# Cards

Post MI ACEi MOA: prevents eccentric hypertrophy cardiac remodeling → survival

SBP >20 above target (130-140) → 2 drug anti HTN

19F, carotid artery bruit, HTN, HA → fibromuscular dysplasia (RAS → hyperaldosterone)

Back pain, hematuria → AoD (RF: HTN)

Shock, clavicular fracture → subclavian vessel injury (NBS: CT chest)

HTN w/ osteoporosis tx: thiazide

CP, TWI → NSTEMI or unstable angina → DAPT, AC, BB, nitrate, statin

MVP, asymptomatic, LVEF 52% → MV repair (if LVEF is 30-60%)

Afib origin: pulmonary vein

AV reentrant tachycardia (WPW) origin: accessory pathway (bundle of Kent)

Aflutter origin: cavotricuspid isthmus

AVNRT origin: AV node

Back pain, epigastric tenderness, prevertebral calcifications → AAA (NBS: CT abdomen)

DHF, holosystolic murmur → MR (↑LVEDV → displacement of papillary muscles)

HFrEF mortality benefit: ACEi/ARB, BB, MRA (sprionlactone, eplernon), SGLT2i

HTN, on 3 anti HTN, claudication, CAD → resistant HTN d/t RAS

Afib/Aflutter tx: BB or CCB

SVT (eg. AVNRT) tx: vagal, adenosine

VT tx: amiodarone, procainamide, lidocaine, sotalol

HF eval: BNP

WPW, HDS, tx: procainamide

Cardiac tamponade: ↑PCWP, ↓CO, ↑SVR, ↑RAP

Syncope, weakness, dehydrated, AV block, diastolic murmur → perivalvular abscess (endocarditis → aortic regurgitation)

S/p CABG, pleural effusion, ST changes, pleuritic CP → acute pericarditis (post-cardiac injury syndrome)

↑PA pressure, ↓LVEF → PH group 2 (tx the HF)

Antiarrhytmics that ↑QRS: Class IA (procainamide), Class IC (flecainide), amiodarone

Collapses after marathon → exercise-associated postural hypotension

PDEF5i (sildenafil) contraindicated w/: nitrates, alpha blockers (doxazosin) d/t hypotension

Popliteal artery aneurysm → screen for AAA

Facial and hand swelling after stress/trauma → hereditary angioedema (C1 inhibitor deficiency)

Mobitz Type I: elongating PR then dropped QRS

Mobitz Type II: constant PR, randomly dopped QRS

Murmur improves with squatting → HOCM

Digoxin + amiodarone s/e → anorexia, n/v, weakness

SVT w/ hemodynamic instability → synchronized cardioversion

BB overdose tx: IVF, atropine, glucagon, calcium gluconate

DHF, AUD → alcohol induced cardiomyopathy (eccentric hypertrophy → dilated cardiomyopathy)

Most common MI arrhythmia: V-Fib

32F, recent URI, DHF → viral myocarditis (dilate ventricles w/ hypokinesis)

ECG w/ bradycardia and TWI in II, III, and aVF → RV MI → R sided precordial ECG (NOT nitrates)

Multiple embolic strokes, TTE w/ mobile vegetations, neg bcx → nonbacterial thrombotic endocarditis (d/t malignancy)

Episodes w/ no sinus nodal activity → sick sinus syndrome (age related fibrosis of sinus node)

JVD, edema, hear border calcifications, biatrial enlargement, h/o CABG → constrictive pericarditis

Afib associated with: chronic HTN, DM, obesity, COPD

Pleuritic CP, friction rub, pericardial effusion, ↑BUN, CKD → uremic pericarditis → HD

25F, transient vision loss, carotid bruit, HTN → FMD (NBS: CTA abdomen)

36F, new AF → TSH

42M, late systolic murmur at RUSB, S4 → AoS (bicuspid vlave)

HTN lifestyle interventions: DASH diet, BMI<25, 30min exercise, <2 drinks

S/p CABG, on AC, hypotensive, tachycardic → RP hematoma from arterial access → CT A/P

29M, epistaxis, BP 180/112, ECG w/ high voltage QRS → chronic HTN 2/2 coarctation of aorta → NBS bilateral BPs

32F, DHF, enlarged heart → viral myocarditis

PE origin: femoral/popliteal vein >>> distal DVT

Congenital long QT tx: nonselective BB (propranolol, nadolol)

4wks after MI, pleuritic chest pain, ST elevations → pericarditis (Dressler syndrome) → ASA + colchicine

44M, dyspnea, elevated L main stem bronchus, AF → mitral stenosis 2/2 rheumatic heart disease

OD, tachy, QRS 120 msec → TCA OD → tx w/ sodium bicarb

Positive pressure ventilation effects on pressures: ↓LV preload, ↓RV preload, ↓LV afterload

Prominent V wave → tricuspid regurgitation

TR in CHF is d/t RVH → dilation of TV annulus

23M, athlete, Mobitz type I AV block → normal in endurance athlete

20M, smoker, finger ulcers, gangrene → thrombangiitis obliterans

Acromegaly effects on heart: concentric LVH

3d after MI, shock, systolic murmur → papillary muscle rupture (MR)

Malignant pericardial effusion tx → pericardial window

JVD, sharp x and y descent, Kussmaul sign, calcification around heart → constrictive pericarditis (viral, TB, RT)

52M, burning CP after eating or on couch, BMI 34 → unstable angina

Vagal maneuvers slow AV node conduction

NSTEMI s/p DES 2 wk ago, pleuritic chest pain, dyspnea, tachycardia, ↑troponin → PE (CTA)

HTN emergency s/p nitroprusside, GTC seizure → CN toxicity (→hypoxia→AGMA)

STEMI s/p DES yesterday, shock and new ST elevation → stent thrombosis

CP, nasal mucosa atrophic, ST depressions → cocaine myocardial ischemia → tx benzo (NOT BB)

S/p chemoRT, JVD, bilateral crackles → ADHF w/ respiratory failure → BiPAP, diuretics

74F, nausea, lethargy, ↓appetite, fatigue, AF → digoxin s/e

Vasovagal syncope ECG → bradycardia with sinus arrest

Septic shock → ↑pulse pressure → bounding pulses

↓BP w/ inspiration → pulsus paradoxus → tamponade

Diastolic murmur increases with expiration → AoR (dx TTE)

68F, AF RVR x1 that self resolved, asymptomatic, h/o HTN → paroxysmal AF → apixaban

Premature atrial complexes, asymptomatic → limit tobacco and alcohol

82F, DM-2, n/v, acute epigastric pain → ACS

Hyperkalemia, peaked T waves → calcium gluconate + insulin + glucose

73M, R thigh pain, pulsatile R groin mass → femoral artery aneurysm

ST elevation w/ Q waves → LV aneurysm

70M, CP, shock, ECG w/ LVH and TWI → AoD (dx TEE)

AoD murmur: aortic regurgitation → early diastolic murmur

S3 → volume overload (HF)

Wide and fixed splitting of S2 → ASD

Opening snap → mitral stenosis

Mid systolic click → MVP

Late systolic murmur → mitral regurgitation

Pulsus parvus et tardus → aortic stenosis

Antihypertensives that ↑weight gain and DM-2 → BB

Bradycardia, wide QRS, no P waves → hyperkalemia → tx calcium gluconate

34F, BP 150/95, OCP → NBS stop OCP

HTN, angina → tx BB, CCB

HTN, post MI → tx ACEi/ARB, BB

HTN, HFrEF → tx ACEi/ARB, BB, diuretic, aldosterone antagonist

HTN, AF → tx BB, nondihydropyridine CCB

HTN, CKD → tx ACEi/ARB

HTN, gout → tx ARB, CCB

HTN, osteoporosis → tx thiazide

HTN, migraine → tx BB, CCB

30F, pre-syncope, HR 36, AV block, LBBB → sarcoidosis

73M, exercise intolerance, exertional pre-syncope → AoS

PPM required for AV block above: Mobitz II

70F, edema, ascites, proteinuria, concentric LVH, DOE → cardiac amyloidosis

45M, new fistula, DOE, displaced PMI, brisk carotid upstroke → high output heart failure (↓SVR → ↑CO → ↑preload)

Complete AV block tx → cardiac pacing

Decrescendo diastolic murmur → AoR → bounding pulses, wide pulse pressure

Renal artery stenosis tx → ACEi/ARB (NOT stent or surgery)

Torsades, HDS → tx IV Mg

S/p STEMI, abdominal pain, blue toes, levido reticularis → cholesterol embolism

Atrial tachycardia w/ AV block → digoxin toxicity

Symptomatic bradycardia, BP 82/44 → tx atropine

Syncope, AV block, wide QRS → bradyarrhythmia

AAA screening guidelines: x1 in men 65-75 yo who ever smoked (U/S)

Crackles on exam, respiratory alkalosis → CHF

WPW can develop: AVRT

PAD → ASCVD → tx ASA + statin

Best way to prevent peri-infarction pericarditis: early reperfusion to minimize myocardial necrosis

COPD, tachycardic, ECG w/ irregular PR and 3 p-wave forms → multifocal atrial tachycardia → tx the COPD

51M, DM-2, ↑cholesterol, ↑TG, nl LDL → statin

Positional CP, low voltage QRS, fevers, chills, ↑WBC, pericardial effusion → purulent pericardial effusion → tx abx + pericardiocentesis

AoD, acute orthopnea, S3 → AR

VT, self resolved → nonsustanted VT → NBS BMP (hypokalemia, hypomagnesemia), echo

AoD tx → BB, then nitroprusside

76F, intermittent palpitations, HTN → AF

DOE, hypoxia, S3 → HFrEF → tx diuretics

Decrescendo early diastolic murmur → AoR (2/2 bicuspid aortic valve)

Atherosclerosis, BP 210/100, crackles, JVD, nl EF → renal artery stenosis (NOT pheo b/c pulmonary edema)

Amiodarone s/e: hyper or hypothyroidism, transaminitis, pneumonitis, peripheral neuropathy

Pleuritic CP, AF, O2sat 84% → PE

60M, persistent AF, nl TSH → OSA

HFpEF RF: HTN, obesity, sedentary lifestyle, CAD, DM

PAD increases risk of: MI, stroke

65M, substernal CP, unresponsive to ASA + nitroglycerin, nl ECG and CXR → repeat ECG q15min

Substernal CP at rest, resolves in 2 hr, nl ECG and stress test → GERD

Substernal CP at rest, resolves in 2 min → vasospastic (Prinzmetal) angina

34F, chest pain w/ stress but not exercise, nl ECG → reassure

ECG w/ STE in V1 and V2, FHx sudden cardiac death → Brugada syndrome

67M, 40 P-Y, HTN, asymptomatic carotid stenosis 40% → ASA + statin (NO CEA)

Lipi screening: start at 40yo, repeat q3-5yr

Systolic murmur decreases with squatting → mitral regurgitation

S/p STEMI, DOE, ECG w/ persistent STE and Q waves → LV aneurysm

48F, BMI 29, BP 152/88 at home → DM-2 screening

>10 mmHg decrease in SBP during inspiration → pulsus paradoxus → ddx cardiac tamponade, COPD

5M, 2/6 mid-systolic vibratory murmur, ↑ intensity while supine → Still murmur (benign)

Mid diastolic murmur → mitral stenosis

Mitral stenosis, AF → LA dilation

27M, syncope, ECG w/ TWI in V4-V6 → HCM → NBS TTE

Symptomatic HCM tx: BB, CCB

34M, HA, 185/105, S4, continuous murmur → aortic coarctation (CXR w/ erosions of inferior costal surfaces)

60F, JVD, proteinuria, TTE w/ thickened ventricular walls and diastolic dysfunction → amyloidosis (restrictive cardiomyopathy)

Dyspnea, SpO2 96%, bilateral crackles, ECG w/ TWI, ↑trop, ↑lactate, nl cardiac cath → CO poisoning

SLE, pleuritic CP radiating to back, ECG w/ TWI → acute pericarditis

Acute MR hemodynamic changes: nl LA size, nl LV size, ↑LVEF (b/c both forwards and back)

Chronic MR hemodynamic changes: ↑LA size, ↑LV size, ↓LVEF (decompensated HF)

AF RVR, LA dilation, LV dilation, HTN → tx rate/rhythm control

PEA, AF RVR → NBS CPR (NOT shock)

S/p DVT, persistent pain and edema → postthrombotic syndrome (chronic venous insufficiency) → tx exercise and compression

65F, acute CP, ECG w/ TWI in V2-V4, nl cath → stress induced takotsubo cardiomyopathy

HTN, ↓renin → primary hyperaldosteronism

Cardiac tamponade physiology: ↓RV compliance, ↓LV preload

Mechanical valves require abx ppx in: tooth manipulation, respiratory mucosa incision, surgery on infected skin, GI/GU procedure w/ infection (NOT EGD/colo, C-section)

Orthopnea, crackles, edema, LVH, LVEF 55% → HFpEF (diastolic dysfunction) → spironolactone, diuretics, antiHTN

Transient STE during pain episodes → vasospastic angina → tx diltiazem

Prosthetic aortic valve, diastolic murmur → AoR → NBS echo

Holosystolic murmur at cardiac apex will also have: S3 (MR)

Exertional syncope, DOE → severe AS

Asymptomatic AS, LVEF 45% → NBS replace valve (b/c LVEF <50%)

Hemodynamic effects of Valsalva: ↓preload

Hemodynamic effects of hand grip: ↑afterload

Hemodynamic effects of squatting: ↑afterload, ↑preload

Hemodynamic effects of standing: ↓preload

Facial swelling, on sacubitril-valsartan → angioedema → r/o airway obstruction

Dyspnea, h/o VT, nl JVD, CXR w/ bilateral lung infiltrates on middle lung fields → amiodarone toxicity

RBBB, RV dilation, systolic murmur → ASD

Ankylosing spondylitis, SOB → AoR

AF, from Cambodia → MS 2/2 rheumatic heart disease

Systolic cres-decs murmur, brisk carotid pulses → HOCM

Systolic cres-decs murmur, slow carotid pulses → AS

Intermittent high amplitude JVP, VT → AV dissociation

54M, substernal CP, left sided neck pain, diaphoresis → ACS

MI exam findings: S4

Fixed split S2 → ASD

Paradoxical split S2 → MI

Soft and single S2 → AS

Friction rub → pericarditis

Pulsus paradoxus → cardiac tamponade, asthma, COPD, pericarditis

HTN initial labs: BMP, UA, A1c, lipids, TSH, ECG, CBC (NOT renal U/S, renin, aldosterone)

Syncope after running to catch bus, no orthostasis, nl ECG → vasovagal → NBS reassure

Nitroglycerin MOA: systemic vasodilation → ↓preload → ↓wall stress → ↓demand

Stroke, MV w/ oscillating densities, neg bcx → nonbacterial thrombotic endocarditis → ddx malignancy, SLE (APLS) → tx AC

# Pulm

Nasal polyps, congestion, headaches, wheezing → aspirin-exacerbated respiratory disease (leukotrienes)

SOB, stress, hand tingling → hyperventilation syndrome (Tx: breathing retraining)

Persistent air leak s/p tube thoracostomy → tracheobronchial injury (NBS: bronchoscopy and surgery)

Asthma vs COPD: asthma responds to bronchodilator

Dullness to percussion, tracheal deviation toward dullness → atelectasis

Dullness to percussion, tracheal deviation away from dullness → pleural effusion

BMI>30, PaCO2 >45 → obesity hypoventilation syndrome

Anaphylaxis: IM epinephrine x3 → IV epinephrine

COPD tx that improves survival: long term supplemental O2

Transudative (↓LDH): capillary hydrostatic pressure

Exudative (↑LDH, ↓glucose): capillary permeability (empyema, malignancy, TB, SLE) → WBC

Paradoxical abdominal movement w/ inspiration → phrenic nerve injury

Clubbing, crackles → ILD (restrictive: ↓FEV1, ↓FVC, ↓RV, normal FEV1/FVC, ↓DLCO)

COPD: ↓FEV1/FVC, ↑RV

AGMA w/u: Serum osm (if ↑Sosm gap → methanol, ethylene glycol)

Chronic cough, worse at night, unresponsive to antihistamine → asthma

Cocaine intoxication, hypoxemia → diffuse alveolar hemorrhage

ARDS, on vent, lack of breath sounds on L, hypotension → PTX

Wedge shaped infarct → PE

Recent URI, yellow and bloody sputum, >5d cough → bronchitis (self-limited)

Hypoxemia, fever, leukoctyosis, Colorado → high altitude pulmonary edema

S/p URI, CXR w/ bilateral thin walled cavities, fever, productive cough → MRSA

Hemoptysis, recurrent epistaxis, nodular lung lesions, microcytic anemia → hereditary hemorrhagic telangiectasia (AVMs)

Chronic transplant rejection: >1 yr, progressive fibrosis

S/p transplant 3mo ago, crackles, interstitial infiltrates, fever → CMV pneumonitis

Recurrent sinopulmonary infections, voluminous sputum, now with hemoptysis → bronchiectasis

PD, lung abscess, sputum, fever → aspiration

Burning sensation hrs after aspiration → pneumonitis → spontaneously resolves

40M, 6mo of DOE, slight ↑LFTs → A1AT deficiency (also panniculitis)

Chronic bronchitis dx criteria: 3 consecutive months of productive cough in 2 successive years

Chronic cough, DOE, weight loss, hemoptysis → aspergillosis

CXR w/ dilated airways, sputum → bronchiectasis

CXR w/ thickened bronchovascular markings, cough → chronic bronchitis

69M, smoker, prolonged expiration with wheezes, hyperlucency of lungs, RUL bulla, respiratory acidosis → COPD exacerbation → tx IV steroids, inhaled bronchodilators, NPPV

Recurrent fever, cough, dyspnea, hypoxemia, CXR bilateral micronodular interstitial pattern, ↑WBC → hypersensitivity pneumonitis

COPD exacerbation, AMS → hypercapnic encephalopathy

Fatal asthma RF: previous attack requiring intubation, ICU, inhaler use, steroid use

Hemoptysis, RUL opacity → TB r/o (respiratory isolation)

Blood in ET tube → bronchoscopy

Persistent cough after URI → bronchitis → tx bronchodilator (NOT CXR)

Empyema → exudative effusion (↓glucose, ↓pH, ↑protein)

64M, persistent cough, inspiratory dry crackles → ILD (dx high resolution CT)

Intubated, decreased R breath sounds, decreased peak and plateau pressure → PTX

Intubated, decreased L breath sounds, increased peak and plateau pressure → R mainstem intubation

Perianal crepitus, bilateral lung infiltrates → ARDS

Does not correct w/ supplemental O2: shunt (pulmonary edema, ARDS), dead space ventilation (PE)

Corrects w/ supplemental O2: hypoventilation (obesity, CNS depression), diffusion limited (ILD, emphysema), V/Q mismatch (PNA)

RLL dullness to percussion w/ ↑expiratory breath sounds → consolidation (PNA)

Bilateral hyperresonance to percussion, ↓breath sounds → emphysema

Best way to improve daily functioning in COPD: pulmonary rehab (NOT O2)

↓PO2, ↓PCO2, nl A-a gradient → hypoventilation, high altitude

↓PO2, ↓PCO2, ↑ A-a gradient → atelectasis

Sarcoidosis PFTs: granuloma fibrosis → restrictive (nl FEV1, ↓TLC, ↓DLCO)

Trachea deviated to L, no R breath sounds, JVD → R tension PTX → needle thoracostomy

Asthma wakes up pt from sleep x1/week → persistent asthma → tx scheduled LABA + ICS

HA, nausea, confusion, arrived in Colorado → high altitude cerebral edema → dx dexamethasone

Vent setting in ARDS: low-tidal volume ventilation (prevents alveolar overdistension)

Exercise induced bronchoconstriction tx: ICS + beta-agonist before exercise

COPD, acute dyspnea, unilaterally decreased breath sounds → ruptured alveolar bleb

First asthma exacerbation tx: albuterol + pred

S/p albuterol, muscle weakness → hypokalemia

High altitude illness tx → acetazolamide (treats respiratory alkalosis)

Pleural effusion w/ ↓glucose and ↑↑LDH, joint swelling → RA

Nitrofurantoin s/e: acute hypersensitivity pulmonary injury

ARDS physiology: V/Q mismatch (shunt), ↓compliance, ↑pulmonary arterial pressure

Oxygenation: FiO2 (but keep < 60%) and PEEP

Ventilation: RR > TV

Nasal polyps, asthma ↑eosinophils → EGPA

Rhinorrhea, pharyngeal cobblestoning, transverse nasal crease → allergic rhinitis → intranasal steroids

38M, DOE, cough, bilateral basilar hyperlucency → A1AT deficiency

Occupational asthma confirmation: responsiveness to albuterol + peak expiratory flow rate at home vs work

Elevated inspiratory hold pressure on ventilator → ↓compliance

Elevated peak pressure on ventilator → ↑airway resistance

Digital clubbing ddx: lung CA, CF, R to L shunt

S/p ERCP for cholangitis, respiratory distress, crackles, no JVD, ↑trop, hyperdynamic LV → ARDS

20F, recurrent RLL PNA → bronchial carcinoid tumor

Transudative effusion pH: 7.4 – 7.55

Exudative effusion pH: 7.3 – 7.45

S/p PRBC, dyspnea, crackles, infiltrates, ↓BP, no JVD, nl BNP → transfusion related acute lung injury

S/p PRBC, dyspnea, crackles, infiltrates, nl BP, JVD, ↑ BNP → transfusion associated circulatory overload

Prolonged intubation, flat flow-volume loop, biphasic stridor → tracheal stenosis

Recurrent PNA, thick mucous, CXR w/ bronchial markings and ring shadows → bronchiectasis → NBS CT

CT w/ tram tracking, bronchial dilation, signet ring sing → bronchiectasis

Cough, ↑Ca, CXR w/ mediastinal fullness, ↑LFTs → sarcoidosis

27M, infertile, nl FSH/LH/testosterone, recurrent PNA → absence of vas deferens 2/2 CF

Persistent congestion, wheezing after NSAID, anosmia → aspirin-exacerbated respiratory disease (nasal polyposis)

SCD, chronic cough, worse at night → asthma

House fire, lactic acidosis, reddish skin → cyanide poisoning → tx hydroxocobalamin

SCD, DOE, 2+ edema, ↓DLCO → pulmonary hypertension (pulmonary vascular remodeling)

Pleuritic CP, hemoptysis, tachycardia, recent flight → pulmonary infarction 2/2 PE

Best estimate of postop pulmonary morbidity: FEV1

Nighttime cough with wheezing, sour taste → GERD → tx PPI

Chlorpheniramine MOA: H1 antihistamine

22M, acute dyspnea, small apical PTX → tx supplemental O2

Ways to reduce VAP risk: elevated HOB, suction secretions, minimize transport, minimize PPI

Bronchodilators do not reduce COPD mortality

COPD mortality reduction: smoking cessation, pulmonary rehab, flu vaccine, O2 if <88%, nocturnal noninvasive ventilation, lung transplant

Fever, cough, dyspnea, visited farm, CXR w/ reticular interstitial opacities, ↓ FVC → hypersensitivity pneumonitis

Soft holosystolic murmur, diastolic flow murmur → large VSD

CT w/ RLL nodule, 2 cm, 30 P-Y → NBS bx (b/c >0.8cm)

Pulmonary effusion = ↓tactile fremitus

45M, weight loss, cough, hemoptysis, ↑WBC, bilateral nodules w/ cavitation, tracheal narrowing and ulceration → granulomatosis with polyangiitis

COPD, ↑JVD, enlarged liver, edema → cor pulmonale

DOE, COPD tx: LABA-LAMA

Lung transplant 5 yr ago, ↓FEV1 → chronic transplant rejection (bronchiolitis obliterans)

Lung abscess, fever → oral anaerobic bacteria → tx ampicillin-sulbactam

PNA hypoxemia pathophys: V/Q mismatch

Asthma exacerbation tx: SABA + pred x 7d

Rescued from burning building, seizure → CO poisoning → tx 100% O2

Hemoptysis, cavitary lung lesion, works at community clinic → TB

Asthma exacerbation on NIPPV, agitated, no wheezing → NBS intubation

ARDS management (fluids): neg negative to avoid pulmonary edema

OSA sequelae: HTN, pulmonary HTN

# GI

Emesis, alcohol, suprasternal crepitus, shock → Boerhaave → surgery

Emesis, hematemesis → Mallory-Weiss → PPI

RUQ pain, h/o CCY, ↑ LFTS, worse w/ opioids → Sphincter of Oddi dysfxn

Rectal prolapse tx: fiber supplementation if non-full thickness, surgery if full-thickness

↑ALKP, ↑AMA → PBC → ursodeoxycholic acid

↑ALKP, ↑AFP, vertebral osteolytic lesions → HCC (cirrhosis, HBV, aflatoxin)

Opioid induced constipation tx: stimulant laxative (bisacodyl)

S/p cardiac cath, enlarged pancreas → cholesterol emboli → acute pancreatitis → IVF

Dementia, diarrhea, brown discoloration of colonic mucosa → Senna abuse

Tylenol poisoning → AST>1000, INR>1.5, HE → acute liver failure (tx: transplant)

S/p CCY, nocturnal diarrhea → bile acid diarrhea → tx w/ bile acid resins (cholestyramine)

Thrombosed external hemorrhoid tx: stool softeners, hemorrhoidectomy if painful

34F, AUD, liver mass w/ central scar, ↑lipase → FNH

Brown skin, ↑LFTs, diabetes → hereditary hemochromatosis (r/o HCC)

Mild UC (normal ESR/CRP) tx: 5-ASA (mesalamine, sulfasalazine) → steroids

Moderate/severe UC tx: TNFa (infliximab, adalimumab, golimumab)

32F, voluminous nocturnal diarrhea 3wks, normal labs and exam → factitious diarrhea (stool osm)

38M w/ DS, new onset constipation → hypothyroidism

32M, ↑ALKP, nl AST/ALT, ↑GGT, bile duct dilation → PSC (↑risk CRC)

87F w/ AF, vomiting, ↑WBC, abdominal pain > exam, AGMA → acute mesenteric ischemia (NBS: CTA)

37M w/ endocarditis, severe abdominal pain → acute mesenteric ischemia

56F, hypothyroidism, nausea, macrocytic anemia → autoimmune metaplastic atrophic gastritis

Postprandial abdominal pain → functional dyspepsia

Changes in bowel frequency/caliber, cramps → IBS

Postprandial abdominal pain, DM, scleroderma → gastroparesis

S/p ICU for sepsis, GIB → stress induced ulcer

Diarrhea, SBO → Ogilvie syndrome (electrolyte imbalance → colonic pseudo obstruction) → tx rest, neostigmine

Foul smelling diarrhea, weight loss, h/o pancreatitis → chronic pancreatitis (pancreatic exocrine insufficiency, NBS fecal elastase)

Steatorrhea, IDA → CD (NBS: TTG ab)

C diff RF: abx, PPI, hospitalization, age

Acute pancreatitis red flags: fever, leukocytosis, ↑BUN, ↑Cr, third spacing

GIB but negative upper and lower endoscopy → small bowel bleeding (angiodysplasia)

Angiodysplasia bleeding risk increased in: ESRD and aortic stenosis

24M, involuntary tremors, ↑LFTs → Wilson disease

Cirrhosis, obstructive lung disease → A1AT

Hyperpigmentation, DM, ↑LFTs → hemochromatosis

26M, 6wk bloody diarrhea, abdominal distension, ↑WBC → IBD toxic megacolon

32F, fever, shock, RUQ pain, solid liver mass, fluid in abdomen → ruptured hepatic adenoma

H/o Roux-en-Y, acid reflux → anastomotic stenosis → EGD

24F, icterus after fast, nl RBC, ↑indirect bili → Gilbert

Variceal bleeding tx: 1. 2x IV, 2. Volume, octreotide, abx, 3. EGD, 4. TIPS

Flatulence, excessive nonbloody diarrhea including at night, h/o Roux-en-Y → SIBO

Tachycardia, diarrhea, flushing after meals, h/o Roux-en-Y → dumping syndrome

Watery diarrhea, pancreatic mass, ↓K → VIPoma (secretory diarrhea) → tx octreotide

Diarrhea, flushing, GI mass → carcinoid syndrome

Diarrhea, gastric ulcers, pancreatic mass → gastrinoma

Acute pancreatitis ddx: alcohol, gallstones, hypertriglyceridemia, medications, recent ERCP, CMV, trauma

6wk of watery diarrhea, nocturnal, weight loss, works in day care → giardia (stool antigen test)

Dysphagia, EGD lack of peristalsis in lower esophagus, decreased esophageal sphincter tone, joint pain → systemic sclerosis (smooth muscle atrophy and fibrosis)

Mucopurulent rectal discharge, anal pruritis → gonococcal proctitis

HAV → complete recovery (HBV and HCV assoc w/ HCC)

Bleeding esophageal varices, ↓LOC → intubation (airway protection) + abx + octreotide

Intermittent watery diarrhea, bloating, normal labs → IBS

Abdominal distension, pruritis, facial plethora, ↑Hgb → PV → Budd-Chiari (hepatic outflow obstruction) → NBS: abdominal doppler U/S

56F, nocturnal chronic watery diarrhea, colonoscopy w/ lymphocytes in LP and thickened subepithelial collagen band → microscopic colitis

82F, SBO, ↑LFTs, air in intrahepatic bile ducts → gallstone ileus

20M, hematemesis, alcohol and cocaine use, ASA → gastric mucosal erosion

Obstipation, U shaped colon (coffee bean) → sigmoid volvulus → tx flex sig

PBC increases risk of: osteopenia, osteoporosis, osteomalacia

Hemochromatosis associated w/ cardiomyopathy

A1AT deficiency associated with emphysema

PSC associated w/ UC (↑CRC risk)

S/p ileocecal resection, watery diarrhea, bloating → SIBO → dx carbohydrate breath test

Fecal elastase is test for chronic pancreatitis

75M, abdominal distension, coffee bean sign w/ U loop → sigmoid volvulus (RF: constipation)

Diffuse dilation of colon, fever → toxic megacolon (C diff)

62F, RUQ pain, ↑WBC, fever, air in gallbladder wall → emergent CCY

45M, vomiting, h/o acid ingestion, succussion splash on epigastrium → GOO (pyloric stricture)

SBP dx → paracentesis cell count and differential (NOT culture and stain)

88F, unintentional weight loss, CKD → anorexia → nutritional supplementation

23M w/ asthma, intermittent difficulty swallowing food → eosinophilic esophagitis

S/p RT for prostate cancer, constipation, hematochezia → radiation proctitis (rectal fibrosis)

64M, 20lb weight loss, BMI 19, DM-2 → pancreatic cancer

S/p Roux-en-Y, hyperkeratosis, conjunctival plaques → Vitamin A deficiency

UGIB tx → PRBC (NOT whole blood)

Best way to ↓liver inflammation and ↓portal pressure in alcoholic cirrhosis → alcohol cessation

Chronic mass on hard palette → torus palatinus (congenital anomaly)

50M, jaundice, RUQ pain, fever, ↑WBC, AST 212, ALT 99, ALP 305, ↑dbili → alcoholic hepatitis

52M, ED, weight loss, gynecomastia, small tests, nl TSH, ↓T3/T4 → cirrhosis

CD RF: smoking (↑risk), young age, ulcerations, strictures, prior surgery

S/p GOO surgery, tachycardic, ↓K, ↓Phos → refeeding syndrome

42M, AUD, shock, AKI → severe pancreatitis

36M, blood on toilet paper, asymptomatic → anoscopy (hemorrhoids)

Vesicles on dorsa of hands w/ hyperpigmentation, AST 65, ALT 78 → HCV (porphyria cutanea tarda)

Bloody ascites → HCC

35F, CP w/ hot or cold food, improves w/ nitrates → esophageal spasm (dx manometry)

42F, burning w/ meals, nausea, bloating, stool guaiac positive → dyspepsia (H pylori → PUD)

Dyspepsia, chronic diarrhea, weight loss → Zollinger-Ellison (pancreatic gastrin producing tumor)

45F, epigastric pain after meals, fever, diffuse abdominal tenderness, stool guaiac positive, NSAID use → perforation 2/2 PUD → NBS XR

45M h/o PUD, EGD w/ duodenal + jejunal ulcers and gastric folds → gastrinoma (ZES)

19M, watery stools, ↑CRP, anemia → IBD (NBS colonoscopy)

S/p biliary stent, RUQ pain ,fever, ↑ALP → pyogenic liver abscess → CTA

Foul smelling stools x 6mo, epigastric pain → steatorrhea → tx pancreatic enzyme supplementation

Cirrhosis sequelae MOA: ↑E2 → spider angioma, palmar erythema, gynecomastia; portal HTN → caput medusae, splenomegaly; hypoalbuminemia → ascites, edema

IBD toxic megacolon tx → IV steroids

CD, erythematous rash, diarrhea, smooth red tongue → pellagra (niacin / Vit B3 deficiency)

Diarrhea that awakens from sleep, s/p abdominal surgery, stool osmotic gap low → secretory diarrhea (bile acids)

AUD, vomiting, now bloody → Mallory Weiss tear (mucosal tear at GEJ)

80F, SBO, fullness in right groin → hernia

Pseudocyst, symptomatic → tx drainage

DM-2, early satiety, upper endoscopy w/ food → gastroparesis → tx metoclopramide, erythromycin

C diff tx: vanco or fidaxomicin

Colo in UC patients: start 8-10yr after diagnosis, q1-3yr

Rapid increase in ALT/AST (nl ALP and bilis) → ischemic hepatopathy

AUD LFTs: also ↑GGT and ↑ferritin

Acute liver failure requirements: ↑ALT/AST, HE, ↑INR

Vegan diet nutritional deficiencies: Vit B12, Vit D, Ca, Fe, Zn

Gnawing pain that improves w/ eating, dark stools → duodenal ulcer → PPI + abx

Screening in cirrhosis: RUQUS q6mo, EGD

Esophageal varices tx: endoscopic variceal ligation or nonselective BB (nadolol, propranolol)

RUQ pain, melena, ↓Hgb, ,↑WBC, ↑PLT, ↑d-bili, afebrile → hemobilia

H/o CD, Hgb 8, MCV 98, paresthesias → Vit B12 deficiency

47F, ↑↑AST/ALT, ↑bili, +AMA, +ANA → autoimmune hepatitis → tx pred

67F, diarrhea + constipation, LLQ pain → diverticulitis (NBS CT)

76M, dementia, difficulty swallowing, foul breath, fluctuant neck mass → Zenker diverticulum (NBS esophagography)

42M w/ UC, fatigue, Hgb 12, ↑bili, ↑ALP → PSC (NBS MRCP)

Gallstone pancreatitis, no obstruction → CCY

Gallstone pancreatitis, CBD dilation → MRCP + ERCP + CCY

Gallstone pancreatitis, cholangitis, obstruction → urgent ERCP + CCY

42M, epigastric pain after binge drinking → acute pancreatitis (NBS amylase/lipase, NOT CT)

Foul smelling stools, microcytic anemia → celiac disease (Vit ADEK deficiency)

83F, h/o MI, postprandial epigastric pain → chronic mesenteric ischemia

32F, recurrent rectal pain unrelated to defecation for 15 min, nl exam → proctalgia fugax

23F, foul stols, weight loss, villous atrophy, neg IgA TTG screen → celiac disease + IgA deficiency

Succussion splash → GOO

DM-2, hepatomegaly, CPPD → hereditary hemochromatosis → NBS serum Fe

Drugs that cause pancreatitis: diuretics, loop diuretics, ACEi, statin, INH, bactrim

2 wk s/p liver transplant, ↑LFTs, fever, BP 85/55, HR 130 → bacterial infection

Pancreatic atrophy w/ calcifications → chronic pancreatitis → lipase supplementation

AUD, epigastric pain, distension, ascites w/ amylase → pancreatic ascites 2/2 chronic pancreatitis

S/p STEMI, ↑AST/ALT → hepatocyte ischemia

Acute odynophagia, EGD w/ circumferential ulceration w/ surrounding normal mucosa → pill esophagitis

H/o epilepsy, epigastric pain → valproate induced pancreatitis

Fatigue, hematuria, icterus, ↑ALP, ↑d-bili, nl AST/ALT → ddx choledocholithiasis, PBC, cholangiocarcinoma

DM-1, postprandial emesis → gastroparesis

Ascites, SAAG >1 → cirrhosis, HF

Ascites, SAAG <1 → malignancy, TB, nephrotic syndrome

34M, RUQ pain, hematochezia, fever, ↑ALP, ↑AST/ALT, nl RUQUS → PSC c/b cholangitis

52F, ↑↑cholesterol, ↑AP, nl AST/ALT, nl RUQUS → PBC

Lactose intolerance labs: +hydrogen breath test, ↑stool osmotic gap

Dysphagia, coughing / choking → oropharyngeal dysphagia → ddx achalasia → NBS barium sallow, esophageal manometry

Dysphagia, food sticking in chest → esophageal dysphagia → ddx tumor, stricture, rings → NBS EGD

Epigastric pain only partially relieved by antacids → Zollinger-Ellison (gastrinoma → PUD)

28F, abdominal pain, BUE weakness, +urobilinogen → acute intermittent porphyria

15M, psychoses, rigidity → Wilson disease

Hepatic encephalopathy tx: IVF, lactulose, rifaximin

Hepatic encephalopathy exacerbated by: hypokalemia, metabolic alkalosis

Esophageal varices d/t cirrhosis tx: BB

65F, hard stools, abdominal pain → NBS colo (c/f CRC)

Abdominal pain, improves when leaning forward, diarrhea, weight loss → chronic pancreatitis

18F, constipation, LLQ pai, resolves w/ BM → IBS → tx psyllium

RUQ pain, fever, ↑WBC, gas in gallbladder wall → emphysematous cholecystitis → tx CCY

S/p gastrectomy, abdominal cramps and nausea and diaphoresis after eating → dumping syndrome → tx smaller meals, add complex carbs, high fiber

42F, ↑ALT,AST, ↑total protein, nl PT, nl PTT, nl ALP → autoimmune hepatitis

Cholangitis imaging findings: dilation of intrahepatic and CBD

Cholecystitis imaging findings: thickened gallbladder wall and pericholecystic fluid

Epigastric pain, ↑ALP, ↑↑↑amylase/lipase → NBS RUQUS (NOT CT) for gallstone pancreatitis

Postmenopause, skin hyperpigmentation, arthralgia → hemochromatosis

Sialadenosis ddx: AUD, bulimia, malnutrition, DM, liver disease

Jaundice, ↑ALP, weight loss, ↑CEA, ↑CA19-9, h/o UC → cholangiocarcinoma 2/2 PSC

Liver cancer w/ ↑CEA, ↑CA19-9, nl AFP → cholangiocarcinoma

Liver cancer w/ nl CEA, nl CA19-9, ↑ AFP → HCC

Argumentative, mouth held open, dysarthria, hepatomegaly, ↑DTRs → Wilson disease

26F, asymptomatic jaundice, ↑bili, nl ALP/AST/ALT, ↑urinary bilirubin → Dubin-Johnson

Alcoholic cirrhosis, decreased R breath sounds → hepatic hydrothorax (pleural effusion)

Drain cleaner ingestion tx: airway, remove clothing, endoscopy (NOT neutralizing agent)

Calcified gallbladder → porcelain gallbladder 2/2 chronic cholecystitis → ↑r/o gallbladder adenocarcinoma

14M, IDA, scaly rash on elbows → celiac disease (NBS anti-TTG)

Esophageal varices tx: IVF + CTX + octreotide

H pylori testing: stool or urea test 2wk after stopping PPI (if alarm symptoms, immediate endoscopy)

NAFLD pathophys: insulins resistance → ↑peripheral lipolysis → ↑hepatic FA →↑cytokines

S/p fundoplication, bloating, food aversion → gastroparesis (CN X damage) → NBS scintigraphic gastric emptying scan → tx small low fat low fiber meals

Crohn disease, alopecia, impaired taste, pustular skin rash w/ scaling around mouth → Zinc deficiency

60F, fatigue, ↑AST/ALT, ↑↑ferritin → hereditary hemochromatosis → tx phlebotomy

Wilson disease tx: penicillamine

Steatorrhea, nl D-xylose test → pancreatic insufficiency

Steatorrhea, ↓D-xylose test, responds to rifaximin → SIBO

Steatorrhea, ↓D-xylose test, does not respond to rifaximin → Celiac disease

Celiac disease increases irsk of: small bowel adenocarcinoma and lymphoma (NOT colon cancer)

# Renal

LUTS, AKI 🡪 BPH (NBS renal US)

Flank pain, h/o membranous nephropathy, left gonadal vein dilation → renal vein thrombosis

BLE edema, ↓ albumin → nephrotic syndrome → ↑ LDL → ↑ r/o atherosclerosis

Vomiting, volume depletion → ↓K, ↓Cl, metabolic alkalosis

Polyuria, normal sodium, ↓ urine specific gravity, fhx HbSS → hyposthenuria (SCT)

HIV, 3+ urine protein → HIV associated nephropathy (FSGS)

DHF → ↑RAAS → vasoconstriction, sodium retention

51M, polyuria, polydipsia, HTN, flank pain, abdominal mass → ADPKD

Uric acid stone ppx: potassium citrate (alkalization of urine), low purine diet

AGMA, 100F, tinnitus, pulmonary edema → salicylate toxicity → tx HD

Bipolar, hypernatremia, ↑Sosm, ↑Uosm → diabetes insipidus d/t lithium

Most common cause of death in ESRD: CVD

Encephalopathy, AGMA, AKI, calcium oxalate crystals, hypocalcemia → ethylene glycol toxicity → tx fomepizole

CN poisoning tx → hydroxocobalamin

Methemoglobinemia (eg. dapsone OD) tx → methylene blue

APAP toxicity tx → N-acetylcysteine

79F, seizure, on HCTZ + amlodipine → hyponatremia

N/v, AGMA, optic disc hyperemia → methanol

Metabolic alkalosis, ↓Cl → tx IVF + Cl repletion

17M w/ membranous nephropathy ddx: malignancy, HBV, SLE, NSAIDs

45M, recurrent sinusitis, auditory canal ulceration, hematuria → GPA (ANCA)

Bilateral small kidneys, ↑BUN, ↑Cr, bland UA, trace proteinuria → hypertensive nephrosclerosis

Diabetic kidney disease tx → ACEi/ARB for goal BP <130/80

Hyperkalemia in CKD tx → low potassium diet + patiromer +/- thiazide or loop diuretic

22M, gross hematuria, h/o URI 3d ago, nl complement → IgA nephropathy

22M, gross hematuria, h/o URI 2wk ago, low complement → PSGN

70F, ESRD, bilateral shoulder pain, bone cysts, rotator cuff thickness → amyloidosis

Hematuria, proteinuria, ↓C3, nl C4 → APSGN

Hematuria, proteinuria, nl C3, nl C4 → IgA nephropathy

Hematuria, ++ proteinuria, no RBC casts → FSGS

Hematuria, ↓C3, ↓Hgb → HUS

Proteinuria, child → MCD

35F, hematuria, HTN → ADPKD

S/p kidney transplant, on tacrolimus, AKI → calcineurin inhibitor mediated arteriolar vasoconstriction

Hematuria, UA w/ blood and RBCs, long distance runner → bladder trauma

Hematuria, UA w/ blood but no RBCs → myoglobinuria (rhabdo) or hemoglobinuria (marching)

30M, constipation, clumsy, forgetful, microcytic anemia, ↑uric acid → lead poisoning → tx EDTA

56F, proteinuria, periorbital purpura, hepatomegaly → AL amyloidosis (MM, WM)

pH 7.56, ↑bicarb, ↓K, ↓UCl, ↓Una → vomiting

NAGMA: diarrhea, RTA

HTN on new meds, ↑K → s/e of amiloride or spironolactone

31F, nephrotic syndrome, acute flank pain and hematuria → RVT (d/t hypercoagulability)

54M w/ psoriasis, nephrotic syndrome, enlarged kidneys, HSM → amyloidosis

S/p allopurinol, fever, malaise, polyarthralgia, rash → AIN

Cirrhosis, AKI, ↓Na, ↑K → HRS (↓UNa)

Bilateral renal infarcts, abdominal artery microaneurysms → polyarteritis nodosa

HRS: ↓portal blood flow → ↑NO → ↑splanchnic vasodilation → ↓SVR → ↑RAAS →renal vasoconstriction

Glomerular scarring, podocyte effacement, nephrotic syndrome → FSGS

FSGS RF: obesity, heroin, HIV

62M, chronic back pain, bilateral small kidneys, UA w/ WBC casts → tubulointerstitial nephritis d/t analgesic nephropathy

Organophosphate poisoning tx: atropine then pralidoxime

53M, smoker, Gross hematuria at end of voiding → bladder cancer

Medications that cause hyponatremia: chlorthalidone

Thiazide diuretic s/e: ↓Na, ↓K, ↑Ca, ↑glucose, ↑cholesterol, ↑uric acid

H/o osteoporosis, abdominal pain, constipation, polydipsia → hypercalcemia (Milk-alkali syndrome → excessive intake of calcium and alkali)

Primary hyperaldosteronism → ↑Na, ↓K, ↑HCO3 (metabolic alkalosis)

Hyperkalemia is s/e of: ACEi/ARB, NSAID, amiloride, spironolactone, heparin, TMP, cyclosporine, BB, digoxin, succinylcholine

S/p coronary angiogram, purple mottling of BLE, ↑Cr, ↓C3 → cholesterol crystal embolism

Burning pain in L hand that worsens during dialysis → CTS

Recurrent nephrolithiasis, hypercalciuria → thiazide diuretic (chlorthalidone)

Symptomatic hypercalcemia NBS: IVF

Taking antacids, ↑Ca, ↓Phos, ↓Mg, AKI → milk-alkali syndrome (excess calcium intake)

Hematuria, ↓C3, ↓C4, ↓PLT, palpable purpura, joint pain → MPGN (cryoglobulins), SLE

Hematuria, low complement → IC glomerulonephritis (SLE, MPGN/cryoglobulin, PSGN)

Hematuria, normal complement → Ab glomerulonephritis (Goodpasture/anti-GBM, GPA, MPA, EGPA)

AGMA, sweet breath, UA w/ envelope crystals → ethylene glycol toxicity

Sosm in hyponatremia only necessary if: hyperlipidemia, hyperglycemia, paraproteinemia, mannitol

Wrist drop, foot drop, ↑Cr, levido reticularis → mononeuritis multiplex 2/2 PAN

S/p PRBC, muscle cramps → hypocalcemia (citrate in PRBCs)

S/p acyclovir, AKI → crystal induced AKI

Tertiary hyperPTH: CKD → ↓Ca, ↑Phos → ↑↑PTH

Edema, crackles, JVD, weight gain, ↑↑HTN, hematuria → glomerulonephritis (→ RAAS)

32M, BP 150/95, HR96, nl TSH, nl BMP, fine tremor → cocaine

70M, nephrotic syndrome, kidney bx w/ IgG → membranous nephropathy (PLA2R, if neg look for malignancy, SLE, HBV, NSAIDs)

CCB (amlodipine) induced edema → tx add ACEi

Acute confusion, ↑lactate, AGMA, hyperthermia → salicylate toxicity

Acute confusion, ↑lactate, AGMA, no hyperthermia → CO poisoning

Vomiting causes: hypokalemia hypochloremic metabolic alkalosis (kidneys can’t excrete bicarb)

Hypokalemia hypochloremic metabolic alkalosis tx: IVF

MVA, lethargic, ↑BUN, ↑↑↑CK, asterixis → uremic encephalopathy 2/2 AKI d/t rhabdo → tx HD

Nephrolithiasis (calcium oxalate) ppx: limit sodium, normal calcium, increase potassium

Acute tubular necrosis (UA) → muddy brown casts

Glomerulonephritis (UA) → RBC casts

Interstitial nephritis, pyelonephritis (UA) → WBC casts

Nephrotic syndrome (UA) → fatty casts

Chronic renal failure (UA) → broad and waxy casts

pH 7.08, PaCO2 42, bicarb 12 → mixed metabolic acidosis + respiratory acidosis

68M, acute pyelonephritis, recurrent UTI → BPH

AMS, on morphine, CKD → morphine toxicity

22M, hematuria after hiking, Hgb 10, UA w/ RBCs and no casts → renal papillary necrosis 2/2 sickle cell trait

Nephrolithiasis tx: fluids, pain control, alpha-1 antagonist (tamsulosin)

Tylenol OD, nl labs → tx administer charcoal (if <4 hr), then N-acetylcysteine

32M, HTN, bilateral abdominal masses → ADPKD

72F, proteinuria, ulnar deviation of fingers, ecchymoses → RA c/b AA amyloidosis

BMP in salicylate poisoning → pH 7.4, PaCO2 23, HCO3 14 (metabolic acidosis w/ respiratory compensation)

Pancreatic cancer s/p chemo, flank pain, hematuria → renal vein thrombosis

Found down, ↑K, ↑phos, ↓Ca, ↑LFTs → rhabdo

Drugs that cause myotoxicity rhabdo: statin, fibrates, colchicine, ethanol, cocaine

Brittle hair, skin depigmentation, ataxia, peripheral neuropathy, microcytic anemia → Cu deficiency

Thyroid dysfunction, cardiomyopathy, immune dysfunction → selenium deficiency

Alopecia, perioral rash, hypogonadism, impaired taste → Zn deficiency

Petechiae, perifollicular hemorrhage, gingivitis, bruising → Vit C deficiency

VWD on desmopressin, nausea, HA → SIADH

Ototoxic medications: aminoglycosides, cisplatin, salicylates (high dose), loop diuretics

Recurrent UTI, kidney stone → struvite (magnesium ammonium phosphate) stone (d/t ↑urine ammonia)

NAGMA ddx: diarrhea, carbonic anhydrase inhibitors, RTA, ileal loop, pancreatic fistula

Renal transplant, AKI after ACEi initiation → transplant renal artery stenosis

Acute renal failure, ↑Ca → MM

H/o gout, nephrolithiasis → uric acid stones → tx potassium citrate

Fever, weight loss, flank pain, recent UTI, UA w/o bacteria → renal abscess

Metabolic alkalosis ddx: vomiting, diuretics, hyperaldosteronism

Flank pain, decreased UOP, intermittent high volume urination, ↓K → nephrolithiasis

Crohn disease predisposes patients to urinary calcium oxalate stones

Antihypertensive that causes edema: CCB (amlodipine, nifedipine) → tx ACEi

24M, hematuria, recent sore throat → IgA nephropathy

ACEi cough mechanism: impaired metabolism of kinins and substance P

ESA s/e: HTN

Unilateral hydronephrosis, UA w/ RBC and no bacteria → bladder cancer

LLQ pain radiating to groin, nl testicular exam → ureterolithiasis → NBS abdominal U/S (NOT CT, UA)

# Heme/Onc

Hoarseness, smoking hx, bleeding laryngeal mass → SCC

Mediastinal mass, pruritis, ↑LDH, cough, CP → HL

HbSS, macrocytic anemia → adverse effect of hydroxyurea

Zofran MOA: serotonin (5HT) receptor antagonist

Bad breath, sore throat, enlarged tonsil, cervical LAD → HPV HNSCC

Nocturnal back pain, h/o breast CA → spinal MRI

Bone mets, ↑Ca → hypercalcemia of malignancy (PTHrP) → tx w/ bisphosphonates, densoumab

Tonsil lesion, ulcerated, 100 P-Y → SCC

Meningioma RF: age, female, NF2, radiation exposure

SCD, splenomegaly → anemia, ↑retic, ↓PLT

SCD, parvoB19 → aplastic crisis (anemia, ↓retic)

Trastuzumab s/e: cardiotoxicity

Bladder cancer screening: none if asymptomatic

15M w/ CF, bruising → Vit K deficiency (fat malabsorption) → ↑PT, nl PTT

Ecchymoses, nl PLT, nl PT, nl PTT, s/p bariatric surgery → Vitamin C deficiency

Normocytic anemia, ↑retics, otitis media → amoxicillin induced hemolytic anemia

CKD, nl PLT, nl PT, nl PTT → platelet dysfxn → tx desmopressin (DDAVP)

H/o idiopathic chronic pancreatitis, epigastric pain, weight loss → Pancreatic CA (CT abdomen)

Microcytic anemia, prolonged bleeding, ↑PLT → IDA

H/o NSCLC, focal vertebral tenderness, back pain worse at night → mets

Tender erythematous palpable veins on arm and chest → migratory thrombophlebitis → visceral adenocarcinoma

Watery diarrhea, on chemotherapy → tx loperamide

59M, urinary frequency, suprapubic pai, UA w/ RBCs → bladder cancer

HIT tx: stop heparin + start argatroban

Most common source of liver mets → CRC

Auer rods → APL → r/o consumptive coagulopathy → tx ATRA

Hand swelling, ↑ESR, ↓WBC, HSM, LAD → RA w/ Fetty syndrome

Hematoma after minor trauma, Uncle w/ bleeding disorder → Hemophilia (also hemarthrosis)

Microcytic anemia, does not improve with iron → thalassemia

4mo, gamma tetramers → Hgb barts (HgbH disease) → target cells, ↓MCV, ↑RBCs

35M w/ HIV, hemolytic anemia, ↓PLT → TTP → tx plasma exchange, steroids, rituximab

Metastatic colon adenocarcinoma to liver tx → surgical resection of both

Hemolytic anemia, ↑MCHC, cholecystitis → hereditary spherocytosis (w/ pigment gallstones)

WBC 54k, smudge cells → CLL

17M, fatigue, fever, pruritis, nontender LAD → HL → LN bx

Colonoscopy w/ 2x hyperplastic polyps → repeat colo in 10 yrs

SIADH, Na 117 tx → HTS

Sickle cell trait complications → hematuria, hyposthenuria

22F, easy bleeding, PLT 150k, PTT 44 → vWD

Splenic infarct after airplane ride, ↑retic, ↑indirect bili → sickle cell trait

PE tx in pt w/ eGFR<30 → unfractionated heparin → bridge to warfarin

SCD pt w/ stroke → exchange transfusion

Macrocytic anemia, shiny tongue, neuropathy, ↓DTRs → VitB12 deficiency (autoimmune atrophic gastritis → gastric CA)

63M, multiple liver masses, microcytic anemia → CRC

S/p thyroidectomy for PTC, ↑thyroglobulin → cancer recurrence

SCD on HU → HbS + ↑HbF

Hgb 19, PLT 240k, WBC 5.1k, BMI 45 → OSA induced PCV (↑epo)

17F, ↓PLT, otherwise nl labs → ITP

62M w/ IDA → colo (c/f GIB)

15 yr s/p HL tx w/ chemoRT → risk of second malignancy > recurrence

57M, back pain, weight loss, nl exam → pancreatic tail cancer (dx CT)

50F, radiating shoulder pain, miosis, ptosis → superior pulmonary sulcus (Pancoast) tumor → CXR

58M, macrocytic anemia → antibodies against intrinsic factor (NOT dietary B12 deficiency)

Pseudothrombocytopenia: clumped platelets ↓PLT count

Bleeding, nl PLT, impaired aggregation → Glanzmann thrombasthenia

Develops urticarial rash during platelet transfusion → transfusion rxn → diphenhydramine

H/o AV replacement, anemia x6 mo, ↑retic, ↓PLT → valvular hemolysis (dx TTE)

Blood smear in scleroderma → MAHA (renal crisis → HUS/TTP)

Tamoxifen s/e: endometrial hyperplasia/cancer/polyps, VTE, hot flashes

66M, back pain, constipation → MM (↑Ca)

59M, R ear pain, nontender cervical LAD → HNSCC (referred otalgia) → EGD

53M, unprovoked DVT → cancer screening

17M, ITP unresponsive to IVIG → splenectomy

66M, back pain, irregular hyperdense sclerosis L1/L2, ↓Ca, ↑Phos, ↑ALP → metastatic prostate cancer

56M, facial plethora, HTN, splenomegaly → PCV → tx phlebotomy

Chr 22 abnormality → CML (BCR-ABL) → tx imatinib

Lymphocytes w/ large cytoplasm → EBV

Short acting opioids: oxycodone, morphine

Long acting opioids: fentanyl, ER-morphine

74M, neuropathy, HA, HSM, LAD, IgM spike → Waldenstrom macroglobulinemia

IgA/IgG spike → MGUS

Bone pain, IgA/IgG spike → MM

5% HbA2, 95% HbF → beta thalassemia major → tx PRBC transfusions + chelation

Meds to avoid in G6PD deficiency: dapsone, isobutyle nitrite, nitrofurantoin, rasburicase, primaquine

54M, unintentional weight loss, ascites, ↑LFTs, solitary liver nodule → HCC

Solitary liver nodule, OCP use, obese → hepatic adenoma (benign)

PNA on CTX + azithromycin, anemia → drug induced hemolytic anemia

HIT increases risk of: arterial AND venous thrombus

Cyclophosphamide s/e: hemorrhagic cystitis, bladder carcinoma, myelosuppression

Priapism ddx: SCD, PCV, CML, MM, spinal cord injury, drugs

Priapism, HSM → CML

ED, no morning erections, bilateral hand pain, small testes → hereditary hemochromatosis

Cervical LN w/ SCC, smoking history → HSCC → NBS laryngopharyngoscopy

21M, anterior mediastinal mass, ↑bHCG, ↑AFP → mixed germ cell tumor

Hemolytic microcytic anemia, ↑MCHC → HS

Hemolytic microcytic anemia, ↓MCHC → beta-thalassemia

Warfarin reversal: PCC

Heparin reversal: protamine sulfate

SCD, macrocytic anemia x3 wk, ↓retic → folate deficiency

SCD, acute normocytic anemia → aplastic crisis

54M w/ Cdiff, WBC 52k (30% bands), ↑leukocyte alkaline phosphatase → leukemoid reaction

Microcytic anemia, ↓Fe, ↓ferritin, ↑TIBC, ↓transferrin sat → IDA

Microcytic anemia, ↓Fe, ↑ferritin, ↓TIBC, ↓transferrin sat → ACD

Hydroxyurea s/e: myelosuppression

Neoplasm of parafollicular cells in thyroid → medullary thyroid cancer (calcitonin)

Medullary thyroid cancer surveillance: calcitonin

Papillary/follicular thyroid cancer surveillance: thyroglobulin

S/p chemo, ↑uric acid, ↑K → TLS → tx rasburicase + IVF

S/p chemoRT, JVD → constrictive pericarditis

Lynch syndrome: colorectal, endometrial, ovarian cancer

FAP: colorectal, brain, osteoma

VHL: hemangioblastoma, clear cell renal cancer, pheo

MEN1: parathyroid adenoma, pituitary, pancreatic adenoma

MEN2: MTC, pheo, parathyroid

BRCA: breast, ovarian cancer

66F, recurrent PNA, osteolytic rib fx → MM (impaired ab production)

H/o SLE, fatigue, fever, weight loss, ↑LDH → NHL

Macrocyticnemia, hypersegmented neutrophil, nl MMA → folate deficiency

Macrocyticnemia, hypersegmented neutrophil, ↑ MMA → cobalamin (Vit B12) deficiency

Pounding in neck, weight loss, tricuspid regurgitation → carcinoid syndrome

Dark urine, back pain, recent URI → G6PD deficiency

Smear w/ bite cells and erythrocyte inclusions → G6PD deficiency

SCD, hypoxia, chest pain, fever → acute chest (vasocclussion of pulmonary microvasculature)

Pancreatic cancer RF: cigarettes, obesity, chronic pancreatitis

34F, middle mediastinal mass, frequent URI → bronchogenic cyst

Blood smear in asplenic patient: Howell-Jolly bodies (precursor nuclei)

How to prevent AKI w/ chemotherapy → IV NS + rasburicase (prevent TLS)

28M, painless hypoechoic unilateral testicular mass → testicular cancer → radical orchiectomy (NOT bx)

Pulse ox 85%, PaO2 142, arterial O2 sat 99% → methmoglobinemia

Signs that parotid mass is malignant: cranial nerve dysfunction (facial droop, numbness)

HA, dizziness, nausea, Hct 60% → CO poisoning (carboxyhemoglobinemia)

Vaginal cancer, SCC RF: age, HPV, tobacco

Vaginal cancer, clear cell adenocarcinoma RF: age, HPV, tobacco, in utero DES

6M, polyuria, Na 150, two small lytic lesions on femur and skull → Langerhans cell histiocytosis

XR w/ lytic lesion surrounded by concentric layers of reactive bone → osteosarcoma

24M, pulmonary nodules, retroperitoneal LAD → testicular cancer

Hereditary spherocytosis confirmatory tests: osmotic fragility, eosin-5-maleimide

Microcytic anemia, target cells, nl erythrocyte count → thalassemia → reassure

Pancytopenia w/ normal smear → aplastic anemia

60M. h/o NSCLC, solitary brain met → surgical resection (NOT chemotherapy)

SCD, splenomegaly, shock, anemia → acute splenic sequestration → IVF + PRBC + splenectomy (if recurrent)

55F, Hgb 8.7, PLT 610k, WBC 67k, ↓LAP, myelocytes → CML

62F, unintentional weight loss, firm flank mass, intermittent fever → renal cell carcinoma

17M, anterior mediastinal mass, pancytopenia → ALL

68M, normocytic anemia, ↑total protein, rouleaux on smear → MM

BMP in TLS: ↓Ca, ↑phos, ↑K, ↑uric acid

Dysphagia, Barrett esophagus, concentric narrowing of esophagus → esophageal stricture

Dysphagia, Barrett esophagus, asymmetric narrowing of esophagus → esophageal cancer

CLL pt w/ anemia → AHA d/t warm agglutinins (IgG)

63M w/ fixed nontender subareolar mass → NBS mammography (NOT excision)

Appetite for paper and ice → Picca (d/t anemia)

S/p dapsone, blood in UA → G6PD deficiency

62M, smoker, weight loss, ↑ALP, ↑AST/ALT, ↑bili → pancreatic cancer → NBS CT abdomen (NOT amylase, lipase)

Plumber, RLL cavitary mass → asbestosis

Contraception for breast cancer pt beginning chemotherapy → copper IUD (NOT hormonal)

Hemolytic anemia, ↓PLT, hepatic vein thrombosis → PNH

Muscle weakness, does not improve w/ repetitive stimulation, RLL mass → dermatomyositis

Prostate CA, back pain, bladder dysfxn → spinal cord compression → NBS IV steroids (NOT imaging)

62M, firm nontender submandibular mass, R ear pain → SCC → NBS laryngopharyngoscopy and FNA

Carcinoid tumors can cause: niacin deficiency

Diarrhea, dermatitis, glossitis, angular stomatitis, dementia → niacin deficiency

Pancytopenia, no splenomegaly → aplastic anemia

Pancytopenia, splenomegaly → myelofibrosis

Anemia, tingling in toes → Vit B12 cobalamin deficiency

57M, hematuria, ↑Hgb, ↑PLT, varicocele → RCC

SCD, priapism tx: aspirate blood from corpora cavernosa, phenylephrine injection

2M, microcytic anemia, high cow’s milk intake → IDA

IDA RDW: ↑

Beta thalassemia RDW: ↓

IDA MCHC: ↓

HS MCHC: ↑

45M, epigastric pain, diarrhea, duodenal ulcer → Zollinger-Ellison (gastrinoma → inactivation of pancreatic enzymes)

Asplenia smear: Howell-Jolly body

SCD smear: Howell-Jolly body

Hemolytic anemia, s/p Bactrim, bite cells → G6PD deficiency (even if G6PD test negative)

HA, fever, ↓Hgb, ↓PLT, ↑Cr, schistocytes → TTP → tx plasma exchange

Microcytic anemia, nl RDW → thalassemia minor

Mediastinal and inguinal LAD x1 yr, nl CBC → NHL (Bcl-2)

65M, new DM-2, weight loss → pancreatic cancer

↑Hgb, ↑epo → RCC

# ID

Osteo NBS: bone bx (NOT wound cx)

Recurrent jaw pain, mass, fever 🡪 sialolithiasis

Osteomyelitis in children → Staph, salmonella → CTX + clindamycin

SCD, knee pain, fever 🡪 osteomyelitis

URI, pooled oral secretions, stridor → epiglottitis (Step pneumo, H flu) → NBS: lateral neck XR

Aseptic meningitis, rash, sexually active → HIV

Myalgias, cold hands, rapid progression, fever → N meningitidis (NBS: LP)

HIV, ring enhancing brain lesion → Toxo (tx: sulfadiazine + pyrimethamine)

HIV, Missouri, ↑LFTs, reticulonodular opacities → Histo (Tx: Amphotericin)

Gastroenteritis pathogen: norovirus

Splenectomy vaccines: S pneumo, H flu, N meningitis

Unilateral axillary LAD, s/p clindamycin → Bartonella

Osteomyelitis, stepped on nail → PSA

Face ash w/ sharply demarcated borders, external ear, LAD → erysipelas (GAS)

HAV transmission: close contacts, sexual

Sore throat, pharyngitis, LAD, autoimmune hemolytic anemia → EBV

Fever, malaise, lymphocytosis, ↑LFTs, MSM → CMV

Lower back pain, h/o UTI, ↑ESR → osteomyelitis (S aureus)

HIV, RUL PNA, CD4 > 200 → TB

PPD threshold: >15 w/o risk factors

Right abdominal pain, s/p chemo, lightly brushing skin is painful → VZV

Ear pain, granulation tissue in external auditory canal, facial droop → necrotizing otitis externa (PSA)

Positive STD → also test for gonorrhea, chlamydia, HIV, syphilis

35M, recurrent sinopulmonary infxns, pulmonary fibrosis → CVID (NBS: immunoglobulins)

48M w/ hereditary hemochromatosis cut foot on dock → Vibrio vulnificus

GPRs in lungs and brain, acid fast → Nocardia → tx bactrim

Candida bacteremia → central venous catheter infxn

Fever, HA, n/v, LP w/ ↑protein, rash on trunk and extremities → Rickettsia

Small ulcer at bug bite → brown recluse spider bite → necrosis and eschar

H/o GSW, 3 yrs later PNA and bcx wit GPC → h/o splenectomy

Tdap vaccine schedule: q10yr

Pneumo vaccine schedule: in >65yr or chronic disease → PCV20 or PCV15 then PCV23

HepA and HepB vaccine in patients w/ cirrhosis

HA, myalgia, pancytopenia, rash, ↑LFTs, fever → Dengue (Aedes)

Single penil ulcer w/ induratedc borders → syphilis (chancre) → dx FTA-ABS > VDRL

23F, 3d f/c, RLL PNA → S pneumo

RUQ pain, solitary hypoechoic liver lesion, travel to Nepal, ↑WBC → Entamoeba histolytica (protozoan)

80F, persistent cough, compressive unilateral hilar LAD, RLL infiltrate → pulmonary TB

Painless superficial ulcers in circumferential pattern with white borders on glans penis → circinate balantis (reactive arthritis) 2/2 chlamydia

Immunosuppressed, bilateral pulmonary infiltrates, ↑LDH → PCP PNA

Empyema organisms: oral anaerobes > Strep pneumo, Staph aureus

54F, PNA, meningitis → Strep pneumo

HIV +, PPD 8mm → latent TB (>5mm) → tx rifapentine + INH

LP: ↓glucose, ↑protein, WBC: 230 (70% lymphocytes) → TB

Diarrhea, arthritis, fever, PAS macrophages in intestinal bx → Whipple disease

Meningococcal meningitis tx: vanco + CTX

Muscle pain, fever, subungal splinter hemorrhages, periorbital edema, chemosis, ↑eos → Trichinellosis

Recurrent chlamydia after azithromycin x1 → reinfection from untreated partner

Rash, fever, joint pain, ↓WBC, ↓PLT → dengue

Fever, joint pain, HSM, ↓RBC → malaria

Fever, cheek and trunk rash → ParvoB19

S/p kidney transplant, hematochezia, atypical lymphocytes, colonic ulcerations → CMV

Fever, aches, HA, ↓PLT, ↑LFTs, rash on wrist and ankles → RMSF → tx doxycycline

35M, fever, night sweats, weight loss, LUL consolidation, lytic lesions, verrucous skin lesions → blasto

Acute bacterial prostatitis tx → FQ (levofloxacin) or bactrim

26F w/ SLE on pred, fever, dyspnea, ↑LDH, CXR w/ infiltrates, ↑CO2 → PJP PNA

Pyelonephritis, non-obstructive renal calculus, UA w/ pH 8.5 → Proteus

Endocarditis after dental procedure → Step sanguinis, Strep mitis, Strep mutans, Strep milleri

25M, dyspnea, bilateral infiltrates, oral white plaques → AIDS (PJP) → bactrim pred

21F, vomiting, diarrhea, fever, erythroderma → TSS (S aureus)

HIV, CD4 < 200, ppx: PJP (bactrim only)

HIV, CD4 <100, ppx: toxo (bactrim only)

Submandibular lesion, yellow granules, GPRs w/ branching → actinomyces → tx penicillin

TB on RIPE, mildly ↑LFTs → c/w RIPE

CMV transmission: urine, saliva

25M, n/v over last 3 hrs, reheated rice → Bacillus cereus

DM osteomyelitis → polymicrobial infxn by contiguous spread

S/p splenectomy, fever → amoxicillin-clavulanate

Dirty air conditioning → Legionella (NOT pertussis)

3 mo chronic cough, vomiting → Pertussis

HIV, HA, n/v, CTH w/ enlarged ventricles, CN VI palsy → cryptococcus neoformans

HIV, CD4 200, fevers, diffuse LAD, VL undetectable → NHL (EBV)

HIV, CD4 30, severe odynophagia → CMV esophagitis

Forearm ulcer for 1 wk, intracellular GN coccobacilli → tularemia

DM-2, AGMA, foot ulcer, afebrile → IV abx

38F, jaundice, schoolteacher, ↑↑↑AST/ALT → HAV

HIV, substernal chest pain, oral thrush → oral fluconazole (NOT EGD)

Cough, abdominal pain, ↑LFTs, s/p transplant → CMV

S/p bee sting 1 d ago, swelling erythema and induration 11cm from site of sting → large local reaction

S/p BMT, hemoptysis, CP, fever, RUL nodular lesion w/ GGOs → aspergillosis

Abx to avoid in AAA → FQ (collagen degradation)

Mono complications: airway obstruction, AHA, splenic rupture

Nasal packing, shock, v/d, ↓PLT, macular rash → TSS

Crackles on exam → CXR (CAP)

Clostridium septicum → colonoscopy (c/f CRC)

HIV, HA, fever, bilateral papilledema, nl CTH → cryptococcus

50M, diarrhea, LAD, hyperpigmentation, AoR, cough, arthralgia, PAS+ lamina propria → Whipple disease

CXR w/ hilar LAD, bilateral alveolar opacities, granuloma w/ yeast forms → Histo

CXR w/ unilateral infiltrate and ipsilateral hilar LAD, spherules w/ endospores → Coccidio

32F, recurrent PNA, h/o bloody diarrhea → CVID

HIV, KS → tx ART only

19M, cough, HA, macular rash, CXR w/ interstitial markings → Mycoplasma

24F, migratory arthritis, pustular/vesiculopustular lesions → gonococcus

Meningococcus vaccines: 11 yo + 16 yo

Patients on anti-TNF should avoid live vaccines (intranasal influenza, MMR, typhoid, VZV)

Foul smelling sputum, fever, CT w/ air fluid level → lung abscess w/ anaerobic bacteria

35M, testicular neoplasm, ↑E2 → Leydig cell tumor

35M, testicular neoplasm, ↑bHCG, ↑AFP → nonseminoma germ cell tumor

HIV, friable nodule on face → bacillary angiomatosis (Bartonella)

DM-2 w/ 3 cm foot ulcer x4 wk → NBS XR for osteomyelitis

S gallolyticus endocarditis → BNS colonoscopy

Watery diarrhea, hiked in Europe, lakes, no WBCs or blood in stool → crytposporidosis

S/p heart transplant, LAD, fever, +EBV → posttransplantation lymphoproliferative disorder

Erythematous streaks from wound, LAD → lymphangitis (Staph, Strep) → tx cephalexin

Low back pain, L3/L4 TTP, afebrile, IVDU, ↑PLT → osteomyelitis

Tick bite, fever, HA, ↓PLT, ↓WBC, ↑LFT → erlichia → tx doxycycline

S/p stage I CRC resection → colo in 1 yr, then q3-5yr

Endocarditis, h/o UTI → enterococci

Endocarditis, h/o PIV → Staph epi

Fever, diarrhea, vomiting, crackles, Na 128 → Legionella → tx FQ

Fever, cough, skin ulcer, spleen and liver masses, East Asia, GNR → Burkholderia pseudomallei (melioidosis) → tx ceftazidime or carbapenem then Bactrim

Endocarditis NBS: bcx, then TTE

Persistent cough, chest wall pain, 80% lymphocytes → Pertussis

Fever, diffuse rash starting on trunk, grey mucosal patches in mouth, LAD → syphilis

Epididymitis tx → abx (NOT observation), most likely G/C or UTI

25M, BMI 34, painful fluctuant mass above anus → pilonidal disease

Measles contact precautions: airborne

11 mo, cough, conjunctivitis, rash that spares hands and feet → measles

Bit by pet dog → abx + observe dog for rabies

Bit by wild dog → abx + rabies post exposure prophylaxis

MSM, watery to bloody diarrhea → Shigella

Fleshy verrucous bumps in groin → condylomata accuminata (HPV)

Rhinorrhea, nasal congestion, conjunctivitis, cough → viral pharyngitis → symptomatic tx

Rhinorrhea, nasal congestion, conjunctivitis, fever, LAD, no cough → GAS → tx penicillin

58M w/ HIV, impaired memory and attention, MRI w/ ventricular enlargement → HIV associated neurocognitive dysfunction

70F, somnolent, cough, fever, RLL consolidation → Strep pneumo

Fever, violaceous skin lesions, yeast, Wisconsin → blasto

Auditory canal w/ purulent discharge and granulation tissue → necrotizing otitis externa → tx IV cipro

Snake bite tx → antivenom Fab

HIV, HA, lethargy, CT w/ hydrocephalus and meningeal enhancement → TB

Syphilis, penicillin allergy → tx doxycycline

Back pain, wide gait, urinary incontinence, small pupils → tabes dorsalis (syphilis)

Found tick → carefully remove and reassure

Lyme disease ppx criteria: ixodes tick + >36 hr + w/n 72 hr of removal + New England + not pregnant

Roomate has N meningitidis → ppx w/ rifampin, CTX or cipro regardless of vaccination status

Fever, fatigue, HA, ↑LFT, New England → babesiosis (Ixodes) → NBS blood smear

HIV, watery diarrhea, fever → cryptosporidium

55F, bilateral pain in MCP and PIP, afebrile, nl ESR, day care → ParvoB19

29M, watery to bloody diarrhea, RLQ pain → EHEC

VZV ppx, non-immune, immunocompetent → VZV vaccine

VZV ppx, non-immune, immunocompromised → VariZIG

VZV ppx, immune → observe

Hypopigmented patch on arm, thick ulnar nerve, loss of pain and temperature sensation → leprosy (NBS skin bx)

Pertussis post exposure prophylaxis → macrolide postexposure ppx to all contacts regardless of vaccination status

Fatigue, weakness, DOE, violaceous nodules on fingers, microcytic anemia ↑ ESR, UA w/ blood and protein → endocarditis

Screening tests in newly diagnosed HIV: G/C, syphilis, HAV, HBV, HCV, TB

Palpable purpura, glomerulonephritis, ↓DTRs, fever → small vessel vasculitis (HCV, ANCA, IgA)

HA, fever, myalgia, rash, ↓PLT, Na 129 → RMSF → tx doxycycline

6M w/ CF, influenza PNA → tx cefepime + oseltamivir + vanco (also treat for S aureus)

7M, nasal congestion x3 d, facial pressure → acute viral rhinosinusitis → supportive

7M, nasal congestion x10 d, fever, facial pressure → acute bacterial rhinosinusitis → abx

16M, T 102F, erythematous pharynx, pale, BLE TTP → meningococcus

Fever, AMS, ptosis, dilated pupils, IVDU → wound botulism

Cough, hilar LAD, fever, nodules over shins, bilateral opacities, noncaseating granulomas, Mississippi → noncaseating granulomas

RUQ pain, fever, ↑ALP, Mexico, cystic liver lesion → entamoeba histolytica → stool PCR (if diarrhea), serology

Fever, weight loss, ↑WBC, left pleural effusion, splenic fluid collection → endocarditis c/b splenic abscess

HIV, bloody diarrhea → CMV

HIV, watery diarrhea → cryptosporidium

HIV, watery diarrhea, ↑↑fever → MAC

Bacterial sinusitis pathogens: H flu > Strep pneumo > Moraxella

Dysphagia, drooling, muffled voice, tongue displaced, crepitus in submandibular area → Ludwig angina (dental infxn) → tx augmentin, clindamycin

16F, joint pain, rash on face chest and back, posterior auricular LAD → rubella

Cough, arthralgia, tender nodules on shins, CXRF w/ RLL infiltrate → coccidio

8 mo, fever, emesis, LP w/ gram negative diplococci → N meningitidis

N meningitidis contact precautions: droplet

23M, sore throat, fever, swollen SCM muscle, internal jugular vein thrombosis, cavitary lung nodules → Lemierre syndrome (Fusobacterium)

Recent sore throat, grimacing face, friction rub, STE → rheumatic fever (GAS)

Papule on finger that ulcerates w/ odorless drainage → sporotrichosis → tx oral itraconazole

Diarrhea, night sweats, weight loss, macular rash, fever, nontender cervical LAD → acute HIV

+ FTA-ABS, - VDRL → previously treated syphilis or early syphilis

+ VDRL, - FTA-ABS → false positive (pregnancy, IVDU, APS, HIV)

8F, hypotonia, repeated throat clearing, emotional lability, OCD → Sydenham chorea

Brown recluse spider bite, necrotic, expanding → tx wound care (NOT abx)

HIV, IVDU, multiple cavitary pulmonary nodules, fever, ↑WBC → septic pulmonary emboli d/t infective endocarditis (S aureus)

5F, UTI on abx, persistent fever, vomiting → renal abscess → NBS renal U/S

On chemotherapy, ↓ANC, fever, chills → GN bacteremia → tx pip-tazo

Campylobacter tx: symptomatic care only (abx only if fever, bloody stool, or immunocompromised)

Cryptococcus tx: amphotericin B + flucytosine x2 wk, then fluconazole x8 wk

5M, dysphagia, drooling, respiratory distress, leaning forward → epiglottitis

28M, corrugated white plaques on tongue that cannot be scraped off, weight loss → oral hairy leukoplakia → NBS HIV test

Recent diarrhea, BLE weakness, ↓DTR, ptosis, double vision → Miller Fisher syndrome (GBS)

Recent diarrhea, descending weakness → botulism

63M, tender mass in scrotum, dysuria → epididymitis (E coli)

30M, tender mass in scrotum → epididymitis (gonorrhea, chlamydia)

Cough x 2mo, weight loss, bilateral reticunodular CXR → miliary TB

HIV, CD4 50, purple pedunculated skin lesions, liver lesions → bacillary angiomatosis (bartonella)

Cough, anemia, ↑monocytes, ↑total protein → TB

Fever, rash, arthralgia, ↓WBC, ↓PLT, Caribbean → chikungunya virus

RUQ pain, hepatic cyst w/ daughter cysts → echinococcus

RUQ pain, smooth cystic subcapsular mass → entamoeba histolytica

RUQ pain, biliary disease, undercooked fish → liver fluke (Clonorchis)

17M, watery mucous diarrhea, RLQ pain → infectious ileocecitis (campylobacter)

Confusion, subconjunctival hemorrhage, holosystolic murmur, brain abscess → endocarditis

LUL cavitary lesion, branching partially acid fast filamentous rods → nocardia → tx Bactrim

Ppx in organ transplant recipients: Bactrim, PCV vaccine, HBV vaccine, flu vaccine

# Endo

Thyrotoxicosis MOA: ↓SVR, ↑SV/contractility, ↑HR 🡪 high output HF

Diabetic neuropathy tx: pregabalin, TCA (avoid in elderly, h/o MI)

Weight loss, ↓Na, ↑K → PAI (Addison), NBS: 8AM cortisol, plasma ACTH, ACTH stimulation test

Facial plethora, striae, HTN → Cushing syndrome, NBS: 24h cortisol

HHS: osmotic diuresis → ↑Sosm, ↑ serum K (↓insulin) but ↓ total K (urinary loss)

DKA → osmotic diuresis → ↓ total K

Papillary thyroid cancer → sx → radioiodine ablation if ↑risk, levothyroxine (to ↓TSH)

Velvety hyperpigmented plaques → acanthosis nigricans (PCOS, DM)

Glycemic control reduces risk of: nephropathy, retinopathy (NOT MI, stroke, death)

Depressed mood, salt craving → adrenal insufficiency (cosyntropin stim test)

Metformin a/e: lactic acidosis, renally cleared

Hypothyroidism tx that worsens ophthalmopathy → radioiodine ablation

Osteoporosis, hypercalcemia, bone pain, ↑Cr, ↓albumin, ↓Hgb → MM (SPEP)

Diabetes management during marathon → reduce basal and bolus insulin doses

Fatigue, constipation, nephrolithiasis → hypercalcemia (hyper PTH) → CPPD

PTU a/e: fulminant hepatic necrosis, agranulocytosis

Methimazole a/e: teratogenicity, agranulocytosis

Palpitations, unintentional weight loss, edema, DOE → high output HF 2/2 hyperthyroidism (↓SVR)

Depression, poor sleep, muscle weakness, kidney stones, HTN, ↑Ca → hyper PTH

Tetraplegic in facility, muscle aches → osteomalacia d/t Vit D deficiency

Hot thyroid nodule (↓TSH, ↑radionuclide uptake) → treat

Cold thyroid nodule → FNA

Tetraplegic, ↑Ca, ↓PTH → immobilization osteoclastic bone resorption → tx bisphosphonate

ED, ↓FSH, ↓LH, ↓testosterone → secondary hypogonadism → NBS prolactin level

Sepsis, hypoglycemia → increase tissue glucose use

ICU, ↓TSH, ↓T3, nl T4 → euthyroid sick syndrome → repeat outpatient

Weight loss, ↓Na, ↑K, pigmentation at palm → primary adrenal insufficiency (autoimmune)

Steroid induced adrenal insufficiency still has normal aldosterone and MSH

↓TSH, ↑T3, ↑T4, ↓RAIU → autoimmune thyroiditis

↓TSH, ↑T3, ↑T4, ↑RAIU → Graves

↑TSH, ↓T4, ↑prolactin → primary hypothyroidism (→infertility)

Weakness, abdominal pain, loss of appetite, hyponatremia → adrenal insufficiency

Adrenal insufficiency w/ hyperpigmentation → primary (autoimmune, malignancy)

Adrenal insufficiency, nl Na/K, no hyperpigmentation → secondary (pituitary ischemia, steroids)

↓T3, nl T4, nl TSH → euthyroid sick syndrome

HHS tx → NS then 0.45% and insulin

42F, fatigue, hyperpigmentation in palmar crease → adrenal insufficiency → AM cortisol

↑T4, ↓TSH, no RAIU, anti-TPO → painless thyroiditis → tx BB

↑T4, ↓TSH, no RAIU, ↑ESR, recent URI → subacute granulomatous thyroiditis (de Quervain) → tx pred

↑T4, ↓TSH, ↑ RAIU → Graves → tx methimazole

Recurrent hypoglycemia → ↓autonomic response

PNA, ↑T4, ↓T3, ↓TSH → euthyroid sick syndrome (adaptation to illness)

35M, ↑T4, ↓TSH, ↑ESR, tender goiter, fever → subacute de Quervain thyroiditis (postviral)

38M, depressed mood, insomnia, obesity, ↓K → Cushing syndrome → 24hr urine cortisol

40M, ↑PTH → surgery

40M, ↑Ca, ↓Phos, ↓PTH → cancer (PTHrP)

Graves disease on PTU, sore throat and oral ulcerations → drug induced neutropenia → d/c PTU

35M, low energy, cold intolerance, ↓DTR, low libido, pale skin → panhypopituitarism

Primary adrenal insufficiency tx: hydrocortisone/prednisone + fludrocortisone

Obesity, irregular menses, hair on upper lip, skin atrophy, bruises → Cushing syndrome

Obesity, irregular menses, hair on upper lip, normal skin → PCOS

Postpartum thyroiditis tx: BB only, self-limited

Painful EOM, fatigue → Graves

DM-2, urine albumin/creatinine >30 → add ACEi/ARB or SGTL2i

Prolactinoma complications → ↓FSH/LH (↑r/o osteoporosis)

Prolactinoma tx: dopamine agonists (cabergoline, bromocriptine)

34M, HA, HTN, orthostasis, ↑glucose → pheo

Joint space widening, enlarged tongue, ↑glucose, ↓testosterone → acromegaly

Hyperthyroid, single hot nodule → toxic adenoma → tx methimazole, PTU

Untreated toxic adenoma can lead to: osteoporosis, hypercalcemia

↑TSH, nl T4 → subclinical hypothyroidism → NBS anti-TPO (Hashimoto)

Correct Na in DKA: Na + 2 for every 100 glucose is over 100

Most sensitive test for diabetic nephropathy: urine albumin/creatinine ratio

30M, weight gain, ↑LDL, ↑TG → hypothyroidism

Proximal muscle weakness, weight loss, ↑HR, ↑DTRs → hyperthyroid myopathy

Pituitary surgery complications: diabetes insipidus (↓ADH), SIADH

Infertile, 6ft tall, BMI 20, gynecomastia, hypogonadism → Klinefelter syndrome (dysgenesis of seminiferous tubules)

On OCP, nl TSH, ↑T4 → increased T4 binding globulin (d/t estrogen)

Muscle weakness, hirsutism, weight gain → Cushing syndrome

Cough, lightheaded, orthostasis, ↓Na, ↑K, ↓gluc, ↑eos, LUL opacities, mediastinal LAD → primary adrenal insufficiency 2/2 miliary TB

Small testes, ↓testosterone, ↓LH → secondary hypogonadism (opioids, steroids, weight loss)

26F, cough, LAD, bumps on legs, facial eruptions, constipation → sarcoidosis (↑calcitriol → ↑Ca →↓PTH)

Vitamin D def ddx: lactose intolerance, vegan diet, crohn disease, celiac disease, gastric bypass, inadequate sunlight, CKD, liver disease, anticonvulsants, INH, rifampin

↓TSH, ↑T4/T3 → Graves disease → tx methimazole, radioactive iodine (NOT in elderly, CHF), thyroidectomy

29F, weight loss, hypotension, orthostasis, hyperpigmented buccal mucosa, ↑eos → primary adrenal insufficiency

Radioactive iodine a/e: hypothyroidism

Proliferative diabetic retinopathy corresponds with the presence of diabetic nephropathy

DM-2 management, fasting AM glucose reflects: basal coverage

Good AM fasting glucose, but A1c still high → postprandial hyperglycemia → adjust correctional insulin

Prolactinoma tx: cabergoline, bromocriptine (surgery IF unresponsive)

# Neuro

Cushing reflex: ↑ ICP → HTN, bradycardia

Disinhibition, apathy, loss of empathy, compulsions, hyperorality, executive dysfxn → FTD

Epilepsy, ash leaf spots, shagreen patches, periungal fibroma → TSC (autosomal dominant)

Unconscious, fixed pupils, extensor posturing → brain herniation

RLS w/u: iron studies

6wk post MVA, HA, daytime sleepiness → postconcussion syndrome (no tx)

76F, HA, ESR 55 → GCA, tx: pred AND temporal artery bx

BLE weakness, UMNS, urinary incontinence, loss of vibratory/proprioception → transverse myelitis

Motor weakness, loss of pain and temperature → ASA syndrome

Sensory ataxia, progressive spastic paraparesis → subacute combined degeneration (↓B12)

SNHL, vertigo/nystagmus triggered by Valsalva, h/o head trauma → perilymphatic fistula

Sudden brief vertigo assoc w/ head movement → BPPV

Episodic vertigo w/ tinnitus, hearing loss → Meniere disease

Unilateral ptosis, diplopia, pupillary dilation → CNIII palsy (intracranial aneurysm, NBS: CTA)

CVA/TIA RF: HTN > smoking > DM

Ischemic stroke, >4.5hr, no large vessel occlusion → antiplatelet (ASA, Plavix), NOT AC

Parkinsonism, fluctuating cognition, visual hallucinations, REM sleep disorder → Lewy body dementia

Back pain improves with walking up hill → spinal stenosis (OA, degenerative disk disease)

Orthostasis, dry mouth, falls, rigidity → multiple system atrophy

Distal symmetric polyneuropathy ddx: DM, HIV, uremia, FQ, MNZ, chemotherapy, toxin

HA in morning, rhythmic pulsating sound, optic disc edema → idiopathic intracranial hypertension (MRI)

HA, pure motor hemiparesis → lacunar stroke (penetrating artery lipohyalinosis)

8M, 10min staring, unilateral twitching, postictal paralysis → focal seizure

8M, 10sec starting, provoked by hyperventilation → absence seizure

Resting tremor → PD (tx pramipexole, trihexyphenidyl)

Action tremor → essential tremor (tx BB, primidone > benzo)

TBI → hypocoagulability, hyperfibrinolysis → tx w/ TXA

REM sleep behavior disorder is associated with PD

75F, back pain with walking, midline TTP → vertebral compression fracture

Radiating back pain, + straight leg test → herniated disk

Back pain with lifting, paraspinal TTP → lumbosacral strain

Chronic back pain, weakness, relieved with shopping cart → spinal stenosis

Soft voice, coughing when drinking, change in taste, masked facies → PD (bulbar)

45F, proximal muscle weakness, ↑CK → hypothyroid myopathy (NBS: TSH, T4)

Lower radicular back pain, BLE weakness, recent illness (days) → GBS

BLE weakness and sensory deficit, recent illness (weeks) → transverse myelitis

R eye vision blurry in shower, HA, dizziness → optic neuritis (Uhthoff phenomenon) 2/2 MS

Delirium increases risk of cognitive decline

Stroke, narrowing of MCA, meningitis, trunk rash → syphilis

Conductive hearing loss, normal TM → otosclerosis

HIV, loss of BLE sensation, ↓ankle reflex → HIV distal symmetric polyneuropathy → tx gabapentin

Posterior fossa hyperdensity → ICH → tx surgery

Decreased motor and sensory in BUE, bladder dysfxn → central cord syndrome (cervical spondylotic myelopathy)

38F w/ CD, nystagmus, wide based gait, AMS → Wernicke encephalopathy (thiamine deficiency)

Ataxia, AMS, loss of pain/temperature on L face and R body, cerebellar signs → Wallenberg syndrome (vetebrobasilar artery occlusion)

34M, acute ack pain, sensory deficit over dorsum of foot → L5 lumbar radiculopathy

Distal radius fx → Colles fx → median n injury → impaired thumb abduction, CTS

MS spasticity tx → tizanidine

DS, weakness, gait change, urinary incontinence → atlantoaxial instability

Back pain, bowel dysfunction, perianal numbness, hyperreflexia, symmetric weakness → conus medullaris

Back pain, bowel dysfunction, perianal numbness, areflexia, asymmetric weakness → conus medullaris

Nystagmus not fatigable, DM-2, HA → cerebellar stroke

63F, former CEO, abrupt executive dysfxn, asymmetric reflexes, slow gait, urinary frequency, depressed mood → vascular dementia (stroke)

Dementia < 1 yr after PD → dementia with Lewy bodies

Dementia > 1 yr after PD → PD with dementia

Drug induced PD: haldol, SGA, metoclopramide, prochlorperazine

AMS, slowly reactive pupils, ataxia → Wernicke encephalopathy → tx thiamine BEFORE glucose

Unilateral face pain, afraid to brush teeth or drink cold water → trigeminal neuralgia (vascular nerve root compression)

HIV, nonenhancing symmetric white matter lesions w/o edema → PML (JC virus)

HIV, ring enhancing lesions w/ edema → toxo

HIV, single ring-enhancing lesion w/ edema → CNS lymphoma

Severe HA, hypotension, bilateral field defects → pituitary apoplexy

Mild cognitive impairment: MOCA <26, ↓executive fxn (vs normal aging)

Facial nerve palsy, bilateral parotid swelling, ↑Ca → sarcoidosis

High frequency action tremor, distractable → enhanced physiologic tremor

High amplitude, low frequency tremor, distractable → functional psychogenic tremor

Unilateral pain behind eye, nasal drainage → cluster HA → tx 100% O2

Mobile home, s/p seizure, normal O2 sat → CO poisoning (NBS: ABG)

IIH tx: acetazolamide

MVA, BUE weakness and sensory loss → central cord syndrome → dx myelogram → tx steroids/sx

RLE weakness → L ACA stroke

23M, bug bite, HA, fever, bilateral proptosis and ↓EOM, bilaterally ↓sensation → CVST

Action tremor that worsens with stress, BPD → physiologic tremor d/t lithium

57M, BUE weakness and ↓reflexes, BLE hyperreflexia → cervical myelopathy (spondylosis / cord compression)

Loss of pain and temperature sensation over shoulders and back → syringomyelia

Intermittent back pain → spinal stenosis

RLS tx → iron, carbidopa-levodopa, gabapentin

30F, BUE weakness and ↓pain/temp sensation, h/o C spine injury → syringomyelia

Acute impairment, disability request → offer limited time off work

Gymnast, lower back pain, worsens with activity or extension → spondylolysis → XR

Back pain, improves with activity, worse at night → ankylosing spondylitis (HLA-B27)

Bilateral motor and sensory deficits at one level, T2 intense spinal cord → transverse myelitis → steroids

69M, AUD, retrograde and antegrade amnesia → Korsakoff syndrome (thiamine deficiency)

69F, memory loss, MOCA 22/30 → CBC, B12, TSH, CMP, MRI (most likely AD, but w/u)

Unilateral HA at end of day, jaw tenderness, stressful job → TMD

45F, dysphagia, ↑ESR, ↑CK → polymyositis

DM-2, ↓proprioception (poor balance) → large nerve fiber neuropathy

DM-2, ↓pain and temperature → small nerve fiber neuropathy

Hyper/hypopigmentation, hyperkeratosis, neuropathy → arsenic poisoning

Chronic paraspinal low back pain → exercise therapy (NOT activity restriction or back brace)

Weakness, ↓DTRs, bradycardia, hypotension → Mg toxicity

RLE weakness, worse w/ coughing, + crossed straight leg raise test → vertebral disc herniation

CSF: ↓glucose, ↑protein, ↑WBC (70%) lymphocytes → TB

Circum-corneal injection, sluggish pupil, decreased acuity → acute angle closure glaucoma

68M, acting out dreams, alert when awakened → REM sleep behavior disorder (PD, Lewy body)

↓vibratory sensation in BLE, h/o GERD → Vitamin B12 deficiency 2/2 PPI

Acute diplopia, R eye down and out, PERRL, DM-2 → diabetic ophthalmoplegia (nerve ischemia)

Acute diplopia, R eye down and out, pupil dilated → CNIII compression

Guillain-Barre CSF: ↑protein ONLY

35F, episodic vertigo, SNHL, whistling sound → Meniere disease → tx limit salt, caffeine, alcohol

45M, 3 mo of worsening muscle weakness, LMN signs → CIDP (demyelination of peripheral nerves)

Pure sensory stroke → lacunar stroke of thalamus

Thumb flexes when middle finger flicked → Hoffman sign (CST lesion) → cervical myelopathy

74F, R ear pain, erythematous vesicles in external canal, R facial droop → herpes zoster oticus (VZV → Ramsay Hunty syndrome)

Ipsilateral eye does not adduct → internuclear ophthalmoplegia (MLF MS lesion)

Pain radiating to 4/5th digits, decreased sensation → C8 cervical radiculopathy → NSAIDs

Involuntary tonic closure of eyes w/ light → blepharospasm (focal dystonia)

Fatigable muscle weakness, diplopia, ptosis → myasthenia gravis

Dizzy, n/v, recent URI w/ muffled hearing → vestibular neuritis

Vasovagal syncope tx → counterpressure maneuver

HA, papilledema, bMRI w/ narrowing of transverse sinus → IIH → tx LP

BUE weakness and ↓pain and temperature, nl BLE → central cord syndrome

BLE weakness and ↓pain and temperature → anterior cord syndrome

BLE weakness, ↓proprioception → posterior cord syndrome

NPH tx → LP

T6 to T8 fluid collection w/ peripheral enhancement → spinal epidural abscess → surgery

Should abduction and external rotation weakness, normal PROM → suprascapular nerve entrapment

Early and late AD have FHx risk

Wide gait, lateral gaze restricted → Wernicke encephalopathy (thiamine deficiency)

38F, HA, acting strangely, memory loss, seizure → brain tumor

Proximal BLE weakness → polymyositis (dx muscle bx)

67F, hallucinations, dementia, walks slowly, tremor → Dementia w/ Lewy bodies

Elbow flexion / biceps reflex = C5-C6

Triceps reflex = C7

Concussion return to play: 2d res then gradual return to play

86F w/ AD, acute intraparenchymal brain bleed → amyloid angiopathy

55M, drooling, dysphagia, muscle twitching, ↑DTRs → ALS

BUE atrophy/weakness, BLE hyperreflexia → cervical spondylotic myelopathy

MMSE <23 is abnormal

65F, hyperreflexia, spastic gait, tongue deviation, HA → medulla lesion (foramen magnum meningioma)

Bilateral globus pallidus intensity → hypoxic brain injury

Best way to prevent falls in elderly w/ weakness → supervised exercise training

CEA is recommended when stenosis is >80% (70% if symptomatic woman, 50% if symptomatic man)

S/p CPR, involuntary muscle spasms → myoclonus status epilepticus (poor prognosis)

RLE paralysis, LLE loss of pain and temperature up to umbilicus → R cord hemisection at T8

48M, irritability, ↓executive fxn, repeated involuntary movements, ↑DTRs → HD (caudate nucleus atrophy)

74F h/o seizures, unsteady gait, ↑DTRs, horizontal nystagmus, dysmetria → phenytoin toxicity

Absence seizure w/u: EEG

ADHD w/u: behavioral rating scales from teachers

MS is associated with MDD

Unilateral hearing loss after airplane flight → TM rupture → reassurance

64F w/ MG, respiratory distress, PNA → myasthenic crisis → intubation

CXR w/ diaphragmatic elevation, abdomen moves out during expiration → ALS

Essential tremor tx: BB, primidone

CT w/ hyperdense MCA, mismatch b/w core and penumbra → ischemic stroke

Hemorrhagic stroke tx → IV nicardipine (BP goal 140-160), Vit K (if warfarin), protamine sulfate (if heparin), mannitol (if ICP)

Status epilepticus increases risk of: cortical necrosis

BUE weakness, loss of sensation on back → syringomyelia

52F w/ MS, hemiplegia that resolved, nl CT → TIA → tx DAPT

L face weakness, unable to close eye → Bell palsy → tx pred

Brain abscess pathogen: S aureus, S viridians, anaerobes

C spine injury, HDS → NBS foley cath

Peripheral neuropathy, ↓DTR, AUD → alcoholic neuropath

Intermittent foot drop → common fibular peroneal neuropathy

Frontotemporal epidural hematoma → subfalcine herniation

Contralateral leg weakness → subfalcine herniation

Fixed pupils → tonsillar herniation

Ipsilateral dilated pupil → uncal herniation

40F, ICH, no risk factors → cocaine

TBI w/ cerebral edema → tx HTS

Ascending paralysis x hrs, VSS → search for tick

Ascending paralysis x days, tachycardic → GBS → tx IVIG

Back pain readiating to calf, + straight leg raise → lumbosacral radiculopathy → tx NSAIDS (NOT MRI)

84F, falls, HA, somnolence, hemiparesis → SDH

26M, painless unilateral vision loss, cysts in kidneys, nodules in cerebellum, FHx → VHL (retinal hemangioblastoma, RCC)

Most common cause of foot drop: fibular nerve neuropathy, L5 radiculopathy

Lateral thigh pain and paresthesia → meralgia paresthesia (lateral femoral cutaneous nerve compression) → avoid tight clothes

Rest tremor, improves w/ action, no gait dysfxn → PD

Distal paresthesia, weakness, areflexia → mercury toxicity

Meds to avoid in MG: Mg, FQ, aminoglycoside, rocuronium, benzo, barb, tizanidine, CCB, BB, opioid, statin

GBS, HDS → NBS spirometry

GBS, unstable → intubation

Dementia, irritable, MOCA 24, smoking more → FTD

Dementia, myoclonus, hypokinesia → CJD

Dementia, hallucinations, REM disorder → LBD

BLE weakness, hyporeflexia, ECG w/ flat T waves and PVCs → hypokalemia

23F, first time seizure w/u: BMP, CBC, LFTs, CTH, Utox, EEG

Brain imaging in myelomeningocele: Chiari II (herniation of medulla and cerebellum), obstructive hydrocephalus

MG, respiratory failure → plasma exchange

37F, depressed, repeatedly raises arm then strokes hair, FHx, MOCA 25 → Huntington (↓GABA)

Organophosphate poisoning tx: remove clothing, atropine, pralidoxime

Anticholinergic poisoning tx: physostigmine

GCA complications: vision loss (ischemic optic neuropathy), aortic aneurysm

IIH complications: blindness

IIH tx: weight loss, acetazolamide, topiramate

Restless leg syndrome tx: gabapentin (alpha-2-delta calcium channel ligand)

27F, seizure, CTH w/ small ventricles and temporal lobe hemorrhage, ↓PLT, ↑D-dimer → cerebral venous sinus thrombosis

80F, CT w/ 1.5cm dural based spherical calcified parafalcine mass → meningioma → serial imaging (NOT surgery)

Unilateral face weakness, hearing loss → acoustic neuroma (NBS bMRI)

Voice becomes more nasal at end of lectures → MG

Intermittent jaw pain triggered by light touch → trigeminal neuralgia → tx carbamazepine, oxcarbazepine

ALS, daytime fatigue, ↑JVD → OSA → tx noninvasive positive pressure ventilation

74F, 2 mo HA, acute vision loss → GCA (temporal arteritis) → tx high dose steroids

Dementia, memory loss, delusions, paranoia, urinary incontinence → AD

Dementia, parkinsonism, fluctuating cognition, hallucinations, REM disorder → Lewy body dementia

Dementia, personality changes, THEN memory loss → FTD

Dementia, executive function deficits, THEN memory loss → Vascular dementia

Antiepileptic drugs can be tapered after being seizure free for 2 yrs

LP w/ ↑14-3-3 → CJD

LP w/ anti-hu → SCLC (dementia, seizures)

Focal HA that lasts a few seconds, no triggers, no autonomic symptoms → primary stabbing HA

POD5 from SAH repair, right sided weakness → delayed cerebral ischemia d/t vasospasm → tx nimodipine

30M, hand weakness, tapping thenar eminence results in delayed relaxation, decreased libido → myotonic dystrophy

24F, h/o unilateral migraines, bilateral HA w/ vomiting → NBS bMRI

Diabetes insipidus, bitemporal hemianopsia, suprasellar mass w/ calcifications → craniopharyngioma (NOT pituitary adenoma)

Throbbing HA, on isotretinoin → IIH

6F, ataxia, abducens nerve palsy, papilledema, HA → medulloblastoma

Involuntary contraction of SCM → torticollis (cervical dystonia)

DMD is associated with: scoliosis, dilated cardiomyopathy, restrictive lung disease

BLE weakness, ↑DTRs, urinary incontinence → parasagittal meningioma

Vertigo, L facial pain, L horner syndrome → L lateral medullary Wallenberg syndrome

Episodic vertigo, tinnitus, SNHL, aural fullness → Meniere disease (↑endolymphatic pressure)

HHT, stroke → AVM (hyperdense fluid collection w/ irregular margins)

21M, BLE weakness, ↑DTR, ↓sensation, bowel incontinence → transverse myelitis

Acute inflammatory demyelinating polyneuropathy = GBS

Epidural hematoma, symptomatic → emergent surgery

Epidural hematoma, small, asymptomatic → serial CT scan

ALS, fatigue, HA → respiratory insufficiency (NOT MDD) → NBS ABG

Peripheral neuropathy, constipation, microcytic anemia, ↑uric acid → lead toxicity

56F, severe HA, neck stiffness, nl CTH → SAH → NBS LP

Memory loss, broad based gait, urinary urgency, nl fundoscopy → NPH

Stroke goal BP: 160-185 / 90-110

Ischemic stroke, 7hr → NBS CTA to determine thrombectomy eligibility

Left sided weakness, HA and nausea worse in morning → brain tumor

4F, seizure, R sided weakness, nl CTH → ischemic stroke → NBS bMRI

Pronator drift = UMN sign

S/p TBI, fever ↑BP ↑HR ↑diaphoresis when repositioned → paroxysmal sympathetic hyperactivity

H/o migraines, new mild HA requiring increasing APAP → medication overuse headache

60M, first time seizure, R arm weakness, h/o RCC → NBS bMRI

Cognitive decline x 3mo, memory impairment, pronator drift → vascular dementia + previously unrecognized stroke

20F, bilateral SNHL, difficulty balancing → NF2 schwannoma

Acute HA, R pupillary dilation → SAH

Acute HA, R pupillary constriction → cluster headache

11F, flashing lights, bifrontal HA → migraine → tx NSAIDs

Difficulty drinking water, jaw jerk reflex, tongue fasciculations → ALS → NBS electromyography

28F, s/p fall, unilateral HA, Horner syndrome, TIA → carotid artery dissection → tx tPA vs DAPT

Postherpetic neuralgia tx: gabapentin (NOT valacyclovir)

56F, fasiculations, ↑DTRs, weakness → ALS → tx riluzole

# Rheum

h/o ACL sx, knee pain → OA

Groin pain, worsens w/ activity, BMI 34 → hip OA

Negatively birefringent crystals: monosodium urate (gout), tx w/ NSAID, colchicine, pred

Rhomboid crystals, weakly positively birefringent: calcium pyrophosphate crystals (pseudogout)

20M, runner, stress fracture → anorexia nervosa

Lateral hip pain, obese → greater trochanteric pain syndrome → NSAIDs, corticosteroid injection

MTX s/e: lung injury

Palpable purpura, glomerulonephritis, ↑LFTs, ↓C4, ↑RF → small vessel vasculitis (mixed cryoglobulinemia syndrome d/t HCV)

Elbow soft tissue mass, bone erosions w/ overhanging edges → tophaceous gout of olecranon bursa

Tenderness at distal humerus, pain with passive wrist flexion → lateral epicondylitis

Heel pain, runs barefoot → plantar fasciitis

CD, SBO → fibrotic stricture

25F, ↓PLT, ↓WBC, oral ulcer, wrist pain → SLE (ITP)

Gout RF: obesity, alcohol, red meat

MTX labs prior to starting: LFTs

40M w/ CD on infliximab, fever, joint pain, rash → serum sickness (immune complex / Type 3 HSR)

CTS, fatigue, joint pain → RA (ESR, CRP, RF)

32M, R knee pain, ESR 60, joint aspirate 3.5k WBCs no organisms or crystals, recent Salmonella → reactive arthritis

Reynaud’s w/u: CBC, BMP, UA, ANA, C3, C4

Bony enlargement at DIP and PIP joints → osteoarthritis → tx NSAIDs

Spongey enlargement at MCP joints → RA

29F, L>R arm pain, ↑ESR, weight loss, ↓BP in L arm → Takayasu arteritis (larger artery arteritis)

11F, lens dislocation, honors student → Marfan syndrome → TTE for aortic root disease

11F, lens dislocation, intellectual disability, VTE → homocystinuria

38F, pain, fatigue, normal exam and labs → fibromyalgia → tx TCA

4M, cough, aches, rash, quotidian fever, ↑PLT, ↑WBC, HSM, arthralgia → JIA

R knee pain, arthrocentesis w/ WBC 30k (90% PMN) and few rhomboid crystals → CPPD (assoc w/ meniscal calcification)

XR w/ chondrocalcinosis → CPPD

Chronic R knee pain, bony crepitus, small joint effusion, tibial tenderness → OA

30M, lower back pain, diarrhea (worse w/ NSAIDs), ↑CRP, sacroiliac inflammation → IBD

68F w/ osteoporosis, jaw pain, gum swelling → bisphosphonate related osteonecrosis

45F, bilateral wrist pain and swelling, clubbing → hypertrophic osteoarthropathy (assoc w/ lung CA)

AVN RF: alcohol, prolonged steroids, sickle cell, SLE

32F, CVA, ↑ANA, +RPR → APS (SLE)

68F w/ RA, BLE weakness, sensory deficits → RA cervical myelopathy (atlantoaxial instability)

Fibromyalgia tx: aerobic exercise, sleep hygiene

High riding patella, inability to maintain straight leg w/ leg raise → patellar tendon rupture

Raynaud’s tx: CCB (nifedipine, amlodipine), PDE-5i

9M, recurrent hospitalizations for abdominal pain, hematuria → SCD

25M, back pain, ↑ESR → ankylosing spondylitis → NSAIDs → 2nd line anti-TNF or anti-IL17

58F, NAGMA, urine pH 6.8, ↑K → Type I RTA

55M, gardner, painless nodular band at base of finger → Dupuytren contracture (fibrosis of palmar fascia)

23F, progressive low back pain, improves with activity → ankylosing spondylitis (dx XR sacroiliac joint)

62F, pleuritic chest pain, inspiratory rub, joint swelling → drug induced lupus

25M, pain at AC joint, heels, iliac crust, tibial tuberosity → enthesitis (ankylosing spondylitis)

RHF, finger tip tightening, GERD → systemic sclerosis

SSc pulmonary complications: vasculopathy → PAH, BM infiltration → ILD

SSc, ↓DLCO, nl FEV1/FVC, nl TLC, nl CXR → PAH

SSc, ↓DLCO, nl FEV1/FVC, ↓ TLC, CXR w/ infiltrates → ILD

Chronic hand pain, 1 hr morning stiffness, joint tap w/ WBC 50k → RA

Chronic knee pain, 15 min morning stiffness, joint tap w/ WBC 1k → OA (Baker cyst)

XR w/ narrowed joint space and osteophytes → OA

XR w/ calcification of joint cartilage → chondrocalcinosis → CPPD (pseudogout)

XR w/ punched out erosions → gout

XR w/ swelling of adjacent soft tissue, normal joint space → septic arthritis

XR w/ periarticular osteopenia erosions of joint margin → RA

R foot warmth and swelling, XR w/ soft tissue swelling and chronic calcification → CPPD

Joint pain, ↓PLT, splenic infarct → SLE (APLAS)

CV complications in SSc → pulmonary arterial hypertension (wide S2, RV heave, TR, JVD)

MOA of PAH in SSc → arteriolar intimal hyperplasia

Nodules on fingers with chalk white appearance → tophaceous gout

38M, XR w/ joint space narrowing and chondrocalcinosis and osteophytes at MCP, ↑LFTs → hereditary hemochromatosis → tx phlebotomy

Raynaud, dysphagia, malar rash, +ANA, +RNP → MCTD

XR w/ erosions and periarticular osteopenia → RA → tx DMARD (MTX > etanercept, infliximab

83F, dry eyes, dry mucosa → age related exocrine gland atrophy (NOT SS)

70M, joint pain, fatigue, weight loss, ↑ESR, anemia → polymyalgia rhuematica → tx pred

24F, fatigue, joint pain, rash on nose cheeks and back, splenomegaly, fever, ↓WBC, murmur → SLE

MTX s/e: hepatotoxicity, stomatitis (oral ulcers), cytopenia

Morning stiffness, fatigue, swelling, XR w/ periarticular erosions → RA → tx MTX

XR w/ chondrocalcinosis → CPPD

Genital ulcers, oral ulcers, uveitis → Bechet disease

RA increases risk of: vasculitis, atherosclerosis, osteopenia, anemia, depression, neuropathy, SS

Sjogren syndrome complications: NHL, corneal damage, dental caries

51F, fatigue, muscle pain, no weakness, nl CRP → fibromyalgia

Swollen wrist, fever, arthrocentesis w/ WBC 50k but no organisms → gonococcus

Swollen knee, afebrile , arthrocentesis w/ WBC 10k but no organisms → Lyme

Small joints of hand stiffness, prolonged morning stiffness, swelling of entire finger, nail pitting → psoriatic arthritis

Eye pain, back pain, heel pain → ankylosing spondylitis

CTS, myalgia, constipation, dry skin, edema → hypothyroidism (→myxedema → mucinous infiltration of median nerve)

Scleroderma autoantibodies: anti-topoisomerase I (Scl70), anti-RNApol III, anti-centromere

APS autoantibodies: anti-cardiolipin

Autoimmune hepatitis autoantibodies: anti-smooth muscle

38M, back pain, heel pain, impaired spinal mobility → ankylosing spondylitis

78F, shoulder pain, grade fever, ↑ESR → polymyalgia rheumatica → tx pred

Septic arthritis tx: abx + I&D

Hydroxychloroquine s/e: retinopathy

Swollen joints, plaque on arm, UA w/ protein → discoid lupus

55M, swollen fingers, weight loss → RA (even if RF neg)

Ankle pain, BLE rash, scrotal swelling → IgA vasculitis (HSP) → tx NSAIDs

56F, AMS, BP 220/115, shiny skin, telangiectasia, ↑K, ↑Cr → scleroderma renal crisis (renal injury → ↑RAAS) → tx ACEi

# Derm

Target lesions, HSV 🡪 EM (clinical diagnosis, tx steroids)

Pruritic, purple, polygonal papules, plaques, Kobner rxn → lichen planus, assoc w/ HCV

Painful subcutaneous nodules on shins → erythema nodosum → sarcoidosis, TB, histo, IBD, Bechet (NBS: CXR)

Purpuric plaques on arm, h/o breast CA s/p RT and LN dissection → angiosarcoma

Generalized hair thinning, stressed, cycling → anorexia

89F, ecchymoses, normal coags → senile purpura (loss of elastic fibers)

Maculopapular rash of trunk, palms, and soles → secondary syphilis

Burning and itching rash, weight loss, diarrhea → celiac disease w/ dermatitis herpetiformis

28F w/ SLE, erythematous papules of back and upper arms → steroid-induced acne

Femoral bowing, unilateral hearing loss, thoracic dextroscoliosis → Paget disease of bone (osteoclast dysfxn)

Circular pruritic plaque w/ raised scaly border → tinea corporis (ringworm / dermatophyte infxn)

Onychomycosis → Trichophyton rubrum

49M, scaly fissured plaque on arm → nummular eczema

Round erythematous plaque w/ pustules, strep skin infection → ecthyma

Red macules evolving into vesicles, PSA bacteremia → ecthyma gangrenosum

Atopic dermatitis with golden crusting → superinfection

H/o transplant, high dose corticosteroids, non painful red lesions → KS

Fever, pharyngitis, LAD, mild HSM, polymorphous erythematous rash after amoxicillin → EBV

Ulcer w/ friable red granulation tissue at medial malleolus → SCC

56F w/ RA, bumped shin, developed nodule that progressed to ulcer with purulent base → pyoderma gangrenosum (pathergy) → tx steroids

Peeling in between toes → tinea pedis → tx miconazole cream

Calciphylaxis RF: ESRD, ↑Ca, ↑Phos, ↑PTH, warfarin

Facial rash, greasy yellow scale on erythematous base, dandruff → seborrheic dermatitis

Pruritic back rash spreading over 24 hr → acute urticaria → tx H1 blocker (cetirizine)

Pruritic back rash, purple papules, HCTZ, lisinopril → drug induced lichen planus

5M, single erythematous lesion on trunk, outbreak of macules and papules, s/p URI → pityriasis rosea

Angiofibroma, hypopigmented macules → TSC

Ulcer on arm w/ keratinization and associated paresthesia → SCC

Ulcer on face w/ telangiectasia → BCC

Patchy hair loss w/ uneven hair growth, sparse eyebrows → trichotillomania

Hair loss, circular smooth patches → alopecia areata

Female hair loss, progressive hair thinning at vertex → androgenetic alopecia

Hair loss, diffuse thinning → telogen effluvium

Hair loss, scaly erythematous patches w/ black dots → tinea capitis

Vesicles on hands, fragile skin, superficial erosions w/scarring, h/o IVDU, HCV → porphyria cutanea tarda

Axilla w/ malodorous seropurulent drainage → Hidradenitis suppurativa → tx abx

Recurrent pruritic rash on hands → dyshidrotic eczema

Chronic round scaly plaques on dry skin on legs → nummular eczema

Scaly papule w/ central ulcer on lower lip → SCC

45F, facial flushing in sun and alcohol, telangiectasia → rosacea

21F, blisters of palms and feet, oral ulcers → epidermolysis bullosa

Skin fragility on face and back of hands → porphyria cutanea tarda

64F, DM-2, plaques w/ central clearing and eroded boarders, weight loss → necrolytic migratory erythema (glucagonoma)

Large purple/black patches in periumbilical area, on SQ heparin → HIT

23M, erythematous nodules on shins, weight loss → erythema nodosum → IBD

Erythema nodosum is associated with: Strep, IBD, sarcoidosis, abx, OCP, pregnancy

Fevers, chills, macules on palms and soles, visited water park → HFM disease (coxsackievirus)

Newborn w/ hypoplastic fingers, microcephaly, cleft palate → fetal hydantoin syndrome (in utero antiepileptic)

42M, rapid onset psoriasis → dx HIV

Recurrent epistaxis, blanchable ruby papules on lips, clubbing → hereditary hemorrhagic telangiectasia (pulmonary AVM → polycythemia)

Hyperpigmented nodule with dark edges that dimples when pinched → dermatofibroma

CD, ulcer on leg → pyoderma gangrenosum

Hidradenitis suppurativa RF: smoking, obesity, DM-2

Angular cheilosis, ↑LFTs → Vit B2 (riboflavin) deficiency

S/p chemotherapy, ↓WBC, indurated papules, gangrenous ulcers → ecthyma gangrenosum (PSA bacteremia)

IBD, papule that quickly ulcerates w/ violaceous borders → pyoderma gangrenosum (neutrophilic dermatosis)

Abdominal pain, watery diarrhea, depressed, pigmented scaly rash on face neck and hands, vegan, on INH → pellagra (Vit B3 niacin deficiency)

Skin colored papule on thigh → molluscum contagiosum → tx cryotherapy, curettage, cantharidin

Acne, non-responsive to BP and tazarotene, sexually active → tx clindamycin (NOT spironolactone)

29F, GA20, dome shaped lesion slowly growing on finger → pyogenic granuloma (lobular capillary hemangioma)

Diffuse cutaneous scaling, increased palmar lines → ichthyosis vulgaris

Flaking on soles of feet → tinea pedis → topical miconazole

Hyperkeratotic papules on soles of feet → verruca plantaris (HPV)

Pruritic hand rash, erythematous plaques w/ eroded vesicles and bullae → contact dermatitis

65F, pruritic rash with blister development → BP → tx topical clobetasol

7M, patchy hair loss, normal underlying skin → alopecia areata

Diffuse scaling, FHx → ichthyosis vulgaris → tx long baths, urea, alpha-hydroxy acid

Non pruritic slowly enlarging scaly rash → SCC → NBS punch bx

Female pattern hair loss tx: topical minoxidil

Male pattern hair loss tx: finasteride + minoxidil

18 mo, eczema flare on cheeks, overlying painful clear vesicles, hemorrhagic crust → HSV

Annular plaque w/ scaly border in L groin → tinea cruris

Recurrent tinea cruris in groin → NBS examine toes (autoinfection)

45F, painful blisters in mouth, trunk, nose → PV

Nodule w/ dimple in center when pinched → dermatofibroma

1 hr old, tachypnea, CXR w/ hyperinflation and fluid in fissures → TTN

Seborrheic dermatitis tx: topical selenium sulfide, ketoconazole, steroids

# Peds

Painful leg, moth eaten on XR → Ewing sarcoma

Otitis externa →PSA → topical cipro

Normal internal genitals, external virilization, undetectable E2 → aromatase deficiency

Finger lesions on vocal cords → laryngeal papilloma (recurrent respiratory papillomatosis), d/t HPV

Severe nodulocystic acne, irregular menses, polycystic ovaries → hyperandrogenism (PCOS)

Firm flesh colored papules w/ umbilication → molluscum contagiosum (tx: observation)

Pubertal delay, HA → craniopharyngioma (calcified suprasellar mass)

Translucent teeth, frequent fractures, joint laxity → osteogenesis imperfecta

Chronic TM drainage → chronic suppurative otitis media (S. aureus, PSA), tx: ototopical FQ

4M, fixated interests, solitary play, hand biting → ASD

Hand biting, dystonia, spasticity, nephrolithiasis, gout → Lesch-Nyhan

7d old, respiratory distress → GBS pneumonia

Hrs after birth, respiratory distress → respiratory distress syndrome (surfactant deficiency)

Just born, respiratory distress, CXR w/ interlobar fissures → transient tachypnea of newborn

Recurrent sinopulmonary infections (H flu, giardia, S pneumo) → X linked agammaglobulinemia

Recurrent viral, fungal, bacterial infxn (Candida) → SCID (ADA deficiency)

Recurrent bacterial infxn (Strep pneumo, N meningitidis) → complement deficiency

Recurrent skin/pulm infxn, catalase + (S aureus, Serratia) → chronic granulomatous disease (impaired oxidative burst)

Hypocalcemia, cardiac defect → thymic hypoplasia (DiGeorge, 22q11.2)

Newborn, bright red raised plaque → hemangioma (if periorbital, tx w/ BB d/t r/o visual impairment)

Port-wine stain tx: laser therapy

Acute PSGN tx: furosemide

HPV vaccine: 2 doses if <15yo, 3 doses if >15yo

4M, easy bruising, nontender LAD, HSM → ALL

Bright red, sharply demarcated, plaque/macule → strawberry hemangioma → tx w/ BB

14F, polyarticular joint pain improves w/ activity → JIA → tx w/ naproxen

Bedwetting normal < 5yo

2M, fever, rash spares hands and feet, conjunctivitis → measles → tx Vitamin A, supportive

2F, recurrent diaper rash, fused labia → labial adhesions → tx topical E2

Severe hyperbilirubinemia RF: premature, cephalohematoma, ABO incompatibility, lactation failure

Jaundice < 24h = pathologic (most often ABO incompatibility)

Pathologic (vs functional) constipation: weakness, hair tuft, poor growth (CD, CF, hypoT, DS, HD)

Congenital clubfoot tx: serial molding casts

6mo, dry erythematous rash on face and trunk → atopic dermatitis

Croup → corticosteroids → if stridor at rest, nebulized epinephrine

Cephalohematoma tx: observation

Nausea, blunt abdominal trauma → duodenal hematoma (NBS: CT abdomen)

CVC manipulation, tachypnea → thromboembolism

14M, back pain w/ activity, BLE weakness, lower back lipoma → tether cord syndrome

14M, back pain w/ rest → ankylosing spondylitis

Newborn, peaked P waves, L axis, CXR w/ decreased pulmonary marking, cyanosis → TV atresia

MMR vaccine s/e: maculopapular rash → self-limited, avoid contact with immunocompromised

18mo F, speech regression, seizures → Rett syndrome (MECP2 mutation)

18mo M, delayed milestones, hypotonia → Lesch-Nyhan (HGPT enzyme deficiency)

Recent URI, petechiae → ITP → observe (if mucosal bleeding, pred or IVIG)

13M, knee pain worse w/ activity, prominent tibial tuberosity → Osgood-Schlatter disease

Infant, eczema, bleeding → Wiskott-Aldrich syndrome

Absent uterus, normal secondary sex characteristics → mullerian agenesis (also renal abnormalities)

JIA, shoulder pain, synovial fluid w/ PMNs → septic arthritis → IV abx

17M, unvaccinated, swollen right cheek → parotitis → mumps (r/o orchitis)

13F, amenorrhea, bulging vaginal mass → imperforate hymen

12M, lower back pain, palpable step off → spondylolisthesis

Newborn, BLE weakness, lumbosacral hemangioma → spina bifida (spinal dysraphism)

Erythematous lesion on trunk, spreads to lines of tension in Christmas tree pattern → pityriasis rosea

Newborn, cryptorchid testes, no hypospadias → no further workup

Lead poisoning test: capillary stick (screen) → venous measurement (confirm)

Lead poisoning treatment: <45: remove from source, >45 succimer, >60 EDTA or dimercaprol

Recurrent skin abscesses (Staph, Serratia, Aspergillus) → CGD (tx: Bactrim ppx, itraconazole)

3M, hematuria, recent strep, mass in abdomen → Wilms tumor (NOT PSGN)

Congenital CMV → SNHL, periventricular calcification, jaundice

Congenital toxo → chorioretinitis, hydrocephalus

Congenital syphilis → Hutchinson teeth, saddle nose

Congenital Rubella → cataracts, SNHL

CGD test: dihydrorhodamine (DHR) test

Infantile spasms, ash leaf spots → TSC → subependymal giant cell tumor, cardiac rhabdomyoma

NF1: café au lait, axillary freckling, neurofibroma, optic nerve glioma, iris hamartoma

Premature infant, <6mo, breastfed → supplement w/ iron and vitamin D

16F, amenorrhea, female external genitalia, no internal genitalia, ↑testosterone → androgen insensitivity syndrome

4mo, bilious emesis, h/o omphalocele → malrotation

1mo, non bilious projective vomiting → pyloric stenosis

Transfusion rxn to type O Rh neg PRBCs → selective IgA deficiency

Botulism tx: antitoxin

9M, parietal lobe tumor → low grade astrocytoma

1mo, leg asymmetry → DDH (dx hip U/S, tx Pavlik harness)

6M, coughing, chest crepitus → spontaneous pneumomediastinum (NBS: CXR r/o PTX)

16F, hirsuitism, ↑17-OHP → nonclassic CAH

11mo, fever, pulmonary edema, HSM, tachycardia, S3, hand rash → KD (lymphocytic myocarditis)

Secondary bed wetting, fatigue, weight loss → DM-1

DMD w/u: CK

Rheumatic heart disease tx: penicillin ppx

GI abnormality in DS: duodenal atresia (double bubble) → surgery

6mo, flexible skull bones, metaphyseal widening → Rickets (Vitamin D deficiency)

Neonate w/ well-demarcated head swelling → cephalohematoma

Neonate w/ poorly-demarcated head swelling → caput succedaneum

12F, recurrent sinusitis/GI infections → CVID → tx IVIG

Biliary atresia labs: ↑direct bili, ↑GGT, ↑ALKP

Fever, urticarial rash, arthralgia, diffuse LAD, taking penicillin for strep → serum sickness like reaction

URI, palpable pruritic rash → HSP

Erythema marginatum, migratory arthritis, strep → rheumatic fever

Large ears, deep set eye, intellectual disability → FXS

Intellectual disorder, seizures, musty odor → phenylketonuria

Retinal hemangioblastoma, FHx adrenal tumor → VHL (also RCC, pheo)

Collpase of arytenoid cartilage with inspiration → laryngomalacia → inspiratory stridor

5M, acute onset of vomiting, diarrhea, wheezing, myoclonus → nicotine poisoning

Secondary enuresis, snores → pediatric OSA (d/t adenotonsillar hypertrophy, r/o HTN)

Immediately after birth, assess: tone and breathing/crying → if NO, warmth, airway, stimulate

9M w/ APC mutation → FAP → frequent colonoscopy, elective proctocolectomy in teens

Acute otitis media RF: lack of breastfeeding, day care, smoke exposure

5mo, hypovolemic hypernatremia → tx NS (NOT 0.45%)

Newborn, vomiting with feeds, oral secretions, aspiration → tracheoesophageal fistula with esophageal atresia (NBS: NG tube)

3M, SCD, vaccines up to date, bacteremia → S pneumo

Scoliosis RF: female, premenarche, Cobb angle > 25

Primary amenorrhea: no menarche >13 AND no secondary sex characteristics

Primary amenorrhea w/ uterus, NBS: FSH

Radial head subluxation trx: hyper pronation of forearm OR supination of forearm and elbow flexion

4d old, bilious vomiting, tight anal canal, dilated bowel → Hirschsprung disease → tx contrast enema

18F, heavy menses, anemia, obese → endometrial hyperplasia → tx progestin

Short stature, amenorrhea, micrognathia, scoliosis → Turner syndrome (also AoD, horseshoe kidney)

Empyema → Strep penumo, Staph aureus → CTX + vanco

14M, breast mass, no nipple discharge → pubertal gynecomastia (reassurance)

6M w/ hematuria → nephrolithiasis (NBS: renal U/S)

Ambiguous genitals, 46XX, ↑testosterone → congenital adrenal hyperplasia

12M, proteinuria, hematuria, recent skin infection → PSGN (immune complex)

Recurrent food impaction to solid foods → vascular ring (aortic arch malformation)

SIDS RF: smoke exposure, avoid prone sleeping

16M, R knee swelling, aspirate w/ 15K WBC (50% PMN), no organisms → Borrelia burgdorferi

16M, R knee swelling, aspirate w/ 30K WBC (90% PMN) → Gonorrhea

8M, fell out of bed, cyanotic → generalized seizure

Neonate, only urinated x1, losing weight → NBS: bladder U/S

1d neonate, initial breathing fine, now cyanotic, unresponsive to O2 → tx PgE1 to keep PDA open

20M, shoulder dislocations, wide atrophic scars → Ehlers Danlos

Joint laxity, short stature → achondroplasia

5M, fell on toothbrush, right hemiplesia → carotid artery dissection

Unilateral subconjunctival hemorrhage, hypokalemia → self induced vomiting

Cryptorchidism increases risk of testicular germ cell tumor

7d M, Hgb 12, ↓MCHC, ↑LFTs, vomiting, FTT → galactosemia (inability to metabolize galactose)

3F, LLL infiltrate, expiratory wheezing, hilar adenopathy → TB

15F, defying authority, irritable mood, blames failures on others → oppositional defiant disorder

9F, recurrent vomiting around start of school, dental caries → cyclic vomiting syndrome

6M, bleeding gums, macrocytic anemia, pancytopenia, hypoplastic thumbs, short stature, hypopigmentation on trunk → Fanconi anemia (DNA repair defect)

Congenital umbilical hernia → elective surgery at 5 yr old

6wk old, peristaltic wave, forceful vomiting → pyloric stenosis

Stridor when supine, resolves when prone → laryngomalacia

5d old, vomiting, jaundice, HSM, cataracts → galactosemia

6M, chronic limp → Legg-Calve-Perthes (iodiopathic avascular necrosis of femur)

4mo, seizures, ↑lactate, HSM, doll like face → G6P deficiency (von Gierke)

3mo, shoulder pain, metaphyseal erosions, rhinorrhea, skin fissures → congenital syphilis

Neonate, SpO2 84%, perioral cyanosis, no murmurs → neonatal respiratory distress syndrome (↓surfactant → V/Q mismatch → R to L intrapulmonary shunt)

1d old, Asymptomatic VSD → spontaneous resolution

4F, 2wk nasal discharge, cough, fever → acute bacterial rhinosinusitis (H flu, S pneumo) → augmentin

Premature infant, seizures, hypertonia, intraventricular hemorrhage → cerebral palsy

Motor delay, BLE hypertonia, equinovarus deformity → cerebral palsy

2F, back rash, punched out erosions covered with crust → eczema herpeticum (HSV) → acyclovir

2d old, poor urine output, weight gain, respiratory distress → posterior urethral valves → renal U/S

Diaphragmatic hernia increases risk of: pulmonary hypoplasia, respiratory failure, pulmonary hypertension

2d old, seizures, bulging fontanelle → intraventricular hemorrhage → assoc w/ prematurity

1mo old, no prior medical care, hydrocephalus → obstructive ICH from Vitamin K deficiency

2mo, chin deviation with head tilt → congenital muscular torticollis (sternocleidomastoid contraction)

18mo F, first febrile UTI → abx + renal U/S

6M, midline neck lump that moves with swallowing → thyroglossal duct cyst (embryologic abnormality)

3mo, spitting up after feeds, partially digested milk → GERD → reassurance, breastfeed + cholecalciferol

9M, difficulty opening hands, learning difficulty, daytime sleepiness → myotonic dystrophy

Foster child, social withdrawal, lack of response to attempts to comfort → reactive attachment disorder

18 mo, fever, cough, congestion, crackles, CXR interstitial markings and peribronchial cuffing → bronchiolitis (RSV) → tx supportive

15mo, constipation, rectal exam results in stool expulsion → Hirschsprung disease → contrast enema

3mo, cyanotic during feeds and crying, crescendo-decrescendo systolic murmur at LUSB → tetralogy of fallot (RVOT obstruction, RVH, overriding aorta, VSD) → tx knee chest positioning

Lower extremity hypotension and cyanosis → coarctation of the aorta

Cyanosis at birth → D-transposition of the great arteries

10mo, fever, maculopapular exanthem spreads face to trunk, posterior cervical LAD → rubella

4M, swallowed pills, AGMA, hematemesis, radiopaque on XR → iron poisoning

Height 2nd percentile, normal growth rate and bone age, delayed puberty → constitutional growth delay

Short stature, slow growth rate, delayed bone age, delayed puberty → GH deficiency

4M, unilateral cervical lymphadenitis, fever → S aureus or Strep pyogenes

KD: conjunctivitis, oral mucosal erythema, rash, edema, cervical LAD, coronary artery aneurysms

21mo, epiglottitis, respiratory distress → H flu > Staph/strep → tx CTX + vanco

3F, HTN, palpable R abdominal mass → Wilms tumor

4mo, biphasic stridor, improves with neck extension → vascular ring

Neonate, noisy breathing, snorting, cyanosis during feeds, better with crying → bilateral choanal atresia

14M, knee pain, fixed hard nodules near joints → osteochondroma

CT scan for head trauma if: AMS, LOC, >5ft, vomiting, CSF rhinorrhea

4M, sore throat, respiratory distress, chin thrust forward → epiglottitis

Preterm (28wk), increasing head circumference, seizure → IVH

Labial adhesion tx → topical estrogen

4wk old, progressive jaundice, subhepatic mass → biliary cyst

4wk old, progressive jaundice, no gallbladder → biliary atresia

5d old, vomiting after feeds, pneumatosis intestinalis → NEC → bcx + abx

1d old, soft systolic midsystolic murmur → reassure

1d old, cyanosis of hands and feet → acrocyanosis (normal)

11F, irregular jerky movements of entire body, not during sleep, hypotonia → Sydenham chorea (NBS: ASO titer)

12d, full fontanelle, ↓WBC (20% bands) → GBS meningitis

4d, full fontanelle, ↓WBC (20% bands) → Listeria meningitis

2yr, GTC seizure, fever, bloody diarrhea → Shigella

1d, scrotal swelling, transilluminates → hydrocele → reassurance

3M, sharply demarcated erythematous perianal rash, pruritis, perirectal fissures → GAS dermatitis

Bright red erythematous perianal rash with satellite lesions → candidal dermatitis

Perianal pruritis at night → pinworm (Enterobius vermicularis)

2wk, born at 26wk, apneic episodes → apnea of prematurity (immature pons and medulla) → tx caffeine

15F, amenorrhea, short stature, aortic coarctation → Turner syndrome (45X) → also pigmented nevi, webbed neck, osteoporosis, aortic stiffness, horseshoe kidney, celiac disease

Newborn, cyanosis with feeding, relieved by crying → choanal atresia → surgery

6M, fatigue, fever and diarrhea 10d ago, ↓Hgb, ↓PLT, ↑WBC, AKI → renal vascular occlusion 2/2 HUS (EHEC)

4wk old, hematochezia, otherwise normal, drinks cow’s milk → food protein induced allergic proctocolitis

AOM, penicillin allergy → tx azithromycin or clindamycin

Precocious puberty, advanced bone age, ↑LH → central PP → MRI

Precocious puberty, advanced bone age, ↓LH → peripheral PP (CAH, gonad tumor)

Precocious puberty, normal bone age → premature adrenarche/thelarche

9F, >10d nasal congestion → acute bacterial rhinosinusitis (Hflu, S pneumo, Moraxela) → assoc w/ vURI

14F, BLE weakness, high plantar arches, scoliosis, wide gait, cervical spinal cord atrophy, decreased vibratory sensation → Friedreich ataxia → genetic testing

Ataxia, ocular and cutaneous telangiectasia → ataxia-telangiectasia (increased risk of cancer)

2wk old, 29wk premature, intermittent apnea, bradycardia, abdominal distension → NEC → KUB

2 hr old, respiratory distress, meconium aspiration syndrome, R hand O2 sat > R foot O2 sat → PPHN → nitric oxide

2 yr old, cervical paravertebral mass, Horner syndrome → neuroblastoma

3 wk old, bilious vomiting, premature, abdominal distension, ↑WBC, formula feeds → NEC

Premature, intermittent apnea → apnea of maturity → tx caffeine

7 mo, started rice and cow’s milk, hard stools, anal fissure → constipation → add prune puree

7M, repeats others, head turning, shrugging → Tourette → tx risperidone

2 d old, scattered erythematous papules and pustules → erythema toxicum neonatorum → reassurance

8M, polyuria, polydipsia, Na 142, Uosm 120 → AVP resistance (water deprivation testing)

1 yr old, chickenpox → dx is clinical, no tx indicated (acyclovir if > 12yr)

3M, seizures, MRI w/ subependymal nodules, hypopigmented macules → TSC (cardiac rhabdomyoma, renal angiomyolipoma)

NF1: optic nerve glioma, hyperpigmented café au lait, axillary freckling, neurofibroma

NF2: hearing loss, tinnitus, meningiomas, bilateral vestibular schwannoma

WAGR: Wilms tumor, aniridia, genitourinary abnormalities, mental retardation

Beckwith-Wiedemann syndrome: macrosomia, macroglossia, hemihypertrophy, Wilms tumor

16M, scrotal pain erythema and edema, worse w/ elevation, no transillumination → torsion

12 mo, vomiting, lethargic, sunken eyes → NS bolus

3 wk old, erythematous pustules limited to face → neonatal cephalic pustulosis (Malassezia) → soap

3M, jaundice following URI, FHx splenectomy → HS (↑MCHC)

2 d old, ↑indirect bili → physiologic jaundice of newborn (↓UGT activity → ↓hepatic bilirubin clearance)

Strabismus w/u: dilated fundoscopic examination (asymmetric red reflex)

12F, obese, hip pain w/ exercise, decreased internal rotation → SCFE

7 mo, hand preference, UMN signs, MRI w/ white matter injury → cerebral palsy (RF: preterm)

Diffuse intracranial calcifications → congenital toxo

Micrognathia, overlapping fingers, convexity of soles, limited hip abduction, VSD → Edwards syndrome (Trisomy 18)

8M w/ raised flushy papules on vulva → condyloma acuminata → sexual abuse assessment

1 wk old, erythematous popular back rash, lots of swaddling → miliaria rubra (heat rash)\

Tay-Sachs disease inheritance: autosomal recessive

Newborn, macrosomia, respiratory distress, small LV, ↑intraventricular septal wall thickness, systolic murmur → HCM d/t GDM (LVOT obstruction) → spontaneous regression

5mo F, seizure, microcephaly, nl labs and imaging → phenylketonuria (dx amino acid analysis)

Newborn w/ TEF → NBS TTE and renal US (c/f VACTERL)

5M, left hip pain, recent URI, nl labs and imaging → transient synovitis → tx NSAIDs

3M, recurrent abscesses, ↑eos → Hyper-IgE syndrome

5M, watery then bloody diarrhea, afebrile → EHEC → IVF (no abx)

5mo, microcephaly, nl physical exam → measure parent’s head circumference

9 mo, from Nigeria, swelling hands and feet in 1 d, fever → dactylitis (vaso-occlusion in SCD)

Newborn, ↑PT and ↑PTT → Vit K deficiency

Newborn, microcephaly, ventricular calcifications → congenital CMV

8M, clumsy, low IQ, thin upper lip, short palpebral fissures → fetal alcohol syndrome

Elongated face, retrognathia, prominent nose, hypernasal speech → velocardiofacial syndrome

Epicanthal folds, upslanting palpebral fissures, flat nasal bridge → down syndrome

Long narrow face, large ears, macrocephaly, ASD → fragile X

Premature screening: head U/S (c/f IVH)

Newborn, chorioretinitis, hydrocephalus, intracranial calcifications → congenital toxo

Newborn, rhinorrhea, desquamating rash on feet → congenital syphilis

Newborn, cataracts, PDA, SNHL → congenital rubella

Newborn, periventricular calcifications, microcephaly, SNHL → congenital CMV

Newborn, vesicular rash → congenital HSV

Newborn, clavicular fracture → reassurance

4F, picky eater → normal

4 wk old, solitary hyperpigmented lesion w/ overlying hair → congenital melanocytic nevus

Flat, gray-blue patch → congenital dermal melanocytosis (Mongolian spot)

Flat erythematous blanchable vascular birthmark on eyelid and neck → nevus simplex

Flat erythematous blanchable vascular birthmark on face → nevus flammeus (port wine stain)

13F, weight loss, eczematous rash around math, tremor, ↓DTRs → inhalant use

3M, intermittent abdominal pain, recent gastroenteritis → intussusception → tx air enema

AOM w/ perforation → amoxicillin → 2nd line amoxicillin-clavulanate

9 mo, UTI → tx cefixime

4 wk, forceful vomiting after feeds, hungry after vomiting → pyloric stenosis

5M, enuresis, proteinuria, ↓weight, recurrent UTI → CKD (PUV) (dx Cr)

2 wk, persistent jaundice, ↑Tbili, ↑dBili, yellow stools → biliary atresia (dx RUQUS)

2F, s/p URI, knee pain x2 mo, fever, ↑PLT, ↑WBC → JIA

5M, pancytopenia, hematuria → aplastic anemia

5F, fair hair, blue eyes, long arms/legs, CVA, eye problems → homocystinuria → tx B6, folate, B12

Angiokeratoma, peripheral neuropathy, corneal dystrophy, renal failure, HF → Fabry disease

Blindness, deafness, paralysis, neuropathy, seizures, intellectual disability → Krabbe disease

Intellectual disability, eczema, fair complexion → PKU

Intellectual disability, weakness, seizures, cherry red macula → Tay-Sachs

4M, fever, productive cough, CXR w/ LLL opacity with minimal fluid layering → parapneumonic effusion → oral abx and outpt f/u

First third of night awakening, unresponsiveness, no recall, autonomic arousal → sleep terror

Second half of night, fully alert, recall, consolable → nightmare

15F, amenorrhea, Tanner stage 5, scant pubic hair, blind vaginal pouch, no ovaries → androgen insensitivity syndrome (46XY)

15F, amenorrhea, Tanner stage 5, normal pubic hair, blind vaginal pouch, ovaries → Mullerain agenesis (46XX)

14M, ↓IgM, ↓IgG, ↓IgA → CVID

Fissures at lips, hyperemic tongue, normocytic anemia, seborrheic dermatitis → Vit B2 (riboflavin) deficiency

Peripheral neuropathy, heart failure → Vit B1 (thiamine) deficiency

Cheilosis, stomatitis, glossitis, confusion → Vit B6 (pyridoxine) deficiency

Punctuate hemorrhages, gingivitis → Vitamin C (ascorbic acid) deficiency

Newborn, eye discharge, clear conjunctiva, eyelash matting → congenital dacryostenosis (nasolacrimal duct obstruction)

12M, itchy eyes, eyelid edema, watery discharge → allergic conjunctivitis → topical antihistamine

13F, microcytic anemia, macules on lips → Peutz-Jeghers → EGD and colo

7 mo, recurrent infections, ↓IgG, scaly lesions on cheeks → transient hypogammaglobulinemia of infancy

5M w/ SNHL → congenital CMV

2M, spasticity, dystonia, hyperreflexia, biting fingers → Lesch-Nyhan

Spasticity, dystonia only → cerebral palsy

8 mo, speech and motor regression, hand wringing → Rett syndrome

8M, unilateral cervical LAD, anaerobic → poor dental hygiene

13d, runny nose, wheezes, tachypnea → RSV bronchiolitis → ↑risk of apnea

16F, s/p amoxicillin, urticarial rash, tender joints → serum sickness like reaction → d/c med, self resolves

5M, bulging TM, boggy nasal mucosa → AOD

9 mo, unilateral hydronephrosis, voiding cystourethrography w/ ureteral filing → vesicoureteral reflux → abx ppx (if not blunting of calyces can just observe)

10F, poor follow-through, uncooperative, interruptive → ADHD

4M, small papules w/ yellow crusting on foot, contagious → impetigo (S aureus) (NOT scabies) → mupirocin

Newborn, ambiguous genitalia, ↑17-hydroxyprogesterone → congenital adrenal hyperplasia (46XX)

20M, small testes, infertile → Klinefelter (47XXY)

8M, basketball, heel pain, can’t stand on heels, dorsiflexion painful → calcaneal apophysitis

Panic attack tx: acute → benzo, maintenance → SSRI

3F, shock, cannot place PIV → intraosseous cannulation

13 mo, metaphyseal corner fracture of distal femur → child abuse

16F, hematuria, proteinuria → glomerulonephritis (SLE, PSGN) → NBS C3

13M, R hip pain, BMI >95%, fever, erythematous overlying skin → osteomyelitis\

Newborn, clenched hands w/ overlapping fingers → Trisomy 18 / Edwards (micrognathia, VSD)

11M w/ SCD, ↓Hgb, nl PLT, nl WBC, no splenomegaly, ↓retic → aplastic crisis (Parvo B19)

11M w/ SCD, ↓Hgb, splenomegaly, ↑retic → splenic sequestration

3d old, purulent eye drainage, conjunctival injection → gonococcal conjunctivitis → CTX

10d old, mucopurulent eye discharge → chlamydial conjunctivitis → erythromycin

Sleep terror disorder → reassurance (benzo if distressing)

2M, fever, BP 60/40, HR 155, cervical LAD, holosystolic murmur, subcostal retractions → myocarditis

3M, URI, left hip pain, mildly ↑ESR and ↑WBC → transient synovitis (NBS hip U/S to r/o septic arthritis)

6d, holosystolic murmur → echo (c/f VSD)

Pathologic murmur characteristics: holosystolic, diastolic, harsh, grade >3, ↑ with standing/Valsalva

Benign murmur characteristics: early or midsystolic, musical, grade <3, ↓ with standing/Valsalva

Newborn, respiratory distress, flat facies, club foot, suprapubic mass → Potter sequence (PUV → oligohydramnios and bladder distension)

14 mo, recurrent cellulitis, gingival ulceration, ↑↑↑WBC → LAD (CD18 deficiency)

11M, irritable, poor sleep, fidgeting, wants to be left alone → MDD

14F, hallucinations, joint pains, hematuria, ↓PLT → SLE

4M, odynophagia, muffled voice, widened prevertebral space → retropharyngeal abscess

18 mo M, recurrent infections, eczema, ↓PLT, nl WBC → WAS (impaired cytoskeleton)

1 yr old, meningitis, rash, sudden hypotension → Waterhouse-Friedrichsen (adrenal hemorrhage) 2/2 meningococcus

2 mo, stridor improves w/ neck extension, CXR w/ R tracheal indentation → vascular ring (NBS CTA)

5M, R TM immobile w/ retraction and pearly white mass → cholesteatoma (keratin debris)

Hypospadias w/u: urologic c/s + karyotype

BAT to flank, pain but nl CBC and UA → CT abdomen (c/f renal injury)

14F, hip pain, XR w/ radiolucent lesion w/ layered periosteal rxn → Ewing sarcoma

Bone bx w/ small round blue cells → Ewing sarcoma

Bone bx w/ pleomorphic tumor cells → osteosarcoma

2 mo, cyanosis during crying and feeding, cres-dec systolic murmur → tetralogy of fallot → knee-chest positioning

4M, follicular conjunctivitis (inflamed yellow follicles on upper conjunctivae) → trachoma

8M, vomiting, ↑tbili, ↑amylase, ↑lipase, RUQ mass → biliary cyst (→ acute pancreatitis)

10F, café au lait (hyperpigmentation), Lisch nodules (pigmented hamartoma of iris) → NF1 → peripheral nerve sheath tumors

11F, mom with BRCA1 → wait until adulthood to test for BRCA

2M, high pitched inspiratory noise, dry cough, fever → croup (parainfluenza virus)

Bit by pet cat → amoxicillin-clavulanate ppx

6 mo, hypotonia, HSM, bright red macula, ↓DTRs → Niemann-Pick (sphingomyelinase def)

6 mo, hypotonia, bright red macula, ↑DTRs, no HSM → Tay Sachs (b-hexosaminidase A def)

Hypotonia, ↓DTRs, nl macula → Krabbe (galactocerebrosidase def)

Anemia, ↓PLT, HSM → Gaucher (glucocerebrosidase def)

1 yr, coarse facial feature, inguinal hernia, corneal clouding, HSM → Hurler (lysosomal hydrolase def)

10 d, bilious emesis, stool in rectum, abdominal distension, XR w/ air fluid levels → midgut volvulus → exlap

7 d old, ↓Na, ↑K → congenital adrenal hyperplasia (21-hydroxylase deficiency → ↑androgens, ↓aldosterone, ↓cortisol)

15 mo, bow legged → genu varum → reassurance (resolves by 2 yo)

Congenital diaphragmatic hernia → intubation + NGT + surgery

Diaper rash spares skinfolds → irritant dermatitis → tx topical barrier

Diaper rash involves skinfolds → Candida → tx topical antifungal

21 d, first stool 50hr, edema, enlarged fontanelle, jaundice, hypotonia → congenital hypothyroidism

Daytime sleepiness, sleep paralysis → narcolepsy → tx modafinil

12 mo, diarrhea, s/p gastroenteritis, bloating → secondary lactose intolerance → reassure

5M, fever, gray oral ulcers on soft palate, palantine pillaris, tonsils, and uvula → herpanigina (Coxsackie)

5M, fever, oral ulcers on anterior oral mucosa, tongue, and lips → herpetic gingivostomatitis (HSV-1)

9M, hematuria, SNHL, FHx kidney disease → Alport syndrome (longitudinal splitting of GBM)

6 mo, NBNB vomiting, abdominal pain, cryptorchidism → testicular torsion

5M, BLE pain w/ palpable purpura, hematuria → IgA vasculitis (HSP) → ↑risk of intussusception

17F, UA w/ WBC and RBC, dysuria, afebrile → UTI (nitrites don’t always have to be positive)

1d old, decreased O2sat in feet → persistent pulmonary hypertension of newborn (↑PVR → R to L shunt)

13F, never period, acne, clitoromegaly → 5a reductase deficiency (46XY)

3d old, t bili 16 -> 28 → tx exchange transfusion

16 mo, seizures, hypoventilation, wrings fingers, rocks back and forth → Rett syndrome

4 mo, inspiratory stridor that improves when prone → laryngomalacia (dx laryngoscopy)

9M, long arms, tongue nodules → MEN2B (r/o medullary thyroid cancer, pheo)

1d old, edema of extremities, loose skin on neck, dysplastic nails → Turner (45X)

8M, weight loss, oily nonblood diarrhea, recent lake → giardiasis

3 mo, fever, micronodular lesions in lungs liver and spleen, grandmother w/ chronic cough → TB

7F, vaginal foreign body → topical anesthetic and irrigation

Neonatal cyanosis, does not improve w/ O2 → TOGA → tx prostaglandin

Neonatal cyanosis, improves w/ O2 → intubate

1 mo, holosystolic murmur at LLSB, dyspnea → VSD (L to R shunt → ↑ pulmonary blood flow → high output HF)

Precocious puberty, hyperpigmented macules, bone fx → McCune-Albright

10 mo, bloody stools, intermittent abdominal pain, no fecal WBC → intussusception

4 mo, fever, fussy, normal exam → UTI

7 d old, abdominal distension, T 95F, bloody stool, bilious emesis → NEC

7 mo old, abdominal distension, bilious emesis → malrotation (midgut volvulus)

3F, R knee welling x 3mo → oligoarticular JIA → r/o uveitis

8 mo, fever, bulging fontanelle → bacterial meningitis → LP then abx (CT not necessary to check for ICP b/c fontanelle open)

7F, secondary enuresis → UTI or stress

12F, BUE and BLE swelling, FHx →hereditary angioedema (C4, C1 inhibitor)

3M, edema, proteinuria → MCD → tx pred

14M, bone pain, worse at night, unrelated to activity, relieved by NSAIDs → osteoid osteoma

4M, nasal polyps, digital clubbing → CF

10M, limited upward gaze, upper eyelid retraction, HA → pinealoma

Delayed puberty, anosmia, ↓FSH/LH → Kallmann syndrome (46XX)

1 d old, vaginal bleeding, breast hypertrophy → neonatal withdrawal bleeding → reassure

Cyanotic infant, single loud S2 → TOGA

Drowning, now asymptomatic → observe for 8 hr, then CXR

Newborn, meconium, cyanosis of hands and feet → reassure

12M, neck mass, anterior to sternocleidomastoid, leaking fluid → branchial cleft cyst

12M, neck mass, midline lower neck, moves with tongue→ thyroglossal duct cyst

12M, neck mass, midline, no movement with tongue→ dermoid cyst

12M, neck mass, draining sulfur granules → actinomyces

18 mo, holds furniture while walking → gross motor delay

18 mo, inspiratory stridor when crying, resolves at rest → croup (edema and narrowing of proximal trachea)

3 d old, jaundice, HSM, vomiting, ↓glucose, ↑bili → galactosemia

16F, forgetful, sleeping more, irritable → MDD

Macrocephaly, frontal bossing, midface hypoplasia, limb shortening → achondroplasia

Clubfoot, craniofacial defects, abdominal wall defect → amniotic band sequence

Cryptorchidism, <6mo: monitor

Cryptorchidism, >= 6mo: orchiopexy

10M, erythematous popular rash w/ rough texture on tunk, axilla, and groin → scarlet fever (GAS)

14F, primary amenorrhea, 46XY → androgen insensitivity syndrome → elective gonadectomy

Newborn, prolonged labor, diffuse fluctuant scalp edema from ear to ear → subgaleal hemorrhage

Newborn, prolonged labor, nonfluctuant swelling does not cross suture lines → cephalohematoma (subperiosteal hemorrhage)

13M, cough x2 wk, bilateral crackles → mycoplasma, chlamydia

5F, pubic hair, acne, obese, normal bone age → premature adrenarche (↑insulin → adrenal gland)

5F, pubic hair, acne, advanced bone age, high LH → central precocious puberty (CNS)

5F, pubic hair, acne, advanced bone age, low LH → peripheral precocious puberty (CAH, gonadal tumor)

4 mo w/ nocardia infxn → CGD (impaired NADPH oxidase)

Recurrent infxn w/ bacteria (Staph, nocardia, serratia) and fungus (aspergillus) → CGD

Recurrent infxn w/ encapsulated bacteria (strep pneumo) → X linked agammaglobulinemia

Recurrent infxn w/ HSV → NK cell defiicency

Recurrent infxn w/ encapsulated bacteria (neisseria) → complement deficiency

4M, glans penis w/ erythema and white discharge → balanitis w/ candida

13F, firm mass above knee, XRF w/ bone spur configures w/ cortex → osteochondroma (benign)

18 mo, erythroderma, fever, sloughing skin, flaccid blisters, no mucosal lesions → SSSS

18 mo, erythroderma, fever, sloughing skin, mucosal lesions → TEN

18 mo, erythroderma, fever, sandpaper rash → scarlet fever

13F, BLE pain, hips externally rotate during flexion, limited internal rotation, waddling gait → SCFE

Newborn, medial deviation of forefoot, flexible → metatarsus adductus → resolves

Newborn, medial deviation of forefoot, rigid, plantarflexion → clubfoot → serial casting

Cyanotic newborn, low birth weight, CXR w/ diffuse GGO → respiratory distress syndrome (surfactant deficiency)

Cyanotic newborn, tachypneic, CXR w/ fluid in interlobar fissures → transient tachypnea of newborn (inadequate alveolar fluid clearance)

Cyanotic newborn, tachypneic, CXR nl → persistent pulmonary hypertension

6 mo, cough, crackles → bronchiolitis (RSV) → tx supportive

Aortic coarctation tx: PgE1 (R to L shunt → ↑systemic perfusion)

5M, intellectual disability, long face w/ prominent forehead and chin, joint hypermobility → fragile X (normal life expectancy)

4 mo, macrocytic anemia, clef palate, triphalangeal thumbs, webbed neck → Diamond Blackfan anemia → tx pred + PRBC

Newborn, failure to pass meconium, abdominal distension, no stool in colon → meconium ileu (CF)

1 yr old, DS, recurrent intussusception → Meckel diverticulum (NBS Meckel scintigraphy 99m scan)

18F, inspiratory stridor during exercise → paradoxical vocal fold motion

16F, migrating arthralgia, pustular rash, synovial fluid w/ 30k WBC and cx neg → gonococcus

3M, syncope after running, murmur louder but cyanosis better when squatting → tetralogy of fallot

17M, athlete, LVH, enlarged LA, ECG w/ TWI → hypertrophic cardiomyopathy

17M, athlete, LVH, normal LA → athlete’s heart

11 mo, episodic crying and flexing hips, lethargy → intussusception (NBS abdominal U/S)

7M, acne, height 98th percentile, pubic hair, ↑bone age, ↓LH → nonclassic congenital adrenal hyperplasia (21-hydroxylase deficiency)

15 mo, cyanotic and LOC while crying → breath holding spell → normal (reassure)

6F, disobedient just at home → parent management training

2M, LOC after fall, nl exam → breath holding spell

7 wk old, straining when stooling, soft yellow stools → normal dyschezia

4 mo, macrocephaly, seizures, chorioretinitis → congenital toxo

XR w/ diaphragmatic rupture → NBS CT

5 d, ↓BP in extremities → aorta coarctation (↑LV afterload)

6 wk, stool w/ streaks of blood, no anal fissures, no abd pain → food protein induced allergic proctocolitis → eliminate dairy from maternal diet

18 mo, only eats pureed foods and yogurts, weight loss → eosinophilic esophagitis (NBS endoscopy)

7M, asymptomatic biliary cyst → tx surgery to ↓ r/o malignancy

45 min old, tachypnea, retractions, CXR w/ diffuse GGO → neonatal respiratory distress syndrome (↓surfactant) → tx corticosteroids

1 hr old, mother w/ GDM, ↑interventricular septal wall → HCM → tx BB

5F, limited vocabulary, wrong grammar → language disorder

5F, stuttering → childhood onset fluency disorder

6 mo, decreased tone, head lag, ↓head circumference → microcephaly → NBS bMRI

10M, IDA, +FOBT, nl colo and nl EGD → Meckel diverticulum (NBS T99m pertechnetate scan)

Newborn w/ hydrocephalus, intracranial calcifications, jaundice → congenital toxo (transmission: undercooked meat)

Newborn w/ microcephaly, periventricular intracranial calcifications, SNHL → congenital CMV (transmission: bodily fluids)

3M, unilateral purulent rhinorrhea → nasal foreign body

7F, scattered erythematous macules, limp, gum bleeding, microcytic anemia → scurvy (Vit C ascorbic acid deficiency)

Criteria for strep test: >2 of fever, tender LAD, tonsillar exudates, no cough

6M, BLE pain at night → growing pain → reassure

20 mo, fever, h/o AOM, protruded auricle w/ swelling → mastoiditis

5 wk old, GPC in pairs and chains → GBS

15 mo, spiral fracture of tibia → toddler fx (d/t walking) → immobilization

4M, obesity, hyperphagia, poor muscle tone, intellectual disability → Prader-Willi → NBS genetic test

13F, scoliosis → NBS XR → monitor, brace (if >30 deg), surgical fixation (if >40deg)

Seizure after receiving vaccine is not a contraindication to receiving vaccine again

5F, recurrent UTI, blunted calyces → vesicoureteral reflux

4 mo, hypoglycemic at birth, obese, enlarged tongue, R leg > L leg → Beckwith-Wiedemann (omphalocele, Wilms tumor, hepatoblastoma) → screening abdominal U/S, AFP

18 mo, delayed language, hand flapping, does not follow gaze → ASD

3M, acute unilateral erythematous cervical LN, fever → cervical lymphadenitis (Staph, Strep) → tx clindamycin, augmentin

3 d old, poor feeding, WBC 3k, crying → neonatal sepsis (GBS, E coli, listeria) → tx ampicillin + gentamicin

Normal breast milk feeding frequency: q2-3 hr

Normal number of diapers in newborn: # wet diapers = age in days

Normal arrival of yellow stools: first few days

6 d old, ↑unconjugated bili, ↓weight → lactation failure jaundice (↓bilirubin elimination)

Down syndrome heart defect: complete atrioventricular septal defect

15M, unconscious, previously sober 5 min ago, dizzy → inhalant intoxication

S/p otitis media, HA, tender mastoid, ↑WBC → mastoiditis c/b brain abscess → bMRI

Neonatal respiratory distress syndrome tx: surfactant + abx

18 mo, air fluid levels behind both TMs → otitis media with effusion → observe (NOT tubes)

10 wk old, normocytic anemia → physiologic anemia of infancy (↓Epo)

3M, enlarged calves → DMD → txc steroids

18 mo, unilateral wheezing, hyperresonance on other side → foreign body

6 hr old, mother w/ preeclampsia, tachypnea, ↑Hct, ↓gluc, low birth weight → neonatal polycythemia → tx IVF

16F, cold, constipation, BP 90/60, HR 54, BMI 18 → anorexia (NOT hypothyroidism b/c not HTN and not overweight)

4M, fever, diastolic murmur, ↑WBC, UA w/ RBCs → endocarditis

16M, swollen knee x6mo, h/o bleeding → hemophilic arthropathy (hemosiderin deposition + fibrosis)

2M w/ burkholderia PNA, granulomas in LN → CGD (↓superoxide production)

7F, bilateral hip pain, BLE palpable purpura, abdominal pain → HSP (IgA vasculitis)

2F, recent URI, disoriented, ↓gluc, ↑AST/ALT, ↑ammonia, cerebral edema → Reye syndrome

15 mo, s/p topical anesthetic, cyanotic, SpO2 85%, does not improved with O2 → methemoglobinemia → tx methylene blue

Lead poisoning tx → dimercaprol

Ethylene glycol or methanol tx → fomepizole

7M, wetting bed, failed enuresis alarms, FHx → primary nocturnal enuresis → tx desmopressin

16F, fatigue, HSM, ↓PLT, delayed puberty → Gaucher disease

7M, seizure, intellectual disability, freckles in inguinal folds, hyperpigmented macules → NF1 (optic glioma, Lisch nodules, scoliosis, neurofibroma)

Angiofibroma, hypopigmented macules, intracardiac rhabdomyoma → TSC

Acoustic neuroma, meningioma, schwannoma → NF2

Intellectual disability, macroorchidism, large ears → FXS

Port wine stain, glaucoma, leptomeningeal capillary-venous malformation → Sturge Weber syndrome

10 mo, PJP infxn → T cell deficiency

10 mo, recurrent infxn, dilated blood vessels on sclera → ataxia-telangiectasia

Newborn, low set ears, micrognathia, cleft palate → DiGeorge syndrome (hypocalcemia)

4M, soft nontender coiled mass superior to R testicle → varicocele → NBS abdominal U/S (Wilms tumor)

Newborn, SNHL, HSM, growth restriction → congenital rubella

Erb palsy 2/2 shoulder dystocia → tx observation (self-resolves)

2M, dark stool, anemia → Meckel diverticulum (NBS T99m pertechnetate scan)

15 mo M, chronic enteroviral meningitis → X linked agammaglobulinemia

Anemia of prematurity pathophys: ↓epo

6F, short, high palate, short metacarpal → Turner syndrome → tx GH

Shoulder dystocia, Klumpke palsy, Horner syndrome → C8/T1 injury

Shoulder dystocia, waiter’s tip palsy (Erb-Duchenne) → C5/C6 injury

10M, R ear pain, R facial weakness, crusted external auditory meatus → VZV

Vaccines are given based on chronological (not gestational) age

Strength training is OK in children if: cognitive maturity, > 8yo, supervised, proper technique

Neonatal Graves pathophys: mother anti-TSHR → stimulates T4 release in baby → self resolves after birth

6 wk old, crying 3 hr every night, no infxn → NBS review soothing techniques

CXR w/ diffuse reticulogranular pattern w/ air bronchograms → respiratory distress syndrome

CXR w/ interstitial infiltrates w/ prominent interlobar fissures → transient tachypnea of newborn

13 d old, eyelid swelling, mucopurulent discharge → chlamydia → tx oral erythromycin

17M, delayed muscle relaxation, testicular atrophy → myotonic muscular dystrophy

Febrile seizure tx: APAP + reassurance (NOT additional testing)

1 mo, well appearing, bloody stools → food protein-induced allergic proctocolitis

13 mo, bruising, weight loss, abdominal mass, periorbital ecchymoses, rapid eye movements → neuroblastoma

Diaper rash involving skin folds, confluent erythema → seborrheic dermatitis

4 mo, unable to lift head, bradycardia, large tongue, low weight, less frequent BM, umbilical hernia → congenital hypothyroidism

Newborn, choanal atresia, cyanosis improves with crying, cleft palate, hole in iris, VSD → CHARGE syndrome

Newborn, abnormal ears, heart defects, hypoplastic thumbs, pigmentation → Fanconi anemia

Newborn, heart defect, hypocalcemia → DiGeorge

Newborn, heart defect, iris defect, cleft palate, cryptorchidism, microcephaly → Trisomy 13

Newborn, cardiac and renal abnormalities, tracheoesophageal fistula → VACTERL

15 d, bilious emesis, nl KUB → NBS upper GI series (for malrotation w/ midgut volvulus)

6F, bilateral hip effusions, limited R hip internal rotation → transient synovitis

3 wk old, jaundice, nl Hgb, ↑↑ d-bili, nl ALT/AST, hepatomegaly → biliary atresia → NBS liver bx

3 wk old, jaundice, nl Hgb, ↑ indirect-bili, nl ALT/AST → Crigler-Najjar, Gilbert

3 wk old, jaundice, nl Hgb, ↑↑ d-bili, ↑ALT/AST, hepatomegaly → A1AT deficiency

4 mo, dystonia, SNHL, chorea → bilirubin induced neurologic dysfunction

7F, precocious puberty, R adnexal mass → granulosa cell tumor

1 mo, ↑↑TSH, ↓T4 → thyroid dysgenesis

3M, AGMA, radiopaque tablets in stomach → iron poisoning → tx deferoxamine

Iron poisoning tx: deferoxamine

Lead poisoning tx: succimer

6M, noisy sleeping, weight 25th percentile → OSA

Newborn w/ RDS, improved w/ bag valve mask → NBS NPPV

3F, recurrent mucosal infection, ↑↑↑WBC → LAD (CD18)

3F seizure, port wine stain, language delay → Sturge-Weber

21 d old, poor feeding, jaundice, hypotonic, fussy, afebrile → sepsis

5 d old F, mucoid vaginal discharge w/ blood → maternal hormone withdrawal

# Psych

Reaction formation: using opposite emotion

55M, forgetful, executive dysfxn 🡪 EOD (NBS: MoCA)

Schizophreniform: 1-6 mo

Clozapine s/e: agranulocytosis

Adjustment disorder: within 3mo of stressor, significant impairment, tx w/ therapy

Schizophrenic w/ mass, talking to it → does not have capacity

MDD, not responding to SSRI, weight gain, sexual dysfxn → switch to bupropion

13M, needs handwriting to be perfect → OCD → tx w/ SSRI + CBT

Borderline personality disorder tx: dialectical behavior therapy

Schizoid personality disorder: loner

Schizotypal personality disorder: unusual thoughts and behavior

MDD physiology: ↑cortisol, ↓hippocampal volume, ↓REM latency, ↓slow wave sleep

MDD x1, responsive to SSRI → can taper after 6mo

MDD x2, responsive to SSRI → can taper after 2-3 yr

13F, distractibility, worried about failing, fidgeting → GAD (tx SSRI)

MDD with anorexia, not responsive to SSRI → venlafaxine

MDD, diabetic neuropathy → duloxetine

MDD, recent MI → sertraline (NOT citalopram d/t QTc)

NMS vs malignant hyperthermia: MH is after anesthesia

Somatic symptom disorder tx: SSRI

MDD w/ psychotic features tx → SSRI + SGA

Binge eating with compensatory behavior → Bulimia

Binge eating w/o compensatory behavior → binge eating disorder

Attempting to diet, hypokalemia → Bulimia (tx SSRI)

Dysthymia criteria: >2yr, never symptom free >2mo, >2 of SIGECAPS

Prolactinoma prolactin increase > prolactin increase from SGA

Somatic symptom disorder → tx regularly scheduled appointments

Chronic sadness, low-energy, low self esteem → dysthymia

Checking stove repeatedly → OCD → tx CBT

Stimulant OD tx → benzo

Delirium in elderly tx → Haldol

Gaps in memory, regressive behavior, childhood trauma → dissociative identity disorder

H/o BPAD, mute, immobile, stable VS → catatonia → tx benzo or ECT

Lithium s/e: fatigue, constipation, myalgia, hypothyroidism, hyperPTH, hypercalcemia, DI, CKD

Tardive dyskinesia MOA: dopamine receptor supersensitivity

Ropinirole s/e: dopamine agonist-induced impulse control disorder

Bipolar type I: mania (>7d) +/- MDD

Bipolar type II: hypomania (>4d) + MDD

Cyclothymic: hypomanic symptoms + depressive symptoms, >2yr

Unusual thoughts, perceptions, behavior → schizotypal PD

Prefers to be alone, detached → schizoid PD

Avoids people d/t fear of criticism → avoidant PD

Social anxiety disorder tx: SSRI (NOT buspirone)

Depressed 7mo after death of wife, poor sleep and appetite → MDD → mirtazapine

Smoking cessation tx: nicotine replacement therapy, bupropion, varenicline

Quetiapine MOA: 5HT2A and D2R blockade

56F, MDD on venlafaxine → need to monitor BP

Difficulty making friends, repetitive movements, interrupts others, routines → ASD

Motor and vocal tics → Tourettes

Panic attack tx → SSRI > benzo

S/p MI, feels overwhelmed, wakes up diaphoretic → PTSD → tx CBT

Agitated, fever, HTN, nystagmus, rigidity → PCP intoxication → tx benzos

On risperidone, grimacing and tapping foot → TD → d/c risperidone

Acute dystonia tx: benztropine

17F, sleep disturbance, fatigue, poor concentration, worrying about a lot → GAD

Dry mouth, tachycardia, anxiety → cannabis intoxication

OD, drooling, alert, VSS → caustic ingestion

22M, 8 d after death of father, sits along in dark → brief psychotic disorder

Acute stress disorder is precursor to PTSD (<1mo, hyperarousal)

Body dysmorphic disorder therapy → determine insight by asking about perceptions of others

17M, lying, stealing, running away → conduct disorder (NOT oppositional defiant disorder)

Conduct disorder (<18 yr) → antisocial personality disorder (>18 yr)

Antipsychotics that ↑seizure risk → SGA

Antipsychotics that ↑LFTs → valproate

Needs to be center of attention, focused on image → histrionic personality disorder

Needs to be center of attention, lack empathy → narcissistic personality disorder

MDD + delusions → MDD w/ psychotic features

Antiemetic that causes acute dystonia → metoclopramide

MDD symptoms only about someone who died → persistent complex bereavement disorder

Anxious about going to work, unplugs appliances → OCD (NOT GAD)

Binge eating disorder → trx SSRI

Acute mania w/ psychosis → tx IM olanzapine (NOT valproate)

Bipolar depressive episode → tx lamotrigine

Opioid withdrawal → tx buprenorphine

Tourette tx → tetrabenazine (VMAT2i), risperidone, alpha-2 receptor antagonists (guanfacine, clonidine)

SGA w/ greatest risk of ↑prolactin → risperidone

Uncomfortable around people, fear of embarrassment or rejection → social anxiety disorder

Uncomfortable around people, fear of embarrassment or criticism → avoidant personality disorder

Prefers being alone → schizoid personality disorder

Unstable mood, anger outbursts → BPD → tx DBT

Tyramine crisis s/e: ↑sympathomimetic → HTN

AMS, ↑HR, HTN, ↑DTRs, fever, tremors, on MAOI → serotonin syndrome

AMS, ↑HR, HTN, nl DTRs, no fever, on MAOI → tyramine crisis

Acute stress disorder tx → CBT

Fever, delirium, rigidity, ↑HR, HTN, sweating → NMS → tx dantrolene, bromocriptine

Tremor, hyperreflexia, ↑HR, HTN → serotonin syndrome

Antipsychotic, acute dystonia tx → diphenhydramine, benztropine

Chronic insomnia, difficulty falling asleep → CBT (sleep diary)

Body dysmorphic disorder tx → SSRI

Combative, tachycardic, psychosis, ataxia, increased pain tolerance → PCP

Combative, tachycardic, psychosis, mydriasis → cocaine

↓RR, no response to naloxone → benzo + alcohol OD

Tourette tx: antidopaminergic (tetrabenazine, SGA), apha-2 adrenergic agonist (guanfacine, clonidine)

74M, MDD unresponsive to SSRI, psychosis → ECT

Antipsychotic for pt w/ DM-2 → ziprasidone

MDMA + SSRI → sympathomimetic (HTN, tachycardic, hyperthermia), AMS, hyperrflexia, seizure, hyponatremia

Mood swings, binge eating resolves with menstrual period → premenstrual dysphoric disorder

PD on carbidopa-levodopa, but has psychosis → tx quetiapine

Fluoxetine and dextromethorphan, AMS, ↑DTR, ↑BP, ↑HR → serotonin syndrome → tx benzo + cyproheptadine

Lithium s/e: n/v/d, AMS, confusion, ataxia, tremor

PTSD increases risk of: suicide (NOT panic disorder)

S/p death of father, does not remember his name, family members or recent events → dissociative amnesia

GAD requires symptoms for: 6 mo

Adjustment disorder criteria: w/n 3 mo of stressor, less than 6 mo from stressor

ADHD tx, stimulant: methylphenidate, dextroamphetamine

ADHD tx, nonstimulant: atomoxetine, clonidine (children), guanfacine (children)

Insomnia, anxiety, palpitations, HTN, anxiety, agitation → caffeine intoxication

Best therapy for schizophrenia: family therapy

Episodic anxiety and SOB, worrying about future attacks → panic disorder

Somatic symptom disorder RF: female, lower education, childhood neglect, sexual trauma

74F, withdrawn, forgetful x3yr, disinterested, MOCA 22 → AD dementia (NOT MDD) → tx donepezil, galantamine, rivastigmine

LP w/ low 5-hydroxyindoleacetic acid → MDD

12F, excessive concern about mother’s safety → separation anxiety disorder

Catatonia tx: benzo

SGA, 103F, ↑BP, ↑HR, rigid, stiff → NMS → tx bromocriptine, benzo, dantrolene

SGA, dystonia → EPS → tx benztropine

Serotonin syndrome tx: cyproheptadine

23F, new onset psychosis → NBS urine tox (NOT SGA)

Postop delirium management: sitter (NOT benzo, restraints)

Schizophrenia, restlessness → akathisia (EPS) → tx BB, benztropine, benzo

Strongest suicide RF: prior attempt

Recently started HCTZ, on psych meds, confusion, tremor, seizure → lithium toxicity

Agitative, psychosis x several days, seizure → bath salts (cathinone) intoxication

Somatic symptom disorder vs conversion disorder: conversion is neurological symptom

Schizophrenia resistant to olanzapine and risperidone → tx clozapine

SGA, tongue protrusion, involuntary movements → tardive dyskinesia → tx valbenazine or deutetrabenazine (VMAT2 inhibitor), switch meds

SGA, torticollis, oculogyric crisis → acute dystonia → tx diphenhydramine, benztropine

SGA, restlessness, pacing → akathisia → tx BB

Thoughts of suicide → NBS suicide risk assessment BEFORE hospitalization

Phenytoin should be supplemented with: folic acid

Intermittent explosive disorder vs disruptive mood dysregulation disorder: DMDD is always angry and before 10 yo

Premature ejaculation tx: SSRI

Postpartum psychosis tx: hospitalization

Benzo s/e in elderly: cognitive impairment, falls, paradoxical agitation

# OBGYN

Gastroenteritis, fetal demise 🡪 Listeria

First prenatal visit screening: CBC, Rh, HIV, RPR, HBV, HCV, Rubella, UCx, Chlamydia

24-28 wk screening: Hgb, Ab screen, GCT

36-38 wk screening: GBS cx

Amenorrhea, ↑FSH, FMR1 carrier → primary ovarian insufficiency (↓E2 → no endometrial proliferation)

Irregular menses, unresponsive to OCP w/u: endometrial biopsy

Unilateral bloody nipple discharge, mass → breast CA

Nonstress test: nonreactive → biophysical profile

Asymptomatic endometriosis → CTM

GA30, appendicitis tx: surgery

Vulvovaginal candidiasis RF: abx, DM

Voice change → virilization (Sertoli-Leydig cell tumor)

Recurrent UTI, s/p menopause → vaginal estrogen

IUD contraindications: AUB, infxn, polyp, endometrial cancer

Tried to conceive for 3 yr, home HCG pos but office HCG neg → pseudocyesis

Missed SAB: HCG positive, nonviable on US

22F, fevers, RUQ pain, intermenstrual spotting → PID w/ perihepatits (Fitz-Hugh-Curtis)

GA8, syphilis, penicillin allergy → desensitization

Late fetal decels → d/c oxytocin

Colposcopy equivocal → endocervical curettage

Shoulder dystocia RF: fetal macrosomia, GA>42, GDM, maternal obesity, maternal weight

Vasa previa (fetal vessels over cervix) tx: emergency cesarean

Dysuria, pruritic vesicles on vulva, pyuria, LAD → HSV

GDM, postpartum visit → 2hr GTT screen

Pelvic pressure, postmenopause spotting, on tamoxifen → uterine sarcoma

Uterine + bilateral adnexal tenderness, AUB → PID

Postpartum hemorrhage, prolonged labor, forceps delivery, high fundus → uterine atony

Uterine atony tx: 1. Massage + oxytocin, 2. TXA, 3. Misoprostol, 4. Intrauterine balloon, 5. Surgery

29F, acute unilateral pelvic pain during sex → ruptured ovarian cyst

Preeclampsia at <20wk GA → hydatidiform mole

Postpartum blues timing: peaks 5 days after birth, resolved w/n 2 wk

First prenatal visit, h/o conization → TVUS cervical length measurement

Prenatal vitamins: folic acid at 5-6wk

GDM screen in first trimester if: prior GDM, prior macrosomic infant, fhx DM-2, PCOS, >40yo

24F, mobile breast mass → fibroadenoma (NBS: U/S)

Fibroids, wants children → hysteroscopic myomectomy

Preeclampsia BP: SBP>140 or DBP>90

Eclampsia tx: Mg sulfate

Jittery newborn, mom w/ GDM → ↓glucose, ↓Mg → ↓ PTH → ↓Ca

GA28, h/o HIV, ↑LFTs, normal RUQUS → HCV

Preeclampsia severe features: >160/110, HA, visual changes, Cr>1.1, ↑LFTs

Preeclampsia proteinuria: urine protein/Cr >0.3

Preeclampsia HTN tx: labetalol, hydralazine (if bradycardic), nifedipine

Preeclampsia seizure tx: magnesium sulfate

Mg toxicity: loss of DTR, somnolence, respiratory depression

Mg toxicity tx: calcium gluconate

Preterm labor, GA<32 → tocolysis w/ indomethacin, steroids, penicillin, Mg sulfate (to ↓cerebral palsy)

Preterm labor, GA 32-34 → tocolysis w/ nifedipine

Preterm labor, GA>34 → expectant management

No menses postpartum, had retained placenta, normal TSH/FSH → Asherman syndrome

Pregnant, dyspnea, respiratory alkalosis → reassurance

Regular menses + light intermenstrual bleeding → endometrial polyps

Postpartum period: uterine contractions, milk letdown, chills, shivering, lochia (bloody clots)

GA28, acute abdominal pain, diffuse uterine tenderness, contractions → abruptio placentae

Placenta previa: placenta covers cervix

Uterine inversion tx: 1. Manually replace uterus, 2. Remove placenta

62F, ovarian cyst → CA-125

Postpartum, shock, purple mass protruding into vagina → vaginal hematoma

Trial of labor after cesarean: only after low transverse cesarean

Unilateral pruritic breast rash w/ axillary LAD → breast CA (NBS: bx)

GA30, h/o HL, epigastric pain, ↑lipase, nl LFTS → TG pancreatitis (NBS: lipid panel)

BRCA testing indicated if FHx of ovarian cancer or breast cancer at <50

Acne and male pattern hair loss → PCOS (NBS: oral GTT)

60F, AUB, ovarian mass, endometrial hyperplasia → granulosa cell tumor

Diarrhea, constipation, worse in pregnancy → IBS

36F, 103F, fevers, chills, joint tenderness, pustules on chest → gonorrhea

Recurrent pregnancy loss, h/o TIA → APS

Polyhydramnios, double bubble on U/S → duodenal atresia (DS, VACTERL)

ACEi/ARB in pregnancy → hypoplastic kidneys → oligohydramnios

Postpartum bleeding, placenta in pieces, firm uterus, h/o D&C → placenta accreta

Antepartum bleeding, fetal HR abnormalities → placenta abruption

OCP s/e: HTN, VTE, irregular bleeding, nausea, breast tenderness (NOT weight gain)

16F, painful menses → primary dysmenorrhea → tx NSAIDs, OCP

Ovarian cancer screening: only if >1 close family members, male breast cancer, bilateral breast cancer, breast cancer <50, Ashkenazi jewish

18F w/ migraines → avoid OCP d/t stroke risk

Incomplete bladder emptying → overflow incontinence / outlet obstruction (fibroids)

Nitrazine positive fluids, fetal HR 170 → PPROM w/ chorioamnionitis

Postmenopausal, polyp → bx (if premenopausal, bx not necessary)

Pregnant, RLQ pain, WBC 16k → acute appendicitis

Weight gain, hirsutism → Cushing syndrome → dx overnight dexamethasone suppression test

GA34, RLQ pain, hematuria, WBC 14k → nephrolithiasis → dx renal U/S

Secondary amenorrhea → dx FSH, TSH, prolactin

GA10 w/ bacteriuria → fosfomycin (Bactrim and nitrofurantoin not indicated at GA10)

IUD contraindication: uterine cavity distortion

S/p C-section, back pain, BLE numbness and weakness → epidural abscess

Depressed, <2 wk postpartum → postpartum blues → reassurance

Depressed, 4-6 wk postpartum → PPD → SSRI + CBT

Asymptomatic BV → no treatment

Mobile nontender mass posterior labium majus → Bartholin duct cyst

GA37, ROM for 2d, green discharge → GBS → tx penicillin

Exercise to avoid in pregnancy: contact sports, fall risk, scuba diving, hot yoga

GA26, chorioamnionitis, PPROM → abx and immediate delivery

Birth weight <3rd percentile, mother w/ preeclampsia → fetal growth restriction → polycythemia, hypoglycemia, hypothermia, hypocalcemia, perinatal asphyxia

Asymptomatic pelvic organ prolapse → reassurance

Symptomatic pelvic organ prolapse → pelvic floor exercises, pessary, surgery

Primigravida, 4hr pushing with epidural, fully dilated, still at +3 station, exhausted → second stage arrest → vacuum assisted delivery

Occiput anterior position > occiput posterior

Heavy periods, anemia, irregular enlarged uterus → fibroids (smooth muscle proliferation in myometrium)

Heavy periods, uniformly enlarged uterus, tenderness → adenomyosis

Irregular bleeding → endometrial hyperplasia

Secondary dysmenorrhea concerning in: age >25, unilateral pain, no systemic symptoms, AUB

Fetal ascites, polyhydramnios, placental thickening, fetal pericardial effusion → hydrops fetalis (Rh, parvoB19, alpha thalassemia → hypoxemia → HOHF)

Polyhydramnios, macrosomia, omphalocele → Beckwith-Wiedemann

Pregnant w/ thyroid nodule: 1. TSH, 2. Thyroid U/S, 3. FNA

Postpartum visit tests: intimate partner violence screening

Maternal sensation of decreased movement → nonstress test

Fetal demise, ↑bile acids, pruritis → intrahepatic cholestasis of pregnancy

HELLP: hemolysis, elevated liver enzymes, low platelets

Oligohydramnios, late decels → amnioinfusion

GA41, deepest pocket 1cm → oligohydramnios → induction of labor (if no oligo, could wait until 42wk)

Dyspareunia, dry eyes → SS

Chlamydia NAAT +, gonorrhea NAAT - → doxycycline only (NAAT is specific)

Rh negative primigravid → anti-D Ig (RhoGAM) at delivery or abortion

16F, heavy irregular bleeding → immature HPO → tx OCP

GA20, placenta previa → routine care (90% self resolve)

No change in cervix for 4 hr despite contractions → active phase arrest → C-section

CIN3, NBS: cervical conization

S/p perineal lac repair, fever, crackles, diffuse rash → Staph toxic shock syndrome → tx vanco, cefepime, clinda

Newborn, mother had HBV during pregnancy → HepB immunoglobulin + HBV vaccine

Contraindications to breastfeeding: HIV

Postmenopausal bleeding → TVUS or endometrial biopsy + pap smear

11F, itchy vulva, thin white skin w/ excoriations, portions of labia minora adherent → lichen sclerosis

Multiple miscarriages, head sparing growth restriction → APS → uteroplacental artery thrombosis

Suction uterine curettage increases risk of: intrauterine adhesions (Asherman syndrome)

58F, vulvar pruritis, white striae, erythematous erosions, friable vaginal epithelium with serosanguinous drainage, reticular erosions and oral ulcers, white plaques on tongue → lichen planus

GA29, abd pain, fundal tenderness, firm uterine mass, WBC 19k, no decels → uterine fibroid degeneration

GA29, abd pain, guarding, h/o C-section, decels → uterine rupture

Gestational sac at left uterine cornu, fluid in cul-de-sac → ruptured ectopic pregnancy → tx surgery

Unruptured ectopic pregnancy tx → MTX

Spontaneous abortion tx → misoprostol

Hirsutism, enlarged clitoris, acne, obese, ↑testosterone, nl DHEAS → Sertoli-Leydig tumor

Hirsutism, acne, obese, ↑testosterone, nl DHEAS → PCOS

19F, dyspareunia, cervical displacement, cervical motion tenderness → endometriosis

GA29, PLT 120k → gestational thrombocytopenia → reassurance

46F G3P3, h/o C-sections, heavy periods, tender globular uterus → adenomyosis

18F, lower abdominal pain during menses → primary dysmenorrhea

18F, painful menses, dyspareunia, immobile uterus → endometriosis

APS in pregnancy tx → LMWH

OCP s/e: VTE, CVD, HTN, migraines

Ovarian cancer tx → exlap (NO bx d/t c/f seeding)

Fetal growth restriction including head, ASD → chromosomal abnormality

Fetal growth restriction including head, intracerebral calcifications → congenital infection

Fetal growth restriction, head-sparing → uteroplacental insufficiency or malnutrition

41F, vaginal bleeding, h/o Roux-en-Y, ↑hCG, ↓TSH, uterine enlargement → hydatidiform mole

32F, infertile, irregular periods, dark plaques under axilla, enlarged ovaries → PCOS → tx letrozole

Colposcopy unable to visualize squamocolumnar junction → endocervical curettage

Endocervical curettage w/ CIN3 → cervical conization

42F, AUB, night sweats, mood changes → FSH, TSH, prolactin (c/f early menopause)

GA5, vaginal spotting, mucopurulent endocervical discharge, viable pregnancy → acute cervicitis → abx

HELLP, dyspnea, hypoxia → pulmonary edema (arterial vasospasms → ↑SVR → ↑afterload)

17F, heavy regular menses, nl PLT, nl PT, nl PTT → vWD

63F, postemenopausal bleeding, ulcerated lesion in vagina → vaginal CA (bx)

PPD3, intraamniotic infxn, prolonged labor, increased vaginal bleeding → retained products of conception

Hyperandrogenism → testosterone and DHEAS levels (BEFORE imaging)

Breast tenderness, ovarian mass → granulosa cell tumor (E2)

Unable to void 6 hr after delivery → postpartum urinary retention (pudendal nerve injury → bladder atony)

Adnexal tenderness, unilocular mass w/ homogeneous low level echoes → endometriosis

GA20, anencephaly → inadequate folate

Congenital uterine abnormality → ↑risk of preterm

S/p C-section, firm uterus, BP 80/50, HR 124, no pelvic bleeding → postpartum hemorrhage → exlap

Postpartum, occipital HA, HTN, LLE weakness → preeclampsia (dx CTH)

Postpartum, occipital HA → postdural puncture HA

Asherman syndrome = intrauterine synechiae

Plan B = levonorgestrel

48F, unilateral bloody nipple discharge, nl mammography → intraductal papilloma (benign)

39F, weight gain, amenorrhea → hypothyroidism

Postpartum, seizure, DIC, shock → amniotic fluid embolism

34F, infertility, hypothyroidism → primary ovarian insufficiency

6 wk postpartum, extended labor, clear vaginal discharge → vesicovaginal fistula

Pregnant, migraines → tx BB

Vulva w/ single ulcer with indurated edges → Syphilis (chancre)

Vulva, multiple deep ulcers on yellow base, LAD → chancroid (H ducreyi)

Vulva, multiple ulcers w/ granulation tissue, no LAD → granuloma inguinale (donovanosis)

Vulva, small and shallow ulcers, painful LAD → LGV (chlamydia)

Bilateral gray nipple discharge → hyperprolactinemia (hypothyroidism)

GA26, pyelonephritis → IV abx (NOT outpt)

S/p perineal laceration, pain, edematous, TTP, no drainage → NSAIDs

Variable decels → maternal repositioning (cord compression)

67F, vulvar itching, dryness, clitoral hood retraction → lichen sclerosis (dx punch bx) → tx topical steroids

GA10, DM-1, proteinuria, AKI, BP 144/88 → underlying diabetic nephropathy

Postpartum dyspareunia → ↓estrogen 2/2 lactation (prolactin inhibits GnRH)

Pregnancy → ↑T3, ↑T4, ↓TSH

Newborn, nl length, nl head, ↓weight → asymmetric fetal growth restriction (uteroplacental insufficiency)

Newborn, nl length, ↓head, ↓weight → symmetric fetal growth restriction (congenital)

GA30, MVA, BP 90/60, HR 136 → placental abruption → PRBC

Fibroids spontaneously regress after menopause d/t ↓E2

69F w/ AF, coughing recently, left abdominal pain x2 d, palpable mass, no n/v/d → rectus sheath hematoma (inferior epigastric artery rupture)

26F, near syncope, BP 80/50, HR 120, nausea, itching → anaphylaxis

S/p abortion, septic shock → septic abortion → tx abx + IVF + suction curettage

32F, LLQ pain, left ovary w/ cyst with thin walls, moderate pelvic fluid → rupture ovarian cyst → reassurance

LMP 5wk, rising bHCG even after D&C → ectopic pregnancy → tx MTX

GA8, n/v, ↓weight, BP 100/70, HR 104 → hyperemesis gravidarum (ketonuria)

Pap w/ atypical squamous cells of undetermined significance, -HPV → routine screening

Athlete, secondary amenorrhea, nl exam → hypothalamic amenorrhea

Indomethacin s/e → oligohydramnios

Newborn with HSM, PDA, cataracts → congenital rubella

GDM management: diet, insulin

Shoulder dystocia → tx McRoberts maneuver (flex hips against abdomen)

Corpus luteum provides progesterone for pregnancy until GA10

Yellow malodorous discharge, friable cervix → acute cervicitis

Pregnant, muscle aches, difficulty sleeping, worries about baby → GAD → tx CBT

Postpartum contraception, 2 wk after delivery, breastfeeding → subdermal progestin or copper IUD

External cephalic version can be offered after GA 37

Bleeding after sex, raised cervical mass that bleeds w/ manipulation → cervical cancer

Subdermal progestin s/e → weight gain

20F, tender palpable adnexal mass, vaginal bleeding → ovarian torsion

GA37, crampy BLE swelling, holosystolic murmur → reassurance

Vaginismus = genito-pelvic pain/penetration disorder

GBS but penicillin allergy → cefazolin

Postmenopausal bleeding, vaginal petechiae, fissures, vaginal pH 6 → atrophic vaginitis (loss of vaginal epithelial elasticity) / genitourinary syndrome of menopause

Urethral injury → urethrography BEFORE surgery

S/p RT for cervical cancer, dyspareunia, narrow introitus, thin vulvar skin → genitourinary syndrome of menopause

Erythematous vulvar lesions w/ purple hue, vaginal lesions → lichen planus

Thin vulvar skin, obliteration of labia majora and minora, normal vagina → lichen sclerosis

Placenta w/ numerous lacunae and myometrial thinning → placenta accreta → ↑risk of postpartum hemorrhage

Vaginal itching, pH 4 → Candida

Endometrial cancer RF: obesity, PCOS, nulliparity, tamoxifen

Tobacco reduces risk of: endometrial cancer, ovarian cancer

PPD7, believes doctors are trying to hurt baby → postpartum psychosis

Quad screen w/ ↓AFP, ↑bHCG, ↑inhibin A → Trisomy 21

56F, Pap test w/ endometrial cells → NBS endometrial bx

Vaccines contraindicated in pregnancy: HPV, MMR, live influenza, varicella

GA38 in labor, HSV → C section

GA30, itchy palms → intrahepatic cholestasis of pregnancy → tx ursodeoxycholic acid

No cervical change despite adequate contractions >4hr → active phase arrest → C-section

Emergency contraception options: copper IUD, progestin IUD > ulipristal, levonorgestrel >> OCPs

GA36, h/o HSV but no lesions → acyclovir until delivery

Preeclampsia, unresponsive, RR 10, areflexia → Mg toxicity → tx calcium gluconate

Abx safe in all stages of pregnancy: beta-lactams (cephalosporin, penicillin)

Bactrim in pregnancy → kernicterus

Premenstrual breast tenderness, diffuse nodular and dense breasts → fibrocystic change (benign)

Morphine can cause FHR minimal variability

45F, unilateral blood nipple discharge, neg mammograph and U/S → NBS MRI

GA16, ↑AFP → NTD (NBS US)

Ovarian torsion NBS → diagnostic laparoscopy (NOT imaging)

Uterine atony tx: uterine massage + oxytocin, then TXA, then carboprost (avoid if asthma), then intrauterine balloon tamponade

GA35, irregular contractions, closed cervix → false labor → reassure

47F w/ IBS, urinary frequency, dyspareunia → interstitial cystitis

53F, LLQ pain, ovarian mass w/ solid components and thick septations, ascites → endothelial ovarian carcinoma

Ovarian cyst w/ internal echoes, ground glass → endometrioma

Ovarian cyst lined by cuboidal nonciliated epithelium → cystadenoma

Ovarian cyst w/ hyperechoic nodules and calcifications → teratoma

DM-1, fetal growth restriction → NBS umbilical artery U/S

SCD, GA12, diffuse abdominal pain → acute pain episode

SCD increases pregnancy risk of: preeclampsia, abruption, FGR, preterm

Mitral stenosis, wants to become pregnant → valve repair BEFORE pregnancy

GA32, dark macules on nose → melasma → sunscreen

GA37, fluid in posterior vagina, negative nitrazine blue test → urinary incontinence (retrograde vaginal voiding)

GA29, fatigue, AF RVR → mitral stenosis

Local anesthetic a/e: perioral numbness, metallic taste, seizure

GA41, late decels, oligohydramnios → uteroplacental insufficiency

Primary dysmenorrhea tx: NSAIDs

Uterus w/ heterogenous mass w/ cystic structures → hydatidiform mole → D&C

Hypothyroidism management in pregnancy: increase levothyroxine

Hirsutism, adrenal mass → DHEAS producing tumor

S/p oxytocin, seizure → hyponatremia

GA30, PPROM, stable → abx + betamethasone

34F, pelvic pain, nontender adnexal mass → pelvic U/S

GA28, pap w/ high grade squamous intraepithelial lesion → NBS colposcopy

IUFD w/ growth restriction, multiple limb fx, hypoplastic thoracic cavity → osteogenesis imperfecta

IUFD w/ clubfoot, pulmonary hypoplasia, hip dislocation → Potter sequence (oligohydramnios)

60F, urinary frequency, labia minor retraction, dry vaginal epithelium → menopause (E2 deficiency)

Anxiety, psychosis, teratoma → anti-NMDAR encephalitis

GA24, RUQ pain, fever, FHR 160, contractions → pyelonephritis

GA24, RUQ pain, + rebound/guarding → appendicitis

GA24, RUQ pain, tender uterus, fever → intraamniotic infection

Contraindications to exercise in pregnancy: amniotic fluid leak, cervical insufficiency, multiple gestation, placenta abruption, placenta previa, premature labor, preeclampsia, heart disease

Grey malodorous vaginal discharge → BV (Gardnerella)

GA32, LLE pain and paresthesia, ↓sensation at lateral thigh → meralgia paresthetica (lateral femoral cutaneous nerve compression by inguinal ligament)

34F, amenorrhea, s/p chemo → primary ovarian insufficiency (hypergonadotropic hypogonadism)

Bartholin duct cyst, asymptomatic → observation

Bartholin duct cyst, symptomatic → I&D + word catheter

Sinusoidal FHR → fetal blood loss (vasa previa)

GA37, preeclampsia, myasthenia gravis → avoid Mg

GA14, gallstones, ↑ALP, ↑AST/ALT, nl bili, DM-2, BMI 36 → NAFLD

GA14, gallstones, ↑ALP, ↑AST/ALT, ↑ bili, pruritis → intrahepatic cholestasis of pregnancy

CIN3 s/p conization w/ clean margins → HPV test in 6 mo

GA37, polyhydramnios, asymptomatic → expectant management

GA37, polyhydramnios, symptomatic → amnioreduction

GA14, BP 142/96 → chronic HTN (b/c < GA20)

6 mo b/w pregnancies, ↑risk of: maternal anemia, preterm, low birth weight

Lack of menses is normal < 15yo

Breast mass, skin retraction, bx w/ fat globules and foamy histiocytes → fat necrosis (benign)

GA30, migraine → tx acetaminophen > caffeine, NSAIDs > opioid

GA3, DM-1, U/S w/ twins, first prenatal visit → 24hr urine protein (c/f preeclampsia) → ppx ASA at GA12

Pumping milk, fever, erythema and tenderness upper outer quadrant of breast → lactational mastitis → abx and continue breast feeding

49F, decreased libido, pale vulvovaginal mucosa, dyspareunia, h/o hysterectomy → menopause (NBS FSH level b/c did not have prior menses)

Chorioamnionitis tx: abx + labor augmentation

GA7, vaginal bleeding, closed cervix → threatened abortion

GA7, vaginal bleeding, dilated cervix → inevitable abortion

GA7, vaginal bleeding, dilated cervix, products of conception partially expelled → incomplete abortion

42F, pap w/ atypical glandular cells → colposcopy, endocervical curettage, endometrial bx

15F, irregular menses, heavy periods, Hgb 10 → anovulatory cycles → tx progesterone

GA38, increased clear vaginal discharge, amniotic fluid level 2 cm → ROM

42F, heavy menstrual periods, boggy tender uterus → adenomyosis

42F, heavy menstrual periods, firm nontender uterus → leiomyomata

Endometritis tx: clindamycin + gentamicin

22F, vaginal bleeding, +bHCG, no intrauterine gestation, unilocular adnexal cyst → complete abortion

GA30, abdominal mass protrudes between rectus abdominis w/ Valsalva → rectus abdominis diastasis → reassure

GA30, PPROM → latency abx, corticosteroids, expectant management (NOT tocolytics)

Breastfeeding, unilateral erythema from areola to lateral edge, are of fluctuance → breast abscess 2/2 mastitis (poor emptying) → drainage + abx

Breastfeeding, unilateral pain w/ mass in subareolar region → clogged lactiferous duct → warm compress

Pap test w/ benign appearing endometrial cells, premenopausal, no AUB → reassurance

Pap test w/ benign appearing endometrial cells, postmenopausal → endometrial sampling

Pap test w/ atypical glandular cells, <35 yr → reassurance

Pap test w/ atypical glandular cells, >35 yr → endometrial sampling

GA32, recurrent RUQ pain → cholelithiasis

2 weeks postpartum, stress urinary incontinence → reassure (b/c <6 wk postpartum)

10 d postpartum, HA in morning, seizure, papilledema → cerebral venous sinus thrombosis (NBS MR venography of brain)

Ovarian cyst w calcifications and hyperechoic nodules → teratoma → tx laparoscopic ovarian cystectomy

Breech presentation RF: advanced maternal age, fibroids, preterm, polyhydramnios, oligohydramnios, placenta previa

PPROM increases risk of: preterm labor, intraamniotic infection, placental abruption, umbilical cord prolapse

Hypotension after epidural anesthesia MOA: vasodilation and venous pooling

Inevitable abortion, HDS → misoprostol or expectant management

Inevitable abortion, unstable → suction curettage

GA20, dyspnea, worse at night, cough → asthma

GA20, dyspnea, persistent → dyspnea of pregnancy

GA8, U/S w/ yolk sac but no fetal pole, declining bHCG → missed abortion

61F, LLQ pain, hard stools, abdominal distension, nl colo → epithelial ovarian carcinoma (NBS pelvic U/S)

28F, undergoing fertility tx, bilateral enlarged ovaries, ↑WBC, ↑Hgb, abdominal distension → ovarian hyperstimulation syndrome

Antihypertensives to use in pregnancy: BB, CCB, hydralazine > clonidine, thiazide

Pregnant w/ Lyme → tx amoxicillin

GA34, epigastric pain, ↑WBC, ↑bili, ↑LFTs, ↓glucose, ↓PLT → acute fatty liver of pregnancy (NOT cholecystitis b/c hypoglycemia)

28F, bilateral nonbloody nipple discharge, nl prolactin, nl TSH → physiologic galactorrhea (reassure)

GA18, facial hair, acne, bilateral masses in ovaries → gestational hyperandrogenism (luteoma of pregnancy) → tx observation (self-resolves)

Preeclampsia s/p Mg, flushing, ↓DTR, somnolence → Mg toxicity → tx calcium gluconate

Pregnant, HIV+, antepartum tx: CD4 and VL q3mo, HAART

Pregnant, HIV+, intrapartum tx: avoid ROM, avoid scalp electrode, avoid operative delivery, C-section if VL >1000

Postpartum 6mo, worry, constipation, weight gain → postpartum thyroiditis (self-limited)

GA16, h/o preeclampsia → tx ASA

Adnexal mass, calcified w/ thin echogenic bands → teratoma

Contraception for pt with antiphospholipid syndrome: IUD

IUD can be placed in any uterus position

52F, fatigue, soaking sleeps, pale thin vulvovaginal tissue, intact uterus → menopause → tx estrogen-progestin pills

52F, fatigue, soaking sleeps, pale thin vulvovaginal tissue, h/o hysterectomy → menopause → tx estrogen patch (smal risk of breast cancer w/ estrogen-progestin pills)

POD2 from C-section, serosanguineous drainage, intact rectus fascia → superficial dehiscence → dressing change

Renal changes in pregnancy: ↓BUN, ↓Cr, ↑urinary protein

CBC changes in pregnancy: ↑WBC, ↓Hgb, ↓PLT

GA14, h/o two second trimester losses w/ precipitous delivery → cervical insufficiency → tx cerclage

GA30, RUQ pain, ↓PLT, ↑WBC, ↑ALP, ↓gluc → acute fatty liver of pregnancy → immediate delivery

Prior neonatal GBS infxn → GBS ppx in current pregnancy

32F, secondary amenorrhea, obese → anovulation

GA24, BP 152/88, UA w/ 1+ protein → NBS 24hr urine protein (to dx preeclampsia, UA requires 2+ protein)

Fetus w/ ventriculomegaly, intracranial calcifications, ascites, HSM → congenital toxo

↑AFP → neural tube defect, ventral wall defects, multiple gestation

ROM, painless minimal vaginal bleeding, nontender uterus, fetal demise → vasa previa (NOT placental abruption b/c uterus not tender)

PPROM RF: prior PPROM, infxn (asymptomatic bacteruria, BV), antepartum bleeding

52F, erythematous friable plaque on labium majus → vulvar squamous cell carcinoma

15F, firm mobile mass in upper outer quadrant of R breast → fibroadenoma → observe and repeat exam in 6 mo

GA14, twin gestation → NBS ASA81 (for preeclampsia ppx)

70F, vulvar pruritis, firm white vulvar plaque → vulvar SCC 2/2 lichen sclerosis

In labor, s/p epidural, late decels, BP 60/40 → sympathetic nerve blockade → tx vasopressor

Postpartum hemorrhage, soft uterine fundus → uterine atony → tx massage, oxytocin, TXA, carboprost

Methylergonovine contraindicated in: HTN

Pap testing: 21-65 yo q3yr

Painful breast cyst s/p FNA still visible on U/S → NBS core needle biopsy

Protracted active phase → cephalopelvic disproportion

Indirect Coombs screening in pregnancy: first trimester AND second trimester (if negative in first)

GBS screening in pregnancy: GA36-38

Lactational mastitis not improving on dicloxacillin → breast abscess (NBS U/S) → tx aspiration

Postpartum, pain with walking, macrosomia → pubic symphysis diastasis

3 wk postpartum, disturbed sleep, amotivation → postpartum depression (NOT blues)

Poor weight gain during pregnancy increases risk of: preterm delivery

27F, infertile, nl periods, h/o PID → NBS hysterosalpingogram

H/o C-sections, unable to remove anterior placenta → placenta accreta → hysterectomy

HIV tx in pregnancy: combination HAART

HIV delivery, VL <50: ART + vaginal delivery

HIV delivery, VL 50-1000: ART + zidovudine + vaginal delivery

HIV delivery, VL >1000: ART + zidovudine + C-section

PCOS tx: weight loss, OCP

26F, infertile, ↑↑prolactin → NBS bMRI

37F, intermenstrual bleeding, ulcer on cervix → cervical cancer → NBS cervical bx

57F, vaginal pruritis, dyspareunia, pale vagina → atrophic vaginitis → tx estrogen cream

# Surgery

6hr postop, AMS → hemorrhagic shock

Sudden severe abdominal pain, peritonitis → diverticular perforation

8hr post MVA, tachypnea, hypoxemia → pulmonary contusion

2d post MVA, tachypnea, hypoxemia, rash → fat embolism

30M, recurrent UTI, pain with ejaculation → chronic bacterial prostatitis

Hyponatremia worsens with IVF → SIADH

Hyperthermia, sweating, HA, n/v → heat exhaustion

Hyperthermia, sweating, HA, n/v, AMS → exertional heat stroke

Burn resuscitation: LR (NOT NS d/t c/f hyperchloremic metabolic acidosis)

Mass above left testes, does not transilluminate, decreases when supine → varicocele

Asymptomatic subconjunctival hemorrhage → reassurance

Anal abscess tx: I&D and abx (if DM-2 or fever)

Pancreatic leak → NAGMA / hyperchloremic acidosis

RUQ pain, gallstones, ↑lipase, fever → cholangitis / gallstone pancreatitis → ERCP

Hematuria associated with menses → endometriosis

Femoral hernia (inferior to inguinal ligament) tx → elective surgery

Inguinal hernia (superior to inguinal ligament) tx → observation

106F, shock, AMS → exertional heat stroke → tx cold water immersion

High myopia (>6 diopters) increases risk of: retinal detachment, macular degeneration

Pale and cold limb, + doppler, no motor/sensory deficit → CTA

Pale and cold limb, - doppler → emergent revascularization

Pale and cold limb, - doppler, + motor/sensory deficit → amputation

Rolled ankle, tenderness over malleolus → XR (NOT conservative management)

OD, hypotensive, ↑QRS → TCA OD → tx sodium bicarb

84F, fall, externally rotated and shorter leg → femoral neck fracture > anterior hip dislocation

Minutes after transfusion, respiratory distress, hypotension → anaphylactic rxn (IgA deficiency)

Transfusion, ↑HR, ↑BP, respiratory distress → transfusion associated circulatory overload → tx diuresis

GSW with cool extremity and feeble pulses → urgent surgery

Mixed urinary incontinence → voiding diary

Testicular trauma → Doppler U/S to r/o torsion

Most effective way to reduce fall complications: osteoporosis screening

15M, from Indonesia, SBO, ↑eos → ascariasis

S/p MVA, RUQ pain, pericholecystic fluid, gastric retention → cholecystitis → adynamic ileus

S/p TTE, fever, CXR widened mediastinum → esophageal perforation → EGD

PACU, tachycardic, fever, anxiety, AMS, tremor → thyroid storm → tx BB, PTU, steroids

PACU, tachycardic, fever, rigidity, ↑↑↑CK → malignant hyperthermia → dantrolene

Blunt chest trauma, intermittent tachycardia (other VS table) → blunt cardiac injury → TTE

PE testing: CTA > D-dimer

Positive FAST → exlap

Penile fracture, urinary retention → retrograde urethrography → surgery

GSW, FAST equivocal, unstable → exlap

Retropharyngeal abscess increases risk of acute necrotizing mediastinitis

Zenker diverticulum tx → cricopharyngeal myotomy

HIV, eye crusting and redness, linear branching keratitis (dendritic ulceration) → HSV keratitis

Contact lenses, central round infiltrate → bacterial keratitis (PSA, S aureus)

Thorn trauma to eye, multiple ulcers with feathery margins → fungal keratitis (Candida)

HIV, painless vision loss, fluffy or granular retinal lesions and hemorrhages → CMV

76F, diverticulitis c/b abscess → tx IV abx + percutaneous drainage

63M, left leg pain, weakness, pulseless → acute limb ischemia → tx IV heparin and thrombolysis (NOT ABI)

S/p burn, loss of viable skin graft, erythema → burn wound infxn (PSA + MRSA)

Succinylcholine s/e: ↑K → cardiac arrhythmia

T 108F, AMS, epistaxis, BMI 40 → heat stroke (rhabdo, DIC)

Inability to lose weight for 6mo w/ lifestyle changes → semaglutide (BMI 25-30) or bariatric surgery (BMI>35)

Trauma, R arm swelling and pain, no fracture, +pulses → acute compartment syndrome → fasciotomy

S/p CCY, L abdominal pain, fever, chills, splenomegaly, DM-2 → splenic abscess

MVA, unable to dorsiflex or straighten leg → posterior hip dislocation (sciatic and common fibular nerves)

Dorsal penile plaque, curved erection → peyronie disease

Frostbite tx: rapid rewarming in water bath → if still gray angiography and thrombolysis

63M w/ AF, GI perforation, INR 2.1 → before sx give prothrombin complex concentrate (warfarin reversal)

BPH tx: alpha-1 blocker (terazosin, tamsulosin) > 5 alpha reductase inhibitors (finasteride)

43M, septic, perineum crepitus → Fournier gangrene → surgery (NOT imaging)

POD3, shock, ↑JVD, RBBB → PE

Abdominal trauma, air in retroperitoneum → duodenal tear

Urethral meatus extends to ventral corona → hypospadias

GA30, oligohydramnios, h/o SCD → uteroplacental insufficiency

S/p AAA repair, bloody diarrhea, fever, abdominal distension, LLQ TTP w/o rebound → ischemic colitis

Abdomen TTP w/ rebound tenderness → bowel perforation

POD5 hemicolectomy, tachycardic, 94% O2 sat, ↓R lung sounds → PE

Electrical injuries increase risk of: skeletal muscle necrosis → compartment syndrome, rhabdo, AKI

CT not needed before exlap if: hemodynamic instability, bleeding, peritonitis, evisceration, impalement

BAT, ecchymosis over upper abdomen, nl CT → pancreatic duct injury

25M, incomplete bladder emptying, weak stream → urethral stricture (NOT BPH b/c <40 yo)

S/p burn, abdominal distension, intolerance to feeds → burn wound sepsis (ileus)

Meningioma tx → surgical resection

Infxn ppx in burn injury: early excision of necrotic tissue and wound grafting

55M, ED, hip pain → Leriche syndrome (aortoiliac occlusion) 2/2 PAD → NBS ABI

MVA, chest tube draining green fluid → esophageal perf

15min postop, dyspnea, dark urine, HR 134, brown urine, rigidity → malignant hyperthermia

Urinary frequency, enlarged prostate → NBS UA + PSA (r/o cancer)

Anal fissure tx: stool softener, sitz bath, lidocaine, nifedipine

Nutrition for intubate patient on vent → enteral feeds through feeding tube

POD3, ventilated, fever, ↑WBC, nl LFTs, RUQ pain → acalculous cholecystitis

Testicular mass increases during Valsalva, does not transilluminate, irregular → varicocele (dilated pampiniform plexus)

Testicular mass increases during Valsalva, does not transilluminate, reducible → indirect inguinal hernia (patent processus vaginalis)

POD3, gray discharge from wound → necrotizing fasciitis

S/p lap-appendectomy, fever, RUQ pain, hiccups → subphrenic abscess

Surgical ppx abx in pt w/ penicillin allergy → vanco

Fluctuant mass near anus with induration of skin → perianal abscess (occlusion of anal crypt gland)

S/p MVA, respiratory distress, rib fractures → flail chest

Nasal trauma, fluctuant swelling of septum → septal hematoma → tx I&D (c/f septal abscess)

BAT, SBO → duodenal hematoma

MVA, hematuria, pelvic fx, no intraperitoneal fluid → extraperitoneal bladder rupture

Burn victim, oliguria, HR 120, progression to full-thickness necrosis → sepsis

Pain w/ defecation and chronic discharge, inflamed perianal lesion → anorectal fistula → surgery

GA16, polyuria, Na 140 → diabetes insipidus (unmasked during pregnancy)

Full thickness burn injury, arm pain w/ ↓pulse → compartment syndrome → tx escharotomy

S/p fall, hypoxemia, confusion, CT w/ bilateral GGO → fat embolism syndrome

Acute dyspnea after removal of R IJ CVC → venous air embolism → left lateral decubitus

Copious white mucoid odorless vaginal discharge, assoc w/ menses, squamous cells → physiologic leukorrhea

POD3 from Roux-en-Y, chills, rigor,s, abdominal pain → anastomotic leak → CT scan

2 hr after CCY, fever, ↑WBC → postoperative fever (benign)

Groin trauma, hematuria → retrograde urethrography

Urinary urgency, perineal pain during ejaculation, UA w/ leukocytes but no organisms, no prostate tenderness → chronic prostatitis

Swollen left tonsil, uvula deviated, cervical LAD, muffled hot potato voice, no drooling → peritonsillar abscess → peritonsillar aspiration (NOT intubation b/c handling secretions)

Chest stab wound, JVD, obtunded → tension PTX → needle thoracostomy (BEFORE intubation)

Fish bone caught in throat → endoscopy

POD9 from CABG, sternal wound drainage, afebrile → CT chest, surgical debridement and cx, IV abx

Asymptomatic sliding hiatal hernia → reassurance

PAD tx: 1. Smoking cessation, ASA + statin, exercise, 2. cilostazol, 3. Stent or bypass graft

Auricular hematoma → immediate I&D

Optimal FiO2 in ventilation: < 0.6 to prevent hyperoxia

73M, POD89, cannot open mouth, periauricular edema and tenderness → suppurative parotitis (d/t poor oral hygiene)

Transfusion reaction, 5 min, shock, bleeding from sites → ABO incompatibility

Transfusion reaction, 1 min, shock, wheezing → IgA deficiency

Flat capnography → ddx ETT in esophagus, or cardiac arrest

S/p surgery, bilateral ptosis, ice pack improves ptosis → myasthenia gravis (exacerbated by rocuronium)

GA26, bilateral hydronephrosis, bland UA → physiologic hydronephrosis of pregnancy (clinical dx, NO urodynamic testing)

Third degree burns to genitalia → NBS catheterization

Acute pancreatitis, dyspnea, ↓UOP, shock → abdominal compartment syndrome

Sternotomy wound clicking with movement → sternal dehiscence

Post amputation pain, focal tenderness → neuroma

58M, 3 hr s/p hernia repair, abdominal distension → urinary retention → NBS bladder ultrasound

SBO, septic shock → exlap

POD2, delirium, hallucinations, tremulous → benzo withdrawal

Burn victim, fever, tachycardia, negative cultures → hypermetabolic response

Colonic ischemic affects: splenic flexure (rectosigmoid junction)

MVA, widened pubic symphysis → NBS pelvic binder (NOT retrograde cystourethrogram)

Toxic megacolon tx: exlap

Acute abdominal pain, LOC, BP 80/54, HR 120, ↓Hgb, ↑WBC → splenic rupture

Chest stab wound, thoracostomy w/ 2L bloody output → NBS thoracotomy

Bradycardia during insufflation for laparoscopic surgery → peritoneal stretch

H/o abdominal surgery 6 yr ago, mass at midline when supine, protrudes w/ Valsalva → incisional hernia (NOT rectus abdominis diastasis b/c palpable when supine)

Recent epidural, urinary retention, BLE weakness → spinal epidural hematoma → NBS MRI

POD3, ↓PaO2, ↓PaCO2 → atelectasis (mucus plugging, impaired cough)

# MSK

Achilles tendinopathy, chronic → tx eccentric resistance exercise

S/p open tibial fx fixation, nonunion, sinus tract → chronic osteomyelitis → bone bx, bone debridement

Hip pain, on steroids → AVN (BM infarction, MRI > XR)

FOOSH, ↓active abduction, nl passive abduction → rotator cuff tear (NBS: MRI)

Anterior knee pain, runner → patellofemoral pain syndrome → quadriceps strengthening

Thessaly test (twisting bent knee) is painful w/ click → meniscal tear

Paresthesia in first three digits → CTS

S/p thigh trauma, mobile mass → myositis ossificans (heterotopic ossification)

Lateral distal humerus TTP, pain with grip and wrist extension → lateral epicondylitis → tx elbow counterforce brace

65M, h/o Paget disease of bone, knee pain, XR w/ periosteal elevation → osteosarcoma

XR osteolytic lesion with periosteal reaction (onion skin) → Ewing sarcoma

XR periosteal elevation with spiculated sunburst pattern → osteosarcoma

XR sclerotic cortical lesion with central lucency → osteoid osteoma

30F, 6wk postpartum, pain on radial wrist → de Quervain tendinopathy

Burning at 4th and 5th metatarsal, crepitus on exam, runner → interdigital Morton neuroma

Posterior knee pain, edema, crescent shaped ecchymosis over medial malleolus → ruptured popliteal cyst

65M, knee pain, bony enlargement, arthrocentesis w/ 1.8k WBCs → OA → tx diclofenac

Swollen ankle, no movement when squeezing calf → Achilles tendon rupture → impaired ability to walk on toes

XR w/ lucent bony lesion w/ sclerotic margin in humeral metaphysis, MRI w/ homogenous rim-enhancing fluid filled lesion → unicameral bone cyst

29F, soap bubble lytic lesion on distal femur → giant cell tumor

Scoliosis red flags: back pain, neurologic s/s

R shoulder pain w/ AROM and PROM → adhesive capsulitis → tx physical therapy

Shoulder pain, pain w/ abduction and external rotation → rotator cuff impingement

Shoulder pain, weakness w/ abduction and external rotation → rotator cuff tear

Shoulder pain, decreased PROM and AROM, stiffness → adhesive capsulitis

Shoulder pain, anterior, pain w/ lifting → biceps tendinopathy/rupture

Pain when squeezing sides of heel → calcaneal stress fx

Foot pain, impaired proprioception and pain sensation → charcot joint (neurogenic arthropathy)

Heel spurs are a RESULT of plantar fasciitis (not a cause)

Pain when squeezing forefoot across metatarsals → Morton neuroma

Toe numbness, pain with percussion of posterior malleolus → tarsal tunnel syndrome (tibial nerve)

XR w/ resorption and sclerosis → Page disease of bone

Page disease of bone labs: nl Ca, nl Phos, ↑ALP

Worsening joint pain after steroid injection, fever → iatrogenic septic bursitis → tx aspiration

Planta fasciitis tx → heel pad

Calcaneal bone spur, heel painful w/ toe dorsiflexion → plantar fasciitis

XR w/ cortical thickening and accentuated trabeculae, hearing loss → Paget disease of bone

Infected TKR 6 mo postop → S epidermidis

Infected TKR 2 mo postop → S aureus, GNRs

Infected TKR 2 yr postop → S aureus, GNRs, GBS

Pain w/ adduction of R arm across body → AC joint sprain

22M, pitcher, R arm swelling w/ erythema and superficial veins → DVT → NBS UENI

27M, runner, medial knee pain → pes anserinus pain syndrome

Marfan syndrome gene: fibrillin-2

Severe pain exacerbated by passive movement → compartment syndrome

Pain w/ hip extension, relieved by flexion → psoas abscess (NBS CT)

34F, hearing loss, inherited, red hue behind TM → otosclerosis

Humerus fx, asymmetric pulses → open reduction and surgical exploration

DM-2, R foot swelling, collapse of arch, XR w/ osseous resorption → Charcot arthropathy → cast

Pain 3 cm above posterior calcaneus → achilles tendinopathy → tx NSAID

Pain 1 cm above posterior calcaneus, basketball player → calcaneal apophysitis

Pain at achilles tendon insertion point → subcutaneous calcaneal bursitis

Supracondylar fx of humerus, posterior displacement of distal humerus, r/o injury to: median nerve and brachial artery

Supracondylar fx of humerus, anterior displacement of distal humerus, r/o injury to: ulnar nerve

HA, hearing loss, spinal stenosis, osteosarcoma → Page disease

Blow to lateral knee, laxity with abduction → medial collateral ligament tear → tx RICE

Injury when pivoting, effusion and crepitus, catching → medial meniscus tear

Hand pain, XR w/ MCP hook like osteophytes → hemochromatosis

Hand pain, XR w/ DIP and PIP pencil in cup deformity → PsA

Hand pain, XR w/ subchondral sclerosis and periarticular osteophytes → OA

75M, ↑ALP, nl AST/ALT → paget disease

Thickened skull, HA, hearing loss, hip pain → paget disease → tx bisphosphonate

Thickened skull, HA, macroglossia → acromegaly → tx octreotide

Knee pain after working on knee, no pain with ROM, fluctuant swelling anterior to patella → septic bursitis (NBS aspiration)

Knee pain after working on knee, pain with ROM, diffuse swelling → septic arthritis (NBS aspiration)

Scaphoid fx have ↑risk of: osteonecrosis

24M, lower back pain worse at night, ↑ESR → anklyosing spondylitis

FOOSH, dorsal wrist swelling, pain w/ radial deviation, nl XR → scaphoid fracture → splint and repeat XR in 10 d

Shoulder pain improves when hand is placed on head → cervical radiculopathy

Acute sever testicular pain, n/v, U/S w/ heterogenous echotexture → testicular torsion

Swelling over tip of olecranon → olecranon bursitis → tx NSAIDs

Hip dislocation tx: closed reduction immediately (prevent osteonecrosis)

Fx, ↓pulses, stable hematoma, hemorrhage → CTA

8M, rip hip pain after hike, resists extension, h/o vomiting and diarrhea, U/S w/ effusion, afebrile, nl WBC and ESR → transient synovitis → NSAIDs

Marathon runner, R knee pain, tenderness proximal to R lateral joint line → iliotibial band syndrome

Soccer player, knee “popped”, ↑anterior drawer test → ACL tear

Anterior shoulder dislocation → axillary n injury → weakened shoulder abduction

Humerus midshaft fracture → radial n injury → weakened finger extension, loss forearm sensation

Humerus epicondyle fracture → ulnar n injury → numbness in medial 2 fingers, claw hand

Axillary lymphadenectomy → long thoracic n injury → winged scapula

Episodic neck/shoulder pain, ↓sensation in forearm → cervical radiculopathy 2/2 cervical spondylosis (osteophyte formation in facet and uncovertebral joints)

Septic arthritis of MCP, ↓ROM → I&D

S/p twisted ankle, swelling, pain w/ light touch, XR w/ patchy osteopenia → complex regional pain syndrome

SCD, hip pain, limited abduction and internal rotation, nl CBC, nl XR → AVN

24F, low back pain, widened sacroiliac joint → ankylosing spondylitis → tx NSAIDs

CTS tx: wrist splinting, glucocorticoid injection, surgery

Knee pain w/ AROM, PROM OK, XR w/ swelling in front of patella → prepatellar bursitis

Arm adducted and internally rotated → posterior shoulder dislocation

Arm abducted and externally rotated → anterior shoulder dislocation

S/p STI, R knee pain, aspirate w/ WBC 10k and no organisms → reactive arthritis → tx NSAIDs

Posterior knee dislocation reduction → NBS ABI

Decreased sensation over thumb and index finger, nl Phalen and Tinel → CTS (Phalen and Tinel have low sensitivity) → NBS nerve conduction studies

Recurrent cellulitis of LLE, now swelling → chronic lymphedema

Mass on extensor wrist, firm, mobile, nontender, transilluminates → ganglion cyst

C-spine injury r/o: CT (NOT XR)

53M, R hip pain when lying on side, BMI 37 → greater trochanteric pain syndrome → tx NSAIDs

29F, R knee pain x3mo, worse w/ stairs, quadriceps atrophy, pain w/ quadriceps contraction → patellofemoral pain syndrome

Claw toe and hammer toe deformities → diabetic neuropathy

55F, decreased PROM and AROM of shoulder, initially painful now stiff, nl XR → adhesive capsulitis

Raloxifene MOA: selective estrogen receptor modulator

Selective estrogen receptor modulators: tamoxifen, raloxifene

Tamoxifen s/e: hot flashes, VTE, endometrial carcinoma, uterine sarcoma

45F, celiac disease, bone pain, nl Ca, ↓phos, ↑PTH, ↑ALP → osteomalacia d/t VitD deficiency

Page disease labs: nl Ca, nl phos, nl PTH, ↑ALP

R knee pain, OA, not responsive to NSAIDs → NBS quadriceps strengthening

Asymptomatic ganglion cyst → NBS observe (NOT aspirate)

AUD, swollen calves, BLE weakness → rhabdo 2/2 alcohol myopathy

Pes planus, burning foot pain, tapping medial malleolus is painful → tarsal tunnel syndrome

Pes planus, pain w/ dorsiflexion of toes → plantar fasciitis

R knee pain, “catching”, flexion elicits pain and crepitus w/ internal rotation → meniscal tear → NBS MRI

Low riding patella → quadriceps tendon tear

High riding patella → patellar tendon tear

13M, kyphosis in supine and prone → Scheuermann kyphosis → NBS XR

34M, back pain improves with activity → spondyloarthropathy (inflammation at ligamentous insertion)

Osteoporosis screening: DEXA at 65yo

14M, hip pain, quadriceps atrophy, contralateral pelvis drops when standing on leg → SCFE

17F, L knee effusion, no trauma, afebrile, nl bleeding → Lyme

# Ophtho

Shot in eye w/ paintball, rock hard, RAPD → orbital compartment syndrome → emergency orbital decompression

Bleach in eye → continuous irrigation

Teardrop pupil → globe perforation

Severe unilateral eye pain, stony hard to touch → acute angle closure glaucoma

Parallel lines appear wavy → macular degeneration

Chronic itchy eyelids, discharge in mornings → Blepharitis

Strabismus tx: patch normal eye

HIV, opacification of lens, chronic glare → cataracts, tx w/ surgery

Blood in anterior chamber of eye → hyphema → intraocular HTN

Eye trauma, no foreign body, NBS: fluorescein staining (corneal injury)

Acute painless monocular vision loss, whitened retina → CRAO

Acute painless monocular vision loss, blood and thunder retina, cotton wool spots → CRAVO

Month long loss of central vision → age related macular degeneration

Sudden monocular loss of vision → CRAO

Swelling at medial eye with purulent discharge → dacryocystitis (nasolacrimal duct obstruction)

Night blindness, midperiphery vision loss, optic disc pallor, retinal vessel attenuation → retinitis pigmentosa

Night blindness, excessive corneal dryness → Vitamin A

Orbital cellulitis (vs preseptal cellulitis) → painful EOM, proptosis, ophthalmoplegia → tx IV abx +/- surgery

Bilateral conjunctival erythema, fluorescein stain w/ punctate corneal staining → photokeratitis (UV exposure)

Fundoscopy w/ fluffy yellow-white chorioretinal lesions → fungal endophthalmitis

Fluorescein stain w/ small oval green uptake → corneal abrasion → tx topical abx

AIDS, floaters, yellow-white exudates → CMV retinitis

Increased cup/disc ratio, loss of peripheral vision → open angle glaucoma

Unilateral bright flashes of light, dark web in periphery → retinal detachment

Bilateral blurring of vision, halos around lights at night → cataracts

Acute unilateral painless loss of vision, cotton wool spots → CRVO

63F, unilateral headache, nonreactive dilated pupil, lacrimation, ↑ESR → acute angle glaucoma

Painful red eye, diminished acuity, photophobia, tearing, diarrhea → anterior uveitis (assoc w/ sarcoidosis, ankylosing spondylitis, reactive arthritis, IBD)

Painful red eye, diminished acuity, headache, n/v → acute angle closure glaucoma

Acute painless unilateral vision loss, fundoscopy w/ dark red glow, DM-2 → vitreous hemorrhage

Acute painful red eye, ulceration, contact lenses → pseudomonal keratitis → tx moxifloxacin

Acute painful red eye, fixed dilated pupil → acute angle closure glaucoma

9 mo, photophobia, tearing, conjunctival erythema, port wine stain → glaucoma 2/2 Sturge-Weber

Thinning of optic disc rim and symmetric cup/disc ratio → open angle glaucoma → tx latanoprost ophthalmic solution

Purulent eye discharge that reaccumulates within minute4s → acute bacterial conjunctivitis (S aureus)

53M, difficulty reading → presbyopia (↓lens elasticity)

Unilateral HA, R eye w/ conjunctival flushing and mid-dilated pupil → angle closure glaucoma → tx IV acetazolamide

R eye pain, ↓acuity, proptosis, periorbital edema, pain w/ EOM, dental caries → orbital cellulitis 2/2 bacterial sinusitis

Enlarged blind spots, bilaterally ↓acuity, fundoscopy w/ splinter hemorrhages → IIH

4M, ↓acuity in one eye, nl exam → amblyopia (refractive error)

Acute monocular vision loss, washed out color, afferent pupillary defect → optic neuritis

POD5 from cataract surgery, layering leukocytes in anterior chamber → postoperative endophthalmitis

S/p head trauma, ↓R eye acuity, RAPD → optic nerve injury

Painful swelling of lower eyelid → hordeolum (stye) → tx warm compress

Blurry vision, dot and blot hemorrhages, retinal hard exudates → diabetic retinopathy → tx photocoagulation

Acute eye pain, photophobia, tearing, erythema around cornea → HSV keratitis → NBS slit lamp w/ dendritic ulcerations

# Epi

Admission rate bias: different rates of admission at different hospitals

Failure mode and effect analysis: prospective analysis of potential errors

Per protocol analysis: only includes participants who adhered (ignores dropouts)

Best intervention to improve med rec: pharmacist directed

Number needed to harm = 1/(absolute risk increase)

Best intervention to prepare for emergencies: simulation based training

Most effective way to change practice: compare physicians to benchmarks

Statistic to use for RCT: relative risk

Statistic to compare time to event: hazard ratio

Statistic to use for case control study: odds ratio

Most effective way to reduce error: physical design (human factors engineering)

Case series do NOT have a comparison group

Best way to prevent patient medication errors: teach back, plain language

Best way to prevent med rec error: multiple care team member verification (redundancy)

Best way to improve medication adherence: see same physician

Recall bias: inaccurate memory of past events by patients

Can’t use “an individual” statements based off population study results

Low adherence to evidence based protocols d/t: organization and systems factors → improve accountability and culture

County level data → ecological study

How to reduce errors in hand offs: prioritize information, anticipatory guidance, checklist, interactive

Effective teams: shared goals, clear roles w/o overlap, commensurate roles

Framing bias: excessive influence of contextual or prior information

Availability bias: excessive influence of common diseases

Ways to reduce defense medicine: clinical pathways, practice guidelines

Consolidation: after induction therapy (before maintenance)

Salvage: after failure of initial therapy

Factorial design: multiple interventions w/ multiple endpoints

Parallel group: multiple interventions w/ one outcome

Attributable risk = (RR – 1)/RR

OR approximates RR when: incidence is low

Low health literacy associated with: absence at follow up visits

Fall prevention: minimize furniture, lower bed, direct view of nurses, frequent checks

Blinding increases internal validity

ALL studies require IRB approval

Best way to decrease loss to follow up: high quality communication (patient counseling)

Best way to eliminate errors related to transfer of care: documentation, standardized sign out, specific action plan, closed loop communication

Root cause analysis vs failure mode and effects analysis: RCA is retrospective, FMEA is prospective

Predictor of mortality in HFrEF: hyponatremia

Loss to follow up = selection bias

Best way to improve communication to minority patients: train providers to align care delivery w/ patient preferences (NOT multiple language materials)

Best way to prevent incorrect units: system standardization, smart pumps

Health insurance method to optimize spending and outcomes: pay for performance

New screening test for cancer: lead time bias

Cross-sectional vs cohort study: cohort study follows cohorts over time

# Ethics

Terminal AD, no longer feeding → comfort measures (eg. hand feeding)

Concerned about another physician’s behavior → report to Physician Health Program

Patient repeatedly visits clinic after hours → do not evaluate (boundary setting)

8F does not want cancer treatment → defer to parents’ decision

Allowed to get collateral without patient’s consent

Parents do NOT have right to refuse life saving treatment for child

Hospice patients are not eligible for life prolonging treatment

Medication prescribing in elderly: choose based on therapeutic benefit (consider life expectancy)

Patient seeking alternative medicines → help identify verified alternative medicine

Incidental mass found during surgery → don’t remove b/c no consent

Pt w/ meningococcus refusing to stay in hospital → isolate patient against wishes

Parents refuse life saving treatment → NBS court order (as long as not emergent)