

**GASTROINTESTINAL/LIVER PATHOLOGY  
CURRICULUM**

**July 2008**

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Welcome to the GI/liver pathology rotation. This will be a busy, but fruitful month. This curriculum will serve as a guide for your responsibilities during your rotation with us, as well as an orientation to the service. All residents will receive a copy of this curriculum at the beginning of their rotation on service, as well as a reference guide to grossing common specimens. *The resident should review all of this material on the first day of rotation, and revisit the grossing guidelines frequently.*

***DESCRIPTION OF THE ROTATION***

During this rotation the resident will learn and refine skills in gross dissection, histologic diagnosis of gastrointestinal, pancreaticobiliary and liver disorders. Resident duties will include gross assessment and preparation of specimens, as well as slide preview and sign-out of all cases grossed.

***GOALS OF THE ROTATION***

The resident, after completing the required amount of time on the GI/liver service, will be competent in the gross examination and histologic diagnosis of all of the more commonly encountered diagnoses. The resident will be proficient at handling standard GI specimens, including but not limited to gallbladder, appendix, small and large bowel, esophagectomy, stomach, pancreaticoduodenectomy, and liver resections/explants. Additionally, the resident will be competent to assess biopsies and resections histologically, and be proficient in diagnoses of non-neoplastic and neoplastic disorders. Importantly, the resident will have gained experience and awareness of importance of clinicopathologic correlations in gastrointestinal and liver diseases; and have a firm understanding of the role of pathology in patient management.

***DURATION OF THE ROTATION***

The GI/liver pathology rotation takes place in 4 week blocks, and the timing of the rotation is determined at the beginning of the academic year.

***ASSESSMENT OF CORE COMPETENCIES***

Specific resident duties and expectations are outlined in the following sections, and performance of these tasks as well as progression of knowledge and skill will be used to evaluate the resident at the end of the rotation. The evaluation will be a consensus opinion of the attending pathologists who have worked with the resident, and will address the core competencies as outlined below.

**Core Competency 1: Patient Care**

Although direct patient interaction does not take place on this service, a resident's handling of several duties is an excellent measure of their commitment to exceptional patient care. Specifically, their attention to detail and thorough grossing practices, commitment to timely sign-out and follow-through on cases, as well as their daily interactions with our clinical colleagues are prime examples and will be evaluated.

**Core Competency 2: Medical Knowledge**

Commitment to forming an organized and thorough knowledge base is essential and is obtained through discussions during sign-out (which are always mandatory), case-directed reading and literature searches, and textbook reading. This measure of competency will be assessed by evaluating the resident's performance and demonstrations of knowledge at sign-out, as well as by the end-of-rotation quiz (see below).

**Core Competency 3: Practice-based Learning and Improvement**

As residents advance in their training, they will be expected to perform with increasing levels of independence by initiating case work-up, communicating with clinicians, and preparing preliminary reports. By their final rotation, residents should be able to competently take a case from initial stages of grossing and intraoperative assessment, through the histologic examination and work-up to the final sign-out with little intervention from the attending or GI fellow, and their ability to do so will be evaluated.

**Core Competency 4: Interpersonal and Communication Skills**

The ability to effectively communicate is essential in our practice. It is expected that the resident have appropriate, timely, and courteous interactions with attendings, fellows, pathology assistants, other residents, our clinical colleagues, as well as our support staff. This competency is evaluated by observing the resident's interactions at sign-out, during conferences, and in the gross room.

**Core Competency 5: Professionalism**

Professional behavior is expected at all times. Honesty, good character, and an exemplary commitment to excellent patient care are expected. Residents are expected to finish case previews in a timely manner and to be on time and attentive at sign-out. These characteristics will be evaluated by observation and interaction with the resident.

**Core Competency 6: Systems-based Practice**

In order to practice good pathology, residents must become aware of the impact of their diagnosis on the patient management. Diagnoses and communications with clinicians should be well thought out in all instances. Residents are expected to attend multispecialty conferences as outlined in the "Conference" section below. This competency will be evaluated by direct observation and interactions with the resident.

## ***DUTIES AND RESPONSIBILITIES OF THE RESIDENTS***

### ***Daily Sign-Out***

***The resident is expected to be available to preview no later than 8:30 AM***, following the resident morning conference. Slides are typically delivered by 7:00 AM, so preview time prior to conference is also an option. If the GI fellow is also on service, first year residents may initially wish to sit at the scope with the fellow to review slides. As the first year resident's comfort level increases (usually by the 2nd week of the rotation and certainly by the second rotation on service), they will be expected to preview cases independently. For most residents, when the fellow is also on service, cases should be split between the resident and the fellow for preview. Sometime in the early morning, the resident should touch base with the attending(s) on service to determine a suitable time for sign-out. ***Timely case preview and preparation, as well as being on time for sign-out is expected (Core Competency 1: Patient Care, and 5: Professionalism).***

First thing in the morning, prior to slide preview, all GI and liver cases should be triaged. All biopsies marked RUSH, possible tumor cases, cases of graft-versus-host disease, opportunistic viral infection, and any other urgent case should be reviewed as early in the morning as possible (probably with the attending on service) to allow timely ordering of immunohistochemical staining and notification of the clinical team as needed. Initial work-up includes not only previewing the slides, but also assessment of adequacy (i.e. broken glass, poor histology, recuts needed, etc.) and addressing any inadequacies - ***prior to submitting for review with the attending***. As part of the preview process, residents should input their presumed diagnoses into the computer. A complete diagnosis will include not only the main diagnosis, but also margin assessment, pertinent histologic characteristics, AJCC tumor stage, as well as ancillary diagnoses (such as "histologically normal appendix" in a total colectomy). Textbook reading on cases, including literature searches when appropriate, should be done at this time (***Core Competency 2: Medical Knowledge***). First year residents may need a couple of weeks to get acquainted with the PowerPath system, but by mid-rotation (2 weeks in) this process should be second nature. Upper level residents are expected to perform competently with progressively less supervision, and by their final rotation should be able to process a case from the gross room or intraoperative consultation stage to final sign-out with little intervention from the attending or fellow (***Core Competency 3: Practice-based Learning and Improvement***).

It is not necessary to preview and prepare every case, however care and due diligence should be taken on the cases that are reviewed. ***It is expected that the residents take "ownership" of the cases, and follow the case from initial work-up through sign-out. Organization, communication and time management are key to avoiding any case being overlooked, and thus delaying a timely sign-out.*** It is expected that the resident be an active participant and key manager in work flow by organizing the most pressing and urgent cases first for review, ordering stains as early as possible, and ensuring that all cases are finalized in a timely manner (***Core Competency 1: Patient Care, and 5: Professionalism***). Appropriate communications with clinical colleagues, as well as following up on consultations with other anatomic pathology staff is expected (***Core Competency 4: Interpersonal and Communication Skills***). Additionally, the sign-out area is expected to be kept orderly and free of clutter, foodstuff, and trash.

### ***Gross Specimens***

First year residents will be on a rotating schedule, with one day to gross in specimens, and the following day to sign them out. ***On a grossing day, ALL GI and liver cases will be grossed by the resident.*** This includes biopsies, gallbladders, as well as the more complicated tumor and explant liver cases; essentially any case that will be assigned to GI/liver sign-out. Additionally, all cases requiring "prep" on a grossing day should be prepared by the resident. The resident is expected to remain in the vicinity of the gross room area the entire day, in order to be immediately available for specimen prep as it arrives. On these days the resident will be expected to assist in any frozen section room duties that involve GI or liver cases. This is designed to keep the resident intimately involved with the entire process of specimen preparation. The following day the resident will be responsible for the histologic review of the previous day's cases. Although the primary obligation on these days will not be grossing, if any cases require additional grossing, it will be the ***resident's*** responsibility to complete the case.

Upper level residents, who are doing their second or third rotation, will preview slides in the morning and gross specimens in the afternoons. These residents are expected to gross all "big" surgical cases. If the caseload on a given day is excessive, the resident may contact Robin Foss and the PA staff to request that they gross some of the less complicated cases. Regardless, the resident should gross any tumor cases, any IBD cases and all liver resections or explants.

It is entirely appropriate with complicated cases that the resident may feel the need to have a second opinion or advice regarding the best approach to grossing in a specimen. In addition to the PA staff, residents are encouraged to seek the input of the attending pathologist and/or fellow (***Core Competency 4: Interpersonal and Communication Skills***).

The resident is expected to remain on site until the day's work is completed, including sign-out and grossing responsibilities, and at times this may require staying late. ***The resident is expected to checkout with the attending(s) or fellow prior to leaving the***

***hospital for the day to review the pending cases, stains, etc. (Core Competency 5: Professionalism).***

On those occasions when the resident is finished with sign-out and grossing early, the remaining time should be used for review of the teaching material, studying and for scholarly work. The resident is expected to be available until 5 PM, unless previously excused by the attending(s) on service. In order to avoid confusion, the resident should notify the attending or fellow on service if they will be out of the gross room or sign-out area for a significant period of time (such as at the library or in the resident area to study).

### ***Recommended Reading***

The best and most constructive approach to learning while on rotation is to read in depth about disease processes as cases are encountered. This is accomplished not only by using the available textbooks as references, but by performing literature searches when appropriate (***Core Competency 2: Medical Knowledge***). There are several excellent textbooks available that should be used as references. These would include (but are not limited to):

MacSween's Pathology of the Liver  
Gastrointestinal Pathology: An Atlas and Text (Ed. Fenoglio-Preiser)  
Surgical Pathology of the GI tract, Liver, Biliary Tract and Pancreas (Odze, Goldblum and Crawford)

### ***Conferences***

Several GI or liver conferences are held throughout the week, and these are an excellent education opportunity. ***Attendance is required for some of these, as indicated.*** Others should be attended when possible, especially the Tumor Boards, as these are wonderful examples of multidisciplinary conference and patient management (***Core Competencies 4: Interpersonal and Communication Skills, and 6: Systems-Based Practice***).

Hepatobiliary Tumor Board	Mondays, 7:15 am, Cancer Center**
IBD conference	TO BE SCHEDULED
GI/Liver QA	Wednesdays at 2:00 pm, 2 <sup>nd</sup> floor scope*
Pediatric GI	Thursdays at 3:00 pm, 2 <sup>nd</sup> floor scope*
Liver transplantation	Thursdays at 3:30 pm, 2 <sup>nd</sup> floor scope*
GI Tumor Board	Fridays at 7:00 am, Cancer Center**

\* Required attendance

\*\*Resident should attend as able (i.e. if there is no conflict with resident lecture schedule)

### ***TEACHING STAFF***

Currently there are four attending pathologists who rotate on the service (see below). The service is divided into Liver and GI. On any given day a resident may be required to sign-out with one to two different attending pathologists. There is also a GI fellow, who is an excellent learning resource. The four attending pathologists are:

James Crawford, MD, PhD (pager 888-890-4258, office 273-7841)  
Lisa Dixon, MD (pager 413-7525, office 4-5058)  
Chen Liu, MD, PhD (pager 413-7469, office 273-5413)  
John Reith, MD (pager 413-7504, office 4-4961)

### ***RESIDENT SUPERVISION AND EVALUATION***

Residents will be supervised and instructed by the attending on service as well as the fellow. Residents are encouraged to request help from the attending pathologist or fellow, either in the gross room or at the microscope. At the end of each GI/liver rotation, the resident will be given a set of 10 slides to review and to submit diagnoses. These slides are representative of concepts the faculty feel the resident should be knowledgeable about, and these are stratified to level of training. This is not a timed test, and books may be used. Other residents or pathologists, however, should not be consulted. Performance on this objective assessment will be reflected in the resident's evaluation. When the resident is finished with the slides, an attending will set aside a time to go over these cases and review the resident's performance (***Core Competency 2: Medical Knowledge***).