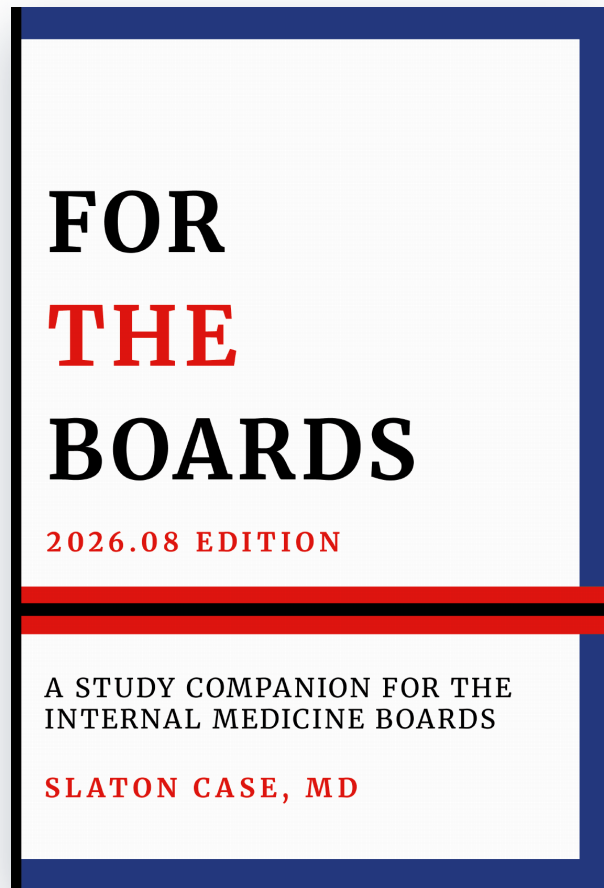


FREE SAMPLE



For The Boards

A study companion for the internal medicine boards

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Inside this sample: the full table of contents, the method for answering clinical vignettes, and selected pages from Cardiology, Pulmonology, Nephrology, Gastroenterology, Infectious Disease, Endocrinology, the ABIM rules to memorize, and the quick-reference tables.

Order the printed book at fortheboards.com

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How to Answer Clinical Vignettes

The goal is not to identify every true statement. It is to choose the **best answer to the exact question**, at the correct point in care.

SIX STEPS

1. Name the task Is the question asking for a diagnosis, next test, initial treatment, definitive treatment, mechanism, complication, or prognosis?	2. Screen for urgency If the patient is unstable or an organ is threatened, act on that first—even when the stem is written as a diagnosis question.
3. Compress the case Write one sentence: who, how fast, what syndrome, and the finding that changes the answer.	4. Find the pivot Use the finding that separates the closest choices. Do not let neutral details outweigh discriminating data.
5. Respect the sequence Stabilization → targeted evaluation → definitive therapy. Choose what must happen <i>now</i> .	6. Check the answer Confirm that it addresses the task, fits the major findings, and is not blocked by a contraindication.

ForTheBoards is written in that order. The left column is the stem—who, how fast, and the pivot—with the discriminating finding in red. The right column names the task: Dx, Next, Test, or Treat. Contrast, TRAP, and AVOID mark answers that can be true and still be wrong for the question being asked.

Example	
A 66-year-old man has increasing confusion, weakness, constipation, poor intake, and weight loss. He is dry and tachycardic. Calcium is 14.2 mg/dL, creatinine is 1.8 mg/dL, albumin is 4.0 g/dL, and PTH is suppressed. Chest radiograph shows a right hilar mass. Which is the most appropriate initial treatment? A. Intravenous isotonic saline B. Intravenous bisphosphonate C. Parathyroid exploration D. Oral glucocorticoid E. Radiation to the hilar mass	
TASK	Choose the first action , not the underlying diagnosis or definitive cancer therapy.
ONE-LINER	An older smoker with a lung mass has severe symptomatic hypercalcemia , volume depletion, and acute kidney injury.
PIVOT	Dry mucous membranes, tachycardia, and kidney injury identify hypovolemia as the immediate physiologic problem; suppressed PTH argues against primary hyperparathyroidism.
SEQUENCE	IV saline now. A bisphosphonate is next, not first; the mass can wait. This question asked for the first action.
BEST ANSWER	A. Intravenous isotonic saline.

Reasoning chain: severe symptomatic hypercalcemia + dehydration + kidney injury → restore intravascular volume first → IV isotonic saline.

THE 2-PAGE CHEAT SHEET

Clinical Trigger / Finding	Condition / Diagnosis	Critical Action / Management Key
Post-MI, hypotension, JVD, clear lungs	Right Ventricular Infarct	IV Fluids. AVOID NITRATES AND DIURETICS.
EKG: Diffuse ST elevations, PR depression	Acute Pericarditis	Treat with NSAIDs + Colchicine.
Tearing/ripping pain radiating to the back	Aortic Dissection (Type A)	EMERGENT SURGERY. IV Beta-blocker FIRST (target SBP 100-120).
FEV1/FVC is Normal/High AND TLC < 80%	Restrictive Defect (Extrapulmonary)	Next Step: Normal DLCO. Think Obesity, Neuromuscular.
Pain out of proportion to exam, crepitus, bullae	Necrotizing Fasciitis	EMERGENT SURGERY + Broad Abx (Add Clindamycin).
Fever, chills, flank pain, CVA tenderness	Pyelonephritis	Outpatient: Ciprofloxacin. Inpatient: IV Ceftriaxone.
Petechial rash on trunk/extremities with AMS/fever	Meningococemia	IMMEDIATE Abx (Ceftriaxone + Vanc) and Dexamethasone.
Hypotension, N/V, Hyperpigmentation, Hyperkalemia	Primary Adrenal Insufficiency	If crisis: IV Hydrocortisone + IV Fluids.
Episodic Palpitations, Headaches, and Sweating	Pheochromocytoma	ALPHA-BLOCKADE BEFORE BETA-BLOCKADE (Phenoxybenzamine).
High Insulin, LOW C-peptide (during hypoglycemia)	Factitious Hypoglycemia	Exogenous insulin administration.
Isolated, markedly elevated Alkaline Phosphatase	Paget Disease of Bone	Treat symptomatic disease with Bisphosphonates.
Chronic HTN + Hypokalemia (or Resistant HTN)	Primary Hyperaldosteronism	Aldosterone-Renin Ratio (ARR). Treat with Spironolactone.
AST:ALT ratio > 2:1 (with low absolute values <500)	Alcoholic Hepatitis	Abstinence. If MDF > 32, give Corticosteroids.
Severe, diffuse abdominal pain out of proportion to exam	Acute Mesenteric Ischemia (AMI)	CT Angiography. Surgical/Interventional Emergency.
Painful swallowing (Odynophagia) in HIV/Immunosuppressed	Infectious Esophagitis	EGD with biopsy. Empiric treatment (Fluconazole) often started first.

Fasting triglycerides ≥ 500 mg/dL	FIRST: Treat secondary causes—uncontrolled diabetes, alcohol, hypothyroidism, estrogen, thiazides, retinoids TREAT: Very-low-fat diet plus fenofibrate or prescription omega-3 to prevent pancreatitis; risk climbs above 1000 mg/dL AVOID: Gemfibrozil with a statin—use fenofibrate if a fibrate is needed
TG 150-499 mg/dL + ASCVD or diabetes with risk factors, on a maximally tolerated statin	TREAT: Add icosapent ethyl 2 g twice daily to reduce cardiovascular events TRAP: Only purified EPA has outcome data—OTC fish oil and mixed EPA/DHA do not WATCH: Increased atrial fibrillation and bleeding risk
Premature ASCVD, early family CAD, or recurrent events despite LDL-C at goal	TEST: Lipoprotein(a), measured once in a lifetime; ≥ 50 mg/dL (≥ 125 nmol/L) is elevated RULE: Genetically fixed—statins, diet, and exercise do not lower it; treat as a risk enhancer favoring earlier, more intensive LDL lowering NEXT: Screen first-degree relatives; no Lp(a)-targeted therapy is approved

ECG Pattern Boundaries

Peaked, narrow-based T waves progressing to a wide QRS or sine wave	Dx: Hyperkalemia TREAT: Any ECG change is an emergency—give IV calcium at once, before the confirmatory level returns CONTRAST: Hyperacute STEMI T waves are broad-based, asymmetric, and regional; hyperkalemic T waves are narrow, symmetric, and diffuse TRAP: A normal ECG does not exclude severe hyperkalemia
Flattened T waves + prominent U waves with ST depression	Dx: Hypokalemia TREAT: Replete potassium with magnesium; the fused T-U wave is a torsades warning, so stop QT-prolonging drugs CONTRAST: Prominent U waves also come from bradycardia and class III antiarrhythmics (sotalol, dofetilide)
QT changes from calcium disorders	HYPOCALCEMIA: Long QT from a stretched ST segment with a normal-width T wave HYPERCALCEMIA: Short QT, often with a short or absent ST segment RULE: Before blaming a drug for a long QT, check and correct potassium, magnesium, and calcium
QTc > 500 ms (or a rise > 60 ms) on a QT-prolonging drug or after K/Mg loss, no arrhythmia yet	Dx: Acquired long QT with high torsades risk TREAT: Stop the offending drug, replete potassium toward 4.5-5 mEq/L and give magnesium, keep on telemetry CULPRITS: Sotalol, dofetilide, methadone, haloperidol, macrolides, fluoroquinolones, ondansetron
Osborn J waves + bradycardia after cold exposure	Dx: Hypothermia—J waves usually appear below 32°C TREAT: Alert and shivering at $32\text{--}35^{\circ}\text{C}$ → passive external rewarming; $< 32^{\circ}\text{C}$ or altered → active external rewarming plus warmed IV crystalloid ESCALATE: $< 28^{\circ}\text{C}$, instability, or arrest → core or extracorporeal rewarming; continue CPR and do not declare death until rewarmed TRAP: Atrial fibrillation usually reverts with rewarming alone; handle gently—jostling can trigger VF

Low voltage + electrical alternans

Dx: Large pericardial effusion

NEXT: Urgent bedside echocardiography—the ECG suggests the effusion; echo and blood pressure diagnose tamponade

CONTRAST: Low voltage without alternans → amyloidosis (thick walls), or simply obesity, COPD, or pleural effusion

Patient on digoxin + downsloping “scooped” ST depression, asymptomatic

Dx: Digoxin effect

NEXT: No change in therapy—the pattern occurs at therapeutic levels and is not evidence of toxicity

CONTRAST: Nausea, confusion, visual change, hyperkalemia, or a new arrhythmia → digoxin toxicity, not effect

Chest Pain Triage: ACS vs Mimics

Ischemic chest pain + regional ST elevation with reciprocal ST depression

Dx: ST-elevation myocardial infarction

NEXT: Activate the cath lab on the ECG alone—reperfusion timing is the next decision, not this one

CONTRAST: Diffuse concave elevation with PR depression and no reciprocal change is pericarditis or early repolarization

TRAP: Do not wait for troponin when the ECG already shows a STEMI pattern

Rest, new-onset, or crescendo angina + no ST elevation

Dx: NSTEMI-ACS—a troponin rise/fall makes it NSTEMI, no rise makes it unstable angina

TREAT: Identical for both—antithrombotic and anti-ischemic therapy with a risk-guided invasive strategy

CONTRAST: Predictable exertional pain relieved by rest or nitroglycerin is stable angina—outpatient testing, not admission

Diffuse ST elevation + PR depression + pleuritic pain relieved by leaning forward

Dx: Acute pericarditis

TREAT: High-dose NSAID or aspirin with a taper, plus colchicine for 3 months to prevent recurrence

TEST: Echocardiography and troponin—a troponin rise means myopericarditis: admit and restrict exercise

Chest pain + normal or nondiagnostic ECG—killers to exclude before discharge

DISSECTION: Tearing pain to the back, inter-arm BP difference, widened mediastinum → CT angiography

PE: Pleuritic pain, dyspnea, hypoxemia, VTE risk → pretest probability, then D-dimer or CTPA

TENSION PNEUMOTHORAX: Absent breath sounds + hypotension → needle decompression before any imaging

ESOPHAGEAL RUPTURE: Pain after forceful vomiting + subcutaneous emphysema → CT esophagography

Troponin rise during sepsis, rapid AF, GI bleed, or hypertensive emergency + no ischemic chest pain

Dx: Type 2 MI from supply-demand mismatch, not plaque rupture

TREAT: Correct the stressor—rate, anemia, hypoxemia, blood pressure; urgent angiography is not indicated

CONTRAST: Ischemic pain with regional ECG change is type 1 MI—antithrombotics and catheterization

Pulmonology and Critical Care

PFT Pattern Boundaries

**FEV₁/FVC below LLN +
scooped expiratory limb**

INTERPRET: Obstructive ventilatory defect

GRADE: Severity comes from FEV₁ % predicted—mild ≥80, moderate 50-79, severe 30-49, very severe <30

NEXT: Repeat after bronchodilator, then add DLCO and lung volumes to identify the cause

TRAP: A fixed 0.70 ratio overcalls obstruction in older adults and misses it in the young

**Low FVC with preserved
FEV₁/FVC**

NEXT: Measure TLC before diagnosing restriction—spirometry alone cannot confirm it

INTERPRET: TLC below LLN (roughly <80% predicted) = true restriction

CONTRAST: Normal TLC with low FVC = nonspecific pattern—obesity, submaximal effort, or air trapping

Low FEV₁/FVC + low TLC

INTERPRET: Mixed defect—COPD with obesity or heart failure, sarcoidosis, or combined fibrosis-emphysema

TRAP: Gas-dilution TLC underreads in air trapping; confirm with body plethysmography before calling it mixed

**High RV and RV/TLC ± high
TLC**

INTERPRET: Air trapping; a high TLC adds hyperinflation

CLUES: COPD/emphysema or severe asthma—obstruction is present even when FEV₁ looks preserved

WHY IT MATTERS: Bronchodilators cut hyperinflation and dyspnea even when FEV₁ barely changes

Restriction + low DLCO

INTERPRET: Intrinsic parenchymal restriction—ILD, pneumoconiosis, or drug/radiation lung injury

NEXT: HRCT, then serial FVC and DLCO to grade severity and track progression

FLAG: DLCO fall out of proportion to the restriction, or exertional desaturation—evaluate for pulmonary hypertension

Restriction + normal DLCO

INTERPRET: Extrapulmonary restriction—obesity, chest-wall disease, or neuromuscular weakness

TEST: MIP/MEP plus upright and supine FVC; a supine drop ≥20% means diaphragm weakness

CONTRAST: Obesity mainly lowers ERV and FRC with a near-normal TLC

**Smoking exposure +
obstruction + low DLCO**

Dx: Emphysema-predominant COPD

NEXT: Check ambulatory oximetry—a low DLCO predicts exertional desaturation

TRAP: Asthma and chronic bronchitis preserve DLCO; a low DLCO in “asthma” means another diagnosis

Matching the urine sediment to the lesion	MUDDY BROWN GRANULAR: Acute tubular injury; a bland sediment instead favors prerenal or postrenal disease RBC CASTS OR DYSMORPHIC RBCs: Glomerulonephritis WBC CASTS: Acute interstitial nephritis or pyelonephritis FATTY CASTS, MALTESE CROSSES: Nephrotic-range proteinuria BROAD WAXY CASTS: Advanced chronic kidney disease
New kidney dysfunction of uncertain chronicity	TEST: Kidney ultrasound for size, echogenicity, cortical thickness, and obstruction CHRONIC: Small echogenic kidneys with a thin cortex; normal size with no obstruction keeps AKI in play TRAP: Diabetes, amyloidosis, HIV nephropathy, and polycystic disease keep kidneys large despite advanced CKD
Unexplained AKI/CKD with active sediment, nephrotic syndrome, or systemic disease	NEXT: Kidney biopsy when histology will change treatment FIRST: Correct coagulopathy, control blood pressure, exclude UTI; small echogenic kidneys are a contraindication CONTRAST: Typical diabetic kidney disease—gradual albuminuria, bland sediment, retinopathy—usually needs no biopsy
Pyuria with a negative urine culture	Dx: Sterile pyuria CAUSES: Partially treated UTI, chlamydial or gonococcal urethritis, genitourinary tuberculosis, interstitial nephritis, papillary necrosis NEXT: NAAT for chlamydia and gonorrhea; three first-morning urine mycobacterial cultures if TB is plausible

Sodium and Water Disorders

New hyponatremia	FIRST: Measure serum osmolality to confirm hypotonic hyponatremia THEN: Assess volume status, urine osmolality, and urine sodium—these three sort nearly every case CONTRAST: Isotonic pseudohyponatremia—paraproteins, severe hyperlipidemia; hypertonic—glucose, mannitol, glycine
DKA/HHS with apparent hyponatremia	RULE: Add 1.6-2.4 mEq/L to sodium for each 100 mg/dL glucose above 100 TRAP: A normal measured sodium here means a true free-water deficit; sodium rises as glucose falls
Hyponatremia with seizure, coma, or severe neurologic symptoms—including the collapsed endurance athlete	TREAT: 3% saline, 100-mL IV bolus; repeat up to twice if severe symptoms persist GOAL: Raise sodium 4-6 mEq/L promptly, then slow correction TRAP: Isotonic saline can lower the sodium further—severe symptoms need 3% saline, not 0.9%
Chronic hyponatremia corrected >8 mEq/L in 24 hours	Dx: Osmotic demyelination syndrome NEXT: Stop correction; give desmopressin and, if needed, D5W to relower sodium HIGHEST RISK: Sodium ≤ 105, alcohol use disorder, malnutrition, hypokalemia, or liver disease—cap the rise at 4-6 mEq/L per 24 hours

**Severe constant perianal pain
+ fever + tender fluctuant
perianal mass**

Dx: Perianal (cryptoglandular) abscess

NEXT: Prompt incision and drainage; antibiotics alone are not adequate therapy

TEST: Severe pain with a nondiagnostic external exam → pelvic CT or MRI for deep ischiorectal/supralelevator abscess

CONTRAST: Persistent purulent drainage afterward → fistula-in-ano; recurrent or complex fistulas → evaluate for Crohn disease

**Chronic constipation
refractory to fiber and
laxatives + excessive straining
and sensation of blockage**

Dx: Defecatory (pelvic floor) dyssynergia

TEST: Digital rectal exam showing paradoxical sphincter contraction; confirm with anorectal manometry and balloon expulsion

TREAT: Pelvic-floor biofeedback rather than escalating laxative therapy

Liver Enzyme Patterns and Viral Hepatitis

**Abnormal liver tests—classify
the pattern first**

HEPATOCELLULAR: ALT/AST-predominant, $R \geq 5$ → viral, autoimmune, drug, ischemic, metabolic

CHOLESTATIC: ALP-predominant, $R \leq 2$ → right upper quadrant ultrasound is the first test

RULE: $R = (ALT \div ULN) \div (ALP \div ULN)$; $R 2-5$ is mixed injury

NEXT: Cholestatic labs with nondilated ducts → AMA, drug review, and infiltrative disease

**Alkaline phosphatase
elevation + uncertain liver
source**

TEST: GGT or 5'-nucleotidase to confirm hepatobiliary source

CONTRAST: Normal GGT suggests bone/placental/intestinal alkaline phosphatase source

**Mild unconjugated
hyperbilirubinemia during
fasting/illness + normal
enzymes**

Dx: Gilbert syndrome (reduced UGT1A1 conjugation); bilirubin rarely exceeds 4-5 mg/dL

NEXT: CBC, reticulocytes, LDH, and haptoglobin to exclude hemolysis; no imaging or treatment needed

TRAP: Conjugated (direct) hyperbilirubinemia is never Gilbert and needs hepatobiliary workup

**HBsAg positive + total anti-
HBc positive + IgM anti-HBc
positive + anti-HBs negative**

Dx: Acute hepatitis B

RULE: >95% of immunocompetent adults clear spontaneously; perinatal infection becomes chronic ~90% of the time

TREAT: Supportive care; tenofovir or entecavir for severe, protracted, or fulminant disease with transplant-center referral

**HBsAg negative + anti-HBs
negative + total anti-HBc
positive with IgM anti-HBc
positive**

Dx: Acute hepatitis B, window period—HBsAg cleared, anti-HBs not yet detectable

NEXT: Confirm with HBV DNA; repeat HBsAg and anti-HBs in 4-8 weeks to document recovery

TRAP: Anti-HBs appears only after HBsAg clears—a negative HBsAg does not exclude acute infection

CNS Infections

Fever + neck stiffness + altered mental status + **CSF PMNs + high protein + low glucose**

Dx: Bacterial meningitis

TREAT: Droplet precautions plus ceftriaxone and vancomycin immediately; add dexamethasone before or with first antibiotic dose

RULE: Continue dexamethasone when pneumococcal meningitis is confirmed; stop it if another organism is identified

CONTRAST: Viral meningitis usually has lymphocytic CSF and normal glucose

Suspected bacterial meningitis + **focal deficits/ papilledema/seizure/ immunocompromise/altered consciousness**

NEXT: Blood cultures, immediate antibiotics/steroids, then CT before LP

CONTRAST: If no high-risk features, LP should not be delayed for CT

Meningitis **age >50/pregnant/ alcohol use disorder/ immunocompromised**

TREAT: Ampicillin for Listeria

CONTRAST: Ceftriaxone plus vancomycin alone misses Listeria

Rapid **petechiae/purpura + shock** + meningitis

Dx: Meningococcemia from N. meningitidis

RULE: Droplet isolation until 24 hours of effective therapy

NEXT: Close contacts get rifampin for 2 days or single-dose ciprofloxacin/ceftriaxone ASAP; pregnancy → ceftriaxone

Headache + fever + focal deficits over days-weeks + **ring-enhancing lesion**

Dx: Pyogenic brain abscess

TREAT: Vancomycin + metronidazole + ceftriaxone; stereotactic aspiration for culture and drainage

AVOID: LP because of herniation risk

CONTRAST: HIV + multiple basal-ganglia rings is presumed toxoplasmosis

Seizures + cystic/calcified brain lesions in patient from endemic area

Dx: Neurocysticercosis from Taenia solium larvae

NEXT: Control seizures, edema, or hydrocephalus first; use CT/MRI plus serology to support diagnosis

TREAT: Viable parenchymal cysts → albendazole (add praziquantel if multiple) plus corticosteroids

CONTRAST: Calcified/dead cysts do not benefit from antiparasitic therapy

Fever + altered mental status + **temporal lobe signs or RBCs in CSF**

Dx: HSV encephalitis

TREAT: Start IV acyclovir immediately

TEST: CSF HSV PCR; MRI often localizes to temporal lobes

TRAP: Early PCR can be false-negative; repeat LP if suspicion remains high

Summer/fall mosquito exposure + encephalitis or asymmetric flaccid paralysis

Dx: West Nile virus neuroinvasive disease

TEST: Serum or CSF West Nile IgM

TREAT: Supportive care

Subacute meningitis + immigrant or HIV + **lymphocytic CSF with low glucose**

Dx: Tuberculous meningitis

TEST: CSF mycobacterial culture and NAAT; AFB smear is often negative

TREAT: RIPE plus adjunctive dexamethasone

Follicular neoplasm on FNA	LIMIT: Cytology cannot distinguish adenoma from carcinoma NEXT: Diagnostic lobectomy to assess capsular/vascular invasion, or molecular testing to triage surgery TRAP: Do not perform total thyroidectomy on follicular-neoplasm cytology alone; if invasion is confirmed, completion thyroidectomy is often required
Nondiagnostic or AUS/FLUS cytology on thyroid FNA	BETHESDA I: Repeat ultrasound-guided FNA BETHESDA III: Repeat FNA or molecular testing; diagnostic surgery if still unresolved AVOID: Immediate total thyroidectomy for indeterminate cytology
Thyroid nodule + diarrhea/flushing + elevated calcitonin	Dx: Medullary thyroid carcinoma NEXT: Germline RET testing; screen for pheochromocytoma before thyroidectomy. Follow with calcitonin and CEA.
Elderly + rapidly enlarging hard neck mass + compressive symptoms	Dx: Anaplastic thyroid carcinoma NEXT: Protect the airway and obtain core biopsy (FNA is often inadequate) TREAT: Usually unresectable; chemoradiation, not RAI CONTRAST: Hashimoto + rapidly enlarging goiter → consider thyroid lymphoma (chemo-sensitive)
After resection of papillary or follicular thyroid cancer	NEXT: Serial serum thyroglobulin and neck ultrasound RULE: Suppress TSH by recurrence risk; low-risk disease needs only a low-normal TSH CONTRAST: Medullary cancer is followed with calcitonin and CEA, not thyroglobulin

Adrenal Disease and Secondary Hypertension

Purple striae + proximal weakness + easy bruising + HTN + hyperglycemia	Dx: Cushing syndrome SCREEN: 1-mg overnight DST (8-AM cortisol <1.8 mcg/dL excludes), late-night salivary cortisol, or 24-hour UFC NEXT: After confirming hypercortisolism, measure ACTH to localize TRAP: Random serum cortisol or ACTH is not an initial screening test
Cushingoid features in a patient taking exogenous glucocorticoids	Dx: Iatrogenic (exogenous) Cushing syndrome NEXT: Taper/stop the steroid if possible; do not test for endogenous Cushing while on pharmacologic glucocorticoids TRAP: Inhaled, intra-articular, and topical steroids can suppress the axis and cause Cushingoid features
Confirmed Cushing syndrome + low ACTH	Dx: ACTH-independent Cushing syndrome (adrenal source) NEXT: Adrenal CT; unilateral adenoma → laparoscopic adrenalectomy CONTRAST: Normal or high ACTH → ACTH-dependent disease; obtain pituitary MRI first

ABIM Rules to Memorize

Cardiology

ASCVD, ECG, and Chest Pain

1. **Known ASCVD** → **TREAT**: High-intensity statin; mild transaminase elevation or new diabetes is not a reason to stop it.
2. **Very-high-risk ASCVD + LDL-C above the secondary-prevention goal despite maximal statin** → **NEXT**: Add ezetimibe, then a PCSK9 inhibitor if still above goal.
3. **Triglycerides ≥ 500 mg/dL** → **TREAT**: Secondary causes plus a very-low-fat diet and fenofibrate or prescription omega-3 to prevent pancreatitis.
4. **Peaked T waves, widening QRS, or sine wave** → **TREAT**: Give IV calcium immediately for suspected hyperkalemia; do not wait for the potassium result.
5. **Regular wide-complex tachycardia** → **RULE**: Treat as ventricular tachycardia unless clearly proven otherwise.
6. **Ischemic pain + diagnostic ST elevation** → **NEXT**: Activate reperfusion immediately; do not wait for troponin.
7. **STEMI + expected first-contact-to-device time ≤ 120 minutes** → **NEXT**: Primary PCI is preferred.
8. **STEMI within 12 hours + PCI delay > 120 minutes** → **NEXT**: Give fibrinolysis if there is no contraindication.
9. **NSTE-ACS + refractory ischemia, shock, or sustained ventricular arrhythmia** → **NEXT**: Immediate invasive angiography.
10. **Stable high-risk NSTEMI-ACS** → **NEXT**: Angiography within 24 hours.
11. **Asymptomatic adult with cardiovascular risk factors** → **RULE**: Do not order a screening stress test; symptoms should drive ischemia testing.
12. **Stable angina** → **TREAT**: Beta-blocker or calcium-channel blocker for symptoms plus secondary prevention; revascularization is mainly for refractory symptoms or high-risk anatomy.

MI Complications and Heart Failure

1. **Inferior MI + hypotension/JVD + clear lungs** → **Dx**: Right ventricular infarction; give cautious IV fluid and avoid nitrates or diuretics.
2. **Several days after MI + pulmonary edema + new apical systolic murmur** → **Dx**: Papillary muscle rupture; obtain urgent echo and surgical repair.
3. **Several days after MI + harsh systolic murmur with thrill** → **Dx**: Ventricular septal rupture; obtain urgent echo and surgical repair.
4. **Several days after MI + sudden hypotension, JVD, and electromechanical dissociation** → **Dx**: Free-wall rupture causing tamponade.
5. **Chronic HFrEF** → **TREAT**: ARNI/ACEi/ARB + evidence-based beta-blocker + mineralocorticoid antagonist + SGLT2 inhibitor.
6. **Acute HF + congestion with adequate perfusion** → **TREAT**: IV loop diuresis; this is not an indication for an inotrope.
7. **Acute HF in a patient taking a beta-blocker** → **RULE**: Continue it unless cardiogenic shock or severe instability is present.
8. **HF + hypotension, cool extremities, oliguria, or rising lactate** → **Dx**: Cardiogenic shock; use an inotrope while urgently treating the cause.
9. **HFpEF** → **TREAT**: Diurese congestion, control comorbidities, and use an SGLT2 inhibitor.

High-Yield Numbers and Thresholds

Number	Meaning
CD4 count below 200	TMP-SMX for PJP prophylaxis
CD4 count below 100	Toxoplasma prophylaxis if seropositive (often covered by TMP-SMX)
CD4 count below 50	MAC prophylaxis only if not promptly starting effective ART
INR target 2.0–3.0	Most warfarin indications
INR target 2.5–3.5	Mechanical mitral valve
Functional capacity above 4 METs	Usually proceed to elective surgery without further cardiac testing
SGLT2 inhibitor hold time	Hold 3–4 days before major surgery or severe illness
Metformin and eGFR below 30	Contraindicated — stop metformin
Statin-related CK above 10× ULN	Stop statin; treat as rhabdomyolysis if clinically indicated
Fluoxetine before an MAOI	5-week washout
MAOI before most serotonergics	Usually 14-day washout
Hydroxychloroquine dose limit	≤5 mg/kg/day actual body weight
Light criteria	Exudate if pleural/serum protein >0.5, pleural/serum LDH >0.6, or pleural LDH >2/3 ULN
BAL eosinophils ≥25%	Acute eosinophilic pneumonia once infection is excluded
Total IgE >1000 IU/mL	ABPA with <i>Aspergillus</i> -specific IgE (asthma or CF)
Calcium often >14	Severe symptomatic hypercalcemia — IV saline first
MDF ≥32 or MELD >20	Steroids for alcohol-associated hepatitis if no infection or GI bleed
PREVENT-ASCVD ≥10%	Statin for primary prevention — do not reuse the old 7.5% threshold

Adult Vaccines

Topic	Key point
Zoster	Recombinant vaccine — all adults ≥50; immunocompromised ≥19
Hepatitis B	Vaccinate adults 19–59; age ≥60 with risk or by request
Pneumococcal	Age ≥50 or age 19–49 with risk: PCV20/21 alone or PCV15 → PPSV23
RSV	Adults ≥75; ages 50–74 at increased risk
Asplenia vaccines	Pneumococcal, MenACWY, MenB, Hib, annual influenza; give before elective splenectomy

Postexposure Prophylaxis

Exposure	Qualifies	PEP
HIV	Needlestick or infectious fluid on mucosa/nonintact skin; source HIV-positive or high-risk unknown	Start 3-drug PEP ASAP, ≤72 h; continue 28 days. Do not await testing

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