

# **Advanced Endoscopy Rotation**

**EDUCATIONAL PURPOSES:** To further develop the endoscopy skills of fellows with focus on advanced endoscopic procedures, particularly ERCP and EUS. Fellows will be exposed to other procedures based on availability, including capsule endoscopy, variceal banding, enteroscopy, cryoablation therapy, endoscopic mucosal resection and cholangioscopy. This rotation is designed for second and third year fellows who are interested in advanced endoscopy and who have demonstrated technical competency in basic endoscopic techniques.

To maximize the availability of advanced procedures, all efforts should be made to schedule this rotation when all other second and third year fellows who are also interested in advanced endoscopy are on away rotations. The priority during the rotation will be to participate in any advanced procedures with Drs Coyle, Kuldau and Reidel throughout the week. Fellows will be responsible for reviewing the weekly outpatient schedule, as well as the daily inpatient schedule to stay informed of any upcoming advanced procedures. When possible, they will familiarize themselves with patients in the clinic or inpatient setting prior to the procedure. At the least, fellows must review the patient chart, interpret the relevant lab values and radiologic imaging, and discuss the case with the faculty prior to the procedure.

Fellows will be expected to become familiar with the indications, contraindications, complications, techniques and interpretation of various advanced endoscopic procedures. Fellows will learn to formulate diagnostic and therapeutic plans for patients with complicated gastrointestinal and biliary diseases. They will be responsible for the management and follow-up of patients after advanced procedures. Fellows will also be expected to manage patients through a multi-disciplinary approach, collaborating with the surgery, radiology and pathology services.

When no advanced procedures are available, fellows will continue to develop their endoscopic skills in basic procedures (diagnostic and therapeutic esophagogastroduodenoscopy and colonoscopy), see clinic patients with available faculty (Coyle, Kuldau, Reidel), or conduct research.

## **Procedures:**

Endoscopic retrograde cholangiopancreatography

Biliary stone removal

Lithotripsy

Sphincterotomy

Biliary balloon dilation

Biliary stent placement

Biliary biopsies and brushing

Cholangioscopy

Pancreatic stent placement

Endoscopic ultrasound

Fine needle aspiration

Cyst drainage

Sclerotherapy of esophageal varices

Endoscopic variceal band ligation  
Percutaneous endoscopic gastrostomy feeding tube placement  
Foreign body removal or retrieval from upper GI tract  
Esophageal dilation using Maloney and Savary bougies  
Stricture dilation using through-the-scope balloon  
Esophageal and colonic stenting  
Argon beam coagulation  
Botox injection for achalasia  
Cryotherapy ablation  
Endoscopic mucosal resection  
Capsule endoscopy  
Enteroscopy

**TEACHING METHODS:** Mentoring by GI faculty, primarily those with experience in advanced endoscopy (Coyle, Kuldau, Reidel); one on one with attendings; seminars, lectures, teaching rounds, and conferences

Fellows will be expected to read about the various advanced procedures to familiarize themselves with instruments, indications, techniques and complications. Basic fluoroscopy training will be required prior to performing ERCP. Fellows will also be required to present at the Combined San Diego Advanced Endoscopy Conference at UCSD at least one time during the academic year.

**DEGREE OF SUPERVISION:** All patient care activities occur under the close supervision of the mentoring attending physicians. All procedures will be directly supervised by the attending physician.

**MIX OF DISEASES AND PATIENTS:** The full spectrum of adult patients, with an emphasis on those with needs addressed by advanced diagnostic and therapeutic endoscopy. Encountered diseases include but are not limited to choledocholithiasis, ascending cholangitis, cholangiocarcinoma, biliary strictures, sclerosing cholangitis, ampullary neoplasia, choledochal cysts, pancreatic benign and malignant lesions, pancreatic cysts and pseudocysts, hepatic benign and malignant lesions, gastrointestinal submucosal lesions, gastric antral vascular ectasia, esophageal and gastric carcinoma, esophageal and colonic strictures, peptic strictures, lung cancer staging, paraesophageal and mediastinal pathology, Barrett's esophagus with dysplasia, variceal hemorrhage, foreign body ingestion, food impaction, achalasia, small bowel tumors, intestinal lymphoma, and complications post-liver transplantation.

**INTEGRATED LEARNING:** Attending physicians will use the clinical encounters and patient and disease mix to integrate teaching regarding pre-procedure assessment, indications and contraindications, techniques of procedure, data interpretation, follow-up, quality assurance, cost effectiveness, outcomes, alternative therapy, medical ethics, medical legal issues, and professionalism.

**READING LISTS:** Sleisenger and Fordtran's Gastrointestinal and Liver Disease, 6th Edition; relevant articles from Gastroenterology, Hepatology, American Journal of Gastroenterology,

New England Journal of Medicine, Lancet, JAMA, Digestive Disease and Science, Gut; Sivak's Gastrointestinal Endoscopy; Johnson and Imrie's Pancreatic Disease; Dominguez-Munoz's Clinical Pancreatology; Rosch and Classen's Gastroenterologic Endosonography; Hawes and Focken's Endosonography; Cotton and Leung's Advanced Digestive Endoscopy: ERCP.

**METHOD OF EVALUATION:** Fellows will be evaluated informally throughout the rotation by key faculty and via the competency based GI fellow evaluation form in New Innovations at the end of every month. Evaluation will include knowledge competency and procedural competency using the guidelines established by the American Gastroenterology Association.