

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

ABIM invites diplomates to help develop the Endocrinology, Diabetes, and Metabolism 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 endocrinologists 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 300 endocrinologists, similar to the total invited population of endocrinologists in age, gender, geographic region, and time spent in direct patient care, provided the blueprint topic ratings. ABIM used this feedback to update the blueprint for MOC assessments (beginning with the Fall 2016 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 endocrinologists 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 Endocrinology, Diabetes, and Metabolism MOC Assessments

MOC assessments are designed to evaluate whether a certified endocrinologist 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 will be 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, ten-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 exams are developed can be found 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

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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 Endocrinology, Diabetes, and Metabolism practice. Clinical information presented may include diagnostic imaging studies, continuous glucose monitoring tracings, radiographic studies, or patient photographs.

Tutorials for the traditional, ten-year MOC exam and for LKA, including examples of ABIM exam question format, can be found at abim.org/maintenance-of-certification/examinformation/endocrinology-diabetes-metabolism/examtutorial.aspx.

Content distribution

Listed below are the major medical content categories that define the domain for the Endocrinology, Diabetes, and Metabolism 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 endocrinologists. Informed by these data, the Endocrinology, Diabetes, and Metabolism Board Approval Committee and Board determined the content category targets shown below.

CONTENT CATEGORY	TARGET %
Adrenal Disorders	8%
Pituitary Disorders	8%
Lipids, Obesity, and Nutrition	13%
Female Reproduction	5%
Male Reproduction	5%
Diabetes Mellitus and Hypoglycemia	31%
Calcium and Bone Disorders	12%
Thyroid Disorders	18%
Total	100%

The Endocrinology, Diabetes, and Metabolism traditional 10-year MOC exam may cover other dimensions of medicine as applicable to the medical content categories, such as adolescent medicine.

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 Endocrinology, Diabetes, and Metabolism Board 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 mediumimportance 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 25% of questions will address low-frequency content (indicated by "LF" following the topic description).

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The content selection priorities below are applicable beginning with the Fall 2016 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 Endocrinology, Diabetes, and Metabolism traditional, 10-year MOC exam and LKA

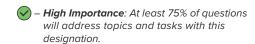


— **High Importance**: At least 75% of questions will address topics and tasks with this designation.

/ – **Medium Importance**: No more than 25% of questions will address topics and tasks with this designation.

X – **Low Importance**: <u>No</u> questions will address topics and tasks with this designation.

ADRENAL DISORDERS (8% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
GLUCOCORTICOIDS (3.5% of exam)						
Cushing syndrome		\bigcirc	⊘	⊘	⊘	⊘
Management of glucocorticoid therapy		Not Ap	plicable	⊘	⊘	⊘
Adrenal insufficiency		\bigcirc	\bigcirc	\bigcirc	\bigcirc	⊘
Glucocorticoid resistance	LF		⊘	⊘	×	⊘
MINERALOCORTICOIDS (2% of exam)						
Hyperaldosteronism		\bigcirc	⊘	⊘	⊘	⊘
Hypoaldosteronism	LF	⊘	⊘	⊘	⊘	⊘
ADRENAL ANDROGENS (<2% of exam)						
Congenital adrenal hyperplasia	LF	⊘	⊘	⊘	⊘	⊘
ADRENAL INCIDENTALOMA (<2% of e.	xam)					
Adrenal incidentaloma		\bigcirc	⊘	⊘	\bigcirc	⊘
ADRENAL MEDULLA (<2% of exam)						
Pheochromocytoma and paraganglioma	LF	\bigcirc	⊘	⊘	⊘	⊘
Neurofibromatosis type 1	LF		⊘	⊘	×	×
von Hippel Lindau syndrome	LF	⊘	⊘	⊘	×	×
Multiple endocrine neoplasia (MEN) types 2A and 2B	LF	⊘	⊘	⊘	⊘	(
Familial paraganglioma syndromes	LF	⊘	⊘	⊘	×	×
Familial paraganglioma- pheochomocytoma syndromes	LF	⊘	⊘	⊘	×	×



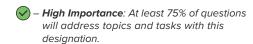
X – Low Importance: No questions will address topics and tasks with this designation.

ADRENAL DISORDERS					Risk Assessment/	
(8% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Prognosis/ Epidemiology	Pathophysiology/ Basic Science
ADRENAL CANCER (<2% of exam)	'	'			'	'
Adrenal cancer	LF	⊘	⊘	⊘		⊘
PITUITARY DISORDERS (8% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
PROLACTIN (<2% of exam)						
Hyperprolactinemia		\bigcirc	\bigcirc	\bigcirc	⊘	\bigcirc
Normoprolactinemic galactorrhea				⊘	⊘	⊘
GROWTH HORMONE (<2% of exam)						
Acromegaly	LF	\bigcirc	\bigcirc	⊘	⊘	⊘
Deficiency	LF	⊘	⊘	⊘	⊘	⊘
THYROID-STIMULATING HORMON	E (TSH) (<2% of exam)				
TSH-secreting	LF	⊘	⊘	⊘	⊘	⊘
Hyperplasia secondary to longstanding primary hypothyroidism	LF	⊘	\bigcirc		⊘	⊘
TSH deficiency	LF	⊘	⊘	⊘	⊘	⊘
GONADOTROPINS (<2% of exam)						
Gonadotroph pituitary tumors	LF	⊘	⊘	⊘	⊘	✓
Hypogonadotropic hypogonadism	1	\bigcirc	⊘	⊘	⊘	⊘
NONSECRETING PITUITARY TUMO	RS (<2%	of exam)				
Nonsecreting pituitary tumors		\bigcirc	\bigcirc	⊘	⊘	⊘
ADRENOCORTICOTROPIC HORMO	NE (ACT	TH) (<2% of exam)				
Cushing disease	LF	\bigcirc	⊘	⊘	⊘	⊘
ACTH deficiency	LF	\bigcirc	\bigcirc	⊘	⊘	⊘
HYPOPITUITARISM (<2% of exam)						
Clinical presentation		\bigcirc	\bigcirc	⊘	⊘	



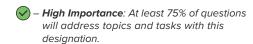
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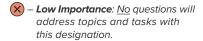
PITUITARY DISORDERS					Risk Assessment/	
continued (8% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Prognosis/ Epidemiology	Pathophysiology/ Basic Science
HYPOPITUITARISM continued (<2% of	of exam)					
Causes						
Tumors		\bigcirc	\bigcirc	⊘	⊘	⊘
Pituitary apoplexy	LF	\bigcirc	\bigcirc	\bigcirc		⊘
Sheehan syndrome	LF	\bigcirc	\bigcirc	\bigcirc		⊘
Hemochromatosis	LF				⊘	⊘
Lymphocytic hypophysitis	LF				⊘	⊘
Sarcoidosis	LF	\bigcirc		⊘	⊘	⊘
Traumatic brain injury	LF	\bigcirc		⊘	⊘	⊘
latrogenic (radiation, surgery)		\bigcirc	\bigcirc	⊘	⊘	⊘
Diagnosis		⊘	⊘	⊘	⊘	×
Treatment						
Adjustment of growth hormone according to insulin-like growth factor-1 (IGF-1) levels	LF	Not App	olicable	⊘	⊘	⊘
Monitoring of thyroid with free thyroxine (T4)		Not App	olicable	⊘	⊘	⊘
Clinical adjustment of glucocorticoi	ds	Not App	olicable	⊘	⊘	⊘
EMPTY SELLA SYNDROME (<2% of ex	ram)					
Empty sella syndrome		\bigcirc	\bigcirc	⊘	⊘	⊘
ANTIDIURETIC HORMONE (ADH) (<2%	of exam	n)				
Diabetes insipidus	LF	\bigcirc	⊘	⊘	⊘	⊘
Syndrome of inappropriate antidiuretic hormone secretion (SIADH)	C	\bigcirc	\bigcirc	⊘	⊘	⊘
CRANIOPHARYNGIOMA (<2% of exam)					
Craniopharyngioma	LF	⊘	⊘	⊘	⊘	⊘
PITUITARY INCIDENTALOMA (<2% of 6	exam)			·		
Pituitary incidentaloma		⊘	⊘	⊘	\bigcirc	⊘



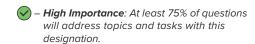
Low Importance: No questions will address topics and tasks with this designation.

LIPIDS, OBESITY, AND NUTRITION (13% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
HYPERCHOLESTEROLEMIA (<2% of exam	n)				
Primary disorders					
Familial hypercholesterolemia	⊘	⊘	⊘	⊘	⊘
Familial defective apolipoprotein B-100		⊘	⊘	⊘	×
Lipoprotein (a)		⊘	⊘	×	×
Elevated high-density lipoprotein cholesterol		⊘	⊘		×
Secondary disorders	⊘	⊘	⊘	⊘	⊘
HYPERTRIGLYCERIDEMIA (2% of exam)					
Primary disorders					
Monogenic hypertriglyceridemia	⊘	⊘	⊘	⊘	⊘
Polygenic disorders LI		⊘		×	×
Secondary disorders	⊘	⊘	⊘	⊘	⊘
Chylomicronemia syndrome LI		⊘	⊘	⊘	⊘
ELEVATED TRIGLYCERIDES AND LOW-D	ENSITY LIPOPROT	EIN CHOLESTER	ROL (3% of exam)		
Primary disorders					
Familial combined hyperlipidemia	⊘	⊘	⊘	⊘	⊘
Familial dysbetalipoproteinemia (type III)		⊘	⊘		×
Secondary disorders		⊘	⊘	⊘	⊘
HYPOLIPIDEMIA (<2% of exam)					
Primary disorders LI	×	×	\otimes	×	×
Hypobetalipoproteinemia (Low LDL-c)	*	*	*	X *	*
Secondary disorders LI		×	×	×	×



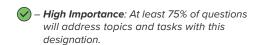


LIPIDS, OBESITY, AND NUTRITION continued (13% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
TREATMENT OF LIPID DISORDERS (5% of	exam)		·		
Diet	Not Ap	plicable	⊘	⊘	⊘
Drugs	Not Ap	plicable	⊘	⊘	⊘
Lifestyle	Not Ap	plicable	⊘	⊘	⊘
Indications for treatment	⊘	⊘	⊘	⊘	⊘
OBESITY AND NUTRITION (2.5% of exam)					
Genetic disorders	\bigcirc	\bigcirc	⊘	⊘	⊘
Secondary disorders	⊘	⊘	⊘	⊘	⊘
Comorbidities	⊘	⊘	⊘	⊘	⊘
Treatment of obesity	,				
Diet	Not Ap	plicable	⊘	⊘	⊘
Drugs	Not Ap	plicable	⊘	⊘	⊘
Lifestyle	Not Ap	plicable	⊘	⊘	⊘
Surgery and endoscopic treatments	⊘		⊘	⊘	(
Indications for treatment	\bigcirc	⊘	⊘	⊘	⊘
GENERAL NUTRITION (<2% of exam)					
Energy requirements	⊘	⊘	⊘	⊘	⊘
Vitamin deficiency	⊘	⊘	⊘	⊘	⊘
Enteral nutrition	⊘	⊘	⊘	⊘	⊘
COUNSELING (<2% of exam)	•				
Strategies for counseling	⊘	⊘	⊘	⊘	⊘



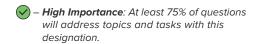
Low Importance: No questions will address topics and tasks with this designation.

FEMALE REPRODUCTION (5% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
AMENORRHEA (<2% of exam)	•			·	•	
Primary						
Androgen insensitivity syndrome	LF	⊘	⊘	⊘	×	×
Turner syndrome	LF	⊘	⊘	⊘	⊘	⊘
Congenital gonadotropin-releasing hormone (GnRH) deficiency	LF	×	×	×	(X)	×
Secondary		⊘	⊘	⊘	⊘	⊘
HYPERANDROGENISM (<2% of exam)				'		,
Polycystic ovary syndrome		⊘	⊘	⊘	⊘	⊘
Non-polycystic ovary syndrome						
Hyperthecosis	LF	⊘	⊘	⊘	×	×
Ovarian tumors	LF	⊘	⊘	⊘	×	×
Adrenal tumors		⊘	\bigcirc	⊘	⊘	⊘
Nonclassic congenital adrenal hyperplasia	LF	⊘	⊘	⊘	⊘	⊘
Pregnancy-associated	LF	⊘			×	×
Anabolic steroids	LF	⊘			×	×
PREMENSTRUAL SYNDROME AND P	REMEI	NSTRUAL DYSPI	HORIC DISORD	ER (<2% of exam)		
Premenstrual syndrome and premenstrual dysphoric disorder	LF	Ø	⊘	⊘	×	×
ENDOCRINE CAUSES OF INFERTILITY	Y (<2%	of exam)				
Anovulation		⊘	⊘	✓	×	×
Age-associated infertility (diminished ovarian reserve)	LF	⊘	⊘	×	×	×
HORMONAL CONTRACEPTION (<2%	of exan	7)				
Combined estrogen-progestin contraception		Not App	olicable	⊘	⊘	×
Progestin-only contraception	LF	Not App	olicable	⊘	⊘	×



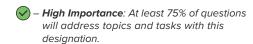
Low Importance: No questions will address topics and tasks with this designation.

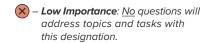
FEMALE REPRODUCTION continued				Risk Assessment/	
(5% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Prognosis/ Epidemiology	Pathophysiology/ Basic Science
PERIMENOPAUSE AND MENOPAUSE (<	2% of exam)				
Perimenopause	⊘	⊘	⊘	⊘	⊘
Menopause	⊘	⊘	⊘	⊘	⊘
Estrogen-progestin therapy	Not Ap	pplicable	⊘	⊘	⊘
SEXUAL DIFFERENTIATION (<2% of example)	n)				
Gender dysphoria	_F	⊘	⊘	⊘	×
Female-to-male transition management	F Not Applicable	⊘	⊘	⊘	×
MALE REPRODUCTION (5% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
HYPOGONADISM (3% of exam)	'				
Testosterone in hypogonadism	⊘	⊘	⊘	\bigcirc	⊘
Sex hormone binding globulin (SHBG)-dependent changes in testosterone	⊘	⊘	⊘	⊘	<u> </u>
Primary hypogonadism	⊘	⊘	⊘	⊘	⊘
Secondary hypogonadism	\bigcirc	\bigcirc	\bigcirc	⊘	⊘
Genetic disorders of androgen production and action	_F 🕜		⊘	\otimes	×
Testosterone therapy	Not Ap	pplicable	\bigcirc	\bigcirc	\bigcirc
Gonadotropins	Not Ap	pplicable		⊘	⊘
INFERTILITY (<2% of exam)					
Causes					
Cryptorchidism	_F	×	×	×	×
Klinefelter syndrome	_F	⊘	⊘	⊘	⊘
Cystic fibrosis and cystic fibrosis gene mutations	_F	\otimes	×	\otimes	×
Drug-induced infertility	_F	⊘		⊘	⊘
Obstructive azoospermia	_F ×	×	×	×	×



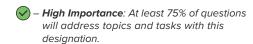
X – Low Importance: No questions will address topics and tasks with this designation.

MALE REPRODUCTION continued (5% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
INFERTILITY continued (<2% of exam	n)	Diagnosis	resurig	Care Decisions	Epideimology	Basic Science
Causes continued						
Idiopathic oligozoospermia	LF	×	×	×	×	×
Y-chromosome microdeletions	LF	\otimes	\otimes	×	×	×
Treatment						
Gonadotropins	LF	Not App	olicable	⊘	⊘	⊘
Testicular sperm extraction	LF	Not App	olicable	×	×	×
Intracytoplasmic sperm injection	LF	Not Applicable		×	×	×
GYNECOMASTIA (<2% of exam)						
Causes						
Drug-induced gynecomastia		⊘	⊘	✓	⊘	✓
Testicular tumors (Sertoli and Leydig cell tumors)	LF	Ø	⊘	⊘	×	\otimes
Extratesticular tumors	LF	⊘	×	×	×	×
Androgen deprivation therapy for prostate cancer	LF	Ø	⊘	⊘	⊘	\otimes
Hyperthyroidism	LF	\bigcirc	\bigcirc	⊘	⊘	⊘
Pubertal gynecomastia	LF	⊘	⊘	⊘	⊘	⊘
Idiopathic and other rare causes of gynecomastia		⊘	⊘	⊘	Ø	⊘
Treatment						
Tamoxifen	LF	Not App	olicable	⊘	⊘	×
Aromatase inhibitors	LF	Not App	olicable	⊘	⊘	×
Mammoplasty and mastectomy	LF	Not App	olicable	×	×	×





MALE REPRODUCTION continued (5% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science	
ERECTILE DYSFUNCTION (<2% of exa	m)	Diagnosis	lesting	Oale Decisions	Lpiderillology	Basic Golerice	
Causes							
Smoking		⊘	⊘	⊘	⊘	⊘	
Diabetes mellitus		⊘	\bigcirc	⊘	\bigcirc	⊘	
Hypertension		⊘	\bigcirc	⊘	\bigcirc	⊘	
Hyperlipidemia		⊘	\bigcirc	⊘	⊘	⊘	
Peyronie disease	LF	×	×	×	×	×	
Pelvic and prostate surgery	LF	×	×	×	×	×	
Obesity		⊘	\bigcirc	⊘	⊘	⊘	
Diagnostic tests	,						
Diagnostic tests	LF	Not Applicable	×		Not Applicable		
Treatment							
Phosphodiesterase-5 and non-spec phosphodiesterase inhibitors	cific	Not App	olicable	⊘	⊘	⊘	
Prostaglandin E1, intraurethral and intracavernosal	LF	Not App	olicable	⊘	×	×	
Alpha-adrenergic blockers	LF	Not App	olicable		×	×	
Penis pump (penile vacuum device)	LF	Not App	olicable	×	×	×	
Penile implant	LF	Not App	olicable	×	×	×	
TESTOSTERONE IN AGING MEN (<2%	of ex	ram)					
Testosterone in aging men		⊘	\bigcirc	⊘	\bigcirc	✓	
ABUSE OF ANDROGENS AND ANABO	LIC S	STEROIDS (<2% of	exam)				
Abuse of androgens and anabolic steroids		⊘	⊘	⊘	⊘	⊘	



Low Importance: No questions will address topics and tasks with this designation.

MALE REPRODUCTION continued			Treatment/	Risk Assessment/ Prognosis/	Pathophysiology/
(5% of exam)	Diagnosis	Testing	Care Decisions	Epidemiology	Basic Science
SEXUAL DIFFERENTIATION (<2% of exam)					
Gender dysphoria LF	⊘	⊘	⊘	⊘	×
Male-to-female transition management LF	Not Applicable	⊘	⊘		\otimes
EJACULATORY DYSFUNCTIONS (<2% of e	exam)				
Premature ejaculation LF	×	×	×	×	×
DIABETES MELLITUS AND HYPOGLYCEMIA (31% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
PREDIABETES (2% of exam)					
Impaired fasting glucose	⊘	⊘	⊘	⊘	⊘
Impaired glucose tolerance	⊘	\bigcirc	\bigcirc	\bigcirc	⊘
Screening	⊘	\bigcirc	Not Applicable	\bigcirc	⊘
Diabetes prevention		✓		⊘	⊘
MONITORING GLYCEMIC CONTROL (2% of	of exam)				
Hemoglobin A1c	⊘	\bigcirc	⊘	⊘	⊘
Fructosamine and 1,5-anhydroglucitol	⊘		⊘		
Conventional glucose monitoring	⊘	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Ketone testing	⊘		⊘	⊘	⊘
Continuous glucose monitoring (CGM)	⊘	\bigcirc	\bigcirc	⊘	⊘
TYPE 1 DIABETES MELLITUS (4% of exam))				
Ketoacidosis	⊘	\bigcirc	⊘	⊘	⊘
Recent-onset type 1 diabetes	⊘	\bigcirc	⊘	⊘	⊘
Latent autoimmune diabetes of the adult (LADA)	⊘	\bigcirc	⊘	⊘	(
Hyperglycemia in type 1 diabetes	\bigcirc	\bigcirc	\bigcirc	\bigcirc	⊘



Low Importance: No questions will address topics and tasks with this designation.

DIABETES MELLITUS AND HYPOGLYCEMIA continued (31% of exam) TYPE 1 DIABETES MELLITUS continued Hypoglycemia due to insulin	d (49	Diagnosis % of exam)	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
TYPE 1 DIABETES MELLITUS continued Hypoglycemia due to insulin	d (49		roomig		_pidoi.iioiogy	
Hypoglycemia due to insulin	a (49	% or exam)				
management			⊘	⊘	⊘	⊘
Hypoglycemia unawareness		\bigcirc	\bigcirc	\bigcirc	\bigcirc	
Pathogenesis of type 1 diabetes		\bigcirc	\bigcirc	\bigcirc	\bigcirc	⊘
TYPE 2 DIABETES MELLITUS (5% of ex	(am)					
Hyperosmolar nonketotic state		\bigcirc	\bigcirc	⊘	⊘	⊘
Hyperglycemia in type 2 diabetes		\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Hypoglycemia due to oral agents and insulin management		\bigcirc	⊘	⊘	⊘	⊘
Pathogenesis of type 2 diabetes		⊘	⊘	⊘	⊘	⊘
ADDITIONAL TYPES OF DIABETES (<2	% of e	exam)				
Monogenic diabetes	LF	⊘	⊘	⊘	⊘	⊘
Ketosis-prone diabetes (KPD)	LF			⊘	⊘	⊘
New-onset diabetes after transplant (NODAT) [posttransplant diabetes mellitus – PTDM]	LF	⊘	⊘	Ø	⊘	⊘
Pancreatic diabetes	LF	⊘	⊘	⊘	⊘	⊘
Cystic fibrosis-related diabetes	LF	⊘	⊘	⊘	⊘	⊘
Drug-induced diabetes		⊘	⊘	⊘	⊘	⊘
RECOGNITION AND MANAGEMENT OF	F ASS	OCIATED COND	ITIONS (2% of e	exam)		
Hypertension		\bigcirc	\bigcirc	⊘	\bigcirc	⊘
Dyslipidemia		⊘	\bigcirc	⊘	⊘	⊘
Obesity		⊘	\bigcirc	⊘	⊘	⊘
Sleep apnea		\bigcirc	⊘	⊘	⊘	⊘
Fatty liver		\bigcirc	\bigcirc	⊘	⊘	⊘
Thyroid disease		\bigcirc	\bigcirc	⊘	⊘	⊘
Celiac disease	LF	⊘	⊘	⊘	⊘	⊘



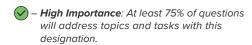
Low Importance: No questions will address topics and tasks with this designation.

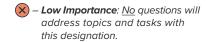
DIABETES MELLITUS AND HYPOGLYCEMIA continued (31% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
RECOGNITION AND MANAGEMENT OF ASS	SOCIATED COND	ITIONS continue	ed (2% of exam)		
Polycystic ovary syndrome	\bigcirc	\bigcirc	\bigcirc	\bigcirc	⊘
Eating disorders LF	⊘	⊘	⊘	⊘	⊘
PREGNANCY (<2% of exam)					
Gestational diabetes	\bigcirc	\bigcirc	⊘	⊘	⊘
Pre-gestational diabetes	\bigcirc	\bigcirc	⊘	⊘	⊘
DIABETES MELLITUS COMPLICATIONS (5%	of exam)				
Microvascular					
Retinopathy	\bigcirc	\bigcirc	⊘	⊘	⊘
Nephropathy	\bigcirc	\bigcirc	⊘	⊘	⊘
Neuropathy	\bigcirc	\bigcirc	⊘	⊘	⊘
Macular edema	Ø	⊘	Ø	⊘	⊘
Mononeuropathies LF	Ø	⊘	⊘	⊘	×
Macrovascular					
Coronary artery disease	\bigcirc	\bigcirc	⊘	⊘	⊘
Heart failure	⊘	⊘	⊘	⊘	⊘
Peripheral vascular disease	\bigcirc	\bigcirc	⊘	⊘	⊘
Diabetic foot	⊘	⊘	⊘	⊘	⊘
Skin disorders					
Lipohypertrophy LF	Ø	⊘	Ø	⊘	⊘
Lipoatrophy LF	⊘	⊘	⊘	⊘	⊘
Necrobiosis lipoidica LF	⊘	×	⊘	×	×
Acanthosis nigricans	\bigcirc	⊘	⊘	⊘	⊘
Neuropsychiatric LF	⊘	⊘	⊘	⊘	×



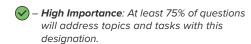
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DIABETES MELLITUS AND HYPOGLYCEMIA continued (31% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
PANCREAS TRANSPLANTATION (<2%	of exa	am)		<u>'</u>	1	
Pancreas transplantation	LF	⊘	⊘	⊘	⊘	⊘
HYPOGLYCEMIA INDEPENDENT OF D	IABE	TES (2% of exam))			
Insulinoma	LF	\bigcirc	\bigcirc	\bigcirc	⊘	⊘
Noninsulinoma	LF	\bigcirc	⊘	⊘	⊘	⊘
INPATIENT DIABETES MANAGEMENT	(<2%	of exam)				
Intensive care unit		\bigcirc	⊘	⊘	⊘	⊘
Non-intensive care unit		\bigcirc	⊘	⊘	⊘	⊘
CALCIUM AND BONE DISORDERS (12% of exam)	5	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
HYPERCALCEMIA (3% of exam)						
Parathyroid hormone-mediated						
Primary hyperparathyroidism		\bigcirc	⊘	⊘	\bigcirc	⊘
Familial hypocalciuric hypercalcemia	LF	\bigcirc	⊘	⊘	⊘	⊘
Lithium-induced	LF	⊘		⊘	⊘	⊘
Non-parathyroid hormone-mediated						
Hypercalcemia of malignancy		\bigcirc	\bigcirc	\bigcirc	⊘	⊘
Milk-alkali syndrome	LF	⊘	⊘	⊘	⊘	⊘
Sarcoidosis, tuberculosis, and other granulomatous diseases	LF		⊘		⊘	⊘
Vitamin D intoxication	LF		⊘		⊘	⊘
Post-rhabdomyolysis	LF		⊘		×	×
Adynamic bone disease	LF	⊘	⊘	⊘	⊘	⊘
Myeloma	LF	⊘	⊘	⊘	⊘	⊘
Acute adrenal insufficiency	LF	\bigcirc	⊘	⊘	⊘	⊘
Vitamin A	LF		⊘		×	×



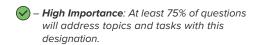


CALCIUM AND BONE DISORDERS continued	6			Treetment/	Risk Assessment/	Both on by sielemy/
(12% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Prognosis/ Epidemiology	Pathophysiology/ Basic Science
HYPOCALCEMIA (3% of exam)						
Hypoparathyroidism		\bigcirc	\bigcirc	⊘	⊘	⊘
Parathyroid hormone (PTH) resistance	LF	⊘	⊘	⊘	×	⊘
Hypomagnesemia	LF		⊘	⊘	⊘	⊘
Hyperphosphatemia	LF		⊘			⊘
Celiac disease	LF				⊘	⊘
Hypocalcemia (general)		\bigcirc	\bigcirc	\bigcirc		⊘
OSTEOPOROSIS (4% of exam)						
In female		\bigcirc	\bigcirc	⊘	⊘	⊘
In male		\bigcirc	⊘	⊘	⊘	⊘
Post-transplant and glucocorticoid-induced		\bigcirc	⊘	⊘	⊘	⊘
Renal, hepatic, and gastrointestinal disease related		⊘	⊘	⊘	⊘	⊘
PAGET DISEASE OF BONE (<2% of exa	am)					
Paget disease of bone	LF	\bigcirc	⊘	⊘	⊘	⊘
HYPOVITAMINOSIS D (<2% of exam)						
Dietary deficiency		\bigcirc	⊘	⊘	⊘	⊘
Limited sun exposure		⊘	⊘	⊘	⊘	⊘
Malabsorption		\bigcirc	⊘	⊘	⊘	⊘
Liver failure	LF	⊘	⊘	⊘	×	×
Renal insufficiency		⊘	⊘	⊘	⊘	⊘
Vitamin D dependent rickets type I and II	LF	⊘	⊘	⊘	×	⊘
Vitamin D resistant rickets	LF		⊘	⊘	×	⊘
Drug-induced	LF		⊘	⊘	×	⊘
Bone disease		\bigcirc	⊘	⊘	⊘	⊘
Nonskeletal disorders	LF		⊘	⊘	×	×



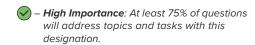
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CALCIUM AND BONE DISORDERS continued (12% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
OSTEOMALACIA AND RICKETS (<2% of	of exar	n)				
Chronic hypophosphatemia	LF	⊘	⊘	✓	×	⊘
Inhibitors of mineralization	LF	⊘	⊘	⊘	×	×
RENAL OSTEODYSTROPHY (<2% of ex	am)					
Renal osteodystrophy		⊘	⊘	⊘	⊘	⊘
NEPHROLITHIASIS (<2% of exam)						
Nephrolithiasis		⊘	⊘	⊘	⊘	⊘
OSTEOGENESIS IMPERFECTA AND BO	ONE D	YSPLASIAS (<2%	% of exam)			
Osteogenesis imperfecta and bone dysplasias	LF	⊘		⊘	×	×
FIBROUS DYSPLASIA AND OTHER DY	SPLA	STIC SYNDROM	ES (<2% of exan	n)		
Fibrous dysplasia and other dysplastic syndromes	LF	×	×	×	\otimes	×
CALCIPHYLAXIS (<2% of exam)						
Calciphylaxis	LF	⊘	⊘	⊘	×	×
HYPOPHOSPHATEMIA (<2% of exam)						
Renal losses	LF	⊘	⊘	⊘	×	×
Gastrointestinal malabsorption	LF	⊘	⊘	⊘	×	×
Internal redistribution	LF	×	×	×	×	×
RARE BONE DISEASES (<2% of exam)						
Hypophosphatasia	LF	⊘ *	/ *	⊘ *	*	*
Fibrodysplasia ossificans progressiva	LF	⊘ *	⊘ *	X *	*	*
Osteopetrosis	LF	*	/ *	/ *	*	*



Low Importance: No questions will address topics and tasks with this designation.

THYROID DISORDERS (18% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
HYPERTHYROIDISM (3.5% of exam)		·				•
Graves disease		\bigcirc	\bigcirc	⊘	\bigcirc	\bigcirc
Toxic adenoma and multinodular goiter		⊘	⊘	⊘	⊘	⊘
Inappropriate thyroid-stimulating ho	ormone	syndromes				
TSH-secreting tumor	LF	⊘	⊘	⊘	⊘	⊘
Resistance to thyroid hormone and thyroid hormone action	LF	⊘	⊘	⊘	⊘	⊘
Artifactual TSH "derangements"	LF	\bigcirc	\bigcirc	\bigcirc	⊘	⊘
Thyrotoxicosis with low radioactive	iodine	uptake				
Thyroiditis		⊘	⊘	⊘	⊘	⊘
Factitious, accidental, and iatrogenic thyrotoxicosis	LF	⊘	\bigcirc	⊘	⊘	⊘
lodine-induced	LF	⊘	⊘	⊘	⊘	⊘
Struma ovarii	LF	⊘	⊘	⊘	×	×
Complicated thyrotoxicosis	LF	⊘	⊘	⊘	⊘	⊘
Subclinical hyperthyroidism		⊘	\bigcirc	⊘	⊘	⊘
HYPOTHYROIDISM (2.5% of exam)						
Primary		\bigcirc	\bigcirc	⊘	\bigcirc	⊘
Secondary		⊘	⊘	⊘	⊘	⊘
Subclinical hypothyroidism		\bigcirc	\bigcirc	⊘	⊘	⊘
Complicated hypothyroidism	LF	\bigcirc	\bigcirc	⊘	⊘	⊘
TSH resistance	LF	×	×	×	×	×
Therapy		Not App	licable	⊘	\bigcirc	⊘
NONTOXIC SOLITARY NODULES AN	D MULT	INODULAR GOIT	TER (2.5% of ex	am)		
Fine-needle aspiration/cytology and genetic test interpretation		\bigcirc	\bigcirc	Not Applicable	⊘	⊘
Roles of ultrasound and radionuclide scanning		⊘	\bigcirc	Not Applicable	⊘	\bigcirc



 Low Importance: No questions will address topics and tasks with this designation.

THYROID DISORDERS continued (18% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
NONTOXIC SOLITARY NODULES ANI	MULT	INODULAR GO	TER continued	. (2.5% of exam)		
Treatment						
Surgery		Not Ap	plicable	⊘	\bigcirc	⊘
Radioactive iodine		Not Ap	plicable	⊘	\bigcirc	
Minimally invasive and noninvasive treatments	LF	Not Applicable				×
THYROID CANCER (3.5% of exam)						
Well-differentiated epithelial cancers		\bigcirc	⊘	⊘	⊘	⊘
Hürthle cell cancer	LF	\bigcirc	\bigcirc	\bigcirc		
Anaplastic cancer	LF	\bigcirc	⊘	⊘	⊘	×
Lymphoma	LF		⊘	⊘	⊘	×
Medullary cancer	LF	\bigcirc	⊘	⊘	⊘	⊘
THYROID TEST ABNORMALITIES WI	ГНОЦТ	THYROID DISE	ASE (2.5% of exa	am)		
Euthyroid hypothyroxinemia		\bigcirc	⊘	⊘	⊘	/
Euthyroid hyperthyroxinemia	LF	⊘	⊘	⊘	⊘	⊘
Effect of drugs on thyroid function tests		\bigcirc	⊘	⊘	⊘	⊘
Euthyroid sick syndrome		\bigcirc	\bigcirc	\bigcirc		
Thyroid hormone antibodies		\bigcirc	\bigcirc	⊘	⊘	⊘
Antibody interferences with TSH measurement	LF	⊘	⊘			⊘
THYROID DISEASES IN PREGNANCY	′ (<2% c	of exam)				
Hypothyroidism		\bigcirc	⊘	⊘	⊘	\bigcirc
Hyperthyroidism		\bigcirc	⊘	⊘	⊘	⊘
Thyroid nodule and cancer		\bigcirc	⊘	⊘	\bigcirc	/