University of Minnesota
Hepatology Rotation Information

Year and Site-specific Goals and Objectives – See Attached Document

Rotation Description: The hepatology rotation is a three-month block rotation, in which the fellows are exposed exclusively to liver patients. The site of the rotation is the University of Minnesota Medical Center- Fairview.

On the first day of your rotation, please come to VFW 3rd floor, where you will meet with Drs. Charmaine Stewart and Julie Thompson. The purpose of this meeting is to receive direction and answer any questions you may have regarding clinical priorities.

I. Patient care. During this rotation, the fellows are exposed to patients with a wide variety of liver diseases, including, acute alcoholic liver disease, viral hepatitis, autoimmune liver disease, metabolic liver disease, cirrhosis and the complications, thereof. They will also:

1) Learn treatment and management of treatment side effects of hepatitis C.
2) Learn treatment and management of treatment side effects of hepatitis B.
3) Learn treatment and management of treatment side effects of autoimmune liver disease and metabolic liver disease.
4) Learn how to evaluate liver patients for transplant.
5) Learn how to manage medications for immune suppression.
6) Perfect skills in liver biopsy (20 liver biopsies is the minimum requirement for GI fellows).

Out-patient liver transplant, hepatology clinic, and endoscopy:

1) Three morning half days in the transplant clinic with Dr. Jack Lake. These days are Mondays, Tuesdays and Fridays.
2) Tuesday at 3 pm is the Transplant Conference.
3) One morning half day in the transplant clinic with Dr. Mohamed Hassan. (Wednesdays)
4) One morning half day (Thursday) in the Unit J endoscopy clinic with Dr. Jack Lake.

In-patient transplant hepatology consults service: The hepatology fellow is the contact person on the service for transplant patient consults. Please clarify with your GI consult attending whether he or she can staff your consults or whether you need to staff them directly with a hepatology attending only. In addition, the liver fellow is generally expected to see all liver consults, and those may be communicated by the general GI fellow. Consults for patients with acute liver failure are considered emergencies and should be seen at the time the consult is requested. The delay in evaluating any consult should be discussed with the attending on service.

The senior hepatology fellow and the GE fellow rotating on hepatology are responsible for the follow-up of the consults, even if daily notes are not written. The fellow should be aware of the patients and be up-to-date regarding all diagnostic studies and treatments. Communication with the nurse practitioner, the team and the GI/hepatology attending should be maintained on a daily basis.
He or she sees:

1) Pre-transplant patients that require evaluation for liver transplant, including fulminant liver failure and de-compensated cirrhosis.
2) Pre-transplant patients admitted to the medical teams on the transplant waiting list.
3) Post-transplant patients admitted to the medical teams.
4) (Generally expected to see) all general liver consults (e.g., elevated liver enzymes, hepatitis C, alcoholic hepatitis).
5) Acute liver failure patients.

II. Education

The liver fellow is expected to attend all the mandatory conferences at the University and other affiliated medical facilities.

Attendance at the following conferences is mandatory:

1. Multidisciplinary hepatobiliary/pancreas oncology conference on Monday at 5pm is mandatory. Relevant cases (hepatic masses; hepatocellular carcinoma; cholangiocarcinoma) should be submitted to Tina Russell [russe041@umn.edu] the Wednesday of the week before the conference, by the GI fellow rotating on hepatology. If the fellow is unable to attend, i.e. due to conflict with clinic, then the list of cases should include a brief history, consisting of a few sentences.

2. Liver biopsy conference occurs on 2 days of the month: 2nd Wednesday it will be held at 12 noon in the Benson Conference room in Pathology, Mayo Building Room C456; the other liver biopsy conference will be the 4th Thursday of the month at 7am in the GI conference room, VFW building room V372. The case list will be presented to the pathologist by the senior hepatology fellow on the Friday of the previous week and will consist of most of the liver biopsies performed during the month or that were sent in for consultation for patients seen in clinic. Other cases will be chosen from Dr. Jessurun’s teaching files. The purposes of this conference are to teach the basics of liver pathology interpretation and to review in a meaningful manner the clinicopathological relationships among cases.

Please note: Some of the hepatologists may not be able to attend the noon conference on Wednesdays due to clinical duties, but the fellows are expected to attend.

3. On the 2nd Thursday of the month: A combination of Journal Club and hepatology related case discussion will be held. It is expected that the senior hepatology fellow and the GI fellow rotating on hepatology will prepare the article and the cases. Please, arrange for a pathologist and/or radiologist to be present. Please, also provide the title of the article to be discussed to Ms. Bao Moua (625-8999 mouax029@umn.edu) on the Friday of the previous week so it is distributed by email to the attendees of the conference. If the input of a particular hepatologist is needed, then this person should be contacted so that their attendance is assured.

Conference Schedule

a) Attend mandatory conferences at the University and the VA. Currently the University conferences take place three times/month on Thursday mornings 7 – 8 AM in Mayo 3-100.
b) The IBD conference organized by Dr. Chris Shepela is held every first Thursday of the month.

c) Multidisciplinary GI conference is organized by Dr. Alex Khoruts. It covers a broad range of topics centered on patient cases, especially as they interface with other GI-related specialties. These include GI and liver pathology, radiology, and surgery. The fellows should try to identify interesting cases for presentations, and notify Alex Khoruts with specific cases (e-mail: khorut001@umn.edu, or the dedicated box in the GI office). The fellows will be expected to participate in case presentation and review of the relevant literature.

d) GI Pathology Review for the GI Fellows is held every last Tuesday of the month at 8-9 AM in the Bell Auditorium, 1st floor Mayo building. You are expected to come unless you have conflict with your clinic (not endoscopy at the U).

e) The fellow should assume partial responsibility for guiding the education of the residents and medical students on the service.

III. Communication Skills: Within the in-patient consult setting, the GI fellow will learn and progressively improve communication skills: with patients, with consulting physicians, and with ancillary personnel and service providers.

IV. Professionalism: The GI fellow will learn, develop and demonstrate professionalism with respect to all relationships involving the consult service. Professional dress is expected, e.g. a white coat over scrubs, if scrubs are worn.

V. Practice-Based Learning: The fellow will present cases from the consult experience at GI conferences, in order to benefit and learn from reflection on case experiences and outcomes. The GI fellow will learn life-time learning skills by using library and electronic resources to research relevant medical literature regarding patient issues.

VI. Systems-Based Practice: The GI fellow will learn and utilize skills in the Electronic Medical Record system, Electronic Ordering, and the mechanisms for interacting with critical ancillary services (such as Pathology, Radiology, and Surgery) that are essential to consultative medical practice at this training site.

VII. Progressive Responsibility (Year specific goals and objectives)
All trainees will be fully supervised with respect to their consultative and procedural practice. The degree of independent practice with respect to consultative and procedural responsibilities will be graded in degree – based upon the trainee’s experience and performance, as assessed by supervising faculty members. First year fellows will perform basic GI procedures; such as upper GI endoscopy, colonoscopy/polypectomy, sigmoidoscopy, liver biopsy, PEG, and dilatation. Third year fellows, and advanced first year fellows, may perform advanced procedures, such as stent placement and ERCP.

Continuity Clinic
GI fellows have a half-day continuity clinic throughout their training (clinical or research time). Each fellow will attend a VA Medical Center clinic (Monday afternoons) one week, alternating with a non-VA clinic site (Regions Hospital, Hennepin County Medical Center, University of Minnesota Medical Center) on alternate weeks.
Year and Site-Specific Goals and Objectives:

**Year 1** (for nearly all fellows, this is a clinical year):

1. To provide graded, progressive, and supervised clinical/cognitive experience evaluating and treating patients with diseases of the gastrointestinal tract, liver, and nutrition
2. To provide graded, progressive, and supervised training in the basic endoscopic procedures (upper GI endoscopy and biopsy, colonoscopy and polypectomy, dilatation, endoscopic hemostasis, and liver biopsy)
3. To evaluate progress on a quarterly basis and to advance responsibilities based upon performance

Goals and objectives for individual training sites:

1. **Regions Hospital** (RH, 3 months): First year specialty residents provide inpatient GI consultations and longitudinal follow-up, supervised by faculty members. They supervise and teach general internal medicine residents and students rotating on the GI service. Under supervision, they perform basic endoscopic procedures for inpatient consults and selected outpatients. Night and weekend call (taken at home) enables residents to participate in emergency procedures such as esophageal foreign body removal. Responsibilities and independence in managing inpatients and performing endoscopy is advanced based upon the resident's experience, proficiency, and performance as evaluated by supervising faculty members (using GI E-Value criteria).

2. **Hennepin County Medical Center** (HCMC, 3 months): As stated for RH above.

3. **Minneapolis VA Medical Center** (VAMC, 3 months): As stated for RH above. Specialty residents also perform additional outpatient basic endoscopic procedures.

4. **University of Minnesota Medical Center** (UMMC, 3 months): As stated for RH above. Additionally, specialty residents participate in the liver transplantation program, seeing transplant patients and a patient population enriched with liver diseases.

5. **Abbott-Northwestern Hospital** (AB-NW, 3 months): As stated for RH above. Additionally, specialty residents participate in longitudinal outpatient clinics, which focus on patients with IBD and patients with chronic viral hepatitis. They also participate in an active GI motility lab, performing motility studies and reviewing teaching cases.

Evaluation: E-Value criteria for patient care, professionalism and ethics, and procedural competency, as evaluated quarterly by supervising mentors

**Year 2** (consisting of 6-12 months of research experience, with the remainder being more advanced clinical and procedural practice):

Research:
1. To train specialty residents in the fundamentals and practice of the experimental method and scientific studies in broad areas of medicine
2. To offer a wide variety of research opportunities, to meet the need of individual specialty residents for their future careers

Goals and objectives of individual research training sites:
1. **UMMC**: Research opportunities include a variety of basic science labs, with a focus on molecular biology and clinical outcomes projects. Course work towards a degree in outcomes research (MS) is available.
2. **VAMC**: Research opportunities include several basic science labs, having a focus on physiologic studies and molecular mechanisms, hepatitis C clinical studies, and outcomes research.
3. **HCMC**: Research opportunities include studies of therapeutic endoscopy and outcomes studies of advanced procedures, such as EUS.

Clinical:
1. To offer opportunities for additional clinical care and procedures, as in Year 1
2. To introduce advanced endoscopic procedures, including diagnostic and therapeutic ERCP and EUS

All training sites offer similar basic opportunities:
1. RH also offers ERCP training
2. HCMC offers ERCP and EUS training
3. VAMC offers ERCP and EUS training
4. UMMC offers liver transplant/hepatology training
5. ABNW offers additional clinical IBD and motility training

Evaluation: Continuous monitoring and evaluation of research progress is provided in written narrative by the research mentor; a scholarly product from the research effort (publication, abstract, formal presentation, etc) is expected and will be reviewed by the GI Executive Committee and the faculty. Clinical work during this year is evaluated by the E*Value system, or by advanced procedure mentors who supervise these procedures.

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**Year 3** (consisting of additional clinical and procedural work for most specialty residents, but allows up to six additional months of research experience to meet the individual resident's needs):

1. To provide additional cognitive clinical experience in gastroenterology practice, primarily using inpatient consult services
2. To provide additional procedural experience with both basic and advanced endoscopic procedures

Goals and objectives for individual training sites:
1. Similar to the format of Year 1
2. HCMC, RH, and VAMC offer extensive ERCP training for specialty residents interested in this
3. HCMC offers EUS experience for interested residents

Evaluation: Using E-Value, as per Year 1. Research and advanced procedure work in the third year is evaluated as per Year 2.