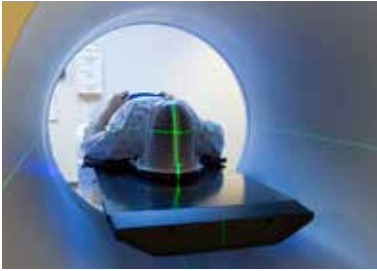


# IMAGING ORDERING GUIDE



**Guide also available online at  
[beaumont.edu/doctor](http://beaumont.edu/doctor)**

TO SCHEDULE AN EXAM / STAT EXAM

Appointment Center: 800-328-8542

Physician Liaisons and Forms Ordering: 888-343-2790

**Beaumont**



## Introduction

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Beaumont is committed to providing the highest quality imaging services. We perform nearly 1 million diagnostic and screening studies each year with most of our sites offering same-day or next-day appointments.

**Services offered:** CT, MRI, ultrasound, nuclear medicine, breast imaging and interventional radiology. 3-D image reconstruction is performed when indicated.

**Radiologists:** Beaumont employs more than 100 board-certified, fellowship-trained radiologists who offer sub-specialized diagnostic and interventional imaging services and are available around-the-clock for consultation.

**Equipment:** Beaumont offers patients the most advanced, safest and most precise imaging technology, with more than 150 pieces of equipment fully accredited by the American College of Radiology (ACR).

This ordering guide was created to assist physicians when ordering a study with Beaumont. The guide includes common indications with recommendations for the most appropriate examination. Our goal is to provide patients with the most appropriate, complete and safest imaging exam. When ordering a radiology exam, it is important to include any pertinent history as well as signs or symptoms, which will help us to ensure that exams are appropriate for each patient's specific condition.



High tech 3T MRI



Low radiation dose Flash CT
















3-D image reconstruction

*Disclaimer: The Imaging Ordering Guide is intended as a guide to assist in the selection of imaging exams. Selection of appropriate imaging exams should be dictated by the severity and complexity of a patient's clinical condition. This guide does not consider imaging studies necessary to evaluate any co-existing diseases or other medical consequences of the patient's condition. The ultimate decision regarding the appropriateness of any specific radiologic exam must be made by the referring physician and radiologist in light of all circumstances presented in an individual case.*

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# Imaging at Beaumont

## Imaging Locations

For hours of operation or to schedule an appointment, please call the Appointment Center at 800-328-8542.


Location	Address	Days of Operation (Not all services all days)	X-ray	CT	MRI	US	Breast Imaging	Nuclear Medicine
<b>Hospitals</b>								
Grosse Pointe	468 Cadieux Road, Grosse Pointe, MI 48230	7 days	x	x	x	x	x	x
Royal Oak	3601 W. 13 Mile Road, Royal Oak, MI 48073	7 days	x	x	x	x	x	x
Troy	44201 Dequindre Road, Troy, MI 48085	7 days	x	x	x	x	x	x
<b>Medical Centers</b>								
Health & Wellness Center	1555 E. South Boulevard, Rochester Hills, MI 48307	7 days	x		x			
Lake Orion	1455 S. Lapeer Road, Lake Orion, MI 48360	Mon-Fri	x	x	x	x	x	x
Macomb	15959 Hall Road, Macomb, MI 48044	Mon-Sat	x	x	x	x	x	x
Rochester Hills	6700 N. Rochester Road, Rochester Hills, MI 48306	Mon-Fri	x			x	x	
Saint Clair Shores	25631 Little Mack, St. Clair Shores, MI 48081	Mon-Fri	x			x	x	
Sterling Heights	44250 Dequindre Road, Sterling Heights, MI 48314	7 days	x	x	x	x		x
Warren	8545 Common Road, Warren, MI 48093	Mon-Fri	x			x	x	x
West Bloomfield	6900 Orchard Lake Road, West Bloomfield, MI 48322	Mon-Sat	x	x	x	x	x	x

Appointment Center: 800-328-8542




## Choosing CT or MRI

This page is intended to assist the ordering physician in choosing the appropriate exam when CT and MRI are both being considered. Please refer to Section VII of this guide for additional information on radiation safety.


NEUROLOGIC IMAGING			
Area of Concern	Body Part	CT	MRI
Head and neck 	Brain	<ul style="list-style-type: none"> <li>CT head without contrast for initial evaluation of trauma/hemorrhage</li> </ul>	<ul style="list-style-type: none"> <li>MRI brain with and without contrast for evaluation of infection, inflammation, seizures and neoplasm. If MRI contraindicated then a CT head with and without contrast.</li> <li>MRI brain without contrast for acute stroke, TIA, dementia or patients with contraindications for contrast or renal failure</li> </ul>
	Soft tissue neck	<ul style="list-style-type: none"> <li>CT soft tissue neck with contrast for evaluation of all neck pathology</li> </ul>	<ul style="list-style-type: none"> <li>MRI soft tissue neck with and without contrast if recommended after initial CT</li> </ul>
	Paranasal sinuses	<ul style="list-style-type: none"> <li>CT sinuses without contrast for initial sinus evaluation</li> </ul>	<ul style="list-style-type: none"> <li>MRI sinuses with and without contrast for evaluation of sinus neoplasm or invasive inflammatory process if recommended after initial CT</li> </ul>
	Face	<ul style="list-style-type: none"> <li>CT facial bones without contrast for initial evaluation of all pathologies including trauma</li> </ul>	<ul style="list-style-type: none"> <li>Consider MRI soft tissue face if recommended after initial CT</li> </ul>
	Orbits	<ul style="list-style-type: none"> <li>CT orbits without contrast for trauma evaluation or with contrast if MRI contraindicated</li> </ul>	<ul style="list-style-type: none"> <li>MRI orbits with and without contrast for initial evaluation infection, inflammation, neoplasm</li> </ul>

**NEUROLOGIC IMAGING (CONT.)**


Area of Concern	Body Part	CT	MRI
Head and neck <i>(cont.)</i>  	Pituitary	<ul style="list-style-type: none"> <li>CT pituitary with and without contrast only if MRI contraindicated</li> </ul>	<ul style="list-style-type: none"> <li>MRI brain and pituitary gland for all suspected pituitary/sellar suprasellar and cavernous sinus pathology</li> </ul>
	Temporal bone	<ul style="list-style-type: none"> <li>CT temporal bones without contrast for evaluation of the ossicles and other bony structures. Initial evaluation for all congenital, infectious, inflammatory and neoplastic processes</li> </ul>	<ul style="list-style-type: none"> <li>MRI internal auditory canals with and without contrast for hearing loss, tinnitus, and initial evaluation of children or if recommended following initial CT</li> </ul>
	Neck vessels, Circle of Willis and intracranial circulation	<ul style="list-style-type: none"> <li>CTA head/neck with and without contrast if there is a contraindication to MRI or for additional evaluation subsequent to initial MRA</li> </ul>	<ul style="list-style-type: none"> <li>MRA head without contrast for intra-cranial circulation—Circle of Willis</li> <li>MRA head with and without contrast for patients with aneurysm “coils” (MR compatible)</li> <li>MRA neck with and without contrast for evaluation of the neck vessels</li> <li>MRV head with contrast for evaluation of the intracranial veins and dural venous sinuses</li> </ul>
	Temporomandibular joints (TMJ)	<ul style="list-style-type: none"> <li>CT not usually indicated, please check with radiology</li> </ul>	<ul style="list-style-type: none"> <li>MRI TMJ without contrast</li> </ul>




## NEUROLOGIC IMAGING (CONT.)

Area of Concern	Body Part	CT	MRI
Spine 	Spine	<ul style="list-style-type: none"> <li>▪ CT spine without contrast for initial spine trauma evaluation.</li> <li>▪ For all other indications, consider MRI</li> </ul>	<ul style="list-style-type: none"> <li>▪ MRI spine with and without contrast for evaluation of infection, inflammation, neoplasm and post operative spine (<i>for lumbar spine only</i>)</li> <li>▪ MRI without contrast for initial evaluation of neck and back pain with/without radiculopathy, or after initial CT for trauma</li> <li>▪ If MRI is contraindicated then a CT without contrast should be performed</li> </ul>
	Brachial plexus	<ul style="list-style-type: none"> <li>▪ CT not indicated</li> </ul>	<ul style="list-style-type: none"> <li>▪ MRI brachial plexus for any suspicious brachial plexus pathology with and without contrast for suspected infection or neoplasm</li> </ul>


## MUSCULOSKELETAL IMAGING

Musculoskeletal 	Musculoskeletal	<ul style="list-style-type: none"> <li>▪ CT is utilized under certain circumstances in evaluation of the bony structures and is usually requested specifically by the orthopedic surgeon.</li> <li>▪ For most musculoskeletal issues, MRI is the imaging procedure of choice.</li> </ul>	<ul style="list-style-type: none"> <li>▪ MRI is the most accurate examination available for joints and the surrounding tendons, ligaments and cartilage. It is especially helpful for any sports-related injuries. MRI is also helpful for persistent unexplained joint pain in the elderly as it is very sensitive in the detection of occult fracture in patients with osteopenia or osteoporosis.</li> </ul>
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VASCULAR IMAGING

Area of Concern	Body Part	CT	MRI
<p>Aorta/vascular</p> 	<p>Aorta/vascular</p>	<p>There are many specific CTA or MRA studies that can be ordered for the vascular system. For upper and lower extremity vascular imaging either MRA or CTA may be ordered. Consult with radiology for help in deciding between CTA and MRA.</p> <ul style="list-style-type: none"> <li>▪ CTA aortic endograft protocol</li> <li>▪ CTA coronary arteries</li> <li>▪ CT calcium scoring</li> <li>▪ CTA renal donor</li> <li>▪ CTA/MRA upper extremity</li> <li>▪ CTA/MRA lower extremity (runoff)</li> <li>▪ CTA/MRA abdominal aorta</li> <li>▪ CTA/MRA chest/aorta</li> <li>▪ CTA/MRA mesenteric ischemia</li> <li>▪ CTA/MRA pelvis</li> </ul>	


## BODY IMAGING

Area of Concern	Body Part	CT	MRI
Chest 	Lungs	<ul style="list-style-type: none"> <li>▪ CT chest with contrast for initial evaluation of lung disease, and for follow up of a known malignancy</li> <li>▪ CT PE protocol when looking for PE</li> <li>▪ High resolution chest CT-only for interstitial lung disease</li> <li>▪ CT chest without contrast to follow up pulmonary nodules and lung cancer screening for high risk patients</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unless directed by a radiologist, it is not recommended to order an MRI for evaluation of lungs or initial evaluation of mediastinal pathology. A radiologist may recommend an MRI of the chest subsequent to CT for further evaluation.</li> </ul>
	Coronary artery	<ul style="list-style-type: none"> <li>▪ CTA for detailed evaluation of the coronary arteries, coronary artery disease or coronary artery anomalies</li> <li>▪ Cardiac CT for evaluation of heart and valves</li> <li>▪ CT calcium scoring for risk stratification of coronary artery disease</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cardiac MRI for evaluation of myocardial infarction, cardiac viability, cardiac function or morphology</li> </ul>

**BODY IMAGING (CONT.)**

Area of Concern	Body Part	CT	MRI
	Abdomen/pelvis	<ul style="list-style-type: none"> <li>For generalized screening of abdominal pain, order CT abd/pelvis with IV and oral contrast. For more specific concerns, see individual organs below.</li> </ul>	
Abdomen/pelvis 	Liver/biliary	<ul style="list-style-type: none"> <li>CT dual phase liver protocol with contrast for workup of the liver for suspected mass, lesion or other abnormality. Consider MRI first.</li> </ul>	<ul style="list-style-type: none"> <li>If there is a known liver lesion or biliary system lesion, it is best to order an MRI/MRCP liver/pancreas. If MRI is contraindicated, order CT dual phase liver protocol with contrast.</li> </ul>
	Pancreas	<ul style="list-style-type: none"> <li>For initial workup of the pancreas (<i>mass or worsening pancreatitis</i>), order a CT dual phase pancreatic protocol with contrast</li> </ul>	<ul style="list-style-type: none"> <li>MRI/MRCP of pancreas for young patients and for cystic or solid pancreatic lesions</li> </ul>
	Spleen	<ul style="list-style-type: none"> <li>If there is no known abnormality but there is a concern and a general screen is needed, order a CT abdomen with contrast</li> </ul>	<ul style="list-style-type: none"> <li>If there is a known splenic lesion it is best to order an MRI abdomen with and without contrast</li> </ul>
	Kidneys	<ul style="list-style-type: none"> <li>CT renal stone protocol if there is concern for renal stone</li> <li>CT renal mass protocol (<i>CT abdomen and pelvis with and without contrast</i>) for characterization of a known renal mass</li> <li>CTU for full evaluation of the collecting system, ureters and bladder in case of hematuria (<i>adult only</i>)</li> </ul>	<ul style="list-style-type: none"> <li>MRI renal protocol for young patients or if there is a known renal lesion for which characterization is required</li> <li>MRU for full evaluation of the collecting system, ureters and bladder in case of hematuria (<i>pediatric patients</i>)</li> </ul>

## BODY IMAGING (CONT.)

Area of Concern	Body Part	CT	MRI
Abdomen/pelvis <i>(cont.)</i> 	Adrenal glands	<ul style="list-style-type: none"> <li>▪ MRI adrenal protocol for evaluation of known adrenal gland pathology. If MRI is contraindicated, a CT adrenal protocol is recommended. In certain cases CT may be better than MRI – consult radiology.</li> </ul>	
	Bowel	<ul style="list-style-type: none"> <li>▪ CT enterography for evaluation of small bowel focal or diffuse pathology. MR enterography is an alternative.</li> </ul>	
	Uterus/ovaries	<ul style="list-style-type: none"> <li>▪ If US of pelvis with transvaginal imaging finds suspicious lesions, MRI of the pelvis with and without contrast for evaluation of the uterus and ovaries</li> <li>▪ CT scan of abdomen and pelvis is better for staging of a known ovarian or uterine cancer</li> </ul>	
	Bladder	<ul style="list-style-type: none"> <li>▪ CT urogram for evaluation of bladder pathology (<i>adult only</i>)</li> </ul>	

## CT AND CTA CODING GUIDE

### Chest

71250 w/o contrast  
71260 w/contrast  
71260 PE protocol  
71275 CTA w/ and w/o contrast  
71250 lung cancer screening

### Abdomen

74150 w/o contrast  
74160 w/contrast  
74170 w/ and w/o contrast  
74175 CTA w/ and w/o contrast

### Abdomen and Pelvis

74176 w/o contrast  
74177 w/contrast  
74178 w/ and w/o contrast  
74174 CTA w/ and w/o contrast

### Pelvis

72192 w/o contrast  
72193 w/contrast  
72194 w/ and w/o contrast

### Orbits/IAC

70480 w/o contrast  
70481 w/contrast  
70482 w/ and w/o contrast

### Sinus

70486 w/o contrast

### Maxillofacial

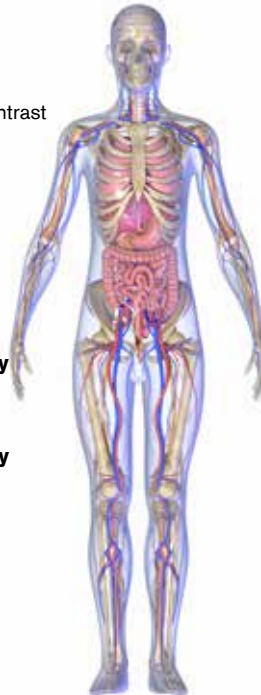
70486 w/o contrast  
70487 w/contrast  
70488 w/ and  
w/o contrast

### Upper Extremity

73200 w/o contrast  
73201 w/contrast

### Lower Extremity

73700 w/o contrast  
73701 w/contrast



### Head/Brain

70450 w/o contrast  
70460 w/contrast  
70470 w/ and w/o contrast  
70496 CTA w and w/o contrast

### Neck/Soft Tissue

70490 w/o contrast  
70491 w/contrast  
70492 w/ and w/o contrast  
70498 neck CTA w/contrast

### Cervical Spine

72125 w/o contrast  
72126 w/contrast (myelogram)

### Thoracic Spine

72128 w/o contrast  
72129 w/contrast  
72130 w/ and w/o contrast

### Lumbar Spine

72131 w/o contrast  
72132 w/contrast (myelogram)  
72133 w and w/o contrast

### Stone Protocol

74176 abdomen and  
pelvis w/o contrast

### CT Urogram

74178  
abdomen and  
pelvis w/ and  
w/o contrast

### CT Enterography

74177  
abdomen and  
pelvis w/contrast


## CT premedication for patients with contrast allergy

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- Patients with history of mild or moderate prior allergic reaction to iodinated contrast (*such as hives, rash, pruritis, itchy or scratchy throat, or throat tightness or hoarseness without dyspnea*) must be pre-medicated prior to IV contrast CT scan (*not oral contrast*).
- Patients with prior history of physiologic reactions to iodinated contrast (*such as nausea, vomiting, isolated chest pain, vasovagal reaction or dizziness*) and patients with history of shellfish allergy do not require premedication.
- For patients with prior history of severe life threatening reaction to iodinated contrast (*such as anaphylactic shock or laryngeal edema*), speak with a radiologist before ordering the exam. Consider non contrast CT (*no IV and no oral iodinated contrast*) or alternate imaging modality. A barium-based oral contrast should be used if deemed necessary in this group.


### Premedication protocol


- Prednisone:  
50 mg PO (three doses total) to be taken 13 hours, 7 hours and 1 hour prior to exam
- Diphenhydramine (*Benadryl*):  
50 mg PO to be taken 1 hour prior to exam

CT						
Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Neuro		<p><b>GENERAL GUIDELINES</b></p> <ul style="list-style-type: none"> <li>No IV contrast specifically requested by physician</li> <li>History of <b>severe</b> contrast allergy (<i>for mild or moderate contrast allergies, pre-medication is recommended</i>)</li> <li>GFR &lt;40 ml/min, unless benefit outweighs risk</li> <li>Pre radio-iodine treatment for thyroid cancer/Graves' disease (<i>CT contrast is to be avoided at least six weeks before treatment and also in the following six weeks. However, please contact the treating nuclear medicine physician with questions at ext. 84121.</i>)</li> <li>Please note that a neck CT without contrast is fairly limited and alternatives may be considered</li> <li><b>If a specific test order is not listed on EPIC</b>, please use the "notes" part of the order entry system to <b>free</b> text in addition to choosing the closest test</li> </ul>	No	No	CT to be performed without contrast	70450
Head 	Brain	<ul style="list-style-type: none"> <li>Headache</li> <li>Hemorrhage, including suspected subarachnoid hemorrhage</li> <li>Syncope</li> <li>Dementia</li> <li>Stroke, CVA, TIA</li> <li>Head injury</li> <li>Hydrocephalus follow-up, normal pressure hydrocephalus</li> <li>Any other general indication not listed in this guide</li> </ul>	No	No	Head CT without contrast	70450






**CT (CONT.)**

Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Head (cont.) 	Brain (cont.)	<ul style="list-style-type: none"> <li>▪ Metastases, mass, tumor</li> <li>▪ Abscess, infection</li> <li>▪ Chronic subdural hematoma</li> </ul>	No	Yes	Head CT with and without contrast	70470
		<ul style="list-style-type: none"> <li>▪ Vascular malformation</li> <li>▪ Venous sinus thrombosis</li> <li>▪ Seizures, vertigo</li> </ul>	No	Yes	Head CT with and without contrast. Also consider MRI, if feasible.	70470
		Recent non-contrast head CT and for above indications	No	Yes	Head CT with contrast only	70460
	Temporal bones	<i>Avoid requesting both with and without contrast to limit radiation dose to patient</i>				
	<ul style="list-style-type: none"> <li>▪ Hearing loss</li> <li>▪ Mastoiditis; contrast not required except if suspicion of abscess</li> <li>▪ Cholesteatoma, middle ear infection</li> <li>▪ Injury, fracture temporal bones</li> <li>▪ Superior semicircular canal dehiscence</li> <li>▪ Otosclerosis</li> <li>▪ Pre-operative assessment of ear</li> </ul>	No	No	CT temporal bones without contrast	70480	
	<ul style="list-style-type: none"> <li>▪ Tinnitus</li> <li>▪ Glomus tumor (<i>paraganglioma</i>)</li> <li>▪ Internal auditory canal mass, “acoustic neuroma”</li> </ul>	No	Yes	CT temporal bone with contrast. However, consider MRI first.	70481	
	<ul style="list-style-type: none"> <li>▪ Abscess near mastoid or ear</li> </ul>	No	Yes	CT temporal bone with contrast	70481	


CT (CONT.)						
Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Head (cont.) 	Face	<b>If both pre- and post-contrast are required, please discuss with neuroradiologist at 248-898-3184.</b> <ul style="list-style-type: none"> <li>▪ Facial injury</li> <li>▪ Cyst or odontogenic mass</li> <li>▪ Pre-operative evaluation of maxilla, mandible</li> </ul>	No		CT maxillofacial without contrast	70486
		<ul style="list-style-type: none"> <li>▪ Cancer of maxillofacial region</li> </ul>	No	Yes	CT maxillofacial with contrast	70487
		<ul style="list-style-type: none"> <li>▪ Sinusitis</li> <li>▪ Nasal septum deviation</li> <li>▪ Post-nasal drip, polyps, allergies</li> </ul>	No		CT sinuses without contrast	70486
		<ul style="list-style-type: none"> <li>▪ Cancer of sinuses</li> </ul>	No	Yes	CT sinuses with contrast	70487
	Orbits	<b>Please avoid requesting CT orbits both with and without contrast to reduce radiation dose to eyes.</b> <ul style="list-style-type: none"> <li>▪ Mass, tumor</li> <li>▪ Infection, abscess, cellulitis</li> </ul>	No	Yes	CT orbits with contrast	70481
Neck	<b>Routinely performed with contrast to improve sensitivity. Please note the limited sensitivity of a non-contrast neck CT and consider alternatives such as MRI.</b> <ul style="list-style-type: none"> <li>▪ Exception is if thyroid mass effect on trachea is desired to be assessed, then order CT neck without contrast</li> <li>▪ Please note that a “CT cervical spine without contrast” should be considered if symptoms are neck pain instead of CT neck</li> </ul>	No	No	CT neck without contrast	70490	

CT (CONT.)


Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Head (cont.) 	Neck (cont.)	<ul style="list-style-type: none"> <li>Lymphadenopathy, lymphoma</li> <li>Mass in neck, dysphagia</li> <li>Infections of the neck including dental infection</li> <li>Abscess</li> </ul>	No	Yes	CT neck with contrast	70491
		<ul style="list-style-type: none"> <li>Vocal cord paralysis</li> <li>Hoarseness</li> </ul>	No	Yes	CT neck with contrast (with phonation views)	70491
Chest/thorax 	High resolution chest	<ul style="list-style-type: none"> <li>Interstitial lung disease (do not use for nodule or mass) *This technique samples the lung parenchyma-only order if concern for ILD</li> </ul>	No	No	Chest CT without contrast (high resolution technique)	71250
	General chest	<ul style="list-style-type: none"> <li>Pulmonary nodule/mass initial workup</li> <li>Lung cancer follow-up</li> <li>Metastatic workup</li> <li>Pneumonia, cough, hemoptysis</li> <li>Sternal dehiscence or any other osseous abnormality, please consult MSK radiology</li> </ul>	No	Yes	Chest CT with contrast (routine protocol)	71260
		<ul style="list-style-type: none"> <li>Chest pain R/O pulmonary embolism (specify PE protocol)</li> <li>Shortness of breath (if concern for PE, please specify)</li> <li>Chest pain; if concern for dissection or aneurysm, please see CTA under vascular</li> </ul>	No	Yes	Chest CT with contrast (PE protocol)	71260
		<ul style="list-style-type: none"> <li>SVC occlusion</li> <li>Upper extremity edema (do not order thoracic outlet protocol)</li> </ul>	No	Yes	Chest CT with contrast (venous phase protocol)	71260
		<ul style="list-style-type: none"> <li>Follow up a known lung nodule</li> <li>Screening for lung cancer in high risk patients</li> </ul>	No	No	Chest CT without contrast (low-dose protocol)	71250

CT (CONT.)						
Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Abdomen 	Abdomen; general	<ul style="list-style-type: none"> <li>▪ <b>No IV contrast specifically requested by physician</b></li> <li>▪ History of severe contrast allergy (<i>for mild or moderate contrast allergies, pre-medication is recommended</i>)</li> <li>▪ GFR &lt;40 ml/min, unless benefit outweighs risk – refer to CIN policy or contact radiology with questions</li> <li>▪ Pre radio-iodine treatment for thyroid cancer/Graves' disease (<i>CT contrast is to be avoided at least six weeks before treatment and also in the following six weeks. However, please contact the treating nuclear medicine physician with questions at ext. 84121.</i>)</li> <li>▪ Hematocrit drop, retroperitoneal hemorrhage or FU for hematoma or hemorrhage</li> </ul>	Possible	No	CT abdomen and pelvis without contrast	74176
		<ul style="list-style-type: none"> <li>▪ Abdominal pain</li> <li>▪ Appendicitis</li> <li>▪ Diverticulitis</li> <li>▪ Injury</li> <li>▪ Injury follow-up</li> <li>▪ Anastomotic leak</li> <li>▪ Fever, including FUO</li> <li>▪ Suspected <b>acute massive</b> abdominal-pelvic hemorrhage</li> <li>▪ Metastatic survey and follow up (<i>if dx of breast, RCC, Islet cell tumor, sarcoma, melanoma or carcinoid, order dual phase liver</i>)</li> <li>▪ Lymphoma (<i>diagnosis, staging or follow-up</i>)</li> <li>▪ Suspected intra-abdominal mass, non-localized</li> <li>▪ Intra-abdominal abscess or fluid collection</li> </ul> Any other general indication not listed in this guide	<ul style="list-style-type: none"> <li>▪ Weight loss</li> <li>▪ Abdominal hernia</li> <li>▪ Post-op abdomen</li> <li>▪ Colitis</li> <li>▪ Bowel perforation</li> <li>▪ Bowel obstruction</li> </ul>	Yes	Yes	CT abdomen and pelvis with contrast


CT (CONT.)



Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Abdomen (cont.) 	Liver	<ul style="list-style-type: none"> <li>HCC surveillance</li> <li>Hypervascular metastasis (<i>from primary breast, melanoma, renal cell, carcinoid, islet cell tumors and sarcoma</i>)</li> <li>Cirrhosis</li> <li>Hepatitis</li> <li>Characterization of a focal liver lesion or mass seen on US or routine CT (<i>consider MRI first, order CT only if MRI is contraindicated</i>)</li> <li>Post-RFA</li> <li>Post-segmental resection evaluation</li> <li>Post-transplant evaluation</li> <li>Pre-op liver transplant and segmental liver resection</li> </ul>	Yes	Yes	CT abdomen with contrast <b>(dual phase liver protocol)</b>	74160
		<ul style="list-style-type: none"> <li>Abnormal LFTs</li> <li>Splenic lesion (<i>consider MRI if known splenic lesion</i>)</li> </ul>	Yes	Yes	CT abdomen with contrast <b>(routine protocol)</b>	74160
	Pancreas	<ul style="list-style-type: none"> <li>Pancreatic cancer staging or restaging</li> <li>Acute pancreatitis (<i>initial scan, or known pancreatitis with worsening condition</i>)</li> <li>Suspected pancreatic mass</li> <li>Suspected pancreatic neuro-endocrine (<i>islet cell</i>) tumor</li> </ul>	Yes, Water	Yes	CT abdomen with contrast <b>(dual phase pancreas)</b>	74160
		<ul style="list-style-type: none"> <li>Chronic pancreatitis</li> <li>Pancreatic pseudocyst follow-up</li> <li>Follow-up pancreatitis</li> <li>Follow-up non-resectable stage 4 pancreatic cancer</li> </ul>	Yes	Yes	CT abdomen with contrast <b>(routine protocol)</b>	74160

## CT (CONT.)

Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Abdomen and pelvis 	Bowel	<ul style="list-style-type: none"> <li>Suspected small bowel tumor</li> <li>Crohn's disease (<i>IBD</i>)</li> <li>Questionable small bowel thickening seen on routine CT</li> <li>Celiac sprue</li> <li>Unexplained iron deficiency anemia</li> <li>GI bleed, if upper endoscopy and colonoscopy is negative</li> <li>Suspected small bowel ischemia</li> <li>Malabsorption</li> </ul>	Yes (VoL-umen)	Yes	CT abdomen and pelvis with contrast <b>(CT enterography)</b>	74177
		<ul style="list-style-type: none"> <li>Non-specific GI symptoms</li> <li>Change in bowel habits</li> <li>Irritable bowel syndrome</li> <li>Bowel obstruction</li> <li>Diarrhea</li> <li>Constipation</li> <li>Gastric mass</li> <li>Distention/bloating</li> </ul>	Yes	Yes	CT abdomen and pelvis with contrast <b>(routine protocol)</b>	74177
		<ul style="list-style-type: none"> <li>Groin hernia</li> <li>Evaluate Hartman's pouch for anastomotic leak</li> </ul>	Yes	Yes	CT pelvis with contrast	72193
Genitourinary ( <i>kidney, bladder, adrenal</i> )	Renal stone	<ul style="list-style-type: none"> <li>Renal stone</li> <li>Post-lithotripsy follow-up</li> <li>Flank pain suspected stone disease</li> </ul>	No	No	CT abdomen and pelvis without contrast ( <b>stone protocol</b> )	74176



CT (CONT.)

Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Genitourinary <i>(kidney, bladder, adrenal)</i> <i>(cont.)</i> 	Renal	<ul style="list-style-type: none"> <li>Suspected renal mass</li> <li>Post-partial nephrectomy follow-up</li> <li>Characterization of a focal renal mass, complex cyst or indeterminate lesion seen on US or routine abdominal or chest CT</li> </ul>	Yes	Yes	CT abdomen with and without contrast <b>(renal mass protocol)</b>	74170
	Adrenal	<ul style="list-style-type: none"> <li>Characterization of an adrenal nodule</li> <li>Adrenal hemorrhage</li> <li>Pheochromocytoma</li> <li>Conn's syndrome</li> </ul>	Yes	Yes	CT abdomen with and without contrast <b>(adrenal protocol)</b>	74170
	Urinary system <i>(kidneys to bladder)</i>	<ul style="list-style-type: none"> <li>Bladder cancer</li> <li>Microscopic or gross hematuria</li> <li>Evaluation for urinary tract anomalies</li> <li>Post cystectomy evaluation</li> </ul>	Yes, Water	Yes	CT urogram with 3-D reconstruction (adult only) – Order two exams: 1) CT abdomen/pelvis with and without contrast(CTU) AND 2) 3-D reconstruction	4178  76377
		<ul style="list-style-type: none"> <li>Suspected bladder injury (<i>CT cystogram</i>)</li> <li>Colo-vesicle fistula; rectal contrast per radiologist discretion (<i>consider MRI first</i>)</li> <li>Recto-vaginal fistula; rectal contrast per radiologist discretion (<i>consider MRI first</i>)</li> </ul>	No	No	CT pelvis without contrast	72192
		Renal donor evaluation	No	Yes	CTA abdomen/pelvis with and without contrast <b>(donor protocol)</b>	74174
<ul style="list-style-type: none"> <li>Recurrent UTIs</li> <li>Pyelonephritis</li> </ul>	<ul style="list-style-type: none"> <li>Renal abscess</li> <li>Psoas abscess</li> </ul>	Yes	Yes	CT abdomen and pelvis with contrast <b>(routine protocol)</b>	74177	

CT (CONT.)						
Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Upper extremities 	Finger Hand Wrist Forearm Humerus Shoulder Clavicle Scapula	<ul style="list-style-type: none"> <li>Fracture</li> <li>Fusion</li> <li>Non-union/malunion</li> </ul>	No	No	CT upper extremity without contrast ( <i>specify area</i> )	73200
		<ul style="list-style-type: none"> <li>Infection</li> <li>Tumor/mass/cancer/mets</li> </ul>	No	Yes	CT upper extremity with contrast ( <i>specify area</i> )	73201
	Sternocla- vicular joint	<ul style="list-style-type: none"> <li>Fracture</li> <li>Non-union/malunion</li> </ul>	No	No	CT chest without contrast	71250
Pelvis and lower extremities 	Foot Ankle Calf ( <i>tibia/fibula</i> ) Knee Thigh ( <i>femur</i> ) Hip Bony pelvis	<ul style="list-style-type: none"> <li>Fracture</li> <li>Non-union/malunion</li> <li>Arthritis</li> <li>Patello femoral malalignment (<i>bilateral</i>)</li> <li>Anteversio/malrotation (<i>bilateral</i>)</li> </ul>	No	No	CT lower extremity without contrast	73700
		<ul style="list-style-type: none"> <li>Infection</li> <li>Tumor/mass/cancer/mets</li> </ul>	No	Yes	CT lower extremity with contrast	73701





**CT (CONT.)**

Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Back 	Spine	<b>It is not routine to perform pre- and post-contrast scans of the spine to minimize radiation dose to patient.</b>				
		<ul style="list-style-type: none"> <li>▪ Neck pain (<i>non-vascular symptoms</i>)</li> <li>▪ Spinal stenosis</li> <li>▪ Degenerative disc disease</li> <li>▪ Radiculopathy, disc herniation</li> <li>▪ Cord compression – please consider MRI first</li> </ul>	No	No	CT spine without contrast <ul style="list-style-type: none"> <li>▪ Cervical</li> <li>▪ Thoracic</li> <li>▪ Lumbar</li> </ul>	72125 72128 72131
		<ul style="list-style-type: none"> <li>▪ Infection – MRI is preferable, but if high suspicion of abscess order CT with contrast</li> </ul>	No	Yes	CT spine with contrast <ul style="list-style-type: none"> <li>▪ Cervical</li> <li>▪ Thoracic</li> <li>▪ Lumbar</li> </ul>	72126 72129 72132
CT arthrography 	Hip Knee Ankle Shoulder Elbow Wrist	<ul style="list-style-type: none"> <li>▪ Cartilage abnormality</li> <li>▪ Meniscus abnormality</li> <li>▪ Labrum abnormality</li> <li>▪ Loose bodies</li> </ul>	No	Yes	CT with contrast – <b>Order three codes</b> 1) CT with contrast lower extremity OR upper extremity 2) Fluoro guided arthrogram 3) Injection - choose code:	73701 OR 73201 77002  27093 27370 27648 23350 24220 25246




## CTA

Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Head and neck 		<b>CTA head and neck is performed only with contrast; a non-contrast head CT is obtained if one has not been recently performed.</b>				
		<ul style="list-style-type: none"> <li>▪ Acute stroke</li> </ul>			Follow stroke protocol with stroke service	
	Head	<ul style="list-style-type: none"> <li>▪ Intracranial stenosis, occlusion</li> <li>▪ Vascular malformation</li> <li>▪ Cerebral aneurysm</li> </ul>	No	Yes	CTA head with contrast	70496
	Neck	<ul style="list-style-type: none"> <li>▪ Carotid stenosis in neck</li> <li>▪ Vertebrobasilar insufficiency</li> <li>▪ Pre-carotid endarterectomy</li> <li>▪ Neck vascular dissection</li> <li>▪ Neck vascular injury (<i>after conferring with radiologist</i>)</li> </ul>	No	Yes	CTA neck with contrast	70498


CTA						
Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Chest, abdomen and pelvis 	Chest	<ul style="list-style-type: none"> <li>Thoracic aortic aneurysm</li> <li>Aortic coarctation</li> <li>Pre-thoracic aortic stent graft planning</li> </ul>	No	Yes	CTA chest with contrast	71275
		<ul style="list-style-type: none"> <li>Thoracic aortic stent graft follow-up</li> <li>Thoracic trauma suspected vascular injury</li> </ul>	No	Yes	CTA chest with and without contrast	71275
	Chest and abdomen	<ul style="list-style-type: none"> <li>Aortic dissection (<i>diagnosis or follow-up</i>)</li> </ul>	No	Yes	CTA chest and abdomen with and without contrast ( <b>dissection protocol</b> )	71275 AND 74175
		<ul style="list-style-type: none"> <li>Thoraco-abdominal aneurysms</li> <li>Takayasu arteritis</li> </ul>	No	Yes	CTA chest and abdomen with contrast	71275 AND 74175
	Chest, abdomen and pelvis	<ul style="list-style-type: none"> <li>Pre operative evaluation for breast flap reconstruction</li> </ul>	No	Yes	CTA chest, abdomen and pelvis ( <b>DIAPHRAGMATIC FLAP protocol</b> )	74174
Abdomen	<ul style="list-style-type: none"> <li>Celiac, SMA hepatic, gastric or GDA aneurysm or pseudoaneurysm</li> <li>Renal artery aneurysm or pseudoaneurysm</li> <li>Renal artery stenosis</li> <li>Renal vein thrombosis (<i>specify to add venous phase</i>)</li> <li>Median arcuate ligament syndrome</li> <li>SMA syndrome</li> </ul>	No	Yes	CTA abdomen with contrast	74175	

**CTA (CONT.)**


Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Chest, abdomen and pelvis (cont.) 	Abdomen and pelvis	<ul style="list-style-type: none"> <li>Abdominal aortic aneurysm or pseudoaneurysm (<i>screening, f/u or pre-graft planning</i>)</li> <li>Iliac aneurysm or pseudoaneurysm (<i>external or internal</i>)</li> <li>Common femoral aneurysm or pseudoaneurysm</li> </ul>	No	Yes	CTA abdomen and pelvis with contrast	74174
		<ul style="list-style-type: none"> <li>Abdominal aortic stent graft follow-up</li> <li>Aorta-femoral bypass graft evaluation</li> </ul>	No	Yes	CTA abdomen and pelvis with and without contrast	74174
		<ul style="list-style-type: none"> <li>Renal donor evaluation</li> </ul>	No	Yes	CTA abdomen/pelvis with and without contrast ( <b>donor protocol</b> )	74174
		<ul style="list-style-type: none"> <li>Peripheral vascular disease (<i>claudication, absent peripheral pulse, ischemic ulcer, abnormal ankle- brachial index</i>)</li> <li>Lower extremity thromboembolism</li> <li>Femoro-popliteal bypass graft evaluation</li> <li>Aortic occlusion</li> </ul>	No	Yes	CTA abdomen and pelvis with run-off	74174
		<ul style="list-style-type: none"> <li>IVC thrombosis</li> <li>Iliac thrombosis</li> </ul>	Yes	Yes	CT abdomen and pelvis with contrast ( <i>venous phase</i> )	74177



## MRI


Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Head 	Brain	<ul style="list-style-type: none"> <li>▪ Headache without focal symptoms</li> <li>▪ Stroke, CVA, TIA</li> <li>▪ Dizziness and giddiness</li> <li>▪ Seizures (<i>children</i>)</li> <li>▪ Alzheimer's, dementia, memory loss</li> <li>▪ Injury (<i>please specify</i>)</li> <li>▪ Mental status changes, confusion</li> </ul>	No	No	MRI brain without contrast	70551
		<ul style="list-style-type: none"> <li>▪ CSF flow study for Chiari I</li> </ul>	No	No	MRI brain without contrast with CSF flow study	70551
		<ul style="list-style-type: none"> <li>▪ Cranial nerve lesions</li> <li>▪ Dizziness, vertigo</li> <li>▪ IAC/hearing loss</li> </ul>	No	Yes	MRI IAC ( <i>internal auditory canal</i> ) with and without gadolinium including brain	70553
		<ul style="list-style-type: none"> <li>▪ Multiple sclerosis</li> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Headache with focal symptoms</li> <li>▪ Vascular lesions</li> <li>▪ Neurofibromatosis</li> <li>▪ HIV</li> <li>▪ Seizures (adult new onset)</li> <li>▪ Infection</li> <li>▪ Vision changes</li> <li>▪ Mets</li> <li>▪ Pituitary lesion, elevated prolactin (<i>Please add comment: pituitary</i>)</li> </ul>	No	Yes	MRI brain with and without contrast	70553

## MRI (CONT.)


Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
Head (cont.) 	Brain (cont.)	<ul style="list-style-type: none"> <li>Tumor perfusion for necrosis, etc. (<i>needs radiologist approval, also specific note for gamma knife protocol</i>)</li> </ul>	No	Yes	Order two exams: <ul style="list-style-type: none"> <li>MRI brain with and without contrast AND</li> <li>MRI brain perfusion with contrast</li> </ul>	70553 AND 76498
		<ul style="list-style-type: none"> <li>Tumor spectroscopy (<i>needs radiologist approval, also specific note for gamma knife protocol</i>)</li> </ul>	No	Yes	MR spectroscopy	76390
		<ul style="list-style-type: none"> <li>Trigeminal neuralgia</li> </ul>	No	Yes	MRI brain with and without contrast	70553
	Orbits	<ul style="list-style-type: none"> <li>Optic neuritis</li> </ul>	No	Yes	MRI orbits/face/neck with and without contrast	70543
		<ul style="list-style-type: none"> <li>Grave's disease</li> <li>Trauma</li> </ul>	No	No	MRI orbits/face/neck without contrast	70540
		<ul style="list-style-type: none"> <li>Exophthalmos, proptosis</li> <li>Tumor/mass/cancer/mets</li> <li>Pseudotumor</li> <li>Vascular lesions</li> </ul>	No	Yes	MRI orbits/face/neck with and without contrast	70543
	Neck	<ul style="list-style-type: none"> <li>Infection</li> <li>Tumor/mass/cancer/mets</li> <li>Pain</li> <li>Vocal cord paralysis</li> </ul>	No	Yes	MRI orbits/face/neck with and without contrast	70543
		<ul style="list-style-type: none"> <li>Parotid gland</li> <li>Submandibular glands</li> </ul>	No	Yes	MRI orbits/face/neck with and without contrast	70543
	Skull base	<ul style="list-style-type: none"> <li>Skull base for tumor or other reason (<i>please request specifically skull base evaluation and provide detailed reason</i>)</li> </ul>	No	Yes	MRI brain with and without contrast	70553




## MRI (CONT.)


Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code	
Spine 	Cervical spine	<ul style="list-style-type: none"> <li>▪ Cervicalgia</li> <li>▪ Disc herniation</li> <li>▪ Arm/shoulder pain and/or weakness</li> </ul>	<ul style="list-style-type: none"> <li>▪ Degenerative disease</li> <li>▪ Radiculopathy</li> <li>▪ Neck pain</li> </ul>	No	No	MRI cervical spine without contrast	72141
		<ul style="list-style-type: none"> <li>▪ Multiple sclerosis</li> <li>▪ History of malignancy</li> <li>▪ Discitis</li> <li>▪ Osteomyelitis</li> <li>▪ Post op</li> </ul>	<ul style="list-style-type: none"> <li>▪ Myelopathy</li> <li>▪ Syrinx</li> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Vascular lesions, AVM</li> </ul>	No	Yes	MRI cervical spine with and without contrast	72156
	Thoracic spine	<ul style="list-style-type: none"> <li>▪ Back pain (<i>thoracic spine pain/backache</i>)</li> <li>▪ Radiculopathy</li> <li>▪ Degenerative disease</li> <li>▪ Injury (<i>specify</i>)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Disc herniation</li> <li>▪ Vertebroplasty planning (<i>with no hx malig</i>)</li> <li>▪ Compression Fx (no hx malig/mets)</li> </ul>	No	No	MRI thoracic spine without contrast	72146
		<ul style="list-style-type: none"> <li>▪ Multiple sclerosis</li> <li>▪ Myelopathy</li> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Syrinx</li> <li>▪ History of malignancy</li> <li>▪ Vascular lesions</li> <li>▪ Post op</li> </ul>	<ul style="list-style-type: none"> <li>▪ Compression Fx (<i>with hx malig/mets</i>)</li> <li>▪ AVM</li> <li>▪ Discitis</li> <li>▪ Vertebroplasty planning (<i>with hx malig</i>)</li> <li>▪ Osteomyelitis</li> </ul>	No	Yes	MRI thoracic spine with and without contrast	72157

**MRI (CONT.)**


Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code	
Spine(cont.) 	Lumbar spine	<ul style="list-style-type: none"> <li>▪ Back pain</li> <li>▪ Compression fx (no hx malig/mets)</li> <li>▪ Degenerative disease</li> <li>▪ Radiculopathy</li> <li>▪ Disc herniation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Injury (specify)</li> <li>▪ Sciatica</li> <li>▪ Vertebroplasty planning (with no hx malig)</li> <li>▪ Spondylolisthesis</li> <li>▪ Stenosis</li> </ul>	No	No	MRI lumbar spine without contrast	72148
		<ul style="list-style-type: none"> <li>▪ Post-op</li> <li>▪ Discitis</li> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Osteomyelitis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Compression fx (hx malig/mets)</li> <li>▪ Vertebroplasty (with hx malig)</li> </ul>	No	Yes	MRI lumbar spine with and without contrast	72158
	Brachial plexus	<ul style="list-style-type: none"> <li>▪ Injury, plexopathy</li> </ul>		No	No	MRI brachial plexus without contrast	73218
		<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Plexitis (viral, radiation, autoimmune)</li> </ul>		No	Yes	MRI brachial plexus with and without contrast (specify side L/R)	73220
	Lumbar plexus and lumbosacral plexus	<ul style="list-style-type: none"> <li>▪ Injury, plexopathy</li> </ul>		No	No	MRI lumbro sacral plexus without contrast	72195
		<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Plexitis (viral, radiation, autoimmune)</li> </ul>		No	Yes	MRI lumbro sacral plexus with and without contrast	72197
	Chest-mediastinum	<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets in chest</li> </ul>		No	Yes	MRI Chest/mediastinum with and without contrast	71552

## MRI (CONT.)


Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code	
Abdomen and pelvis 	Abdomen	<ul style="list-style-type: none"> <li>▪ MRCP (<i>biliary/pancreatic ducts</i>)</li> <li>▪ Adrenal adenoma</li> <li>▪ Adrenal mass (<i>not adenoma</i>)</li> <li>▪ Hemangioma</li> </ul>	<ul style="list-style-type: none"> <li>▪ Liver, kidney, pancreas mass</li> <li>▪ Pre liver transplant</li> <li>▪ Tumor/mass/cancer/mets</li> </ul>	No	No	MRI abdomen without contrast (MRCP)	74181
		<ul style="list-style-type: none"> <li>▪ Sports hernia</li> </ul>	No	Yes	MRI abdomen with and without contrast	74183	
	Pelvis	<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Pre/post fibroid embolization</li> <li>▪ Abscess</li> <li>▪ Fibroid</li> <li>▪ Ulcer - GI related, fistula, sinus tract</li> <li>▪ Adenomyosis</li> <li>▪ Urethral diverticulum</li> <li>▪ Hip/pelvis pain</li> </ul>	No	Yes	MRI pelvis with and without contrast	72197	
		<ul style="list-style-type: none"> <li>▪ Sports hernia</li> </ul>	No	No	MRI pelvis without contrast	72195	
Abdomen and pelvis MRI enterography	<ul style="list-style-type: none"> <li>▪ GI bleed</li> <li>▪ Small bowel masses</li> <li>▪ Crohn's disease/inflammatory</li> <li>▪ Celiac disease</li> <li>▪ Bowel disease</li> <li>▪ Suspected partial SBO (<i>small bowel obstruction</i>)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Liver, kidney, pancreas mass</li> <li>▪ Pre liver transplant</li> <li>▪ Tumor/mass/cancer/mets</li> </ul>	Yes	Yes	<b>Order two exams:</b> MRI abdomen with and without contrast AND MRI pelvis with and without contrast	74183  72197	

MRI (CONT.)					
Area of Concern	Body Part	Reason for Exam		Exam to be Ordered	CPT Code
Upper extremity 	Shoulder	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Internal derangement</li> <li>▪ Impingement</li> <li>▪ Rotator cuff tear</li> <li>▪ Labral tear/repair</li> </ul>	<ul style="list-style-type: none"> <li>▪ Osteoarthritis</li> <li>▪ Arthritis</li> <li>▪ Dislocation</li> <li>▪ Trauma</li> </ul>	MRI shoulder – routine ( <i>specify side L/R</i> )	73221
		<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Osteomyelitis, septic arthritis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Infection</li> <li>▪ Inflammatory arthritis</li> </ul>	MRI shoulder with and without contrast ( <i>specify side L/R</i> )	73223
		<ul style="list-style-type: none"> <li>▪ Rotator cuff tear</li> <li>▪ Tendon tear</li> <li>▪ Labral tear</li> <li>▪ SLAP tear</li> </ul>		MRI shoulder - direct arthrogram ( <i>specify side L/R</i> )	73222 AND 73040 AND 23350
		<ul style="list-style-type: none"> <li>▪ Rotator cuff tear</li> <li>▪ Labral tear</li> <li>▪ SLAP tear</li> </ul>		MRI shoulder – indirect arthrogram ( <i>specify side L/R</i> )	73222


## MRI (CONT.)


Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code	
Upper extremity (cont.) 	Clavicle	<ul style="list-style-type: none"> <li>▪ Trauma</li> <li>▪ Arthritis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Postoperative</li> </ul>	MRI clavicle without contrast <i>(specify side L/R)</i>	71550
		<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Infection</li> <li>▪ Pain with history of cancer</li> </ul>		MRI clavicle with and without contrast <i>(specify side L/R)</i>	71552
	Sternoclavicular joint	<ul style="list-style-type: none"> <li>▪ Trauma</li> <li>▪ Arthritis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Postoperative</li> </ul>	MRI sternoclavicular joint without contrast <i>(include both sides)</i>	73221
		<ul style="list-style-type: none"> <li>▪ Pain with history of cancer</li> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Infection</li> </ul>		MRI sternoclavicular joint with and without contrast <i>(include both sides)</i>	73223
	Acromioclavicular joint	<ul style="list-style-type: none"> <li>▪ Trauma</li> <li>▪ Arthritis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Postoperative</li> </ul>	MRI acromioclavicular joint without contrast <i>(specify side L/R)</i>	73221
		<ul style="list-style-type: none"> <li>▪ Pain with history of cancer</li> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Infection</li> <li>▪ Synovitis</li> </ul>		MRI acromioclavicular joint-with and without contrast <i>(specify side L/R)</i>	73223

## MRI (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code	
Upper extremity <i>(cont.)</i> 	Scapula	<ul style="list-style-type: none"> <li>▪ Trauma</li> <li>▪ Arthritis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Postoperative</li> </ul>	MRI scapula without contrast <i>(specify side L/R)</i>	73218
		<ul style="list-style-type: none"> <li>▪ Pain with history of cancer</li> <li>▪ Tumor/mass/cancer/mets</li> </ul>	<ul style="list-style-type: none"> <li>▪ Infection</li> <li>▪ Synovitis</li> </ul>	MRI scapula – with and without contrast <i>(specify side L/R)</i>	73220
	Humerus	<ul style="list-style-type: none"> <li>▪ Trauma</li> <li>▪ Pain</li> <li>▪ Muscle tear/strain</li> </ul>	<ul style="list-style-type: none"> <li>▪ Tendon tear</li> <li>▪ Tendinopathy</li> <li>▪ Neuropathy</li> </ul>	MRI humerus without contrast <i>(specify side L/R)</i>	73218
		<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Infection</li> </ul>		MRI humerus with and without contrast <i>(specify side L/R)</i>	73220
	Elbow	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Internal derangement</li> <li>▪ Epicondylitis</li> <li>▪ Tendon Tear</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ulnar neuritis</li> <li>▪ Osteoarthritis</li> <li>▪ Trauma</li> </ul>	MRI elbow without contrast <i>(specify side L/R)</i>	73221
		<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Lump</li> </ul>	<ul style="list-style-type: none"> <li>▪ Infection</li> <li>▪ Pain with history of cancer</li> </ul>	MRI elbow with and without contrast <i>(specify side L/R)</i>	73223
		<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Internal derangement</li> <li>▪ Capsular tear</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ligament tear</li> <li>▪ Postoperative</li> </ul>	MRI elbow-direct arthrogram <i>(specify side L/R)</i>	73222 AND 73085 AND 24220


## MRI (CONT.)


Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code	
Upper extremity <i>(cont.)</i> 	Forearm	<ul style="list-style-type: none"> <li>▪ Trauma</li> <li>▪ Pain</li> </ul>	<ul style="list-style-type: none"> <li>▪ Muscle tear</li> <li>▪ Tendon tear</li> </ul>	MRI forearm without contrast <i>(specify side L/R)</i>	73218
		<ul style="list-style-type: none"> <li>▪ Pain with history of cancer</li> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Infection</li> </ul>		MRI forearm with and without contrast <i>(specify side L/R)</i>	73220
	Wrist	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Ligament tear</li> <li>▪ Triangular Fibrocartilage/TFCC tear</li> <li>▪ Tendon tear</li> </ul>	<ul style="list-style-type: none"> <li>▪ Tendinopathy/tendinosis</li> <li>▪ Osteoarthritis/arthrits</li> <li>▪ Carpal tunnel syndrome</li> <li>▪ Trauma</li> <li>▪ Avascular necrosis</li> </ul>	MRI wrist without contrast <i>(specify side L/R)</i>	73221
		<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Infection</li> <li>▪ Neuroma</li> </ul>		MRI wrist with and without contrast <i>(specify side L/R)</i>	73223
		<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Ligament tear</li> <li>▪ Triangular Fibrocartilage/TFCC tear</li> <li>▪ Impingement</li> </ul>		MRI wrist - direct arthrogram <i>(specify side L/R)</i>	73222 AND 73115 AND 25246

MRI (CONT.)					
Area of Concern	Body Part	Reason for Exam		Exam to be Ordered	CPT Code
Upper extremity (cont.) 	Hand	<ul style="list-style-type: none"> <li>Pain</li> <li>Ligament tear</li> <li>Tendon tear</li> </ul>	<ul style="list-style-type: none"> <li>Degenerative Joint Disease /DJD</li> <li>Osteoarthritis/arthritis</li> <li>Trauma</li> </ul>	MRI hand without contrast <i>(specify side L/R)</i> <i>(if finger, specify which digit)</i>	73218
		<ul style="list-style-type: none"> <li>Tumor/mass/cancer/mets</li> <li>Infection</li> </ul>	<ul style="list-style-type: none"> <li>Ganglion cyst</li> <li>Neuroma</li> </ul>	MRI hand with and without contrast <i>(specify side L/R)</i> <i>(if finger, specify which digit)</i>	73220
		<ul style="list-style-type: none"> <li>Ligament tear</li> <li>Gamekeeper's thumb</li> <li>Radial collateral ligament tear</li> </ul>		MRI hand – direct arthrogram <i>(specify side L/R)</i> <i>(if finger, specify which digit)</i>	73222 AND 73115 AND 25246
Bony pelvis	Bony pelvis	<ul style="list-style-type: none"> <li>Trauma</li> <li>Muscle tear/strain</li> </ul>	<ul style="list-style-type: none"> <li>Tendon tear</li> <li>Sacral fracture</li> </ul>	MRI bony pelvis without contrast	72195
		<ul style="list-style-type: none"> <li>Pubalgia</li> <li>Sports hernia</li> </ul>		MRI pelvis athletic pubalgia/sports hernia without contrast	72195
		<ul style="list-style-type: none"> <li>Pain</li> <li>Pain with history of cancer</li> <li>Tumor/mass/cancer/mets</li> </ul>	<ul style="list-style-type: none"> <li>Infection</li> <li>Postoperative</li> </ul>	MRI bony pelvis with and without contrast	72197




## MRI (CONT.)


Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code	
Lower extremity 	Hip	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Internal derangement</li> <li>▪ Labral tear/repair</li> <li>▪ Arthritis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Avascular necrosis/ Osteonecrosis</li> <li>▪ Trauma</li> </ul>	MRI hip without contrast <i>(specify side L/R)</i>	73721
		<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Infection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Myositis</li> <li>▪ Bursitis</li> </ul>	MRI hip with and without contrast <i>(specify side L/R)</i>	73723
		<ul style="list-style-type: none"> <li>▪ Labral tear</li> <li>▪ Tendon tear</li> <li>▪ Hip dysplasia</li> <li>▪ Cartilage tear</li> </ul>		MRI hip –direct arthrogram <i>(specify side L/R)</i>	73722 AND 73525 AND 27093
		<ul style="list-style-type: none"> <li>▪ Labral tear</li> <li>▪ Tendon tear</li> </ul>	<ul style="list-style-type: none"> <li>▪ Hip dysplasia</li> <li>▪ Cartilage tear</li> </ul>	MRI hip – indirect arthrogram <i>(specify side L/R)</i>	73722
	Femur	<ul style="list-style-type: none"> <li>▪ Trauma</li> <li>▪ Muscle tear</li> <li>▪ Muscle strain</li> </ul>		MRI femur/thigh without contrast <i>(specify side L/R)</i>	73718
		<ul style="list-style-type: none"> <li>▪ Pain with history of cancer</li> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Infection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Myositis</li> <li>▪ Postoperative</li> </ul>	MRI femur/thigh with and without contrast <i>(specify side L/R)</i>	73720

MRI (CONT.)					
Area of Concern	Body Part	Reason for Exam		Exam to be Ordered	CPT Code
Lower extremity <i>(cont.)</i> 	Knee	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Internal derangement</li> <li>▪ Tendon tear</li> <li>▪ Ligament tear</li> <li>▪ Swelling</li> <li>▪ Degenerative Joint Disease /DJD</li> </ul>	<ul style="list-style-type: none"> <li>▪ Arthritis</li> <li>▪ Avascular necrosis/ osteonecrosis</li> <li>▪ Osteochondritis dessicans</li> <li>▪ Trauma</li> </ul>	MRI knee without contrast <i>(specify side L/R)</i>	73721
		<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Infection</li> <li>▪ Pain with history of cancer</li> </ul>		MRI knee with and without contrast <i>(specify side L/R)</i>	73723
		<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Internal derangement</li> <li>▪ Capsular tear</li> <li>▪ Osteochondral defect</li> </ul>		MRI knee- direct arthrogram <i>(specify side L/R)</i>	73722 AND 73580 AND 27370
		<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Internal derangement</li> </ul>	<ul style="list-style-type: none"> <li>▪ Capsular tear</li> <li>▪ Osteochondral defect</li> </ul>	MRI knee – indirect arthrogram <i>(specify side L/R)</i>	73722



## MRI (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code	
Lower extremity (cont.)  	Lower leg	<ul style="list-style-type: none"> <li>▪ Trauma</li> <li>▪ Muscle tear</li> </ul>	<ul style="list-style-type: none"> <li>▪ Muscle strain</li> </ul>	MRI lower leg ( <i>specify side L/R</i> )	73718
		<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Pain with history of cancer</li> <li>▪ Metastasis</li> <li>▪ Tumor/mass/cancer/mets</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lump</li> <li>▪ Infection</li> <li>▪ Osteomyelitis</li> <li>▪ Abscess</li> </ul>	MRI lower leg with and without contrast ( <i>specify side L/R</i> )	73720
	Ankle	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Ligament tear</li> <li>▪ Tendon tear</li> <li>▪ Posterior tibial tendon tear</li> <li>▪ Achilles tendon tear</li> <li>▪ Extensor tendon tear</li> </ul>	<ul style="list-style-type: none"> <li>▪ Avascular necrosis</li> <li>▪ Plantar fasciitis</li> <li>▪ Trauma</li> <li>▪ Degenerative Joint Disease /DJD</li> <li>▪ Osteoarthritis/arthritis</li> </ul>	MRI ankle without contrast ( <i>specify side L/R</i> )	73721
		<ul style="list-style-type: none"> <li>▪ Tumor/mass/cancer/mets</li> <li>▪ Infection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ganglion cyst</li> <li>▪ Neuroma</li> </ul>	MRI ankle with and without contrast ( <i>specify side L/R</i> )	73723
		<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Ligament tear</li> <li>▪ Internal derangement</li> <li>▪ Impingement</li> </ul>		MRI ankle – direct arthrogram ( <i>specify side L/R</i> )	73722 AND 73615 AND 27648
		<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Ligament tear</li> </ul>	<ul style="list-style-type: none"> <li>▪ Internal derangement</li> <li>▪ Impingement</li> </ul>	MRI ankle – indirect arthrogram ( <i>specify side L/R</i> )	73722

## MRI (CONT.)


Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code
Lower extremity (cont.) 	Calcaneus	<ul style="list-style-type: none"> <li>Trauma</li> <li>Muscle/tendon tear</li> </ul>	MRI ankle/hind foot without contrast	73718
		<ul style="list-style-type: none"> <li>Pain with history of cancer</li> <li>Tumor/mass/cancer/mets</li> <li>Infection</li> <li>Myositis</li> </ul>	MRI ankle/hind foot with and without contrast	73720
	Foot	<ul style="list-style-type: none"> <li>Pain</li> <li>Ligament tear</li> <li>Tendon tear</li> <li>Calcific tendonitis</li> <li>Degenerative Joint Disease/DJD</li> <li>Osteoarthritis/arthritis</li> <li>Trauma</li> </ul>	MRI forefoot without contrast (specify side L/R)	73718
		<ul style="list-style-type: none"> <li>Tumor/mass/cancer/mets</li> <li>Infection</li> <li>Ganglion cyst</li> <li>Morton's neuroma</li> </ul>	MRI foot/toes with and without contrast (specify side L/R)	73720

## MRA (MRI ANGIOGRAPHY)

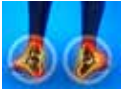
Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
	Brain (MRA-arterial)	<ul style="list-style-type: none"> <li>▪ Stroke, CVA, TIA</li> <li>▪ Aneurysm</li> <li>▪ Follow up to aneurysm coiling</li> </ul>	No	No	MRA brain without contrast	70544
			No	Yes	MRA brain with and without contrast	70456
	Brain (MRV-venous)	<ul style="list-style-type: none"> <li>▪ Venous thrombosis</li> </ul>	No	Yes	MRA with contrast If contraindications ( <i>allergy, pregnancy</i> ), order without contrast	70545 70544
	Neck	<ul style="list-style-type: none"> <li>▪ Stroke, CVA, TIA</li> <li>▪ Occlusion and stenosis or precerebral arteries, carotid artery</li> <li>▪ Dissection</li> </ul>	No	Yes	MRA neck with and without contrast	70549
MRI angiography (MRA)  	Chest	Thoracic aneurysm without rupture <ul style="list-style-type: none"> <li>▪ Vascular anomalies</li> <li>▪ Thoracic aorta (<i>other than dissection</i>)</li> <li>▪ Subclavian vessels</li> </ul>	No	Yes	MRA chest with and without contrast	71555
		<ul style="list-style-type: none"> <li>▪ Aortic dissection</li> </ul>	No	Yes	<b>Order two exams:</b> MRA chest with and without contrast AND MRA abdomen with and without contrast	71555 74185
	Arch and great vessels	<ul style="list-style-type: none"> <li>▪ Occlusion and stenosis or precerebral arteries, carotid artery</li> <li>▪ Stroke, CVA, TIA</li> </ul>	No	Yes	MRA neck with and without contrast	70549

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## MRA (MRI ANGIOGRAPHY) (CONT.)

Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code				
MRI angiography (MRA) (cont.) 	Abdomen (MRA-arterial)	<ul style="list-style-type: none"> <li>AAA (<i>abdominal aortic aneurysm</i>)</li> <li>Pre kidney transplant</li> <li>HTN</li> <li>Renal mass-evaluation/pre-op</li> </ul>	Abdominal aortic dissection	Uncontrolled blood pressure	Mesenteric ischemia	Renal artery stenosis	No	Yes	MRA abdomen with and without contrast	74185
		<ul style="list-style-type: none"> <li>Renal mass-evaluation/pre-op</li> </ul>	No	Yes	<b>Order two exams (to be scheduled at different times):</b> MRI abdomen with and without contrast MRA abdomen with and without contrast	74183 74185				
	Abdomen (MRV-venous)	<ul style="list-style-type: none"> <li>Venous thrombosis</li> <li>Venous pathology</li> </ul>	No	Yes	MRV abdomen with and without contrast	74185				
	Pelvis	<ul style="list-style-type: none"> <li>AVM (<i>arteriovenous malformation</i>)</li> <li>May thurner</li> </ul>	No	Yes	MRA pelvis with and without contrast	72198				
		<ul style="list-style-type: none"> <li>Pelvic congestion</li> </ul>	No	Yes	<b>Order two exams:</b> MRA pelvis with and without contrast MRI pelvis with and without contrast	72198 72197				

## MRA (MRI ANGIOGRAPHY) (CONT.)


Area of Concern	Body Part	Reason for Exam	Oral Prep	IV Contrast	Exam to be Ordered	CPT Code
	Lower extremity	<ul style="list-style-type: none"> <li>▪ Claudication</li> <li>▪ Cold foot</li> <li>▪ Pain</li> </ul>	No	Yes	<b>Order three exams:</b> MRA abdomen with and without contrast MRA lower extremity with and without contrast LEFT AND MRA Lower Extremity with and without contrast RIGHT	74185  73725  73725

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## ULTRASOUND

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code
Abdomen 	Pancreas, aorta, IVC, liver, GB, CBD bilateral kidneys, spleen	<ul style="list-style-type: none"> <li>▪ Abdominal mass</li> <li>▪ Splenomegaly</li> <li>▪ Abnormal LFT's</li> <li>▪ Fatty liver</li> <li>▪ Hepatomegaly</li> <li>▪ Gallstones</li> <li>▪ Cirrhosis or hepatic disease</li> <li>▪ Cholecystitis</li> <li>▪ Abdominal distension</li> </ul>	<ul style="list-style-type: none"> <li>▪ Jaundice</li> <li>▪ Personal history of cancer</li> <li>▪ Pancreatitis/pseudoaneurysm</li> <li>▪ Metastasis</li> <li>▪ Nausea/vomiting</li> <li>▪ Abnormal diagnostic test</li> <li>▪ Abdominal pain</li> </ul>	<b>US abdomen complete without Doppler</b>	NPO 6 hours prior  76700
		<ul style="list-style-type: none"> <li>▪ TIPS</li> <li>▪ Recanalized umbilical vein</li> <li>▪ Mesenteric ischemia</li> <li>▪ Splenic vein thrombosis</li> <li>▪ Portal vein thrombosis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Post prandial abdominal pain</li> <li>▪ Budd-Chiari</li> <li>▪ Portal hypertension</li> </ul>	<b>US abdomen complete with complete Doppler</b>	NPO 6 hours prior  93975 AND 93976
	<ul style="list-style-type: none"> <li>▪ RUQ: (<i>pancreas, liver, GB, CBD and RT kidney</i>)</li> <li>▪ Single organ</li> <li>▪ 4 quadrants</li> <li>▪ Area of concern scanned by request</li> </ul>	<ul style="list-style-type: none"> <li>▪ Abnormal CT finding</li> <li>▪ Gallstones</li> <li>▪ Evaluate mass</li> <li>▪ Ascites</li> </ul>	<b>US abdomen limited without Doppler</b>	NPO 6 hours prior  NPO 6 hours prior No prep  76705	


**ULTRASOUND (CONT.)**

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code	
Abdomen <i>(cont.)</i> 	RUQ vasculature	<ul style="list-style-type: none"> <li>▪ Portal hypertension</li> <li>▪ Budd-Chiari</li> <li>▪ TIPS</li> <li>▪ Varices</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mesenteric ischemia</li> <li>▪ Recanalized umbilical vein</li> <li>▪ Portal vein thrombosis</li> </ul>	<b>US abdomen limited with complete Doppler</b> Done only if the patient has had a recent ultrasound or CT and evaluating the vasculature is the only concern <i>(includes Doppler evaluation only)</i>	NPO six hours  76705 AND 93975	
	Liver Tx	<ul style="list-style-type: none"> <li>▪ Post liver Tx</li> <li>▪ Arterial patency of Liver Tx</li> </ul>	<b>US abdomen limited with complete Doppler</b> Done only if the patient has had a recent ultrasound or CT and evaluating the vasculature is the only concern <i>(includes Doppler evaluation only)</i>	NPO six hours	76775	
	Abdomen	<ul style="list-style-type: none"> <li>▪ IVC filter patency</li> </ul>	<b>US abdomen limited with limited Doppler</b>	No prep	76705/ 93975	
	Aorta	<ul style="list-style-type: none"> <li>▪ AAA/follow up AAA</li> <li>▪ Family history of AAA</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pulsatile aorta</li> <li>▪ Bruit</li> </ul>	<b>US aorta</b> Scanned only for AAA	NPO six hours	G0389
	Abdominal wall	<ul style="list-style-type: none"> <li>▪ Seroma</li> <li>▪ Abscess</li> <li>▪ Lipoma</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fluid collection</li> <li>▪ Lump/bump</li> <li>▪ Hematoma</li> </ul>	<b>US abdominal wall</b> <i>(includes area of concern only)</i>	No prep	76705
	Abdomen	<b>Abdominal duplex</b> <i>Must be ordered and scanned in the vascular lab</i>				


## ULTRASOUND (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code	
Urinary tract 	Bilateral kidneys and bladder	<ul style="list-style-type: none"> <li>▪ Hydronephrosis/obstruction</li> <li>▪ Renal cancer</li> <li>▪ Neurogenic bladder</li> <li>▪ Dialysis</li> <li>▪ Pyelonephritis/cystitis/UTI</li> <li>▪ Renal stone</li> <li>▪ Flank pain</li> </ul>	<ul style="list-style-type: none"> <li>▪ Elevated labs (BUN/CR)</li> <li>▪ Hematuria</li> <li>▪ Post void residual</li> <li>▪ Urinary retention</li> <li>▪ Bladder diverticula</li> <li>▪ Renal failure</li> <li>▪ Trauma/hematoma</li> <li>▪ Renal cyst/mass</li> </ul>	<b>US kidney retroperitoneal complete</b>	Drink 12 ounces of water one hour prior to exam       	76770
	Bilateral kidneys, bladder, and renal vasculature	<ul style="list-style-type: none"> <li>▪ Hypertension</li> <li>▪ Renal vein and artery patency</li> <li>▪ Renal artery stenosis</li> <li>▪ Renal artery aneurysm</li> <li>▪ Renal vein thrombosis</li> </ul>	<b>US kidney retroperitoneal complete with Doppler</b>	NPO six hours AND Drink 12 ounces of water one hour prior to exam	76770 AND 93975	


**ULTRASOUND (CONT.)**

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code	
Urinary tract (cont.) 	Kidney transplant and bladder	<ul style="list-style-type: none"> <li>▪ Post renal transplant</li> <li>▪ Elevated labs (<i>creatinine</i>)</li> <li>▪ Rejection</li> <li>▪ Poor renal function</li> <li>▪ Hydronephrosis</li> <li>▪ Pain over transplant site</li> <li>▪ Mass/cyst</li> </ul>	<ul style="list-style-type: none"> <li>▪ Post void residual</li> <li>▪ Hematuria</li> <li>▪ Renal artery stenosis</li> <li>▪ Urinoma</li> <li>▪ Renal artery/vein patency</li> <li>▪ Lymphocele</li> </ul>	<b>US kidney retroperitoneal transplant with Doppler</b>	Drink 12 ounces of water one hour prior to exam	76776 AND 93976
	Bilateral kidneys, kidney transplant and bladder	<ul style="list-style-type: none"> <li>▪ Mass</li> <li>▪ Hydronephrosis</li> <li>▪ Hematuria</li> </ul>	<ul style="list-style-type: none"> <li>▪ Native kidney size</li> <li>▪ Flank pain</li> <li>▪ Renal stones</li> </ul>	<b>US kidney retroperitoneal transplant with native kidneys</b>	Drink 12 ounces of water one hour prior to exam	76776
	Prostate	<ul style="list-style-type: none"> <li>▪ Elevated PSA</li> <li>▪ Urinary frequency</li> <li>▪ Mass/nodule</li> <li>▪ Family history prostate cancer</li> </ul>	<ul style="list-style-type: none"> <li>▪ Prostatitis</li> <li>▪ Hematuria</li> <li>▪ Enlarged prostate</li> <li>▪ Abnormal physical exam</li> </ul>	<b>US prostate without Doppler</b> <i>(transrectal ultrasound of the prostate)</i>	Fleet enema 1-2 hrs. prior to exam. Eat normal meals.	76872


## ULTRASOUND (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code
Pelvis 	Uterus, bilateral ovaries, endometrium, cervix and bilateral adnexas	<ul style="list-style-type: none"> <li>▪ Pelvic/adnexal pain</li> <li>▪ Ovarian cyst</li> <li>▪ Ovarian torsion</li> <li>▪ Fibroids</li> <li>▪ Enlarged uterus/ovaries</li> <li>▪ Dysfunctional uterine bleeding</li> <li>▪ Post menopausal bleeding</li> <li>▪ Menorrhagia</li> <li>▪ Abnormal CT/MRI</li> <li>▪ Abnormal pelvic exam</li> <li>▪ Mass/ovarian neoplasm</li> <li>▪ Precocious puberty</li> <li>▪ Polycystic ovarian disease</li> <li>▪ Amenorrhea</li> <li>▪ Dysmenorrhea</li> <li>▪ Localization of IUD</li> <li>▪ Retained products of conception</li> <li>▪ Pelvic congestion</li> <li>▪ Fibroid embolization</li> <li>▪ Metastasis</li> </ul>	<p><b>US pelvic complete with transvag with complete Doppler</b></p> <ul style="list-style-type: none"> <li>▪ EC patients must be with complete Doppler and have a BhCG drawn prior to the ultrasound.</li> <li>▪ Non-EC patient, indication must be for torsion for Doppler to be performed.</li> </ul> <p><b>US pelvic complete with complete Doppler</b> – BhCG must be drawn prior to ultrasound.</p> <ul style="list-style-type: none"> <li>▪ EC patients unable to have transvaginal ultrasound</li> <li>▪ Non-EC patients with indication of ovarian torsion that are unable to have transvaginal ultrasound.</li> </ul> <p><b>US pelvic complete with transvag without Doppler</b> – For all non-EC patients unless Doppler is needed for ovarian torsion as explained above.</p> <p><b>US pelvic complete without Doppler</b> For non-EC patients unable to have transvaginal ultrasound and when Doppler is not indicated.</p>	<p>Drink 32 ounces of fluids one hour prior to exam and DO NOT void</p> <p style="color: red;">EC patients only – no prep unless transvaginal US is NOT ordered</p>	<p>76856, 93975</p> <p>76856 AND 93975</p> <p>76856, 76830</p> <p>76856</p>

**ULTRASOUND (CONT.)**



Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code
Pelvis, (cont.) 	Appendix	<ul style="list-style-type: none"> <li>▪ Appendicitis</li> <li>▪ RLQ pain</li> <li>▪ Pelvic pain/cyst/mass</li> </ul>	<b>US pelvic limited without Doppler</b> <i>area of appendix scanned only for appy or RLQ</i>	No prep	76857
	Bladder only	<ul style="list-style-type: none"> <li>▪ Post void residual</li> <li>▪ Bladder mass</li> <li>▪ Bladder jets</li> <li>▪ Bladder volume</li> </ul>	<b>US pelvic limited without Doppler</b> <i>OB patients of 13 weeks gestation looking for ovarian pathology without a concern for ovarian torsion</i> <b>DOES NOT INCLUDE FETAL ULTRASOUND</b> Scanned for bladder only	Drink 16-20 oz. of fluids 1 hrs. prior to exam and <b>DO NOT</b> void	76857
	RLQ or LLQ	<ul style="list-style-type: none"> <li>▪ RLQ pain or LLQ pain</li> <li>▪ Pelvic pain</li> <li>▪ Torsion</li> </ul>	<b>US pelvic limited with complete Doppler</b> <i>limited ultrasound for OB patients over 13 weeks gestation with a concern for torsion</i> <b>DOES NOT INCLUDE FETAL ULTRASOUND</b>	No prep	76857 AND 93975
	Pelvis: Superficial	<ul style="list-style-type: none"> <li>▪ Seroma</li> <li>▪ Edema</li> <li>▪ Hematoma</li> <li>▪ Post C-section Inflammation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fluid collection</li> <li>▪ Lump/bump</li> <li>▪ Abscess</li> </ul>	<b>US pelvis superficial</b>	No prep

## ULTRASOUND (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code
Pelvis, (cont.)  	Ovaries	Follow up only for above indications to a recent CT or ultrasound	<b>US transvaginal non-OB with complete Doppler</b> <i>Scanned as a follow up to a recent CT or ultrasound only when Doppler evaluation of the ovaries is needed to rule out ovarian torsion</i>	Empty bladder	76830 AND 93975
		Follow up only for above indications to a recent CT or ultrasound	<b>US transvaginal without Doppler</b> <i>Scanned as a follow up to a recent CT or ultrasound only</i>	Empty bladder	76830
	Uterus	<ul style="list-style-type: none"> <li>▪ Postmenopausal bleeding</li> <li>▪ Synechiae</li> <li>▪ Polyp</li> <li>▪ Focal/diffuse endometrial</li> <li>▪ Abnormal uterine bleeding</li> <li>▪ Abnormality</li> <li>▪ Uterine myoma</li> <li>▪ Congenital abnormality of</li> <li>▪ Infertility</li> <li>▪ Uterus</li> <li>▪ Recurrent miscarriage</li> </ul>	<b>Hysterosonography with transvag</b> <i>Includes transvaginal ultrasound only and sonohysterogram</i>	<b>Only performed</b> Day 1-10 and not bleeding. May take Motrin/Tylenol evening prior to exam and eat light breakfast. Bladder must be empty.	58340, 76830, 76831


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**ULTRASOUND (CONT.)**

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code
Pelvis, (cont.) 	Uterus, bilateral ovaries, endometrium, cervix, bilateral adnexas, gestational sac size, crown rump length, fetal heart tones and gestational age	<ul style="list-style-type: none"> <li>Pain</li> <li>Ectopic</li> <li>Miscarriage</li> <li>Viability</li> <li>Vaginal bleeding</li> </ul>	<b>US OB &lt; 14 weeks with transvag with complete Doppler</b> <ul style="list-style-type: none"> <li>EC up to 13 weeks gestation: through the EC</li> <li>EC over 13 weeks gestation: Must be ordered and scanned in fetal imaging</li> <li>IP &amp; OP: must go to fetal imaging</li> </ul>	Drink 32 ounces of fluids one hour prior to exam and DO NOT void <b>EC patients only – no prep unless transvaginal US is NOT ordered</b>	76801 AND 76817
Small parts 	Bilateral thyroid and isthmus	<ul style="list-style-type: none"> <li>Nodule/mass</li> <li>Abnormal lab test</li> <li>Cyst</li> <li>Thyroid cancer</li> <li>Hyper/hypothyroidism</li> <li>Enlarged thyroid</li> <li>Abnormal CT/MRI/nuclear scan</li> </ul>	<b>US thyroid</b>	No prep	76536
	Bilateral thyroid and parathyroid	<ul style="list-style-type: none"> <li>Parathyroid adenomas</li> <li>Elevated calcium levels</li> </ul>	<b>US thyroid (includes parathyroid )</b>	No prep	76536
	Thyroid bed and lateral Aspect of the neck bilaterally	<ul style="list-style-type: none"> <li>Thyroid cancer</li> <li>Post thyroidectomy</li> <li>Lymph nodes</li> <li>Abnormal nuclear scan</li> <li>Palpable mass</li> <li>Increased lab values</li> <li>Follow up</li> <li>Residual thyroid tissue</li> <li>Cysts</li> </ul>	<b>US post thyroidectomy</b> <i>(Please indicate if the patient has a history of thyroid cancer and if the scan is to be read by a specific radiologist.)</i>	No prep	76536




## ULTRASOUND (CONT.)



Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code	
Miscel- laneous  	Scrotum	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Torsion</li> <li>▪ Varicocele</li> <li>▪ Mass/cyst</li> <li>▪ Epididymitis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Trauma</li> <li>▪ Hydrocele</li> <li>▪ Undescended testes</li> <li>▪ Swelling</li> <li>▪ Microcalcifications</li> </ul>	<b>US scrotum with complete Doppler</b> <i>(includes bilateral scrotal ultrasound with Doppler)</i>	No prep	76870
	Breast	<ul style="list-style-type: none"> <li>▪ Lump/mass in breast</li> </ul>	<b>US breast (left/right/bilateral)</b> <i>Must be performed in the mammography department</i>			
	Chest	<ul style="list-style-type: none"> <li>▪ Pleural effusion</li> <li>▪ Loculated fluid</li> <li>▪ Superficial mass</li> </ul>	<b>US chest without Doppler</b> <i>(includes pleural area or area of concern on the chest)</i>	No prep	76604	
	Axilla	<ul style="list-style-type: none"> <li>▪ Lump/bump</li> <li>▪ Hematoma</li> <li>▪ Mass</li> <li>▪ Lipoma</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lymph node</li> <li>▪ Abscess</li> <li>▪ Fluid collection</li> </ul>	<b>US axilla (left/right)</b> <i>(includes area of abnormality)</i>	No prep	76882
	Chest wall	<ul style="list-style-type: none"> <li>▪ Fluid collection</li> <li>▪ Swelling/edema/cellulitis</li> <li>▪ Abscess</li> <li>▪ Lump/bump</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mass</li> <li>▪ Lipoma</li> <li>▪ Lymph node</li> <li>▪ Hematoma</li> </ul>	<b>US chest wall</b> <i>(includes superficial area of interest- for example, PIC line site for abscess)</i>	No prep	76604

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**ULTRASOUND (CONT.)**


Area of Concern	Body Part	Reason for Exam		Exam to be Ordered	Preparation	CPT Code
Miscel- laneous (cont.)  	Face	<ul style="list-style-type: none"> <li>▪ Swelling/edema/ cellulitis</li> <li>▪ Lymph node</li> <li>▪ Mass</li> <li>▪ Hematoma</li> </ul>	<ul style="list-style-type: none"> <li>▪ Abscess</li> <li>▪ Lipoma</li> <li>▪ Fluid collection</li> <li>▪ Lump/bump</li> </ul>	<b>US face</b> <i>(includes superficial area of interest on the face – for example, red lump on the cheek)</i>	No prep	76536
	Buttocks	<ul style="list-style-type: none"> <li>▪ Mass</li> <li>▪ Hematoma</li> <li>▪ Swelling/edema/ cellulitis</li> <li>▪ Fluid collection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lump/bump</li> <li>▪ Lipoma</li> <li>▪ Abscess</li> </ul>	<b>US buttocks</b> <i>(includes superficial area of interest on the buttocks for the indications provided – for example, after a fall)</i>	No prep	76857
	Middle/lower back	<ul style="list-style-type: none"> <li>▪ Mass</li> <li>▪ Fluid collection</li> <li>▪ Abscess</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lump/bump</li> <li>▪ Hematoma</li> <li>▪ Lipoma</li> </ul>	<b>US middle/lower back superficial</b> <i>(includes superficial area on the mid to lower back for the indications provided – for example, inflamed area of concern after an insect bite)</i>	No prep	76705
	Upper back	<ul style="list-style-type: none"> <li>▪ Abscess</li> <li>▪ Hematoma</li> <li>▪ Fluid collection</li> <li>▪ Lipoma</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lump/bump</li> <li>▪ Hematoma</li> </ul>	<b>US upper back superficial</b> <i>(includes superficial area on the upper back for indications provided – for example, palpable lump by the shoulder blade)</i>	No prep	76604

## ULTRASOUND (CONT.)


Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code
Miscel- laneous (cont.)  	Head	<ul style="list-style-type: none"> <li>▪ Mass</li> <li>▪ Hematoma</li> <li>▪ Lymph node</li> <li>▪ Fluid collection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lump/bump</li> <li>▪ Lipoma</li> <li>▪ Abscess</li> </ul>	<b>US soft tissue head</b> <i>(Includes superficial area on the head for the indications provided for example lump after trauma)</i>	No prep  76536
	Neck	<ul style="list-style-type: none"> <li>▪ Mass</li> <li>▪ Hematoma</li> <li>▪ Lump/bump</li> <li>▪ Fluid collection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lymphadenopathy</li> <li>▪ Lipoma</li> <li>▪ Abscess</li> </ul>	<b>US soft tissue neck/US neck</b> <i>(includes superficial area on the neck for the indications provided – for example, lump on physical exam with question of enlarged lymph node)</i>	No prep  76536
	Spine	<ul style="list-style-type: none"> <li>▪ Mass</li> <li>▪ Lipoma</li> <li>▪ Fluid collection</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lump/bump</li> <li>▪ Hematoma</li> <li>▪ Abscess</li> </ul>	<b>US spine</b> <i>(includes imaging over the spine for the indications provided – for example at epidural injection site)</i>	No prep  76800
Vascular  	Transcranial	<ul style="list-style-type: none"> <li>▪ Vasospasm</li> <li>▪ Sickle cell disease</li> <li>▪ Subarachnoid hemorrhage</li> </ul>	<b>Ultrasound transcranial Doppler complete</b> <i>(includes MCA, ACA., PCA, vertebral arteries and basilar arteries)</i>	No prep	93886 (at RO only)
	Temporal artery	<ul style="list-style-type: none"> <li>▪ Temporal arteries</li> </ul>	<b>Ultrasound transcranial Doppler limited</b> <i>(includes bilateral temporal arteries)</i>	No prep	93888 (at RO only)

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**ULTRASOUND (CONT.)**

Area of Concern	Body Part	Reason for Exam		Exam to be Ordered	Preparation	CPT Code
Vascular (cont.)  	Carotid	<ul style="list-style-type: none"> <li>▪ Vertigo/dizziness</li> <li>▪ Aphasia</li> <li>▪ TIA/CVA</li> <li>▪ Bruit</li> <li>▪ Headache</li> <li>▪ Carotid trauma</li> </ul>	<ul style="list-style-type: none"> <li>▪ Weakness</li> <li>▪ Stroke</li> <li>▪ Difference in arm blood pressure</li> <li>▪ Amaurosis fugax</li> <li>▪ Memory loss/ confusion</li> </ul>	<p><b>Carotid duplex</b>  <i>(includes bilateral carotids)</i>  <i>Performed in the outpatient center only. Must be performed in vascular lab if:</i></p> <ul style="list-style-type: none"> <li>▪ Patient has prior carotid US in vascular lab</li> <li>▪ Indication is for intimal thickening</li> <li>▪ Patient is going for carotid surgery</li> <li>▪ Patient is inpatient</li> </ul>	No prep	93880 93882
	Lower extremity	<ul style="list-style-type: none"> <li>▪ Leg edema/swelling</li> <li>▪ Post surgical evaluation</li> <li>▪ Calf pain</li> <li>▪ Trauma</li> <li>▪ DVT/follow up DVT</li> </ul>	<ul style="list-style-type: none"> <li>▪ Positive homan sign</li> <li>▪ Varicose veins</li> <li>▪ History of long plane/ car trip</li> <li>▪ Pulmonary embolus</li> <li>▪ Venous reflux</li> </ul>	<p><b>Lower extremity venous duplex unilateral/bilateral</b>  <i>(includes venous Doppler imaging of unilateral or bilateral lower extremities as indicated)</i></p> <ul style="list-style-type: none"> <li>▪ <i>Done in the out patient center only. If the patient has a prior lower extremity venous duplex ultrasound in the vascular lab the exam must be performed in the vascular lab.</i></li> <li>▪ <i>All inpatient lower extremity venous duplex exams must be performed in the vascular lab</i></li> </ul>	No prep	Uni-lateral 93971 Bilateral 93970


## ULTRASOUND (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered
Vascular (cont.)  	Lower extremity (cont.)	<b>Lower extremity arterial Doppler</b> <i>Performed in the vascular lab</i>	
		<b>Lower extremity arterial duplex unilateral/bilateral</b> <i>Performed in the vascular lab</i>	
	Upper extremity	<b>Upper extremity venous duplex unilateral/bilateral</b> <i>Performed in the vascular lab</i>	
		<b>Upper extremity arterial Doppler bilateral</b> <i>Performed in the vascular lab</i>	
	Venous mapping	<b>Venous mapping</b> <i>Performed in the vascular lab</i>	


**ULTRASOUND (CONT.)**

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code	
	Shoulder	<ul style="list-style-type: none"> <li>▪ RCT</li> <li>▪ Injury</li> <li>▪ Decreased range of motion</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pain</li> <li>▪ Weakness</li> </ul>	<b>US shoulder complete</b>	No prep	76881
		<ul style="list-style-type: none"> <li>▪ Mass/swelling/lump</li> <li>▪ Abscess</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cyst</li> <li>▪ Fluid</li> </ul>	<b>US shoulder limited</b>	No prep	76882
	Axilla	<ul style="list-style-type: none"> <li>▪ Lump/bump</li> <li>▪ Hematoma</li> <li>▪ Mass</li> <li>▪ Lipoma</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lymph node</li> <li>▪ Abscess</li> <li>▪ Fluid collection</li> </ul>	<b>US axilla (left/right)</b> <i>(includes area of concern in the axilla area)</i>	No prep	76882
	Upper arm	<ul style="list-style-type: none"> <li>▪ Mass/swelling/lump</li> <li>▪ Cyst</li> <li>▪ DST bicep abnormality</li> </ul>	<ul style="list-style-type: none"> <li>▪ Abscess</li> <li>▪ Muscle abnormality</li> </ul>	<b>US upper arm limited</b> <i>(US upper arm complete not needed)</i>	No prep	76882
	Elbow	<ul style="list-style-type: none"> <li>▪ Tendon injury</li> <li>▪ Ulnar nerve subluxation</li> <li>▪ Ligament injury</li> </ul>		<b>US elbow complete</b> <i>(includes US and dynamic maneuvers)</i>	No prep	76881
		<ul style="list-style-type: none"> <li>▪ Mass/swelling/lump</li> <li>▪ Cyst</li> <li>▪ Bursitis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fluid collection</li> <li>▪ Abscess</li> </ul>	<b>US elbow limited</b>	No prep	76882
	Forearm	<ul style="list-style-type: none"> <li>▪ Mass/swelling/lump</li> <li>▪ Fluid</li> <li>▪ Muscle injury</li> </ul>	<ul style="list-style-type: none"> <li>▪ Abscess</li> <li>▪ Cyst</li> </ul>	<b>US forearm limited</b> <i>(US forearm complete not needed)</i>	No prep	76882

## ULTRASOUND (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code
	Wrist	<ul style="list-style-type: none"> <li>▪ Mass/swelling/lump</li> <li>▪ Carpal tunnel</li> <li>▪ Fluid</li> <li>▪ Bursitis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ganglion</li> <li>▪ Tenosynovitis</li> <li>▪ Abscess</li> <li>▪ Tendon/ligament injury</li> </ul>	<b>US wrist limited</b> <i>(US wrist complete not needed)</i>	No prep  76882
	Hand/finger	<ul style="list-style-type: none"> <li>▪ Tendon/ligament injury</li> <li>▪ Gamekeeper's thumb</li> <li>▪ Mass/swelling/lump</li> <li>▪ Fluid</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pulley injury</li> <li>▪ Tenosynovitis</li> <li>▪ Cyst</li> <li>▪ Abscess</li> </ul>	<b>US hand/finger limited</b> <i>(US hand/finger complete not needed)</i>	No prep  76882
	Chest wall	<ul style="list-style-type: none"> <li>▪ Mass</li> <li>▪ Abscess</li> <li>▪ Lymph node</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cyst</li> <li>▪ Fluid collection</li> </ul>	<b>US chest wall</b>	No prep  76604
	Abdominal wall	<ul style="list-style-type: none"> <li>▪ Ventral hernia</li> <li>▪ Abscess</li> <li>▪ Mass</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fluid collection</li> <li>▪ Lymph node</li> </ul>	<b>US abdominal wall</b>	No prep  76705
	Groin	<ul style="list-style-type: none"> <li>▪ Hernia</li> <li>▪ Cyst</li> <li>▪ Hematoma</li> <li>▪ Abscess</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lymph node</li> <li>▪ Fluid collection</li> <li>▪ Mass/swelling/lump</li> </ul>	<b>US groin unilateral</b> <i>(if bilateral, must place two orders) (for hernia, includes US and dynamic maneuvers) (indication of pseudoaneurysm must be ordered and performed in the vascular lab)</i>	No prep  76882

**ULTRASOUND (CONT.)**

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	Preparation	CPT Code
Musculo-skeletal (cont.) 	Hip	<ul style="list-style-type: none"> <li>▪ Effusion</li> <li>▪ Gluteal tendon injury</li> <li>▪ Trochanteric bursitis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mass/swelling/lump</li> <li>▪ Snapping hip - iliopsoas tendon</li> </ul>	<b>US adult hip limited</b> <i>(US hip complete not needed)</i>	No prep  76882
	Thigh	<ul style="list-style-type: none"> <li>▪ Mass/swelling/lump</li> <li>▪ Tendon injury</li> </ul>	<ul style="list-style-type: none"> <li>▪ Muscle abnormality</li> </ul>	<b>US thigh limited</b> <i>(US thigh complete not needed)</i>	No prep  76882
	Knee	<ul style="list-style-type: none"> <li>▪ Baker's cyst</li> <li>▪ Joint effusion</li> <li>▪ Patella tendon injury</li> </ul>	<ul style="list-style-type: none"> <li>▪ Quadriceps tendon injury</li> <li>▪ Mass/swelling/lump</li> </ul>	<b>US knee limited</b>	No prep  76882
	Lower leg	<ul style="list-style-type: none"> <li>▪ Mass/swelling/lump</li> <li>▪ Fluid</li> <li>▪ Muscle abnormality</li> <li>▪ Abscess</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cyst</li> <li>▪ Fascial tear/muscle herniation</li> </ul>	<b>US lower leg limited</b> <i>(US lower leg complete not needed)</i>	No prep  76882
	Ankle	<ul style="list-style-type: none"> <li>▪ Tendon injury</li> <li>▪ Ligament injury</li> </ul>		<b>US ankle complete</b> <i>(please specify tendon or ligament of interest)</i>	No prep  76881
		<ul style="list-style-type: none"> <li>▪ Cyst</li> <li>▪ Achilles tendon</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mass/swelling/lump</li> <li>▪ Tendon/ligament injury</li> </ul>	<b>US ankle limited</b> <i>(please specify tendon or ligament of interest)</i>	No prep  76882
	Foot	<ul style="list-style-type: none"> <li>▪ Tendon injury</li> </ul>		<b>US foot complete</b>	No prep  76881
		<ul style="list-style-type: none"> <li>▪ Mass/swelling/lump</li> <li>▪ Plantar plate</li> </ul>	<ul style="list-style-type: none"> <li>▪ Neuroma</li> <li>▪ Fascia</li> </ul>	<b>US foot limited</b>	No prep  76882



## ULTRASOUND - GUIDED PROCEDURES

Procedure Type	Reason for Exam	Exam to be Ordered	Preparation	CPT Code
Paracentesis	<ul style="list-style-type: none"> <li>▪ Ascites</li> </ul>	<b>US guided paracentesis</b> <i>(Please indicate if the test is diagnostic or therapeutic. If diagnostic, please indicate what labs fluid will be sent for.)</i>	No prep	49083
Thoracentesis	<ul style="list-style-type: none"> <li>▪ Pleural effusion</li> <li>▪ Drainage</li> </ul>	<b>US guided thoracentesis</b> <i>(Please indicate if the test is diagnostic or therapeutic. If diagnostic, please indicate what labs fluid will be sent for and if a drain is to be left in place.)</i>	No prep	32555
Biopsy	<ul style="list-style-type: none"> <li>▪ Lymph node Bx</li> <li>▪ Prostate Bx</li> <li>▪ Thyroid Bx</li> <li>▪ Abdominal Bx</li> <li>▪ Liver Bx (random and mass)</li> <li>▪ Pelvic mass Bx</li> <li>▪ Renal Bx (function and mass)</li> </ul>	<b>US guided biopsy</b> <i>(Please indicate if any additional testing is needed. For example, flow cytometry on a lymph node Bx.)</i>	If conscious sedation is given patient must be NPO after midnight	76942
Ablation	<ul style="list-style-type: none"> <li>▪ Liver ablation</li> <li>▪ Kidney ablation</li> </ul>	<b>US guided tissue ablation</b>		76940

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**ULTRASOUND - GUIDED PROCEDURES (CONT.)**

Procedure Type	Reason for Exam	Exam to be Ordered	Preparation	CPT Code
Aspiration	<ul style="list-style-type: none"> <li>▪ Fluid collection</li> <li>▪ Seroma</li> <li>▪ Hematoma</li> <li>▪ Neuroma</li> <li>▪ Abscess</li> </ul>	<p><b>US guided aspiration</b> <i>(Please indicate what labs you would like the fluid to be sent for if the test is diagnostic.)</i></p>		619580
	<ul style="list-style-type: none"> <li>▪ Muscle/tendon fluid aspirations</li> <li>▪ Joint fluid aspirations</li> <li>▪ Joint injections</li> <li>▪ Muscle/tendon injections</li> </ul>	<p><b>US guided joint aspiration</b> <i>(Please indicate if the test is diagnostic and what labs you would like the fluid sent for if needed.)</i></p>		76942
Drainage	<ul style="list-style-type: none"> <li>▪ Abscess</li> <li>▪ Pleurx cath placement</li> </ul>	<p><b>US guided drainage</b> <i>(Please indicate what labs you would like the fluid to be sent for if the test is diagnostic.)</i></p>		49405
Hysterosonography	<ul style="list-style-type: none"> <li>▪ Postmenopausal bleeding</li> <li>▪ Recurrent miscarriage</li> <li>▪ Polyp</li> <li>▪ Synechiae</li> <li>▪ Abnormal uterine bleeding</li> <li>▪ Focal/diffuse endometrial</li> <li>▪ Uterine myoma</li> <li>▪ Abnormality</li> <li>▪ Infertility</li> <li>▪ Congenital abnormality of uterus</li> </ul>	<p><b>Hysterosonography with transvag</b> <i>(includes transvaginal ultrasound only and sonohysterogram)</i></p>	<p>Only performed between day 1-10. Pt. must not be bleeding. Pt. may take Motrin or Tylenol prior to the exam and have a light breakfast. Pt. must have an empty bladder.</p>	58340, 76830, 76831

## NUCLEAR MEDICINE

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code
Musculoskeletal		<ul style="list-style-type: none"> <li>▪ Primary or metastatic cancer – initial evaluation or follow up</li> <li>▪ Pathologic fracture</li> <li>▪ Pain of suspected musculoskeletal etiology</li> <li>▪ Arthritis and sacroiliitis</li> <li>▪ Evaluation abnormal findings by other imaging modalities</li> <li>▪ Evaluation abnormal lab tumor marker, elevated alkaline phosphatase</li> <li>▪ Unexplained bone or back pain</li> <li>▪ Stress fractures, any body site</li> <li>▪ Osteoporotic fractures</li> <li>▪ Vertebral fracture (<i>aging</i>)</li> <li>▪ Sports injury in children/athletes</li> <li>▪ Pars stress injury-spondylolysis</li> <li>▪ Paget's disease</li> </ul>	Bone scan – whole body with SPECT or SPECT-CT ( <i>if indicated</i> )	78306 78320  (add on charge for SPECT)
		<ul style="list-style-type: none"> <li>▪ Stress or occult fractures (<i>limited area</i>)</li> <li>▪ Osteomyelitis</li> <li>▪ Reflex sympathetic dystrophy (RSD)</li> <li>▪ Loosening hardware or prosthesis</li> </ul>	Bone scan ( <i>3 phase</i> ) with flow whole body or limited	78315
		<ul style="list-style-type: none"> <li>▪ Musculoskeletal trauma (<i>limited area</i>)</li> <li>▪ Prosthetic joint evaluation for loosening or infection.</li> <li>▪ Avascular necrosis</li> <li>▪ Non-union fractures</li> <li>▪ Charcot's joint</li> </ul>	Limited bone scan	78300

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NUCLEAR MEDICINE (CONT.)				
Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code
Musculoskeletal <i>(cont.)</i>		<ul style="list-style-type: none"> <li>▪ Spondylolysis or spondylolisthesis</li> <li>▪ Painful prosthesis</li> <li>▪ Pseudoarthrosis (<i>painful spine post fusion/instrumentation</i>)</li> <li>▪ Spinal fractures in pediatric patients</li> <li>▪ Foot/ankle trauma/pain</li> <li>▪ Osteoid osteoma</li> </ul>	Limited bone scan with SPECT or SPECT-CT <i>(if indicated)</i>	78300 78320 <i>(add on charge for SPECT)</i>
Endocrine	Parathyroid	<ul style="list-style-type: none"> <li>▪ Primary hyperparathyroidism</li> <li>▪ Hypercalcemia</li> <li>▪ Parathyroid adenoma localization</li> </ul>	Parathyroid scan planar or Parathyroid SPECT or SPECT-CT	78070 78071 78072
	Thyroid <i>(Clinic)</i>	<ul style="list-style-type: none"> <li>▪ Thyroid cancer</li> <li>▪ Hyperthyroidism</li> </ul>	Consult – call department to schedule Royal Oak: 248-898-4121 Troy: 248-964-4860	
	Thyroid imaging	<ul style="list-style-type: none"> <li>▪ Determination of thyroid size, function and position</li> <li>▪ Evaluation of functional status of thyroid nodules/mass</li> <li>▪ Multinodular thyroid gland</li> <li>▪ Evaluate for hyperthyroidism, Graves disease, Toxic nodular goiter</li> <li>▪ Abnormal thyroid lab results</li> <li>▪ Subacute thyroiditis</li> <li>▪ Evaluation of patients with history of head and neck irradiation</li> </ul>	Thyroid scan with visual uptake <i>(Tc-99m technetium)</i>	78013

## NUCLEAR MEDICINE (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code
Endocrine <i>(cont.)</i>	Thyroid imaging plus uptake	<ul style="list-style-type: none"> <li>▪ Hyperthyroidism (<i>establish etiology</i>)</li> </ul>	Tc-99m technetium with I-131 ( <i>uptake</i> )	78014
	Thyroid uptake ( <i>single/multiple</i> )	<ul style="list-style-type: none"> <li>▪ Hyperthyroidism</li> </ul>	Thyroid uptake	78012
	Iodine 123 thyroid	<ul style="list-style-type: none"> <li>▪ Clarification of thyroid nodule/hyperthyroidism</li> <li>▪ Detection of substernal thyroid tissue</li> </ul>	I-123 thyroid single uptake and scan	78012
	Radioactive I-131 body scan ( <i>thyroid cancer patients only</i> )	<ul style="list-style-type: none"> <li>▪ Thyroid cancer – initial or follow up (<i>hormonal withdrawal</i>)</li> </ul>	I-131 whole body scan	78018
		<ul style="list-style-type: none"> <li>▪ Thyroid cancer follow up</li> <li>▪ Thyrogen</li> </ul>	I-131 thyrogen whole body	78018 78020 96372
	<ul style="list-style-type: none"> <li>▪ Thyroid cancer-dosimetry</li> </ul>	I-131 whole body scan with dosimetry	78018 78020 77300	

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NUCLEAR MEDICINE (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code
Cardiovascular	Left ventricular (LV) function	<ul style="list-style-type: none"> <li>▪ Cardiomyopathy</li> <li>▪ Evaluate cardio toxic effects of chemotherapy</li> <li>▪ Quantify LVEF in CHF</li> <li>▪ Evaluate regional wall motion abnormality and LVEF in patients with CAD</li> </ul>	MUGA Scan	78472
		<ul style="list-style-type: none"> <li>▪ Evaluate regional wall motion abnormality and LVEF in patients with suspected/known CAD</li> </ul>	Stress MUGA (Royal Oak)	78473
	Myocardial stress testing	<ul style="list-style-type: none"> <li style="width: 50%;">▪ Chest pain</li> <li style="width: 50%;">▪ Post myocardial infarction</li> <li style="width: 50%;">▪ Post CABG</li> <li style="width: 50%;">▪ Hypercholesterolemia</li> <li style="width: 50%;">▪ CAD</li> <li style="width: 50%;">▪ Shortness of breath</li> <li style="width: 50%;">▪ Diabetes</li> <li style="width: 50%;">▪ Coronary stenosis</li> <li style="width: 50%;">▪ Abnormal EKG</li> <li style="width: 50%;">▪ Post stent</li> <li style="width: 50%;">▪ Hypertension</li> <li style="width: 50%;">▪ Pre-operative clearance</li> </ul>	Myocardial perfusion imaging SPECT <b>**Physician must specify exercise or pharmacologic (Lexiscan) stress test MPI on prescription**</b>	78452
		<ul style="list-style-type: none"> <li>▪ Myocardial viability imaging (see PET section)</li> </ul>	PET MPI	78492

## NUCLEAR MEDICINE (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code	
Pulmonary	Lung	<ul style="list-style-type: none"> <li>▪ Acute or chronic pulmonary embolus (<i>women, renal insufficiency, near normal chest X-ray, pregnancy</i>)</li> <li>▪ Pulmonary hypertension (chronic PE)</li> </ul>	Lung scan – aerosol and perfusion	78582	
		<ul style="list-style-type: none"> <li>▪ Perfusion only</li> </ul>	Perfusion only	78580	
GI	General abdomen	<ul style="list-style-type: none"> <li>▪ Planned lung resection</li> <li>▪ Radiation therapy</li> </ul>	Quantitative lung scan – perfusion	78598	
		<ul style="list-style-type: none"> <li>▪ Gastro-esophageal reflux</li> <li>▪ Aspiration</li> </ul>	Gastric reflux study (Royal Oak only)	78262	
		<ul style="list-style-type: none"> <li>▪ Abdominal pain</li> <li>▪ Feeling of fullness</li> <li>▪ Nausea, vomiting</li> </ul>	<ul style="list-style-type: none"> <li>▪ Dumping syndrome</li> <li>▪ Gastroparesis</li> <li>▪ Gastric outlet obstruction</li> </ul>	Gastric emptying scan (4 hour)	78264
		<ul style="list-style-type: none"> <li>▪ GI bleeding/GI hemorrhage (<i>labeled RBCs</i>)</li> </ul>	Gastrointestinal bleeding scan	78278	
	<ul style="list-style-type: none"> <li>▪ Meckel's diverticulum</li> </ul>	Meckels scan	78290		
	Liver/spleen	<ul style="list-style-type: none"> <li>▪ Accessory spleen</li> <li>▪ Trauma to liver or spleen</li> </ul>	Heat damaged RBCs with SPECT (requires water bath – Royal Oak only)	78206	
	Liver	<ul style="list-style-type: none"> <li>▪ Specified or unspecified disorders of the liver</li> <li>▪ Cavernous hemangioma</li> </ul>	UltraTag RBC Liver imaging SPECT with vascular flow	78205	

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NUCLEAR MEDICINE (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code	
GI (cont.)	Hepatobiliary	<ul style="list-style-type: none"> <li>▪ Acute cholecystitis</li> <li>▪ Evaluate bile leak</li> <li>▪ Chronic cholecystitis</li> </ul>	Hepatobiliary system imaging <i>(gallbladder scan, HIDA scan)</i>	78226	
		<ul style="list-style-type: none"> <li>▪ Gallbladder motor function/functional gallbladder disorder <i>(chronic cholecystitis)</i></li> </ul>	Hepatobiliary system imaging with pharmacologic intervention <i>(gallbladder scan with CCK)</i>	78227	
		<ul style="list-style-type: none"> <li>▪ Evaluate for sphincter of Oddi dysfunction, Hopkins protocol <i>(post cholecystectomy)</i></li> </ul>	Hepatobiliary Hopkin's protocol	78227	
Genitourinary		<ul style="list-style-type: none"> <li>▪ Evaluate renal perfusion and split function only</li> </ul>	Renal scan flow and function <i>(no lasix)</i>	78707	
		<ul style="list-style-type: none"> <li>▪ Hydronephrosis</li> <li>▪ Urinary tract obstruction</li> <li>▪ Functional analysis (UPJ)</li> </ul>	Renal scan diuresis <i>(lasix)</i>	78708	
		<ul style="list-style-type: none"> <li>▪ Renovascular HTN/renal artery stenosis</li> </ul>	Captopril renal scan	78708	
		<ul style="list-style-type: none"> <li>▪ Parenchymal scarring</li> <li>▪ Pyelonephritis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cortical lesion</li> <li>▪ Split renal function</li> </ul>	Renal SPECT – <i>(DMSA renal)</i>	78710
		<ul style="list-style-type: none"> <li>▪ Evaluate vesicoureteral reflux</li> </ul>	Radionuclide voiding cystogram <i>(radionuclide VCUG)</i> <i>(Royal Oak)</i>	78740 and 51703	



## NUCLEAR MEDICINE (CONT.)

Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code
Neurologic	Brain	<ul style="list-style-type: none"> <li>▪ Cerebrovascular disease</li> <li>▪ Alzheimer's disease vs. FTD or MCI</li> <li>▪ Seizure</li> <li>▪ Brain death</li> </ul>	Brain SPECT - (Royal Oak)	78607
		<ul style="list-style-type: none"> <li>▪ Normal pressure hydrocephalus</li> <li>▪ Pre-chemo subarachnoid space patency</li> </ul>	Cisternogram*	78630 and 62311
		<ul style="list-style-type: none"> <li>▪ CSF leak (<i>head</i>)</li> <li>▪ Spine/spontaneous cerebral hypotension</li> </ul>	Cerebrospinal fluid leak study	78650 and 62311
		<ul style="list-style-type: none"> <li>▪ Essential tremor vs. Parkinson's disease</li> </ul>	DatScan*	78607
		<ul style="list-style-type: none"> <li>▪ Assess cerebral vasodilatory reserve/underlying CVD</li> </ul>	Diamox augmented brain SPECT	78607
Blood	Red blood cells	<ul style="list-style-type: none"> <li>▪ Polycythemia</li> </ul>	Red blood cell mass	78122
Infection	Any	<ul style="list-style-type: none"> <li>▪ Sarcoid/sarcoidosis</li> <li>▪ Fever of unknown origin</li> <li>▪ Vertebral osteomyelitis/discitis</li> </ul>	Gallium scan* with SPECT, SPECT-CT ( <i>if indicated</i> )	Whole Body 78806 SPECT 78807
		<ul style="list-style-type: none"> <li>▪ Infection</li> <li>▪ Osteomyelitis</li> <li>▪ Infection of prosthetic joint</li> <li>▪ Evaluation of vascular graft infection</li> </ul> <ul style="list-style-type: none"> <li>▪ Renal infection</li> <li>▪ Abscess detection</li> <li>▪ Inflammatory bowel disease</li> </ul>	In-111 white blood cell scan ( <i>or Tc99m WBC scan</i> ) with SPECT, SPECT-CT ( <i>if indicated</i> )	Limited 78805 Whole Body 78806 SPECT 78807

NUCLEAR MEDICINE (CONT.)				
Area of Concern	Body Part	Reason for Exam	Exam to be Ordered	CPT Code
Infection (cont.)	Marrow imaging	<ul style="list-style-type: none"> <li>Extramedullary hematopoiesis</li> </ul>	Bone marrow imaging (MAP)	Multi Area 78103
	Triple tracer	<ul style="list-style-type: none"> <li>Infection of prosthesis/hardware</li> </ul>	Triple tracer (WBC/marrow/bone)	WBC 78805 Bone 78315 Colloid 78102
Oncology		<ul style="list-style-type: none"> <li>Primary and metastatic neuroendocrine tumors bearing somatostatin receptors (Carcinoid, pheochromocytoma, medullary thyroid cancer)</li> </ul>	Octreotide scan*	78803 and 78804
		<ul style="list-style-type: none"> <li>Pheochromocytoma</li> <li>Neuroblastoma</li> </ul>	I-123 MIGB*	78803 and 78804
Lymphatics	Sentinel node (mapping)	<ul style="list-style-type: none"> <li>Melanoma</li> <li>Breast cancer</li> </ul>	Sentinel node lymphoscintigraphy with imaging	78195 and 38792
		<ul style="list-style-type: none"> <li>Breast cancer</li> </ul>	Sentinel node injection only	38792

\*To order special studies (MIGB Adrenal, Octreotide, Gallium, DAT and Cisternogram), please call: Royal Oak: 248-898-8850  
Troy: 248-964-4870

## NUCLEAR MEDICINE CONSULTATION AND THERAPY SERVICES

Diagnosis	Reason for Exam	Exam to be Ordered	CPT Code
Endocrine	<ul style="list-style-type: none"> <li>▪ Thyroid cancer</li> <li>▪ Hyperthyroidism</li> </ul>	Consultation for therapy Call department to schedule Royal Oak: 248-898-4121 Troy: 248-964-4860	
	<ul style="list-style-type: none"> <li>▪ Thyroid Cancer</li> </ul>	I-131 Therapy for thyroid cancer ( <i>radiopharmaceutical therapy, by oral administration</i> )	79005
	<ul style="list-style-type: none"> <li>▪ Hyperthyroidism/autonomously functioning thyroid tissue</li> </ul>	I-131 Therapy for hyperthyroidism ( <i>radiopharmaceutical therapy, by oral administration</i> )	79005
Bone metastases	<ul style="list-style-type: none"> <li>▪ Metastatic prostate cancer to the bones</li> <li>▪ Therapeutic for treatment of bone pain due to skeletal metastases</li> </ul>	Consultation for therapy Call department to schedule Royal Oak: 248-898-4121 Troy: 248-964-4860	
		Xofigo ( <i>radium 223</i> )	C9399 and 79101
	<ul style="list-style-type: none"> <li>▪ Metastatic breast cancer to the bones</li> <li>▪ Therapeutic for treatment of bone pain due to skeletal metastases</li> </ul>	Sr-89 therapy ( <i>radiopharmaceutical therapy, by IV administration</i> )	A9600
Lymphoma	<ul style="list-style-type: none"> <li>▪ Refractory or recurrent low grade follicular CD20 (+) non-Hodgkin's lymphoma</li> </ul>	Y-90 Zevalin	77750 and 77790

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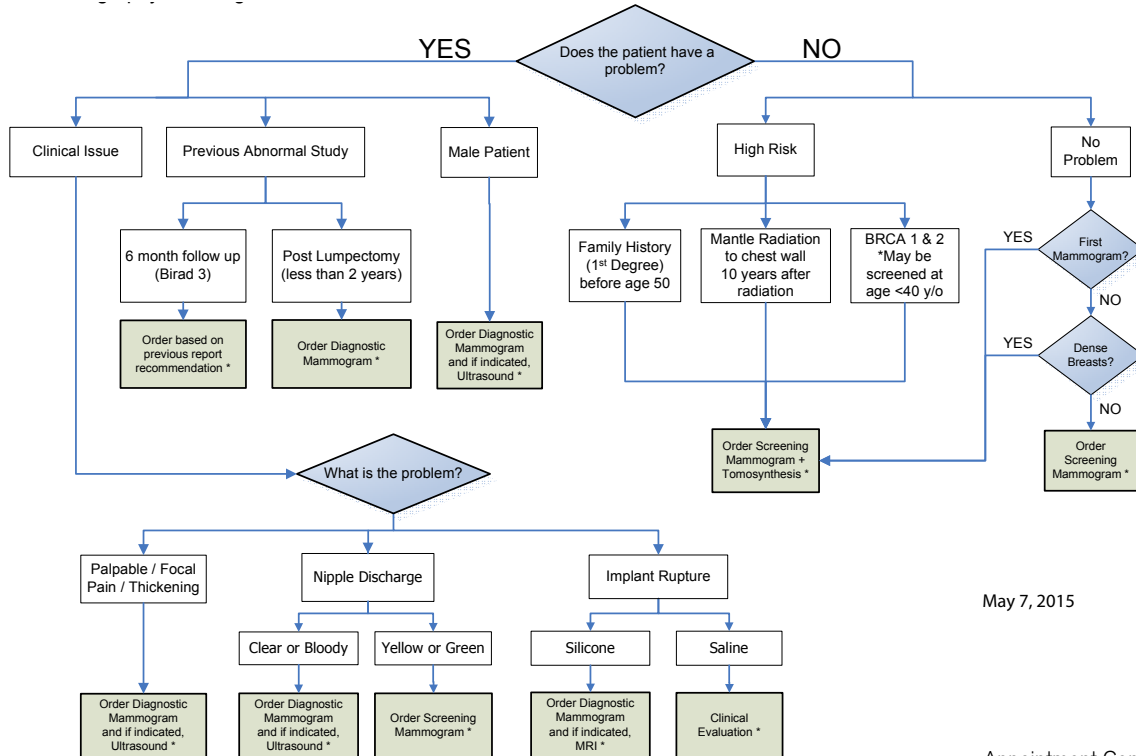
## PET IMAGING

Area of Concern	Reason for Exam	Exam to be Ordered		CPT Code
Brain	<ul style="list-style-type: none"> <li>▪ Epilepsy, tumor recurrence FTD (<i>frontotemporal dementia</i>) vs. SDAT (<i>senile dementia of the Alzheimer's type</i>)</li> </ul>	Brain imaging, perfusion evaluation		78609
		Brain imaging, metabolic evaluation		78608
Heart	<ul style="list-style-type: none"> <li>▪ Coronary artery disease</li> <li>▪ Risk assessment for major surgery after myocardial infarction</li> <li>▪ For patients with large body habitus</li> </ul>	Myocardial perfusion stress		78492
	<ul style="list-style-type: none"> <li>▪ Assessment of myocardial viability: differentiating ischaemia from scar, and predicting improvement</li> </ul>	Myocardial viability		78459
Tumor	<ul style="list-style-type: none"> <li>▪ Diagnosis                             <ul style="list-style-type: none"> <li>– Clarify abnormal CT</li> <li>– Determine biopsy site/location</li> <li>– Determine benign vs. malignant pulmonary nodule masses or adenopathy</li> </ul> </li> <li>▪ Staging (<i>all cancer types except prostate</i>)</li> <li>▪ Restaging (<i>most cancer types including prostate</i>)</li> </ul>	PET/CT Imaging	Skull base to mid-thigh	78815
			Whole body	78816
Bone	<ul style="list-style-type: none"> <li>▪ Evaluation of metastatic cancer to the bone</li> <li>▪ (Includes CMS patients under PET registry)</li> </ul>	F-18 bone scan	Whole body	78816

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# BEAUMONT MAMMOGRAPHY ORDERING DECISION TREE



May 7, 2015

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*\* For all orders, please mark "any procedure listed above" on script*





## RADIATION SAFETY

### Radiation dose

Our Physics Department works in conjunction with radiologists and technologists to minimize radiation dose in our imaging exams. We place special emphasis on attaining the most optimal images while minimizing radiation exposure. Most imaging procedures are relatively low dose and can be compared to the average natural background dose that everyone receives from radon, cosmic and terrestrial sources, which is on average 3 milliSieverts (mSv), or 300 millirem (mrem).

**IMAGE WISELY**

Beaumont subscribes to the Image Wisely campaign's practices of using the lowest possible dose for each exam to limit exposure to radiation. For more information please visit [www.imagewisely.org](http://www.imagewisely.org).

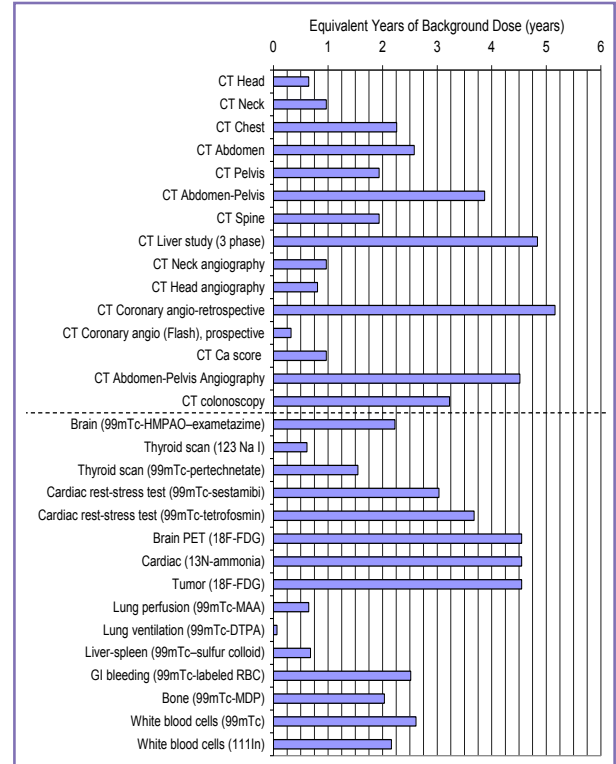
### Radiation safety in children's imaging

Beaumont subscribes to the Image Gently campaign's practices of gentle imaging for pediatric patients and using the lowest possible dose for each exam to limit a child's exposure to radiation. For more information please visit [www.imagegently.org](http://www.imagegently.org).

**IMAGE GENTLY**

### Radiation dose

Imaging procedures using X-rays (i.e. CT) or radiopharmaceuticals involve a radiation dose. This chart shows average radiation doses per exam, though the doses will vary by patient size. Dose from an exam is specific to patient body size, since it takes more X-rays or more of a radiopharmaceutical to create a useable, high quality image for larger patients.



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# IMAGING ORDERING GUIDE

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**TO SCHEDULE AN EXAM / STAT EXAM**

**Appointment Center:**

**800-328-8542**

**Beaumont**