# **UPTODATE PATHWAYS** • TABLE OF CONTENTS

#### ANESTHESIOLOGY

• Morphine milligram equivalent calculator for adults with chronic non-cancer pain

#### CARDIOVASCULAR MEDICINE

- •Acute decompensated heart failure: Determining if a hospitalized adult is ready for discharge
- •Acute decompensated heart failure: Discharge checklist
- •Acute decompensated heart failure: Initial management of hypervolemic patients with adequate perfusion
- Acute decompensated heart failure: Management of patients with cardiogenic shock
- •Acute decompensated heart failure: Selecting the site of care from the outpatient clinic
- •Atrial fibrillation: Anticoagulation for adults with atrial fibrillation
- •Evaluation of adults with apparent resistant hypertension
- •Heart failure with preserved ejection fraction (HFpEF): Pharmacologic therapy for patients already taking a loop diuretic
- •Heart failure: Diagnosis and classification
- •Heart failure: Initial pharmacologic therapy and dose titration for compensated heart failure with reduced ejection fraction (HFrEF)
- •Heart failure: Secondary pharmacologic therapy in adults with compensated chronic heart failure with reduced ejection fraction (HFrEF)
- •Heart failure: Selecting the site of care from the emergency department
- Hypertension: Initial management
- Hypertension: Management of patients on combination therapy (two antihypertensive drugs) who have uncontrolled blood pressure
- Hypertension: Management of patients on monotherapy who have uncontrolled blood pressure
- Lipids: Management of LDL cholesterol for primary prevention of cardiovascular disease in adults
- Lipids: Management of LDL cholesterol for secondary prevention of cardiovascular disease in adults

#### **EMERGENCY MEDICINE**

- Chronic obstructive pulmonary disease: Identifying patients with an acute exacerbation who warrant hospitalization
- •Community-acquired pneumonia: Determining the appropriate site of care for adults
- Community-acquired pneumonia: Empiric antibiotic selection for adults admitted to a general medical ward
- •Community-acquired pneumonia: Empiric antibiotic selection for adults admitted to the intensive care unit
- Community-acquired pneumonia: Empiric antibiotic selection for adults in the outpatient setting
- •Headache: Initial evaluation of adults in the emergency department
- •Heart failure: Selecting site of care from the emergency department
- Mild head trauma: Evaluation of adults in the emergency department
- •Pulmonary embolism (confirmed or suspected): Initial management of hemodynamically stable adults
- Pulmonary embolism (confirmed or suspected): Initial management of hemodynamically unstable adults
- Pulmonary embolism: Diagnostic evaluation in adults who are hemodynamically stable
- Pulmonary embolism: Diagnostic evaluation in adults who are hemodynamically unstable despite resuscitative efforts

#### ENDOCRINOLOGY AND DIABETES

- Diabetes: Diagnosis of diabetes mellitus or prediabetes in non-pregnant adults
- •Diabetes: Initial therapy for non-pregnant adults with type 2 DM
- Diabetes: Initiation and titration of insulin therapy in non-pregnant adults with type 2 DM
- Diabetes: Medication selection for non-pregnant adults with type 2 DM and persistent hyperglycemia despite monotherapy
- Osteoporosis and osteopenia: Initial management
- in postmenopausal patients

There are 79 unique UpToDate Pathways. Certain pathways appear multiple times if relevant to multiple specialties.

- •Thyroid nodules: Initial evaluation in adults
- •Thyroid nodules: Initial evaluation in pregnant patients

#### FAMILY MEDICINE AND GENERAL PRACTICE

- Evaluation of adults with apparent resistant hypertension
- Prescription of opioids for acute pain for opioid naïve adults
- in the ambulatory setting

#### GASTROENTEROLOGY AND HEPATOLOGY

- Abnormal liver tests: Initial evaluation
- •Colon polyps: Surveillance after colon polyp resection
- Colorectal cancer (CRC) screening: Asymptomatic patients with no history of colon polyps
- Diverticulitis: Indications for hospitalization and empiric antibiotic selection for adults
- Gallstones: Management of an adult with gallstones (symptomatic or asymptomatic)
- Gastroesophageal reflux disease: Identification of adults who require upper endoscopy
- Helicobacter pylori: Initial treatment for adults
- •Hepatitis C virus: Interpretation and confirmation of initial screening tests in individuals older than 18 months
- •Hepatitis C virus: Screening in adults

#### GENERAL SURGERY

- Diverticulitis: Indications for hospitalization and
- empiric antibiotic selection for adults
- Gallstones: Management of an adult with gallstones (symptomatic or asymptomatic)

# HEMATOLOGY

- •Anemia: Indications for red blood cell transfusion in hospitalized adults
- •COVID-19: Anticoagulation in adults with COVID-19

#### HOSPITAL MEDICINE

- •Clostridioides difficile infection: Treatment of adults with an initial or recurrent infection
- •COVID-19: Anticoagulation in adults with COVID-19
- Empiric antibacterial therapy for hospitalized patients with acute exacerbations of chronic obstructive pulmonary disease

#### INFECTIOUS DISEASES

- Acute bacterial rhinosinusitis: Evaluation and management for adults who have failed initial antibiotic treatment
- Acute bronchitis: Evaluation of suspected acute bronchitis in adults
- •Acute pharyngitis in adults: Evaluation
- Acute rhinosinusitis: Initial evaluation of adults
- •Acute rhinosinusitis: Initial management and antibiotic selection in adults
- •Cellulitis and skin abscesses: Empiric antibiotic selection for adults
- •Clostridioides difficile infection: Treatment of adults with an initial or recurrent infection
- Community-acquired pneumonia: Determining the appropriate site of care for adults
- Community-acquired pneumonia: Empiric antibiotic selection for adults admitted to a general medical ward
- Community-acquired pneumonia: Empiric antibiotic selection for adults admitted to the intensive care unit
- Community-acquired pneumonia: Empiric antibiotic selection for adults in the outpatient setting
- •COVID-19: Anticoagulation in adults with COVID-19
- Empiric antibacterial therapy for hospitalized patients with acute exacerbations of chronic obstructive pulmonary disease
- Hepatitis C virus: Interpretation of confirmation of initial screening tests in individuals older than 18 months
- •Hepatitis C virus: Screening in adults
- Streptococcal pharyngitis in adults: Treatment
- Urinary tract infection (UTI): Empiric antibiotic selection for acute complicated UTI in adults
- Urinary tract infection (UTI): Empiric antibiotic selection for acute simple cystitis in women

# UPTODATE PATHWAYS • TABLE OF CONTENTS (CONTINUED)

#### NEPHROLOGY AND HYPERTENSION

•Acute kidney injury (hospital acquired): Initial diagnostic approach in adults

- •Acute kidney injury (hospital acquired): Subsequent diagnostic approach in adults
- Hematuria: Evaluation in adults
- Hyperkalemia: Treatment in adults
- •Hyponatremia: Evaluation in adults
- Hyponatremia: Initial inpatient management in adults with moderate to severe hyponatremia

#### NEUROLOGY

·Headache: Initial evaluation of adults in the emergency department

· Mild head trauma: Evaluation of adults in the emergency department

#### **OBSTETRICS, GYNECOLOGY AND WOMEN'S HEALTH**

 Cervical cancer screening in resource-rich settings: Screening asymptomatic women who are at average risk for cervical cancer

Cervical cancer screening: Follow-up of a Pap test reported as "unsatisfactory"

- Cervical cancer screening: Follow-up of a Pap test showing partially obscuring blood or inflammation
- •Cervical cancer screening: Follow-up of a Pap test with an absent endocervical transformation zone
- Trial of labor after cesarean: Shared decision making with a pregnant patient

#### ONCOLOGY

- Cervical cancer screening in resource-rich settings: Screening asymptomatic patients who are at average risk for cervical cancer
- Colorectal cancer (CRC) screening: Asymptomatic patients with no history of colon polyps
- •Lung cancer: Screening

Prostate cancer: Screening

#### PRIMARY CARE (ADULT)

 Acute bacterial rhinosinusitis: Evaluation and management for adults who have failed initial antibiotic treatment

- · Acute bronchitis: Evaluation of suspected acute bronchitis in adults
- · Acute pharyngitis in adults: Evaluation
- Acute rhinosinusitis: Initial evaluation of adults
- · Acute rhinosinusitis: Initial management and antibiotic selection in adults
- Atrial fibrillation: Anticoagulation for adults with atrial fibrillation

· Cellulitis and skin abscesses: Empiric antibiotic selection for adults

•Cervical cancer screening in resource-rich settings: Screening asymptomatic women who are at average risk for cervical cancer

• Cervical cancer screening: Follow-up of a Pap test reported as "unsatisfactory"

•Cervical cancer screening: Follow-up of a Pap test showing partially

- obscuring blood or inflammation
- Cervical cancer screening: Follow-up of a Pap test with an absent
  endocervical transformation zone
- Chronic obstructive pulmonary disease: Identifying patients with an acute exacerbation who warrant hospitalization
- Chronic obstructive pulmonary disease: Initial diagnosis
- •Chronic obstructive pulmonary disease: Severity assessment and selection of initial therapy in adults
- Clostridioides difficile infection: Treatment of adults with an initial or recurrent infection
- Colon polyps: Surveillance after colon polyp resection
- Colorectal cancer (CRC) screening: Asymptomatic patients with no history of colon polyps
- Community-acquired pneumonia Determining the appropriate site of care for adults
- Community-acquired pneumonia: Empiric antibiotic selection for adults in the outpatient setting
- Diabetes: Diagnosis of diabetes mellitus or prediabetes in non-pregnant adults
- Diabetes: Initial therapy for non-pregnant adults with type 2 DM
- Diabetes: Initiation and titration of insulin therapy in non-pregnant adults with type 2 DM
- Diabetes: Medication selection for non-pregnant adults with type 2 DM and persistent hyperglycemia despite monotherapy

## PRIMARY CARE (Cont.)

- •Gastroesophageal reflux disease: Identification of adults who require upper endoscopy
- Gout: Initial management of adults with a gout flare

There are 79 un

- Heart failure: Diagnosis and classification
- Helicobacter pylori: Initial treatment for adults
- Hematuria: Evaluation in adults
- Hepatitis C virus: Interpretation and confirmation of initial screening tests in individuals older than 18 months
- Hepatitis C virus: Screening in adults
- Hypertension: Initial management
- Knee osteoarthritis: Management in adults
- Lipids: Management of LDL cholesterol for primary prevention
- of cardiovascular disease in adults • Lipids: Management of LDL cholesterol for secondary prevention
- of cardiovascular disease in adults
- •Low back pain: Evaluation of an adult with acute, non-traumatic low back pain
- Lung cancer: Screening
- Morphine milligram equivalent calculator for adults
- with chronic non-cancer pain
- Osteoporosis and osteopenia: Initial management in postmenopausal patients
- Prescription for opioids for acute pain for opioid naïve adults in the ambulatory setting
- Prostate cancer: Screening
- Unipolar major depression: Initial pharmacologic therapy in adults
- Urinary tract infection (UTI): Empiric antibiotic selection for acute complicated UTI in adults
- Urinary tract infection (UTI): Empiric antibiotic selection for acute simple cystitis in female adults

#### PULMONARY AND CRITICAL CARE MEDICINE

• Acute bronchitis: Evaluation of suspected acute bronchitis in adults

• Chronic obstructive pulmonary disease: Identifying patients with an acute exacerbation who warrant hospitalization

- Chronic obstructive pulmonary disease: Initial diagnosis
- Chronic obstructive pulmonary disease: Empiric antimicrobial therapy for outpatients with acute exacerbations
- Chronic obstructive pulmonary disease: Severity assessment and selection of initial therapy in adults
- Community-acquired pneumonia: Determining the appropriate site of care for adults
- •Community-acquired pneumonia: Empiric antibiotic selection for adults admitted to a general medical ward
- Community-acquired pneumonia: Empiric antibiotic selection for adults admitted to the intensive care unit
- Community-acquired pneumonia: Empiric antibiotic selection for adults in the outpatient setting
- COVID-19: Anticoagulation in adults with COVID-19
- Empiric antibacterial therapy for hospitalized patients with acute exacerbations of chronic obstructive pulmonary disease
- Lung cancer: Screening
- Pulmonary embolism (confirmed or suspected): Initial management of hemodynamically stable adults

 Pulmonary embolism (confirmed or suspected): Initial management of hemodynamically unstable adults

• Pulmonary embolism: Diagnostic evaluation in adults who are hemodynamically stable

 Pulmonary embolism: Diagnostic evaluation in adults who are hemodynamically unstable despite resuscitative efforts

### PSYCHIATRY

• Unipolar major depression: Initial pharmacologic therapy in adults

#### RADIOLOGY

- Pulmonary embolism: Diagnostic evaluation in adults who are hemodynamically stable
- Pulmonary embolism: Diagnostic evaluation in adults who are hemodynamically unstable despite resuscitative efforts

# RHEUMATOLOGY

- Gout: Initial management of adults with a gout flare
- Knee osteoarthritis: Management in adults

# UpToDate<sup>®</sup> Advanced

que UpToDate Pathways. Certain pathways

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# LAB INTERPRETATION • TABLE OF CONTENTS

#### CHEMISTRY LAB MONOGRAPHS

- Abnormal lipid profile: High total cholesterol, low HDL cholesterol, high LDL cholesterol, or high triglycerides in adults
- •Abnormal liver panel: High alkaline phosphatase and high conjugated bilirubin in adults
- High alanine aminotransferase (ALT) or aspartate aminotransferase (AST) in adults
- High alkaline phosphatase in adults
- High amylase or high lipase in adults
- High bicarbonate in adults
- High bilirubin in adults
- High blood urea nitrogen in adults
- High brain natriuretic peptide (BNP) in adults
- High calcium in adults
- High carbon monoxide (carboxyhemoglobin) level in adults
- High chloride in adults
- High lactate in adults
- High lactic dehydrogenase (LD or LDH) in adults
- High N-terminal pro-brain natriuretic peptide in adults
- High phosphorus in adults
- High potassium in adults
- High procalcitonin in adults
- High serum creatinine in adults
- High skeletal muscle creatine kinase in adults
- High sodium in adults
- High triglycerides in adults
- High troponin in adults
- High urate in adults
- Lipid screen: High total cholesterol or low HDL cholesterol in adults
- Low alpha-1 antitrypsin in adults
- Low bicarbonate in adults
- Low C1q in adults
- Low calcium in adults
- Low chloride in adults
- Low glucose in adults
- Low magnesium in adults
- Low phosphorus in adults
- Low potassium in adults
- Low sodium in adults
- •Low total hemolytic complement (CH50) in adults

## Positive blood lead levels in adults

- COAGULATION LAB MONOGRAPHS
- •Low antithrombin in adults
- •Low fibrinogen in adults
- •Low protein C in adults
- •Low protein S in adults
- Positive D-dimer in adults
- Positive factor V Leiden or abnormal activated protein C resistance in adults
- Prolonged PT or prolonged aPTT in adults
- Prolonged thrombin time in adults

#### ENDOCRINOLOGY LAB MONOGRAPHS

- •Abnormal thyroid profile: High TSH and high free T4 in adults
- •Abnormal thyroid profile: High TSH and low free T4 in adults
- Abnormal thyroid profile: High TSH and normal free T4 in adults
- •Abnormal thyroid profile: Low TSH and high free T4 in adults
- •Abnormal thyroid profile: Low TSH and low free T4 in adults
- •Abnormal thyroid profile: Low TSH and normal free T4 in adults
- High 17-hydroxyprogesterone in adults
- High cortisol in adults
- High fractionated metanephrines (urine or plasma) in adults
- High free T4 in adults
- •High FSH in women
- High glucose in adults
- High glycated hemoglobin (A1C) in adults
- High hCG (tumor marker) in men
- High insulin-like growth factor-1 in adults
- High prolactin in adults
- High renin (PRA or PRC) and high aldosterone in adults
- High renin (PRA or PRC) and low aldosterone in adults

# There are 121 UpToDate Lab Interpretation monographs.

- Low serum calcium and high parathyroid hormone in adults
- Low serum calcium and low or low-normal parathyroid hormone in adults
- •Low testosterone in men
- •Low thyroid-stimulating hormone (TSH) in adults
- •Low vitamin D (25-OH vitamin D) in adults
- Normal serum calcium and high parathyroid hormone in adults
- •Normal serum calcium and low parathyroid hormone in adults
- Positive hCG in women
- HEMATOLOGY LAB MONOGRAPHS
- •Abnormal iron profile: Low ferritin or low iron in adults
- •Abnormal serum protein electrophoresis (SPEP) in adults
- Abnormal white blood cell count in adults
- High eosinophils in adults
- High ferritin in adults
- High hemoglobin, hematocrit in adults
- High lymphocytes in adults
- High neutrophils in adults
- High platelet count in adults
- High reticulocytes in adults
- •Low CD4 count in adults with HIV infection
- Low folate in adults
- Low haptoglobin in adults
- •Low hemoglobin, hematocrit in adults
- •Low lymphocytes in adults
- •Low neutrophils in adults
- •Low platelet count in adults
- •Low vitamin B12 and low folate in adults

IMMUNOLOGY LAB MONOGRAPHS • Abnormal immunoglobulin levels in adults

• High C-reactive protein in adults

-glycoprotein antibody in adults

MICROBIOLOGY LAB MONOGRAPHS

Positive hepatitis B serology in adults

• Positive HIV screening test in adults

adults

Positive Lyme disease antibody in adults

Positive serologic tests for syphilis in adults

TUMOR MARKER LAB MONOGRAPHS

High prostate-specific antigen in men

• Elevated CA 125 in women

• Positive rheumatoid factor (RF)

High tryptase in adults

Positive ANCA in adults

Low C4 and/or C3 in adults

High total immunoglobulin E in adults

Abnormal serum free light chains in adults

• High erythrocyte sedimentation rate in adults

• Positive antinuclear antibodies (ANA) in adults

Positive Epstein-Barr virus antibodies in adults

• Positive lupus anticoagulant, anticardiolipin antibody, or anti-beta2

• Positive Clostridioides (formerly Clostridium) difficile in adults

• Positive or uninterpretable interferon-gamma release assay in

- •Low vitamin B12 in adults
- Positive Coombs test, direct and indirect in adults
- Positive ELISA PF4-heparin antibody in adults