The vision of Urology (Dr. Millard and Braasch) and Post graduate Medical Education

In the late 19th century, the practice of urology was in its infancy. Dr. Millard and Braasch worked to perfect the technique of electric fulguration using a probe to treat bladder disease. They later studied under Dr. Edwin Beer, who was a pioneer in diagnostic endoscopy of the genitourinary tract. Dr. Braasch then went on to establish the Cleveland Clinic, where he developed acute renal failure, which resulted in his untimely death. With this knowledge, Dr. Millet developed the first renal biopsy to identify the cause of his death. This criticism prompted an in-depth response from Dr. Gershom Thompson, who argued that urology could be considered a specialty because it required specialized training.

The Inception of Post-Graduate Medical Education (Fellowship) at the Mayo Clinic

In 1898, Dr. William Mayo, the father of Mayo Clinic, asked Dr. Donald Maclean to establish a fellowship program. The goal was to develop a cadre of surgeons who would be able to provide better care to patients. The fellowship program at Mayo Clinic was one of the first of its kind and set a standard for postgraduate medical education.

Punch (Braasch-Bumpus) Resectoscope

This innovation was developed by Dr. William E. Lower, founder of the Cleveland Clinic, to learn diagnostic and therapeutic endoscopic methodology leaving any prostatic and urogenital lesion. Dr. Braasch, a trained internist and pathologist, with operative privileges limited to the perforations, brought the concepts of listerism, (antiseptic surgery), and agreed to join the practice with operative privileges limited to the perforations.

Defending the TURP, Defining the TUR syndrome and the Division of Mayo Urology

In the 1960s, the development of the transurethral resection of the prostate (TURP) was a major milestone in the field of urology. However, it was accompanied by a high rate of complications, including TURP syndrome, which was later defined as a set of symptoms including hypotension, hypothermia, tachycardia, and metabolic acidosis. The Division of Mayo Urology helped establish urology as a separate field from General Surgery.

Accidental Discovery of Genitourinary Rado-opacity of 30% Sodium Iodide

In 1937, while working with Dr. Smith, it was Dr. Joseph Segura that eventually led the team to discover that sodium iodide was a radio-opaque substance that would allow visualization of the genitourinary system. This discovery led to the development of the intravenous pyelogram (IVP), which became the primary imaging modality for the assessment of the genitourinary tract. He published the first descriptions of the technique.

Controversy regarding urologists becoming open surgeons at the Mayo Clinic

Despite the initial offer, they returned to Dornier, hat in hand and became the first surgeons at the Mayo Clinic to perform open procedures. This led to a major controversy as the Division of Mayo Urology was having a major impact on the field of urology, and the Division of Urology was becoming one of the primary centers for the treatment of genitourinary diseases.

Excitatory Urography (Intravenous pyelography), the Department of Urology and the Mayo Clinic

The Mayo Clinic was one of the first institutions to use intravenous pyelography (IVP) for the assessment of the genitourinary tract. The technique was developed by surgeon Dr. Cowan and radiologist Dr. Culp in the 1930s. The IVP was a major advance in the field of urology, allowing for the visualization of the kidneys and ureters without the need for invasive procedures.

Division of Urology becomes Department of Urology in 1970

In 1970, the Division of Urology became the Department of Urology at Mayo Clinic Rochester, marking a major milestone in the development of the field of urology.

Innovation in the Treatment of Urinary Calculi

In the 1980s, urologists at Mayo Clinic Rochester began to use new techniques to treat urinary calculi. This led to the development of percutaneous nephrolithotomy, a procedure that became the standard of care for the treatment of kidney stones.

History of the Department of Urology Mayo Clinic Rochester

This timeline highlights the major milestones in the development of the Department of Urology at Mayo Clinic Rochester, from its founding in 1898 to the present day. It provides a comprehensive overview of the growth and evolution of the field of urology at Mayo Clinic.
data bases: Olmsted County database, Prostate, and cited papers and numerous advances in the management of benign prostatic
bases were first mined for information in 1982, they have led to > 300 peer-review
observers entering the data, and are associated with a urologist, pathologist,
found within the Olmsted county prospective data base, originated the concept of
in a prospective fashion. Dr. Horst Zincke, observing the wealth of information
records of individuals living in Olmsted County, Minnesota, with data acquired
lobbied the US government and insurance agencies to recognize organic erectile
development of the Nocturnal Penile Tumescence and Rigidity test. Together they
stackable standardized extensions), the Furlow insertion tool for placement of
relationship. These two giants, over the next two decades, would establish the
Renal and Bladder Cancer databases

History of the Department of Urology Mayo Clinic Rochester

Innovations for IPP and AUS

In 1975, Dr. George Shoskes published the first trial of a penile prosthesis. This
work at Mayo Clinic has been the foundation for the current devices.

Pushing the horizons for surgical management of advanced prostate cancer
and renal cell carcinoma

By the early 1990s, Dr. Zincke began to push the horizons for surgical
management of advanced prostate cancer and renal cell carcinoma.

Robotic Assisted Laparoscopic and Natural Orifice Surgical Techniques
(NOTES)

With the advent of the Da Vinci robotic arm, the development of NOTES,
the Department of Urology at Mayo Clinic, along with other institutions,
has been at the forefront of NOTES.

Photovapotization of prostate

Dr. Robert Dahiya performed the first photovapotization of the prostate using

Treatment of Advanced Prostate Cancer

Mayo Clinic has been at the forefront of treatment of prostate cancer.

Innovations from the Department of Urology Mayo Clinic Rochester

Published "Clinical Urology- An Atlas and Textbook of Roentgenologic Diagnosis"

Co-development with Baylor University and Mayo Clinic of MMPI testing and
assessment of cognitive function

• Development of the artificial urinary sphincter (AUS), and inflatable penile
prosthesis – 1970

• Development of the tunneled ureteral enteric re-implantation for a non-refluxing
ureter – 1918-1926

• Development of the Culp –DeWeerd spiral fl ap pyeloplasty for UPJ obstruction
– 1920-23.

• Development of radio-opaque contrast media to determine the presence of renal
obstruction

• Development of the Goepel balloon for antegrade renal pyelography

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