

MR/CT Protocols for Common Diagnosis

HEAD/BRAIN

CT without contrast

- Acute onset headache
- Acute trauma
- Acute stroke (R/O bleed)

CT with contrast

- Tumor/Infection (If contraindication to MRI)

MRI without contrast

- Dizziness
- TIA/stroke evaluation (MRA also?)
- Subacute or old trauma

MRI with contrast

- Tumor/Infection
- Chronic headaches/known Multiple Sclerosis/prolonged Bell's Palsy/CN deficits (Cranial Nerve Palsy)/Pulsatile Tinnitus/pituitary

MRA

- Cerebral aneurysm
- Carotid/vertebral stenosis
- Aorta and great vessels

MRV

- Dural venous sinus thrombosis

NECK/FACE

CT without contrast

- Paranasal sinus evaluation
- Trauma (R/O fracture)
- Palpable Mass/Abscess/ Lymphoma/Laryngeal CA

CT IAC (Temporal Bones) without contrast

- Inner ear path or basilar skull fracture.

CT Orbit Foreign Body

- Pre-MRI screening for metals

CT with contrast (Facial or Orbital)

- Trauma/Facial Infection/ Tumor

CT with contrast

- R/O mass/Tumor/Infection in neck or orbit

MRI Soft Tissue Neck with and without

- Mass/Fluid collection/Neck primary/Infection

SPINE

MRI without contrast

- Preferred for evaluation of disc and facet degeneration leading to pain and neurological symptoms

MRI Lumbar without contrast

- Radiculopathy

MRI Lumbar with and without contrast

- Previous lower back surgery/ Tumor/Infection

MRI Thoracic without contrast

- Pain/Trauma

MRI Thoracic with and without contrast

- Demyelinating Disease/Tumor/Mets/Infection

MRI Cervical without contrast

- Neck Pain/HA/Trauma/Radiculopathy

MRI Cervical with and without contrast

- Known demyelinating Disease/Tumor/Mets/Infection

MRI with contrast

- Evaluate disc and facet disease WITH history of prior back surgery
- Spinal cord evaluation – demyelination/Tumor

CT without contrast

- Preferred for acute fracture evaluation

EXTREMITIES

MRI without contrast

- Trauma/Pain

MRI with and without contrast

- Mass or Lump/Osteomyelitis/Sarcoma or Mets

MRI Arthrogram Knee

- Meniscal surgery (Depends on Physician)

MRI Arthrogram Shoulder

- Tears (Depends on Physician)

MRI Arthrogram Wrist (Depends on Physician)

CHEST

CT Chest without contrast

- F/U on lung nodules/or initial evaluation < 1cm nodule

CT Chest with contrast

- Lung mass or nodule > 1cm on CXR/known lung CA/Pneumonia/pleural fluid

Hi-Resolution CT Chest without contrast

- Evaluate for diffuse lung disease/ ILD/Bronchiectasis/Air Trapping

CTA Pulmonary Angiogram with contrast

- R/O PE/SOB/Hypoxia
- Preferred over VQ in all cases – including pregnant patient, unless contraindication to IV contrast.

ABDOMEN/PELVIS

CT with Contrast

- All standard abdominal imaging – Pain/Weight loss/ R/O Cancer/Cancer Staging/Diverticulitis/Appendicitis/ Pyelonephritis.

CT without IV or Oral Contrast

- Renal Stones

CT with and without IV Contrast

- Painless Hematuria
- Initial work up of pancreatitis
- Evaluate renal mass or renal cyst

US

- Use first in Pediatrics.
- Initial test of choice for cholecystitis/gallstones.
- Pelvic pain in female.
- Appendicitis – Pediatrics or if young, thin female – can do US first if ovarian cyst is also in the differential.
- Screen for AAA.

CT Coronary Calcium Score

- Screening for coronary vascular risk stratification in asymptomatic patient.

MRI/MRA

- Problem solving or elevated creatinine

MRA or multi-detector CTA with contrast

- Renovascular Hypertension

BODY MRI

- Problem Solving/Lesion Characterization
- CT contrast allergy

MRI ABDOMEN without contrast

- Adrenals/MRCP

MRI ABDOMEN with contrast

- Renals/Liver/Spleen/Pancreas/Mets

MRI Pelvis without contrast

- Uterine anomaly

MRI Pelvis with and without contrast

Uterus fibroids/Endometriosis/Ovarian