

INDEX

[A Word From Our Radiologists](#)

[CPT Codes](#)

[MRI Anatomical Guide](#)

[CT Anatomical Guide](#)

[Exam Preps](#)

[Contact Numbers](#)

[FAQ](#)

[Radiologists](#)



A WORD FROM OUR RADIOLOGISTS

As healthcare costs have continued to rise over the years, insurance carriers have designated certain studies for pre-authorization, particularly for high-end imaging procedures. The ever increasing practice by insurance carriers of requiring pre-authorization for procedures such as MRI, CT, and ultrasound has changed the way medical decisions are made by referring physicians. This extra layer of work has been confusing and expensive to implement.

When your patient has an insurance plan that does not require pre-authorization or the patient is a “self-pay” patient, requesting a procedure is relatively simple and straight-forward. Ordering MRI, CT, or ultrasound for this patient population can be written as simply as “MRI brain, contrast as needed,” or “CT abdomen/pelvis, contrast if necessary.” Radiologists tailor the protocol for studies in this category based on the patient's history and symptoms.

When the patient's insurance policy requires pre-authorization, our office staff at the MARC Imaging Center will obtain pre-authorization.

The pre-authorization process is specific and rigid. In addition, the authorization may take up to 3 days to complete. In order for the imaging procedure to be covered by the authorization, UT Radiology must follow the specific requirements outlined in the authorization form. Failure to follow the authorization results in non-payment for the services rendered. If the protocol is changed by one of our radiologists to a more suitable examination to answer the specific clinical question, your office will be contacted to submit a different examination order which must be pre-authorized.

In order to help our referring providers, UT Radiology is committed to providing as much assistance as necessary to ensure accurate orders are in place. If you have any questions, please feel free to call our office.

We have also created this Referring Physicians' Toolkit to help you determine the appropriate exam based on clinical indications. Although we cannot answer every scenario, this guide is intended to provide you with information that is concise and as complete as possible regarding pre-authorization and contrast requirements.

In these challenging financial times, there is valuable information available to patients to assist them in making informed decisions about their healthcare choices. We encourage you and your patients to utilize the on-line cost estimator found on most insurance carrier websites.

We hope that you will find these resources useful in determining the appropriate exam for your patients. We appreciate your support as we continue to serve the needs of your practice and patients.

Sincerely,

Gregg W. Bean, MD
Director of Musculoskeletal Radiology

The Referring Physicians' Toolkit is reprinted with permission from Raleigh Radiology. The information contained has been edited to represent the practice of the UTHSCSA Department of Radiology.



DIRECTIONS TO UT Medicine MARC Imaging Center 8300 Floyd Curl Drive



Floyd Curl Drive, San Antonio, Texas 78229

(Phone:(210) 450-6000 **Fax:** (210) 450-6750 **http://www.utmedicine.org/imaging**

From University Hospital (4502 Medical Drive):

- Turn left on Medical Drive
- Take your first right at the stop light onto Wurzbach Road
- Turn left on the first stoplight onto Floyd Curl Drive
- The MARC will be on the right
- 0.7 miles, 3 minutes

From the San Antonio International Airport:

- From Airport Blvd, take a right onto Loop I-410 West
- Take Exit 16 to IH-10 West towards El Paso
- Take Exit 561 Medical Drive/Wurzbach Road, turn left under the overpass onto Wurzbach Road
- After 1.6 miles turn right onto Floyd Curl Drive
- The MARC will be on the right
- 9.3 miles, 15 minutes

From the La Cantera shopping center:

- Head south/west on La Cantera Parkway
- Take a left under the 1604 overpass and merge onto 1604 East
- Turn right onto IH-10 East towards downtown
- Take a right onto the Wurzbach Road Exit
- Take a right onto Floyd Curl Drive
- The MARC will be on your right
- 9 miles, 14 minutes

From Downtown:

- Take IH-10 West towards El Paso
- 7.3 miles later take Exit 561 toward Medical Drive/Wurzbach Road
- Take a left under the IH-10 overpass onto Wurzbach Road
- Take a right onto Floyd Curl Drive
- The MARC will be on your right
- 11.7 miles, 20 minutes



MRI/MRA CPT Coding Guide

Brain / Head (IACS / Pituitary)

70551 MR Brain w/o contrast
70552 MR Brain w/ contrast
70553 MR Brain w/wo contrast
70544 MRA w/o contrast (MRV)

Orbits, Face, TMJ or Neck

70540 Orbits, Face & Neck w/o contrast
70542 Orbits, Face & Neck w/ contrast
70543 Orbits, Face & Neck w/wo contrast
70336 TMJs
70547 MRA Neck w/o
70548 MRA Neck w/ contrast
70549 MRA Neck w/wo contrast

Cervical Spine

72141 Cervical Spine w/o contrast
72142 Cervical Spine w/ contrast
72156 Cervical Spine w/wo contrast

Thoracic Spine

72146 Thoracic Spine w/o contrast
72147 Thoracic Spine w/ contrast
72157 Thoracic Spine w/wo contrast

Chest (non cardiac)

71550 Chest w/o contrast
71551 Chest w/ contrast
71552 Chest w/wo contrast
71555 MRA Chest w/wo contrast

Breast

77059 Breast MRI w/wo contrast (Bilateral)
Performed at Aurora

Lumbar Spine

72148 Lumbar Spine w/o contrast
72149 Lumbar Spine w/ contrast
72158 Lumbar Spine w/wo contrast

Lower Extremity Joint (Hip, Knee, Ankle)

73721 Lower Extremity Joint w/o contrast
73722 Lower Extremity Joint w/ contrast
73723 Lower Extremity Joint w/wo contrast

Upper Extremity Joint (Shoulder, Elbow, Wrist)

73221 Upper Extremity Joint w/o contrast
73222 Upper Extremity Joint w/ contrast
73223 Upper Extremity Joint w/wo contrast

Upper Extremity Non Joint (Humerus, Forearm, Hand)

73218 Upper Extremity Non Joint w/o contrast
73219 Upper Extremity Non Joint w/ contrast
73220 Upper Extremity Non Joint w/wo contrast
73225 MRA Upper Extremity w/wo contrast

Abdomen

74181 Abdomen w/o contrast (MRCP)
74182 Abdomen w/ contrast
74183 Abdomen w/wo contrast
74185 MRA Abdomen w/wo contrast (Aorta)

Pelvis

72195 Pelvis w/o contrast (also prostate)
72196 Pelvis w/ contrast
72197 Pelvis w/wo contrast
72198 MRA Pelvis w/wo contrast

Enterography (order both)

74183 Abdomen w/ & w/o contrast
72197 Pelvis w/ & w/o contrast

Lower Extremity Non Joint (Femur, Lower leg, Foot)

73718 Lower Extremity Non Joint w/o contrast
73719 Lower Extremity Non Joint w/ contrast
73720 Lower Extremity Non Joint w/wo contrast
73725 MRA Lower Extremity Non Joint w/wo contrast



CT/CTA CPT Coding Guide

MaxilloFacial

- 70486 MaxilloFacial wo contrast (sinus)
- 70487 MaxilloFacial w/ contrast
- 70488 MaxilloFacial w/wo contrast

Head

- 70450 Head w/o contrast
- 70460 Head w/contrast
- 70470 Head w/wo contrast
- 70496 Head CTA w/wo contrast

Orbits/Sella/Fossa

- 70480 Orbits w/o contrast
- 70481 Orbits w/contrast
- 70482 Orbits w/wo contrast

Neck/Soft Tissue

- 70490 Neck w/o contrast
- 70491 Neck w/ contrast
- 70492 Neck soft tissue w/wo contrast
- 70498 Neck CTA w/ contrast

Chest

- 71250 Chest w/o contrast
- 71260 Chest w/ contrast
- 71270 Chest w/wo contrast
- 71275 CTA Chest w/wo contrast

Abdomen

- 74150 Abdomen w/o contrast
- 74160 Abdomen w/ contrast
- 74170 Abdomen w/wo contrast
- 74175 CTA Abd w/wo contrast

Pelvis

- 72192 Pelvis w/o contrast
- 72193 Pelvis w/ contrast
- 72194 Pelvis w/wo contrast

Abdomen & Pelvis

- 74176 Abdomen & Pelvis w/o contrast
- 74177 Abdomen & Pelvis w/ contrast
- 74178 Abdomen & Pelvis w/ & w/o contrast
- 74174 CTA Abdomen & Pelvis w/wo contrast

Stone Protocol (Order both)

- 74176 Abdomen & Pelvis w/o contrast

Urogram (Order both)

- 74178 Abdomen & Pelvis w/ & w/o contrast

Enterography (Order both)

- 74177 Abdomen & Pelvis w/ contrast

Cervical Spine

- 72125 Cervical Spine w/o contrast
- 72126 Cervical Spine w/ contrast
- 72127 Cervical Spine w/wo contrast

Thoracic Spine

- 72128 Thoracic Spine, w/o contrast
- 72129 Thoracic Spine w/ contrast
- 72130 Thoracic Spine w/wo contrast

Lumbar Spine

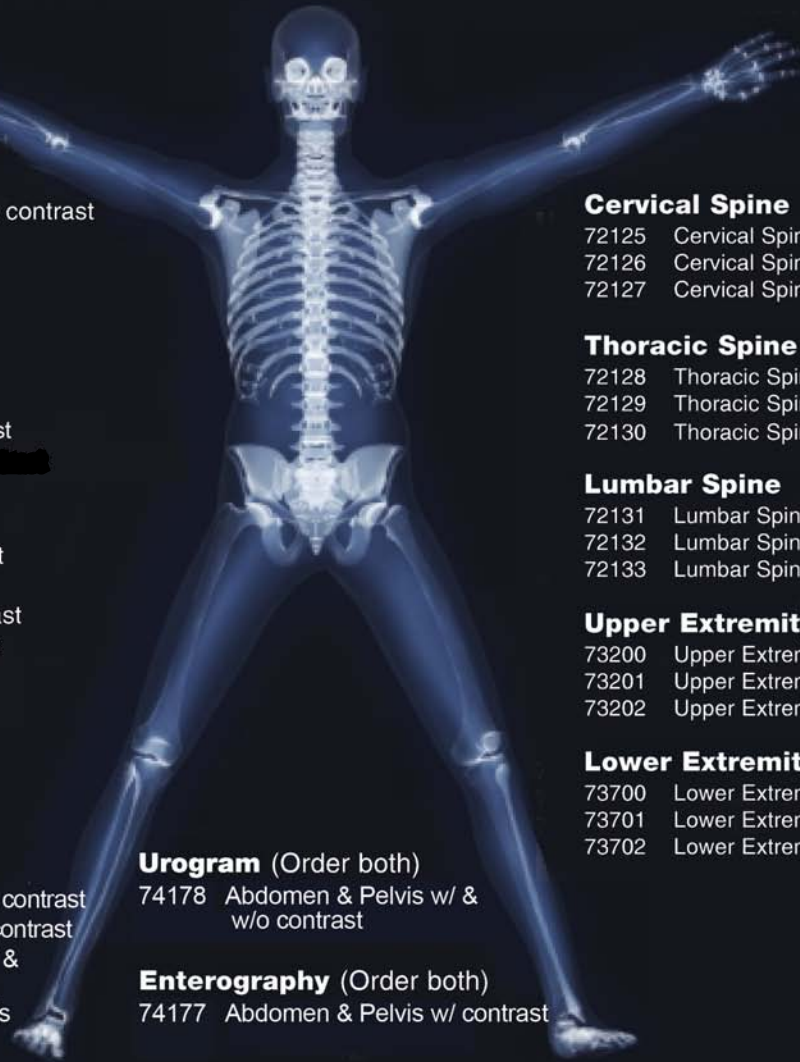
- 72131 Lumbar Spine w/o contrast
- 72132 Lumbar Spine w/ contrast
- 72133 Lumbar Spine w/wo contrast

Upper Extremity

- 73200 Upper Extremity w/o contrast
- 73201 Upper Extremity w/ contrast
- 73202 Upper Extremity w/wo contrast

Lower Extremity

- 73700 Lower Extremity w/o contrast
- 73701 Lower Extremity w/contrast
- 73702 Lower Extremity w/wo contrast



Ultrasound

Head/Neck/Chest

76536	Ultrasound Neck Tissues
76536	Ultrasound Thyroid
93880	Ultrasound Duplex Scan, Carotid
76604	Ultrasound Chest
76942 + 10022	Ultrasound Guidance Thyroid FNA

Breast

76645	Ultrasound Breast (unilateral or bilateral) CTSC
76881	Ultrasound Axilla CTSC

Abdomen

76700	Ultrasound Abdomen, Complete
76705	Ultrasound Abdomen Ltd,(single organ-Appendix)
76705	Ultrasound Abdomen, Ltd (Liver/RUQ)
76770	Ultrasound Renal (includes aorta + IVC)
76775	Ultrasound Aorta
76999	Ultrasound Soft Tissue Torso Area UHS

Pelvic

76830	Ultrasound, Transvaginal
76856	Ultrasound, Pelvic
76857	Ultrasound, Pelvic ltd, followup

Pelvic COMBO

76856 + 76830	Ultrasound Pelvic + Transvaginal
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Testicular

76870	Ultrasound, Scrotal
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Extremity (non vascular)

76881	(complete)
76882	(limited)

Neonatal

76885	Neonatal Hips UHS
76800	Neonatal Spine UHS
76705	Pyloric Stenosis UHS

Other

20605	Ultrasound Aspiration/Injection UHS
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Ultrasound Vascular





93970	Duplex / Doppler Lower Extremity Venous Bilateral (DVT)
93971	Duplex / Doppler Lower Extremity Venous Unilateral (DVT)
93975	Duplex / doppler pelvic / scrotal
93978	Duplex / doppler aorta / ivc / iliac or Bypass complete
93979	Duplex / doppler aorta / ivc / iliac or Bypass ltd unilateral
93880	Duplex / doppler carotid

Please note that with the exception of renal or hepatic transplant follow up, all arterial ultrasound examinations are performed by the vascular laboratory.



MRI ANATOMICAL GUIDE

We require GFR/Creatinine levels if contrast is needed for all patients 55 and older, diabetic, or with H/O renal failure or risk factors. Labwork is current within 1 month.


Area of Concern	Body Part	Reason for Exam	IV Contrast	Procedure to Pre-Cert	Codes
Head  	Brain	Alzheimer's Dementia Mental Status Change Confusion Headaches Memory Loss Trauma Stroke /CVA TIA Dizziness / Vertigo	No	MRI Brain w/o Contrast	70551
		Tumor / Mass / Cancer HIV Infection Vascular Lesions (AVM) Multiple Sclerosis Neurofibromatosis	Yes	MRI Brain w/ & w/o Contrast	70553
	Brain, IAC	Cranial Nerve Lesions Hearing Loss, IAC Mass Acoustic Neuroma Vertigo / Dizziness (IAC) Bell's palsy	Yes	MRI IAC w/ & w/o Contrast	70553
	Brain, sella	Pituitary Lesion Elevated Prolactin	Yes	MRI Sella w/ & w/o Contrast	70553
	MRV Brain	Venous Thrombosis	No	MRA Brain w/o Contrast	70544
	Orbits (includes whole brain - plus thin cuts thru the orbits)	Graves Disease Exophthalmos / Proptosis Vascular Lesions (Hemangioma) Trauma Tumor / Mass / Cancer / Mets Pseudotumor Visual Change (order brain with contrast as well)	Yes	MRI Orbits/ Face/ Neck w/ & w/o Contrast	70543
	Neck	Infection Pain Tumor / Mass / Cancer / Mets Vocal Cord Paralysis	Yes	MRI Orbits/ Face/ Neck w/ & w/o Contrast	70543
Chest 	Mediastinum	Tumor / Mass / Cancer / Mets	Yes	MRI Chest w/ & w/o Contrast	71552
	Brachial Plexus	Brachial Plexus Injury Nerve Avulsion Tumor Invasion	Yes/No	MRI Upper Extremity w/o or w/ & w/o Contrast	73218 73220
Breast 	Breast	Newly diagnosed cancer Personal History of BC BRCA 1 or 2 Gene High risk screening Implant Integrity/Rupture Evaluate response to chemo Dense breasts Palpable lump w/abnormal US or mammographic findings	Yes	MRI Breast Bilateral w/wo contrast	77059

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MRI ANATOMICAL GUIDE

We require GFR/Creatinine levels if contrast is needed for all patients 55 and older, diabetic, or with H/O renal failure or risk factors.
 Labwork is current within 1 month.


Area of Concern	Body Part	Reason for Exam	IV Contrast	Procedure to Pre-Cert	Codes	
	Abdomen: General	Tumor / Mass / Cancer / Mets Hematuria Abdominal Pain	Yes	MRI Abdomen w/ & w/o Contrast	74183	
	Liver	Post embolization Hemangioma Hepatitis Cirrhosis Hepatoma Increased LFTs		MRI Liver w/ & w/o Contrast		
	MRCP: Biliary	Biliary Obstruction Primary sclerosing cholangitis	Stones Jaundice Abnormal enzymes	No	MRI Abdomen w/o Contrast (MRCP)	74181
	Renal	Renal Mass (cyst or solid)	Yes	MRI Renal w/ & w/o Contrast	74183	
	Urogram (Urinary System, Kidneys to Bladder)	Hematuria Transitional cell carcinoma	Yes	MRI Renal w/ & w/o Contrast MRI Pelvis w/ & w/o Contrast	74183 72197	
	Adrenal	Adrenal Mass or Lesion Pheochromocytoma	Hypertension	Yes	MRI Adrenal w/ & w/o Contrast	74183
	Pancreas	Pancreatitis Pancreas Mass Cholangiocarcinoma	Increased LFT's Painless jaundice Ampulla evaluation	Yes	MRI Pancreas w/ & w/o Contrast MRCP	74183
	Pelvis Soft Tissue: General	Tumor / Mass / Cancer / Mets Abscess Pain Decubitus Ulcer	Yes	MRI Pelvis w/ & w/o Contrast	72197	
	Uterus	Fibroid Adenomyosis Bicornuate Uterus	Pre/Post Fibroid Embolization Infertility Septate Uterus	Yes	MRI Pelvis w/ & w/o Contrast	72197
	Ovaries	Ovarian Mass	Endometrioma	Yes	MRI Pelvis w/ & w/o Contrast	72197
Prostate	Cancer Staging	Treatment Planning	Yes	MRI Pelvis w/ & w/o Contrast	72197	
Small bowel Enterography	Diagnosis and follow up of Crohn's disease Low- grade small bowel obstruction Small bowel tumors	Yes <i>(Glucagon is also administered to relax bowel motion)</i>	MRI abdomen w/ &w/o MRI pelvis w/ & w/o	74183 72197		

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MRI ANATOMICAL GUIDE

We require GFR/Creatinine levels if contrast is needed for all patients 55 and older, diabetic, or with H/O renal failure or risk factors.
 Labwork is current within 1 month.


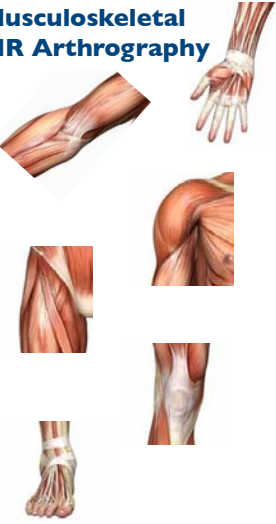
Area of Concern	Body Part	Reason for Exam	IV Contrast	Procedure to Pre-Cert	Codes	
	Extremity: Non Joint Upper Forearm Humerus Hand/finger/thumb Lower Lower Leg/Calf, Femur/ Thigh Foot (hindfoot, midfoot, forefoot) Toes	Fracture Stress Fracture	Muscle / Tendon Tear	No	MRI — Non Joint Without Contrast Upper Extremity Lower Extremity	73218 73718
		Abscess Ulcer Tumor / Mass / Mets Cellulitis Fasciitis	Myositis Morton's Neuroma Osteomyelitis (contrast if possible) Soft tissue Tumor/ Mass/ Mets	Yes	MRI — Non Joint w/ & w/o Contrast Upper Extremity Lower Extremity	73220 73720
	Extremity: Joint Upper Wrist Elbow Shoulder Lower Ankle/hind foot (Includes distal, tibia & fibula thru base of meta-tarsals) Knee Hip - will include whole pelvis	Arthritis Myositis Avascular Necrosis (AVN) Insufficiency Fracture Internal Derangement Pain	Meniscal Tear Muscle Tear Ligament Tear Cartilage Tear Osteochondritis Dissecans (OCD)	No For Arthrogram see next page	MRI — Joint Without Contrast Upper Extremity Lower Extremity	73221 73721
		Abscess Ulcer Cellulitis Fasciitis	Osteomyelitis (contrast as needed) Septic Arthritis Tumor/ Mass / Mets	Yes	MRI — Joint w/ & w/o Contrast Upper Extremity Lower Extremity	73223 73723
	Bony Pelvis/Pelvis/Hip/Sarcum	Fracture Pain	Trauma Muscle/ Tendon Tear Sacroiliitis	No	MRI — Pelvis w/o Contrast MRI Sacrum w/o Contrast	72195
		Tumor / Mass/ Cancer / Mets Osteomyelitis	Septic Arthritis	Yes	MRI — Pelvis w/ & w/o Contrast MRI Sacrum w/ & w/o Contrast	72197
	Spine: Cervical	Arm/ Shoulder Pain Numbness Neck Pain	Disc Herniation Radiculopathy Degenerative Disc Disease	No	MRI Cervical Spine w/o Contrast	72141
		Syrinx Discitis Osteomyelitis	Myelopathy Multiple Sclerosis Tumor / Mass/ Cancer / Mets	Yes	MRI Cervical Spine w/ & w/o Contrast	72156

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 Information subject to change**



MRI ANATOMICAL GUIDE

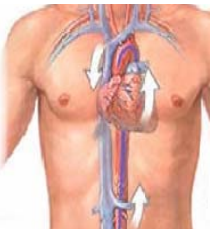
We require GFR/Creatinine levels if contrast is needed for all patients 55 and older, diabetic, or with H/O renal failure or risk factors.
 Labwork is current within 1 month.

Area of Concern	Body Part	Reason for Exam	IV Contrast	Procedure to Pre-Cert	Codes	
Musculoskeletal continued 	Spine: Thoracic	Back pain Degenerative Disc Disease Disc Herniation Radiculopathy	Trauma Compression Fracture — (no hx of malignancy)	No	MRI Thoracic Spine w/o Contrast	72146
		Discitis Post-op Fusion Syrinx Osteomyelitis Multiple Sclerosis	Myelopathy Tumor / Mass / Cancer / Mets Compression Fracture — (w/ hx of malignancy)	Yes	MRI Thoracic Spine w/ & w/o Contrast	72157
	Spine: Lumbar	Back, Leg pain Degenerative Disc Disease Disc Herniation Radiculopathy Trauma	Sciatica Spondylolisthesis Spinal Stenosis Compression Fracture — (no hx of malignancy)	No	MRI Lumbar Spine w/o Contrast	72148
		Discitis Osteomyelitis	Post-Op-Hx of Back Surgery Tumor / Mass / Cancer / Mets	Yes	MRI Lumbar Spine w/ & w/o Contrast	72158
Musculoskeletal MR Arthrography 	Wrist Arthrogram	TFCC tear	Scapholunate or Lunotriquetral Tear	*Gad is injected into the joint space by a MSK radiologist. *Labs not required	MR Upper Ext Joint w/o Contrast Injection - Wrist Rad exam - wrist	73221 73115
	Elbow Arthrogram	Osteochondral Injury	Internal derangement Collateral Ligament tear	*Gad is injected into the joint space by a MSK radiologist. *Labs not required	MR Upper Ext Joint w/o Contrast Injection - Elbow Rad exam - elbow	73221 73085
	Shoulder Arthrogram	Labral tear Under the age of 36 Prior surgery	RCT retear or partial tear Dislocation/Instability	*Gad is injected into the joint space by a MSK radiologist. *Labs not required	MR Upper Ext Joint w/o Contrast Injection - Shoulder Rad exam - shoulder	73221 73040
	Hip Arthrogram	Labral tear Osteochondral injury	Femoracetabular impingement	*Gad is injected into the joint space by a MSK radiologist. *Labs not required	MR Lower Ext Joint w/o Contrast Injection - Hip Rad exam - hip	73721 73525
	Knee Arthrogram	Recurrent meniscal tear	Osteochondral injury	*Gad is injected into the joint space by a MSK radiologist. *Labs not required	MR Lower Ext Joint w/o Contrast Injection - Knee Rad exam - knee	73721 73580
	Ankle Arthrogram	Prior ligament repair	Osteochondral injury	*Gad is injected into the joint space by a MSK radiologist. *Labs not required	MR Lower Ext Joint w/o Contrast Injection - Ankle Rad exam - ankle	73721 73615



MRI ANATOMICAL GUIDE

We require GFR/Creatinine levels if contrast is needed for all patients 55 and older, diabetic, or with H/O renal failure or risk factors. Labwork is current within 1 month.

Area of Concern	Body Part	Reason for Exam	IV Contrast	Procedure to Pre-Cert	Codes	
MRA 	MRA Brain (COW)	Aneurysm, family hx Anuerysm, AVM TIA Stroke / CVA	No	MRA Brain w/o Contrast	70544	
	MRA Neck	Bruit Stroke/ CVA TIA	Abnormal doppler or dizziness	Yes	MRA Neck w/ & w/o Contrast	70549
	MRA Arch and Great Vessels	Stroke / CVA Bruit	TIA	Yes	MRA Neck w/ & w/o Contrast	70549
	MRA Abdominal Aorta	Abdominal Aortic Dissection Aneurysm		Yes	MRA Abdomen w/ & w/o contrast	74185
	MRA Chest	Aneurysm Thoracic Aortic Dissection	Excluding cardiac myocardium	Yes	MRA Chest w/ & w/o contrast	71555
	MRA Abdomen	Renal artery stenosis Hypertension	Mesenteric Arterial Ischemia	Yes	MRA Abdomen w/ & w/o contrast	74185
	MRA Pelvis	Femoral Arteries		Yes	MRA Pelvis w/ & w/o contrast	72198
	MRA Upper Extremity	Subclavian Redness, swelling	Tenderness	Yes	MRA Upper Extremity w/ & w/o	73225
MRA Lower Extremity (run off)	Peripheral vascular disease		Yes	MRA Lower Extremity w/ & w/o	73725	



MRI SAFETY

Magnetic Resonance Imaging (MRI) is a way of obtaining very detailed images of organs and tissues throughout the body without utilizing radiation. Instead, MRI utilizes a powerful magnetic field, radiowaves, a rapidly changing magnetic field, and a computer to demonstrate whether or not there is an injury or some disease process present. An MRI exam causes no pain, and the magnetic fields produce no known tissue damage or side effects. However, the powerful magnetic field of the MR system will attract iron-containing (ferromagnetic) objects or cause them to move suddenly and with great force. This includes items in the body (aneurysm clips, **pacemakers**...) or external objects. Other metallic implants or objects may distort the MRI images. For this reason, great care is taken to ensure the safety of our patients.

Some MRI exams may require the injection of a contrast material called gadolinium into a vein to help interpret the exam. Although gadolinium does not contain iodine, recent findings have shown the gadolinium-based contrast agents increase the risk for nephrogenic systemic fibrosis (NSF) in certain patients. Therefore, we have adjusted our screening guidelines to ensure the highest safety standards for patients.

WEIGHT LIMITS & CLAUSTROPHOBIA

Wide Bore MRI - 350 lbs or less

Most claustrophobic patients have successful MRI exams. Some patients may require a mild oral sedative prescribed by their doctor. **Wide Bore MRI** may be an option for claustrophobic or larger patients. New 1.5T High-field **Wide Bore MRI** technology (vs. traditional **smaller bore mri**) provides the same strength and quality of conventional MRI scanners, while also providing patients with a wider and shorter opening with a design similar to that of a CT scanner. **Wide Bore MRI** is available at the **MARC Imaging Center**

Currently we do not perform examinations with intravenous sedation at the MARC

GADOLINIUM-BASED CONTRAST AGENTS AND NSF:

As your partner in healthcare, we would like to keep you up to date on aspects related to Radiology. Since June 2006, the FDA has issued two Public Health Advisories concerning gadolinium-based contrast agents (GBCA's) and a disease known as Nephrogenic Systemic Fibrosis (NSF), formerly known as Nephrogenic Fibrosing Dermopathy (NFD). Depending on a patient's individual history and symptoms, injection of MRI contrast may enhance the images and give the radiologists better differentiation and clarity for parts of the body.

To ensure the highest safety standards for your patients, the following factors are used to help screen patients for renal disease.

1. History of renal failure or dialysis*
2. Age—If over the age of 55, a current GFR/creatinine level is needed.*
3. Sex
4. Race

* Age and history of renal failure are screening questions at the point of MRI scheduling.

Using the creatinine value, age, sex and race, a scientific score commonly referred to as GFR is calculated and reviewed. This score assists the radiologists and referring physicians in making a determination to:

1. Inject MRI contrast at a normal rate
2. Reduce the amount of contrast used
3. Perform MRI without contrast

CONTRAINDICATIONS:

Cardiac Pacemakers, Defibrillators, Cochlear Implants, **certain** Cerebral Aneurysm Clips, Metal in the eye, clips placed by colonoscopy.

To ensure the highest standard of safety, we would like to review any metallic objects in the body or topical treatments (such as wound treatments) prior to your MRI exam. Typically dental work does not affect an MRI, but the technologist may have you remove partials or dentures discretely prior to the exam for head or neck imaging.



For further information regarding patient screening, please see our MRI screening form on the next page. To expedite your patient's MRI examination appointment, the screening form can be completed prior to arriving at the Imaging Center and submitted to the registration desk upon arrival.



Patient Name: _____ Age: _____ Weight: _____ Height: _____

Is your exam today part of a **RESEARCH STUDY**? Yes No

Previous MRI? Yes No If yes, when and where? _____

Have you experienced any problem related to a previous MRI examination? Yes No

If Yes, please describe: _____

Have you had anything to eat or drink today? Yes No If yes, what time? _____

Please indicate if you have any of the following:

- | | | | |
|--|----------------------------------|--|---------------------------|
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Aneurysm/ Vascular Clips | <input type="checkbox"/> Yes <input type="checkbox"/> No | Metal Implants |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Allergies: _____ | <input type="checkbox"/> Yes <input type="checkbox"/> No | Neurostimulator |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Cardiac Pacemaker/Defibrillator | <input type="checkbox"/> Yes <input type="checkbox"/> No | Diabetic |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Cochlear Implant | <input type="checkbox"/> Yes <input type="checkbox"/> No | Hearing Aids |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Claustrophobia | <input type="checkbox"/> Yes <input type="checkbox"/> No | Heart Valve Surgery |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Dialysis: Renal Failure | <input type="checkbox"/> Yes <input type="checkbox"/> No | Insulin/ Medication Pump |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Hypertension/High Blood Pressure | <input type="checkbox"/> Yes <input type="checkbox"/> No | Tattoos/ Permanent Makeup |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Internal Pacing Wires | <input type="checkbox"/> Yes <input type="checkbox"/> No | Wire Sutures |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | IUD (describe) _____ | <input type="checkbox"/> Yes <input type="checkbox"/> No | Surgery: _____ |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Shrapnel or Metal fragments | <input type="checkbox"/> Yes <input type="checkbox"/> No | Stents: _____ |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Prosthesis/ Artificial Limbs | <input type="checkbox"/> Yes <input type="checkbox"/> No | Other: _____ |

Are you currently working or have you ever worked as a machinist, metal worker, or in any profession that requires grinding/welding metal? Yes No

Have you had blood drawn/ lab work done within 30 days? Yes No When/ Where? _____

Female patients only:

Are you pregnant, or is there a chance you may be pregnant? Yes No

Are you currently breast feeding? Yes No

Surgical History: Hysterectomy? Tubal Ligation? Other: _____ Yes No

Patient Signature: _____ **Date:** _____

TO BE COMPLETED BY TECHNOLOGIST/RADIOLOGY PERSONNEL ONLY ON ALL CONTRAST EXAMS

Date Lab drawn: _____ i-STAT Other Labs B.U.N. Level: _____ Creatinine Level: _____

Contrast Type Injected: _____ Volume: _____ mL Lot# _____ EXP Date: _____

IV Access: _____ Time: _____ Location: _____ Catheter Size/Type: _____ # of Attempts: _____



IV Started by: _____ Injected By: _____

Allergy Problems post contrast? Yes No If Yes, complete Contrast Incident form. M.D. notified

MARC Radiology Staff FULL Signature: _____ **Date:** _____

CT ANATOMICAL GUIDE

We require GFR/Creatinine levels for all patients 55 and older, diabetic, or with H/O renal failure or risk factors. Labwork is current within 1 month.


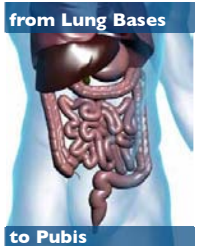
Area of Concern	Body Part	Reason for Exam	Oral Prep Test	IV w/Contrast	Procedure to Pre-Cert	Codes	
Head  	Brain	Trauma Headaches CVA Stroke/ Bleed Alzheimer's Memory Loss, Confusion Facial Droop	Hydrocephalus TIA Change in mental status Dizziness, Vertigo Loss of Balance Syncope Tinnitus	No	No	CT Head w/o	70450
		Mass/Tumor Infection/Abcess Meningioma	Metastatic Staging HIV	No	Yes	CT Head w/ & w/o <i>(* MR Brain may be preferred if patient is able)</i>	70470
	Orbits	Trauma Fracture	Foreign Body Bony Abnormalities	No	No	CT Orbits w/o	70480
		Graves Disease Mass, swelling Pain	Abscess Cellulitis	No	Yes	CT Orbits w/	70481
	Sinus	Sinusitis Mass Pain Foreign body	Congestion Nasal polyps Deviated septum Sinus headache	No	No	CT Sinus w/o	70486
	Face (From orbits to mandible)	Trauma Pain	Fracture Bony abnormalities	No	No	CT maxillofacial w/o	70486
		Tumor Swelling, Mass in face	Infection Abscess	No	Yes	CT maxillofacial w/	70487
	Temporal Bones/Mastoids	Congenital hearing loss Tinnitus Trauma	Cholesteatoma Mass in ear	No	No	CT temporal bones w/o	70480

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CT ANATOMICAL GUIDE

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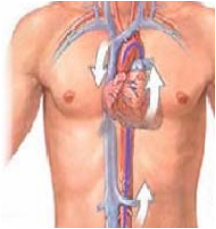
Area of Concern	Body Part	Reason for Exam	Oral Prep Test	IV w/Con- trast	Procedure to Pre-Cert	Codes		
Neck	Neck	Focal mass Lymphadenopathy Lymphoma	Dysphagia Goiter Esophageal cancer	No	Yes	CT soft tissue neck w/	70491	
		Salivary gland stone		No	No	CT soft tissue neck w/o	70490	
Abdomen and Pelvis	Abdomen: General (From the Lung Bases to the Iliac Crest)	Abdominal pain Abnormal US Neoplasm/Mass Weight Loss Hernia	Trauma Pancreatic Lesion Elevated LFT Pancreatitis	No	Yes	CT abdomen w/	74160	
	 <p>CT Abdomen from Lung Bases to Iliac Crest</p>	Abdomen & Pelvis: General (From the Lung Bases to Pubis)	Mass Abdominal pain Pelvic pain Appendicitis Lymphoma Nausea / Vomiting / Diarrhea Bloody stools Diverticulitis Diverticulosis Abnormal US	Neoplasm Fever; Elevated WBC Weight loss Hernia Trauma Constipation, obstruction IBD Metastasis All Cancer Staging, except melanoma or carcinoid	No	Yes	CT abdomen w/ CT pelvis w/	74177
	 <p>CT Abdomen and Pelvis from Lung Bases to Pubis</p>	Pelvis: General (From Iliac Crest to Pubis)	Pelvic pain Groin pain Abnormal pelvic US Pelvic mass	Hernia Trauma Adnexal mass	No	Yes	CT pelvis w/	72193
CT Abd / Pelvis Enterography								

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Area of Concern	Body Part	Reason for Exam	Oral Prep Test	IV w/Contrast	Procedure to Pre-Cert	Codes	
	Liver	Liver Cancer Cirrhosis Hepatitis	Hemachromatosis Hepatoma Jaundice	No	Yes	CT Abdomen 3 phase Liver w/o & w/ contrast	74170
	Renal Stone	Hematuria Flank pain Urinary frequency	Renal Stone Dysuria Retroperitoneal Bleed	No	No	CT Abdomen w/o & CT pelvis w/o	74176
	Renal	Renal Mass work-up Complex Renal Cyst	Abnormal US Hematuria	No	Yes	CT Abdomen w/ & w/o	74170
	CT Urogram (Urinary System) (Kidneys to Bladder)	Hematuria Abnormal cystogram	Bladder mass	No <i>(Unless specifically indicated by referrer)</i>	Yes	CT Abdomen w/ & w/o CT pelvis w/ & w/o	74178
	Adrenal	Adrenal mass		No	No*	CT Adrenal w/ <i>*A CT abdomen w/ may be added at the radiologists' discretion in cases where mass measurement results from the w/o scan are abnormal</i>	74160
	CTA Head	Aneurysm AV Malformation Stenosis Occlusion Thrombosis	Dissection Congenital abnormalities Vascular injury Pre Op Evaluation for tumor blood supply	No	Yes	CTA Head w/ & w/o	70496
	CTA Neck	Aneurysm AV Malformation Stenosis Occlusion Thrombosis Dissection	Congenital abnormalities Vascular injury Pre Op Evaluation for tumor blood supply Post Op Carotid endarterectomy / Post carotid stenting	No	Yes	CTA Neck w/ contrast	70498
	CTA Chest	Pulmonary Embolism Chest Pain	Shortness of Breath	No	Yes	CTA Chest w/	71275
	CTA Chest	Aortic Dissection Aneurysm		No	Yes	CTA Chest w/ & w/o	71275



CT ANATOMICAL GUIDE


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Area of Concern	Body Part	Reason for Exam	Oral Prep Test	IV w/Contrast	Procedure to Pre-Cert	Codes	
CT Angiography continued	CTA Abdomen	Abdominal Aortic Aneurysm Renal artery stenosis Trauma	Abnormal US Post stent grafting Mesenteric ischemia	No	Yes	CTA Abdomen w & w/o contrast	74175
	CTA Abdomen & Pelvis	Abdominal Aortic Aneurysm Renal Artery Stenosis Dissection Trauma	Abnormal US Post stent grafting Mesenteric ischemia	No	Yes	CTA Abdomen w & w/o CTA Pelvis w & w/o	74174
General Chest 	General Chest	Abnormal CXR Pneumonia Cough Hemoptysis Sarcoidosis Hilar abnormality Hx cancer; tumor; mets Chest Pain	Neoplasm / Mass Abscess Enlarge aortic arch Lymphadenopathy Shortness of breath. Trauma	No	Yes	CT Chest w/ contrast	71260
		Lung nodule follow up Bony abnormality Rib fractures, trauma	Chronic cough H/O chronic smoking	No	No	CT Chest w/o contrast	71250
	Hi Resolution Chest	Interstitial disease Fibrosis Bronchiectasis	COPD /emphysema Asbestos exposure	No	No	CT Chest w/o contrast	71250



CT ANATOMICAL GUIDE

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Area of Concern	Body Part	Reason for Exam	Oral Prep Test	IV w/Contrast	Procedure to Pre-Cert	Codes	
	Extremities <u>Upper</u> Hand, wrist, elbow, radius/ ulna, humerus, shoulder <u>Lower</u> Foot, ankle, knee, hip, tibia/fibula, femur	Pain Arthritis Fracture	Fusion Malunion	No	No	CT w/o contrast Upper extremity Lower extremity 73200 73700	
		Infection Tumor/ mass/ cancer/ mets		No	Yes	CT w/ contrast Upper extremity Lower extremity 73201 73701	
	Spine	Pain, trauma, fracture, fusion Pre or post surgery Degenerative Disc Disease		No	No	CT w/o contrast Cervical Thoracic Lumbar 72125 72128 72131	
		Infection Tumor, mass, cancer, mets		No	Yes	CT w/ contrast Cervical Thoracic Lumbar 72126 72129 72132	
	Pelvis/ Hips Acetabulum	Pain Fracture Mets, Cancer	Arthritis Bone Lesions	No	No	CT pelvis w/o contrast	72192
		Soft tissue mass Tumor/ mets Abscess	Infection Cellulitis	Yes	Yes	CT pelvis w/ contrast	72193

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DIAGNOSTIC IMAGING: RADIATION DOSE AND PATIENTS' CONCERNS

Exposure to ionizing radiation during diagnostic radiologic procedures carries small but real risks. Ionizing radiation can damage living cells by causing undesired chemical reactions that alter the structure of macromolecules within the cell. Children, young adults, and pregnant women are especially vulnerable. On the other hand, the images produced can contain critical diagnostic information that may greatly benefit the patient. Therefore, the risks and benefits must be considered before proceeding with any diagnostic test involving ionizing radiation. Exposure to ionizing radiation should be kept As Low As Reasonably Achievable (ALARA), while still answering the clinical question at hand.

Quantifying the Radiation Dose

Everyone is constantly exposed to naturally occurring ionizing radiation, commonly called background radiation. Some comes from radioactive elements present in the earth since its formation, such as uranium and the natural products of its decay, radium and the gas radon. Other background radiation is in the form of cosmic rays, high-energy particles that constantly bombard the atmosphere and create radioisotopes of carbon and nitrogen. The average annual effective dose from ionizing radiation is estimated at 3.6 millisieverts (mSv).

Some diagnostic procedures involve an effective dose of radiation that is a tiny fraction of that from background radiation, whereas many impart several times that amount (Table 1).

Radiation Risks of Imaging

A widely accepted estimate of the risk of radiation-induced carcinogenesis in diagnostic imaging comes from the National Research Council Committee on the Biological Effects of Ionizing Radiation (BEIR VII). The BEIR VII states that an effective dose of 10 mSv to a working-age adult results in a 1 in 1,000 lifetime risk of developing radiation-induced cancer. Or, if 10,000 adults receive this dose, around 10 of them will develop radiation induced cancer during their lifetime. The relative risk is small, however, since 4,200 people out of 10,000 are expected to develop cancer for other reasons.

Ionizing radiation can be both carcinogenic and teratogenic to the fetus. The National Council on Radiation Protection and the American College of Obstetricians and Gynecologists maintain that a cumulative effective dose to the fetus of less than 50 mSv is not associated with any increased risks—and none of the studies listed in Table 1 exceeds this.

Nevertheless, the use of diagnostic imaging in pregnant patients requires careful consideration. The fetus is most sensitive to the teratogenic effects of ionizing radiation from the second to the eighth week of development. But exposure at even up to 20 weeks of development increases the risk of microcephaly, mental retardation, and growth retardation, and radiation exposure at all gestational ages increases the risk of childhood leukemia.

Ways to Minimize Patient Exposure

Use CT with discretion. CT accounts for two thirds of the cumulative patient dose from diagnostic radiologic procedures. The cumulative dose from CT is rising as technological advances increase the number of indications for and the capabilities of CT.

Minimize imaging of the young. Risks from radiation exposure are higher in children and young adults, as these patients are likely to survive the latent period of cancer development.

Avoid studies that do not influence patient care, such as plain radiography for suspected rib and coccyx fractures, and lumbar spine radiography in a patient without radiculopathy, which uses an exceptionally high effective dose for a plain radiographic study (Table 1).

Consider alternatives to ionizing radiation. Ultrasonography and MRI as yet have no practically demonstrated adverse effects.

Consider whether follow-up diagnostic radiologic studies are truly necessary and what the appropriate follow-up interval should be. Doubling the follow-up interval for regular examinations halves the cumulative effective dose.

Table 1: Estimated effective radiation dose of common diagnostic imaging tests

Study	Effective Dose in Millisieverts (mSv)
Chest radiography, posteroanterior and lateral	0.06
Screening mammography	0.6
Kidney-ureter-bladder radiography (KUB)	1.7
CT of the head	1.8
Lumbar spine radiography	2.1
Background radiation, annual dose	3.6
CT of the pelvis	7.1
CT of the abdomen	7.6
CT of the chest	7.8
Barium enema	8.7
Intravenous pyelography	10.0–20.0



FLUOROSCOPY EXAM - Performed at UHS

GI Series and/or Small Bowel Study

- Nothing to eat or drink after midnight prior to the exam.

Barium Enema

- The day before the exam remain on a clear liquid diet all day drinking 8 oz of water each hour: (For breakfast, lunch (noon) and dinner (5:00 pm) patient can drink sugar free drinks (no milk or creamer), clear broths, sugar free gelatin, sugar free popsicles.)

CT EXAMS

CT Abdomen and Pelvis

- Nothing to eat or drink 4 hours prior to the exam. **If needed, the Redi-Cat 2 (Barium Sulfate Suspension) will be given 1/2 hours prior to the scheduled appointment time. The Barium suspension will be given when the patient arrives at the imaging facility.**

CT Abdomen and Pelvis (Urogram)

- Nothing to eat or drink 4 hours prior to exam. Oral contrast not given unless specifically indicated by provider or radiologist.

CT Enterography

- Nothing to eat or drink 4 hours prior to the exam. **The patient should arrive 60 minutes early to drink Volumen contrast at various intervals.**

ULTRASOUND EXAMS

Abdominal / RUQ Ultrasound

- Nothing to eat or drink 8 hours before the exam.

Renal Artery Ultrasound

- No food or drink 8 hours prior to the exam. Drink 24 oz. water one hour prior to the exam. Schedule preferably in the morning to eliminate bowel gas interference.

Pelvic / Early OB Ultrasound

- Drink 32 ozs of fluid within 1 ½ hours immediately preceding the exam time. Do not empty bladder; the bladder must be very full for this exam.

MAMMOGRAM

- Do not wear deodorant or talcum powder the day of the exam.

MRI EXAMS

MRI of the Brain or Orbits

- No eye makeup or hair pins/hair weaves

MRI of the Abdomen and/or MRCP

- No food or drink 4 hours prior to the exam.

MRI Enterography

- No food or drink 4 hours prior
- Arrive 30 minutes early to drink **prep before the exam**
- Glucagon will be administered to relax bowel motion



HELPFUL SCHEDULING INFORMATION

Scheduling at University Hospital or UHS Downtown

Monday – Friday 7:30 am – 5:30 pm

Scheduling phone number (210) 358-2725

Scheduling Fax number (210) 358-8464 or 358-8160

Scheduling at the MARC

Monday – Friday 8am – 5pm

Scheduling phone number (210) 450-6000

Scheduling Fax number (210) 450-6075

Scheduling at UHS a Biopsy or other invasive radiological procedure For Example: CT/Sono Guided Biopsy/Abscess Drainage

Monday – Friday 7:30 am – 4:00 pm

Scheduling phone number (210) 358-2167

Scheduling Fax number (210) 358-2379

Scheduling UHS Interventional (Angio)Procedures

Monday – Friday 7:30 am – 5:00 pm

Scheduling phone number (210) 358-2373

Scheduling Fax number (210) 358-1242

Scheduling UHS Musculoskeletal Procedures (Arthrograms, Therapeutic Joint Injections, Aspirations)

Monday-Friday 8:00-7:00pm

Scheduling phone number (210) 358-2725

Scheduling Fax number (210) 358-8464

Information to have at the point of scheduling

- Patient's full name
- DOB
- Exam being ordered
- Reason for exam
- Is Pre Auth required?
- Insurance name and policy numbers
- Ordering physicians name and signature



VASCULAR AND INTERVENTIONAL SERVICES OFFERED AT UNIVERSITY HOSPITAL

UT Radiology is now offering consults with our Vascular & Interventional Radiologists at University Hospital

UFE (Uterine Fibroid Embolization) consults:

- All UFE consults need to have a MRI Pelvis with and without contrast prior to their consult appt. MRIs can be scheduled at our MARC Imaging Center. If patients had their imaging at another facility, we ask that they bring those studies to the consult appt.
- Please fax all pertinent clinical notes, medical history and patient's insurance information to (210) 358-1242 prior to their consult appt.
- The UFE procedure will be scheduled by our radiologist.

Kyphoplasty consults:

- All kyphoplasty consults need an MRI, preferably with STIR sequence (standard at our outpatient facilities). If the patient cannot have a MRI, they will need a CT that accurately localizes the involved level. If patients had their imaging at another facility, we ask that they bring those studies to the consult appt. MRIs can be scheduled at our MARC Imaging Center.
- Please fax all relevant clinical notes to the current fracture, pertinent medical history (cardiac / pulmonary status, anticoagulants, etc.) and insurance information to 358-1242 prior to their consult appt.
- The Kyphoplasty procedure will be scheduled by our radiologist at University Hospital.

Radiofrequency Ablation/Cryoablations consults:

- If patients had their imaging at another facility, we ask that they bring those studies to the consult appt.
- Please fax all pertinent clinical notes, medical history and patient's insurance information to 358-1242 prior to their consult appt.

Pelvic Congestion Syndrome Consults

- All Pelvic Congestion Syndrome consults need a CT abdomen/pelvis with and without contrast prior to their consult. These can be scheduled at the MARC Imaging Center prior to their consult. If patients had their imaging at another facility, we ask that they bring those studies to their consult appointment.

Picc, Ports and Ambulatory Phelbectomy Consults

Consults can be scheduled by calling: Lori Leal at (210) 358-2373



MRI FAQ'S

How big is the MRI machine?

Wide Bore MRI is 4 feet long & 28 inches in diameter

Is there a weight limit on the scanner?

Yes. Wide Bore MRI limit is 400 lbs. Traditional MRI weight limit is 300 lbs.

What happens if the electricity goes off?

The table has a manual override that enables it to unlock and bring you out of the scanner.

Where will you be while I'm in the scanner?

The technologist will be just outside the scanner door at the MRI console. The technologist will also be in visual contact with you through the glass during your exam.

How will you know if I need you?

The technologist will be in contact with you throughout the test. You will also have a call button.

Why do I have to have contrast?

Contrast may enhance the images and gives the radiologist more detailed information about your exam.

Will the contrast make me sick?

It is very unlikely. The only thing you should feel is a coolness at the injection site.

Can we do the test without contrast?

Yes we can; however, specific information that your physician wants, may not be able to be obtained by doing the test without contrast. The test could be inconclusive.

Will I be able to drive after the exam?

Patients having oral sedation need to be accompanied by a driver.

Do I have to hold my breath the whole time I'm in the machine?

No; however, you may be asked to hold your breath for specific exams for a period of 30 seconds or less as we are obtaining the images.

Can you scan my head without putting it in the head coil?

No. It is the antenna that picks up the signal to create the images of your brain.

CT FAQ'S

Why do I need to drink contrast?

The oral contrast fills the colon for better visualization on the images.

Why do I need the IV contrast?

The IV contrast enhances all of the vascular structures on the images (i.e. liver, pancreas, kidneys). It will also characterize potential pathology.

Could I have a reaction to the IV contrast?

Yes, but the chances are minimal. It has the same risk for reaction as any medication does, which is why we use contrast screening forms—to flag possible patients who are at risk for having a reaction to the contrast.

Why is a head CT done most frequently without IV?

Most pathology can be detected in the brain without IV contrast. If there is suspicion, contrast may be given or a MRI might be suggested for further evaluation.

How long is this exam going to take?

Depending on the anatomy being scanned a CT can take from 5 minutes up to 20 minutes.

Is it ok that I took my medication(s) this morning before I came?

Yes. Any type of medication is fine to take the morning of your exam. If you take a certain kind of diabetic medication (Metformin) you may be asked to withhold for 48 hours after the exam.

What is this test going to show?

A CT scan is a good way to image and evaluate bones, internal organs, the brain and vascular structures within the neck, chest, abdomen, and pelvis.

ULTRASOUND FAQ'S

Why does the bladder need to be full for a pelvic exam?

A full bladder pushes the uterus in a position where we can see it better, and brightens up the entire pelvis so that we can adequately visualize the uterus and ovaries. It also moves the intestines and bowel out of the way.

Why do I need to have a transabdominal and transvaginal Ultrasound exam done?

A transabdominal exam allows us to image the entire liver, spleen, kidneys, gall bladder, pancreas, aorta, IVC, and the transvaginal exam will image the uterus and ovaries in more detail.

Can I have a transvaginal exam while I am still on my period?

Yes, but if you are uncomfortable in any way we would be happy to reschedule your appointment.

Why do I have to fast for my abdominal Ultrasound?

This decreases the amount of gas in the abdomen and allows the gallbladder to be adequately visualized. The gallbladder contracts down when you eat or drink.

Why is it better to schedule my abdominal or RUQ Ultrasound in the morning?

Your abdomen has the least amount of gas in the morning.

What is a Renal Duplex exam and why does it need to be scheduled in the morning?

A renal duplex exam images the arteries going to the kidneys as well as the very small arteries within the kidneys. On a normal patient, the arteries can be very difficult to see, so it is very important for this exam to be done in the morning to obtain the best possible exam. You do have to drink water prior to the exam because the bladder is also imaged.

Is Ultrasound radiation?

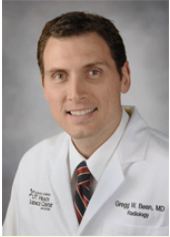
No. Ultrasound uses sound waves.

Do you scan my entire breast or just specific areas?

We do not do screening Ultrasound of entire breast, we only do focal targeting areas of breasts based on physician's orders and clinical findings.

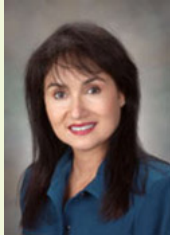


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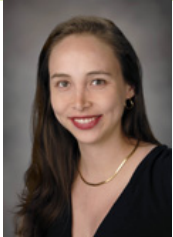
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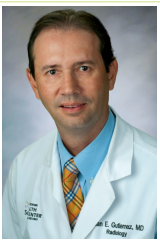
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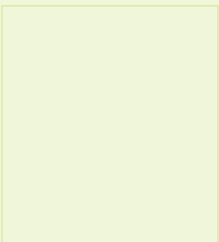
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- Fellowship, Abdominal Imaging Research, Massachusetts General
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- Residency, Texas Tech University Health Science Center
- American Board Nuclear Medicine Diplomate



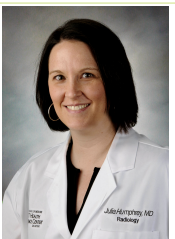
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- Fellowship, Felix Bloch MRI
- Fellowship, Stanford University Medial Center



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*Emergency and
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- Residency, The University of Texas Health Science Center at San Antonio
- Fellowship in Cardiothoracic imaging, The University of Texas Health Science Center at San Antonio



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Emergency Radiology

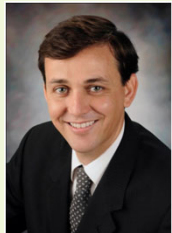
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- Residency, The University of Texas Health Science Center at San Antonio
- Fellowship in Musculoskeletal Radiology, The University of Texas Health Science Center at San Antonio





Ghazwan Kroma, MD
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- Fellowship, Louisiana State University Health Science Center
- Fellowship, University of Texas Health Science Center at San Antonio



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- Residency, Louisiana State University Health Science Center at Shreveport
- Residency, Universidad de Monterrey - Hospital Christus Muguerza
- Fellowship, Rush University Medical Center



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General Radiology

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- Residency, University Health System
- Chief of General Radiology



Isabel Bass, MD
General Radiology

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- Residency, State University of New York Health Sciences Brooklyn
- Fellowship, University of California at San Francisco



Christine Benton, MD
General Radiology

- MD, Baylor College of Medicine
- Residency, University of Texas Health Science Center at San Antonio





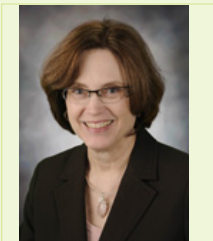
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- MD, BJ Medical College, Pune, Maharashtra, India
- Residency, Seth GS Medical College, Mumbai, India
- Fellowship, cardiothoracic and breast imaging at University of Texas HealthScience Center at San Antonio



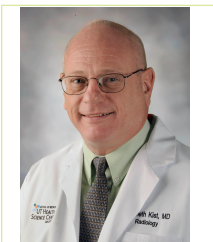
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Breast Imaging

- MD, University Of Missouri-Kansas City
- Residency, University Of Texas Health Science Center at San Antonio
- Fellowship, University Of Texas Health Science Center at San Antonio
- Interim Chair of Radiology, University of Texas Health Science Center at San Antonio



Nella C. Dornbluth, MD
Breast Imaging

- MD, University Of Texas Health Science Center At San Antonio
- Residency, University Of Texas Health Science Center At San Antonio



Ken Kist, MD
Breast Imaging

- MD, Hahnemann University
- Residency, University Of Texas Medical Branch At Galveston
- Fellowship, Magee-Womens Hospital of UPMC Health System, Thomas Jefferson University - Medical College
- Chief of Breast Imaging





Umber Salman, MD
General Radiology

- MD, Peoples Medical College for Girls
- Residency, University of Texas Health Science Center at San Antonio
- Fellowship, University of Texas Health Science Center at San Antonio
- American Board of Nuclear Medicine Diplomate



Ralph Blumhardt, MD
Nuclear Medicine

- MD, Hahnemann University School of Medicine
- Residency, Letterman Army Medical Center - S.F.
- Residency, Madigan Army Medical Center
- Fellowship, William Beaumont Army Medical Center
- American Board of Nuclear Medicine Diplomate
- American Board of Internal Medicine Diplomate
- Chief of Nuclear Medicine



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- Fellowship, University of Texas Health Science Center at San Antonio
- American Board of Nuclear Medicine Diplomate



Riley Scott, MD
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- MD, University of Missouri-Columbia School of Medicine
- Residency, University of Texas Health Science Center at San Antonio
- Fellowship, University of Texas Health Science Center at San Antonio



Barbara McCorvey, MD
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- Residency, George Washington University Hospital GME
- Residency, Hahnemann University
- Fellowship, George Washington University Hospital GME

To consult with a specific radiologist call UT Radiology at (210) 358-8532.



RADIOLOGISTS BY SUB-SPECIALTY

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Dr. Kedar N Chintapalli
Dr. Michael W Freckleton
Dr. Venkata S Katabathina
Dr. Vijayanadh Ojili
Dr. Abhijit G Sunnapwar
Dr. Hugh White
Dr. Amol Katkar

Diagnostic Radiologists

Dr. Isabel S Bass
Dr. Christine E Benton
Dr. James G Flournoy
Dr. Umber A Salman
Dr. Kenneth A Taylor

Musculoskeletal Radiologists

Dr. Gregg W Bean
Dr. Rebecca A Loredo
Dr. Deborah Stedman

Neuroradiologists

Dr. Carlos Bazan
Dr. Juan E Gutierrez
Dr. Achint K Singh
Dr. Bundhit Tantiwongkosi
Dr. Maria Del Pilar Valencia-Velez
Dr. Wilson Altmeyer

Cardiothoracic radiologists

Dr. Aimee P Carswell
Dr. Michael J McCarthy
Dr. Carlos S Restrepo
Dr. Amy L Mumbower

Nuclear Medicine Radiologist

Dr. Ralph Blumhardt
Dr. Darlene F Metter
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Dr. Achint K Singh

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Dr. Rajeev Suri
Dr. Andres E Garza-Berlanga
Dr. Ghazwan M. Kroma

Women's Imaging Radiologists

Dr. Pamela M Otto
Dr. Nella C Dornbluth
Dr. Kenneth Kist
Dr. Barbara McCorvey
Dr. Rashmi Katre

Emergency Radiologists

Dr. Aimee P Carswell
Dr. Julia Humphrey

