

### **INFECTIOUS DISEASE** Blueprint

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

# ABIM invites diplomates to help develop the Infectious Disease 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 infectious disease specialists 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 270 infectious disease specialists, similar to the total invited population of infectious disease specialists 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 infectious disease specialists 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 assessment assembly process (described further under *Detailed content outline* below).

#### Purpose of the Infectious Disease MOC Assessments

MOC assessments are designed to evaluate whether a certified infectious disease specialist 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.

ABIM's LKA for MOC, launching in 2023, 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.

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 infectious disease practice. Clinical information presented may include patient photographs, radiographs, electrocardiograms, and other media to illustrate relevant patient findings.

Exam tutorials, including examples of question format, can be found at abim.org/maintenance-of-certification/examinformation/infectious-disease/exam-tutorial.aspx.

#### **Content distribution**

Listed below are the major medical content categories that define the domain for the Infectious Disease 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 infectious disease specialists. Informed by these data, the Infectious Disease Approval Committee and Board have determined the medical content category targets are appropriate, as shown below.

CONTENT CATEGORY	BLUEPRINT %
Bacterial Disease	27%
Human Immunodeficiency Virus (HIV)	15%
Antimicrobial Therapy	9%
Viral Diseases	<b>7</b> %
Travel and Tropical Medicine	5%
Fungi	5%
Immunocompromised Host (Non-HIV Infection)	5%
Vaccinations	4%
Infection Prevention and Control	5%
Internal Medicine and Non-Infectious Syndromes	18%
Total	100%

The inherent complexity of the field of infectious disease leads to considerable overlap in content categories, and each question can only be assigned to a single blueprint topic. Thus, a question addressing the cause of fever and rash likely would be classified under the specific organism, while a similar question addressing the treatment of that same illness would be classified under the antimicrobial agent used.

## 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 Infectious Disease 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 70% of questions will address high-importance content (indicated in green)
- No more than 30% 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 15% of questions will address low-frequency content (indicated by "LF" following the topic description).

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

### Detailed content outline for the Infectious Disease traditional, 10-year MOC exam and LKA

- High Importance: At least 70% of questions will address topics and tasks with this designation.

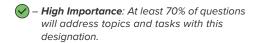
Salmonella

— Medium Importance: No more than 30% 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 15% of questions will address topics with this designation, regardless of task or importance.

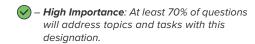
BACTERIAL DISEASES (27% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science		
GRAM-POSITIVE COCCI								
Staphylococcus aureus		<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>		
Streptococcus		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>		
Enterococcus		$\bigcirc$	$\bigcirc$		$\bigcirc$	<b>⊘</b>		
GRAM-POSITIVE RODS								
Listeria	LF	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>		
Corynebacterium		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>×</b>		
Bacillus		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×		
Erysipelothrix	LF	<b>⊘</b>	×	×	<b>⊘</b>	×		
GRAM-NEGATIVE COCCI AND C	OCCOBACI	LLI						
Neisseria		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>		
Haemophilus		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>		
GRAM-NEGATIVE RODS								
Enterobacteriaceae		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>		
Pseudomonas		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>		
Stenotrophomonas		<b>⊘</b>	<b>/</b>	<b>⊘</b>	<b>⊘</b>	×		
Burkholderia	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×		
Acinetobacter		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>		
Aeromonas	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×		
Colmonollo								



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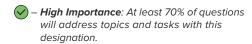
BACTERIAL DISEASES continued				Treatment/	Risk Assessment/ Prognosis/	Pathophysiology/
(27% of exam)		Diagnosis	Testing	Care Decisions	Epidemiology	Basic Science
GRAM-NEGATIVE RODS continued						
Shigella	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Campylobacter	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Vibrio	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Pasteurella	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Yersinia	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Legionella		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Capnocytophaga	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Bartonella	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Brucella	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Bordetella	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Streptobacillus	LF	<b>⊘</b>	<b>×</b>	×	×	×
Francisella	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Helicobacter		<b>⊘</b>	<b>(</b>	<b>⊘</b>	<b>⊘</b>	×
ANAEROBES						
Gram-positive cocci		<b>(</b>	<b>/</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Gram-positive rods		<b>⊘</b>	<b>/</b>	<b>⊘</b>	<b>⊘</b>	×
Gram-negative rods		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
ACTINOMYCETES						
Actinomyces	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Nocardia	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
SPIROCHETES				•	1	
Treponema		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Borrelia		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Leptospira	LF	<b>⊘</b>	<b>/</b>	<b>⊘</b>	<b>⊘</b>	×

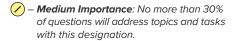




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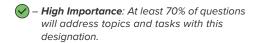
BACTERIAL DISEASES continued (27% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
MYCOPLASMA						
M. pneumoniae		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
M. genitalium	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
TROPHERYMA WHIPPLEI						
Tropheryma whipplei	LF		<b>⊘</b>	×	<b>✓</b>	×
CHLAMYDIA						
C. trachomatis		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
C. pneumoniae	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
C. psittaci	LF	<b>⊘</b>	×	<b>⊘</b>	<b>⊘</b>	×
RICKETTSIA						
R. conorii	LF	×	×	×	×	×
R. akari	LF	<b>⊘</b>	$\otimes$	×	<b>⊘</b>	×
R. rickettsii	LF	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	
R. prowazekii	LF		<b>⊘</b>		<b>⊘</b>	×
R. typhi	LF		×	<b>⊘</b>	<b>⊘</b>	×
Orientia tsutsugamushi	LF	×	×	×	×	×
R. parkeri	LF		×	×	×	×
R. africae	LF		×	<b>⊘</b>	×	×
Coxiella burnetii	LF		<b>⊘</b>	<b>⊘</b>	<b>✓</b>	×
EHRLICHIA						
E. chaffeensis	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
E. ewingii	LF	×	×	<b>×</b>	×	×
Anaplasma phagocytophilum		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>





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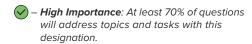
BACTERIAL DISEASES					
continued (27% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
MYCOBACTERIUM					
M. tuberculosis	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
M. bovis	<b>⊘</b>	<u>/</u>	<b>⊘</b>	<b>⊘</b>	×
M. leprae LF	<b>⊘</b>	<b>⊘</b>	×	<b>⊘</b>	×
Nontuberculous mycobacteria	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
SYNDROMES CHARACTERIZED BY BACTE	RIAL PATHOGEN	S			
Head and neck	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Respiratory	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Gastrointestinal	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Ophthalmologic LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Genitourinary	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Dermatologic (including skin and soft-tissue infections)	<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Musculoskeletal	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Neurologic	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Cardiovascular	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION (15% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
EPIDEMIOLOGY			_		
Transmission	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Testing and counseling	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Initial laboratory evaluation	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$
Prevention	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
PATHOGENESIS					
Virology	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Immunopathogenesis	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Acute HIV infection	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>

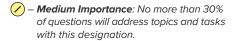


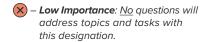
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HUMAN IMMUNODEFICIENCY VIRU (HIV) INFECTION continued (15% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
LABORATORY TESTING		•			
Diagnostic evaluation	<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Baseline evaluation	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
HIV TREATMENT REGIMENS					
Antiretroviral therapy drug classes	<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Adverse effects of treatment	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<	<b>⊘</b>
Drug-drug interactions	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
When to start therapy	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Selection of optimal initial regimen	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Laboratory monitoring	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Treatment-experienced patients	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	$\bigcirc$
OPPORTUNISTIC INFECTIONS (OIs)					
Prevention	Not Ap	plicable	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
When to start HIV therapy in the context of active OIs	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Immune reconstitution inflammatory syndrome	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>		<b>⊘</b>
Bacteria	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Mycobacteria	$\bigcirc$	$\bigcirc$	<b>⊘</b>	$\bigcirc$	<b>⊘</b>
Fungi	$\bigcirc$	$\bigcirc$	<b>⊘</b>	$\bigcirc$	<b>⊘</b>
Parasites	LF 🕝	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Viruses	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
MALIGNANCIES					
Kaposi sarcoma	LF 🕏	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Lymphoma	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Cervical cancer	LF 🛇	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Anal cancer	LF 🔗	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×



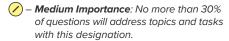




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HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION continued (15% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
OTHER COMPLICATIONS OF HIV					
Hematologic	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Endocrine	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Gastrointestinal	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Renal (HIV-associated nephropathy [HIVAN])	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Cardiac (HIV cardiomyopathy)	<b>✓</b>		<b>✓</b>	<b>⊘</b>	×
Pulmonary	$\bigcirc$	$\bigcirc$	<b>✓</b>	<b>⊘</b>	<b>⊘</b>
Head, eye, ear, nose, and throat LF	<b>⊘</b>		<b>⊘</b>	<b>⊘</b>	×
Musculoskeletal LF	<b>⊘</b>		<b>⊘</b>	<b>⊘</b>	×
Neurologic				<b>⊘</b>	<b>⊘</b>
Psychiatric	$\bigcirc$			<b>⊘</b>	×
Dermatologic	<b>⊘</b>			<b>⊘</b>	×
RELATED ISSUES					
Substance use disorder	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Organ transplantation LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Primary care	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Miscellaneous non-HIV-related complications that may occur more commonly in those who have HIV	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	*
Pregnancy LF	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
ANTIMICROBIAL THERAPY (9% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
ANTIBACTERIALS					
Aminoglycosides	<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Antifolates	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Carbapenems	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Cephalosporins	<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>

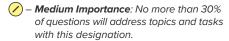




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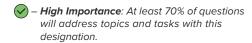
ANTIMICROBIAL THERAPY continued	Pii-	Taskina	Treatment/	Risk Assessment/ Prognosis/	Pathophysiology/
(9% of exam)	Diagnosis	Testing	Care Decisions	Epidemiology	Basic Science
ANTIBACTERIALS continued					
Fluoroquinolones	$\bigcirc$	$\bigcirc$	<b>⊘</b>	$\bigcirc$	<b>Ø</b>
Glycopeptides, glycolipopeptides, and lipopeptides	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Lincosamides					
Macrolides	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Monobactams	<b>⊘</b>	<u>/</u>	<b>⊘</b>	<b>⊘</b>	×
Nitroimidazoles	<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Oxazolidinones	$\bigcirc$	$\bigcirc$	<b>⊘</b>	$\bigcirc$	<b>⊘</b>
Penicillins	$\bigcirc$	$\bigcirc$		$\bigcirc$	
Polymyxins		$\bigcirc$		$\bigcirc$	
Rifamycins		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>
Tetracyclines	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Non-sulfonamide (sulfa drug), non-trimethoprim urinary tract agents	<b>⊘</b>			<b>⊘</b>	×
Pleuromutilins (e.g., lefamulin)	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Topical antibacterials LF	×	×	<b>⊘</b>	<b>⊘</b>	×
Other routes of administration	<b>⊘</b>	<u>/</u>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
ANTIVIRALS (NON-HIV)					
For influenza	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
For herpes simplex	<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
For cytomegalovirus	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
For hepatitis C and respiratory syncytial virus (RSV)	<b>⊘</b>	<b>⊘</b>	⊗	<b>⊘</b>	<b>Ø</b>
For hepatitis B		$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Interferon alfa 2a and alfa 2b	×	×	×	×	×
For hepatitis C	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>

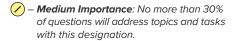




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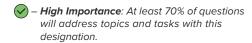
ANTIMICROBIAL THERAPY continued (9% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
PHARMACOLOGY AND OUTPATIENT PA	RENTERAL ANTIMIC	CROBIAL THER	APY (OPAT)		
Susceptibility testing	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Drug resistance	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
ADME (absorption, distribution, metabolism, and excretion)	<b>⊘</b>	<b>Ø</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Dosing	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Drug interactions	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Toxicity	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Outpatient parenteral antimicrobial therapy	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
VIRAL DISEASES (7% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
DNA VIRUSES					
Herpesviruses	<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Adenovirus L	.F	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Papillomavirus	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Polyomavirus L	.F	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Poxviruses L	.F	×	×	<b>⊘</b>	×
Hepadnaviridae	<b>/</b>	✓	<b>⊘</b>	<b>⊘</b>	×
Parvovirus L	F /				×

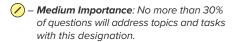


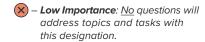


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VIRAL DISEASES continued					Risk Assessment/	
(7% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Prognosis/ Epidemiology	Pathophysiology/ Basic Science
RNA VIRUSES	'		'	'		'
Reoviridae (e.g., rotavirus)	LF	<b>/</b>	×	×	×	×
Togaviridae (e.g., chikungunya)	LF	<b>⊘</b>	×	×	×	×
Flaviviridae		$\bigcirc$	$\bigcirc$		<b>⊘</b>	<b>⊘</b>
Coronaviridae	LF	<b>⊘</b>	×	×	×	×
Paramyxoviridae	LF	<b>⊘</b>	×	×	×	×
Rhabdoviridae	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Filoviridae (hemorrhagic fever viruses)	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>(</b>
Orthomyxoviridae (influenza)		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Bunyaviridae	LF	×	×	×	×	×
Arenaviridae (e.g., lymphocytic choriomeningitis virus)	LF	<b>⊘</b>	×	×	$\otimes$	×
Non-HIV Retroviridae	LF		<b>⊘</b>	×	<b>⊘</b>	×
Picornaviridae	LF		×	×	×	×
Calciviridae	LF		×	×		×
Hepatitis E	LF		<b>⊘</b>		<b>⊘</b>	×
PRIONS						
Prions	LF	<b>⊘</b>	<b>⊘</b>	×	<b>Ø</b>	×
TRAVEL AND TROPICAL MEDIC (5% of exam)	INE	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
PROTOZOAL INTESTINAL INFECTION	ONS					
Balantidium coli	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Blastocystis hominis	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Cryptosporidium parvum and C. hominus	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	
Cyclospora cayetanensis	LF		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Cystoisospora (Isospora) belli	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×

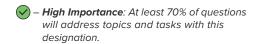


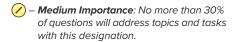


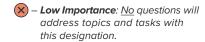


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TRAVEL AND TROPICAL MEDICIN continued	IE			Treatment/	Risk Assessment/ Prognosis/	Pathophysiology/
(5% of exam)		Diagnosis	Testing	Care Decisions	Epidemiology	Basic Science
PROTOZOAL INTESTINAL INFECTION	I <b>S</b> con	tinued				
Dientamoeba fragilis	LF	<b>⊘</b>	×	×	×	×
Entamoeba histolytica (amebiasis)		<b>⊘</b>		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Giardiasis		<b>⊘</b>		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Microsporidiosis	LF	<b>⊘</b>		<b>⊘</b>	<b>⊘</b>	×
PROTOZOAL EXTRAINTESTINAL INFE	СТІО	NS				
Amebic meningoencephalitis	LF	$\bigcirc$	$\bigcirc$	<b>⊘</b>	$\bigcirc$	<b>⊘</b>
Babesiosis	LF	<b>⊘</b>	<u>/</u>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Leishmaniasis	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Malaria		<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Toxoplasmosis		<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Trichomonas vaginalis		<b>⊘</b>		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Trypanosomiasis (general)	LF	<b>⊘</b>		<b>⊘</b>	<b>⊘</b>	×
NEMATODE INTESTINAL INFECTIONS	6					
Anisakiasis	LF	<b>⊘</b>	×	×	<b>⊘</b>	×
Ascaris lumbricoides (ascariasis)	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Capillaria philippinesis (capillariasis)	LF	×	×	×	×	×
Enterobius vermicularis (pinworm)	LF	<b>⊘</b>	<u>/</u>	<b>⊘</b>	<b>⊘</b>	×
Hookworm	LF	<b>⊘</b>		<b>⊘</b>	<b>⊘</b>	×
Strongyloides stercoralis		<b>⊘</b>		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Trichuris trichiura (whipworm)	LF	<b>⊘</b>	<b>⊘</b>	<b>Ø</b>	<b>⊘</b>	×
NEMATODE EXTRAINTESTINAL INFE	CTION	IS				
Angiostrongylus cantonensis	LF	<b>⊘</b>	<b>/</b>	<b>⊘</b>	<b>⊘</b>	×
Bayliascariasis (raccoon roundworm)	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Cutaneous larva migrans (dog and cat hookworm)	LF	<b>⊘</b>	<b>⊘</b>			$\otimes$



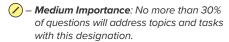




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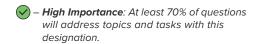
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TRAVEL AND TROPICAL MEDICIN continued (5% of exam)	IE	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
NEMATODE EXTRAINTESTINAL INFE	CTION	IS continued				
Dracunculus medinensis (Guinea worm)	LF	×	×	×	$\otimes$	×
Filariasis	LF		<b>⊘</b>		<b>⊘</b>	×
Gnathostoma spinigerum	LF		×	×	×	×
Toxocariasis	LF		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Trichinella spiralis (trichinellosis)	LF		<b>⊘</b>		<b>⊘</b>	×
CESTODE INFECTIONS						
Diphyllobothrium latum (fish tapeworm)	LF	<b>⊘</b>	<b>Ø</b>	<b>⊘</b>	<b>⊘</b>	×
Hymenolepis (dwarf tapeworm)	LF	$\bigotimes$	×	×	×	×
Echinococcus granulosus (hydatid disease)	LF		<b>⊘</b>	<b>⊘</b>	<b>Ø</b>	<b>⊘</b>
Echinococcus multilocularis (alveolar disease)	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Taenia saginata (beef tapeworm)	LF	<b>⊘</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	×
Taenia solium (pork tapeworm; intestinal)	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>		×
TREMATODE INFECTIONS (FLUKES)						
Clonorchis sinensis (Chinese liver fluke)	LF	<b>⊘</b>	×	×	<b>⊘</b>	×
Fasciolopsis buski (intestinal fluke)	LF	×	×	×	×	×
Fasciola hepatica and F. gigantica (sheep liver fluke)	LF	<b>⊘</b>	×	×	<b>⊘</b>	×
Paragonimus westermani (lung fluke)	LF	<b>⊘</b>	×	×	<b>⊘</b>	×
Schistosomiasis (general)	LF	<b>⊘</b>	<b>✓</b>	<b>✓</b>	<b>⊘</b>	<b>✓</b>
ECTOPARASITIC INFECTIONS						
Myiasis (human botfly or tumbu fly)	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Pediculus humanus (body, head, and pubic lice)	LF	<b>⊘</b>	<b>Ø</b>	<b>⊘</b>	<b>⊘</b>	<b>×</b>
Tick bites – identification and tick paralysis		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>

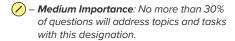




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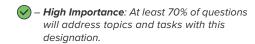
TRAVEL AND TROPICAL MEDICINE continued (5% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
ECTOPARASITIC INFECTIONS continued					
Tungiasis (Tunga penetrans) LF		×	×	<b>⊘</b>	×
Bed bugs	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
GENERAL PRINCIPLES OF TRAVEL MEDI	CINE				
Pretravel preparation	<b>⊘</b>	<b>⊘</b>	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Post-travel illness	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Immigrants, refugees, and adoptees	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Travelers with specific needs LF		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
FUNGI (5% of exam)	Diagnasia		Treatment/	Risk Assessment/ Prognosis/	Pathophysiology/
	Diagnosis	Testing	Care Decisions	Epidemiology	Basic Science
YEASTS					
	Diagnosis	Testing	Care Decisions	Epidemiology	Basic Science
YEASTS					
YEASTS  Candida	<ul><li>✓</li><li>✓</li></ul>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
YEASTS  Candida  Cryptococcus  Other yeasts (including	<ul><li>✓</li><li>✓</li></ul>	<ul><li>✓</li><li>✓</li></ul>	<b>⊘</b>	<ul><li>∅</li><li>∅</li></ul>	<ul><li>✓</li><li>✓</li></ul>
YEASTS  Candida  Cryptococcus  Other yeasts (including Trichosporon and Saccharomyces)	<ul><li>✓</li><li>✓</li></ul>	<ul><li>✓</li><li>✓</li></ul>	<b>⊘</b>	<ul><li>∅</li><li>∅</li></ul>	<ul><li>✓</li><li>✓</li></ul>
YEASTS  Candida  Cryptococcus  Other yeasts (including Trichosporon and Saccharomyces)  ENDEMIC MYCOSES		<ul><li>✓</li><li>✓</li><li>✓</li></ul>			<ul><li>✓</li><li>✓</li><li>⊗</li></ul>
YEASTS  Candida  Cryptococcus  Other yeasts (including Trichosporon and Saccharomyces)  ENDEMIC MYCOSES  Histoplasma		<ul><li>✓</li><li>✓</li><li>✓</li></ul>	<ul><li>✓</li><li>✓</li><li>✓</li></ul>		<ul><li>✓</li><li>✓</li><li>⊗</li></ul>
YEASTS  Candida  Cryptococcus  Other yeasts (including Trichosporon and Saccharomyces)  ENDEMIC MYCOSES  Histoplasma  Blastomyces dermatitidis  LF					<ul> <li>✓</li> <li>✓</li> <li>⊗</li> </ul>
YEASTS  Candida  Cryptococcus  Other yeasts (including Trichosporon and Saccharomyces)  ENDEMIC MYCOSES  Histoplasma  Blastomyces dermatitidis  LF  Coccidioides immitis (C. posadasii)					<ul> <li>✓</li> <li>✓</li> <li>⊗</li> <li>✓</li> <li>⊗</li> <li>✓</li> </ul>





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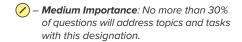
FUNGI continued					Risk Assessment/	
(5% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Prognosis/ Epidemiology	Pathophysiology/ Basic Science
MOLDS						
Aspergillus		$\bigcirc$	$\bigcirc$	<b>⊘</b>	$\bigcirc$	<b>⊘</b>
Hyaline molds	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Agents of zygomycosis (mucormycosis)	LF	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	
Dematiaceous molds ( <i>Bipolaris</i> , <i>Exophyla</i> , and others)	LF		×			$\bigotimes$
SUPERFICIAL AND SUBCUTANEOU	S MYCO	SES				
Mycetoma	LF	<b>⊘</b>	<b>⊘</b>	<b>✓</b>	<b>⊘</b>	×
Chromoblastomycosis	LF	<b>⊘</b>	$\otimes$	×	<b>⊘</b>	×
Malassezia	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Dermatophytes		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
PNEUMOCYSTIS JIROVECII PNEUM	IONIA (P	JP)				
Pneumocystis jirovecii pneumonia (PJP)		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
THERAPY						
Agents		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Pharmacokinetics		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Drug interactions		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Spectrum		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Toxicity		<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Prophylaxis		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Susceptibility testing		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Drug resistance		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
DIAGNOSTIC TESTING						
Histopathology		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Culture		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>

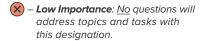


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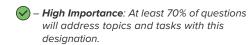
Nonculture methods		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
FUNGI continued (5% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
SYNDROMES						
Mucosal		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Skin		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Pulmonary		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Central nervous system and eyes		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Cardiac	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Disseminated		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	$\bigcirc$	<b>⊘</b>
IMMUNOCOMPROMISED HOST (NON-HIV INFECTION) (5% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
PRIMARY IMMUNODEFICIENCY						
Anatomic lesions	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Lymphocyte defects	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Combined immunodeficiency syndromes (including severe combined immunodeficiency [SCID])	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>×</b>
Phagocytes	LF	<b>⊘</b>	<b>×</b>	×	×	×
Complement deficiencies	LF	<b>⊘</b>	<b>⊘</b>	×	<b>⊘</b>	×
NK cell deficiencies	LF	$\bigotimes$	$\otimes$	×	×	×
HEMATOLOGIC MALIGNANCIES AND	STEM	I CELL TRANSPL	ANTATION			
Infections associated with chemotherapy-induced neutropenia		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Stem cell transplant	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Syndromes	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Noninfectious conditions		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>





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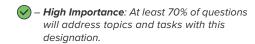
IMMUNOCOMPROMISED HOST (NON-HIV INFECTION) continued			Treatment/	Risk Assessment/ Prognosis/	Pathophysiology/			
(5% of exam)	Diagnosis	Testing	Care Decisions	Epidemiology	Basic Science			
SOLID ORGAN TRANSPLANTATION								
Donor-derived infections LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×			
Surgical site infections	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>			
Hospital-acquired infections	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>			
Opportunistic infections	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>			
Noninfectious conditions LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×			
COMPLICATIONS OF IMMUNOSUPPRESSINCLUDING TUMOR-NECROSIS FACTOR [				MODIFYING AGEI	NTS,			
Bacteria	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>			
Fungi	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>			
Viruses	$\bigcirc$	<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>			
Parasites and protozoa LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×			
INFECTION PREVENTION IN THE IMMUNO	SUPPRESSED HO	OST						
Immunizations	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>			
Antimicrobials	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>			
Environmental control	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>			
VACCINATIONS (4% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science			
ACTIVE IMMUNIZATIONS (VACCINES)			,	,				
Pneumococcal	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>			
Influenza	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>			
Tetanus, diphtheria, and acellular pertussis	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×			
Haemophilus influenzae LF	×	×	<b>⊘</b>	<b>⊘</b>	×			
Hepatitis B	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×			
Hepatitis A	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×			
Measles, mumps, and rubella LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×			



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VACCINATIONS continued (4% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
ACTIVE IMMUNIZATIONS (VACCINES	S) contin					
Polio	LF	×	×			×
Meningococcal		<b>⊘</b>	<b>⊘</b>			×
Rabies	LF	<b>⊘</b>	<u> </u>	<b>⊘</b>	<b>⊘</b>	×
Varicella			<u> </u>	<b>⊘</b>	<b>⊘</b>	×
Herpes zoster		<b>⊘</b>	<u> </u>	<b>⊘</b>	<b>⊘</b>	×
Human papillomavirus (HPV)	LF		<u> </u>		✓	×
PASSIVE IMMUNIZATIONS						
						×
Varicella-zoster virus		<b>②</b>			<b>(</b>	-
Rabies	LF	<b>(</b> )			<b>(</b> )	<b>(X)</b>
Hepatitis B					<b>Ø</b>	<b>X</b>
Tetanus	LF	<b>Ø</b>			<b>(</b> )	<b>X</b>
Immune globulin	LF	<u> </u>	<u> </u>	<u>/</u>	<u>/</u>	×
Other (including cytomegalovirus immune globulin)	LF	×	×		×	×
INFECTION PREVENTION AND CONTROL (5% of exam)		Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
APPLIED EPIDEMIOLOGY AND BIOS	STATIST	ics				
Outbreak investigation/ management		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Healthcare quality improvement		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
HEALTHCARE-ASSOCIATED INFECT	IONS (F	HAIs) OF ORGAN	SYSTEMS			
HAIs related to intravascular devices, short-term and long-term (including contaminated infusions)		<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
HA urinary tract and pneumonia infections		<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>



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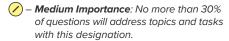
INFECTION PREVENTION AND CONTROL continued				Treatment/	Risk Assessment/ Prognosis/	Pathophysiology/
(5% of exam)		Diagnosis	Testing	Care Decisions	Epidemiology	Basic Science
HEALTHCARE-ASSOCIATED INFECTION	ONS (F	IAIs) OF ORGAN	SYSTEMS conti	inued		
HA surgical site infections		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
HAIs of other organ systems (including gastrointestinal and central nervous system)		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
EPIDEMIOLOGY AND PREVENTION O	F HAIs	S CAUSED BY SP	PECIFIC PATHO	GENS		
Bacterial infections		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Mycobacterial and fungal infections		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Viral infections		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
EPIDEMIOLOGY AND PREVENTION O	F HAIs	S IN SPECIAL PAT	TIENT POPULAT	TIONS		
HAIs in obstetrics	LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
HAIs in neoplastic diseases		$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
HAIs in organ transplantation and hematopoietic stem cell transplantation		$\bigcirc$	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
EPIDEMIOLOGY AND PREVENTION O	F HAIs	IN THERAPEUT	IC PROCEDUR	ES		
Infection risks of endoscopy	LF	<b>⊘</b>	<b>⊘</b>	<b>Ø</b>	<b>⊘</b>	×
HAIs associated with hemodialysis and peritoneal dialysis		$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
HAIs related to other procedures (including cardiology and respiratory therapy)	LF	<b>⊘</b>	<b>⊘</b>		<b>⊘</b>	×
HAIs after transfusion of blood and blood products	LF		<b>⊘</b>			×
Fecal transplantation	LF		<b>⊘</b>		<b>⊘</b>	×
PREVENTION OF HAIS RELATED TO H	IOSPIT	TAL SUPPORT SE	ERVICES			
Environmental services	LF	<b>⊘</b>	<b>⊘</b>	Not Applicable	<b>⊘</b>	×
Disinfection and sterilization	LF	<b>⊘</b>	<b>⊘</b>	Not Applicable	<b>⊘</b>	<b>⊘</b>

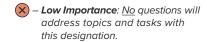


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INFECTION PREVENTION AND CONTROL continued (5% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
EPIDEMIOLOGY AND PREVENTION OF HAIS	S IN HEALTHCAF	RE WORKERS			
Prevention of occupationally acquired viral hepatitis in LF healthcare workers	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Prevention of occupationally acquired HIV infection in healthcare workers	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Vaccination of healthcare workers	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Prevention of occupationally acquired diseases of healthcare workers spread by contact, droplet, or airborne precautions (other than TB, and including diagnostic laboratories)	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
ORGANIZATION AND IMPLEMENTATION OF	INFECTION CO	NTROL PROGRA	MS		
Surveillance of HAIs	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Isolation precautions	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Hand antisepsis	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Epidemiology and prevention of infections in residents of long-term care facilities	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	
Infection control in countries with limited resources	×	×	×		<b>(X)</b>
INTERNAL MEDICINE AND NON-INFECTIOUS SYNDROMES (18% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
GENERAL INTERNAL MEDICINE					
Malignancies	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Hemophagocytic lymphohistiocytosis (Hemophagocytic syndrome)	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>Ø</b>	×
Noninfectious inflammatory disorders (e.g., vasculitis, granulomatosis with polyangiitis, eosinophilic granulomatosis with polyangiitis, aortitis)	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Dermatologic disorders	$\bigcirc$	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×







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INTERNAL MEDICINE AND					
NON-INFECTIOUS SYNDROMES continued (18% of exam)	Diagnosis	Testing	Treatment/ Care Decisions	Risk Assessment/ Prognosis/ Epidemiology	Pathophysiology/ Basic Science
GENERAL INTERNAL MEDICINE continued.					
Hematologic disorders	<b>⊘</b>	<b>✓</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Noninfectious central nervous system disease	✓	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>×</b>
Bites, stings, and toxins	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Drug fever	<b>⊘</b>	<b>⊘</b>	$\bigcirc$	<b>⊘</b>	$\otimes$
Ethical and legal decision making	Not Ap	plicable		<b>⊘</b>	Not Applicable
SURGICAL INFECTIONS					
Orthopedic	<b>⊘</b>	<b>⊘</b>	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Neurosurgery	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Ear, nose, and throat	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
General surgery and intra-abdominal	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>(</b>
Thoracic and cardiothoracic	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Urologic	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Obstetrics and gynecologic LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
Plastic and reconstructive LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	$\otimes$
Vascular	<b>⊘</b>	<b>⊘</b>	$\bigcirc$	<b>⊘</b>	<b>⊘</b>
CRITICAL CARE MEDICINE					
Systemic inflammatory response syndrome (SIRS) and sepsis	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Ventilator-associated pneumonias	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	<b>⊘</b>
Noninfectious pneumonias (eosinophilic and acute respiratory distress syndrome [ARDS])	<b>⊘</b>	<b>⊘</b>		<b>⊘</b>	<b>⊘</b>
Bacterial pneumonias	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Viral pneumonias	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>
Hyperthermia and hypothermia LF	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	<b>⊘</b>	×
E-cigarette or vaping product use– associated lung injury (EVALI)	<b>⊘</b>	<b>⊘</b>		×	×