

Jordan Llerena-Velastegui¹

¹Affiliation not available

January 09, 2025

Mastering CCS Cases: A Comprehensive Guide for USMLE Step 3

Schematized and Specialty-Sorted Solutions for All 173 CCS Cases

"Your Essential Companion for High-Yield Preparation"
"Efficient, Structured, and Specialty-Based Learning for CCS Cases"

Authored by Jordan Llerena-Velastegui



Edition: January 2025
All rights reserved by the author

Guide to Solving CCS Cases for the USMLE Step 3

This booklet is a comprehensive guide designed to help medical professionals effectively approach and solve the Clinical Case Simulations (CCS) in the USMLE Step 3. With its clear structure and systematic organization, this guide provides essential strategies for mastering the CCS component of the exam.

Structure and Organization

1. **Step-by-Step Framework:** Each case is accompanied by a detailed framework outlining the steps needed to address the clinical scenario effectively, from the initial evaluation to management and follow-up.
2. **Specialty-Sorted Cases:** The cases are grouped by medical specialty for focused and efficient study. This allows users to concentrate on one area at a time, building specialty-specific clinical reasoning skills.
3. **Case Numbering:** Each case includes its corresponding number as listed on the official CCS Cases platform, covering all 173 cases updated as of January 2025. This ensures seamless navigation and alignment with the online resource.
4. **High-Yield Focus:** Cases are prioritized by their relevance and likelihood of appearing on the exam, enabling efficient allocation of study time.

Purpose of the Guide

The primary goal of this guide is to schematize and organize the vast amount of information required for the CCS portion of the USMLE Step 3. By providing a structured and user-friendly format, this resource simplifies the study process, helping candidates retain key concepts and apply them effectively during the exam.

Whether you are just starting your CCS preparation or refining your approach, this guide offers an invaluable roadmap for success.

STEP 3 -CCS Cases-

1. Read the case and **get important data**: Age, Gender, Main HPI points, (T/NT) Allergies, (T/NT) Vaccines, (T/NT) Screening tests, (T) Alcohol/(F) Cigarettes/(D) Drugs.
2. Determines the **current status of the patient**.
 - When the patient is **stable** or **without** acute symptoms (pain, SOB) → **Complete** physical exam.
 - When the patient is **unstable** or **with** acute symptoms (pain, SOB) → **Focused** physical exam.
 - Note: You can always do a complete physical exam later in the case after placing emergency orders!
3. Determines the **service** where the patient will be treated: **Inpatient** (ED or ICU or Inpatient Unit), **Outpatient** (Office or Home).
4. Send **initial or emergency orders**.
 - **General orders** → FFFOOCA-VoMICCCa mnemonic:
 - **Foley + Input/output + Urine output** (if needed)
 - **Fetal monitor external** (if needed)
 - Fluids **normal**
 - Oxygen
 - Oximetry
 - Cardiac monitor
 - Acc: IV **access** + **Accu-Chek** glucose
 - Vitals signs
 - Medications
 - Intubation + Mechanical ventilation + Oxygen + Nasogastric tube **with suction** (if needed)
 - Cervical **collar rigid** (if needed)
 - Chest tube (if needed)
 - Cardiac catheterization (**PCI**) (if needed)
 - **Symptom management** → Medications → PANDaC mnemonic:
 - Pain: Ibuprofen + Omeprazole, Tylenol, Morphine (NO in CKD), Hydromorphone (NO in liver failure)
 - Abdominal cramping: Dicyclomine
 - Nausea: Ondansetron, Metoclopramide
 - Diarrhea: Loperamide
 - Constipation: Polyethylene **glycol**
 - Send **labs or imaging studies specific** to the case.
5. **Complete the rest of the physical exam** if you did a focused exam at the beginning.

Comentado [U1]: General information to keep in mind!

6. Send routine orders.

- CCCaMP mnemonic:
 - CBC (Complete Blood Count)
 - CMP (Comprehensive Metabolic Panel)
 - Creatine kinase: **rhabdomyolysis**, myocardial infarction
 - Magnesium: ACS, arrhythmias, **acute pancreatitis, delirium tremens**
 - Phosphate: **CKD**, hypocalcemia, malnutrition
- HUEEECA mnemonic:
 - HCG (childbearing women)
 - Ultrasound (**Transabdominal pelvic US**: pregnancy)
 - **ECG 12 leads** + Cardiac Enzymes: ACS
 - Echocardiography
 - EEG
 - **Electrolytes**
 - Chest X ray/ other X-rays
 - ABG (Arterial Blood Gas)
- CENT-LLLUCaS mnemonic:
 - **Coagulation** (PT/PTT, INR, **bleeding time**)
 - ESR, CRP (inflammatory markers)
 - **Neuro checks** (Glasgow Coma Scale/ pupil reactivity)
 - TSH (Thyroid Stimulating Hormone)
 - Lactate: sepsis, shock, lactic acidosis
 - Lipid profile
 - **LFT** (Liver Function Tests)
 - Urine analysis/culture/toxicology
 - Culture (blood)
 - Stool culture/ova and parasites

Comentado [U2]: General information to keep in mind!

7. Case-specific medical management.

Psychiatry: **Toxicology urine + Alcohol blood**

- Panic attack (#73):
 - Diagnostic test: **TSH**
 - Pharmacological treatment: **Sertraline OP**
 - Consult: **Psychology**, psychiatry
 - Instruct: **Relaxation techniques**
- Acute agitation (#139):
 - Pharmacological treatment: **Haloperidol IM**
 - Consult: Psychiatry
- Bipolar disorder (**manic episode**) (#145):
 - Pharmacological treatment: **Olanzapine IM + Lithium OP**
 - Consult: Psychiatry
- Depression (#86):
 - Diagnostic tests "3": **PHQ9 + TSH + Cortisol plasma**
 - Pharmacological treatment: **Sertraline OP**
 - Consult: **Psychology**, psychiatry
 - Advise: **Safety plan, exercise program**
- Post traumatic stress disorder (PTSD) (#171):

- Diagnostic test: **TSH**
- Pharmacological treatment: **Sertraline OP**
- Consult: **Psychology**, psychiatry
- Instruct: **Relaxation techniques**
- Schizophrenia (#132):
 - Diagnostic tests “3”: TSH + “**A1C + Lipid profile**”
 - Pharmacological treatment: **Risperidone OP**
 - Advise: **Side effects**
 - Consult: Psychiatry
- Bullying (#120):
 - Consult: **Social services**, psychology

Neurology:

- **Altered mental status:**
 - Diagnostic tests: Brain CT scan + **EEG + Toxicology urine + Alcohol blood**
 - Instruct: **No driving**
- Encephalitis (#24):
 - Diagnostic tests: Brain CT scan + Lumbar puncture + CSF analysis + **Blood culture + Urine culture + Toxicology urine**
 - Pharmacological treatment:
 - Viral encephalitis (West Nile): Tylenol
 - Consult: Infectious disease
- Meningitis:
 - Diagnostic tests: Brain CT scan + Lumbar puncture + CSF analysis + **Blood culture + Urine culture + Toxicology urine**
 - Pharmacological treatment:
 - Bacterial meningitis (#10):
 - <1 month “2”: **Ampicillin + Gentamicin**
 - 1 month–50 years “3”: “**Vancomycin + Ceftriaxone**” + **Dexamethasone**
 - >50 years “3”: “**Vancomycin + Ceftriaxone**” + **Ampicillin**
 - Viral meningitis (#66): Tylenol
 - Consult: Infectious disease
- **First episode generalized tonic-clonic seizure (#75):**
 - Diagnostic tests: Brain CT scan + **EEG + Toxicology urine + Alcohol blood**
 - Consult: Neurology
 - Instruct: **No driving**
 - **AVOID: Diazepam, phenytoin**
- Transient ischemic attack (TIA) (#13):
 - Diagnostic tests: Brain CT scan + **Brain MRI + “Carotid MRA + Echocardiography + Lipid profile” + Toxicology urine**
 - Pharmacological treatment → AAL mnemonic “2-3”: Aspirin + Atorvastatin ± **Lisinopril** (if BP ≥140/90 mmHg)
 - Consult: Neurology, **vascular surgery**
 - **AVOID: Alteplase**
- Subarachnoid hemorrhage (SAH) (#51):
 - Diagnostic tests: Brain CT scan + **Cerebral arteries MRA** + Lumbar puncture + CSF analysis

Comentado [U3]: General information to keep in mind!

- Pharmacological treatment: **Nimodipine**
- Consult: **Surgerv, neurologic**
- Subdural hematoma (#11):
 - Diagnostic test: Brain CT scan
 - Consult: **Surgerv, neurologic**
- Guillain-Barre syndrome (#29):
 - Diagnostic tests → "Pulmonary → Neuro → Infectious → Toxic" mnemonic phrase "9": Chest X ray, **pulmonary function test**, lumbar puncture, CSF analysis, **lumbar spine MRI, electromyography**, HIV antibody, VDRL, **heavy metal screen**
 - Treatment: **Plasmapheresis + Spirometry INCENTIVE**
 - **AVOID: Methylprednisolone**
 - Consult: Neurology
- Myasthenia gravis (#14):
 - Diagnostic tests: **Acetylcholine receptor antibody, electromyography, chest CT scan**
 - Treatment: **Methylprednisolone + Neostigmine + Thymectomy**
 - Consult: **Surgerv, cardiothoracic**
- Dementia "7": **TSH, B1, B12, VDRL, PHO9**, brain CT scan, **cognitive testing**
 - Normal pressure hydrocephalus (#91):
 - Diagnostic test: **Lumbar puncture**
 - Surgical treatment: **Ventriculoperitoneal Shunt (VPS)**
 - Consult: **Surgerv, neurologic**
 - Alzheimer's disease (#137):
 - Pharmacological treatment: **Donepezil**
 - **Advance directive**
 - Consult: **Social services**
- Idiopathic intracranial hypertension (#106):
 - Diagnostic tests "3": Brain CT scan + Lumbar puncture + CSF analysis
 - Pharmacological treatment: **Acetazolamide**
 - Consult: **Ophthalmology**
 - Advise: **Exercise program**
 - Consult: **Nutrition**
- Facial neuropathic pain disorders:
 - Trigeminal neuralgia (#168):
 - Diagnostic test: **Brain MRI**
 - Pharmacological treatment: **Carbamazepine**
 - Trigeminal postherpetic neuropathy (#173):
 - Pharmacological treatment: **Gabapentin**
- Headache AND Hypertension:
 - Diagnostic tests "7": Brain CT scan + Toxicology urine + **Metanephrines urine + Catecholamines urine + Mercury urine + Aldosterone serum + TSH**
 - Intracranial hemorrhage: Brain CT scan
 - Cocaine/Amphetamine poisoning: Toxicology urine
 - Pheochromocytoma: **Metanephrines urine + Catecholamines urine + Mercury urine**
 - Hyperaldosteronism: **Aldosterone serum**
 - Hyperthyroidism: TSH

Comentado [U4]: General information to keep in mind!

Comentado [U5]: General information to keep in mind!

- Headache:
 - Pharmacological treatment:
 - Tension headache (#141):
 - Abortive treatment: **Ibuprofen OP**
 - Preventive treatment: **Amitriptyline OP**
 - Migraine headache:
 - Abortive treatment: **Sumatriptan SC**
 - Preventive treatment: **Amitriptyline OP**
 - Cluster headache (#129):
 - Abortive treatment: **Oxygen 100% → Sumatriptan SC**
 - Preventive treatment: **Verapamil OP**
 - Instruct: **Relaxation techniques**
- Cauda equina syndrome (#163):
 - Diagnostic test: **Lumbar spine MRI**
 - Surgical treatment: **Laminectomy**
 - Consult: **Surgerv. neurologic**

Endocrinology:

- Hypothyroidism (#84):
 - Diagnostic tests “6”: “TSH + **Thyroid hormone T4 free + Thyroid hormone T3 free + Thyroid antibodies + Thyroid ultrasound**” + PHQ9
 - Pharmacological treatment: **Levothyroxine**
 - Advise: **Exercise program**
 - Consult: **Endocrinology**
- Hyperthyroidism (#89):
 - Diagnostic tests “6”: “TSH + **Thyroid hormone T4 free + Thyroid hormone T3 free + Thyroid antibodies + Thyroid ultrasound**” + Toxicology urine
 - Pharmacological treatment: **PropRanolol + Methimazole**
 - Consult: **Endocrinology**
- Postpartum thyroiditis (#135):
 - Diagnostic tests “6”: “TSH + **Thyroid hormone T4 free + Thyroid hormone T3 free + Thyroid antibodies + Thyroid ultrasound**” + Toxicology urine
 - Pharmacological treatment: **PropRanolol**
 - **AVOID: Thyroid uptake + Methimazole**
 - Consult: **Endocrinology**
- Hypercalcemia (≥14 mg/dL) (#87):
 - Diagnostic test: **Parathormone**
 - Pharmacological treatment “2”: **Zoledronic acid + Calcitonin-salmon**
 - **AVOID: Consult hematology/oncology**
- Multiple endocrine neoplasias (MEN):
 - MEN 1:
 - Diagnostic tests:
 - **Parathyroid**: Parathormone + Calcium ionized
 - **Pancreas/Duodenum** (Zollinger-Ellison syndrome): Gastrin
 - **Pituitary gland**: Prolactin
 - Surgical treatment: Parathyroidectomy
 - MEN 2A:

Comentado [U6]: General information to keep in mind!

Comentado [U7]: General information to keep in mind!

Comentado [U8]: General information to keep in mind!

- Diagnostic tests:
 - **Medullary thyroid carcinoma:** Calcitonin + Calcium ionized + CEA
 - **Pheochromocytoma:** Metanephrines urine + Catecholamines urine
 - **Parathyroid:** Parathormone + Calcium ionized
- Surgical treatment: Thyroidectomy
- MEN 2B:
 - Diagnostic tests:
 - **Medullary thyroid carcinoma:** Calcitonin + Calcium ionized + CEA
 - **Pheochromocytoma:** Metanephrines urine + Catecholamines urine
 - **Marfanoid habitus/ Multiple neuromas:** No specific test
 - Surgical treatment: Thyroidectomy
- Cushing disease (#76):
 - Diagnostic tests “4”: **Cortisol plasma, Dexamethasone suppression test, ACTH plasma, Brain CT scan**
 - Consult: **Surgery, neurologic**
- Pheochromocytoma “7” (#116):
 - Diagnostic tests: **Catecholamines urine + Metanephrines urine + Mercury urine urine + Abdomen CT scan**
 - Pharmacological treatment: **Phenoxybenzamine + PropRanolol**
 - **Start Phenoxybenzamine**→ If BP <140/90 mmHg→ **Add PropRanolol**
 - Consult: General surgery
- Delayed puberty (short stature) “7”: **Bone age + Growth hormone serum + FSH + LH + TSH + Prolactin + Testosterone/Estrogen**
 - Turner syndrome (#138):
 - Diagnostic tests “4”: **Chest X ray + Echocardiography + Karvotype + Homocysteine**
 - Pharmacological treatment: **Growth hormone therapy SC**
 - Consult: Endocrinology, **Surgery, cardiothoracic** (if coarctation of the aorta)
- Diabetes mellitus “4”: **Accu-Chek glucose + A1C + ABG + Microalbumin urine**
 - Treatment:
 - T2DM (#140):
 - A1C < 9%: **Metformin** + Atorvastatin
 - A1C ≥ 9%: **Insulin** + Atorvastatin
 - Diabetic ketoacidosis (#4):
 - **Insulin regular ± Potassium chloride** (if K <5.3 mEq/L)
 - Advise: **Exercise program**
 - Diet: **Diabetic**
 - Instruct: **Diabetes**
- Insulinoma (#125):
 - Diagnostic tests “3”: **Insulin serum + C peptide serum + Abdomen CT scan**
 - Pharmacological treatment: Dextrose **10%** ± Octreotide (if NOT agreed to surgical treatment)

Comentado [U9]: While there are no cases of Multiple Endocrine Neoplasia (MEN) included in the CCS cases, one case of Zollinger-Ellison Syndrome references MEN. Therefore, I have categorized it under this section.

This information may prove useful in clinical practice.

Comentado [U10]: General information to keep in mind!

- Surgical treatment: **Laparoscopy** (stable)/ Laparotomy (unstable)
- Consult: **General surgery**
- Statin-induced myopathy (#154):
 - Diagnostic tests “6”: **Creatine kinase + ESR + TSH + Vitamin D serum + Alcohol blood + Toxicology urine**
 - **Vitamin D**: Regulates calcium metabolism, critical for muscle contraction and relaxation
 - Pharmacological treatment: **Discontinue statins/fibrates**
 - Advise: **Side effects**
 - Consult: Endocrinology

Pneumology:

- Hypoxemia:
 - Diagnostic tests: **Carbon monoxide, cyanide, methemoglobin**
- Fat embolism syndrome (#83):
 - Diagnostic tests: **Chest X ray + Chest CT scan + ABG**
 - Treatment: **Intubation + Mechanical ventilation + Nasogastric tube with suction (if needed)**
 - **AVOID: Enoxaparin**
- Obstructive sleep apnea (OSA) (#128):
 - Diagnostic test: **Polysomnography** (Apnea-Hypopnea Index “AHI” ≥ 15 events/hour)
 - Treatment: **CPAP** (Continuous Positive Airway Pressure)
- Respiratory infectious diseases “8”: Chest X ray, blood culture, sputum culture, **sputum gram stain, sputum mycobacterial, RSV antibody, influenza antigen, legionella urine**
 - Pulmonary tuberculosis (#17):
 - Diagnostic tests: **Chest X ray + Chest CT scan + IGRA**
 - Pharmacological treatment \rightarrow "IR PERreando" mnemonic phrase “5”: **Isoniazid + Vitamin B6 + Rifampin + Pyrazinamide + Ethambutol**
 - Consult: **Ophthalmology** (for side effects of ethambutol)
 - Isolation, respiratory
 - Refer **public health**
 - Consult: **Social services**
 - COPD exacerbation (#20):
 - Diagnostic tests: **RSV antibody + Influenza antigen**
 - Pharmacological treatment \rightarrow "CeCi MIA" mnemonic phrase “5”: Ceftriaxone + Clarithromycin + **Methylprednisolone + Ipratropium + Albuterol**
 - Pneumonia:
 - Community acquired pneumonia (#44):
 - Pharmacological treatment \rightarrow "CeCi" mnemonic phrase “2”: Ceftriaxone IV + Clarithromycin OP
 - Pneumocystis jirovecii pneumonia (PCP pneumonia) (#9):
 - Diagnostic tests “4”: **Viral load + CD4 + LDH + Sputum pneumocystis**
 - Pharmacological treatment: **TMP-SMZ** (trimethoprim-sulfamethoxazole)
 - **PaO₂ <70 mmHg or A-a gradient ≥ 35 mm Hg: Prednisone**

Comentado [U11]: General information to keep in mind!

Comentado [U12]: General information to keep in mind!

- Consult: Infectious disease
- Refer **public health**
- Legionella pneumonia (#151):
 - Pharmacological treatment: **Levofloxacin IV**
- Cystic fibrosis (#16):
 - Diagnostic tests: **Sweat chloride, RSV antibody, influenza antigen, chest X ray, stool fat**
 - Pharmacological treatment → "Pulmones, Páncreas, Aparato digestivo, Vitaminas" mnemonic phrase "4": **PIP TAZ + Pancreatic enzymes + Albuterol + Vitamins multiple regular**
 - Consult: **Nutrition, genetics, pulmonary medicine**
 - **Chest physiotherapy**
 - **Influenza vaccine**
 - Advise: **Cystic fibrosis care center**

Cardiology:

- Essential hypertension (#105):
 - Diagnostic tests: **ECG 12 lead + Urine analysis + TSH + A1C**
 - Pharmacological treatment: Losartan
 - Diet: **Low sodium**
- Hypertensive emergency (SBP ≥ 180 mm Hg or DBP ≥ 120 mm Hg + **Target Organ Damage**) (#37):
 - Diagnostic tests: **"ECG 12 lead + Cardiac Enzymes + Chest X ray" + Urine analysis + Toxicology urine + TSH**
 - **Neurological Signs:**
 - Symptoms: Severe headache, confusion, seizures.
 - Diagnostic tests: Brain CT scan (stroke, encephalopathy).
 - **Ophthalmic Signs:**
 - Symptoms: Visual disturbances.
 - Diagnostic tests: **Fundoscopy "HEENT/Neck physical examination"** (retinal hemorrhages, exudates, papilledema).
 - **Cardiac Signs:**
 - Symptoms: Chest pain, shortness of breath, palpitations.
 - Diagnostic tests: ECG 12 lead (ischemia, arrhythmias), cardiac enzymes (ischemia), chest X ray (pulmonary edema).
 - **Renal Signs:**
 - Symptoms: Decreased urine output.
 - Diagnostic tests: Creatinine serum (renal function), BUN serum "BMP" (renal function), urine analysis (proteinuria, hematuria).
 - **Vascular Signs:**
 - Symptoms: Sudden severe chest or back pain.
 - Diagnostic tests: Chest CTA (aortic dissection).
 - Pharmacological treatment: **Labetalol (if HR >60 bpm) → Nicardipine (if HR <60 bpm)**
 - Advise: Medication compliance
- Congestive heart failure (#6):
 - Diagnostic tests: **"ECG 12 lead + Cardiac Enzymes + Chest X ray" + Echocardiography**

Comentado [U13]: General information to keep in mind!

Comentado [U14]: This information may prove useful in clinical practice.

- Pharmacological treatment → FaSCiNE mnemonic “5”: Furosemide + Spironolactone + **Carvedilol** + **Nitroglycerin** + Entresto
- Diet: **Low sodium, fluid-restricted**
- Pneumococcal vaccine
- Cardiac **rehabilitation**
- Intermittent claudication (#35):
 - Diagnostic tests: **Ankle brachial index** (Claudication “ABI” < 0.7) + **Doppler lower extremities arterial**
 - Pharmacological treatment → 2A mnemonic “2”: **Atorvastatin + Aspirin**
 - Advise: **Exercise program**
- 3rd degree heart block (#34):
 - Diagnostic tests: **Serology Lyme** + “**ECG 12 lead + Cardiac Enzymes + Chest X ray**”
 - Treatment: **Pacemaker temporary transvenous** → **Prepare for surgery** → **Pacemaker permanent**
 - Consult: Cardiology
- Orthostatic hypotension (#131):
 - Diagnostic test: **Postural vitals**
 - Pharmacological treatment: Fluids **normal** → **Midodrine**
- Chest pain: **ECG 12 lead + Cardiac Enzymes + Chest X ray**
 - Tension pneumothorax (#1):
 - Treatment: **Chest tube**
 - Acute coronary syndrome (ACS):
 - Diagnostic test: **Echocardiography**
 - Pharmacological treatment:
 - **STEMI/UNstable angina** → AMMANECE mnemonic “7-8” (#2): **Aspirin + Morphine + Metoprolol + Atorvastatin + Nitroglycerine + Enoxaparin + Clopidogrel ± Enalapril** (if BP ≥140/90 mmHg)
 - Specific location:
 - **Inferior STEMI** → AACE mnemonic “4-5” (#23): **Aspirin + Atorvastatin + Clopidogrel + Enoxaparin ± Metoprolol** (if **NOT** hemodynamically **UN**nstable)
 - **Right ventricular STEMI** → AACE mnemonic “5-6” (#36): **Aspirin + Atorvastatin + Clopidogrel + Enoxaparin + Fluids normal ± Dobutamine**
 - **AVOID in RV STEMI: Nitroglycerin, metoprolol, enalapril, and morphine**
 - **AVOID in UNstable angina: Alteplase**
 - **NSTEMI** → AMMANECE mnemonic “7-8” (#50): **Aspirin + Morphine + Metoprolol + Atorvastatin + Nitroglycerine + Enoxaparin + Clopidogrel ± Enalapril** (if BP ≥140/90 mmHg)
 - **AVOID in NSTEMI: Alteplase**
 - Surgical treatment: Cardiac catheterization (**PCI**)
 - Advise: **Exercise program**
 - Cardiac **rehabilitation**
 - Pericarditis:
 - Diagnostic tests “3”: **ANA, rheumatoid factor, echocardiography**

Comentado [U15]: General information to keep in mind!

- Pharmacological treatment:
 - Idiopathic pericarditis → ICO mnemonic “3” (#31): **Ibuprofen** + **Colchicine** + Omeprazole
 - Advise: **Rest at home**
 - **AVOID: Pericardiocentesis**
 - Peri-infarct pericarditis → ACa mnemonic “2” (#111): **Aspirin** + **Colchicine**
 - Advise: **Rest at home**
 - **AVOID: Ibuprofen**
- Infective endocarditis (#52):
 - Diagnostic test: **Echocardiography transesophageal**
 - Pharmacological treatment: **Vancomycin IV**
 - Consult: **Surgery, cardiothoracic**, infectious, **substance abuse unit, social services**
- Pericardial tamponade (#43):
 - Diagnostic test: **FAST US**
 - Treatment: **Pericardiocentesis**
 - Consult: **Surgery, cardiothoracic**
- Aortic dissection (#48):
 - Diagnostic test: **Chest CTA**
 - Treatment: **Labetalol + Nicardipine**
 - Stanford A: **Surgical treatment**
 - Consult: **Surgery, cardiothoracic**
 - Stanford B: **Pharmacological treatment**
 - **Start Labetalol** → If HR <60 bpm → **Add Nicardipine**
- Atrial fibrillation (AF) (#39):
 - Diagnostic tests “6”: **Echocardiography** + **Toxicology urine** + **TSH** + “**ECG 12 lead + Cardiac Enzymes + Chest X ray**”
 - Pharmacological treatment → MiA mnemonic “2”: **Metoprolol IV** + **Apixaban OP**
 - Advise: **Side effects, exercise program**
- Pulmonary embolism (PE) (#26):
 - Diagnostic tests: **Echocardiography** + **Chest CTA** + “**ECG 12 lead + Cardiac Enzymes + Chest X ray**” + “**D Dimer + Doppler lower extremities venous**”
 - Pharmacological treatment: **Apixaban OP**
 - Advise: **Side effects, exercise program**
- Deep venous thrombosis (DVT) (#104):
 - Diagnostic tests: “**D Dimer + Doppler lower extremities venous**”
 - Pharmacological treatment: **Apixaban OP**
 - Advise: **Side effects, exercise program**

Gastroenterology:

- Celiac disease (#8):
 - Diagnostic tests “15+1=16”: Vitamin A, vitamin D, vitamin E, vitamin K, folic acid, B12, iron and TIBC, ferritin, transferrin, cooper, zinc, FOBT, dexscan, endomysial antibody (to rule OUT Celiac Disease), endoscopy upper, small bowel biopsy
 - Pharmacological treatment: Vitamin D therapy
 - Consult: Nutrition
 - Diet: Gluten free
 - Pneumococcal vaccine
- Crohn's disease (#90):
 - Diagnostic tests “15+1=16”: Vitamin A, vitamin D, vitamin E, vitamin K, folic acid, B12, iron and TIBC, ferritin, transferrin, cooper, zinc, FOBT, dexscan, endomysial antibody (to rule OUT Celiac Disease), endoscopy upper, colonoscopy
 - Pharmacological treatment: Prednisone
 - Consult: Gastroenterology
- Ulcerative colitis (#123):
 - Diagnostic test: Colonoscopy
 - Pharmacological treatment: Mesalamine
 - Consult: Gastroenterology
- Irritable bowel syndrome (#41):
 - Diagnostic tests: Stool analysis, endomysial antibody (to rule OUT Celiac Disease)
 - Pharmacological treatment “2”: Loperamide + Dicyclomine
 - Diet: Lactose free, high fiber
 - Consult: Nutrition
 - Advise: Exercise program
- Adult jaundice “7” (#30): Bilirubin serum
 - Direct hyperbilirubinemia “3”: Abdomen US + Hepatitis panel + Lipase
 - General treatment: ERCP
 - AVOID: Tylenol
 - Indirect hyperbilirubinemia “3”: Reticulocyte count + COOMBS direct + Tylenol nomogram
 - AVOID: Tylenol
- Gastrointestinal bleeding:
 - Diagnostic test: FOBT
- Gastrinoma (Zollinger-Ellison syndrome) (#70):
 - Diagnostic tests “6”: Abdomen CT scan, endoscopy upper, small bowel biopsy, parathormone, calcium ionized, gastrin, prolactin
 - Discard: Multiple endocrine neoplasia 1 (MEN 1)
 - Parathyroid: Parathormone + Calcium ionized
 - Pancreas/Duodenum (Zollinger-Ellison syndrome): Gastrin
 - Pituitary gland: Prolactin
 - Pharmacological treatment: Omeprazole
 - Consult: General surgery
- Hiatal hernia (#165):
 - Diagnostic test: Endoscopy upper

Comentado [U16]: General information to keep in mind!

Comentado [U17]: General information to keep in mind!

Comentado [U18]: General information to keep in mind!

- Treatment:
 - Type I: **Omeprazole OP**
 - Type II, III, and IV: **Nissen** fundoplication
 - Consult: General surgery
- Diet: Calorie-restricted
- Abdominal pain: **NPO + Abdomen X ray**
- Acute cholecystitis (#3):
 - Diagnostic tests: **Abdomen US, LFT, lipid profile**
 - If abdomen US is negative, order a: **HIDA scan**
 - Treatment: **PIP TAZ + Laparoscopic cholecystectomy**
- Acute pancreatitis (#21):
 - Diagnostic tests: **Abdomen US, LFT, lipid profile, lipase, alcohol blood**
 - Treatment → NEMO mnemonic “4”: **NPO + ERCP + Morphine + Ondansetron**
 - Consult: **Gastroenterology**, general surgery
- Abdominal abscess (#22):
 - Diagnostic tests: **Abscess culture, abscess gram stain, blood culture, urine culture, abdomen US**
 - Treatment:
 - <4cm: **PIP TAZ**
 - ≥4cm: **PIP TAZ + Abscess drainage**
- Acute diverticulitis (#28):
 - Diagnostic test: **Abdomen CT scan**
 - Pharmacological treatment: **PIP TAZ**
 - Diet: **High fiber**
 - **AVOID: Colonoscopy**
- Ischemic colitis (#69):
 - Diagnostic test: **Abdomen CT scan**
 - Treatment: **PIP TAZ + Nasogastric tube with suction**
- Pneumoperitoneum (#80):
 - Diagnostic tests: **H pylori stool, chest X ray, abdomen CT scan**
 - Treatment: **PIP TAZ + Nasogastric tube with suction**
 - Consult: General surgery
 - Advise: **No NSAIDs, No aspirin**
- Acute gastritis (#19):
 - Diagnostic tests: **H pylori stool**, FOBT
 - Treatment: Omeprazole
 - Advise: **No NSAIDs**
- Duodenal ulcer (#63):
 - Diagnostic tests: **H pylori stool**, FOBT, **postural vitals**
 - Pharmacological treatment:
 - **Clarithromycin-sensitive H. pylori** → Triple therapy → OCA mnemonic “3”: Omeprazole + Clarithromycin + Amoxicillin
 - **Clarithromycin-resistant H. pylori** → Quadruple therapy → TOMBo mnemonic “4”: Tetracycline + Omeprazole + Metronidazole + **Bismuth** subsalicylate
 - Consult: **Gastroenterology**

Comentado [U19]: General information to keep in mind!

- Advise: **No NSAIDs**
- Gastroparesis (#136):
 - Diagnostic tests: **Gastric emptying scan + Endoscopy upper**
 - Pharmacological treatment: **Metoclopramide**
- Intussusception (#93):
 - Diagnostic test: **Abdomen US**
 - Treatment: **Barium enema + Nasogastric tube with suction**
 - Consult: **Pediatric surgery**
- Malrotation with volvulus (#107):
 - Diagnostic test: **Abdomen US**
 - Treatment: **Barium enema + Nasogastric tube with suction**
 - Consult: **Pediatric surgery**
 - **AVOID: Abdomen CT scan**

Nephrology:

- Nephrolithiasis (#62):
 - Diagnostic tests: **Abdomen US + Urine strain**
 - Pharmacological treatment: Morphine + **Tamsulosin**
- End stage renal failure (#53):
 - Diagnostic test: **Abdomen US**
 - Treatment: **Hemodialysis + Kidney transplant**
 - Consult: Nephrology
- Rhabdomyolysis (#152):
 - Diagnostic tests: **Creatine kinase + Myoglobin urine**
 - Treatment: Fluids **normal** + **Bicarbonate therapy** (to prevent conversion of myoglobin to methemoglobin)
 - Consult: Nephrology
- Nephritic syndrome:
 - Post-streptococcal glomerulonephritis (PSG) (#18):
 - Diagnostic tests “9”: ASO, ANA, ANCA, **GBM, complement C3, complement C4, cryoglobulin, abdomen US, chest X ray**
 - Pharmacological treatment: **Furosemide IV**
 - Consult: **Nephrology, nutrition**
 - Diet: **Low sodium, fluid-restricted**
- Nephrotic syndrome:
 - Minimal change disease (MCD) (#143):
 - Diagnostic tests “4”: **Protein 24-hour urine, complement C3, complement C4, lipid profile**
 - Pharmacological treatment: **Prednisone OP**
 - **AVOID: Statins**
- Autosomal dominant polycystic kidney disease (ADPKD) “6” (#114):
 - Diagnostic tests “2”: **Abdomen CT scan + Cerebral arteries MRA (to rule OUT berry aneurysm)**
 - Pharmacological treatment: **Lisinopril**
 - Consult: Nephrology, **urology**
 - Advise: **No sports**
- Renal cell carcinoma (RCC) (#157):

Comentado [U20]: General information to keep in mind!

- Diagnostic test: **Abdomen CT scan**
- Surgical treatment: **Nephrectomy**
- Consult: Nephrology, **general surgery**, hematology/oncology
- Counsel: **Cancer**

Urology:

- Benign prostatic hyperplasia (BPH) (#158):
 - Diagnostic tests “3”: **Urine analysis + PSA serum total + Transabdominal pelvic US** (post-void residual “PVR” volume ≥ 200 mL = urinary retention or bladder outlet obstruction)
 - Pharmacological treatment: **Tamsulosin**
 - Advise: **No caffeine**

Dermatology:

- Stevens-Johnson syndrome (#61):
 - Diagnostic tests: **Skin biopsy + Skin culture + Mycoplasma serum + Chest X ray**
 - Treatment → CMW mnemonic “3”: **Cyclosporine + Morphine + Wound dressing**
 - **Isolation reverse**
- Squamous cell carcinoma (SCC) of the lip (#170):
 - Diagnostic test: **Skin biopsy**
 - Surgical treatment: **Mohs surgery**
 - Consult: **Dermatology**
 - **AVOID: Sun**

Orthopedics: **Physical therapy**

- Osteoarthritis (#112):
 - Diagnostic test: **Knee X ray**
 - Pharmacological treatment:
 - Can use NSAIDs: Ibuprofen + Omeprazole
 - Can **NOT** use NSAIDs → DT mnemonic “2”: **Duloxetine + Triamcinolone**
 - Diet: Calorie-restricted
 - Advise: **Exercise program**
- Lumbar disk herniation (#159):
 - Diagnostic test: **Lumbar spine MRI**
 - Pharmacological treatment: **Ibuprofen** + Omeprazole

Comentado [U21]: General information to keep in mind!

Rheumatology:

- Systemic lupus erythematosus (SLE) (#45):
 - Diagnostic tests “6”: ANA serum, double stranded DNA serum, complement C3, complement C4, coagulation (PT/PTT, INR), dexscan
 - Pharmacological treatment → pH-DC mnemonic “4”: Prednisone + Hydroxychloroquine + “Vitamin D therapy + Calcium gluconate” (prevention of glucocorticoid-induced osteoporosis)
 - Consult: Rheumatology, nephrology
 - AVOID: Sun
- Rheumatoid arthritis (#100):
 - Diagnostic tests “5”: ANA serum, rheumatoid factor, hand X ray, arthrocentesis, synovial fluid analysis
 - Pharmacological treatment “2”: Methotrexate + Ibuprofen
 - Consult: Rheumatology
 - Advise: Exercise program
 - AVOID: Opioids
- Sarcoidosis (#94):
 - Diagnostic tests “6”: Chest X ray, skin biopsy, IGRA, HIV antibody, histoplasma capsulatum serum, vitamin D serum
 - Pharmacological treatment “3”: Prednisone + “Vitamin D therapy + Calcium gluconate” (prevention of glucocorticoid-induced osteoporosis)
 - Consult: Rheumatology
- Temporal arteritis (#92):
 - Diagnostic tests “5”: ESR, CRP, temporal artery biopsy, brain CT scan, chest X ray (to rule OUT aortic aneurysm)
 - Pharmacological treatment “3”: Methylprednisolone + “Vitamin D therapy + Calcium gluconate” (prevention of glucocorticoid-induced osteoporosis)
 - Consult: Ophthalmology, rheumatology
- Ankylosing spondylitis (#97):
 - Diagnostic tests “3”: HLA B27, rheumatoid factor, pelvic X ray
 - Pharmacological treatment: Adalimumab
 - Consult: Rheumatology

Obstetrics and Gynecology (OB/GYN):

- Pregnancy: Transabdominal pelvic US + Fetal monitor external + Urine analysis
- Spontaneous abortion (#67):
 - Treatment “4”: Dilatation and curettage + Misoprostol + Methylergonovine + Doxycycline
 - Consult: Psychology
- Ruptured ectopic pregnancy (#95):
 - Diagnostic tests: HCG + Blood type
 - Surgical treatment: Laparoscopy (stable)/ Laparotomy (unstable)
 - Advise: Safe sex
 - AVOID: Abdomen X ray, Abdomen CT scan
- Gestational hypertension (#49):
 - Diagnostic test: Protein 24-hour urine
 - Pharmacological treatment: Nifedipine
 - If $\geq 160/110$ mmHg: Magnesium sulfate (seizure prophylaxis)

Comentado [U22]: General information to keep in mind!

- Advise: **Medication compliance**
- Preeclampsia (#7):
 - Diagnostic test: **Protein 24-hour urine**
 - Pharmacological treatment: **Magnesium sulfate + Nifedipine**
 - If $\geq 160/110$ mmHg: **Hydralazine + Cesarean section**
 - Advise: **Medication compliance**
- Between 24 and 34,6 WOG:
 - Pharmacological treatment: **Dexamethasone IM**
- Delivery:
 - Diagnostic tests: **Blood type and crossmatch, coagulation (PT/PTT, INR)**
- Vaginal itching/ Vaginal discharge:
 - Diagnostic tests “6”: **“Vaginal KOH + Vaginal secretions pH + Vaginal secretions wet mount” + “Chlamydia urethra + Gonococcal urethra+ Gram stain urethra”**
 - Pharmacological treatment:
 - Atrophic vaginitis “2” (#130): **“Estrogen conjugated + Lubricating jelly”**
 - Bacterial Vaginosis (Gardnerella vaginalis): **Metronidazole PO**
 - Trichomoniasis (Trichomonas vaginalis) (#166): **Metronidazole PO**
 - Advise: **Sexual partner needs treatment, no intercourse**
 - Candida Vaginitis (Candida albicans): **Fluconazole PO**
- Pelvic inflammatory disease (PID) (#32):
 - Diagnostic tests “14”: **“HIV antibody + VDRL + Hepatitis panel + Gonococcal urethra + Chlamydia urethra + Gram stain urethra” + “Vaginal KOH + Vaginal secretions pH + Vaginal secretions wet mount” + Cervix gram stain + Blood culture + Urine culture + Urine analysis + Transabdominal pelvic US**
 - Pharmacological treatment:
 - Outpatient: **Ceftriaxone IM + Doxycycline OP ± Metronidazole OP**
 - Inpatient: **Cefoxitin IV + Doxycycline OP**
 - Advise: **Sexual partner needs treatment**
- Endometrioma (#54):
 - Diagnostic test: **Transabdominal pelvic US**
 - Surgical treatment: **Laparoscopy** (stable)/ Laparotomy (unstable)
 - Consult: Gynecology
- Dysfunctional uterine bleeding (#58):
 - Diagnostic tests “7”: **Postural vitals + Transabdominal pelvic US + “HCG + TSH + FSH + Prolactin + Testosterone”**
 - Pharmacological treatment: **Oral contraceptive low estrogen/low progestin**
- Polycystic ovary syndrome (PCOS) (#113):
 - Diagnostic tests “7”: **Transabdominal pelvic US + A1C + “HCG + TSH + FSH + Prolactin + Testosterone”**
 - Pharmacological treatment: **Oral contraceptive low estrogen/low progestin**
 - Diet: **Calorie-restricted**
 - Advise: **Exercise program**
- Ruptured ovarian cyst (#161):
 - Diagnostic tests: **HCG + Transabdominal pelvic US**

Comentado [U23]: General information to keep in mind!

Comentado [U24]: General information to keep in mind!

- Surgical treatment: Laparoscopy (stable)/ **Laparotomy** (unstable)
- Consult: Gynecology
- Ovarian torsion (#169):
 - Diagnostic tests: **HCG + Doppler ovarian arteries + Transabdominal pelvic US**
 - Surgical treatment: **Laparoscopy** (stable)/ Laparotomy (unstable)
 - Consult: Gynecology
- Menopause (#88):
 - Diagnostic tests “5”: **“HCG + TSH + FSH + Prolactin + Testosterone”**
 - Pharmacological treatment “3”: **Sertraline + “Estrogen conjugated + Lubricating jelly”**
- Osteoporosis (#103):
 - Diagnostic tests “2”: **Dexascan + Vitamin D serum**
 - Pharmacological treatment “3”: **Alendronate + “Vitamin D therapy + Calcium gluconate”**
 - Advise: **Exercise program**

Pediatrics:

- Neonatal jaundice “7”: **Bilirubin serum**
 - Direct hyperbilirubinemia “3”: **Abdomen US + Hepatitis panel + Galactose serum**
 - Galactosemia (#108):
 - Diagnostic tests: **Galactose serum ± Galactokinase**
 - Consult: Genetics, **nutrition**
 - Indirect hyperbilirubinemia “3”: **Reticulocyte count + COOMBS direct + Glucose-6-Phosphate dehydrogenase**
 - Hemolytic disease of the newborn (HDN) (#101):
 - Treatment: **Phototherapy** ± Exchange transfusion
 - **Infant formula regular**
 - Advise: **Breast feeding**

Comentado [U25]: General information to keep in mind!

Hematology:

- Anemia:
 - Diagnostic tests: **Blood type and crossmatch, H and H (Hemoglobin and Hematocrit)**
 - **Microcytic anemia “3”:** **Iron and TIBC, ferritin, transferrin**
 - **Normocytic anemia “5”:** **Reticulocyte count, bilirubin serum, LDH serum, haptoglobin, blood smear**
 - Sickle cell disease (SCD)
 - Glucose-6-phosphate dehydrogenase deficiency (G6PD deficiency)
 - **Macrocytic anemia “4”:** **Vitamin B12 serum, folic acid serum, TSH, blood smear**
 - Treatment: **Transfusion packed red blood cells**
 - Hemoglobin <7 g/dL: Stable patients
 - Hemoglobin <8 g/dL: **Un**-stable patients, cardiovascular diseases
- Inherited bleeding disorders (PT normal, aPTT prolonged):

Comentado [U26]: General information to keep in mind!

- Diagnostic tests “4”: **Factor VIII plasma + Factor IX plasma + Factor XI plasma + von Willebrand factor antigen plasma**
- Treatment:
 - Hemophilia A (#162): Factor VIII **therapy**
 - Hemophilia B: Factor IX **complex**
 - Hemophilia C: **Fresh frozen plasma**
 - von Willebrand disease: **Desmopressin**
- Consult: Hematology/oncology, **genetics**
- Sickle cell disease (SCD) (#15):
 - Diagnostic tests: **Electrophoresis hemoglobin + Chest X ray**
 - Pharmacological treatment → "Mi Tratamiento Habitual: Fármacos Potentes" mnemonic phrase “5”: **Morphine + Transfusion RBCs + Hydroxycure + Folic acid therapy + Penicillin V**
 - Acute chest syndrome (ACS): **Ceftriaxone**
 - **Meningococcal vaccine**
 - Consult: Hematology/oncology
- Glucose-6-phosphate dehydrogenase deficiency (G6PD deficiency) (#77):
 - Diagnostic test: **Glucose-6-Phosphate dehydrogenase**
 - Pharmacological treatment: **Ibuprofen** (if needed) + **Transfusion packed red blood cells** (if needed)
 - Advise: **No fava beans**
 - Consult: Hematology/oncology
- Lymphadenopathy disorders “3”: **Lymph node biopsy + HIV antibody + EBV serum**
 - Hodgkin lymphoma (#56):
 - Diagnostic tests: **Chest X ray + PET scan + Albumin serum**
 - Pharmacological treatment → **ABVD mnemonic “4”: Chemotherapy** (Adriamycin + Bleomycin + Vinblastine + Dacarbazine)
 - Consult: Hematology/oncology
 - Counsel: **Cancer**
- Multiple myeloma (#118):
 - Diagnostic tests: **Lumbar spine CT scan + Electrophoresis urine + Bone marrow aspirate**
 - Pharmacological treatment: **Zoledronic acid**
 - Consult: Hematology/oncology
 - Counsel: **Cancer**
- Immune thrombocytopenia (ITP) (#133):
 - Pharmacological treatment: **Prednisone**
 - Advise “3”: **No sports, no NSAIDs, no aspirin**
- Neutropenic fever (#68):
 - Diagnostic test: **Blood culture**
 - Pharmacological treatment: **PIPTAZ**
- Methemoglobinemia:
 - Diagnostic test: **Methemoglobin blood**
 - Treatment: **Methylene blue**
- Porphyria:
 - Porphyria cutanea tarda (PCT) (#96):
 - Diagnostic tests “1 protoporph + 2 porph + 1 A= 4”: **Protoporphyrin + Porphyrin urine + Porphobilinogen urine + Alcohol blood**

Comentado [U27]: General information to keep in mind!

- Treatment: **Phlebotomy**
- **AVOID: Sun, Skin biopsy**
- Advise: **No alcohol**
- Consult: Internal medicine
- Acute intermittent porphyria (AIP) (#122):
 - Diagnostic tests “1 protoporph + 2 porph + 1 A= 4”: **Protoporphyrin + Porphyrin urine + Porphobilinogen urine + Alcohol blood**
 - Treatment: **Hemin**
 - Advise: **No alcohol**
 - Consult: Internal medicine, **psychiatry**

Oncology: Counsel: **Cancer**

- Lung cancer (#85):
 - Diagnostic tests “5”: **Chest X ray + Chest CT scan + IGRA + Brain CT scan + Abdomen CT scan**
 - Surgical treatment: **Bronchoscopy**
 - Consult: **General surgery**, hematology/oncology
- Colon cancer (#40):
 - Diagnostic tests “6”: **FOBT + CEA serum + Abdomen CT scan + Colonoscopy + Chest X ray + PET scan**
 - Surgical treatment: **Colectomy laparoscopy**
 - Consult: **General surgery**, hematology/oncology
- Pancreatic cancer (#81):
 - Diagnostic tests “5”: **Lipase + CA 19-9 serum + Abdomen US + Abdomen CT scan + Chest CT scan**
 - Surgical treatment: **ERCP**
 - Consult: **General surgery**, hematology/oncology
- Prostate cancer (#119):
 - Diagnostic tests “5”: **PSA serum total + Prostate aspirate + Prostate US + Abdomen CT scan + Lumbar spine CT scan**
 - Pharmacological treatment: **Leuprolide**
 - Surgical treatment: **Prostatectomy**
 - Consult: **Urology**, hematology/oncology
- Breast cancer (#147):
 - Diagnostic tests “3”: **Mammography + Breast ultrasound + Breast biopsy**
 - Pharmacological treatment:
 - ~~Estrogen receptor (ER+): **Tamoxifen PO** (premenopausal), **Anastrozole PO** (postmenopausal)~~
 - ~~Progesterone receptor (PR+): **Tamoxifen PO** (premenopausal), **Anastrozole PO** (postmenopausal)~~
 - ~~Human epidermal growth factor receptor 2 (HER2+): **Trastuzumab IV** (both premenopausal and postmenopausal)~~
 - Consult: **General surgery**, hematology/oncology, **radiation therapy**
- Endometrial cancer (#121):
 - Diagnostic tests “2”: **Transabdominal pelvic US + Endometrial biopsy**
 - Surgical treatment: **Laparoscopy** (stable)/Laparotomy (unstable)
 - Consult: **Gynecology**, hematology/oncology, **radiation therapy**
- Cervical cancer (#149):

Comentado [U28]: General information to keep in mind!

- Diagnostic tests “9”: **Pap smear + Cervical biopsy + Colposcopy + “Vaginal KOH + Vaginal secretions pH + Vaginal secretions wet mount” + “Chlamydia urethra + Gonococcal urethra + Gram stain urethra”**
- Pharmacological treatment: **Cisplatin**
- Surgical treatment: **Laparoscopy** (stable)/ Laparotomy (unstable)
- Consult: **Gynecology**, hematology/oncology, **radiation therapy**
- Ovarian cancer (#115):
 - Diagnostic tests “2”: **Transabdominal pelvic US + CA 125**
 - Surgical treatment: **Laparoscopy** (stable)/ Laparotomy (unstable)
 - Consult: **Gynecology**, hematology/oncology, **radiation therapy**

Infectious Diseases: (fever= **blood culture + urine culture ± sputum culture ± abscess culture + toxicology urine**)

- Life-threatening infections:
 - Septic shock (#27):
 - Diagnostic tests “5-9”: **“Chest X ray, urinalysis, urine culture, blood culture + echocardiography” ± sputum culture, sputum gram stain ± abscess culture, abscess gram stain**
 - Pharmacological treatment → VeCi-No mnemonic “2-3”: **“Vancomycin + Ceftriaxone” ± Norepinephrine**
 - Consult: **Infectious disease, general surgery** (if surgical)
 - Toxic shock syndrome (#102):
 - Diagnostic tests: **Tampon culture + Tampon gram stain**
 - Treatment “3”: **“Vancomycin + Ceftriaxone” + Remove tampon**
 - Consult: **Infectious disease**
- Upper respiratory infections:
 - Acute otitis media (#172):
 - Pharmacological treatment:
 - First episode, complete vaccination: **Amoxicillin OP**
 - Recurrent (≥3 episodes in 6 months or ≥4 in 1 year), incomplete vaccination, no improvement with amoxicillin after 48-72 hours: **Amoxicillin-clavulanate OP**
 - Epiglottitis (#38):
 - Diagnostic tests: **Throat culture bacterial + Blood culture**
 - Treatment “3-6”: **“Vancomycin + Ceftriaxone” + Tylenol ± “Intubation + Mechanical ventilation + Nasogastric tube with suction (if needed)”**
 - Pharyngitis: **Rapid strep screen**
 - Viral pharyngitis (#117):
 - Pharmacological treatment: Tylenol + **Saline gargle**
 - Streptococcal pharyngitis (#164):
 - Pharmacological treatment: **Amoxicillin + Tylenol + Saline gargle**
 - Mononucleosis (#42):
 - Diagnostic test: **EBV serum**
 - Pharmacological treatment: Tylenol
 - **AVOID: Aspirin**
 - Advise: **No aspirin**

Comentado [U29]: General information to keep in mind!

- Croup/ Laryngotracheobronchitis (#71):
 - Diagnostic test: **Neck X ray**
 - Pharmacological treatment: Racemic **epinephrine** INH + **Dexamethasone** IV
- Gastrointestinal infections:
 - Diarrhea:
 - Diagnostic tests: Stool **ova and parasites**, stool **bacterial culture**, stool **clostridium difficile**, stool **fat**, **hepatitis panel** (to rule **OUT** hepatitis A)
 - Pharmacological treatment:
 - Acute traveler's diarrhea (ETEC) (#127) → Ciprofloxacin OP
 - Giardiasis (#144) → Metronidazole OP
 - Clostridium difficile colitis (#142):
 - Pharmacological treatment: Vancomycin **OP** → Fidaxomicin **OP**
 - **AVOID: Loperamide**
 - Urinary tract infections (UTI): **Urine analysis**, **urine culture**, **urine gram stain**, **chlamydia urethra**, **gonococcal urethra**
 - Pyelonephritis (#110):
 - Pharmacological treatment: Ceftriaxone IV
 - Cystitis (#59, #167):
 - Pharmacological treatment: Nitrofurantoin OP
 - Prostatitis (#46):
 - Pharmacological treatment: Ciprofloxacin OP
 - Sexually transmitted diseases (STD): "**HIV antibody**, VDRL, hepatitis panel, gonococcal urethra, chlamydia urethra, **gram stain urethra**"
 - HIV:
 - Diagnostic tests "**3**": **Viral load + CD4 + LDH**
 - Pharmacological treatment: Tenofovir OP + Emtricitabine OP + Efavirenz OP
 - Advise: **Sexual partner** needs treatment
 - Syphilis (#155):
 - Diagnostic tests: **VDRL + FTA ABS** ± Lumbar puncture (if neurological symptoms) ± CSF analysis (if neurological symptoms)
 - Pharmacological treatment:
 - Early latent (<12 months) "1ry and 2ry syphilis": **Penicillin G benzathine IM (single dose)**
 - Late latent (≥12 months) "1ry and 2ry syphilis": **Penicillin G benzathine IM (weekly, for 3 weeks)**
 - Neurosyphilis "3ry syphilis": **Penicillin G IV (every 4 hours, for 10-14 days)**
 - Advise: **Sexual partner** needs treatment, **safe sex**
 - Urethritis (#55):
 - Pharmacological treatment: Ceftriaxone IM + Doxycycline OP
 - Advise: **Sexual partner** needs treatment
 - Epididymitis (#146):
 - Pharmacological treatment "**3-4**": Ceftriaxone IM + Doxycycline OP ± **Levofloxacin** OP (when anal sex, for rectal flora) + **Ibuprofen** OP

Comentado [U30]: General information to keep in mind!

Comentado [U31]: General information to keep in mind!

Comentado [U32]: General information to keep in mind!

- **Cold compresses**
- Advise: **Sexual partner** needs treatment
- Musculoskeletal infections:
 - Arthritis:
 - Diagnostic tests “6”: **Arthrocentesis + Synovial fluid analysis + Knee x ray + Uric acid urine + Gram stain urethra + Lyme serology**
 - Pharmacological treatment:
 - Septic arthritis (#64): Ceftriaxone IV + Doxycycline OP
 - Gouty arthritis (#79): Ibuprofen/ **Colchicine**/Triamcinolone
 - If necessary: **Stop Thiazide diuretics → Start Losartan**
 - Osteomyelitis (#126):
 - Diagnostic tests: **Lumbar spine MRI** ± Bone biopsy (**ONLY** if **culture is negative**)
 - Pharmacological treatment: **“Vancomycin + Ceftriaxone”**
- Skin and soft tissue infections:
 - Erysipelas/ **Cellulitis** (#99):
 - Diagnostic tests: **“D Dimer + Doppler lower extremities venous”**
 - Pharmacological treatment: **Cefazolin IV**
 - Roseola Infantum (exanthem subitum) (#156):
 - Pharmacological treatment: Tylenol
 - **Reassure patient**

Comentado [U33]: General information to keep in mind!

Toxicology: **Poison control center**

- Drug abuse:
 - Diagnostic tests “8”: **“HIV antibody, VDRL, hepatitis panel, gonococcal urethra, chlamydia urethra, gram stain urethra”, toxicology urine, alcohol blood**
 - Consult: **Substance abuse unit, social services**
 - Advise: **no illegal drug use**
- Any overdose:
 - Diagnostic tests “6-8”: Brain CT scan + **“Tylenol nomogram + Aspirin serum + Alcohol blood + Toxicology urine” + Creatine kinase** ± Carbon monoxide (if hypoxemia) ± **Methemoglobin** (if hypoxemia)
 - Pharmacological treatment:
 - General treatment → ENT mnemonic “3”: **Charcoal + Naloxone + Thiamine (vitamin B1 therapy)**
 - **Charcoal**: Do **NOT** use if there is a **risk of aspiration**
 - Specific treatment:
 - TCA overdose treatment (#5): **Sodium bicarbonate therapy**
 - Opioid overdose treatment (#12): **Naloxone**
 - Benzodiazepine overdose treatment (#78): **Flumazenil**
 - **AVOID: Charcoal**
 - Consult: **Psychology, psychiatry**
 - **Precautions suicide**
- **Lead** toxicity (#60):
 - Diagnostic tests: **Heavy metal blood + Abdomen X ray**
 - Pharmacological treatment:
 - 45-69 µg/dL **venous** level “1”: **Succimer**

Comentado [U34]: General information to keep in mind!

Comentado [U35]: General information to keep in mind!

- ≥ 70 $\mu\text{g/dL}$ venous level “2”: **Dimercaprol + EDTA**
- Consult: **Social services**
- Toxic gas poisonings:
 - **Carbon monoxide** poisoning (#109, #160):
 - Diagnostic tests: “**Carbon monoxide**, **cyanide**, **methemoglobin**” + **Lactate**
 - **Carbon monoxide** poisoning: Lactate <4 mmol/L
 - Treatment:
 - COHb $<25\%$: **Oxygen**
 - COHb $\geq 25\%$: **Hyperbaric oxygen**
 - **Cyanide** poisoning (#74):
 - Diagnostic tests: “**Carbon monoxide**, **cyanide**, **methemoglobin**” + **Lactate**
 - **Cyanide** poisoning: Lactate ≥ 4 mmol/L
 - Treatment: **Vitamin B12 therapy**
- Delirium tremens (#25):
 - Diagnostic tests: Brain CT scan + **Magnesium + Toxicology urine + Alcohol blood**
 - Pharmacological treatment \rightarrow 169-12-aDN mnemonic “6-7”: **Vitamin B1 therapy + Vitamin B6 therapy + Folic acid therapy + Vitamin B12 therapy + Diazepam + Naltrexone** \pm Metoprolol (if BP $\geq 140/90$ mmHg)
 - Consult: **Substance abuse unit, social services, psychiatry**

Comentado [U36]: General information to keep in mind!

Comentado [U37]: General information to keep in mind!

Emergency Medicine:

- Hyperkalemic emergency (#65):
 - Pharmacological treatment “4”: **Calcium gluconate + Insulin regular IV + Dextrose 10% + Furosemide IV**
 - Diet: **Low potassium**
- Anaphylaxis (#134):
 - Pharmacological treatment “3”: **Epinephrine IM + Diphenhydramine IV** \pm **Albuterol INH**
 - Counseling: **EpiPen**
 - Consult: **Immunology**
- Foreign body aspiration (#82):
 - Diagnostic tests: **Neck X ray + Chest X ray**
 - Surgical treatment: **Bronchoscopy**
- Rape victim (sexual assault) (#33, #150):
 - Diagnostic tests “8”: “**HIV antibody**, VDRL, hepatitis panel, gonococcal urethra, chlamydia urethra, **gram stain urethra**”, **toxicology urine, alcohol blood**
 - Pharmacological treatment “6-7” \rightarrow outpatient PID + HIV mnemonic: **Ceftriaxone IM + Doxycycline OP + Metronidazole OP + Tenofovir OP + Emtricitabine OP + Efavirenz OP + Ulipristal OP (if woman)**
 - **Rape kit**
 - Consult: **Social services, psychology**
 - Advise: **No intercourse**
- Drowned patient “8” (#47):

- General measures: Intubation + Mechanical ventilation + Oxygen + Nasogastric tube **with suction** (if needed)
 - Hypothermia: **Remove cloth + Warm blanket**
 - HR <60 bpm: **CPR + Epinephrine**
- Hanging (#153):
 - Diagnostic tests “7”: **“Tylenol nomogram + Aspirin serum + Alcohol blood + Toxicology urine” + Brain CT scan + Neck CT scan + Chest CT scan**
 - Treatment: **Cervical collar rigid + Methylprednisolone** (for *acute spinal cord injury* according to NASCIS)
 - Consult: **Surgery, neurologic, psychiatry**
- Domestic abuse (#57, #72, #148):
 - Diagnostic tests “3”: **Osseous survey + Brain CT scan + Toxicology urine**
 - Advise: **Safety plan**
 - Consult: **Social services**
- Burned patient (#57):
 - Treatment “6”:
 - Intravenous treatment “3”: **Ringer lactate IV + Morphine IV + Omeprazole IV**
 - Topical treatment “2”: **Silver sulfadiazine TD + Lidocaine TD**
 - Surgical treatment “1”: **Surgical debridement**
 - Consult: **Plastic surgery**

Comentado [U38]: General information to keep in mind!

Genetics:

- Phenylketonuria (PKU) (#98): **Foul-smelling urine**
 - Diagnostic test: **Phenylalanine serum**
 - Consult: **Nutrition**
- Maple syrup urine disease (MSUD) (#124): **Sweet-smelling urine**
 - Diagnostic test: **Leucine serum**
 - Pharmacological treatment: **Vitamin B1 therapy**
 - Consult: **Nutrition**

8. Anticipate the time of day, review the test results, provide the appropriate treatment, and **select the service** where the patient should be seen.

- General:
 - Activity: **Ambulate** with assistance, **bed rest** with bathroom privileges, **bed rest** complete
 - Diet: NPO, clear liquid **diet**, advanced **diet**, regular **diet**
- Prep for Surgery “8”:
 - Diet: **NPO**
 - Labs: Coagulation (PT/PTT, INR), **Blood type and crossmatch**
 - Exams: **ECG 12 lead**, Chest X ray
 - Others:
 - Informed **consent**
 - **Consult** general surgery → “Acute cholecystitis”, assess for **surgery**

Comentado [U39]: General information to keep in mind!

9. **Interval Hx** → Interval / Follow up → OK.

10. If all is good, you just make the **final recommendations**.

- Vaccines (SIMP-TH mnemonic):
 - S: Shingles **vaccine** (adults 50+)
 - I: Influenza **vaccine** (annually for everyone 6 months+, **cystic fibrosis**)
 - M: Meningococcal **vaccine** (adolescents 11-12, high-risk groups "students/military/prisoners", **SCD**)
 - P: Pneumococcal **vaccine** (adults 65+, high-risk groups "chronic illnesses/weak immunity/smokers/long-term care residents", **celiac disease**)
 - T: **Tdap** (every 10 years for adults)
 - H: **HPV vaccine** (9-26 years, males and females)
- Screening tests (DuCHa-PoMPa mnemonic):
 - **Dexascan** "T-score" (women 65+, once)
 - Colonoscopy (ages 45-75, every 10 years)
 - HIV **antibody** (ages 15-65, once or annually if high risk)
 - **Pap smear** (ages 21-65, every 3 years)
 - Mammography (women 50-75, every 2 years)
 - PSA **serum total** (men 55-70, every 2 years)
- Counseling (SAD-SESA mnemonic):
 - **Smoking cessation**
 - **Alcohol abstinence**
 - Diet, **diabetic/ low sodium/ calorie restricted**
 - **Safe sex**
 - **Exercise** program
 - Seatbelt use
 - **Advise/ Advise/ Refer/ Reassure/ Precautions/ Consult:**
 - Advise, **no illegal drug use**
 - Advise, **medication compliance** (when using antibiotics, corticosteroids, antipsychotics) *****
 - Advise, **side effects**
 - Advise, **safety plan**
 - **Advance directive** (in terminal illnesses)
 - Refer **public health** (in HIV, TB)
 - **Reassure** patient
 - Precautions, "**suicide**"
 - Consult, social service (in TB, delirium tremens, drug abuse, rape victim)
 - Consult, **substance abuse unit** (in delirium tremens, drug abuse)

Comentado [U40]: General information to keep in mind!