



University of Tennessee College of Medicine
Chattanooga
Department of Urology

Academic Year 2022 - 2023

Overall Training Program Objectives
General Educational Goals
And
Rotation Specific Goals and Objectives

Overall Program Objectives

Education

Educational activities of the residency program will instruct the trainee in the assessment and management of Urologic disease.

Clinical Care

Clinical activities focus on secondary and tertiary care providing the trainee with a broad experience preparing them for the practice of urology.

Research

Clinical and basic research activities are ongoing in many areas in the department. There are many opportunities for trainee participation in research.

Teaching Objectives

Humanistic and professional attitudes

To foster development in each trainee of positive humanistic and professional attitudes as essential ingredients of excellence in patient care.

Technical skills

To assure acquisition by each trainee of appropriate technical skills and an appreciation of surgical anatomy and physiology.

Faculty Rotation Assignments

Rotation	Faculty
Urologic Non-Oncology	Singh, Wheelock, Shridharani, Waldorf, Okafor, Lange, Threlkeld
Urologic Oncology	Singh, Wheelock, Shridharani, Waldorf
Pediatric Urology	Walker

General Educational Competencies and Goals of the Urology Resident Program

Residents are expected to acquire and apply the below skills at the URO-1 level and to further master them throughout the remainder of the training program. Residents annually receive specific written goals and objectives for each rotation assignment at each level of the program.

Professionalism

Residents must demonstrate a commitment to professionalism and an adherence to ethical principles.

Residents must demonstrate competence in:

1. Compassion, integrity, and respect for others
2. Responsiveness to patient needs that supersedes self-interest
3. Respect for patient privacy and autonomy
4. Accountability to patients, society and the profession
5. Respect and responsiveness to diverse patient populations, including but not limited to diversity in gender, age, culture, race, religion, disabilities, national origin, socioeconomic status and sexual orientation
6. Ability to recognize and develop a plan for one's own personal and professional well-being
7. Appropriately disclosing and addressing conflict or duality of interest

Patient Care and Procedural Skills

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Residents must demonstrate competence in providing direct patient care with increasing levels of responsibility in patient management as they advance through the program;

Residents must, under supervision, demonstrate competence in providing for the total care of the patient, including initial evaluation, establishment of diagnosis, selection of appropriate therapy, providing that therapy, and management of complications;

Residents must demonstrate competence in providing continuity of patient care through pre- and post-operative clinics and inpatient contact;

When residents participate in pre- and post- operative care in a clinic or private office setting, the program director must ensure that the resident functions with an appropriate degree of responsibility under supervision.

Residents must be given responsibility commensurate with their individual knowledge, problem-solving ability, technical skills, experience, and the severity and complexity of each patient's status and,

Residents must be able to perform all medical, diagnostic, and surgical procedures considered essential for the area of practice.

Residents must develop competence in the following core techniques:

endo-urology; major open flank and pelvic surgery; minimally-invasive intra-abdominal and pelvic surgical techniques including, laparoscopy and robotics; perineal and genital surgery; and, urologic imaging including fluoroscopy, and ultrasound.

Medical Knowledge

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care.

Residents must demonstrate knowledge of the following topics:

- a. Bioethics
- b. Biostatistics
- c. Calculus disease
- d. Epidemiology
- e. Evidence-based medicine
- f. Female pelvic medicine
- g. Infectious disease
- h. Infertility and sexual dysfunction
- i. Geriatrics
- j. Medical oncology
- k. Patient safety and quality improvement
- l. Pediatric urology
- m. Plastic surgery

- n. Pre-Intra- and post-operative aspects of:
 - i. Endoscopic-urology
 - ii. Major open flank and pelvic surgery

- iii. Microsurgery
- iv. Minimally-invasive intra-abdominal and pelvic surgical techniques, including laparoscopy and robotic surgery
- v. Perineal and genital surgery; and
- vi. Urologic imaging, including fluoroscopy, interventional radiology, and ultrasound
- o. Radiation safety
- p. Reconstruction
- q. Renal transplantation
- r. Renovascular disease
- s. Trauma
- t. Urologic oncology
- u. Voiding dysfunction

Practice Based Learning and Improvement

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

Residents must demonstrate competence in:

1. Identifying strengths, deficiencies, and limits in one's knowledge and expertise
2. Setting learning and improvement goals
3. Identifying and performing appropriate learning activities
4. Systematically analyzing practice using quality improvement methods, and implementing changes with the goal of practice improvement
5. Incorporating feedback and formative evaluation into daily practice
6. Locating, appraising, and assimilating evidence from scientific studies related to their patients' health problems
7. Using information technology to optimize learning

Interpersonal and Communication Skills

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

Residents must demonstrate competence in:

1. Communicating effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds.
2. Communicating effectively with physicians, other healthcare professionals, and health-related agencies.
3. Working effectively as a member or leader of a health care team or other professional group.
4. Educating patients, families, students, residents, and other health professionals.
5. Acting in a consultative role to other physicians and health professionals.
6. Maintaining comprehensive, timely, and legible medical records, if applicable

Residents must learn to communicate with patients and families to partner with them to assess their care goals, including when appropriate, end-of-life goals.

Systems Based Practice

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, including the social determinants of health, as well as the ability to call effectively on other resources to provide optimal health care.

Residents must demonstrate competence in:

1. Working effectively in various healthcare delivery settings and systems relevant to their clinical specialty
2. Coordinating patient care across the health care continuum and beyond as relevant to their clinical specialty
3. Advocating for quality patient care and optimal patient care systems
4. Working in inter-professional teams to enhance patient safety and improve patient care quality
5. Incorporating considerations of value, cost awareness, delivery and payment, and risk-benefit analysis in patient and/or population-based care as appropriate
6. Understanding health care finances and its impact on individual patients' health decisions

Residents must learn to advocate for patients within the health care system to achieve the patient's and family's care goals, including, when appropriate, end-of-life goals.

Preliminary PGY-1 (URO-1) Rotation

Service:	Urology
Institution:	Erlanger Health System
Duration:	6 months
Supervision:	See PGY-1 Supervision Level Policy

GOAL

Residents will begin to develop outpatient and inpatient clinical and operative skills in the management of urology patients with general urologic disease states. By the end of the rotation, the resident will:

Patient Care and Procedural Skills (IV.B.1.b)

1. Assist with general urology inpatient consultations including:
 - a. Complete consultative history
 - b. Thorough physical examination
 - c. Identify urologic pathology
 - d. Identification of steps in design of patient care plan and its implementation
2. Begin to develop basic knowledge in outpatient clinical skills for the management of general urology patients
3. Assist in the coordination and implementation of care on the non-oncology healthcare team including:
 - a. Ordering appropriate lab tests
 - b. Social services
 - c. Patient evaluation
 - d. Collating patient information
 - e. Summarizing patient information for senior residents and faculty
 - f. Identifying alterations in normal physiology
4. Begin to develop basic knowledge in inpatient urologic patient management
5. Identify the steps and gain experience with outpatient evaluations and problem-focused evaluations
6. Gain level appropriate experience with the procedures listed on the PGY2 Minor Procedure List
7. Acquire level appropriate knowledge of skills needed for PGY2 Procedure List procedures
8. Begin to describe pathophysiology of urologic disease states
9. Acquire knowledge of appropriate diagnostic tests, work-ups and the patient care management steps for resulting urologic disease states including:
 - a. CT urograms

- b. Renal US
 - c. Urethrograms
 - d. Cystograms
 - e. Loopograms
 - f. MRI studies
 - g. Retrograde pyelograms
10. List, with level appropriate knowledge, indications for and utility of laboratory tests for the non-oncology urologic patient including:
- a. Male hormone evaluation
 - b. Creatinine
 - c. GFR
 - d. Urinalysis
 - e. Urine culture
 - f. Stone analysis

Medical Knowledge (IV.B.1.c)

1. Demonstrate level appropriate knowledge of urologic disease states including:
 - a. Female urologic disorders
 - b. Urethral stricture dissection
 - c. BPH
 - d. Kidney stones
 - e. Benign kidney disorders
 - f. Urologic infectious diseases
 - g. Infertility
 - h. Male sexual dysfunction
 - i. Miscellaneous urologic disease states
2. Assist in the assessment, with level appropriate detail, patients with general urologic diseases
3. Begin to list the steps of procedures on PGY2 Minor Procedure List
4. Prepare patients and equipment appropriately for endoscopic procedures
5. Demonstrate basic surgical skills
 - a. Patient positioning
 - b. Suturing and knot tying
 - c. Draping
 - d. Docking and undocking the robot
6. Demonstrate basic skills in office procedures including Foley catheter placement and drain removal
7. Begin to identify acute, chronic conditions as they relate to patient hospitalization and acute urologic problems
8. Integrate patient-specific information to generate an appropriate working diagnosis

PGY2 Minor Procedure List as relevant to Urologic Patients

- Cystoscopy
- Prostate Needle Biopsy
- Stent Placement
- Urodynamics
- Incision and Drainage
- Urethral Dilation
- Suprapubic Tube Placement
- Retrograde Pyelogram
- Nephrostogram
- Cystogram
- Tissue Biopsy

PGY2 Procedure List as relevant to Non-Oncology Urologic Patients

- Simple and Complicated Foley Catheter Placements
- Bladder Volume Index and Post Void Residuals
- Urethral Catheterization
- Suprapubic Tube Management
- Urodynamics and Urodynamics Interpretation

Professionalism (IV.B.1.a)

1. Demonstrate level appropriate acquisition of the basic principles of professionalism in Urology: optimal care for patients, honesty, integrity, and respect for others
2. Demonstrate the level appropriate acquisition of the basic principles of the AUA Code of Ethics
3. Demonstrate compassion, integrity, and respect for others
4. Act with respect for patient privacy
5. Demonstrate accountability to patients, society, and profession
6. Know how to report professionalism lapses
7. Demonstrate knowledge of ethical principles underlying shared decision making and patient confidentiality
8. Take responsibility for failure to complete tasks, identify potential contributing factors, and suggest strategies to ensure future timely task completion
9. Recognize status of personal and professional well-being with assistance

Interpersonal Communication Skills (IV.B.1.e)

1. Demonstrate skill in the key elements of effective communication with patients (i.e. introduction, patient related items, questioning skills) and families in an understandable and respectful manner
2. Communicate effectively and respectfully with urology clinic allied health professionals, and other physicians

3. Accurately record information in the patient record in a timely manner while safeguarding patient personal health information
4. Communicate appropriately when participating in consultations with other physicians and health care professionals

Practice-Based Learning and Improvement (IV.B.1.d)

1. Assess general urologic knowledge and/or competency gaps and direct further study as appropriate
2. Demonstrate how to access available evidence
3. Adapt, with guidance as needed, changes suggest by Urology faculty in patient care, procedures, surgical technique, and clinic interactions
4. Integrate formative evaluation feedback into daily practice
5. Establish goals for personal and professional development

Systems-Based Practice (IV.B.1.f)

1. Demonstrate level appropriate acquisition of the key elements in direct management of patients within this and other healthcare systems
2. Demonstrate knowledge of common patient safety events and institutional reporting system
3. Demonstrate knowledge of basic quality improvement methodologies and metrics
4. Demonstrate knowledge of care coordination and community health needs
5. Perform safe and effective transitions of care in routine clinical situations
6. Identify basic needs for effective transition to practice (IT, billing, personnel, etc.)
7. Describe basic health payment systems (government, private, uninsured, etc.)

PGY-2 (URO-2) Urology Non-Oncology Rotation

Service:	Urology Non-Oncology
Institution:	Erlanger Health System
Duration:	3 months
Supervision:	See PGY-2 Supervision Level Policy

GOAL

Residents will develop outpatient and inpatient clinical and operative skills in the management of urology patients with general urologic disease states. By the end of the rotation, the resident will:

Patient Care and Procedural Skills (IV.B.1.b)

1. Assist with general urology inpatient consultations including:
 - a. Complete consultative history
 - b. Thorough physical examination
 - c. Identify urologic pathology
 - d. Identification of steps in design of patient care plan and its implementation
 - e. Order and interpret diagnostic testing
2. Develop basic knowledge in outpatient clinical skills for the management of general urology patients
3. Assist in the coordination and implementation of care on the non-oncology healthcare team including:
 - a. Ordering appropriate lab tests
 - b. Social services
 - c. Patient evaluation
 - d. Collating patient information
 - e. Summarizing patient information for senior residents and faculty
 - f. Report clinical information pertaining to common peri-procedural alterations and complications
4. Develop basic knowledge in inpatient urologic patient management
5. Identify the steps and gain experience with outpatient evaluations and problem-focused evaluations
6. Gain level appropriate experience with the procedures listed on the PGY2 Minor Procedure List
7. Acquire level appropriate skill in PGY2 Procedure List
8. Describe pathophysiology of urologic disease states
9. Acquire knowledge of appropriate diagnostic tests, work-ups and the patient care management steps for resulting urologic disease states including:

- a. CT urograms
 - b. Renal US
 - c. Urethrograms
 - d. Cystograms
 - e. Loopograms
 - f. MRI studies
 - g. Retrograde pyelograms
10. List indications for and utility of laboratory tests for the non-oncology urologic patient including:
- a. Male hormone evaluation
 - b. Creatinine
 - c. GFR
 - d. Urinalysis
 - e. Urine culture
 - f. Stone analysis
11. Act as surgical assistant in operating room

Medical Knowledge (IV.B.1.c)

1. Demonstrate level appropriate knowledge of urologic disease states including:
 - a. Female urologic disorders
 - b. Urethral stricture dissection
 - c. BPH
 - d. Kidney stones
 - e. Benign kidney disorders
 - f. Urologic infectious diseases
 - g. Infertility
 - h. Male sexual dysfunction
 - i. Miscellaneous urologic disease states
2. Assist in the assessment, with level appropriate detail, patients with general urologic diseases
3. List the steps of procedures on PGY2 Minor Procedure List
4. Identify acute, chronic conditions as they relate to patient hospitalization and acute urologic problems
5. Create prioritized differential diagnosis using supporting rationale

PGY2 Minor Procedure List as relevant to Non-Oncology Urologic Patients

- Cystoscopy
- Prostate Needle Biopsy
- Stent Placement
- Urodynamics
- Incision and Drainage
- Urethral Dilatation
- Suprapubic Tube Placement

- Retrograde Pyelogram
- Nephrostogram
- Cystogram
- Tissue Biopsy
- Priapism irrigation
- Removal of genital wart

PGY2 Procedure List as relevant to Non-Oncology Urologic Patients

- Simple and Complicated Foley Catheter Placements
- Bladder Volume Index and Post Void Residuals
- Urethral Catheterization
- Suprapubic Tube Management
- Urodynamics and Urodynamics Interpretation
- Vasectomy
- Circumcision

Professionalism (IV.B.1.a)

1. Demonstrate level appropriate acquisition of the basic principles of professionalism in Urology: optimal care for patients, honesty, integrity, and respect for others
2. Demonstrate the level appropriate acquisition of the basic principles of the AUA Code of Ethics
3. Demonstrate compassion, integrity, and respect for others
4. Act with respect for patient privacy
5. Demonstrate accountability to patients, society, and profession
6. Demonstrate insight into personal triggers for professionalism lapses and develop mitigation strategies
7. Perform administrative tasks in a timely manner with appropriate attention to detail in routine situations
8. Recognize personal status of personal and professional well-being

Interpersonal Communication Skills (IV.B.1.e)

1. Demonstrate skill in the key elements of effective communication with patients (i.e. introduction, patient related items, questioning skills)
2. Communicate effectively with urology clinic allied health professionals, and other physicians
3. Demonstrate advancement in chart documentation skills
4. Communicate appropriately when participating in consultations with other physicians and health care professionals
5. Identify barriers to effective communication
6. Document diagnostic and therapeutic reasoning in the patient record with appropriate use of documentation shortcuts

Practice-Based Learning and Improvement (IV.B.1.d)

1. Assess general urologic knowledge and/or competency gaps and direct further study as appropriate
2. Adapt, with guidance as needed, changes suggest by Urology faculty in patient care, procedures, surgical technique, and clinic interactions
3. Integrate formative evaluation feedback into daily practice
4. Articulate clinical questions to guide evidence-based care
5. Identify opportunities for improvement; design a learning plan

Systems-Based Practice (IV.B.1.f)

1. Demonstrate level appropriate acquisition of the key elements in direct management of patients within this and other healthcare systems
2. Identify and report patient safety events
3. Coordinate multidisciplinary care of patients in routine clinical situations, considering inequities and disparities for their local population
4. Perform safe and effective transitions of care in complex clinical situations
5. Demonstrates use of information technology required for medical practice (EHR, billing)
6. Describes how components of a complex health care system are interrelated and how this impacts patient care

PGY-2 (URO-2) Urology Oncology Rotation

Service:	Urology Oncology
Institution:	Erlanger Health System
Duration:	9 months
Supervision:	See PGY-2 Supervision Level Policy

GOAL

Residents will develop outpatient and inpatient clinical and operative skills in the management of urology patients with urologic oncology disease states. By the end of the rotation, the resident will:

Patient Care and Procedural Skills (IV.B.1.b)

1. Participate in inpatient consultations on the urologic oncology service including:
 - a. Complete consultative history
 - b. Thorough physical examination
 - c. Identify urologic pathology
 - d. Identification of steps in design of patient care plan and its implementation
 - e. Order and interpret diagnostic testing
2. Develop progression in basic knowledge in outpatient clinical skills for the management of urologic oncology patients
3. Develop progression in basic knowledge in inpatient urologic oncology patient management
4. Identify the steps, with accuracy, and gain experience with outpatient evaluations and problem-focused evaluations
5. Demonstrate advancing experience on an assistant level with the procedures listed on the PGY2 Minor Procedure List for urologic oncology patients
6. Assist, with progression in level appropriate ability, in the coordination and implementation of care on the urologic oncology healthcare team including:
 - a. Ordering appropriate lab tests
 - b. Social services
 - c. Patient evaluation
 - d. Collating patient information
 - e. Summarizing patient information for senior residents and faculty
 - f. Report clinical information pertaining to common peri-procedural alterations and complications
7. Demonstrate acquisition of level appropriate skill in PGY2 Procedure List
8. Describe, with advancing skill, the pathophysiology of urologic oncology disease state

9. Demonstrate progression knowledge of appropriate diagnostic tests, work-ups and the patient care management steps for resulting urologic oncology disease state including:
 - a. CT urograms
 - b. Renal US
 - c. Bone scans
 - d. PET scans
 - e. MRI studies
 - f. Retrograde pyelograms
10. List indications for and utility of laboratory tests for the urologic oncology patient including with progressing level appropriate skill and knowledge:
 - a. PSA
 - b. Testis Cancer Tumor Marker (AFP, beta HCG, LDH)
 - c. Alkaline Phosphatase
 - d. Creatinine
 - e. GFR
11. Demonstrate progression of skill in performance as surgical assistant in operating room

Medical Knowledge (IV.B.1.c)

1. Demonstrate progression of level appropriate knowledge of urologic oncology disease states including:
 - a. Kidney Cancer
 - b. Bladder Cancer
 - c. Prostate Cancer
 - d. Testis Cancer
 - e. Miscellaneous Urologic Cancers
2. Assist in the assessment, with level appropriate detail, patients with chronic and acute urologic oncology conditions
3. Recall, with accuracy, the steps of procedures listed on PGY2 Minor Procedure List
4. Name acute, chronic conditions as they relate to urologic oncology patient hospitalization and acute urologic oncology problems
5. Create prioritized differential diagnosis using supporting rationale

PGY2 Minor Procedure List as relevant to Oncologic Urologic Patients

- Cystoscopy
- Prostate Needle Biopsy
- Stent Placement
- Urethral Dilation
- Suprapubic Tube Placement
- Retrograde Pyelogram
- Nephrostogram
- Cystogram
- Tissue Biopsy

- Urethral Catheterization
- Bladder Volume Index and Post Void residuals
- Simple and Complicated Foley Catheter Placements
- Suprapubic Tube Placement
- Abscess incision and drainage

Professionalism (IV.B.1.a)

1. Demonstrate the acquisition of the basic principles of professionalism in Urology: optimal care for patients, honesty, integrity, and respect for others
2. Demonstrate acquisition of the basic principles of the AUA Code of Ethics
3. Demonstrate compassion, integrity, and respect for others
4. Act with respect for patient privacy
5. Demonstrate accountability to patients, society, and profession
6. Demonstrate insight into personal triggers for professionalism lapses and develop mitigation strategies
7. Perform administrative tasks in a timely manner with appropriate attention to detail in routine situations
8. Recognize personal status of personal and professional well-being

Interpersonal Communication Skills (IV.B.1.e)

1. Demonstrate acquisition of skill in the key elements of effective communication with patients (i.e. introduction, patient related items, questioning skills)
2. Communicate effectively with urology cancer clinic allied health professionals, and other physicians
3. Demonstrate advancement in chart documentation skills
4. Communicate appropriately when participating in consultations with other physicians and health care professionals
5. Identify barriers to effective communication
6. Document diagnostic and therapeutic reasoning in the patient record with appropriate use of documentation shortcuts

Practice-Based Learning and Improvement (IV.B.1.d)

1. Assess knowledge and/or competency gaps and direct further study as appropriate
2. Adapt changes suggested by Urology faculty in patient care, procedures, surgical technique, and clinic interactions
3. Integrate formative evaluation feedback into daily practice
4. Articulate clinical questions to guide evidence-based care
5. Identify opportunities for improvement; design a learning plan

Systems-Based Practice (IV.B.1.f)

1. Demonstrate continued acquisition of the key elements in direct management of patients within this and other healthcare systems

2. Identify and report patient safety events
3. Coordinate multidisciplinary care of patients in routine clinical situations, considering inequities and disparities for their local population
4. Perform safe and effective transitions of care in complex clinical situations
5. Demonstrates use of information technology required for medical practice (EHR, billing)
6. Describes how components of a complex health care system are interrelated and how this impacts patient care

PGY-3 (URO-3) Pediatric Urology Rotation

Service:	Pediatric Urology
Institution:	Children's Hospital at Erlanger
Duration:	3 months
Supervision:	See PGY-3 Supervision Level Policy

GOAL

Residents will demonstrate acquisition of skills necessary to care for pediatric urologic patients as an intermediate level resident. By the end of the rotation, the resident will:

Patient Care and Procedural Skills (IV.B.1.b)

1. Demonstrate level appropriate knowledge of and progressive experience with longitudinal continuity of care for outpatient pediatric urologic patients
2. Demonstrate appropriate skill in patient care plan development for patients with straightforward pediatric urologic conditions
3. Assist with, level appropriate skill, pediatric urologic inpatient consultations including:
 - a. Complete consultative history
 - b. Thorough physical examination
 - c. Identify pediatric urologic pathology
 - d. Identification of steps in design of patient care plan and its implementation
 - e. Appropriately order and interpret pediatric urologic imaging and diagnostic lab tests
4. Participate with level appropriate skill as part of a multidisciplinary team in the management of pediatric inpatients
5. Demonstrate level appropriate progression in pediatric urologic skills in:
 - a. Open surgery
 - b. Endoscopic surgery
 - c. Laparoscopic surgery
 - d. Robotic surgery
6. Demonstrate level appropriate acquisition of skill and experience in the following areas as related to the pediatric patient:
 - a. Urinary Tract Reconstruction
 - b. Urinary Incontinence
 - c. Stone Disease
 - d. Congenital Anomalies
 - e. Hydronephrosis
 - f. Renal Failure
 - g. Pediatric Urologic Oncology

1. Assist in the coordination and implementation of care on a pediatric healthcare team including:
 - h. Ordering appropriate lab tests
 - i. Pediatric patient evaluation
 - j. Collating patient information
 - k. Summarizing patient information for senior residents and faculty
 - l. Develop a plan to manage patients with straightforward pediatric urologic conditions
 - m. Identify and prioritize tasks necessary for management of common peri-procedural alterations and complications

Medical Knowledge (IV.B.1.c)

1. Demonstrate knowledge of pediatric urologic disease pathophysiology and treatment
2. Independently synthesize clinical information to inform diagnosis and therapy in straightforward pediatric urology patients
3. Acquire level appropriate knowledge of pediatric disease processes as they relate to inpatient and outpatient services
4. Assist in the assessment, with level appropriate detail, of pediatric patients with general urologic conditions
5. Assist in the development of pediatric patient management plans, with level appropriate detail, for patients with general urologic conditions
6. Identify, with level appropriate knowledge, acute or chronic pediatric conditions and how this relates to patient care plan development/acute urologic problems
7. Demonstrate foundational knowledge and management of pediatric urologic emergencies including trauma
8. Demonstrate level appropriate ability to distinguish urgent from non-urgent pediatric urologic problems
9. Assist in development and presentation of a case for M&M Conference demonstrating knowledge of the pathophysiology behind the complication, complete review of relevant literature, and assist in the development (with level appropriate knowledge) of a recommendation for an alternative patient care plan to avoid complication in the future

Professionalism (IV.B.1.a)

1. Demonstrate professional behavior in complex or stressful situations
2. Seek help in managing and resolving complex ethical situations
3. Perform tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations
4. Establish a therapeutic relationship in challenging encounters
5. Demonstrate level appropriate acquisition of the basic principles of professionalism in pediatric urology: advocating for optimal care, working with pediatric

patients/families/representatives, and optimal care for patients, honesty, integrity, and respect for others

6. Demonstrate the level appropriate acquisition of the basic principles of the AUA Code of Ethics
7. Demonstrate compassion, integrity, and respect for others
8. Act with respect for patient privacy
9. Demonstrate accountability to patients, society, and profession

Interpersonal Communication Skills (IV.B.1.e)

1. Demonstrate skill in the key elements of effective communication with pediatric patients and families (i.e. introduction, patient related items, questioning skills)
2. Establish a therapeutic relationship in challenging encounters
3. Communicate effectively with pediatric clinic allied health professionals, and other physicians
4. Concisely report diagnostic and therapeutic reasoning
5. Demonstrate advancement in chart documentation skills
6. Communicate appropriately when participating in consultations with other physicians and health care professionals
7. When prompted, reflect on personal biases while attempting to minimize communication barriers
8. Counsel pediatric patients and families through decision-making processes, including questions, for simple clinical problems
9. Actively recognize and mitigate communication barriers and biases with members of the healthcare team

Practice-Based Learning and Improvement (IV.B.1.d)

1. Assess pediatric urologic knowledge and/or competency gaps and direct further study as appropriate
2. Adapt, with guidance as needed, changes suggested by pediatric urology faculty in patient care, procedures, surgical technique, and clinic interactions
3. Integrate formative evaluation feedback into daily practice
4. Integrate best available evidence with patient preferences to guide care
5. Institute behavioral changes to narrow the gaps between expectations and actual performance
6. Integrate practice data and feedback with humility to implement a learning plan

Systems-Based Practice (IV.B.1.f)

1. Demonstrate level appropriate acquisition of the key elements in direct management of pediatric patients within a pediatric healthcare system

2. Demonstrate level appropriate acquisition of how to advocate for optimal patient care within a pediatric health system
3. Demonstrate level appropriate knowledge of the differences between academic, non-academic and pediatric health systems
4. Participate in analysis of patient safety events (simulated or actual)
5. Participate in local quality improvement initiatives
6. Coordinate multidisciplinary care of patients in complex clinical situations and incorporate local resources into the plan
7. Supervise safe and effective transitions of care/hand-offs of junior residents
8. Demonstrate core administrative knowledge needed for transition to independent practice
9. Discuss how individual practice affects the broader system performance

PGY-3 (URO-3) Urology Non-Oncology Rotation

Service:	Urology Non-Oncology
Institution:	Erlanger Health System
Duration:	3 months
Supervision:	See PGY-3 Supervision Level Policy

GOAL

Residents will demonstrate progression in acquisition of skills necessary to care for urology patients as an intermediate level resident. By the end of the rotation, the resident will:

Patient Care and Procedural Skills (IV.B.1.b)

1. Transition from participation to leading general urologic inpatient consultations including:
 - a. Complete consultative history
 - b. Thorough physical examination
 - c. Identify urologic pathology
 - d. Identification of steps in design of patient care plan and its implementation
 - e. Order and interpret diagnostic imaging
2. **Demonstrate a progression in management of urologic patients with straightforward conditions**
3. Demonstrate a progression of advanced knowledge and skill in inpatient urologic patient management
4. Participate as a senior team member, with level appropriate ability, in the coordination and implementation of care on the non-oncology healthcare team including:
 - a. Ordering appropriate lab tests
 - b. Social services
 - c. Patient evaluation
 - d. Collating patient information
 - e. Summarizing patient information for senior residents and faculty
5. Perform, with level appropriate accuracy, and gain experience with outpatient evaluations and problem-focused evaluations
6. **Independently identify and prioritize tasks necessary for management of common peri-procedural complications**
7. Display advanced level skill and experience on an assistant level in PGY3 Procedure List
8. Display progression and acquisition of level appropriate skill in PGY3 Procedure List
9. Classify, with level appropriate skill, the pathophysiology of urologic disease states

10. Display progression of knowledge of appropriate diagnostic tests, work-ups and the patient care management steps for resulting urologic disease states, with advancing level appropriate ability, including:
 - a. CT scans
 - b. Renal Ultrasound
 - c. Retrograde Urethrogram
 - d. Cystograms
 - e. Loopograms
 - f. MRI studies
 - g. Retrograde pyelograms
11. Determine indications for and utility of (with advancing level appropriate ability) laboratory tests for the non-oncology urologic patient including:
 - a. Male hormone evaluation
 - b. Serum Creatinine and GFR
 - c. Serum electrolytes
 - d. Urinalysis
 - e. Urine culture
 - f. Stone analysis
12. Demonstrate level appropriate progression of skill in clinic procedures for non-oncology urology patients (outpatient/inpatient)
13. Demonstrate level appropriate progression of skill in operative procedures for non-oncology urology patients
14. Demonstrate level appropriate development of skill in open urological surgical procedures (inpatient and outpatient)

Medical Knowledge (IV.B.1.c)

1. Discuss, with level appropriate knowledge, urologic disease states including:
 - a. Female urologic disorders
 - b. Urethral strictures
 - c. Ureteral strictures
 - d. BPH
 - e. Kidney stones
 - f. UPJ obstruction
 - g. Urologic infectious diseases
 - h. Male infertility
 - i. Male sexual dysfunction
 - j. Miscellaneous urologic disease states
2. Participate in the assessment of, with level appropriate detail, patients with both acute and chronic general urologic conditions
3. **Demonstrate knowledge of pathophysiology and treatments of complex non-oncologic conditions**
4. **Independently synthesize clinical information to inform diagnosis and therapy in simple cases and adapt based on a patient's clinical course and additional data**

5. Give detailed explanations for acute and chronic conditions as they relate to patient hospitalization and acute urologic problems
6. Explain, with level appropriate ability, the details of complex metabolic evaluations for stone disease
- 7.

PGY3 Procedure List

- Complicated flexible and rigid cystoscopy
- Complicated Foley Catheter Placements
- Complicated Ureteral Stent Placement
- Complicated Urethral Catheterization
- Suprapubic Tube Insertion and Management
- Interpretation of Urodynamics
- Independently perform simple endoscopic procedures
 - Simple ureteroscopy
 - TURP, laser enucleation of large prostate
- Assist with advanced endoscopic procedures
 - Complex ureteroscopy
 - Nephroscopy and PCNL
 - TURP, laser enucleation of large prostates
- Independently perform simple open procedures
 - Vasectomy
 - Circumcision
 - Simple scrotal procedures (hydrocele, I and D)
 - Cystorrhaphy
- Independently perform simple portions of laparoscopic/robotic procedures
 - Bladder takedown in RALP
 - Colonic mobilization in renal procedures
 - Pelvic lymph node dissection

Professionalism (IV.B.1.a)

1. Articulate the basic principles of professionalism in Urology: optimal care for patients, honesty, integrity, and respect for others
2. **Demonstrate professional behavior in complex or stressful situations**
3. **Seek help in managing and resolving complex ethical situations**
4. Demonstrate the level appropriate acquisition of the basic principles of the AUA Code of Ethics
5. **Perform tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations**
6. Demonstrate advancement in ability to mentor and teach junior residents in outpatient clinical and procedural skills
7. Perform with sensitivity and responsiveness to diverse patient population
8. **With assistance, propose a plan to optimize personal and professional well-being**

Interpersonal Communication Skills (IV.B.1.e)

1. Provide detail on the key elements of effective communication with patients (i.e. introduction, patient related items, questioning skills)
2. Demonstrate continued acquisition of skill in communicating and maintaining effective relationships with members of a healthcare team
3. Establish a therapeutic relationship in challenging encounters
4. When prompted, reflect on personal biases while attempting to minimize communication barriers
5. Counsel patients through decision making processes, including questions, for simple clinical problems
6. Actively recognize and mitigate communication barriers and biases with members of the healthcare team
7. Concisely report diagnostic and therapeutic reasoning

Practice-Based Learning and Improvement (IV.B.1.d)

1. Evaluate own general urologic knowledge and/or competency gaps and direct further study as appropriate
2. Adapt, with guidance as needed, changes suggest by Urology faculty in patient care, procedures, surgical technique, and clinic interactions
3. Integrate best available evidence with patient preference to guide care
4. Institute behavioral changes to narrow the gaps between expectations and actual performance
5. Integrate practice data and feedback with humility to implement a learning plan

Systems-Based Practice (IV.B.1.f)

1. Discriminate the key differences between institutions and how these differences impact the direct management of patients within this and other healthcare systems
2. Identify and appreciate, with progression in ability, the social, ethical, and financial implications of urologic care
3. Participate in analysis of patient safety events (simulated or actual)
4. Participate in local quality improvement initiatives
5. Coordinate multidisciplinary care of patients in complex clinical situations and incorporate local resources into the plan
6. Supervise safe and effective transitions of care/hand-offs of junior residents

7. Describe core administrative knowledge needed for transition to independent practice
8. Discuss how individual practice affects the broader system performance

PGY-3 (URO-3) Urology Oncology Rotation

Service:	Urology Oncology
Institution:	Erlanger Health System
Duration:	6 months
Supervision:	See PGY-3 Supervision Level Policy

GOAL

Residents will demonstrate progression in acquisition of skills necessary to care for urologic oncology patients as an intermediate level resident. By the end of the rotation, the resident will:

Patient Care and Procedural Skills (IV.B.1.b)

1. Actively participate, with level appropriate ability, as a team member in inpatient consultations on the urologic oncology service including:
 - a. Complete consultative history
 - b. Thorough physical examination
 - c. Identify urologic pathology
 - d. Design and institution of patient care plan
 - a. Order and interpret diagnostic imaging
2. **Demonstrate a progression in management of urologic patients with straightforward conditions**
3. Demonstrate advancement of level appropriate knowledge and ability in outpatient clinical skills for the management of urologic oncology patients
4. Demonstrate a progression in knowledge and skill in inpatient urologic oncology patient management
5. Demonstrate progression of level appropriate skill in operative procedures for oncology patients
6. Identify the steps, with accuracy, and gain experience with outpatient evaluations and problem-focused evaluations
7. Lead, with progression in level appropriate ability, in the coordination and implementation of care on the urologic oncology healthcare team including:
 - a. Ordering appropriate lab tests
 - b. Social services
 - c. Patient evaluation
 - d. Collating patient information
 - e. Summarizing patient information for senior residents and faculty
8. Describe, with advancing level appropriate skill, the pathophysiology of urologic oncology disease states

9. Demonstrate progression of knowledge of appropriate diagnostic tests, work-ups and the patient care management steps for resulting urologic oncology disease state including:
 - a. CT scans
 - b. Renal US
 - c. Bone scans
 - d. PET scans
 - e. MRI studies
 - f. Retrograde pyelograms
10. With level appropriate ability, review indications for and utility of laboratory tests for the urologic oncology patient including:
 - a. PSA
 - b. Testis Cancer Tumor Markers (AFP, beta HCG, LDH)
 - c. Alkaline Phosphatase
 - d. Serum creatinine and GFT
 - e. Serum electrolytes
11. Exhibit progression in level appropriate skill in endoscopic principles and anatomy for the oncology patient
12. Demonstrate further progression in level appropriate ability to perform as surgical assistant in operating room

Medical Knowledge (IV.B.1.c)

1. Demonstrate advancement of level appropriate knowledge of urologic oncology disease states including:
 - a. Kidney Cancer
 - b. Bladder Cancer
 - c. Prostate Cancer
 - d. Testis Cancer
 - e. Miscellaneous Urologic Cancers
2. Participate in the assessment, with level appropriate detail, patients with both acute and chronic urologic oncologic conditions
3. **Demonstrate knowledge of pathophysiology and treatments of complex urologic oncologic conditions**
4. **Independently synthesize clinical information to inform diagnosis and therapy in simple cases and adapt based on a patient's clinical course and additional data**
5. Describe, with progressing accuracy, acute, chronic conditions as they relate to urologic oncology patient hospitalization and acute urologic oncology problems
6. Recognize and identify implications of relevant urologic oncology disease state pathology during pathology and tumor board conferences
7. Demonstrate level appropriate advancement of knowledge acquisition of the indications/contraindications and procedural steps of clinic procedures for oncology patients (outpatient/inpatient)

8. Demonstrate level appropriate advancement of knowledge acquisition of indications/contraindications and procedural steps of operative procedures for oncology patients

PGY3 Procedure List

- Complicated flexible and rigid cystoscopy
- Prostate needle biopsy, including fusion biopsy
- Transperineal placement of biodegradable material (Space OAR)
- Independently perform simple endoscopic procedures
 - Small TURBT
 - Simple diagnostic ureteroscopy
- Assist with advanced endoscopic procedures
 - Large TURBT
 - Antegrade and retrograde endoscopic tumor ablation
- Independently perform simple portions of open procedures
 - Opening/closure of abdominal and flank incisions
 - Simple pelvic lymph node dissection
- Independently perform simple portions of laparoscopic/robotic procedures
 - Bladder mobilization in RALP
 - Pelvic lymph node dissection in RALP
 - Colonic reflection in renal surgery
 - Ureteral identification and initial dissection
 - Simple robotic suturing

Professionalism (IV.B.1.a)

1. Articulate the basic principles of professionalism in Urology: optimal care for patients, honesty, integrity, and respect for others specific to urology oncology practice
2. **Demonstrate professional behavior in complex or stressful situations**
3. **Seek help in managing and resolving complex ethical situations**
4. Demonstrate progression in level appropriate acquisition of the basic principles of the AUA Code of Ethics
5. **Perform tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations**
6. Demonstrate advancement in ability to mentor and teach junior residents in outpatient clinical and procedural skills
7. Perform with sensitivity and responsiveness to diverse patient population

8. With assistance, propose a plan to optimize personal and professional well-being

Interpersonal Communication Skills (IV.B.1.e)

1. Demonstrate advancement of ability in the key elements in communicating with colleagues and allied health professionals related to urology oncology practice (i.e. introduction, H&P outcomes-patient related items, questioning skills)
2. Exhibit advancing acquisition of skill in the key elements in communicating with patients related to urology oncology practice (i.e. communication during H &P, clinic/ward rounds, outcomes-patient related-items, questioning skills)
3. Establish a therapeutic relationship in challenging encounters
4. When prompted, reflect on personal biases while attempting to minimize communication barriers
5. Counsel patients through decision making processes, including questions, for simple clinical problems
6. Actively recognize and mitigate communication barriers and biases with members of the healthcare team
7. Concisely report diagnostic and therapeutic reasoning

Practice-Based Learning and Improvement (IV.B.1.d)

1. Assess, with increasing accuracy, knowledge and/or competency gaps and direct further study as appropriate
2. Adapt learning and practice, with level appropriate ability, changes suggested by Urology faculty in patient care, procedures, surgical technique, and clinic interactions
3. Integrate best available evidence with patient preference to guide care
4. Institute behavioral changes to narrow the gaps between expectations and actual performance
5. Integrate practice data and feedback with humility to implement a learning plan

Systems-Based Practice (IV.B.1.f)

1. Assess the social, ethical and financial implications of urologic oncology care demonstrating progression of competency
2. Exhibit progression of level appropriate acquisition of the key elements in direct management of patients within this and other healthcare systems
3. Participate in analysis of patient safety events (simulated or actual)
4. Participate in local quality improvement initiatives
5. Coordinate multidisciplinary care of patients in complex clinical situations and incorporate local resources into the plan

6. Supervise safe and effective transitions of care/hand-offs of junior residents
7. Describe core administrative knowledge needed for transition to independent practice
8. Discuss how individual practice affects the broader system performance

PGY-4 (URO-4) Pediatric Urology Rotation

Service:	Pediatric Urology
Institution:	Children's Hospital at Erlanger
Duration:	3 months
Supervision:	See PGY-4 Supervision Level Policy

GOAL

Residents will exhibit knowledge and skill acquisition for clinical and surgical activities necessary to care for pediatric urology patients as a resident in the final years of education. By the end of the rotation, the resident will:

Patient Care and Procedural Skills (IV.B.1.b)

1. Demonstrate level appropriate knowledge of and progressive experience with longitudinal continuity of care for outpatient pediatric urologic patients
2. Exhibit abilities necessary to plan and administer outpatient pediatric care with level appropriate accuracy
3. Display ability in overall pediatric patient care evaluation and management with level appropriate accuracy
4. Direct, conduct and manage inpatient pediatric consultations
5. Guide and participate, with level appropriate skill and leadership, a multidisciplinary team in the management of pediatric inpatients
6. Assist with level appropriate skill in pediatric urologic inpatient consultations including:
 - a. Complete consultative history
 - b. Thorough physical examination
 - c. Identify pediatric urologic pathology
 - d. Identification of steps in design of patient care plan and its implementation
 - e. Appropriately order and interpret pediatric urologic imaging and diagnostic lab tests
7. Apply knowledge of pediatric urology and patient care management in pediatric urologic emergencies including trauma
8. Distinguish urgent from non-urgent pediatric urologic problems with level appropriate accuracy
9. Demonstrate level appropriate acquisition of skill and experience in the following areas as related to the pediatric patient:
 - a. Urinary Tract Reconstruction
 - b. Urinary Incontinence

- c. Stone Disease
 - d. Congenital Anomalies
 - e. Hydronephrosis
 - f. Renal Failure
 - g. Pediatric Urologic Oncology
10. Support the coordination and participate in the implementation of care on a pediatric healthcare team including:
- a. Ordering appropriate lab tests
 - b. Social services
 - c. Patient evaluation
 - d. Collating patient information
 - e. Summarizing patient information for faculty
 - f. Develop a plan to manage patients with complex pediatric urologic conditions and adapt plan for changing clinical situations
 - g. Independently identify and prioritize tasks necessary for management of complex and/or less common peri-procedural alterations and complications

Medical Knowledge (IV.B.1.c)

1. Demonstrate comprehensive knowledge, including guidelines, of a full spectrum of pediatric urologic diseases
2. Independently synthesize clinical information to inform diagnosis and therapy in complex cases, recognizing sources of error
3. Integrate and apply to practice, data and knowledge of pediatric disease process, in medical, preoperative, and postoperative contexts
4. Integrate, with level appropriate accuracy, knowledge of pediatric disease processes into patient care activities as they relate to inpatient and outpatient services including: :
 - a. Medial processes
 - b. Perioperative processes
5. Assess, with level appropriate detail, pediatric patients with pediatric conditions
6. Develop and implement pediatric patient management plans for patients with general urologic conditions with level appropriate accuracy, detail, and assistance as needed
7. Extend knowledge to assess acute or chronic pediatric conditions and how this relates to patient care plan development/acute urologic problems with level appropriate accuracy
8. Discuss, with level appropriate knowledge and ability, the management of pediatric urologic emergencies including trauma
9. Demonstrate level appropriate ability to distinguish urgent from non-urgent pediatric urologic problems
10. Develop and present a case for M&M Conference demonstrating knowledge of the pathophysiology behind the complication, complete review of relevant literature, and assist in the development (with level appropriate knowledge) of a recommendation for an alternative patient care plan to avoid complication in the future

Professionalism (IV.B.1.a)

1. Utilize in practice, with level appropriate accuracy, the principles of professionalism in pediatric urology: advocating for optimal care, working with pediatric patients/families/representatives, and optimal care for patients, honesty, integrity, and respect for others
2. Recognize and intervene in situations to prevent professionalism lapses in self and others
3. Recognize and use appropriate resources for managing and resolving ethical dilemmas
4. Recognize situations that may impact others ability to complete tasks and responsibilities in a timely manner and propose solutions
5. Apply in practice, with level appropriate ability, the principles of the AUA Code of Ethics
6. Independently develop a plan to optimize personal and professional well-being

Interpersonal Communication Skills (IV.B.1.e)

1. Display and explain, with advanced, level appropriate knowledge, the key elements of effective communication with pediatric patients (i.e. introduction, patient related items, questioning skills)
2. Demonstrate knowledge acquisition of skill in communicating and maintaining effective relationships with members of a pediatric healthcare team
3. Facilitate difficult discussions specific to patient and family conferences
4. Independently recognize personal biases while attempting to proactively minimize communication barriers
5. Counsel patients through decision making processes, including questions, for complex clinical problems
6. Lead and coordinate recommendations from multidisciplinary members of the health care team
7. Efficiently communicate in an organized fashion that includes contingency plans

Practice-Based Learning and Improvement (IV.B.1.d)

1. Assess own general pediatric urology knowledge and/or competency gaps and direct further study as appropriate
2. Plan, with guidance as needed, changes suggested by pediatric urology faculty in patient care, procedures, surgical technique, and clinic interactions
3. Tailor patient care in the setting of conflicting or absent evidence
4. Continuously reflect on remaining gaps and institute behavioral adjustments to narrow them
5. Use performance data to measure the effectiveness of the learning plan and adapt when necessary

Systems-Based Practice (IV.B.1.f)

1. Apply to practice, with level appropriate ability, the key elements in direct management of pediatric patients within a pediatric health system
2. Practice, with level appropriate ability, the ability to advocate for optimal patient care within a pediatric health system
3. Distinguish, with level appropriate knowledge, the differences between academic, non-academic and pediatric health systems
4. Offer strategies to prevent safety events
5. Demonstrate skills required to identify, develop, implement, and analyze a quality improvement project
6. Lead care coordination of patients with barriers or other disparities in care
7. Resolve conflicts in transitions of care between teams
8. Analyze individual practice patterns and professional requirements in preparation for practice
9. Manage various components of the complex health care system to provide efficient and effective patient care

PGY-4 (URO-4) Urology Non-Oncology Rotation

Service:	Urology Non-Oncology
Institution:	Erlanger Health System
Duration:	3 months
Supervision:	See PGY-4 Supervision Level Policy

GOAL

Residents will demonstrate progression in acquisition of skills necessary to care for general non-oncology patients as a resident in the final years of education. By the end of the rotation, the resident will:

Patient Care and Procedural Skills (IV.B.1.b)

1. Lead patient care team in general urologic inpatient consultations including:
 - a. Complete consultative history
 - b. Thorough physical examination
 - c. Identify urologic pathology
 - d. Identification of steps in design of patient care plan and its implementation
 - e. Order and interpret diagnostic testing
2. Develop a plan to manage patient with complex urologic conditions and adapt plans for changing clinical situations
3. Independently identify and prioritize tasks necessary for management of common peri-procedural complications
4. Integrate level appropriate knowledge and skill in outpatient clinical patient care and management activities for non-oncology patients
5. Integrate advanced knowledge and skill in urology inpatient care plans and management
6. Participate as a team member, with level appropriate ability, in the coordination and implementation of care on the urology healthcare team including:
 - a. Ordering appropriate lab tests
 - b. Social services
 - c. Patient evaluation
 - d. Collating patient information
 - e. Summarizing patient information for senior residents and faculty
7. Execute and gain experience with outpatient evaluations and problem-focused evaluations with level appropriate accuracy
8. Display progression and acquisition of level appropriate skill and experience in PGY4 Procedure List
9. Describe, with level appropriate skill, the pathophysiology of urologic disease states

10. Demonstrate progression of knowledge of appropriate diagnostic tests, work-ups and the patient care management steps for resulting urologic disease states, with advancing level appropriate ability, including:
 - a. CT urograms
 - b. Renal US
 - c. Urethrograms
 - d. Cystograms
 - e. Loopograms
 - f. MRI studies
 - g. Retrograde pyelograms
11. Distinguish indications for and utility of (with advancing level appropriate ability) laboratory tests for the non-oncology urologic patient including:
 - a. Male hormone evaluation
 - b. Serum Creatinine and GFR
 - c. Serum electrolytes
 - d. Urinalysis
 - e. Urine culture
 - f. Stone analysis
12. Demonstrate level appropriate advancement of skill in clinic procedures for non-oncology urology patients (outpatient/inpatient)
13. Demonstrate level appropriate advancement of skill in operative procedures for non-oncology urology patients
14. Demonstrate progression in development in level appropriate skill in open urologic surgical procedures (inpatient and outpatient)

Medical Knowledge (IV.B.1.c)

1. Analyze presenting patient cases, with level appropriate knowledge, exhibiting urologic disease states including:
 - a. Female urologic disorders
 - b. Urethral strictures
 - c. Ureteral strictures
 - d. BPH
 - e. Kidney stones
 - f. UPJ obstruction
 - g. Urologic infectious diseases
 - h. Male infertility
 - i. Male sexual dysfunction
 - j. Adrenal disease
 - k. Miscellaneous urologic disease states
2. Participate in the assessment of, with level appropriate detail, patients with both acute and chronic general urologic conditions
3. **Demonstrate comprehensive knowledge, including guidelines, of the full spectrum of urologic diseases, treatments, and populations**

4. Independently synthesize clinical information to inform diagnosis and therapy in complex cases, recognizing sources of error
5. Apply level appropriate knowledge of procedures on PGY4 Minor Procedure List
6. Discriminate and provide detail for acute, chronic conditions as they relate to patient hospitalization and acute urologic problems
7. Explain, with level appropriate ability, the details of complex metabolic evaluations for stone disease

PGY4 Procedure List

- Oversight/teaching of complicated flexible and rigid cystoscopy
- Oversight/teaching of complicated foley catheter placements
- Oversight/teaching of complicated ureteral stent placement
- Oversight/teaching of complicated urethral catheterization
- Oversight/teaching of suprapubic tube insertion and management
- Interpretation of complex urodynamics
- Independently perform advanced endoscopic procedures
 - Complex ureteroscopy
 - Nephroscopy and PCNL, including percutaneous access
 - TURP, laser enucleation of large prostates
- Independently perform more difficult portions of open procedures
 - Complex scrotal procedures (spermatocectomy, microsurgical scrotal and inguinal surgery)
 - Urethroplasty
 - Prosthetic urology (IPP, AUS)
 - Female and male sling
- Independently perform more difficult portions of laparoscopic/robotic procedures
 - Ureteral dissection in pyeloplasty
 - Complex robotic suturing
 - Robotic prolapse repair

Professionalism (IV.B.1.a)

1. Explain the principles of professionalism in Urology: optimal care for patients, honesty, integrity, and respect for others
2. Recognize and intervene in situations to prevent professionalism lapses in self and others
3. Recognize and use appropriate resources for managing and resolving ethical dilemmas

4. Differentiate with continued, level appropriate knowledge the basic principles of the AUA Code of Ethics
5. Recognize situations that may impact others ability to complete tasks and responsibilities in a timely manner and propose solutions
6. Display improvement in the ability to mentor and teach junior residents in outpatient clinical and procedural skills
7. Perform with sensitivity and responsiveness to diverse patient population
8. Independently develop a plan to optimize personal and professional well-being

Interpersonal Communication Skills (IV.B.1.e)

1. Display and explain, with advanced, level appropriate knowledge, the key elements of effective communication with patients (i.e. introduction, patient related items, questioning skills)
2. Demonstrate knowledge acquisition of skill in communicating and maintaining effective relationships with members of a healthcare team
3. Facilitate difficult discussions specific to patient and family conferences
4. Independently recognize personal biases while attempting to proactively minimize communication barriers
5. Counsel patients through decision making processes, including questions, for complex clinical problems
6. Lead and coordinate recommendations from multidisciplinary members of the health care team
7. Efficiently communicate in an organized fashion that includes contingency plans

Practice-Based Learning and Improvement (IV.B.1.d)

1. Evaluate own general urologic knowledge and/or competency gaps and direct further study as appropriate
2. Adapt, with guidance as needed, changes suggest by Urology faculty in patient care, procedures, surgical technique, and clinic interactions
3. Tailor patient care in the setting of conflicting or absent evidence
4. Continuously reflect on remaining gaps and institute behavioral adjustments to narrow them
5. Use performance data to measure the effectiveness of the learning plan and adapt when necessary

Systems-Based Practice (IV.B.1.f)

1. Compare and contrast the key differences between institutions and how these differences impact the direct management of patients within this and other healthcare systems
2. Identify and appreciate, with progression in ability, the social, ethical, and financial implications of urologic care
3. Offer strategies to prevent safety events
4. Demonstrate skills required to identify, develop, implement, and analyze a quality improvement project
5. Lead care coordination of patients with barriers or other disparities in care
6. Resolve conflicts in transitions of care between teams
7. Analyze individual practice patterns and professional requirements in preparation for practice
8. Manage various components of the complex health care system to provide efficient and effective patient care

PGY-4 (URO-4) Urology Oncology Rotation

Service:	Urology Oncology
Institution:	Erlanger Health System
Duration:	6 months
Supervision:	See PGY-4 Supervision Level Policy

GOAL

Residents will demonstrate progression in acquisition of skills necessary to care for urologic oncology patients as a resident in the final years of education. By the end of the rotation, the resident will:

Patient Care and Procedural Skills (IV.B.1.b)

1. Participate as a team leader in inpatient consultations on the urologic oncology service (with level appropriate knowledge/ability) including:
 - a. Complete consultative history
 - b. Thorough physical examination
 - c. Identify urologic pathology
 - d. Design and institution of patient care plan
 - e. Order and interpret diagnostic testing
2. Develop a plan to manage patient with complex urologic conditions and adapt plans for changing clinical situations
3. Independently identify and prioritize tasks necessary for management of common peri-procedural complications
4. Intergrade level appropriate knowledge and ability in outpatient clinical skills for the management of urologic oncology patients
5. Integrate level appropriate knowledge and skill in inpatient urologic oncology patient management
6. Participate as a team member, with level appropriate ability, in the coordination and implementation of care on the urology healthcare team including:
 - a. Ordering appropriate lab tests
 - b. Social services
 - c. Patient evaluation
 - d. Collating patient information
 - e. Summarizing patient information for senior residents and faculty
7. Execute and gain experience with outpatient evaluations and problem-focused evaluations with level appropriate accuracy

8. Display progression and acquisition of level appropriate skill and experience in PGY4 Procedure List
9. Describe, with level appropriate skill, the pathophysiology of urologic disease states
10. Demonstrate progression of knowledge of appropriate diagnostic tests, work-ups and the patient care management steps for resulting urologic disease states, with advancing level appropriate ability, including:
 - a. CT urograms
 - b. Renal US
 - c. Bone scans
 - d. PET scans
 - e. MRI studies
 - f. Retrograde pyelograms
11. Discuss indication for and utility of laboratory tests for the urologic oncology patient (with level appropriate knowledge and ability) including:
 - a. PSA
 - b. Testis Cancer Tumor Marker (AFP, beta HCG, LDH)
 - c. Alkaline Phosphatase
 - d. Creatinine
 - e. GFR
12. Demonstrate level appropriate advancement of skill in clinic procedures for oncologic urology patients (outpatient/inpatient)
13. Demonstrate level appropriate advancement of skill in operative procedures for oncologic urology patients

Medical Knowledge (IV.B.1.c)

1. Display level appropriate knowledge of urologic oncology disease states including:
 - a. Kidney Cancer
 - b. Bladder Cancer
 - c. Prostate Cancer
 - d. Testis Cancer
 - e. Miscellaneous Urologic Cancers
2. Participate in the assessment of, with level appropriate detail, patients with both acute and chronic urologic conditions
3. Demonstrate comprehensive knowledge, including guidelines, of the full spectrum of urologic diseases, treatments, and populations
4. Independently synthesize clinical information to inform diagnosis and therapy in complex cases, recognizing sources of error
5. Describe, with accuracy, acute, chronic conditions as they relate to urologic oncology patient hospitalization and acute urologic oncology problems
6. Differentiate and infer the implications of, with level appropriate ability, the pathophysiology of the urologic oncology disease state

7. Recognize and identify implications of relevant urologic oncology disease state pathology during pathology and tumor board conferences
8. Demonstrate level appropriate knowledge acquisition of the indications/contraindications and procedural steps of clinic procedures for oncology patients (outpatient/inpatient)

PGY4 Procedure List

- Oversight/teaching of complicated flexible and rigid cystoscopy
- Oversight/teaching of prostate needle biopsy, including fusion biopsy
- Oversight/teaching of biodegradable material (Space OAR)
- Independently perform advanced endoscopic procedures
 - Large TURBT
 - Antegrade and retrograde endoscopic tumor ablation
- Independently perform more difficult portions of open procedures
 - Oversight/teaching of abdominal and flank incisions
 - Pelvic lymph node dissection
 - Renal mobilization
 - Renal hilar dissection
 - Renal tumor visualization using intraoperative ultrasound
 - Small bowel anastomosis and ileal conduit creation
- Independently perform more difficult portions of laparoscopic/robotic procedures
 - Veress needle passage and optical entry
 - Posterior dissection during RALP
 - Pelvic lymph node dissection during RALP
 - Prostatic pedicle dissection and control
 - Complex robotic suturing
 - Renal hilar dissection
 - Renal tumor visualization using intraoperative ultrasound
 - Simple renorrhaphy

Professionalism (IV.B.1.a)

1. Demonstrate the acquisition of the principles of professionalism in Urology: optimal care for patients, honesty, integrity, and respect for others specific to urology oncology practice
2. **Demonstrate professional behavior in complex or stressful situations**
3. **Seek help in managing and resolving complex ethical situations**
4. Demonstrate progression in level appropriate acquisition of the basic principles of the AUA Code of Ethics

5. Perform tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations
6. Demonstrate advancement in ability to mentor and teach junior residents in outpatient clinical and procedural skills
7. Act with respect for patient privacy and patient autonomy
8. Perform with sensitivity and responsiveness to diverse patient population
9. With assistance, propose a plan to optimize personal and professional well-being

Interpersonal Communication Skills (IV.B.1.e)

1. Demonstrate advancement of ability in the key elements in communicating with colleagues and allied health professionals related to urology oncology practice (i.e. introduction, patient related items, questioning skills)
2. Exhibit advancing acquisition of skill in the key elements in communicating with patients related to urology oncology practice (i.e. communication during H &P, clinic/ward rounds, outcomes-patient related-items, questioning skills)
3. Establish a therapeutic relationship in challenging encounters
4. When prompted, reflect on personal biases while attempting to minimize communication barriers
5. Counsel patients through decision making processes, including questions, for simple clinical problems
6. Actively recognize and mitigate communication barriers and biases with members of the healthcare team
7. Concisely report diagnostic and therapeutic reasoning

Practice-Based Learning and Improvement (IV.B.1.d)

1. Assess, with increasing accuracy, knowledge and/or competency gaps and direct further study as appropriate
2. Adapt learning and practice, with level appropriate ability, changes suggested by Urology faculty in patient care, procedures, surgical technique, and clinic interactions
3. Integrate best available evidence with patient preference to guide care
4. Institute behavioral changes to narrow the gaps between expectations and actual performance
5. Integrate practice data and feedback with humility to implement a learning plan

Systems-Based Practice (IV.B.1.f)

1. Assess the social, ethical and financial implications of urologic oncology care demonstrating progression of competency in the area
2. Exhibit progression of level appropriate acquisition of the key elements in direct management of patients within this and other healthcare systems

3. Participate in analysis of patient safety events (simulated or actual)
4. Participate in local quality improvement initiatives
5. Coordinate multidisciplinary care of patients in complex clinical situations and incorporate local resources into the plan
6. Supervise safe and effective transitions of care/hand-offs of junior residents
7. Describe core administrative knowledge needed for transition to independent practice
8. Discuss how individual practice affects the broader system performance

PGY-5 (URO-5) Urology Non-Oncology Rotation

Service:	Urology Non-Oncology
Institution:	Erlanger Health System
Duration:	6 months
Supervision:	See PGY-5 Supervision Level Policy

GOAL

Residents will demonstrate progression in acquisition of skills necessary to care for urologic patients as a resident in the final years of education. By the end of the rotation, the resident will:

Patient Care and Procedural Skills (IV.B.1.b)

1. Lead resident team in general urologic inpatient consultations including:
 - a. Complete consultative history
 - b. Thorough physical examination
 - c. Identify urologic pathology
 - d. Identification of steps in design of patient care plan and its implementation
2. Integrate advanced knowledge and skill in outpatient clinical management of urology patients
3. Integrate advanced knowledge and skill in inpatient urologic patient management
4. Develop a clinical pathway for the management of patients with complex conditions or identify clinical trials for patients
5. Independently identify and prioritize tasks necessary for management of complex and/or less common peri-procedural alterations and complications
6. Serve as a senior team member, with level appropriate ability, in the coordination and implementation of care on the healthcare team including:
 - a. Ordering appropriate lab tests
 - b. Social services
 - c. Patient evaluation
 - d. Collating patient information
 - e. Summarizing patient information for senior residents and faculty
7. Perform with level appropriate accuracy, and gain experience with, complex outpatient evaluations and complex problem-focused evaluations
8. Display level appropriate advancement in skill and experience on clinical procedures
9. Display progression and acquisition of level appropriate skill in complex clinical procedures
10. Integrate, with advanced level skill, the pathophysiology of urologic disease states to patient care decisions

11. Demonstrate progression of knowledge of appropriate diagnostic tests, work-ups and the patient care management steps for resulting urologic disease states, with advancing level appropriate ability, including:
 - a. CT urograms
 - b. Renal US
 - c. Urethrograms
 - d. Cystograms
 - e. Loopograms
 - f. MRI studies
 - g. Retrograde pyelograms
12. Distinguish indications for and utility of (with advancing level appropriate ability) laboratory tests for the non-oncology urologic patient including:
 - a. Male hormone evaluation
 - b. Serum Creatinine and GFR
 - c. Serum electrolytes
 - d. Urinalysis
 - e. Urine culture
 - f. Stone analysis
13. Demonstrate level appropriate advancement of skill in clinic procedures for non-oncology urology patients (outpatient/inpatient)
14. Demonstrate level appropriate advancement of skill in operative procedures for non-oncology urology patients
15. Demonstrate progression in development in level appropriate skill in open urologic surgical procedures (inpatient and outpatient)

Medical Knowledge (IV.B.1.c)

1. Analyze presenting patient cases, with level appropriate knowledge, exhibiting urologic disease states including:
 - a. Female urologic disorders
 - b. Urethral strictures
 - c. Ureteral strictures
 - d. BPH
 - e. Kidney stones
 - f. UPJ obstruction
 - g. Urologic infectious diseases
 - h. Male infertility
 - i. Male sexual dysfunction
 - j. Adrenal disease

- k. Miscellaneous urologic disease states
2. Lead or co-lead the assessment, with level appropriate detail, patients with both acute and chronic general urologic conditions
 3. Apply and integrate level appropriate knowledge of procedures into patient care activities
 4. Apply progressing level appropriate knowledge and integrate knowledge into patient care activities of acute, chronic conditions as they relate to patient hospitalization and acute urologic problems
 5. **Create a curriculum for clinical medical knowledge**
 6. Apply level appropriate knowledge of endoscopic principles and anatomy
 7. Apply level appropriate knowledge of the indications/contraindications and procedural steps of clinic procedures for non-oncology urology patients (outpatient/inpatient)
 8. Discuss and apply to patient care activities, with level appropriate ability, indications/contraindications and procedural steps of operative procedures for non-oncology urology patients

PGY5 Procedure List

- Oversight/teaching of complicated flexible and rigid cystoscopy
- Oversight/teaching of complicated foley catheter placements
- Oversight/teaching of complicated ureteral stent placement
- Oversight/teaching of complicated urethral catheterization
- Oversight/teaching of suprapubic tube insertion and management
- Interpretation of complex urodynamics
- Independently perform advanced endoscopic procedures
 - Complex ureteroscopy
 - Nephroscopy and PCNL, including percutaneous access
 - TURP, laser enucleation of large prostates
- Independently perform most or all portions of open procedures
 - Complex scrotal procedures (spermatocectomy, microsurgical scrotal and inguinal surgery)
 - Urethroplasty
 - Prosthetic urology (IPP, AUS)
 - Female and male sling
- Independently perform most or all portions of laparoscopic/robotic procedures
 - Ureteral dissection in pyeloplasty
 - Complex ureteral dissection
 - Complex robotic suturing
 - Robotic prolapse repair

Professionalism (IV.B.1.a)

1. Integrate into practice the principles of professionalism in Urology: optimal care for patients, honesty, integrity, and respect for others
2. Integrate into practice level appropriate knowledge of the basic principles of the AUA Code of Ethics
3. Coach others when their behavior fails to meet professional expectations
4. Identify and seek to address system-level factors that induce or exacerbate ethical problems or impede their resolution
5. Develop systems to enhance other's ability to efficiently complete administrative tasks and responsibilities
6. Coach others when emotional responses do not meet professional expectations

Interpersonal Communication Skills (IV.B.1.e)

1. Integrate, with level appropriate ability, the key elements of effective communication with patients (i.e. introduction, patient related items, questioning skills)
2. Use acquired knowledge and skill in communicating and maintaining effective relationships with members of a healthcare team
3. Mentor others in situational awareness and critical self reflection
4. Coach others in the facilitation of crucial conversations
5. Counsel patient through decision-making processes, including questions, for uncommon clinical problems
6. Exemplar of flexible communication strategies
7. Facilitate improved written and verbal communication of others

Practice-Based Learning and Improvement (IV.B.1.d)

1. Assess own general urologic knowledge and/or competency gaps and direct further study as appropriate
2. Integrate, with guidance as needed, changes suggested by Urology faculty in patient care, procedures, surgical technique, and clinic interactions
3. Coach others to critically appraise and apply evidence for patients with complex conditions
4. Coach others on reflective practice
5. Coach others in the design and implementation of learning plans

Systems-Based Practice (IV.B.1.f)

1. Differentiate the key differences between institutions and how these differences impact the direct management of patients within this and other healthcare systems
2. Discuss and appreciate, with advancement in ability, the social, ethical, and financial implications of urologic care
3. Actively engage and lead teams and processes to prevent patient safety events
4. Create, implement, and assess quality improvement initiatives at the institutional or community level
5. Design innovative care coordination strategies for populations with health care inequities
6. Lead in the design and implementation of improvements to transitions of care
7. Educate others to prepare them for transition to practice
8. Advocate for or lead systems change that enhances high-value, efficient, and effective patient care

PGY-5 (URO-5) Urology Oncology Rotation

Service:	Urology Oncology
Institution:	Erlanger Health System
Duration:	6 months
Supervision:	See PGY-5 Supervision Level Policy

GOAL

Residents will demonstrate the skills necessary to care for urologic oncology patients as a resident in the final year of education. By the end of the rotation, the resident will:

Patient Care and Procedural Skills (IV.B.1.b)

1. Lead the team in inpatient consultations on the urologic oncology service (with level appropriate knowledge/ability) including:
 - a. Complete consultative history
 - b. Thorough physical examination
 - c. Identify urologic pathology
 - d. Identification of steps in design of patient care plan and its implementation
2. Integrate advanced knowledge and skill in outpatient clinical management of urology oncology patients
3. Integrate advanced knowledge and skill in inpatient urologic oncology patient management
4. Develop a clinical pathway for the management of patients with complex conditions or identify clinical trials for patients
5. Independently identify and prioritize tasks necessary for management of complex and/or less common peri-procedural alterations and complications
6. Exhibit skill in clinic procedures for oncology patients (outpatient/inpatient) with level appropriate accuracy
7. Exhibit level appropriate skill in operative procedures for oncology patients
8. Facilitate and manage outpatient evaluations and problem-focused evaluations with level appropriate accuracy
9. Lead the coordination and implementation of care on the urologic oncology healthcare team (with level appropriate accuracy) including:
 - a. Ordering appropriate lab tests
 - b. Social services
 - c. Patient evaluation
 - d. Collating patient information
 - e. Summarizing patient information for senior residents and faculty

10. Exhibit advanced knowledge of pathophysiology of urologic oncology disease state
11. Exhibit advanced knowledge of appropriate diagnostic tests, work-ups and the patient care management steps for resulting urologic oncology disease state including:
 - a. CT urograms
 - b. Renal US
 - c. Bone scans
 - d. PET scans
 - e. MRI studies
 - f. Retrograde pyelograms
12. Discuss indications for and utility of laboratory tests for the urologic oncology patient (with level appropriate knowledge and ability) including:
 - a. PSA
 - b. Testis Cancer Tumor Marker (AFP, beta HCG, LDH)
 - c. Alkaline Phosphatase
 - d. Creatinine
 - e. GFR
13. Demonstrate level appropriate skill in endoscopic principles and anatomy for the oncology patient
14. Demonstrate level appropriate advancement of skill in clinic procedures for oncologic urology patients (outpatient/inpatient)
15. Demonstrate level appropriate advancement of skill in operative procedures for oncologic urology patients

PGY4 Procedure List

- Oversight/teaching of complicated flexible and rigid cystoscopy
- Oversight/teaching of prostate needle biopsy, including fusion biopsy
- Oversight/teaching of biodegradable material (Space OAR)
- Independently perform advanced endoscopic procedures
 - Large TURBT
 - Antegrade and retrograde endoscopic tumor ablation
- Independently perform most or all portions of open procedures
 - Oversight/teaching of abdominal and flank incisions
 - Pelvic lymph node dissection
 - Renal hilar dissection and vessel clamping/control
 - Renal tumor visualization using intraoperative ultrasound
 - Renal tumor enucleation
 - Completion of renorrhaphy
 - Small bowel anastomosis and ileal conduit creation
- Independently perform most or all portions of laparoscopic/robotic procedures
 - Veress needle passage and optical entry

- Bladder neck dissection during RALP
- Prostatic pedicle dissection and control
- Nerve sparing during RALP
- Dissection of prostate apex during RALP
- Complex robotic suturing
- Renal hilar dissection and vessel clamping/control
- Renal tumor visualization using intraoperative ultrasound
- Simple tumor enucleation
- Completion of renorrhaphy

Medical Knowledge (IV.B.1.c)

1. Display advanced knowledge of urologic oncology disease states including:
 - a. Kidney Cancer
 - b. Bladder Cancer
 - c. Prostate Cancer
 - d. Testis Cancer
 - e. Miscellaneous Urologic Cancers
2. Facilitate and contribute, as a team leader with level appropriate detail, to the assessment of patients with both acute and chronic urologic oncology conditions
3. Discuss, with accuracy, acute, chronic conditions as they relate to urologic oncology patient hospitalization and acute urologic oncology problems
4. Differentiate and infer the implications of, with level appropriate ability, the pathophysiology of the urologic oncology disease state
5. Recognize and identify implications of relevant urologic oncology disease state pathology during pathology and tumor board conferences
6. Exhibit advanced knowledge acquisition of the indications/contraindications and procedural steps of clinic procedures for oncology patients (outpatient/inpatient)
7. **Create a curriculum for clinical medical knowledge**

Professionalism (IV.B.1.a)

1. Demonstrate the attainment and integration into practice of the principles of professionalism in Urology: optimal care for patients, honesty, integrity, and respect for others specific to urology oncology practice
2. Demonstrate attainment and integration into practice of the principles of the AUA Code of Ethics
3. **Coach others when their behavior fails to meet professional expectations**
4. **Identify and seek to address system-level factors that induce or exacerbate ethical problems or impede their resolution**

5. Develop systems to enhance other's ability to efficiently complete administrative tasks and responsibilities
6. Coach others when emotional responses do not meet professional expectations

Interpersonal Communication Skills (IV.B.1.e)

1. Demonstrate attainment and integration into practice of ability in the key elements in communicating with colleagues and allied health professionals related to urology oncology practice (i.e. introduction, H&P outcomes-patient related items, questioning skills)
2. Exhibit attainment and integration into practice of the key elements in communicating with patients related to urology oncology practice (i.e. communication during H &P, clinic/ward rounds, outcomes-patient related-items, questioning skills)
3. Mentor others in situational awareness and critical self reflection
4. Coach others in the facilitation of crucial conversations
5. Counsel patient through decision-making processes, including questions, for uncommon clinical problems
6. Exemplar of flexible communication strategies
7. Facilitate improved written and verbal communication of others

Practice-Based Learning and Improvement (IV.B.1.d)

1. Assess, with accuracy, knowledge and/or competency gaps and direct further study as appropriate
2. Adapt learning and practice, with level appropriate ability, changes suggested by Urology faculty in patient care, procedures, surgical technique, and clinic interactions
3. Coach others to critically appraise and apply evidence for patients with complex conditions
4. Coach others on reflective practice
5. Coach others in the design and implementation of learning plans

Systems-Based Practice (IV.B.1.f)

1. Assess the social, ethical and financial implications of urologic oncology care demonstrating competency in the area
2. Exhibit attainment and integration into the key elements in direct management of patients within this and other healthcare systems
3. Create, implement, and assess quality improvement initiatives at the institutional or community level
4. Design innovative care coordination strategies for populations with health care inequities
5. Lead in the design and implementation of improvements to transitions of care

6. Educate others to prepare them for transition to practice
7. Advocate for or lead systems change that enhances high-value, efficient, and effective patient care

UT Erlanger Urology Residency – Robotic Surgery Training Curriculum

Participating Faculty:

- Amar Singh, M.D., Chairman
- Ben Waldorf, M.D., Director of Robotics Fellowship, Assistant Residency Program Director
- Henry Okafor, M.D.

Introduction:

The proportion of major intraabdominal and retroperitoneal urologic operations performed in a minimally invasive manner continues to increase, and competency in operating with the DaVinci robotic surgical platform is necessary for the graduating resident in 2021. Proficiency in robotic surgery is a core component of resident training in our program. UT Urology physicians typically perform 10-12 robotic cases per week at Erlanger Baroness Hospital and Erlanger East Hospital, and residents are involved in the majority of these operations. In the future, we plan to add one fellow to our training program. Three DaVinci Xi dual console systems are available for use at Erlanger Baroness, and one Xi single console system is used at Erlanger East.

The following program was developed to provide a structure for developing robotic surgical skills as residents and fellows progress through our training program. While the curriculum is broken down by PGY year, proficiency is highly dependent on individual factors such as motivation, interest, and innate ability. Thus, our curriculum serves as a guideline, with some trainees being ahead of or behind the outlined schedule. Our overarching goal is to provide all residents at graduation with the skills necessary to perform common robotic urologic surgical procedures, and if desired, proceed with confidence to further fellowship training in robotic surgery.

Training in robotic urologic surgery extends beyond the operating room, and self study is mandatory for all trainees. One recent study published in the Journal of Urology proposed a minimum of 10 hours of time on the DaVinci Skills Simulator as needed for basic proficiency in robotic surgery (<https://pubmed.ncbi.nlm.nih.gov/26154108/>). Familiarity and proficiency with the surgeon console, obtained through the above methods, is considered a prerequisite to operating on live patients. Non-operative components of our curriculum include:

- Simulator training
- Online module review
- Surgical video review and analysis

Operative training will be with the three attending physicians listed above. Index cases are broken into lower and upper tract categories. Lower tract cases include: radical prostatectomy (RALRP), simple prostatectomy (RALSP), sacrocolpopexy, and radical cystectomy (male and female). Upper tract cases include: radical nephrectomy, partial nephrectomy, robot assisted laparoscopic pyeloplasty. For assessment purposes, expectations for resident proficiency will be broken into beginner (B), intermediate (I) and expert (E) level classification.

PGY 1/2 Curriculum:

As time on the urology service is variable for our interns, the tasks and objectives outlined below are to be completed by the end of the PGY 2 year.

Educational year-end objectives:

- Complete the Intuitive Surgical online modules for residents
- Complete the AUA University Fundamentals of Robotic surgery module
- Complete a minimum of 10 hours of simulator training
- Begin review of robotic surgical videos
- Develop an understanding of indications for common robotic surgical procedures

Operative year-end objectives:

General:

- Proper patient positioning (B)
- Veress needle placement and optical entry into the abdomen (B)
- Robotic port placement and docking (B)

Lower tract:

- RALRP:
 - Bladder mobilization, opening of endopelvic fascia (B)
- RASP:
 - Cystotomy creation, stay suture placement, bladder closure (B)

PGY 3 Curriculum:

Educational year-end objectives:

- Complete AUA University online modules in radical prostatectomy, partial nephrectomy, sacrocolpopexy, pyeloplasty, and radical cystectomy
- Continue review of robotic surgical videos
- Fully understand the indications, preoperative workup, and postoperative management for all common robotic surgical procedures

Operative year-end objectives:

General

- Proper patient positioning (I)
- Veress needle placement and optical entry into the abdomen (I)
- Robotic port placement and docking (I)

Lower tract:

- RALRP:
 - Dissection of seminal vesicles (B)
 - Bladder mobilization, opening of endopelvic fascia (I)
 - Prostatic pedicle control (B)
 - Pelvic lymph node dissection (B)

- RALSP:
 - Cystotomy creation, stay suture placement, bladder closure (I)
 - Mobilization of adenoma (B)

Upper tract:

- Radical/Partial nephrectomy, pyeloplasty:
 - Colonic mobilization (B)
 - Identification and mobilization of ureter (B)
 - Mobilization of kidney off Psoas (B)
 - Closure of Gerota's fascia (B)

PGY 4 Curriculum:

Educational year-end objectives:

- Detailed review of robotic surgical videos
- Fully understand the indications, preoperative workup, and postoperative management for all common robotic surgical procedures

Operative year-end objectives:

General

- Proper patient positioning (E) without attending physician
- Veress needle placement and optical entry into the abdomen (E)
- Robotic port placement and docking (E)
- Initial experience with intraoperative trouble shooting and management

Lower tract:

- RALRP:
 - Dissection of seminal vesicles (I)
 - Bladder mobilization, opening of endopelvic fascia (I)
 - Bladder neck dissection (B)
 - Prostatic pedicle control (I)
 - Nerve sparing (B)
 - Control of DVC (B)
 - Apical dissection (B)
 - Pelvic lymph node dissection (I)

- Urethrovesical anastomosis (B)
- RALSP:
 - Cystotomy creation, stay suture placement, bladder closure (E)
 - Mobilization of adenoma (I)
 - Bladder mucosal advancement (I)

Upper tract:

- Radical/Partial nephrectomy
 - Colonic mobilization (I)
 - Mobilization of liver, spleen/pancreas (B)
 - Mobilization of kidney off Psoas (I)
 - Hilar dissection (B)
 - Mobilization of perirenal fat and tumor identification (B)
 - Renorrhaphy (B)
 - Closure of Gerota's fascia (I)

- Pyeloplasty:
 - Identification and mobilization of ureter (I)
 - Ureteropelvic anastomosis (B)

PGY 5 Curriculum:

Educational year-end objectives:

- Detailed review of robotic surgical videos
- Mastery of the indications, preoperative workup, and postoperative management for all common robotic surgical procedures
- Mastery of preoperative and postoperative management of complex cases

Operative year-end objectives:

General

- Proper patient positioning (E) without attending physician
- Veress needle placement and optical entry into the abdomen (E)
- Robotic port placement and docking (E)
- Intraoperative trouble shooting and management (I)

Lower tract:

- RALRP:
 - Dissection of seminal vesicles (E)
 - Bladder mobilization, opening of endopelvic fascia (E)
 - Bladder neck dissection (I)
 - Prostatic pedicle control (E)
 - Nerve sparing (I)

- Control of DVC (I)
- Apical dissection (I)
- Pelvic lymph node dissection (E)
- Urethrovesical anastomosis (I)
- RALSP:
 - Cystotomy creation, stay suture placement, bladder closure (E)
 - Mobilization of adenoma (E)
 - Bladder mucosal advancement (E)

Upper tract:

- Radical/Partial nephrectomy
 - Colonic mobilization (E)
 - Mobilization of liver, spleen/pancreas (I)
 - Mobilization of kidney off Psoas (E)
 - Hilar dissection (I)
 - Mobilization of perirenal fat and tumor identification (I)
 - Tumor excision in partial nephrectomy (B)
 - Renorrhaphy (I)
 - Closure of Gerota's fascia (E)
- Pyeloplasty:
 - Identification and mobilization of ureter (E)
 - Ureteropelvic anastomosis (I)

Fellow Curriculum:

Educational year-end objectives:

- Detailed review of robotic surgical videos
- Mastery of the indications, preoperative workup, and postoperative management for all common robotic surgical procedures
- Mastery of preoperative and postoperative management of complex cases
- Supervision and teaching of residents both intraoperatively and in simulator training

Operative year-end objectives:

General

- Proper patient positioning (E) without attending physician
- Veress needle placement and optical entry into the abdomen (E) without attending physician
- Robotic port placement and docking (E) without attending physician
- Intraoperative trouble shooting and management (E)

Lower tract:

- RALRP:
 - Dissection of seminal vesicles (E)
 - Bladder mobilization, opening of endopelvic fascia (E)
 - Bladder neck dissection (E)
 - Prostatic pedicle control (E)
 - Nerve sparing (E)
 - Control of DVC (E)
 - Apical dissection (E)
 - Pelvic lymph node dissection (E)
 - Urethrovesical anastomosis (E)
- RALSP:
 - Cystotomy creation, stay suture placement, bladder closure (E)
 - Mobilization of adenoma (E)
 - Bladder mucosal advancement (E)

Upper tract:

- Radical/Partial nephrectomy
 - Colonic mobilization (E)
 - Mobilization of liver, spleen/pancreas (E)
 - Mobilization of kidney off Psoas (E)
 - Hilar dissection (E)
 - Mobilization of perirenal fat and tumor identification (E)
 - Tumor excision in partial nephrectomy (I)
 - Renorrhaphy (E)
 - Closure of Gerota's fascia (E)
- Pyeloplasty:
 - Identification and mobilization of ureter (E)
 - Ureteropelvic anastomosis (E)