**GU Rotations Goals and Objectives**

**Director:** L. Priya Kunju, M.D.

The goal of the **First Genitourinary Pathology Rotation** is for the resident to move from being a

**Novice** (A novice knows little about the subject, and rigidly adheres to rules with little situational perception. He/she does not feel responsible for outcomes. )

To

**Advanced Beginner** (The advanced beginner is still dependent on rules, but can adapt rules to changing circumstances. However, all attributes of a situation tend to be given equal importance, and there is still little feeling of personal responsibility for outcomes.)

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| **First Rotation Goals** | **First Rotation Objectives** |
| **Medical Knowledge**  Acquires knowledge of pathophysiology and laboratory manifestations of routinely-encountered conditions; knows where to access information to fill gaps in knowledge. | The resident will:   * Be familiar and competent with basic pathology of the prostate, including normal histology, benign prostatic hyperplasia, high grade PIN and its mimics, adenocarcinoma and relevant immunohistochemistry, Gleason grading, staging criteria, and therapy effects * Have a basic knowledge of urinary bladder pathology, including normal histology, cystitis, flat urothelial lesions, papillary urothelial neoplasms and their precursors, invasive conventional urothelial carcinoma, and staging criteria * Have a basic knowledge of kidney pathology, including subtypes of RCC and the immunohistochemistry used to distinguish them * Have a basic knowledge of testicular tumors, including the subtypes of germ cell tumors and their immunohistochemical staining patterns. |
| **Patient Care**  Is able to perform procedures necessary to generate laboratory information, gather clinical information needed to establish a diagnosis, and make observations relevant to the clinical situation. | With appropriate supervision (see below), the resident will   * Be able to gross common genitourinary tract specimens as directed in the grossing manual * Become proficient at taking good quality gross photographs that help to illustrate the important findings. * Dictate cogent gross descriptions, and select appropriate tissues for microscopic examination. * Begin to recognize when more information from the submitting physician is need to adequately perform gross dissections. * Obtain clinical history from the EMR when none is provided * Review prepared slides and dictate preliminary reports in the correct format, correlating histologic findings with patient history. * Order additional studies after discussion with faculty, and keep pending cases organized until completed * Keep incomplete cases organized until completed |
| **Practice-based Learning and Improvement**  Uses feedback and evaluations to generate or modify learning plan and improve skills. | The resident:   * Uses faculty critiques and personal assessment of gross descriptions and sampling to improve and refine gross dissection and sampling of similar specimens. * Uses feedback from preliminary diagnostic errors to improve diagnostic accuracy * Asks questions and seeks guidance in building medical knowledge and improving patient care skills * Accesses learning sources (textbooks, medical literature, online resources) to fill gaps in medical knowledge that come to light during case discussions * Develops increasingly efficient case management |
| **Interpersonal and Communication Skills**  Establishes collegial interactive and communication skills in dealing with others; structures reports that are clear, succinct, and follow templates; listens to and fulfills requests from other providers. | The resident will   * Interact in a collegial way with technical staff, including histotechnologists, pathology assistants, and transcriptionists, with goal of providing optimal patient care * Volunteer his/her opinion of cases to faculty, using correct terminology * Dictate diagnoses that use accepted terminology, are easy to understand, and that relay the information important to patient management * With direction, notify treating physicians of unexpected diagnoses |
| **Professionalism**  Is honest, compassionate, and respectful of others; complies with laws and regulations pertaining to medical practice; fulfills patient care and educational responsibilities faithfully. Understands professional responsibility to appear for duty rested and fit to provide service. | The resident:   * Is present and ready for signout at the agreed time * Admits errors or omissions and takes steps to correct them * Protects patient privacy * Is sensitive to issues of race, gender, ethnic background, religion, sexual orientation and other social factors in dealing with patient care and in interactions with other providers and other learners * Treats colleagues at all levels with respect |
| **Systems-based Practice**  Identifies issues related to error, cost, and the need for interdisciplinary collaboration in the delivery of health care. Conducts handoff at the conclusion of rotation with care and thoroughness. | The resident:   * Is vigilant regarding possible specimen, slide, or identification errors and takes steps to investigate and resolve potential errors * Accurately assigns billing codes and quality codes to cases, and understands the role of these codes * Discusses the cost-effectiveness in the selection of ancillary studies. * Understands the value of intradepartmental consultation and collaboration with other departments and specialties in delivering optimal patient care. |

The goal of the **Second and Third Genitourinary Pathology Rotation** is for the resident to move from being an

**Advanced Beginner** (The advanced beginner is still dependent on rules, but can adapt rules to changing circumstances. However, all attributes of a situation tend to be given equal importance, and there is still little feeling of personal responsibility for outcomes.)

To

**Competent** (The competent learner grasps the relevant facts, can sort information by relevance, can bring his/her own judgment to each case, and solve problems. Guidelines are adapted to unexpected events. He/she feels accountable for outcomes because of increasing decision-making.)

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| **Second and Third Rotation Goals** | **Second and Third Rotation Objectives** |
| **Medical Knowledge**  Acquires knowledge of less commonly-encountered conditions and laboratory techniques; critically evaluates knowledge sources and uses evidence-based approach to acquire new knowledge. | The resident will acquire knowledge about   * Advanced prostate pathology, including tertiary Gleason patterns, the evaluation of ASAP (atypical small acinar proliferation) in prostate biopsies and be cognizant of entities such as intraductal carcinoma of prostate * Advanced urinary bladder pathology, including histologic variants of urothelial carcinoma, glandular lesions, squamous lesions, and mesenchymal tumors and tumor-like lesions * The morphologic and immunohistochemical distinction between poorly differentiated prostatic and urothelial carcinomas * Morphologic features and grading of renal tumors, including clear cell, chromophobe, papillary, sarcomatoid, collecting duct, renal medullary, mucinous tubular and spindle cell carcinomas, as well as oncocytoma, xanthogranulomatous pyelonephritis, cystic nephroma, mixed epithelial and stromal tumor, angiomyolipoma, and translocation-associated renal cell carcinoma * Common leukemia involving the testes * Common conditions and neoplasms involving the penis penile lesions * Common testicular germ cell tumors |
| **Patient Care**  Uses laboratory data and own observations to generate accurate diagnoses and differential diagnoses; suggests appropriate ancillary studies as needed; responds to requests for consultation. | With appropriate supervision (see below), the resident will   * Be able to adapt grossing techniques to uncommon specimens from the genito-urinary tract * Dictate gross descriptions, photograph, and select appropriate sections from complex specimens, asking for guidance as needed. * Obtain clinical history from the EMR when the provided information is needed to make accurate diagnosis * Review prepared slides and dictate preliminary reports that are usually accurate, and need some editing by faculty * Become competent in completing prostate biopsy and radical prostate templates in most cases * Suggest additional studies during with faculty, analyze results and anticipate need for further studies or consultation. |
| **Practice-based Learning and Improvement**  Adapts practices based on literature review, case outcomes, peer reviews, and system demands; seeks and gives feedback to improve self and others. | The resident:   * Continues to use feedback from preliminary diagnostic errors to improve diagnostic accuracy. * Uses information accessed on past cases to more efficiently arrive at a diagnosis in subsequent cases. * Uses feedback and questions from clinicians to refine approach to reporting cases.   Accesses learning sources (textbooks, medical literature, online resources) to fill gaps in medical knowledge before coming to signout. |
| **Interpersonal and Communication Skills**  Effectively communicates in a variety of settings, including during conferences, while providing consultations, and teaching peers. | The resident will   * Interact in a collegial way with treating physicians, other learners who request information or attend signout. * Volunteer his/her opinion of cases to faculty, with explanations of rationale * Dictate reports that are designed to answer both the articulated and anticipated clinical questions. * Recognize cases that indicate the need to notify treating physicians, and suggest this need to faculty at signout. * Bring cases to consensus conference and relay pertinent information |
| **Professionalism**  Manages patient care duties and interacts with other providers with compassion and respect for diversity; recognizes and responds to need for help from colleagues. | The resident:   * Attends daily consensus conference, setting aside cases as directed * Assures successful transfer of cases to next rotating resident * Offers assistance to other members of the team as appropriate |
| **Systems-based Practice**  Improves patient outcomes and promotes efficiency by making decisions based on best evidence of outcomes, and by involvement in quality initiatives. | The resident:   * Is knowledgeable about and suggests the most efficient and effective ancillary studies in difficult cases. * Gives feedback to laboratory about quality and timeliness of slides and case delivery * Initiates intradepartmental consultations so as to improve case turnaround time.   Calls attention to practices that may increase the risk of error. |

The goal of the **Fourth and Final**  **Genitourinary Pathology Rotation** is for the resident to move from being

**Competent** (The competent learner grasps the relevant facts, can sort information by relevance, can bring his/her own judgment to each case, and solve problems. Guidelines are adapted to unexpected events. He/she feels accountable for outcomes because of increasing decision-making.)

To

**Proficient** ((Characterized by the progress of the learner from step-by-step analysis and task performance to a holistic perception of the entirety of the situation. Uses pattern recognition arising from experience to identify problems. Perceives deviations from what is expected.  Learns from the experience of others.   Sense of responsibility grows with increasing decision-making. )

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| **Final Rotation Goals** | **Final Rotation Objectives** |
| **Medical Knowledge**  Exercises judgment in application of evidence-based knowledge to patient and to patient population; assists junior residents and other learners in accessing sources of medical knowledge. | The resident will acquire knowledge about   * the four basic diagnoses given for testicular biopsies for fertility (See department website and wall in GU signout room for chart) * The full spectrum of germ cell and sex cord-stromal tumors of the testis * Lymphoma and leukemia involving the testes * Uncommon conditions and neoplasms involving the penis and scrotum * Consolidate his knowledge on prostate, bladder, kidney, testicular and penile pathology * Become aware of newly described and current topics of I interest and controversy in GU pathology * Read up on recent advances in prostate cancer and bladder cancer research including molecular pathways of prostate and bladder cancer, new molecular tests for diagnosis of GU malignancies such as but not limited to Urine PCa3 and MiPS for prostate cancer , UroVision FISH for bladder cancer |
| **Patient Care**  Recognizes clinical cases and circumstances that are rare or unique and selects appropriate additional studies; initiates consultant role in unusual cases; directs other providers and learners in challenging situations. | The resident will   * Be competent to gross almost all GU specimens including complex resections * Recognize subtle deviations from normal or common lesions and seek out relevant information to explain the findings. * Be able to ask sophisticated questions of clinicians about cases with complex or confusing gross or microscopic findings. * Proactively seek expert intradepartmental consultation on cases for which this is required. * Give direction to other residents, technical staff, and pathology assistants regarding the handling of unusual cases. * Serve as a resource for other learners regarding interpretation and diagnosis. |
| **Practice-based Learning and Improvement**  Facilitates collaboration and teamwork to improve patient care and promote learning. | The resident:   * Work with other learners, such as fellows, other residents, and medical students, to share tasks related to gathering knowledge * Recognize gaps in others’ learning (fellow, residents, students, and faculty) and contribute to filling the gaps. * Recognize circumstances in which the current state of clinical and scientific evidence is lacking. |
| **Interpersonal and Communication Skills**  Demonstrates skill in dealing with conflicting opinions or perspectives; responds independently to questions from other providers, patients, and families; generates sophisticated reports that relay information about complex cases. | The resident will   * Manage conflicting opinions or perspectives in such a way that optimal patient care is protected. * Independently handle inquiries for clarification or additional information, and initiate tasks necessary to provide this. * Generate reports that convey diagnostic information about both simple and complex cases effectively, needing little or no editing by faculty. |
| **Professionalism**  Recognizes impairment in themselves and peers and takes steps to address this. Mentors others in use of inter-professional and multi-disciplinary collaboration; Is a role model to other learners regarding accountability to self and others. | The resident:   * Can be viewed as a role model in understanding and managing the strengths and weaknesses of him/herself and others. |
| **Systems-based Practice**  Identifies sources of error and inefficiency and initiates action to assess and fix; acts as a consultant in conducting cost benefit analysis | The resident:   * Identifies processes that lead to inefficiencies and potential errors, and suggests improvements.   Works to resolve cytologic/histologic discrepancies in ways that bring about the best possible patient care outcome |

**Plan for Training**

**ROTATION DESCRIPTION**:

Four “2 week rotations” in which the trainee will become competent in the broad area of genitourinary pathology, including urologic oncology with an emphasis on diseases of the prostate, bladder, kidney, testis and other urinary tract as well as understanding the medical and surgical management of GU malignancies utilizing patient materials derived from the cystoscopic and GU surgical services.

**RESPOSIBILITIES, EXPECTATIONS, GUIDELINES:**

1. **Schedule**

* **Sign- out: 9 am to ~1pm** (**NEVER past 2pm).** Gross and preview in the afternoon.
* Since specimens come later in the afternoon, helps to preview some, then gross, then finish previewing.
* **Do not stay past 10 pm. Go home**.

1. **Pre-study:**

“W:\Resident Training\AP\GU Sign-out Tools\BASIC KNOWLEDGE – for all rotations” on the *W drive*.

* 1. Bladder.pdf, WHO Bladder.pdf, Current Perspectives on Gleason Grading of Prostate Cancer.pdf
  2. Other folders including advanced knowledge and articles in the GU section of the W drive can be helpful once on rotation.
  3. The white folder in GU room has hard copies of useful articles and presentations as well: the index of topics is a useful guide to check. Make sure you have read all articles in W drive and hard copy at least once by the end of third rotation. Last rotation is for revision and re-reading.
  4. Helps to pre-read the Prostate Biopsy Interpretation (Epstein, 4th Ed) prior to rotation (recognize benign prostate, high-grade PIN, adenocarcinoma, atrophy, perineural invasion, and ***Gleason grading***) … borrow from another resident or check out from the Health Sciences library.
  5. Bladder Biopsy Interpretation (Epstein) is also helpful (normal, flat lesions, papillary lesions, invasive).
  6. Genitourinary book in the Diagnostic Pathology series by Amin is great to read on rotation.

1. **Before sign-out / Preview**: Responsibilities
   1. Scan stack for RUSH cases
   2. Identify slides that might need recuts/stains … CONSULT THE FELLOW (or attending) prior to placing order

Recuts – tissue missing from slide, unclear/ non-continuous margin margins, poor histology, etc. (most common for prostatectomy)

IPOX – Renal cancers challenging to classify, prostate cores with ? Cancer (not slam-dunk cancer)

* 1. Preview/dictate over the weekend cases for the Mondays you are on service (i.e. ***Preview the weekend before you start GU rotation*). If first time on rotation, it will be helpful to *meet with the fellow beforehand***.
  2. Find out what specimen container labels are if not properly transcribed
  3. Know patient’s relevant clinical history, prior biopsy results, and the gross description. Review and correction of the gross description if required. Enter blank diagnostic lines and templates into Soft (e.g. “A. Prostate, radical prostatectomy: \_\_”).

Relevant clinical history

* + 1. Prostate: PSA, prior biopsy results, therapy, age
    2. Kidney: Imaging (size, unilateral/bilateral, enhancement), previous biopsy?
    3. Bladder: Prior pathology, cystoscopy findings, treatment
    4. Testis: Serum markers, exam/ultrasound, treatment, age
    5. Prostatectomy whole mounts: Map out cancer nodules on the “Whole mount” diagram… these get saved on the shelf
  1. Various cancer templates are in the “GU Templates” folder in the sign-out room. You can dictate the templates for transcription; alternatively, insert them into “Template” section of Soft yourself: “[Ctrl] + [A]” and template code, or search for template (keywords can be non-intuitive). The back of the folder also has sample diagnosis dictations.

List of common templates:

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| **Procedure** | **“[Ctrl]+A” code** | **Search keyword** |
| Prostate, core biopsy | PBT2 | Prost |
| Prostate, perineal saturation\* | PPSB | \*… most attendings use the *core biopsy* template instead |
| Prostate, prostatectomy | RPM | Prost |
| Nephrectomy (partial or total) | RNT | renal |
| Adrenocortical carcinoma | ADCC | renal |
| Bladder, TURBT | TURBT | TURBT |
| Bladder, Cystectomy | BLADDERNEO | prostate |
| Ureter and Renal pelvis | RPU1 | Renal |
| Orchiectomy (germ cell tumor) | TGCT |  |

1. **Sign out**

* Arrange the cases for sign out so that biopsies are signed out first (RUSH cases on top) followed by cases of highest educational value, emphasizing cases you have grossed and studied the clinical records.
* When the attending asks you to request a stain, do so immediately in Soft in “New Stain Request,” not waiting until end of sign-out unless explicitly stated otherwise by faculty.

1. **After sign-out**, the resident will be responsible for:
   1. Ordering recuts/IHC if not done at time of sign-out
   2. Procuring additional sections from specimens signed out that day if deemed necessary by the attending.
   3. Attend the daily consensus conference held at 1 P.M. in the surgical pathology suite and GU consensus conference after regular consensus every Tuesday
   4. Share interesting/challenging cases with other faculty as required/instructed
2. **In the afternoon/ early evening,** the resident will be responsible for:
3. **Grossing**

-If you are not familiar with the gross room, ask a senior resident or PA for a brief orientation (i.e., to tell you where supplies are kept, etc.).

-Before you gross each type of specimen for the first time, read the appropriate part of the cutting manual (<http://www.pathology.med.umich.edu/Resident/Cutting_Manual/>), and DON’T HESITATE TO ASK FOR HELP. The PAs, senior residents, GU or Surg path fellows and attendings can help.

- If unsure, ask the fellow. If fellow unavailable, ask the attending. ***Take PHOTOS!!!***

-Use the Raymond Paragraph format for dictating resection specimens in the cutting manual

- When you finish, leave the grossing station clean

- Gross what you can without going over hours. Residents need not gross any specimens that arrive from the OR past 9 pm.

**Weekends:**

* + Responsible for grossing if you are on GU the Friday before a weekend (i.e. Just preview the weekend before first day of rotation; just gross after last day of rotation)
  + Remember to also take care of pinned-out prostates downstairs in ***Room 1*** (dictate template, submit whole mounts)
  + Processor **cut-off is 3:00 PM on Sunday** (be done by then!)

*Some helpful grossing point reminders:*

* 1. Kidneys (RCC) – take 3-4 sections of renal sinus. Take more if tumor close to sinus fat.
  2. Bladder – let fix overnight. If no grossly visible tumor (just scar), sample scar generously.
  3. Testis- remember to take 1-2 sections of testicular hilar fat/soft tissue
  4. Penectomies: all penises should preferably be shown to GU fellow and/or attending if resident is in first or second rotation or grossing such a specimen for the first time..

1. **Follow- up on immunostains** that come out that afternoon and completing the cases with the attendings
2. **Screen** incoming slides in the late afternoon to see if there are any rush cases or cases in which upfront immunostains on biopsies may be help to decrease turnaround time. Those cases with possible immunostains will be reviewed with either the attending or GU fellow
3. Preview all slides and dictating on cases that were grossed by you. Residents rotating in their first week of GU are not expected to pre-dictate all cases by themselves; however residents will be expected to dictate a greater proportion of the cases as they go along.
4. **CONFERENCE SCHEDULES:**

* *GU consensus conference*, after regular consensus, *every Tuesday* —attendance required

1. **RESOURCES ( in GU room)**
   1. GU room folder
   * This folder has very useful articles ranging from seminal must read papers to papers dealing with more complex issues
   * Goal is to have read all the articles by the third rotation
   1. “GU room sign-out tools”
   * Virtual GU library housed in the W drive under “Residents Training” folder which contains useful articles, lectures/talks as well as useful IHC templates.
   * Useful templates are pasted on the wall of the GU sign-out room. \
   1. GU room Template folder
   * All templates used in GU room are categorized by organ system in the folder
2. **Guidelines as to Number of Cases to Preview and Gross**
   1. Because the case mix in GU Room is very heterogeneous and variable day by day, a specific set of guidelines is difficult to achieve on all days.
   2. For days with numerous prostate biopsies ( usually for Mondays and Fridays sign-out ) , residents should preview 5-6 standard prostate biopsies preferably choosing the complex biopsy cases for maximum educational value ( cases with previous diagnosis of cancer, atypical foci /HGPIN on previous biopsy or radiation treatment). Remaining cases, if present, will be signed out by GU fellow and/or attending.
   3. For perineal mapping saturation prostate biopsies (26 blocks per case), resident should preview 2-3 cases. Additional cases, if present will be signed out by GU fellow and/or attending.
   4. Any and all cases that have not been previewed should be signed out the next morning. Any cases of high educational value not seen by the house officers (both residents and fellows) should be shared by all.
   5. Residents need not gross any specimens that arrive from the OR past 8 pm, especially if they have cases to preview.
   6. On busy days, it is possible that you cannot get to all the cases. You are not required to preview every case, **but for cases you do preview, learn the relevant clinical history and read, understand and correct the gross description. If the gross description doesn’t make sense to you, talk to the person who grossed the case and/or pull the specimen out and look at it.** If you cannot preview every case, it is still OK to sign them out with your attending. **Do not stay past 10 pm. Go home**.
3. **Rotation Expectations**

*1ST Rotation Expectations*

1. By the end of the first rotation, resident must be reasonably comfortable grossing and predictating radical prostatectomy specimens, grossing cystectomies, partial nephrectomies and predictating some (non-complex) kidney resections, bladder biopsies, TURBTs (especially knowledge of which templates to be used for which type of resections etc.), cystectomies.
2. It is OK if you are not entirely comfortable predictating all cases during your first week of GU sign-out. Focus on learning how to dictate large volume cases- example radical prostatectomies and the not so complex prostate and bladder biopsies. Work with GU fellow such that by the end of the first week you get comfortable to pre-dictate at least some of the prostate and bladder cases for the second week. It’s OK if it’s not perfect!

*2ND Rotation Expectations*

1. Become more comfortable with predictating at least most of the routine radical prostatectomies, cystectomies, prostate and bladder biopsies and partial nephrectomies.

. 2. Become comfortable grossing all routine GU specimens

*3rd Rotation expectation*

1. Become comfortable with grossing and predictating the routine radical prostatectomies, cystectomies, prostate and bladder biopsies and partial nephrectomies
2. Become comfortable grossing complex GU specimens
3. Begin to develop confidence in work-up complex cases
4. Begin sitting in the TS sign-out with GU fellow and faculty at least sometimes to increase your confidence in dictating both routine and complex GU cases

*4th Rotation Expectation*

1. To be able function independently most of the time and almost at the level of GU fellow

**Supervision**

The following activities are to be conducted with **Direct Supervision** (the supervising physician is physically present with the resident):

* Gross dissection of the first 3 large specimens (prostate, bladder or kidney, as mandated by ACGME; direct supervision may be provided by faculty or by 3rd or 4th year resident or fellow)
* Electronic verification of diagnoses, additional or amended diagnoses, and comments.
* Frozen sections (if called upon)
* Communications with other providers, during the first GU rotation.

The following activities may be conducted with **Indirect Supervision** (direct supervision immediately available either within the hospital of by telephonic or electronic communication):

* Gross dissections other than those described above
* Communications with other providers for those who have completed one GU rotation.

The following activities may be conducted with **Oversight** (the supervising physician is available to review with feedback after activity is completed):

* Dictation of preliminary diagnoses

Evaluation

* Electronic (Med Hub) evaluation completed by faculty at the conclusion of each rotation
* 360 evaluation completed by fellows and technical staff semi-annually
* Resident Inservice Examination (annually)