Gastroenterology Fellowship Overview

I. EDUCATIONAL PROGRAM

The Fellowship Training Program at the University of Kansas School of Medicine has a long tradition of excellence and a proven track record of producing competent and compassionate gastroenterologists for both clinical practice and academic careers.

Gastroenterology has become an increasingly complex subspecialty over the years and today’s gastroenterologists need to be up to date with the practice of general gastroenterology, as well, as more subspecialized fields within gastroenterology, such as hepatology, advanced interventional endoscopy, motility and the management of complex chronic diseases, such as inflammatory bowel disease.

Our goal is to produce well rounded gastroenterologists who are able to competently practice within these fields and also to prepare academically minded individuals to competitively pursue further advanced training in these areas.

Each fellow’s program can be tailored to the ultimate final goal of individualized training. All fellows will have comprehensive training in general gastroenterology and endoscopy, six months of dedicated research time, six months of hepatology practice, and exposure to advanced endoscopic techniques.

GENERAL GI:

Our general GI program includes 10 months of consultation, and upper and lower endoscopy training in the first year.

The volume of EGD and colonoscopies at both facilities is sufficient to provide training to each of our fellows. In the second and third years, 6-12 months of exposure to advanced interventional endoscopy including therapeutic endoscopy with treatment of bleeding, treatment of cancer, placement of stents, ERCP with sphincterotomy, and stone extraction occurs.

A program of endoscopic ultrasound has been in place and is now expanding within our division and can be in the future an area of training for our fellows.
AMBULATORY CARE CLINICS:

Outpatient clinic exposure is a critical feature of our training program and critical to the understanding of the care of patients with GI disorders. Each of our fellows participates in ambulatory GI and hepatology clinics, both at the University of Kansas Hospital and at the Kansas City VA Medical Center.

A feature of our program is a dedicated continuity clinic for each of the fellows. These are designed to enable the fellow to recruit patients that are of interest to the fellows or that the fellows have seen on the wards or in the endoscopy lab and to provide longitudinal ambulatory care. These clinics are staffed by faculty who supervise the assessment and decision-making process of the fellows.

HEPATOLOGY:

The Leaders in Gastroenterology have published (Gastroenterology) a guideline for the development of three-year programs. Their recommendations are that at least five months of the training have an intensive exposure to hepatology.

Our program has an independent liver transplant program and independent faculty whose focus in training is in hepatology and liver transplantation. At least five months of our program will include separate rotations with inpatient and outpatient hepatology consultation, liver biopsy and paracentesis performance, liver biopsy interpretation, and pre- and post-transplant evaluation and management.

RESEARCH:

Research is emphasized by the Leadership in Our GI training program. At least six months of research is designed for each fellow. As mentioned above, for those fellows interested in a career in clinical research or academics, a longer period of time can be obtained. This will be clinical or a mixture of clinical and basic research, taking advantage of those faculty members who have active research programs.

Our division currently has active research in the areas of Barrett’s esophagus and GERD, liver diseases, GI cancer prevention, GI motility, and advanced endoscopy.

Fellows are encouraged to select areas of interest and then to interview with the faculty and develop the programs that they would be involved with. An outline of goals, expectations, and publications should be agreed upon at the start of the research experience.
CONFERENCES:

Several conferences each week are available and required for the fellows to attend. The primary educational conference of the Division is GI Grand Rounds which takes place 5:00 pm to 7:00 pm each Tuesday evening. It has a long tradition at KU Medical Center and is well attended by faculty both within our division and guest faculty from other departments.

The fellows and house staff on the GI service attend the conference and present cases and reviews. It provides the integration of patient presentation with test results, pathologic specimens, radiographic studies, surgical intervention, and consultation with other appropriate services.

This conference involves journal clubs, during which important recent GI papers are discussed, core GI lectures, GI physiology discussions and presentations of interesting clinical cases. There are also dedicated pathology review conferences at both the University of Kansas Hospital and VA Medical Center to review interesting and relevant pathologic specimen that were obtained during endoscopy or liver biopsy.

II. GOALS

The program of education as outlined above is designed to provide training and experience for the fellow, allowing him/her the opportunity to develop competence of a specialist in gastroenterology. This training includes clinical expertise with the development of history and physical exam skills, consultation skills, interaction with other services in the evaluation and management of patients, use of radiology, surgery, pathology, and related disciplines in the assessment and management of patients with gastroenterologic disorders.

In addition, competence in endoscopy, including esophagogastroduodenoscopy, esophageal dilation, flexible sigmoidoscopy and proctoscopy, colonoscopy with polypectomy, percutaneous liver biopsy, percutaneous endoscopic gastrostomy, biopsies of the mucosa of the esophagus, stomach and small bowel, and colon, treatment of bleeding, both variceal and non-variceal are taught at KU Medical Center and at the VA Medical Center.

Competences will be determined, not only by the numbers, but also by their ability to appropriately assess patients, understand the indications and risks, proceed with careful evaluation during the procedure and recognize disease processes and plan appropriate intervention. The American College of Gastroenterology has developed (with other societies) guidelines for numbers of cases and the minimums that they require are easily met during our training program.
During our conferences and consultation, we would expect to have formal instruction and clinical experience and opportunities to all variety of these diseases of the gastrointestinal tract:

1. Diseases of the esophagus including reflux inflammatory diseases, ulcerative, and infectious disease.

2. Acid peptic and Helicobacter related disorders of the gastrointestinal track.

3. Motility disorders including gastroesophageal reflux disease, dysphagia (its analysis and management), gastroparesis of all types, pseudo obstruction, and chronic constipation.

4. (Functional) bowel disorders including dyspepsia, Irritable bowel syndrome, chronic abdominal pain and non-cardiac chest pain.

5. Inflammatory bowel diseases including ulcerative colitis, ulcerative proctitis, Crohn's disease, and other inflammatory diseases including pseudomembranous colitis, colitis associated with collagen vascular disorders.

6. Malnutrition, malabsorption, and other disorders of nutrient assimilation.

7. Vascular disorders including ischemic bowel, arteria-venous malformations etc.

8. Gastrointestinal infections including Helicobacter, retroviral, "herpes, CMV, hepatitis, fungal and mycotic, and parasitic diseases.


10. Gastrointestinal diseases associated with acquired immunodeficiencies syndrome.

11. Cholelithiasis and choledocholithiasis

12. Chronic liver diseases:
   - Related to alcohol, related to chronic viral hepatitis, related to biliary tract disorders including primary biliary cirrhosis, primary sclerosing cholangitis.
   - Drug-induced hepatic injury
   - Management of chronic liver disease including assessment of portal hypertension including ascites and bleeding with utilization of paracentesis, TIPS, and endoscopic and surgical techniques.
In particular, during consultation and during conferences the trainee should be able to evaluate patients who present with symptoms such as dysphagia, abdominal pain, acute abdomen, acute and chronic nausea and vomiting, malabsorption, diarrhea, constipation, gastrointestinal bleeding, jaundice, cirrhosis, with and without portal hypertension and malnutrition, genetic or inherit disorders, depression, neurosis, and somatizations syndromes. The trainee should understand assessment, the use of consultative advisers to assist and the ultimate treatment.

A gastroenterologist often works closely with gastrointestinal surgeons, and our program emphasizes a good relationship with these colleagues. We stress the understanding of surgical indications, management of patients pre and post operatively, and integrating care and testing with our surgical colleagues in the management of patients.

At the conference level, and in daily clinical care, we emphasize that the trainees understand the indications, contra indications, complications, limitations and interpretation of a variety of diagnostic and therapeutic procedures. These include radiographic procedures such as ultrasound of the abdomen, computed tomography, magnetic resident imaging, vascular and nuclear medicine.

In the invasive radiographic program, we encourage the fellows to understand the complications, limit his management of patient assessments and interpret percutaneous cholangiography, vascular intervention, TIPS, and drainage procedures as utilized by the interventional radiologist.

Our program also maintains an active clinical and research motility program and a fully complimentary diagnostic GI laboratory. Fellows are exposed to and understand the indications and application of gastric, pancreatic and biliary secretory tests including gastrin levels, gastric analysis, secretions, hydrogen breath testing, urea breath testing, pancreatic polypeptide levels, and motility studies including esophageal manometry, gastroduodenal manometry, anal rectal manometry, and 24-hour pH monitoring. Exposure to endoscopic retrograde cholangiopancreatography is available.

It is our goal to expose all fellows to the appropriate indications and application of these techniques and diagnosis and management of their patients. At certain level, a competence is required, not only with diagnostic but also with therapeutic procedures in ERCP before the individual can be fully certified. These include papillotomy and biliary and pancreatic stent placement.

Competence will be measured by the expert faculty that is available supervising those procedures.
III. FACILITIES AND RESOURCES

Our clinical faculty is currently composed of 12 individuals at the University of Kansas Medical Center and the Kansas City VA Medical Center; nationally and internationally recognized faculty members are actively involved in fellowship education.

Four faculty members are located primarily at the VA and eight at the KUMC campus. Four faculty members are hepatologists with a primary interest in management of liver diseases and involved with liver transplantation. Our faculty encompasses expertise in all areas of GI including general gastroenterology, esophagology, inflammatory bowel diseases, motility, hepatology, and interventional endoscopy with ERCP and endoscopic ultrasound.

Facilities for gastrointestinal surgery, gastrointestinal radiology, and gastrointestinal pathology are readily available both the VA Hospital and Kansas University Medical Center. Close interaction with critical care, ICU, pulmonary, oncology, and interventional radiology provide for the full spectrum of patient management and fellow training opportunities.