



### Core Curriculum for the European Board of Surgery Qualification (EBSQ) in Coloproctology

Goals, General Competencies and Specific Educational Objectives

#### **DEFINITION**

Coloproctology (colorectal surgery) is the surgical subspecialty that deals with investigation, diagnosis, and treatment of disorders of the colon, rectum and anus.

#### **Goals**

The overall goal of this curriculum is to define the level of surgical knowledge and skills to become a competent specialist in the field of Coloproctology. When this level is obtained, the surgeon may be presumed to be capable of independently practicing in the role as a medical specialist (coloproctologist / colorectal surgeon).

Candidates for the European Board of Surgery Qualification (EBSQ) coloproctology examination must demonstrate the requisite knowledge and skills for effective patient-centered care a diverse population. This mandates that the candidate has obtained the appropriate national surgical qualification. Despite variations in the standard and structure of training and certification across European countries (standard of training, length of training, and degree of specialization can all vary) a national surgical training program specifically aimed at the field of coloproctology should be successfully completed by all candidates.

## GENERAL REQUIREMENTS

General requirements to undertake the EBSQ Coloproctology examinations can be found at [www.uemssurg.org](http://www.uemssurg.org).

Applicant must hold a valid CCST or equivalent certificate from an appropriate international country or FMH in the case of Switzerland. In addition, coloproctology training must take place under the instruction of more than one principal trainer and should preferably involve more than one hospital group or institution.

The minimum acceptable duration of training for EBSQ coloproctology is 7 years. This must include a minimum of 5 years in specialist surgical units for common trunk training. Candidates must have also completed 2 or more extra years in coloproctology. All candidates must prove that the duration of their training has been at least five years. The training may not be interrupted for more than one year. The additional two years can be recognised as appropriate training provided the experience is acquired as a specialist or consultant in a unit with senior colleague/s who will act and certify that they have acted in the capacity of a mentor, but at least one year of advanced training must be undertaken in a nationally recognised unit.

EBSQ Qualification in Coloproctology may be awarded upon the recommendation of the Division of Coloproctology of the UEMS after having successfully passed the examination.

## **1. COGNITIVE KNOWLEDGE BASIC SCIENCE**

At the completion of the training program the candidate must be able to demonstrate and apply knowledge in the following clinical and fundamental biomedical sciences:

### **1. Anatomy and embryology of colon, rectum and anus.**

- Colon
  - Structure of the Colonic Wall
  - Colonic Segments
  - Blood Vessel Supply of the Colon
  - Lymphatic Drainage of the Colon
  - Nerve Supply of the Colon
- Rectum and Anus
  - Rectal Ampulla
  - Anal Canal and Anus
  - Pelvic and Rectal Fasciae
  - Blood Vessel Supply of the Rectum and Anus
  - Lymphatic Drainage of the Rectum and Anus
  - Nerve Supply of the Rectum and Anus
- Pelvic Floor
  - Levator Ani Muscle
  - External Anal Sphincter
  - Smooth Pelvic Muscles
  - Nerve Supply of the Pelvic Floor
  - Blood Vessel Supply of the Pelvic Floor
  - Anal Continence Organ
  - Pelvic Spaces

### **2. Physiology of the colon, rectum and anus**

- Functions of the Colon and Rectum
- Colonic and Rectal Muscle Physiology
  - Resting Membrane Potential
  - Colonic Muscle Contraction
  - Colonic Motility
  - Rectal Motility
  - Postprandial and Diurnal Changes
  - Neural Control of Colorectal Motility
- Colorectal Transit Time
- Anorectal Physiology
  - Internal Anal Sphincter
  - External Anal Sphincter
  - Puborectalis Muscle
  - Rectal Compliance
  - Anorectal Sensitivity

- Anorectal Motility
- Defaecation
- Physiological Assessment of the Colon and Rectum
  - Colonic Motility
  - Anal Manometry
- Absorption of Water and Electrolytes
- Absorption of Short-chain Fatty Acids

**3. Pharmacology as related to diseases of the colon, rectum and anus.**

**4. Microbiology of the intestine.**

**5. Surgical nutrition as related to intestinal disease.**

**6. Critical care as related to colon and rectal surgery.**

**7. Principles of medical and radiation oncology in the treatment of colorectal and anal malignancies.**

## 2. COGNITIVE KNOWLEDGE DISEASES

The candidate must be able to manage fully (investigation, diagnosis and treatment) and demonstrate comprehensive knowledge of normal anatomy, physiology, pathology, pathophysiology, etiology and radiology of the following disease entities:

### Anal Disorders

- Hemorrhoidal disease
  - Anatomy
  - Epidemiology
    - Incidence
    - Prevalence
  - Symptoms
  - Diagnosis
  - Classification
  - Therapy
    - Conservative Treatment
    - Surgical Treatment
  
- Anal Fissures (Fissure-in-ano)
  - Aetiology
  - Epidemiology
    - Incidence
    - Prevalence
  - Epidemiology
  - Diagnostic Procedures
  - Therapy
    - Conservative Treatment
    - Surgical Treatment
  
- Perianal Abscess and Fistula
  - Anatomy
  - Epidemiology
    - Incidence
    - Prevalence
  - Symptoms
  - Diagnosis
    - MRI
    - Endoanal Sonography
  - Classification
  - Therapy
    - Conservative Treatment
    - Surgical Treatment

- Complications
- 

## **Dermatology**

- Pruritus Ani
  - Aetiology
  - Epidemiology
  - Diagnostic Procedures
  - Therapy
    - Conservative Treatment
    - Surgical Treatment
- Hidradenitis Suppurativa (Acne Inversa)
  - Aetiology
  - Epidemiology
    - Incidence
    - Prevalence
  - Diagnostic Procedures
  - Therapy
    - Conservative Treatment
    - Surgical Treatment
- Condylomata Acuminata
  - Aetiology
  - Epidemiology
    - Incidence
    - Prevalence
  - Diagnostic Procedures
  - Therapy
    - Conservative Treatment
    - Surgical Treatment
- Sexually Transmitted Diseases
  - Bacterial Pathogens
    - Gonorrhoea
    - Chlamydia
    - Syphilis
    - Chancroid
    - Epidemiology
    - Diagnosis
    - Treatment
  - Viral Pathogens
    - Herpes Simplex
    - Human Papilloma Virus
    - HPV
    - Molluscum Contagiosum
    - HIV / AIDS

- Epidemiology
- Diagnosis
- Treatment
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- Late Sequelae of viral infection
  - Anal Intraanal Dysplasia
    - Epidemiology
    - Diagnosis
    - Treatment
      - Anal Cancer
        - (See chapter “Anal Cancer)

### **Pilonidal Sinus**

- Aetiology
- Epidemiology
  - Incidence
  - Prevalence
- Diagnostic Procedures
- Therapy
  - Conservative Treatment
  - Surgical Treatment
- Complications

### **Functional Disorders**

- Incontinence
  - Aetiology
  - Epidemiology
    - Incidence
    - Prevalence
  - Diagnostic Procedures
    - Inspection and Palpation
    - Proctoscopy and Rigid Sigmoidoscopy (Rectoscopy)
    - Endoanal Ultrasound
    - Anorectal Manometry
    - Neurological Examination
    - Sensitivity Tests
    - Defaecography
    - Continence Tests
    - Special Considerations
  - Therapy
    - Conservative Treatment
    - Surgical Treatment

- Constipation
  - Aetiology
    - Colonic Constipation
    - Functional Constipation
  - Epidemiology
    - Incidence
    - Prevalence
  - Classification
  - Diagnostic Procedures
    - Physical Examination
    - Colonic Transit Time
    - Defaecography
    - Anorectal Manometry .
    - Electrophysiological Examinations
    - Endoscopy and Biopsy
    - Magnetic Resonance Imaging
    - Psychosocial Evaluation
  - Therapy
    - Conservative Treatment
    - Surgical Treatment

### **Defaecation Disorders**

- Aetiology
- Incidence
- Epidemiology
- Diagnostic Procedures
- 

### **Functional Obstructive Defecation**

- Incidence
- Epidemiology
- Diagnostic Procedures
- Therapy
  - Conservative Treatment
  - Surgical Treatment
- Rectal Prolapse, Intussusception, Solitary Rectal Ulcer
  - Aetiology
    - Differential Diagnosis
  - Incidence
  - Epidemiology
  - Diagnostic Procedures
  - Therapy
    - Perineal Procedures



- Abdominal Procedures

### **Irritable Bowel Syndrome**

- Definition
- Incidence
- Epidemiology
- Aetiology/Pathophysiology
- Symptoms
- Diagnosis
  - Physical Examination
  - Investigation
- Management and Therapy
- Prognosis

### **Inflammatory Bowel Disease**

- Ulcerative Colitis
  - Definition
  - Epidemiology
    - Incidence
    - Prevalence
  - Aetiology
    - Genetic Factors
    - Immunological Factors
    - Microbiological Factors
  - Symptoms
  - Diagnosis
    - Clinical Findings
    - Endoscopy
    - Radiography
    - Microbiology
    - Histology
    - Serology
  - Complications
    - Malnutrition
    - Colorectal Cancer
    - Cholangiocarcinoma
    - Toxic Megacolon
    - Acute Gastrointestinal Haemorrhage
    - Benign Strictures
  - Therapy
    - Conservative Treatment
    - Surgical Treatment
  - Differential Diagnosis
  - Prognosis

- Crohn's Disease
  - Definition
  - Intestinal Distribution of Crohn's Disease
  - Epidemiology
    - Incidence
    - Prevalence
  - Aetiology
    - Genetic Factors
    - Immunological Factors
    - Microbiological Factors
  - Symptoms and Signs
  - Extraintestinal Manifestations
  - Assessment of Disease Activity
  - Diagnosis
    - Clinical Findings
    - Endoscopy
    - Radiography
    - Histology
    - Serology
  - Complications
    - Acute Complications
    - Other / Chronic complications
  - Classification
  - Therapy
    - Medical Treatment
    - Surgical Treatment
    - Anorectal Manifestations
  - Crohn's disease and Pregnancy
  
- Indeterminate Colitis
  - Definition
  - Epidemiology
  - Therapy
    - Conservative Treatment
    - Surgical Considerations

### **Diverticular Disease**

- Definition
- Epidemiology
  - Incidence
  - Prevalence
- Aetiology
- Classification
- Treatment

- Conservative Treatment
- Surgical Treatment
  - Fistulas
  - Obstruction
  - Bleeding
  -

### **Colitis of other origins**

- Necrotizing Enterocolitis
- Pseudomembranous Colitis
- Ischemic Colitis
- Infectious Colitis
- Collagenous Colitis

### **Benign Tumours**

- Non-neoplastic Epithelial Lesions
  - Hyperplastic Polyps
  - Hamartomas
  - Inflammatory Polyps
  - Lymphoid Polyps
- Neoplastic Epithelial Lesions
  - Adenoma
    - Definition
    - Epidemiology
    - Familial Adenomatous Polyposis
      - Definition
      - Epidemiology
      - Symptoms
      - Treatment
        - Endoscopic treatment
        - Surgical treatment
  - Mesenchymal Lesions
    - Lipoma
    - Leiomyoma
    - Neuroma
    - Angioma
    - Lymphangioma
    - Endometriosis
    - Pneumatosis Cystoides Intestinalis

## Malignant Tumours

- Genetics of Cancer
  - Familial Adenomatous Polyposis
    - Molecular Screening
    - Screening Guidelines
    - Colorectal Polyposis
    - Duodenal Adenomas
    - Desmoid Tumour
  - Hereditary Non-Polyposis Colorectal Cancer Syndrome
    - Molecular Screening
    - Screening Guidelines
      - Endometrial Cancer
      - The MAP Syndrome
      - The Peutz-Jeghers Syndrome
      - Juvenile Polyposis Syndrome
      - Hyperplastic Polyposis Syndrome Colon Cancer
- Colon Carcinoma
  - Definition
  - Epidemiology
    - Incidence
    - Prevalence
  - Aetiology
    - Extrinsic Factors
    - Genetic Factors
  - Signs and Symptoms
  - Diagnosis
    - Diagnostic Strategies
  - Screening
    - Screening in the Healthy Population
    - Screening in Populations at Increased Risk
  - Staging
  - Treatment
    - Curative Intent
    - Palliative Treatment
  - Metastases and Local Recurrence
  - Current Treatment Recommendations
  - Follow-up
- Rectal Cancer
  - Definition
  - Epidemiology
    - Incidence
    - Prevalence
  - Aetiology
  - Classification
  - Diagnosis

- Differential Diagnosis
- Staging
- Surgical Treatment
- Radiotherapy
  - Neoadjuvant
  - Neoadjuvant Chemoradiation
  - Adjuvant
  
- Current Treatment and Recommendations
- Follow-up
- Complications
  - Complications of Surgery
  - Complications of Radiotherapy
- Recurrence
  - Local
  - Distant Metastases
- Pathological Assessment of Quality of Mesorectal Excision
- Pathological Assessment of Quality of Abdominoperineal Excision
  
- Anal Cancer
  - Definition
  - Epidemiology
    - Incidence
    - Prevalence
  - Aetiology
  - Classification
  - Diagnosis
  - Differential Diagnosis
  - Staging
  - Treatment
    - Chemoradiotherapy
    - Current Treatment Recommendations
    - Abdominoperineal Excision
    - Local Excision
    - Brachytherapy
    - Nodal Disease
  - Follow-Up
  - Complications
  - Recurrence
    - Local
    - Lymph Node
    - Distant
  - Rare Tumours
    - Adenocarcinoma
    - Melanoma
    - Sarcoma

- Carcinoma of the Perianal Skin (Anal Margin)
- Premalignant Conditions
  - Bowen's Disease
  - Paget's Disease
  - Buschke-Lowenstein Disease

### **Current Tumour Classification**

- Principles of Current Tumour Classification
- Objectives of Uniform Tumour Classification
- Principles of TNM Classification
- General Rules of TNM

### **Stomas and Stomatherapy**

- Definitions and Indications
  - Indications for a Permanent Stoma
  - Indications for a Temporary Stoma
- Stoma Construction
  - Stoma Site and Preoperative Counselling
  - Surgical Techniques
- "Continent" Stomas
- Stoma Complications

### **Endoscopy**

- Diagnostic Endoscopy of the Colon and Rectum
  - Flexible Sigmoidoscopy
  - Colonoscopy
- Therapeutic Endoscopy
  - Polypectomy
  - Balloon Dilation
  - Argon Plasma Coagulation
  - Self-expanding Metal Stents
- Surveillance
  - Postpolypectomy Surveillance
  - Colonoscopy Surveillance After Colorectal Cancer Resection
- New Techniques
  - Chromoendoscopy
  - Magnifying Colonoscopy
  - Spectroscopic Endoscopy
  - Narrow-band Imaging (NBI)

## Emergencies

- Anal and Rectal Trauma
  - Aetiology
  - Diagnosis
  - Therapy
- Colonic/Rectal Obstruction
  - Aetiology
  - Symptoms
  - Diagnosis
  - General Management
  - Neoplastic Colorectal Obstruction
    - Aetiology/Epidemiology
    - Symptoms
    - Diagnosis
    - Differential Diagnosis
    - Treatment
      - Conservative Treatment
      - Surgical Treatment
    - Prognosis
- Colonic Volvulus
  - Definition
  - Epidemiology/Aetiology
  - Symptoms
  - Diagnosis
  - Therapy
- Lower Gastrointestinal Bleeding
  - Definition
  - Epidemiology
    - Incidence
    - Prevalence
  - Presenting Clinical Features
  - Aetiology and Differential Diagnosis
  - Evaluation
  - Treatment
    - Bleeding from Colonic Diverticulosis
    - Bleeding from Angiodysplasia
    - Surgical Treatment
  - Prognosis

## Pain Syndromes

- Chronic Pelvic Pain
  - Definition
  - Clinical Features
  - Investigation
  - Classification
  - Treatment

### 3. PSYCHOMOTOR SKILLS

At the completion of the national training program in Coloproctology, the candidate must be able to demonstrate a minimum acceptable total experience of specialist coloproctological procedures, as either first assistant or principal surgeon.

Requirements for the EBSQ examinations can be found at [www.uemssurg.org](http://www.uemssurg.org).

Technical competence in the following procedures:

#### 1. Anorectal Procedures

- a. Incision and drainage of abscesses (perianal, ischiorectal)
- b. Excision of thrombosed hemorrhoids
- c. Rubber band ligation of hemorrhoids
- d. Hemorrhoidectomy
- e. Anal fistulotomy, use of seton, fibrin glue, anal plug
- f. Anoplasty
- g. Pilonidal sinus – operative management
- h. Lateral internal sphincterotomy
- i. Excision of hidradenitis suppurativa
- j. Treatment of condylomata acuminata
- k. Transanal excision of rectal tumors
- l. Sphincteroplasty

#### 2. Endoscopic Procedures (*\*where applicable, depending on national training*)

- a. Proctosigmoidoscopy – rigid and flexible
- b. Colonoscopy with biopsy and polypectomy
- c. Colonoscopic stent placement
- d. Colonoscopic intervention for bleeding ( APC, clips, bicap)



### **3. Operative Procedures (open, laparoscopic assisted or hand assisted)**

- a. Right hemicolectomy with anastomosis
- b. Left hemicolectomy with anastomosis
- c. Sigmoid colectomy with anastomosis
- d. Proctocolectomy with ileostomy
- e. Proctocolectomy with ileoanal anastomosis, pelvic pouch procedures  
*(\*where applicable, depending on national situation)*
- f. Colectomy with ileorectal anastomosis
- g. Subtotal colectomy with ileostomy
- h. Anterior proctosigmoidectomy with colorectal anastomosis
- i. Hartmann procedure – including reconstruction
- j. Abdominoperineal resection
- k. Pull through colo-anal anastomosis
- l. Small bowel resection
- m. Small bowel repair and stricturoplasty
- n. Ileostomy (conventional, loop and end)
- o. Colostomy (closure, construction, relocation and revision)
- p. Parastomal hernia repair
- q. Lysis of adhesions (bowel obstruction)
- r. Cecostomy
- s. Procidentia (Abdominal rectopexy, perineal rectosigmoidectomy, Delorme)  
*(\*where applicable, depending on national situation)*

### **4. Miscellaneous Procedures**

- a. -Local treatment of rectal cancer
- b. -Colovaginal fistula – management *(\*where applicable, depending on national situation)*
- c. -Colovesical fistula – management

Psychomotor skills will be judged using a credit point system to assess a number of key-procedures. A minimum number of credit points must be obtained by successful candidates. (Document "EBSQ Coloproctology\_OPERATIVE EXPERIENCE")

The following surgical procedures are considered to be index procedures within the European Core Curriculum:

- **Anterior Resection with anastomosis**
- **Anal fistula**
- **Stoma procedures**