



GASTROENTEROLOGY Blueprint

For traditional, 10-year Maintenance of Certification (MOC) exam and Longitudinal Knowledge Assessment (LKA)

ABIM invites diplomates to help develop the Gastroenterology MOC exam blueprint

Based on feedback from physicians that MOC assessments should better reflect what they see in practice, in 2016 the American Board of Internal Medicine (ABIM) invited all certified gastroenterologists to provide ratings of the relative frequency and importance of blueprint topics in practice.

This review process, which resulted in a new MOC exam blueprint, will be used on a periodic basis to inform and update all MOC assessments created by ABIM. No matter what form ABIM's assessments ultimately take, they will need to be informed by front-line clinicians sharing their perspective on what is important to know.

A sample of over 400 gastroenterologists, similar to the total invited population of gastroenterologists in age, gender, time spent in direct patient care, and geographic region of practice, provided the blueprint topic ratings. ABIM used this feedback to update the blueprint for MOC assessments (beginning with the Spring 2017 administration of the traditional, 10-year MOC exam).

To inform how assessment content should be distributed across the major blueprint content categories, ABIM considered the average respondent ratings of topic frequency and importance in each of the content categories. A second source of information was the relative frequency of patient conditions in the content categories, as seen by certified gastroenterologists and documented by national health care data (described further under *Content distribution* below).

To determine prioritization of specific assessment content within each major medical content category, ABIM used the respondent ratings of topic frequency and importance to set thresholds for these parameters in the exam assembly process (described further under *Detailed content outline* below).

Purpose of the Gastroenterology MOC Assessments

MOC assessments are designed to evaluate whether a certified gastroenterologist has maintained competence and currency in the knowledge and judgment required for practice. The MOC assessments emphasize diagnosis and management of prevalent conditions, particularly in areas where practice has changed in recent years. As a result of the blueprint review by ABIM diplomates, MOC assessments place less emphasis on rare conditions and focus more on situations in which physician intervention can have important consequences for patients. For conditions that are usually managed by other specialists, the focus is on recognition rather than on management.

Assessment format

The traditional, 10-year MOC exam contains up to 220 single-best-answer multiple-choice questions, of which approximately 50 are new questions that do not count in the examinee's score. Examinees taking the traditional, 10-year MOC exam will have access to an external resource (i.e., UpToDate®) for the entire exam.

The LKA for MOC, is a five-year cycle in which physicians answer questions on an ongoing basis and receive feedback on how they're performing along the way. More information on how assessments are developed can be found at [abim.org/about/exam-information/exam-development.aspx](https://www.abim.org/about/exam-information/exam-development.aspx).

Most questions describe patient scenarios and ask about the work done (that is, tasks performed) by physicians in the course of practice:

- **Diagnosis:** making a diagnosis or identifying an underlying condition
- **Testing:** ordering tests for diagnosis, staging, or follow-up
- **Treatment/Care Decisions:** recommending treatment or other patient care
- **Risk Assessment/Prognosis/Epidemiology:** assessing risk, determining prognosis, and applying principles from epidemiologic studies
- **Pathophysiology/Basic Science:** understanding the pathophysiology of disease and basic science knowledge applicable to patient care

ABIM is committed to working toward health equity and believes that board-certified physicians should have an understanding of health care disparities. Therefore, health equity content that is clinically important to each discipline will be included in assessments, and the use of gender, race, and ethnicity identifiers will be re-evaluated.

Clinical scenarios presented take place in outpatient or inpatient settings as appropriate to a typical gastroenterology practice. Clinical information may include patient photographs, imaging studies, electrocardiograms, endoscopic videos, and other media to illustrate relevant patient findings.

A tutorial, including examples of question format, can be found at abim.org/maintenance-of-certification/exam-information/gastroenterology/exam-tutorial.aspx.

Content distribution

Listed below are the major medical content categories that Define the domain for the Gastroenterology traditional, 10-year MOC exam and LKA. The relative distribution of content is expressed as a percentage of the total assessment. To determine the content distribution, ABIM considered the average respondent ratings of topic frequency and importance. To cross-validate these self-reported ratings, ABIM also considered the relative frequency of conditions seen in Medicare patients by a cohort of certified gastroenterologists. Informed by these data, the Gastroenterology Approval Committee and Board have determined the medical category targets, shown below.

CONTENT CATEGORY	Target %
Esophagus	12%
Stomach and Duodenum	15%
Liver	22%
Biliary Tract	10%
Pancreas	11%
Small Intestine	10%
Colon	20%
Total	100%

Assessment questions in the content areas above also may address topics in endoscopy, genetic conditions, medication management and risks, nutritional support, and quality benchmarking.

How the blueprint ratings are used to assemble the MOC assessment

Blueprint reviewers provided ratings of relative frequency in practice for each of the detailed content topics in the blueprint and provided ratings of the relative importance of the topics for each of the tasks described in *Assessment format* above. In rating importance, reviewers were asked to consider factors such as the following:

- High risk of a significant adverse outcome
- Cost of care and stewardship of resources
- Common errors in diagnosis or management
- Effect on population health
- Effect on quality of life
- When failure to intervene by the physician deprives a patient of significant benefit

Frequency and importance were rated on a three-point scale corresponding to low, medium, or high. The median importance ratings are reflected in the *Detailed content* outline below. The Gastroenterology Approval Committee and Board, in partnership with the physician community, have set the following parameters for selecting MOC assessment questions according to the blueprint review ratings:




- At least 75% of questions will address high-importance content (indicated in green)
- No more than 25% of questions will address medium-importance content (indicated in yellow)
- No exam questions will address low-importance content (indicated in red)

Independent of the importance and task ratings, no more than 17% of questions will address low-frequency content (indicated by “LF” following the topic description).

The content selection priorities below are applicable beginning with the Spring 2017 traditional, 10-year MOC exam and are subject to change in response to future blueprint review.











Note: The same topic may appear in more than one medical content category.

Detailed content outline for the Gastroenterology traditional, 10-year MOC exam and LKA

 – High Importance: At least 75% of questions will address topics and tasks with this designation.	 – Medium Importance: No more than 25% of questions will address topics and tasks with this designation.	 – Low Importance: No questions will address topics and tasks with this designation.
LF – Low Frequency: No more than 17% of questions will address topics with this designation, regardless of task or importance.		

ESOPHAGUS (12% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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ANATOMY, DEVELOPMENT, AND PHYSIOLOGY (<2% of exam)

Anatomic abnormalities	LF					
Esophageal physiology						

SYMPTOMS AND CLINICAL PRESENTATION (<2% of exam)

Dysphagia						
Heartburn						
Chest pain						
Globus sensation						

DISEASES AND DISORDERS (10% of exam)

Oropharyngeal disorders						
Gastroesophageal reflux disease (GERD)						
Esophageal motility and functional disorders						
Barrett esophagus						
Foreign body and food impaction						
Esophageal injury	LF					
Esophageal infections	LF					

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ESOPHAGUS <i>continued...</i> (12% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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DISEASES AND DISORDERS *continued... (10% of exam)*

Neoplasms of the esophagus					
Benign	LF	⚠	⚠	⚠	✘
Malignant		✔	✔	✔	⚠
Esophageal ulcerations		✔	✔	✔	⚠
Eosinophilic esophagitis		✔	✔	✔	⚠
Esophageal varices		✔	✔	✔	⚠
Systemic disorders involving the esophagus	LF	⚠	⚠	⚠	⚠

STOMACH AND DUODENUM (15% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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ANATOMY, DEVELOPMENT, AND PHYSIOLOGY (<2% of exam)

Anatomic abnormalities	LF	⚠	⚠	⚠	✘
Physiology of the stomach and duodenum		⚠	⚠	⚠	⚠

SYMPTOMS AND CLINICAL PRESENTATION (3% of exam)

Upper gastrointestinal bleeding		✔	✔	✔	⚠
Dyspepsia and upper abdominal pain		✔	✔	✔	⚠
Nausea and vomiting		✔	✔	✔	⚠

DISEASES AND DISORDERS (10.5% of exam)

Gastric mucosal disorders					
Inflammatory		✔	✔	✔	⚠
Infiltrative	LF	⚠	⚠	⚠	⚠
Peptic ulcer disease					
<i>Helicobacter pylori</i>		✔	✔	✔	⚠
Medication-induced		✔	✔	✔	⚠

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STOMACH AND DUODENUM <i>continued...</i> (15% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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DISEASES AND DISORDERS *continued... (10.5% of exam)*

Neoplasms of the stomach and duodenum					
Benign	⚠	⚠	⚠	⚠	⚠
Malignant	LF ✔	✔	✔	✔	⚠
Gastric motility and functional disorders					
	✔	✔	✔	⚠	⚠
Post-surgical conditions					
Bariatric surgery	⚠	⚠	⚠	⚠	⚠
Gastric resection	LF ⚠	⚠	⚠	⚠	✘
Surgery for benign disease	LF ⚠	⚠	⚠	✘	✘
Surgery for malignant disease	LF ⚠	⚠	⚠	⚠	⚠

LIVER (22% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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ANATOMY, DEVELOPMENT, AND PHYSIOLOGY (2% of exam)

Anatomic abnormalities	LF ⚠	⚠	⚠	⚠	✘
Hepatic physiology	⚠	⚠	⚠	⚠	⚠

SYMPTOMS AND CLINICAL PRESENTATION (2% of exam)

Abnormal liver chemistries	✔	✔	✔	✔	⚠
Jaundice	✔	✔	✔	✔	⚠
Portal hypertension					
Varices	✔	✔	✔	✔	⚠
Ascites and hepatic hydrothorax	✔	✔	✔	✔	⚠
Hepatorenal syndrome	LF ✔	✔	✔	✔	⚠
Portosystemic encephalopathy	✔	✔	✔	✔	⚠
Pulmonary complications	LF ⚠	⚠	⚠	⚠	⚠
Pruritus	LF ⚠	⚠	⚠	⚠	✘

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LIVER <i>continued...</i> (22% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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DISEASES AND DISORDERS (18% of exam)

Inherited disorders						
Iron overload	LF	✔	✔	✔	⚠	⚠
Wilson disease	LF	✔	✔	⚠	⚠	⚠
Alpha ₁ -antitrypsin deficiency	LF	⚠	⚠	⚠	⚠	✘
Cystic fibrosis	LF	⚠	⚠	⚠	✘	✘
Sickle cell hepatopathy	LF	⚠	⚠	✘	✘	✘
Cholestatic liver diseases						
Primary biliary cholangitis		✔	✔	✔	⚠	⚠
Primary sclerosing cholangitis	LF	✔	✔	✔	⚠	⚠
Secondary biliary cholangitis	LF	⚠	⚠	⚠	⚠	⚠
Viral hepatitis (6% of exam)						
Hepatitis A	LF	✔	✔	⚠	⚠	✘
Hepatitis B						
Acute hepatitis B	LF	✔	✔	✔	⚠	⚠
Chronic hepatitis B		✔	✔	✔	✔	⚠
Hepatitis C						
Acute hepatitis C	LF	✔	✔	✔	⚠	⚠
Chronic hepatitis C		✔	✔	✔	✔	⚠
Delta hepatitis	LF	⚠	⚠	⚠	⚠	✘
Hepatitis E	LF	⚠	⚠	✘	⚠	✘
Autoimmune hepatitis		✔	✔	✔	⚠	⚠
Vascular liver disease	LF	⚠	⚠	⚠	⚠	✘
Alcoholic liver disease		✔	✔	✔	✔	⚠
Nonalcoholic fatty liver disease		✔	✔	✔	✔	⚠
Drug-induced liver disease		✔	✔	✔	✔	⚠

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LIVER <i>continued...</i> (22% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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DISEASES AND DISORDERS *continued...* (18% of exam)

Pregnancy-related liver disease	LF	✔	✔	✔	⚠	⚠
Acute liver failure	LF	✔	✔	✔	✔	⚠
Neoplasms of the liver						
Benign		✔	✔	✔	⚠	✘
Malignant		✔	✔	✔	✔	⚠
Liver abscess	LF	✔	✔	✔	⚠	✘
Hepatic manifestations of systemic disease		⚠	⚠	⚠	⚠	⚠
Liver transplantation						
Indications and complications		⚠	⚠	⚠	⚠	⚠
Surgical considerations for patients who have liver disease		⚠	✔	✔	⚠	✘
Extrahepatic manifestations in patients who have liver disease		⚠	⚠	⚠	⚠	⚠

BILIARY TRACT (10% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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ANATOMY, DEVELOPMENT, AND PHYSIOLOGY (<2% of exam)

Anatomic abnormalities	LF	⚠	⚠	⚠	⚠	✘
Physiology of the biliary tract	LF	⚠	⚠	⚠	✘	✘

SYMPTOMS AND CLINICAL PRESENTATION (<2% of exam)

Obstructive jaundice		✔	✔	✔	✔	⚠
Right upper quadrant pain		✔	✔	✔	✔	⚠
Hemobilia	LF	⚠	⚠	⚠	✘	✘

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BILIARY TRACT <i>continued...</i> (10% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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DISEASES AND DISORDERS (8% of exam)

Gallstone disease	✔	✔	✔	✔	⚠
Gallbladder diseases	✔	✔	✔	⚠	⚠
Bile duct diseases	✔	✔	✔	⚠	⚠
Biliary infections	✔	✔	✔	⚠	⚠

Neoplasms of the biliary tract

Benign	LF	⚠	⚠	⚠	✘
Malignant		✔	✔	✔	⚠

Biliary motility and functional disorders

	LF	⚠	⚠	⚠	✘
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PANCREAS (11% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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ANATOMY, DEVELOPMENT, AND PHYSIOLOGY (<2% of exam)

Anatomic abnormalities	LF	⚠	⚠	⚠	✘
Physiology of the pancreas	LF	⚠	⚠	⚠	✘

SYMPTOMS AND CLINICAL PRESENTATION (<2% of exam)

Duct disruptions	✔	✔	✔	⚠	⚠
Malabsorption	⚠	⚠	⚠	⚠	⚠
Ascites	✔	✔	✔	⚠	⚠

DISEASES AND DISORDERS (8% of exam)

Acute pancreatitis	✔	✔	✔	✔	⚠
Chronic pancreatitis	✔	✔	✔	⚠	⚠

Neoplasms of the pancreas

Benign	✔	✔	✔	⚠	✘
Malignant	✔	✔	✔	✔	⚠

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SMALL INTESTINE (10% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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ANATOMY, DEVELOPMENT, AND PHYSIOLOGY (2% of exam)

Congenital anomalies	LF	✘	✘	✘	✘	✘
Acquired structural anomalies	LF	⚠	⚠	⚠	⚠	✘
Digestion, absorption, and malabsorption		✔	⚠	✔	⚠	⚠
Mechanical obstruction and ileus		✔	✔	✔	⚠	⚠

SYMPTOMS AND CLINICAL PRESENTATION (<2% of exam)

Diarrhea		✔	✔	✔	✔	✔
Acute abdominal pain		✔	✔	✔	✔	⚠
Chronic abdominal pain		✔	✔	✔	✔	⚠
Bleeding from small intestinal source		✔	✔	✔	⚠	⚠
Abdominal distention, bloating, and gas		✔	✔	✔	✔	⚠

DISEASES AND DISORDERS (7% of exam)

Small bowel motility and functional disorders		⚠	⚠	⚠	⚠	⚠
Small bowel infections		⚠	⚠	⚠	⚠	⚠
Small bowel injury	LF	⚠	⚠	⚠	✘	✘

Immunologic and inflammatory disorders of the gut

Eosinophilic gastroenteritis	LF	⚠	⚠	⚠	✘	✘
Crohn disease of the small bowel						
<i>Complications</i>		✔	✔	✔	✔	⚠
<i>Extra-intestinal manifestations</i>		✔	⚠	⚠	⚠	⚠
Celiac disease		✔	✔	✔	✔	⚠

Neoplasms of the small bowel

Benign	LF	⚠	⚠	⚠	⚠	✘
Malignant	LF	⚠	⚠	⚠	⚠	✘
Vascular disorders of the small bowel		⚠	⚠	⚠	⚠	✘

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COLON (20% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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ANATOMY, DEVELOPMENT, AND PHYSIOLOGY (<2% of exam)

Volvulus and intussusception	LF	✔	✔	✔	⚠	⚠
Defecation		✔	⚠	✔	⚠	⚠

SYMPTOMS AND CLINICAL PRESENTATION (<2% of exam)

Constipation		✔	✔	✔	✔	⚠
Diarrhea		✔	✔	✔	✔	⚠
Fecal incontinence		⚠	⚠	⚠	⚠	⚠
Lower gastrointestinal bleeding		✔	✔	✔	✔	⚠
Abdominal pain		✔	✔	✔	✔	⚠

DISEASES AND DISORDERS (17% of exam)

Colorectal motility and functional disorders		✔	✔	✔	⚠	⚠
Colorectal infections		✔	✔	✔	⚠	⚠
Colorectal injury	LF	⚠	⚠	⚠	⚠	✘

Inflammatory bowel disease

Microscopic colitis		✔	✔	✔	⚠	⚠
Ulcerative colitis		✔	✔	✔	✔	⚠
Crohn disease		✔	✔	✔	✔	⚠
Drug-induced inflammatory bowel disease	LF	⚠	⚠	⚠	⚠	⚠

Diverticular disease

Hemorrhage		✔	✔	✔	✔	⚠
Diverticulitis		✔	✔	✔	✔	⚠
Appendicitis	LF	✔	✔	✔	⚠	✘

Neoplasms of the colon and rectum (5% of exam)

Benign		✔	✔	✔	✔	⚠
Malignant		✔	✔	✔	✔	⚠

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COLON <i>continued...</i> (20% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
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DISEASES AND DISORDERS *continued...* (17% of exam)

Vascular disorders of the colon and rectum	✔	✔	✔	⚠	⚠
Perianal and anorectal disorders	✔	⚠	✔	⚠	⚠
Post-surgical colorectal conditions LF	⚠	⚠	⚠	⚠	⚠