



Updated 1/2021

CT Contrast vs. No Contrast Reference Sheet – Head/Neck

*MRI of the brain is preferable to CT in **most** clinical scenarios for neurological signs/symptoms/diagnoses, etc., due to its superior contrast resolution and lack of beam-hardening artifact adjacent to the petrous bone (which may limit visualization in portions of the posterior fossa and brainstem on CT).

Exceptions to the use of brain MRI as the neuroimaging procedure of choice and situations where CT is preferred are listed below. Unless otherwise contraindicated, for all other symptoms/reasons for requested brain imaging please see MRCH “Ordering Guidelines for MRI Examinations” for appropriate exam request.

For reasons listed below, “ACUTE**” is classified as less than 8 hours since the onset of symptoms.

Body Part	Reason for Exam	Procedure to Pre-Cert	CPT Code
Head	-Trauma -* ACUTE intracranial hemorrhage (parenchymal, subarachnoid, subdural, epidural). -F/U of treated intracranial hemorrhage -evaluation of calcified intracranial lesions -skull fracture -** MOST other ER evaluations (headache, dizziness, AMS, syncope, weakness, seizure, visual disturbance, altered sensory, etc.)	CT Brain without contrast *CT is preferred for acute ICH. MRI is preferred for subacute or chronic ICH. **For any of these same reasons ordered for outpatients with chronic symptoms, MRI would be first choice exam unless contraindicated.	70450
Head	-Abscess/Lesion/Mass -Metastatic Disease -Pituitary -AVM	CT Brain without and with contrast *only if MRI is contraindicated or for an ER patient approved by the radiologist.	70470
Vascular-Circle of Willis (COW)	- ACUTE Stroke/CVA/TIA	CTA Head with contrast *MRA Head without for subacute/chronic CVA or aneurysm	70496
Vascular-Carotids	- ACUTE Stroke/CVA/TIA -Dissection -Acute/Traumatic C-Spine fracture or penetrating neck injury	CTA Neck with contrast *MRA Neck with contrast for subacute/chronic/non-emergent reasons	70498
Orbits	-Trauma/Fracture/Black eye -Visual disturbance	CT Orbit/Ear without contrast	70480

	-Grave's disease		
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CT Contrast vs. No Contrast Reference Sheet – Head/Neck

(continued)

Body Part	Reason for Exam	Procedure to Pre-Cert	CPT Code
Face	-Facial trauma/contusion -Jaw injury	CT Facial/Sinus without contrast **For chronic TMJ issues (no acute injury) MRI of TMJs is best	70486
Face	-Mass/Neoplasm/Malignancy -Abscess -Cellulitis	CT Facial/Sinus with contrast	70487
Sinuses	-Acute or chronic sinusitis -Nasal cavity polyps	CT Facial/Sinus without contrast	70486
Temporal Bones/ IACs	-Trauma/injury -Mastoiditis -*Developmental hearing loss -*Chronic, non-pulsatile tinnitus -**KNOWN acoustic neuroma (including progression, post-treatment or resection or suspected regrowth)	CT Orbit/Ear without contrast *for sensorineural hearing loss or pulsatile tinnitus MRI is preferred **for suspect/undiagnosed acoustic neuroma or cholesteatoma MRI is preferred	70480
Neck-Soft Tissue	-Pain/difficulty swallowing -Tumor/Mass/Cancer/Mets -Abscess/Cellulitis/Infection	CT Neck Soft Tissue with contrast	70491
Neck-Soft Tissue	-Pain/ Salivary gland calculi	CT Neck Soft Tissue without and with contrast (without images through salivary glands only)	70492

CT Contrast vs. No Contrast Reference Sheet – Spine

*CT of the spine is most often reserved for trauma and/or bony detail as listed below.

For most other spinal abnormalities, MRI is the modality of choice, unless contraindicated or not tolerated by the patient (for example, secondary to claustrophobia).

Body Part	Reason for Exam	Procedure to Pre-Cert	CPT Code
Spine: Cervical Thoracic Lumbar	-Trauma/injury -Fracture or fracture F/U -Fusion assessment -Assess bony degenerative changes	CT Spine Cervical without contrast CT Spine Thoracic without contrast CT Spine Lumbar without contrast *MRI recommended for disc herniation, radicular pain, Mets, infection, hematoma, epidural abscess, etc. unless otherwise contraindicated.	72125 72128 72131
Spine: Cervical Thoracic Lumbar	-Infection -Hematoma -Epidural abscess -Tumor/Mass/Cancer/Mets -*Myelogram	CT Spine Cervical with contrast CT Spine Thoracic with contrast CT Spine Lumbar with contrast (Only if MRI is contraindicated) *Requires intrathecal contrast injection to be done by the radiologist.	72126 72129 72132

CT Contrast vs. No Contrast Reference Sheet – MSK

Body Part	Reason for Exam	Procedure to Pre-Cert	CPT Code
Upper Extremities	-Injury or trauma -Fusion -Other bony abnormalities	CT Upper Ext (LT or RT) without contrast Order MUST specifically identify side and location to scan (i.e. RT knee, LT hand, etc.)	73200
Upper Extremities	-Infection -*Arthrogram (only if MRI Arthrogram is contraindicated) **MRI recommended for tumor/mass/cancer/mets	CT Upper Ext (LT or RT) with contrast Order MUST specifically identify side and location to scan (i.e. RT knee, LT hand, etc.) *Requires contrast injection in affected joint to be done by the radiologist.	73201
Lower Extremities	-Injury or trauma -Fusion -Other bony abnormalities	CT Lower Ext (LT or RT) without contrast Order MUST specifically identify side and location to scan (i.e. RT knee, LT hand, etc.)	73700
Lower Extremities	-Infection -*Arthrogram (only if MRI Arthrogram is contraindicated) **MRI recommended for tumor/mass/cancer/mets	CT Lower Ext (LT or RT) with contrast Order MUST specifically identify side and location to scan (i.e. RT knee, LT hand, etc.) *Requires contrast injection in affected joint to be done by the radiologist	73701

CT Contrast vs. No Contrast Reference Sheet – Body

Body Part	Reason for Exam	Procedure to Pre-Cert	CPT Code
Chest	-Simple pneumonia -F/U Lung nodule(s) -? Aortic aneurysm size -Pneumothorax -Atelectasis	CT Chest without contrast	71250
Chest	-Infection/Abscess -Mass (Hilar, chest wall, etc.) -Lung CA or METS -Esophageal CA (+oral contrast) - Initial lung nodule scan -Empyema -Lymphadenopathy -*Complicated pneumonia -*Cough -*Fever of unknown origin -*Hemoptysis -*Pleural Effusion -*Emphysema -*COPD	CT Chest with contrast *With contrast is best. However, it is okay to do without contrast if contrast is contraindicated for any reason and/or if ordering MD requests no contrast.	71260
Chest	-Interstitial Lung Disease -Sarcoidosis -Asbestosis -Bronchiectasis -Pulmonary Fibrosis	CT Chest Hi-Res without contrast *will be done with High Resolution protocol	71250
Chest-Vascular	-Acute SOB -elevated D-Dimer -Chest pain with dyspnea -new onset SOB following surgery or recent travel	CTA PE Chest with contrast (PE protocol)	71275
Chest-Vascular	-Thoracic aortic aneurysm -Aortic coarctation (narrowing) -Aortic root dilatation -Dissection (add CTA A/P with contrast if needed) -Trauma -Pulmonary AVM -A-Fib (pre-ablation)	CTA Thoracic Aorta with contrast	71275

CT Contrast vs. No Contrast Reference Sheet – Body

(continued)

Body Part	Reason for Exam	Procedure to Pre-Cert	CPT Code
Chest/Abd/Pelvis	-Cancer staging	CT Chest with contrast and CT Abdomen/Pelvis with contrast Oral contrast will be given	71260 74177
Abdomen- Liver	-Cirrhosis -Hepatoma -Hepatitis -*Hemangioma (*MRI preferred)	CT Abdomen without and with contrast Order needs to specify “Liver protocol” (no oral contrast given)	74170
Abdomen- Adrenal	-Adrenal mass- only if previously uncharacterized *MRI preferred	CT Abdomen without and with contrast Order needs to specify “Adrenal mass protocol” (no oral contrast given)	74170
Abdomen- Pancreas	-Pancreatic mass -Pseudocyst -*NOT for pancreatitis	CT Abdomen without and with contrast Order needs to specify “Pancreas protocol” (Oral contrast WILL be given)	74170
Abdomen- Kidneys (Renal)	-Renal mass (suspected or prior history of)	CT Abdomen without and with contrast Order needs to specify “Renal mass protocol” (no oral contrast given)	74170
Abdomen- General	-RUQ pain -LUQ pain -Epigastric pain -Pancreatitis -Jaundice -Abnormal lab work	CT Abdomen with contrast Oral contrast will be given unless ordering MD specifically requests it to be withheld.	74160
Abdomen/Pelvis	-Flank pain -History of kidney stones -Hematuria with pain -? AAA size- F/U	CT Abdomen/Pelvis without contrast Specify “Stone protocol” for all but AAA (no oral contrast given)	74176
Abdomen/Pelvis	-Generalized abdominal pain -Nausea/vomiting/diarrhea -Diverticulitis/LLQ pain -Appendicitis/RLQ pain -Weight loss -Hernia (ventral, umbilical) -Ulcerative colitis -Abscess -Ascites -Fever -Bowel perforation -Bowel obstruction -Mass/tumor/mets	CT Abdomen/Pelvis with contrast Oral contrast will be given unless ordering MD specifically requests it to be withheld.	74177

CT Contrast vs. No Contrast Reference Sheet – Body

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Body Part	Reason for Exam	Procedure to Pre-Cert	CPT Code
Abdomen/Pelvis- (Small Bowel) Enterography	-Crohn's disease -IBS -Celiac disease -Assess for bowel wall inflammation, stricture or fistula	CT Abdomen/Pelvis with contrast Order needs to specify "Enterography protocol". This is a timed study with a special oral prep called Volumen. The patient will be given this oral prep at timed intervals within the department prior to scanning.	74177
Abdomen/Pelvis	-Hematuria without pain -Suspected urothelial malignancy	CT Abdomen/Pelvis without and with contrast Order needs to specify "Urogram protocol" (no oral contrast will be given)	74178
Pelvis- Bony	-Fracture -Bony abnormalities	CT Pelvis without contrast Order needs to specify "Bony Pelvis" NO oral contrast will be given	72192
Pelvis	-Mass -Hernia (inguinal) -Infection -Pain (female) -Adenopathy	CT Pelvis with contrast Oral contrast will be given unless ordering MD specifically requests it to be withheld.	72193
Abdomen- Vascular	-Renal Arteries (stenosis, aneurysm, etc.) -Mesenteric ischemia -Trauma	CTA Abdomen with contrast NO oral contrast given	74175
Abdomen/Pelvis- Vascular	-AAA (post-surgical repair, leak, symptomatic) -Iliac aneurysm -Trauma -Dissection (add CTA Chest with contrast if needed) -AVM -Vasculitis -Other large vessel diseases	CTA Abdomen/Pelvis Aorta with contrast NO oral contrast given	74174

*No oral contrast is given for any CTA exams.

In CT, the phrases "with contrast", "without contrast", or "without and with contrast" refer to **injectable contrast ONLY (usually IV but can be intrathecal or intra-articular). **ORAL** contrast is not a separate charge and will be given to patients per specific scanning protocols unless specifically requested to be withheld by ordering MD.

***Since there are many different and specific ways to scan based on what is being looked for, we ask that you please be very specific and detailed in your orders/reasons for your patient to have a CT so that we can make sure we are doing the best exam(s) for your patient's needs.