Ordering Guide

WHAT TO ORDER WHEN

Brain	
Headache	CT head without contrast for acute ("worst headache of life").
Trauma	CT head without contrast (acute).
Suspected Intra-Cranial Hemorrhage	CT head without contrast.
Acute Neurological Changes	CT head without contrast. Subsequent study: MRI with and without contrast.
Acute Stroke / TIA	CTA head and neck. CT head without contrast. Subsequent studies: MRI brain with and without contrast, MRA brain and MRA neck with and without contrast as indicated.
Hydrocephalus	CT head without contrast. Alternative: MRI with and without contrast (for acute process).
Seizure	MRI brain with and without contrast (seizure protocol).
Dementia / Memory Loss	MRI brain with and without contrast.
Mass	Brain MRI with and without contrast.
Aneurysm or AVM "Screening"	MRA head. CTA head with contrast for definition of small aneurysms, patients who cannot have MRA.
Infection	MRI with and without contrast. MRI contraindicated: CT with and without contrast.
Face	
Trauma	CT maxillofacial without contrast.
Sinus Disease	CT sinus without contrast. If suspected orbital / intra-cranial involvement: MRI brain and orbits with and without contrast.
Infection	CT maxillofacial with contrast. Suspected orbit or brain extension: MRI brain and orbits (IAC protocol).
Hearing Loss, Vertigo	Developmental: CT temporal bones without contrast. Sensorineural: MRI IAC with and without contrast.
Neck / Soft Tissue	
Carotid or Vertebral Artery Stenosis	MRA neck with and without contrast. Alternatives: CTA neck with contrast. Carotid Doppler ultrasound.
Mass	CT neck with contrast. Thyroid nodule: Neck ultrasound. Thyroid cancer: MRI neck with and without contrast.
Infection	CT neck with contrast.
Carotid or Vertebral Artery Dissection	CTA neck with contrast. Alternative: MRA neck with and without contrast (dissection protocol).
Salivary Duct Stone	CT neck with and without contrast.



ORDERING - PG. 2

Thoracic Spine		
Trauma	CT thoracic spine without contrast. Acute neurologic deficit and CT negative: MRI without contrast.	
Pain, Degenerative Changes, Radiculopathy	MRI thoracic spine without contrast. Prior surgery within 5 years: MRI T-spine with and without contrast. MRI contraindicated: CT without contrast or CT myelogram.	
Lumbar Spine		
Trauma	CT lumbar spine without contrast. Acute neurologic deficit and CT negative: MRI without contrast.	
Pain, Degenerative Changes, Radiculopathy	MRI lumbar spine without contrast. Prior surgery within 5 years: MRI with and without contrast. MRI contraindicated: CT without contrast or CT myelogram.	
Mass	MRI without and with contrast.	
Infection	MRI without and with contrast.	
Chest		
Chronic Dyspnea	CT chest.	
Hemoptysis	CT chest with contrast.	
Lung Cancer – Non-invasive Staging	CT chest with contrast.	
Screening for Pulmonary Metastases	CT chest with or without for initial evaluation or surveillance. Chest X-Ray if performed as a baseline.	
Blunt Chest Trauma, Suspect Aortic Injury	CTA chest with contrast.	
Acute Chest Pain Suspect Aortic Dissection	CTA chest and abdomen (dissection protocol).	
Suspected Pulmonary Embolism	CTA chest with contrast. Alternative: When CT contrast contraindicated, consider ventilation / perfusion scan.	
Gastrointestinal		
Acute Abdominal Pain, Fever, Rule Out Abscess	CT abdomen and pelvis with IV and oral contrast.	
Pregnant Patient With Acute Abdominal Pain	Ultrasound. If indeterminate, then MRI abdomen and pelvis without contrast.	
Pancreatitis	CT abdomen with contrast. Consider MRCP as well to evaluate for gall stones.	
Blunt Trauma Stable Patient	CT chest / abdomen / pelvis with IV contrast.	
Jaundice – Painless	CT with and without contrast (pancreas protocol).	
Jaundice With Pain / Fever	Ultrasound. Alternative: MRCP with IV contrast.	
Left Lower Quadrant Pain	CT abdomen / pelvis with IV contrast and with oral contrast.	
Evaluate Inflammatory Bowel Disease / Crohn's Disease	MRI abdomen with IV contrast and with oral contrast (enterography protocol). Alternative: CT abdomen with IV contrast and with oral contrast (enterography protocol).	



ORDERING - PG. 3

Gastrointestinal – Cont'd	
Right Lower Quadrant Pain – Suspected Appendicitis	CT abdomen and pelvis with IV and oral contrast.
Right Lower Quadrant Pain – Pregnant	Ultrasound. Obtain MRI if inconclusive.
Right Lower Quadrant Pain – Children	Ultrasound. Obtain MRI if inconclusive.
Right Upper Quadrant Pain	Ultrasound abdomen initially for evaluation of gallbladder and biliary system.
Evaluate Liver Lesions	CT or MRI with contrast IV (liver protocol).
Suspected Small Bowel Obstruction	CT abdomen and pelvis with contrast IV and water-soluble oral contrast, if tolerated.
Urologic	
Flank Pain – Suspected Stone Disease	CT abdomen and pelvis without contrast (CTKUB).
Acute Pyelonephritis	CT abdomen and pelvis with and without contrast.
Hematuria	CT abdomen and pelvis with and without contrast. Order as CT-IVP which includes high resolution excretory phase imaging of the renal collecting systems and ureters.
Incidental Renal Mass	Either CT or MRI abdomen with and without contrast (renal mass protocol).
Recurrent Urinary Tract Infections in Women	CT with and without contrast for bladder and kidneys evaluation. MRI pelvis to exclude urethral diverticulum or pelvic prolapse.
Evaluation of Female Pelvis	Ultrasound pelvis. If further evaluation needed, MRI pelvis with contrast IV (gynecologic protocol).
Evaluation of Prostate Lesion	MRI pelvis with contrast IV(prostate protocol).
Evaluation of Adrenal Nodule	CT with and without contrast or MRI without contrast (adrenal protocol).
Extremities	
Assess Fractures or Dislocation	CT without contrast.
Evaluate Stress Fracture	MRI without contrast.
Labral Tear	MRI arthrogram. CT arthrogram if contraindication to MRI.
Cartilage Evaluation	MRI arthrogram. CT arthrogram if contraindication to MRI.
Joint Bodies	MRI arthrogram. CT arthrogram if contraindication to MRI.

