

Page	Update Type	Description
Chapter 18: Immunizations		
p. 255 and 257	Labeling Change	The FDA expanded approval of <i>Gardasil 9</i> to include women and men aged 27-45 years.
Chapter 23: Infectious Diseases IV: Opportunistic Infections		
p. 343	Guideline Update	<p>The Guidelines for the Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents has updated recommendations for primary prophylaxis of <i>Mycobacterium avium</i> complex (MAC) infections:</p> <ol style="list-style-type: none"> 1. Primary prophylaxis is no longer recommended in patients newly diagnosed with HIV who are immediately started on antiretroviral therapy (ART). 2. Primary prophylaxis is indicated in patients with a CD4+ count < 50 cells/mm³ if they are not taking ART. <ol style="list-style-type: none"> a. Azithromycin 1,200 mg PO weekly is still the preferred prophylaxis regimen. 3. Criteria for discontinuing primary prophylaxis: patient is started on ART. <p style="text-align: right;"><i>Guidelines for the Treatment and Prevention of Opportunistic Infections</i></p>
Chapter 24: Human Immunodeficiency Virus		
p. 348 and 360	Guideline Update	<p>The Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents Living with HIV have been updated. Key points for testing include:</p> <ol style="list-style-type: none"> 1. <i>Genvoya</i> (elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide) and <i>Stribild</i> (elvitegravir/cobicistat/emtricitabine/tenofovir disoproxil fumarate) have been moved from the category of “Recommended Initial Regimens for Most People with HIV” to “Recommended Initial Regimens in Certain Clinical Situations.” This change is due to the risk of drug-drug interactions with cobicistat and a lower threshold for resistance with elvitegravir. 2. Dolutegravir should not be used in women who are pregnant or who might become pregnant due to a risk for neural tube defects in the infant. A pregnancy test should be performed in women of childbearing potential before starting antiretroviral therapy (ART). <p style="text-align: right;"><i>Panel on Antiretroviral Guidelines for Adults and Adolescents.</i></p>
p. 353	New Drug Approvals	<p>The FDA has approved the following new medications for the treatment of HIV:</p> <ol style="list-style-type: none"> 1. <i>Pifeltro</i> (doravirine) is a non-nucleoside reverse transcriptase inhibitor (NNRTI).

		<p>2. <i>Delstrigo</i> (doravirine/lamivudine/tenofovir disoproxil fumarate) is a combination drug that is included in the guideline “Recommended Initial Regimens in Certain Clinical Situations.”</p>
Chapter 25: Dyslipidemia		
p. 374 - 375	Guideline Update	<p>The AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA Guideline on The Management of Blood Cholesterol was published. Key points for testing include:</p> <p>Update to Determining Appropriate Statin Treatment Intensity Based on Patient Risk (p. 375)</p> <ol style="list-style-type: none"> 1. Secondary prevention: high-intensity or moderate-intensity statin is reasonable in patients age > 75 years. 2. Primary prevention: <ol style="list-style-type: none"> a. Diabetes and age 40-75 years with LDL ≥ 70 mg/dL: moderate-intensity (calculation of ASCVD risk is no longer needed). b. No Diabetes and age 40-75 years with LDL ≥ 70 mg/dL: <ol style="list-style-type: none"> i. 10-year ASCVD risk ≥ 7.5%: moderate-intensity. ii. 10-year ASCVD risk ≥ 20% (very high risk): high-intensity. <p>Non-Statin Treatments (p. 374)</p> <ol style="list-style-type: none"> 1. If LDL ≥ 70 mg/dL on maximally tolerated doses of a statin and patient high risk (e.g., clinical ASCVD or diabetes with ASCVD risk ≥ 20%): <ol style="list-style-type: none"> a. Add ezetimibe. b. PCSK9 inhibitors are recommended after ezetimibe due to cost. <p style="text-align: right;"><i>Grundy SM, et al. J Am Coll Cardiol. 2018.</i></p>
Chapter 32: Anticoagulation		
p. 467-468	Guideline Update	<p>The Chest Guideline for Antithrombotic Therapy for Atrial Fibrillation and the AHA/ACC/HRF Guideline for the Management of Patients with Atrial Fibrillation were updated. Key points for testing include:</p> <ol style="list-style-type: none"> 1. The CHA₂DS₂-VASc scoring system should be used to evaluate stroke risk: <ol style="list-style-type: none"> a. Score of 0 in males or 1 in females: no anticoagulation treatment. b. Score ≥ 1 in males or ≥ 2 in females: consider oral anticoagulation treatment. c. Score ≥ 2 in males or ≥ 3 in females: oral anticoagulation treatment indicated. 2. General treatment principles: <ol style="list-style-type: none"> a. Non-vitamin K antagonist oral anticoagulants (NOACs) are preferred over warfarin. These include apixaban, rivaroxaban, edoxaban and dabigatran.

		<ul style="list-style-type: none"> b. If warfarin is used, the INR should be within the therapeutic range most of the time. c. Antiplatelet treatment with aspirin alone, or a combination of aspirin and clopidogrel, is no longer recommended for stroke prevention. <p style="text-align: right;"><i>Lip GYH, et al. Chest. 2018. January CT, et al. J Am Coll Cardiol. 2019.</i></p>
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Chapter 40: Chronic Obstructive Pulmonary Disease

p. 545	Guideline Update	<p>The Global Initiative for Chronic Obstructive Lung Disease (GOLD) report was published. Key points for testing include:</p> <ol style="list-style-type: none"> 1. Eosinophil counts can be used to predict the benefit from inhaled corticosteroids (ICS). Eosinophils > 300 cells/μL indicate a good response to ICS treatment (reduced exacerbations). Eosinophils < 100 cells/μL indicate a poor response to treatment. 2. Initial treatment recommendations stayed the same, except for Group D patients: can start LAMA, LAMA + LABA (if highly symptomatic/dyspneic) or LABA + ICS (if eosinophil count > 300 cells/μL). 3. Titration of treatment is based on the presence of dyspnea or history of exacerbations (patients with both should follow the exacerbation treatment recommendations). <ol style="list-style-type: none"> a. Dyspnea: focus on bronchodilators and titrate to LAMA + LABA. ICS treatment is generally reserved for patients with exacerbations and high eosinophil counts. b. Exacerbations and eosinophils < 100 cells/μL: titrate to LAMA + LABA. If additional treatment is needed, roflumilast or azithromycin (in former smokers) can decrease exacerbations. c. Exacerbations and eosinophils > 300 cells/μL: titrate to LABA + ICS. If additional treatment is needed, titrate to LAMA + LABA + ICS before adding roflumilast or azithromycin. <p style="text-align: right;"><i>Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2019 Report.</i></p>
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Chapter 42: Diabetes

p. 563 and 566	Guideline Update	<p>The American Diabetes Association Standards of Medical Care in Diabetes – 2019 has been published. Key points for testing include:</p> <p>Comprehensive Care (p. 563)</p> <ol style="list-style-type: none"> 1. Antiplatelet therapy: aspirin is no longer routinely recommended for primary prevention. It should continue to be recommended for secondary prevention in any patient with ASCVD (e.g., history of myocardial infarction, stable angina, stroke/TIA, peripheral arterial disease). 2. Cholesterol control: any patient with diabetes and ASCVD or ASCVD risk > 20% should receive a high-intensity statin.
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		<p>3. Blood pressure control: a goal BP of < 130/80 mmHg is appropriate for patients with diabetes and ASCVD or ASCVD risk > 15%.</p> <p>Treatment for Type 2 Diabetes (p. 566)</p> <ol style="list-style-type: none"> 1. Dual treatment can be initiated if patient A1C is ≥ 8.5% at baseline. 2. Metformin and lifestyle modifications are still first-line. If A1C is not at target after 3 months, select a drug to add to metformin based on patient comorbid risks: <ol style="list-style-type: none"> a. Patient has ASCVD: choose a drug with cardiovascular benefit, either a GLP-1 agonist (liraglutide, semaglutide or exenatide extended release) or an SGLT2 inhibitor (empagliflozin or canagliflozin). b. Patient has heart failure or CKD (eGFR ≤ 60 mL/min/1.73 m² or albuminuria): choose an SGLT2 inhibitor (empagliflozin or canagliflozin). c. Patient has no ASCVD, heart failure or CKD: choose a drug from any of the remaining medication classes. <p style="text-align: right;">ADA Standards of Medical Care in Diabetes - 2019</p>
Chapter 66: Gout		
p. 753-754	Labeling Change	The FDA is requiring a boxed warning for febuxostat (<i>Uloric</i>) due to an increased risk of death compared to allopurinol. Allopurinol is now considered first-line for chronic urate-lowering therapy. Febuxostat should be reserved for patients who have failed or do not tolerate allopurinol.

Errata: 2019 RxPrep Course Book

Corrections or clarifications for the RxPrep Course Book

Page	Description
Chapter 5: Preparing IV Medications	
p. 68	In the Vesicants are Safer with a Central Line section, the second sentence should say "Vesicants are preferentially administered through a central line because the line is less likely..."
Chapter 17: Hepatitis & Liver Disease	
p. 235	The footnote at the bottom of the Direct Acting Antivirals Study Tip should say: <i>fosamprenavir oral susp (without food in adults)</i> .
Chapter 18: Immunizations, Chapter 42: Diabetes	
p. 254 and 565	Patients with diabetes should receive an annual influenza vaccine (not live), a hepatitis B series, <i>Pneumovax 23</i> from ages 19-64 years, and both <i>Prevnar 13</i> and <i>Pneumovax 23</i> at ages ≥ 65 years. Wait 12 months after <i>Prevnar 13</i> to give <i>Pneumovax 23</i> .

Chapter 20: Infectious Diseases I

p. 280	The word "methotrexate" is missing in the section on Penicillin Drug Interactions. It should say "Penicillins can increase the concentration of methotrexate, and..."
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Chapter 32: Anticoagulation

p. 459	The Notes section of the drug table should say "Antidote for apixaban and rivaroxaban: andexanet alfa (<i>Andexxa</i>)."
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Chapter 61: Oncology I: Overview & Side Effect Management

p. 763-764	The "N" on the legend for chemo person should say "Neurotoxic (crosses blood brain barrier)."
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