UNIVERSITY OF FLORIDA

College of Medicine
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January 4, 2005

Sheila K. Dickison, Ph. D.
Associate Provost
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CAMPUS

Dear Sheila:

The College of Medicine departmental chairmen unanimously approved the creation of a Department of Urology at their October 21, 2004 Executive Committee meeting. A description of the new department is enclosed for your review. The description includes the justification for the new department along with the proposed organizational structure and faculty transfers. All increased costs of creating the department will be borne by the clinical earnings of the College and no additional state dollars are required.

As per our earlier conversation, I would be pleased if this proposal could be placed on the agenda for the January 2005 meeting of the University Curriculum Committee.

Sincerely,

C. Craig Tisher, M. D.
Dean, College of Medicine
Folke H. Peterson/Dean's Distinguished Professor

CCT/hcb

Proposal to Create a Department of Urology at the University of Florida College of Medicine

Introduction

Since the inception of the College of Medicine at the University of Florida in 1956, the discipline of urology has been organized as a division within the Department of Surgery. As the College has grown in faculty numbers to over 1100, growth of urology has remained rather stagnant and today this discipline has just five individuals. Despite its modest size, the urology unit is highly regarded as exemplified by the most recent U.S. News and World Report ranking at #22 in the top fifty urology programs in the country.

Maintaining a quality program that has focused primarily on clinical care delivery and education has been a difficult struggle in recent years because of the inability to recruit and retain urologists interested in an academic career to replace several faculty who have retired. Further, because of the limited number of available personnel, there has been little opportunity to offer newer treatments or expanded service to our patient population to maintain the quality of the program it has enjoyed over several decades.

Mission Statement

The department will have as its mission the evaluation and treatment of patients with health problems that afflict the genitourinary system. An integral part of the program will be to provide education for urologists of the future, medical students, residents and fellows. The department will provide outstanding care based on evidence-based medicine. There will be significant emphasis on research, both clinical and translational. It is through investigation that we will develop the treatments that will help our aging population of baby boomers lead more productive lives.

Justification

Moving to departmental status will put Urology on the same footing as other top urology programs in the United States. As noted by consultant John McConnell, M. D., in his letter to former Dean Berns in the year 2001, "Duke is the only top 20 Urology Program in the country that is a Division."

In the last two years there has been significant difficulty with recruiting needed faculty. Approximately 60% of academic urology programs are currently searching for faculty. In some subspecialty areas, most notably Pediatric Urology, there is a significant shortage

of candidates. As of October 2004, there were 40 open slots and just 15 individuals seeking jobs. Candidates interviewing at the University of Florida have repeatedly stated their preference to join a department rather than a division, thus placing our institution at a major disadvantage as we seek additional highly qualified faculty interested in an academic career in urology.

During the past 20 years there have been paradigm shifts in the way patients with diseases that afflict the genitourinary tract are treated. As a result the need to provide new, more complicated and technically demanding therapies has increased to keep pace with these paradigm shifts. In many instances significant subspecialization in urology is necessary which translates into faculty growth to maintain a high quality clinical and educational program. Below are listed a few examples of the profound changes that have impacted the care of patients with urologic diseases.

The care of patients with urolithiasis has shifted from open to minimally invasive procedures such as extracorporeal shockwave lithotripsy, ureteroscopy, and percutaneous nephrolithotomy. Benign prostatic hyperplasia (BPH or benign enlargement of the prostate) is now often treated with medications or minimally invasive procedures other than TURP (transurethral resection of the prostate). Erectile dysfunction treatment has expanded to include the five phosphodiesterase inhibitors (e.g., Viagra, Levitra, and Cialis), the Vacuum Erection Device (VED) and intracavernosal penile injections. No longer is a penile prosthesis the only alternative.

In the last decade laparoscopy has come to play a major role in the removal of kidneys (nephrectomy). In addition, we now have a more in depth understanding of the genetic etiology of some renal cancers.

Leadership

The College of Medicine will conduct a national search to identify a nationally prominent leader in urology to chair the proposed department with the anticipation that the individual will commence his or her activities on or before the fall term of 2005.

Commitments by the College of Medicine

The College of Medicine has committed resources to permit the initial recruitment of 6-8 new faculty members and approximately 10 support staff. It is anticipated that the new chair will recruit established and emerging leaders in their areas of expertise who can independently develop and conduct cutting-edge clinical programs and thus support both the clinical and educational needs of the department. The appointments will range from assistant to full professor levels depending on recruitment opportunities. Most will be recruited within a two to three year time frame from the creation of the department. The College has identified approximately 4,000 sq. ft. of office space in the Stetson Medical Sciences Building to house this department. Additional space will be identified as the department grows.

Organizational Structure

The structure of the department will parallel other departments in the College of Medicine. It will include nine divisions and an administrative core.

1) Endourology and stones
2) Female urology, including voiding dysfunction, reconstructive urology & trauma
3) Geriatric urology
4) Infertility
5) Sexual dysfunction
6) Men's health and general urology
7) Minimally invasive surgery, laparoscopy and robotics
8) Pediatric urology
9) Oncology

Focus Areas

1. *Endourology & Stone Disease*. In the early 1980's, a major shift occurred in the management of stone disease. Extracorporeal shockwave lithotripsy, percutaneous nephrolithotomy, and ureteroscopy were born during this time interval. No longer is it necessary, in most circumstances, to have a 12-inch incision made on one's flank to remove a 5-millimeter stone. This technology has served patients well in decreasing the pain associated with stone removal and making it possible for patients to return to their usual activities in a more timely fashion.

UF has long been a referral center for patients with complex stone problems. Many urologists in private practice refer these cases. Historically, Florida has also had a significant research group with an interest in stone disease.

2. *Female Urology, Voiding Dysfunction, Reconstructive Urology & Trauma*. This subspecialty includes treatment of both males and females who have problems with voiding dysfunction, disorders of pelvic floor support (dropped bladder, uterus, and rectum), spinal cord injury, urethral stricture, and those individuals who require complex pelvic reconstruction of the urethra, vagina, and bladder (e.g. continent diversion or neobladder). With the new Level I Trauma Center there is a noticeable increase in GU trauma cases.

There are many areas for potential collaboration. There are clinical and research opportunities for liaisons with the Brain Institute, Neurology, Gynecology, Shands Rehabilitation Hospital and the new Department of Aging & Geriatric Research. It is estimated that 15-20% of the population aged 60 and over suffer from urinary incontinence . The prevalence of this problem increases with advancing age. Florida's population is about 17 million. The Department of Elder Affairs for the state estimates that about 25% of Florida inhabitants are age 60 and older. With our institutional priorities in neuroscience and aging, there are significant funding opportunities for a clinically-based urologist with training in incontinence and neurourology. In fact,

diabetic neuropathy and Parkinson's disease, which are common causes of bladder dysfunction, are high priorities of the NIH.

3. *Geriatric Urology*. The advent of the new Department of Aging and Geriatric Research at UF will provide many opportunities for urology. There is an obvious overlap of Geriatric Urology with other subspecialty areas. There are a number of problems that become more prevalent in the aging population. Those include incontinence, nocturia, urinary tract infections, diseases affecting the prostate, GU malignancy, end-stage renal disease, patients with multiple co-morbidities associated with genitourinary problems, and sexual dysfunction (both men and women). These areas are relatively unexplored scientifically from the urologic standpoint.

4-5. *Infertility and Sexual Dysfunction*. Infertility: Evaluation and treatment of infertility often focuses on in-vitro fertilization. However, there are several areas in which evaluation and/or treatment of the male member of the couple are appropriate. Male Sexual Dysfunction: There are various definitions of erectile dysfunction (ED). According to the NIH an estimated 15-20 million men experience chronic ED. The incidence of ED increases with age affecting approximately 15-25% of men age 65. Approximately 70% of chronic ED problems are related to diabetes, kidney disease, alcoholism and atherosclerosis. In patients with diabetes, 35-50% of men experience ED. Psychological factors account for another 10-20%. Female Sexual Dysfunction: This is a poorly understood and largely unexplored area of medicine. A handful of centers including UCLA and Boston University are beginning to explore the psychosocial and physiological causes of female sexual dysfunction.

6. *Men's Health and General Urology*. There are a number of maladies which do not necessarily fall within a specific subspecialty area of urology. Examples would include patients needing evaluation for hematuria, urinary tract infection, cystitis, prostatitis, patients requesting a vasectomy, and patients wishing to have a general GU exam. As another example, many men choose to come to a urologist for an annual prostate "check-up".

7. *Minimally Invasive Surgery and Laparoscopy*. In the early 1990's laparoscopic nephrectomy was introduced. This procedure has evolved to a point where 90-95% of all nephrectomies can be performed laparoscopically. This includes laparoscopic donor nephrectomy. A similar phenomenon has occurred with the managementof adrenal masses (laparoscopic adrenalectomy) and the treatment of uretero-pelvic junction obstruction (laparoscopic pyeloplasty).

Thus, the field of laparoscopy in urology is growing rapidly. Included in this area are purely laparoscopic techniques and those that involve robotics, with the da Vinci robot being the primary technology in use today. Laparoscopic techniques are utilized in adult and pediatric urology. Most notably, laparoscopy is being used to a greater extent in the treatment of genito-urinary cancers every day.

8. *Pediatric Urology*. Urology at UF was fortunate to have Dr. Dixon Walker as a premier pediatric urologist for 30 years. Dixon is currently seeing patients two days a month in an effort to maintain a part of our patient base. At this point, there has been a shift in referral patterns as there are currently pediatric urologists in Jacksonville, Tampa, and Orlando. With the strong base of pediatricians and pediatric sub-specialties at UF there is clearly a need for a Division of Pediatric Urology. It will take some time to re-build the pediatric practice for urology.

9. *Oncology*. Based on information from the State Tumor Registry (the Florida Cancer Data System), in 1997 approximately 99,000 new cases of cancer were diagnosed. In terms of diagnosed cases, Florida ranks 3rd in the nation. Among men, prostate cancer is the most commonly diagnosed tumor accounting for about a third of all cases. Lung cancer (20%) and colo-rectal cancer (12%) are the next most common. Bladder cancer ranks 4th (7.2%) and kidney cancer ranks 8th (2.7%). In Florida women, breast cancer is most common (30%), while bladder and kidney cancer account for 2.75% and 1.8% of cases respectively.

Oncology is an obvious area of focus for urology considering the incidence and genito-urinary cancers in the Florida population and the strong support in our College with the cancer center. It is essential that we develop a strong presence in prostate cancer to support the institutional effort to become an NCI-designated Comprehensive Cancer Center.

There are a variety of treatments available for prostate cancer including radical prostatectomy, external beam radiation therapy, proton beam therapy (soon to be available in Jacksonville), palladium seed implantation, cryosurgery, hormonal manipulation, chemotherapy, and watchful waiting. The newest entry in the surgical armamentarium is laparoscopic radical prostatectomy. This procedure can be done using a purely laparoscopic approach or with the da Vinci robot. Current data strongly suggest that outcomes with laparoscopic prostatectomy are compable to open radical prostatectomy. Patient demand for laparoscopic prostatectomy, particularly using a robot, is increasing. In fact, we have patients frequently calling to inquire whether this technique is offered at UF. At the present time we do *not* offer this modality.

Private practice urologists in Ocala, Tampa, and Orlando now offer robotic laparoscopic prostatectomy. The number of robotic laparoscopic prostatectomies performed throughout the world is increasing steadily from 800 in 2002, to 2700 in 2003, to over 6000 in 2004. The rapidly increasing number of robotic laparoscopic prostatectomies throughout the world and including Florida has significant implications for urology at the University of Florida. UF urology *must* offer laparoscopic prostatectomy. The technique offers many opportunities for investigation. In addition, patients are much more knowledgeable than they were 10-15 years ago. Patients now call our clinic requesting laparoscopic radical prostatectomy. When told that we do not offer the procedure, they choose to go elsewhere.

UROLOGY MANPOWER SUMMARY

Faculty Complement

Subspecialty	Current	Hire in 0-1 yrs	Hire in 0-2 yrs	Hire in 2-4 yrs
Endourology – Lap	1.5	(1)	0	0
Endourology (Stone) Ph. D.	0	.5	0	.5
Female & Reconstructive	0	0	1	1
General Urology	0	0	0	1
Oncology – General	1	1	0	0
Oncology – Min. Invasive	0	(1)	0	0
Oncology – Ph. D.	0	0	1	1
Pediatric Urology	0	1	0	1
Ph. D. – TBA	0	0	0	1
Sexual Dysfunction & Infertility	.5	0	0	1
VAH	2	0	1	0
Secondary Providers (PA or ARNP)*	0	2	1	1
Totals	5 MD 0 Ph D 0 PA/ARNP	8 MD .5 Ph D 2 PA/ARNP	10 MD .5 Ph D 3 PA/ARNP	14 MD 3 Ph D 4 PA

*With the change to an 80-hour work week for residents and the requirement for more extensive documentation, there is a clear need for secondary providers to help manage the increasing volume of patients and paperwork. This includes patient care in the clinic and in the hospital setting.

Research

The research efforts in the department should mesh with efforts in the cancer center to move toward an NCI-designated Cancer Center. There should be significant involvement in clinical and translational research programs. Abundant opportunities are also present for collaboration with basic scientists in the Brain Institute and in a variety of clinical specialties (see below).

Collaboration Between Specialties

There are many opportunities for collaboration between specialties at UF. Natural areas for collaboration involving patient care, clinical research and translational research include the following:

Specialty/Area	*Common Areas of Interest*
Brain Institute	Erectile Dysfunction Neurogenic Bladder Parkinson's Disease Spinal Cord Injury
Cancer Center	Development of an NCI-designated Cancer Center Prostate Cancer Bladder & Urothelial Cancer Kidney Cancer Testicular Cancer
Endocrinology	Adrenal Masses Diabetes Mellitus Erectile Dysfunction
Hematology – Oncology – Adult	All GU Cancers Clinical Trials
Hematology – Oncology – Pediatric	All Pediatric GU Cancers Clinical Trials
Nephrology – Adult	Adrenal Masses End-Stage Renal Disease Hypertension Stones Transplantation

Nephrology – Pediatric	Congenital Anomalies End-Stage Renal Disease Stones Transplantation
Pediatric – General	Congenital Anomalies
Pediatric Surgery	Congenital Anomalies
OB/GYN	Female Urology or Uro-Gynecology Infertility
Pathology	Basic Stone Research General GU Pathology
Psychiatry – Psychology	Erectile Dysfunction
Radiology	GU Tract Imaging Minimally Invasive Access (Interventional Radiology)
Radiation Oncology	All GU Cancers

Education

Currently, urology has a 5-year residency program with 10 total residents. There are plans to add an additional residency slot each year (for a total of three per year). Urology will have capacity for at least two clinical fellows (one in oncology and one in minimally invasive surgery). Additionally, our education program will be expanded to include greater involvement in the medical school curriculum.

The creation of a department will enhance the ability to improve our educational program. As an example, historically, residents have learned to perform a procedure by operating on patients. It is anticipated that urologic surgeons of the future will learn basic skills needed to master a surgical procedure through the use of simulators or trainers in much the same way that pilots learn to fly by using flight simulators. Simulators must be tested and validated with respect to their effectiveness in teaching specific skills. Thus, in addition to serving as a training tool, there is great opportunity for investigation in this area.

During the next 2-3 years, urology must incorporate the competencies outlined by the Residency Review Committee (RRC) into our training program. This will require added educational support. Currently a one-third FTE support staff is devoted to the residency program. It is anticipated that this will become a fulltime position.

Issues Related to Existing Faculty and Ongoing Activities

Currently there are five faculty and three staff in the Division of Urology within the Department of Surgery. These individuals will relocate to the new department. The current faculty and the division chief, Dr Robert Newman, have unanimously endorsed the move to department status and have contributed significantly to the proposed structure of the unit. The chairman of the Department of Surgery, Dr. Cance, is also fully supportive of creating a department separate from surgery.