

# A brief history of urology at Baylor University Medical Center

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**A**lthough recognition of urology as a separate specialty or subspecialty of general surgery is relatively recent, evidence of many diseases and even some surgical procedures dating to ancient times have been discovered, diseases that later came under the purview of urology. Bladder stones have been found in Egyptian mummies dating to several millennia BCE, and the rite of circumcision is thought to have been practiced in Egypt as early as 4000 BCE (Figure 1). Ritual circumcision on the eighth day of life was practiced by the ancient Hebrews as evidence of God's covenant with Abraham, a story related in Genesis 17: 10–14. A more elegant artistic portrayal of this ancient rite may be seen in Rembrandt's etching of the circumcision of Christ, a copy of which is included in the Karen G. and Dr. Elgin W. Ware, Jr., collection of prints and drawings at the University of Texas in Austin.

The Oath of Hippocrates dating to the fifth century BCE includes the following provision: "I will not cut, even for the stone, but will leave such procedures to the practitioners of that craft." The practitioners referred to by Hippocrates tended to be concerned primarily with bladder stones, which are known to have been common in the Middle Ages and the Renaissance. These stones, which were probably due to dietary deficiencies and bladder outlet obstruction, were usually found in men.

At the end of the pre-Christian era, ancient Hindu surgeons attempted to remove bladder stones through a suprapubic incision, but the operation lapsed until 1556 when Pierre Franco successfully performed this procedure on a child. Two centuries

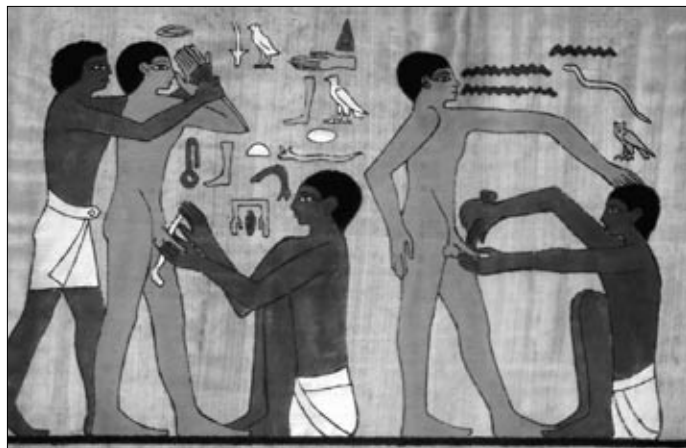


Figure 1. Circumcision as practiced in early Egypt. Photo © Christine Osborne/CORBIS.



Figure 2. Surgeons renowned for removing bladder stones: (a) Jacques Beaulieu, also known as Frere Jacques (1651–1714) and (b) Jean Civiale (1792–1867). Photos reprinted from Bush RB, Bush IM, Javadpour N, Landes RR, Wilkey JL. *One Hundred Famous Names in Urology*. Northridge, Calif: Riker Laboratories, 1973.

later, the preferred approach was through the perineum, and several surgeons attained prominence as itinerant lithotomists by virtue of having attained a certain proficiency in this procedure. One French lithotomist known as Frere Jacques (Figure 2a) was said to have performed this procedure in 45 seconds, a record for all time, but it remained for the eminent English surgeon William Cheselden to perfect this approach in the 19th century. The great English diarist Samuel Pepys underwent this operation with outstanding success, relating that he not only was relieved of symptoms but subsequently attained a reputation for sexual prowess, which he attributed to the procedure. The term "lithotomy position" is derived from the perineal approach to the bladder.

The procedure for crushing a bladder stone is known as lithotrity, contrasted to the open lithotomy, the proverbial "cutting for the stone." The first lithotrity was performed in 1824 by Jean Civiale in France (Figure 2b). Another harbinger of the

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**Figure 3.** A servant brings a patient's urine to the physician for visual analysis, called "water casting." Photo © William A. Bake/CORBIS.

later development of urology as a specialty was the practice of "water casting," which involved diagnosing a variety of diseases by the simple expedient of observing the patient's urine in a flask; these practitioners were known as uroscopists or water casters (Figure 3).

These and other steps in the evolution of urology as a specialty were forerunners of a number of developments in the 19th century, developments that marked the beginning of a separation from the discipline of general surgery, although the two remained closely associated. In addition, urology was closely associated with dermatology, and for several decades in the early 20th century *The Urologic and Cutaneous Review* was recognized as a reputable medical journal. One of the first dedicated urologists in this country, Dr. Edward L. Keyes, Sr., began his career as a professor of dermatology. Dr. Keyes was organizer and first president of the American Association of Genito-Urinary Surgeons in 1888. He is remembered for having said of Dr. Hugh Hampton Young, a later urology great and authority on prostate diseases, that "the prostate makes most men old, but it made Hugh Hampton Young."

Perhaps one thing that contributed to the splitting off of urology from general surgery was the development of the cystoscope in the 19th century. Beginning in 1807, a number of instruments were devised to peer into body cavities, but it was not until 1877 that Max Nitze (Figure 4), in collaboration with an instrument maker in Dresden, fabricated the first cystoscope. The cystoscope, particularly the Nitze system, was improved during the ensuing years; it was only after the invention of the incandescent lamp by Thomas Edison in 1880 and subsequent miniaturization that an instrument similar to that used today was developed.

Recognition of urology as a separate specialty took a giant step forward with the organization of the American Urological Association (AUA) in 1902, with Dr. Ramon Guiteras as the first president. Since its organization, the AUA has become the standard-bearer of American urology; its publication, *The Journal of Urology*, was begun in 1917. Today, the AUA is a preeminent organization in American medicine, involved in undergraduate education and research as well as socioeconomic and political affairs.

The first 2 decades of the 20th century were closely identified with a colorful figure in the person of Dr. Hugh Hampton Young



**Figure 4.** Max Nitze (1848–1906). Photo reprinted from Bush RB, Bush IM, Javadpour N, Landes RR, Wilkey JL. *One Hundred Famous Names in Urology*. Northridge, Calif: Riker Laboratories, 1973.

**Figure 5.** Hugh Hampton Young, father of modern American urology. Photo reprinted from Bush RB, Bush IM, Javadpour N, Landes RR, Wilkey JL. *One Hundred Famous Names in Urology*. Northridge, Calif: Riker Laboratories, 1973.



(Figure 5). Dr. Young was referred to by some as the "father of American urology." Originally from San Antonio, Texas, Dr. Young obtained his bachelor's, master's, and medical degrees from the University of Virginia. He then began a residency in urology under William Stewart Halsted in 1896. In 1897, Dr. Halsted asked him to head the Department of Genito-Urinary Surgery at Johns Hopkins, and Dr. Young spent the remainder of his long and productive life there until his death in 1945. Others who contributed to the specialty lived during this period, including Drs. Bransford Lewis, F. E. B. Foley, Thomas Kirwin, Charles Huggins, Edwin Beer, William Braasch, Henry Bugbee, Frank Hinman, Herman Kretschmer, George Cahill, and many others.

#### LEADERS IN UROLOGY AT BAYLOR

"If I see further than other men, it is because I stand on the shoulders of giants." —SIR ISAAC NEWTON

Urology as a specialty at Baylor Hospital, later to be known as Baylor University Hospital and Baylor University Medical Center, became recognized during and shortly after the end of World War I. From 1910 to 1920, 4 names were associated with the practice of genitourinary diseases at Baylor: Drs. John Henry Dean, John Graham Pascall, Frank B. Morgan, and J. T. Colwick. In addition, Drs. A. R. Super and Van Cookerly began their practices in urology about the same time.

About 1920, a dynamic individual appeared on the scene and became the dominant figure in urology for more than 2 decades. Dr. Alfred Iverson Folsom, the son of a physician, was born in 1883 in McGregor, a small town in central Texas. He was orphaned at an early age and subsequently moved to Waxahachie to live with an uncle. He received a bachelor's degree from Southwestern University in Georgetown and a degree in medicine from Southwestern Medical College in Dallas, not to be confused with the present-day University of Texas Southwestern Medical School. About 1912, he became attracted to the new field of urology. Although he had no formal training as we know it today, he became a frequent visitor at the Mayo Clinic, where he studied under such eminent urologists as William F. Braasch,



**Figure 6.** Dr. Alfred I. Folsom (second from the left) leaving a meeting of the South Central Section of the American Urological Association the day before his death. Photo reprinted from Spence HM. *History of the South Central Section of the American Urological Association, Inc*, 1981.

a pioneer in endoscopy and pyelography. In 1920, he became the first physician on the Baylor staff to restrict his practice to urology. He was named assistant professor of urology at Baylor University College of Medicine in 1920. In 1923, he became professor of urology and urologist in chief at both Baylor and Parkland Hospitals, posts he held until his death in 1946. In addition to his busy practice and numerous organizational duties, he founded the first urological residency in Texas in 1938 at the old Parkland Hospital. He was a founder of the American Board of Urology in 1935 and was president-elect of the AUA at the time of his death in an automobile accident in 1946 (Figure 6).

Around this same time and following his return from the army, Dr. Jo C. Alexander, a native of Garland, Texas, established an office in Dallas largely devoted to the treatment of venereal diseases. Also during this period, Dr. George Raworth Williams, a native West Texan, graduated from Columbia University College of Physicians and Surgeons in 1920. In 1923, he became the first individual with formal training in urology to enter practice in Dallas. In addition to an active practice, Dr. Williams attained prominence as a polo player, having a 3-goal handicap and being one of the relatively few left-handed players. His death occurred from a cardiovascular event or a fall from his pony. About this same time, the term urology began to supplant the older designation of genitourinary disease.

Soon afterward, 2 other physicians were added to the urology staff at Baylor, Drs. Rex Van Duzen and Edward White, both of whom carried on active practices until the 1950s. In 1923, Drs. Howard Lee Cecile and Paul Matthews joined the Baylor staff. They, along with Dr. Williams, were thought to be the first to have formal training in urology.

During the late 1920s and throughout the 1930s, a number of urologists were added to the Baylor staff, physicians with varying degrees of formal training in the specialty. Dr. Karl Bowen King began practice in the early 1930s and later became associated with Dr. Alexander. Dr. Ralph Smith entered practice about the same time, although he later worked primarily at the Veterans Hospital in Lisbon. Both these physicians performed meritorious service as naval medical officers in the Pacific Theater in World

War II. Both attained the rank of captain, with Dr. Smith ending the war as senior medical officer in charge of a naval hospital and Dr. King as senior medical officer on an aircraft carrier. Dr. King and Dr. Alexander had formed a partnership in 1936, an association that was resumed when Dr. King returned from the navy in 1945 and lasted until his death in 1969. Dr. Alexander died in 1976.

In the mid 1930s, 2 physicians who trained at outstanding centers entered practice in Dallas and attained prominence after World War II: Dr. Harold A. O'Brien, a native of Wisconsin who trained under Dr. Ira Sisk at the University of Wisconsin, and Dr. Harry M. Spence, a native of San Angelo, Texas, and a graduate of Harvard Medical College who trained under Dr. George Gilbert Smith at the Massachusetts General Hospital.

Dr. O'Brien came to Dallas in 1932 to become associated with the Dallas Medical and Surgical Clinic and in 1936 joined in partnership with Dr. Folsom. After Dr. Folsom's death in 1946, Dr. O'Brien formed a partnership with Dr. Joseph Mitchell and was later joined by Dr. Vincent Vermooten and later still by Dr. Ben Schnitzer, who continues an active practice at Baylor. Dr. O'Brien was chief of the urology service from 1947 to 1965. He was president of the Dallas County Medical Society and president of the South Central Section of the AUA in 1955. He also served on the Dallas City Council. Dr. O'Brien was particularly interested in transurethral resection of the prostate and became noted for his proficiency in this procedure.

Other active members of the urology staff during the 1930s were Drs. Sydney Baird and John Pace. Dr. Baird was in partnership with Dr. Spence at the Dallas Medical and Surgical Clinic. Dr. Pace, who had offices in the Medical Arts Building, trained at the Mayo Clinic; he was noted for his use of the cold punch technique for transurethral resection of the prostate.

Undoubtedly, the leading figure in urology at Baylor after the death of Dr. Folsom was Dr. Harry Spence. Harry Metcalf Spence was born in San Angelo, Texas, one of twins. He liked to refer to Sissy, the other twin who was born 20 minutes before him, as his older sister. He did undergraduate work at the University of Illinois in Champaign-Urbana and received his medical degree from the Harvard Medical School. He then trained at the Massachusetts General Hospital, where he met and later married an MGH nurse, Lois Ames, from Aroostook County, Maine. He also had training at Brigham and Women's Hospital in Boston. He initially established practice in Ponca City, Oklahoma, where he wrote his first paper on gonorrhea in the male. After coming to Dallas in 1936, Dr. Spence joined the staff of the Dallas Medical and Surgical Clinic, where he was associated with Dr. Sydney Baird until Dr. Baird's death in 1969.

Dr. Spence served in the US Navy during World War II and had a distinguished record in the South Pacific. On his return in 1945, he rejoined Dr. Baird in practice and rather quickly became the acknowledged preeminent figure in Dallas urology. He was recognized internationally for his work in this field and was a member of every prestigious urologic organization, including some abroad. He was an avid traveler and an avid sailor. This writer spent many happy hours on boats with Harry in Switzerland, England, the West Indies, Maine, and on Chesapeake Bay (Figure 7). We owned several boats together and enjoyed many happy times on small freshwater lakes in the Dallas area.



**Figure 7.** Drs. Spence and Ware preparing for a race.

Dr. Spence was dedicated to education and the further development of the urology residency program at Parkland and Southwestern Medical School, where he was professor emeritus at the time of his death. He was head of what he liked to call “the Spence era,” and his contributions included the establishment of working and teaching rounds for students and residents at Parkland and a weekly grand rounds for the entire urology staff at the medical school; this continues to the present. Dr. Spence was chief of the urology service at Baylor from 1966 to 1970. He was a past president of the South Central Section of the AUA and was a regent of the American College of Surgeons. He was noted for his outstanding technical excellence in addition to his interest in education.

After World War II, the urology service at Baylor began to receive increasing recognition, and this was inevitably accompanied by a significant increase in the number of patients as well as staff members. Prominent additions to the staff were Drs. Joseph Mitchell, Ken Mooney, Eugene St. Martin, John Collins, W. Lesley Bush, Rhodes Mustain, Foster Fuqua, and Charles Fromm. Later, Drs. David Reisman, Mel Kadesky, Arthur Shannon, Elgin Ware, John Denman, Bill Hoffman, Ben Schnitzer, Terry Allen, Myron Fine, George Hurt, and Richard Dulaney joined the staff; more recently, Drs. Eugene Todd, Troy Scott, Don Johnson, Scott Coffield, Phillip Riley, and Mike Goldstein joined. A number of these physicians are now deceased, and several others now practice elsewhere. Finally, the most recent additions to the urology staff are Drs. Steve Frost, Key Stage, Robert Schoenvogel, Keith Newman, John Ware, Josh Fine, and David Ewalt.

It has been my privilege to have lived through this history and to have known most of the members of the urology staff, beginning with Dr. Folsom. Each helped create one of the outstanding departments in the country.

The chiefs of service were as follows: Dr. Alfred Folsom, 1923–1946; Dr. H. A. O’Brien, 1947–1965; Dr. Harry Spence, 1966–1970; Dr. Foster Fuqua, 1971–1977; Dr. William W. Hoffman, 1977–1985; Dr. Elgin W. Ware, Jr., 1986–1987; Dr. Ben Schnitzer, 1987–1996; Dr. Michael Goldstein, 1997–2000; and Dr. Myron G. Fine, 2001–present (*Figure 8*).

## THE FACILITIES

Recognition of urology at Baylor as a distinct entity began during the Folsom years, when designated wards or divisions were set apart for use by the urology staff members and their



**Figure 8.** Chiefs of urology at Baylor Hospital, Baylor University Hospital, and Baylor University Medical Center. Top row: Drs. Alfred Folsom, H. A. O’Brien, Harry Spence. Middle row: Drs. Foster Fuqua, William W. Hoffman, Elgin W. Ware, Jr. Bottom row: Drs. Ben Schnitzer, Michael Goldstein, Myron G. Fine.

patients. About 60 years ago, when the main hospital in the Baylor complex was the Minnie B. Veal building, a 20- or 30-bed ward was located in a fourth-floor area toward the west end of the building. This ward, division 4A, was set aside for (and usually filled with) patients of Dr. Folsom, who was chief of service. The remaining staff members vied for patient beds on division 3A, one floor beneath.

Dr. Folsom’s ward was presided over by a male nurse, Pat Patterson, who had, early on and perhaps by nature, adopted many of his boss’s authoritarian mannerisms and methods of operation. One of his established customs was to administer a daily enema to every patient on the ward, whether needed or not. At least once, this practice resulted in rupture of the colon; nevertheless, it apparently was continued.

As Baylor continued to grow, the urology ward was moved to division 2Y of the Veal building; this occurred after Dr. Folsom’s death in 1946. In those days, open drainage systems were utilized with inlying catheters. This provided easy mobility for the patient, as it was no problem to pick up the drainage bottle and go traipsing down the hall. It was common to see a number of patients gathered in a sunny lounge area on the division, sitting in a semicircle, each with his bottle set in front of him, and discussing world affairs or perhaps comparing notes concerning their operations. Following construction of the Truett building, urology was moved to the fourth floor of Truett Hospital, and as Baylor continued to expand, urology was moved to the seventh floor of the Hoblitzelle building and finally to the twelfth floor of Roberts Hospital, where it is today.

There were no recovery rooms in those days, and patients were brought directly back to their room after surgery. Frequent

mishaps occurred in the immediate postoperative period, and bleeding and occluded catheters were not uncommon in post-prostatectomy patients. Several urology technicians made their living serving as special nurses for these patients, sometimes caring for as many as 3 or 4 patients at a time; they became expert at adjusting and irrigating catheters. Most prominent and steadfast of these were Carlos Soria, Louis Bright, and Cecil Croomes, and when one of them would call to report excessive bleeding several hours after surgery, the attending physician rarely contradicted the technician's judgment in deciding to return the patient to the operating room.

During this writer's internship (1946–1947), the hospital, including the operating rooms, was not air-conditioned. Because of the summer heat, all windows were properly screened but otherwise left open, with dust from the street occasionally being seen infiltrating through the screens. Homage to the concept of laminar airflow was paid by using oscillating fans in the operating rooms, both on a table and on the floor. The operating space allotted for cystoscopy and transurethral resection was a double room with one operating table at each end, separated by a sheet hanging from the ceiling. Conversations and activities could be easily heard throughout the room. When Dr. O'Brien, an old associate of Dr. Folsom, and Dr. Vermooten, who was briefly associated with Dr. O'Brien after Dr. Folsom's death but who had parted company on somewhat unfriendly terms, would be working at the same time in this awkward room, many sarcastic remarks could be heard on both sides of the dividing sheet.

The development and improvement of the urology service began to accelerate after World War II, keeping pace with the rapid development of newer techniques for diagnosis and treatment of urologic diseases generally, and these were combined with major growth in all departments of the Baylor complex. The addition of the Hoblitzelle Hospital and subsequently the Jonsson Hospital greatly enhanced the number of patient beds available as well as much-needed additional space for ancillary services, including hospital-based specialties such as radiology and hematology. Urology as a Baylor service was always quick to take advantage of the newer diagnostic modalities such as sonography, computed tomography, and magnetic resonance imaging, in addition to newer methods of treatment, including endoscopic techniques, lithotripsy, and, most recently, laparoscopic surgery. With its alert and forward-looking staff and the ready and ever-present cooperation of the hospital administration, the Baylor urology service has become recognized as one of the best in the country and bodes well to continue this tradition of excellence in the future.

## EDUCATION

Close association of the urology service at Baylor with recognized medical schools, first Baylor University College of Medicine and later Southwestern Medical School, dates to the early years of the 20th century. In 1920, Baylor University College of Medicine and the Texas Baptist Memorial Sanitarium (renamed Baylor Hospital that year) were joined by having a single board of trustees in Dallas. Much of the interest in medical education at Baylor dates to Dr. Folsom. As noted previously, Dr. Folsom started the first residency program in urology in Texas. By 2000,

it had become one of the preeminent teaching centers in the country, partly due (in early years at least) to the clinical faculty composed of private practitioners, or "town men," many of whom were and are members of the Baylor urology staff. During post-World War II years, some thought was given to establishing a full-time accredited residency in urology at Baylor, but it never materialized; Dr. Spence felt that there should be only one teaching center in the metroplex under a single chief but utilizing other hospitals as well as Parkland. Thus, through the years, residents from Parkland have rotated through the Baylor service for a 3- or 4-month period at least twice during their training. This arrangement has been mutually advantageous to Baylor and the residency program.

Prior to this arrangement, there were a few organized and regularly scheduled intern and general surgery rotations, and an early attempt was made to establish a system similar to that at present. Dr. Enrique Garazo, a native of Spain and urology resident at Parkland from 1956 to 1958, was the first resident to be assigned to Baylor for a 6-month rotation. This concept subsequently languished until Dr. Paul Peters became chief of service at Parkland and the present system of rotation of Parkland residents through the Baylor service was instituted.

Three physicians who established practices in countries that did not require formal certification from established residency programs trained at Baylor under the auspices of the Baylor staff. These were Drs. Guillermo Ramos Ochoa (1957–1959), Juakin Baeza Del Monte (1959–1961), and Roy Fanconi (1963–1964). Drs. Ramos and Baeza returned to Mexico to establish successful practices in Guadalajara, and Dr. Fanconi became a medical missionary to Africa. He later practiced psychiatry in Dallas.

The Baylor service continues to enjoy a cordial working and teaching relationship with the teaching faculty and administration at Southwestern Medical School and Parkland Hospital.

## RESEARCH

In 1998, with the instigation and financial help of a private patient at Baylor and with the additional financial backing of the Baylor and Seeger Foundations, the Baylor Urologic Research Institute was established. Dr. Mike Goldstein was chief of service at the time, and the patient, who was under his care, intended to make Baylor one of the preeminent urology centers in the country, with an active research program. The large patient base at Baylor provides ample material for clinical research, and manuscripts on topics such as the retrospective evaluation of results and treatment for prostate cancer have already been prepared in collaboration with faculty members at Southwestern Medical School. Investigations of such disparate things as the efficiency of antibody-coated catheters and a cost comparison for different methods of treating urinary tract calculi have either been completed or are under way. The service is cooperating with Dr. Jacques Banchereau on projects involving basic concepts in cancer research. Such endeavors receive the wholehearted and enthusiastic support of all the urology staff members, both as a group and as individuals. With this forward-looking attitude coupled with hard work, a spirit of collegiality, and the full support of the hospital administration, the future of urology at Baylor seems assured.