

Middlesex Healthcare

CT Scan Exam Ordering Guidelines

Prior Allergy to IV or PO contrast media

The purpose of corticosteroid premedication is to mitigate the likelihood of an allergic-like reaction in high-risk patients. For patients with a known (prior) history of having an allergy to Iodinated contrast, IV contrast and/or water soluble enteric contrast, **the following premedication guidelines are recommended:** Note: For symptoms and categories (Reference table B)

1. Prior Mild Reaction- (excluding hives, itching, and facial swelling): No need for premedication
2. Prior Moderate Reaction (including hives, itching, and facial swelling): premedication is recommended
3. Prior Severe Reaction: No contrast media administration is recommended, but if no alternatives are available and it is felt to be clinically needed, a radiologist and/or provider can approve premedication protocol before administration of Iodinated Contrast material.

Note: Water soluble Iodinated contrast media (enteric use)

1-2% of enteric contrast is absorbed systemically, and reactions are not dependent on the volume of contrast (page 62 of 2017 ACR contrast manual). Therefore, patients can develop allergy from this small amount. It is very uncommon for moderate to severe reactions to happen (ACR Version 10.3 2017, pg. 51)

13 Hour Premedication Protocol (Adult)

Medication	Dosage	Timing
Prednisone	50 mg by mouth	13, 7 and 1 hour before contrast media injection
Diphenhydramine (Benadryl®)	50 mg by mouth, intravenously, or by intramuscularly.	1 hour before contrast media injection

Pre CT Exam Kidney Function Testing:

Patients, who meet the criteria (see below) must have eGFR test results available within 6 weeks of the CT scan. The eGFR must be performed if the patient has ANY of these risk factors:

- 1) Age of patient >60 yrs old
- 2) Current Diabetic
- 3) History of Diabetes mellitus
- 4) History of hypertension requiring medical therapy
- 5) Current use of metformin-containing medications*
- 6) AKI (acute kidney injury)
- 7) History of renal disease to include:
 - A. Dialysis
 - B. Kidney transplant
 - C. Solitary kidney
 - D. Renal cancer
 - E. Renal surgery

* Metformin containing medicine(s) has a post IV iodinated contrast follow up, for renal function, see Metformin section below.

IV contrast media and patients taking metformin containing medication(s)

- A. Recommended CT appointment days:
 - a. Saturday through Wednesdays.
 - b. Thursday and Friday appointments should only be done if prior arrangements are made for the ordering provider to be available to on Saturday or Sunday for management of lab results and metformin.
- B. The metformin agent DOES NOT need to be stopped prior to the CT.
- C. The Metformin agen needs to be stopped for 48 hours after the injection of IV contrast media.
- D. Renal Function is to be drawn and checked 48 hours after the imaging procedure. The patient is to contact their primary care physician after their blood work is drawn to discuss restarting metformin
- E. Blood work script and a discharge instruction form will be given to the patient after procedure by the CT technologist.

CT Exam Ordering Guidelines:

Body Part	Symptom & Indications	Exam for Pre-Certification
CT Head/Brain	Head Trauma, headache, TIA, CVA, hx of stroke, hemorrhage, alzheimer's memory loss, confusion, vertigo, dizziness, shunt check, hydrocephalus	CT Head w/o IV Contrast
	Infection or mass, metastatic staging (MR preferred) Tumor, stroke,alzheimer's, headache with neurological symptoms	CT Head w/ IV contrast and w/o IV contrast
	Scalp cellulitis, scalp infection	CT Head W/ IV contrast
	CT Venogram cerebral venous thrombosis, sinus thrombosis	CTA Head w/ IV contrast and w/o IV contrast
	CT Angiogram aneurysm Intractable headache TIA,CVA AVM (arterial/venous malformation)	CTA Brain w IV contrast and w/o IV contrast
CT IAC/Mastoid/ Temporal Bone	Pain, trauma, infection Hearing loss	CT IAC/mastoid w/o IV contrast

CT IAC/Mastoid/ Temporal Bone	mass, Abscess, tumor	CT IAC/Mastoid w/ IV contrast
CT Sinus	Sinus pain/pressure; Headache Non Trauma pain Sinusitis	CT Sinus w/o IV contrast
	Sinusitis sinus pressure sinus infection	CT Sinus w/o low dose (must state on script)
	Ordered by ENT Doctors. "LandMarx/Medtronic" for pre-surgery assessment. If unsure do not add modifier	CT Sinus w/o IV contrast
	Cellulitis/ pain / abscess	CT Sinus w/ IV contrast
CT Facial/Mandible	Facial Trauma Mandible trauma ? fracture	CT Facial/Sinus w/o IV contrast
	Facial Swelling/infection Mandibular swelling/infection Facial or Mandibular Mas	CT Facial/Sinus with IV contrast
CT Neck/C-Spine	Throat pain Swelling Soft tissue mass, Abscess	CT Neck with IV contrast
	Salivary gland stone Infection of salivary gland * (only perform w/out contrast if looking for salivary stone)	CT Neck with IV and w/o IV contrast
	Trauma Upper Extremity Numbness Post surgery assessment	CT cervical spine w/o IV contrast
	Infection of Recent Surgical Site	CT cervical spine with IV contrast
CT Chest	Cough Pneumonia chest pain mass fever Cancer, hemoptysis mediastinal or hilar adenopathy Rib fractures Interstitial Lung Disease no air trapping or vascular hypertension	CT Chest w/ contrast

	*if exam contraindicated for contrast order w/o contrast	CT Chest w/o contrast
	All Cancer staging lymphoma Mets pain lymphadenopathy trauma colorectal cancer pre-treatment screening	CT Chest w/ contrast and CT Abdomen and Pelvis w/ contrast
	Interstitial Lung disease looking for air trapping. (bronchiolitis/COPD) or vascular hypertension	CT Chest Interstitial Lung disease w/o Contrast(formally HRCT)
	Interstitial Lung disease looking for air trapping. (bronchiolitis/COPD) or vascular hypertension	CT Chest Interstitial Lung disease w/ Contrast(formally HRCT) *preferred to scan w/ contrast when possible, however do ask for new script if ordered dy.
CT Calcium Scoring	Calcium build up in plaque of arteries	CT Calcium Scoring
CT Lung Nodule	Initial Incidental Finding: Non-lung screening follow up- incidental lung nodule finding on radiology imaging.	CT chest w/o IV contrast (low dose technique)
	Known incidental Finding: Non-Lung Screening follow up- known lung nodule finding. (Fleisher's pathway)	CT chest w/o IV contrast (low dose technique)
	Initial Lung Screening Exam <ul style="list-style-type: none"> ● Age 55-77 ● Current smoker or ● Former smoker, quit within last 15yrs 	CT Lung Screening w/o IV contrast (low dose technique)
	LRAD category 0-2 (LRAD pathway). Lung Screening Follow up Exam: (no other symptoms or indications)	CT Lung Screening w/o IV contrast (low dose technique)
	LRAD category 3-4 (LRAD pathway). Lung Screening Follow up Exam: *Category 3-4 patient is a yearly lung screening regiment.	CT chest w/o IV contrast (low dose technique) (Must precert a CT Chest, DO NOT pre-cert a lung screening)