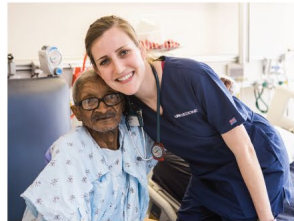


SURGEONS ARE MADE!

Thomas Chi, MD, MBA, FACS

Anton J. Bueschen, MD, Endowed Professor and Chair of Urology
UAB Department of Urology

UAB MEDICINE.



Disclosures

- Boston Scientific: Advisor
- BD Bard: Consultant
- Cool: Consultant
- Auris Medical: Advisor
- Perceus: Founder
- Medtech: Consultant
- Lumenis: Consultant
- Alnylam: Consultant
- Vibronix: Consultant
- Mendaera: Consultant
- Applaud, Sonomotion, BSC: grant recipient

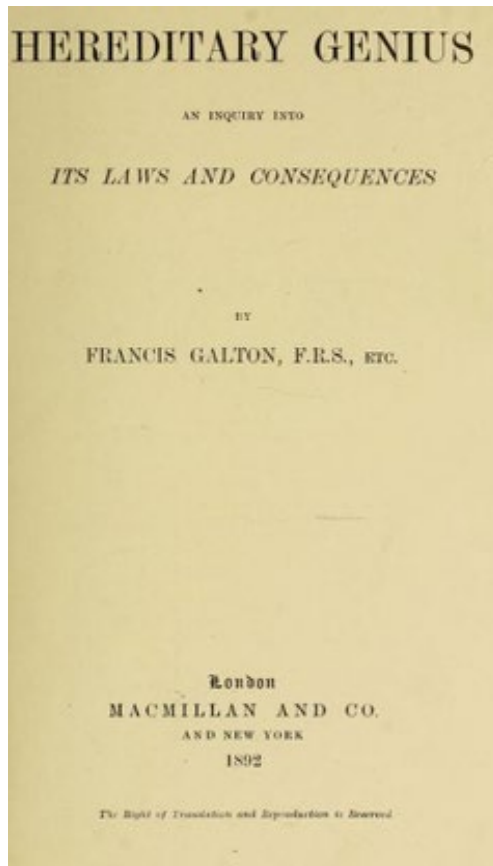
Overview

Educational Theory

Outcomes Data

Empirical Data

What Are We Building



THE TRAINING OF THE SURGEON

BY JASPER HALPENNY, M.A., M.D., F.A.C.S.

Winnipeg

THE available knowledge relating to medicine has now reached such great proportions, no one human mind can encompass it all. Of necessity, specialties have sprung up. Of these specialties, surgery was one of the first to appear, and the range covered is one of the largest as well in the breadth of matter as in the number of patients. And it might be interjected here, that after all the whole science of medicine exists for the patient. In other words, the patient stands pre-eminent.

As to surgery, surgeons are made, not born. The making process we call education. Education should commence when the child begins to use its hands. It should be taught to use both hands equally well, as nearly as possible. As it grows, it should have its reasoning power developed, its ability to observe and record its observations, and its mechanical ability should be encouraged.

Pre-medical training is not yet settled. Should the prospective medical student take a degree in arts? One can scarcely agree that the experience of McGill Medical School is the experience elsewhere. Dr. Adami, speaking on behalf of McGill, and addressing the medical students of Toronto University in 1910, said: "At McGill we have noted as a common occurrence that the frequent B.A.'s amongst our students—of course, there are brilliant exceptions—do but poorly in their first two or three years under us. . . as a rule in their final years these men get into their pace again and do excellently. . . . But all the same, I believe they have wasted roughly a year of their student life."

The experience elsewhere is preponderantly in favour of a degree in arts when possible. And if a degree in arts, what is the best course to take? The popular idea is in favour of the natural sciences. One cannot help but think that a course in philosophy would be preferable, providing as it does a grounding in reasoning.

Read at the Hamilton Medical Week, May, 1918.

Cross Domain Evidence Supports Surgeons Being Made



Cross Domain Evidence Supports Surgeons Being Made



Repetitive Skills Training Improves performance

RESEARCH ARTICLE

Open Access

The benefit of repetitive skills training and frequency of expert feedback in the early acquisition of procedural skills

Hans Martin Bosse¹, Jonathan Mohr², Beate Buss², Markus Krautter³, Peter Weyrich⁴, Wolfgang Herzog², Jana Jünger² and Christoph Nikendei^{2*}

Table 4 Task-specific clinical skill performance and global procedural performance

Task-specific clinical skill performance (binary checklists)

	High-frequency feedback group (HFF group) N = 23	Low-frequency feedback group (LFF group) N = 24	p-value ¹
Peyton's step 4 (T1)	91.06 ± 7.48	91.42 ± 9.14	.851
Final, 6th repetition (T2)	99.22 ± 2.25	96.04 ± 4.96	.093
p value ¹	<.001	<.001	

Global procedural performance (global rating)

	High-frequency feedback group (HFF group) N = 23	Low-frequency feedback group (LFF group) N = 24	p-value ²
Peyton's step 4 (T1)	5.31 ± 0.50	5.30 ± .64	.941
Final, 6th repetition (T2)	5.95 ± 0.07	5.65 ± .48	<.004
p value ³	<.001	.002	

Simulation Training Improves Surgical Skills

Transfer of Skills From Simulation Lab to Surgical Services: Impact of a Decade Long Laparoscopic Urology Surgical Course



TABLE 2. Data on Challenges in Dissemination of Laparoscopic Surgery Following Skill Training Courses

Questionnaires	Responses
Main reasons for not pursuing laparoscopic surgery	Interest in other subspecialty during training Facilities not available Cancer work centralised Job prospects in the region
Challenges in establishing service following training in laparoscopic surgery	Equipment and infrastructure issues Number of cases needed to overcome learning curve Peer encouragement and training Mentorship availability Centralization of services Helpful management
Importance of local/distant mentor (1-5)	4.5
How important is laparoscopic skills for every trainee? (1-5)	4
Should laparoscopic surgery skills be offered at undergraduate level?	5
Importance of surgical skill courses (1-5)	5

Mohammad Hassan Khan, MBBS, FRCS (urol),*[†] M.Z. Aslam, FRCS (Urol),[†] A. McNeill, FRCS (Urol),[‡] B. Tang, PhD,[§] and G. Nabi, MS, MD, MCh, FRCS (Urol)[†]



Some may never get to competence



■ ANNOTATION

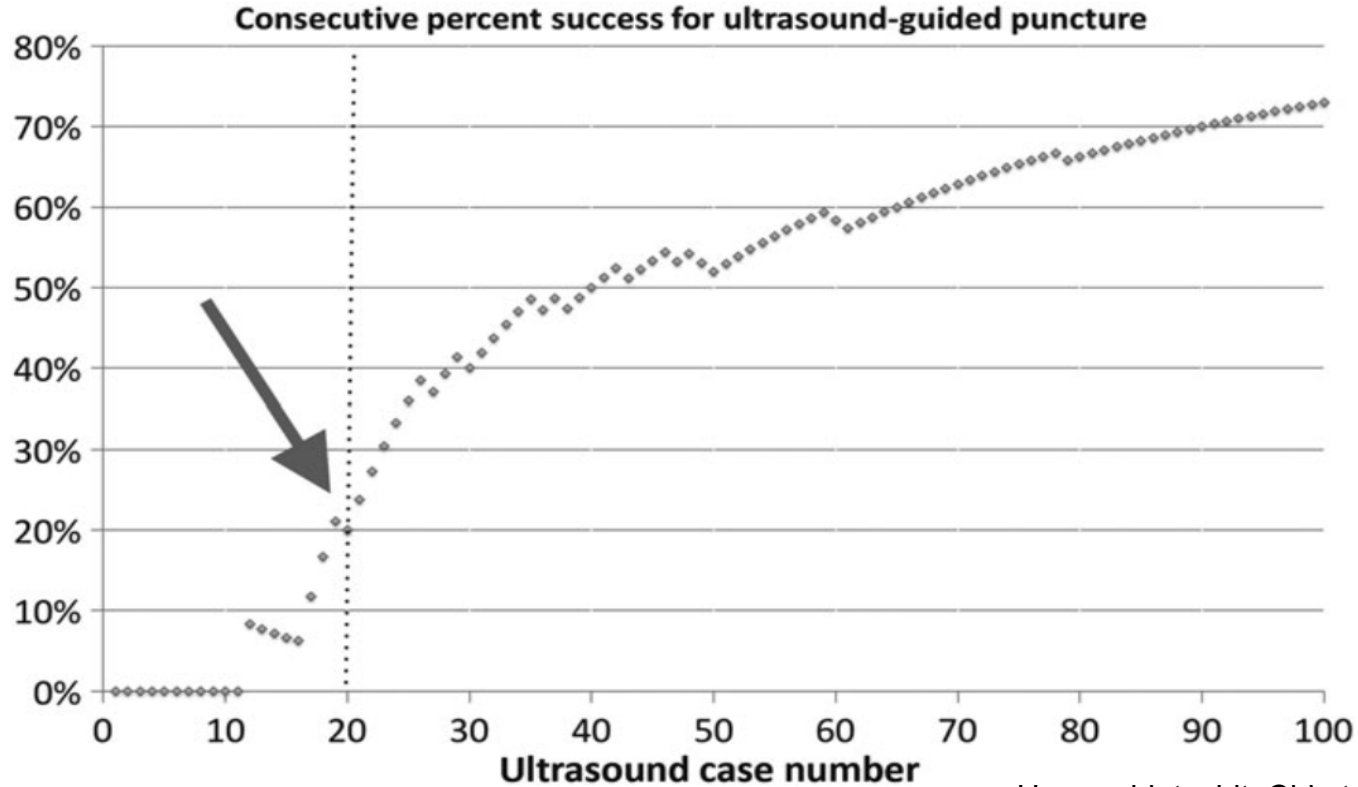
Identifying orthopaedic surgeons of the future

THE INABILITY OF SOME MEDICAL STUDENTS TO ACHIEVE COMPETENCE IN BASIC ARTHROSCOPIC TASKS DESPITE TRAINING: A RANDOMISED STUDY

Table III. Performance based on the ability to stabilise the learning curve within 20 episodes, i.e. reached competence

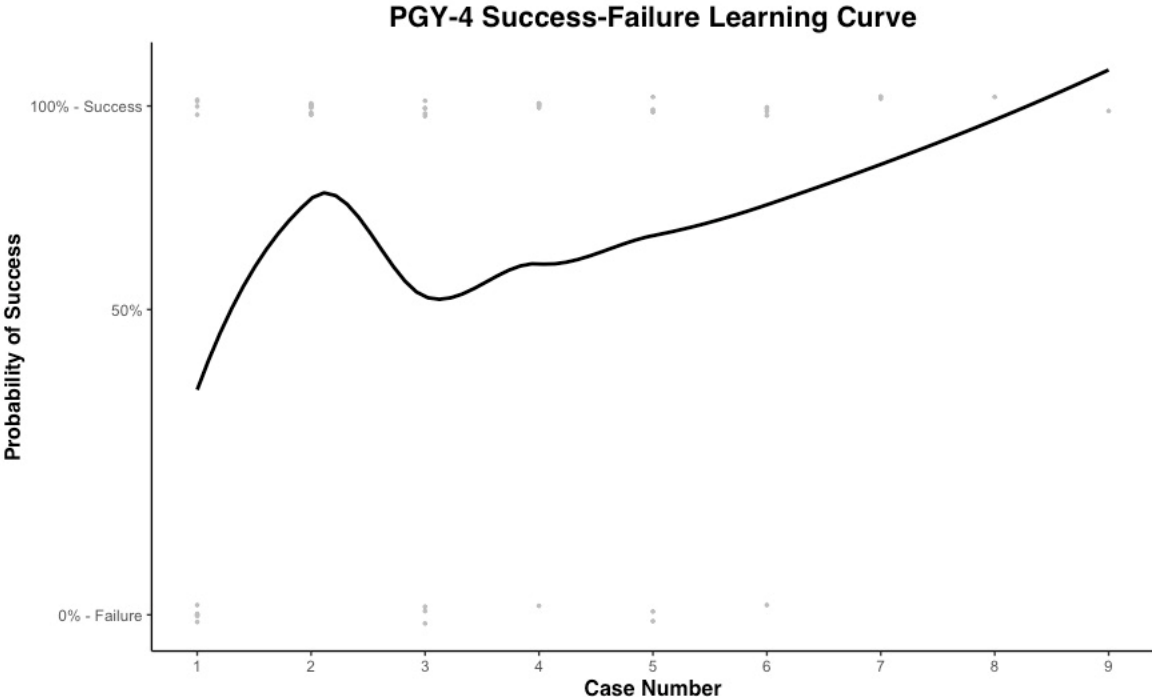
Task	Training status	Subjects who stabilised learning curve	Subjects who could not stabilise learning curve	Significance
Shoulder	Untrained (n = 17)	11	6	p = 0.041
	Trained (n = 16)	15	1	
Knee	Untrained (n = 17)	15	2	p = 0.948
	Trained (n = 16)	14	2	

Committed Teachers are Critical for Making Surgeons



Usawachintachit, Chi et al, J Endo 2016

Structured training can shorten learning curves





Empirical Data: Two urologists started in the same place and made themselves into different surgeons



January 12, 2026 / [Florida - Local](#)

Cleveland Clinic Florida Names Chad R. Ritch, M.D., Chair of the Division of Urology

In his new role, Dr. Ritch will lead efforts to expand clinical excellence, enhance resident education, foster innovation, and strengthen academic and research initiatives across Cleveland Clinic's Florida market



USF Health-University of South Florida

July 7, 2022 · 🌐

USF Health Morsani College of Medicine's Department of Urology, led by Dr. Rafael Carrion, is proud to announce the appointment of two vice chairs.

Dr. Trushar Patel, a leading expert in robotic surgery and urologic oncology, has been named the Vice Chair of Clinical Operations of Urology.

Who can spot the difference?



Urology Residency Program

Urology Residency Overview

Residency Program
Current Residents
Teaching Affiliates

Overview



The USF Health Urology Residency Program is a three resident per year, five-year training program. Our residents gain a wealth of experience by rotating at five unique sites: Tampa General Hospital, James A. Haley Veterans Hospital, Moffitt Cancer Center, Advent Hospital Tampa, and the Arnold Palmer Children's Hospital Orlando under the guidance of a diverse and caring faculty.

Our mission is to train the next generation of the most accomplished and caring Urologic Surgeons. We offer a robust and diverse volume of cases, world class simulation opportunities at the CAMLS Center, and exceptional hands on mentoring.

- We follow the **AGIA Urology Core Curriculum**.
- Please review the **Resident Handbook** to learn more.

Fellowship Programs



Overview

The University of South Florida (USF) Health Morsani College of Medicine Department of Urology offers advanced fellowship training programs designed to prepare physicians for successful careers as subspecialty experts, educators, and leaders in academic medicine. Our fellowships provide a comprehensive educational experience that integrates clinical excellence, surgical innovation, and scholarly activity. Currently, the Department of Urology offers a Sexual Medicine Fellowship Program, with an Endourology Fellowship Program in development and anticipated to begin accepting applicants in 2025.

Fellowship Programs

Sexual Medicine Fellowship Program

This fellowship covers the field of Men's Health including genitology and sexual medicine, male factor infertility and male incontinence. In addition, exposure to urologic reconstructive surgery is available depending on the fellow's interest with a uROUS board attending on staff. Under the direction of Dr. Caron, the fellowship involves training via a multidisciplinary approach to the medical and surgical management of men and women with sexual dysfunction, men with infertility and andropause conditions, and covers in-depth prostatic surgery as well as surgical techniques for the treatment of male factor infertility and Peyronie's Disease, and surgery for complex male incontinence.

Program Highlights

- Multidisciplinary Training:** Focused on medical and surgical management of sexual dysfunction, infertility, Peyronie's Disease, prostatic urology, and complex male incontinence.
- Surgical Rotations:** Fellows gain full autonomy in the operating room, with opportunities to lead and teach residents under the expert guidance of faculty.
- Unlimited Privileges:** Fellows hold full privileges at Tampa General Hospital, Moffitt Ambulatory Surgery Center, and James A. Haley Veterans Hospital, where they can independently perform and assist.

- Academic Engagement:** As USF Health faculty, fellows actively participate in resident education, weekly conferences, journal clubs, and grand rounds.
- Call Responsibilities:** Fellows share call with department faculty.

Training Programs Believe That Cognitive And Non-technical Skills Are Trainable

Department of Urology

HEERSINK SCHOOL OF MEDICINE

Faculty Research Education Clinical About

Education

Residency

Match Applicants

Curriculum

Apply

Salary and Benefits

Wellness Resource Center

Living in Birmingham

Training at UAB

Current Residents

Urology Home - Education - Residency

Urology Residency Program



The Department of Urology residency program is a five year program consisting of a preliminary year followed by four years of urology.

Our preliminary year provides an introduction to urology and prepares the residents to care for complicated patients they will routinely encounter on the urology service.

Our training program has numerous strengths including exposure to all urologic subspecialties, the opportunity to work in different health care delivery systems and a growing research enterprise. We have busy clinical services with high volume surgical experience. We anticipate continued growth in our faculty and increased opportunities for education. In addition, UAB is among the top institutions nationally and Birmingham is a wonderful place to work and live.

Our goal is to train urologists to either enter practice immediately or to pursue postgraduate fellowship training in their particular area of interest. Because of the broad exposure provided by our program, our graduates have the flexibility to pursue their interests upon completing their training. We use a program of graded responsibility to accomplish this goal. Our residency training program has fellowship trained faculty in all urologic subspecialties including:

- Urologic oncology
- Pediatric urology
- Laparoscopy/robotics
- Neurourology/voiding dysfunction
- Uroynecology and reconstructive pelvic surgery
- Erectile dysfunction
- Stone disease/endourology
- Male infertility
- Genitourinary reconstruction and gender affirming surgery
- Cancer survivorship

Department of Urology

HEERSINK SCHOOL OF MEDICINE

Faculty Research Education Clinical About

Education

Residency

Fellowships

Endourology and Minimally Invasive Urological Surgery Fellowship

Genitourinary Reconstruction and Prosthetics Fellowship

Living in Birmingham

Grand Rounds

Journal Club

Continuing Medical Education

Medical Student Opportunities

Urology Home - Education - Fellowships

Fellowships



The UAB Department of Urology offers two robust fellowship options for subspecialty training in the field of urology.

Our Endourology Fellowship offers one- or two-year track options and is accredited through the Endourological Society. Our Genitourinary Reconstruction and Prosthetics Fellowship offers a one-year program and is accredited through the Society of Genitourinary Reconstructive Surgeons.

Learn More

Endourology and Minimally Invasive Urological Surgery Fellowship

Genitourinary Reconstruction and Prosthetics Fellowship

USF Believes That Cognitive And Non- technical Skills Are Trainable

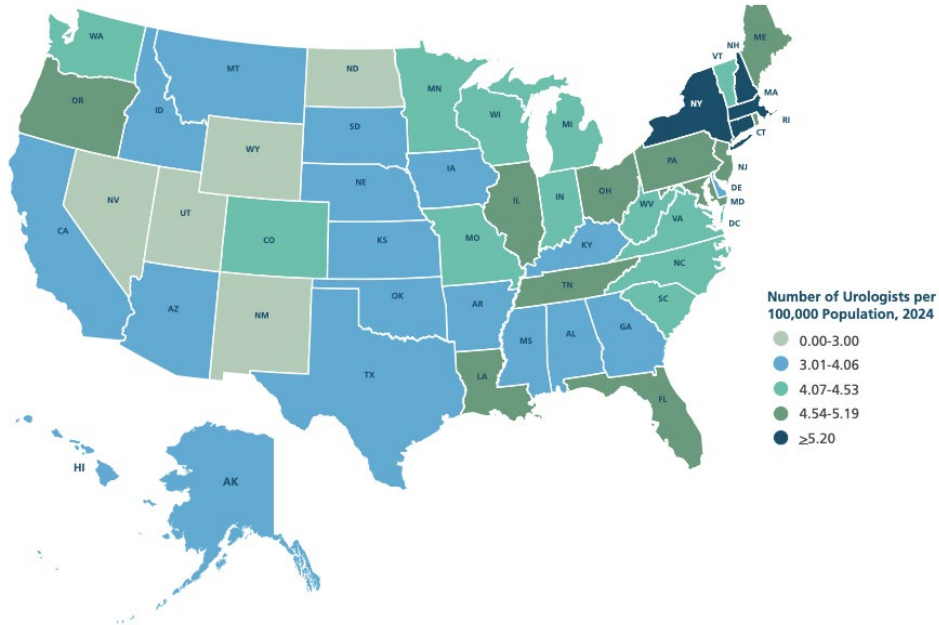


Residency is an essential dimension of the transformation of the medical student to the independent practitioner along the continuum of medical education. It is physically, emotionally, and intellectually demanding, and requires longitudinally concentrated effort on the part of the resident.

Contents

Resident Handbook (updated 9-10-2025)	1
Overview of Urology Training Program	4
Program Goals, Objectives, and Graduation Requirements	4
Professionalism	5
Resident Selection Process and Criteria	6
Clinical Competency Committee (CCC)	6
To be promoted to the next year of training, the Resident must:	6
Assessment of clinical competency:	7
Assessment of Operative Competency:	7
In addition to being certified as completing the training program, the resident must:	7
Program Evaluation Committee (PEC)	7
Duties of the Resident in Each Year	9
Scholarly Activity Requirement	9
Quality Improvement (QI) Project Requirements	10
Conferences and Attendance	10
Goals and Objectives by Rotation Site	11
Advent Hospital Rotation	11
Tampa General Hospital Rotation	17
Moffitt Cancer Center Rotation	26
Arnold Palmer Children Hospital/Orlando Health	33
James A. Haley VA Hospital Rotation	38
Clinical and Educational Work Hour Policy	46
Supervision Policy	48
Overall Function of Urology Residency Staff at Different Levels of Training	49
Evaluation of patients in the ER	50
Consenting Bedside Procedures	53
All bedside procedures including cystoscopy, SP Tube placement, I/D of abscess or anything that could be deemed as a procedure, require a consent with a nurse present.	53
Transitions of Care	54
Annual Program Evaluation Plan and Program Evaluation Committee	56
Evaluation Policy	56
Call Responsibilities and Backup Call Systems	57
Case Logs	57
USMLE Policy	57

WHAT are we training



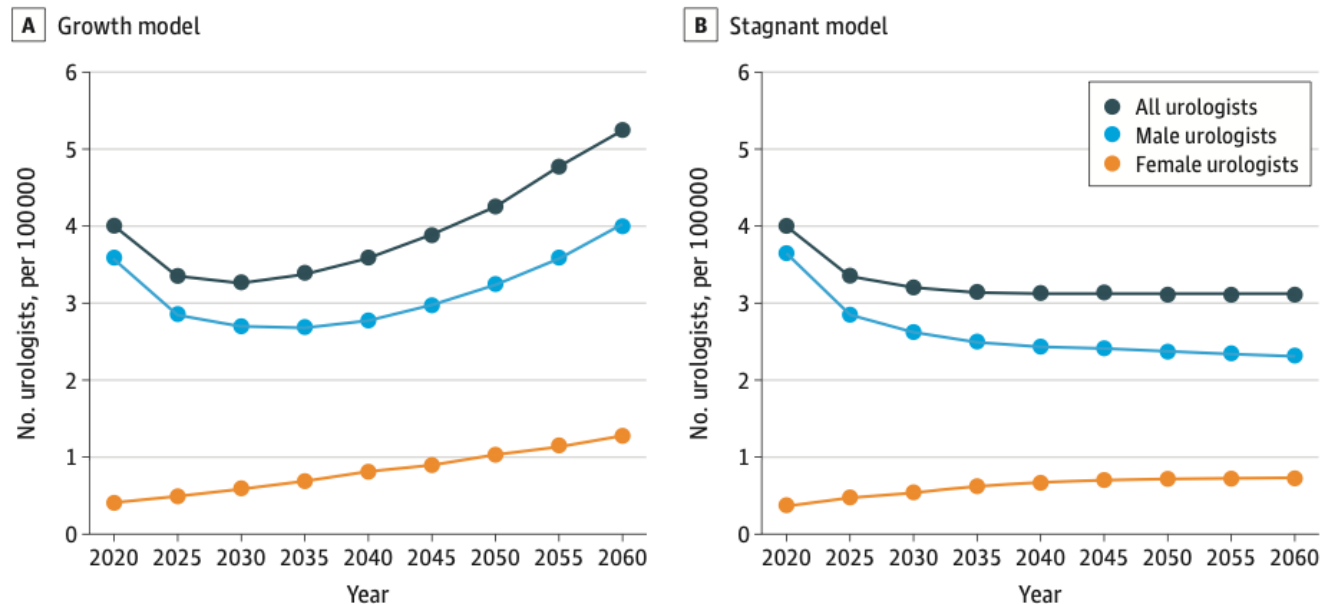
2024 AUA Census Data is Powerful

Total Number of Practicing Urologists and Percentage of Female Practicing Urologists in the Workforce From 2014 to 2024



Urology Workforce Issues are Real and Growing

Figure 1. Projected Number of Urologists per Capita From 2020 to 2060



Many Residents May Forego Fellowship

Completion of Fellowship Training

Fellowship Status	Practicing Urologists Represented		
	Number	Percent	+/- MOE (%)
No fellowship training	7,594	53.7	2.2
Fellowship training completed	6,549	46.3	2.2
Total reported	14,142	100	
Not reported	132		
Total	14,274		

Fellowship Areas (select all that apply)

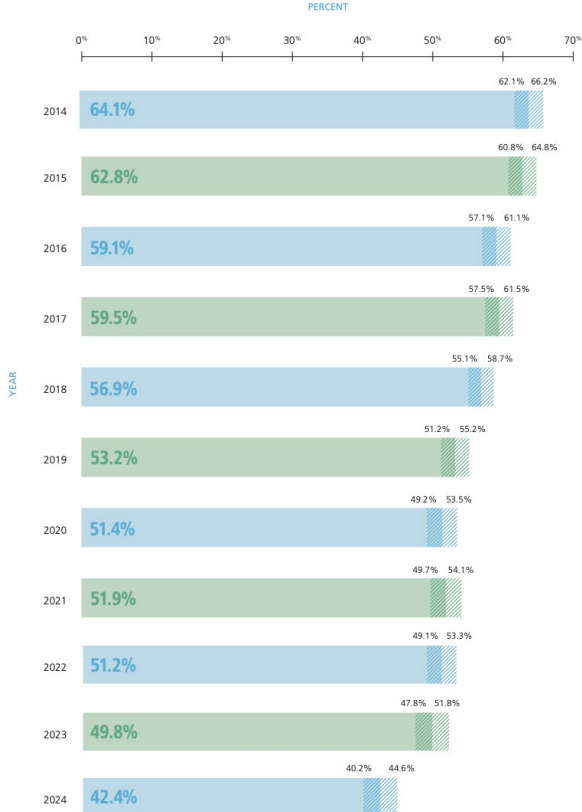
Fellowship Area	Practicing Urologists Represented		
	Number	Percent	+/- MOE (%)
Oncology	2,121	14.9	1.7
Robotic surgery	1,081	7.6	1.2
Endourology/stone disease	1,067	7.5	1.2
Pediatrics	985	6.9	1.2
Female pelvic medicine and reconstructive surgery	801	5.6	0.9
Erectile dysfunction	705	4.9	1.1
Male reconstruction/trauma	676	4.7	1.0
Male infertility	621	4.4	1.0
Laparoscopic surgery	564	4.0	0.9
Renal Transplantation	187	1.3	0.6

Primary Practice Setting

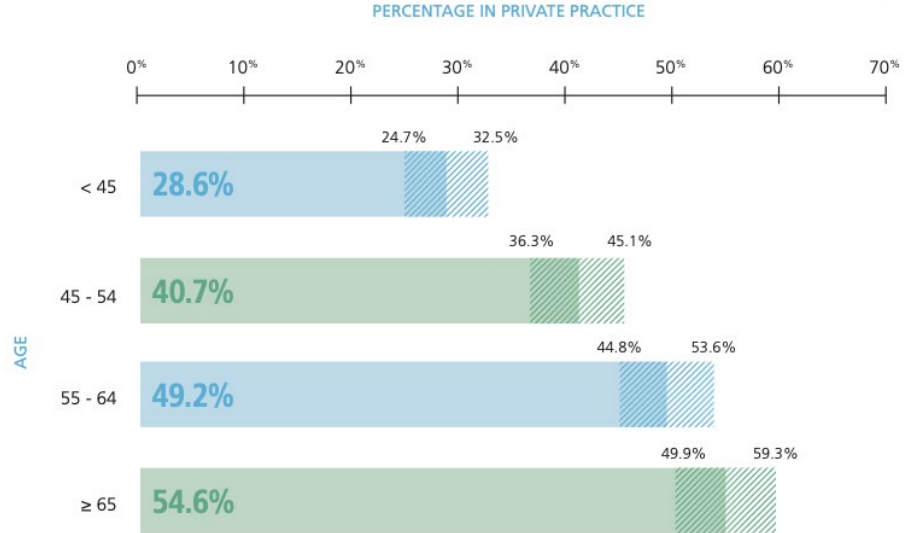
Primary Practice Setting	Practicing Urologists Represented		
	Number	Percent	+/- MOE (%)
Private practices	6,052	42.4	2.2
Solo practice	832	5.8	1.0
Single-specialty urology group	3,274	22.9	1.9
Multispecialty group	1,945	13.6	1.5
Institutional settings	8,015	56.2	2.2
Academic medical center/medical school	4,624	32.4	2.1
Public or private hospital	1,474	10.3	1.4
Private hospital	631	4.4	1.0
VA	363	2.5	0.6
Other public, nonmilitary hospital	355	2.5	0.7
Non-VA military hospital	124	0.9	*
Community health center	74	0.5	*
HMO/managed care organization	270	1.9	0.6
Health system	1,574	11.0	1.5
Industry (pharmaceuticals, EHR vendors, device manufacture, etc.)	6	0.0	*
Other settings[^]	207	1.4	0.5
Total	14,274	100	

Most Urologists Want to Be Hospital Employed

Percentage of Practicing Urologists in Private Practice from 2014 to 2024*



Percentage of Practicing Urologists in Private Practice by Age*



We Need to Create a Workforce for the Future



Academic Community Urology: A New Concept for UAB Urology

- Community minded general urologists
- Community experience
- Prime of their career
- ***Mission Focused:*** Train a future workforce of community urologists

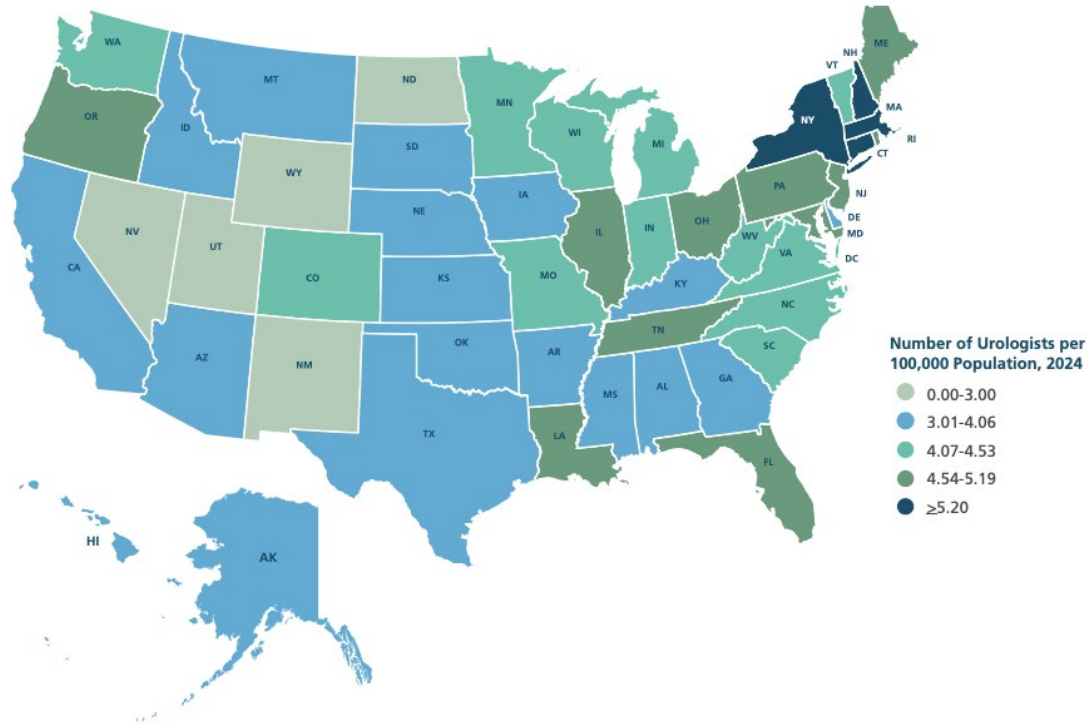


Dustin Hyatt, MD
10 Years experience



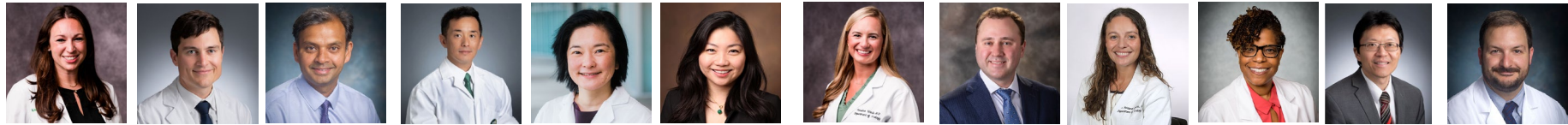
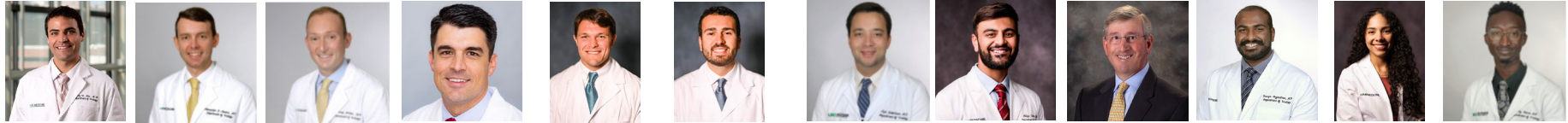
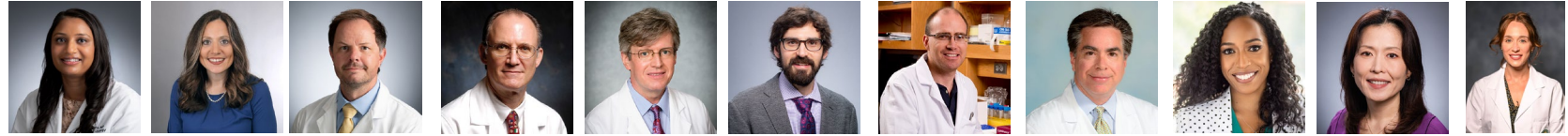
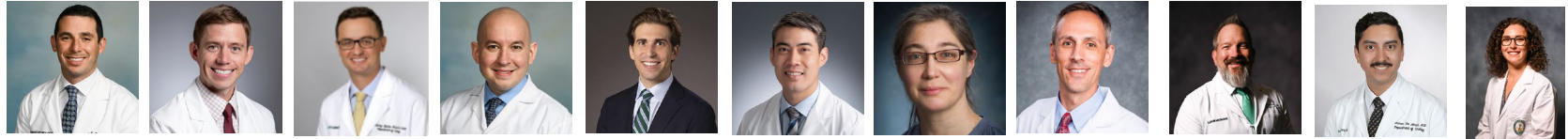
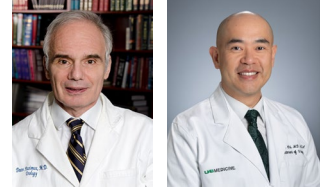
Karishma Gupta, MD
2 Years experience

Can we collectively solve the workforce issue by empowering Academic Community Urologists?



- Rural rotations
- Locums/moonlighting models
- Leadership training
- Community exposure/engagement

We Have to Make Great Surgeons to Ensure a Bright Future



**“If you want to go fast, go alone.
If you want to go far, go in a
team.”**



Take Home Messages

- Multiple lines of evidence support that surgeons are made
- We are in the business of making surgeons
- With intention, we should be making the surgeons that ensure a brighter future



Thank You Very Much!

tchi@uabmc.edu

@thomaschi8



WhatsApp: +1.415.699.0617

UAB Urology

- *Discover – Inspire – Serve*
- Scholarships for sub-I's
- Structured Research Programs
- Expanded Residency – 4/year
- GURS fellowship – 1 year
- Endourology Fellowship – 1 or 2 years

DREAM BIG

