



ACGME International

**Advanced Specialty Program Requirements for
Graduate Medical Education in
Colon and Rectal Surgery**

Revised: 12/12/15, effective: 7/1/2016
Initial approval: 8/1/2014

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I. Introduction

I.A. Definition and Scope of the Specialty

Colon and rectal surgery is the specialty that focuses on the medical, surgical, endoscopic, and peri-operative management of disorders involving the colon, rectum, and anus, and related problems of the abdomen, pelvis, and perineum.

I.B. Duration of Education

I.B.1. The education program in colon and rectal surgery must be 12 or 24 months in length.

II. Institutions

II.A. Sponsoring Institution

See International Subspecialty Foundational Requirements, Section I.A.

II.B. Participating sites

See International Subspecialty Foundational Requirements, Section I.B.

III. Program Personnel and Resources

III.A. Program Director

III.A.1. The program director must document each fellow's scholarly activity annually.

III.B. Faculty

See International Subspecialty Foundational Requirements, Section II.B.

III.C. Other Program Personnel

III.C.1. Each fellow must have the opportunity to interact with other providers, such as enterostomal therapists, mid-level providers, nurses, other specialists, and social workers.

III.D. Resources

III.D.1. The program must have access to the volume and variety of colon and rectal patients and surgery necessary for fellows to perform the required minimum case numbers and achieve all required outcomes.

- III.D.2. Fellows must have the following testing methods available for use in the evaluation and treatment of patients:
- III.D.2.a) anorectal manometry;
 - III.D.2.b) defecography/dynamic magnetic resonance imaging (MRI);
 - III.D.2.c) electromyography and pudendal nerve testing;
 - III.D.2.d) pelvic floor exercise, rehabilitation, and directed biofeedback; and,
 - III.D.2.e) transit time assessment.
- III.D.3. Fellows must be provided with office workspace with computer hardware, software, support, Internet access, reference assistance, and statistical support.
- III.D.4. Fellows must be provided with reliable systems for prompt communication with supervising faculty members.

IV. Fellow Appointment

IV.A. Eligibility Criteria

- IV.A.1. Prior to appointment in the program, fellows must have successfully completed an ACGME International (ACGME-I)-accredited residency program in general surgery.

IV.B. Number of Fellows

See International Subspecialty Foundational Requirements, Section III.B.

V. Specialty-Specific Educational Program

V.A. Regularly Scheduled Didactic Sessions

- V.A.1. There must be a structured, program-long series of didactic sessions with the faculty that follows the written curriculum, held on at least a weekly basis.
- V.A.2. Regular colon and rectal conferences must be coordinated among program sites to allow attendance by a majority of faculty members and fellows.
- V.A.2.a) A conference attendance record for both fellows and faculty members must be maintained.
 - V.A.2.b) Fellows must attend a minimum of 70 percent of all conferences, excluding excused time away for meetings, vacation, and illness.
- V.A.3. Regular conferences must include:

- V.A.3.a) morbidity and mortality, held at least monthly, at which all complications occurring on the colon and rectal service(s) are presented for peer-review and follow-up; and,
- V.A.3.a).(1) Cases must be presented by the fellow(s), involved faculty members must be present, and other colon and rectal surgery faculty members should participate.
- V.A.3.b) a journal club, held at least quarterly, during which important articles from current and past literature are presented by fellow(s) and any other learners on the service, and are discussed for content and study design.
- V.A.4. Related pathology and radiology studies should be presented during conferences.
- V.A.5. Formal clinical teaching rounds with the responsible faculty member(s) must be conducted on each rotation at least weekly.

V.B. Clinical Experiences

- V.B.1. The program must be organized so that fellows participate in patient evaluation and care in each of the following settings:
 - V.B.1.a) ambulatory clinic/office;
 - V.B.1.b) Emergency Department;
 - V.B.1.c) endoscopy suite/center;
 - V.B.1.d) inpatient care/hospital; and,
 - V.B.1.e) operating theater, including in-patient and ambulatory cases.
- V.B.2. Fellows must be exposed to basic and complex patients with the following conditions:
 - V.B.2.a) the broad spectrum of anorectal disease;
 - V.B.2.b) colon, rectal, and anal cancers;
 - V.B.2.c) colorectal physiological disorders, including fecal incontinence, constipation, rectal and pelvic prolapse, and intestinal dysmotility;
 - V.B.2.d) diverticular disease;
 - V.B.2.e) inflammatory bowel disease, including ulcerative colitis; and,

- V.B.2.f) relevant genetic disorders, including familial adenomatous polyposis (FAP) and hereditary non-polyposis colorectal cancer (HNPCC).
- V.B.3. Fellows must have broad operative experience, including:
 - V.B.3.a) abdominal/pelvic surgery, both open and laparoscopic;
 - V.B.3.b) anorectal surgery; and,
 - V.B.3.c) endoscopic procedures, including flexible sigmoidoscopy and colonoscopy.
- V.B.4. Fellows must have formal instruction and clinical experiences in all essential disorders and procedures.
- V.B.5. Fellows must participate in the evaluation and treatment of patients with the following diagnoses:
 - V.B.5.a) anorectal and physiologic disorders, including hemorrhoids, fistulas, abscesses, fissures, constipation, incontinence, and pelvic floor problems; and,
 - V.B.5.b) abdominal disorders, including neoplasia of the colon, rectum, and anus, inflammatory bowel disease, diverticular disease, and rectal prolapse.
- V.B.6. Fellows must document case numbers, including:
 - V.B.6.a) abdominal operations, to include:
 - V.B.6.a).(1) laparoscopic resections; and,
 - V.B.6.a).(2) pelvic dissections.
 - V.B.6.b) anorectal operations; and,
 - V.B.6.c) procedures evaluating the gastrointestinal tract and pelvic floor, to include:
 - V.B.6.c).(1) sigmoidoscopy/proctoscopy;
 - V.B.6.c).(2) anoscopy;
 - V.B.6.c).(3) rectal and anal ultrasound;
 - V.B.6.c).(4) pelvic floor evaluation; and,
 - V.B.6.c).(5) colonoscopies, including:

- V.B.6.c).(5).(a) interventional procedures.
- V.B.7. No more than 50 percent of the total number of cases logged should be endoscopic procedures.
- V.B.8. A colon and rectal surgery fellow and a chief resident in general surgery or a fellow in another program (regardless of if he or she is in an ACGME-I-accredited position) should not have primary responsibility for the same patient, except that a colon and rectal surgery fellow and a critical care fellow may co-manage the non-operative care of the same patient.
- V.B.9. Each fellow must continue to provide care for his or her post-operative patients until discharge, or until the patients' post-operative conditions are stable and only non-surgical issues remain.

V.C. Fellows' Scholarly Activities

- V.C.1. Each fellow should participate in at least two of the following activities:
- V.C.1.a) one or more ongoing research studies with faculty member(s);
 - V.C.1.b) one or more fellow-initiated research project(s) with faculty member supervision;
 - V.C.1.c) one or more scientific presentations at local, regional, national, or international meetings;
 - V.C.1.d) preparation/submission of one or more articles for peer-reviewed publication; or,
 - V.C.1.e) writing one or more book chapters or current standards papers.
- V.C.2. The program should provide support for fellows involved in research, including support for research design, technical elements, and statistical analysis.

V.D. Duty Hour and Work Limitations

See International Subspecialty Foundational Requirements, Section VI.

VI. ACGME-I Competencies

VI.A. Patient Care

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows must demonstrate proficiency in:

- VI.A.1. the evaluation and management of patients with all of the essential colon and rectal surgical disorders, including:

- VI.A.1.a) pre-operative diagnosis, indications, alternatives, risks, and preparation;
 - VI.A.1.b) assessment of patient risk, nutritional status, co-morbidities, and need for pre-operative treatment and peri-operative prophylaxis;
 - VI.A.1.c) interpretation of a variety of testing methods in the evaluation and treatment of patients;
 - VI.A.1.d) appropriate non-operative management;
 - VI.A.1.e) operative management, including all technical aspects, intra-operative decision making, avoidance and management of intra-operative complications, and management of unexpected findings; and,
 - VI.A.1.f) post-operative management, including recognition and treatment of complications, and appropriate follow-up and additional treatment.
- VI.A.2. the treatment of the essential colon and rectal surgery disorders, including:
- VI.A.2.a) abdominal and pelvic disorders, to include:
 - VI.A.2.a).(1) carcinoma of the colon, rectum, and anus;
 - VI.A.2.a).(2) colorectal infectious diseases, including sexually transmitted diseases (STDs) and other colidities, including clostridium difficile and human immunodeficiency virus (HIV)-related infection;
 - VI.A.2.a).(3) diverticular disease;
 - VI.A.2.a).(4) gastrointestinal obstruction, including those due to adhesions, malignancy, volvulus, hernias, and pseudo obstruction;
 - VI.A.2.a).(5) inflammatory bowel disease, including Crohn's disease and ulcerative colitis;
 - VI.A.2.a).(6) inherited colorectal disorders, including familial polyposis, hereditary cancer syndromes, other inherited polyposis syndromes, and related genetic disorders;
 - VI.A.2.a).(7) lower gastrointestinal hemorrhage;
 - VI.A.2.a).(8) other neoplastic processes, including gastrointestinal stromal tumor (GIST), lymphoma, carcinoid, desmoids, and small bowel and mesenteric tumors; and,

- VI.A.2.a).(9) radiation enteritis and the effects of ionizing radiation.
- VI.A.2.b) anorectal and perineal disorders, to include:
 - VI.A.2.b).(1) anal fissure;
 - VI.A.2.b).(2) anorectal stenosis;
 - VI.A.2.b).(3) fistulas, both anorectal, and rectovaginal;
 - VI.A.2.b).(4) hemorrhoids;
 - VI.A.2.b).(5) hidradenitis;
 - VI.A.2.b).(6) meningocele, chordoma, and teratoma;
 - VI.A.2.b).(7) necrotizing fasciitis;
 - VI.A.2.b).(8) pilonidal disease;
 - VI.A.2.b).(9) presacral/retrorectal lesions, including cysts; and,
 - VI.A.2.b).(10) pruritus ani.
- VI.A.2.c) pelvic floor disorders, to include:
 - VI.A.2.c).(1) constipation, including clinical and physiological evaluation, dysmotility, anismus and other forms of pelvic outlet obstruction;
 - VI.A.2.c).(2) fecal incontinence; and,
 - VI.A.2.c).(3) rectal and pelvic prolapse, rectocele, and solitary rectal ulcer syndrome.
- VI.A.3. the following essential colon and rectal surgery procedures:
 - VI.A.3.a) abdominal procedures, to include:
 - VI.A.3.a).(1) abdominoperineal resection and total proctocolectomy;
 - VI.A.3.a).(2) creation of stomas and surgical management of stoma complications;
 - VI.A.3.a).(3) ileal pouch-anal anastomosis;
 - VI.A.3.a).(4) laparoscopic abdominal and gastrointestinal surgery, including colon and rectal resections, ostomy construction and prolapse repair;

- VI.A.3.a).(5) low anterior resection with colorectal and coloanal anastomosis;
- VI.A.3.a).(6) procedures for rectal prolapse;
- VI.A.3.a).(7) segmental colectomy, including ileocolic resection and colon resection;
- VI.A.3.a).(8) small bowel resection; and,
- VI.A.3.a).(9) stricturoplasty.
- VI.A.3.b) anorectal and perineal procedures, to include:
 - VI.A.3.b).(1) anooplasty;
 - VI.A.3.b).(2) fistulotomies, including primary and staged advancement flap repairs of complex anorectal and rectovaginal fistulas;
 - VI.A.3.b).(3) hemorrhoidectomy, including operative and office treatment;
 - VI.A.3.b).(4) internal sphincterotomy;
 - VI.A.3.b).(5) perineal repairs of rectal prolapse;
 - VI.A.3.b).(6) transanal excision of rectal neoplasms;
 - VI.A.3.b).(7) treatment of hidradenitis; and,
 - VI.A.3.b).(8) treatment of pilonidal disease.
- VI.A.3.c) endoscopic procedures, to include:
 - VI.A.3.c).(1) anoscopy;
 - VI.A.3.c).(2) colonoscopy, both diagnostic and therapeutic;
 - VI.A.3.c).(3) sigmoidoscopy, both rigid and flexible; and,
 - VI.A.3.c).(4) administration of conscious sedation and local analgesia.
- VI.A.3.d) pelvic floor procedures, to include interpretation of clinical and laboratory study results, including anorectal manometry, anorectal ultrasound/pelvic MRI, defecography, and transit time studies.

VI.B. Medical Knowledge

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows must demonstrate proficiency in knowledge of:

- VI.B.1. anatomy, embryology, and physiology of the colon, rectum, anus, and related structures;
- VI.B.2. essential colorectal disorders;
- VI.B.3. additional colon and rectal surgery-related issues, including:
 - VI.B.3.a) congenital disorders, to include congenital pelvic and sacral neoplasms; Hirschsprung's disease; imperforate anus; and urogenital and sacral dysgenesis, including spina bifida;
 - VI.B.3.b) genetics and molecular biology as they apply to colorectal disorders;
 - VI.B.3.c) gynecological disorders, to include endometriosis, considerations in managing the pregnant patient with colorectal disorders, and related intra-operative findings, such as ovarian lesions, fibroids, endometrial implants, and gynecological prolapse;
 - VI.B.3.d) other pediatric and congenital disorders, to include childhood fissure, encopresis, juvenile polyposis, malrotation, Meckel's diverticulum, and prolapse;
 - VI.B.3.e) other pelvic disorders, to include cystocele, enterocele, urinary incontinence, and vaginal and uterine prolapse;
 - VI.B.3.f) the pathology of colon and rectal disorders;
 - VI.B.3.g) radiological and other imaging modalities, to include plain x-rays, contrast studies, computed tomography (CT), positron emission tomography (PET), CT colonography MRI, nuclear medicine scans, angiography, defecography, abdominal ultrasound, evaluation for deep vein thrombosis and pulmonary embolism, fistulograms, and sinograms;
 - VI.B.3.h) related medical conditions;
 - VI.B.3.i) urological disorders, to include urinary incontinence, fistulas to the urinary tract, involvement of the ureters, bladder, and urethra in CRD, and identifying and avoiding intra-operative injury to the ureters; and,
 - VI.B.3.j) vascular and mesenteric disorders affecting the colon and rectum.

- VI.B.4. additional colon and rectal surgery-related procedures, including:
- VI.B.4.a) abdominal procedures, to include continent ileostomy and pelvic exenteration;
 - VI.B.4.b) alternate pelvic pouch techniques, to include colonic J-pouch and coloplasty;
 - VI.B.4.c) anastomotic techniques, to include both sewn and stapled methods of colonic and anal anastomoses;
 - VI.B.4.d) anorectal procedures, to include alternative methods of fistula repair, including fibrin glue and/or plug placement;
 - VI.B.4.e) flaps and grafts for perineal reconstruction;
 - VI.B.4.f) indications for and interpretation of CT colonography;
 - VI.B.4.g) management of colorectal trauma and foreign bodies;
 - VI.B.4.h) other procedures for fecal incontinence, to include alternative methods of sphincter repair, augmentation, and implantable devices;
 - VI.B.4.i) pelvic floor and gastrointestinal physiological assessment and procedures, their uses, and indications, to include performance and interpretation of anorectal manometry, electromyography and pudendal nerve testing, defecography/dynamic MRI, transit time assessment, pelvic floor exercise, rehabilitation, and directed biofeedback;
 - VI.B.4.j) procedures for pelvic prolapse in addition to rectal prolapsed, to include rectocele and enterocele repairs; and,
 - VI.B.4.k) transanal endoscopic microsurgery.

VI.C. Practice-based Learning and Improvement

Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Fellows are expected to develop skills and habits to be able to meet the following goals:

- VI.C.1. evaluate and analyze patient care outcomes; and,
- VI.C.2. utilize an evidence-based approach to patient care.

VI.D. Interpersonal and Communication Skills

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

VI.E. Professionalism

Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Fellows must demonstrate:

VI.E.1. a high standard of ethical behavior; and,

VI.E.2. a commitment to continuity of care.

VI.F. Systems-based Practice

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.