North Central Section of the AUA, Inc.

88th Annual Meeting
September 10 – 13, 2014
Swissôtel Chicago
Chicago, Illinois

PROGRAM BOOK
Christopher S. Cooper, MD
2013 – 2014 NCS President

The Officers and Board of Directors welcome you to Chicago, Illinois for the 88th Annual Meeting of the North Central Section of the American Urological Association, Inc.

September 10 – 13, 2014
Swissôtel Chicago
Chicago, Illinois
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NCS 89th Annual Meeting Date

**POLICY: Filming, Photography, Audio Recording and Cell Phones**

No attendee/visitor at the NCS 2014 Annual Meeting may record, film, tape, photograph, interview or use any other such media during any presentation, display or exhibit without the express, advance approval of the NCS Executive Director. This policy applies to all NCS members, non-members, guests and exhibitors as well as members of the print, online or broadcast media.
SCHEDULE AT A GLANCE

All sessions are located in Vevey Ballroom unless otherwise noted.

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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| Wednesday, September 10, 2014 | Registration/Information Desk Open  
Location: Monte Rosa Lobby | 7:00 a.m. – 5:00 p.m.       |
|                    | Speaker Ready Room                                                   | Location: Monte Rosa      | 7:00 a.m. – 5:00 p.m.       |
|                    | Spouse/Guest Hospitality Suite                                       | Location: Matterhorn      | 7:30 a.m. – 11:00 a.m.      |
|                    | Exhibit Hall Open                                                    | Location: Zurich Ballrooms D-G | 6:30 p.m. – 8:30 p.m.       |
|                    | Live Surgery Transmission from University of Chicago: Artificial Urinary Sphincter and Robotic Cystectomy | 8:00 a.m. – 10:00 a.m.    |
|                    | Break                                                                | Location: Vevey Foyer     | 10:00 a.m. – 10:30 a.m.     |
|                    | AUA Course of Choice: Common Problems in Pediatric Urology: What Every Urologist Should Know | 10:30 a.m. – 12:00 p.m.   |
|                    | Industry Sponsored Luncheon                                          | Location: Zurich A        | 12:00 p.m. – 1:15 p.m.      |
|                    | Health Policy and Practice Management                                | Location: St. Gallen I & II | 1:15 p.m. – 5:00 p.m.       |
|                    | Primary Care Update in Urology                                       |                           | 6:30 p.m. – 8:30 p.m.       |
|                    | Welcome Reception & Wine Tasting                                     | Location: Zurich Ballrooms D-G |

Thursday, September 11, 2014

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<tr>
<th>Time</th>
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<th>Location</th>
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| 5:30 a.m. – 5:45 p.m. | Registration/Information Desk Open  
Location: Monte Rosa Lobby | 5:30 a.m. – 5:45 p.m.       |
| 5:30 a.m. – 5:45 p.m. | Speaker Ready Room                                                   | Location: Monte Rosa      | 5:30 a.m. – 5:45 p.m.       |
| 7:30 a.m. – 11:00 a.m. | Spouse/Guest Hospitality Suite                                       | Location: Matterhorn      | 7:30 a.m. – 11:00 a.m.      |
| 7:00 a.m. – 4:00 p.m. | Exhibit Hall Open                                                    | Location: Zurich Ballrooms D-G | 7:00 a.m. – 4:00 p.m.       |
| 6:30 a.m. – 7:30 a.m. | Breakfast Breakout Sessions  
Pediatrics: Topics in Pediatric Urology  
Location: Montreux  
Bladder and Upper Tract Urothelial Cancer Update  
Female Urology  
Location: St. Gallen I & II | 6:30 a.m. – 7:30 a.m.       |
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<th>Time</th>
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| 7:30 a.m. – 8:00 a.m. | Break – Visit Exhibits  
*Location: Zurich Ballrooms D-G* |                           |
| 8:00 a.m. – 8:05 a.m. | President's Welcome                                                  |                           |
| 8:05 a.m. – 8:30 a.m. | Special Lecture: Robotic Surgery in Pediatric Urology: Lessons  
Learned From the First Decade |                           |
| 8:30 a.m. – 9:35 a.m. | Pediatrics Podium Session                                             |                           |
| 9:35 a.m. – 9:45 a.m. | Announcements                                                        |                           |
| 9:45 a.m. – 10:10 a.m. | Break – Visit Exhibits  
*Location: Zurich Ballrooms D-G* |                           |
| 10:10 a.m.    | unforeseen                                                               |                           |
| 10:45 a.m.    | unforeseen                                                               |                           |
| 11:15 a.m.    | Young Urologists Program  
*Location: St. Gallen I & II* | Prostate – Malignant  
I Podium Session  
*Location: Montreux* | Ask the Expert:  
Current Management of UTI and Reflux in Children:  
Interpreting the Guidelines  
*Location: St. Gallen III* | Laparoscopy/Robotics-Kidney Podium Session  
*Location: Montreux* |
| 11:30 a.m. – 12:00 p.m. | Biomarkers in Prostate Cancer: The New Frontier |                           |
| 12:00 p.m. – 1:15 p.m. | Industry Sponsored Luncheon  
*Location: Zurich A* | Industry Sponsored Luncheon  
*Location: Zurich B* |                           |
| 1:20 p.m. – 1:50 p.m. | Special Lecture: Staghorn Stones, Lessons Learned from Dr.  
William H. Boyce and Thereafter! |                           |
| 1:50 p.m. – 2:40 p.m. | Endourology/Stone Disease Podium Session  
*Location: Montreux* | Kidney Malignant I Podium Session  
*Location: St. Gallen I & II* | Ask the Expert:  
Open Radical Prostatectomy in The Days of The Robot: Really? |                           |
| 2:40 p.m. – 2:55 p.m. | Special Lecture: Role of the Pubovaginal Fascial Sling in 2014 |                           |
| 2:55 p.m. – 3:40 p.m. | Urinary Incontinence/Neurourology Podium Session |                           |
| 3:40 p.m. – 4:00 p.m. | Break – Visit Exhibits  
*Location: Zurich Ballrooms D-G* |                           |
| 4:00 p.m. – 4:30 p.m. | Panel Discussion: Controversial Cases in Endourology |                           |
| 4:30 p.m. – 5:45 p.m. | Prostate Malignant II Podium Session  
*Location: Zurich C* | Adrenal/Kidney/Ureter – Malignant/  
Benign Poster Session  
*Location: Currents* | Pediatric Urology  
Poster Session  
*Location: Currents* |                           |
| 6:00 p.m. – 7:00 p.m. | Young Urologists Mixer  
*Location: Edelweiss Penthouse* |                           |
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<td>5:30 a.m. – 5:30 p.m.</td>
<td>Registration/Information Desk&lt;br&gt;<em>Location: Monte Rosa Lobby</em></td>
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<tr>
<td>5:30 a.m. – 5:30 p.m.</td>
<td>Speaker Ready Room&lt;br&gt;<em>Location: Monte Rosa</em></td>
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<td>7:30 a.m. – 11:00 a.m.</td>
<td>Spouse/Guest Hospitality Suite&lt;br&gt;<em>Location: Matterhorn</em></td>
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<td>7:00 a.m. – 11:00 a.m.</td>
<td>Exhibit Hall Open&lt;br&gt;<em>Location: Zurich Ballrooms D-G</em></td>
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<tr>
<td>6:30 a.m. – 7:30 a.m.</td>
<td><strong>Breakfast Breakout Sessions</strong>&lt;br&gt;Panel Discussion: Endourology&lt;br&gt;<em>Location: Montreux</em>&lt;br&gt;Understanding the New AUA Urotrauma Guidelines with Case Presentations&lt;br&gt;<em>Location: St. Gallen I &amp; II</em>&lt;br&gt;Robotics: Complications and Their Management</td>
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<tr>
<td>7:30 a.m. – 7:40 a.m.</td>
<td>Break – Visit Exhibits&lt;br&gt;<em>Location: Zurich Ballrooms D-G</em></td>
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<tr>
<td>7:40 a.m. – 8:05 a.m.</td>
<td>Special Lecture: Surgical Management of Vaginal Mesh Complications</td>
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<td>8:05 a.m. – 9:05 a.m.</td>
<td>Socioeconomics Podium Session</td>
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<td>9:05 a.m. – 9:35 a.m.</td>
<td>Special Lecture: Active Surveillance for Prostate Cancer: Benign Neglect, an Annuity or Black Box?</td>
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<tr>
<td>9:35 a.m. – 10:15 a.m.</td>
<td>Presidential Round Table Discussion: Prostate Cancer Detection, Treatment of Localized Disease, Treatment of Advanced Disease</td>
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<tr>
<td>10:15 a.m. – 10:20 a.m.</td>
<td>Announcements</td>
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<tr>
<td>10:20 a.m. – 10:45 a.m.</td>
<td>Break – Visit Exhibits&lt;br&gt;<em>Location: Zurich Ballrooms D-G</em></td>
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<tr>
<td>10:45 a.m. – 11:35 a.m.</td>
<td>Outcomes Podium Session&lt;br&gt;Bladder Malignant Podium&lt;br&gt;<em>Location: Montreux</em>&lt;br&gt;Penis/Urethra/Testis/Trauma/Transplant Podium Session&lt;br&gt;<em>Location: St. Gallen I &amp; II</em></td>
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<td>11:35 a.m. – 12:00 p.m.</td>
<td>Special Lecture AUA Gold Cystoscope Honoree: Histotripsy: A New Technology for Prostatic Obstruction</td>
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<td>12:00 p.m. – 12:05 p.m.</td>
<td>ABU Update</td>
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<tr>
<td>12:05 p.m. – 1:05 p.m.</td>
<td>Industry Sponsored Luncheon&lt;br&gt;<em>Location: Zurich A</em></td>
<td>Industry Sponsored Luncheon&lt;br&gt;<em>Location: Zurich B</em></td>
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<tr>
<td>1:05 p.m. – 1:35 p.m.</td>
<td>Special Lecture: Metabolic Evaluation of Stone Patients</td>
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<td>1:35 p.m. – 1:40 p.m.</td>
<td>Reflections of Our AUA Past President</td>
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<td>1:40 p.m. – 1:50 p.m.</td>
<td>AUA Update</td>
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<tr>
<td>1:50 p.m. – 1:55 p.m.</td>
<td>Report from the American Association of Clinical Urologists</td>
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<td>Time</td>
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<tr>
<td>1:55 p.m. – 2:05 p.m.</td>
<td>Report from the NCSAUA Foundation Scholar</td>
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<td>2:05 p.m. – 2:10 p.m.</td>
<td>IVUmed Update</td>
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<tr>
<td>2:10 p.m. – 2:15 p.m.</td>
<td>NCS/AACU Health Policy Young Investigator Award Presentation</td>
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<tr>
<td>2:15 p.m. – 2:20 p.m.</td>
<td>Award Presentations: John D. Silbar, Thirlby &amp; Traveling Fellowship</td>
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<tr>
<td>2:20 p.m. – 2:25 p.m.</td>
<td>Break</td>
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<td>2:25 p.m. – 3:10 p.m.</td>
<td>Resident Bowl: Round 1</td>
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<td>3:10 p.m. – 3:35 p.m.</td>
<td>The Presidential Address: What Should We Tell the Kids?</td>
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<tr>
<td>3:35 p.m. – 4:15 p.m.</td>
<td>Annual Business Meeting</td>
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<td>4:15 p.m. – 5:30 p.m.</td>
<td>Bladder Poster Session</td>
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<td>Location: Zurich C</td>
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<tr>
<td>6:30 p.m. – 12:00 a.m.</td>
<td>Annual Banquet</td>
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<td>Location: The Union League Club of Chicago</td>
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**SATURDAY, SEPTEMBER 13, 2014**

<table>
<thead>
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<tr>
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<td>7:30 a.m. – 11:00 a.m.</td>
<td>Spouse/Guest Hospitality Suite</td>
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<td>Location: Matterhorn</td>
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<tr>
<td>7:00 a.m. – 8:00 a.m.</td>
<td>Video Session</td>
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<td>8:00 a.m. – 8:45 a.m.</td>
<td>Roundtable Discussion: Looking into the Future</td>
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<td>8:45 a.m. – 9:35 a.m.</td>
<td>Bizarre &amp; Interesting Cases Podium Session</td>
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<tr>
<td>9:35 a.m. – 10:30 a.m.</td>
<td>Male and Couple Infertility/Sexual Dysfunction Podium Session</td>
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<td>Location: St. Gallen III</td>
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<tr>
<td>10:30 a.m. – 10:45 a.m.</td>
<td>Break</td>
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<tr>
<td>10:45 a.m. – 11:15 a.m.</td>
<td>NCS Resident Super Bowl – Final</td>
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<tr>
<td>11:15 a.m. – 11:20 a.m.</td>
<td>Best Poster, Best Video and Bizarre &amp; Interesting Case Award</td>
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<td>Presentations</td>
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<tr>
<td>11:20 a.m. – 11:30 a.m.</td>
<td>Incoming NCS President Remarks</td>
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</tbody>
</table>

**LOCATION:**
- Monte Rosa Lobby
- Monte Rosa
- Matterhorn
- St. Gallen III
- Montreux
HOTEL DIRECTORY

General Session: Vevey Ballroom

Breakout Rooms: St. Gallen I
                St. Gallen II
                St. Gallen III
                Montreux

Exhibit Hall: Zurich Ballrooms D-G

Poster Sessions: Zurich C and Currents

Speaker Ready Room: Monte Rosa

Spouse/Guest Hospitality Suite: Matterhorn

Committee Meetings: St. Gallen I
                    St. Gallen III
                    Arosa

PROMOTIONAL PARTNERS

NCS Recognizes and Welcomes our 2014 Promotional Partners
(as of 8/21/2014)

Platinum Level Partners
AbbVie
Actavis Pharma, Inc.
Genomic Health
Medivation/Astellas
Myriad Genetic Laboratories, Inc.

Gold Level Partners
Astellas Pharma US, Inc.
Auxilium Pharmaceuticals, Inc.

Thank You to Our 2014 Contributors
Astellas Pharma US, Inc.
Janssen Biotech, Inc.
Lilly
Medivation
Pfizer, Inc.
EXHIBITORS
(as of 8/21/2014)

AbbVie
Actavis
Allergan, Inc.
American Medical Systems, Inc.
American Urological Association, Inc.
Astellas Pharma US, Inc.
Auxilium Pharmaceuticals, Inc.
Bard Medical Division
Bayer HealthCare
biolitec U.S., Inc
BK Medical Systems
Bostwick Laboratories, Inc.
Coloplast Group
Cook Medical
Dornier MedTech
Elizabeth Harbour Estates
Ferring Pharmaceuticals
Genomic Health
HealthTronics, Inc.
Hitachi-Aloka Medical
Intuitive Surgical, Inc.
Invivo
IVU Med
Janssen Biotech, Inc.
KARL STORZ
Lilly
Lisa Laser USA
Lumenis, Inc.
Mallinckrodt Pharmaceuticals
Medispec, Ltd.
Medivation/Astellas
Medtronic
Miraca Life Sciences
Myriad Genetic Laboratories, Inc.
NeoTract, Inc.
Olympus America, Inc.
Pacific Edge Diagnostics USA Ltd.
Pfizer, Inc.
Prometheus Laboratories Inc.
Richard Wolf Medical Instruments, Corp.
Salix Pharmaceuticals
Theralogix
United Medical Systems
University Compounding Pharmacy
Uroplasty, Inc.
Urologix
USmd, Inc.
Vision Sciences, Inc.
Wedgewood Pharmacy
Wellspect Healthcare
# INDUSTRY SPONSORED EVENTS

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Location</th>
<th>Title</th>
<th>Presenter</th>
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</thead>
<tbody>
<tr>
<td>Wednesday, September 10, 2014</td>
<td>12:00 p.m. – 1:15 p.m.</td>
<td>Industry Sponsored Luncheon</td>
<td>Zurich A</td>
<td>“Prolaris: A Novel Genomic Test For Prostate Cancer”</td>
<td>John W. Davis, MD, FACS</td>
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<td>Associate Professor, Urology</td>
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<td>Director, Urosurgical Prostate Program</td>
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<td>Houston, TX</td>
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<tr>
<td>Thursday, September 11, 2014</td>
<td>12:00 p.m. – 1:15 p.m.</td>
<td>Industry Sponsored Luncheon</td>
<td>Zurich A</td>
<td>“The Impact of Genomic Assays on Prostate Cancer Management”</td>
<td>Ketan K. Badani, MD</td>
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<td>Associate Professor of Urology</td>
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<td>Columbia University</td>
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<td>New York, NY</td>
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<tr>
<td>Thursday, September 11, 2014</td>
<td>12:00 p.m. – 1:15 p.m.</td>
<td>Industry Sponsored Luncheon</td>
<td>Zurich B</td>
<td>“XTANDI (enzalutamide) Capsules: An Option for Continuing the Care of Patients with mCRPC in the Urology Practice”</td>
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<tr>
<td>Friday, September 12, 2014</td>
<td>12:05 p.m. – 1:05 p.m.</td>
<td>Industry Sponsored Luncheon</td>
<td>Zurich A</td>
<td>“Innovative Weapon for the Treatment of BPH with Rapaflo”</td>
<td>Kevin T. McVary, MD-FACS</td>
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<td>Professor and Chairman</td>
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<td>Southern Illinois University School of Medicine</td>
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<tr>
<td>Friday, September 12, 2014</td>
<td>12:05 p.m. – 1:05 p.m.</td>
<td>Industry Sponsored Luncheon</td>
<td>Zurich B</td>
<td>“Promoting Wellness in 2014: How to Save Time Reviewing What Works and What is Worthless”</td>
<td>Mark Moyad, MD, MPH</td>
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<td>Jenkins/Pokempner Director of Complementary and Alternative Medicine</td>
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<td>Department of Urology, University of Michigan</td>
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<td>Ann Arbor, MI</td>
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NEEDS, OBJECTIVES AND CME ACCREDITATION

Needs Assessment
The incoming Secretary of the North Central Section (Dr. Gary Faerber), consulted with other members of the Program Committee and the Executive Committee members, including the current NCS President, Dr. Christopher Cooper, recent Past Secretary, Dr. Patrick McKenna, Chair of the NCS Education Committee, Dr. Bradley Schwartz, and Chair, Office of Education of the AUA, Dr. Elspeth McDougall, regarding the needs we are attempting to fulfill through our annual scientific program. It was agreed by the above committee members, Section Officers and Chair, Office of Education of the AUA, that there continues to be significant educational needs for our Annual Meeting and scientific program. Urologic abnormalities can present with a myriad of clinical symptoms and signs. Accurate differential diagnosis and disease management, which meets current standards of care, requires ongoing review of the presentations of various urologic abnormalities as well as the appropriate use of safe and cost-effective imaging modalities and various pharmacologic, minimally invasive and operative management options. In addition, advancements in medical science and progress in management of various urologic diseases require basic and clinical research. Presentation and discussion of such peer-reviewed and abstract reviewer-selected summaries and results of investigations provide “cutting edge” updates for practicing clinicians and essential feedback to researchers on the practical applications and translation of their investigations to clinical practice.

The American Urological Association provided many services and Health Policy support to practicing urologists in the NCS region and the Past President, AUA Secretary, AUA Chairman of Education and NCS Board Representative will provide an update on the activities of the AUA.

Educational Objectives:
At the conclusion of the North Central Section 88th Annual Meeting, attendees should be able to:

- Apply Evidence Based Medicine (EBM) in urologic practice specifically incorporating AUA Guidelines into daily practice.
- Apply the role of new ablative therapies (histotripsy) in the treatment of urologic conditions.
- Explain the evolving role of active surveillance as a treatment strategy for patients with low risk prostate cancer (LRPC).
- Analyze the role of new biomarkers for prostate cancer and their implications in the treatment of low risk and high risk prostate cancer.
- Analyze data pertaining to various pharmacologic and surgical treatments for voiding dysfunction and urinary incontinence.
- Utilize evidence based treatment algorithms to manage patients with challenging urolithiasis.
- Integrate new and modified treatments for erectile dysfunction, infertility and use of testosterone.
- Enumerate prognostic significance and treatments of various stages and grades of bladder cancer and its associated morbidity and mortality.
- Explain coding, physician payment reforms and collaboratives between payers and providers.
Accreditation Statement:
The American Urological Association (AUA) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Credit Designation:
The American Urological Association designates this live activity for a maximum of 28.25 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Evidence Based Content:
It is the policy of the AUA to ensure that the content contained in this CME activity is valid, fair, balanced, scientifically rigorous and free of commercial bias.

AUA Disclosure Policy:
All persons in a position to control the content of an educational activity (i.e., activity planners, presenters, authors) participating in an educational activity provided by the AUA are required to disclose to the provider any relevant financial relationships with any commercial interest. The AUA must determine if the individual’s relationships may influence the educational content and resolve any conflicts of interest prior to the commencement of the educational activity. The intent of this disclosure is not to prevent individuals with relevant financial relationships from participating, but rather to provide learners information with which they can make their own judgments.

The disclosure report for this meeting may be found in your registration packet.

Resolution of Identified Conflict of Interest:
All disclosures will be reviewed by the program/course directors or editors for identification of conflicts of interest. Peer reviewers, working with the program directors and/or editors, will document the mechanism(s) for management and resolution of the conflict of interest and final approval of the activity will be documented prior to implementation. Any of the mechanisms below can/will be used to resolve conflict of interest:

- Peer review for valid, evidence-based content of all materials associated with an educational activity by the course/program director, editor and/or Education Content Review Committee or its subgroup
- Limit content to evidence with no recommendations
- Introduction of a debate format with an unbiased moderator (point-counterpoint)
- Inclusion of moderated panel discussion
- Publication of a parallel or rebuttal article for an article that is felt to be biased
- Limit equipment representatives to providing logistics and operation support only in procedural demonstrations
- Divestiture of the relationship by faculty

Off label or Unapproved Use of Drugs or Devices:
It is the policy of the AUA to require the disclosure of all references to off-label or unapproved uses of drugs or devices prior to the presentation of educational content. The audience is advised that this continuing medical education activity may contain reference(s) to off-label or unapproved uses of drugs or devices. Please consult the prescribing information for full disclosure of approved uses.
Disclaimer:
The opinions and recommendations expressed by faculty, authors and other experts whose input is included in this program are their own and do not necessarily represent the viewpoint of the AUA.

Audio, Video and Photographic Equipment:
The use of audio, video and other photographic recording equipment is prohibited by attendees inside AUA meeting rooms.

Reproduction Permission:
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Special Assistance/Dietary Needs:
The American Urological Association complies with the Americans with Disabilities Act §12112(a). If any participant is in need of special assistance or has any dietary restrictions, please see the registration desk.
2013 – 2014
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Howard J. Korman, MD; Royal Oak, MI
To Be Determined
To Be Determined

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Lawrence J. Litscher, MD; Dayton, OH (Ohio)
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Norm D. Smith, MD; Chicago, IL (Illinois)
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Tobias S. Kohler, MD, MPH, FACS; Springfield, IL
(Young Urologist Committee Vice Chair)
Aaron J. Milbank, MD; St. Paul, MN (Young Urologist Committee Chair)
Nominating Committee
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Bodo E. Knudsen, MD, FRCSC; Columbus, OH (Ohio)
Tobias S. Kohler, MD, MPH, FACS; Springfield, IL (Illinois)
John V. Kryger, MD; Milwaukee, WI (Wisconsin)
Dinesh J. Telang, MD; Royal Oak, MI (Michigan)

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Timothy P. Kresowik, MD; Davenport, IA (Iowa Representative)
Daniel K. Lee, MD; Iowa City, IA (Iowa Representative)
Steven M. Lucas, MD; Grosse Pointe, MI (Michigan Representative)
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Mark Memo, DO; Youngstown, OH (Ohio Representative)
Ranko Miocinovic, MD; Detroit, MI (Michigan Representative)
Josiah D. Nelson, MD; Eau Claire, WI (Wisconsin Representative)
Kenneth G. Nepple, MD; Iowa City, IA (Iowa Representative)
Daniel H. Williams, IV, MD; Madison, WI (Wisconsin Representative)
Stephen A. Boorjian, MD; Rochester, MN (Minnesota, North Dakota, South Dakota)
Tobias S. Kohler, MD, MPH, FACS; Springfield, IL (Young Urologist Committee Vice Chair)
Aaron J. Milbank, MD; St. Paul, MN (Young Urologist Committee Chair)
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We proudly recognize all of our members who are currently serving on AUA Committees:

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Robert R. Bahnson, MD; Columbus, OH (AMA Alternate Delegate)

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Howard N. Winfield, MD; Tuscaloosa, AL (Representative)

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**Young Urologist Committee**
Tobias S. Kohler, MD, MPH, FACS; Springfield, IL (Representative)
<table>
<thead>
<tr>
<th>Year</th>
<th>President</th>
<th>Meeting Site</th>
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<tbody>
<tr>
<td>2013</td>
<td>Chandru P. Sundaram, MD</td>
<td>Naples, FL</td>
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<td>2012</td>
<td>Howard N. Winfield, MD</td>
<td>Chicago, IL</td>
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<td>2011</td>
<td>Peter M. Knapp, Jr., MD</td>
<td>Rancho Mirage, CA</td>
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<td>2010</td>
<td>Steven W. Siegel, MD</td>
<td>Chicago, IL</td>
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<td>2009</td>
<td>Stephen Y. Nakada, MD</td>
<td>Scottsdale, AZ</td>
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<td>2008</td>
<td>Jay B. Hollander, MD</td>
<td>Chicago, IL</td>
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<tr>
<td>2007</td>
<td>Dennis A. Pessis, MD</td>
<td>Hollywood, FL</td>
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<td>2006</td>
<td>David E. Patterson, MD</td>
<td>Coronado, CA</td>
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<td>2005</td>
<td>Robert C. Flanigan, MD</td>
<td>Chicago, IL</td>
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<td>2005</td>
<td>Robert C. Flanigan, MD</td>
<td>San Antonio, TX</td>
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<td>2004</td>
<td>Frank P. Begun, MD</td>
<td>Miami Beach, FL</td>
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<td>2003</td>
<td>Elroy D. Kursh, MD</td>
<td>Vancouver-Canada</td>
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<td>2002</td>
<td>R. Bruce Bracken, MD</td>
<td>Chicago, IL</td>
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<td>2001</td>
<td>Richard A. Memo, MD</td>
<td>Chicago, IL</td>
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<td>2000</td>
<td>J. Randolf Beahrs, MD</td>
<td>Scottsdale, AZ</td>
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<td>1999</td>
<td>* Richard D. Williams, MD</td>
<td>Chicago, IL</td>
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<td>1998</td>
<td>James E. Lingeman, MD</td>
<td>Amelia Island, FL</td>
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<td>1997</td>
<td>Ananias C. Diokno, MD</td>
<td>Monterey, CA</td>
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<td>1996</td>
<td>Earl H. Johnson, MD</td>
<td>Tucson, AZ</td>
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<td>1995</td>
<td>* Joseph W. Segura, MD</td>
<td>Minneapolis, MN</td>
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<td>1994</td>
<td>Jack L. Summers, MD</td>
<td>Boca Raton, FL</td>
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<td>1993</td>
<td>Arthur J. Johnson, MD</td>
<td>Milwaukee, WI</td>
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<td>1992</td>
<td>Eugene T. McEnery, MD</td>
<td>Dorado, Puerto Rico</td>
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<td>1991</td>
<td>Charles E. Hawthrey, MD</td>
<td>Scottsdale, AZ</td>
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<td>1990</td>
<td>Lawrence S. Ross, MD</td>
<td>Colorado Springs, CO</td>
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<td>1989</td>
<td>Charles W. Troup, MD</td>
<td>Chicago, IL</td>
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<td>1988</td>
<td>Paul R. Hartig, MD</td>
<td>Orlando, FL</td>
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<td>1987</td>
<td>Kenneth A. Kropp, MD</td>
<td>Detroit, MI</td>
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<td>1986</td>
<td>Joseph C. Cerny, MD</td>
<td>Rancho Mirage, CA</td>
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<td>1985</td>
<td>* John D. Silbar, MD</td>
<td>Palm Beach, FL</td>
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<td>1984</td>
<td>Edwin D. Kennedy, MD</td>
<td>Cedar Rapids, IA</td>
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<td>1983</td>
<td>* John P. Donohue, MD</td>
<td>Maui, HI</td>
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<td>1982</td>
<td>Everette J. Duthoy, MD</td>
<td>Marco Island, FL</td>
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<td>1981</td>
<td>* William E. Forsythe, MD</td>
<td>Indianapolis, IN</td>
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<td>1980</td>
<td>* David C. Utz, MD</td>
<td>Hamilton- Bermuda</td>
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<td>1979</td>
<td>Charles F. McKiel, Jr., MD</td>
<td>Phoenix, AZ</td>
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<td>1978</td>
<td>* Jack Lapides, MD</td>
<td>Chicago, IL</td>
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<td>1977</td>
<td>* Laurence F. Greene, MD</td>
<td>Coronado, CA</td>
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<td>1976</td>
<td>* Harry E. Lichtwardt, MD</td>
<td>Palm Beach, FL</td>
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<td>1975</td>
<td>* David Presman, MD</td>
<td>Phoenix, AZ</td>
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<td>1974</td>
<td>* David A. Culp, MD</td>
<td>Columbus, OH</td>
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<td>1973</td>
<td>* Lester Persky, MD</td>
<td>Acapulco- Mexico</td>
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<tr>
<td>1972</td>
<td>George J. Bulkley, MD</td>
<td>Chicago, IL</td>
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<td>1971</td>
<td>* Jack N. Taylor, MD</td>
<td>Detroit, MI</td>
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<td>1970</td>
<td>* Myron H. Nourse, MD</td>
<td>Cincinnati, OH</td>
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<td>1969</td>
<td>* James W. Sargent, MD</td>
<td>Milwaukee, WI</td>
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<td>1968</td>
<td>* Baxter A. Smith, Jr., MD</td>
<td>Rochester, MN</td>
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<tr>
<td>1967</td>
<td>* Paul J. Schildt, MD</td>
<td>Cleveland, OH</td>
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</tbody>
</table>
1966  * Frank B. Bicknell, MD  Chicago, IL
1965  * Ormond Culp, MD  Minneapolis, MN
1964  * Donald J. Jaffar, MD  Columbus, OH
1963  * F. Harold Entz, MD  Chicago, IL
1962  * Charles J. Cooney, MD  Detroit, MI
1961  * Edwin C. Graf, MD  Cincinnati, OH
1960  * T. Brent Wayman, MD  Chicago, IL
1959  * N. Warren Bourne, MD  Chicago, IL
1958  * C. Grafton Weller, MD  Milwaukee, WI
1957  * John L. Emmett, MD  Mackinac Island, MI
1956  * C.D. Creevy, MD  Cleveland, OH
1955  * William J. Butler, MD  Chicago, IL
1954  * Rubin H. Flocks, MD  Detroit, MI
1953  * William J. Engel, MD  Cincinnati, OH
1952  * Reed M. Nesbit, MD  Minneapolis, MN
1951  * William N. Wishard, Jr., MD  Toledo, OH
1950  * Russell D. Herrold, MD  Milwaukee, WI
1949  * James C. Sargent, MD  Grand Rapids, MI
1948  * Robert S. Breakey, MD  Des Moines, IA
1947  * William J. Baker, MD  Cleveland, OH
1946  * Walter M. Kearns, MD  Rochester, MN
1944  * H.W. Plaggemeyer, MD  Chicago, IL
1941  * G.J. Thompson, MD  Detroit, MI
1940  * Ernest Rupel, MD  Milwaukee, WI
1939  * Charles C. Higgins, MD  Indianapolis, IN
1938  * W.G. Sexton, MD  Peoria, IL
1937  * Charles M. McKenna, MD  Madison, WI
1936  * Parke Smith, MD  Cincinnati, OH
1935  * Robert E. Cumming, MD  Rochester, MN
1934  * Frederic E.B. Foley, MD  Cleveland, OH
1933  * Vincent J. O’Connor, MD  Chicago, IL
1932  * William N. Taylor, MD  Detroit, MI
1931  * H.M. Stang, MD  St. Paul, MN
1930  * Ira R. Sisk, MD  Indianapolis, IN
1929  * Harry Culver, MD  Rochester, MN
1928  * J.L. Crenshaw, MD  Columbus, OH
1927  * E.O. Smith, MD  Madison, WI
1926  * H.L. Morris, MD  Cincinnati, OH
1925  * N.G. Alcock, MD  Detroit/Ann Arbor, MI
1924  * G.J. Thomas, MD  Iowa City, IA

*Deceased
BOARD OF DIRECTORS AND COMMITTEE MEETINGS

Tuesday, September 9, 2014

8:00 a.m. – 9:00 a.m. Executive Committee Meeting  
Location: St. Gallen I

9:00 a.m. – 10:00 a.m. Finance Committee Meeting  
Location: St. Gallen I

10:00 a.m. – 11:00 a.m. Long Range Planning Committee Meeting  
Location: St. Gallen I

11:00 a.m. – 12:00 p.m. Annual Meeting Committee Meeting  
Location: St. Gallen I

12:00 p.m. – 1:00 p.m. Board of Directors Luncheon  
Location: Swissotel Executive Club Level

1:00 p.m. – 5:00 p.m. Board of Directors Meeting  
Location: St. Gallen I & II

Wednesday, September 10, 2014

7:00 a.m. – 8:00 a.m. Nominating Committee Meeting  
Location: St. Gallen III

12:00 p.m. – 1:15 p.m. Young Urologist Committee Meeting  
Location: St. Gallen III

12:00 p.m. – 1:15 p.m. Editorial and Awards Committee Meeting  
Location: Arosa

Friday, September 12, 2014

12:05 p.m. – 1:05 p.m. Health Policy Council Meeting  
Location: St. Gallen III
GENERAL MEETING INFORMATION

Scientific Sessions
Wednesday, September 10, 2014 8:00 a.m. – 5:00 p.m.
Thursday, September 11, 2014 6:30 a.m. – 5:45 p.m.
Friday, September 12, 2014 6:30 a.m. – 5:30 p.m.
Saturday, September 13, 2014 7:00 a.m. – 11:30 a.m.

Technical Exhibits
Location: Zurich Ballrooms D-G
Wednesday, September 10, 2014 6:30 p.m. – 8:30 p.m.
Thursday, September 11, 2014 7:00 a.m. – 4:00 p.m.
Friday, September 12, 2014 7:00 a.m. – 11:00 a.m.

Registration/Information Desk Hours
Location: Monte Rosa Lobby
Wednesday, September 10, 2014 7:00 a.m. – 5:00 p.m.
Thursday, September 11, 2014 5:30 a.m. – 5:45 p.m.
Friday, September 12, 2014 5:30 a.m. – 5:30 p.m.
Saturday, September 13, 2014 6:30 a.m. – 11:30 a.m.

Spouse/Guest Hospitality Suite
Location: Matterhorn
Wednesday, September 10, 2014 7:30 a.m. – 11:00 a.m.
Thursday, September 11, 2014 7:30 a.m. – 11:00 a.m.
Friday, September 12, 2014 7:30 a.m. – 11:00 a.m.
Saturday, September 13, 2014 7:30 a.m. – 11:00 a.m.

Registered spouses and guests are welcome to enjoy the many benefits of the Hospitality Suite where breakfast and light refreshments will be available at all times. We ask that you wear your NCS name badge at all times in the Hospitality Suite.

Admission Policy
Registered individuals will receive a name badge and tickets to the Welcome Reception and Annual Banquet in the registration packet. You must wear your name badge to be admitted to scientific sessions. Likewise, you must bring your tickets to be admitted to the Welcome Reception and Annual Banquet. Additional tickets for guests can be purchased at the Registration/Information Desk.
EVENING FUNCTIONS

One ticket to each evening function is included in attendee and spouse/guest registration fee. To purchase additional tickets, please visit the Registration/Information Desk.

Welcome Reception and Wine Tasting
Date: Wednesday, September 10, 2014
Time: 6:30 p.m. – 8:30 p.m.
Location: Zurich Ballrooms D-G
Attire: Casual
Attendees can sample a variety of wines, connect with fellow attendees and visit our industry sponsors and exhibitors while enjoying a variety of appetizers.
Cost of Additional Tickets: $50.00*
*Children under 13 can attend for free

Young Urologists Mixer
Date: Thursday, September 11, 2014
Time: 6:00 p.m. – 7:00 p.m.
Location: Edelweiss Penthouse
Attire: Casual
This mixer is open to residents and urologists who are within ten years post training. This is a great way to network with other urologists and learn how to become more active in the Section.
Cost of Additional Tickets: This is a free event open to residents and urologists who are within ten years post training.

Annual Banquet*
Date: Friday, September 12, 2014
Time: 6:30 p.m. – 7:30 p.m. Cocktails and Hors d’oeuvres
7:30 p.m. – 12:00 a.m. Dinner and Entertainment
Location: The Union League Club of Chicago
Attire: Black Tie Optional
The 2014 Annual Banquet promises to be an affair to remember. This event will feature delicious culinary delights followed by an enthralling evening of music and dancing.
Cost of Additional Tickets: $185.00
*Tables are assigned during the meeting, so be sure to sign up with your friends/colleagues on the boards posted by the NCS registration desk.
SPEAKER INFORMATION

The North Central Section thanks all the presenters for their outstanding commitment to the 88th Annual Meeting.

Speaker Guidelines
All presentations shall be loaded onto the computer in the Speaker Ready Room. An AV technician will be present during the Speaker Ready Room hours to load presentations and answer any question you may have. We strongly encourage you to turn in your presentations as early as possible. At a minimum, presentations must be turned in to the AV Technicians four hours prior to your presentation. Remember, all media must be IBM Compatible.

Poster Presentation Guidelines
Presenters may hang their posters starting at 1:00 p.m. for the Thursday and Friday Sessions. Please look for the board containing your poster number. NCS will provide pushpins. Posters must be removed immediately at the close of the session. NCS will not hold or be responsible for posters left behind.

Moderator Guidelines
Please make every effort to ensure that the program runs on schedule by checking the speaker timer before each talk and each discussion. Also, encourage the speakers and discussants to adhere to the allotted time. Please be sure to inform the audience that all speakers have completed the AUA faculty disclosure process, a written report is included in the registration envelopes. Finally, remember to introduce presentations by the following: Title of Presentation, Speaker’s Name, Speaker’s City. Please do not cite all of the authors’ names.

Speaker Ready Room Hours
Location: Monte Rosa
Wednesday, September 10, 2014 7:00 a.m. – 5:00 p.m.
Thursday, September 11, 2014 5:30 a.m. – 5:45 p.m.
Friday, September 12, 2014 5:30 a.m. – 5:30 p.m.
Saturday, September 13, 2014 6:30 a.m. – 11:30 a.m.
**NCS FULL SCIENTIFIC PROGRAM SCHEDULE**

*All sessions held in the Vevey Ballroom unless otherwise noted.*

*Speakers/times are subject to change*

**WEDNESDAY, SEPTEMBER 10, 2014**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00 a.m. – 5:00 p.m.</td>
<td>Registration/Information Desk Open</td>
<td>Monte Rosa Lobby</td>
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<td>7:00 a.m. – 8:00 a.m.</td>
<td>Continental Breakfast</td>
<td>Vevey Foyer</td>
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<td>7:00 a.m. – 5:00 p.m.</td>
<td>Speaker Ready Room</td>
<td>Monte Rosa</td>
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<td>7:30 a.m. – 11:00 a.m.</td>
<td>Spouse/Guest Hospitality Suite</td>
<td>Matterhorn</td>
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<td>6:30 p.m. – 8:30 p.m.</td>
<td>Exhibit Hall Open</td>
<td>Zurich Ballrooms D-G</td>
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<td>6:30 p.m. – 8:30 p.m.</td>
<td>Welcome Reception &amp; Wine Tasting</td>
<td>Zurich Ballrooms D-G</td>
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**GENERAL SESSION**

**8:00 a.m. – 10:00 a.m.**

**Live Surgery Transmission from University of Chicago**

**Moderator:** Christopher M. Gonzalez, MD, FACS, MBA
Chicago, IL

**Surgeons:**
- **Artificial Urinary Sphincter**
  - Gregory T. Bales, MD
  - Chicago, IL
- **Robotic Cystectomy**
  - Norm D. Smith, MD
  - Chicago, IL

**10:00 a.m. – 10:30 a.m.**

**Break**

**Location:** Vevey Foyer

**10:30 a.m. – 12:00 p.m.**

**AUA Course of Choice: Common Problems in Pediatric Urology: What Every Urologist Should Know**

**Speaker:** Richard C. Rink, MD
Indianapolis, IN
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| 12:00 p.m. – 1:15 p.m. | Industry Sponsored Lunch  
Location: Zurich A  
(See page 8 for full information) |
| 1:15 p.m. – 5:00 p.m. | **Health Policy and Practice Management**  
**Session 1: Module on Government Payers**  
Moderator: Matthew T. Gettman, MD  
Rochester, MN |
| 1:15 p.m. – 1:20 p.m. | **Welcome**  
Matthew T. Gettman, MD  
Rochester, MN |
| 1:20 p.m. – 1:40 p.m. | **Keynote Address: “Health Care Reform and Political Advocacy”**  
Mark D. Stovsky, MD, MBA, FACS  
Cleveland, OH |
| 1:40 p.m. – 2:00 p.m. | **Implementing the Affordable Care Act: An Update**  
Christopher M. Gonzalez, MD, FACS, MBA  
Chicago, IL |
| 2:00 p.m. – 2:20 p.m. | **Physician Payment Reforms: Mind your PQRS and RVUs**  
J. Quentin Clemens, MD  
Ann Arbor, MI |
| 2:20 p.m. – 2:40 p.m. | **Update on New Ideas from the Large Urology Practice Groups**  
Gary M. Kirsh, MD  
Cincinnati, OH |
| 2:40 p.m. – 3:00 p.m. | **Government Relations: An Update**  
James C. Ulchaker, MD, FACS  
Cleveland, OH |
| 3:00 p.m. – 3:20 p.m. | **Where Does Tort Reform Stand in 2014?**  
Patrick H. McKenna, MD, FACS, FAAP  
Madison, WI |
| 3:20 p.m. – 3:30 p.m. | **Break** |
| 3:30 p.m. – 3:50 p.m. | **The AUA Science & Quality Council – What is it Doing for You?**  
J. Stuart Wolf, Jr., MD  
Ann Arbor, MI |
| 3:50 p.m. – 4:15 p.m. | **AUA Guidelines Update**  
John T. Stoffel, MD  
Ann Arbor, MI |
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<td>4:15 p.m. – 4:35 p.m.</td>
<td>How Data Has Affected the Practice from the Perspective of CMS Audits, Managed Care and Benchmarking</td>
<td>Jeffrey A. Scott, MD</td>
<td>Riviera, FL</td>
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<td>4:35 p.m. – 5:00 p.m.</td>
<td>“Contracting for Urologic Care... Is the Patient Centered Specialty Practice the Answer?”</td>
<td>Peter M. Knapp, Jr., MD</td>
<td>Greenwood, IN</td>
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| 1:15 p.m. – 5:00 p.m. | Primary Care Update in Urology  
*Location: St. Gallen I & II* | Ajay K. Singla, MD               | Toledo, OH        |
| 1:15 p.m. – 1:35 p.m. | Controversies in PSA Screening                                                                 | Christopher A. Warlick, MD, PhD | Minneapolis, MN  |
| 1:35 p.m. – 1:55 p.m. | Evaluation of Hematuria with Reference to AUA Guidelines                                        | Cheryl T. Lee, MD                | Ann Arbor, MI    |
| 1:55 p.m. – 2:15 p.m. | Nephrolithiasis – Metabolic Work Up and Initial Management                                          | Khaled Shahrou, MD              | Toledo, OH       |
| 2:15 p.m. – 2:35 p.m. | The Safety of Testosterone Treatment: Evidence Over Hysteria                                             | Tobias S. Kohler, MD, MPH, FACS | Springfield, IL  |
| 2:35 p.m. – 3:05 p.m. | Break                                                                                              |                                  |                  |
| 3:05 p.m. – 3:25 p.m. | How to Manage Recurrent UTIs                                                                          | Stephanie J. Kielb, MD           | Chicago, IL      |
| 3:25 p.m. – 3:45 p.m. | Medical Management of LUTS and OAB in Women                                                            | Courtenay K. Moore, MD           | Cleveland, OH    |
3:45 p.m. – 4:05 p.m. | BPH - Basic Evaluation and Current Medical Management With Reference to AUA Guidelines  
Glenn S. Gerber, MD  
Chicago, IL

4:05 p.m. – 4:30 p.m. | Urological Trauma – What do the AUA Guidelines Say  
Edward E. Cherullo, MD  
Cleveland, OH

4:30 p.m. – 5:00 p.m. | Incorporating Advanced Practice Providers in Your Urology Practice: The AUA White Paper  
Susanne Quallich, MSN, NP  
Ann Arbor, MI

6:30 p.m. – 8:30 p.m. | Welcome Reception & Wine Tasting  
Location: Zurich Ballrooms D-G

THURSDAY, SEPTEMBER 11, 2014

5:30 a.m. – 5:45 p.m. | Registration/Information Desk Open  
Location: Monte Rosa Lobby

5:30 a.m. – 5:45 p.m. | Speaker Ready Room  
Location: Monte Rosa

7:30 a.m. – 11:00 a.m. | Spouse/Guest Hospitality Suite  
Location: Matterhorn

7:00 a.m. – 4:00 p.m. | Exhibit Hall Open  
Location: Zurich Ballrooms D-G

BREAKFAST BREAKOUT SESSIONS

6:30 a.m. – 7:30 a.m. | Pediatrics: Topics in Pediatric Urology  
Location: Montreux  
Moderator: Christopher S. Cooper, MD  
Iowa City, IA

Stone Disease in Children  
Kate H. Kraft, MD  
Ann Arbor, MI

Robotic Pyeloplasty  
Mohan S. Gundeti, MD (Pro)  
Chicago, IL  
Kate H. Kraft, MD (Con)  
Ann Arbor, MI
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| 6:30 a.m. – 7:30 a.m. | **Bladder and Upper Tract Urothelial Cancer Update**  
Moderator: Stephen A. Boorjian, MD  
Rochester, MN  
**Intravesical Therapy for Bladder Cancer**  
Cheryl T. Lee, MD  
Ann Arbor, MI  
**Upper Tract Surveillance**  
Bradley F. Schwartz, DO, FACS  
Springfield, IL |
| 6:30 a.m. – 7:30 a.m. | **Female Urology**  
*Location: St. Gallen I & II*  
Moderator: Elizabeth B. Takacs, MD  
Iowa City, IA  
**Botulinum Toxin for OAB**  
Gregory T. Bales, MD  
Chicago, IL  
Craig A. Peters, MD  
Washington, DC  
**Percutaneous Treatment**  
Anne K. Pelletier Cameron, MD  
Ann Arbor, MI |
| 7:30 a.m. – 8:00 a.m. | **Break – Visit Exhibits**  
*Location: Zurich Ballrooms D-G* |
| 8:00 a.m. – 8:05 a.m. | **President’s Welcome**  
Christopher S. Cooper, MD  
Iowa City, IA |
| 8:05 a.m. – 8:30 a.m. | **Special Lecture: Robotic Surgery in Pediatric Urology: Lessons Learned From the First Decade**  
Guest Speaker: Craig A. Peters, MD  
Washington, DC |
| 8:30 a.m. – 9:35 a.m. | **Pediatrics Podium Session**  
Moderators: Travis Groth, MD  
Milwaukee, WI  
Joel C. Hutcheson, MD  
Minneapolis, MN  
Discussant: Yuri E. Reinberg, MD  
Minneapolis, MN |
8:30 a.m.  #1  CLINICAL PATHWAY FOR EARLY DISCHARGE AFTER CPRE AND EPISPADIAS REPAIR WITH PELVIC OSTEOTOMIES BY USING A SPICA CAST
Bryan Sack, MD, John Kryger, MD, Michael Mitchell, MD, Anthony Balcom, MD, Charles Durkee, MD, Roger Lyon, MD and Travis Groth, MD
Medical College of Wisconsin
(Presented By: Bryan Sack, MD)

8:35 a.m.  #2  COMPLEX PEDIATRIC UROLOGIC RECONSTRUCTION UTILIZING THE ASTRA TECHNIQUE: PRELIMINARY EXPERIENCE AT A SINGLE INSTITUTION
Diana Bowen, MD¹, Earl Cheng, MD², Mary Beth Madonna, MD², Theresa Meyer² and Elizabeth Yerkes, MD²
Northwestern University; ²Northwestern University Feinberg School of Medicine
(Presented By: Diana Bowen, MD)

8:40 a.m.  #3  SHOULD PRENATAL HYDRONEPHROSIS THAT RESOLVES BEFORE BIRTH BE FOLLOWED POSTNATALLY? AN ANALYSIS AND COMPARISON TO PERSISTENT PRENATAL HYDRONEPHROSIS
Patrick Scarborough, MD¹, Elizabeth Ferrara, MD¹ and Douglas Storm, MD²
¹Naval Medical Center San Diego; ²University of Iowa
(Presented By: Douglas Storm, MD)

8:45 a.m.  #4  IS THERE A NEED FOR PREOPERATIVE URETERAL STENTING IN PEDIATRIC PATIENTS UNDERGOING URETEROSCOPY?
Dane Johnson, MD, Ruth Swedler, MS, Charles Durkee, MD and Travis Groth, MD
Medical College of Wisconsin
(Presented By: Dane Johnson, MD)

8:50 a.m.  #5  COMPARING ROBOTIC−ASSISTED LAPAROSCOPIC AND OPEN PYELOPLASTY IN CHILDREN: A SINGLE SURGEON EXPERIENCE
Prithvi Murthy, BSE¹, Joshua Cohn, MD² and Mohan Gundeti, MD²
¹University of Chicago – Pritzker School of Medicine; ²University of Chicago – Section of Urology
(Presented By: Prithvi Murthy, BSE)
8:55 a.m. #6 IS RENAL SCINTIGRAPHY NECESSARY AFTER HEMINEPHRECTOMY IN CHILDREN?
Andrew Strine, MD1, Benjamin Whittam, MD1, Katherine Hubert, MD, MPH1, Rosalia Misseri, MD1, Martin Kaefer, MD1, Richard Rink, MD1, Boaz Karmazyn, MD2 and Mark Cain, MD1
1Division of Pediatric Urology, Riley Hospital for Children at Indiana University Health, Indiana University School of Medicine; 2Section of Pediatric Radiology, Riley Hospital for Children at Indiana University Health, Indiana University School of Medicine
(Presented By: Andrew Strine, MD)

9:00 a.m. #7 EMERGENCY DEPARTMENT MANAGEMENT AFTER ULTRASOUND FOR TESTICULAR TORSION: WHAT HAPPENS NEXT?
Kristina Suson, MD1, Cortney Wolfe-Christensen, PhD1, Jack Elder, MD2 and Yegappan Lakshmanan, MD1
1Children’s Hospital of Michigan; 2Henry Ford Health System
(Presented By: Kristina Suson, MD)

9:05 a.m. #8 25 YEAR PERSPECTIVE ON ALPHA BLOCKERS IN VOIDING DYSFUNCTION: A META−ANALYSIS
Kristina Suson, MD, Larisa Kovacevic, MD and Yegappan Lakshmanan, MD
Children’s Hospital of Michigan
(Presented By: Kristina Suson, MD)

9:10 a.m. #9 FOLLOW−UP REGIMEN AND TIME TO PRESENTATION OF COMPLICATIONS AFTER HYPOSPADIAS REPAIR
Mark Faasse, MD and Dennis Liu, MD
Ann & Robert H. Lurie Children’s Hospital of Chicago
(Presented By: Mark Faasse, MD)

9:15 a.m. #10 CONSERVATIVE VERSUS SURGICAL MANAGEMENT OF MULTICYSTIC DYSPLASTIC KIDNEY (MCDK) FROM THE COST ANALYSIS POINT OF VIEW
Marawan El Tayeb, MD, Akwasi Boateng, MD, Marion Schulte and Paul Noh, MD
Cincinnati Children’s Hospital Medical Center
(Presented By: Marawan El Tayeb, MD)
9:20 a.m.  #153 WHAT REALLY HAPPENS IN BOYS’ LOCKER ROOMS?
Siobhan Alexander, Douglas Storm, MD and Christopher Cooper, MD
University of Iowa
(Presented By: Siobhan Alexander)

9:25 a.m.  #154 VESICOURETERAL REFLUX (VUR) OCCURRING AT LOW BLADDER VOLUME PREDISPOSES CHILDREN TO PYELONEPHRITIS
Siobhan Alexander, Douglas Storm, MD, Kathleen Kieran, MD and Christopher Cooper, MD
University of Iowa
(Presented By: Siobhan Alexander)

9:30 a.m. – 9:35 a.m.  Q&A

9:35 a.m. – 9:45 a.m.  Announcements
Local Arrangements Chair: John V. Kryger, MD
Milwaukee, WI

9:45 a.m. – 10:10 a.m.  Break – Visit Exhibits
Location: Zurich Ballrooms D-G

CONCURRENT SESSIONS

10:10 a.m. – 11:30 a.m.  Young Urologists Program
Location: St. Gallen I & II
Moderator: Aaron J. Milbank, MD
St. Paul, MN

10:10 a.m. – 10:15 a.m.  Introduction
Aaron J. Milbank, MD
St. Paul, MN

10:15 a.m. – 11:20 a.m.  Tips and Tricks on the Business and Balance Of Your Urology Practice
Neil H. Baum, MD
New Orleans, LA

11:20 a.m. – 11:30 a.m.  Q&A

10:45 a.m. – 11:30 a.m.  Prostate – Malignant I Podium Session
Moderators: Timothy Masterson, MD
Indianapolis, IN
Hans J. Stricker, MD
Detroit, MI

Discussant: Brent K. Hollenbeck, MD
Ann Arbor, MI
10:45 a.m.  #11  CURRENT SMOKING ASSOCIATES WITH EXTRAPROSTATIC EXTENSION OF PROSTATE CANCER AT THE TIME OF RADICAL PROSTATECTOMY
Stephen Hurley, DO¹, Patricia Vidal, MD¹, Robert Flanigan, MD², Jeffrey Branch, MD², Marcus Quek, MD², Daisy Cintron, MA³, Leslie Deane, MD⁴, Li Lui⁵, Qiang Zhang⁵, Vincent Freeman, MD, MPH⁵ and Courtney M.P. Hollowell, MD¹
¹Division of Urology, Cook County Hospital, Cook County Health and Hospitals System; ²Department of Urology, Loyola University Health System; ³Institute for Health Research and Policy, University of Illinois at Chicago; ⁴Department of Urology, University of Illinois at Chicago; ⁵Division of Epidemiology and Biostatistics, University of Illinois at Chicago
(Presented By: Stephen Hurley, DO)

10:50 a.m.  #12  LONG-TERM INCIDENCE OF HEMATURIA, URETHRAL STRICTURE, AND BLADDER CANCER FOLLOWING RADIATION THERAPY FOR PROSTATE CANCER
Robert Blackwell, MD¹, Alexander Kandabarow, BD², Gopal Gupta, MD¹, Matthew Harkenrider, MD¹, Marcus Quek, MD¹ and Robert Flanigan, MD¹
¹Loyola University Medical Center; ²Loyola University Stritch School of Medicine
(Presented By: Alexander Kandabarow, BD)

10:55 a.m.  #13  RISK STRATIFICATION IN ACTIVE SURVEILLANCE USING THE BADGR NOMOGRAM
Jonathan Shiau, MD¹, Matthew Truong, MD², Jon Slezak³, E. Jason Abel, MD¹, Tracy Downs, MD¹ and David Jarrard, MD¹
¹University of Wisconsin, Department of Urology; ²University of Rochester, Department of Urology; ³University of Wisconsin School of Medicine
(Presented By: Jonathan Shiau, MD)

11:00 a.m.  #14  GENETIC CORRECTION OF PSA CAN REDUCE THE NUMBER OF MEN DIAGNOSED WITH POTENTIALLY INSIGNIFICANT PROSTATE CANCER: RESULTS FROM A SURGICAL AND ACTIVE SURVEILLANCE COHORT
James Kearns, MD¹, Brian Helfand, MD, PhD¹, Kimberly Roehl, Kristian Novakovic, MD¹, Philip Cooper and William Catalona, MD²
¹NorthShore University Health System; ²Northwestern University
(Presented By: James Kearns, MD)
11:05 a.m.  #15  DISTINGUISHING INDOLENT FROM AGGRESSIVE PROSTATE CANCER IN ACTIVE SURVEILLANCE USING PARTIALWAVE SPECTROSCOPY TO MEASURE NANOCYTOLOGICAL FIELD CARCINOGENESIS
James Kearns, MD, Brian Helfand, MD, PhD, Charles Brendler, MD, Hermant Roy, Chi−Hsiung Wang, Kristian Novakovic, MD, Hariharan Subramanian, Di Zhang, Charles Maneval and Vadim Backman
NorthShore University Health System
(Presented By: James Kearns, MD)

11:10 a.m.  #16  DELAYING RADICAL PROSTATECTOMY DOES NOT INCREASE RISK OF ADVERSE PATHOLOGICAL OUTCOMES AMONG MEN WITH LOW−RISK PROSTATE CANCER
Adam Weiner, BS, Sanjay Patel, MD and Scott Eggener, MD
University of Chicago
(Presented By: Adam Weiner, BS)

11:15 a.m.  #17  VALIDATION OF THE ICOGS PROSTATE CANCER RISK LOCI AND ASSOCIATIONS WITH AGGRESSIVE PATHOLOGY IN AN INDEPENDENT SURGICAL COHORT
James Kearns, MD1, Kimberly Roehl, Philip Cooper, William Catalona, MD2 and Brian Helfand, MD, PhD1
1NorthShore University Health System; 2Northwestern University
(Presented By: James Kearns, MD)

11:20 a.m. – 11:30 a.m.  Q&A

10:45 a.m. – 11:30 a.m.  Laparoscopy/Robotics-Kidney Podium Session
Location: Montreux
Moderators:  David F. Jarrard, MD
Madison, WI
James O. Peabody, MD
Detroit, MI
Discussant:  Chandru P. Sundaram, MD
Indianapolis, IN

10:45 a.m.  #18  IMPACT OF HOSPITAL VOLUME ON POSTOPERATIVE COMPLICATIONS FOLLOWING ROBOT−ASSISTED PARTIAL NEPHRECTOMY
M. Francesca Monn, MD, MPH, Clinton D. Bahler, MD, Chandra K. Flack, Hitesh T. Dube, BS and Chandru P. Sundaram, MD
Indiana University School of Medicine Department of Urology
(Presented By: Chandra K. Flack)
10:50 a.m.  #19  WHAT FACTORS ARE ASSOCIATED WITH 30 DAY HOSPITAL READMISSION FOLLOWING RADICAL AND PARTIAL NEPHRECTOMY FOR RENAL MALIGNANCY?  
Neil Patel, Francesca Monn, MD, Clinton Bahler, MD and Chandru Sundaram, MD  
Indiana University School of Medicine  
(Presented By: Neil Patel)

10:55 a.m.  #20  PEDIATRIC OPEN AND ROBOT-ASSISTED LAPAROSCOPIC PYELOPLASTY: A COMPARATIVE SINGLE INSTITUTION STUDY  
Marawan El Tayeb, MD, Christopher Bean, MD, Zachary Liss, MD, John Murray, MD, Marion Schulte, Brian Vanderbrink, MD, W. Robert Defoor, MD, Pramod Reddy, MD, Eugene Minevich, MD, Curtis Sheldon, MD and Paul Noh, MD  
Cincinnati Children’s Hospital Medical Center  
(Presented By: Marawan El Tayeb, MD)

11:00 a.m.  #21  PERIOPERATIVE BLOOD TRANFUSION WITH PARTIAL NEPHRECTOMY IDENTIFIES PATIENTS AT RISK FOR PSEUDOANEURYSM  
Robert Blackwell, MD, Alex Gorbonos, MD, Ahmer Farooq, DO, Marcus Quek, MD and Gopal Gupta, MD  
Loyola University Medical Center  
(Presented By: Robert Blackwell, MD)

11:05 a.m.  #22  MULTI-INSTITUTIONAL EXPERIENCE WITH ROBOTIC NEPHRECTOMY WITH IVC TUMOR THROMBECTOMY  
Ronney Abaza, MD, FACS¹, Erik Castle, MD, FACS², Jim Hu, MD, MPH³, Monish Aron, MD⁴, Elton Lillukani, MD⁵, Sameer Chopra, MD⁶, Michael Patton⁷, Daniel Salevitz⁸, William Stone, MD⁹, Richard Fowl, MD⁹ and Daniel Eun, MD⁵  
¹OhioHealth Dublin Methodist Hospital; ²Mayo Clinic Arizona Department of Urology; ³UCLA Department of Urology; ⁴USC Department of Urology; ⁵Temple University Department of Urology; ⁶Mayo Medical School; ⁷Mayo Clinic Arizona Department of Vascular Surgery  
(Presented By: Ronney Abaza, MD, FACS)
11:10 a.m. #23 ROBOTIC-ASSISTED HEALTHY MARGIN VS ENUCLEO-RESECTION PARTIAL NEPHRECTOMY FOR T1 RENAL TUMORS: A MULTI-INSTITUTIONAL ANALYSIS OF PERIOPERATIVE OUTCOMES
Robert Blackwell, MD1, Jeromy Hackney, MD2, Jessica Wetterlin, MD1, Clinton Bahler, MD2, Ronald Boris, MD2, Chandru Sundaram, MD2, Marcus Quek, MD1 and Gopal Gupta, MD1
1Loyola University Medical Center; 2Indiana University
(Presented By: Robert Blackwell, MD)

11:15 a.m. #24 CONTEMPORARY NATIONAL SURGICAL OUTCOMES IN THE TREATMENT OF URETEROPELVIC JUNCTION OBSTRUCTION REVEALS MAJOR CHANGE IN SURGICAL APPROACH
Daniel Oberlin, MD, Barry McGuire, MD, Matthew Pilecki, Aksharananda Rambachan, John Kim, MD, Kent Perry, MD and Robert Nadler, MD
Northwestern Memorial Hospital, Feinberg School of Medicine
(Presented By: Daniel Oberlin, MD)

11:20 a.m. – 11:30 a.m. Q&A

10:45 a.m. – 11:30 a.m. Ask the Expert: Current Management of UTI and Reflux in Children: Interpreting the Guidelines
Location: St. Gallen III
Moderator: Christopher S. Cooper, MD
Iowa City, IA

Guest Speaker: Craig A. Peters, MD
Washington, DC

GENERAL SESSION

11:30 a.m. – 12:00 p.m. Biomarkers in Prostate Cancer: The New Frontier
Moderator: William J. Catalona, MD
Chicago, IL

Speakers: Kathleen A. Cooney, MD
Ann Arbor, MI
Joel B. Nelson, MD
Pittsburgh, PA

12:00 p.m. – 1:15 p.m. Industry Sponsored Luncheon
Location: Zurich A
(See page 8 for full information)
12:00 p.m. – 1:15 p.m.  Industry Sponsored Luncheon  
Location: Zurich B  
(See page 8 for full information)

1:20 p.m. – 1:50 p.m.  Special Lecture: Staghorn Stones, Lessons Learned from Dr. William H. Boyce and Thereafter!  
Guest Speaker:  Dean G. Assimos, MD  
Birmingham, AL

CONCURRENT SESSIONS

1:50 p.m. – 2:40 p.m.  Endourology/Stone Disease Podium Session  
Location: Montreux  
Moderators:  Bodo E. Knudsen, MD, FRCSC  
Columbus, OH  
Bradley F. Schwartz, DO, FACS  
Springfield, IL  
Discussant:  Amy E. Krambeck, MD  
Rochester, MN

1:50 p.m.  #25  OUTCOMES OF URETEROSCOPIC STONE TREATMENT IN SPINAL CORD INJURED PATIENTS  
Duncan Morhardt, MD, PhD\(^1\), J. Stuart Wolf, Jr., MD\(^2\), Gary Faerber, MD\(^2\), William Roberts, MD\(^2\), John Stoffel, MD\(^2\) and Anne Pelletier-Cameron, MD\(^2\)  
\(^1\)University of Michigan; \(^2\)Univeristy of Michigan, Department of Urology  
(Presented By: Duncan Morhardt, MD, PhD)

1:55 p.m.  #26  EVALUATION OF ENDOSCOPY, FLUOROSCOPY, AND CYTOLOGY TO DETECT UPPER TRACT UROTHELIAL CARCINOMA  
Matthias Hofer, MD, PhD, Elodi Dielubanza, MD and Robert Nadler, MD  
Northwestern University  
(Presented By: Matthias Hofer, MD, PhD)

2:00 p.m.  #27  DIETARY COUNSELING FOR STONE PREVENTION: DO PATIENTS REMEMBER?  
Margaret Wertheim, MS, Stephen Nakada, MD and Kristina Penniston, PhD  
Dept. of Urology, University of Wisconsin School of Medicine and Public Health  
(Presented By: Margaret Wertheim, MS)
2:05 p.m. #28 VASCULAR COMPLICATIONS FOLLOWING PERCUTANEOUS NEPHROLITHOTOMY: 10 YEARS OF EXPERIENCE
Marawan El Tayeb, MD, John Knoedler, MD, Amy Krambeck, MD, Jessica Paonessa, MD, Mathew Melon, MD and James Lingeman, MD
1IUH, Methodist Hospital; 2Mayo Clinic, Rochester
(Presented By: Marawan El Tayeb, MD)

2:10 p.m. #29 STAGHORN AND LARGE RENAL CALCULI MAINLY CAUSED BY METABOLIC ABNORMALITIES
Avinash Chennamsetty, MD, David Pridmore, MD, David Wenzler, MD, Ronald Rubenstein, MD and Bradley Rosenberg, MD
Beaumont Health System
(Presented By: Avinash Chennamsetty, MD)

2:15 p.m. #30 CLINICAL, METABOLIC, AND HISTOLOGIC RISK FACTORS FOR PLUG FORMATION IN IDIOPATHIC CALCIUM OXALATE STONE FORMERS
Marcelino Rivera, MD, Patrick Cockerill, MD, John Lieske, MD, Eric Bergstralh, Ramy Mehta and Amy Krambeck, MD
Mayo Clinic
(Presented By: Marcelino Rivera, MD)

2:20 p.m. #31 VESICOURETERAL REFLUX, URETEROPELVIC JUNCTION OBSTRUCTION AND ADULT STONE FORMERS
Mitra de Cógáin and Amy Krambeck
Mayo Clinic
(Presented By: Mitra de Cógáin)

2:25 p.m. #32 24 HOUR URINE AND SERUM CHEMISTRIES OF 100% URIC ACID STONE FORMERS: IS THERE A DIFFERENCE?
Chad Reichard, MD, Shubha De, MD, Carl Sarkissian, CCRP and Manoj Monga, MD
Cleveland Clinic Glickman Urological and Kidney Institute
(Presented By: Chad Reichard, MD)

2:30 p.m. – 2:40 p.m. Q&A
1:50 p.m. – 2:40 p.m. **Kidney Malignant I Podium Session**

*Location: St. Gallen I & II*

**Moderators:**
- William K. Johnston, III, MD
  - Novi, MI
- Aaron J. Milbank, MD
  - St. Paul, MN

**Discussant:**
- Khaled S. Hafez, MD
  - Ann Arbor, MI

1:50 p.m. #33 **POSITIVE VASCULAR MARGINS AT TUMOR THROMBECTOMY FOR RENAL CELL CARCINOMA ARE ASSOCIATED WITH INFERIOR CANCER OUTCOMES**

Sarah Psutka, MD1, R. Houston Thompson, MD1, Alonso Carrasco, MD1, Christine Lohse, MS2, Suzanne Stewart, MD1, Stephen Boorjian, MD1, John Cheville, MD3 and Bradley Leibovich, MD1

1Department of Urology, Mayo Clinic; 2Department of Health Sciences Research; 3Department of Pathology, Mayo Clinic

(Presented By: Sarah Psutka, MD)

1:55 p.m. #34 **MULTICENTER VALIDATION OF ABILITY OF SURGEON ASSESSMENT OF RENAL PRESERVATION IN COMPARISON TO MEASUREMENT WITH 3D IMAGE ANALYSIS**

Conrad Tobert, MD1, Toshio Takagi, MD2, Michael Liss, MD3, Ithaar Derweesh, MD3, Steven Campbell, MD, PhD2 and Brian Lane, MD, PhD4

1University of Iowa; 2Cleveland Clinic; 3University of California San Diego; 4Spectrum Health Hospital System and Michigan State University College of Human Medicine

(Presented By: Conrad Tobert, MD)

2:00 p.m. #35 **EFFECT OF OBESITY ON THE PERIPHERAL IMMUNE SIGNATURE IN RENAL CELL CARCINOMA (RCC)**

Laura Bertrand, MD1, Megan T. Bing, MD1, Gal Wald1, Kenneth G. Nepple, MD1, James A. Brown, MD1 and Lyse A. Norian, PhD2

1Department of Urology, The University of Iowa Hospitals and Clinics; 2Department of Pathology, The University of Iowa Hospitals and Clinics; Interdisciplinary Graduate Program in Immunology, The University of Iowa

(Presented By: Laura Bertrand, MD)
EVALUATION OF RENAL FOSSA RECURRENCES FOLLOWING NEPHRECTOMY FOR RENAL CELL CARCINOMA
Sarah Psutka, MD¹, Mark Heidenreich², Stephen Boorjian, MD¹, John Cheville, MD³, Suzanne Stewart, MD¹, Christine Lohse, MS⁴, Thomas Atwell, MD⁵, Brian Costello, MD⁶, Bradley Leibovich, MD¹ and R. Houston Thompson, MD¹
¹Department of Urology, Mayo Clinic; ²Mayo Medical School; ³Department of Pathology, Mayo Clinic; ⁴Department of Health Sciences Research, Mayo Clinic; ⁵Department of Radiology, Mayo Clinic; ⁶Department of Oncology, Mayo Clinic
(Presented By: Sarah Psutka, MD)

COMPARISON OF PARTIAL NEPHRECTOMY AND PERCUTANEOUS ABLATION FOR CT1A RENAL MASSES
R. Houston Thompson, MD, Grant Schmit, MD, Stephen Boorjian, MD, Anil Kurup, MD, Christine Lohse, MS, Sarah Psutka, MD, Suzanne Stewart, MD, Bradley Leibovich, MD and Tom Atwell, MD
Mayo Clinic
(Presented By: R. Houston Thompson, MD)

COST ANALYSIS OF METALLIC STENTS FOR CHRONIC URETERAL OBSTRUCTION: A MULTI-CENTER STUDY
Luke Frederick, MD¹, Adam Kadlec, MD², Chad Ellimoottil, MD², Arpeet Shah, MD², Thomas Turk, MD² and Bradley Schwartz, MD¹
¹SIU School of Medicine; ²Loyola
(Presented By: Luke Frederick, MD)

DOWNREGULATION OF DYSTROGLYCAN GLYCOSYLTRANSFERASES CORRELATE WITH INCREASED MORTALITY IN CLEAR CELL RENAL CELL CARCINOMA
Michael Miller, Qin Huang, PhD, Deqin Ma, PhD, Patrick Breheny, PhD, James Schappet, Ryan Lorentzen, Sarah Mott, Eric Askeland, MD, James Brown, MD and Michael Henry, MD
University of Iowa
(Presented By: Eric Askeland, MD)
ROBOTIC−ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY (RALPN) IN PATIENTS WITH A SOLITARY KIDNEY: A MULTI−INSTITUTIONAL REVIEW OF INITIAL ONCOLOGICAL AND FUNCTIONAL RESULTS
Adam Calaway, MD1, Clint D. Bahler1, Gopal Gupta, MD2, Akshay Bandari, MD3, Daniel Eun, MD4, Chandru P. Sundaram, MD1 and Ronald S. Boris, MD1
1Indiana University School of Medicine; 2Loyola University; 3Mount Sinai Medical Center; 4Temple University
(Presented By: Adam Calaway, MD)

Q&A

Ask the Expert: Open Radical Prostatectomy in the Days of the Robot: Really?
Moderator: Robert C. Flanigan, MD
Maywood, IL

Guest Speaker: Joel B. Nelson, MD
Pittsburgh, PA

GENERAL SESSION

Special Lecture: Role of the Pubovaginal Fascial Sling in 2014
Invited Speaker: E. Ann Gormley, MD
Lebanon, NH

Urinary Incontinence/Neurourology Podium Session
Moderator: Larry T. Sirls, II, MD
Royal Oak, MI

Discussant: Karl J. Kreder, Jr., MD
Iowa City, IA

EVALUATING AN IMPLANTABLE WIRELESS PRESSURE SENSOR FOR USE IN THE URINARY TRACT
Brian Le, MD, MA1, Alberto Colombo, PhD2, Harry Rowland, PhD3, Kevin McVary, MD2 and Kevin McKenna, PhD4
1Johns Hopkins Hospital; 2Southern Illinois University;
3Endotronix; 4Northwestern University
(Presented By: Brian Le, MD, MA)
3:00 p.m. #42 INTERIM ANALYSIS OF THE LONG-TERM EFFICACY AND SAFETY OF REPEAT ONABOTULINUMTOXINA IN THE TREATMENT OF OVERACTIVE BLADDER AND URINARY INCONTINENCE, MEDIAN 2.4 YEARS’ FOLLOW UP
Victor Nitti, MD1, Christopher Chapple, MD2, David Sussman, MD3, Sidney Radomski, MD4, Peter Sand, MD5, Steve Guard, PhD6, Jihao Zhou, PhD7 and Karl–Dietrich Sievert, MD8
1NYU Langone Medical Center; 2Sheffield Teaching Hospitals NHS Foundation Trust; 3Rowan University School of Osteopathic Medicine; 4University of Toronto; 5University of Chicago; 6Allergan, Ltd.; 7Allergan, Inc.; 8University of Tuebingen
(Presented By: David Sussman, MD)

3:05 p.m. #43 ELECTROSURGICAL MANAGEMENT OF HUNNER’S ULCERS
Avinash Chennamsetty, MD, Jonathan Goike, BS, Kim Killinger, MSN, Benjamin Girdler, MD and Kenneth Peters, MD
Beaumont Health System
(Presented By: Avinash Chennamsetty, MD)

3:10 p.m. #44 NEUROGENIC BLADDER PRESENTING TO THE EMERGENCY DEPARTMENT IN THE UNITED STATES: ADMISSION RATES AND ASSOCIATED MORTALITY
Jessica Meyers, MD1, Marianne Schmid, MD2, Akshay Sood, MD1, Quoc–Dien Trinh, MD2 and Humphrey Atiemo, MD1
1Henry Ford Hospital; 2Brigham’s and Women’s Urology
(Presented By: Jessica Meyers, MD)

3:15 p.m. #45 URINARY INCONTINENCE AND SATISFACTION WITH TREATMENTS AFTER ROBOTIC ASSISTED RADICAL PROSTATECTOMY
Avinash Chennamsetty, MD, Behdod Poushanchi, BS, Scott Pew, BS, Jay Hollander, MD, Kim Killinger, MSN, Mary Coffey, PhD, Kenneth Peters, MD and Jason Hafron, MD
Beaumont Health System
(Presented By: Avinash Chennamsetty, MD)
ROLE OF SURVEILLANCE CYSTOSCOPY AFTER AUGMENTATION CYSTOPLASTY
Balaji Kalyanaraman, MD, PhD, Patrick Hoversten, MD, Joseph Fleck, BA and Sean Elliott, MD, MS
University of Minnesota
(Presented By: Balaji Kalyanaraman, MD, PhD)

URETHRAL PRESSURE MEASUREMENTS CAN BE USED DURING URODYNAMICS TO DETECT DETRUSOR SPHINCTER DYSSYNERGIA IN MULTIPLE SCLEROSIS AND SPINAL CORD INJURY PATIENTS
Lindsey Cox, MD, Anne Pelletier Cameron, MD, Ann Oldendorf, MD, J. Quentin Clemens, MD and John Stoffel, MD
University of Michigan
(Presented By: Lindsey Cox, MD)

Q&A

Panel Discussion: Controversial Cases in Endourology
Moderator: Amy E. Krambeck, MD
Rochester, MN
Panelists: Dean G. Assimos, MD
Birmingham, AL
Khurshid Ghani, MS, FRCS
Ann Arbor, MI
Manoj Monga, MD
Cleveland, OH

CONCURRENT SESSIONS

Prostate Malignant II Podium Session
Moderators: Frank P. Begun, MD
Columbus, OH
Stephen A. Boorjian, MD
Rochester, MN
Discussant: Timothy Masterson, MD
Indianapolis, IN

DISPARITIES IN ACTIVE SURVEILLANCE FOR LOW RISK PROSTATE CANCER BETWEEN AFRICAN AMERICAN AND CAUCASIAN MALES
Travis Pagliara, MD, MDFin, Oluwakayode Oluwakayode Adejoro, MD, MPH and Badrinath Konety, MD, MBA
University of Minnesota
(Presented By: Travis Pagliara, MD, MDFin)
4:35 p.m.  #49 THE IMPACT OF MALPRACTICE CAPS ON ADOPTION OF MINIMALLY INVASIVE RADICAL PROSTATECTOMY (MIRP)
Badrinath Konety, MD, MBA and Oluwakayode Adejoro, MD, MPH
University of Minnesota
(Presented By: Badrinath Konety, MD, MBA)

4:40 p.m.  #50 ACTIVE SURVEILLANCE FOR LOW−RISK PROSTATE CANCER IN A STATE−WIDE QUALITY IMPROVEMENT COLLABORATIVE
Paul R. Womble, MD¹, James E. Montie, MD¹, Zaojun Ye, MS¹, Susan M. Linsell, MHSA¹, Brian R. Lane, MD, PhD² and David C. Miller, MD, MPH¹
¹University of Michigan; ²Spectrum Health Medical Group
(Presented By: Paul R. Womble, MD)

4:45 p.m.  #51 MAGNETIC RESONANCE IMAGE GUIDED TRANSURETHRAL ULTRASOUND ABLATION (TULSA) OF PROSTATE CANCER: PRELIMINARY OUTCOMES OF A PHASE I MULTI−CENTER CLINICAL TRIAL
Jason Hafron, MD¹, Kiran Nandular, MD², Mathieu Burtnyk, PhD³, Joseph Chin, MD⁴, Michele Billia, MD⁴, Sascha Pahernik, MD⁵, Matthias Roethke, MD⁵, Heinz− Peter Schlemmer, MD⁵ and James Relle, MD¹
¹Department of Urology, Beaumont Health System, Royal Oak, MI, United States; ²Department of Radiology, Beaumont Health System, Royal Oak, MI, United States; ³Profound Medical Inc., Toronto ON, Canada; ⁴Western University, London Health Sciences Center, London Victoria Hospital, London ON, Canada; ⁵Department of Radiology, German Cancer Research Center DKFZ, and Department of Urology, University Hospital, Heidelberg, Germany
(Presented By: Jason Hafron, MD)

4:50 p.m.  #52 INCREASED LYSOSOMAL B−GALACTOSIDASE (GLB1) EXPRESSION IS A SENESCENCE MARKER AND IDENTIFIES INDOLENT PROSTATE CANCER
Jennifer Wagner, BA¹, Nathan Damaschke, BS², Bing Yang, PhD³, Matthew Truong, MD², Chad Guenther, MA², Wei Huang, MD¹ and David Jarrard, MD²
¹University of Wisconsin Madison; ²Department of Urology, University of Wisconsin−School of Medicine and Public Health, Madison, WI; ³Department of Pathology and Laboratory Medicine, University of Wisconsin−School of Medicine and Public Health, Madison, WI
(Presented By: Jennifer Wagner, BA)
4:55 p.m.  #53  TRIPTOLIDE INDUCES APOPTOTIC CELL DEATH IN PROSTATE CANCER (CAP) CELLS BY DOWN REGULATING ANDROGEN RECEPTOR–HEAT SHOCK PROTEINS COMPLEX (AR–HSP) Ayman Soubra, MD, Sumit Isharwal, MD, Sulagna Banerjee, PhD, Ashok Saluja, PhD and Badrinath Konety, MD University of Minnesota (Presented By: Ayman Soubra, MD)

5:00 p.m.  #54  FUNCTIONAL OUTCOMES OF ROBOTIC ASSISTED LAPAROSCOPIC PROSTATECTOMY (RALP) VERSUS OPEN RADICAL RETROPUBIC PROSTATECTOMY (RRP) Michael Strigenz, BS¹, Michael Moriarty, BS¹, Mark Newton, MD², Kenneth Nepple, MD² and James Brown, MD² ¹University of Iowa; ²University of Iowa Department of Urology (Presented By: Michael Strigenz, BS)

5:05 p.m.  #55  POPULATION–BASED ANALYSIS OF TREATMENT MODALITIES AND SURVIVAL FOR LOCALIZED SMALL–CELL CARCINOMA OF THE PROSTATE Adam Weiner, BS, Sanjay Patel, MD, Kyle Richards, MD, Russell Szmulewitz, MD and Scott Eggener, MD University of Chicago (Presented By: Adam Weiner, BS)

5:10 p.m.  #56  FATTY ACID (FA) COMPOSITION OF PERIPROSTATIC ADIPOSE (PPA) TISSUE CAN PREDICT PROSTATE CANCER (PCA) AGGRESSIVENESS Kristian Novakovic, MD¹, Palamadai Venkatasubramanian, PhD¹, George Iordanescu, PhD¹, Jennifer Doll, PhD², Alice Wyrwicz, PhD¹ and Charles Brendler, MD¹ ¹NorthShore University HealthSystem; ²University of Wisconsin–Milwaukee (Presented By: Kristian Novakovic, MD)

5:15 p.m.  #57  LOW DOSE GTX–758 DECREASES FREE TESTOSTERONE AND PSA IN MEN WITH METASTATIC CASTRATION RESISTANT PROSTATE CANCER (MCRPC) Robert Getzenberg, PhD¹, Evan Yu, MD², Jordan Smith, MS¹, Michael Hancock, MS¹, Ronald Tutrone, MD³, Thomas Flaig, MD¹, Karl Westenfelder, MD², Miklós Szucs, MD⁶, James Dalton, PhD¹ and Mitchell Steiner, MD¹ ¹GTx Inc; ²University of Washington and Seattle Cancer Care Alliance; ³CURA; ⁴University of Colorado; ⁵Five Valleys Urology; ⁶Semmelweis University (Presented By: Robert Getzenberg, PhD)
5:20 p.m.  #58  PCA3 VARIABILITY IN OBESE AND NON–OBESE MEN ON ACTIVE SURVEILLANCE
Kristian Novakovic, MD, Chihsiung Wang, PhD, Charles Brendler, MD, Michael McGuire, MD and Brian Helfand, MD, PhD
NorthShore University HealthSystem
(Presented By: Kristian Novakovic, MD)

5:25 p.m.  #59  DUCTAL CARCINOMA OF THE PROSTATE: CONTEMPORARY COMPARISON WITH HIGH RISK ACINAR ADENOCARCINOMA
Vignesh Packiam, MD, Sanjay Patel, MD, Kyle Richards, MD, Adam Weiner, BS, Greg Zagaja, MD and Scott Eggener, MD
University of Chicago
(Presented By: Vignesh Packiam, MD)

5:30 p.m. – 5:45 p.m.  Q&A

4:30 p.m. – 5:45 p.m.  Pediatric Urology Poster Session
Location: Currents
Moderator:  Earl Y. Cheng, MD
Chicago, IL

Poster #1  CAN THE EXTERNAL MASCULINIZATION SCORE PREDICT SUCCESS OF GENETIC TESTING IN 46,XY DSD?
Ruthie Su, MD1, Margaret Adam, MD2, Patricia Fechner, MD2, Paul Merguerian, MD, MS2 and Margaret Shnorhavorian, MD, MPH2
1University of Wisconsin; 2Seattle Children’s Hospital, University of Washington
(Presented By: Ruthie Su, MD)

Poster #2  EXPERIENCE WITH UROLOGICAL APPLICATION OF BOTULINUM TOXIN INJECTION IN PEDIATRIC POPULATION WITH MEDICALLY REFRACTORY NEUROPATHIC BLADDER
Brian VanderBrink, MD, Muhammad K. Khan, MD, W. Robert DeFoor, MD, Eugene Minevich, MD, Paul Noh, MD, Elizabeth Jackson, MD, Pramod P. Reddy, MD
Cincinnati Children’s Hospital Medical Center
(Presented By: Brian VanderBrink, MD)
**Poster #3**

**COMPARISON OF PEDIATRIC ROBOTIC ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY AND LAPAROENDOSCOPIC SINGLE SITE PARTIAL NEPHRECTOMY**

Zachary Liss, MD¹, Christopher Bean, MD¹, Nicholas Cost, MD², Marion Schulte¹, W. Robert Defoor, MD¹, Pramod Reddy, MD¹, Brian VanderBrink, MD¹, Eugene Minevich, MD¹ and Paul Noh, MD¹

¹Cincinnati Children’s Hospital; ²Children’s Hospital Colorado

(Presented By: Zachary Liss, MD)

**Poster #4**

**CAN TEACHING OF SOCIETY FOR FETAL UROLOGY (SFU) GRADING OF PEDIATRIC HYDRONEPHROSIS (HN) BE IMPROVED BY COMPUTER ENHANCED VISUAL LEARNING (CEVL): A MULTI–INSTITUTIONAL AND MULTI–SPECIALTY TRIAL**

Dennis Liu, MD¹, Blake Palmer, MD², CD Herndon, MD³ and Max Maizels, MD¹

¹Ann and Robert H. Lurie Children’s Hospital of Chicago; ²University of Oklahoma Medical Center; ³University of Virginia Medical Center

(Presented By: Dennis Liu, MD)

**Poster #5**

**CHANGING MANAGEMENT OF URETEROCELES**

Michael Levin, MD¹, David Weatherly, MD¹, Brian Roelof, MD², Theodore Barber, MD², Jeff Pugach, MD³ and George Steinhardt, MD²

¹Wayne State University; ²Helen Devos Childrens Hospital; ³Cook Childrens Hospital

(Presented By: Michael Levin, MD)

**Poster #6**

**CHARACTERIZATION OF THE MURINE BLADDER RESPONSE TO SUBTOTAL CYSTECTOMY: A MODEL OF MAMMALIAN ORGAN REGENERATION**

Grace Delos Santos, MD¹, Andrew Flum, MD², Natalie Kukulka, BA³, Meredith Lilly, BA³, Robert Dettman, PhD³ and Edward Gong, MD³

¹Loyola University Medical Center; ²Feinberg School of Medicine, Northwestern University; ³Anne and Robert H. Lurie Children’s Hospital

(Presented By: Grace Delos Santos, MD)
Poster #7

LAPROENDOSCOPIC SINGLE SITE AND TWO-PORT VARICOCELECTOMY: A COMPARATIVE STUDY IN THE PEDIATRIC POPULATION

Noah Allen, MD¹, Paul Noh, MD², Eugene Minevich, MD² and Pramod Reddy, MD²

¹University of Cincinnati; ²Cincinnati Childrens Hospital Medical Center

(Presented By: Noah Allen, MD)

Poster #8

UNDERLYING DISEASE DOES NOT PREDICT SERUM B12 DEFICIENCY FOLLOWING ILEOCYSTOPLASTY

Alison Keenan, MD, Konrad Szymanski, MD, Shelly King, NP, Melissa Young, NP, Benjamin Whittam, MD, Rosalia Misseri, MD, Martin Kaefer, MD, Richard Rink, MD and Mark Cain, MD

IU Health Dept of Pediatric Urology

(Presented By: Alison Keenan, MD)

Poster #9

“THE RETROGRADE” TECHNIQUE OF PEDIATRIC ROBOTIC ASSISTED LAPAROSCOPIC HEMINEPHRECTOMY− DESCRIPTION OF TECHNIQUE & RENAL OUTCOMES

Rena Malik, MD and Mohan S. Gundeti, MB, MCh, FEBU, FRCS (Urol), FEAPU

University of Chicago Medical Center

(Presented By: Rena Malik, MD)

Poster #10

URINARY RETENTION AMONG PATIENTS UNDERGOING BILATERAL EXTRAvesical ROBOTIC URETERAL REIMPLANTATION

David Hatcher, MD, Anup Shah and Mohan S. Gundeti, MB, MCh, FEBU, FRCS, FEAPU

The University of Chicago Medical Center

(Presented By: David Hatcher, MD)

Poster #11

OPEN VERSUS ROBOTIC−ASSISTED LAPAROSCOPIC AUGMENTATION ILEOCYSTOPLASTY AND MITROFANOFF APPENDICOVESICOSTOMY (RALIMA) IN CHILDREN

Prithvi Murthy, BA, Joshua Cohn, MD and Mohan Gundeti, MD

University of Chicago

(Presented By: Prithvi Murthy, BA)
Poster #12
THE MADISON ALGORITHM FOR ANTENATAL MANAGEMENT OF DISORDERS OF SEXUAL DIFFERENTIATION
Andy Radtke, Jennifer E. Heckman, MD, Jennifer L. Rehm, MD and Patrick H. McKenna, MD
UW Madison School of Medicine and Public Health
(Presented By: Andy Radtke)

Poster #13
THE DOUBLE BARREL SHOTGUN TECHNIQUE FOR IMPLANTATION OF DEFLUX IN THE TREATMENT OF VESICOURETERAL REFLUX: DESCRIPTION OF TECHNIQUE AND RESULTS
Michael Avallone, MD, Jessica Lee, BS, Gina Lockwood, MD and Hrair Mesrobian, MD
Medical College of Wisconsin, Department of Urology
(Presented By: Michael Avallone, MD)

Poster #54
PREVALENCE OF PATIENT−REPORTED LOWER URINARY TRACT SYMPTOMS IN MUSCULAR DYSTROPHY
Laura Bertrand, MD1, Eric J. Askeland, MD1, Katherine D. Mathews, MD2, Bradley A. Erickson, MD1 and Christopher S. Cooper, MD1
1Department of Urology, The University of Iowa Hospitals and Clinics; 2Department of Pediatric Neurology, The University of Iowa Hospitals and Clinics
(Presented By: Laura Bertrand, MD)

Poster #55
PREDICTIVE FACTORS FOR MISSED PEDIATRIC UROLOGY APPOINTMENTS
Anwar Taha, Christopher Cooper, MD, Kathleen Kieran, MD, Lisa Gerard, RN and Douglas Storm, MD
University of Iowa
(Presented By: Douglas Storm, MD)

4:30 p.m. – 5:45 p.m.
Adrenal/Kidney/Ureter – Malignant/Benign Poster Session
Location: Zurich C
Moderators: Matthew T. Gettman, MD
Rochester, MN
Jay B. Hollander, MD
Royal Oak, MI

Poster #14
PRETREATMENT NEUTROPHIL−TO−LYMPHOCYTE RATIO CAN PREDICT TUMOR AGGRESSIVENESS IN NEWLY DIAGNOSED RENAL LESIONS
Boyd Viers, MD, R.H. Thompson, S.A. Boorjian, C.M. Lohse, B.C. Leibovich and M.K. Tollefson
Mayo Clinic
(Presented By: Boyd Viers, MD)
Poster #15  
CORTICAL RENORRHAPHY AND TUMOR DIAMETER ARE ASSOCIATED WITH VOLUME LOSS DURING PARTIAL NEPHRECTOMY  
Clinton Bahler, MD, Swapnil Garg, BS, Eric M Deroo, MD, Christian H. Tabib, MD, Jagan K. Kansal, MD, MBA, Chandra K. Flack, MD, Richard S. Foster, MD and Chandru P. Sundaram, MD  
Indiana University  
(Presented By: Clinton Bahler, MD)

Poster #16  
COMPARISON OF 30–DAY POSTOPERATIVE COMPLICATIONS BETWEEN LAPAROSCOPIC RADICAL NEPHRECTOMY AND OPEN PARTIAL NEPHRECTOMY  
Sean McAdams, MD, Goldfarb Robert, MD, Mary Kwaan, MD and James Anderson, MD  
University of Minnesota  
(Presented By: Goldfarb Robert, MD)

Poster #17  
CRITICAL APPRAISAL OF FIRST GENERATION RENAL TUMOR COMPLEXITY SCORING SYSTEMS TO CREATE AN “OPTIMIZED MODEL”  
Conrad Tobert, MD¹, Allen Shoemaker, PhD², Richard Kahnoski, MD³ and Brian Lane, MD, PhD⁴  
¹University of Iowa; ²Grand Rapids Medical Education Partners, Department of Statistics; ³Spectrum Health Hospital System; ⁴Spectrum Health Hospital System and Michigan State University College of Human Medicine  
(Presented By: Conrad Tobert, MD)

Poster #18  
SUNITINIB REDUCES EXPANSION OF IN VITRO INDUCED MYELOID DERIVED SUPPRESSOR CELLS  
Raman Unnikrishnan, MD¹, Patricia Rayman, MS² and James Finke, PhD²  
¹Cleveland Clinic Department of Urology; ²The Cleveland Clinic Lerner Institute, Department of Immunology  
(Presented By: Raman Unnikrishnan, MD)

Poster #19  
THE IMPACT OF OBESITY ON RENAL MASS COMPLEXITY  
Laura Bertrand, MD¹, Lyse A. Norian, PhD², James A. Brown, MD¹ and Kenneth G. Nepple, MD¹  
¹Department of Urology, The University of Iowa Hospitals and Clinics; ²Department of Urology, The University of Iowa Hospitals and Clinics; Interdisciplinary Graduate Program in Immunology, The University of Iowa  
(Presented By: Laura Bertrand, MD)
Poster #20  DEVELOPMENT OF A NOVEL HIGH INTENSITY FOCUSED ULTRASOUND PROBE FOR RENAL ABLATION
Clinton Bahler, MD, Jason C. Sea, MD, Joshua D. Ring, MD, Sable Amstutz, MD, Naren Sanghvi, PhD and Liang Cheng, MD
1Indiana University; 2University of Florida; 3SonaCare Medical LLC
(Presented By: Clinton Bahler, MD)

Poster #21  CLINICAL AND RADIOGRAPHIC PREDICTORS OF THE NEED FOR RESECTION OF THE INFERIOR VENA CAVA DURING NEPHRECTOMY FOR PATIENTS WITH RENAL CELL CARCINOMA AND VENOUS TUMOR THROMBUS
Sarah Psutka, MD, Stephen Boorjian, MD, R. Houston Thompson, MD, Grant Schmit, MD, John Schmitz, MD, Thomas Bower, MD, Suzanne Stewart, MD, Christine Lohse, MD, John Cheville, MD and Bradley Leibovich, MD
1Department of Urology, Mayo Clinic; 2Department of Radiology, Mayo Clinic; 3Division of Vascular Surgery, Department of Surgery, Mayo Clinic; 4Department of Health Sciences Research, Mayo Clinic; 5Department of Pathology, Mayo Clinic
(Presented By: Sarah Psutka, MD)

Poster #22  CONCOMMITTANT SURGERY FOR HEPATIC INVOLVEMENT AT THE TIME OF NEPHRECTOMY FOR RENAL CELL CARCINOMA: A MATCHED COHORT STUDY
Sarah Psutka, MD, R. Houston Thompson, MD, Stephen Boorjian, MD, John Cheville, MD, Suzanne Stewart, MD, Christine Lohse, MS, Brian Costello, MD, Florencia Que, MD and Bradley Leibovich, MD
1Department of Urology, Mayo Clinic; 2Department of Pathology, Mayo Clinic; 3Department of Health Sciences Research, Mayo Clinic; 4Department of Oncology, Mayo Clinic; 5Department of Surgery, Mayo Clinic
(Presented By: Sarah Psutka, MD)

Poster #23  CAN RENAL MASS HISTOLOGY BE PREDICTED BY MULTI-PHASIC CT?
Paul T. Gellhaus, MD, M.F. Monn, MD, MPH, T.A. Masterson, MD, A.A. Patel, MD, M. Tann, MD and R.S. Boris, MD
Indiana University Department of Urology
(Presented By: Paul T. Gellhaus, MD)
Poster #24  THE INCREASING COMPLEXITY OF TUMOR THROMBI IN RENAL CELL CARCINOMA: 39 YEARS OF EXPERIENCE
Sarah Psutka, MD1, R. Houston Thompson, MD1, Stephen Boorjian, MD1, Christine Lohse, MS2, Suzanne Stewart, MD1, John Cheville, MD3 and Bradley Leibovich, MD1
1Department of Urology, Mayo Clinic; 2Department of Health Sciences Research, Mayo Clinic; 3Department of Pathology, Mayo Clinic
(Presented By: Sarah Psutka, MD)

Poster #25  PERIOPERATIVE BLOOD TRANSFUSION FOLLOWING RADICAL AND PARTIAL NEPHRECTOMY
M.F. Monn, MD, MPH, C.D. Bahler, MD, Chandra K. Flack, R.S. Boris, MD and C.P. Sundaram, MD
Indiana University School of Medicine Department of Urology
(Presented By: Chandra K. Flack)

Poster #26  RENAL CELL CARCINOMA IN THE UNDERINSURED
Brian McArdle, DO, MBA, Jed Robinson, DO and Courtney Hollowell, MD
Cook County Health and Hospitals System
(Presented By: Brian McArdle, DO, MBA)

FRIDAY, SEPTEMBER 12, 2014

5:30 a.m. – 5:30 p.m.  Registration/Information Desk Open
Location: Monte Rosa Lobby

5:30 a.m. – 5:30 p.m.  Speaker Ready Room
Location: Monte Rosa

7:00 a.m. – 11:00 a.m.  Exhibit Hall Open
Location: Zurich Ballrooms D-G

7:30 a.m. – 11:00 a.m.  Spouse/Guest Hospitality Suite
Location: Matterhorn

6:30 p.m. – 12:00 a.m.  Annual Banquet
Location: The Union League Club of Chicago
**BREAKFAST BREAKOUT SESSIONS**

### 6:30 a.m. – 7:30 a.m.

**Panel Discussion: Endourology**  
*Location: Montreux*  
Discussants:  
- Khurshid Ghani, MD  
  Ann Arbor, MI  
- Bodo E. Knudsen, MD, FRCSC  
  Columbus, OH

### 6:30 a.m. – 7:30 a.m.

**Understanding the New AUA Urotrauma Guidelines with Case Presentations**  
*Location: St. Gallen I & II*  
Discussants:  
- Sean P. Elliott, MD  
  Minneapolis, MN  
- Bradley Erickson, MD  
  Iowa City, IA

### 6:30 a.m. - 7:30 a.m.

**Robotics: Complications and Their Management**  
**Moderator:** Bradley F. Schwartz, DO, FACS  
Springfield, IL  
**Panelists:**  
- Geoffrey N. Box, MD  
  Columbus, OH  
- Peter Langenstroer, MD, MS  
  Milwaukee, WI  
- Chandru P. Sundaram, MD  
  Indianapolis, IN

### 7:30 a.m. – 7:40 a.m.

**Break – Visit Exhibits**  
*Location: Zurich Ballrooms D-G*

### GENERAL SESSION

### 7:40 a.m. – 8:05 a.m.

**Special Lecture: Surgical Management of Vaginal Mesh Complications**  
**Guest Speaker:** E. Ann Gormley, MD  
Lebanon, NH

### 8:05 a.m. – 9:05 a.m.

**Socioeconomics Podium Session**  
**Moderators:**  
- Lawrence J. Litscher, MD  
  Dayton, OH  
- James C. Ulchaker, MD, FACS  
  Cleveland, OH

**Discussant:** Gary M. Kirsh, MD  
Cincinnati, OH
8:05 a.m.  #60  UROLOGISTS KNOWLEDGE OF THE COSTS OF SURGICAL SUPPLIES IS SEVERELY DEFICIENT
Shane Pearce, MD¹, Rena Malik, MD¹, David Hatcher, MD¹, Gregory Auffenberg, MD², Samuel Ohlander, MD³, Kristin Greco, MD⁴, Chi–Siung Wang, PhD⁵, Christopher Gonzalez, MD⁵, Sangtae Park, MD⁵, Brian Helfand, MD⁵ and Michael McGuire, MD⁵
¹University of Chicago; ²Northwestern University; ³University of Illinois Chicago; ⁴Loyola University Medical Center; ⁵Northshore University Health System
(Presented By: Shane Pearce, MD)

8:10 a.m.  #61  INCREASING FREQUENCY AND COST OF PROSTATE CANCER RELATED MALPRACTICE CLAIMS
Benjamin Sherer, MD, Kalyan Latchamsetty, MD and Coogan Christopher, MD
Rush University Medical Center
(Presented By: Benjamin Sherer, MD)

8:15 a.m.  #62  REDUCING OPERATING ROOM MARGINAL COSTS THROUGH REAL TIME COST INFORMATION FEEDBACK
Christian H. Tabib, MD, Clinton Bahler, MD, Thomas J. Hardacker, MD, Kevin M. Ball, MD, Chandru P. Sundaram, MD
Indiana University
(Presented By: Clinton Bahler, MD)

8:20 a.m.  #63  KNOWLEDGE OF MEDICARE REIMBURSEMENT AND THE AFFORDABLE HEALTH CARE ACT IS DEFICIENT AMONG UROLOGISTS
Shane Pearce, MD¹, Rena Malk, MD¹, David Hatcher, MD¹, Gregory Auffenberg, MD², Samuel Ohlander, MD³, Kristin Greco, MD⁴, Chih–Siung Wang, PhD⁵, Christopher Gonzalez, MD⁵, Sangtae Park, MD⁵, Brian Helfand MD⁵ and Michael McGuire, MD⁵
¹University of Chicago; ²Northwestern University; ³University of Illinois Chicago; ⁴Loyola University Medical Center; ⁵Northshore University Health System
(Presented By: Shane Pearce, MD)

8:25 a.m.  #64  FIRST CASE ON–TIME (FCOT) START PROJECT: THE UPDATED CLEVELAND CLINIC EXPERIENCE
James Ulchaker, MD, FACS¹, Cheryl Smith, RN², Rob Kenney, MBA² and Ryan Gusching, MSN²
¹Cleveland Clinic Foundation; ²CCF
(Presented By: James Ulchaker, MD, FACS)
8:30 a.m.  #65  EVALUATION OF THE FACT SHEET FOR PATIENT EDUCATION “WHAT MEN SHOULD KNOW ABOUT PROSTATE SCREENING” FROM THE AUA
David Pridmore, MD, Jason Hafron, MD and Michael Lutz, MD
Oakland University William Beaumont School of Medicine
(Presented By: David Pridmore, MD)

8:35 a.m.  #66  PROPERLY DOCUMENTING COMORBIDITIES IN UROLOGY PATIENTS IS ESSENTIAL IN THE ERA OF HEALTHCARE REFORM
Bradley Gill, MD, MS, James Ulchaker, MD, Sandip Vasavada, MD and Hans C. Arora, MD, PhD
Cleveland Clinic
(Presented By: Hans C. Arora, MD, PhD)

8:40 a.m.  #67  ANTICIPATING THE IMPACT OF NATIONAL INSURANCE EXPANSION ON INPATIENT UROLOGICAL SURGERY
Chandy Ellimoottil, MD¹, Sarah Miller, PhD², John Wei, MD, MS² and David Miller, MD, MPH¹
¹University of Michigan, Center for Healthcare Outcomes and Policy; ²University of Michigan
(Presented By: Chandy Ellimoottil, MD)

8:45 a.m.  #68  PATTERN OF LOCAL TREATMENT FOR ADVANCED PROSTATE CANCER IN THE U.S.
Elizabeth Ferry, MD¹, Robert Abouassaly, MD² and Hui Zhu, MD, ScD³
¹University Hospitals Case Medical Center; ²University Hospitals Case Medical Center, Urology Institute, Cleveland, OH; ³Louis Stokes Cleveland Veterans Affairs Medical Center, Cleveland, OH
(Presented By: Elizabeth Ferry, MD)

8:50 a.m.  #69  TOWARD BETTER USE OF STAGING BONE SCANS
Selin Merdan, BS, Paul Womble, MD, David Miller, MD, MPH, Jun Ye, MS, James Montie, MD and Brian Denton, PhD
University of Michigan
(Presented By: David Miller, MD, MPH)

8:55 a.m.  #70  ATTRIBUTES, PERCEPTIONS AND ACCEPTANCE OF REMOTE VIDEO−VISIT ENCOUNTERS IN A UROLOGIC PATIENT POPULATION
Boyd Viers, MD, M.E. Rivera, D.A. O’Neil, S.M. Jenkins, M.T. Gettman
Mayo Clinic
(Presented By: Boyd Viers, MD)
9:00 a.m. – 9:05 a.m.  Q&A

9:05 a.m. – 9:35 a.m.  Special Lecture: Active Surveillance for Prostate Cancer: Benign Neglect, an Annuity or Black Box?
Guest Speaker: Joel B. Nelson, MD
Pittsburgh, PA

9:35 a.m. – 10:15 a.m.  Presidential Round Table Discussion: Prostate Cancer Detection, Treatment of Localized Disease, Treatment of Advanced Disease
Moderator: Christopher S. Cooper, MD
Iowa City, IA
Panelists:
Kathleen A. Cooney, MD
Ann Arbor, MI
Robert C. Flanigan, MD
Maywood, IL
Joel B. Nelson, MD
Pittsburgh, PA

10:15 a.m. – 10:20 a.m.  Announcements
Local Arrangements Chair: John V. Kryger, MD
Milwaukee, WI

10:20 a.m. – 10:45 a.m.  Break – Visit Exhibits
Location: Zurich Ballrooms D-G

CONCURRENT SESSIONS

10:45 a.m. – 11:35 a.m.  Outcomes Podium Session
Moderators:
Jeffrey Branch, MD
Maywood, IL
Stephen Y. Nakada, MD
Madison, WI
Discussant: John M. Hollingsworth, MD
Ann Arbor, MI

10:45 a.m.  #71  IMPACT OF RESIDENT INVOLVEMENT ON UROLOGIC SURGERY OUTCOMES: AN ANALYSIS OF 40,001 PATIENTS FROM THE AMERICAN COLLEGE OF SURGEONS NATIONAL SURGICAL QUALITY IMPROVEMENT PROGRAM DATABASE
Richard Matulewicz, MS, MD, Matthew Pilecki, Akshar Rambachan, John Kim, MD and Shilajit Kundu, MD
Northwestern University Feinberg School of Medicine
(Presented By: Richard Matulewicz, MS, MD)
10:50 a.m.  #72  ANXIETY AND FEAR OF PROGRESSION FOLLOWING TREATMENT FOR LOCALIZED PROSTATE CANCER: RESULTS FROM A PROSPECTIVE, OBSERVATIONAL, 12-MONTH TRIAL
David Victorson, PhD¹, Shilajit Kundu, MD¹, Brian Helfand, MD², Kristian Novakovic, MD², Gregory Auffenberg, MD¹, Martha McCurdy, RN², Robert Nadler, MD¹, Jacqueline Petkewicz², Michael McGuire, MD², Carly Maletich, MA¹ and Charles Brendler, MD²
¹Northwestern University; ²NorthShore University Health System
(Presented By: David Victorson, PhD)

10:55 a.m.  #73  THE USE OF CENTRALIZED DATA TO EVALUATE COMPLIANCE WITH THE AUA/SUFU GUIDELINE ON OVERACTIVE BLADDER – A COLLABORATIVE EFFORT OF THE AUA GUIDELINE COMMITTEE AND HEALTHRONICS IT SOLUTIONS
Gregory Auffenberg, MD¹, Robert Dowling, MD², William Meeks³ and J. Stuart Wolf, Jr., MD⁴
¹Northwestern University; ²Healthtronics Information Technology Solutions; ³American Urological Association; ⁴University of Michigan
(Presented By: Gregory Auffenberg, MD)

11:00 a.m.  #74  URETHROPLASTY FOR LONG STRICTURES: A MULTI-INSTITUTIONAL STUDY
Ibraheem Malkawi, MD, Jonathan Warner, MD, Mohammad Daradkeh, MD, Christopher Gonzalez, MD, Guido Barbagli, MD, Pankaj Joshi, MD, Reynaldo Gomez, MD, Francisco Martins, MD, Sanjay Kulkarni, MD and Richard Santucci, MD
DMC–Urology
(Presented By: Ibraheem Malkawi, MD)

11:05 a.m.  #75  THE CUPID TRIAL: PREVALENCE OF UROLOGIC DISORDERS IN A MALE CARDIOLOGY CLINIC POPULATION
Bradford Stevenson, MD, Michael Kottwitz, MD, Joel Koenig, MD, Randy Sulaver, MD, Cynthia Bednarchik, MS, FNP–BC, Yogitha Potini, BS, Charles Welliver, MD and Tobias Kohler, MD, MPH
Southern Illinois University
(Presented By: Bradford Stevenson, MD)
11:10 a.m. #76 IN PATIENTS WITH POST-OPERATIVE VENOUS THROMBOEMBOLIC EVENTS, PHARMACOLOGIC PROPHYLAXIS IS FREQUENTLY UNDERDOSED Benjamin Cohen, MD¹, Raman Unnikrishnan, MD¹, Michelle Ponziano, MSN, RN² and Venkatesh Krishnamurthi, MD¹ ¹Department of Urology, Glickman Urological and Kidney Institute, Cleveland Clinic Foundation; ²Department of Quality and Patient Safety, Glickman Urological and Kidney Institute, Cleveland Clinic Foundation (Presented By: Benjamin Cohen, MD)

11:15 a.m. #77 LONG TERM RISK OF URINARY ADVERSE EFFECTS FOLLOWING PROSTATE CANCER TREATMENT Stephanie Jarosek, PhD¹, Balaji Kalyanaraman, MD², Yunhua Fan, MPH², Haitao Chu, PhD³, Beth Virrnig, PhD³ and Sean Elliott, MD, MS² ¹University of Minnesota; ²University of Minnesota Medical School, Department of Urology; ³University of Minnesota School of Public Health (Presented By: Stephanie Jarosek, PhD)

11:20 a.m. #78 PERCUTANEOUS CRYOABALATION VERSUS PARTIAL NEPHRECTOMY (OPEN AND ROBOT ASSISTED): COST ANALYSIS FROM A SINGLE INSTITUTION Monzer Chehab, MD¹, Andrew Vartanian, MD¹, Joseph Ciacci, DO¹, Xiang Li², Howard Korman, MD¹, Emily Blum, MD¹, David Pridmore, MD¹ and Anant Krishnan, MD¹ ¹Beaumont Health System; ²Oakland University William Beaumont School of Medicine (Presented By: Emily Blum, MD)

11:25 a.m. #79 PREDICTORS OF CONTINUED SMOKING AFTER THE DIAGNOSIS OF A GENITOURINARY MALIGNANCY Stephen Hurley, DO, Elizabeth Rourke, Saumya Easaw, MD, Cristina Palmer, DO, Tanya Uddin, Arshan Chaudri, Thomas O’Grady, DO, Mark Wille, MD, Courtney M.P. Hollowell, MD Division of Urology, Cook County Hospital, Cook County Health and Hospitals System (Presented By: Stephen Hurley, DO)

11:30 a.m. – 11:35 a.m. Q&A
10:45 a.m. – 11:35 a.m.  
**Bladder Malignant Podium**  
*Location: Montreux*  

Moderators:  
- James A. Brown, MD  
  Iowa City, IA  
- Tracy M. Downs, MD  
  Madison, WI  

Discussant:  
- Stephen A. Boorjian, MD  
  Rochester, MN  

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#80  
WITHDRAWN

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10:45 a.m.  
#81  
**THE EFFECT OF INTRAOPERATIVE FLUID RATE ON POSTOPERATIVE OUTCOMES AMONG BLADDER CANCER PATIENTS UNDERGOING CYSTECTOMY WITH URINARY DIVERSION**  
Ian McLaren, MD\(^1\), Morgan Hoskins\(^2\), Michaela Kehoe\(^2\), Chang He\(^2\), Stephen Daily\(^2\), Alon Weizer, MD, MS\(^1\), Todd Morgan, MD\(^1\), Ted Skolarus, MD, MPH\(^1\), Sachin Kheterpal, MD\(^3\), James Montie, MD\(^1\) and Jeffery Montgomery, MD, MHSA\(^1\)  
\(^1\)University of Michigan Department of Urology;  
\(^2\)University of Michigan;  
\(^3\)University of Michigan  
Department of Anesthesiology  
(Presented By: Ian McLaren, MD)

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10:50 a.m.  
#82  
**INCIDENCE OF CLINICAL UNDERSTAGING IN UROTHELIAL CARCINOMA WITH DIVERGENT HISTOLOGY**  
Noah Canvasser, MD, Alon Weizer, MD, MS, Heather Crossley, Stephen Dailey, Chang He, MS, Lakshmi Priya Kunju, MD, Cheryl Lee, MD, Khaled Hafez, MD, Brent Hollenbeck, MD, MS, Todd Morgan, MD, James Montie, MD and Jeffrey Montgomery, MD, MHSA  
University of Michigan  
(Presented By: Noah Canvasser, MD)

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10:55 a.m.  
#83  
**RADICAL CYSTECTOMY OUTCOMES OVER 20 YEARS: IS IT TIME FOR CHANGE?**  
H.Z. Kaimakliotis, MD, M.F. Monn, MD, J.A. Pedrosa, MD, Paul T. Gellhaus, MD, K.C. Cary, MD, T.A. Masterson, MD, R.S. Foster, MD, M.O. Koch, MD and R. Bihrle, MD  
Indiana University  
(Presented By: Paul T. Gellhaus, MD)
11:00 a.m.  #84  CYTOTOXIC EFFECTS OF Trehalose−6,6−Dimycolate On Urothelial Carcinoma Cells
Justin Benabdallah, MD¹, Gopitkumar Shah, PhD¹, Fanghong Chen, PhD¹, GuangJian Zhang, PhD¹, Balaraman Kalyanaraman, PhD² and William See, MD¹
¹Medical College of Wisconsin Urology; ²Medical College of Wisconsin Biophysics
(Presented By: Justin Benabdallah, MD)

11:05 a.m.  #85  Does Squamous Differentiation Portend Worse Outcomes in Urothelial Bladder Cancer?
David Yang, BS, M.F. Monn, MD, MPH, H.Z. Kaimakliotis, MD, K.C. Cary, MD, MPH, J.A. Pedrosa, MD, T.A. Masterson, MD, T.A. Gardner, MD, R.S. Foster, MD, R. Bihrle, MD, L. Cheng, MD, PhD and M.O. Koch, MD
Indiana University
(Presented By: David Yang, BS)

11:10 a.m.  #86  Understanding Readmission Intensity After Cystectomy
Ted Skolarus, MD, MPH¹, Han Yeo¹, Bruce Jacobs, MD², Jeffrey Montgomery, MD¹, Chang He¹, Michael Hu¹, Mariel Lavieri¹, Jonathan Helm³ and Brent Hollenbeck, MD, MS¹
¹University of Michigan; ²University of Pittsburgh; ³Indiana University
(Presented By: Ted Skolarus, MD, MPH)

11:15 a.m.  #87  Time Trends in Perioperative and Long−Term Mortality Following Cystectomy
Suzanne Stewart, MD¹, Igor Frank, MD¹, Sarah Psutka, MD¹, John Cheville, MD², Prabin Thapa, MS³, R. Houston Thompson, MD¹, Matthew Tollefson, MD¹ and Stephen Boorjian, MD¹
¹Department of Urology, Mayo Clinic, Rochester, Minnesota; ²Department of Pathology, Mayo Clinic, Rochester, Minnesota; ³Department of Biostatistics, Mayo Clinic, Rochester, Minnesota
(Presented By: Suzanne Stewart, MD)

11:20 a.m.  #88  Preoperative Prostatic Urethral Invasion is Associated with Pathology Proven Urothelial Carcinoma in Urethrectomy Specimens
Shane Pearce, MD, Rena Malik, MD, Joshua Cohn, MD, Gladell Paner, MD and Gary Steinberg, MD
University of Chicago
(Presented By: Shane Pearce, MD)
**11:25 a.m. – 11:35 a.m.**  
Q&A

**10:45 a.m. – 11:35 a.m.**  
Penis/Urethra/Testis/Trauma/Transplant Podium Session  
*Location: St. Gallen I & II*

<table>
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<tr>
<th>Session</th>
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<th>Discussant</th>
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| Q&A     | Gregory T. Bales, MD  
Chicago, IL  
Kevin T. McVary, MD  
Springfield, IL | Edward E. Cherullo, MD  
Cleveland, OH |

**10:45 a.m.**  
#89  
**MITOMYCIN C, NOT ON ABOTULINUM TOXIN A, IMPROVES OUTCOMES AT THE TIME OF MANAGEMENT OF RECALCITRANT BLADDER NECK CONTRACTURES**  
Jonathan Warner, MD, Ibraheem Malkawi, MD, Michael Krueger, BioStatistician and Richard Santucci, MD  
DMC  
(Presented By: Jonathan Warner, MD)

**10:50 a.m.**  
#90  
**MEASURING THE IMPACT OF RADICAL PROSTATECTOMY ON HEALTH RELATED QUALITY OF LIFE BEFORE AND FOLLOWING PROSTATE CANCER TREATMENT**  
Carly Maletich, MA¹, Shilajit Kundu, MD², David Victorson, PhD¹, John Cashy, PhD², Sandra Gutierrez, MEd¹, Azra Muftic¹, Kent Perry, MD² and Robert Nadler, MD²  
¹Department of Medical Social Sciences, Northwestern University, Feinberg School of Medicine; ²Department of Urology, Northwestern University, Feinberg School of Medicine  
(Presented By: Carly Maletich, MA)

**10:55 a.m.**  
#91  
**THE ROLE OF 18F–FDG PET/CT IN THE STAGING AND SURVEILLANCE OF PENILE CANCER**  
Robert Goldfarb, MD, Badrinath Konety, MD and Sumit Isharwal, MD  
University of Minnesota  
(Presented By: Sumit Isharwal, MD)
11:00 a.m. #92 SALVAGE PEDICILE ISLAND FLAP URETHROPLASTY FOLLOWING FAILED OPEN REPAIR  
Eric DeRoo, MD, Benjamen Carpentger, MD, Matthew Mellon, MD and Richard Bihrle, MD  
Indiana University  
(Presented By: Eric DeRoo, MD)

11:05 a.m. #93 SHORT−TERM DONOR SITE MORBIDITY OF BUCCAL MUCOSAL GRAFT HARVEST FOR URETHROPLASTY: RESULTS FROM A PATIENT REPORTED OUTCOME MEASURE  
Tariq A. Khemees, MD, Bradley Erickson, MD, Joshua Broghammer, MD, FACS and Christopher McClung, MD  
1Ohio State University; 2The University of Iowa, Carver College of Medicine; 3Kansas University Medical Center  
(Presented By: Tariq A. Khemees, MD)

11:10 a.m. #94 URETHRAL MANAGEMENT AT THE TIME OF ARTIFICIAL URINARY SPHINCTER EROSION, IS URETHRAL CATHETERIZATION ALONE ENOUGH?  
Brian Linder, MD and Daniel Elliott MD  
Mayo Clinic  
(Presented By: Brian Linder, MD)

11:15 a.m. #95 ASSESSING THE EFFECTS OF PREOPERATIVE VOLUME MEASUREMENT FOR KIDNEY SELECTION DURING LAPAROSCOPIC DONOR NEPHRECTOMY  
Joshua Roth, MD, Alexander Schneider, Clinton Bahler, MD, John Powelson, MD, Asif Sharfuddin, MD and Chandru Sundaram, MD  
1Indiana University Department of Urology; 2Indiana University School of Medicine; 3Indiana University Department of Transplant Surgery; 4Indiana University Department of Transplant Nephrology  
(Presented By: Joshua Roth, MD)

11:20 a.m. #96 NATIVE NEPHRECTOMY DECREASES ANTIHYPERTENSIVE MEDICATION REQUIREMENTS IN AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE  
Ashley Shumate, Clinton Bahler, MD, Chandru P. Sundaram, MD, William Goggins, MD and Asif Sharfuddin, MD  
Indiana University School of Medicine  
(Presented By: Ashley Shumate)
THE ROLE OF URODYNAMICS IN PATIENTS WITH RECURRENT URINARY TRACT INFECTIONS AFTER KIDNEY TRANSPLANT
Adarsh Manjunath, Elodi Dielubanza, MD, Daniel Mazur, MD, John Hairston, MD and Stephanie Kielb, MD Northwestern University
(Presented By: Adarsh Manjunath)

Q&A

GENERAL SESSION

Special Lecture AUA Gold Cystoscope Honoree:
Histotripsy: A New Technology for Prostatic Obstruction
Guest Speaker: William W. Roberts, II, MD
Ann Arbor, MI

ABU Update
Speaker: Stephen Y. Nakada, MD
Madison, WI

Industry Sponsored Luncheon
Location: Zurich A
(See page 8 for full information)

Industry Sponsored Luncheon
Location: Zurich B
(See page 8 for full information)

Special Lecture: Metabolic Evaluation of Stone Patients
Guest Speaker: Dean G. Assimos, MD
Birmingham, AL

Reflections of Our AUA Past President
AUA Past President: Dennis A. Pessis, MD
Chicago, IL

AUA Update
AUA President: William W. Bohnert, MD
Scottsdale, AZ

Report from the American Association of Clinical Urologists
Presenter: Patrick H. McKenna, MD, FACS, FAAP
Madison, WI

Report from the NCSAUA Foundation Scholar
Presenter: Sargurunathan Subashchandrabose, PhD
Ann Arbor, MI
2:05 p.m. – 2:10 p.m.  IVUmed Update
Speaker: Josh Wood
IVU Med, Executive Director

2:10 p.m. – 2:15 p.m.  NCS/AACU Health Policy Young Investigator Award Presentation
Presenter: Matthew T. Gettman, MD
Rochester, MN

2:15 p.m. – 2:20 p.m.  Award Presentations: John D. Silbar, Thirlby & Traveling Fellowship
Presenter: Christopher L. Coogan, MD
Chicago, IL

2:20 p.m. – 2:25 p.m.  Break

2:25 p.m. – 3:10 p.m.  Resident Bowl: Round 1
Moderator: Bradley F. Schwartz, DO, FACS
Springfield, IL

Judges: Christopher S. Cooper, MD
Iowa City, IA
John V. Kryger, MD
Milwaukee, WI
Dennis A. Pessis, MD
Chicago, IL

3:10 p.m. – 3:35 p.m.  The Presidential Address: What Should We Tell The Kids?
NCS President: Christopher S. Cooper, MD
Iowa City, IA

3:35 p.m. – 4:15 p.m.  Annual Business Meeting

CONCURRENT SESSIONS

4:15 p.m. – 5:30 p.m.  Bladder Poster Session
Location: Zurich C
Moderators: Teresa D. Beam, MD
Noblesville, IN
Tracy M. Downs, MD
Madison, WI

Poster #27  NON–VARIANT PRIMARY UROTHELIAL BLADDER CANCER OUTCOMES IN A CONTEMPORARY CYSTECTOMY COHORT
H.Z. Kaimakliotis, MD, M.F. Monn, MD, K.C. Cary, MD, Paul T. Gellhaus, MD, J.A. Pedrosa, MD, T.A. Masterson, MD, R.S. Foster, MD, M.O. Koch, MD and R. Bihrlle, MD
Indiana University
(Presented By: Paul T. Gellhaus, MD)
Poster #28  EXOSOMES AS A DELIVERY VECTOR FOR PLK1 SIRNA IN BLADDER CANCER
Kristin Greco, MD, Carrie A. Franzen, Paul C. Kuo, Kimberly E. Foreman, Robert C. Flanigan and Gopal N. Gupta
Loyola University Medical Center
(Presented By: Kristin Greco, MD)

Poster #29  UNDERESTIMATION OF MICROSCOPIC HEMATURIA IN A UROGYNECOLOGIC POPULATION
Tanaka Dune, MD, Elizabeth Mueller, MD, MSME, Colleen Fitzgerald, MD, MS, Linda Brubaker, MD, MS and Cynthia Brincat, MD, PhD
Loyola University Medical Center – Stritch School of Medicine
(Presented By: Tanaka Dune, MD)

Poster #30  IMPACT OF BODY MASS INDEX ON RADICAL CYSTECTOMY OUTCOME
Robert Blackwell, MD, Bethany Kearns, MD, Ted Vellos, MD, Robert Flanigan, MD, Gopal Gupta, MD and Marcus Quek, MD
Loyola University Medical Center
(Presented By: Bethany Kearns, MD)

Poster #31  SHORT−TERM MORBIDITY AND MORTALITY OF INDIANA POUCH, ILEAL CONDUIT, AND NEOBLADDER URINARY DIVERSION
M. Francesca Monn, MD, MPH, H.Z. Kaimaklioti, MD, K.C. Cary, MD, MPH, J.A. Pedrosa, MD, M.O. Koch, MD and R. Bihrlle, MD
Indiana University School of Medicine, Department of Urology
(Presented By: M. Francesca Monn, MD, MPH)

Poster #32  EVALUATION OF THE IMPACT OF BODY COMPOSITION AND MUSCLE DENSITY ON OVERALL SURVIVAL FOLLOWING RADICAL CYSTECTOMY FOR BLADDER CANCER
Sarah Psutka, MD1, Stephen Boorjian, MD1, Grant Schmit, MD2, Michael Moynagh, MD2, Igor Frank, MD1, Alonso Carrasco, MD1, Suzanne Stewart, MD1, Prabin Thapa3, Robert Tarrell1 and Matthew Tollefson, MD1
1Department of Urology, Mayo Clinic; 2Department of Radiology, Mayo Clinic; 3Department of Health Sciences Research, Mayo Clinic
(Presented By: Sarah Psutka, MD)
MODIFIABLE FACTORS FAIL TO PREDICT READMISSION FOLLOWING CYSTECTOMY
Brian Minnillo, MD1, Matthew Maurice, MD1, Aiswarya Pillai1, Nicholas Schiltz, PhD2, Siran Koroukian, PhD2, Firouz Daneshgari, MD1 and Robert Abouassaly, MD, MSc1
1University Hospitals Case Medical Center; 2Case Epidemiology
(Presented By: Brian Minnillo, MD)

ABORTED RADICAL CYSTECTOMY: CAUSES AND OUTCOMES
Robert Blackwell, MD, Bethany Kears, MD, Ted Vellos, MD, Robert Flanagan, MD, Gopal Gupta, MD and Marcus Quek, MD
Loyola University Medical Center
(Presented By: Robert Blackwell, MD)

ROBOTIC CYSTECTOMY WITH ANTERIOR PELVIC EXENTERATION: A SIMPLIFIED STEP–BY–STEP APPROACH
Iryna Makovey, MD, Idir Ouzaid, MD, Jayram Krishnan, MD, Vishnu Ganeshan, MD, Riccardo Autorino, MD, Nima Almassi, MD, Robert Stein, MD, Jihad Kaouk, MD and Georges–Pascal Haber, MD
Cleveland Clinic
(Presented By: Iryna Makovey, MD)

FGFR3 EXPRESSION IS NOT AN EFFECTIVE PREDICTOR OF BLADDER TUMOR RECURRENCE OR PROGRESSION
Peter Tsambarlis, James Rybak, Paolo Gattuso, Ilhab Lamzabi, David Bostwick and Christopher Coogan
Rush University Medical Center
(Presented By: Peter Tsambarlis)

OUTCOMES FOLLOWING RADICAL CYSTECTOMY FOR PLASMACYTOID UROTHELIAL CARCINOMA: DEFINING THE NEED FOR IMPROVED LOCAL CANCER CONTROL
Patrick Cockerill, MD, John Cheville, MD, Stephen Boorjian, MD, Andrew Blackburne, MD, Prabin Thapa, Robert Tarrell and Igor Frank, MD
Mayo Clinic
(Presented By: Patrick Cockerill, MD)
Poster #38
FDG−PET SCAN UTILITY IN THE PREDICTION OF LYMPH NODE STATUS (LN) AND LOCAL INVASION IN BLADDER CANCER PATIENTS
Ayman Soubra, MD, Daniel Hayward, MD, Robert Goldfarb, MD, Jerry Froelich, MD and Badrinath Konety, MD
University of Minnesota
(Presented By: Ayman Soubra, MD)

Poster #39
SURVEILLANCE STRATEGIES IN BLADDER CANCER FOLLOWING RADICAL CYSTECTOMY: A SYSTEMATIC REVIEW AND META−ANALYSIS
Suzanne Stewart, MD¹, Fares Alahdab, MD², Khalid Benkhadra, MD², Zhen Wang, PhD², Atsushi Sorita, MD², Stephen Boorjian, MD¹, Igor Frank, MD¹ and Mohammad Murad, MD²
¹Department of Urology, Mayo Clinic, Rochester, Minnesota; ²The Mayo Clinic Robert D. and Patricia E. Kern Center for the Science of Health Care Delivery, Rochester, Minnesota
(Presented By: Suzanne Stewart, MD)

4:15 p.m. – 5:30 p.m.
Endourology II Podium Session
Moderator: Gary J. Faerber, MD
Ann Arbor, MI
Discussant: Jeffrey A. Triest, MD
Detroit, MI

4:15 p.m.  #98
URINARY STONE COMPOSITION AND OUTCOMES IN ADULT SPINA BIFIDA PATIENTS
Robert Brown, MD, Manoj Monga, MD, Carl Sarkissian, BS and Sri Sivalingam, MD
Cleveland Clinic
(Presented By: Robert Brown, MD)

4:20 p.m.  #99
URETEROSCOPY−ASSISTED RETROGRADE NEPHROSTOMY (UARN) FOR PCNL – WHO IS A GOOD CANDIDATE?
Jason B. Wynberg, MD, FACS, Barrett G. Anderson, DO and Jonathan Warner, MD
Detroit Medical Center
(Presented By: Jason B. Wynberg, MD, FACS)
4:25 p.m. #100 IL1–BETA AND TNF–ALPHA REPRESENT NOVEL URINARY INFLAMMATORY BIOMARKERS IN NEPHROLITHIASIS PATIENTS
Benjamin Cohen, MD1, Karen Keslar2, Shubha De, MD1, Robert Fairchild, PhD2 and Manoj Monga, MD1
1Department of Urology, Glickman Urological and Kidney Institute, Cleveland Clinic Foundation; 2Department of Immunology, Cleveland Clinic Lerner Research Institute
(Presented By: Benjamin Cohen, MD)

4:30 p.m. #101 TOPIRAMATE RESULTS IN A RAPID AND PROGRESSIVE DECLINE IN URINARY CITRATE OVER 60 DAYS: A PROSPECTIVE STUDY
Kristina Penniston, PhD1, Allan Jhagroo, MD2 and Stephen Nakada, MD1
1Dept. of Urology, University of Wisconsin School of Medicine and Public Health; 2Dept. of Medicine, University of Wisconsin School of Medicine and Public Health
(Presented By: Kristina Penniston, PhD)

4:35 p.m. #102 SENSITIVITY OF NON–CONTRAST COMPUTED TOMOGRAPHY VERSUS ENDOSCOPY FOR DETECTION OF RENAL CALCULI
Jessica E. Paonessa, MD, Marawan El Tayeb, MD, Naeem Bhojani, MD, James C. Williams, Jr., PhD, Tariq A. Hameed, MD and James E. Lingeman, MD
Indiana University School of Medicine
(Presented By: Marawan El Tayeb, MD)

4:40 p.m. #103 ESTIMATING PATIENTS’ INTAKE OF STONE–RELATED FOODS AND NUTRIENTS WITH A NOVEL FOOD FREQUENCY QUESTIONNAIRE
Margaret Wertheim, MS, Rachel Bell, MS and Kristina Penniston, PhD
Dept. of Urology, University of Wisconsin School of Medicine and Public Health
(Presented By: Margaret Wertheim, MS)

4:45 p.m. #104 CLINICAL AND RADIOGRAPHIC CHARACTERISTICS ASSOCIATED WITH UPPER URINARY TRACT ACCESS AT THE TIME OF URETEROSCOPIC STONE TREATMENT
Boyd Viers, MD, L.D. Viers, MD, N.C. Hull, MD, T.J. Hanson, MD, R.A. Mehta, E.J. Bergstralh, T.J. Vrtiska, MD and A.E. Krambeck, MD
Mayo Clinic
(Presented By: Boyd Viers, MD)
4:50 p.m.  #105  NEUROGENIC BLADDER AND STONE FORMATION
Andrew Blackburne, MD¹, Mitra DeCogain, MD² and Amy Krambeck, MD³
¹Mayo Clinic Department of Urology; ²Fellow, Department of Urology, Mayo Clinic; ³Department of Urology, Mayo Clinic
(Presented By: Andrew Blackburne, MD)

4:55 p.m.  #106  RISK OF CHRONIC KIDNEY DISEASE IN BRUSHITE STONE FORMERS COMPARED TO IDIOPATHIC CALCIUM OXALATE STONE FORMERS AT LONG-TERM FOLLOW-UP
Christopher Jaeger, MD, Daniel Yelfimov, MD and Amy Krambeck, MD
Mayo Clinic – Rochester
(Presented By: Christopher Jaeger, MD)

5:00 p.m.  #107  GEOGRAPHIC DIFFERENCES IN THE QUALITY OF CARE FOR PATIENTS WITH METABOLIC STONE DISEASE
Abdulrahman Alruwaily¹, Casey Dauw, MD¹, Maggie Bierlein, MS¹, John Asplin, MD², Khurshid Ghani, MD¹, J. Stuart Wolf, MD¹ and John Hollingsworth, MD¹
¹University of Michigan; ²Litholink Corporation
(Presented By: Abdulrahman Alruwaily)

5:05 p.m.  #108  SHOULD UROLOGISTS OFFER DIETARY RECOMMENDATIONS TO STONE FORMERS? A SURVEY OF CURRENT PRACTICE PATTERNS
Kristina Penniston, PhD, Margaret Wertheim, MS and Stephen Nakada, MD
Dept. of Urology, University of Wisconsin School of Medicine and Public Health
(Presented By: Kristina Penniston, PhD)

5:10 p.m.  #109  CONTEMPORARY PROFILE OF RECURRENT STONE FORMERS PRESENTING TO A METABOLIC STONE EVALUATION CLINIC: BMI, GENDER AND SEASONAL DIFFERENCES IN 1,143 PATIENTS WITH SERUM AND 48-HOUR URINE COLLECTION
Barry McGuire, MD, Vidit Sharma, Megan McLean, Richard Matulewicz, Kent Perry and Robert Nadler Northwestern Memorial Hospital
(Presented By: Barry McGuire, MD)
5:15 p.m.  #110  WITHHOLDING AN ANGIOTENSIN CONVERTING ENZYME INHIBITOR OR AN ANGIOTENSIN RECEPTOR BLOCKER HAS NO EFFECT ON PERIOPERATIVE RENAL FUNCTION AMONG PATIENTS UNDERGOING PERCUTANEOUS NEPHROLITHOTOMY
Benjamin Cohen, MD, Shubha De, MD, Ganesh Kartha, MD, Ina Li, Carl Sarkissian and Manoj Monga, MD
Department of Urology, Glickman Urological and Kidney Institute, Cleveland Clinic Foundation
(Presented By: Benjamin Cohen, MD)

5:20 p.m.  #111  PROVIDER VARIATION IN THE QUALITY OF METABOLIC STONE MANAGEMENT
Casey Dauw, MD¹, Maggie Bierlein, MA¹, Abdulrahman Alruwaily, MD¹, Khursid Ghani, MD², John Asplin, MD³, J. Stuart Wolf, Jr., MD¹ and John Hollingsworth, MD, MS¹
¹University of Michigan; ²Ann Arbor Veterans Administration; ³Litholink Corporation
(Presented By: Casey Dauw, MD)

5:25 p.m. – 5:30 p.m.  Q&A

4:15 p.m. – 5:30 p.m.  Laparoscopy/Robotics Poster Session
Location: Currents
Moderators: Ronald S. Boris, MD
Indianapolis, IN
Geoffrey N. Box, MD
Columbus, OH

Poster #40  VOLUME PRESERVATION BETTER PREDICTS RENAL FUNCTIONAL OUTCOME THAN WARM ISCHEMIA TIME IN ROBOTIC PARTIAL NEPHRECTOMY
Timothy Durso, BS¹, Robert Blackwell, MD², Adam Van Huis¹, David Surprenant¹, Patrick Sweigert¹, Helyn Alvarez¹, Jonathan Carnell, MD², Jessica Wetterlin, MD², Marcus Quek, MD², Robert Flanigan, MD² and Gopal Gupta, MD²
¹Loyola University Chicago Stritch School of Medicine; ²Loyola University Medical Center
(Presented By: Timothy Durso, BS)
Poster #41

INCREASING TUMOR VOLUME PREDICTS GREATER PARENCHYMAL LOSS IN PARTIAL NEPHRECTOMY

Timothy Durso, BS1, Adam Van Huis1, David Surprenant1, Patrick Sweigert1, Helyn Alvarez1, Jonathan Carnell, MD2, Marcus Quek, MD2, Robert Flanigan, MD2 and Gopal Gupta, MD2

1Loyola University Chicago Stritch School of Medicine; 2Loyola University Medical Center

(Presented By: Timothy Durso, BS)

Poster #42

ROBOTIC NEPHRECTOMY IS NOT COSTLIER THAN STANDARD LAPAROSCOPY WHEN ROBOT AVAILABLE

Iahn Gonsenhauser, MD, MBA1, Geoffrey Box, MD, FACS1, Ahmad Shabsigh, MD, FACS1, David Sharp, MD, FACS1 and Ronney Abaza, MD, FACS2

1The Ohio State University Medical Center; 2OhioHealth Dublin Methodist Hospital

(Presented By: Ronney Abaza, MD, FACS)

Poster #43

ZERO–ISCHEMIA ROBOTIC ENUCLEO–RESECTION OF RENAL MASSES

Jessica Wetterlin, MD, Robert Blackwell, MD and Gopal Gutpa, MD

Loyola University Medical Center

(Presented By: Jessica Wetterlin, MD)

Poster #44

IMPACT OF ROBOTIC FELLOWSHIP EXPERIENCE ON PERIOPERATIVE AND ONCOLOGIC OUTCOMES OF ROBOTIC–ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY (RAPN)

Michael Moriarty, BS1, Kenneth Nepple, MD2, Chad Tracy, MD2, Daniel Lee, MD2 and James Brown, MD2

1The University of Iowa, Carver College of Medicine; 2The University of Iowa, Department of Urology

(Presented By: Michael Moriarty, BS)

Poster #45

LYMPHADNECTOMY IN THE SETTING OF ROBOTIC NEPHROURORETERECTOMY FOR UPPER TRACT TCC

Ahmed Sarhan, MD, MS Ahmed Sarhan, MD and Ahmad Shabsigh, MD

Ohio State University

(Presented By: Ahmed Sarhan, MD, MS)
Poster #46

ROBOTIC ENucleo–RESECTION OF RENAL MASSES: OUTCOMES WITH TRANS– AND RETROPERITONEAL APPROACHES
Robert Blackwell, MD, Jessica Wetterlin, MD and Gopal Gupta, MD
Loyola University Medical Center
(Presented By: Robert Blackwell, MD)

Poster #47

OPTIMIZING SACRAL FIXATION OF MESH: COMPARISON OF SURGICAL TECHNIQUES
Ahmed Akl, MD1, Leonard Voronov, MD, PhD2, Muturi Muriuki, PhD2, Robert Havey, BS2, Avinash Patwardhan, PhD1, Timothy Vandenboom, MD1, Linda Brubaker, MD, MS1, Colleen Fitzgerald, MD, MS1 and Elizabeth Mueller, MD, MSME1
1Loyola University Medical Center Stritch School of Medicine; 2Edward Hines Jr. VA Hospital
(Presented By: Ahmed Akl, MD)

Poster #48

FACTORS ASSOCIATED WITH INTRAOPERATIVE CONVERSION DURING ROBOTIC SACROCOLPOPEXY
Brian Linder, MD, George Chow, MD, Lindsay Hertzig, MD, Marisa Clifton, MD and Daniel Elliott, MD
Mayo Clinic
(Presented By: Brian Linder, MD)

Poster #49

BUILDING A SUCCESSFUL UROLOGIC SIMULATION LAB: A MULTI–INSTITUTIONAL WORKSHOP MODEL
Benjamin Sherer, MD1, Emily Yura, BA1, Kalyan Latchemsetty, MD1, Michael Abern, MD2, Ervin Kocjancic, MD2, Thomas Turk, MD3 and Christopher Coogan, MD1
1Rush University Medical Center; 2University of Illinois, Chicago; 3Loyola University Medical Center
(Presented By: Benjamin Sherer, MD)

Poster #50

DISK AT RISK: SACRAL SUTURE DEPTH IN MINIMALLY INVASIVE SACROCOLPOPEXY
Edith Graham, BA1, Ahmed Akl, MD2, Linda Brubaker, MD, MS2, Colleen Fitzgerald, MD, MS2 and Elizabeth Mueller, MD, MSME2
1Loyola University Chicago Stritch School of Medicine; 2Loyola University Medical Center
(Presented By: Edith Graham, BA)

Poster #51

OPTIMIZING ROBOTIC SIMULATION AND TRAINING
Scott Johnson, MD, Margaret Mulligan, PhD and Kenneth Jacobsohn, MD
Medical College of Wisconsin
(Presented By: Scott Johnson, MD)
Poster #52

3D RECONSTRUCTION METHOD FOR ACCURATE AND REPRODUCIBLE SOFT TISSUE STRUCTURE VOLUME DETERMINATION
Timothy Durso, BS¹, Jonathan Carnell, MD², Robert Blackwell, MD², Thomas Turk, MD², Jeffrey Branch, MD² and Gopal Gupta, MD²
¹Loyola University Chicago Stritch School of Medicine; ²Loyola University Medical Center
(Presented By: Timothy Durso, BS)

Poster #53

ROBOTIC ASSISTED LAPAROSCOPIC REPAIR OF COMPLEX VESICOVAGINAL FISTULAS AT A SINGLE ACADEMIC INSTITUTION
Tom Tieu, MD¹, Ahmed El-Zawahry, MD¹, Tatnai Burnett, MD², Sohail Siddique, MD² and Alex Gorbonos, MD¹
¹SIU Division of Urology; ²SIU Division of Obstetrics and Gynecology
(Presented By: Tom Tieu, MD)

6:30 p.m. – 12:00 a.m. Annual Banquet
Location: The Union League Club of Chicago

SATURDAY, SEPTEMBER 13, 2014

6:15 a.m. – 7:00 a.m. Continental Breakfast
Location: Vevey Foyer

6:30 a.m. – 11:30 a.m. Registration/Information Desk Open
Location: Monte Rosa Lobby

6:30 a.m. – 11:30 a.m. Speaker Ready Room
Location: Monte Rosa

7:30 a.m. – 11:00 a.m. Spouse/Guest Hospitality Suite
Location: Matterhorn

GENERAL SESSION

7:00 a.m. – 8:00 a.m. Video Session
Moderators: Krishnanath Gaitonde, MD
Cincinnati, OH
Sarah E. McAchran, MD
Madison, WI
Video #1 REPAIR OF MEGAMEATUS WITH INTACT PREPUCE: A MODIFIED APPROACH
Elizabeth Dray, MD¹, Mark Faasse, MD² and Earl Cheng, MD²
¹Loyola University Medical Center; ²Ann & Robert H. Lurie Children’s Hospital of Chicago
(Presented By: Mark Faasse, MD)

Video #2 ROBOTIC−ASSISTED PARTIAL NEPHRECTOMY AFTER PREVIOUS IPSILATERAL PARTIAL NEPHRECTOMY
Richard S. Vigh, BA, BSc¹, Clinton D. Bahler, MD², Jason C. Sea, MD³ and Chandru P. Sundaram, MD²
¹Saba University School of Medicine; ²Indiana University School of Medicine; ³University of Florida
(Presented By: Richard S. Vigh, BA, BSc)

Video #3 AUTOLOGOUS TRANSOBTURATOR MID−URETHRAL SLING PLACEMENT FOR FEMALE STRESS URINARY INCONTINENCE
Brian Linder, MD and Daniel Elliott, MD
Mayo Clinic
(Presented By: Brian Linder, MD)

Video #4 TROUBLESHOOTING ROBOT−ASSISTED RADICAL NEPHRECTOMY WITH A LEVEL I VENA CAVA TUMOR THROMBECTOMY: CONFIRMING VASCULAR CONTROL PREVENTS COMPLICATIONS
David Y. Yang, BS, Clinton D. Bahler, MD and Chandru P. Sundaram, MD
Indiana University School of Medicine
(Presented By: David Y. Yang, BS)

Video #5 EXPANDING THE KIDNEY ORGAN DONOR POOL AND REDUCING PATIENT WAIT LIST TIMES THROUGH UTILIZATION OF LIVING DONOR KIDNEYS WITH RENAL ANGIOMYOLIPOMAS.
Charles Modlin, MD, MBA¹, Stuart Flechner, MD², Ryan Mori, MD³, Ahmen A. Aboumohamed, MD² and Mark Cassara⁴
¹Cleveland Clinic, Section Renal Transplantation; ²Cleveland Clinic, Department Urology, Section Renal Transplantation; ³Cleveland Clinic Department Urology; ⁴Cleveland Clinic Organ Preservationist
(Presented By: Charles Modlin, MD, MBA)
**Video #6**

**ROBOTIC ASSISTED ADRENALECTOMY AND RETROPERITONEAL LYMPH NODE DISSECTION FOR METASTATIC LUNG CANCER**

Matthew Tellman, Clinton Bahler, MD and Chandru Sundaram, MD
Indiana University School of Medicine
(Presented By: Matthew Tellman)

**Video #7**

**OMITTING CORTICAL RENORRHAPHY DURING PARTIAL NEPHRECTOMY**

Spencer Knapp, BS, Clinton Bahler and Chandru Sundaram, MD
Indiana University
(Presented By: Clinton Bahler)

**Video #8**

**ROBOTIC PARTIAL NEPHRECTOMY WITH INTRACORPOREAL COOLING IN PATIENTS WITH SOLITARY KIDNEY OR STAGE IV CKD**

David Pridmore, MD, Sanjeev Kaul, MD and Avinash Chennamsetty, MD
Oakland University William Beaumont School of Medicine
(Presented By: David Pridmore, MD)

**8:00 a.m. – 8:45 a.m.**

**Roundtable Discussion: Looking into the Future**

Moderator: Manoj Monga, MD
Cleveland, OH

Discussants: **Urology Manpower**
Christopher M. Gonzalez, MD, FACS, MBA
Chicago, IL

**ACA and Its Effect on Urology**
Mark D. Stovisky, MD, MBA, FACS
Cleveland, OH

**Residency Training**
Stephanie J. Kielb, MD
Chicago, IL

**8:45 a.m. – 9:35 a.m.**

**Bizarre & Interesting Cases Podium Session**

Moderators: John V. Kryger, MD
Milwaukee, WI
Patrick H. McKenna, MD, FACS, FAAP
Madison, WI
8:45 a.m. #112 DELIVERY OF A MASSIVE BLADDER STONE FROM AN AUGMENTED BLADDER USING OBSTETRICAL FORCEPS
Duncan Morhardt, MD, PhD, and John Stoffel, MD
1University of Michigan; 2University of Michigan Health System
(Presented By: Duncan Morhardt, MD, PhD)

8:48 a.m. #113 A JINGLING IN MY LONGJOHNS: A SPONTANEOUS AUTOAMPUTATION OF GLANS PENIS
Michael Levin, MD, and John Damiani, DO
1Wayne State University; 2Oakwood Hospital
(Presented By: Michael Levin, MD)

8:51 a.m. #114 LIFE THREATENING PENILE HEMORRHAGE: AN UNFORTUNATE NIGHT AT THE BOWLING ALLEY
Bradford Stevenson, MD and Tobias Köhler, MD
Southern Illinois University
(Presented By: Bradford Stevenson, MD)

8:54 a.m. #115 URETEROPELVIC JUNCTION OBSTRUCTION PRESENTING AS CYCLIC VOMITING SYNDROME IN SIBLINGS
Alonso Carrasco, MD, Amy Hou, MD, and Yuri Reinberg, MD
1Mayo Clinic; 2Pediatric Surgical Associates
(Presented By: Alonso Carrasco, MD)

8:57 a.m. #116 A UNIQUE MUSICAL CAUSE OF RECURRENT UTIS IN AN ELVIS IMPERSONATOR
Matthew Uhlman, MD, MDA, Matthew Knudson, MD, and Kenneth Nepple, MD
1University of Iowa; 2University of Iowa Alumni
(Presented By: Matthew Uhlman, MD, MDA)

9:00 a.m. #117 A NOVEL METHOD OF PENILE MEASUREMENT AND ITS CONSEQUENCES
Jonathan Kiechle, MD and Robert Abouassaly, MD
Case Western Reserve University
(Presented By: Jonathan Kiechle, MD)

9:03 a.m. #118 PRIMARY TESTICULAR ADENOCARCINOMA PRESENTING 40 YEARS AFTER PARTIAL ORCHIECTOMY
Matthew Fulton, MD and Ronald Rubenstein, MD
Beaumont Hospital
(Presented By: Matthew Fulton, MD)
9:06 a.m.  #119  DERMOID CYST IN A MULTICYSTIC DYSPLASTIC KIDNEY
Michael Levin, MD1 and Theodore Barber, MD2
1Wayne State University; 2Helen Devos Childrens Hospital
(Presented By: Michael Levin, MD)

9:09 a.m.  #120  DOUBLE URETEROCALICOSTOMY AS A SALVAGE PROCEDURE FOR POSTOPERATIVE STRUCUTURE
Daniel Yelfimov, MD, Alonso Carrasco, MD and Stephen Kramer, MD
Mayo Clinic
(Presented By: Daniel Yelfimov, MD)

9:12 a.m.  #121  PEEL−AWAY INTRODUCER SHEATH USED TO FACILITATE LITHOTRIPSY IN URINARY BOWEL CONDUIT
Rebekah Beach, MD, John Park, MD and Julian Wan, MD
University of Michigan
(Presented By: Julian Wan, MD)

9:15 a.m.  #122  PSEUDOANGIOMATOUS STROMAL HYPERPLASIA OF THE PROSTATE
Emily Slopnick, MD and J. Patrick Spirnak, MD
Metrohealth Medical Center
(Presented By: Emily Slopnick, MD)

9:18 a.m.  #123  SPONTANEOUS RESOLUTION OF INFLAMMATORY PSEUDOTUMOR OF THE KIDNEY: A CASE REPORT
Adam Calaway, MD, Dibson Gondim, MD, Muhammed Idress, MD and Ronald S. Boris, MD
Indiana University School of Medicine
(Presented By: Adam Calaway, MD)

9:21 a.m.  #124  SIMULTANEOUSLY OCCURRING ANTERIOR AND POSTERIOR URETHRAL VALVES: A RARE CAUSE OF URETHRAL OBSTRUCTION
Christine Tran, MD, Chad Reichard, MD, Daniel McMahon, MD and Audrey Rhee, MD
Cleveland Clinic Glickman Urological and Kidney Institute
(Presented By: Chad Reichard, MD)

9:24 a.m.  #125  ECTOPIC DUPLICATED URETER DISCOVERED DURING ROBOTIC PROSTATECTOMY
Scott Johnson, MD, John Lacey, MD and Kenneth Jacobsohn, MD
Medical College of Wisconsin
(Presented By: Scott Johnson, MD)
### A Case of Idiopathic Scrotal Calcinosis

**Presented By:** Aron Liaw, MD

Ohio State University

### Q&A

#### Concurrent Sessions

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<th>Time</th>
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<tr>
<td>9:35 a.m.</td>
<td>126</td>
<td>Penile Prosthesis Surgery as a Barometer of the Economy?</td>
<td>Daniel Oberlin, MD, Laurie Bachrach, MD, Sarah Flury, MD, Robert Brannigan, MD</td>
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<td>Northwestern Memorial Hospital, Feinberg School of Medicine</td>
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<td>9:40 a.m.</td>
<td>128</td>
<td>The Medtronic Zotarolimus–Eluting Peripheral Stent System for the Treatment of Erectile Dysfunction in Males with Sub-optimal Response to PDE5 Inhibitor – 3 Year Results</td>
<td>Tobias Kohler, MD, MPH, FACS, Irwin Goldstein, MD</td>
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<td>1SIU SOM; 2Institute for Sexual Medicine, San Diego</td>
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<td>9:45 a.m.</td>
<td>129</td>
<td>The Privates Study: Pain Rates in Vasectomy and Testing to Ensure Sterility: A Contemporary Series</td>
<td>Michael Kottwitz, MD, Charles Welliver, MD, Anand Brahmandam, BS, Bradley Holland, BS, Benjamin Bova, BS and Tobias Köhler, MD</td>
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<td>Southern Illinois University</td>
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9:50 a.m.  #130  LONG ACTING LIPOSOMAL BUPIVICAINE DOES NOT LEAD TO DECREASED NARCOTIC REQUIREMENTS OR PAIN SCORES IN MEN UNDERGOING PENILE PROSTHESIS IMPLANTATION
Brittney Hanerhoff, Charles Welliver, MD, Anand Brahmandam, Jena Cummins, PharmD, Cynthia Bednarchik, NP, Georgia Mueller, MS, Danuta Dynda, MD and Tobias Köhler, MD, MPH
Southern Illinois University School of Medicine
(Presented By: Brittney Hanerhoff)

9:55 a.m.  #131  17% OF HYPOGONADAL MEN TREATED WITH CLOMIPHENE CITRATE REQUIRE COMBINATION THERAPY WITH AN AROMATASE INHIBITOR
Tristan Nicholson¹, Brett Johnson, MD², Andrew Brunk², Tracy Downs, MD², William Ricke, PhD² and Daniel Williams, MD²
¹University of Rochester School of Medicine & Dentistry, Rochester, NY; ²Department of Urology, University of Wisconsin School of Medicine and Public Health, Madison, WI
(Presented By: Brett Johnson, MD)

10:00 a.m.  #132  FINITE ELEMENT SIMULATION MODELING OF A SHAPE−MEMORY ALLOY USED IN A NOVEL PENILE PROSTHESIS DESIGN
Brian Le, MD, MA¹, Alberto Colombo, PhD² and Kevin McVary, MD²
¹Johns Hopkins Hospital; ²Southern Illinois University
(Presented By: Brian Le, MD, MA)

10:05 a.m.  #133  SCROTOPLASTY AT TIME OF PENILE IMPLANT IS AT HIGH RISK FOR DEHISCENCE IN DIABETICS
Randy Sulaver, MD, Michael Kottwitz, MD, Luke Frederick, MD, Charles Welliver, Jr., MD and Tobias Kohler, MD
SIU SOM
(Presented By: Randy Sulaver, MD)

10:10 a.m.  #134  PREDICTORS OF SUCCESS AFTER MICROSCOPIC SUBINGUINAL VARICOCELECTOMY
Brooke Harnisch, MD, Andrew Zaganjar, BS, Dane Johnson, MD and Jay Sandlow, MD
Medical College of Wisconsin
(Presented By: Brooke Harnisch, MD)
10:15 a.m.  #135  DOES AGE OR BMI AFFECT HORMONE RESPONSE AFTER SUBCUTANEOUS TESTORONE PELLETS?
Brent Carlyle, MD and Greg Lowe, MD
Ohio State University
(Presented By: Brent Carlyle, MD)

10:20 a.m. – 10:30 a.m.  Q&A

9:35 a.m. – 10:30 a.m.  Prostate Malignant/Benign Podium Session
Moderator:  Peter Langenstroer, MD, MS
Milwaukee, WI
Discussant:  Thomas A. Gardner, MD
Indianapolis, IN

9:35 a.m.  #136  PROGNOSTIC UTILITY OF THE CELL CYCLE PROGRESSION (CCP) SCORE FOR PREDICTING SYSTEMIC DISEASE AFTER BIOCHEMICAL RECURRENCE
Michael Koch, MD1, Liang Cheng, MD1, Zaina Sangale, MD2, Michael Brawer, MD2, William Welbourne, PhD2, Julia Reid, M Stat2 and Steven Stone, PhD2
1Indiana University School of Medicine; 2Myriad Genetics, Inc.
(Presented By: Michael Koch, MD)

9:40 a.m.  #137  KI–67 PROLIFERATION ON PROSTATE BIOPSY IS ASSOCIATED WITH UNFAVORABLE PATHOLOGY AT PROSTATECTOMY AND BIOCHEMICAL RECURRENCE AMONG MEN WITH LOW RISK PROSTATE CANCER
John Knoedler, MD, R. Jeffrey Karnes, MD, Boyd Viers, MD, Laureano Rangel, Eric Bergstrahl, Thomas Sebo, MD and Matthew Tollefson, MD
Mayo Clinic
(Presented By: John Knoedler, MD)

9:45 a.m.  #138  PCA3 VELOCITY OVER TIME HELPS PREDICT BIOPSY OUTCOME ON ACTIVE SURVEILLANCE
Kristian Novakovic, MD, Chihsiung Wang, PhD, Charles Brendler, MD, Michael McGuire, MD and Brian Helfand, MD, PhD
NorthShore University HealthSystem
(Presented By: Kristian Novakovic, MD)
**9:50 a.m.  #139**  
**PROSTATE SPECIFIC ANTIGEN/SOLVENT INTERACTION ANALYSIS (PSA/SIA): INITIAL REVIEW OF CLINICAL DATA FOR SERUM PSA IN THE RANGE OF 2 < [PSA] < 4 NG/ML.**  
Mark Stovsky, MD, MBA, FACS¹, Lee Ponsky, MD², Srinivas Vourganti, MD², Peter Stuhldreher, MD², Mike Siroky, MD³, Victor Kipnis, PhD⁴, Olga Fedotoff, PhD⁵, Larissa Mikheeva, PhD⁵, Boris Zaslavsky, PhD⁵, Arnon Chait, PhD⁵, J. Stephen Jones, MD, MBA¹  
¹Cleveland Clinic; ²Case Western Reserve University School of Medicine – Case Medical Center; ³Veterans Administration Boston Healthcare System; ⁴Biometry Research Group – National Cancer Institute; ⁵Cleveland Diagnostics, Inc.  
(Presented By: Mark Stovsky, MD, MBA, FACS)

**9:55 a.m.  #140**  
**VARIATION IN THE FREQUENCY OF PREMALIGNANT LESIONS AMONG PATIENTS UNDERGOING PROSTATE BIOPSY IN MICHIGAN**  
Paul R. Womble, MD¹, David C. Miller, MD, MPH¹, Susan M. Linsell, MHSA¹, Zaojun Ye, MS¹, Frank N. Burks, MD² and James E. Montie, MD¹  
¹University of Michigan; ²Oakland University William Beaumont School of Medicine  
(Presented By: Paul R. Womble, MD)

**10:00 a.m.  #141**  
**EFFECT OF HOLEP ON CHRONIC PROSTATITIS SYMPTOMS**  
Emily Jacobs, MD and James E. Lingeman, MD  
Indiana University School of Medicine  
(Presented By: Emily Jacobs, MD)

**10:05 a.m.  #142**  
**PHOTOVAPORIZATION OF THE PROSTATE IN THE OFFICE SETTING UNDER LOCAL ANESTHESIA FOR BENIGN PROSTATIC HYPERPLASIA WITH PROSTATE SIZE MORE THAN SEVENTY GRAMS**  
Robert Elgin, DO¹, Tarek Pacha, DO, Ryan Nelson, DO, Robert DeLoreto, MD² and Valal George, MD, PhD²  
¹Botsford Hospital– Detroit Metro Urology; ²Michigan Institute of Urology  
(Presented By: Robert Elgin, DO)

**10:10 a.m. – 10:30 a.m.**  
**Q&A**
9:35 a.m. – 10:30 a.m.  Urinary Incontinence II Podium Session  
*Location: Montreux*  
**Moderator:** Sarah E. McAchran, MD  
Madison, WI  
**Discussant:** Elizabeth B. Takacs, MD  
Iowa City, IA

9:35 a.m.  #143  
**URODYNAMIC CHARACTERIZATION OF URINARY DYSFUNCTION IN ADULTS WITH CEREBRAL PALSY**  
Balaji Kalyanaraman, MD, PhD¹, Andrew Nguyen, MD¹, Jenna Katorski, RN, CNP² and Sean Elliott, MD, MS¹  
¹University of Minnesota; ²Gillette Childrens Specialty Healthcare Clinics  
(Presented By: Balaji Kalyanaraman, MD, PhD)

9:40 a.m.  #144  
**FACTORS ASSOCIATED WITH POOR RETURN OF URINARY FUNCTION AFTER ROBOTIC ASSISTED RADICAL PROSTATECTOMY: EVALUATION OF EXPANDED PROSTATE CANCER INDEX COMPOSITE (EPIC) SCORES**  
David Pridmore, MD, Avinash Chennamsetty, MD, Jason Hafron, MD, Michael Lutz, MD, Jay Hollander, MD and Kenneth Peters, MD  
Oakland University William Beaumont School of Medicine  
(Presented By: David Pridmore, MD)

9:45 a.m.  #145  
**TRIATHLETE RISK OF PELVIC FLOOR DISORDERS, PELVIC GIRDLE PAIN AND THE FEMALE ATHLETE TRIAD**  
Johnny Yi, MD¹, Sandi Tenfelde, PhD, RN, APN¹, Dina Tell, PhD², Cynthia Brinca, MD, PhD¹, Elizabeth Mueller, MD, MSME¹ and Colleen Fitzgerald, MD, MS¹  
¹Loyola University Medical Center; ²Loyola University  
(Presented By: Johnny Yi, MD)

9:50 a.m.  #146  
**CHARACTERIZATION OF MULTIPLE SCLEROSIS PATIENTS WITH LOWER URINARY TRACT SYMPTOMS**  
Waseem Ahmad, BS¹, Dusan Stefoski, MD², Joshua Andalcio, MS² and Ajay Nehra, MD²  
¹Rush Medical College; ²Rush University Medical Center  
(Presented By: Waseem Ahmad, BS)

#147  WITHDRAWN
ANALYSIS OF CROSS−OVER RATES BETWEEN SACRAL NEUROMODULATION AND ONABOTULINUMTOXIN−A INJECTION IN REFRACTORY IDIOPATHIC OVERACTIVE BLADDER

Lindsey Cox, MD, Sara Lenherr, MD, Duncan Morhardt, MD, PhD, Heather Crossley, BA, Cynthia Stroup, PA, Anne Cameron, MD, Ann Oldendorf, MD, John Stoffel, MD and J. Quentin Clemens, MD, MS
University of Michigan
(Presented By: Lindsey Cox, MD)

GENITOURINARY SYMPTOMS IN THE DYSTROGlyCANOPATHIES

Cameron D. Crockett, BS1, Laura A. Bertrand, MD2, Christopher S. Cooper, MD3, Ke Liu, MS4, M. Bridget Zimmerman, PhD4, Katherine D. Mathews, MD5
1Carver College of Medicine, University of Iowa; 2Department of Urology, University of Iowa; 3Department of Urology, Department of Pediatrics, University of Iowa; 4Department of Biostatistics, College of Public Health, University of Iowa; 5Department of Neurology, Department of Pediatrics, University of Iowa
(Presented By: Cameron D. Crockett, BS)

EVIDENCE FOR ANTIBIOTIC STEWARDSHIP FOLLOWING CYSTOSCOPIC ONABOTULINUMTOXINA INJECTION

Elizabeth Ferry, MD1, Dhruti Patel, MD2, Anne Sammarco, MD3, Elias Kikano, BA4, Firouz Daneshgari, MD2, Sangeeta Mahajan, MD3 and Adonis Hijaz, MD2
1University Hospitals Case Medical Center; 2University Hospitals Case Medical Center, Urology Institute, Cleveland, OH; 3University Hospitals MacDonald Women’s Hospital, Department of Obstetrics and Gynecology, Cleveland, OH; 4Case Western Reserve University School of Medicine, Cleveland, OH
(Presented By: Elizabeth Ferry, MD)

VOIDING COMPLAINTS IN PATIENTS PRESENTING WITH PELVIC PAIN

Michael Ehllert, MD1, Larry T. Sirls, MD1, Donna Carrico, NPMS2, Emily Dove-Medows, CNM, MSN2, Jason Gilleran, MD1, Jamie Bartley, DO1, Jamice Tomakowsky, PhD, MPF1, Jennifer Carty, MA2 and Kenneth Peters, MD1
1William Beaumont Health System; 2Beaumont Women’s Urology Center
(Presented By: Michael Ehllert, MD)
10:15 a.m. #152 INTONE: A NOVEL PELVIC FLOOR REHABILITATION DEVICE FOR URINARY INCONTINENCE
Michael Guralnick, MD, FRCSC, Holly Kelly, BS, RN, Heather Engelke, Sumana Koduri, MD and R. Corey O’Connor, MD
Medical College of Wisconsin
(Presented By: Michael Guralnick, MD, FRCSC)

10:20 a.m. – 10:30 a.m. Q&A
10:30 a.m. – 10:45 a.m. Break

GENERAL SESSION
10:45 a.m. – 11:15 a.m. NCS Resident Super Bowl – Final
Moderator: Bradley F. Schwartz, DO, FACS
Springfield, IL
Judges: Christopher S. Cooper, MD
Iowa City, IA
John V. Kryger, MD
Milwaukee, WI
Dennis A. Pessis, MD
Chicago, IL

11:15 a.m. – 11:20 a.m. Best Poster, Best Video and Bizarre & Interesting Case Award Presentations
Presenter: Bradley F. Schwartz, DO, FACS
Springfield, IL

11:20 a.m. – 11:30 a.m. Incoming NCS President Remarks
NCS President-Elect: Patrick H. McKenna, MD, FACS, FAAP
Madison, WI
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ABSTRACT
PRESENTERS

Sherer, Benjamin A.
9/12/14 4:15 p.m. Poster# 49
9/12/14 8:10 a.m. AB# 61

Shiau, Jonathan M.
9/11/14 10:55 a.m. AB# 13

Shumate, Ashley
9/12/14 11:20 a.m. AB# 96

Skolarus, Ted A.
9/12/14 11:15 a.m. AB# 86

Slopnick, Emily
9/13/14 9:15 a.m. AB# 122

Soubra, Ayman
9/11/14 4:55 p.m. AB# 53
9/12/14 4:15 p.m. Poster# 38

Stevenson, Bradford J.
9/13/14 8:51 a.m. AB# 114
9/12/14 11:05 a.m. AB# 75

Stewart, Suzanne B.
9/12/14 11:20 a.m. AB# 87
9/12/14 4:15 p.m. Poster# 39

Storm, Douglas W.
9/11/14 4:30 p.m. Poster# 55
9/11/14 8:40 a.m. AB# 3

Stovsky, Mark D.
9/13/14 9:50 a.m. AB# 139

Strigenz, Michael
9/11/14 5:00 p.m. AB# 54

Strine, Andrew C.
9/11/14 8:55 a.m. AB# 6

Su, Ruthie Rebecca
9/11/14 4:30 p.m. Poster# 1

Sulaver, Randy
9/13/14 10:05 a.m. AB# 133

Suson, Kristina Dawn
9/11/14 9:00 a.m. AB# 7
9/11/14 9:05 a.m. AB# 8

Sussman, David O.
9/11/14 3:00 p.m. AB# 42

Tellman, Matthew
9/13/14 7:00 a.m. Video# 6

Thompson, Robert Houston
9/11/14 2:10 p.m. AB# 37

Tieu, Thomas
9/12/14 4:15 p.m. Poster# 53

Tobert, Conrad
9/11/14 1:55 p.m. AB# 34
9/11/14 4:30 p.m. Poster# 17

Tsambarlis, Peter
9/12/14 4:15 p.m. Poster# 36

Uhlman, Matthew A.
9/13/14 8:57 a.m. AB# 116

Ulchaker, James C.
9/12/14 8:25 a.m. AB# 64

Unnikrishnan, Raman
9/11/14 4:30 p.m. Poster# 18

VanderBrink, Brian Andrew
9/11/14 4:30 p.m. Poster# 2

Victorson, David
9/12/14 10:50 a.m. AB# 72

Viers, Boyd R.
9/12/14 4:45 p.m. AB# 104
9/11/14 4:30 p.m. Poster# 14
9/12/14 8:55 a.m. AB# 70

Vigh, Richard S.
9/13/14 7:00 a.m. Video# 2

Wagner, Jennifer
9/11/14 4:50 p.m. AB# 52

Wan, Julian
9/13/14 9:12 a.m. AB# 121

Warner, Jonathan Nicholas
9/12/14 10:45 a.m. AB# 89
Weiner, Adam
9/11/14 5:05 p.m. AB# 55
9/11/14 11:10 a.m. AB# 16

Wertheim, Margaret
9/12/14 4:40 p.m. AB# 103
9/11/14 2:00 p.m. AB# 27

Wetterlin, Jessica
9/12/14 4:15 p.m. Poster# 43

Womble, Paul R.
9/11/14 4:40 p.m. AB# 50
9/13/14 9:55 a.m. AB# 140

Wynberg, Jason B.
9/12/14 4:20 p.m. AB# 99

Yang, David Y.
9/13/14 7:00 a.m. Video# 4
9/12/14 11:10 a.m. AB# 85

Yefimov, Daniel
9/13/14 9:09 a.m. AB# 120

Yi, Johnny
9/13/14 9:45 a.m. AB# 145
ABSTRACTS

Podium #1
CLINICAL PATHWAY FOR EARLY DISCHARGE AFTER CPRE AND EPISPADIAS REPAIR WITH PELVIC OSTEOTOMIES BY USING A SPICA CAST
Bryan Sack, MD, John Kryger, MD, Michael Mitchell, MD, Anthony Balcom, MD, Charles Durkee, MD, Roger Lyon, MD and Travis Groth, MD
Medical College of Wisconsin
Presented By: Bryan Sack, MD

Introduction: Pelvic osteotomies and fixation is used at the time of complete primary repair of exstrophy (CPRE) and Epispadias repair. Our clinical pathway using SPICA casting allows for early discharge without increased morbidity.

Methods: Records of patients that underwent pelvic osteotomies with SPICA casting at the time of CPRE or epispadias repair from November 2006 to March 2013 were reviewed.

Results: Pelvic osteotomies and SPICA casting was performed in 17 children. They were subdivided into primary bladder exstrophy (11), bladder exstrophy revision (4) and epispadias (2). The median post−operative hospital stay was 6 (3−15) days. The results are in Table 1. One primary bladder exstrophy child had a seizure disorder requiring prolonged hospitalization (35 days) and is not included in the hospital stay calculation. No child experienced an abdominal complication (ie: abdominal dehiscence, bladder prolapse) or orthopedic complication (ie: osteotomy infection, skin breakdown) related to SPICA casting. One older patient (4.8 yrs) required prolonged casting (64 days) because of pelvic pinning. The median length of casting without pinning (n=16) was 31 (26−48) days.

Conclusion: This clinical pathway is safe and allows for an earlier discharge compared to other post−operative pathways. Children may experience minor cast irritation or tightness, but these issues can be overcome with minor cast adjustments.

Table 1.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>M/F</th>
<th>Median Age at Surgery (days)</th>
<th>Median Post-op Stay (days)</th>
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<tbody>
<tr>
<td>Primary Bladder Exstrophy</td>
<td>11</td>
<td>5/6</td>
<td>4.0 (1-125)</td>
<td>6.5 (3-15)</td>
</tr>
<tr>
<td>Bladder Exstrophy Revision</td>
<td>4</td>
<td>2/2</td>
<td>404 (79-1764)</td>
<td>5.5 (5-8)</td>
</tr>
<tr>
<td>Epispadias</td>
<td>2</td>
<td>1/1</td>
<td>134 (71-197)</td>
<td>5.0 (4-6)</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>8/9</td>
<td>15.0 (1-1764)</td>
<td>6.0 (3-15)</td>
</tr>
</tbody>
</table>
Podium #2

COMPLEX PEDIATRIC UROLOGIC RECONSTRUCTION UTILIZING THE ASTRA TECHNIQUE: PRELIMINARY EXPERIENCE AT A SINGLE INSTITUTION

Diana Bowen, MD1, Earl Cheng, MD2, Mary Beth Madonna, MD2, Theresa Meyer2 and Elizabeth Yerkes, MD2
1Northwestern University; 2Northwestern University Feinberg School of Medicine
Presented By: Diana Bowen, MD

Introduction: The anterior sagittal transrectal approach (ASTRA) has been recently described as a tool for surgical access to the posterior urethra for complex pediatric reconstructive cases and for access to the vagina in high urogenital sinus (UG) anomalies. We adopted this promising technique and report our single institution experience.

Methods: From 2010 to 2013, we utilized the ASTRA approach in five children. The mean age at the time of surgery was 14.2 months (range 7 to 36 months). Our series included four girls with long UG sinus and one boy with Denys–Drash syndrome with a symptomatic Müllerian structure after perineal hypospadias repair. Full bowel preparation was performed, no diverting colostomies were utilized and diet was resumed as bowel movements occurred.

Results: Average length of stay was 5.7 days (range 4.5 – 8.4). Average follow-up was 12.2 months (range 2 – 22 months). The vagina easily reached the perineum in all four relevant cases. There were no instances of rectourethral fistula or fecal incontinence. One patient had a partial perineal body dehiscence that subsequently healed fully.

Conclusions: Our series adds to the growing body of literature demonstrating that ASTRA is a safe, advantageous and easily adapted approach for a program well versed in complex reconstruction. Surgical exposure is superior to the standard perineal approach without compromising continence outcomes. Our early results support the view that protective colostomy is not required. Long term follow-up in these individuals for both continence and vaginal and urethral health will be important.
Introduction: Prenatal ultrasonography has greatly enhanced detection of congenital genitourinary abnormalities. It remains unclear if hydronephrosis that resolves prior to birth should be imaged postnatally. We sought to determine postnatal abnormalities associated with prenatal hydronephrosis that resolved prior to birth (RPH) and compared this group to those with prenatal hydronephrosis that persisted throughout pregnancy (PPH).

Methods: We performed a retrospective review of all consecutive patients evaluated for prenatal hydronephrosis over 24 months.

Results: A total of 126 patients were evaluated. 54 children were found to have RPH. The average anterior–posterior renal pelvis length at the original prenatal ultrasound was significantly longer in children with PPH (p=0.01). 46% of children with RPH were actually found to have recurrent hydronephrosis on postnatal ultrasound. 6% of children with PPH and 9% of children with RPH were found to have vesicoureteral reflux. With a mean follow up of 128 days (10–601 days), 32% of PPH resolved after birth, while 40% of the postnatal hydronephrosis identified within the RPH cohort resolved after birth. Five PPH patients were found to have abnormalities requiring surgical intervention, while no RPH patients needed surgery.

Conclusion: A significant number of children with RPH had recurrent hydronephrosis on postnatal studies. No children within the RPH cohort were found to have abnormalities requiring intervention. Prenatal hydronephrosis is a poor indicator of postnatal vesicoureteral reflux. Although RPH may recur after birth, the low chance of its required intervention suggests that these children may not require postnatal imaging.
Introduction: To evaluate the use of passive ureteral dilation with a ureteral stent in children undergoing ureteroscopy for upper tract calculi and to determine whether age can predict the likelihood of successful ureteroscopy without ureteral stent placement.

Methods: We retrospectively reviewed all patients who underwent ureteroscopic procedures for upper tract calculi from 2002 to 2012 at Children’s Hospital of Wisconsin. Patients 18 years of age and older, those with previous GU reconstructive surgery or with known GU anomalies were excluded from this study. Once identified, patients were stratified based on age.

Results: Between 2002 and 2012, 130 patients underwent ureteroscopic treatment for upper tract stones. Of these, 37 patients were excluded from study. The remaining 93 patients were reviewed. Passive ureteral dilation with ureteral stents was required in 24 patients (25.8%). In patients stratified to age groups 0–6yrs, 6–12yrs and 12–18yrs, they required stents for passive dilation 57.1% (n=14), 26.0% (n=31) and 17.0% (n=48) of the cases, respectively. Overall success rate of achieving upper tract access after passive dilatation with ureteral stents was 100%.

Conclusion: Passive dilation of the ureter in preparation for ureteroscopy is successful and beneficial in children. Younger patients were more likely to require stents for passive dilation. Those younger than 6yrs of age were most likely to require ureteral stents for passive dilation.
Objective: Robotic-assisted laparoscopic pyeloplasty (RALP), the most commonly performed pediatric robotic urologic surgery, has not been compared against open pyeloplasty (OPN) by a single surgeon. Here we describe our experience and outcomes.

Methods: Children undergoing open or robotic pyeloplasty from 2007 to 2013 were reviewed. Clinical success was defined as resolution of presenting symptoms and improved/stable hydronephrosis on ultrasound scan.

Results: The RALP cohort consisted of 52 patients and the OPN 40. RALP patients were significantly older (6.8 vs. 1.2 years, p<0.01) and heavier (28.4 vs. 8.4 kg, p<0.01). RALP operative times were longer (203.3 vs. 135.0 minutes, p<0.01), but decreased significantly with increasing experience (r²=0.42, p<0.01). Seven Clavien IIIb complications occurred in RALP compared to two in OPN. There were no differences in post-operative narcotic administration (p=0.92) or length of stay (LOS) (p=0.93). 11/42 (28%) OPN patients required epidural analgesia but none were placed in the RALP cohort. 49/52 (94%) RALP patients and 40/40 OPN had successful outcomes. Three RALP patients required re-do robotic pyeloplasty.

Conclusions: RALP and OPN clinical outcomes seem comparable. An initial learning curve with RALP is to be expected, but RALP operative times approach those of OPN. Previously reported RALP benefits, such as reduced analgesic requirements and LOS, were not observed. This may be attributed to comparison of a heterogeneous cohort. The benefits of minimally-invasive robotic surgery must be evaluated in the future, when robotic experience approaches open experience.
IS RENAL SCINTIGRAPHY NECESSARY AFTER HEMINEPHRECTOMY IN CHILDREN?

Andrew Strine, MD¹, Benjamin Whittam, MD¹, Katherine Hubert, MD, MPH¹, Rosalia Misseri, MD¹, Martin Kaefer, MD¹, Richard Rink, MD¹, Boaz Karmazyn, MD² and Mark Cain, MD¹

¹Division of Pediatric Urology, Riley Hospital for Children at Indiana University Health, Indiana University School of Medicine; ²Section of Pediatric Radiology, Riley Hospital for Children at Indiana University Health, Indiana University School of Medicine

Presented By: Andrew Strine, MD

Introduction: Heminephrectomy remains an excellent option for a poorly functioning moiety in a duplicated system in children. A primary concern during heminephrectomy is a vasculature injury to the remaining ipsilateral moiety. Renal scintigraphy is often used in the postoperative evaluation of renal function but is costly, invasive and associated with exposure to radiation. We compare Doppler renal ultrasound (DRUS) to renal scintigraphy in determining the viability of the remaining ipsilateral moiety after heminephrectomy.

Methods: We performed a retrospective review of children who underwent heminephrectomy between 2006–2013. Only children who underwent both a postoperative DRUS and renal scan were included. DRUS were reviewed by a blinded pediatric radiologist. Vascular flow on DRUS was correlated with renal function in the remaining ipsilateral moiety on renal scintigraphy.

Results: We identified 29 children for inclusion. Demographic and operative data are provided in Table 1. Average preoperative and postoperative differential renal functions in the ipsilateral kidney were 41.6% and 38.0% on renal scintigraphy, respectively. DRUS demonstrated vascular flow in the remaining ipsilateral moieties of all children, which was confirmed on renal scintigraphy for a positive predictive value of 100%.

Conclusions: DRUS is an accurate imaging modality for determining the viability of the remaining ipsilateral moiety after heminephrectomy and may obviate the need for renal scintigraphy.

### Table 1. Demographic and operative data

<table>
<thead>
<tr>
<th>No. patients</th>
<th>29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median age at surgery in months (range)</td>
<td>5 (2-131)</td>
</tr>
<tr>
<td>No. female (%)</td>
<td>23 (79.3)</td>
</tr>
<tr>
<td>No. prenatal hydronephrosis (%)</td>
<td>20 (69.0)</td>
</tr>
</tbody>
</table>

#### Indications for heminephrectomy

| No. ectopic ureter (%) | 21 (72.4) |
| No. ureteroceles (%) | 3 (10.3) |
| No. vesicoureteral reflux (%) | 3 (10.3) |
| No. secondary ureteropelvic junction obstruction (%) | 2 (6.9) |
| No. upper-pole heminephrectomy | 25 (86.2) |
Introduction: Emergency departments (EDs) employ scrotal ultrasound (SUS) to evaluate males with clinical concern for testicular torsion. We studied the management that followed SUS.

Methods: An IRB-approved retrospective chart review was performed on boys <18 years in whom SUS was obtained in the ED to evaluate for testicular torsion over two years. Those with a prior history of urologic abnormalities or inguinal surgery were excluded.

Results: 160 SUS were performed on 151 boys, 41% of which were normal. The most common SUS impressions were epididymo-orchitis, undescended testis and hydrocele; 2.5% were diagnosed with testicular torsion. Management is presented in the table. Urinalyses (UAs) were not obtained on 18% of visits. Of boys with epididymo-orchitis, 11.4% had positive UAs, however, 65.7% were treated with antibiotics. Boys with a possible mass, microlithiasis or varicocele were most likely to be referred to pediatric urology, while those with idiopathic testicular pain, cellulitis or epididymitis were least likely to be referred.

Conclusions: SUS screens acuity of patients presenting to the ED with testicular pain and predicts likelihood of need for urologic surgery. A protocol-based approach to testicular pain in the ED is needed to triage consultation and referral, improve UA collection and limit antibiotics, thus improving quality of care and decreasing costs.

<table>
<thead>
<tr>
<th></th>
<th>Normal US (%)</th>
<th>Abnormal US (%)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urology Consult</td>
<td>6.1</td>
<td>17.9</td>
<td>0.031</td>
</tr>
<tr>
<td>Phone Consultation</td>
<td>7.7</td>
<td>25.3</td>
<td>0.004</td>
</tr>
<tr>
<td>Urology Referral</td>
<td>29.0</td>
<td>62.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Urology Clinic Appt if Referred</td>
<td>44.4</td>
<td>42.1</td>
<td>0.862</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>3.1</td>
<td>33.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Bowel Regimen</td>
<td>12.3</td>
<td>6.3</td>
<td>0.187</td>
</tr>
<tr>
<td>Immediate Surgery*</td>
<td>0</td>
<td>5.3</td>
<td>0.08</td>
</tr>
<tr>
<td>Ever Surgery§</td>
<td>1.5</td>
<td>22.1</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

* Includes 3 ipsilateral orchiectomy/contralateral orchiopexy, 1 detorsion/bilateral orchiopexy, 1 incision and drainage of scrotal abscess
§ Includes 12 hernia/hydrocele repair, 8 orchiopexy/orchiectomy, 1 meatoaplasty, 1 incision and drainage
Podium #8
25 YEAR PERSPECTIVE ON ALPHA BLOCKERS IN VOIDING DYSFUNCTION: A META−ANALYSIS
Kristina Suson, MD, Larisa Kovacevic, MD and Yegappan Lakshmanan, MD
Children’s Hospital of Michigan
Presented By: Kristina Suson, MD

Introduction: A meta−analysis of modern alpha blocker use in anatomically normal children with lower urinary tract symptoms (LUTS) was performed to evaluate subjective and objective efficacy, and side effects.

Methods: PubMed was searched and cross−referenced as of February 1, 2014 using the terms “alpha blocker,” “pediatric,” “dysfunctional voiding,” “urination disorders,” “bladder neck obstruction” and “lower urinary tract symptoms.” Twelve articles were original research on patients <21 years, written in English and published within the last 25 years, and included 400 patients with non−anatomic, non−neurogenic LUTS.

Results: Doxazosin, tamsulosin, prazosin and terazosin were used for pediatric LUTS. Side effects included: postural hypotension, subjective worsening, dizziness, somnolence, epigastric pain, lightheadedness and recurrence of heart murmur. Of 305 patients with reported subjective responses, 21% experienced complete resolution of symptoms, 56% improved and 15% had no response. Of 156 patients with reported diurnal incontinence and response to therapy, 75% improved. Of 52 patients with reported urgency and response to therapy, 71% improved. Objective measures are presented in the table.

Conclusion: Alpha blockers are an effective, safe treatment for pediatric LUTS. Few patients experience significant side effects, while most enjoy both subjective and objective relief. No identified studies compared efficacy between alpha blockers, thus choice of agent should be individualized by side effect profile.

<table>
<thead>
<tr>
<th></th>
<th>Pre-Alpha Blocker</th>
<th>Post-Alpha Blocker</th>
<th>% Improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean post void residual (mL)</td>
<td>82.5</td>
<td>21.3</td>
<td>74.2%</td>
</tr>
<tr>
<td>Mean average flow rate (mL/sec)</td>
<td>6.5</td>
<td>11.2</td>
<td>72.8%</td>
</tr>
<tr>
<td>Mean maximum flow rate (mL/sec)</td>
<td>11.1</td>
<td>18.4</td>
<td>65.3%</td>
</tr>
</tbody>
</table>
Introduction: The objective of this study was to better define the follow-up interval during which complications emerge after hypospadias repair.

Methods: From 2011–2013, 51 boys at our institution underwent surgery to repair a total of 57 complications that occurred following primary hypospadias repair. The time at which each complication presented was determined, as well as the most recent follow-up visit prior to presentation of the complication. Between-group comparisons were based on the nature of the primary repair, which was classified as mid/distal (1-stage), proximal 1-stage or proximal 2-stage.

Results: There was no statistically significant difference in the distribution of complication types (P = .43). Complications that presented late (greater than 12 months after the primary repair) were more likely to be associated with mid/distal repairs (P = .01). In this group, the most recent visit prior to presentation of late complications was less likely to have occurred after four months postoperatively (P < .001), with a longer follow-up interval in which complications emerged (P = .03).

Conclusion: A substantial portion of complications present over one year after hypospadias repair, especially following mid/distal repairs. In this group, there was a lengthier interval between follow-up visits during which complications emerged. These findings may support more rigorous follow-up protocols after mid/distal hypospadias repair.
Objective: The aim of our study is to compare the cost burden of conservative versus surgical management of MCDK.

Methods: A retrospective analysis of a single institution data of all 128 consecutive pediatric patients with unilateral MCDK was performed from January 2007 to February 2013. The patient follow-up protocol consisted of annual office visit, renal ultrasound (RUS) and one lifetime DMSA scan. Surgical management was based on failure of involution after five years, family preference or increasing size of the MCDK.

Results: Fifty-four renal units (RU) had spontaneous involution. Of these, 43 of 54 (79.6%) RU involuted prior to 5 years of age, while 20.4% (11/54) involuted after 5 years of age (P < 0.001). Surgery was performed in 74 RU either due to increase in size (56.8%), family preferences (32.4%) or failure of involution (10.8%). Patient demographics and follow up data (Table 1), average service costs (Table 2).

Conclusion: Annual follow up of MCDK significantly increase costs. The majority of costs were seen in the group ultimately undergoing surgical management. We recommend omission of the annual follow-ups and limit it to after 5 years of age as most of MCDK involute. Extended counseling can prevent the prolonged follow-up of these patients if they elect for surgical management.
Introduction: Parents of young boys frequently express concern to urologists that their sons may be teased in middle or high school because of penile appearance. We sought to investigate the validity of this common concern by investigating the extent and frequency of teasing regarding penile appearance in school locker rooms.

Methods: An IRB−approved, anonymous questionnaire was administered to undergraduate college men. Participants answered questions regarding middle and high school demographics, school sports and gym class participation, and any teasing experienced or witnessed due to penile appearance in the locker room.

Results: 290 men (mean age 19 years ±1.3) returned the questionnaire. 10% were teased about penile appearance, while 47% reported witnessing someone else being teased, of which 54% estimated they witnessed teasing at least once a week. Of those who reported being personally teased, there was no significant difference in frequency of teasing between circumcised and uncircumcised (p=0.471) and no correlation with sports participation (p=0.654). The most common characteristic criticized was small size (72%). Overall, 8% wished their penis had a different appearance; there was no significant difference between circumcised and uncircumcised (p=0.111). Men that wished their penis appeared differently did not report a significantly higher rate of being teased (p=0.268).

Conclusion: Teasing in the locker room about penile appearance occurs frequently. While our study is limited to one Midwest university population, it appears that parental concerns regarding the occurrence of middle and high school locker room teasing related to different penile appearance characteristics are valid.
Introduction: There has been an increasing recognition of the need to selectively identify those children with VUR that are at risk for pyelonephritis. Previous work demonstrated that high reflux grades increase the risk for pyelonephritis and renal scarring. We have shown that VUR onset early during bladder filling on cystogram is less likely to resolve independent of grade. We hypothesized that reflux occurring earlier may also increase the risk for pyelonephritis since the upper tracts may be exposed to longer periods of bacteria from the lower tract.

Methods: We retrospectively reviewed 255 children with VUR in whom the bladder volume at VUR onset was known (208 girls; 47 boys; mean age 3.1 years ± 2.6). VUR onset volume was normalized for age predicted bladder capacity (PBC). Patients were controlled for age, gender, reflux grade, laterality, bladder or bowel dysfunction (BBD) and prior UTI history. Clinical outcome was defined as having a breakthrough UTI.

Results: Reflux onset at <20% PBC had a significant association with developing a UTI when compared to later reflux at >20% PBC (p = 0.033). Significant associations also existed between high grade reflux and prior history of febrile UTI and developing a breakthrough UTI (p = 0.035 and p = 0.041, respectively).

Conclusions: We demonstrated that children with early VUR onset during bladder filling are at increased risk for developing UTI. The volume at onset should be routinely recorded during cystograms to help stratify children with VUR regarding risk for pyelonephritis and lower resolution and to help individualize patient management.
Podium #11
CURRENT SMOKING ASSOCIATES WITH EXTRAPROSTATIC EXTENSION OF PROSTATE CANCER AT THE TIME OF RADICAL PROSTATECTOMY

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Presented By: Stephen Hurley, DO

Introduction: The association between cigarette smoking and the presence of extraprostatic extension of the primary tumor is understudied. We investigated the association between current cigarette smoking and the presence of extraprostatic extension of prostate cancer in patients undergoing radical prostatectomy for clinically organ-confined prostate cancer.

Methods: We performed a cross-sectional study of cigarette smoking habit and pathologic stage in 202 men undergoing radical prostatectomy between 2009 and 2012. Patient’s smoking habit was assessed using a structured questionnaire administered before prostatectomy. Pathologic tumor characteristics were determined by a single pathologist. Multivariate logistic regression was used to analyze the association of smoking status with extraprostatic extension after accounting for age, race/ethnicity, type of prostatectomy, Gleason sum, serum prostate-specific antigen (PSA) concentration and body weight.

Results: Relative to never smokers, current smokers were approximately 4.5-fold more likely to have extraprostatic extension at the time of surgery (odds ratio = 4.47, 95% confidence interval = 1.45 to 13.7, p = 0.0092) independent of Gleason sum (p = 0.0002) and PSA concentration (p = 0.0083). The association did not significantly vary by Gleason sum (<7 vs. >7) or race/ethnicity (African Americans vs. Whites).

Conclusions: Independent of other established prognostic indicators, current smokers are at a significantly higher risk for extraprostatic extension of prostate cancer at the time of surgery when compared to never smokers. The presence of extraprostatic extension at the time of radical prostatectomy is associated with a higher risk of cancer recurrence, metastatic disease and lower cancer-specific survival.

Financial Disclosure: NCI/NIH 5R01CA129140
INTRODUCTION: Urinary tract toxicity following radiation therapy (RT) for prostate cancer (PCa) has received limited attention. We describe the incidence of hematuria, urethral stricture and bladder cancer, identify risk factors, and measure the effect of RT modality in primary and post-prostatectomy RT patients.

METHODS: 1,559 patients were counseled regarding RT for PCa from 1992 to 2013, with 888 receiving RT and continuing follow-up. RT modalities included external-beam RT (EBRT), brachytherapy (BT), combination therapy (EBRT+BT) or post-prostatectomy RT. PCa characteristics, comorbidities, RT modality and hematuria, urethral stricture, and bladder cancer were recorded. Stepwise Cox regression was used to associations with independent variables and RT modality.

RESULTS: Median follow-up time (IQR) after RT was 48 months (18–88). Overall 5- and 10-year risk (95% CI) for hematuria was 23% (19–27%) and 42% (36–48%), for urethral stricture was 7% (5–9%) and 12% (8–16%), and for bladder cancer was 2% (1–3%) and 5% (3–7%). On stepwise Cox regression, smoking (HR=2.5, p<0.001) was associated with hematuria. Obesity (HR=2.5, p=0.005), EBRT + BT (HR=3.8, p=0.006) and Adjuvant RT HR=3.1, p=0.015) were associated with urethral stricture. Age at RT was associated with bladder cancer (HR=1.105, p=0.032).

CONCLUSION: Hematuria, urethral stricture and bladder cancer are conditions necessitating evaluation and treatment following RT for PCa, with a risk of 42%, 12% and 5% over 10 years, respectively. Salvage RT, EBRT+BT and obesity demonstrated an increased risk of urethral stricture. There are large numbers of patients experiencing adverse events following RT for PCa, and the incidence continues to increase over time.
Objective: Active surveillance is a treatment option for low-risk prostate cancer. An externally validated nomogram was previously developed to predict the likelihood of upgrading from Gleason 6 on biopsy at the time of radical prostatectomy. We applied this nomogram to our active surveillance cohort to evaluate its potential role in predicting disease progression.

Methods: We reviewed an institutional active surveillance cohort consisting of 101 patients with PSA<10, Gleason score ≤6, max core involvement <50% and ≤2 positive cores on transrectal prostate biopsy. The BADGR nomogram was used to generate a risk score, and the ability of the BADGR nomogram to predict progression was assessed using univariate and multivariate Cox proportional-hazards analysis. Age, obesity, ultrasonic prostate volume, PSA density, number of positive cores, MCI and BADGR Score were evaluated.

Results: Of the 101 patients with a mean follow up of 32 months, 37 patients had disease progression on subsequent biopsy. On univariate analysis, our nomogram was an independent predictor of disease progression by all 4 criteria. On multivariate analysis, the BADGR nomogram was an independent predictor of Gleason score >7 (p=0.003) on subsequent biopsy.

Conclusions: This novel nomogram can be used to generate a risk score that independently predicts Gleason upgrading in patients on AS. This information is available for AS patients at the time of diagnosis and provides risk assessment on a continuous scale that can play a role in counseling patients.
Introduction and Objectives: There is concern for an over-diagnosis of prostate cancer (PC). It is possible that genetic correction of PSA in men with seemingly indolent disease could adjust the PSA level below a biopsy threshold and avoid a PC diagnosis.

Methods: The genotypes of 4 genetic variants previously associated with serum PSA levels (Sci Trans Med: 2010. 2; 62) were determined for Caucasian subjects with NCCN low- and very-low risk PC who underwent surgical treatment and 147 men with similar disease who enrolled in a prospective active surveillance study. The PC characteristics were documented for all subjects. Genetic correction of PSA was performed by dividing an individual’s PSA value by his combined genetic risk. Analyses were used to compare the percentage of men who would meet commonly used biopsy thresholds before and after genetic correction.

Results: Genetic correction of serum PSA was associated with a significantly decreased percentage of men meeting biopsy thresholds in the surgical cohort (p<0.001). Genetic correction was associated with a 15.5% and 24.2% relative reduction in the number of men meeting biopsy thresholds of ≥2.5 ng/ml and ≥4.0 ng/ml. Similar analyses in the AS cohort demonstrated that genetic correction could potentially reduce the number of biopsies and PC diagnoses by 38.8% and 42.9%.

Conclusions: Analyses of an independent and validated cohort suggest that a diagnosis of PC could have been avoided for almost half of men with seemingly indolent PC if correction for 4 PSA genetic variants was applied prior to undergoing a prostate biopsy.
Introduction and Objectives: Field carcinogenesis (FC) is a well-documented phenomenon that occurs in prostate cancer (PC). We have developed a novel biophotonics technology, partial wave spectroscopic (PWS) microscopy or nanocytology, which quantifies intranuclear organization beyond the limits of conventional light microscopy. Our previous data within 7 other cancers has demonstrated that PWS-detected alterations in histologically normal cells are a highly accurate biomarker of FC, cancer risk and disease aggressiveness. We hypothesized that PWS could be used to distinguish aggressive disease PC patients undergoing active surveillance (AS).

Methods: PWS nanocytology was performed on core tissue samples obtained on the initial surveillance biopsy from 38 men undergoing AS. PWS was performed on histologically normal prostatic epithelium that was not adjacent to the cancerous tissue. The “disorder length” (Ld) was measured in 40 glandular epithelial cells for each sample. Patients were grouped by clinical outcomes stratified by success or failure of AS for 3 years.

Results: The baseline clinical characteristics of men were not significantly different between progressors (n=20) and non-progressors (n=18) and included: mean age 66.5±5.6 years, mean BMI of 28.1±4.0, median PSA of 4.73ng/ml and mean prostate volume of 42.5±20.7mL. Using PWS, the Ld was found to be significantly increased in the progressors compared to non-progressors (p=0.002). This was associated with an effect size of 110% with 80% sensitivity and 85% specificity.

Conclusions: PWS nanocytological assessment of FC can predict disease progression in AS. This novel technology has the potential to mitigate overtreatment of PC.
Introduction: Active surveillance for low-risk prostate cancer may reduce treatment-related morbidities without compromising overall survival. We used a population-based cohort of low-risk prostate cancer patients to evaluate the association of delaying radical prostatectomy (RP) on the frequency of adverse pathological outcomes.

Methods: Using the National Cancer Database, we identified all men diagnosed with low-risk prostate cancer (1998–2011) with Gleason 6, clinical stage cT1–2 and PSA<10 ng/ml who received no treatment prior to RP. Delayed RP was defined as more than 6 months after diagnosis. Adverse pathological outcomes were defined as pathological Gleason upgrading, pathological upstaging or positive surgical margins.

Results: In total, 9%, 43%, 15% and 50% of men had upstaging, upgrading, positive surgical margins and at least one adverse pathological outcome at RP, respectively. Patients who delayed RP (n=2,175) were more likely to be African-American (12.4% vs. 10.5% p = 0.02) and cT1 (82.7% vs. 80.0% p = 0.007), but were equivalent to men who received initial RP (n = 28,561) based on PSA (p = 0.2) and age (p = 0.11). There were no differences in the frequency of upstaging (p = 0.7), upgrading (p = 0.2), positive surgical margins (p = 0.13) and having at least one adverse pathological outcome (p = 0.8). On multivariate analysis, delayed RP was not a significant predictor of adverse pathological outcomes (OR:1.00, 95%CI:[0.91–1.09], p = 0.9)

Conclusion: Delaying RP >6 months in men who meet general criteria for active surveillance does not increase adverse pathologic outcomes. Men meeting criteria for active surveillance should be encouraged that delaying RP does not impact their short-term outcomes.

Financial Disclosures: None.
Introduction and Objectives: Genetic epidemiologic studies have provided strong evidence for a heritable predisposition to prostate cancer (PC). Recent advances in genotyping technologies have allowed for the identification of 23 novel single nucleotide polymorphisms (referred to as iCOGS SNPs) that are associated with disease susceptibility (Nat Genet. 2013. 45:385). However, validation of the associations between these loci, PC risk and aggressiveness are necessary.

Methods: The genotypes of the 23 iCOGS SNPs were determined for 1,300 healthy male volunteers and 1,676 men with PC who underwent radical prostatectomy. The demographics and clinical characteristics of all subjects were documented. Statistical analyses were used to determine the association between the iCOGS SNPs and disease risk and aggressiveness. High-risk disease was defined as Gleason score (GS) ≥8, lymph node metastasis, distant metastasis, PC death and/or PSA ≥20 ng/ml; low risk was defined as GS ≤6.

Results: Four of the 23 iCOGS SNPs were significantly associated with PC risk including rs30960702 on chr.6 (OR 0.86, 95%CI 0.77–0.96, p = 0.009), rs6984769 on chr.8 (OR 0.87, 95%CI 0.76–1.00, p = 0.05), rs8008270 on chr.14 (OR 1.25, 95%CI 1.10–1.43, p < 0.001), and rs684232 on chr.17 (OR 1.13, 95%CI 1.01–1.26, p = 0.03). Only rs2427345 remained significantly associated with high-risk disease after multivariate analyses.

Conclusions: Our results validate that only some of the iCOGS SNPs are associated with PC susceptibility and aggressive disease in our cohort of men of European ancestry. Further validation of their associations in independent study cohorts, including those of different ancestries, should be pursued.
Podium #18
IMPACT OF HOSPITAL VOLUME ON POSTOPERATIVE COMPLICATIONS FOLLOWING ROBOT-ASSISTED PARTIAL NEPHRECTOMY
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Presented By: Chandra K. Flack

**Introduction:** Previous studies show an inverse relationship between hospital volume and postoperative complications; however, this has not been examined in robot-assisted partial nephrectomy (RAPN). We evaluated this using the Nationwide Inpatient Sample.

**Methods:** We identified RAPN from 2009–2011. Hospitals were divided into volume-based tertiles by year (high, medium, low). Multivariable logistic regression assessed the association between hospital volume and in-hospital complications, controlling for demographics, hospital characteristics, primary payer, comorbidities and kidney cancer.

**Results:** We identified 17,583 cases from 323 hospitals, of which 112 were low, 112 medium and 99 high volume. 13,645 (78%) cases were at high volume institutions. 11% of patients developed a complication, with 15% at low, 12% at medium and 10% at high volume hospitals (p=0.071). Blood transfusion was less common at high volume hospitals (p = 0.015). Differences in median hospital cost approached significance, with $13,956 for high and $14,287 for low volume hospitals (p = 0.090). On multivariable logistic regression, high volume hospitals had 42% decreased odds of complications (95% CI 0.37–0.90; p = 0.016).

**Conclusions:** High volume hospitals are associated with decreased transfusions and complications. With the recognition that high volume RAPN hospitals are independently associated with improved clinical outcomes, further studies should be performed to determine the role of hospital and surgeon volume thresholds in the performance of RAPN.
WHAT FACTORS ARE ASSOCIATED WITH 30 DAY HOSPITAL READMISSION FOLLOWING RADICAL AND PARTIAL NEPHRECTOMY FOR RENAL MALIGNANCY?
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Presented By: Neil Patel

Introduction: Readmission due to perioperative complications is potentially preventable; understanding these can enable improved postoperative treatment. We determined risk factors associated with 30-day unplanned readmission following radical nephrectomy (RN) and partial nephrectomy (PN).

Methods: From the National Surgical Quality Improvement Program database, we examined patients with non-disseminated renal malignancy undergoing RN and PN between 2011 and 2012. Using stepwise multivariable logistic regression we evaluated which preoperative and in-hospital variables were associated with 30-day unplanned readmission.

Results: Of the 4,766 patients identified, 2,642 (55%) underwent RN and 2,142 (45%) PN. RN patients had more comorbid conditions and were older than PN patients (p < 0.05). Postoperative complications were more common following RN (24% vs. 17%, p = <0.001). 148 (5.6%) RN and 107 (5.0%) PN patients required unplanned readmission (p = 0.390). Predictors of readmission are shown below. In 2012, the most common reason for unplanned readmission following RN was GI complications (28%) whereas for PN it was bleeding complications (25%).

Conclusions: Five percent of RN and PN require unplanned readmission. Diabetes mellitus was associated with 30-day readmission following RN. Bleeding disorders were associated with 30-day readmission following PN.
Objective: Our aim is to compare the outcomes between open pyeloplasty (OP) and robotic assisted laparoscopic pyeloplasty (RALP) in the pediatric population.

Methods: A retrospective review was performed of all patients who underwent unilateral dismembered pyeloplasty at a single pediatric institution from January 2007 to June 2013. Indications for surgery included symptomatic obstruction and abnormal diuretic renogram. Data included patient demographics, operative time (OT), length of hospital stay (LOS), inpatient analgesics, complications, resolution of symptoms, hydronephrosis and length of follow-up. Patients were divided into 5 age groups: 0−2 yrs (I), 2−5 yrs (II), 5−10 yrs (III), 10−15 yrs (IV), >15 yrs (V). SFU hydronephrosis grading system was utilized.

Results: 135 OP and 81 RALP were performed. Patient demographics were similar for all age groups except median weight was greater for RALP in group V. Median OT was longer for RALP in groups III and V. Median LOS was shorter for RALP in all age groups except group V. Epidural analgesia was used more commonly for OP in all age groups except group V. Oral narcotics were used less in RALP except group V. Intravenous ketorolac was used more in RALP except group V. Symptom resolution and complications rates were similar for OP and RALP. Preoperative, postoperative and grade reduction of hydronephrosis were similar in all age groups.

Conclusion: OP and RALP have similar success and complication rates. RALP was associated with less narcotic utilization, without epidural analgesia, and shorter hospital stay in ages 0−10 years old.
Introduction: Partial nephrectomy (PN) is performed for suspicious renal masses to preserve renal function. Renal pseudoaneurysm is a potentially life-threatening complication, developing in 1−12% of minimally invasive PN. We report outcomes and clinical signs that should raise suspicion for pseudoaneurysm.

Methods: Retrospective chart review was performed of patients who underwent robotic-assisted laparoscopic PN. Patient characteristics and pseudoaneurysm diagnosis were recorded. Stepwise cox multivariate regression was utilized to compare patient characteristics associated with pseudoaneurysm development.

Results: Between 6/2008 and 1/2014, 152 patients underwent 153 robotic-assisted laparoscopic PN. Median follow up for the group was 9 months (IQR 1.5−20.0). Median estimated blood loss was 100mL (IQR 50−250). Seven patients (4.6%) developed a pseudoaneurysm at median post-operative day 12 (range 7−19). Median hemoglobin was 9.7 grams/dL at discharge, and 7.7 grams/dL on readmission. Three of these seven patients during their surgical admission received a total of 10 units of packed red blood cells (pRBCs). Of remaining 148 patients only 4 required a total of 5 units pRBCs. All pseudoaneurysms were successfully controlled with percutaneous supraselective embolization. On stepwise cox multivariate regression, for each unit of blood received perioperatively the odds of pseudoaneurysm increased by a factor of 2.285(95% CI 1.331−3.920, p=0.003), and for each day in the hospital increased by 1.541 (95%CI 1.057−2.248, p=0.025).

Conclusions: Minimally invasive PN is associated with a risk of pseudoaneurysm formation, which presents within the first several weeks following surgery. Patients who receive blood product transfusion during their surgical hospitalization should have a higher index for suspicion of pseudoaneurysm.
MULTI-INSTITUTIONAL EXPERIENCE WITH ROBOTIC NEPHRECTOMY WITH IVC TUMOR THROMBECTOMY

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Presented By: Ronney Abaza, MD, FACS

Introduction: Since the first report of robotic management of renal cell carcinomas with inferior vena cava (IVC) tumor thrombi, few additional cases have been reported in the literature. We report our combined experience with this procedure, the largest and first multi-institutional series reported to date.

Methods: A retrospective, multi-institutional review of robotic nephrectomy with IVC tumor thrombectomy was performed with institutional review board approval. Demographic and outcomes data were evaluated.

Results: A total of 19 cases were performed among five surgeons at five institutions since the first known procedure in 2008. Mean patient age was 62 yrs (43–81 yrs) with mean BMI of 31 kg/m2 (19–43 kg/m2) and tumor size of 9.6 cm (5.8–15.8 cm). The length of tumor extension into the IVC ranged from 1 cm to 6.9 cm. The IVC was cross-clamped in 15 cases. Mean operative time was 296 min (180–411 min) with blood loss of 361 cc (50–1200 cc). There were no conversions to open surgery and only one perioperative transfusion. All but one patient ambulated on postoperative day (POD) #0 or #1, and mean length of stay was 3.4 d (1–7 d). Lymphadenectomy was performed in 14 patients with mean nodal yield of 13.1 nodes. Four patients experienced distant recurrences with mean follow-up of 17.6 mos.

Conclusion: Robotic nephrectomy in the setting of tumor thrombi extending into the IVC is a feasible and safe operation. Despite the complex and critical nature of these procedures, the favorable experiences of multiple surgeons at multiple institutions suggests reproducibility with adequate robotic experience.
Introduction: Nephron sparing surgery is the standard of care treatment of renal masses when technically feasible. Both traditional healthy margin partial nephrectomy (HMPN) and enucleo-resection (ENPN) open techniques have been described to maximally preserve renal parenchyma. We evaluate our initial experience performing robotic ENPN and compare this to robotic HMPN.

Methods: Retrospective chart review of consecutive patients who underwent robotic-assisted laparoscopic HMPN or ENPN at either Loyola University Medical Center or Indiana University between 3/2008 and 9/2013. Surgical approach was determined by surgeon preference. Patients selected for ENPN had cT1 masses, often with an exophytic component. Patient characteristics and perioperative outcomes were recorded.

Results: A total of 249 patients underwent robotic-assisted partial nephrectomy. There were 194 HMPN and 55 ENPN. Median follow-up was 7.31 months (IQR: 3.8−16). Collecting system entry and repair occurred in 34% of HMPN cases, but only 6% of ENPN cases (p<0.05). Positive surgical margins were present in 3.6% and 6.5% in the HMPN and ENPN patients, respectively. In the setting of ENPN, tumor abutting but not invading the pseudocapsule (n=7) was considered negative. Preoperative mean GFR in the HMPN and ENPN groups were 76.4 and 77.5 ml/min/1.73m², respectively. Postoperative mean GFR was minimally changed for HMPN and ENPN at 74.8 and 77.1 ml/min/1.73m², at mean 3.8 and 3.4 months, respectively.

Conclusion: Robotic ENPN appears to be a safe and feasible approach to renal mass excision along with decreased collecting system entry as well as comparable blood loss, operative time and length of stay compared with HMPN.
CONTEMPORARY NATIONAL SURGICAL OUTCOMES IN THE TREATMENT OF URETEROPELVIC JUNCTION OBSTRUCTION REVEALS MAJOR CHANGE IN SURGICAL APPROACH

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Presented By: Daniel Oberlin, MD

Introduction: Minimally invasive pyeloplasty (MIP) has shown comparable functional outcomes to open pyeloplasty (OP) in the treatment of ureteropelvic junction obstruction (UPJO).

Methods: We evaluated contemporary national trends and outcomes of pyeloplasty using the National Surgical Quality Improvement Program (NSQIP) database. Patients treated by OP or MIP (laparoscopic or robotic) between 2006–2011 were identified by ICD–9 codes. Perioperative variables were analyzed using chi–squared and Student’s t–test. Multiple logistic regressions were used to identify morbidities and readmission risk factors.

Results: 355 patients were identified. 20.2% of cases were OP and 79.8% were MIP. The usage of MIP increased from 33% in 2006 to 83% in 2011 (p<0.001). 11.7% of patients in the MIP group underwent outpatient surgery (p = 0.002). Patients at teaching hospitals were over three times more likely to undergo MIP (OR = 3.17, p = 0.001). There was significantly longer hospitalization in OP versus MIP (3.9 versus 2.2 days, p = 0.001). There was significantly increased risk of requiring re-operation or suffering post-operative morbidity in the OP compared to MIP (11.1% versus 4.2%, p = 0.02). Multivariate analysis confirmed a higher rate of overall morbidity of OP (p = 0.03). Multivariate analysis revealed that being male (OR = 4.38, p = 0.02) or obese (OR = 4.28, p = 0.06) was four times more likely to have postoperative morbidity or require re-operation. There was no significant difference in operative time between groups (p = 0.2).

Conclusions: This is the first multi-institutional surgical database analysis of pyeloplasty demonstrating a massive change in the way this condition is treated with improved short-term outcomes for MIP.
Objective: Spinal cord injury (SCI) results in immobility, infection, lower urinary tract dysfunction and changes in body habitus that contribute to stone formation. Surgical positioning issues and the complexity of stone burden require repeated interventions and complications often necessitate intensive care unit admissions. In the era of flexible ureteroscopy, evidence guiding safe and effective treatment in this cohort remains scarce and would be instructive for directing appropriate surgical stone management.

Methods: Records from 7,000 consecutive stone procedures were retrospectively reviewed for patients with SCI.

Results: 40 SCI patients underwent a total of 83 ureteroscopic procedures. Flexible ureteroscopy was universally used. Thirteen patients had difficulty with positioning. The majority of stones were in the lower pole (54%). Stones sampled during surgery were composed primarily of calcium phosphate (29%) and calcium oxalate (18%). Overall complication rate was ~15%. Urosepsis occurred in 8% of cases and was more common in bilateral procedures (4/18, 22%). 73% of cases employed post-operative ureteral stents. Only one complication occurred without a stent. Complete treatment required 2 procedures on average (range 1–9).

Conclusions: Urosepsis is the most common serious complication after ureteroscopy in SCI patients. Stones are accessible with flexible ureteroscopy despite contractures. Comparison with other modalities may further improve stone treatment for this population.

Funding Disclosures: None.
Introduction: Endoscopic management of upper tract urothelial carcinoma (UTUC) is a therapeutic option for a defined patient population. However, reliable identification of disease is critical. We analyzed the value of endoscopy, fluoroscopic imaging and cytology for detection of UTUC.

Methods: Records of 38 patients with endoscopically managed UTUC by one surgeon were reviewed. In total, 116 endoscopic procedures were performed. Chi square and ANOVA tests were used to determine significance.

Results: Visual inspection was suspicious in 76/116 cases, 55 of which had UTUC on biopsy, while 9/40 visually normal cases had positive biopsy (p<0.001). Suspicious visualization had a sensitivity of 88.7% and specificity of 61.5% to detect UTUC (PPV 73.3%, NPV 82.1%). Normal and abnormal pyelograms were associated with UTUC in 19/49 and 36/54 patients, respectively, yielding sensitivity for pyelogram to detect UTUC of 65.5% (specificity 62.5%, PPV 66.7%, NPV 61.2%). Upper tract cytology was positive in 17/80 patients, 12 of which had a positive biopsy. Meanwhile, 21/63 patients with negative cytology had UTUC. Positive cytology was significantly associated with UTUC (p=0.006), with a specificity of 89.36%, yet, a sensitivity of 36.4% (PPV 70.6%, NPV 66.7%).

Conclusions: Ureteroscopy is the most sensitive modality to detect UTUC with the highest positive predictive value. Random biopsies have a high rate of positivity even if visualization is normal. Pyelogram may miss UTUC and although specific, the sensitivity of cytology is poor.
Introduction: Nutrition therapy for urolithiasis is endorsed. But do patients comply? We assessed recall of nutrition recommendations and patients’ willingness to continue nutrition therapy.

Methods: Patients received nutrition counseling within 4 months of contacting them by mail/email to recall recommendation(s) made to them. We also assessed patient-reported difficulty following the recommendations.

Results: Patients (M:F 12:5, 61±8 y) received an average 3.2±1.1 recommendations (range, 1−5). All were provided written handouts outlining their individualized plan. The most common recommendations were: increase fruits/vegetables; increase fluids (specific amount for each patient); and increase and/or change the distribution of daily calcium intake. 35% of patients correctly recalled all recommendations provided them. Two recommendations had particularly low recall (chart). Patients provided ≥3 recommendations had a 28% perfect recall rate vs. 50% in those provided ≤2 recommendations. 24% of patients reported difficulty in following recommendations, but 87% rated them “acceptable.” 76% reported following the recommendations most or all of the time.

Conclusion: Adherence and compliance with nutrition recommendations may depend on the number of recommendations provided. Patients provided <3 recommendations had higher recall than those provided more. Future investigation will elucidate whether barriers to remembering individualized dietary recommendations include the types of recommendations and the manner in which they are provided and explained.

Funding Source: None.
Podium #28

VASCULAR COMPLICATIONS FOLLOWING PERCUTANEOUS NEPHROLITHOTOMY: 10 YEARS OF EXPERIENCE
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Introduction and Objectives: Our aim is to provide a contemporary look at vascular complications following PNL with access performed solely by a urologist using fluoroscopic guidance.

Methods: A retrospective review of 2,792 Patients who had undergone 3,338 PNL between 2003 and 2013 was performed. Patients who experienced significant bleeding requiring diagnostic renal angiography (RA) and subsequent superselective embolization (SSE) were reviewed and compared to the overall database.

Results: There were 15 patients (16 renal units) requiring RA and SSE (0.48%). Eight kidneys had pseudoaneurysm (PA), four had arteriovenous fistula (AVF) and four had both. Mean drop in hemoglobin was 5.3 g/dl (range 2−9 g/dl). There were no differences between the vascular complications group (VCG) and the uneventful PNL group in mean age, (55.06 v 52.2 years, P=0.519), history of UTI, (40% v 38 %, p=0.92), history of previous urological procedure on the same renal unit (53.3% v 52.3%,p=0.94), mean operative time, (125.8 v 102.47 min, P=0.192), the need for multiple access, (18.75% v 18%, p=0.939) and the location of renal access (lower pole punctures, (76.4% v 70.6%, p=0.911)). Mean intraoperative blood loss was 158.6 ml (range 50−500 ml). Interestingly the VCG had a lower stone burden than the uneventful PNL group, (stones > 2 cm 43.7% v 74.03%, p=0.014).

Conclusion: PNL when performed at high volume tertiary care centers using urologist gained fluoroscopic renal access, the occurrence of vascular bleeding complications appears to be a random and rare event, no specific risk factor can be identified.
STAGHORN AND LARGE RENAL CALCULI MAINLY CAUSED BY METABOLIC ABNORMALITIES
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Presented By: Avinash Chennamsetty, MD

Introduction: The 2005 American Urological Association Guidelines suggest metabolic stones are uncommon in the composition of staghorn calculi. Incidence of metabolic and infection stones in staghorn calculi were compared to large renal calculi in those who underwent percutaneous nephrolithotomy (PCNL).

Methods: We retrospectively analyzed patients who underwent PCNL for large renal calculi by two surgeons between 2008 and 2012. Imaging, stone analysis and operative characteristics in relation to stone composition were reviewed.

Results: Of 129 stones (119 patients), 88 (68.2%) stones were staghorn calculi and 41 (31.78%) stones were not. All stones were ≥ 0.8 cm in greatest dimension (Mean of 2.62 cm). Of the 88 staghorn calculi, 88% stones were metabolic and 12% were infection stones. Similarly, of the 41 non–staghorn calculi, 88% stones were metabolic and 12% were infection stones. Stone compositions of the metabolic stones in the staghorn group were calcium oxalate monohydrate (45.4%), calcium phosphate (33.7%), uric acid (14.2%) and cystine (3.89%). In both groups, only 28.6% renal units had positive urine cultures at time of surgery.

Conclusions: The majority of staghorn and large renal calculi were caused by metabolic abnormalities, and not by infection. Metabolic stones need to be considered in patients with staghorn calculi.

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Podium #30
CLINICAL, METABOLIC, AND HISTOLOGIC RISK FACTORS FOR PLUG FORMATION IN IDIOPATHIC CALCIUM OXALATE STONE FORMERS
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Mayo Clinic
Presented By: Marcelino Rivera, MD

Introduction: Collecting duct plugs are thought to provide a nidus for stone formation within the kidney, however, their role in idiopathic calcium oxalate (iCaOx) calculogenesis remains poorly defined. We evaluated plug risk factors in a cohort of well-characterized iCaOx stone formers.

Methods: Data was collected from a prospective cohort of patients undergoing percutaneous nephrolithotomy (PCNL) between 2009–2013. After stone removal, accessible renal papillae were endoscopically videotaped, analyzed to quantify the percent surface area (SA) occupied by plaque and plug, and biopsied. Stone composition was determined by micro-CT, and all patients underwent metabolic evaluation.

Results: Among 103 iCaOx formers, 42 (41%) had plugging, and 61 (59%) did not. In patients with plugs, mean % SA of plugging was 1.2%. Patients with plugs had a higher papillary SA involved with plaque (mean of 4.3% SA versus 2.3% SA, p=0.006). Among iCaOx stone formers with plug, 26 (62%) had other crystals within their stone compared to 34 (56%) of those without plug. The predominant secondary composition was apatite. There was no difference in age, gender, BMI, diabetes mellitus, chronic kidney disease or metabolic evaluation by serum study and 24 hour urine collection between iCaOx patients with and without plug. Patients in both groups had a similar frequency of prior PCNL, ESWL or ureteroscopy.

Conclusions: iCaOx stone formers with collecting duct plugs have increased plaque formation compared to those without plugs. However, no clinical or metabolic risk factors appear to differentiate those iCaOx patients with plugs from those without.
Introduction: Patients with a history of ureteropelvic junction obstruction or vesicoureteral reflux have irreversible histopathologic changes that occur. Perturbations in urinary parameters may persist after the underlying disorder has been corrected and changes in urinary constituents may lead to urolithiasis.

Methods: We performed a retrospective review from 1998–2013 for patients with a code for VUR, UPJO and urolithiasis, excluding patients with bowel surgery and neurogenic bladder.

Results: We identified 99 patients (46 male, 53 female) who underwent 150 procedures (52 ureteral reimplant, 68 pyeloplasty, 12 endopyelotomy, 10 nephrectomy, 8 Other [Deflux, Antibiotics]). Average age for stone diagnosis was 32.9 years. 50% (20/40) had a family history of stones and 82% (55/67) had a stone recurrence. The most common stone types were calcium oxalate monohydrate (36%, 18/50) and apatite (22%, 11/50), and 66% (33/50) had >10% calcium phosphate present. Average urine pH was 6.3 (Range 5.1–7.9). 26.3% (10/38) were hypocitraturic, 28.9% (11/38) were hypercalcuric. 55.1% (49/89) had congruence between obstruction side and stone side, while 21.4% (19/89) were discordant.

Conclusions: Stone formation is severe in patients with a history of UPJO or VUR and calcium phosphate stones may be more common in these patients than previously appreciated. A metabolic workup should be completed in patients with a history of UPJO or VUR at their first stone event as they appear to be at risk for severe and recurrent stone disease.
Introduction: Dissolution by urinary alkalinization is the first line medical management of uric acid stones (UAS), however, success rates diminish as percent uric acid composition decreases. The metabolic characteristics that might distinguish between the varying percentage of uric acid in stone composition are not known. We aim to define the metabolic profiles of 100% (UAS) formers compared with those of mixed composition stones.

Methods: We identified 308 patients from a retrospective review of kidney stone analyses database from 2001–2013. Patients were grouped according to percentage (UAS) composition: 10–20; 30–50; 60–90; 100% uric acid. Data was extracted from 24hr urine samples and serum chemistries. Patients taking allopurinol, citrates, or thiazide diuretics were excluded.

Results: Mean urine pH of patients with 10–20% (UAS) was 5.89±0.05 vs. 5.62±0.07 in patients with 100% (UAS) and 5.63±0.09 in patients with 60–90% (UAS) (p=0.02 and p=0.03 respectively). Mean serum uric acid of patients with 10–20% (UAS) was 5.89±1.4 vs. 6.5±1.18 in patients with 100% (UAS) and 6.61±1.49 in patients with 60–90% (UAS) (p=0.003 and p=0.005 respectively). Mean urine uric acid was 560±19 (10–20% UAS); 607±68 (30–50%UAS); 499±31 (60–90%UAS); 498±24 (100%UAS) (all p>0.1).

Conclusions: Patients with 100% (UAS) have a higher serum uric acid and lower pH than patients with 10–20% (UAS). Urine uric acid is not significantly different among groups. Refining associations such as these will enable development of clinical algorithms to predict the probability a patient has 100% uric acid stone and thus counsel them more accurately on their treatment options.
Podium #33

POSITIVE VASCULAR MARGINS AT TUMOR THROMBECTOMY FOR RENAL CELL CARCINOMA ARE ASSOCIATED WITH INFERIOR CANCER OUTCOMES

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Presented By: Sarah Psutka, MD

**Introduction:** We evaluated the impact of positive vascular margins (PVM) on oncologic outcome following resection of venous tumor thrombus (VTT) and nephrectomy for renal cell carcinoma (RCC).

**Methods:** The records of 304 patients treated for RCC with VTT from 2000–2009 were reviewed. Cancer-specific (CSS) and overall survival (OS) were estimated using the Kaplan–Meier method.

**Results:** Among 304 patients, there were 241 (79%) with negative vascular margins (NVM) and 63 (21%) with PVM. There was a significant association between the presence of PVM and tumor thrombus level, with PVM in 5%, 27%, 40%, 31% and 41% for levels 0, I, II, III and IV, respectively (p<0.001). Median CSS for NVM vs. PVM was 4.5 and 1.8 years respectively (HR 1.82, p<0.001). Similarly, median OS was 4.1 and 1.6 years for NVM vs. PVM (HR 1.71, p<0.001). Among 219 M0 patients, those with PVM had a significantly increased risk of systemic recurrence (HR 1.82, p=0.004, Figure) and a trend towards higher risk of local recurrence (HR 1.77, p=0.07).

**Conclusions:** In patients with VTT and RCC, the presence of a PVM is associated with increased risk of systemic recurrence, decreased CSS and OS. Complete surgical excision with achievement of negative vascular margins should be the goal for patients undergoing tumor thrombectomy.
Podium #34
MULTICENTER VALIDATION OF ABILITY OF SURGEON ASSESSMENT OF RENAL PRESERVATION IN COMPARISON TO MEASUREMENT WITH 3D IMAGE ANALYSIS
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Presented By: Conrad Tobert, MD

Introduction: Baseline renal function and preservation of functioning renal parenchyma are the strongest predictors of function after partial nephrectomy (PN) for presumed renal cancer. Prior studies have confirmed that measurement of volume preservation with 3D imaging (3DVP) is accurate, but limited data exist to compare this time-consuming approach with surgeon assessment of volume preservation (SAVP). We validated the findings of a prior, single-surgeon series with a multi-institutional comparison of 3DVP and SAVP as predictors of renal function after PN.

Methods: 3DVP and SAVP were calculated for 157 Patients from two institutions with pre- and post-operative cross-sectional imaging. Renal function was assessed by univariable and multivariable linear regression methods.

Results: (hypothetical) Median parenchymal preservation was 92% by 3DVP (72%−102%) and 92% by SAVP (70%−97%). 3DVP and SAVP strongly correlated with each other, p<0.0001. There was no significant difference between individual surgeon assessments of SAVP. Each method was strongly correlated with post-operative GFR (each p<0.0001). Univariable analyses revealed that age, preoperative GFR, RENAL score and each assessment were significant predictors of renal function (p<0.05), and parenchymal preservation was the strongest predictor in multivariable analyses (p<0.0001). Models using 3DVP and SAVP were statistically similar in ability to predict nadir GFR and latest GFR.

Conclusions: SAVP has now been validated in a multi-center cohort of PN patients, demonstrating it to provide a reliable estimate of renal functional preservation that is reproducible in contemporary practice. We propose that SAVP reporting should be performed routinely to facilitate analysis of PN outcomes.
Introduction: Obesity is a risk factor for RCC and is associated with poor prognosis. For metastatic RCC, multiple immunotherapies exist but complete response rates remain <10%. To understand how obesity impacts immunity to RCC, we examined peripheral blood immune markers in obese (Body Mass Index [BMI] ≥30) and non-obese (BMI <30) subjects.

Methods: Multiple leukocyte populations were evaluated via flow cytometry in subjects with a renal mass +/− metastases (n=91) pre-operatively and 30 days post-operatively. Pro-tumorigenic plasma proteins were analyzed via Multiplex array. Subjects were compared to age- and BMI-matched tumor-free controls.

Results: Obese subjects (n=53) had decreased frequencies of circulating CD14−/CD11b+/HLA−DR− myeloid-derived suppressor cells (pro-tumorigenic suppressors of immune function) compared to non-obese subjects (n=38; p<0.002) both pre- and post-surgery. Obese subjects with Fuhrman grade III/IV tumors (n=17) had elevated exhausted CD4+ T−cells postoperatively (p=0.02). Endoglin (protein promotor of angiogenesis and tumor progression) was upregulated in RCC subjects versus controls (p = 0.001 and 0.044) and was highest in obese RCC subjects (p=0.001). No differences in cell populations were seen between obese (n=32) and non-obese (n=21) controls although obese controls demonstrated upregulation of pro−tumorigenic proteins (sCD40L, sFASL, HB−EGF, IL−6, VEGF−A, VEGF−C and VEGF−D; p<0.05).

Conclusion: We found multiple significant differences in immune profiles between obese and non-obese subjects with RCC. Continued elucidation of these complex changes may explain the poorer prognosis observed in obese patients with RCC. This study was funded by NIH grant #1R01CA181088−01.
Podium #36
EVAluation of Renal FoSSa Recurrences Following NEphrectomy for Renal Cell CarcInoma
Sarah Psutka, MD1, Mark Heidenreich2, Stephen Boorjian, MD1, John Cheville, MD3, Suzanne Stewart, MD1, Christine Lohse, MS4, Thomas Atwell, MD5, Brian Costello, MD6, Bradley Leibovich, MD1 and R. Houston Thompson, MD1
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Presented By: Sarah Psutka, MD

Introduction: Local recurrence following Radical Nephrectomy (RN) for renal cell carcinoma (RCC) is rare. We examine the incidence of renal fossa recurrences (RFr) after RN and describe factors associated with cancer-specific survival (CSS).

Methods: We reviewed the records of 2,502 patients treated with RN for unilateral, sporadic, localized RCC between 1970 and 2006 and identified 63 (2.5%) patients who had RFr during follow-up. CSS from the time of RFr was evaluated according to management with local therapy (surgery, ablation, or radiation), systemic therapy or observation. Survival was estimated using the Kaplan–Meier method.

Results: Among the 63 patients, RFr occurred at a median of 1.4 years postoperatively. At last follow-up, 57 patients died at a median of 1.7 years following RFr, including 50 patients who died from RCC. Median follow-up for survivors was 6.0 years. Overall, median CSS was 2.2 years and 3-year CSS rates were 64%, 50% and 28% among those treated locally, systemically or expectantly (p=0.006). On multivariable analysis, when compared to observation, local treatment was associated with significantly improved CSS (HR 0.25, p<0.001) and there was a trend towards superior survival with medical therapy (HR 0.45, P=0.16).

Conclusions: Isolated RFr is rare, occurring in only 2.5% of RN patients. Patients who underwent locally directed therapy (surgery, ablation, radiation) had improved CSS in comparison to expectant management, suggesting that select patients may benefit from aggressive local treatment.
Introduction: We review our experience with partial nephrectomy, radiofrequency ablation (RFA) and cryoablation for cT1a renal masses.

Methods: Using our Renal Tumor Registry, we identified 1,424 patients with index cT1aN0M0 renal masses managed at the Mayo Clinic between 2000 and 2011. Local recurrence-free, distant metastases-free and overall survival were estimated using the Kaplan–Meier method.

Results: Among the 1,424 patients, 1,057 underwent partial nephrectomy, 180 had RFA and 187 had cryoablation. Median tumor size was 2.4, 1.9 and 2.8cm for patients treated with partial nephrectomy, RFA and cryoablation, respectively (p<0.001). Median duration of follow-up was 5.2 years, 3.6 years and 1.9 years for partial nephrectomy, RFA and cryoablation, respectively. There was not a significant difference in local recurrence-free survival among the three treatment types (p=0.49) although 5-year metastases-free survival was significantly better for partial nephrectomy (98%, p=0.005) and cryoablation (100%, p=0.021) when compared with RFA (93%). Additionally, patients treated with partial nephrectomy were significantly less likely to die from any cause compared with RFA (p<0.001) or cryoablation (p<0.001) patients while overall survival was similar among RFA and cryoablation patients (p=0.42).

Conclusion: With a relatively large number of treated index cT1a renal masses, recurrence-free survival was similar for partial nephrectomy, RFA and cryoablation. Metastases-free survival was excellent overall, although best among partial nephrectomy and cryoablation patients. Overall survival was improved after partial nephrectomy, likely due to selection bias. We believe these results suggest the need for a prospective randomized trial.
Introduction and Objective: Metallic stents are used to manage chronic ureteral obstruction in select patients. Our objective was to perform a cost analysis of chronic metallic and polymer stent changes.

Methods: We retrospectively identified all patients who had a metallic stent placed at two academic institutions between July 2007 and July 2013. We then obtained cost data from a single institution looking at cost for operating room, anesthesia, medication, fluoroscopy, and ureteral stent.

Results: 230 stents, placed in 86 patients, were included in the analysis. The average life of a metal stent was 7.4 months. Applying our cost data to a metal stent life of 7.4 months showed a yearly stent cost for metallic stents of $7,859.43 and $9,296.37 for unilateral and bilateral stents. For a unilateral polymer stent changed every 3 months the yearly cost was $16,342. For bilateral polymer stents changed every 3 months the cost was $16,826 per year. If the polymer stents were changed every 6 months the costs were $8,171 and $8,413 for unilateral and bilateral stent changes (Table 1).

Conclusions: Cost analysis reveals that metallic stents are considerably more cost effective than polymer stents when applied to our 6 year metal stent cohort.

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INTRODUCTION: Dystroglycan (DG) is a cell-surface laminin binding protein that functionally links the cytoskeleton to the extracellular matrix in a variety of epithelial tissues. Its function as a matrix receptor requires extensive glycosylation of its extracellular subunit, which requires at least 15 distinct genes encoding for known glycosyltransferases. Prior work has shown loss of DG glycosylation in a variety of carcinomas, though the cause and functional consequence of this loss are still unclear. Herein we analyzed human FFPE samples and The Cancer Genome Atlas (TCGA) to analyze whether glycosyltransferase dysregulation leads to clinically relevant outcomes in renal cell carcinoma.

METHODS: We analyzed DG glycosylation by immunohistochemistry followed by quantification of gene expression using qRT–PCR. We correlated these findings with the TCGA and identified associated clinical parameters.

RESULTS: DG is frequently downregulated in renal clear cell carcinoma patient samples, though it does not statistically correlate with disease recurrence. Additionally, TCGA data revealed a frequent dysregulation of a small number of putative DG glycosyltransferases, most exceptionally a frequent, significant downregulation of GYLTL1B (LARGE2). The relative transcript level of GYLTL1B and ISPD, another glycosyltransferase, were shown to inversely associate with mortality.

CONCLUSIONS: These data are the first to show that loss of GYLTL1B transcript associates with increased patient mortality and is likely the cause of hypoglycosylated DG. This work highlights the utility and applicability of The Cancer Genome Atlas as an unbiased and powerful resource with which to probe more complex pathways and their associated clinical features in a variety of tumor types.
Introduction: Partial nephrectomy is the gold standard for the surgical treatment of small renal masses. Nephron-sparing surgery is imperative in solitary kidney patients to avoid renal replacement therapy. Historically, a minimally invasive approach in this setting was discouraged due to the potential hazards of warm ischemia. We evaluated our experience with RALPN in patients with solitary kidneys.

Methods: Records of patients with solitary kidneys undergoing RALPN at four academic institutions between 2010 and 2013 were reviewed. Baseline demographic, peri-operative and pathological data were collected. Functional and early operative outcomes were analyzed.

Results: Fourteen patients underwent RALPN with an average age of 68 yrs (range 55–80). EBL and OR time were 189 mL and 154 minutes, respectively. Average warm ischemia was 9.85 minutes with 6/14 (42.8%) done off-clamp. Tumor enucleo-resection was performed in 12 of 14 (85.7%). Four (28.5%) patients had high-grade tumors (≥ Fuhrman grade 3). Eleven (78.5%) patients were pT1a and clear cell RCC was present in 11/14 (78.5%). Margins were negative in all patients. No patient experienced renal loss or required dialysis. Pre- and post-operative GFR at last follow-up was not significantly different (51.4, 46.9, Δ−9%; p = 0.27). The average follow up duration was 9.28 months (range 1–18).

Conclusions: RALPN in patients with a solitary kidney appears safe and feasible in our early experience. Tumor enucleo-resection may be a suitable approach in these patients to maximize renal preservation and minimize hilar clamping. Longer follow up is needed to support these initial findings.
Podium #41
EVALUATING AN IMPLANTABLE WIRELESS PRESSURE SENSOR FOR USE IN THE URINARY TRACT
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1Johns Hopkins Hospital; 2Southern Illinois University; 3Endotronix; 4Northwestern University
Presented By: Brian Le, MD, MA

Introduction: Current methods of obtaining pressure information require a direct wired connection, which causes discomfort and limits repeated measurements and widespread use. Here we evaluate a novel wireless induction technology that would allow wireless measurements to be taken through tissues using a self-contained microcircuit with an external reader.

Methods: We conducted in vitro and animal experiments to evaluate the signal strength, accuracy and feasibility of a wireless pressure sensing system in the GU tract. Prior to implantation, bench tests were carried out to evaluate the sensors’ pressure reading accuracy at a range of different pressures and distances. In animal trials, we inserted a self-contained Induction–Capacitance (LC) circuit into the bladder of a rat. A calibrated catheter with a pressure gauge was inserted into the bladder via the urethra. The bladder was cycled from empty to capacity several times while readings were obtained.

Results: Bench tests on wireless sensors showed accuracy within +/− 1.5 mmHg up to 9 cm distance in the urinary tract pressure range of 0 to 50 mm Hg. When the sensor was inserted in the bladder of rats, the sensors responded to an artificial increase in bladder pressure with the emission of a proportionally decreasing resonant frequency signals. As expected, a declining resonant frequency is recorded with increasing pressure. A linear regression could be detected with r=−0.75.

Conclusions: Wireless sensors can be effectively used in the urinary system and can provide a robust signal through tissues and in a high salt environment in a predictable fashion.
Introduction: Long-term efficacy/safety of repeated onabotulinumtoxinA treatments were assessed for patients with overactive bladder (OAB) symptoms including urinary incontinence (UI) who had been inadequately managed by an anticholinergic (ACH). The results are from a third interim analysis.

Methods: Patients who completed either of two phase 3 studies could enter a 3-year extension study in which they received multiple onabotulinumtoxinA (100U) treatments. Data were analyzed by treatment cycle. Change from baseline (BL) in OAB symptoms, proportions of patients with a positive response on the Treatment Benefit Scale (TBS; co−primary endpoint), health−related quality of life (HRQOL), duration of effect, adverse events (AEs) and clean intermittent catheterization (CIC) initiation were assessed.

Results: 829 patients entered this extension study; median follow-up was 126 weeks (2.4 years). Discontinuation rates due to AEs/lack of efficacy were low (4.5%/4.9%). OnabotulinumtoxinA reduced mean UI episodes/day (co−primary endpoint; BL=5.55) at week 12 by −3.26, −3.70, −3.87, −3.20, and −3.22 (cycles 1−5, respectively). Improvements in other OAB symptoms and HRQOL (exceeding minimally important differences; ≥2.5X) were consistently observed with repeat onabotulinumtoxinA. Positive TBS responses were reported (74.0, 80.9, 80.4, 79.4, 86.1%). Median duration was 24.0, 31.6, 27.9, 24.3 and 23.9 weeks. Most common AE was urinary tract infection, with no changes in overall AE profile. CIC rates were 4.6, 4.0, 4.3, 4.6 and 2.9%.

Conclusions: Patients with OAB and UI inadequately managed by an ACH showed sustained improvements in OAB symptoms, perception of their condition and HRQOL after repeated onabotulinumtoxinA treatment, with no new safety concerns.

Funding: Allergan, Inc.
Introduction: Electrocauterization (EC) is a valid treatment option in Interstitial Cystitis (IC) patients with Hunner’s Ulcers (HU).

Methods: From 1997 to 2013, we characterized our HU patient’s experience with EC, reviewing demographics, operative characteristics and response to a questionnaire.

Results: 214 EC procedures were performed in 77 patients (87% female, mean age 66 ± 14.45 years). 42 (54%) patients who underwent multiple EC had mean initial bladder capacity (BC) of 456.19 ± 30.66 ml and final BC of 444.22 ± 34.38 ml. Mean number of EC procedures was 2.96 ± 2.29 (range 1−10). Mean time between first and last EC was 56 ± 1.40 (range 4−165) months. 51 patients (66%) completed our questionnaire, with 13.62 ± 9.32 years of symptoms and 10.72 ± 6.88 years since diagnosis. Ranking IC treatments, 37(86%) reported EC most beneficial. On a 0−10 (none to worst possible) scale before and after EC, frequency improved from 9.07 ± 1.31 to 3.64 ± 2.78 (p<0.001), urgency from 8.46 ± 2.38 to 3.26 ± 2.74 (p<0.001) and pain from 8.67 ± 2.36 to 2.67 ± 2.58 (p<0.001). Overall, 89.3% noted some degree of symptom improvement after EC; 55.3% had marked improvement. 98% would undergo EC again.

Conclusions: EC of HU is an effective and safe procedure with high patient satisfaction that does not diminish bladder capacity.

Funding: Ministrelli Program for Urology Research and Education− MPURE.
Podium #44
NEUROGENIC BLADDER PRESENTING TO THE EMERGENCY DEPARTMENT IN THE UNITED STATES: ADMISSION RATES AND ASSOCIATED MORTALITY
Jessica Meyers, MD¹, Marianne Schmid, MD², Akshay Sood, MD¹, Quoc-Dien Trinh, MD² and Humphrey Atiemo, MD¹
¹Henry Ford Hospital; ²Brigham’s and Women’s Urology
Presented By: Jessica Meyers, MD

Introduction: We characterized patients with neurogenic bladder presenting to the emergency department (ED) in the United States, assessing concurrent diagnoses, predictors of admission and mortality.

Methods: From the Nationwide Emergency Department Sample database between 2006–2009, patients presenting to the ED with diagnoses associated with neurogenic bladder were extracted, and defined as having primary/secondary diagnosis of lower urinary tract symptoms, urinary retention, urinary tract infection (UTI), hematuria, hydronephrosis or urolithiasis, and an additional diagnosis of neurologic disease, including multiple sclerosis, Parkinson’s disease, spina bifida, hemiplegia, quadriplegia, paraplegia and spinal cord injury. Characteristics associated with admission were evaluated using logistic regression models adjusted for clustering.

Results: There were 546,962 ED visits associated with neurogenic bladder. Diagnosis of sepsis and renal failure were seen in 6.8% and 8.7%, respectively. Admission rate was 69%. Predictors of admission included female gender, higher Charlson Comorbidity Index, UTI, hydronephrosis, sepsis and renal failure (Table 1). Mortality rate was 1.1% of admitted patients, 22.0% and 28.1% of patients with kidney failure and sepsis, respectively.

Conclusion: This is the largest population based study to characterize neurogenic bladder patients presenting to the ED, demonstrating its significant morbidity and mortality. This illustrates the severity of the disease, and the necessity of improved care in the outpatient setting.

Financial Disclosure: None.
**Introduction:** Long term urinary incontinence (UI) and treatment satisfaction after robotic assisted radical prostatectomy (RARP) is not well known.

**Methods:** Surveys were mailed to 1,587 men who underwent RARP between 2003 and 2012. Using the Expanded Prostate Cancer Index–26 short form, men recalled preoperative UI and reported current continence. Those leaking more than rarely/never were considered incontinent.

**Results:** In 588 men (mean age 61.5 ± 6.6 years), 79% had stage T2 prostate cancer. Prior to RARP 94% were dry, but at time of survey (mean 5.1 ± 2.6 years since RARP), 50% (268/541) were continent. However, only 20% (54/272) reported their urinary function was a moderate or big problem. 27% (157/580) reported having used treatments for UI. Satisfied/extremely satisfied with each treatment were 84/126 (67%) for pads, 5/21 (24%) for medications, 11/17 (65%) for pelvic floor physical therapy and 6/16 (38%) for male sling. 9 used a penile clamp (3 satisfied), 6 used a condom catheter (4 satisfied), 6 had an artificial urinary sphincter (1 satisfied) and 3 underwent neuromodulation (0 satisfied).

**Conclusions:** Satisfaction with UI treatments after RARP is low. Ongoing assessment and discussions of treatment options are needed.

**Funding:** Ministrelli Program for Urology Research and Education—MPURE.
Introduction: Long-term risks of augmentation cystoplasty (AC) include formation of calculi and increased risk of malignancy in the augmented bladder. There is no standard protocol for surveillance of patients who have undergone AC. This study describes our experience with surveillance cystoscopy following AC in patients with NGB.

Methods: Patients with neurogenic bladder who were 10 or more years post−AC were chosen for this study and a retrospective review of their charts was performed. Annual surveillance was done with urine cytology, basic metabolic panel, serum B12, renal bladder ultrasound (RBUS) and office cystoscopy.

Results: Out of 195 patients in the database, 43 were 10 or more years post−AC. The primary diagnosis was spina bifida in 33 patients, cerebral palsy in 5, spinal cord injury in 4 and bladder exstrophy in 1. Mean age of the study population was 31. Total of 137 RBUS and 75 cystoscopies were performed. 26 patients had both renal bladder ultrasounds and cystoscopies done as part of surveillance. RBUS was positive for hydronephrosis in 12 patients, renal calculi in 7 patients and bladder stones in 4 patients. No bladder tumors were detected by RBUS. Cystoscopy was diagnostic for bladder stones in 6 patients and bladder tumor in 1 patient. In 4 instances, cystoscopy was positive and RBUS negative for bladder stones. The bladder tumor detected on surveillance cystoscopy was subsequently biopsied and found to be benign.

Conclusion: Surveillance cystoscopy in post−AC patients diagnoses bladder calculi and tumors that may not be detected by RBUS.
Podium #47
URETHRAL PRESSURE MEASUREMENTS CAN BE USED DURING URODYNAMICS TO DETECT DETRUSOR SPHINCTER DYSSYNERGIA IN MULTIPLE SCLEROSIS AND SPINAL CORD INJURY PATIENTS
Lindsey Cox, MD, Anne Pelletier Cameron, MD, Ann Oldendorf, MD, J. Quentin Clemens, MD and John Stoffel, MD
University of Michigan
Presented By: Lindsey Cox, MD

Introduction: Detrusor sphincter dysynergia (DSD) can be diagnosed by electromyelograph (EMG) and voiding cystourethrogram (VCUG); body habitus, technical factors and patient positioning can be limiting. We examined (UP) measurements during urodynamics (UDS) to detect DSD.

Methods: MS and SCI patients with DSD on UDS between 2008–2013 were identified. UDS were standardized per ICS guidelines using a urodynamic catheter with both bladder and urethral pressure sensors (positioned at the point of maximal pressure in the proximal urethra). DSD was diagnosed if UP rose >20cm H20 prior to/during detrusor contraction. EMG was positive if pelvic floor activity increased prior to/during detrusor contraction. VCUG was positive if images demonstrated an opened/dilated proximal urethra above the external sphincter during detrusor contraction.

Results: 67 patients with DSD on UDS (22 MS, 45 SCI) were identified. MS patients were older (48 vs. 39 years, p=0.04) and more likely to be female (60% vs. 27%, p=0.01). DSD was diagnosed in 85% of UDS using only UP rise, 75% using only EMG, and 55% using only VCUG. 11% were non-diagnostic for DSD using EMG and VCUG together, but positive on UP. There were no differences in positive UP, EMG, VCUG, detrusor overactivity or low compliance between MS and SCI, although mean UP rise was significantly greater in SCI compared to MS patients (107cmH20 vs. 48cmH20, p=0.02).

Conclusion: UP measurements improved diagnosis of DSD in MS and SCI patients. SCI patients had double the UP rise during DSD compared to MS patients. Prospective studies are needed to understand the sensitivity/specificity of UP.
Podium #48
DISPARITIES IN ACTIVE SURVEILLANCE FOR LOW RISK PROSTATE CANCER BETWEEN AFRICAN AMERICAN AND CAUCASIAN MALES
Travis Pagliara, MD, MDFin, Oluwakayode Oluwakayode Adejoro, MD, MPH and Badrinath Konety, MD, MBA
University of Minnesota
Presented By: Travis Pagliara, MD, MDFin

Introduction: Racial disparities have previously been assessed and discovered in the treatment of prostate cancer from 1991 to 1999 in Surveillance, Epidemiology and End Results (SEER) registry Medicare claims. With changing treatment trends, we reassessed utilization of surveillance vs. treatment from 2003–2011.

Methods: We identified 25,133 White and Black men diagnosed with low risk prostate cancer as defined by D’Amico criteria. (PSA <= 10, Gleason score <= 6, and clinical stage T1−2a). After refining exclusion criteria, it resulted in 13,376 men, of which 3,473 were found on surveillance, defined as no treatment following their diagnosis of prostate cancer. The frequency of surveillance was compared between both groups. The mean time for leaving surveillance was estimated and compared between both groups.

Results: The mean times to any definitive treatment were identical. There was no significant change in the frequency of surveillance per group over the study period. Evaluated yearly, no significant change in AA men vs. Caucasian men over the study period with patients ranging from 9–20% on AS as opposed to 9–21% Caucasian men on AS other than in the years 2006 and 2008.

Conclusion: Both African American and Caucasian men diagnosed with low risk prostate cancer equally utilized active surveillance over the time period studied with no statistical difference in the time to treatment. This marks a notable equalization of surveillance since the prior decade.

Podium #49
THE IMPACT OF MALPRACTICE CAPS ON ADOPTION OF MINIMALLY INVASIVE RADICAL PROSTATECTOMY (MIRP)
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University of Minnesota
Presented By: Badrinath Konety, MD, MBA

Introduction: Studies suggest higher resource utilization in the context of “defensive medicine” in the absence of malpractice reform. However, there are no data regarding the association between malpractice caps and the adoption of new technology. We sought to assess the association between malpractice reform or “caps” on malpractice penalties and adoption of MIRP.

Methods: We identified 96,256 men diagnosed with non-metastatic adenocarcinoma of the prostate between 2003 and 2009 from the SEER–Medicare dataset. We identified the trend of use of MIRP for treatment of prostate cancer in each SEER region by “caps” status within the cohort. A logistic regression model was fitted to determine the influence of malpractice caps on the receipt of MIRP.

Results: There was rapid increase in the use of MIRP (p<0.0001) across all regions. The cap on noneconomic damages varied between $250,000 and $440,000. The diffusion of MIRP was quickest in regions where “caps” existed before the introduction of MIRP (P<0.0001). The odds of receipt of MIRP were 1.6 times higher in the regions with malpractice “caps” compared to those with “no caps.”

Conclusions: Existence of malpractice caps do appear to facilitate adoption of new technology such as MIRP for prostate cancer. It may also suggest that presence of “caps” and more rapid technology adoption may be a proxy measure for better distributed and higher quality health care in such regions.
Introduction: With rising concerns for overtreatment of low-risk prostate cancer (PCa), active surveillance (AS) has developed as a principal management; however, little is known about its contemporary utilization in diverse academic and community practices. Methods: Using data from the Michigan Urological Surgery Improvement Collaborative (MUSIC), we identified men with low-risk PCa (PSA <10, Gleason =6, <cT2a) in MUSIC practices from 3/2012 – 6/2013. We then compared the proportion of men receiving AS for initial therapy stratified by age at diagnosis, Charlson comorbidity index and practice. Results: Among 2,659 men with PCa, 715 (27.8%) had low-risk tumors. Men over 70 years old (p=0.004) and those with Charlson comorbidity index of two or more (p=0.002) had a significantly higher proportion of AS. After adjusting for patient characteristics, the proportion of AS was highly variable across practices, ranging from 26.7% to 80.7% (p=0.003), with an overall rate of 50.0% (Figure). Conclusions: Men with low-risk PCa, 50% undergo AS for initial therapy in Michigan. The impact of these practices on overtreatment will depend on validation of surveillance durability, quality of life and cancer control outcomes. Funding: MUSIC is funded by Blue Cross Blue Shield of Michigan.
Podium #51

MAGNETIC RESONANCE IMAGE GUIDED TRANSURETHRAL ULTRASOUND ABLATION (TULSA) OF PROSTATE CANCER: PRELIMINARY OUTCOMES OF A PHASE I MULTI–CENTER CLINICAL TRIAL

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Presented By: Jason Hafron, MD

Introduction: MRI-guided transurethral ultrasound ablation (TULSA) is a new minimally invasive modality to ablate prostate tissue using real-time MRI monitoring and active temperature feedback control. The aim of this multi-center phase I clinical study is to determine the safety and feasibility of MRI-guided TULSA.

Methods: Patients with low-risk prostate cancer were enrolled (cT1c–T2a, N0, M0; PSA≤10ng/ml; Gleason Score ≤6). Under general anesthesia, the TULSA device (PAD–105, Profound Medical Inc.) is positioned in the prostatic urethra with MRI guidance. Treatment planning is performed under MRI prostate visualization, with therapeutic intent of whole-gland ablation. Treatment is delivered under continuous MR thermometry feedback control. A suprapubic catheter (SPC) is placed and remains for 2 weeks. Primary study endpoints are safety and feasibility. Clinical monitoring is 5 years, including serial PSA, completion of quality of life questionnaires and a prostate biopsy at 12 months.

Results: 22 patients were treated with no intraoperative complications. Median treatment time was 34 (24 – 61) min. Median PSA reduced by 90% (60 – 99%) to 0.7 ng/ml at 1 month (n=20) and remained stable to 0.8 ng/ml at 6 months (n=5). All complications to date were CTCAE v4 Grade 1 −3 and included: hematuria (9), urinary tract infection (6), and epididymitis (1). Acute urinary retention was observed in 3 patients requiring replacement of the SPC.

Conclusion: MRI-guided TULSA enables accurate planning, real-time dosimetry and control of the thermal ablation volume. Initial results indicate that MRI-guided TULSA is safe and clinically feasible with a well-tolerated, low side effect profile.
Podium #52
INCREASED LYSOSOMAL B−GALACTOSIDASE (GLB1) EXPRESSION IS A SENESCENCE MARKER AND IDENTIFIES INDOLENT PROSTATE CANCER
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Presented By: Jennifer Wagner, BA

Introduction: Senescence is terminal growth arrest that functions as a tumor suppressor in aging and precancerous cells and is a response to selected anticancer compounds. Lysosomal−β−galactosidase(GLB1) hydrolyzes the terminal β−galactose from glycoconjugates and is the origin of senescence associated−β−gal activity(SA−β−gal). We investigated GLB1 expression in prostate cancer (PCa) tissues using a novel antibody and quantitative imaging to evaluate senescence biology.

Methods: To confirm the ability of the GLB1 antibody to recognize senescent cells, GLB1 expression was assessed in primary prostate epithelial cell cultures passaged to replicative senescence and induced senescence in PCa lines using low dose doxorubicin (25nm) or Diazequone(AZQ; 250nM). These cells are terminally arrested, express SA−β−gal activity and other senescence markers. Tissue microarrays from 86 PCas, 25 HGPIN and 48 benign tissues were subjected to immunoflourescent staining for GLB1 and automated quantitative imaging using VectraTM.

Results: A cumulative increase in GLB1 expression was seen in replicative and induced senescence that correlated with senescent morphology and p16 levels. In tissues, GLB1 expression was greater in HGPIN specimens compared to benign and cancer (all p<0.0001). Lower expression levels discriminate PCa and metastases from benign tissues (p<0.0001, p=0.004 respectively). Higher GLB1 was associated with lower Gleason Score (p=0.001) and lower T stage (p=0.01), localized vs. metastatic disease (p=0.0003) and improved PSA-free survival (p=0.025) especially useful in stratifying intermediate grade cancers (0.013)

Conclusion: GLB1 is a useful marker in paraffin-embedded primary prostate tissue samples to identify reduced metastatic potential and treatment failure. Elevated GLB1 expression represents increased senescence, a tumor suppressor mechanism.
Introduction: Triptolide is extracted from the Chinese plant Tyrpterygium wilfordii that is proved to have anti-cancerous effect. We examined the effects of triptolide on CaP in vitro as well as the mechanism of action.

Methods: 4 human CaP cell lines including AR positive castrate sensitive (LnCaP), AR positive castrate resistant (C4−2, 22RV1) and AR negative (DU145) were treated with varying concentrations of triptolide. Cell viability assay, caspase 3/7 activation, western blots and RNA studies were done to test the sensitivity of CaP to this agent. siRNA (silencing) of SP1, HSP70 and AR was attempted and mRNA levels of all 3 genes were quantified.

Results: 50 nM of tripolide killed more than 60% of the cells in 48 hours by apoptosis, with 5 folds increase in caspase 3/7 activity. Expression of SP1, AR, HSP70 and HSP27 were decreased at the RNA and protein level after 24 and 48 hours of treatment. siRNA studies have shown that silencing of SP1 leads to decreased levels of HSP70 and AR. Silencing of AR and HSP70 decreased the level of both genes suggesting a bidirectional interaction.

Conclusion: Triptolide induces CaP cell death in both androgen dependent and castration resistant cell lines by apoptosis. We propose that it does so by down regulating SP−1 and its downstream targets HSP70 and AR.
Podium #54
FUNCTIONAL OUTCOMES OF ROBOTIC ASSISTED LAPAROSCOPIC PROSTATECTOMY (RALP) VERSUS OPEN RADICAL RETROPUBIC PROSTATECTOMY (RRP)
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Presented By: Michael Strigenz, BS

Introduction: We studied patient-reported outcomes in patients undergoing RALP and RRP at a single institution.

Methods: The last 100 patients who underwent RALP and RRP, between May 2006 and August 2008, by each of two surgeons were identified. Both had performed greater than 100 procedures prior to this study cohort, and both had similar surgical prostatectomy volume. Patients were sent the EPIC−CP, SHIM and I−PSS questionnaires and asked to recall their urinary and sexual function prior to and following prostatectomy and a questionnaire regarding current scar.

Results: 41 patients who underwent RALP and 50 who underwent RRP returned the questionnaires. No difference was found between the RALP and RRP group in the pre-operative assessment of urinary and sexual function as rated by the EPIC−CP (p=0.12), SHIM (p=0.4) and I−PSS (p=0.31) questionnaires. Urinary continence after prostatectomy, as rated by the EPIC−CP, was significantly better for men in the RALP group as compared to RRP (11.7 v. 15.1, p=0.03). No significant difference was found in the SHIM (p=0.21) or I−PSS questionnaire (p=0.39) between the two groups. Men also viewed their surgical scars as significantly better after RALP (p=<0.001).

Conclusion: Men have better self-reported continence outcomes, as measured by the EPIC−CP questionnaire, after RALP than after RRP. No significant difference was found in erectile function or urinary symptoms following the respective procedures. Men are more satisfied with the appearance of their surgical scars after RALP.
PODUM #55
POULATION−BASED ANALYSIS OF TREATMENT MODALITIES AND SURVIVAL FOR LOCALIZED SMALL−CELL CARCINOMA OF THE PROSTATE
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Presented By: Adam Weiner, BS

Introduction: Small-cell carcinoma of the prostate (SCP) is a rare but aggressive malignancy representing <1% of all prostate cancers. It is commonly advanced stage at diagnosis and managed with systemic therapy. The objectives of our study were to: 1) determine treatment patterns and 2) evaluate factors associated with overall survival for patients with localized SCP.

Methods: We derived our cohort of men diagnosed with pure SCP, without associated nodal or distant metastatic disease noted (n=287) from the National Cancer Database (1997–2011).

Results: Overall, 1-year, 5-year and median survival were 59%, 21% and 14.8 months, respectively. The majority of patients received local therapy (12% radical prostatectomy, 45% radiation therapy). On adjusted Cox proportional hazards model for overall survival, local therapy predicted better survival compared to no local therapy (HR: 0.24, 95% CI 0.15−0.40, p<0.001) (Figure). Advanced clinical stage was an independent predictor for worse survival vs. cT1 (cT3: HR: 2.96, 95% CI 1.32−6.65, p=0.007; cT4: HR: 3.44, 95% CI 1.62−7.34, p=0.002). Age, chemotherapy and ADT were not predictors of survival.

Conclusion: For men diagnosed with localized SCP, overall survival is poor. Although our analysis has clear limitations including selection bias, treatment with local therapy appears to improve survival and may be suitable for select patients.

Financial Disclosures: None.
Podium #56
FATTY ACID (FA) COMPOSITION OF PERIPROSTATIC ADIPOSE (PPA) TISSUE CAN PREDICT PROSTATE CANCER (PCA) AGGRESSIVENESS
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Presented By: Kristian Novakovic, MD

Introduction: Increased PPA thickness has been associated with high grade PCa. Independent of elevated adiposity, the molecular composition of PPA may be a prognostic marker for PCa aggressiveness. Using ex vivo MR spectroscopy (MRS) we found differences in FA composition between PPA from PCa patients and their subcutaneous adipose (SQA). Receiver operating characteristic (ROC) analysis revealed that FA profile of PPA had potential for predicting extracapsular extension (ECE), a marker for PCa aggressiveness.

Methods: PPA and SQA from PCa patients (n=30) were analyzed using MRS. Saturated (fS), mono-unsaturated (fM), poly-unsaturated (fP) and total unsaturated (fU) FA fractions were measured from spectra. The ratios fM/fS, fP/fS and fU/fS were compared against pathological measures using ROC curves.

Results: Patient/tumor characteristics were: body-mass index (BMI) 21.0–40.5; Gleason pattern 52.5% (3+3), 35% (3+4), 12.5% (4+3); 12.8% had ECE. In obesity, fM/fS and fU/fS were significantly higher in PPA than in SQA. Independent of BMI, several differential MRS measures between PPA and SQA had predictive value for ECE based on the area under ROC curves: ΔfM/fS 0.83, ΔfM 0.92, ΔfU 0.84 and ΔfS 0.16.

Conclusion: MRS of PPA has potential to detect aggressive PCa. Altered FA profile of PPA in PCa might represent a metabolic environment permissive to cancer progression.

Acknowledgement: John and Carol Walter Center for Urological Health.
Podium #57
LOW DOSE GTX−758 DECREASES FREE TESTOSTERONE AND PSA IN MEN WITH METASTATIC CASTRATION RESISTANT PROSTATE CANCER (MCRPC)
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Presented By: Robert Getzenberg, PhD

Introduction: LHRH agents used for androgen deprivation therapy (ADT) were designed to lower total testosterone (T) levels to those achieved by orchietomy although 30−40% of men do not achieve castrate total T levels of <20ng/dL. GTx−758 (Capesaris) is an oral estrogen receptor α agonist that increases sex hormone binding globulin (SHBG), lowers free T levels and ameliorates estrogen deficiency side effects associated with ADT.

Methods: In a Phase 2 open label study (G200712, NCT01615120), 38 men with mCRPC were continued on their current form of ADT along with a low dose of GTx−758, 125 mg, for at least 90 days.

Results: In the initial cohort of 38 patients, the mechanism of drug action was observed with 83% having levels of SHBG more than double that of baseline and 81% having at least a 50% reduction in free T. Of the 22 patients who completed at least 90 days on the trial, 91% experienced decreases in PSA levels. GTx−758 impacted the estrogen deficiency side effects associated with ADT with 38% of the subjects experiencing hot flashes prior to taking GTx−758 displaying improvement. Bone turnover biomarkers decreased in a majority of the subjects. The 125 mg arm was well tolerated with no reported venous thromboembolic events.

Conclusions: The 125 mg arm has completed enrollment of 38 patients with metastatic CRPC, and following a planned safety review by an independent data safety monitoring board, the study is now enrolling an additional 38 patients in the 250mg oral daily dose arm.

Funding: GTx, Inc.
**Podium #58**  
**PCA3 VARIABILITY IN OBESE AND NON–OBESE MEN ON ACTIVE SURVEILLANCE**  
Kristian Novakovic, MD, Chihsiung Wang, PhD, Charles Brendler, MD, Michael McGuire, MD and Brian Helfand, MD, PhD  
NorthShore University HealthSystem  
Presented By: Kristian Novakovic, MD

**Introduction:** PCA3 is considered a specific marker for the detection and management of early prostate cancer. We sought to compare temporal variability of PCA3 over time in obese and non-obese men on active surveillance (AS).

**Methods:** We evaluated 54 obese (BMI≥30) and 173 non-obese (BMI<30) patients enrolled in an IRB approved AS protocol. Eligibility criteria included clinical stage ≤T2a, Gleason Score ≤6, ≤3 cores positive, maximum involvement of any core <50% and total tumor volume ≤5% on diagnostic biopsy. Disease progression was defined as having either Gleason Score ≥7 or increased tumor volume (>50% linear involvement or ≥3 cores with cancer). PCA3 variability over time was measured by coefficient of variation (CV).

**Results:** 75 patients exhibited disease progression with a similar proportion of progressors in obese and non-obese men (37% vs. 31%, p=0.68). While baseline PCA3 was similar between obese and non-obese groups, the temporal pattern of PCA3 in obese group was nearly twice as variable as the non-obese group (22.6% vs. 13.2%, p<0.01).

**Conclusion:** PCA3 variability over time is significantly greater in obese men enrolled in AS. Given the magnitude of variability, the usefulness of PCA3 in guiding treatment recommendations for obese patients remains uncertain.
**Introduction:** Ductal carcinoma (DC) of the prostate is uncommon. We compared treatment patterns, pathology and survival of DC and acinar adenocarcinoma (AC).

**Methods:** Using National Cancer Database (NCDB), we identified patients with clinically localized (cN0,cM0) pure DC (n=1,328) and AC (n=751,635) between 1998–2011. AC was categorized Gleason 6–7 and Gleason 8–10.

**Results:** Median follow-up 80 months (IQR:11–57). Patients with DC had lower mean PSA compared to patients with Gleason 8–10 AC (10.3 vs. 16.2 ng/mL, p<0.001), were less likely to undergo radiation (28% vs. 52%, p<0.001) and more likely to undergo prostatectomy (54% vs. 36%, p<0.001). Compared to patients with Gleason 8–10 AC undergoing prostatectomy, those with DC had more favorable pathology: stage ≥T3 (39% vs. 52%, p<0.001), positive lymph nodes (4% vs. 11%, p<0.001), and positive margins (25% vs. 33%, p<0.001). On multivariate analysis, patients with Gleason 6–7 AC had decreased risk of death compared to DC (HR 0.46, 95%CI [0.34–0.61], p<0.001) while Gleason 8–10 AC (HR 0.92, 95%CI [0.69–1.23], p<0.001) had similar risk of death.

**Conclusion:** In this large contemporary population-based series, patients with DC presented with lower PSA and were more likely to undergo surgery than patients with AC. Although DC had more favorable pathology compared with Gleason 8–10 AC, there was no difference in overall survival.
Podium #60
UROLOGISTS KNOWLEDGE OF THE COSTS OF SURGICAL SUPPLIES IS SEVERELY DEFICIENT

Shane Pearce, MD\textsuperscript{1}, Rena Malik, MD\textsuperscript{1}, David Hatcher, MD\textsuperscript{1}, Gregory Auffenberg, MD\textsuperscript{2}, Samuel Ohlander, MD\textsuperscript{3}, Kristin Greco, MD\textsuperscript{4}, Chi−Siung Wang, PhD\textsuperscript{5}, Christopher Gonzalez, MD\textsuperscript{3}, Sangtae Park, MD\textsuperscript{5}, Brian Helfand, MD\textsuperscript{5} and Michael McGuire, MD\textsuperscript{5}
\textsuperscript{1}University of Chicago; \textsuperscript{2}Northwestern University; \textsuperscript{3}University of Illinois Chicago; \textsuperscript{4}Loyola University Medical Center; \textsuperscript{5}Northshore University Health System

Presented By: Shane Pearce, MD

Introduction: Bundled payments under the Affordable Health Care Act will place a premium on informed decision making by surgeons when selecting instruments for a procedure. Urologists’ knowledge of costs associated with common procedures is unknown.

Methods: A survey assessing costs of common urologic instruments was prospectively distributed to urologists in the Chicago area. Respondents reported level of training and type/years in practice. Participants provided cost estimates in US dollars for 12 common disposable instruments and 2 questions about the cost of Medicare anesthesia reimbursements. Responses were scored as correct if they were within 10% of the actual cost.

Results: There were 141 respondents distributed by level of training (39.7% resident/fellow, 60.3% attending), type of practice (49.4% private, 12.9% hospital employed, and 28.2% academic) and years of practice (ranging from 1 to >30 years). The number of respondents who answered correctly to the 14 questions was highly variable, ranging from 0.9% to 23.1%. Overall, the coefficient of variation (CV) was elevated among all groups (80−171%). The majority of respondents overestimated costs. Over 90% of respondents were correct on <25% of questions, including 30.5% who answered no questions correctly. There were no differences in the frequency of correct responses by level of training, type of practice, years in practice, prior education on costs or subjective assessment of cost knowledge (p>0.05 for each).

Conclusions: The lack of knowledge of the costs associated with common urologic procedures among urologists in training and in practice highlights the need to address these educational deficits.
Introduction: We seek to identify the errors and procedure types most commonly resulting in closed urologic claims in the past decade. We also quantify associated costs of litigation based on error implicated.

Methods: An analysis of claims was performed on data from 22 member companies of the Physician Insurers Association of America (PIAA) through 2012. Data included 6,751 closed claims in urologic surgery.

Results: The most prevalent error in urologic surgery in the past decade was “improper performance of a procedure,” accounting for 880 (34%) claims. Of these, procedures involving the prostate were most frequently implicated (110 claims) and 36% resulted in an indemnity payment (Avg Indemnity payment: $451,421). In the past three years, prostate cancer (26 closed claims in 2012) has become the most likely presenting patient condition to result in closed claims. Errors in the management of prostate cancer now account for the highest average indemnity payments ($459,545 in 2012).

Conclusions: Costs of urologic litigation continue to rise at an alarming rate. In the past five years, error in the management of prostate cancer has resulted in the most claims and highest average indemnity payments. This may correlate with the increasing use of robotic assisted surgery in the management of prostate cancer. Understanding the most common errors and procedure types leading to malpractice claims can help urologists with risk management and potentially lead to improved patient care.
Introduction: Financial waste of medical supplies is partly driven by overutilization of surgical items that can be replaced with more cost effective alternatives. This study sought to test a protocol providing surgeons with cost feedback relative to their surgeries. We hypothesized that providing feedback about costs would reduce marginal costs within the operating room (OR).

Methods: The protocol was developed for robotic partial nephrectomy. Costs pertaining to the 20 most recent cases were analyzed to establish a baseline. Through utilization analysis and discussion with surgeons, ten items were identified for replacement or omission. Real time feedback of total OR costs was provided to the surgeon after each case. The effects on the marginal costs were analyzed on five cases after a five case washout period.

Results: Cost analysis of the robotic partial nephrectomy prior to the washout period indicates expenditures of $5,019.33 per case. The 10 modifiable items were found to have a cost of $1,188.75 (24% total cost). Post-washout period cost analysis found the total OR cost decreased by $846.33 (17%) to $4,173. Therefore, $846.33 (71%) of the possible identified savings was realized (see figure).

Conclusion: Providing surgeons with information and feedback related to OR costs may lead to a change in surgeons’ behavior and decreased overall costs.
PODUM #63

KNOWLEDGE OF MEDICARE REIMBURSEMENT AND THE AFFORDABLE HEALTH CARE ACT IS DEFICIENT AMONG UROLOGISTS

Shane Pearce, MD1, Rena Malk, MD1, David Hatcher, MD1, Gregory Auffenberg, MD2, Samuel Ohlander, MD3, Kristin Greco, MD4, Chih-Siung Wang, PhD5, Christopher Gonzalez, MD2, Sangtae Park, MD5, Brian Helfand MD5 and Michael McGuire, MD5

1University of Chicago; 2Northwestern University; 3University of Illinois Chicago; 4Loyola University Medical Center; 5Northshore University Health System

Presented By: Shane Pearce, MD

**Introduction:** The Affordable Health Care Act (AHCA) will change the current reimbursement structure by bundling payments to surgeon and institution. The level of understanding of these changes among urologists is unclear.

**Methods:** An anonymous survey was prospectively distributed to urologists and urology trainees in the Chicago metropolitan area. Respondents reported type and years of practice, subjective knowledge and hours of education. Subjects were asked 3 questions about the AHCA regarding changes in Q1) inpatient surgical costs; Q2) outpatient surgical costs; and Q3) payment bundling and responded (true, false, don’t know). Statistical analysis was performed comparing responses between different demographic groups.

**Results:** There were 141 respondents distributed by level of training (39.7% resident/fellow, 60.3% attending), type of practice (49.4% private, 12.9% employed, and 28.2% academic) and years in practice (ranging from 1 to >30 years). Over 90% of respondents had <5 hours of education about the AHCA and 87% rated their knowledge as deficient. Attendings were more likely to respond correctly compared to resident/fellows (p<0.05). Private practice and hospital employed attendings had a higher correct response rate than academic attending for all 3 questions (p<0.05). Subjective knowledge rating and hours of education was significantly and marginally correlated with correct responses, \( r=0.20 \) (p=0.02) and \( r=0.11 \) (p=0.18), respectively.

**Conclusions:** There is a lack of education and pervasive sense of deficiency in knowledge about the AHCA. At a time in which medical expenditures are under increased scrutiny and potentially linked to reimbursement, it is imperative to address these educational needs.
Introduction: Over the last 36 months, The Cleveland Clinic began to evaluate our data regarding “Wheels in Time” to “Incision” time as an institutional quality improvement project. All surgical service lines were included in this study and the percentage improvement for each service, hours saved by starting cases on time and financial saving were evaluated.

Methods: 18 different surgical service lines at the Cleveland Clinic Foundation between January 2011 and December 2013. Greater than 4,000 cases were urological procedures. Major variables include First Case On Time (FCOT), First Case (FC) Volume and Time Saved.

Time Saved = [FCOT % Improvement] x [Total FC Volume]
(saved “wheels in” to “incision” time)

Financial Impact = [Time Saved] x [Nurse Hourly Rate + Scrub Hourly Rate]
(dollars saved)

Results: Nearly all (17/18) service lines improved FCOT, some more than others. The urology service line noted that the average time between “Wheels In” to “Incision” time showed significant improvement with late cases averaging 101 minutes and on time cases averaging 52 minutes. Financial impact was significant.

Conclusion: Opportunities exist for significant savings from both financial and operating room staffing hours perspectives when “Wheels In” to “Incision” time is lessened.
Podium #65
EVALUATION OF THE FACT SHEET FOR PATIENT EDUCATION “WHAT MEN SHOULD KNOW ABOUT PROSTATE SCREENING” FROM THE AUA
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Oakland University William Beaumont School of Medicine
Presented By: David Pridmore, MD

Introduction: The AUA recently released a new Clinical Guideline on the Early Detection of Prostate Cancer. With this paradigm change, the AUA released a patient fact sheet “What Men Should Know about Prostate Screening.” We evaluated men’s understanding of PSA and the impact of the AUA fact sheet.

Method: In October 2013, 946 subjects attended a men’s health fair in Detroit, Michigan, and were provided with an adapted version of the AUA’s “What Men Should Know about Prostate Screening” fact sheet. The participants completed a survey which assessed their decision about screening.

Result: The mean age of the respondents was 52. 47% achieved a high school or less and 26% received 4-year college degree or higher. After reading the fact sheet, a majority of men had a misunderstanding of PSA testing. When asked if PSA would always help a man live longer and if the test would find slow growing cancers that would not have caused problems, 41% of men were unsure. Most of the men (51%) were unsure whether having an elevated PSA always means prostate cancer is present. Few men (14%) stated that having a PSA test would do more harm than good. The majority of men (98%) chose to undergo PSA screening during the event. For men who chose to undergo PSA screening, the primary reason was, “The early detection of it is the most important thing” (50%).

Conclusion: Most men have a misunderstanding of PSA testing after being provided with an AUA fact sheet.
Introduction: Accurately documenting case complexity by noting comorbid conditions has become increasingly essential. As reimbursement is scrutinized, practice sustainabilty may depend upon documentation of and appropriate payment for managing patients with concomitant medical issues. This study determined the impact on reimbursement of documenting comorbid conditions for hospital admissions to a urologic subspecialty.

Methods: Review of 2011–2012 tertiary center admissions by 4 female pelvic medicine and reconstructive surgeons (FPMRS) occurred. The Centers for Medicare and Medicaid Services Diagnosis–Related Group (DRG) for admissions were recorded. The federal base rate of reimbursement for each DRG was obtained, as were complication or comorbidity (CC) and major complication or comorbidity (MCC) rates. Admission patterns of the surgeons were used to assess how CC and MCC impacted reimbursement.

Results: Common DRG reimbursement base rates were $3,414–$10,416, CC rates $4,980–$15,580, and MCC rates $6,898–$30,706. Compared to base rates, a CC or MCC provided 36% to 197% (mean 97%) additional reimbursement. A total 11–38 and 18–59 (mean 29) admissions per surgeon occurred in 2011 and 2012, respectively, with 14%–44% and 23%–40% (mean 29%) being CC or MCC coded. Base rates were $3,495–$15,580 while mean reimbursement was $8,731 for CC or MCC and $5,245 without. An average $31,374 additional annual reimbursement per surgeon resulted.

Conclusion: Appropriately documenting and being reimbursed for managing comorbidities results in substantial changes to payment for care. Even routinely managed and seemingly minor comorbid conditions should be specifically documented, as they can impact coding.
Objective: The Affordable Care Act (ACA) is expected to provide coverage for nearly twenty-five million previously uninsured individuals. Because the potential impact of the ACA for urological care remains unknown, we estimated the impact of insurance expansion on the utilization of inpatient urological surgeries using Massachusetts (MA) healthcare reform as a natural experiment.

Methods: We identified non-elderly patients who underwent inpatient urological surgery from 2003 through 2010 using inpatient databases from MA and two control states. Using July 2007 as the transition point between pre- and post-reform periods, we performed a difference-in-differences (DID) analysis to estimate the effect of insurance expansion on overall and procedure-specific rates of inpatient urological surgery. We also performed subgroup analyses according to race, income and insurance status.

Results: We identified 1.4 million surgeries performed during the study interval. We observed no change in the overall rate of inpatient urological surgery for the MA population as a whole, but an increase in the rate of inpatient urological surgery for non-white and low income patients. Our DID analysis confirmed these results (all 1.0%, p=0.668; non-whites 9.9%, p=0.006; low income 6.6%, p=0.041). At a procedure level, insurance expansion caused increased rates of inpatient BPH procedures, but had no effect on rates of prostatectomy, cystectomy, nephrectomy, pyeloplasty or PCNL.

Conclusions: Insurance expansion in Massachusetts increased the overall rate of inpatient urological surgery only for non-whites and low income patients. These data inform key stakeholders about the potential impact of national insurance expansion through the Affordable Care Act.
Podium #68

PATTERN OF LOCAL TREATMENT FOR ADVANCED PROSTATE CANCER IN THE U.S.
Elizabeth Ferry, MD¹, Robert Abouassaly, MD² and Hui Zhu, MD, ScD³
¹University Hospitals Case Medical Center; ²University Hospitals Case Medical Center, Urology Institute, Cleveland, OH; ³Louis Stokes Cleveland Veterans Affairs Medical Center, Cleveland, OH
Presented By: Elizabeth Ferry, MD

Introduction: Unlike localized prostate cancer, the utilization of local treatment for advanced prostate cancer is rarely described. In this study, we examine this utilization in patients with stage 4 prostate cancer and its relation to insurance status.

Methods: The National Cancer Data Base was queried. First course treatment was obtained for patients diagnosed with stage 4 prostate cancer from 2000–2011. Insurance status was secondarily assessed. The association between treatment and insurance type was assessed using the chi-square test.

Results: Data were available for 52,746 men diagnosed with stage 4 prostate cancer treated with surgery, radiation (XRT), hormone therapy (ADT), combination radiation and hormone therapy (XRT and ADT), or no first course treatment. Of these men, 50.7% were treated with ADT alone, 25.1% with XRT and ADT, 19.8% with surgery and 4.4% with XRT alone. Patients with private insurance received surgery in 28.7% of cases, compared to 10.2% and 8.5% for uninsured and Medicaid patients, respectively (p<0.0001). No treatment was given for 9.9%, 17.8% and 14.6% of patients with private insurance, uninsured and Medicaid patients, respectively (p<0.0001). Age distribution was similar between insurance types. Treatment by race was similar.

Conclusions: Nearly half of all stage 4 prostate cancer patients received aggressive local treatment in addition to ADT in the U.S. Men with less insurance were significantly more likely to receive no treatment and men with private insurance received surgery 3 times more frequently than those without insurance or Medicaid.
**Podium #69**

**TOWARD BETTER USE OF STAGING BONE SCANS**

Selin Merdan, BS, Paul Womble, MD, David Miller, MD, MPH, Jun Ye, MS, James Montie, MD and Brian Denton, PhD

University of Michigan

Presented By: David Miller, MD, MPH

**Introduction:** We examined predictors of a positive bone scan (BS), and the performance of published guidelines for prostate cancer (CaP) staging.

**Methods:** Using data from the Michigan Urological Surgery Improvement Collaborative, we identified 1,509 men diagnosed with CaP in 19 practices from March 2012 through June 2013. For imaged patients, we examined associations between clinical variables and the presence of bone metastases (BM). We then corrected for verification bias to assess the performance of published guidelines.

**Results:** Among 416 men with a BS, 48 (11.5%) had BM. Only PSA (p ≤0.001) and Gleason Score (GS) (p ≤0.004) were independent predictors of positive BS (Table). Recommendations from the AUA had a sensitivity and specificity of 84% and 83%, respectively, for detection of BM. If the AUA criteria (i.e., PSA >20 or GS >7) were implemented statewide, <1% of positive studies would be missed, while the number of negative studies would fall by 38%.

**Conclusion:** PSA and GS are the best predictors of a positive BS. More uniform application of existing guidelines would ensure that BS is performed for almost all men with BMs, while avoiding many negative studies.

**Financial Disclosure:** MUSIC is funded by Blue Cross Blue Shield of Michigan.

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**Table: Multivariable logistic regression model for the association between clinical variables and bone metastases at diagnosis.**

<table>
<thead>
<tr>
<th>Factors</th>
<th>OR (95% CI)</th>
<th>p-value</th>
<th>Overall p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PSA at diagnosis (ng/mL)</strong></td>
<td></td>
<td></td>
<td>(&lt;.0001)</td>
</tr>
<tr>
<td>&lt; 10.0</td>
<td>Reference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.01-20.0</td>
<td>1.60 (0.60 - 4.22)</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>20.01-50.0</td>
<td>4.12 (1.38 - 12.34)</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>50.01-100.0</td>
<td>6.44 (1.94 - 21.40)</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>&gt; 100.0</td>
<td>14.61 (4.43 - 48.11)</td>
<td>&lt;.0001</td>
<td></td>
</tr>
<tr>
<td><strong>Biopsy Gleason sum</strong></td>
<td></td>
<td></td>
<td>(0.004)</td>
</tr>
<tr>
<td>≤3+4</td>
<td>Reference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4+3</td>
<td>3.09 (0.51 - 18.56)</td>
<td>0.22</td>
<td></td>
</tr>
<tr>
<td>8-10</td>
<td>9.50 (2.140 - 42.20)</td>
<td>0.003</td>
<td></td>
</tr>
</tbody>
</table>

OR = odds ratio; PSA = prostate specific antigen; CI = confidence interval.
PODIUM #70
ATTRIBUTES, PERCEPTIONS AND ACCEPTANCE OF REMOTE VIDEO−VISIT ENCOUNTERS IN A UROLOGIC PATIENT POPULATION
Boyd Viers, MD, M.E. Rivera, D.A. O’Neil, S.M. Jenkins, M.T. Gettman
Mayo Clinic
Presented By: Boyd Viers, MD

Introduction: Remote video−visit (VV) technology is becoming readily available to patients and may have an important role in future healthcare models which emphasize reduced costs and increased efficiency. As such, we aimed to examine the role of patient−provider remote VV in a urological setting; from the patient perspective.

Methods: We identified patients, with available email, treated by a single urology department during a 6 month period. A web-based survey was conducted evaluating patient demographics, perception and acceptance of remote urologic VV.

Results: Of 5,524 patients, 1,372 (25%) completed the survey. Of which, 862 (63%) indicated they would participate in VV for their urologic care. Compared to patients unlikely to participate, those likely to participate in VV were younger (64 vs. 68 yr), more likely to graduate college (77% vs. 65%), had previous exposure to video-conference technology (57% vs. 37%), were more comfortable discussing new urologic symptoms (56% vs. 30%) and sensitive information (48% vs. 27%) and played an active role in their own healthcare (64% vs. 54%) (all p<0.01). Finally, patients willing to participate in VV traveled further, missed more work and spent more money for their urologic care than those unwilling to consider VV (all p<0.001).

Conclusion: A large proportion of patients are willing to participate in VV for their urologic care. This may have significant implications by increasing efficiency and reducing costs. Pending further investigation, these findings may assist urologists in identifying appropriate patient populations for VV technology.
Podium #71
IMPACT OF RESIDENT INVOLVEMENT ON UROLOGIC SURGERY OUTCOMES: AN ANALYSIS OF 40,001 PATIENTS FROM THE AMERICAN COLLEGE OF SURGEONS NATIONAL SURGICAL QUALITY IMPROVEMENT PROGRAM DATABASE
Richard Matulewicz, MS, MD, Matthew Pilecki, Akshar Rambachan, John Kim, MD and Shilajit Kundu, MD
Northwestern University Feinberg School of Medicine
Presented By: Richard Matulewicz, MS, MD

Introduction: Operative training is a key component of the urologic surgical residency. The influence of intraoperative resident participation on surgical outcomes has not been studied for urologic patients on a large scale.

Methods: We identified 40,001 urologic procedures from the 2005 – 2011 in the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP). Outcomes were compared for cases with and without intraoperative resident presence.

Results: Following standard risk adjustment, intraoperative resident participation was found to be associated with decreased odds of overall complications (OR .850) medical complications (OR .830) and reoperation (OR .669). Cases with resident participation had greater operative times (159 vs. 98 minutes, p<.001). Rates of mortality were not significantly different between the two groups. Further analysis by propensity score stratification showed no effect of resident presence on all clinical outcomes for all quintiles. There were lower rates of reoperation for the resident group in quintiles 3 & 5 and lower rates of mortality for the resident group in quintile 2.

Conclusions: Urology resident intraoperative involvement is protective against morbidity and has no impact on mortality. These results validate the current urology resident surgical training paradigm with regards to patient safety.
Podium #72
ANXIETY AND FEAR OF PROGRESSION FOLLOWING TREATMENT FOR LOCALIZED PROSTATE CANCER: RESULTS FROM A PROSPECTIVE, OBSERVATIONAL, 12-MONTH TRIAL
David Victorson, PhD1, Shilajit Kundu, MD1, Brian Helfand, MD2, Kristian Novakovic, MD2, Gregory Auffenberg, MD1, Martha McCurdy, RN2, Robert Nadler, MD1, Jacqueline Petkewicz2, Michael McGuire, MD2, Carly Maletich, MA1 and Charles Brendler, MD2
1Northwestern University; 2NorthShore University Health System
Presented By: David Victorson, PhD

Introduction: We prospectively examined changes and treatment group differences in prostate cancer (PC) anxiety and fear of progression (FP) over a 12-month period.

Methods: Two major PC treatment programs in the Chicago area (NU, NSUHS) enrolled men with localized PC into IRB-approved observational studies to assess anxiety at baseline and 12 months.

Results: 84 men chose Active Surveillance (AS) and 44 men who chose either Radical Prostatectomy (RC) (n=33) or Radiation Therapy (RT) (n=4). No significant group differences were observed between baseline and 12-month PC anxiety change scores. The AS group demonstrated significantly worse FP change scores over time (F=4.7, p=.03, d=.4) compared with the RP/RT group. Both groups demonstrated significant reductions in PC anxiety over time (p<.01). FP remained constantly elevated for men on AS over 12 months (from 3.5 to 3.8). The RP/RT group saw a significant increase in FP from baseline (from 1.5 to 3.3, p<.01), which was moderated by the presence of positive surgical margins (F=7.3, p<.01) and Gleason score (F=2.7, p<.05).

Conclusion: Overall, men on AS demonstrated significantly higher FP over time compared with men treated with RP/RT. Both groups saw significant decreases in PC anxiety over time; however, the RP/RT group reported a significant increase in FP, which was moderated by urological factors.
Introduction and Objective: To evaluate Guideline’s effect on provider behavior, we investigate urinalysis (UA) performance in overactive bladder (OAB) evaluations by urologists who use an electronic medical record (EMR) furnished by Healthtronics Information Technology Solutions (HITS).

Methods: HITS analysts evaluated warehoused OAB encounters occurring in their systems from 5/1/10 to 10/18/13. Patient data including age, gender, co–morbidities, smoking status, insurance carrier, performance of UA and date of OAB diagnosis was collected. De–identified, safe-harbor compliant data was turned over to our research team for independent analysis. Using two tailed z–test, we compared the rate of UA performance before and after 5/1/12 to determine the potential impact of the Guideline on UA performance.

Results: Between 5/1/10– 5/1/12, 27,248 patients were evaluated for OAB. Between 5/2/12 – 10/18/13, 57,946 patients were evaluated. Among those seen after 5/1/12 there was a significantly lower rate of UA performance (Table). Sub-groups showed differing changes in UA performance rate (Table).

Conclusions: A small but significant decrease in the rate of performance of UA was seen after 5/1/12. This study importantly demonstrates data discovery through clinician collaboration with an EMR vendor. This type of collaboration may prove to be an exciting development in patient-related data analysis.

Source of Funding: American Urological Association, Healthtronics Information Technology Solutions Inc.
Introduction: Panurethral strictures are the most difficult problems in reconstructive urology. We performed a multinstitutional study involving large numbers of patients to determine practice patterns and success rates after urethroplasty for this difficult population.

Methods: After IRB approval, an online form was used to collect urethroplasty data from 7 urethroplasty centers of excellence. Patients all had stricture length ≥8 cm and at least 1 year follow-up. Data was collected: age, previous procedures, etiology, length, urethroplasty type, follow-up time, complications and success rates. Success was defined as patients not needing further instrumentation after urethroplasty.

Results: Total sample size was 453. Mean age was 52 years (16–82). Mean stricture length 12.6 cm (8–24). Overall recurrence rate was 22.7%. Previous urethrotomy, dilation or failed urethroplasty did not decrease success rates and success rates were similar for all stricture lengths. Kulkarni urethroplasty was notably successful in 85% of cases, and augmented buccal, fasciocutaneous and first/second stage Johanson urethroplasties were less successful (mean success 60%). Planned first-stage-only Johanson urethroplasty and salvage perineal urethrostomy required revision 22% of the time. Among late complications (mean 8%), chordee and fistula predominated.

Conclusion: Long segment urethroplasty ≥8 cm had a potentially high success rate of 80%, with Kulkarni (dorsal buccal) urethroplasties being most successful. Success rates appear high despite previous urethrotomy or urethroplasty, and stricture length in this very long stricture population.
Podium #75
THE CUPPID TRIAL: PREVALENCE OF UROLOGIC DISORDERS IN A MALE CARDIOLOGY CLINIC POPULATION
Bradford Stevenson, MD, Michael Kottwitz, MD, Joel Koenig, MD, Randy Sulaver, MD, Cynthia Bednarchik, MS, FNP–BC, Yogitha Potini, BS, Charles Welliver, MD and Tobias Kohler, MD, MPH
Southern Illinois University
Presented By: Bradford Stevenson, MD

Introduction: We sought to assess the prevalence of erectile dysfunction (ED), lower urinary tract symptoms (LUTS) and associated comorbidities in a cardiology clinic population.

Methods: We assessed a cohort of consecutive men within a cardiology clinic via IIEF–15, IPSS, ADAM, previous ED treatment questionnaires and serum total testosterone (T), estradiol (E) and sex hormone binding globulin (SHBG) with early morning lab draws. Data were collected on patient age, BMI and cardiac co-morbidities. Logistic regression was used to determine risk factors.

Results: 171 patients were included in the study (mean age 67.3). Mean BMI, calculated free−T (CFT), T:E, estradiol, SHBG were 31.7, 5.4ng/dL, 8.1, 44.0pg/mL and 43.7nmol/L. Low CFT (<6.5ng/dl) was present in 79% and low T:E (<10) was present in 72%. Prevalence of moderate to severe ED and LUTS was 77% and 61%. Severity of ED was predicted by age (OR 1.11), BMI (OR 1.07), calcium channel blocker (OR 5.36) and diuretic use (OR 2.28) and diabetes severity (OR 1.67). Diabetes severity was the only predictor of severe LUTS (OR 1.36). Prevalence of calcium-channel blocker use, diuretic use and diabetes was 19%, 48% and 35%.

Conclusion: Prevalence of urologic disorders among male cardiac patients is high. Risk factors for ED and LUTS can be identified and modified. This population represents a high number of patients that could benefit from referral to urology.
Introduction: The AUA best practice statement for the prevention of deep vein thrombosis (DVT) recommends thrice daily dosing of subcutaneous heparin or once daily dosing of enoxaparin in high-risk patients undergoing non-endoscopic urologic surgery. We evaluated compliance with these guidelines in a cohort of patients who developed post-operative venous thromboembolic events (VTE) during their admission for surgery at our institution.

Methods: We reviewed the records of patients at our institution who developed post-operative VTEs during their admission for urologic surgery from January 2011 to May 2013. These were identified from a list of Patient Safety Index #12 cases. Only patients who developed a VTE during the same admission as their surgery were included. Patients with preoperative VTEs were excluded. We defined high-risk patients as those older than 60 years or those aged 40–60 with cancer.

Results: There were 50 cases of post-operative VTE out of 6,846 surgeries. Of these cases, 80.0% had pharmacologic anticoagulation ordered. Only 26.0% of the patients received pharmacologic anticoagulation without any missed doses. Among the high-risk patients undergoing non-endoscopic surgery that received pharmacologic anticoagulation, only 38.7% were ordered heparin three times daily.

Conclusion: Though 80% of the patients who developed post-operative VTEs at our institution were ordered pharmacologic prophylaxis, the majority were under-dosed per the AUA best practice statement. In addition, missed doses of pharmacologic prophylaxis were common. This represents an opportunity for quality improvement in this high-risk patient cohort, and our institution is actively pursuing a strategy to reduce rates of postoperative VTE.
Podium #77
LONG TERM RISK OF URINARY ADVERSE EFFECTS FOLLOWING PROSTATE CANCER TREATMENT
Stephanie Jarosek, PhD¹, Balaji Kalyanaraman, MD², Yunhua Fan, MPH², Haitao Chu, PhD³, Beth Virrnig, PhD¹ and Sean Elliott, MD, MS²
¹University of Minnesota; ²University of Minnesota Medical School, Department of Urology; ³University of Minnesota School of Public Health
Presented By: Stephanie Jarosek, PhD

Introduction: Urinary adverse effects (UAEs) of prostate cancer treatment, such as incontinence and stricture, are known to be more common after radical prostatectomy (RP) than after radiotherapy (RT) in the short-term; however, long-term data on these and other UAEs (bladder spasm, cystitis, hematuria and fistula) is lacking.

Methods: From a SEER-Medicare cohort of men aged >65 years diagnosed with non-metastatic prostate cancer (1992−2007), we identified 100,890 men who received RP, external beam RT (EBRT), brachytherapy (BT), BT+EBRT, RP+EBRT or cryotherapy. Inverse probability weighting balanced the characteristics of these groups and 144,816 non-cancer controls. Kaplan−Meier and Cox proportional hazards model results display differences in the rates of Grade 3−4 UAEs (those commonly managed with a procedure) among treatment groups.

Results: Grade 3−4 UAEs continued to accrue over time and were most common after RP+EBRT, followed by BT+EBRT and RP (see Figure). The weighted hazard ratio of developing any UAE (ref=control) was 2.9 in RP+EBRT, 2.4 in RP and 1.9 in BT+EBRT. Urethral stricture was the most common event at 10 years: 26% after RP+EBRT, 21% after BT+EBRT and 20% after RP.

Conclusion: UAEs continue to accrue over the long term whether men are treated with RT, RP or both; a long time horizon is necessary when comparing relative risk.
Objective: This study compares real world costs of Percutaneous Cryoablation (PC) to Open (OPN) and Robot Assisted Partial Nephrectomy (RPN).

Methods: We retrospectively evaluated financial and clinical data for PC, OPN and RPN performed for Small Renal Masses (SRMs) (<4cm) from January 2011 to March 2013. Revenue code based financial data for each encounter included costs and charges reported in real world values. Total cost was calculated as the sum of direct and indirect dollars itemized into procedural and peri-procedural hospital elements. Charge refers to the amounts billed to third party payers based on these costs. Clinical data regarding age, gender, BMI, date of hospital/ICU admission/discharge, blood loss and dialysis requirements, was obtained. Categorical variables were analyzed using Pearson or Fisher’s exact tests while continuous variables utilized t−tests or Wilcoxon two−sample tests.

Results: 195 cases including 37 PC, 39 OPN and 119 RPN were compared. PC had significantly lower (p<.0001) direct, indirect and total median costs ($2,164, $1,536, $3,736) compared to OPN ($5,813, $4,470, $10,228) and RPN ($6,690, $3,744, $10,367), respectively. Median charges for PC ($21,486) were significantly lower than OPN ($26,182, p=0.0109) and RPN ($24,468, p=0.0232). PC demonstrated significantly lower (p<.05) hospitalization time, blood loss and ICU admission compared to OPN and RPN. No other cost or clinical data elements demonstrated significant differences.

Conclusion: PC can be performed at lower costs compared to OPN and RPN in the treatment of SRMs.
Podium #79
PREDICTORS OF CONTINUED SMOKING AFTER THE DIAGNOSIS OF A GENITOURINARY MALIGNANCY
Stephen Hurley, DO, Elizabeth Rourke, Saumya Easaw, MD, Cristina Palmer, DO, Tanya Uddin, Arshan Chaudri, Thomas O’Grady, DO, Mark Wille, MD, Courtney M.P. Hollowell, MD
Division of Urology, Cook County Hospital, Cook County Health and Hospitals System
Presented By: Stephen Hurley, DO

Introduction: Genitourinary (GU) cancer patients who continue to smoke after diagnosis are at increased risk for recurrence, poor survival rates, treatment complications, second primary cancers and other chronic smoking related illnesses. The purpose of this study is to identify clinical variables that are predictors for continued smoking among patients diagnosed with a GU malignancy.

Methods: Cross-sectional study of a convenience sample with participants who quit or continued to smoke after the diagnosis of a GU malignancy. A self-reported questionnaire included demographics, smoking behaviors, perceived social support using the Duke–UNC Functional Social Support Questionnaire, fear of cancer recurrence using the Cancer Worry Scale and the Hospital Anxiety and Depression Scale. The relationship between continued smoking and the assessed categorical variables were established using chi-squared analysis.

Results: Among the 76 study participants who were smoking at the time of GU cancer diagnosis, 32 (42.1%) were current smokers at the time survey completion. Cancer diagnoses included prostate 26 (34.2%), kidney 22 (28.9%), bladder 19 (25%), testicular 6 (7.9%), penile 2 (2.6%) and upper GU tract 1 (1.3%). Continued smoking status, when compared to quitters, was positively associated with alcohol use (p <0.01), depression (p <0.01), anxiety (p <0.01), fear of cancer recurrence (p <0.01) and perceived poor social support (p <0.01).

Conclusion: A majority of patients quit smoking after the diagnosis of a GU malignancy. GU cancer survivors who have low perceived social support, increased worry of cancer recurrence, depression, anxiety or consume alcohol are more likely to continue smoking after diagnosis.

Podium #80
WITHDRAWN
THE EFFECT OF INTRAOPERATIVE FLUID RATE ON POSTOPERATIVE OUTCOMES AMONG BLADDER CANCER PATIENTS UNDERGOING CYSTECTOMY WITH URINARY DIVERSION

Ian McLaren, MD1, Morgan Hoskins2, Michaela Kehoe3, Chang He3, Stephen Daily2, Alon Weizer, MD, MS1, Todd Morgan, MD1, Ted Skolarus, MD, MPH1, Sachin Kheterpal, MD3, James Montie, MD1 and Jeffery Montgomery, MD, MHSA1
2University of Michigan; 3University of Michigan Department of Anesthesiology
Presented By: Ian McLaren, MD

Introduction: The effect of intraoperative fluid management on cystectomy patient outcomes is poorly understood. We postulated that intraoperative intravenous fluid (IVF) rate is a predictor of postoperative complications and length of stay (LOS).

Methods: Adult bladder cancer patients undergoing cystectomy with urinary diversion from 2004–2012 were included in a retrospective analysis utilizing a prospective, IRB−approved database. Patient intraoperative crystalloid, colloid and colloid equivalent rates (ml/kg/min) were extracted from a prospective anesthesiology database and combined to find the IVF rate. Odds ratios for LOS categories (short (< 7 days), intermediate (8−12 days), and prolonged (>12 days)) were calculated with respect to IVF rate using proportional odds modeling. Odds ratios for complications with respect to IVF rates were calculated using logistic regression.

Results: Of 929 patients included, there were a total of 1,563 complications within 30 days of surgery, with 497/929 (54%) having any complication. The median LOS was 9 days (range 5–83). Higher intraoperative IVF rate was associated with an increased risk for bleeding complications (OR=1.048 95%CI 1.007−1.090), decreased risk for genitourinary complications (OR = 0.920 95%CI 0.873−0.969), but was not associated with other complication categories. For every 1ml/kg/min increase in IVF rate, the odds of being in a longer LOS category (i.e. prolonged vs. intermediate or intermediate vs. short) increased by 2.7% (OR=1.027 95%CI 1.001−1.054).

Conclusion: Higher intraoperative fluid rate was an independent predictor of longer length of stay and bleeding complications, and was protective against genitourinary complications. Intraoperative fluid management may impact cystectomy patient outcomes, warranting further study.
Introduction: Patients with divergent histology are considered to represent a higher-risk population compared to their pure urothelial counterparts. Our prior research has demonstrated that divergent histology patients have worse oncologic outcomes, but similar stage-for-stage survival. We hypothesized that clinical understaging might play a significant role.

Methods: Using a prospectively maintained, IRB-approved bladder cancer database, we identified consecutive patients who underwent cystectomy for locoregional urothelial carcinoma between 1995 and 2008. Patients who received neoadjuvant chemotherapy were excluded. Clinical and pathologic T staging was retrospectively reviewed and analyzed. The chi-squared test was used to compare understaging rates between patients with any evidence of divergent histology and patients with pure urothelial histology. We then stratified understaging rates by clinical stage.

Results: A total of 600 patients with pure urothelial and 207 patients with any evidence of divergent histology were identified. The overall rate of understaging was significantly greater for divergent histology compared to pure urothelial histology (58% vs. 44%, p<0.0001). When stratifying by clinical stage, patients with divergent histology were significantly more likely to be understaged for non-invasive disease (74% vs. 49%, p=0.002), clinical T1 disease (45% vs. 27%, p=0.01) and clinical T2 disease (63% vs. 43%, p=0.002), but not clinical T3 disease (20% vs. 17%, p=0.8).

Conclusion: Compared with pure urothelial histology, clinical understaging is significantly more prevalent in patients with divergent histology. This may be a crucial factor leading to the apparent worse oncologic outcomes associated with this disease variant.
Podium #83
RADICAL CYSTECTOMY OUTCOMES OVER 20 YEARS: IS IT TIME FOR CHANGE?
H.Z. Kaimakliotis, MD, M.F. Monn, MD, J.A. Pedrosa, MD, Paul T. Gellhaus, MD, K.C. Cary, MD, T.A. Masterson, MD, R.S. Foster, MD, M.O. Koch, MD and R. Bihrlle, MD
Indiana University
Presented By: Paul T. Gellhaus, MD

Introduction: With randomized trial data indicating the benefit of neoadjuvant chemotherapy for muscle invasive bladder cancer and assumed improvements in surgical technique over the last two decades, we hypothesized that survival for patients undergoing radical cystectomy for bladder cancer has improved in the last decade compared to prior.

Methods: A retrospective analysis of radical cystectomy patients with urothelial bladder cancer (UC) with curative intent before and after 2003 was conducted. Survival outcomes were analyzed using Kaplan Meier and log rank test.

Results: 1,442 patients were identified, 446 prior to 2003 and 996 after. 117 patients underwent neoadjuvant chemotherapy, 22 (5%) prior to 2003 and 95 (10%) after (p=0.003). There was no overall survival difference between groups (p=0.64).

Conclusions: Despite increased administration of neoadjuvant chemotherapy and assumed improved surgical techniques, survival remained unchanged. Although there may be selection biases we are unable to account for, we doubt that this entirely accounts for the lack of improved survival in the contemporary group given the near complete overlap of survival curves. Perhaps it is time to shift the direction of our long-term goals in advancing the care of bladder cancer patients through the development of novel treatment algorithms and personalized therapeutic approaches.
Introduction: The mycobacterial cell wall glycolipid trehalose–6,6–dimycolate (TDM), induces cellular immunity, but its effects on urothelial carcinoma (UC) cells are unknown. We seek to measure the cytotoxic effects of TDM on UC cells and determine its mechanism of action.

Methods: Two human UC cell lines (T24, 253J) were exposed to TDM. The endpoints evaluated were cell viability, LDH and HMGB1 release, caspase−3 activity, intracellular signaling pathways (NF−κB), gene transactivation and global profiling of reactive oxygen (ROS)/nitrogen (RNS) species.

Results: TDM significantly decreased viability (T24, p < 0.001) with 30% cell viability after 48h. TDM resulted in a significant LDH release (T24, p < 0.005), HMGB1 release (T24, p < 0.001) and increased caspase−3 activity (T24, p < 0.001). Significant increase in IL−6, iNOS and p21 expression was observed after 6h (T24, p < 0.05). NF−κB activation was not altered (T24, p = 0.2). Global profiling of ROS/RNS at 6h and 12h showed significant decrease in H2O2 levels (T24, p < 0.05), but not in Nitric Oxide (NO) and superoxide levels. Similar results were obtained in 253J cell line.

Conclusions: TDM results in apoptosis and necrosis of UC cells, inducing both caspase activation and HMGB1 release. Like BCG, TDM activates iNOS, p21 and IL−6 gene expression, but is unique in functioning through an NF−κB−independent pathway. This may be due to absence of H2O2/NO generation and a reduction in oxidative stress. The therapeutic potential of TDM warrants continued investigation.

Funding: A grant from the Department of Veterans Affairs and the Milwaukee Veterans.
**Introduction:** We assessed whether squamous differentiation (SQD) conferred worse clinicopathologic outcomes than non-variant (NV) urothelial bladder cancer in radical cystectomy patients.

**Methods:** We identified patients with SQD or NV histology on TURBT and cystectomy pathology over a ten year period. Disease-specific (DS) and overall survival (OS) were evaluated using Kaplan–Meier methodology. Cox regression assessed variables associated with mortality.

**Results:** 617 NV and 118 SQD patients were identified. 75% of SQD had muscle invasive disease at diagnosis compared with 59% of NV (p=0.002). Non-organ confined disease at cystectomy was more common in SQD (57% vs. 44%, p=0.009). 23% of patients received systemic chemotherapy (p=0.836). Median follow-up was 52 months. SQD and NV had similar OS. Adjusted for demographics, pathologic stage and chemotherapy, SQD was not associated with increased risk of DS (HR 1.26, 95%CI 0.84–1.90, p=0.267) or all-cause mortality (HR 0.83, 95%CI 0.60–1.15, p=0.268).

**Conclusion:** Despite more advanced disease at presentation and final pathology, DS and all-cause mortality may be similar between SQD and NV.
Podium #86
UNDERSTANDING READMISSION INTENSITY AFTER CYSTECTOMY
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1University of Michigan; 2University of Pittsburgh; 3Indiana University
Presented By: Ted Skolarus, MD, MPH

Introduction: Why some readmissions after radical cystectomy are more resource intensive than others remains poorly understood. For this reason, we conducted a population-based study to examine factors associated with increasing readmission intensity after radical cystectomy.

Methods: Using SEER−Medicare data, we identified 1,782 patients who underwent radical cystectomy from 2003–2009. We used logistic regression to examine factors associated with readmission intensity as measured by readmission length of stay (LOS).

Results: Readmission LOS quartiles were <3 (lowest), 3–5, 6–7 and >8 days (highest). Compared to patients with the lowest intensity readmissions, those with the highest intensity readmissions were similar in age, gender, race, socioeconomic status, comorbidity and pathologic stage. After adjustment, readmission from a skilled nursing facility (adjusted OR 3.54, 95% CI 1.54–8.13), readmission during weeks 1 (aOR 3.92, 1.58–9.76) and 3 (aOR 4.52, 1.35–15.13) versus week 4 and complications during the index cystectomy admission (aOR 5.09, 2.25–11.49) were associated with increased readmission intensity.

Conclusions: Readmission intensity varies widely after radical cystectomy for bladder cancer. A better understanding of the factors associated with prolonged, resource-intensive readmissions is warranted to inform solutions and limit readmission impacts on patients and hospitals after radical cystectomy.

Funding: None
Introduction: Radical cystectomy (RC) shows non-negligible rates of perioperative and long-term mortality. Moreover, temporal changes in outcomes are not established. We evaluated time trends in perioperative and long-term mortality following RC.

Methods: We reviewed our institutional database of 2,438 patients who underwent RC between 1980–2007. Cox regression models assessed the association of clinicopathologic features with 90-day and 5-year all-cause mortality (ACM).

Results: A total of 97 patients died within 90 days of RC, for a 90-day mortality of 4.8% (2000–2007), 4.3% (1990–1999) and 2.6% (1980–1989) (p=0.08). Older age, higher Charlson and pT3/T4 stage, but not RC year, were significantly associated with increased 90-day ACM (Table). Median follow-up was 10.7 years (IQR 6.8,15.8), during which 1,144 patients died. Five-year ACM was 45.9% (2000–2007), 48.2% (1990–1999) and 46.7% (1980–1989) (p=0.63). Older age, higher Charlson, ≥pT2 stage and positive LN were independently associated with increased 5-year ACM, while a decreased risk of ACM of 2%/year was noted with more recent RC year (p=0.02).

Conclusion: While no significant temporal change in 90-day mortality occurred, more recent RC years showed a modestly decreased risk of 5-year ACM. This may reflect trends in clinicopathologic features of patients and changes in surveillance practice.
Podium #88
PREOPERATIVE PROSTATIC URETHRAL INVASION IS ASSOCIATED WITH PATHOLOGY PROVEN UROTHELIAL CARCINOMA IN URETHRECTOMY SPECIMENS
Shane Pearce, MD, Rena Malik, MD, Joshua Cohn, MD, Gladell Paner, MD and Gary Steinberg, MD
University of Chicago
Presented By: Shane Pearce, MD

Introduction: To better elucidate appropriate indications for urethrectomy, we aimed to identify factors predictive of anterior urethral cancer after urethrectomy for urothelial carcinoma (UC) of the prostatic urethra.

Methods: We identified all patients with prostatic urethral involvement by UC who underwent urethrectomy between 2002 and 2012. Clinical, pathologic and follow-up data was collected. Patients were stratified by final prostate pathologic T-stage into one of 2 groups: noninvasive (i.e. pTis or pTa) and subepithelial invasion (i.e. pT1 or pT2). Analyses were directed at determining the impact of prostate T-stage on the likelihood of urethral involvement at the time of urethrectomy.

Results: 25 men underwent urethrectomy, inclusive of 19 patients with non-invasive (NI) prostatic disease and 6 patients with subepithelial invasion (SI). Mean age was 73±7 years. 13 (52%) patients underwent urethrectomy based upon pathologic findings at the time of RC and 12 (48%) underwent urethrectomy concomitant with RC. Among patients with preoperative NI or SI, 5/19 (17%) and 5/6 (76%) had UC on final urethrectomy specimen, respectively. On univariate logistic regression, SI was significantly associated with the presence of urethral cancer in the urethrectomy specimen (OR 14.08, 95% CI 1.3−150.9, p=0.03). The use of intravesical BCG, preoperative radiation, the presence of CIS, multifocal UC or concomitant or delayed urethrectomy were not significantly associated with presence of urethral cancer.

Conclusions: Prostatic urethral SI predicts for presence of anterior urethral cancer at the time of urethrectomy, therefore, strong consideration should be given to immediate or concomitant urethrectomy these patients.
Introduction and Objective: To evaluate the role of Mitomycin C (MMC) or Onabotulinum toxin A (OBA) compared to no intraleral instillation at the time of endoscopic treatment of recalcitrant BNCs.

Methods: A retrospective review was performed on patients treated for BNCs from September 2000 through January 2014. Patients and individual cases for each patient were evaluated based on treatment with or without intraleral OBA or MMC.

Results: A total of 43 patients with a mean follow up of 33 months and 115 individual cases were evaluated. 63 cases were done with no intraleral treatment, 30 cases were performed with injection of MMC and 20 cases of OBA. OBA, MMC and no intraleral treatment had a cure rate of 10%, 53% and 13%, respectively. Only MMC was found to have a significant improvement over other treatments (p <0.01). Radiation was found to have a negative impact on overall patient outcomes, but not on individual endoscopic cases. Kaplan–Meier analysis showed no difference in time to recurrence, however, there was a trend in the MMC group compared to no intraleral therapy (log rank .08).

Conclusions: MMC appears to improve the cure rate of recalcitrant BNCs if given at the time of endoscopic management for BNCs compared to no intraleral treatment. The same was not seen for OBA.
Podium #90
MEASURING THE IMPACT OF RADICAL PROSTATECTOMY ON HEALTH RELATED QUALITY OF LIFE BEFORE AND FOLLOWING PROSTATE CANCER TREATMENT
Carly Maletich, MA1, Shilajit Kundu, MD2, David Victorson, PhD1, John Cashy, PhD2, Sandra Gutierrez, MEd1, Azra Muftic1, Kent Perry, MD2 and Robert Nadler, MD2
1Department of Medical Social Sciences, Northwestern University, Feinberg School of Medicine; 2Department of Urology, Northwestern University, Feinberg School of Medicine
Presented By: Carly Maletich, MA

Introduction: The aim of this study was to better understand the short- and long-term impact of prostate cancer surgery on health related quality of life and related domains of post-surgical and urological functioning using a prospective, longitudinal observational design.

Methods: Patients met the following criteria: 1) diagnosis of clinically localized/locally advanced prostate cancer; 2) did not receive surgery prior to baseline assessment; 3) >18; and 4) proficient in English. After informed consent but prior to surgery, participants completed PROMIS-based measures of emotional functioning, sexual functioning, bowel and urinary functioning and post-surgical outcomes.

Results: 116 men consented. Competed assessments included: baseline (n=92), 1 month (n=64), 3 months (n=53), 6 months (n=45) and 12 months (n=21). Average PSA was 5.9 (SD: 3.6) with biopsy Gleason scores of: 3+3 (33%), 3+4 (35%), 4+3 (16%), 4+4 (12%). Measures of bowel function, urinary function, fatigue, pain, sleep problems, erectile function, orgasm and sexual interest worsening between baseline and 1 month (p<.001), however, the majority returned to near baseline levels over time. Sexual interest remained lower between 1−3 months and improved toward baseline levels. Orgasmic function remained lower than baseline levels between 1−3 moths, yet demonstrated improvement over time. Erectile function remained lower across all time points.

Conclusion: This study provides important prospective data on the longitudinal impact of prostate cancer surgery and can assist in the characterization of patients and inform treatment decision making.

Financial Funding: Northwestern Memorial Hospital.
THE ROLE OF 18F−FDG PET/CT IN THE STAGING AND SURVEILLANCE OF PENILE CANCER
Robert Goldfarb, MD, Badrinath Konety, MD and Sumit Isharwal, MD
University of Minnesota
Presented By: Sumit Isharwal, MD

Introduction: Positron emission tomography-computed tomography (PET−CT) allows fusion of anatomic and functional information that may improve staging and surveillance of penile squamous cell carcinoma.

Methods: 14 patients diagnosed with invasive squamous cell carcinoma of the penis underwent PET−CT as part of staging or surveillance.

Results: 7 of the 14 patients underwent 1 or more additional procedures within 90 days of having a PET−CT. A total of 14 procedures were performed with 50% positive for squamous cell carcinoma on final pathology. Abnormal PET−CT, defined by size criteria and/or hypermetabolic activity, had a sensitivity and specificity of 100% and 70% respectively, when compared to pathologic diagnosis. Increased standardized uptake value was more predictive of positive pathology than size alone. All 3 false positive PET−CT scans occurred in the same patient whose medical history is significant for a rare dermatologic disorder associated with reactive lymphadenopathy. PET−CT accurately predicted local recurrence in the two patients who underwent repeat resection. The 7 patients who did not undergo additional surgery all had negative PET−CT scans and remained recurrence free for 1 year.

Conclusion: PET−CT is an accurate and useful modality for inguinal and pelvic lymph node staging and may have additional utility in detecting local recurrence, monitoring the response to chemotherapy and surveillance.
Podium #92

SALVAGE PEDICLE ISLAND FLAP URETHROPLASTY FOLLOWING FAILED OPEN REPAIR

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Indiana University
Presented By: Eric DeRoo, MD

Introduction and Objective: There are multiple etiologies of stricture disease and multiple surgical approaches have been described. Failed open repair of urethral strictures presents a complex urological problem and to date, there is no well-defined treatment algorithm. The use of Pedicle Island Flap Urethroplasty (PIFU) has proven useful in many situations. The goal of this study was to evaluate the long-term outcomes of PIFU used as a salvage technique after failed open urethroplasty.

Methods: Retrospective review of PIFU procedures performed at a single tertiary academic institution between 1988 and 2012. 11 patients met inclusion criteria and comprised the cohort.

Results: Amongst the salvage cohort, 7(64%) had pendulous urethra involvement and 4(36%) had bulbar urethral stricture disease. Mean stricture length was 4.4 cm. Mean follow-up was 93.9 months. Ten (91%) had recurrence of stricture with a mean time to failure of 42.9 months. Eight (80%) of the failure cohort required salvage buccal mucosa graft urethroplasty. 70% of failures occurred 24 months after salvage pedicle island flap urethroplasty.

Conclusions: Failed open urethroplasty continues to present a complex urological problem. This study demonstrates that PIFU provides lower than expected results after failed open repair. However, despite a 90.9% stricture recurrence, most of the complications occurred 24 months after salvage PIFU. This institution has previously presented that salvage buccal mucosa graft urethroplasty (BMGU) provides encouraging results, with 66% of patients stricture free with mean follow-up of 26.6 months. When compared to BMGU, PIFU provides inferior outcomes when used as salvage technique following failed open urethroplasty.
Introduction: Buccal mucosa graft (BMG) is commonly used in urethral reconstruction with a 4% long-term complication rate. Short-term morbidity including pain and oral tightness are anecdotally common, but rates are unknown, challenging informed consent. Herein we report a patient reported outcome measure (PROM) to investigate short-term complications of BMG harvest.

Methods: A literature review was conducted to obtain validated ENT questionnaires. From these, select questions pertinent to known short-term patient complaints were abstracted to create a PROM to investigate early complications of BMG harvest. The PROM was provided to 45 consecutive urethroplasty patients pre- and three months post-operatively. We analyzed changes in the domain responses after urethroplasty and compared patients with/without buccal harvest using chi-squared analyses.

Results: There were 15 patients that underwent BMG urethroplasty and 30 controls. Nine of the 13 PROM domains showed significant difference in response changes pre- and post-operatively between the two cohorts (i.e. $\alpha < 0.05$). Patients who had BMG harvest were more likely to experience worsened changes in pain, sensation, chewing, mouth opening and kissing as compared to the controls.

Conclusion: Based on this study, early decline in oral function is common after BMG harvest. Further analysis of short-term morbidity will allow for better patient counseling and improve the overall patient experience following BMG urethroplasty.
Objectives: To evaluate outcomes of patients with urethral erosion of an artificial urinary sphincter managed with device explantation and prolonged catheterization without formal urethral repair.

Methods: 704 consecutive AUS implantations from 1998–2012 at our institution were reviewed. A total of 23 patients (3%) underwent device implantation and subsequent explantation for erosion at our institution and comprises our study cohort. All cases, regardless of the degree of erosion or co-morbidities, were managed with an indwelling urethral catheter for six weeks with no concomitant urethral reconstruction at the time of explantation.

Results: All 23 patients were managed with an indwelling catheter for six weeks, followed by a pericatheter retrograde urethrogram at six weeks and follow-up cystoscopy at six to nine months. At a mean follow-up of 14 months, 20 patients (87%) had no visual or clinical evidence of stricture. Three patients (13%) developed visual-only evidence of a bulbar urethral stricture.

Conclusion: AUS erosion represents significant morbidity to the patient. In our large series, we found that minimal intervention with explantation of the AUS and six weeks of catheter drainage without any attempt to repair the urethra effectively manages the situation.
Podium #95
ASSESSING THE EFFECTS OF PREOPERATIVE VOLUME MEASUREMENT FOR KIDNEY SELECTION DURING LAPAROSCOPIC DONOR NEPHRECTOMY
Joshua Roth, MD1, Alexander Schneider2, Clinton Bahler, MD3, John Powelson, MD3, Asif Sharfuddin, MD4 and Chandru Sundaram, MD1
1Indiana University Department of Urology; 2Indiana University School of Medicine; 3Indiana University Department of Transplant Surgery; 4Indiana University Department of Transplant Nephrology
Presented By: Joshua Roth, MD

Introduction: Before 2008, left kidneys were preferentially selected for donor nephrectomies. Now, significant cost and effort have been employed to analyze kidney volumes so that donors retain the larger kidney. We evaluated whether donor renal function is improved by utilizing volume measurements.

Methods: We retrospectively analyzed laparoscopic donor nephrectomies from 2002–2011. After 2008, renal volumes were prospectively calculated using triphasic CT scans and a semiautomatic segmentation algorithm. We retrospectively calculated the remaining renal volumes.

Results: 223 of 268 donor nephrectomies had calculable volumes. When smaller kidneys were preferentially removed, right kidney donation rates increased from 17.5% to 42.6% \((p<0.0001)\). Patients whose smaller kidney was preferentially selected showed no improvement in %GFR loss from baseline compared with donors prior to 2008 \((-30.8\% \text{ vs. } -31.8\%, p= 0.563)\). Of the 30% of patients with >10% discrepancy in renal volumes, 33% had their larger kidney removed. These patients did not have a worse %GFR loss than those whose smaller kidney was removed \((-34.3\% \text{ vs. } -31.6\%, p=0.333)\).

Conclusion: Renal volumetric measurements have resulted in a higher utilization of right-sided donor nephrectomies, but no renal function benefit was observed. More research is needed to assess whether volume measurements are worth the increased cost of healthcare, surgical complexity and potential radiation exposure.

Source of Funding: None.
Podium #96
NATIVE NEPHRECTOMY DECREASES ANTIHYPERTENSIVE MEDICATION REQUIREMENTS IN AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE
Ashley Shumate, Clinton Bahler, MD, Chandru P. Sundaram, MD, William Goggins, MD and Asif Sharfuddin, MD
Indiana University School of Medicine
Presented By: Ashley Shumate

Introduction: The effect of native nephrectomy on blood pressure in autosomal dominant polycystic kidney disease (ADPKD) with renal transplantation is not well understood. Our goal was to evaluate how native nephrectomy affects the control of blood pressure in patients with ADPKD who are undergoing or have undergone renal transplantation.

Methods: Blood pressure control was studied retrospectively in 132 ADPKD patients, with 53 who underwent transplantation without nephrectomy and 79 who underwent transplantation with concurrent unilateral nephrectomy from 2003 to 2013 at Indiana University. Of the 79, 36 went on to have a second nephrectomy at a median of 9.8 months post-transplantation. The number of antihypertensive medications was recorded at time of nephrectomy and up to 24 months post-nephrectomy.

Results: Transplantation with concurrent unilateral nephrectomy had a greater decrease in number of antihypertensives than transplantation alone (−0.89 vs −0.29 medications, p=0.02) when comparing pre-operative to post-operative medications. Of the 36 patients who went on to have a second nephrectomy, we analyzed the 27 who were still on antihypertensives after first nephrectomy. In this group, the mean decrease in number of medications from post-first nephrectomy to post-second nephrectomy was −0.22 (p=0.03). There was no difference in mean age at operation (p=0.95), gender (p=0.17) or ethnicity (p=0.06) between groups.

Conclusions: In ADPKD patients undergoing renal transplantation, concurrent unilateral nephrectomy significantly decreases the number of antihypertensives needed for blood pressure control. Also, the second nephrectomy improves the control of blood pressure to an even greater degree.

Source of Funding: None.
Introduction: Urinary tract infection (UTI) is the most common infectious complication following renal transplant (RT), and recurrent UTI is associated with morbidity and graft and patient mortality. Urodynamics (UDS) are utilized in evaluation of a variety of urologic complaints in post-RT patients including recurrent UTI. We determine the role of UDS in post-RT recurrent UTI in an effort to optimize care and resource utilization.

Methods: An electronic data warehouse search identified 9 post-RT patients with recurrent UTI referred for UDS. A retrospective review of UDS findings, management and graft outcomes was performed. All patients received exam, imaging, post-void residual urine measurement and cystoscopy. Mean follow-up was 2.46 years.

Results: Compliance was normal in all patients, mean bladder capacity was 392mL and PVR >100mL in 3/9 (33%). Native ureteral reflux was seen in the one patient with history of febrile UTI. All patients were managed with medical therapy; none were referred for surgery. Mean creatinine at last follow up was 1.47. The patient with febrile infections had creatinine >3 from a nadir of <1. No patient required dialysis.

Conclusion: In post-RT recurrent UTI, UDS was not an effective diagnostic tool in the preliminary workup. It failed to identify functional or anatomic abnormalities that impacted management in most cases. UDS is likely best reserved for those with febrile infections or as a second line diagnostic modality after failure to respond to medical therapy.
Introduction: There are limited studies on urinary stone disease in the adult spina bifida population. We describe the stone composition and surgical outcomes of urolithiasis within adult spina bifida patients at our institution.

Methods: We performed a retrospective chart review of patients with a diagnosis of spina bifida at our institution between 2001 and December 2013, and filtered the results to those that had a stone composition. Patient demographics, stone composition, treatment, ancillary procedures and hospital stay were collected.

Results: Thirty-four adult patients with spina bifida had a urinary stone composition. Mean age and BMI was 31 and 31.1, respectively; and 58% were male. Stone composition is shown in Table 1. Twenty-three patients had upper tract stones, of whom 14 were treated by percutaneous nephrolithotomy (PCNL), with a median hospital stay of 6.5 days, 8 patients required multiple procedures and sepsis occurred in 50% of these patients. Eleven patients with bladder stones were treated by open or transurethral cystolitholapaxy with no complications.

Conclusion: We report the largest series of adult spina bifida patients with urolithiasis. Calcium phosphate and struvite stones occur at high rates; PCNL was the most common treatment for upper tract stones, but was associated with a relatively high sepsis and retreatment rate.

Financial Disclosures: None.
Introduction: UARN for PCNL involves advancing a puncture wire through the working channel of a flexible ureteroscope and out of the kidney, in retrograde fashion. We analyze herein who is a good candidate for UARN.

Methods: Data were collected prospectively. We defined a ‘good outcome’ of UARN as procedure success in under 45 minutes. Variables evaluated − BMI, Guy’s and CROES scores, degree of hydronephrosis and nephrostomy site.

Results: Fifty patients underwent UARN from 2011–13. Nephrostomy was successful in 48 (96%). The only nephrostomy related complication was ureteric stricture from ureteral access sheath. Only single access was performed: upper − 16, mid − 27 and lower calyx − 7. Holmium laser was needed to access calyx in 11 cases (22%). Mean: BMI − 30 kg/m2; nephrostomy creation time − 39 minutes; #puncture wire advances − 2.1; CROES score 115. After case #25, median fluoroscopy time for nephrostomy creation + PCNL was only 19 seconds. Patients with ‘good outcome’ had lower BMI [Mean (SD) 27.5 (7.2) vs. 33.6 (6.6), p=0.01]. The best BMI cutoff by ROC analysis for ‘good outcome’ is 36 (sensitivity 46%; specificity 3.7%). There was a non-significant trend toward increased case difficulty with severe hydronephrosis and upper pole access. CROES and Guy’s scores did not predict UARN difficulty. Stone-free rate after second-look ureteroscopy was 86%.

Conclusion: A BMI of >36 kg/m2 strongly predicts poor outcome with UARN. UARN difficulty increases with severe hydronephrosis and upper pole access. UARN offers dramatically reduced fluoroscopy times.
Podium #100
IL1−BETA AND TNF−ALPHA REPRESENT NOVEL URINARY INFLAMMATORY BIOMARKERS IN NEPHROLITHIASIS PATIENTS
Benjamin Cohen, MD¹, Karen Keslar², Shubha De, MD¹, Robert Fairchild, PhD² and Manoj Monga, MD¹
¹Department of Urology, Glickman Urological and Kidney Institute, Cleveland Clinic Foundation; ²Department of Immunology, Cleveland Clinic Lerner Research Institute
Presented By: Benjamin Cohen, MD

Introduction: Intrarenal inflammation has recently been implicated in the pathogenesis of nephrolithiasis. Prior work has demonstrated increased urine levels of IL−6, IL−8 and CCL−2 in patients with nephrolithiasis. Recent work in the arena of renal transplantation has demonstrated the feasibility of using urinary biomarkers to predict and diagnose acute cellular mediated rejection. We sought to discover novel urinary biomarkers in nephrolithiasis patients with the potential for use in the clinical management of stone disease.

Methods: Urine specimens were obtained from stone patients and healthy control subjects. RNA was extracted from all urine cell sediment using the PureLink RNA Mini Kit (Invitrogen). We then utilized Applied Biosystems inventoried TaqMan assays and Fast Universal Master Mix for quantitative PCR analysis.

Results: We confirmed that the urine cell sediment from stone patients had elevated mRNA transcripts of IL−6, IL−8, and CCL−2 compared to healthy control subjects. In addition, urine cell sediment mRNA transcripts of IL−1beta and TNF−alpha were significantly elevated in stone patients compared to healthy control subjects. Comparing stone patients to healthy controls, mean copy number/μg RNA for CCL−2 was 474 v. undetectable, for IL1beta was 1.7x10^5 vs. 2.1x10^4, for IL−6 was 1.3x10^3 vs. undetectable, for IL−8 was 1.0x10^6 vs. 1.0x10^4 and for TNF−alpha was 257 vs. undetectable, respectively.

Conclusion: IL−1 beta and TNF−alpha represent novel urinary biomarkers that may be useful in basic nephrolithiasis research, disease diagnosis and prognosis

Financial Disclosure: Study was funded in part by the Research Program Committee, Lerner Research Institute
**Introduction:** Topiramate (TPM) is commonly prescribed for migraine headaches and, recently, weight loss. We characterized the time course to hypocitraturia, a side effect of TPM.

**Methods:** Headache clinic providers offered participation to adults starting TPM; a titrated dosage reaching 100–200 mg/d within 1 month was prescribed. Patients completed pre- and post-TPM 24-h urine collections.

**Results:** At baseline, 83% of patients were normocitruric (581 mg/d); 17% were mildly hypocitruric (250 mg/d). At 30 d, urinary citrate excretion averaged 279 mg/d; it continued to decrease through 60 d (218 mg/d), at which time, 83% were hypocitruric (196 mg/d). Paired t-tests confirmed differences in urinary citrate between baseline and 30-d and between baseline and 60-d (p=0.01 and 0.002, respectively). Urine pH increased from 6.1 at baseline to 6.6 and 6.5 at 30- and 60-d, respectively (p=0.04 for each comparison), increasing urinary brushite supersaturation. No patients reported stone events in the 6–12 month evaluation period.

**Conclusion:** Hypocitraturia from topiramate is rapid and progressive. This should be taken into account when starting therapy, particularly in patients with a history of urolithiasis or with identifiable lithogenic risk factors. Potassium citrate should be considered as adjunctive therapy in select individuals, and urinary citrate excretion should be monitored to ensure therapeutic effect.

**Funding Source:** None.
Introduction: The objective of this study is to compare the sensitivity of non-contrast CT to endoscopy for detection of renal calculi.

Methods: Idiopathic calcium oxalate (CaOx) stone formers with symptomatic stones requiring ureteroscopy (URS) were studied. At the time of surgery, the number and location of all stones removed were recorded. Patients were excluded if stone analysis revealed stone composition other than CaOx. All CT scans were reviewed by the same GU radiologist who was blinded to the endoscopic findings. The radiologist reported on the number, location and size of each stone. Only patients with recent (<4 months prior to surgery) CTs were included.

Results: 14 renal units were studied. Average time from CT scan to URS was 40.1 days. The mean number of stones identified per kidney was 10.4 for endoscopy and 6.5 for CT (p=0.01) (Table 1). The mean size of stones per kidney was 26.0 and 20.2 mm for endoscopy and CT, respectively (p=0.03) (Table 1).

Conclusions: CT scan may not detect many small renal stones. Endoscopy is the most accurate method for detection of renal calculi within the kidney.
Estimating Patients' Intake of Stone–Related Foods and Nutrients with a Novel Food Frequency Questionnaire
Margaret Wertheim, MS, Rachel Bell, MS and Kristina Penniston, PhD
Dept. of Urology, University of Wisconsin School of Medicine and Public Health
Presented By: Margaret Wertheim, MS

Introduction: Intake is not perfectly reflected in patients’ 24–h urine analyses. Diet assessment is time-consuming and usually requires a nutritionist. We developed a food frequency questionnaire (FFQ) to quantify intake of dietary stone risks.

Methods: The FFQ was developed by registered dietitians. Patients completed 3–day weighed diet records (DRs) and the FFQ. We evaluated data from the FFQ against nutrient data from DRs.

Results: Fruit/vegetable and fluid intakes correlated well (R=0.57 and 0.82). There was <7% difference for calcium, sodium and oxalate (Table). The FFQ fared less well within individuals. When intake was separated into quartiles of consumption, the FFQ accurately predicted those in the 1st and 4th quartiles 40–80% of time for fruits/vegetables, fluids, calcium and oxalate. Sodium intake was predicted 50–60% of the time in quartiles 1 and 3 but not at all (0%) in quartile 4. Intake of meats/eggs was least reliable, with accurate prediction only 17–33% in intake quartiles 1–3.

Conclusion: While further testing is ongoing, leading to improvements in the FFQ, it appears to compare favorably with multiple-day weighed diet records for fruits/vegetables, fluids, calcium, oxalate and sodium. Meat/egg intake was poorly predicted by the FFQ, partially owing to the high intra-individual variability from the diet records for this food category.

Funding Source: None.

<table>
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<th>Nutrient</th>
<th>Weighed Diet Records</th>
<th>Food Frequency Questionnaire</th>
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<td>Fruits/vegetables, servings</td>
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<td>5.6 ± 2.6</td>
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<td>2.1 ± 1.1</td>
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<td>Fluids, ounces</td>
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Podium #104
CLINICAL AND RADIOGRAPHIC CHARACTERISTICS ASSOCIATED WITH UPPER URINARY TRACT ACCESS AT THE TIME OF URETEROSCOPIC STONE TREATMENT
Boyd Viers, MD, L.D. Viers, MD, N.C. Hull, MD, T.J. Hanson, MD, R.A. Mehta, E.J. Bergstralh, T.J. Vrtiska, MD and A.E. Krambeck, MD
Mayo Clinic
Presented By: Boyd Viers, MD

Introduction: In patients undergoing ureteroscopy (URS) for urolithiasis the need for pre-stenting (PS) due to the inability of the ureter to accommodate the ureteroscope, remains unknown. As such, we evaluate the association between clinicoradiographic features and need for PS at the time of stone treatment.

Methods: From 2009–2013, 120 consecutive URS patients with preoperative CT urogram were identified. All radiographic studies underwent radiologist review. Patients with ureteral obstruction, or infection, requiring stent decompression were excluded. A comparison of clinicoradiographic features and need for PS was performed.

Results: There were 154 renal units, of which 25 (16%) required PS. CT urogram was performed at a median 0.8 months (IQR 0.3–1.9) prior to treatment. Patients requiring PS were more likely to undergo sequential ureteral dilation (60% vs. 22%) and had a greater number of surgical procedures (mean 2.0 vs. 1.1); with no difference in stone free rates (89% vs. 69%) or intraoperative complications (8% vs. 3%). A history of prior ipsilateral ureteral stent (4% vs. 31%; OR 0.09), or stone surgery (8% vs. 36%; OR 0.15) decreased the risk of PS; while <50% ureteral opacification on excretory imaging (32% vs. 9%; OR: 4.3) was associated with need for PS (all p<0.05).

Conclusions: Other than requiring a second procedure, PS does not appear to affect surgical outcomes. Furthermore, we identified clinical and radiographic risk factors that can help predict the likelihood of requiring PS at time of attempted stone removal.

Podium #105
NEUROGENIC BLADDER AND STONE FORMATION
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Presented By: Andrew Blackburne, MD

Introduction: Patients with a history of neurogenic bladder often have risk factors for stone formation such as infection and alterations of bowel anatomy from reconstructive procedures.

Methods: We performed a retrospective review from 1998–2013 for patients with a code for neurogenic bladder and urolithiasis, who had undergone urologic surgery for the treatment of neurogenic bladder. The charts were reviewed for history of bowel surgery, stone events and metabolic evaluation.

Results: We identified 65 patients (28 male, 37 female) of whom 86% (56/65) underwent bowel surgery. 49% (32/65) had upper tract stones and 63% (41/65) had lower tract stones. 57% (37/65) had a known stone recurrence. The most common stone types were apatite (85%, 36/40) and struvite (50%, 20/40). 38% (3/8) were hypocitraturic, 36% (4/11) were hypercalcuric and 13% (1/8) were hyperoxaluric.

Conclusions: Stone formation is significant in both the upper and lower tracts in patients with a history of neurogenic bladder. Apatite and struvite stones occur at a rate much higher than in the general population. These patients also often require more invasive procedures for management of their stone disease. These patients would benefit from metabolic evaluation.
Introduction: Histopathologic studies of brushite stone formers (BSF) suggest patients may be at risk for chronic kidney disease (CKD) due to glomerulosclerosis and fibrosis. We sought to study BSF change in renal function over time.

Methods: A retrospective review of all patients who underwent surgical management of upper tract urolithiasis was performed from 1995–2003. Inclusion criteria included nephrolithiasis with minimum 6 years clinical follow-up. BSF were matched 3:1 to idiopathic calcium oxalate stone formers (CaOxSF) over the same time period based on age and history of diabetes mellitus or hypertension.

Results: 20 BSF were identified and matched to 60 CaOxSF. Median patient age (57.5 vs. 61 years, p=0.47) and baseline estimated glomerular filtration rate (eGFR) were not different between BSF and CaOxSF (74.0 vs. 68.9 mLs/min/m², p=0.68). At median follow-up of 13.6 years, both eGFR (78.1 vs. 73.6 mL/min/m², p=0.61) and change in eGFR (0.035 vs. 3.16 mL/min/m², p=0.92) were similar between groups despite the BSF having a higher stone recurrence rate (80% vs. 42%, p=0.0041).

Conclusion: BSFs were not shown to be at increased clinical risk of CKD compared to CaOxSF despite more frequent stone recurrence and histopathologic characteristics.
Podium #107
GEOGRAPHIC DIFFERENCES IN THE QUALITY OF CARE FOR PATIENTS WITH METABOLIC STONE DISEASE
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Presented By: Abdulrahman Alruwaily

Introduction: Prior work has shown significant variability between physicians regarding the intensity of 24–hour urine testing among patients with urinary stone disease. No studies have explored geographic differences in the quality of metabolic evaluations.

Methods: Using Litholink data (1995 to 2013), we identified adult patients with urinary stone disease who had an abnormal chemistry on 24–hour urine collection. We determined whether a repeat collection was performed within six months of the abnormal test. After assigning each patient to a hospital referral region (HRR), we calculated the proportion of patients with abnormal 24–hour urines evaluated with a repeat collection in each HRR. We then used multilevel modeling to quantify the amount of variation in this proportion across HRRs.

Results: Among 220,710 patients with evidence of hypercalciuria, hyperoxaluria, hyperuricosuria or hypocitraturia, only 21,075 (9.6%) performed a repeat collection within six months of their abnormal test. The figure depicts five-fold variation across HRRs (n=306) in the proportion of patients who underwent follow-up testing. Sacramento, California reported the lowest proportion (4.1%), while Olympia, Washington had the highest (19.7%).

Conclusion: Wide variation exists across health care markets in the quality of metabolic stone management.
Should Urologists Offer Dietary Recommendations to Stone Formers? A Survey of Current Practice Patterns

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Presented by: Kristina Penniston, PhD

Introduction: Dietary therapy to prevent stones is offered in many urology clinics. We assessed urologists’ practice patterns and beliefs about dietary therapy for kidney stones.

Methods: A Qualtrics survey was developed by investigators and sent to Endourological Society members.

Results: Most respondents (82%) felt dietary therapy should be provided to patients regardless of number of stone events. More than half (52%) provide it to ≥75% of patients; 10% provide it to <25%. Time spent with patients for nutrition varies; <4 min(31%), 5−9 min(46%) and ≤10 min(23%). A minority of urologists (18%) partner with a dietitian to provide dietary recommendations. 58% of respondents assess patients’ diets; but self-confidence in determining the role of diet in stone risks and in quantifying intake of certain foods/nutrients varied (chart). When asked if they would like more time for nutrition, 62% said yes; 76% said they would like another provider involved.

Conclusion: Urologists are interested in dietary stone prevention. While most believe urologists should address nutrition, the majority spend less time than they would like doing so. As dietitian services to provide nutrition therapy are not reimbursed, urologists will likely continue providing it. We identified areas of educational need, including quantifying patients’ dietary intake and identifying whether stone risk factors are diet-related.

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Podium #109
CONTEMPORARY PROFILE OF RECURRENT STONE FORMERS PRESENTING TO A METABOLIC STONE EVALUATION CLINIC: BMI, GENDER AND SEASONAL DIFFERENCES IN 1,143 PATIENTS WITH SERUM AND 48–HOUR URINE COLLECTION
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Presented By: Barry McGuire, MD

Introduction: We sought to analyze full metabolic evaluation in the contemporary recurrent stone formers based on body mass index (BMI), gender and seasonal variations. Methods: Patients presenting to a metabolic stone clinic with a history of ≥1 stone, assessed by serum and 48–hour urine collection. Results: 2,318 samples from 1,143 patients (645 male, 498 female). Difference in age at presentation between genders (males 50.3 years ± 14.1 SD versus females 46.0 years ± 15.2 SD, p<0.001). 26.4% and 87.6% had an abnormality on serum and urine analysis respectively. Females demonstrated higher levels of calcium (p<0.001), uric acid (p=0.002) and hypocitraturia (p<0.001). Majority were overweight or obese (59.9%). Associations with high BMI: hypercalciuria (p<0.001), hyperoxaluria (p<0.001), hyperuricosuria (p<0.001). Normal weight: a significant trend towards a high urinary calcium, an effect which was dissipated with increasing BMI (p<0.001). Median volume was 1.8 L ± 0.9 SD and many significant indirect correlations were observed: supersaturations of calcium oxalate, phosphate and uric acid (p<0.001). When urinary parameters were assessed for seasonal variance, samples demonstrated significantly higher frequency of hypercalciuria (p=0.02), elevated calcium per kilogram (p=0.006) and hyperuricosuria (p=0.02) in warmer months. Conclusion: The majority contemporary recurrent stone formers have abnormal metabolic evaluations, are obese and demonstrate significant gender and seasonal differences.
Introduction: The use of angiotensin converting enzyme inhibitors (ACEI) and angiotensin receptor blockers (ARB) is common among patients undergoing percutaneous nephrolithotomy (PCNL). The effects of administering or withholding these medications in the perioperative period on patients undergoing PCNL are unknown.

Methods: We conducted a retrospective review of all patients undergoing PCNL at our institution from July 2002 through October 2013. In our analysis, patients on an ACE-I who had their medication administered during their surgical hospitalization were matched to patients who had their medication withheld based on sex, age and BMI.

Results: 2,784 patients underwent percutaneous nephrolithotomy during the review period. At the time of PCNL, 15.2% of patients had a listed prescription for an ACE-I and 6.5% had a listed prescription for an ARB. 59% of patients on an ACE-I and 66.9% on an ARB had their medication administered during their operative hospitalization. Comparing patients who had their medication administered versus withheld, there was no significant difference in baseline systolic blood pressure (SBP), average length of stay, perioperative change in SBP, perioperative change in serum creatinine, change in serum creatinine at one month postoperatively or change in serum creatinine at 1 year postoperatively.

Conclusion: From the standpoint of preserving renal function and blood pressure, it appears safe to administer ACE-I and ARBs to patients undergoing PCNL during their operative hospitalization. Administering these medications during a patient’s inpatient course may prevent errors in medication reconciliation at the time of hospital discharge.
**Introduction:** Urinary stone disease is a chronic condition for which medical therapy, guided by the results of the 24−hour urine collection, plays an important management role. Although assessment of response to any intervention is recommended, the extent to which providers are compliant with this remains unknown.

**Methods:** We used analytical files from Litholink Corporation (2003–2013) to identify patients with lithogenic abnormalities (hypercalciuria, hyperoxaluria or hypocitraturia) found on initial 24−hour urine analysis. We then determined the proportion of patients who underwent repeat testing within a 6 month period. Using multilevel modeling, we quantified variation in repeat 24−hour urine testing attributable to patient, provider and regional factors.

**Results:** In total, 221,620 patients had a urine chemistry abnormality. Among these patients, only 21,177 (9.6%) went on to perform a repeat collection. While the majority of variation in follow-up testing was attributable to the patient, the provider contribution was non-trivial (18.0%). As shown in the Figure, the spread in use of follow-up testing between physicians ranged from 2% of patients to as high as 50%.

**Conclusion:** Follow-up testing in patients with an abnormal initial 24-hour urine collection is uncommon. As such, efforts to educate providers on the value of follow-up testing are likely to have salutary effects on patients with metabolic stone disease.
Introduction: A forty-eight year old man presented for evaluation of expanding and abdominal mass. In the mid-1990s, he developed Fournier’s gangrene involving the prostate and proximal corporeal bodies, which required extensive resection and debridement. Due to a proximal urethral stricture, he required suprapubic tube management and subsequent augmentation cystoplasty with a catheterizable stoma. Fifteen years after his bladder augmentation, he was found to have a 14x18-centimeter calculus in the colon augment while undergoing a workup for orchitis. He was referred for surgical management.

Methods: Through an eight-centimeter midline cystotomy, Simpson obstetric forceps were passed into the augment to deliver a one-kilogram stone with minimal devitalization of the colonic augmentation tissue.

Results: After an extended hospital course for an ileus, the patient was discharged with a suprapubic tube. He is scheduled to undergo a cystogram and ultimately return to a catheterization regimen.

Conclusion: This is the first report of stone management with obstetric forceps in an augmented bladder. This method provided an elegant approach to an unwieldy specimen. Furthermore, the delicate augment tissue appeared to sustain little damage.

Financial Disclosures: None.
Podium #113
A JINGLING IN MY LONGJOHNS: A SPONTANEOUS AUTOAMPUTATION OF GLANS PENIS
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Presented By: Michael Levin, MD

Introduction: JM is a 61 year old male who presented to the hospital with amputation of his glans penis following a syncopal episode. Patient described losing consciousness when rising from the commode following a bowel movement. Once alert, he noticed a foreign body in his underwear, which he described as a “jingling in my long johns.”

Methods: After presenting to the emergency department at an outside hospital, it was determined that the foreign body was in fact his glans penis. A foley catheter was placed, and he was transferred to our institution. He was stable with normal vital signs and no complaints. On examination, an uncircumcised phallus with granulated tissue at the distal end and no bleeding was observed. The glans was in a separate bag wrapped in gauze. It was noted to be intact with the necrotic spongiosal tissue. The patient was admitted for syncopal workup.

Results: On hospital day 2, his catheter was removed and he voided well. He was discharged with instructions to apply bacitracin ointment. On follow up he was doing well. Pathological analysis of tissue showed ulceration with focal acute necrotizing inflammation, negative for malignancy.

Conclusions: Etiology of this patient’s penile autoamputation is unclear although a hair tourniquet is high in the differential diagnosis.
LIFE THREATENING PENILE HEMORRHAGE: AN UNFORTUNATE NIGHT AT THE BOWLING ALLEY
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Presented By: Bradford Stevenson, MD

Introduction: Surgical complications following distal corporoglanular shunt procedures for ischemic priapism are rare. Here we present a case of a young male who developed a life-threatening penile bleed while bowling after a T-shunt procedure.

Methods: A 26 year old male was evaluated in the ER for priapism lasting 8 hours. Conservative management failed and the patient was taken to the operating room for a distal T-shunt with corporal dilation with good response.

Results: On post-operative day 10, after a wild night of bowling, he sensed something amiss and realized he had significant bleeding in his pants. He applied pressure and came to the ER where he was found to have blood projecting from his glans to the foot of the bed. Hemoglobin had dropped two points. He was given blood and taken to the OR. Deep sutures controlled the bleeding and there was an immediate erection. Intra-operative Doppler confirmed a new diagnosis of high-flow priapism which resolved post-operatively with no recurrence of bleeding. Eventually normal erections returned. Several months later he was seen in the ER on two different occasions for priapism controlled with phenylephrine injection. He has since been lost to follow-up. We can only assume he has gone on to a successful career in bowling.

Conclusion: Although rare, life threatening bleeding can occur after a distal shunt for priapism. Patients should be counseled on the potential risks and appropriate post-priapism-treatment activities.

URETEROPELVIC JUNCTION OBSTRUCTION PRESENTING AS CYCLIC VOMITING SYNDROME IN SIBLINGS
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Presented By: Alonso Carrasco, MD

Introduction: Cyclic vomiting syndrome (CVS) is characterized by recurrent and severe episodes of vomiting that alternate with intervals of normal health. Children with ureteropelvic junction obstruction (UPJO) can present with cyclic vomiting in addition to abdominal pain, Dietl’s crisis. We report two cases of UPJO in siblings initially diagnosed with CVS.

Methods: Two siblings age 4 and 2 years old were evaluated for cyclic vomiting. Renal ultrasounds in the non-acute setting were normal. Both patients were diagnosed with CVS and treated with cyproheptadine.

Results: During an acute event an abdominal ultrasound on the older patient demonstrated left sided hydronephrosis. Follow-up Lasix renogram confirmed UPJO. The younger patient was screened with renal ultrasound during an acute episode and he was found to have left hydronephrosis with UPJO obstruction confirmed by Lasix renogram. Both patient underwent dismembered pyeloplasty at age 8 and 5. Both patients are now symptom free and cyproheptadine has since been discontinued.

Conclusions: Children with UPJO may present with cyclic vomit. Delayed radiologic imaging or during asymptomatic period can lead to false negative results secondary to dehydration. UPJO should be considered in the differential of CVS, and renal ultrasound should be obtained immediately at onset of symptoms.
Introduction: A 48 year old male presented to the emergency room with one year of recurrent Klebsiella urinary tract infections (UTI) and hematuria. He had failed multiple courses of antibiotics over the past year. Patient had a history of an impalement injury in 2005 where he “fell on a music stand” necessitating a bladder repair and a diverting colostomy now status post takedown. His AUA score was 17. The patient is a former smoker, drives a cement truck and enjoys Elvis impersonating. Physical exam was notable for a pompadour and sideburns.

Methods: The patient underwent a hematuria work up. CT demonstrated a calcified structure posterior to the bladder. Cystoscopy demonstrated bullous edema near the trigone and a fistulous tract to a posterior cavity. Cystogram showed a cavity posterior to the bladder and a biopsy showed chronic inflammation. An open partial cystectomy was performed.

Results: At the time of surgery, a 5 x 3 cm calcified mass was removed from the posterior bladder cavity and sent to pathology. Intraoperative photos were obtained. The calcified mass was found to be polarizable filamentous foreign material. His postoperative cystogram showed no extravasation. At last follow up his AUA symptom score was 1 and he was infection free.

Conclusion: To our knowledge, this is the first case of recurrent UTIs caused by a retained portion of a music stand in an Elvis impersonator. A good history is a vital component of any evaluation for recurrent infections.
Introduction: A 67 year old male was transferred from an outside hospital after presenting with an 11/16 inch forged steel box end wrench lodged around his penile shaft. On arrival, the patient stated he had placed the wrench around his penis to test “for fit” but his penis became erect and the patient could not remove his chosen measurement device. The wrench had been in place for approximately eight hours prior to presentation and the patient reported decreased sensation in the distal penile shaft and glans and an inability to void since placing the wrench.

Methods: The patient was consented for removal of penile foreign body as well as possible partial penectomy and brought to the operating room. After induction of general anesthesia, a laryngoscope blade was placed between the wrench and the penis and a Dremel rotating saw from the hospital’s maintenance department was used to incise the wrench to allow its safe removal from the patient’s penis.

Results: The patient reported return of full sensation and was able to void spontaneously prior to same day discharge.
Introduction: Adenocarcinoma of the testes is a rare histologic diagnosis. Differential diagnosis includes malignant transformation of teratoma, metastatic from extrascrotal tumor, and rarely primary testicular adenocarcinoma. Less than 50 cases of primary testicular adenocarcinoma have been described in the literature, generally demonstrating aggressive behavior with greater than 50% metastatic at presentation and overall survival around 1 year. The optimal adjuvant therapy is not defined.

Methods: A 72 year old male who presented with 6 months of progressive right scrotal swelling. He had a history of a right testicular tumor treated with partial right orchiectomy performed over 40 years prior and received no adjuvant treatment. Preoperative tumor markers (alpha–FP, beta–hCG and LDH) were normal. MRI showed heterogeneous enhancement of the right testicle with a 10 cm complex cystic mass. The patient underwent a right inguinal orchiectomy.

Results: Pathology showed a 10.5 cm well differentiated intestinal type adenocarcinoma. The specimen lacked findings of teratoma. Metastatic workup was negative and search for another tumor source with colonoscopy was negative. Clinical stage was T2N0M0. Currently he is being closely observed.

Conclusions: This is rare example of primary testicular adenocarcinoma presenting after partial orchiectomy 40 years prior.
Podium #119
DERMOID CYST IN A MULTICYSTIC DYSPLASTIC KIDNEY
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Presented By: Michael Levin, MD

Introduction: A 9 year old girl was fetally diagnosed with a left multicystic dysplastic kidney (MCDK). Ultrasound 1 week postnatally showed a 4.9cm cystic structure in the left kidney. Renal scan did not identify any kidney tissue in the left renal fossa, and she was no longer followed with imaging. A change in pediatrician at age 9 prompted a repeat ultrasound. This demonstrated an 18 cm complex multicystic mass with no solid component. This was followed with an MRI confirming the US findings.

Methods: Due to the complex nature and size of the lesion, the decision was made for a laparoscopic left nephrectomy. Following ligation of the renal vessels and mobilization of the kidney fluid was unable to be percutaneously aspirated secondary to the density of the liquid in the cyst, so it was removed en bloc.

Results: The patient had an uneventful postoperative course and went home on postoperative day one.

Conclusion: Final pathology revealed a dermoid cyst arising in a MCDK, which to our knowledge has not been previously described.
Introduction: Postoperative strictures of the upper tract pose challenging problems, particularly in the setting of prior complex reconstruction. We report a case of a double ureterocalicostomy to salvage a severe stricture of a lower pole ureter resulting from a complication of a prior upper to lower pole ureteroureterostomy. To our knowledge, this is the first reported case in the literature.

Methods: A 2-month old boy with complete duplication of the right renal collecting system and obstruction of an ectopic right upper pole ureter underwent an end-to-side upper to lower pole ureteroureterostomy.

Results: Postoperatively, he developed an obliterated stricture of the lower pole ureter at the anastomosis. After failed percutaneous ureteral dilation, we performed a right flank exploration. Intraoperatively, the entire lower pole renal pelvis was obliterated. The only option for lower pole reconstruction was a lower pole ureterocalicostomy. An extremely short segment of upper pole pelvis/ureter was unable to reach the lower pole ureter. A second ureterocalicostomy was performed, anastomosing the upper pole ureter to a separate calyx of the lower pole, establishing continuity of the upper and lower poles.

Conclusions: Our report demonstrates that a double ureterocalicostomy is a feasible procedure to salvage complex strictures of duplicated collecting systems, allowing nephron preservation by avoiding a heminephrectomy.
Introduction: We report the case of a 12 year old boy born with cloacal exstrophy who has small bowel conduit. He was found to have a 3 cm diameter stone at the base of the conduit. (See image left side)

Methods: To minimize trauma to the bowel lining and to help facilitate drainage of fragments we deployed a peel-away introducer sheath (18 and 26 Fr). We fragmented the stone using a 1000 nm laser fiber.

Results: The sheath allowed us to repetitively pass into the conduit without traumatizing the conduit. We basketed large fragments and irrigated clear the smaller fragments. There was minimal post procedure hematuria and no evidence of rupture or damage to the conduit. (See image right side)

Conclusion: Tear away sheaths have been adapted for use as endoscopic sheaths in nephroscopy. This case illustrates another useful application. With growing numbers of patients who have bowel reservoirs and conduits this option should be kept in mind. The lumen is larger than ureteroscopy endosheaths allowing greater irrigation and instrument options. They are also relatively cheap, available and familiar.
Introduction: Pseudoangiomatous stromal hyperplasia (PASH) is a well-known benign mesenchymal proliferative lesion that typically presents as a palpable nodule in breast tissue of premenopausal women. It occasionally arises from anogenital mammary-like tissue; it has never been reported from prostatic tissue.

Methods: LF is a 57 year old male with history of HIV who presented with prostate specific antigen (PSA) elevation to 5.47. Digital rectal exam was normal. Transrectal ultrasound (TRUS) guided prostate biopsy was performed.

Results: Prostate was measured at 37g. Ultrasound exam was unremarkable. Pathology was consistent with benign mesenchymal proliferation with features suggestive of PASH in 8 of 12 cores. Prostate MRI showed a 4.8 x 3 cm well encapsulated, lobulated, heterogeneously enhancing mass arising from the left peripheral zone of the prostate. Repeat TRUS biopsy confirmed the diagnosis. Given the benign nature of the mass, surveillance was recommended. PSA remains stable at 5.84. The most recent MRI shows growth to 6.6 x 6.4 x 7.6 cm with mass effect but no apparent invasion. Aside from stable lower urinary tract symptoms, the patient is asymptomatic.
Introduction: Inflammatory pseudotumor (IPT) of the kidney is a rare and benign condition often confused with renal malignancy based on clinical presentation and imaging. Utilizing renal mass biopsy to help diagnose and guide therapeutic intervention is increasing but has not been universally adopted to this point.

Methods: A 71-year-old female with chronic kidney disease presented with an incidentally found 5 cm solid renal mass suggestive of renal malignancy (Figure 1, A). A biopsy was obtained with results consistent with inflammatory pseudotumor of the kidney (Figure 1, B).

Results: She was managed conservatively and demonstrated complete spontaneous resolution of the tumor on follow-up imaging at 3 months (Figure 1, C).

Conclusion: Renal IPT presents with vague symptomatology and imaging studies classically show an atypical reniform solid renal mass. Historically, these tumors were treated with nephrectomy. Our observations suggest a more conservative course utilizing renal mass biopsy and surveillance prior to surgical intervention may be appropriate as these tumors do not metastasize and may demonstrate spontaneous resolution. Biopsies of atypical renal masses are often underutilized despite providing significant diagnostic utility that helps guide therapeutic interventions. Renal IPT may be treated without nephrectomy or medical management using simple surveillance measures.

Introduction: Anterior urethral valves (AUV) associated with posterior urethral valves (PUV) is an extremely rare congenital urological anomaly resulting in lower urinary tract obstruction.

Methods: We present our experience with two patients with concomitant anterior and posterior urethral valves as well as a literature review. Case 1 presented with prenatal bilateral hydronephrosis, VCUG concerning for high-grade bilateral vesicoureteral reflux (VUR) and PUV, and impaired renal function. Case 2 presented with prenatal bilateral hydronephrosis, bilateral high grade VUR on VCUG and normal renal function. Follow-up at age 3 revealed normal voiding but VCUG demonstrated bilateral grade III VUR with new dilatation of the posterior urethra with a change in caliber at the bulbomembranous junction.

Results: For case 1, cystourethroscopy on day of life 6 revealed AUV and PUV which were resected with hook electrocautery with subsequent improvement in renal imaging and function on follow-up. For case 2, cystourethroscopy revealed AUV and PUV which were resected with cold hook knife with good outcome.

Conclusions: The clinical presentation of concomitant anterior and posterior urethral valves is variable. Successful endoscopic management can result in improvement in renal function, reversal of obstructive changes and improvement or resolution of voiding symptoms.
Podium #125
ECTOPIC DUPLICATED URETER DISCOVERED DURING ROBOTIC PROSTATECTOMY
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Presented By: Scott Johnson, MD

Introduction: Ectopic ureters are a rare anomaly that most often present in female children. We describe a case of a duplicated ureter with ectopic insertion discovered intraoperatively during robotic assisted laparoscopic prostatectomy (RALP).

Methods: An otherwise healthy, asymptomatic 71 year old Caucasian male elected to undergo RALP. His preoperative workup did not include cross sectional imaging. During bladder neck dissection, the patient was found to have a duplicated ureter with ectopic insertion into the prostate.

Results: The ectopic ureter was transected from the prostate and dissected free. The other ipsilateral ureter was dissected free in order to perform a ureteroureterostomy. While spatulating the ectopic ureter it became clear that it was atretic with an obliterated lumen proximally. It was then clipped and excised. The remainder of the case was completed as expected.

Conclusion: Ectopic ureters are extremely rare finding in an adult man being evaluated for prostate cancer. Anatomic variations are important to be aware of and recognize during genitourinary surgery.

Podium #126
A CASE OF IDIOPATHIC SCROTAL CALCINOSIS
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Presented By: Aron Liaw, MD

Introduction: This is a 44 year old male with a history of painless scrotal cysts since the age of 12 that have progressed and are now extremely disfiguring. This was his first time presenting for treatment.

Methods: The patient was taken for scrotectomy and the entire anterior scrotum was removed. The posterior scrotum was advanced and a STSG was used with mesh overlay to reconstruct the scrotum.

Results: Pathology revealed calcified subcutaneous nodules and was diagnosed as calcinosis cutis. The patient has done well in follow-up.

Conclusion: Scrotal calcinosis is a rare variation of calcinosis cutis, and very few cases are described in urologic literature. Surgical excision is the appropriate treatment and recurrence is rare. Origins are not well elucidated, but appear to involve calcific replacement of subcutaneous epithelial cysts.
Podium #127
PENILE PROSTHESIS SURGERY AS A BAROMETER OF THE ECONOMY?
Daniel Oberlin, MD, Laurie Bachrach, MD, Sarah Flury, MD and Robert Brannigan, MD
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Presented By: Daniel Oberlin, MD

Introduction: Changes in the economy have been linked to changes in healthcare delivery and deferral of elective surgery. We examined case logs submitted to The American Board of Urology (ABU) to determine the impact of the economic climate on penile prosthesis surgery.

Methods: Annualized case logs from 6,615 urologists were obtained from the ABU from 2003–2012. Procedure type was identified by CPT code. Prosthesis volume was compared to trends in major US stock indices and Gross Domestic Product Growth (GDP) annually. Chi-square tests and Pearson correlation statistics evaluated associations between economic and surgical trends.

Results: We found a direct, significant correlation between penile prosthesis surgeries and major indices of the economy (p < 0.001, Figure−1a). Surgical volume closely mirrored US GDP annual growth rate (Figure−1b). Prior to the recession of 2008, penile prosthesis volume was rising 7%/year. After 2008 surgical volume dropped by 38%, from 1208 implants in 2007 to 752 in 2009. Although volume rose 51% since 2009, prosthesis volume has yet to rebound to pre-recession levels.

Conclusions: There is a direct correlation between economic indices and elective urologic surgery. Numerous factors influence the decision to undergo surgery, including insurance coverage, disposable income and overall economic outlook. Better understanding of these factors will enable better planning and outlook for clinicians.
Podium #128

THE MEDTRONIC ZOTAROLIMUS−ELUTING PERIPHERAL STENT SYSTEM FOR THE TREATMENT OF ERECTILE DYSFUNCTION IN MALES WITH SUB−OPTIMAL RESPONSE TO PED5 INHIBITOR – 3 YEAR RESULTS

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Presented By: Tobias Kohler, MD, MPH, FACS

Introduction: We report 3 year safety, feasibility and outcomes of zotarolimus-eluting stent implantation in focal atherosclerotic lesions of the internal pudendal arteries (IPAs) among men with erectile dysfunction (ED) and a suboptimal response to phosphodiesterase−5 inhibitors.

Methods: We performed a prospective, multicenter, single armed safety and feasibility trial of 30 male subjects >18 years with atherosclerotic ED and a suboptimal response to phosphodiesterase−5 inhibitors. A novel combination of clinical, duplex ultrasound and invasive angiographic factors were used to determine eligibility for stent therapy.

Results: Forty-five lesions were treated with stents in 30 subjects. Procedural success was 100% with no major adverse events through follow-up. The primary feasibility end point (IIEF−6 >4) was achieved by 59.3% (16/27) of intention to treat subjects at 3 and 6 months, 81% of subjects (17/21) at one year, 57.9% (11/19) at two years and 38.5% (5/13) at three years (3 year data still accruing). Mean peak systolic velocity on penile Doppler increased from 16.4 cm/s at baseline to 28.8 cm/sec at three months, 42 cm/sec at six months and 32.4 cm/sec at one year. Five patients were stented outside the pudendal artery. Restenosis occurred in 11/32 lesions (34.4%).

Conclusions: Among patients with ED and limited response with pharmacologic therapy, percutaneous stent revascularization of the internal pudendal artery is safe and appears promising. However, significant challenges remain in determining and screening for the appropriate patient treatment population, optimizing procedural techniques for placement and preventing stent restenosis.
Podium #129
THE PRIVATES STUDY: PAIN RATES IN VASECTOMY AND TESTING TO ENSURE STERILITY: A CONTEMPORARY SERIES.
Michael Kottwitz, MD, Charles Welliver, MD, Anand Brahmamdam, BS, Bradley Holland, BS, Benjamin Bova, BS and Tobias Köhler, MD
Southern Illinois University
Presented By: Michael Kottwitz, MD

Introduction: Literature on post vasectomy pain rates and complications is disparate.

Methods: Four year, single surgeon (TSK) retrospective review of office vasectomies. Surgical and demographic data, semen analyses (SA) and patient post-procedure clinic contacts were assessed.

Results: We had 303 subjects with average age 38 years and a mean follow-up of 1,140 days. 9% of patients called with complaints and scheduled postoperative visits. Complaints included incisional concerns (3%, 9/303), scrotal pain (3%), epididymal fullness (1%) and infection (1%). Two percent of patients required a second visit for post-vasectomy pain (PVP) and one patient (with pre-procedure pain) returned 3 times. Two percent (5/303) refilled narcotics while 4% were prescribed NSAIDs. No patients had PVP refractory to NSAIDs. Only 62% of men provided any required post-vasectomy SA. A phone call to the office for any reason increased the likelihood that a man would provide the SA (p<0.001). Using the new AUA vasectomy guidelines, 94% would have been cleared after the first sample, 99% after the 2nd sample and 100% after the 3rd sample.

Conclusion: Men undergoing vasectomy can safely be told they are at a very low risk for refractory PVP, the need for narcotic refills and secondary procedures of any kind.
LONG ACTING LIPOSOMAL BUPIVACAINE DOES NOT LEAD TO DECREASED NARCOTIC REQUIREMENTS OR PAIN SCORES IN MEN UNDERGOING PENILE PROSTHESIS IMPLANTATION

Brittney Hanerhoff, Charles Welliver, MD, Anand Brahmadam, Jena Cummins, PharmD, Cynthia Bednarchik, NP, Georgia Mueller, MS, Danuta Dynda, MD and Tobias Köhler, MD, MPH
Southern Illinois University School of Medicine
Presented By: Brittney Hanerhoff

Introduction: Post-operative pain after IPP implantation remains vexing with variable duration and intensity. We assess a new injectable extended release suspension bupivacaine (ERSB) contained within liposomes purported to produce prolonged (3 day) local anesthesia. It has encouraging results for pain control in non-urologic surgeries but is largely unstudied in urology and costs approximately $285/dose.

Methods: Matched retrospective chart review of a single surgeon (TSK) series undergoing peno-scrotal IPP placement over a 6 month period. We utilized 20 ccs of ERSB with a peri-incisional block prior to incision, bilateral cord blocks, with the majority of medication placed in the area of anticipated pump placement prior to IPP placement to avoid puncture. The control group received either no local or standard bupivacaine. Pain scores and standardized morphine equivalent dose data were collected over subjects’ 23 hour observation period.

Results: A total of 38 patients were compared with 14:24 receiving ERSB and not receiving ERSB, respectively. Groups were comparable with mean age 63 and no statistical difference in co-morbidities. Mean morphine equivalent used was 13.8 (95% CI 6.6–21.0) for ESRB vs. 18 (95% CI 13–23.0) for non-ERSB (p=.3). Mean overall pain scores were 4.1/10 ESRB and 4.3/10 non-ERSB (P=.49). Narcotic equivalent use after catheter removal POD 1 was 3.1 for ESRB and 2.8 for non-ERSB (p=.8).

Conclusion: The use of a new ERSB in IPP implantation did not lead to reduced narcotic consumption or post-operative pain. Routine use of a penile block in addition to our technique may provide superior results.
Podium #131
17% OF HYPOGONADAL MEN TREATED WITH CLOMIPHENE CITRATE REQUIRE COMBINATION THERAPY WITH AN AROMATASE INHIBITOR
Tristan Nicholson¹, Brett Johnson, MD², Andrew Brunk², Tracy Downs, MD², William Ricke, PhD² and Daniel Williams, MD²
¹University of Rochester School of Medicine & Dentistry, Rochester, NY; ²Department of Urology, University of Wisconsin School of Medicine and Public Health, Madison, WI
Presented By: Brett Johnson, MD

Introduction: Clomiphene citrate (CC) is a selective estrogen receptor modulator used off label to stimulate endogenous testosterone production in hypogonadal men. Elevated estradiol levels can sometimes require combination therapy with an aromatase inhibitor, such as anastrozole (AZ). The objectives of this project were to determine the rate of conversion from CC monotherapy to combination therapy with CC+AZ in hypogonadal men.

Methods: We performed a retrospective chart review of hypogonadal men treated with CC between 2006 and 2013. Response to CC therapy was monitored with serum hormones; when estradiol became elevated above the reference range, AZ therapy was added.

Results: We identified 271 hypogonadal men treated with CC and followed for an average of 28 months (SD = 19). Following initiation of CC therapy, 46 (17%) patients required combination therapy with CC+AZ due to elevated estradiol levels. While age and race were similar between groups, the average BMI of patients who converted to CC+AZ combination therapy was significantly higher than those patients who remained on CC monotherapy (Table 1, p < 0.001).

Conclusions: Following initiation of therapy with CC, 17% of hypogonadal men developed elevated estradiol levels, necessitating combination therapy with an aromatase inhibitor. Men requiring the addition of AZ were obese (BMI > 30 kg/m2)

<table>
<thead>
<tr>
<th></th>
<th>CC (n = 225)</th>
<th>CC + AZ (n = 46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>36.7 (SD = 8.9, range 19-77)</td>
<td>36.2 (SD = 8.0, range 21-62)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>192 (85%)</td>
<td>42 (91%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8 (4%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>African American</td>
<td>5 (2%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Asian</td>
<td>14 (6%)</td>
<td>3 (7%)</td>
</tr>
<tr>
<td>Native American</td>
<td>1 (0.4%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Other</td>
<td>5 (2%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>BMI (kg/m2)</td>
<td>29.6 (SD = 6.0, range 18.1-31.9)</td>
<td>35.1 (SD = 7.7, range 23.9-61.6)</td>
</tr>
</tbody>
</table>

Table 1. Demographic information for hypogonadal men treated with CC monotherapy versus CC+AZ.
Podium #132

FINITE ELEMENT SIMULATION MODELING OF A SHAPE−MEMORY ALLOY USED IN A NOVEL PENILE PROSTHESIS DESIGN

Brian Le, MD, MA¹, Alberto Colombo, PhD² and Kevin McVary, MD²
¹Johns Hopkins Hospital; ²Southern Illinois University
Presented By: Brian Le, MD, MA

Introduction: We conceptualized and developed a novel penile prosthesis that relies on shape memory alloy (SMA) changes to alternate between a flaccid and an erect state. Computer simulations offer an alternative and complementary way to design new devices without the need of prototyping every solution. Finite element (FE) simulations were thus used to simulate in silico the mechanical behavior of the prosthesis in different configurations to optimize the design.

Methods: 3D CAD drawings of the novel penile prostheses were created using Solidworks and exported to Abaqus software for meshing and analysis. Nitinol material’s nonlinear behavior was simulated using a three-dimensional continuum-scale constitutive model developed by Stebner et al. Buckling and bending simulations were carried out on 2 different designs. Boundary conditions (absence of rotation and displacement) were applied to 1/3th of the length of the structure to simulate the intrapelvic portion of the cavernosa.

Results: FE simulation analysis revealed that with the force required for routine penetration (1.5kgf), the prostheses in the erect phase created minimal deviation from the axis and did not buckle (<3 degrees). In bending simulations with 0.4kgf placed perpendicularly, the prosthesis in the erect phase showed greater resistance to bending (300MPa vs. 120MPa in the flaccid phase P<0.05) and less deformation (30mm vs. 40mm). Bending behavior correlated well with mechanical bench tests (within 1mm).

Conclusion: Finite element simulation is a useful tool to evaluate prosthesis designs and predict behavior of SMAs under different mechanical situations. Through FE simulations we determined critical design parameters.
Scrotoplasty at Time of Penile Implant is at High Risk for Dehiscence in Diabetics

Randy Sulaver, MD, Michael Kottwitz, MD, Luke Frederick, MD, Charles Welliver, Jr., MD and Tobias Kohler, MD
SIU SOM

Presented By: Randy Sulaver, MD

Introduction: Scrotoplasty has previously been shown to improve penile implant satisfaction and perceptions of penile length. We reviewed data in patients undergoing scrotoplasty at our institution.

Methods: 100 patient retrospective review of a single surgeon’s (TSK) scrotoplasty series. Previous techniques used a high penoscrotal incision with a Heineke–Mikulicz closure in 2 layers with chromic or a V–Y plasty. Current techniques utilize a low Heineke–Mikulicz closure in 2 layers of dartos with 3–0 vicryl and skin with 4–0 monocryl.

Results: Of 100 scrotoplasties, 15 had varying degrees of dehiscence. Ten cases healed secondarily without incident, two healed with a stitch in clinic, one resulted in washout/re–closure, one resulted in malleable washout/exchange and one resulted in failed malleable washout/exchange/explant. Odds Ratio for dehiscence was 10.2x higher in diabetics (p = .0001) compared to non–diabetics. Rates and severity of dehiscence decreased with technique evolution and adoption of 4 principles: Make initial incision 3 cm below penoscrotal junction to maximize distance from tension produced by cylinders; Minimize width of initial incision (the point of maximum tension); Close in 3 layers with non–chromic sutures as above; Opt against scrotoplasty in diabetics with small scrotums. Compared to IPP without scrotoplasty, mean operative time increased 8 minutes and drain output was unchanged (76 ccs).

Conclusion: Although scrotoplasty can improve patient satisfaction with IPP, it can increase patient morbidity, especially in diabetics.
Introduction: Varicocele is found in 40% of men with infertility. Although several meta-analyses have demonstrated that varicocelectomy improves semen parameters and pregnancy rates, it is still unclear as to which patients will benefit from this procedure. The aim of this study was to determine pre-operative clinical and laboratory predictors of success of microscopic subinguinal varicocelectomy (MSV) as defined by a 50% improvement in total progressive motile sperm.

Methods: An IRB retrospective study was conducted on patients undergoing MSV for infertility > one year with abnormal semen parameters and palpable varicocele between 2005−2013. Demographic, clinical and laboratory data was recorded.

Results: 185 patients were identified with both pre- and post-operative semen analyses. Mean sperm concentration, motility and total progressive motile sperm significantly improved after varicocelectomy from 12.9x10⁶/ml to 18.6x10⁶/ml, 35.5% to 41.8% and 21.4x10⁶ to 26.9x10⁶ (p<0.001). Multivariate logistic regression analysis demonstrated that grade 3 varicocele was a significant predictor of 50% improvement in total motile sperm count (OR 2.99; 95% CI 1.31 to 6.88, p=0.0095). Age of patient, age of female partner, body mass index, length and type of infertility, pre-operative hormones and habit history were not associated with significant increase in total progressive motile sperm count. Pregnancy data was available for 118 patients. Of these patients 40 (34%) achieved pregnancy via natural conception.

Conclusion: MSV results in improvement of semen parameters with overall pregnancy rate greater than 50%. The presence of grade 3 varicocele, irrespective of other pre-operative variables, predicts the most successful increase in total motile sperm count.
Introduction: Prior studies demonstrate that hypogonadism contributes to low lean-muscle mass, insulin resistance and decreased bone mineralization. The importance of the testosterone:estradiol ratio is a growing area of interest.

Methods: We performed a retrospective study of patients treated for hypogonadism utilizing subcutaneous testosterone pellets at our institution from January 2009 to November 2013. Demographic data was collected including age, BMI, pre and post implantation testosterone and estradiol, indication for testosterone supplementation, date of implantation, date of labs and number of pellets placed. We divided our population into quartiles by BMI and age. The students t test was used to evaluate differences between each quartile’s post-implant testosterone, post-implant estradiol and post-implant testosterone:estradiol ratio.

Results: During the study period subcutaneous testosterone pellets were placed 147 times. Mean serum testosterone and estradiol at initial post-implantation were 673 ± 209 and 47.1 ± 17.0. Mean testosterone:estradiol ratio was 17.2 ± 13.2. The lowest weight men showed statistically higher testosterone:estradiol ratio as compared to men with BMI in the 3rd quartile (16.3 to 12.2 p = <0.001) and showed a trend towards the same difference compared to men in the 4th quartile (p = 0.07). There was a difference in mean testosterone:estradiol ratio between the youngest and oldest quartile of men (20.0 vs. 12.0, p = 0.01). There was no difference in testosterone values when evaluated by age.

Conclusions: This is the first study the authors are aware of that reports testosterone:estradiol ratios and their association with age and BMI after testosterone pellet placement.
Podium #136
PROGNOSTIC UTILITY OF THE CELL CYCLE PROGRESSION (CCP) SCORE FOR PREDICTING SYSTEMIC DISEASE AFTER BIOCHEMICAL RECURRENCE
Michael Kochm, MD1, Liang Cheng, MD1, Zaina Sangale, MD2, Michael Brawer, MD2, William Welbourne, PhD2, Julia Reid, M Stat2 and Steven Stone, PhD2
1Indiana University School of Medicine; 2Myriad Genetics, Inc.
Presented By: Michael Kochm, MD

Introduction: 25% of patients will experience biochemical recurrence (BCR) after radical prostatectomy. It is not evident at the time of BCR whether this is due to metastatic or local disease. We evaluate the ability of the CCP score to discriminate between these alternatives.

Methods: Patients with BCR after RP were selected for CCP analysis based on: Metastatic disease (MD) (N = 23); No response (NR) to salvage EBRT (N=4); Non-durable response (NDR) to EBRT (N= 7); and durable response (DR) to salvage EBRT (N= 13). Logistic regression assessed the association between CCP score and patient group. Effect size was measured by the odds ratio (OR) per one unit change in score.

Results: CCP score marginally predicted clinical status when comparing patients with MD, NR and NDR to patients with DR (OR = 2.2 (95% CI: 0.92, 5.25), p = 0.06), but significantly predicted status after excluding patients with a NDR (OR = 2.51 (95% CI 1.03, 6.11), p = 0.028). CCP score remained significantly predictive of clinical status after accounting for time to BCR and PSA level at BCR (OR = 2.67 (95% CI 1.08, 8.30), p = 0.032). As an exploratory analysis, CCP score was highly predictive of clinical status when comparing patients with MD or NR to patients with DR or NDR (OR = 2.92 (95% CI 1.31, 7.81), p = 0.0074).

Conclusions: CCP score may be useful in patients with BCR to help determine those patients likely to benefit from radiation therapy.

Funding Source: Myriad Genetics, Inc.
Podium #137
KI−67 PROLIFERATION ON PROSTATE BIOPSY IS ASSOCIATED WITH UNFAVORABLE PATHOLOGY AT PROSTATECTOMY AND BIOCHEMICAL RECURRENCE AMONG MEN WITH LOW RISK PROSTATE CANCER
John Knoedler, MD, R. Jeffrey Karnes, MD, Boyd Viers, MD, Laureano Rangel, Eric Bergstralh, Thomas Sebo, MD and Matthew Tollefson, MD
Mayo Clinic
Presented By: John Knoedler, MD

Introduction: Despite rigorous selection criteria for low-risk prostate cancer, predicting who will progress on active surveillance is difficult. Therefore, we evaluated the association of Ki−67 proliferation index with pathologic upstaging/upgrading at radical prostatectomy (RP) and its association with biochemical recurrence (BCR) among patients with low-risk prostate cancer.

Methods: We identified patients with NCCN criteria low-risk disease who underwent biopsy and RP at our institution. Ki−67 proliferation was assessed by the nuclear antibody MIB−1 and reported as percent positive. Clinicopathologic data were correlated to Ki−67 proliferation. Kaplan−Meier analysis estimated survival and multivariable Cox proportional hazard regression models evaluated the association of Ki−67 with upstaging/upgrading at prostatectomy and BCR.

Results: Among 809 patients, 126 (15.6%) had Ki−67 expression >5%, while 683 (84.4%) had expression ≤5%. Median follow up was 10.4 years after surgery. Overall, 131 patients (16.2%) experienced BCR, 15 (1.9%) experienced systemic progression, and 6 (0.7%) died from prostate cancer. Patients with a biopsy Ki−67 proliferation >5% were significantly more likely to be upstaged/upgraded at surgery (pathologic Gleason ≥7, stage ≥pT3, or N+) compared to patients with proliferation ≤5% (35.7% vs 18.2%; p<0.0001). On MVA, Ki−67 proliferation (as a continuous variable) was significantly associated with upstaging at RP (HR 1.14; p<0.0001), as well as BCR (HR 1.07; p=0.04)

Conclusions: Among patients with low-risk prostate cancer, Ki−67 proliferation is predictive of unfavorable pathology at RP as well as BCR. Given its low cost and wide availability, Ki−67 is a biomarker that may help stratify and counsel patients with low-risk prostate cancer.
Introduction: The role of PCA3 in assessing disease prognosis in men on active surveillance (AS) remains undefined. We evaluated PCA3 velocity as a predictor of unfavorable biopsy in prostate cancer patients enrolled in AS.

Methods: We evaluated 125 men enrolled in an IRB approved AS protocol. Eligibility criteria included stage ≤T2a, Gleason Score ≤6, ≤3 cores positive, maximum involvement of any core <50% and total tumor volume ≤5% on diagnostic biopsy. All men had PCA3 measured at enrollment, 6 and 12 months prior to undergoing surveillance biopsy. Disease progression was defined as having either Gleason Score ≥7 or increased tumor volume (>50% linear involvement or ≥3 cores with cancer).

Results: Thirty patients (24%) exhibited disease progression at the subsequent surveillance biopsy. There were no differences in patient clinical characteristics at baseline between progressors and non-progressors. While both groups illustrated similar PSA velocity over time, there was a significantly higher PCA3 velocity between progressors and non-progressors.

Conclusion: AS patients with greater PCA3 velocities within one year prior to biopsy are at greater risk of disease progression. Patients exhibiting stable PCA3 scores over time may require less frequent surveillance biopsies.

Table 1. Characteristics of patients who underwent biopsies within 12 months after PCA3 test

<table>
<thead>
<tr>
<th></th>
<th>Progressor (n=30)</th>
<th>Non-Progressor (n=95)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, year</td>
<td>67.3 ± 5.5</td>
<td>66.9 ± 6.7</td>
<td>0.721</td>
</tr>
<tr>
<td>BMI, kg/m²</td>
<td>29.3 ± 5.6</td>
<td>28.4 ± 4.2</td>
<td>0.387</td>
</tr>
<tr>
<td>Total PSA, ng/ml</td>
<td>5.1 ± 2.9</td>
<td>4.5 ± 3.0</td>
<td>0.354</td>
</tr>
<tr>
<td>Free PSA, ng/ml</td>
<td>0.7 ± 0.5</td>
<td>0.7 ± 0.5</td>
<td>0.921</td>
</tr>
<tr>
<td>Prostate volume, cc</td>
<td>44.9 ± 27.1</td>
<td>44.5 ± 20.6</td>
<td>0.925</td>
</tr>
<tr>
<td>PCA3</td>
<td>46.6 ± 38.0</td>
<td>44.2 ± 61.0</td>
<td>0.811</td>
</tr>
</tbody>
</table>

Graph showing PCA3 velocity over time for progressors and non-progressors.
Podium #139
PROSTATE SPECIFIC ANTIGEN/SOLVENT INTERACTION ANALYSIS (PSA/SIA): INITIAL REVIEW OF CLINICAL DATA FOR SERUM PSA IN THE RANGE OF 2 < [PSA] < 4 NG/ML

Mark Stovsky, MD, MBA, FACS1, Lee Ponsky, MD2, Srinivas Vourganti, MD2, Peter Stuhldreher, MD2, Mike Siroky, MD2, Victor Kipnis, PhD4, Olga Fedotoff, PhD5, Larissa Mikheeva, PhD5, Boris Zaslavsky, PhD5, Arnon Chait, PhD5, J. Stephen Jones, MD, MBA1
1Cleveland Clinic; 2Case Western Reserve University School of Medicine − Case Medical Center; 3Veterans Administration Boston Healthcare System; 4Biometry Research Group − National Cancer Institute; 5Cleveland Diagnostics, Inc.
Presented By: Mark Stovsky, MD, MBA, FACS

Introduction: We conducted preliminary evaluation of PSA/SIA, a novel protein structural assay for CaP diagnosis, at low serum PSA levels. The assay uses the novel technique called PSA/SIA (PSA/Solvent Interaction Analysis) to detect changes in PSA isoform composition that differentiate benign and malignant disease. We previously reported high performance data for urine and serum in samples with serum PSA above 4 ng/ml. Since the assay is ratiometric and only responsive to changes in isoform composition related to cancer, it should perform similarly at different PSA levels. In this study we test the assay at the same cut-off value of the test statistic, K, and compare against previously reported data for PSA >4 ng/ml.

Methods: 94 serum samples were obtained from multiple clinical sites, collected prior to prostate biopsy from patients with serum PSA between 2 and 4 ng/ml. These serum samples were evaluated using PSA/SIA with complexed PSA as the test analyte, and with biopsy results as gold standard. The fraction of cancer in the sample cohort was 25%.

Results: PSA/SIA results are reported using a ratiometric composite structural coefficient, K. Using ROC analysis, AUC=0.82, SN=100% and SP=46%, NPV=100 and PPV=56% at K cut-off value of 0.14, at cohort cancer prevalence of 25%. Previous data for samples with PSA >4 ng/ml resulted in AUC=0.81, SN=96%, SP=48%, NPV=95% and PPV=38% at the same cut-off level, and with cancer prevalence of 41%.

Conclusions: This study provides preliminary validation that PSA/SIA diagnostic performance is independent of the absolute serum PSA level.
Podium #140
VARIATION IN THE FREQUENCY OF PREMALIGNANT LESIONS AMONG PATIENTS UNDERGOING PROSTATE BIOPSY IN MICHIGAN
Paul R. Womble, MD¹, David C. Miller, MD, MPH¹, Susan M. Linsell, MHSA¹, Zaojun Ye, MS¹, Frank N. Burks, MD² and James E. Montie, MD¹
¹University of Michigan; ²Oakland University William Beaumont School of Medicine
Presented By: Paul R. Womble, MD

Introduction: Because they often drive repeat prostate biopsy, we examined variation in the incidence of atypical small acinar proliferation (ASAP) and multifocal high-grade prostatic intraepithelial neoplasia (HGPIN) among patients biopsied in diverse academic and community practices.

Methods: Using the Michigan Urological Surgery Improvement Collaborative (MUSIC) registry, we included all men biopsied from 3/2012 – 9/2013 without evidence of prostate cancer. We compared the frequency of ASAP & multifocal HGPIN across MUSIC practices and studied associated patient characteristics.

Results: Among 2,679 biopsies from 20 MUSIC practices, rates of ASAP and/or HGPIN varied significantly across practices (p<0.001, Figure). This variation persisted after adjustment for patient characteristics with predicted probabilities of ASAP or multifocal HGPIN ranging from 0% to 41.5% across practices (p<0.001). Both age (p=0.03) and family history of prostate cancer (p=0.04) were significantly associated with the finding of ASAP and/or multifocal HGPIN.

Conclusion: Rates of ASAP and/or multifocal HGPIN varies widely across practices in Michigan. Efforts to understand such variation and standardize pathology reporting represent important quality improvement initiatives.

Funding: MUSIC is funded by Blue Cross Blue Shield of Michigan.

Figure: Rates of ASAP & Multifocal HGPIN in non-malignant prostate biopsies in a state-wide collaborative

![Graph showing variation in ASAP and Multifocal HGPIN across MUSIC practices](image-url)
Podium #141
EFFECT OF HOLEP ON CHRONIC PROSTATITIS SYMPTOMS
Emily Jacobs, MD and James E. Lingeman, MD
Indiana University School of Medicine
Presented By: Emily Jacobs, MD

Introduction: Chronic prostatitis (CP) is a common and often troublesome clinical problem. We examined the hypothesis that HoLEP is effective in relieving the symptoms of many men.

Methods: Our prospectively collected database of patients treated with HoLEP was queried with IRB approval to identify patients with a history of CP. 103 patients were identified. 51 patients were able to be contacted and completed the AUA and NIH–CPSI questionnaires by phone.

Results: Of the 51 patients, 11 had no recollection of a previous diagnosis of CP and so were excluded. Of the 40 patients remaining, AUASI was 19.3 pre–HoLEP and 3.7 currently. Mean age of CP patients was 66.5 as compared to our overall HoLEP cohort age of 75. 35 of 40 patients (87%) reported resolution of CP symptoms with NIH–CPSI pain and impact scores of 0. 6 patients report continued issues with CP (NIH–CPSE pain score 3.1, impact score 1.5).

Conclusion: HoLEP is associated with dramatic improvement in CP symptoms in the vast majority of patients so treated.
Objective: To determine the efficacy, safety and tolerability of photo vaporization of the prostate (PVP) in office settings for benign prostatic hyperplasia (BPH) in patients with prostate size >70 grams.

Methods: Between 2009 and 2011, 139 men with moderate to severe symptoms due to BPH underwent PVP using a 980–nm diode laser under local anesthesia followed by 24–hour catheterization. Out of these 139 patients, 27 patients were evaluated in this study with a prostate size of more than 70 gms. We compared pre- and post-surgical postvoid residual volume (PVR), maximum urine flow (Qmax) and international prostate symptom score/quality of life (IPSS/QoL) questionnaire responses and evaluated postsurgical complications and patient satisfaction survey responses.

Results: An average of 1288.7 ± 1427 seconds of laser exposure at maximum power (180 W) was used. In men with a large (>70–mL) prostate, the median change in PVR was considerably more pronounced (–232.5 mL [–97.9%]; P<.001); the change in Qmax (+3.0 mL/s [25%]; P=.027) and IPSS (–16.5 [–71.7%]; P = .003) was also significant. Patient satisfaction was 85.2%.

Conclusions: Office-based PVP can be a safe, effective and well tolerated approach to BPH in office settings under local anesthesia in patients with prostate size >70 gms.
Introduction: Dysfunctional urinary elimination commonly occurs in patients with cerebral palsy (CP). In this study, we characterize the urodynamic findings in adults with CP.

Methods: CP patients between the ages of 17 and 40 were included. Patients who had undergone lower urinary tract reconstruction were excluded. Patients were classified into 3 groups based on the nature of urinary dysfunction – retention (Ret), incontinence (Inc) and mixed retention and incontinence (RetInc) symptoms. Maximal cystometric capacity (MCC) and detrusor pressure (Pdet) at MCC were derived from urodynamic tracings. From these values, compliance was calculated as the ratio of MCC to Pdet at MCC. Impaired compliance was defined as any value less than 20 ml/cm H2O.

Results: 36 patients, 18 male and 18 female, were included (mean age 27). 18 patients (50%) had Inc, 12 (33%) had Ret, and 6 (17%) had RetInc. Median MCC and range (ml) was 340 (59–1099), 552 (195–1007) and 789 (275–1291) in Inc, Ret and RetInc groups, respectively. Median compliance and range (ml/cm H2O) was 26 (2–350), 49 (3–504) and 22 (9–39) in Inc, Ret and RetInc groups, respectively. In all, 11 patients (5 in Inc and 3 each in Ret and RetInc groups) had impaired compliance.

Conclusion: CP patients with urinary incontinence appear to have the lowest MCC. Patients with mixed symptoms tend to have high MCC and low compliance. Impaired compliance was seen in all 3 groups, thereby demonstrating the need for UDS to identify CP patients at high risk for upper tract injury.
Podium# 144
FACTORS ASSOCIATED WITH POOR RETURN OF URINARY FUNCTION AFTER ROBOTIC ASSISTED RADICAL PROSTATECTOMY: EVALUATION OF EXPANDED PROSTATE CANCER INDEX COMPOSITE (EPIC) SCORES
David Pridmore, MD, Avinash Chennamsetty, MD, Jason Hafron, MD, Michael Lutz, MD, Jay Hollander, MD and Kenneth Peters, MD
Oakland University William Beaumont School of Medicine
Presented By: David Pridmore, MD

Objective: The number of men surviving prostate cancer is rapidly growing. Quality of life outcomes related to survivorship are of increasing importance. We explored factors associated with return to baseline urinary function after robotic assisted prostatectomy.

Methods: From 2003 to 2009 demographic and urinary function data were prospectively collected from 623 men that had RARP. Men completed the Expanded Prostate Cancer Index Composite (EPIC) at baseline, and 6, 12, 18 and 24 months and the urinary function subscale was evaluated. Return to baseline was defined as achieving an EPIC–UF score that was within 0.5 SD of baseline score.

Results: Mean age was 60.02. At baseline, a slight majority (61.4%) had the maximum EPIC–UF score of 100; overall mean score was 93.97. Approximately half the men (53.6%) had returned to baseline function at 24 months. For those men who did or did not return to baseline, significant differences included: baseline EPIC–UF score of 100 vs.<100, BMI ≥30, history of smoking, comorbid CAD, diabetes, pathological stage T2 vs. T3 and ASA. Age, race, education, employment, income, hypertension, nerve-sparing, blood loss and prostate weight did not differ significantly. Predictive factors associated with lack of return to baseline score included baseline EPIC of 100, BMI ≥ 30, smoking, comorbid CAD and stage T3 disease.

Conclusions: Cancer survivorship issues after RARP include ongoing urinary concerns. Surgeons need to understand the preoperative variables that may limit return to baseline urinary function in order to provide counseling to men with prostate cancer and continued treatment to survivors.
Introduction: There is a recent surge in women participating in triathlons. High impact sports are linked to pelvic floor disorders (PFD). Due to impact on the pelvis, there may be a significant prevalence of pelvic girdle pain (PGP). Female endurance sports have also been linked to disordered eating, menstrual irregularities and abnormal bone density, known as Female Athlete Triad (triad). We estimate the prevalence of PFD and PGP among female triathletes and determine any association between PGP, PFD and triad.

Methods: We used a triathlete specific internet database and forum to survey female triathletes. Questions included demographic, training and reproductive history, validated questionnaires for PFD and PGP, and the Female Athlete Triad Screening Questionnaire.

Results: 259 triathletes with a median age range of 35−44 responded. Most were Caucasian, nonsmokers and premenopausal with mean BMI 22.41. 54% were nulliparous. Mean days/week of training was: running 3.7±1.2, biking 2.9±1.1 and swimming 2.5±1.2. PFD prevalence was 15% Urge urinary incontinence, 39% Stress Urinary Incontinence (SUI), 5% pelvic organ prolapse and 28% anal incontinence. Training intensity was not associated with PFD. 18% reported PGP. Participants with SUI had greater levels of PGP (p=0.05). 80% completed the triad questionnaire and 21% screened positive for disordered eating, 24% for menstrual irregularities and 32% for abnormal bone strength. There was no association between PFD and triad.

Conclusion: PFD is common in this unsuspecting group. SUI is associated with more PGP. Female athlete triad may be prevalent in this population. Physicians should be aware of the triad due to long term potentially irreversible health consequences.
CHARACTERIZATION OF MULTIPLE SCLEROSIS PATIENTS WITH LOWER URINARY TRACT SYMPTOMS
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Presented By: Waseem Ahmad, BS

Introduction: We examined the differentiating features and prevalence of urologic therapies in multiple sclerosis (MS) patients with lower urinary tract symptoms (LUTS).

Methods: An observational study of patients who visited a single neurologist at our MS center between June 2011 and July 2013 was performed. Demographic information, urinary symptoms and urologic therapies were analyzed. Successful treatment was defined as not continuing treatment due to improvement in symptoms. Statistical analyses were performed using Pearson’s chi−squared test and a student’s t−test in comparing LUTS and non−LUTS patients.

Results: The prevalence of LUTS was 64.2% (299/466) in women and 67.8% (118/174) in men. In women, the duration of MS (years) for LUTS patients was 19.2±9.6 compared to 10.8±7.8 for non−LUTS patients. In men, the duration of MS (years) for LUTS patients was 17.9±8.6 compared to 10.5±7.3 for non−LUTS patients. In women, the prevalence of urologic therapy use was 50.5% (151/299), of which 12.6% (19/151) were successfully treated. In men, the prevalence of urologic therapy use was 43.2% (51/118), of which 17.6% (9/51) were successfully treated.

Conclusions: The successful use of urologic therapies among the MS population is lower in clinical practice than previously indicated. These findings highlight the necessity for neurologists and urologists to work closely in evaluating and treating these patients.

WITHDRAWN
INTRODUCTION: Many patients with refractory OAB undergo treatment with sacral neuromodulation (SNM) or intradetrusor OnabotulinumtoxinA (BTXA) injections. Some patients crossover from one treatment to the other when therapeutic benefit is not achieved. Our aim was to assess the outcomes of our patients who crossed over.

METHODS: We reviewed all idiopathic overactive bladder (iOAB) patients treated at our institution with SNM and BTXA 2004–2013. After sacroneuromodulation lead testing, permanent device was placed if >50% improvement in symptoms was observed. Therapeutic failure was defined as an increase in medication regimen, an additional procedure or dissatisfaction with the treatment.

RESULTS: Of 29 unique patients, 19 patients started with SNM and 10 started with BTXA. 86% were female. After crossing over, 4 of the 19 SNM to BTXA and 3 of the 10 BTXA to SNM were successful, thus only 24% (n=7) had successful treatment overall. Mean age at time of first treatment was 58.6 ± 16.5 years and mean BMI was 34.3 ± 9.1 kg. Median time between crossover to the alternate form of neuromodulation was 12.4 months (range 0.9–68 months). Mean BTXA dosage was 200 ± 82 units for both groups. 55% percent (n=16) of patients underwent multiple BTXA injections (7 patients BTXA to SNM, 9 patients SNM to BTXA).

CONCLUSIONS: In our practice, most iOAB patients started with SNM and transitioned to BTXA. With only a 24% success rate overall, patients who have failed one form of neuromodulation had a high probability of failed management with the other treatment.
GENITOURINARY SYMPTOMS IN THE DYSTROGLYCANCAPATHIES
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Presented By: Cameron D. Crockett, BS

Introduction: Dystroglycanopathies (DG) are muscular dystrophies characterized by abnormal alpha-dystroglycan glycosylation. We sought to determine genitourinary (GU) symptom frequency in individuals with DG compared to controls.

Methods: Participants in a DG longitudinal study (NTC00313677) and other individuals in the household completed a survey modified from validated urologic surveys. GU symptom frequency, impact on quality of life and medications taken for these symptoms were assessed. Participants not toilet trained were excluded. Symptoms were grouped into urinary storage (urgency, enuresis), voiding (hesitancy, intermittency) and post-micturition (double voiding, incomplete emptying) and an overall GU symptom score was calculated from symptom frequency. Wilcoxon rank-sum test compared symptom frequency between groups and Spearman’s rank-order correlation assessed associations between variables.

Results: 30 of 58 potential DG participants (51.7%) and 16 household controls participated. Subjects were 6–51 years old (mean 26.7), 60% female. Controls were 7–55 years of age (mean 34.6), 44% female. DG participants had more voiding symptoms ($p = 0.02$), higher GU symptom scores ($p = 0.05$) and a suggestion of more post-micturition symptoms ($p = 0.06$). Two DG respondents (6.7%) take medication for urinary symptoms. GU symptom score directly correlated with impact on quality of life ($p < 0.0001$).

Conclusion: GU symptoms occur more frequently in individuals with DGs than household controls. These symptoms can affect quality of life. Our results suggest that questions about GU symptoms should be incorporated into routine care of DG as these may be amenable to medical management.

Funding: NIH U54 NS053672.
Introduction: Urinary tract infection (UTI) is one of the leading adverse events following cystoscopic injection of onabotulinumtoxinA. Our objective was to determine risk factors for post-injection UTI and, therefore, which patients would most benefit from prophylactic antibiotics.

Methods: Data on all patients who underwent cystoscopic onabotulinumtoxinA injection from a single institution from 2008–2013 were obtained. Diagnosis of neurogenic bladder (NGB), preoperative use of catheters, history of recurrent UTIs and prescription of postoperative antibiotics were analyzed as risk factors using individual likelihood ratios. A multivariate logistic regression was performed to assess for confounders.

Results: A total of 87 patients were identified; 58 patients were not prescribed postoperative antibiotics while 29 were. Overall infection rate was 20%. In analysis of all patients, NGB and history of UTIs increased the risk of postoperative infection (p=0.0249, p=0.0384); postoperative use of antibiotics was protective (p=0.0402). On multivariate analysis, only postoperative antibiotics was significant (p=0.0201). In patients who were not prescribed postoperative antibiotics, the infection rate was 22%; NGB was a risk factor (p=0.0138). In patients who were prescribed postoperative antibiotics the infection rate was 17%; no preoperative risk factors were significant. Use of catheters was not a risk factor in any group.

Conclusions: Patients with NGB are at high-risk for infection following injection of onabotulinumtoxinA, while use of catheters and history of recurrent UTIs did not place patients at increased risk. In this retrospective study, postoperative antibiotics were protective for this high-risk group.
Introduction: Pelvic pain may overlap with lower urinary tract symptoms. We investigated clinic-demographics and voiding symptoms in women with high pain scores vs. low pain scores.

Methods: A retrospective review of consecutive new patients from July 2012 to April 2013. Validated symptom surveys, history and physical exam findings, and final diagnosis codes were collected. Women were divided a-priori into high pain score (≥3/10) or low pain (<3/10).

Results: 190 women met inclusion criteria. 103 (52%) had high pain scores and were younger (45 yrs. vs. 54 yrs., p<0.001), more likely to abstain from alcohol (55% vs. 37%, p=0.013), have irritable bowel syndrome (33% vs. 19%, p=0.026) and have more pelvic and urologic surgeries (p<0.05). The high pain score group reported less stress incontinence (36% vs. 51%, p=0.04), had a higher Pelvic Organ Prolapse Distress Index (9.5 vs. 6.1, p<0.001), PFID 20 summary score (25.8 vs. 17.7, p=<0.001), a worse Quality of Life score (61.9 v. 72.3, p=0.013) and were more likely to have a history of anxiety (51% vs. 32%, p=0.009) and depression (43% vs. 22%, p=0.003). There was no difference in urinary frequency, urgency with leakage or OABq symptom severity score. The high pain group was also least likely to be given a urologic diagnosis versus a gynecologic or pelvic pain diagnosis.

Conclusions: Women presenting with higher pelvic pain scores are significantly younger, have had more urologic and gynecologic procedures, have more pelvic organ distress and worse quality of life, and are less likely to be assigned a urologic diagnosis.
INTONE: A NOVEL PELVIC FLOOR REHABILITATION DEVICE FOR URINARY INCONTINENCE

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Presented By: Michael Guralnick, MD, FRCSC

Introduction: InTone (InControl Medical) is a non-implanted intra-vaginal device incorporating biofeedback and electrical stimulation to help women rehabilitate their pelvic floor muscles in the treatment of urinary incontinence (UI). The purpose of this pilot trial is to assess the efficacy and usability of InTone.

Methods: Women (18−70 years of age) with UI (stress, urge, mixed) were recruited for this IRB approved pilot trial. InTone was used by the patient at home 5−6 days a week for 12 weeks. Symptom questionnaires (UDI6, IIQ7), bladder diaries and 24 hour pad weight testing (PWT) were completed at baseline and monthly. Usability was measured with a device usage log and the System Usability Scale (SUS).

Results: 33 women (median age 50 years) were enrolled in the trial. Five patients withdrew and were excluded. After 12 weeks of InTone therapy, median UDI6 and IIQ7 scores improved from 50.0 to 29.2 (p<0.001) and 42.9 to 14.3 (p<0.001), respectively. Statistically significant reductions in median PWT (35.5 g to 4.6 g, p<0.001), median daily pad use (4.0 to 2.0, p<0.001) and median daily incontinence frequency (4.3 to 1.0, p<0.001) were noted. 68% of patients achieved a >50% reduction in daily pad usage and PWT. Device usability was very good with a median SUS of 86.3 and a median percent of expected use of 107% (33−140%).

Conclusions: Twelve weeks of InTone usage resulted in significant objective and subjective reductions in urinary incontinence. Device usability was very good. Further study is warranted.
Introduction: Genetic testing is currently judiciously applied to individuals with Disorder of Sexual Differentiation (DSD) and it is crucial to identify those most likely to benefit from testing. We tested the hypothesis that the external masculinization score (EMS) is inversely associated with the likelihood of finding a genetic abnormality.

Methods: Patients with 46, XY DSD from a single institution evaluated from 2001−2011 were included. Patients with missing medical records were excluded. Results of advanced cytogenetic and gene sequencing tests were recorded. Retrospective chart review was performed to record or assign an EMS score (range 0−12) to each patient according to the team’s initial external genitalia physical exam as previously described.

Results: 92 patients with 46, XY DSD were evaluated; 34% (52/92) underwent further genetic testing beyond karyotype. 35% (11/31) had abnormalities detected on gene sequencing or array. The mean EMS score of those with a positive genetic test was significantly different from those who had negative testing (2.6 (95%CI 2.2−2.9) and 5.2 (95% 5.0−5.5), respectively (p=0.005)), but limited to diagnoses of complete or partial androgen insensitivity (7/11, 63%) or 5-alpha reductase deficiency (2/11, 18%).

Conclusion: 46, XY DSD with a detected genetic abnormality had a phenotype with a significantly lower EMS score than those with no genetic finding but limited to diagnoses of androgen insensitivity or 5-alpha reductase deficiency. If these clinical diagnoses are suspected, genetic testing may be pursued to confirm diagnosis.
**Introduction:** To review our experience of the safety and efficacy of Botulinum toxin injections (BTI) in children with neuropathic bladder (NB) refractory to conservative measures.

**Methods:** We retrospectively identified 25 patients with NB due to variety of conditions who underwent BT urologic injections since 2010. Multiple variables were examined including: demographics, prior or current use of anticholinergics, anticholinergic refractoriness or intolerance, site of BTI, dosage of BTI, pre- and post-injection urodynamic variables and continence status.

**Results:** Mean patient age was 10.6 years (2−21) with a mean follow-up of 11.4 months (3−38). Indications for injection were anti−cholinergic refractory (AR) urodynamic parameters and incontinence (n=18), anticholinergic intolerance (AI) (n=4) and detrusor sphincter dyssynergia (n=3). BTI were performed in detrusor alone in 21 patients (84 %), external sphincter in 3 patients (12%) and both in 1 patient (4%). Mean dose was 290 Units (170−300). No systemic effects seen from BTI. Bladder capacity improved by 48 % (227 mL vs 331 mL, p= 0.008) and maximum detrusor pressure was lowered by 43 % (63 cm H2O vs 44 cm H2O, p=0.002) after the initial BTI. 75% of AI patients were continent between CIC after BTI compared to 50% of AR patients (p=0.002). Mean duration of clinical improvement after BTI was 4.6 months (1−18).

**Conclusion:** BTI is a safe and effective treatment option for pediatric patients with NB for AR or AI patients. The degree of continence observed after BTI was higher for AI rather than AR patients.
Introduction: Outcomes were compared between pediatric robotic assisted laparoscopic partial nephrectomy (RALPN) and laparoendoscopic single site partial nephrectomy (LESSPN) for non-functional moieties in upper urinary tract duplication anomalies.

Methods: A retrospective cohort study was performed of all patients who underwent RALPN and LESSPN at a single pediatric institution from August 2009 to December 2013. Patient demographics, perioperative details and outcomes were reviewed. For statistical analysis, the Mann–Whitney test was used for continuous variables and the Chi Square test was used for categorical variables.

Results: Seventeen patients were identified (8 males, 9 females). Nine patients underwent RALPN and 8 patients underwent LESSPN. Median age was 50.2 months (4.5–118.2) for RALPN and 10.2 months (2.5–136.3) for LESSPN (p=.05). Median operative times were 252 minutes (163–361) for RALPN and 149 minutes (92–238) for LESSPN (p<.01). Median estimated blood loss was 5 mL (0–50) for RALPN and 0 mL (0–25) for LESSPN (p=.024). Median length of stay was 2 days (1–2) for RALPN and 1 day (0–3 days) for LESSPN (p=.19). Inpatient postoperative narcotics were used in 7 of 9 (77%) patients undergoing RALPN versus 1 of 8 (12.5%) undergoing LESSPN (p=.015). Complications included postoperative urinary retention in a patient undergoing RALPN.

Conclusions: Both pediatric RALPN and LESSPN were performed with low morbidity and short hospital stay. LESSPN had a significantly shorter operative time with less blood loss and less inpatient postoperative narcotic use compared to RALPN.
Introduction: Traditionally, grading was taught through immersion learning or self-study. We sought to determine the effectiveness of traditional learning and determine whether use of CEVL could improve learning.

Methods: An online survey was distributed to members of the urology, nephrology and radiology departments at 6 different institutions. Participants were asked: how they learned to grade HN, their confidence in grading and to grade 15 neonatal renal ultrasounds before and after viewing a CEVL module on grading of HN.

Results: 57 respondents completed the pre–CEVL survey. The most common method of learning identified was informal learning during training (48%). 24 respondents completed both the pre and post surveys. There was a mean improvement in confidence for grading HN from 3.13 to 3.92 (p=0.003), and correct grading improved from 56% to 67% (p=0.006). 96% of respondents would recommend CEVL for learning, and 79% found CEVL superior to other methods of learning.

Conclusion: Our study demonstrated that learning through CEVL improved the accuracy of ultrasound grading of newborn HN.
Poster #5
CHANGING MANAGEMENT OF URETEROCELES
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Presented By: Michael Levin, MD

Introduction: Initial management of ureteroceles has progressed from open surgery to transurethral incision (TUI). More recently, observation until intervention is necessary has become a viable option. We present our experience at two institutions over two decades to depict the changing management of these patients.

Methods: A retrospective review was performed for patients diagnosed with an ureterocele from 1989 to 2000 at Cardinal Glennon Childrens Hospital (CGCH), and from 2000 to 2014 at Helen Devos Children’s Hospital (HDVCH). 35 patients at CGCH and 58 patients at HDVCH were identified.

Results: At CGCH, 29/35 patients underwent surgery, 12 having undergone TUI and 17 open surgery. Of those managed non-operatively, 1 required later intervention. Two patients who underwent TUI needed further operations. At HDVCH, only 28 required intervention (p=.001), with 19 undergoing TUI and 9 open surgeries. Indication for surgery included febrile UTI (16/28), worsening hydronephrosis (2/28) and increasing size of ureterocele (7/28). Only 6/28 of patients required secondary intervention. All (8/58) patients with a multicystic dysplastic kidney as well as 15/19 patients with a simple ureterocele did not require intervention. Febrile UTI, worsening hydronephrosis and increasing size of the ureterocele were indications for surgery no matter the year. Indications for initial operation became more conservative with time. Initially large ureterocele size, significant lower pole reflux and persisting hydronephrosis were relative indications and with time were less emphasized.

Conclusion: Our experience demonstrates that observation of appropriate patients is a reasonable treatment plan with the majority of patients not requiring any intervention.
CHARACTERIZATION OF THE MURINE BLADDER RESPONSE TO SUBTOTAL CYSTECTOMY: A MODEL OF MAMMALIAN ORGAN REGENERATION
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Presented By: Grace Delos Santos, MD

Introduction: Regeneration of adult mammalian bladders has been proposed in the literature. However, the molecular mechanisms and signaling involved is unknown. We aim to characterize the bladder’s response to injury in a mouse model.

Methods: Subtotal cystectomy (STC; removal of 50–75%) was performed on adult female CD1 mice. Mice that underwent low-midline laparotomy served as controls. Voiding stains and urodynamics were used to demonstrate bladder function. Bladders were harvested at 1, 2, 4 and 8 weeks. Masson’s trichrome stain identified collagen. Immunohistochemistry expression of cytokeratin, smooth muscle myosin (SMM) and smooth muscle actin (SMA) identified differentiated cells. Phospho–Histone H3 identified mitotically active cells.

Results: The STC group showed greater increases in voided volume compared to controls, especially between 0 and 2 weeks. Full capacity did not return, but urodynamic peak voiding pressures for the STC group were similar to controls. Collagen, SMA and mitotically-active cells were identified at the incision, but SMM was absent. Cytokeratin staining showed a continuous urothelial layer.

Conclusion: Bladders remain functional after STC. The differential volume increase in the first 2 weeks suggests augmented tissue growth. Histology and immunohistochemistry showed fibroblastic changes at the incision rather than regeneration of the bladder wall; however, urothelium demonstrated potential regeneration. There are likely multiple mechanisms by which a mouse bladder responds to injury, but it remains unclear if regeneration occurs.

Funding: Anne and Robert H. Lurie Children’s Hospital
Introduction: Laparoscopy has become a common approach to treat varicoceles in the pediatric and adult population. Previous studies have compared the traditional three-port laparoscopic varicocelectomy to a novel two-port (TP) and laparoendoscopic single site approach (LESS). We present the first comparison between TP and LESS. The main objective of this study is to report our experience and outcomes comparing the TP and LESS techniques in the pediatric population.

Methods: A retrospective cohort study was performed of all patients who underwent TP and LESS at a single pediatric institution from December 2007 to October 2013.

Results: The TP was performed in 10 patients and LESS in 11 patients. No patients underwent conversion to open surgery. Median age was 16 years (range 14−19) for TP and 15 years (range 12−20) for LESS (P=.085). Median operative time was 34.5 minutes (range 23−53) for TP and 49 minutes (range 33−76) for LESS (P=.002). Nine (81.8%) patients in the LESS group and 4 (40%) patients in the TP group were administered narcotics in the recovery room (P=0.05). Two (11.8%) patients in the LESS group and none in the TP group experienced postoperative complications (P=0.15). All varicoceles were clinically resolved in both groups.

Conclusions: TP is comparable to LESS in the pediatric population. Our initial experience indicates that the LESS approach requires more operative time and is more painful in the immediate postoperative period than the TP. Both LESS and TP warrant further evaluation to determine if one approach is clearly more advantageous.
**Poster #8**

**UNDERLYING DISEASE DOES NOT PREDICT SERUM B12 DEFICIENCY FOLLOWING ILEOCYSTOPLASTY**

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Presented By: Alison Keenan, MD

**Introduction:** B12 deficiency is a known complication of ileocystoplasty. We suspect serum B12 deficiency may, in part, be a reflection of underlying disease. We hypothesized that a neuropathic indication for enterocystoplasty may predict B12 deficiency, compared to non-neuropathic indication.

**Methods:** We identified 120 patients who underwent ileocystoplasty at our institution and had at least one B12 level post-operatively. Indication was classified as neuropathic or non-neuropathic bladder. Patients with gut abnormalities were excluded. Patients had low B12 if at least one level was ≤200 pg/mL, and low normal B12 if at least one level was between 201–300 pg/mL. Patients with no B12 level <301 pg/mL were considered normal. Fisher’s exact and Mann–Whitney–U tests were used for statistical analysis.

**Results:** 17 patients with gut abnormalities were excluded. 12 and 101 patients had non-neuropathic and neuropathic indications for enterocystoplasty, respectively. 4/12 (33%) of patients with non-neuropathic indications for enterocystoplasty had low or low normal B12 levels at any time. 2/12 (16.7%) had low B12 levels at any time. 48/101 (47.5%) of patients with neuropathic indications for enterocystoplasty had low or low normal B12 levels at any time. 20/101 (19.8%) had low B12 levels at any time.

**Conclusion:** Collectively, 46% of patients reviewed had a low or low normal B12 level during follow-up. Our data show no difference in risk of serum B12 deficiency if the underlying diagnosis is neuropathic or non-neuropathic. We therefore continue to recommend yearly serum B12 in the post ileocystoplasty population, irrespective of the patients underlying diagnosis.
Poster #9
“THE RETROGRADE” TECHNIQUE OF PEDIATRIC ROBOTIC ASSISTED LAPAROSCOPIC HEMINEPHRECTOMY—DESCRIPTION OF TECHNIQUE & RENAL OUTCOMES
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Presented By: Rena Malik, MD

Introduction: Our objective is to evaluate renal and clinical outcomes and describe our “retrograde technique” for robotic assisted laparoscopic heminephrectomy (RAL–HN) in the pediatric population with duplicated systems.

Methods: Fourteen children underwent RAL–HN from 2009 to 2013. Data was collected via retrospective chart review including demographics, preoperative and postoperative imaging, operative time, estimated blood loss (EBL), length of stay (LOS) and complications. A retrograde technique was used to help identify vasculature to the diseased moiety. After the diseased moiety ureter is separated from the healthy moiety and transected, it is then passed posterior to the renal hilum cranially to allow better visualization.

Results: Mean age at surgery was 24.5 months (3–108 months). Mean operative time was 142 minutes (88–201 minutes) with an EBL of 11 cc. No patients required open conversion. Mean hospital stay was 2 days (1–3 days) and no major complications were observed. Mean follow up was 21.8 months. One patient required secondary ureterectomy for recurrent urinary tract infections and refluxing ureteral stump. No patients lost their remaining healthy moiety. Asymptomatic cyst formation was seen in 4 patients (29%). Change in renal function based on nuclear renography of the duplex kidney ranged from −10.5% to +1% (median 0%).

Conclusions: Based on our initial experience, RAL–HN is a safe surgical option for pediatric patients with duplex moieties with appropriate surgical outcomes. The retrograde technique allows easy identification of the upper moiety vessels and transection without traction on the hilum of lower moiety.

Financial Funding: None.
**Introduction:** Voiding dysfunction is a potential morbidity of extravesical ureteral reimplantation, especially when performed bilaterally, possibly secondary to pelvic plexus damage. The robotic approach may avoid this due to magnification and improved dissection technique, though objective nerve mapping is not possible.

**Methods:** Between November 2008 and November 2013, 46 patients underwent robotic extravesical reimplantation at our institution by a single surgeon (MSG). Study inclusion criteria included: subject underwent bilateral extravesical robotic ureteral reimplantation for VUR and documented postoperative post-void residual (PVR). Primary outcome was postoperative urinary retention, defined as reinsertion of a foley catheter. Secondary outcome was PVR (mls) on bladder scan at first void.

**Results:** 18 patients met inclusion criteria (12 female, 6 male). Mean age at surgery was 59.5 months (36 – 85 months). 10 patients (55.6%) had a history of bladder and bowel dysfunction. One patient underwent prior bilateral Deflux injection for VUR. Mean length of hospitalization was 2.4 days. Mean duration of foley was 2.4 days. Mean postoperative PVR was 45.9 ml. Mean estimated bladder capacity was 198.4 ml. One patient with ADHD (5.6%) required foley reinsertion for urinary retention (150 ml PVR), which resolved spontaneously by postoperative day 6.

**Conclusion:** The risk of urinary retention with bilateral extravesical robotic ureteral reimplantation is minimal with the robotic approach. This may be due to meticulous dissection near the ureter, preserving the neurovascular bundle. Further studies are needed to further delineate the anatomy.
Introduction: Augmentation ileocystoplasty (AI) may be required for refractory neurogenic bladder. We compared outcomes associated with an open versus robotic approach to AI.

Methods: Children undergoing robotic or open AI between 2008 and 2012 were reviewed. Data included demographics, urodynamics and perioperative, short, intermediate and long-term outcomes.

Results: The RALIMA cohort consisted of 15 patients and the open 13. Median follow-up was longer for RALIMA (43.7 vs. 19.6 months, p=0.17). The robotic cohort was older (11.5 vs. 6.7 years, p=0.03), however, the groups did not differ with respect to gender or preoperative urodynamics. Operative time was longer in the robotic cohort (700 vs. 394 minutes, p<0.001). 2 intended robotic AIs were converted to open (required Monti channel). There was a trend towards decreased length of stay (LOS) in the robotic cohort (6.8 vs. 12.7 days, p=0.16). RALIMA was not associated with significantly lower narcotic usage (1.0 vs. 1.8 mg IV morphine equivalents/kg, p=0.42). Both groups had significant improvement in postoperative bladder capacity. Since AI, 60% of robotic and 31% of open patients have undergone one or more minor procedures. 4 robotic patients and 2 open patients have undergone major surgical procedures (robotic: 4 re-do bladder neck closures (BNC), open: 1 re-do BNC and 1 exploratory laparotomy).

Conclusion: RALIMA may be associated with decreased LOS but longer operative times. Regardless of approach, long-term morbidity remains significant. Patients should be counseled regarding the frequent need for future procedures.
Poster #12
THE MADISON ALGORITHM FOR ANTENATAL MANAGEMENT OF DISORDERS OF SEXUAL DIFFERENTIATION
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Presented By: Andy Radtke

**Introduction:** Diagnosis, decision making and counseling for patients with disorders of sexual differentiation (DSD), identified antenatally, poses a challenge for physicians and families. Accurate antenatal evaluation combined with early and frequent communication between the family and multidisciplinary team is important in the antenatal and postnatal period to provide the best possible outcome for the patient. Because of the complexity involved in providing appropriate care to these individuals, it is critical that accurate and universally accessible counseling materials are available to providers and families at the time of diagnosis and management decision-making.

**Methods:** We reviewed the current literature regarding diagnosis, management, gender assignment and fertility for all major disorders of sexual differentiation. Radiologic and genetic diagnostic algorithms from the literature were updated to reflect current nomenclature. Industry genetics websites were reviewed for assays that test for specific DSDs.

**Results:** Synthesis of the information on antenatal diagnosis of DSD from experience and literature review resulted in construction of the Madison Antenatal DSD Algorithm, which predicts possible sex of rearing and fertility outcomes based on antenatal genetic and radiologic information.

**Conclusion:** The Madison Antenatal DSD Algorithm is a crucial piece in the multidisciplinary effort to offer accurate patient and provider education regarding DSD in the antenatal period, thereby improving outcomes for these children. As antenatal information gathering improves with more widely available genetics assays and superior imaging modalities, diagrams such as this will be positioned as a first line resource to those facing the challenge of making decisions and caring for these patients.
Poster #13
THE DOUBLE BARREL SHOTGUN TECHNIQUE FOR IMPLANTATION OF DEFLUX IN THE TREATMENT OF VESICOURETERAL REFLUX: DESCRIPTION OF TECHNIQUE AND RESULTS.
Michael Avallone, MD, Jessica Lee, BS, Gina Lockwood, MD and Hrair Mesrobian, MD Medical College of Wisconsin, Department of Urology Presented By: Michael Avallone, MD

Introduction: We aim to describe a novel technique for implantation of dextranomer/hyaluronic acid copolymer (Deflux) for endoscopic treatment of vesicoureteral reflux (VUR) in children along with our outcomes.

Methods: From 2005 through 2012, our technique was performed by a single surgeon as a first treatment for patients with VUR and documented febrile urinary tract infection (FUTI).

Results: Records were reviewed for 91 patients (84 females, 7 males). Average age at the time of procedure was 69 months. 163 injections were performed to treat 149 ureters with low grade VUR (VCUG grade 1–3, mild on NM cystography or detected by intraoperative positional instillation cystography) and 14 ureters with high grade VUR (VCUG grade 4–5 or moderate to severe on NM cystography). The average volume of Deflux injected was 0.96cc per ureter. At an average post-operative follow up of 9.4 months, 14 patients developed FUTI – 5 in patients with high grade VUR, 9 in patients with low grade VUR. One patient experienced flank pain with hydronephrosis which resolved spontaneously.

Conclusion: The double barrel shotgun technique for implantation of Deflux is safe and results in a high success rate in preventing recurrence of febrile UTI – 88% for patients with low grade reflux and 85% for the entire series.
Poster #54
PREVALENCE OF PATIENT–REPORTED LOWER URINARY TRACT SYMPTOMS IN MUSCULAR DYSTROPHY
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Presented By: Laura Bertrand, MD

Introduction: Duchenne and Becker muscular dystrophy (DMD and BMD respectively) are characterized by progressive muscle weakness and eventual loss of ambulation. In a retrospective review, we previously demonstrated roughly half of these patients have at least one documented urologic diagnosis, most commonly lower urinary tract symptoms (LUTS) and nephrolithiasis. In order to better understand the frequency of LUTS and the degree to which they impact quality of life (QOL) in this patient population, we performed a prospective evaluation.

Methods: Following IRB approval, a survey modified from multiple validated surveys was distributed to DMD/BMD patients at their neurology appointment or via mail−out. The survey included questions regarding urinary urgency, frequency, enuresis, dysuria and bowel function as well as how patients felt these symptoms impacted their QOL.

Results: Of the 36 respondents to date (mean age 17.2, range 4–30), twenty−eight (77%) reported at least one urinary symptom, the most frequent being urgency and intermittency (both 52%). Thirteen out of 36 (36%) reported some element of bother regarding these symptoms; six had been seen by a urologist.

Conclusion: In this on−going prospective series, we confirm a high percentage of DMD/BMD patients experience LUTS. The majority of respondents thus far are not on treatment. Our results suggest that routine screening for LUTS and effect on QOL should be part of DMD and BMD management, with referral for further urologic evaluation and treatment as indicated as appropriate treatment could improve QOL.
Introduction: Missed patient visits and clinic no-shows are detrimental to patient care and hospital and physician productivity. We evaluated potential predictive factors of missed pediatric urology appointments.

Methods: A retrospective review was conducted using patients scheduled in the Division of Pediatric Urology at the University of Iowa between 2008–2009. A multi-factor logistic regression model analysis was then used to examine the variables.

Results: 1,315 consecutive visits were examined. 87% of patients were Caucasian with a mean age of 75.6 months (1−256 months). 43% had private or non-federally subsidized insurance. 84% were scheduled for management of chronic conditions. Mean distance traveled was 87.9 miles (2−1484 miles). Overall, 38.7% of the clinic appointments were missed. African American children (p=0.042) and older patients (p=0.001) were less likely to make their appointment. In addition, children with non-chronic conditions (p=0.025) and those with federally subsidized (p=0.041) and no insurance (p=0.005) were more likely to miss their appointment. Returning patients (p<0.001) and children scheduled on Fridays (p=0.034) were also more likely to not show for their appointment. Distance that the patient had to travel (p=0.307), season in which the appointment occurred (p=0.207) and price of gasoline at the time of the office visit (p=0.738) did not appear to be significant risk factors for the patient missing their appointment.

Conclusions: We identified multiple predictive factors associated with children missing their scheduled pediatric urology clinic visit. This data may be utilized to more effectively schedule clinics to improve patient care and provider and hospital productivity.
Poster #14

PRETREATMENT NEUTROPHIL−TO−LYMPHOCYTE RATIO CAN PREDICT TUMOR AGGRESSIVENESS IN NEWLY DIAGNOSED RENAL LESIONS

Boyd Viers, MD, R.H. Thompson, S.A. Boorjian, C.M. Lohse, B.C. Leibovich and M.K. Tolleson
Mayo Clinic
Presented By: Boyd Viers, MD

Introduction: Elevated neutrophil–lymphocyte ratio (NLR) has been associated with adverse outcomes in clear cell renal cell carcinoma (ccRCC). However, its ability to distinguish aggressive RCC from indolent renal tumors remains unknown.

Methods: From 1995–2008, 2402 patients underwent nephrectomy for localized renal masses. Of these, 2039 had an NLR collected ≤90 days prior to nephrectomy. Comparisons of NLR by tumor size, histologic subtype and nuclear grade were evaluated.

Results: Benign renal masses had a significantly lower NLR than malignant renal tumors (median 2.92 vs. 3.12, p=0.037). Among patients with benign lesions, there was no difference in NLR based upon histologic subtype (p=0.27). However, there was a difference among RCC subtypes (p=0.002), with cystic ccRCC demonstrating the lowest and collecting duct RCC the highest NLR. Finally, among all RCC subtypes, there was a significant increase in NLR with larger tumor size and greater nuclear grade (both p<0.001).

Conclusion: An elevated NLR is associated with an increased risk of RCC at the time of nephrectomy as well as higher grade tumors and more aggressive histologic subtypes. Therefore, NLR appears to be a preoperative marker of aggressive RCC and may be useful in predicting malignancy in patients with suspicious renal lesions.
Objective: To measure the effect of the cortical (outer layer) renorrhaphy on renal function after partial nephrectomy using volume measurements.

Methods: Between 2007 and 2012, 67 patients undergoing partial nephrectomy for a single renal mass were identified with retrievable CT scans (48 renorrhaphy and 19 non-renorrhaphy). The goal was to measure factors affecting %volume loss in the operated kidney, which was calculated from 3-dimensional reconstructions on preoperative and postoperative CT scans using a semiautomatic segmentation algorithm.

Results: The renorrhaphy group had nearly a three-times greater median %volume loss when compared to the non-renorrhaphy group (−14.3% vs. −4.5%, p<0.003). The median %GFR loss was also greater in the renorrhaphy group and nearing significance (−11% vs. −1%, p=0.056). The body mass index, Charlson Index, tumor diameter and nephrometry score were similar between the groups while the renorrhaphy group was older, had more males and had a longer ischemia time. On multivariable linear regression the presence of renorrhaphy (β=−14.4%, p<0.001) and categorical tumor diameter (β=−8.5, p<0.001) were significant predictors of %volume loss while ischemia time (p=0.40) was not a predictor. There was 1 (5.2%) urine leak in the non-renorrhaphy group and one postoperative bleed in each group. Limitations include the retrospective design and the large number excluded from the study based on absence of a retrievable CT scan.

Conclusion: Cortical renorrhaphy and tumor diameter (<2.0, 2.0−4.5, >4.5cm) are associated with volume loss after partial nephrectomy.
POSTERS

Poster #16
COMPARISON OF 30–DAY POSTOPERATIVE COMPLICATIONS BETWEEN LAPAROSCOPIC RADICAL NEPHRECTOMY AND OPEN PARTIAL NEPHRECTOMY
Sean McAdams, MD, Goldfarb Robert, MD, Mary Kwaan, MD and James Anderson, MD
University of Minnesota
Presented By: Goldfarb Robert, MD

Introduction: Management of complex renal masses which are not amenable to laparoscopic partial nephrectomy (LPN) often involves a decision between laparoscopic radical nephrectomy (LRN) and open partial nephrectomy (OPN). With new data questioning the long-term benefits of partial nephrectomy, short-term risks may factor more heavily in this decision.

Methods: The American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) was used to identify patients with malignant neoplasm of the kidney who underwent LRN, OPN or LPN from 2005 to 2012.

Results: The 30-day rate for major complications in 2,252 patients who underwent LRN was 10.4%, compared to 18.5% in 1,247 patients who underwent OPN (p<0.0001). On multivariate analysis, partial nephrectomy was an independent predictor of major complication (OR 1.66, CI 1.37–2.00).

Conclusion: Patients who underwent OPN had a significantly higher risk of major complication within 30 days compared to LRN and should be considered in patients with renal masses not amenable to LPN.
CRITICAL APPRAISAL OF FIRST GENERATION RENAL TUMOR COMPLEXITY SCORING SYSTEMS TO CREATE AN “OPTIMIZED MODEL”

Conrad Tobert, MD¹, Allen Shoemaker, PhD², Richard Kahnoski, MD³ and Brian Lane, MD, PhD⁴

¹University of Iowa; ²Grand Rapids Medical Education Partners, Department of Statistics; ³Spectrum Health Hospital System; ⁴Spectrum Health Hospital System and Michigan State University College of Human Medicine

Presented By: Conrad Tobert, MD

**Introduction:** Tumor size and anatomy are important predictors for utilization and outcomes of partial nephrectomy (PN). Three systems were developed to quantify tumor complexity: RENAL nephrometry score (RNS), PADUA classification (PC) and Centrality–Index (CI). Each has been subjected to some validation and comparative analysis. However, to our knowledge, no attempt has been made to determine whether combination of variables from each system improves performances.

**Methods:** Using pre-operative imaging, scores were assigned to each of 276 patients undergoing NSS or RN for localized renal cortical tumor. Data was analyzed to develop an “optimized score” using each individual component of all 3 systems. Systems were evaluated in multivariable logistic regression analysis.

**Results:** In multivariable analysis, each scoring system was a significant predictor of NSS versus RN (p<0.0001). Of the first generation systems, RNS was most highly correlated with surgery type (R² 0.55), followed by CI (R² 0.53) and PC (R² 0.52), respectively. In a model incorporating the individual components of the three systems, four variables were independent predictors of surgery type (each p<0.005): tumor size (RNS, PC), nearness to the collecting system (RNS), location along the lateral rim (PC) and centrality (CI). Logistic regression was used to assign a novel scoring method for the four variables. This model outperformed the first generation systems. (R² 0.57)

**Conclusion:** Although first generation scoring systems are strong predictors of surgery type and outcomes, optimization of the variables provides a novel scoring system. Further validation will be required to determine the most accurate and clinically useful model.
Introduction: Myeloid derived suppressor cells (MDSCs) are immature precursors to monocytes, granulocytes, and dendritic cells arising in the setting of tumor-derived cytokines. They have been identified as mediators of immune suppression in renal cell carcinoma correlating with increased stage, metastatic disease and reduced overall survival. We hypothesized that sunitinib could reduce the expansion of in vitro induced MDSCs.

Methods: Peripheral blood mononuclear cells (PBMC) were isolated from healthy donors. The PBMC was cultured with granulocyte macrophage colony stimulating factor and interleukin-6 (to induce MDSCs) for 7 days in the presence and absence of sunitinib at three concentrations (0.01 μg/ml (low), 0.1 μg/ml (physiologic) and 1 μg/ml (high)). Cells were counted and flow cytometry was performed at Day 0 and Day 7 to assess expansion of cells with MDSC surface markers.

Results: The cells induced were MDSCs as they had an MDSC phenotype and suppressed autologous T-cell function. There was a mean 2.88 fold expansion of MDSCs with no drug, 2.78 with low dose, 1.11 with the physiologic dose and with the high dose no viable cells were consistently found. When compared to no drug, the physiologic dose significantly reduced expansion (n=5, p=0.013).

Conclusion: Physiologic dose of sunitinib significantly reduced the expansion of induced MDSCs in vitro. This suggests sunitinib is immune-protective and may be a good candidate for use with future immunotherapeutics in patients with metastatic renal cell carcinoma.
Introduction: Obesity is a known risk factor for poor prognosis from renal cell carcinoma (RCC) but it is unknown whether this difference is as associated with greater radiographic complexity of tumors. The nephrometry scoring system (R.E.N.A.L.), based on size, depth and location, standardizes assessment of renal mass complexity. We hypothesized obesity would be associated with more complex renal masses, suggestive of more aggressive tumors. To our knowledge, this relationship has not been examined.

Methods: In a prospective cohort of 91 subjects with renal masses undergoing resection, we calculated nephrometry scores based on preoperative CT or MRI. Obesity was defined using both body mass index (BMI) and intra-abdominal fat (IAF), an established obesity marker measured from the contralateral-posterior renal cortex to the abdominal wall.

Results: When nephrometry scores were grouped into low (4–6), medium (7–9) or high (10–12) complexity, there was a trend toward significance between greater BMI and more complex masses (p = 0.08), but no such relationship with IAF (p = 0.6). We found no correlation between nephrometry score as a continuous variable and obesity (BMI: R² = 0.03, IAF: R² = 0.01).

Conclusion: In our pilot study, there was a trend toward increased BMI being associated with greater mass complexity, which will be further evaluated as this cohort is expanded. Additionally, we are assessing immune parameters to evaluate relationships between tumor biology, radiographic complexity and obesity.

Funding: In part by NIH grant #1R01CA181088-01.
Poster #20
DEVELOPMENT OF A NOVEL HIGH INTENSITY FOCUSED ULTRASOUND PROBE FOR RENAL ABLATION
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1Indiana University; 2University of Florida; 3SonaCare Medical LLC
Presented By: Clinton Bahler, MD

Introduction: High intensity focused ultrasound (HIFU) has been described for ablative therapy in a range of organs. Our objective was to develop and optimize a protocol for a novel 12 mm HIFU probe for treatment of renal masses in a porcine model.

Methods: A HIFU probe on a fixed arm was introduced and ablation was subsequently carried out at two planned locations within each kidney. After four days of survival, kidneys were retrieved and pathologic analysis of the lesions was carried out for necrotic volume (NV). IRB approval was obtained.

Results: Technical issues with the probe included overheating and difficulties with probe positioning in the early surgeries. These were addressed with changes in cooling equipment and the hardware used to engage the probe to the target location. We were able to achieve near optimal lesions in the last 10 lesions (Figure 1). The necrotic volume to planned volume ratio was near optimal at a value of 1.02 (std dev 0.33) across the last ten lesions. All animals survived the surgeries and no complications were identified during the study. No acute renal failure was identified in analysis of the blood work.

Conclusions: A novel 12mm laparoscopic HIFU probe was safely employed to consistently ablate porcine renal tissue.

Funding: SonaCare Medical LLC
Poster #21
CLINICAL AND RADIOGRAPHIC PREDICTORS OF THE NEED FOR RESECTION OF THE INFERIOR VENA CAVA DURING NEPHRECTOMY FOR PATIENTS WITH RENAL CELL CARCINOMA AND VENOUS TUMOR THROMBUS
Sarah Psutka, MD1, Stephen Boorjian, MD1, R. Houston Thompson, MD1, Grant Schmit, MD2, John Schmitz, MD2, Thomas Bower, MD3, Suzanne Stewart, MD1, Christine Lohse, MD4, John Cheville, MD5 and Bradley Leibovich, MD1
1Department of Urology, Mayo Clinic; 2Department of Radiology, Mayo Clinic; 3Division of Vascular Surgery, Department of Surgery, Mayo Clinic; 4Department of Health Sciences Research, Mayo Clinic; 5Department of Pathology, Mayo Clinic
Presented By: Sarah Psutka, MD

Introduction: Nephrectomy and tumor thrombectomy for renal cell carcinoma (RCC) risks luminal narrowing of the inferior vena cava (IVC) and occasionally requires resection of portions of the IVC to assure complete tumor removal. The objective of this study was to evaluate clinical and radiographic predictors of need for vascular resection (VR) during venous tumor thrombectomy for RCC.

Methods: We performed a retrospective review of 317 patients treated for RCC with venous tumor thrombus at the Mayo Clinic between 2000 and 2010. Preoperative imaging was re-reviewed by two radiologists blinded to the patient’s surgical procedure. Univariate and multivariate associations of clinical and radiographic features with VR were evaluated by logistic regression.

Results: Of the 317 patients, 38 (12%) required VR procedures. Optimal cut points determined to predict need for VR included maximal AP IVC diameter: 28.5 mm, IVC and renal vein (RV) diameter at the RV ostium (RVo): 26.5 mm and 15.6 mm, and coronal diameter at the RVo: 19.1mm. On multivariate analysis, RVo diameter ≥15.6 mm (OR 4.0; p=0.028), complete occlusion of the IVC at RVo (OR 6.1; p<0.001), and IVC bowing >5mm at RVo (OR 5.3; p=0.005) were associated with a significantly increased risk of VR.

Conclusion: We present a multivariate model of radiographic features that predict the need for VR during tumor thrombectomy which may be used in preoperative planning and patient counseling.
Introduction: There are few reported series regarding outcomes following simultaneous hepatic resection (HRx) of RCC involving the liver and nephrectomy. Expert opinion varies regarding the safety and benefit of such aggressive surgical intervention. Therefore, we report our experience with simultaneous HRx and nephrectomy.

Methods: We identified 34 cases where patients underwent simultaneous nephrectomy and HRx for direct hepatic invasion or metastasis. These cases were matched 2:1 to controls (n=68) undergoing nephrectomy and metastasectomy without HRx by year, age and TNM classification. Perioperative complication rates were compared. Overall survival (OS) was estimated using the Kaplan Meier method.

Results: Of the 34 cases, 17 patients underwent HRx for pT4 hepatic involvement and 21 patients underwent simultaneous nephrectomy and hepatic metastasectomy. In the control group, 38 patients had non–hepatic pT4 disease and 37 underwent metastasectomy for non–hepatic distant metastasis. The incidence of DVT was significantly higher among cases (15% vs. 1%, p=0.02), however, no significant differences were noted in the rates of Clavien grade 3–4 complications (11.8% vs. 1.5%, p=0.1) or perioperative mortality (3% vs. 0%, p=0.7) between cases and controls. At last follow-up, 31/34 cases and 65/68 controls had died, including 30 and 61 who died of RCC at a median of 1.2 and 0.9 years, respectively. Two–year OS for cases and controls were 40% and 28%, (HR 0.65 p=0.14).

Conclusions: In selected patients, aggressive surgical resection of RCC involving the liver does not appear to significantly increase risk of moderate/severe complications, perioperative or overall mortality when compared to matched controls.
Poster #23
CAN RENAL MASS HISTOLOGY BE PREDICTED BY MULTI-PHASIC CT?
Paul T. Gellhaus, MD, M.F. Monn, MD, MPH, T.A. Masterson, MD, A.A. Patel, MD, M. Tann, MD and R.S. Boris, MD
Indiana University Department of Urology
Presented By: Paul T. Gellhaus, MD

Introduction: Using renal imaging as a non-invasive, alternative method for predicting renal mass histology has not been explored. We evaluated whether radiologists and urologists can predict histology from multi-phasic CT (MPCT).

Methods: Patients with preoperative MPCT undergoing renal mass surgery were identified over ten years. Tumors >10cm, PCKD, locally advanced or metastatic disease, and patients managed by reviewers were excluded. Multivariable logistic regression assessed the association between predictive accuracy and final histology. One urologist and one radiologist regularly collaborate in tumor boards.

Results: 120 cases met criteria: 102 were malignant, of which 73% were clear cell RCC (ccRCC). Mean tumor size was 3.3cm. Correlation was fair for predicting malignant (k=0.25) and final histology (k=0.22). Sensitivity and accuracy are shown below. Presence of ccRCC was associated with 8 fold increased odds of accurate histologic prediction (95% CI 4.6–15.1, p<0.001). Radiologists were at 1.8 increased odds of accurate prediction (95% CI 1.2–2.7, p=0.005).

Conclusions: Although effective in predicting malignant histology, MPCT was unreliable in predicting final histology. Collaborators had the highest sensitivity and accuracy between groups.

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*Tumor board collaborators
Introduction: Our objective was to report determinants of oncologic outcomes and temporal changes in presentation of patients treated with surgical intervention for renal cell carcinoma (RCC) with venous tumor thrombus (VTT).

Methods: We identified 845 patients with RCC and VTT treated surgically from 1970−2009. Following pathological re-review, clinicopathologic features and outcomes were compared by VTT level (0−IV), decade of surgery and TNM stage. Cancer-specific survival (CSS) was estimated using the Kaplan−Meier method.

Results: There were 510 (60%), 91 (11%), 139 (16%), 57 (7%) and 48 (6%) patients with levels 0, I, II, III and IV VTT, respectively. The proportion of level III–IV VTT increased between 1970−89 (5.5%), 1990−99 (14.6%) and 2000−09, (18.9%, p<0.001). At last follow-up, 717 patients had died, including 550 who died from RCC. Median follow-up was 7.9 years. Perioperative mortality decreased from 4.6% to 1.9% between 1970−89 and 2000−09 (p=0.04). Median CSS for patients with levels 0–IV VTT was 4.9, 2.2, 2.4, 2.0 and 1.7 years (p<0.001). Patients with levels I–IV VTT had decreased CSS compared to level 0 VTT (HR 1.59, p<0.001); however, no incremental risk was noted between levels I–IV (p=0.81). Median CSS by pNM status was 7.4, 1.9, 1.2 and 0.8 years in pNx/0M0, pN1M0, pNx/0M1, and pN1M1 disease (p<0.001).

Conclusions: Despite increasing rates of level III–IV VTT in recent years, perioperative mortality has declined. CSS is significantly poorer in patients with IVC VTT compared to renal vein VTT alone and in those presenting with simultaneous nodal and metastatic disease.
**Introduction:** We sought to identify preoperative factors associated with perioperative blood transfusion in patients undergoing open radical (ORN), open partial (OPN), minimally-invasive radical (MIRN) and minimally-invasive partial nephrectomy (MIPN).

**Methods:** Using 2012 NSQIP data, we identified cases of RN and PN for renal malignancy. Multivariable logistic regression identified factors associated with requiring perioperative transfusion of at least one unit of blood.

**Results:** 2,691 cases were identified, of which 562 were ORN, 475 OPN, 905 MIRN and 749 MIPN. Three hundred thirty-seven patients required perioperative transfusion (13%). Patients requiring transfusion were at twice the risk of unplanned readmission compared to non-transfused patients (Figure). ORN and OPN compared with MIPN were at higher odds of requiring transfusion after adjusting for confounding variables (OR 8.3, p<0.001; OR 3.4, p<0.001). Factors associated with transfusion included insulin dependent diabetes, history of a bleeding disorder, preoperative transfusion, preoperative renal function and operative time.

**Conclusion:** While transfusion is not necessarily the cause of poor outcomes such as readmission, it is associated with adverse outcomes. Perioperative transfusion requirements are highest after open radical nephrectomy.
**Poster #26**

**RENAAL CELL CARCINOMA IN THE UNDERINSURED**

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Cook County Health and Hospitals System

Presented By: Brian McArdle, DO, MBA

**Introduction:** Our objective was to investigate the demographics and tumor characteristics in underinsured patients with renal malignancy.

**Methods:** We performed a retrospective review of 239 consecutive patients that underwent nephrectomy at a public health system from 2008 to 2013. Patient demographics and pathologic characteristics were analyzed using unpaired t-tests and two-tailed z-tests.

**Results:** Overall, 239 patients underwent nephrectomy for renal malignancy, (radical, n=143, partial, n=96). Population demographics were 44% Black (n=105), 32% Hispanic (n=77), 21% White (n=51), 3% Asian (n=6). There were 155 males (65%) and 84 females (35%). Overall, mean age was 53 years and mean tumor size was 6.6cm. Ninety-eight percent of the population was uninsured or publicly insured. Males were diagnosed earlier (52.5 years vs. 54.7, p=0.08) and with larger tumors (7.51cm vs. 4.88cm, p<0.0001) compared to females. Hispanics were diagnosed younger (51 years vs. 53, p=0.03) compared to the overall population, especially Hispanics with a BMI <25 (48 years vs. 53, p=0.02). Hispanic females had the largest tumors (mean 6.05cm) among women. Metastases were present at time of diagnosis in 18% of all cases, including 26% of Hispanics (n=20), 18% of Whites (n=9) and 13% of Blacks (n=14).

**Conclusions:** Hispanics were diagnosed at an earlier age and were more likely to have metastatic disease. Overall, males are diagnosed at an earlier age and with larger tumor size.
Non-Variant Primary Urothelial Bladder Cancer Outcomes in a Contemporary Cystectomy Cohort

H.Z. Kaimakliotis, MD, M.F. Monn, MD, K.C. Cary, MD, Paul T. Gellhaus, MD, J.A. Pedrosa, MD, T.A. Masterson, MD, R.S. Foster, MD, M.O. Koch, MD and R. Bihrle, MD
Indiana University
Presented By: Paul T. Gellhaus, MD

Introduction: We assessed outcomes in cystectomy patients with pure urothelial bladder cancer (UC) on both TURBT and final pathology in a contemporary cohort.

Methods: Retrospective analysis of patients with non-variant UC undergoing radical cystectomy at our institution between 2003-2012 was performed. Survival was analyzed using Kaplan-Meier and log-rank test. Multivariable cox proportional hazards regression determined the association between pathologic organ confined disease (OC), non-organ confined (NOC) and lymph node involvement (LN+) with all-cause mortality adjusting for age, sex, clinical stage, neoadjuvant (NACT) and post-operative chemotherapy (POCT).

Results: 617 patients were identified: median age of 66 years, median follow-up of 52 months. 46 patients underwent NACT and 100 patients received POCT. 5-year overall survival (OS) for ≥cT2 patients undergoing NACT compared to no NACT was 62% vs. 48% (p=0.191). 5-year OS for ≤cT1 was 67% versus 49% for ≥cT2 (p<0.001). 5-year OS for OC was 74%, for NOC 40%, and for LN+ 31% (p<0.001). NOC and LN+ patients had 3.5 and 5.6 times increased risk of mortality than OC, respectively (both p<0.001).

Conclusions: Survival outcomes for pure UC vary by clinical and pathologic stage. OC disease remains the strongest predictor of survival. Improved efforts could be made to administer NACT.
Introduction: The use of exosomes as delivery vectors for small interfering RNAs (siRNAs) is promising. Studies show that PLK1 gene depletion leads to cell cycle arrest and apoptosis in bladder cancer cells. Our objective was to use exosomes as a vector to deliver PLK1 siRNA to bladder cancer cell lines.

Methods: Exosomes were isolated by ultracentrifugation from human embryonic kidney (HEK293) cell conditioned media, labeled with PKH−26 dye and co−cultured with bladder cancer cells and uroepithelial cells and imaged on Amnis ImageStreamX. PLK1 siRNA was loaded into HEK293 exosomes via electroporation and exosomes were co−cultured with invasive bladder cancer cells (UMUC3). Real−time PCR was performed.

Results: Bladder cancer cells internalize more HEK293 exosomes when compared to normal uroepithelial cells. Exosomes electroporated with PLK1 siRNA achieved successful knockdown of PLK1 RNA when compared to negative control at both 24 and 48 hour time points (Figure 1).

Conclusions: The internalization findings imply that exosomes would be preferentially taken up by bladder cancer cells and theoretically exert less effect on the normal epithelium. Exosomes can be effectively used as a delivery vector to transport PLK1 siRNA to bladder cancer cells resulting in gene silencing of PLK1. The use of exosomes as delivery vectors is attractive as they enter cells easily and are non−immunogenic.
Introduction: Alkalinity and osmolality can influence the shape and behavior of red blood cells (RBCs) in urine. This study exams other factors.

Methods: Retrospective chart review.

Results: The 212 women identified were predominantly Caucasian (76.6%) with an average age of 62.9 years (±13.3), and average body mass index of 29.1 (± 6.3). 90.2% were non-smokers and 90.7% had no other urologic diagnoses. Of the 212 samples with blood-positive urine dipsticks (DIP POS), 55 (26%) had microscopy samples with ≥3 RBCs/high-power field (HPF) [microscopic hematuria (MH)]. The number of samples with MH varied by dipstick positivity: trace–8.93%, small–15.6%, moderate–32.1% and large–61.1%. Moderate (OR:4.26; 95%CI:1.60–11.39; p<.01) and large (OR:19.86; 95%CI:6.29–62.73; p<.01) urine dipstick values were associated with a confirmatory urinalysis with microscopy. Specific gravity (SG) of ≤1.008 was associated with decreased likelihood (OR:0.74; 95%CI:0.21–0.26; p=.00) that a DIP POS would result MH. 35.4% of the 212 samples had SGs ≤1.008 (Figure 1). 10.9% of the samples with a SG of ≤1.010 had ≥3 RBCs/HPF on microscopy while 39.6% of those with a SG of >1.010 had ≥3 RBCs/HPF (p=.00).

Conclusions: Urine SG is associated with an underestimation of MH, especially in the setting of the current MH guidelines.
**Introduction:** Obesity rates are rising and as such more invasive bladder cancer patients requiring surgical management will be obese. We investigate perioperative and long-term outcomes in this population.

**Methods:** From 11/1996–4/2013, 586 patients underwent RC for bladder cancer. Body mass index (BMI) was categorized as underweight(<18.5), normal(18.5–24.9), overweight(25.0–29.9) and obese(≥30). Baseline demographics, perioperative outcomes and survival were assessed.

**Results:** The median age and follow-up were 69 years (IQR 61–75) and 37.7 months (9.1–56.7), respectively. Patients were underweight (2.1%), normal (28.1%), overweight (37.6%) or obese (32.2%). No significant differences were noted in estimated blood loss (500mL [400–700] and 750mL [500–1000]), blood transfusion (51.4% and 44%), lymph nodes resected (32 [15–44] and 32 [17–56]), length of stay (8 days [7–11] and 9 days [7–14]) or 30-day readmissions (25.6% and 30.7%) between normal BMI and obese patients, respectively. The rate of pN2–3 disease was decreased in obese (6.7%) compared with non-obese patients (23%), p<0.05. Overall survival was equivalent between obese and normal BMI patients, with median survival of 84 months (60–108) and 88 months (25–148), respectively. Underweight patients had a worse prognosis, with median survival of 19 months (2–36), p<0.001.

**Conclusions:** Perioperative outcomes and survival following RC in obese patients is comparable to non-obese. Underweight patients have worse overall survival, possibly a systemic manifestation of cancer-related nutritional deficiency and sarcopenia.
Introduction: Literature suggests a higher incidence of short–term complications for Indiana pouch (IP) compared with ileal conduit (IC) and neobladder (NB). We assessed short–term complications of IP, IC and NB.

Methods: Using institutional National Surgical Quality Improvement Program data, we identified radical cystectomies performed for bladder cancer between January 2011 and June 2013. Multivariable logistic regression assessed factors associated with perioperative complications.

Results: 234 cases were identified: 140 IC, 39 IP, 55 NB. Mean (SD) operative times for IC, IP and NB were 258 (84), 383 (78) and 327 (88) minutes, respectively (p<0.001). The incidence of complications was 59%, which was lower among NB (p=0.013). 35% of patients required transfusion. IP patients were not at increased odds of complication (Table). The predicted probability of patients developing complications was 58% for IC, 67% for IP and 54% for NB.

Conclusions: At a high volume center, IP trended toward more short–term complications than IC and NB. Patients should be counseled regarding short–term complications, particularly that many will require transfusion.

<table>
<thead>
<tr>
<th>Factors associated with developing postoperative complications</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval</th>
<th>p-value</th>
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<tr>
<td><strong>Diversion type</strong></td>
<td></td>
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<td>Ileal conduit</td>
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<td>Indiana pouch</td>
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<td>Neobladder</td>
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<td>Sex (female)</td>
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<td>0.42-2.03</td>
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<td><strong>Body Mass Index</strong></td>
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<td>Normal</td>
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<td>Length of stay</td>
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* Model is adjusted for all variables within the table
Poster #32
EVALUATION OF THE IMPACT OF BODY COMPOSITION AND MUSCLE DENSITY ON OVERALL SURVIVAL FOLLOWING RADICAL CYSTECTOMY FOR BLADDER CANCER
Sarah Psutka, MD1, Stephen Boorjian, MD1, Grant Schmit, MD2, Michael Moynagh, MD2, Igor Frank, MD1, Alonso Carrasco, MD1, Suzanne Stewart, MD1, Prabin Thapa3, Robert Tarrell3 and Matthew Tollefson, MD1
1Department of Urology, Mayo Clinic; 2Department of Radiology, Mayo Clinic; 3Department of Health Sciences Research, Mayo Clinic
Presented By: Sarah Psutka, MD

Introduction: We sought to evaluate the impact of sarcopenia or skeletal muscle wasting, muscle density and obesity on overall survival following radical cystectomy (RC) for bladder cancer (BC).

Methods: Lumbar skeletal muscle index (SMI), total body fat mass index (FMI) and muscle attenuation (MA) were evaluated on preoperative axial imaging in 207 patients who underwent RC from 2000–2007, and were dichotomized according to sex−specific consensus definitions. Obesity was also assessed by standard body−mass index criteria (BMI >= 30 kg/m2). Multivariate Cox proportional hazard analyses were performed to evaluate variables associated with all−cause mortality (ACM).

Results: Sarcopenia was observed in 142 (68.6%) patients, low MA (male <41HU, female <33HU) in 152 (73.4%) patients, Class I–III obesity by FMI criteria (male >9 kg/m2, female >13 kg/m2) in 106 (51.2%) and by BMI criteria in 72 (34.7%). Median follow−up after RC was 6.7 years, during which 137 patients died. On multivariable analysis controlling for age, pT and pN stage, and ASA score, sarcopenia was significantly associated with increased ACM (HR 1.9, p=0.003), whereas increased MA was associated with decreased ACM (HR 0.64, p=0.004). Neither obesity as characterized by FMI (HR 0.8, p=0.23), nor BMI criteria (HR 0.9, p=0.56) were associated with ACM, but showed a trend by FMI criteria towards being protective.

Conclusion: Sarcopenia and low muscle attenuation are associated with increased ACM following RC. The impact of obesity continues to be defined. Utilizing FMI to characterize obesity may offer increased specificity over BMI and should be further evaluated.
MODIFIABLE FACTORS FAIL TO PREDICT READMISSION FOLLOWING CYSTECTOMY

Brian Minnillo, MD\textsuperscript{1}, Matthew Maurice, MD\textsuperscript{1}, Aiswarya Pillai\textsuperscript{2}, Nicholas Schiltz, PhD\textsuperscript{2}, Siran Koroukian, PhD\textsuperscript{2}, Firouz Daneshgari, MD\textsuperscript{1} and Robert Abouassaly, MD, MSc\textsuperscript{1}
\textsuperscript{1}University Hospitals Case Medical Center; \textsuperscript{2}Case Epidemiology
Presented By: Brian Minnillo, MD

Introduction: In the current era of health care reform, performance measures may dictate provider reimbursement. Given its high complication and readmission rate, radical cystectomy (RC) could be a target for quality improvement. We aimed to identify patient and provider predictors of poor outcomes.

Methods: We examined 3,649 patients who underwent RC from 2005–2009 using discharge data from the California State Inpatient Database of the Healthcare Cost and Utilization Project. We reviewed factors (i.e. race, volume, discharge disposition) associated with 30–day readmission, mortality and length–of–stay (LOS).

Results: The 30–day readmission and mortality rate were 22.8\%(833) and 2.3\%(83), respectively. Regarding disposition, 34.8\% were discharged home, 50.8\% were discharged home with home healthcare and 12.2\% were discharged to a post–acute care facility (PACF). Within 30–days, 20.3\% discharged home, 20.9\% discharged with home healthcare and 42.3\% discharged to a PACF were readmitted. After adjusting for confounders with multivariable logistic regression, African American race (OR1.61, 95\%CI 1.05–2.47, P<0.03), ≥2 comorbidities (OR1.42, 95\%CI 1.06–1.90, P<0.02) and discharge disposition to PACF (OR3.72, 95\%CI 2.83–4.88, P<0.0001) were independent predictors of readmission. Median LOS was 9 days (+/–SD9.7) and those with LOS >15days were less likely to be readmitted (OR0.43, 95\%CI 0.27–0.67, P<0.0002). Note, hospital volume (<10, 10–50, >50 RCs/year) did not predict complication, mortality or readmission.

Conclusions: RC stands to face critical review in the “pay for performance” era as perioperative morbidity, mortality and readmission remains high. However, our results suggest that there are few modifiable factors related to readmission and perioperative outcomes.
Introduction: Discrepancy between clinical and pathologic staging occurs in up to 42% of cases of bladder cancer. Unresectable disease on laparotomy presumes a poor prognosis. This patient population, survival, management and factors contributing to the termination of surgery are described.

Methods: Retrospective chart review from 11/1996−4/2013 for patients scheduled for radical cystectomy. Survival was estimated by Kaplan−Meier method. Date of death was confirmed with the Social Security Death Index.

Results: 586 patients were scheduled for radical cystectomy with 31 cases (5.3%) aborted following laparotomy. Median age at surgery and follow−up were 70 years and 6.1 months, respectively. Median time from last imaging, clinical exam and transurethral resection were 0.89 (0.41−2.30), 0.89 (0.49−1.31) and 1.58 (1.05−3.19) months, respectively. Twenty−seven cases were aborted for unresectable disease. Comparing unresectable locally advanced (19) with metastatic disease (8), median survival was 8.87 (4.24−14.49) and 1.48 (1.03−5.55) months, respectively (p<0.001). Five patients underwent chemotherapy alone and had a median survival of 11.01 (6.5−14.5) months. Two patients successfully completed chemotherapy and subsequent salvage cystectomy, with a median survival of 17.7 (17.2−18.27) months (p=0.041). No factors on multivariate analysis significantly impacted survival, including age, obesity, clinical stage, preoperative hydronephrosis, lymphadenectomy or subsequent treatment.

Conclusions: Unresectable disease at the time of intended radical cystectomy is uncommon and portends a poor prognosis. Patients with distant metastases have a short life expectancy and comfort measures appropriate. Patients with locally advanced disease proceed with chemotherapy and subsequent extirpative surgery have improved survival.
**Introduction:** Robotic cystectomy with anterior pelvic exenteration (RCAPE) is feasible minimally invasive approach for cystectomy in female patients. We describe a simplified, standardized technique that removes many technical limitations while adhering to oncologic principles.

**Methods:** Ports are placed in the standard cystectomy fashion as previously described in the “W” configuration with a 12 mm assistant port on the right side of the patient. The patient is positioned in lithotomy steep Trendelenberg position and the robot is docked. The ureters are dissected followed by posterior dissection with assistance of a malleable retractor in the vagina. Lateral dissection is performed to develop the pedicles and vaginal walls which are then secured using the Caiman© Tissue Sealing Device (Aesculap, Center Valley PA). The dorsal venous complex and urethra are divided. Intracorporeal ileal conduit urinary diversion is then performed.

**Results:** Between 08/2011 and 10/2013 we have performed 25 RCAPE using this technique. Operative time including pelvic exenteration, vaginal closure, bilateral extended pelvic node dissection and intracorporeal ileal conduit averaged 355 minutes and average blood loss was 347 mL. One patient required a blood transfusion. Length of hospital stay averaged 6 days. Finally, complications were assessed according to the Memorial−Sloan Kettering Grading System and 3 patients had minor (grades 1–2) complications and 2 patients experienced major (grades 3–5) complications.

**Conclusions:** Robotic cystectomy with anterior pelvic exenteration can be performed using our simplified technique safely. Our technique is reproducible with excellent oncologic outcomes and allows for rapid progression to intracorporeal urinary diversion if desired.

**Funding:** None.
Poster #36

FGFR3 EXPRESSION IS NOT AN EFFECTIVE PREDICTOR OF BLADDER TUMOR RECURRENCE OR PROGRESSION

Peter Tsambarlis, James Rybak, Paolo Gattuso, Ilhab Lamzabi, David Bostwick and Christopher Coogan
Rush University Medical Center
Presented By: Peter Tsambarlis

Introduction: FGFR3 is a naturally occurring receptor on bladder cells. FGFR3 mutations have been associated with lower stage bladder tumors, which tend to recur. This relationship, however, has not been consistently replicated. The purpose of our study was to identify the utility of FGFR3 expression as a predictor for recurrence and progression of bladder cancer.

Methods: A database was created of every patient who had a transurethral resection of a bladder tumor at Rush University Medical Center between 2008 and 2012. A representative pathological slide was recovered for 102 patients and immunohistochemically stained for fibroblast growth receptor 3 (FGFR3). These slides were read by a blinded pathologist and coded as expressing in greater or less than 10% of cells. Recurrence rates and rates of progression were compared between groups.

Results: Of the 102 patients for which a pathological specimen was obtained, 49 showed less than 10% expression; the remaining 53 expressed 11% or more. The recurrence rate as defined by any recurrence occurring between 2008 and 2012 were 44.9% and 43.4% respectively (p > 0.05). The rate of progression in the lower versus higher expression group were 10.2% and 11.3%, respectively (p > 0.05). There were also no differences when the progression rates were evaluated in terms of initial pathological stage at presentation.

Conclusions: FGFR3 expression is not a predictor of progression or recurrence in patients with bladder tumors.
Introduction: We evaluated oncologic outcomes after radical cystectomy (RC) in patients with plasmacytoid urothelial carcinoma (UC), and compared survival to that in patients with pure UC of the bladder.

Methods: We identified 35 patients with plasmacytoid UC and 857 with pure UC who were treated with RC between 1980 and 2007. All pathologic specimens were re-reviewed by a single GU pathologist. Patients were matched 1:2 by age, gender, ECOG performance status, pathological tumor stage and nodal status to patients with UC. Survival was estimated using the Kaplan-Meier method and compared with the log rank test.

Results: Patients with plasmacytoid UC were more likely to have extravesical disease (≥pT3) (86% versus 42%, p<0.0001) and positive margins (31% versus 2.1%, p<0.0001) than patients with pure UC. They were also more likely to experience a local recurrence (RR 2.7, p=0.0004), with a 46% 10-year recurrence free survival compared to 79% in patients with pure UC. Patients with plasmacytoid UC displayed a trend toward decreased 10-year overall (15% versus 30%, p=0.07) and cancer specific survival (28% versus 51%, p=0.05). When patients with plasmacytoid UC were matched to those with pure UC, there were no significant differences in 10-year overall, cancer specific, local or distant recurrence free survival.

Conclusions: Plasmacytoid UC is associated with a high rate of locally advanced disease and positive margins at RC, as well as increased local recurrence rates. Further research is necessary to delineate adjuvant or neoadjuvant treatment strategies to improve local cancer control this rare subtype of UC.
Introduction: Concern persists in AS patients about missing aggressive cancers on ultrasound guided biopsies. We report our outcomes of MR-GB in AS patients.

Methods: We reviewed records from 28 patients on AS who underwent MR-GB using the DynaCad system. Clinical and pathological characteristics of patients and biopsies were recorded. A trained radiologist reread the MRIs and assigned a PI-RADS and Likert scale suspiciousness score to each biopsied lesion. Univariate and multivariate analyses were conducted to predict the presence of cancer on biopsy.

Results: 83 lesions were biopsied in 28 patients. Cancer was detected in 16/28 men (57%); 9/28 (32%) revealed >Gleason 7 disease. Cancer was detected in 22/83 (27%) lesions, 9/83 (11%) of which were >Gleason 7. There was no significant difference between benign and malignant lesions with regard to size or apparent diffusion coefficient (ADC) values, while PI-RADS T2, contrast scores and Likert scores were significantly different with p-values of 0.021, 0.031 and 0.012 respectively. Area and greatest dimension on ADC maps and T2 images were significantly different between benign or Gleason 6 lesions and >Gleason 7 lesions. PI-Rads T2, ADC score and Likert scores were also significantly different in these 2 groups (p-value: 0.05, 0.021 and 0.02 respectively). The Likert score was an independent predictor of cancer vs. benign on multivariate analysis (OR: 1.76; 1.13–2.72).

Conclusions: MR-GB effectively identifies men on AS with Gleason >7 disease. It may be possible to avoid surveillance biopsies in men with only minimally suspicious lesions on MRI.
Introduction: There is no clear guidance on the surveillance of muscle invasive bladder cancer (MIBC) following radical cystectomy (RC) and the effect of surveillance on mortality is debatable. We conducted a systematic review to evaluate the characteristics of available surveillance protocols and determine the effect on mortality with the detection of asymptomatic (Asx) versus symptomatic recurrences (Sx).

Methods: An electronic search of PubMed, Medline, Embase and Cochrane Library databases was performed from 1970–2013. Three reviewers independently assessed the 1,288 candidate studies for eligibility and abstracted data based on criteria priori established protocol. Outcomes were pooled using random effects meta-analysis.

Results: We included 7 retrospective studies with overall good quality. Four studies developed stage stratified surveillance protocols based on stage and recurrence location patterns. All protocols ended surveillance at 5 years and recommended imaging frequencies and techniques that only slightly differed. The detection of Asx reduced mortality by 22% (RR 0.78, CI 0.58,1.04); this effect was statistically significant only when upper and lower urinary tract recurrences were included in analysis.

Conclusion: Available surveillance protocols for MIBC following RC show several common components. There may be a reduction in mortality with Asx detection that provides a rationale for surveillance.
Poster #40

VOLUME PRESERVATION BETTER PREDICTS RENAL FUNCTIONAL OUTCOME THAN WARM ISCHEMIA TIME IN ROBOTIC PARTIAL NEPHRECTOMY

Timothy Durso, BS¹, Robert Blackwell, MD², Adam Van Huis¹, David Surprenant¹, Patrick Sweigert¹, Helyn Alvarez¹, Jonathan Carnell, MD², Jessica Wetterlin, MD², Marcus Quek, MD², Robert Flanigan, MD² and Gopal Gupta, MD²
¹Loyola University Chicago Stritch School of Medicine; ²Loyola University Medical Center

Presented By: Timothy Durso, BS

Introduction: The most important determinants of renal functional outcomes following robotic assisted laparoscopic partial nephrectomy (RALPN) are debated. We analyzed the relationship between warm ischemia time (WIT), percent functional volume preservation (PFVP) and percent glomerular filtration rate preservation (PGP) in patients who underwent RALPN.

Methods: We reviewed records of 65 patients who underwent RALPN, including classic partials (CPx), on-clamp enucleation (OnCE) and off-clamp enucleation (OffCE). Kidney volumes were then assessed before and after surgery using 3D reconstruction. Percent of total volume was used to determine the functional contribution of each kidney. PGP of the ipsilateral kidney was correlated with WIT and PFVP.

Results: Among all patients, PGP correlated positively with PFVP and negatively with WIT. Enucleations had a greater PFVP and PGP than CPxs. Among patients with WIT, PGP correlated positively with PFVP and negatively with WIT. Multivariate regression (R²=.359) showed significant correlation with PFVP and WIT. Compared with CPxs, OnCEs had a greater PFVP, greater PGP trending toward significance and no difference in WIT. OffCEs had significantly greater PFVP than CPxs and greater PGP trending toward significance. No differences were found between OffCEs and OnCEs.

Conclusions: PFVP was significant in renal functional outcomes. WIT had a negative impact, but the strength of this relationship was weak and partially negated by including PFVP in the analysis. When considering RALPN, urologists should prioritize the PFVP. Robotic tumor enucleation optimized renal functional outcomes by maximizing PFVP.
Poster #41
INCREASING TUMOR VOLUME PREDICTS GREATER PARENCHYMAL LOSS IN PARTIAL NEPHRECTOMY
Timothy Durso, BS¹, Adam Van Huis¹, David Surprenant¹, Patrick Sweigert¹, Helyn Alvarez¹, Jonathan Carnell, MD², Marcus Quek, MD², Robert Flanigan, MD² and Gopal Gupta, MD²
¹Loyola University Chicago Stritch School of Medicine; ²Loyola University Medical Center
Presented By: Timothy Durso, BS

Introduction: Preserving renal function, and by extension renal parenchymal volume (RPV), is a key consideration for urologists performing robotic assisted laparoscopic partial nephrectomy (RALPN). We investigated whether renal tumor volume (RTV) and radiographic size (RS) could predict percent functional parenchymal volume preserved (PFVP) of the operated-on kidney.

Methods: We reviewed the records of 37 patients who underwent RALPN. RPV of the operated-on kidney was then assessed before and after surgery using 3D reconstruction software. RTV was also assessed using the same technique. RTV/RPV was calculated using the volumes gathered. PFVP was calculated by dividing post-operative RPV by pre-operative RPV. Outliers defined by measurements outside of two standard deviations from the mean were excluded from analysis. 34 patients were used in the final analysis. Means are displayed ± SD.

Results: Mean RTV was 14.4±0.5 mL. Mean RTV/RPV was .086±.068. Mean RS was 2.92±1.08 cm. Mean PFVP was 89.9±8.6 %. Univariate regression of PFVP with RTV showed a significant negative correlation (R2=.174, t=-2.597, p=.014). Univariate regression of PFVP with RTV/RPV showed a significant negative correlation (R2=.157, t=-2.439, p=.020). Univariate regression of PFVP with RS showed a significant negative correlation (R2=.170, t=-2.562, p=.015).

Conclusions: In general, increasing RTV, RPV/RTV and RS predict decreased PFVP in RALPN. In addition, the strongest correlation observed was between RTV and PFVP. Urologists performing RALPN should be aware of this relationship in order to preserve the greatest parenchymal volume possible.
Poster #42

ROBOTIC NEPHRECTOMY IS NOT COSTLIER THAN STANDARD LAPAROSCOPY WHEN ROBOT AVAILABLE

Iahn Gonsenhauser, MD, MBA1, Geoffrey Box, MD, FACS1, Ahmad Shabsigh, MD, FACS1, David Sharp, MD, FACS1 and Ronney Abaza, MD, FACS2
1The Ohio State University Medical Center; 2OhioHealth Dublin Methodist Hospital
Presented By: Ronney Abaza, MD, FACS

Introduction: While robotic surgical systems are unlikely to be purchased specifically for nephrectomy, it is uncertain whether surgeons at hospitals already owning robots should perform laparoscopic nephrectomy (LN) versus robotic nephrectomy (RN). We compared the cost of RN and LN and specifically the cost of disposables from our patient data.

Methods: All nephrectomies during a 2–year period at our institution were studied, during which RN was performed uniformly by one surgeon and LN uniformly by three surgeons preventing selection bias in type of nephrectomy. Cost minimalization analysis was used to compare the average direct and indirect costs of LN and RN, including pharmacy, operating room, laboratory and hospitalization costs. Additionally, the average costs of standard instrumentation were compared.

Results: A total of 150 nephrectomies were performed, including 90 LN and 60 RN. The average total costs of LN (mean=$12,021) and RN (mean=$11,861) did not differ when assuming a robot was available (p=0.79). The additional cost for each RN if including the fixed cost of owning robots (depreciation and maintenance) was $1,040. The average cost of standard instrumentation and disposables for LN and RN were $2,344 and $2,010, respectively. The cost of robotic instruments was outweighed by the cost of disposable trocars, staplers, clip appliers and advanced energy devices in LN.

Conclusions: Surgeons at institutions already owning robotic systems can perform RN when a robot is available without being costlier than LN. When including the fixed costs of owning robots, the additional costs per case surpass savings in disposables over LN.
Poster #43
ZERO−ISCHEMIA ROBOTIC ENUCLEO−RESECTION OF RENAL MASSES
Jessica Wetterlin, MD, Robert Blackwell, MD and Gopal Gutpa, MD
Loyola University Medical Center
Presented By: Jessica Wetterlin, MD

Introduction: Nephron−sparing surgery has become the standard of care for appropriately selected renal masses. Tumor enucleo−resection is a novel technique for maximal nephron sparing and has demonstrated comparable oncological outcomes to partial nephrectomy. We report perioperative outcomes for zero−ischemia robotic−assisted laparoscopic enucleo−resection (RALER) of renal masses.

Methods: Retrospective chart review of 42 patients who underwent RALER of a renal mass by a single surgeon (GG). Decision to perform zero ischemia versus hilar vessel clamping (off− vs. on−clamp) was determined by tumor size, location, percentage of mass that is exophytic and surgeon preference. Data regarding patient characteristics and perioperative outcomes was collected and analyzed.

Results: Between 3/2012 and 1/2014, 18 of 42 patients underwent RALER performed with zero ischemia. Mean radiographic tumor size was 3.26cm (SD 0.84) on−clamp, and 2.64cm (SD 1.20) off−clamp (p=NS). Mean RENAL nephrometry score was 7.72 on−clamp, and 6.75 off−clamp, with similar individual components in both groups (p=NS). On−clamp mean warm ischemia time was 24.2 minutes (SD 7.2). Mean estimated blood loss was 191.7ml (SD 297.4) on−clamp versus 231.3ml (SD 423.8) off−clamp (p=NS). Length of hospital stay was similar in both groups (1.89 days vs. 1.71 days, p=NS). None of the RALER patients had positive surgical margins. Mean preoperative renal function was similar among groups (GFR 88.7 on−clamp, 83.8 off−clamp), and was not significantly different immediately postoperatively (GFR 90.3 on−clamp, 80.0 off−clamp).

Conclusion: RALER is a novel technique for management of small renal masses that is safe, oncologically sound and maximally parenchymal sparing when performed with zero−ischemia.
Poster #44
IMPACT OF ROBOTIC FELLOWSHIP EXPERIENCE ON PERIOPERATIVE AND ONCOLOGIC OUTCOMES OF ROBOTIC-ASSISTED LAPAROSCOPIC PARTIAL NEPHRECTOMY (RAPN)
Michael Moriarty, BS¹, Kenneth Nepple, MD², Chad Tracy, MD², Daniel Lee, MD² and James Brown, MD²
¹The University of Iowa, Carver College of Medicine; ²The University of Iowa, Department of Urology
Presented By: Michael Moriarty, BS

Introduction: Our institution has surgeons with RAPN fellowship training (FT) and no fellowship training (NFT). We sought to identify differences in perioperative and oncologic outcomes between these individuals in their initial experience with RAPN.

Methods: We identified patients from 2009–2013 that underwent RAPN by surgeons who performed at least 5 cases. To isolate initial outcomes, data through surgeon case number 10 was analyzed. 38 patients were identified from two surgeons with (n=18) and two surgeons without fellowship RAPN experience (n=20). Demographics, nephrometry score, perioperative complications to 60 days and pathologic data were recorded.

Results: FT and NFT cohort patients were similar in age, gender and surgical history. FT surgeons performed surgery on masses of higher nephrometry score (7.8 v. 6.3, p=0.001) and more posterior location (56% v. 25%, p=0.05). The FT cohort more often undertook a retroperitoneal approach to mass excision (44% v. 0%, p=0.003). FT surgeons showed a trend toward shorter WIT (24.9 v. 30.2 min, p=0.14). There was no significant difference in total perioperative complication (39% v. 35%, p=0.45) or final positive margin rates (0% v. 15%, p=0.27).

Conclusion: Fellowship experience may allow for treating more challenging and posterior tumors in initial practice and a significant increase in comfort with performing RAPN via retroperitoneal approach. Further evaluation of the benefits of fellowship RAPN will better define training needs for surgeons.
**Objective:** Define the feasibility and impact of lymphadnectomy (LA) in the setting of robotic Nephroureterectomy (RNU) for upper tract urethelial carcinoma (UTUC).

**Methods:** We retrospectively reviewed the medical records of all patients who RNU for UTUC from January 2007 and February 2013. 100 patients who underwent RNU were identified. Pre-operative, demographic, clinical data and perioperative outcomes were analyzed.

**Results:** LA was performed in 67 patients. 38 patients underwent retroperitoneal lymphadnectomy, 4 underwent pelvic lymphadnectomy and 25 underwent combined RP and pelvic lymphadnectomy. Mean (SD) Lymph node yield in the LA group was 11.7 (9.1) Mean age and BMI were comparable between LA and No−lymphadnectomy groups (NLA) (69.6 vs. 71.6 years, and 27.6 vs. 28.1 Kg/m2). The mean operative time was significantly longer in LA group (316 vs. 248 minutes, P = 0.001). Estimated blood loss (EBL) wasn’t statistically different between the two groups (352 vs. 279 ml). The rate of conversion to open surgery wasn’t statistically significant between the two groups (4.5% vs. 3%, P=0.59) and also the overall incidence of complications wasn’t statistically significant between the two groups (61% vs. 49%, P= 0.16). There was one case of chyle ascites, in the LA group managed conservatively. Lymph node metastasis was detected in 13 out of 67 patients (19.4%).

**Conclusion:** Lymphadnectomy in the setting of robotic Nephroureterectomy for upper tract TCC can be performed safely without significantly increased perioperative morbidity.
Introduction: Partial nephrectomy is the standard of care to excise renal masses while preserving renal parenchyma. We report perioperative outcomes for robotic–assisted enucleo–resection (RALER) of renal masses, via transperitoneal and retroperitoneal approaches.

Methods: Retrospective chart review of patients who underwent RALER of a renal mass by a single surgeon (GG). Surgical approach (Trans versus Retro) was determined on a case–by–case bases, primarily dependent on tumor location (anterior versus posterior). Patient characteristics and perioperative outcomes were recorded.

Results: Between 3/2012 and 1/2014, 42 patients underwent RALER of a renal mass. Surgical approach was Trans in 21, and Retro in 21. Median follow–up was 3.83 months (IQR: 0.99–9.45). Mean radiographic mass size was 2.92cm Trans and 2.89cm Retro, p=NS. Mean RENAL nephrometry scores were 7.43 Trans and 6.86 Retro (p=NS), and the individual components did not differ between groups. Mean estimated blood loss was significantly decreased Retro (58.8mL) compared with Trans (369.8mL) (p<0.05). One Trans patient required a intraoperative blood transfusion. There were no positive margins reported in any RALER patients. The median length of stay for Retro patients was significantly lower than Trans patients, with discharge at median 1 day (IQR: 1–2) and 2 days (IQR 2–3), respectively (p<0.05).

Conclusion: RALER is a safe approach to renal mass excision that can be performed in the more familiar transperitoneal approach, or via the retroperitoneal approach which may have several advantages including decreased blood loss and decreased length of stay.
INTRODUCTION: Sacrocolpopexy is a gold standard procedure for correction of vaginal vault prolapse. In this study, we measure the forces associated with failure at the Sacral Promontory (SP).

METHODS: Sacral sutures were placed at L5–S1 and S2 at a depth and width of 2mm and 10mm in the mid–anterior longitudinal ligament (ALL) on a fresh–frozen human female cadaveric lumbosacral specimen. Suture placement was standardized only in the ALL to avoid the disc. We tested a single suture (Gore–Tex® THX 22 on a CV–2 needle) with two meshes, Vertessa™ Lite (Caldera Medical, Inc, Orem, Utah) and Mpathy® (Restorelle™, Raynham, MA). We measured pull–out force with one vs. two sutures and one vs. two passes through the mesh, as well as unfolded and folded mesh.

RESULTS: The pull–out force of the ALL varied by sacral level: Table1 shows the pull–out forces (N) for mesh–1 and 2 under the various conditions described in methods. In all scenarios at L5–S1, the mesh failed instead of the suture attachment or the ALL.

CONCLUSION: Several surgical techniques are associated with stronger sacral mesh attachment during sacrocolpopexy. This information, combined with new information regarding ALL thickness, suggests that Surgeons performing sacrocolpopexy should consider incorporating: 1) 2 passes of suture through the mesh; 2) Doubling or 2 pieces of mesh for the anterior and posterior wall; and 3) 2 sutures.
Objective: To evaluate for potential predictors of intraoperative conversion from robotic sacrocolpopexy (RSC) to open abdominal sacrocolpopexy.

Methods: We identified 83 patients from 2002 to 2012 with symptomatic high-grade post–hysterectomy vaginal vault prolapse that underwent RSC. Variables including age, comorbidities (body–mass index [BMI], hypertension, diabetes mellitus, tobacco use), prior intra–abdominal surgery and year of surgery were evaluated for potential association with conversion.

Results: Overall, 14/83 cases (17%) required conversion to an open sacrocolpopexy. Patients requiring conversion were found to have a significantly higher BMI compared to those who did not (median 30.2 kg/m² versus 25.8 kg/m²; p=0.003). Other clinical factors evaluated were similar between the cohorts. When stratified by increasing BMI, conversion remained associated with an increased BMI. That is, conversion occurred in 3.8% (1/26) of patients with BMI ≤25 kg/m², 14.7% (5/34) with BMI 25–29.9 kg/m² and 34.7% (8/23) with BMI ≥30 kg/m² (p=0.004).

Conclusions: A higher BMI was the only clinical factor associated with intra–operative conversion during robotic sacrocolpopexy. Recognition of this may aid in pre–operative counseling and surgical patient selection.
Introduction: This study presents a multi-modality, multi-institutional workshop model of urologic simulation for resident education.

Methods: Residents from five area urology training programs rotated through six simulation stations. Simulations included photovaporization of the prostate (PVP), ureteroscopic stone extraction, laparoscopic peg transfer, 3-dimensional laparoscopy rope pass, transobturator sling placement and intravesical injection. Faculty members provided teaching assistance, objective scoring and verbal feedback. Participants completed a non-validated questionnaire evaluating utility of the workshop and soliciting suggestions for improvement.

Results: Of 22 participants, 17 were residents. 16/17 residents (94%) completed the exit questionnaire. 100% had previous urologic simulation experience using the following simulators: laparoscopy (94%), robotics (81%), PVP (69%), intravesical injection (25%), ureteroscopy (19%) and pelvic floor (6%). No residents had previous experience with 3-D laparoscopy. Mean ratings of various workshop elements on a scale of 1–10 were as follows: overall course 8.4/10, faculty instruction 8.9/10, ease of simulator use 8.5/10, station time limits 8/10. The most common suggestion for course improvement was inclusion of a robotic simulator (75%). All (100%) residents viewed the lab as a beneficial educational experience and 88% felt the lab was most valuable for junior residents. However, 75% did not feel a simulation lab should be required prior to resident graduation.

Conclusions: While most trainees had used individual simulators in the past, this workshop model exposed participants to multiple simulation exercises that are not traditionally utilized in urologic training. Overall, residents view a multi-institutional workshop model of urologic simulation as a valuable training tool.
Poster #50

DISK AT RISK: SACRAL SUTURE DEPTH IN MINIMALLY INVASIVE SACROCOLPOPEXY

Edith Graham, BA1, Ahmed Akl, MD2, Linda Brubaker, MD, MS2, Colleen Fitzgerald, MD, MS2 and Elizabeth Mueller, MD, MSME2
1Loyola University Chicago Stritch School of Medicine; 2Loyola University Medical Center
Presented By: Edith Graham, BA

Introduction: During minimally invasive sacrocolpopexy (MSC), sacral sutures are placed through the anterior longitudinal ligament (ALL) at the sacral promontory (SP) despite the high chance (73%) of an underlying vertebral disc. Studies report an ALL depth of 2.2+/−0.3 mm in Scandinavians and 3.3+/−0.3 mm in African–Americans. Evidence suggests that intervertebral disc puncture can accelerate disc degeneration. Our objective was to determine the feasibility of using laparoscopic ultrasound (US) to measure sacral suture depth during MSC.

Methods: Following IRB approval, 9 patient–participants without spinal pathology underwent primary laparoscopic sacrocolpopexy. Sacral suture depth measurements were collected intra–operatively using the BK Medical 8666–RF laparoscopic ultrasound transducer positioned in the center of the needle curve and two still–frame US images were taken. Needle depth was calculated by measuring the distance from the transducer interface to the needle.

Results: Two satisfactory images were obtained in all participants who had average age of 60, average BMI of 30.03 kg/m², and 7 were Caucasian, 1 Middle Eastern, 1 Asian. Average suture depth at SP was 3.96 mm.

Conclusion: Intraoperative US is a feasible modality to measure the depth of the sacral sutures at the SP. The suture depth exceeded 2.2 mm in 8 out of 9 patients (89%). This suggests that during MSC, surgeons could puncture the intervertebral disc, placing “the disc at risk”.
Poster #51
OPTIMIZING ROBOTIC SIMULATION AND TRAINING
Scott Johnson, MD, Margaret Mulligan, PhD and Kenneth Jacobsohn, MD
Medical College of Wisconsin
Presented By: Scott Johnson, MD

Introduction: The da Vinci platforms’ Skills Simulator (DVSS) offers a set of virtual exercises that could play an important part in robotic surgery education, however, the best use of this tool has not been established. The objective of this study is to evaluate and optimize the use of the DVSS in teaching and testing for competency of a core set of robotic surgery skills.

Methods: Expert robotic surgeons were recruited to complete all 30 exercises on the DVSS. Each exercise was rated on its effectiveness in teaching and testing 12 core robotic surgery skills using a novel scoring system, rating each skill from 0−4. A mean rating of 3 or greater was indicative of a core skill being a major focus of that exercise. Agreement among surgeons was quantified by calculating intraclass correlation coefficients (ICC).

Results: Seven surgeons participated in full. Seven of the 12 core robotic skills had a mean rating of 3 or greater in at least 2 different exercises. Two particular exercises involved 5 skills with a mean rating of 3 or greater, the most among all exercises. The “Tubes” exercise tested the most skills at any level. All exercises tested at least 1 skill at a mean rating of 2 or greater.

Conclusions: This study shows certain exercises on the DVSS can be used as benchmarks in multiple areas while other exercises may be of less value in the development of a formal simulator based curriculum.
Poster #52
3D RECONSTRUCTION METHOD FOR ACCURATE AND REPRODUCIBLE SOFT TISSUE STRUCTURE VOLUME DETERMINATION
Timothy Durso, BS1, Jonathan Carnell, MD2, Robert Blackwell, MD2, Thomas Turk, MD2, Jeffrey Branch, MD2 and Gopal Gupta, MD2
1Loyola University Chicago Stritch School of Medicine; 2Loyola University Medical Center
Presented By: Timothy Durso, BS

Introduction: We evaluated the use of 3-dimensional (3D) reconstruction in determining the volume of kidneys, kidney tumors and prostates. We compared these volumes to the current methods of volume assessment and determined the inter-user reliability of our method.

Methods: Kidney and tumor volumes were assessed using 3D reconstruction, as well as other published methods, before and after surgery in 28 patients who underwent robotic assisted laparoscopic partial nephrectomy. Measures of the same quantity from each method were then compared. In addition, inter-user reliability was determined for the 3D reconstruction method. Prostate volumes were assessed before surgery in 23 patients who underwent radical prostatectomy. 3D volumes were compared with trans-rectal ultrasound (TRUS) calculated volumes and pathologic specimen weight.

Results: Cylindrical and spherical methods volumes differed widely in comparison to 3D reconstruction. For example, cylindrical volumes for the non-operative kidney before and after surgery overestimated 3D reconstruction volumes by 15-102% and 12-101%, respectively. In addition, kidney volumes obtained from 3D reconstruction displayed high inter-user reliability. 3D reconstruction prostate volumes were not different from pathologic specimen weight (p = .204). TRUS-calculated volumes underestimated pathologic specimen weight and 3D reconstruction volumes (p < .001).

Conclusions: Our method of 3D reconstruction provides a highly reliable way of assessing volumes in soft tissue structures of urologic interest. 3D reconstruction provides a more clinically useful tool for urologists looking to improve patient care using analysis related to volume.
Objective: We report the results of our series of complicated robotic-assisted laparoscopic vesicovaginal fistula repairs.

Methods: Retrospective review of 7 robotic VVF repair cases at a single academic institution from July, 2011 to July, 2013 by two surgeons. Cystoscopy and cystogram were used to evaluate outcomes on subsequent follow up visits.

Results: Fistula etiology was prior hysterectomy in 6 patients and injury during nephroureterectomy in the other. Three patients failed previous open fistula repair attempts. One patient had two fistulae. One patient required ureteral reimplantation at time of fistula repair. To date, all cases have resulted in successful repair of VVF. Mean operative time: 5 hours and 42 minutes. Average estimated blood loss: 114 mL. Hospital stay averaged 2.7 days. No intraoperative complications occurred. One patient developed hydronephrosis from sutures being placed too close to the intramural ureter. This was managed with a ureteral stent and hydronephrosis did not recur after stent removal. Foley catheter removal ranged from 27–63 days with an average of 40 days. Follow-up periods ranged from 41–158 days with an average of 94 days. One patient still has incontinence unrelated to her VVF repair.

Conclusions: Robotic-assisted approach appears to have a role in repair of complex cases of recurrent vesicovaginal fistulas. Concomitant fistula repair and reimplantation can be performed robotically. Prior failed open attempts do not preclude a robotic-assisted laparoscopic approach as a treatment platform. Larger series would be required in order to determine efficacy of this treatment modality.
VIDEOS

Video #1
REPAIR OF MEGAMEATUS WITH INTACT PREPUCE: A MODIFIED APPROACH
Elizabeth Dray, MD¹, Mark Faasse, MD² and Earl Cheng, MD²
¹Loyola University Medical Center; ²Ann & Robert H. Lurie Children’s Hospital of Chicago
Presented By: Mark Faasse, MD

This video describes our repair of a megameatus variant of hypospadias. We describe how our approach uniquely incorporates aspects of 3 contemporary techniques for repair.

Video #2
ROBOTIC−ASSISTED PARTIAL NEPHRECTOMY AFTER PREVIOUS IPSILATERAL PARTIAL NEPHRECTOMY
Richard S. Vigh, BA, BSc¹, Clinton D. Bahler, MD², Jason C. Sea, MD³ and Chandru P. Sundaram, MD²
¹Saba University School of Medicine; ²Indiana University School of Medicine; ³University of Florida
Presented By: Richard S. Vigh, BA, BSc

Robotic−assisted partial nephrectomy after previous ipsilateral partial nephrectomy is shown as a feasible surgical approach for the treatment of local recurrence of clear cell renal cell carcinoma.

Video #3
AUTOLOGOUS TRANSOBTURATOR MID−URETHRAL SLING PLACEMENT FOR FEMALE STRESS URINARY INCONTINENCE
Brian Linder, MD and Daniel Elliott, MD
Mayo Clinic
Presented By: Brian Linder, MD

We describe a novel technique in the management of female stress urinary incontinence, placement of an autologous urethral sling via transobturator approach.

Video #4
TROUBLESHOOTING ROBOT−ASSISTED RADICAL NEPHRECTOMY WITH A LEVEL I VENA CAVAL TUMOR THROMBECTOMY: CONFIRMING VASCULAR CONTROL PREVENTS COMPLICATIONS
David Y. Yang, BS, Clinton D. Bahler, MD and Chandru P. Sundaram, MD
Indiana University School of Medicine
Presented By: David Y. Yang, BS

After cross−clamping the left renal vein, suprarenal and infrarenal vena cava, the isolated vena cava segment remained distended. Further dissection found an early branch point of the right renal artery, which had not been controlled.
Video #5
EXPANDING THE KIDNEY ORGAN DONOR POOL AND REDUCING PATIENT WAIT LIST TIMES THROUGH UTILIZATION OF LIVING DONOR KIDNEYS WITH RENAL ANGIOMYOLIPOMAS.
Charles Modlin, MD, MBA1, Stuart Flechner, MD2, Ryan Mori, MD3, Ahmen A. Aboumohamed, MD2 and Mark Cassara4
1Cleveland Clinic, Section Renal Transplantation; 2Cleveland Clinic, Department Urology, Section Renal Transplantation; 3Cleveland Clinic Department Urology; 4Cleveland Clinic Organ Preservationist
Presented By: Charles Modlin, MD, MBA

Video detailing surgical techniques for utilization of living donor kidney with angiomyolipoma for living donor kidney transplantation

Video #6
ROBOTIC ASSISTED ADRENALECTOMY AND RETROPERITONEAL LYMPH NODE DISSECTION FOR METASTATIC LUNG CANCER
Matthew Tellman, Clinton Bahler, MD and Chandru Sundaram, MD
Indiana University School of Medicine
Presented By: Matthew Tellman

Robotic assisted right adrenalectomy and retroperitoneal lymph node dissection is performed in a patient with metastatic disease in the right adrenal gland with retroperitoneal extension of the tumor.

Video #7
OMITTING CORTICAL RENORRHAPHY DURING PARTIAL NEPHRECTOMY
Spencer Knapp, BS, Clinton Bahler and Chandru Sundaram, MD
Indiana University
Presented By: Clinton Bahler

We are introducing the subject of omitting cortical renorrhaphy during partial nephrectomies.

Video #8
ROBOTIC PARTIAL NEPHRECTOMY WITH INTRACORPOREAL COOLING IN PATIENTS WITH SOLITARY KIDNEY OR STAGE IV CKD
David Pridmore, MD, Sanjeev Kaul, MD and Avinash Chennamsetty, MD
Oakland University William Beaumont School of Medicine
Presented By: David Pridmore, MD

We describe a technique of renal hypothermia in patients with solitary kidneys with intracorporeal ice slush during robotic partial nephrectomy.
ANNUAL BUSINESS MEETING AGENDA

I. Call to Order: Christopher S. Cooper, MD

II. Minutes of the 2013 Annual Business Meeting: Gary J. Faerber, MD

III. Secretary Report: Gary J. Faerber, MD

IV. Treasurer Report: Gary M. Kirsh, MD

V. Historian Report: Teresa D. Beam, MD

VI. Committee Reports
   1. Audit and Budget Committee: James C. Ulchaker, MD
   2. Board of Directors Report: Gary J. Faerber, MD
   3. 2014 Local Arrangements Committee: John V. Kryger, MD
   4. Program Committee: Gary J. Faerber, MD
   5. Editorial and Awards Committee: Christopher L. Coogan, MD
   6. Health Policy Committee: Matthew T. Gettman, MD
   7. Long Range Planning Committee: Gary J. Faerber, MD
   8. Young Urologists Committee: Aaron J. Milbank, MD
   9. Bylaws Committee: Jay B. Hollander, MD
   10. Education Committee: Bradley F. Schwartz, MD

VII. Representative to the Board of Directors of the AUA: Stephen A. Nakada, MD

VIII. Future Meeting Report: Gary J. Faerber, MD

IX. Membership Committee Report and Election of New Members: Christopher S. Cooper, MD

X. Unfinished Business

XI. New Business

XII. Nominating Committee Report and Elections: Chandru P. Sundaram, MD

XIII. Introduction of Incoming President

XIV. Adjournment
MEMBERSHIP CANDIDATES AND TRANSFERS

* Application Not Complete at the time of printing
FT AUA Fast Track Application

CANDIDATES FOR MEMBERSHIP

Active
BAHLER, Clinton; Indianapolis, IN
* BENNETT, Lisete; Novelty, OH
BLICKENSDERFER, Scot; Granger, IN
BOGER, Michelle; Evansville, IN
BREWTON, Kevin; Battle Creek, MI
CHAVIN, Grant; Homewood, IL
* DOSHI, Rajen; Belleville, IL
* ESHAM, Adam; Chillicothe, OH
* GARCIA, Julia; Michigan City, IN
GILLEY, David; Jasper, IN
GIMENEZ, S.; Ann Arbor, MI
* KING, Andre; Madison, WI
LOWE, Kristn; Athens
* LOWENTHAL, Steve; Aurora, IL
* MCCORMICK, Lynne; Sault S Marie, MI
MELLON, Mathew; Indianapolis, IN
MIOCINOVIC, Ranko; Detroit, MI
MIYAMOTO, Ryan; Ada, MI
* PROPHETE, Robert; Chesterfield, MO
* SCHULTE, Ryan; Waukee, IA
SHAHROUR, Khaled; Toledo, OH
SMITH, Aaron; Pella, IA
* WILKINSON, Scott; Macomb, MI
FT BREKHUS, Michael; Rapid City, SD
FT CHESROW, Alexis; Milwaukee, WI
FT DEORAH, Sundeep; Iowa City, IA
FT EL-ZAWAHRY, Ahmed; Springfield, IL
FT GRANBERG, Candace; Rochester, MN
FT IVANCIC, Vesna; Ann Arbor, MI
FT MICHAELS, Jodi; St. Paul, MN
FT POLCARI, Anthony; St. Paul, MN
FT REBUCK, David; Chicago, IL
FT SHALHOUB, Philip; Roseville, MI
FT WEIGHT, Christopher; Minneapolis, MN
FT WEISE, Erik; Dayton, OH
Total Active: 35

Associate
* BONNELL, Alice; Toledo, OH
CARY, Kelly; Carmel, IN
* JORDAN, Michael; Marysville, OH
* KALYANARAMAN, Balaji; Minnetonka, MN
* KAVASSEERI, Kripa; University Ht, OH
MEMBERSHIP CANDIDATES & TRANSFERS

* NGUYEN, Vannhu; Green Bay, WI
NOVAK, Ryan; Grand Rapids, MN
PATEL, Amit; Chicago, IL
RICHARDS, Kyle; Madison, WI
SU, Ruthie; Madison, WI
* WHITTAM, Benjamin; Carmel, IN
FT MASSANYI, Eric; Akron, OH
FT RYBAK, James; Casyville, IL

Total Associate: 13
Grand Total Candidates for Membership: 48

MEMBERSHIP STATUS TRANSFERS – (INTERNAL)

Active
MEEKS, Joshua; Orland Park, IL
BROWN, Melissa; Aberdeen, SD
DAHM, Philipp; Minneapolis, MN
KHARE, Narendra; Chicago, IL
RAJAMAHANTY, Srinivas; Makanda, IL

Total Active: 5

Associate
GUPTA, Priyanka; Minneapolis, MN

Total Associate: 1

Senior
AHER, Vijay; Marion, IL
BARON, Thomas; Springfield, IL
CANNING, John; Willowbrook, IL
CASTILLO, Isabelo; Windermere, FL
CHOITHANI, Chanderbhan; Whitefish Bay, WI
CLUBB, Meredith; Pleasant Prairie, WI
CORCORAN, Dennis; Rockford, IL
DEVINE, Jr., Arthur; Cedar Rapids, IA
DIOKNO, Ananias; Royal Oak, MI
GADRINAB, Nelcar; Chicago, IL
GOLDSMITH, Gordon; Iowa City, IA
GOLIN, Arthur; Muskegon, MI
KAMER, Marshall; Port Huron, MI
KOMJATHY, Gabriel; Shoreview, MN
MATHEW, Mathew; Sterling, IL
MCGUIRE, Edward; Ann Arbor, MI
MEYER, James; Chanhassen, MN
MILLEMAN, Leo; Ames, IA
NASRALLAH, Phillip; Akron, OH
RAY, Jr., Paul; Chicago, IL
RICHARDS, III, William; Green Bay, WI
SENN, Richard; Indianapolis, IN
SHARER, William; Minneapolis, MN
SMITH, Carl; Minnetonka, MN
SMITH, Cornelius; Naperville, IL
### MEMBERSHIP SUMMARY REPORT
Report date: 8/21/2014

#### ACTIVE
- Active Member: 1,198
- Active Member - Fast Track: 3
- Active Member - Transfer Internal: 1
- Active Member - Transfer into Section: 4

**Total Active**: 1,206

#### AFFILIATE
- Affiliate Member: 2

**Total Affiliate**: 2

#### ASSOCIATE
- Associate Member: 87
- Associate Member - Fast Track: 1
- Associate Member - Transfer Internal: 1

**Total Associate**: 89

#### HONORARY
- Honorary: 1

**Total Honorary**: 1

#### SENIOR
- Senior Member: 489
- Senior Member - Transfer Internal: 29

**Total Senior**: 518

**GRAND TOTAL MEMBERSHIP**: 1,816
NCS 2014 PROPOSED BYLAWS CHANGES

Article IV: Committees
Section 6 – Program Committee

The Committee shall consist of the President, the President-Elect, the Chair of the Local Arrangements Committee, Chair of the Education Committee, a Resident Representative and the Secretary, who shall be Chair of the Committee, and the Secretary-Elect, if any. The Resident Representative will be appointed by the Long Range Planning Committee annually.

NORTH CENTRAL SECTION OF THE AMERICAN UROLOGICAL ASSOCIATION, INC. BYLAWS
(Amended 10/2013)

ARTICLE I
MEMBERSHIP

Section 1 – Boundaries

An applicant for membership in the North Central Section of the American Urologic Association, Inc. (the “Section”) must be a resident of, or practice in, Illinois, Indiana, Iowa, Michigan, Minnesota, North Dakota, Ohio, South Dakota or Wisconsin. Individuals who initially join the Section and then at a future date relocate to another section of the American Urological Association, Inc. (“AUA”) may retain membership in the Section.

Section 2 – Member Categories

The Section membership shall include: Active Members, Associate Members, Affiliate Members, Senior Members, Honorary Members, Corresponding Members and Candidate Members.

Section 3 – Dues, Initiation Fees, and Assessments

The fiscal year of the Section shall date from January first to December thirty-first. All members except for Senior and Honorary Members shall be assessed application fees and dues in an amount determined by the Board of Directors. Special assessments may be ordered by the Board of Directors but must be approved by a majority of the members present and voting at the Annual Business Meeting. Any member who after appropriate notification does not pay membership dues shall cease to receive Section publications and notices.

Section 4 – Voting Status and Rights

Only Active and Senior Members of the Section who are members in good standing of the AUA and AUA Education and Research, Inc. (AUA E/R) shall be eligible to vote at the Annual Meeting. Active and Senior Members who are elected to Honorary
Membership shall retain their voting status. Only voting members are eligible to hold office. All members shall be entitled to receive the latest available copy of the Articles of Incorporation, the Bylaws and the roster of membership of the Section.

Section 5 – Election/Approval of Membership

All members shall be elected at the Annual Business Meeting and must be members of the AUA and AUA E/R or have made application for membership to the AUA and AUA E/R. New members shall receive a Certificate of Membership from the Secretary and the AUA will be notified of their Section membership.

Section 6 – Active Members

Requirements for Active Members are as follows:

a) Possession of an unlimited license to practice medicine and surgery in the state, province or country of the applicant’s residence.

b) Membership in good standing in the American Urological Association, Inc. and practice within its geographical boundaries.

c) Possession of an MD or DO degree, and completion of an accredited urology residency or equivalent by the Royal College of Surgeons (“RCS”) in Canada or the Certifying Board of Urology in the country where practicing within the geographic boundaries of the AUA.

d) Limitation of practice to the specialty of Urology.

e) Certification by the American Board of Urology (“ABU”), the RCS in Canada or the Certifying Board of Urology in the country where practicing within the geographic boundaries of the AUA.

f) Recommendation for membership by two (2) voting members of the Section, except if certified within the last 24 months as provided in item (e) above.

g) Letter of recommendation from the Chief of Urology, Medical Director, or Chair of the Credentials Committee at the hospital(s) where the applicant has privileges, except if certified within the last 24 months as provided in item (e) above.

Section 7 – Senior Members

Members are eligible for Senior Membership in the Section if they have been Active Members for 25 years in either the Section or the AUA and have reached the age of 65, or 20 years as an Active Member and retired or are permanently disabled.

Section 8 – Associate Members

Requirements for Associate Membership are as follows:
a) Requirements are the same as Active Membership except for board certification.

b) Candidate Members Eligible for Fast Track Associate Status. Associate Membership will be offered to all Candidate Members who have passed the qualifying examination (Part I) of the ABU.

c) Non-Members Eligible for Associate Status. Associate Membership is available to non-member urologists who are practicing within the geographic boundaries of a chartered AUA Section, but are not certified by the ABU.

If an Active Member fails to become recertified as required by the ABU (or other certifying board), the Section will transfer the individual to Associate Member status.

If an Active Member becomes decertified by the ABU, or other certifying board, the member shall be automatically dropped for non-compliance with the Section Bylaws, pursuant to Expulsion and Reinstatement policies.

d) Transfer to Active Membership. Associate Members who have passed the ABU certifying exam (Part II) will be transferred to Active Membership in the Section.

Section 9 – Affiliate Members

Affiliate membership is available to Non-Physician Scientists and is not usually available for physicians certified by medical boards. However, in exceptional instances, persons in related fields of medicine and science, who do not qualify for other categories of Section membership, may be considered for Affiliate Membership provided they have contributed significantly to the specialty of Urology. They shall be nominated by two (2) Active or Senior Members who shall furnish the Section Board of Directors with the curricula vitae and other pertinent information.

Section 10 – Honorary Members

Scientists who have achieved outstanding prominence in a field of medicine related to Urology, Past Presidents of the Section and other distinguished urologists are eligible for Honorary Membership. Candidates must be nominated by the Immediate Past President upon recommendation of at least three (3) Active or Senior Members. They must be approved by the Board of Directors and a majority of the members present and voting at the Annual Business Meeting. Honorary Members who have been Active, Associate, or Senior Members shall retain all of their previous rights and privileges but other Honorary Members do not have voting privileges nor eligibility to Section offices and committee assignments. All Honorary Members are exempt from initiation fees, annual dues, and special assessments.

Section 11 – Corresponding Members

Corresponding Membership is available to urologists who are members of the AUA but practice in countries beyond the geographic boundaries of the AUA and wish to be a
member of the Section. The applicant shall be a member of the local or national urological organization in his or her country, and a letter of endorsement of that membership shall be submitted to the Section with the application form. If a national organization does not exist within the applicant’s country, a waiver of this requirement may be considered by the Board of Directors. The applicant’s practice must be limited entirely to the specialty of Urology. The applicant must be a graduate of an acceptable medical school who has received a Doctor of Medicine or equivalent degree. The applicant must be in practice for minimum of two (2) years after completion of residency.

**Section 12 – Candidate Members**

Candidate Membership is established to extend educational and professional advantages to urological residents. The Candidate Member must be practicing and studying within the geographic boundaries of the Section, must be enrolled in a residency program approved by the Residency Review Committee for Urology or the appropriate credentialing body in a country other than the United States and have applied for membership in the AUA and AUA E/R.

**Section 13 – Application For Membership**

Application for membership in this Section must be made on forms approved by the Board of Directors and provided by the Secretary. Qualifications for membership in each of the indicated categories shall be as stated in this Article I.

**Section 14 – Publication of Names**

The names of applicants for Active membership which have been approved by the Section Board of Directors shall be available to the membership prior to the Annual Business Meeting.

**Section 15 – Notification of Election**

Every newly elected member of the Section shall be officially notified of his or her election by the Secretary. The AUA shall also be notified of the new member’s election.

**Section 16 – Transfer of Membership**

An Active, Senior, or Associate Member in good standing of the AUA and of another Section of the AUA who moves his or her residence or practice into the territory of the Section, and who meets all membership qualifications, is automatically eligible for membership in the Section upon presentation of credentials to the Board of Directors of the Section. These credentials shall include his or her previous section records and a letter from that section’s Secretary indicating the applicant’s membership status.

**Section 17 – Resignation, Expulsion and Reinstatement**

a) **Resignation.** Any member who has complied with all the requirements of these Bylaws during the life of his or her membership may resign by written notification to the Secretary who shall officially acknowledge the receipt of the notice. The Secretary shall notify the Secretary of the AUA of such resignation.
b) **Expulsion.** Any member expelled by, or refused membership in, the AUA or AUA E/R shall immediately have his or her Section membership terminated. In addition, a member may be expelled by the Board of Directors of the Section upon conviction of a serious crime, or upon revocation, suspension or surrender of his or her license to practice medicine for reasons of improper or unethical conduct, upon withdrawal of certification by the ABU, or on other grounds stated in these Bylaws. The expulsion of a Section member shall be promptly reported to the AUA Secretary, with a statement of reasons for such expulsion.

c) **Reinstatement.** The reinstatement of suspended members to good standing in the Section shall be determined by the Board of Directors of the Section, which may recommend the reinstatement of expelled members who have been previously reinstated by the AUA; but this action must be ratified by a three-fourths vote of the members of the Section present and voting at a regular meeting.

**Section 18 – Method of Election**

Applications for all categories of membership must reach the Secretary at least seven (7) days before the Annual Business Meeting. The names of the applicants for all categories of membership will be published in the Annual Business Meeting program book or circulated at the Annual Business Meeting. Each applicant for membership who has met the requirements contained in these Bylaws shall become a member if he or she receives a majority vote of the members present and voting at the Annual Business Meeting. The names of all new members elected in the past year shall be published in the program of the Annual Meeting. The Secretary shall furnish all new members a written notification of membership, a copy of the Bylaws, and a roster of membership of the Section. Active and Honorary Members shall be furnished a Certificate of Membership.

**ARTICLE II
OFFICERS**

**Section 1 – Officers and Executive Committee**

The Officers shall be the President, the President-Elect, the Immediate Past President, the Secretary, the Secretary-Elect, the Treasurer, the Treasurer-Elect and the Historian. Each Officer shall serve without financial remuneration from the termination of the Annual Meeting at which he or she is elected until the termination of the Annual Meeting at which his or her successor has been chosen or until his or her successor has otherwise been chosen. No member shall serve more than one term in any office, provided a member can serve up to three one-year terms as Historian and a member can serve in more than one office, though not concurrently. Each Officer must be an Active or Senior Member in good standing, a resident of or practicing within the boundaries of the Section, elected by a majority vote at the Annual Business Meeting. The officers shall comprise “the Executive Committee”. The Executive Committee is empowered and may, on occasion, make policy and/or other decisions, but remain primarily advisory to the Board and Long Range Planning Committee to present issues to the Board for decisions on matters of the Section.
Section 2 – President

The term of office shall be one (1) year. The President shall be the Chief Executive Officer of the Section and shall serve as Chair of the Board of Directors and at the Scientific and Business Sessions of the Section. The President shall appoint Active or Senior Members to vacancies on all standing committees and the Chairs of the committee, as provided in these Bylaws. The President shall appoint special committees authorized by the Board of Directors or membership. All committee appointments shall be made within sixty (60) days after the Annual Meeting and reported to the Secretary for inclusion in the next Newsletter. The President may call Special Meetings of the Board of Directors. The President shall direct the attention of the Board of Directors to all matters pertaining to the interpretation of the Bylaws and to all matters of discipline of members. The President shall be a member of the Program Committee for the Annual Meeting, a member of the Finance Committee and an ex-officio member of all Standing Committees. The President shall nominate a Section member in good standing to serve on the Editorial Board of the Journal of Urology when a vacancy occurs. The President shall appoint a Parliamentarian to all meetings of the Board of Directors and Business Sessions of the Section.

Section 3 – The President-Elect

The term of office shall be one (1) year and the President-Elect shall automatically succeed the retiring President at the conclusion of the Annual Meeting at which the current President’s term of office expires. The President-Elect shall perform any duties assigned by the President and serve in his or her absence. The President-Elect shall appoint a Chair of the Local Arrangements Committee for the Annual Meeting at which he or she will preside, within sixty (60) days after assuming the office of President-Elect.

Section 4 – The Immediate Past President

The term of office shall be one (1) year or until his or her successor assumes the office.

Section 5 – The Secretary

The term of office shall be three (3) years or until his or her successor assumes the office. The Secretary shall: (a) employ, with the approval of the Board of Directors, such secretarial assistance as is necessary under the direction of the Executive Director; (b) keep accurate records of all the activities of the Section; (c) give prompt attention to all correspondence; (d) train the Secretary-Elect during the Secretary’s last year in office; (e) keep an accurate list of (1) members, (2) applicants for membership, (3) applicants recommended for membership by the Board of Directors, (4) applicants rejected and dates of rejection, (5) members suspended or expelled and dates of suspension or expulsion, (6) members reinstated and the date of same, and (7) Active or Associate members transferred to Senior, Inactive, or Honorary membership; (f) provide application blanks and receive applications for all categories of membership and shall send them to the Board of Directors for consideration; (g) give written notification to all newly elected members and furnish them with a copy of the Bylaws, one (1) roster and a certificate of membership, in the case of Active and Honorary members; (h) publish and send Newsletters; (i) send notice of the time and place of the Annual Meeting by Newsletter to all members at least six (6) months prior to the meeting; (j) arrange for meetings of the Board of Directors and send notices of all regular and special meetings to all members of the Board of Directors at least fifteen (15) days prior to the meeting, (k) keep the minutes and all records of such meetings; (l)
have charge of the arrangements for the Annual Meeting in cooperation with the Chair
of the Local Arrangements Committee and in consultation with the President; (m) shall
receive titles of abstracts and papers to be read at the Annual Meeting and present them
to the Program Committee; (n) keep accurate minutes of the Annual Business Meeting
and send one (1) copy to every member of the Board of Directors; (o) obtain the names
of all committee members for the coming year from the President within sixty (60) days
after the Annual Meeting and notify them in writing; (p) make an annual report of all his
or her activities on behalf of the Section to the Board of Directors at the Annual Business
Meeting and to members of the Section at the Annual Business Meeting; (q) report to
the Chair of the Nominating Committee sixty (60) days before the Annual Meeting
regarding vacancies which will occur in the offices of Representative and Alternative
Representative to the Board of Directors of the AUA; (r) report to the Secretary of the
AUA immediately after the Annual Meeting the names of those members elected as
Representative and Alternative Representative to the Board of Directors of the AUA; (s)
report immediately to the Secretary of the AUA the names of the members of the Section
who have been elected for membership in the Section, and (t) take such other action as
directed by the Board of Directors.

Section 6 – Secretary-Elect

The Secretary-Elect shall be elected at the Annual Business Meeting one (1) year before
the termination of the current Secretary’s term of office. The term of office shall be
one (1) year and the Secretary-Elect shall automatically become the new Secretary at
the conclusion of the Annual Meeting at which the current Secretary’s term expires.
The Secretary-Elect shall become familiar with the duties of the Secretary during the
Secretary’s final year in office. The Secretary-Elect shall attend all meetings of the Board
of Directors and the Finance Committee, and make site visits but shall not be eligible to
vote.

Section 7 – Treasurer

The term of office shall be five (5) years or until a successor assumes the office. The
Treasurer shall: (a) keep an accurate record of all assets of the Section and keep them in
the name of the Section; (b) be bonded for approximately the total amount of the assets of
the Section, bond being held by the President; (c) disburse the monies of the Section only
by the authority of the Board of Directors; (d) keep a journal, ledger, and alphabetical list
of all members indicating the state of their accounts with the Section; (e) be responsible
for the collection of all dues and assessments, both current and delinquent; (f) report
delinquent members promptly to the Secretary and to the Board of Directors; (g) have
an annual audit of the Section’s financial status prepared by a certified public accountant
and present a report of this audit to the Board of Directors and to the members of the Section
at the Annual Business Meeting; (h) recommend to the Board of Directors the
need for any special assessments; (i) be responsible for setting the budgets, subject to
approval of the Board of Directors, for the Annual Meeting and working with the Local
Arrangements Committee in monitoring expenses; (j) report annually to the Board of
Directors on the assets held by the Section, the existence of which must be verified by the
certified public accountant and the Audit and Budget Control Committee; (k) take such
other action as directed by the Board of Directors, and (l) train the Treasurer-Elect during
the Treasurer’s last year in office.
Section 8 – Treasurer-Elect

The Treasurer-Elect shall be elected at the Annual Business Meeting one (1) year before
the termination of the current Treasurer’s term of office. The term of office shall be one
(1) year and the Treasurer-Elect shall automatically become the new Treasurer at the
conclusion of the Annual Meeting at which the current Treasurer’s term of office expires.
The Treasurer-Elect shall become familiar with the duties of the Treasurer during the
Treasurer’s final year in office.

Section 9 – Historian

The term of office shall be one (1) year and is renewable for two additional terms. The
Historian shall: (a) prepare an accurate history of the Section; (b) keep records of the
Section pertinent to its history; (c) present an annual report to the Board of Directors and
to the Section at its Annual Business Meeting; (d) prepare for publication any historical
issues relative to the Section and present it to the Board of Directors; e) prepare a necrology
report and present it to the Board of Directors and members of the Section at the time
of the Annual Business meeting. Present a brief eulogy of any member who has made
outstanding contributions to Urology and a brief eulogy of any Section past president who
has died in the preceding year at the Annual Business meeting or plenary session of the
annual scientific meeting as determined by the Section Secretary. f) Present a encomium
of Section past presidents, or any member who has made outstanding contributions to
Urology, at the time of their retirement, to members of the Section during a time designated
by the Secretary at the Annual Business meeting or during the plenary sessions of the
annual scientific meeting. Funds required for the foregoing purposes shall be subject to the
approval of the Board of Directors.

Section 10 – Executive Director

The Executive Director shall be the Chief Administrative Officer of the Section and shall
report directly to the Board of Directors of which he or she shall be an ex officio, non-
voting member. The Executive Director need not be a physician nor a member of this
Section. The Executive Director shall have the full and exclusive authority to hire and
fire staff and to prescribe compensation within the framework of the approved budget.
The Executive Director shall have the authority and ultimate responsibility to carry out all
policies and programs of the Section within the framework of the budget and subject to the
direction of the officers and the Board of Directors and the Section’s committees.

Section 11 – Vacancies

Should a vacancy occur in any elected office of the Section, more than sixty (60) days
before a scheduled election, then the Executive Committee shall promptly nominate
a replacement from among the membership or the existing Board of Directors, taking
into account geographic considerations and relevant factors of experience and necessary
qualifications for the vacant position. The vacancy shall be filled at a special meeting of the
Section Board of Directors, requiring a vote of two-thirds of the entire Board, excluding
the individuals whose names have been placed in nomination.
ARTICLE III
BOARD OF DIRECTORS

Section 1 – Members of Board

The Board of Directors shall consist of the President, President-Elect, Immediate Past President, Secretary, Treasurer, Historian and one elected member from each of the following geographic units: (1) Illinois; (2) Indiana; (3) Iowa; (4) Michigan; (5) Minnesota, North Dakota, and South Dakota; (6) Ohio; and (7) Wisconsin. The Representatives to the Board of Directors of the AUA, the Secretary-Elect, the Treasurer-Elect and the Chair and the Vice-Chair of the Young Leadership Committee shall be non-voting members of the Board of Directors.

Section 2 – Term

The term of office of the geographic unit members shall be three (3) years and no retiring member of the Board of Directors shall be eligible for re-election to the Board as a representative of a geographic unit.

Section 3 – Authority and Duties

The Board of Directors shall constitute the governing Board of the Section and shall be responsible for the administration and management of the Section. The Board of Directors shall receive the reports of the standing and special committees of the Section and shall oversee all functions relating to financial management, member services, Annual Meeting, industry relations, ethics, and official publication. The Board of Directors shall employ the Executive Director whose duties, responsibilities and authority shall be as specified in Article II, Section 10 of these Bylaws. The Board of Directors shall report all actions to the membership at the Annual Business Meeting. The Board of Directors shall select the time and place of the Annual Meeting.

Section 4 – Meetings

The Board shall hold a winter meeting and a meeting concurrently with the Annual Meeting of the Section and shall hold other interim meetings at such times and places as may be established by the President or any seven (7) voting members of the Board.

Section 5 – Notice

Notice of each meeting of the Board of Directors shall be sent out by the Secretary to each member of the Board of Directors to be received at least fifteen (15) days before the date of the meeting. The matters to be discussed and voted upon at any duly called meeting of the Board of Directors shall not be limited to those set forth in the notice of such meeting.

Section 6 – Quorum

Seven (7) Directors shall constitute a quorum for transaction of business by the Board of Directors.
ARTICLE IV
COMMITTEES

Section 1 – Appointment

Active and Senior Members only are eligible for appointment to Committees of the Section. All Committees are to be appointed by the new President within sixty (60) days following the Annual Meeting. The President shall have the power also to appoint special committees for a specific purpose subject to approval by the Board of Directors. All members must be given prompt written notification by the Secretary. A roster of all Section Committees shall be published in the first Newsletter following the Annual Meeting.

Section 2 – Nominating Committee

a) The committee shall be composed of the two Immediate Past Presidents in attendance at the Annual Meeting, one member of the Board of Directors elected by the Board of Directors and four (4) or, if the Past-Past President is a non-voting member of the committee (as provided below), five (5), members selected by the geographic units other than the geographic units represented by the three (3) aforementioned other members of the Committee. The Chair shall be the most recent Past President on the committee and the Vice-Chair shall be the Past-Past President on the committee. In the event the two Immediate Past Presidents serving on the committee are from the same geographic unit, the Past-Past President shall be a non-voting member of the committee, and a total of five members shall be selected by the geographic units, as provided above, so that each geographic unit has representation on the committee.

b) Each geographic unit not represented on the committee by the Past Presidents or the member of the Board of Directors shall choose one representative to serve on the committee who has demonstrated leadership or active participation in the Section and each geographic unit and the Board of Directors shall choose one alternate representative to serve in the event its representative cannot serve or attend meetings. Each such representative shall attend all meetings of the Committee, provided if the representative cannot attend, the alternate shall attend and serve in his or her stead. In the event that neither the delegate or alternate delegate from the geographical unit is able to attend the Nominating Committee meeting, the State Representative of the Section’s Board of Directors may serve on the Nominating Committee in their stead.

c) It shall be the duty of this Committee to present to the members of the Section at the Annual Business Meeting a list of nominees for the following Section offices:

(1) President-Elect
(2) Secretary (every third year)
(3) Treasurer (every fifth year)
The Nominating Committee shall also nominate members of the Section in good standing to serve as Representatives and Alternate Representatives on the AUA Board of Directors, the AUA Nominating Committee and other AUA committees for terms specified in the AUA Bylaws. When it is the Section’s turn in the AUA rotation, the Nominating Committee shall nominate a Section member in good standing to serve as candidate for AUA President-Elect.

e) The report of the Nominating Committee shall be presented at the Annual Business meeting, and a majority of votes shall be necessary to ratify that report. No nominations for Officers, Directors, or AUA Representatives shall be accepted from the floor of the Business Meeting.

f) Should the report of the Nominating Committee be rejected, in whole or in part, by a majority of the membership voting at the Business Meeting, then the Committee shall promptly seek another acceptable candidate for each challenged position in accordance with the provisions of Article IV, Sections 2 (c) and (d) of these Bylaws. A subsequent candidate approved by the Nominating Committee shall be submitted through the mail, within 30 days thereafter, for approval by majority vote of all eligible Section members responding to that vote.

g) The following shall be the Section representatives on AUA Committees:

(1) Bylaws Committee. Chair of the Section Bylaws Committee.
(2) Membership Committee. Secretary of the Section.
Health Policy Committee. Two members of the NCS Health Policy Committee.

h) The representatives to the AUA AudioVisual Committee shall be appointed by the AUA President in consultation with the Section for a one-year term.

i) While serving as a member of this Committee, no member shall be eligible for nomination to any elective office of the Section or the AUA nor for election as a representative to the AUA provided, however, incumbents in any office shall continue for their stated term of office.

Section 3 – Membership Committee

The Committee shall consist of the Board of Directors. The Chair shall be the Immediate Past President. It shall consider applications for all categories of membership which have been filed with the Secretary. When necessary, it will make a thorough investigation of
the ethical, moral and professional standards of an applicant. The Committee shall meet annually or as often as circumstances warrant.

Section 4 – Finance Committee

The Finance Committee shall consist of the President, President-Elect, Immediate Past President, Secretary and Treasurer. The Secretary-Elect and Treasurer-Elect shall be non-voting members. The Treasurer shall be the Chair. The Finance Committee shall study and evaluate all financial affairs of the Section and make recommendations to the Board of Directors, set up a budget for the various activities and committees each year, and, on the basis of the projected budget, make recommendations to the Board of Directors regarding dues for the ensuing year. The Committee shall meet annually or as often as circumstances warrant.

Section 5 – Local Arrangements Committee

The President-Elect shall appoint the Chair of the Local Arrangements Committee for the meeting at which the President-Elect will preside within sixty (60) days after his election as President-Elect. The Chair shall be from the State within the Section which is the host for such meeting. The Chair shall have the power to appoint all Local Chairs and Committee Members. The Treasurer of the Section shall serve as the Treasurer for the meeting and shall be responsible for all of the finances of the meeting. All expenditures must be authorized in advance by the Treasurer or the Chair in accordance with the budget for the Annual Meeting. The Committee shall prepare a budget for the Annual Meeting and present it to the Board of Directors for its approval. The Committee shall make all necessary arrangements for the Annual Meeting after consultation with the President and the Secretary and report such arrangements to the Board of Directors. The Committee shall prepare a program description for the Annual Meeting Program. Additional members of the Committee shall be the Secretary and the immediate past Chairmen of the Local Arrangements Committee.

Section 6 – Program Committee

The Committee shall consist of the President, the President-Elect, the Chair of the Local Arrangements Committee, Chair of the Education Committee and the Secretary, who shall be Chair of the Committee, and the Secretary-Elect, if any. The Committee shall arrange the scientific program for the Annual Meeting and select the abstracts best suited for the program. It shall be the prerogative of the Committee to invite any guest speakers from outside the Section whom the Committee determines would contribute to the program.

Section 7 – Audit Committee

The Committee shall consist of three (3) Representatives of the Board, with 3-year staggered terms to ensure no more than one member rotates off the committee annually. The Chair will be the most senior member. The incoming members will serve one year in a training capacity before joining the committee as a voting member. Appointments are to be made by the President. The Audit Committee’s primary function is to assist the Board in the fulfilling its oversight responsibilities with respect to (1) the audit of the organization’s financial statement and records and (2) the system of internal controls that the organization
has established. The Audit Committee shall interview and select the audit company upon request. The Audit Committee reports to the Board of Directors. The Chair of the Audit Committee presents the Audit Report to the Membership at the Business Meeting.

**Section 8 – Editorial And Awards Committee**

The Committee shall consist of five (5) members and the term of office shall be five (5) years. One new member shall be appointed annually by the President and the most senior member shall be the Chair. No member of the Committee shall be eligible to receive an award granted by the Committee. The Committee may award one or more Traveling Fellowships annually, but if more than one award is to be made, approval by the Board of Directors is required. It shall make the Traveling Fellowship award to Residents or Urologists residing in the Section. Urologists who have been in practice more than five (5) years are not eligible for the award. The recipients need not be members of the Section. The Committee will judge and make awards for the named awards (Thirlby and Traveling Fellowship) and any special prizes accepted for competition by the Board of Directors. It shall instruct the Secretary to send a certificate or formal letter to each recipient stating that he or she has received this award from the Section. It shall request the recipients to give a report of their travel at the next Annual Meeting or submit a written report for publication in the Newsletter. It shall make other awards as directed by the Board of Directors.

**Section 9 – Bylaws Committee**

The Committee shall consist of three (3) Active or Senior Members and the Secretary. One member, other than the Secretary, shall be designated as Chair by the President. The term of office shall be three (3) years. Members shall be eligible for two (2) terms. The Chair of the Committee shall be a member of the Bylaws Committee of the AUA.

The Committee will adhere to the Section’s goal of complying with the Mission and Vision and Purposes of the AUA, as stated currently in Article I, Sections 1 and 2 of the AUA Bylaws, and propose Bylaws which are in accord, or not in conflict with, those of the AUA. The Chair will keep an accurate file of all correspondence to and from the members of the Committee and from the Secretary of proposed amendments by members of the Section. The Committee shall meet and review the Bylaws annually and recommend to the Board of Directors any changes that seem desirable. All proposed amendments to the Bylaws shall be submitted to the Board of Directors for consideration prior to being published in the Newsletter sixty (60) days before the Annual Meeting.

**Section 10 – Technical Exhibits Committee**

**Section 11 – Education Committee**

a) The Education Committee will evaluate educational opportunities, approaches and philosophies as they relate to the Section. Specifically, the Committee will address the content and approach of the Annual Meeting, ongoing educational issues of section members, and any concerns the members may have as they relate to urologic education within the Section. They will be advisory to the Board of Directors.

b) This Committee will meet annually, at the Annual Meeting.
c) The Committee will be comprised of a chair (selected by Board), one “at large” Board member (selected by the Board), the current year local arrangements chair, the next year’s local arrangements chair, the NCS Secretary, and the NCS Secretary-Elect. The term of the chair will be 3 years, renewable once. The other positions will rotate as their Board positions rotate. At the discretion of the Chairman, one member of the committee will report to the Board of Directors and the members of the section (Annual Business Meeting).

Section 12 – Health Policy Committee

The Committee shall consist of two representatives from each state in the Section – and where feasible, one of those representatives should live or practice in the state capital or its vicinity. The Chair of the Committee shall be appointed by the Board for a term of two years, and may be reappointed for one additional two-year term. The Chair shall be expected to attend the annual and interim meetings of the Board. The AUA Health Policy Committee Representatives shall be members of the Health Policy Committee.

Section 13 – Young Urologists Committee

The Committee shall consist of a Chair and Vice Chair, and two members less than 10 years out of residency, preferably one from private practice and one from academic practice, from the following geographic units: Illinois; Indiana; Iowa; Michigan; Minnesota, North Dakota, and South Dakota; Ohio; and Wisconsin with two year staggered terms to ensure no more than one member rotates off a geographic unit annually. Appointments to the geographic units are to be made by the President in consultation with the outgoing Young Urologists Committee member and/or the NCS Board of Directors representative of the outgoing geographic unit. The Committee itself appoints its own Chair and Vice Chair, each for a term of two years with the Vice chair ascending to the position of Chair at the end of the terms with the Young Urologist Committee approval. The Young Urologists Committee primary responsibility is to advise the Board of Directors on issues of particular concern to young urologists and addresses membership issues for young urologists. The Young Urologist Committee Chair and Vice Chair shall serve ex-officio, without vote, on the NCS Board of Directors for the duration of their terms. The Chair presents at Section Board of Directors’ meetings and is responsible for planning the young urologist segment on the annual meeting program when applicable. The Vice Chair of the Young Urologists Committee also serves as the NCS representative on the AUA Young Urologist Committee.

Section 14 – Long-Range Planning Committee

The Committee shall consist of the President, the President-Elect, the Treasurer, the immediate Past President, the Representative to the AUA, the Chair of the Young Leadership Committee, the Chair of the Education Committee, the Secretary-Elect and the Treasurer-Elect. The Secretary shall serve as the Chair of the Committee. It shall assess the Section’s activities and membership needs and make recommendations to the Board of Directors regarding policy and programs.
ARTICLE V
MEETINGS

The Annual and Special Meetings of the members shall be held at such time and place as designated by the President and the Board of Directors, subject to the provisions of these Bylaws. The President or five (5) members of the Board of Directors can call special meetings. Official notice of the Annual Meeting shall be included in a Newsletter which must reach the members at least six (6) months before the time of the meeting. Notice of Special meetings must be sent to the members at least twenty-one (21) days before such a meeting. The order of business at the Scientific Meeting shall be determined by the Secretary after consultation with the Program Committee. The members registered and eligible to vote who are present at the Annual Business Meeting and at any Special Meetings shall constitute a quorum for such meeting, and, unless otherwise specifically required by these Bylaws or applicable law, the vote of a majority of such members shall be required to approve any action at such meeting. The order of business at the Annual Meeting shall be set by the Board of Directors.

ARTICLE VI
AMENDMENTS

These Bylaws may be amended by the two-thirds (2/3) vote of the members present and voting at the Annual Business Meeting. Proposed amendments must be submitted in writing to the Secretary and referred by the Secretary to the Bylaws Committee which shall consider all proposed amendments and present their recommendations to the Board of Directors. Any proposed amendment shall be printed with the Notice of the Annual Meeting at which the action is to be taken and shall be sent to the members at least thirty (30) days before such Annual Meeting.

ARTICLE VII
RULES ON PARLIAMENTARY PROCEDURE

Sturgis Standard Code of Parliamentary Procedure, current edition, shall govern the proceedings of the Section, unless provided otherwise in the Articles of Incorporation or in these Bylaws.
IN MEMORIAM

The North Central Section honors those members who have passed away this year. We will always be thankful for their commitment to the Section and miss them dearly.

Frank B. Adney, Jr., MD
Richmond, IN

Howard R. Doerr
San Antonio, TX

Edward G. Dovey, Jr., MD
Ramrod Key, FL

Thomas J. Doyle, Jr., MD
Eau Claire, WI

Murray S. Mahlin, MD
Southfield, MI

Ramon A. Sanchez, MD
Darien, IL

John J. Sazama, MD
Chippewa Falls, WI

Harry W. Schoenberg, MD
Sedona, AZ

William T. Sheehy, MD
Elgin, IL

William C. Simon, MD
Colorado Springs, CO

Edward A. Stika, MD
Sammamish, WA

Parimal R. Vyas, MD
Toledo, OH

Gerald F. Ward, MD
Garrett, IN

*Indicates Past President
AWARD RECIPIENTS

*Indicates Deceased Member

Traveling Fellowship Recipients
2013  Florian R. Schroeck, MD, MS, Ann Arbor, MI
2012  Bruce L. Jacobs, MD, MPH, Pittsburgh, PA
2011  Sandip Prasad, MD, MPhil, Chicago, IL
2010  Cory M. Hugen, MD, San Antonio, TX
2009  Michael C. Large, MD, Chicago, IL
2008  Tullika Garg, MD, New York, NY
2007  R. Houston Thompson, MD, Byron, MN
2007  Brian R. Lane, MD, Grand Rapids, MI
2007  Brian L. Gallagher, MD, West Des Moines, IA
2006  R. Houston Thompson, MD, Byron, MN
2006  Brian Lane Gallagher, MD, West Des Moines, IA
2005  Herkanwal S. Khaira, MD, San Francisco, CA
2005  Ronney Abaza, MD, Columbus, OH
2004  Herkanwal S. Khaira, MD, San Francisco, CA
2004  David A. Anderson, MD, Springfield, MO
2003  David S. Sharp, MD, Columbus, OH
2003  David C. Miller, MD, MPH, Ann Arbor, MI
2002  Richard C. Sarle, MD, Dearborn, MI
2001  Mihir M. Desai, MD, Highland Heights, OH
2001  Fernando J. Bianco, Jr., MD, Coral Gables, FL
2000  Lee E. Ponsky, MD, Moreland Hls, OH
2000  Stephanie J. Kielb, MD, Chicago, IL
1999  Bijan Shekarriz, MD, Virginia Beach, VA
1998  Sanjay Ramakumar, MD, Tucson, AZ
1997  Steven G. Roberts, MD, Aptos, CA
1996  Jeffrey S. Palmer, MD, FACS, FAAP, Beachwood, OH
1995  Bradley P. Kropp, MD, Oklahoma City, OK
1994  Gregory D. Haselhuhn, MD, Toledo, OH
1993  Joel B. Nelson, MD, Pittsburgh, PA
1992  Earl Y. Cheng, MD, Chicago, IL
1991  Eric J. Dybal, MD, Elk Grove Village, IL
1990  Eugene D. Kwon, MD, Rochester, MN
1989  William A. See, MD, Milwaukee, WI
1988  Kevin T. McVary, MD, Chicago, IL
1987  Hugh A. Kennedy, II, MD, Hartford, CT
1986  Julie R. Spencer, MD, Chicago, IL
1985  John E. Garnett, MD, Chicago, IL
1984  Raleigh G. Humphries, MD, Greensboro, NC
1983  Michael E. Kuglitsch, MD, Columbus, WI
1982  Steven H. Selman, MD, Toledo, OH
1982  Max Maizels, MD, Chicago, IL
1981  Philip T. Hoekstra, MD, Grand Rapids, MI
1980  Jeffrey P. Bolduan, MD, Goshen, IN
1979  William E. Kolbusz, MD, Oak Brook, IL
1978  Peter C. Fisher, MD, Salt Lake City, UT
1977  Randall G. Rowland, MD, PhD, Lexington, KY
1975  John W. Timmons, Jr., MD, Gainesville, FL
1975  Reza S. Malek, MD, Rochester, MN
1974  Bageshwari P. Sirba, MD, Allen Park, MI
1974  Kalish R. Kedia, MD, Middleburg Heights, OH
1973  *Martin I. Resnick, MD, Cleveland, OH
1973  Mark S. Soloway, MD, Miami, FL
1972  Daniel S. Merrill, MD, Minneapolis, MN
1972  Mark S. Soloway, MD, Miami, FL
1971  *Martin I. Resnick, MD, Cleveland, OH
1971  Nasser Javadpour, MD, Minneapolis, MN
1970  Kenneth A. Kropp, MD, Toledo, OH
1969  *Carl V. Dreyer, MD, Minneapolis, MN
1968  Carl R. McKinley, MD, Minneapolis, MN
1968  *John P. Donohue, MD, Melbourne Beach, FL
1966  Jack W. Jaffe, MD, Shaker Heights, OH
1965  Daniel B. Gute, MD, Wellesley, MA
1964  A. Colin Markland, MD, Charleston, SC
1963  Stanley R. Levine, MD, Highwood, IL
1962  Robert A. Rehm, MD, Hilliard, OH
1961  *Charles A. Linke, MD, Rochester, NY

Thirlby Award Recipients
2013  Joel Abbott, DO, Madison Hts, MI
2012  Richard A. Memo, MD, Youngstown, OH
2011  Christopher Knoedler, Maplewood, MN, & Robert Gaertner, North Oaks, MN
2010  Herbert W. Riemenschneider, MD, Columbus, OH
2009  Ronald S. Suh, MD, Greenwood, IN
2008  Eduardo Kleer, MD, Ypsilanti, MI
2007  David S. Turk, MD, Medina, OH
2006  Serge P. Marinkovic, MD, Lafayette, LA
2006  Surendra M. Kumar, MD, Westland, MI
2005  Serge P. Marinkovic, MD, Lafayette, LA
2004  Serge P. Marinkovic, MD, Lafayette, LA
2003  Richard A. Memo, MD, Youngstown, OH
2001  Thomas J. Maatman, DO, Grand Rapids, MI
2000  Steven W. Siegel, MD, Woodbury, MN
1999  Thomas J. Maatman, DO, Grand Rapids, MI
1998  Michael G. Oefelein, MD, FACS, Tustin, CA
1997  Thomas J. Maatman, DO, Grand Rapids, MI
1996  Bruce E. Woodworth, MD, Knoxville, TN
1995  Arthur W. Devine, Jr., MD, Cedar Rapids, IA
1994  Richard A. Memo, MD, Youngstown, OH
1993  Nader Sadoughi, MD, Dana Point, CA
1992  Thomas J. Maatman, DO, Grand Rapids, MI
1991  Jerrold J. Widran, MD, Palm Desert, CA
John D. Silbar Award Recipients

2013  Clinton D. Bahler, MD, Indianapolis, IN
2012  Henry M. Rosevear, MD, Iowa City, IA
2011  Crystal Dover, MD, Madison, WI
2010  Christina B. Ching, MD, Cleveland, OH
2009  Brian L. Gallagher, MD, West Des Moines, IA
2008  David C. Arend, MD, Sioux Falls, SD
2007  Saleem S. Zafar, MD, Toledo, OH
2007  Lynn L. Woo, MD, S. Euclid, OH
2006  Curtis Crylen, MD, Greeley, CO
2005  Steven R. Mindrup, MD, Marion, IA
2004  John C. Thomas, MD, Nashville, TN
2003  Dimitri D. Kuznetsov, MD, Port Townsend, WA
2002  W. Patrick Springhart, MD, Shreveport, LA
2001  Melody A. Denson, MD, Austin, TX
2000  Courtney M.P. Hollowell, MD, Chicago, IL
1999  Steven E. Kahan, MD, Portsmouth, NH
1999  Steven E. Kahan, MD, JD, Portsmouth, NH
1998  Daniel S. Elliott, MD, Rochester, MN
1997  Sheila K. Gemar, MD, Willmar, MN
1996  Cheryl T. Lee, MD, Ann Arbor, MI
Bizarre and Interesting Case Award Recipients

2013  Megan Bing, MD, Iowa City, IA
2012  Anish Shah, MD, Cincinnati, OH
2011  David Wenzler, MD, Royal Oak, MI
2010  Zachary Q. Posey, MD, Ferndale, MI
2009  Anthony J. Polcari, MD, Chicago, IL
2008  Christina B. Ching, MD, Cleveland, OH
2007  Randy M. Chudler, MD, Sterling Heights, MI
2006  Ryan C. Hedgepeth, MD, MS, Minot, ND
2005  Matthew M. Lux, MD, San Diego, CA
2004  Mark Memo, DO, Youngstown, OH
2003  Peter C. Fisher, MD, Salt Lake City, UT
2002  Caleb P. Nelson, MD, Waban, MA
2001  W. Patrick Springhart, MD, Shreveport, LA
2000  Puneet Sindhwani, MD, MS, MBBS, MSBS, Oklahoma City, OK

Basic Science Poster Award Recipients

2013  Ishai S. Ross, MD, Detroit, MI
2013  Kristin A. Greco, MD, Maywood, IL
2012  Kristina L. Penniston, PhD, RD, Madison, WI
2012  Megan Schober, MD, PhD, Columbus, OH
2012  Devon Snow-Lisy, MD, Cleveland, OH
2011  Mitra de Cógáin, MD, Rochester, MN
2011  Nathan A. Bockholt, MD, Coralville, IA
2011  Dae Kim, MD, PhD, Chicago, IL
2011  George R. Schade, MD, Ann Arbor, MI
2010  Srinivas Vourganti, MD, Bethesda, MD
2010  Chad Reichard, BS, Chicago, IL
2010  Anthony J. Polcari, MD, Chicago, IL
2010  Kristina L. Penniston, PhD, RD, Madison, WI
2010  Eric A. Klein, MD, Cleveland, OH
2010  Robert E. Jackson, MD, Ypsilanti, MI
2008  Helen Kuo, MD, Boise, ID
2006  Brian L. Gallagher, MD, West Des Moines, IA
2005  W. Scott Webster, MD, Dallas, TX
2004  Ahmad Hesham Bani Hani, MD, Chadds Ford, PA
2003  David C. Miller, MD, MPH, Ann Arbor, MI
2002  Saleem S. Zafar, MD, Toledo, OH
2001  Louis S. Liou, MD, PhD, Cambridge, MA
2000  *Jong Myun Choe, MD, Mount Vernon, OH

Clinical Science Poster Award Recipients

2013  Thomas A. Gardner, MD, Indianapolis, IN
2013  Kenneth M. Peters, MD, Royal Oak, MI
2013  Florian R. Schroech, MD, MS, Ann Arbor, MI
2013  Miriam Hadj-Moussa, MD, Ann Arbor, MI
2013  Daniel Miller, MD, MPH, Ann Arbor, MI  
2013  Charles R. Powell, II, MD, Indianapolis, IN  
2012  Boyd R. Viers, MD, Rochester, MN  
2012  Conrad Tobert, MD, Grand Rapids, MI  
2012  Joseph Zabell, MD, Minneapolis, MN  
2012  Peter P. Stuhldreher, MD, BS, Cleveland, OH  
2012  Matthew J. Maurice, MD, Cleveland, OH  
2011  Jason Hedges, MD, PhD, Portland, OR  
2011  Simon Kim, MD, MPH, Rochester, MN  
2011  Amit Patel, MD, Westmont, IL  
2011  Sandip Prasad, MD, MPhil, Charleston, SC  
2011  Frank J. Penna, MD, Birmingham, MI  
2011  Christopher Mitchell, MD, Rochester, MN  
2010  K. Scott Coffield, MD, Temple, TX  
2010  Jeffery C. Wheat, MD, Lake Oswego, OR  
2010  Jonathan Ellison, MD, Ann Arbor, MI  
2010  Eric Umbreit, MD, Rochester, MN  
2010  Clint K. Cary, MD, Indianapolis, IN  
2010  Suzette E. Sutherland, MD, Plymouth, MN  
2008  Christopher J. Weight, MD, Rochester, MN  
2008  Khanh Pham, MD, Milwaukee, WI  
2008  Joshua J. Meeks, MD, PhD, New York, NY  
2008  Mark D. Stovsky, MD, MBA, FACS, Beachwood, OH  
2006  Curtis Crylen, MD, Greeley, CO  
2005  David S. Morris, MD, Hendersonville, TN  
2004  James A. Kontak, MD, Cleveland, OH  
2003  Peter Langenstroer, MD, Milwaukee, WI  
2002  David A. Taub, MD, MBA, Toledo, OH  
2001  Timothy L. Mulholland, MD, Mason City, IA  
2000  Bradley C. Leibovich, MD, Rochester, MN  

College Bowl/Super Bowl  
2013  Andrew C. Strine, MD, Indianapolis, IN  
2013  Gregory McLennan, MD, Royal Oak, MI  
2013  Casey A. Dauw, MD, Ann Arbor, MI  
2013  Dhruti M. Patel, MD, Cleveland, OH  
2013  Abhishek Patel, MD, Columbus, OH  
2012  Matthew R. Fulton, MD, Royal Oak, MI  
2012  Casey A. Dauw, MD, Ann Arbor, MI  
2012  Matthew Johnson, MD, MS, Columbus, OH  
2012  Devon Snow-Lisy, MD, Cleveland, OH  
2011  Robert Kohut, Jr., MD, Cleveland, OH  
2011  M. Adam Childs, MD, Rochester, MN  
2011  Aria Razmara, MD, Chicago, IL  
2011  Ken Haberman, MD, Minneapolis, MN  
2011  Kiranpreet Khurana, MD, Cleveland, OH  
2011  Tom Frye, DO, Springfield, IL  
2011  Raymond Tan, MD, Pittsford, NY  
2011  Don Bui, MD, Troy, MI  

AWARD RECIPIENTS
2011 Ariella Friedman, MD, Southfield, MI
2011 George Schade, MD, Ann Arbor, MI
2010 Kyle Kiriluk, MD, Chicago, IL
2010 Tarek Pacha, DO, Sterling Hts, MI
2010 Don T. Bui, MD, Troy, MI
2010 Ty T. Higuchi, MD, PhD, Cleveland, OH
2010 Paul R. Tonkin, MD, Milwaukee, WI

Video Award
2013 Thomas P. Frye, DO, Springfield, IL
2012 Robert M. Kohut, Jr., MD, Cleveland, OH
2011 Ken Haberman, MD, Minneapolis, MN
2010 Ronney Abaza, MD, Columbus, OH
2010 Christopher Mitchell, MD, Rochester, MN
2010 Jesse Sammon, DO, Detroit, MI
The North Central Section greatly appreciates the contributions made by the residents to the success of the annual meeting. This year 74 residents, representing 18 of the Section’s 22 residency programs, will participate in the annual meeting.

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David H. Pridmore, MD
Avinash Chennamsetty, MD
Emily Blum, MD
Matthew R. Fulton, MD

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<tr>
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<tr>
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<td>Pramod C. Sogani, MD, FACS, FRCS(C)</td>
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<td>Secretary</td>
<td>Gopal H. Badlani, MD</td>
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<td>Secretary-Elect</td>
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