



CT Scan Order Guide: A Reference for Clinicians & Technologist

Our standardized CT scan orders: best practice for efficiency, minimizing errors, and ensuring clarity

Patient selection and Screening

- Lab work:
 - specifically, GFR is needed to prevent contrast induced nephropathy, CIN. If the outpatients have any of the following below, GFR is needed within 30 days before using CT contrast. The ordering provider may bypass the renal testing is medically necessary (e.g. stroke, dissection, trauma, etc.).
 - Patient age is above 60 years
 - Person Hx of renal disease, chronic kidney disease
 - Kidney surgery, ablation, transplant, or single kidney
 - Diabetes Mellitus
 - Use of metformin or metformin containing drugs
- Below < 30 or Dx w/ AKI:
 - The radiologist and referring provider consulted to discuss the risk and benefits and approve it.
- Dialysis:
 - Anuric can receive CT IV contrast. No need to initiate dialysis immediately after CT contrast
 - Dialysis patient which can urine, the radiologist and referring provider consulted to discuss the risk and benefits and approve it.
- Allergic & Premed for outpatients:
 - Adult
 - 50mg prednisone PO 13, 7, and 1 hour before the contrast injection
 - 50mg diphenhydramine (Benadryl®) PO within 1 hour of the contrast injection
 - Pediatric
 - Prednisone 0.7 mg/kg (not to exceed 50mg) PO 13,7, and 1 hour before the contrast injection OR Prednisolone 0.7mg/kg (not to exceed 50mg) PO 13, 7, and 1 hour before the contrast injection.
 - Diphenhydramine (Benadryl ®) 1 mg/kg PO (not to exceed 50 mg) within 1 hour of the contrast injection.

Body Part	Reason for Exam	Comments	*Oral Contrast	**IV Contrast	Procedure Name	CPT
HEAD	AMS, Seizure, Hydrocephalus, Dementia, Psychosis, Nausea, Vomiting, Headache, Trauma	Stroke Protocol	N/A	No	CT HEAD WO CONTRAST	70450
	Acute stroke symptoms, Acute CVA/TIA/Bleed/Large Vessel Occlusion/ possible treatment		CT HEAD WO CONTRAST (Stroke Code)			
	F/U Metastasis, F/U Stroke, F/U Hemorrhage, Ischemia, F/U Trauma, Vertigo		N/A	YES	CT HEAD W/ CONTRAST	70460
	Mass, Tumor, Metastasis (new diagnosis, Abscess, Headache, Seizure, Infection)		N/A	YES	CT HEAD W WO CONTRAST	70470
	Aneurysm, vasospasm, Stroke, TIA, CVA, Arteriovenous Malformation, Vasculitis, Dural Arteriovenous Fistula.	If suspect subtle bleed, note in Comments, "Include non-con head with CTA unless a noncon head acquired w/in 2hrs"	N/A	YES	CTA HEAD W CONTRAST	70496
	Dural Venous Sinus Thrombosis, Venous Infarction		N/A	Yes	CTV Cerebral Venogram (CTV-Head (aka CT))	73706
FACE	Trauma, FX, Sinus Congestion Foreign body (facial area)		N/A	No	CT MAXILLOFACIAL WO CONTRAST	70486
	Mass, infection,			YES	CT MAXILLOFACIAL W CONTRAST	70487
ORBIT/SINUS/SE LLA	Trauma, Fracture, Foreign body (facial area)	Order ORBITS if only orbital area.	N/A	NO	CT ORBITS WO CONTRAST	70480
	Orbital cellulitis, Mass, Infection, Abscess (facial area)		N/A	YES	CT ORBITS W CONTRAST	70481
NECK	Swelling, Mass, tumor, pain, Infection, Abscess, Cancer, Lymphadenopathy, Perforation, Salivary mass		No	YES	CT SOFT TISSUE NECK W CONTRAST	70491
	Otalgia	Put in the comment "OTALGIA PROTOCOL"	No	YES	CT TEMPORAL BONES WO & CT NECK W	
	Aneurysm, Dissection, Stenosis, Stroke symptoms, Vascular injury/trauma	For evaluation of carotid & vertebral arteries	No	YES	CTA NECK W CONTRAST	70498

Body Part	Reason for Exam	Comments	*Oral Contrast	**IV Contrast	Procedure Name	CPT
CHEST	Pulmonary embolus, +d-Dimer test, SOB, Chest pain, Thoracic aorta dissection, Aortic injury, Dyspnea, Post op	Enter specific diagnosis in Comments to trigger correct scan protocol: "PE", "AORTOGRAM", "DISSECTION"	N/A	YES	CTA CHEST W CONTRAST	71275
	Nodule, Cancer, Staging, Lymphoma, Neoplasm, Consolidations, Hemoptysis, Difficulty swallowing, Mass Post op evaluation, Hematoma	Enter specific diagnosis in Comments to trigger correct scan protocol:	N/A	YES	CT CHEST W CONTRAST	71260
	Nodule (follow up), COPD		N/A	No	CT CHEST WO CONTRAST	71250
HIGH RESOLUTION	Interstitial lung disease, Fibrosis, Asbestosis	Put " HI RES CHEST " in Comments in Epic	N/A	No	CT CHEST HIGH RESOLUTION WO CONTRAST	71250
Cardiac **Patients avoid gym, caffeine, & smoking 12 hrs and Avoid erectile Dysfunction meds 48 hrs before the exam.	Cardiac Calcium Score		No	No	CT Calcium Score wo	
	Needs Cardiology Consult & med orders: Metoprolol 2.5mg IVP HR 61-85. Hold for SBP<100mmHg. May repeat x1. Metoprolol 5mg IVP if HR > 85 BPM. Hold for SBP <100mghg. May repeat x1. NS 250ml IV Bolus if SBP<90mmHg. Nitroglycerin 0.4 mg Sublingual. Hold for SBP<110mmHg. If pt has a hx of reactive airway disease USE Verapamil 240mg PO immediate release instead of Metoprolol-		No	Yes	CTA- CORONARY WITH CALCUIM SCORE	75571
ABDOMEN **Patients receiving oral Contrast will need to arrive 1 hour early. Liquid diet, no solid food, meds are okay 4 hrs before exam.	Generalized pain, Screening, Contraindication to IV Contrast	Type in Comments if pt has allergic reaction or LOW GFR	YES	No	CT ABDOMEN WO CONTRAST	74150
	RUQ/LUQ pain, Epigastric pain, Initial cancer staging		YES	YES	CT ABDOMEN WO CONTRAST	74160
	Oncologic Therapy and intervention follow up. Renal mass, Adrenal mass, Liver mass, Elevated LFTs, Portal hypertension, Portal vein thrombosis, Pancreatic mass, Pseudocyst/biliary obstruction, Pancreatitis	Enter specific organs of interest and/or diagnosis in Comments to trigger correct scan protocol: "LIVER PROTOCOL", "RENAL MASS PROTOCOL", if dual/triple phase is need	No	YES	CT ABDOMEN W WO CONTRAST	74170
	Liver Lesion, Liver mass, Liver adenoma, focal nodular hyperplasia, HCC screening, Neuroendocrine tumor, cirrhosis, Hep C, Hemochromatosis	Triphasic Liver Protocol				
	Mesenteric artery stenosis/thrombus/ischemia		No	YES	CTA ABDOMEN W CONTRAST	74175
For liver Volume Calculation & Vascular Mapping Pre-Intervention or Lobar Resection Surgical Planning	Liver Volume W only	No	Yes			
PELVIS **Patients receiving oral Contrast will need to arrive 1 hour early. Liquid diet, no solid food, meds are okay 4 hrs before exam.	Bone Tumor, Pelvic/Hip Fracture, Trauma to bony pelvic structures		No	No	CT PELVIS WO CONTRAST	72192
	Drain check, Abscess, Fistula, Mass, Prostate carcinoma, Pelvic pain		YES	YES	CT PELVIS W CONTRAST	72193
	Bladder cancer, Bladder tumors	Type "CT Cystogram" in Comments. Contrast will be administered via Foley	No	YES		
	DVT		No	YES		

Body Part	Reason for Exam	Comments	*Oral Contrast	**IV Contrast	Procedure Name	CPT
ABDOMEN & PELVIS **Patients receiving oral Contrast will need to arrive 1 hour early. Liquid diet, no solid food, meds are okay 4 hrs before exam. **Urogram/IVU w/wo, 30 prior to scan, pt do not void unless uncomfortable due to a distended bladder upon arrival.	Stone, Hematuria, Flank pain	State "STONES" in Comments	No	No	CT RENAL STONE WO CONTRAST	74176
	Abdominal distention, Abscess, Cancer, Cirrhosis, Colitis, Crohn's, Diverticulitis, Fever, hernia, Pain, Perforation, Pyelonephritis, Mets, Trauma, Small bowel obstruction, Splenomegaly, Weight loss	Enter specific organs of interest and/or diagnosis in Comments. Pt will arrive 1 hr before exam for Oral Contrast. Liquid diet, no solid food, meds are okay 4 hrs before exam.	YES	YES	CT ABDOMEN PELVIS W CONTRAST	74177
	RLQ pain, Fever, Elevated WBC	If under 15 years of age, ultrasound should be performed first.	No	YES		
	Gonadal vein thrombosis following GYN surgery and/or recent delivery	Enter delivery/surgery date in Comments	No	YES		
	Hematuria, Urothelial Mass, Urothelial Cancer, Obstructive Uropathy	AKA CT IVU. Document if pt has had or will have cystoscopy	YES	YES	CT ABDOMEN PELVIS W & WO CONTRAST	74178
	Liver Cholangiocarcinoma- MRI is preferred	MRI is preferred. 500-1000ml of water PO 30min prior to exam	Yes	Yes		
	Pancreatic Mass, Painless Jaundice, unexplained Biliary Dilation, Characterize Pancreatic mass seen on other imaging	500ml water PO 30min prior + 1 cup to full stomach at start of scan. TRIPhase-ABD Scan	YES	YES		
	Aortic dissection (acute or chronic), Trauma	Enter specific interest and/or diagnosis in Comments.	No	YES	CTA ABDOMEN PELVIS W CONTRAST	
	AAA, Back pain, Low back pain, Evaluate known and /or leaking aneurysm, Pre- or post-surgical AAA stent evaluation		No	YES		74174
	Claudication, Leg ulcers, PVD		No	YES	CTA ABDOMEN AORTA & BILAT LOWER EXTREMITY RUNOFF	75635
Crohn's Disease, Ulcerative Colitis w/ Backwash Ileitis. Stomach, Small bowel disorders, Crohn's disease, IBS, Inflammatory processes,	Comment if patient is actively bleeding. Specific oral contrast administered on site one hour prior to exam.	YES	YES	CT ENTEROGRAPHY W CONTRAST CT SMALL BOWL	74177	
PEDIATRIC ≤ 15 years of age	Review indications with a radiologist prior to ordering any pediatric exams.	KCH will call the radiologist. Our RIA# 720-493-3777			REVIEW WITH RADIOLOGIST PRIOR TO ORDERING	
SPINE	Routine non traumatic injury, Neck/arm pain, Degenerative disease, Disc disease, herniated disc, Stenosis, pain, Traumatic fracture, Subluxation	Specify part of spine in Comments Remove patient jewelry, hair clips, hearing aids prior to sending patient to CT	N/A	No	CT CERVICAL SPINE WO CONTRAST	72125
					CT THORACIC SPINE WO CONTRAST	72128
					CT LUMBAR SPINE WO CONTRAST	72131
	Post op infection, Tumor, Myelitis	Specify part of spine in Comments. Remove patient jewelry, hair clips, hearing aids prior to sending patient to CT	N/A	No	CT CERVICAL SPINE W CONTRAST	72126
					CT THORACIC SPINE W CONTRAST CT LUMBAR SPINE W CONTRAST	72129 72132

Body Part	Reason for Exam	Comments	*Oral Contrast	**IV Contrast	Procedure Name	CPT
EXTREMITIES	Fracture, dislocation, Abnormal pathology Mass, injection, abscess (MRI preferred)	Comment "Shoulder" if only JOINT area is needed. If other area is needed, place it in the comments under one Extremity order! One charge for unilateral Upper Extremity.	N/A	No	CT Humerus WO	73200
					CT Humerus W	73201
					CTA UPPER EXTREMITY	73206
	Fracture, Abnormal pathology Mass, injection, abscess (MRI preferred)	Comment "Femur" If only upper leg is needed or order "Femur" and comment all area needed. Only one charge for unilateral Lower Extremity	N/A	No	CT LOWER EXTREMITY WO	73700
					CT LOWER EXTREMITY W	73701
					CTA LOWER EXTREMITY	73706