



**SERVICE: GI/Endoscopy– Boca Raton Regional Hospital - PGY 3**

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| <b>General description:</b>  |
| <p>The FAU surgical residents will rotate in the Division of Surgical Endoscopy and Gastroenterology at Boca Raton Regional Hospital and its affiliated Endoscopy Center during their 3<sup>rd</sup> clinical year. The duration of this rotation is 6-7 weeks weeks.</p> <p>The resident will be a fully integrated member of the Surgical/GI Endoscopy team, under the supervision of the Surgery/GI attending staff.</p> <p>The surgical residents will participate in all care rendered to inpatient GI patients at Boca Raton Regional Hospital: admission, diagnostic work-up, endoscopic procedures, post-operative care and discharge.</p> <p>The surgical residents will attend the following <b>educational activities:</b></p> <p><b>Surgery Core/specialty curriculum and Resident Lectures</b> - 2 hours/week<br/> <b>Surgery M&amp;M</b> - 1 hours/week</p> <p>Educational activities related to the Practice/Division<br/> <b>Review of reading material</b></p> <p><b>Surgical Endoscopy/GI Faculty Office Hours</b> – at least 4hours per week</p> <p><b>Daily team teaching rounds</b></p> <p>General Surgery M&amp;M and case based resident lectures - weekly, 2 hours</p> <p>In addition, the residents (all levels) will receive the following lectures during the <b>subspecialty core curriculum:</b></p> <p>Acute and chronic pancreatitis, GI bleeding, cholelithiasis - cholecystitis and biliary emergencies, inflammatory bowel disease, colonic polyps and cancers, considerations in diagnostic and therapeutic endoscopy, malabsorption - celiac disease and management of diarrhea, GERD and Barrett’s disease, peptic ulcer - H. pylori, complications of ulcer disease, hepatitis - cirrhosis and liver failure, diverticulosis and diverticulitis, gastric cancer, rare GI tumors, achalasia - esophageal dysmotility and diverticula, colitis</p> |

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| <b>Competencies:</b> | <b>Goals and Objectives:</b>   |
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| <b>Patient Care:</b> | <p><b>Goals:</b></p> <p>During this rotation, the resident should learn and practice to:</p> <ul style="list-style-type: none"> <li>▪ Demonstrate caring and <b>respectful behaviors</b> when interacting with patients and their families; demonstrate <b>sensitivity</b> to gender, age, ethnicity, religion, value systems and other potential differences of patients and their families; practice according to the clinical standards of Boca Raton Regional Hospital</li> <li>▪ Gather patient and case specific essential, <b>comprehensive multi-source and accurate information</b> about their patients for initial or peri-operative workup and patient followup in the inpatient and outpatient setting</li> </ul> |

- Using all available resources, under the guidance of the Surgical/GI attending, make **informed decisions about diagnostic and therapeutic interventions** based on patient information, up-to-date scientific evidence and clinical judgment; evaluate and implement priorities in patient care and incorporate preventive measures
- Under the guidance by the Surgical/GI attending, develop and **carry out patient management plans**
- Under the guidance by the Surgical/GI attending, **monitor** closely the patient's clinical progress, review and react to variances in patient progress or response to therapeutic interventions; **communicate** the details and changes of patient care, progress and complications to the Surgical/GI attending in a timely manner
- Under close supervision by the Surgical/GI attending and other designated GI related expert personnel, **counsel and educate patients** and their families on the state of the patient's disease, necessary diagnostic tests, operative procedures and medical management
- Use information technology (hospital computer system) to support patient care decisions and patient education (electronic patient record, electronic radiology studies, online educational resources, including literature research)
- **Work closely with other healthcare professionals**, including those from other disciplines (Medicine, Endocrinology, Surgery, Radiology, mid-level providers, nurses, Surgical/GI office staff, etc.), to provide patient-focused and optimum outcome driven care
- Ensure that the **needs of the patient and team supersede individual preferences** when managing patient care; incorporate evidence-based medicine into patient care whenever possible; comply with changes in clinical practice and standards given by the Surgical/GI attending

**Objectives:**

During the rotation, the resident should:

Under one-on-one supervision of the Surgical/GI attending, **perform competently and/or assist in procedures** (both in the inpatient and outpatient setting) **considered essential for the area of practice**, including:

- a. Esophagoscopy
- b. Gastroscopy
- c. Duodenoscopy
- d. ERCP
- e. Endoscopic ultrasound
- f. Ano-rectoscopy
- g. Rigid and flexible sigmoidoscopy
- h. Colonoscopy



And combined procedures, as well as endoscopy-related diagnostic and therapeutic procedures (biopsy, resection of polyps, dilatation, stenting, hemostasis, ductography, placement of feeding tubes, etc, as outlined in the medical knowledge competency

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|                                  | <ul style="list-style-type: none"> <li>▪ Demonstrate knowledge of and the <b>ability to use a variety of endoscopic instruments</b> in the screening, diagnosis and treatment of various diseases</li> <li>▪ <b>Administer conscious sedation</b> and monitor the patient during and after the procedure</li> <li>▪ Under supervision by the Surgical/GI attending, <b>manage post-operative complications</b>, including hemorrhage, perforation, SIRS/sepsis, sedation-related problems, etc.</li> <li>▪ Attend Surgical/GI <b>attending clinic/office hours</b> at least once a week and under one-on-one supervision by the GI attending, participate in the evaluation of patients in the office setting</li> </ul>  |
| <p><b>Medical Knowledge:</b></p> | <p><b><u>Goals:</u></b></p> <p>Residents must demonstrate knowledge about established and evolving biomedical, clinical and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.</p> <p><b><u>Objectives:</u></b></p> <p>At the end of the GI/Endoscopy rotation, the resident should be able to:</p> <ul style="list-style-type: none"> <li>▪ Explain the <b>normal anatomy and mucosal histology</b> and appearance throughout the GI tract; explain <b>endoscopic appearance of common mucosal abnormalities</b>: <ul style="list-style-type: none"> <li>a. Ischemia (mucosal/trans-mural, frank necrosis, acute and chronic)</li> <li>b. Inflammation (nonspecific, Crohn’s and ulcerative colitis, pseudo membranous, etc.)</li> <li>c. Ulceration (trauma, peptic, cancer)</li> <li>d. Polyps (pseudo-, tubular and villous adenoma)</li> <li>e. Diverticula</li> <li>f. AV malformations</li> <li>g. Neoplasms (carcinoma, GIST, lymphoma)</li> <li>h. Strictures, volvulus</li> <li>i. Mucosal metaplasia</li> <li>j. Hemorrhoids</li> </ul> </li> <li>▪ Demonstrate thorough comprehension of <b>common endoscopic diagnostic and therapeutic modalities</b>: <ul style="list-style-type: none"> <li>a. Endoscopic biopsy (hot/cold, mucosal/trans-mural) and polyp excision/endo-mucosal resection</li> <li>b. Endoscopic ultrasound</li> <li>c. Endoscopic cholangio- and pancreatography and sphincterotomy</li> <li>d. Endoscopic hemostasis (cautery / heater probe, injection therapy [saline, epinephrine, etc.]</li> <li>e. Endoscopic laser ablation</li> <li>f. Endoscopic (balloon) dilatation and stent placement</li> </ul> </li> </ul> |

g. Endoscopic placement of nutritional access into stomach, duodenum and proximal jejunum

h. Endoscopic reduction of volvulus and enteric decompression

- Explain the **limitations of endoscopy**, including reach, visibility under certain conditions, need for sedation, etc.
- Explain the **pathophysiology of disease entities or symptom complexes** in which colonoscopy, sigmoidoscopy (rigid/flexible), ano-rectoscopy may be indicated, including:

**Diseases:**

a. **Inflammatory bowel disease:**

- Ulcerative colitis
- Crohn's disease

b. **Benign and malignant anal and colorectal tumors:**

- Ano-rectal and colon polyps (pseudo-polyps, tubular/villous adenomas)
- Polyposis syndromes (Gardner, Peutz Jeghers, Familial polyposis, etc.)
- Hemorrhoidal disease
- Ano-rectal and colon cancer

c. **Infectious conditions:**

- Pseudomembranous colitis

d. **Intestinal vascular insufficiency**

- Ischemic colitis (acute, subacute, chronic)

e. **Sigmoid volvulus, cecal volvulus**

f. **Diverticulosis, diverticulitis**

**Signs and symptoms:**

- a. Overt or occult (lower) GI bleed, including workup for chronic Iron deficiency anemia in appropriate age group
- b. Peri-anal pain
- c. Peri-rectal ulcers and fistulous disease
- d. Acute/chronic diarrhea
- e. Unexplained weight loss
- f. Lower GI obstruction, constipation
- g. Ano-rectal or colonic mass lesion, stricture, inflammation on imaging study

- Explain the **pathophysiology of disease entities or symptom complexes** in which esophagoscopy, gastroduodenoscopy and ERCP/endoscopic ultrasound may be indicated, including:

**Diseases:**

a. **(peptic) Ulcer disease and reflux**

- Gastric ulcers and gastritis
- Duodenal ulcers and duodenitis
- Stress gastritis and ulcers

- Gastroesophageal reflux, hiatal hernia

**b. Benign and malignant conditions**

- Esophageal carcinoma (squamous and adenocarcinoma)
- Barrett's esophagus
- Gastric polyps (and polyposis syndromes)
- Gastric carcinoma and lymphoma
- GIST
- Duodenal polyps
- Duodenal carcinoma (peri-ampullary, duodenum proper)

**c. Diverticula** (stomach and duodenum)

**d. Pancreatico-biliary disease**

- Benign biliary obstruction (calculus, pancreatitis, anatomic variant, other benign strictures)
- (acute / chronic) Pancreatitis, pancreatic pseudocyst
- Bile duct carcinoma, pancreatic carcinoma, cyst adenoma and - carcinoma, and (head of pancreas) islet of Langerhans tumors
- Choledochal cysts

**e. Upper gastrointestinal hemorrhage**

**f. Achalasia, esophageal spasm, esophageal diverticula**

**Signs and symptoms:**

- Dysphagia, odynophagia, chest pain, epigastric pain
- Regurgitation, vomiting (undigested or partially digested food, bilious)
- Early satiety, unexplained weight loss, malabsorption
- Hematemesis, coffee ground emesis, iron deficiency anemia (appropriate age group)
- Jaundice, right upper quadrant pain or mass
- Pulmonary complications of reflux disease
- Esophageal, gastric, duodenal, pancreatic, biliary mass lesion, stricture, mass, inflammation on imaging study

- Assess the **potential complications** that may result from endoscopic procedures and their management, including:
  - Hemorrhage
  - Perforation (pressure, endoscopic hemostasis sequelae, instrument, biopsy, etc.)
  - SIRS/sepsis (bacterial translocation, perforation, etc.)
  - Complications related to sedation and procedural stress
- Assess **utility and limitations of potential alternatives to endoscopy**, including:
  - Entero-capsule study
  - Conventional contrast studies (fluoroscopy, CT)
  - Virtual (CT) colonoscopy
  - MRI (MRCP, etc.)
- Understand the **sedation and monitoring requirements** for various types of

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|  | <p>endoscopy, including the effects of comorbid disease and advanced age</p> <p><b><u>Objectives – General:</u></b></p> <ul style="list-style-type: none"> <li>▪ <b>Complete the reading assignment (see literature list)</b></li> <li>▪ <b>Attend all (≥ 85%) conferences, M&amp;M conferences, Grand Rounds / other educational activities of the Division of Gastroenterology during the rotation.</b></li> <li>▪ <b>Take a post-rotation self-assessment test with at least 75% correct answers</b></li> </ul>   |
| <p><b>Practice-based Learning and Improvement:</b></p> | <p><b><u>Goals and Objectives:</u></b></p> <p>Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:</p> <ul style="list-style-type: none"> <li>▪ <b><u>Self-assessment:</u></b> Analyze practice experience during the rotation, as well as own performance-based on interaction with Surgical/GI attending(s) and other key GI staff; accept and use constructive criticism to improve performance in the six core competencies.</li> <li>▪ <b><u>Medical knowledge:</u></b> Self-directed and under mentorship of GI attending staff, locate, appraise and assimilate evidence from scientific studies related to their patients’ health problems; Use evidence based medicine approach to patient care whenever possible; apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness; use information technology to manage information, access online medical information; and support their own education; facilitate the learning of students and other health care professionals on the GI service by sharing pre-existing and newly acquired knowledge (general and case-based) on rounds and during formal educational activities. Residents are encouraged to ask/question the GI staff and/or other GI related expert providers for clarification of unclear concepts / practices at any time.</li> <li>▪ Participate in the <b><u>management of GI patients and related procedures</u></b> in the inpatient and outpatient setting as outlined in the patient care competency; during the rotation, the resident should become familiar/proficient with: <ul style="list-style-type: none"> <li>a. Fundamentals of GI patient history and exam, and related diagnostic tests and procedures in adult patients</li> <li>b. Fundamentals of endoscopy, including instrument handling, options for therapy, conscious sedation</li> <li>c. Common complications in GI patients and management thereof</li> </ul> </li> </ul> |
| <p><b>Interpersonal and Communication</b></p>          | <p><b><u>Goals and Objectives:</u></b></p> <p>Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patient’s families and professional associates. Residents are expected to:</p>   |

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| <p><b>Skills:</b></p>                 | <ul style="list-style-type: none"> <li>▪ Develop interpersonal skills necessary to <b>communicate effectively</b> with patients, patient families, nursing staff, mid-level healthcare providers, ancillary staff, medical students, fellow residents and attending staff in the complex multi-specialty environment that constitutes Gastroenterology</li> <li>▪ Contribute to <b>creating an atmosphere of collegiality and mutual respect</b> with all providers involved in the care of patients</li> <li>▪ Develop <b>effective listening, questioning and documentation skills</b></li> <li>▪ Demonstrate <b>ability to work effectively as a member of a team</b></li> <li>▪ Demonstrate <b>ethically sound behavior</b> – (see also Professionalism)</li> <li>▪ <b>Share own knowledge</b> with other members of the team to foster an environment of learning</li> </ul>   |
| <p><b>Professionalism:</b></p>        | <p><b><u>Goals and Objectives:</u></b></p> <p>Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles and sensitivity to a diverse patient population. Residents are expected to:</p> <ul style="list-style-type: none"> <li>▪ Demonstrate <b>adherence to institutional and departmental standards and policies</b></li> <li>▪ Demonstrate <b>respect, compassion, integrity and ethical behavior</b> that are consistent with the <b>values of the department and institution</b>; develop and sustain sensitivity toward differences of age, gender, culture, religion, ethnicity or other diversities in both co-workers and patients.</li> <li>▪ Demonstrate ability to appropriately take on, <b>share and delegate responsibilities</b> with regard to patient care; balance own rights and privileges appropriately with responsibilities and accountability resulting from being a member of a team dedicated to patient care</li> <li>▪ Demonstrate <b>commitment to excellence and on-going professional development</b></li> <li>▪ Under attending and other GI staff guidance, develop skill <b>to resolve potential problems and conflicts that occur in a complex corporate environment</b> using the appropriate channels and methods of communication to maximize patient care and surgical service performance</li> <li>▪ Evaluate and formulate a response to <b>ethical questions</b></li> </ul> |
| <p><b>Systems-based Practice:</b></p> | <p><b><u>Goals and Objectives:</u></b></p> <p>Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:</p> <ul style="list-style-type: none"> <li>▪ Understand how choices in patient care and other professional practices affect other healthcare professionals, the healthcare organization and the larger society and how these elements of the system affect their own practice.</li> </ul>  |

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|  | <p>The relevance and components of clinical pathways and how to deal with deviation.</p> <ul style="list-style-type: none"><li>▪ Practice cost-effective healthcare and resource allocation that does not compromise quality of care</li><li>▪ Know how to partner with healthcare managers (GI coordinator, Social Work, Case Management, PT/OT and Rehabilitation medicine, etc.) and other healthcare providers (PMD, specialty providers in and out of the hospital) to assess, coordinate, and improve healthcare for the individual patient and cohorts of patients</li></ul> |
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