

changing landscape was reflected in medical textbooks with a focus on Robbins Pathology and Campbell's Urology.

**METHODS:** Landmark articles on renal neoplasia available in PubMed were evaluated. Textbooks including Robbins Pathology, Campbell's Urology, and other popular texts were reviewed for the incorporation of scientific discoveries.

**RESULTS:** A timeline of discoveries is presented in Figure 1. Information in medical textbooks lagged scientific discoveries. Case reports of renal tumors were described in the 1800s, yet in the textbook "Pathology and Morbid Anatomy" (1889), "carcinomata" of the kidney are absent. In 1926, "Young's Practice of Urology" states, "...the greatest uncertainty reigns as to the histogenesis of these tumors, and competent pathologists have described them as sarcoma, hypernephroma, angiosarcoma, endothelioma, and carcinoma". The original term "hypernephroma" (1894) designated these tumors as adrenal in origin, a theory rejected in a scientific literature review published in 1936. The 1st edition of Campbell (1954) and Robbins (1957) question but do not completely reject the adrenal origin theory. Electron microscopy definitively proved renal cell origin in 1959. In 1976, papillary renal cell carcinoma (RCC) was recognized as a separate entity from clear cell RCC. Campbell separates out "papillary adenocarcinoma" from "classic hypernephroma" in 1979. In 1984 Robbins recognized that most tumors were "clear cell" and associated with VHL. Campbell first mentioned VHL in 1992. Pathologic-based classification occurred in both texts in the late 1990s; Robbins specifying clear cell, papillary, and chromophobe as subtypes, and Campbell using chromophobe, adenocarcinoma NOS (clear/granular), and collecting duct carcinoma. Campbell finally abandoned "hypernephroma" completely in the 10th edition (2011), citing the 2004 WHO, which classified RCC as a group of different tumor subtypes based on molecular studies.

**CONCLUSIONS:** Histology, immunohistochemistry, and molecular techniques revolutionized our understanding of renal tumors. As we continue this journey, Dr. Young's comment holds true; competent pathologists will continue to describe renal tumors under many different names.

penises in an effort for penile enlargement. Since then, penile enhancement practices have continued to evolve. The first human adipose tissue transfer was attempted by Neuber in 1893. Then, in 1959 Sahwny et al. described the use of dermal grafts for penile girth enhancement (Figure 1). The use of an allograft dermal matrix graft (AlloDerm®) for penile girth procedures was introduced in 2004. Reported complications include: infection, fibrosis, and skin loss. Concurrently in 2004, the silicone penile implant known as Penuma® (now termed Himplant™) was developed by Dr. James Elist in an effort to increase flaccid penile length and girth. In 2018, it became the first FDA-approved penile enlargement implant. Since then, thousands of patients have undergone implant placement and reported complications include device erosion, flaring, infection, fibrosis, and seroma formation. Penile injections offer a less invasive approach to penile girth enhancement. Human fat injections were first described by Dimitrije E. Panfilov in 1996. Since its first description in the 1940s, silicone penile injections have been performed with accounts of severely disfiguring granulomatous reactions. In 2005, Kim et. al. reported the use of hyaluronic acid fillers for glans penis augmentation in 187 men. By 2015, Dr. Paul Perito introduced the use of hyaluronic acid fillers (Urofil™) for penile enhancement in 121 men with 71.4% patient satisfaction and low complication rates.

**CONCLUSIONS:** There is a long-standing cross-cultural history of penile enhancement procedures. Future research endeavors should focus on the development of techniques that lead to low complication rates and improved patient satisfaction.

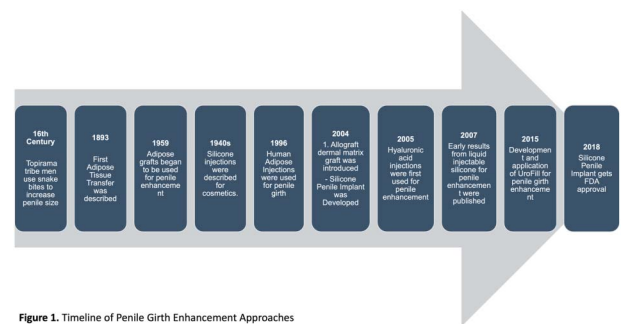


Figure 1. Timeline of Penile Girth Enhancement Approaches

Source of Funding: None

## HF01-14

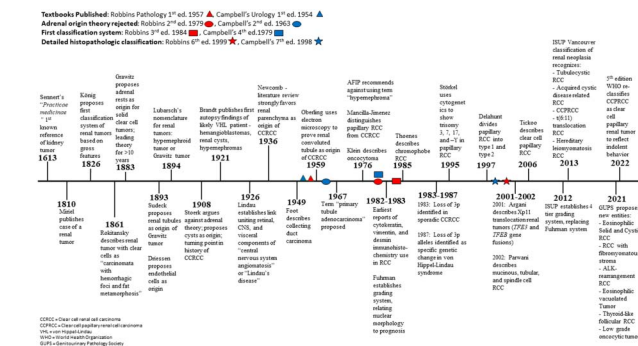
### HISTORY OF PRIAPISM TREATMENT IN THE 20TH CENTURY

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**INTRODUCTION AND OBJECTIVE:** Priapism, defined as a prolonged erection in the absence of sexual arousal, leads to decreased quality of life, physical health, and increased erectile dysfunction. The modern priapism treatments of vasoconstriction and cavernous aspiration stem from strides made throughout the last century. As a result, we seek to chronicle the history of priapism treatment throughout the 20th century.

**METHODS:** We reviewed over two dozen academic articles and medical textbooks from 1872 to 1990 with relevant information on priapism treatment.

**RESULTS:** In the 19th century, treatment of priapism solely involved symptomatic management with morphine and medicinal leeches. In 1928, Dr. Robert McKay and Dr. John Colston discovered that a thrombotic condition is sufficient to sustain an erection and that removing clots from the penis is sufficient to alleviate the erection. They recommended the newly-discovered anticoagulant heparin as a potential remedy. Dr. Rita Franklin then established in 1940 a positive association between testosterone propionate levels and priapism in eunuchoid men. Priapism therapies improved exponentially beginning in the late 1950s. Dr. H. Stephen Brody conducted the first successful penile aspiration in



Source of Funding: None

## HF01-13

### GO BIG OR GO HOME: THE HISTORY OF PENILE GIRTH AUGMENTATION

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**INTRODUCTION AND OBJECTIVE:** Penile appearance is a source of anxiety among men and has led to the development of diverse penile enhancement approaches. The goal of this study was to examine the history of penile girth enhancement procedures.

**METHODS:** Peer-reviewed literature in PubMed and EMBASE as well as medical practice webpages offering penile enhancement were examined to describe the history of penile girth enhancement.

**RESULTS:** There are multiple cross-cultural accounts of penile enhancement throughout history. The Cholomec tribe from Peru used stones as weights to increase penile length. In the 16<sup>th</sup> century, the Topirama tribe of Brazil allowed poisonous snakes to bite their