



# RADIOLOGY HELP DOCUMENTS

Procedures and Preps



**PRAIRIE LAKES**  
Healthcare System

YOUR HEALTH : OUR MISSION

This document is designed to be a tool to assist you with Pre-Medication Guidelines for Contrast Allergies, Creatinine Requirements, Interventional Procedures and Biopsies, Clinical Indication Guidelines and Patient Preps.

## Scheduling

- Same day, outpatient exam: Contact Radiology at 605-882-7770
- A future outpatient exam: Contact Central Scheduling at 605-882-7690 or 882-5438 or 882-5448
- If a patient needs pre-medication for a previous contrast reaction you need to date and sign and obtain the pre-medication for the patient—the “Contrast Reaction Prophylaxis Suggestions for Premedication”
  - \*Fax requests for **Oral Medications** to the Campus Pharmacy at 605-882-7704, M-F 0830-1700, other hours to Main Pharmacy at 605-882-7694
  - \*Fax Requests for **Injectable Medications** to Central Scheduling 605-882-6704
- Reports will still continue to come to the appropriate printers in all patient care areas
- Reports can be accessed in CPSI, Chartlink, PACS and [www.plhspacs.com](http://www.plhspacs.com)
- ER reports will be routed to the ED printer
  1. Stat reports are 30 minutes or less
  2. Inpatients and ASAP 4 hours or less
  3. Routine outpatient reports are 24 hours from the time the exam is scheduled
- Keep in mind, if an exam from any outside or attached clinic (Cardiology, Urology, Nephrology, Cancer Center, GLO, Dr. Jones, Brown Clinic, Sanford Clinic, Hanson/Moran Eye Clinic, Innovative Pain Clinic and VA Clinic) is ordered, the results will be available 24 hours from the time the exam is scheduled. If the patients follow up appointment to see the clinician and review the results is less than 24 hours from the time the exam is conducted, be sure to indicate this on the order so we can submit as an ASAP order.
- CRL provides subspecialty expertise with fellowship trained Radiologists in Interventional, Body, Neuro, Musculoskeletal and Nuclear Medicine.
- If a physician has a question and needs to talk to a Radiologist, the CRL teleradiology support line phone number is 952-285-3750.

Thank you,

Tom Beaudry, RT(R), RDCS, Director of Radiology (605-882-7771 or 605-237-7788)

Jenna Hulscher, RT(R), (MR), PACS Administrator (605-881-7811 or 605-237-3183)

Tyler Valsvig, RT(R), PACS, Administrator (605-590-1885 or 605-237-3183)



# Table of Contents

Pre-Medication Guidelines for Contrast Allergies .....	4
Creatinine Requirements.....	6
Interventional Procedures & Biopsies .....	8
Clinical Indication Guidelines for CT & MRI.....	10
Patient Preps.....	18
Patient Preps Table of Contents.....	19
CT .....	21
Nuclear Medicine.....	37
X-ray .....	56
Ultrasound.....	69
Required Forms.....	80
Post Procedure Orders/Patient Discharge Instructions .....	85

Pre-Medication Guidelines  
for Contrast Allergies

<b>Section:</b> Miscellaneous Orders	<b>Number</b>	Msc-185 / RAD 120
<b>Subject:</b> Contrast Reaction Prophylaxis Suggestions for premedication	<b>Original Date</b>	10-13

\*\* History of asthma, mild to moderate allergies, cardiac disease, and anxiety: No pretreatment required

\*\* History of severe allergies with a prior major anaphylactic response: Pre-medicate the same as a previous moderate or severe contrast reaction.

\*\* History of previous contrast reaction:

**Mild:**

Diphenhydramine (Benadryl) 50mg intravenously, intramuscularly, or by mouth 1 hour before contrast medium.

**Moderate or Severe: Elective Premedication**

Prednisone: 50mg by mouth at 13 hours, 7 hours, and 1 hour before contrast media injection, **plus** Diphenhydramine (Benadryl): 50mg intravenously, intramuscularly, or by mouth 1 hour before contrast medium.

Methylprednisolone (Medrol): 32mg by mouth 12 hours and 2 hours before contrast media injection. An anti-histamine (as in option 1) can also be added to this regimen injection. If the patient is unable to take oral medication,

Diphenhydramine (Benadryl): 50mg intravenously, intramuscularly, or by mouth 1 hour before contrast medium.

200mg of hydrocortisone intravenously may be substituted for oral prednisone.

**Emergency Premedication** (In decreasing Order of Desirability)

Methylprednisolone sodium succinate (Solu-Medrol) 40mg **or**

Hydrocortisone sodium succinate (Solu-Cortef) 200mg intravenously every 4 hours until contrast study required **plus** Diphenhydramine 50mg IV 1 hour prior to contrast injection.

Dexamethasone sodium sulfate (Decadron) 7.5mg **or**

Diphenhydramine 50mg IV 1 hour prior to contrast injection.

Omit steroids entirely and give Diphenhydramine 50mg IV.

*Note: IV steroids have not been shown to be effective when administered less than 4 to 6 hours prior to contrast injection.*

*Please see: ACR Manual on Contrast Media – Version 8, 2012*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date/Time

## Creatinine Requirements

## **SUGGESTIONS FOR THE PREVENTION OF CONTRAST INDUCED NEPHROPATHY**

Obtain Creatinine on patients with the following:

- Age > 60
- History of renal disease, including:
  - Dialysis
  - Kidney transplant
  - Single kidney
  - Renal cancer
  - Renal surgery
- History of hypertension requiring medical therapy
- History of diabetes mellitus
- Metformin or metformin-containing drug combinations
- All inpatients

*ACR, Manual on Contrast Media. 2012*

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If not provided by the lab, estimated GFR can be calculated on this website:

[http://nephron.com/cgi-bin/MDRD\\_GFR.cgi](http://nephron.com/cgi-bin/MDRD_GFR.cgi)

### **GFR > 50**

Use contrast as clinically indicated

### **GFR > 40 and ≤ 50** (Consider non-contrast CT if possible)

1. Use an iso-osmolar contrast agent (Visipaque) and decrease the dose by ~ 20%

### **GFR > 30 and ≤ 40** (Consider non-contrast CT if possible)

1. Contact ordering provider if possible. Weigh the risks and benefits of contrast and allow ordering provider to determine if other renal protective measures (Mucomyst or IV hydration) should be performed. The ordering provider would be responsible for the arrangements.
2. Use an iso-osmolar contrast agent (Visipaque) and decrease the dose by ~ 20%

### **GFR ≤ 30**

Avoid contrast if possible

Advise ordering provider to contact nephrology

## **DIALYSIS PATIENTS**

1. Patients on dialysis with no urine production = In the majority of these patients, contrast can be used as clinically indicated (regardless of timing of next dialysis). In patients with CHF a small subset can become volume overloaded, thus the referring physician and/or nephrology should be contacted.
2. Patients on dialysis and still producing urine = contact nephrology

# Interventional Procedures and Biopsies



# Prairie Lakes Procedures and Biopsies

## **Biopsies (US and CT)**

Everything from Face to Feet\*

\*Small nodules in chest/lung and liver would need prior review and approval from radiologist

\*We do not perform Intrathecal or Heart/Vascular Biopsies.

\*Vertebral body biopsies would need prior review and approval from radiologist.

## **Myelograms**

Thoracic and Lumbar can be performed but need prior review and approval from radiologist.

## **Barium Procedures**

All types can be performed

## **Paracentesis/Thoracentesis**

Can be performed

## **Procedures/Drainages we Do Not Perform**

Transhepatic

Biliary/GB

Percutaneous Nephrostomy

**Please make sure you schedule a follow up appointment to review test results and convey to scheduling.**

## **Suggestions for the Management of Antithrombotic Medications Not Included in Current Guidelines\* prior to Image Guided Interventions**

**Aspirin 81 mg/Aspirin** = Take as normal

**Coumadin** = Withhold for 3 days prior to moderate or high risk procedures

**Plavix** = Withhold for 5 days prior to moderate to high risk procedures

**Ibuprofen/Naproxen** = Take as normal

**Subcutaneous heparin** =

-Prophylaxis with 5000 units BID = No need to withhold

-Prophylactic protocol with monitoring of heparin levels or therapeutic dosing = Withhold for 12 hours prior to low risk procedures. Withhold for 24 prior to moderate or high risk procedures

**IV Unfractionated heparin** = Stop IV 6 hours prior to all procedure

**Argatroban** = Stop IV 3 hours prior to all procedure

**Bivalirudin (Angiomax)** = Stop IV 3 hours prior to all procedure

**Dabigatran (Pradaxa)** = Do not withhold for low risk procedures. Withhold for 5 days prior to moderate or high risk procedures

**Fondaparinux (Arixtra)** = Do not withhold for low risk procedures. Withhold for 5 days prior to moderate or high risk procedures

**Prasugrel (Effient)** = Do not withhold for low risk procedures. Withhold for 5 days prior to moderate or high risk procedures

**Ticagrelor (Brilinta)** = Do not withhold for low risk procedures. Withhold for 5 days prior to moderate or high risk procedures

**Abciximab (Reopro)** = Same as aspirin

**Dipyridamole (Persantine)** = No need to withhold

\* Consensus Guidelines for Periprocedural Management of Coagulation Status and Hemostasis Risk in Percutaneous Image-guided Interventions  
J Vasc Interv Radiol 2009; 20:S240-S249

Clinical Indication  
Guidelines

## **CT Clinical Indication Guidelines**

### **CT Scans WITHOUT Contrast**

**HEAD-** trauma, headache, dizziness, nausea/vomiting

**SINUS-** sinusitis

**ORBITS-** trauma, foreign body

**FACIAL BONES-** trauma

**TEMPORAL BONES-** conductive hearing loss, fracture, skull base fx

**CHEST-** nodules, PNA

**HI-RES CHEST-** interstitial lung disease

**ABD/PELVIS-** stones, ALLERGY to contrast dye, renal insufficiency

**PELVIS-** pelvic pain, evaluate for hernie

**SACRUM-** trauma, back pain

**EXTREMITIES-** fracture

**CERVICAL/THORACIC/LUMBAR SPINES-** trauma, back pain **MYELOGRAM-**  
disc herniation, radiculopathy, cord/conus compression, cauda equine syndrome, CSF  
leak, spinal vascular malformation

## **CT scans WITHOUT/WITH IV contrast**

**CHEST-** dissection

**HEAD-** tumor, cancer, infection (meningitis, abscess)

**ADRENALS-** adrenal adenoma, Cushing Syndrome (hypercortisolism), Conn Syndrome (hyperaldosteronism), Addisons disease (adrenal insufficiency)

**TRI-PHASE LIVER-** liver mass, hepatitis, portal hypertension, cirrhosis, renal cell cancer, islet cell cancer, neuroendocrine cancer, carcinoid cancer, hepatocellular carcinoma

**HEMATURIA PROTOCOL-** hematuria, bladder transitional cell cancer, renal mass

**KNOWN CIRRHOSIS-** r/o hepatoma

**TIPS EVALUATION-** eval TIPS shunt

**CTA C/A/P DISSECTION-** eval for known or suspected aortic dissection, leak, tear, thrombosis, trauma or emergency eval of aortic injury

**PORTOSYSTEMIC SHUNT EVAL-** to confirm patency of a surgical portosystemic shunt

**PRE-EVT OR ENDOLUMINAL GRAFT-ANGIO ABD-** to determine extent of aneurysm prior to endoluminal stenting, pre-surgical abdominal aortic stent or bypass evaluation, abdominal aortic/iliac/common femoral/splenic/cealic/SMA/hepatic/gastric/ GDA/renal aneurysm or pseudoaneurysm, chronic mesenteric ischemia, acute mesenteric ischemia

**POST EVT OR ENDOVASCULAR GRAFT-ANGIO ABD-** post surgical abdominal aortic stent or bypass evaluation to r/o endo leak

**RENAL ANGIO-** hypertension, trauma

### **CT scans WITH IV and PO contrast**

**CHEST/ABD/PELVIS-** lymphadenopathy, mass, abscess, fevers, cancer, metastasis

**ABD/PELVIS-** abd pain, mass, abscess, fevers, appendicitis, nausea/vomiting, weight loss, Crohn's disease, diarrhea, history of malignancy, elevated WBC, trauma, infection, bowel obstruction

**ABD/PELVIS ENTEROGRAPHY-** (Volumen Oral Prep)- small bowel tumors, Crohn's disease, intermittent small bowel obstruction

## **CT scans with IV ONLY contrast**

**HEAD-** tumor, cancer, abscess

**SINUS-** known history of tumor, epistaxis

**ORBITS-** tumor, infection, Graves (thyroid) disease

**TEMPORAL BONES-** sensory neural hearing loss, mastoiditis, tumor

**CHEST-** mass, cancer, abscess, cough

**PE CHEST-** suspected PE, elevated D-Dimer, chest pain, SOB, pulmonary hypertension

**THORACIC OUTLET SYNDROME-** suspected obstruction

**ABD/PELVIS-** emergency evaluation for appendicitis, abscess, fevers

**LIVER HEMANGIOMA-** hemangioma

**ADRENALS-** adrenal adenoma, Cushing Syndrome (hypercortisolism), Conn Syndrome (hyperaldosteronism), Addisons disease (adrenal insufficiency)

**DUAL PHASE PANCREAS-** newly diagnosed pancreatitis

**TRI-PHASE LIVER-** liver mass, hepatitis, portal hypertension, cirrhosis, renal cell cancer, islet cell cancer, neuroendocrine cancer, carcinoid cancer, hepatocellular carcinoma

**HEMATURIA PROTOCOL-** hematuria, bladder transitional cell cancer, renal mass

**ISCHEMIC BOWEL-** ischemic bowel

**KNOWN CHOLANGICARCINOMA-** gallbladder cancer

**KNOWN CIRRHOSIS-** r/o hepatoma

**TIPS EVALUATION-** eval TIPS shunt

**EXTREMITIES-** abscess, cellulitis

**SOFT TISSUE NECK-** mass, lymphadenopathy, infection, abscess

**CERVICAL/THORACIC/LUMBAR SPINES-** tumors, cancer, post surgery, infection (e.g. discitis, osteomyelitis, epidural abscess)

**CTA BRAIN/COW-** aneurysm

**CTA CAROTIDS/NECK-** stenosis, aneurysm, stroke workup

**CTA CAROTIDS/NECK & BRAIN/COW-** stenosis, stroke workup

**CTA ABD/PELVIS-** aortic aneurysm

### **CT IV ONLY studies cont'd**

**CTA CHEST/ABD/PELVIS-** eval for known or suspected aortic dissection, leak, tear or thrombosis, trauma or emergency eval of aortic injury

**MESENTERIC ISCHEMIA ANGIO-** eval for mesenteric ischemia, ischemic bowel

**PORTOSYSTEMIC SHUNT EVALUATION-** to confirm patency of a surgical portosystemic shunt

**PRE-EVT OR ENDOLUMINAL GRAFT-ANGIO ABD-** to determine extent of aneurysm prior to endoluminal stenting, pre-surgical abdominal aortic stent or bypass evaluation, abdominal aortic/ iliac/common femoral/splenic/cealic/SMA/hepatic/gastric/GDA/ renal aneurysm or pseudoaneurysm, chronic mesenteric ischemia, acute mesenteric ischemia

**POST EVT OR ENDOVASCULAR GRAFT-ANGIO ABD/PEL-**post surgical abdominal aortic stent or bypass eval to r/o endo leak

**RENAL ANGIO-** hypertension, trauma

**ANGIO RUNOFF (LONG LEGS)-** peripheral vascular disease (claudication, absent peripheral pulse, ischemic ulcer, abnormal ankle-brachial index), lower extremity thrombo-embolism, femoro-popliteal bypass graft evaluation, aortic occlusion, iliac occlusal disease, (patient may have a "cold foot")

## **MRI Clinical Indication Guidelines**

### **Musculoskeletal & Body MRI Exams**

**W & W/O indications for all musculoskeletal exams-**  
bone infection, osteomyelitis, mass/tumor

**Shoulder w/o only-**shoulder/arm pain, Rotator Cuff Tear, SLAP injury

**Shoulder w/Arthrogram-** labral tear

**Elbow w/o only-** Biceps tendon tear, elbow pain

**Wrist w/o only-**wrist pain, fracture

**Long Bone (Humerus, Radius/Ulna, Femur, Tib/Fib)-**pain

**Pelvis & Hip w/o only-** hip pain, degeneration of hip joint, possible tears, fractures

**Hip w/Arthrogram-** labral tea

**Knee-**pain, ACL tear, MCL tear, internal derangement, meniscal tear

**Ankle-**ankle pain, Achilles tendon, tibial or peroneal tendon

**Foot-**distal foot pain, Morton's neuroma, synovial inflammatory disease

**Temporomandibular Joints (TMJ)-**TMJ pain, TMJ injury, internal derangement

**Abdomen w & w/o-** evaluate liver masses or disease, pancreatic masses or disease, adrenal masses and cysts, renal masses and cysts

**MRCP (always w/o only)-** biliary and pancreatic disease, biliary stone/obstruction



## **MRI Clinical Indication Guidelines**

### **Neuro MRI Exams**

**Brain w/o only**-headaches, dizziness, memory loss, stroke

**Brain w & w/o**-headaches, dizziness, memory loss, seizures, MS

**Brain w/ IAC's**- tinnitus, vertigo, acoustic neuroma

**Brain w/ Pituitary**- headaches, hyperprolactemia

**Orbits w/wo**-double vision, vision loss, orbital pain

**MRA Brain (always w/o only)**-aneurysm, stenosis

**MRA Carotids w & w/o**-stenosis, aneurysm, dissection

**Soft Tissue Neck w & w/o**-mass, lymphoma, infection, pain, dysphagia, vocal cord paralysis, staging of carcinoma, parotid or submandibular gland/mass, skull base tumor,

**Cervical Spine w/o**-neck pain, arm/hand numbness, stenosis

**Cervical Spine w & w/o**-MS, myelopathy, tumor, infection

**Thoracic Spine w/o**-back pain, arm/hand numbness, stenosis, trauma

**Thoracic Spine w & w/o**- MS, myelopathy, tumor, infection

**Lumbar Spine w/o only**-low back pain, leg/foot numbness, stenosis, trauma

**Lumbar Spine w & w/o**- post surgery within 10 years, tumor, infection

## Patient Preps

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**TABLE OF CONTENTS**

<b>COMPUTED TOMOGRAPHY (CT) EXAMS</b>	
CT UPPER ABDOMEN	22
CT ABDOMEN (AAA ONLY)	23
CT ABDOMEN & PELVIS	24
CT ABDOMEN STONE	25
CT CHEST, ABDOMEN, AND PELVIS	26
CTA-CT ANGIOGRAM-CAROTIDS, AAA, LEGS	27
CT CHEST	28
HEAD CT (WITH INTRAVENOUS CONTRAST)	29
HEAD CT (WITHOUT INTRAVENOUS CONTRAST)	30
MISCELLANEOUS CT EXAMS WHICH MAY REQUIRE ADMINISTRATION OF INTRAVENOUS CONTRAST	31
CT OF THE PELVIS	32
CT OF THE SPINE	33
CT CARDIAC SCORING	34
IMAGE-GUIDED NEEDLE BIOPSY OR ABSCESS DRAINAGE	35
CT WITH INTRAVENOUS CONTRAST	36
<b>NUCLEAR MEDICINE IMAGING EXAMS</b>	
NUCLEAR MEDICINE BONE SCAN	38
NUCLEAR MEDICINE CYSTOGRAM	39
GALLIUM SCAN	40
NUCLEAR MEDICINE GASTRIC EMPTYING STUDY	41
HIDA SCAN (CHOLESCINTIGRAPHY) WITH CCK INJECTION	42
NUCLEAR MEDICINE GASTROINTESTINAL BLEEDING STUDY	43
NUCLEAR MEDICINE LIVER/SPLEEN SULFUR COLLOID SCAN	44
NUCLEAR MEDICINE LUNG SCAN	45
MECKEL'S DIVERTICULUM SCAN	46
MUGA SCAN	47
RENOGRAM	48
NUCLEAR MEDICINE SCROTUM/TESTES SCAN	49
MYOCARDIAL MYOVIEW PERFUSION STUDIES WITH S.P.E.C.T.	50
I-123 THYROID UPTAKES AND SCAN	51
COLORECTAL CANCER STUDY (CEA STUDY)	52
I-131 THERAPY FOR HYPERTHYROIDISM	53
BONE THERAPY FOR PAINFUL OSSEOUS METASTASES	54
I-131 WHOLE BODY IMAGING FOR THYROID CANCER	55

<b>X-RAY EXAMS</b>	
BARIUM ENEMA	57
BARIUM SWALLOW ESOPHAGRAM	58
CHEST FLUOROSCOPY	59
ORAL CHOLECYSTOGRAM	60
GASTROGRAFIN ENEMA	61
UPPER GI SERIES: SMALL BOWEL SERIES	62
RETROGRADE PYELOGRAM	63
MYELOGRAM WITH NON-IONIC IODINATED CONTRAST	64
PEDIATRIC BARIUM ENEMA	65
T-TUBE CHOLANGIOGRAM	66
FLUOROSCOPICALLY GUIDED LUMBAR PUNCTURE	67
DEXA SCANS (BONE MINERAL DENSITY)	68
<b>ULTRASOUND EXAMS</b>	
ULTRASOUND GUIDED NEEDLE BIOPSY, CYST ASPIRATION, THORACENTESIS, PERITONEOCENTESIS, etc...	70
CAROTID DUPLEX DOPPLER ULTRASONOGRAPHY	71
UPPER ABDOMINAL ULTRASONOGRAPHY (e.g., GALLBLADDER, LIVER, PANCREAS, SPLEEN, etc...)	72
KIDNEY ULTRASONOGRAPHY	73
ULTRASONOGRAPHY OF PANCREAS, AORTA, SPLEEN	74
TRANSABDOMINAL PELVIC ULTRASONOGRAPHY	75
TRANSVAGINAL ULTRASONOGRAPHY	76
OBSTETRICAL ULTRASONOGRAPHY	77
RENAL ARTERY DOPPLER	78
ULTRASOUND SCREENINGS	79
<b>REQUIRED FORMS</b>	
X-RAY PROCEDURES WHICH REQUIRE PATIENT INFORMATION AND CONSENT FORMS	81
ULTRASOUND PROCEDURES WHICH REQUIRE SPECIAL CONSENT FORMS	82
REQUIRED FORMS FOR ALL MRI EXAMS	83
REQUIRED FORMS FOR ALL NUCLEAR MEDICINE STUDIES	84
<b>POST-PROCEDURE ORDER AND PATIENT DISCHARGE INSTRUCTIONS FORMS</b>	
POST MYELOGRAM ORDERS	86
POST LUMBAR PUNCTURE ORDERS	87
POST MYELOGRAM DISCHARGE INSTRUCTIONS	88
POST LUMBAR PUNCTURE DISCHARGE INSTRUCTIONS	89

## Computed Tomography (CT) Exams

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**CT UPPER ABDOMEN  
(e.g., Liver, Pancreas, Kidneys, etc.)**

1. Nothing to eat or drink for 4 hours prior to the exam, except for oral prep. Patient will need to drink 2 glasses of Omni 300 10cc with 500cc water in each glass that will be given in the x-ray department.
2. The following clinical situations require a **current serum creatinine/GFR**\*\* measurement to insure that the value is normal before intravascular contrast can be administered (i.e., before a CT study of the upper abdomen with IV contrast can be performed):
  - Age > 60
  - History of renal disease, including:
    - Dialysis
    - Kidney transplant
    - Single kidney
    - Renal Cancer
    - Renal surgery
    - Multiple Myeloma
  - History of Diabetes Mellitus
  - Metformin or Metformin containing drug combinations
  - ALL INPATIENTS

\*\* Serum creatinine determination must be current, i.e., done within the 30 days immediately prior to the study. If the determination is to be made the day of the study, blood must be drawn at least 45 minutes prior to the scheduled time of the study such that the results will be available by the scheduled time.

\***Metformin** should be discontinued before or at the time of the procedure, withheld for 48 hours after the procedure, and be *restarted only after renal function has been re-evaluated (i.e., via a repeat serum creatinine determination) and found to be normal.*

3. *CT – MRI – X-RAY Information Form and IV Contrast Record* form must be completed and signed before the study is begun.

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**Brent Bullis, MD**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparations**

**CT ABDOMEN / AAA ONLY  
(To be used **ONLY** for AAA Protocol)**

1. Nothing to eat for four (4) hours prior to exam.
2. May drink liquids up to one (1) hour before exam.
3. Scan time: 30 minutes
4. **The following clinical situations require a current serum creatinine GFR\*\* measurement to insure that the value is normal before intravascular contrast can be administered (i.e., before a CT study of the upper abdomen with IV contrast can be performed):**
  - **Age > 60**
  - **History of renal disease, including:**
    - **Dialysis**
    - **Kidney transplant**
    - **Single kidney**
    - **Renal Cancer**
    - **Renal surgery**
    - **Multiple Myeloma**
  - **History of Diabetes Mellitus**
  - **Metformin or Metformin containing drug combinations**
  - **ALL INPATIENTS**

\*\* Serum creatinine determination must be current, i.e., done within the 30 days immediately prior to the study. If the determination is to be made the day of the study, blood must be drawn at least 45 minutes prior to the scheduled time of the study such that the results will be available by the scheduled time.

**\*Metformin** should be discontinued before or at the time of the procedure, withheld for 48 hours after the procedure, and be *restarted only after renal function has been re-evaluated (i.e., via a repeat serum creatinine determination) and found to be normal.*

5. **CT-MRI-X-ray Information Form and IV Contrast Record form must be completed and signed before the study is performed.**

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**Brent Bullis, MD**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department / Patient Preparation**

**CT ABDOMEN AND PELVIS**

1. Nothing to eat or drink for 4 hours prior to the exam, except for oral prep. Patient will need to drink 2 glasses of Omni 300 10cc with 500cc water in each glass that will be given in the x-ray department.
2. The following clinical situations require a **current serum creatinine/GFR**\*\* measurement to insure that the value is normal before intravascular contrast can be administered (i.e., before a CT study of the upper abdomen with IV contrast can be performed):
  - Age > 60
  - History of renal disease, including:
    - Dialysis
    - Kidney transplant
    - Single kidney
    - Renal Cancer
    - Renal surgery
    - Multiple Myeloma
  - History of Diabetes Mellitus
  - Metformin or Metformin containing drug combinations
  - ALL INPATIENTS

\*\* Serum creatinine determination must be current, i.e., done within the 30 days immediately prior to the study. If the determination is to be made the day of the study, blood must be drawn at least 45 minutes prior to the scheduled time of the study such that the results will be available by the scheduled time.

\***Metformin** should be discontinued before or at the time of the procedure, withheld for 48 hours after the procedure, and be *restarted only after renal function has been re-evaluated (i.e., via a repeat serum creatinine determination) and found to be normal.*

3. *CT – MRI – X-RAY Information Form and IV Contrast Record* form must be completed and signed before the study is begun.

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**Brent Bullis, MD**

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**Date**



**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparations**

**CT ABDOMEN STONE  
(To be used ONLY for kidney stones)**

1. No prep needed.

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**Brent Bullis, MD**

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**Date**

**Prairie Lakes HealthCare System**  
**Radiology Department / Patient Preparation**  
**CT CHEST, ABDOMEN AND PELVIS**

1. Nothing to eat or drink for 4 hours prior to the exam, except for oral prep. Patient will need to drink 2 glasses of Omni 300 10cc with 500cc water in each glass that will be given in the x-ray department.
2. The following clinical situations require a **current serum creatinine/GFR**\*\* measurement to insure that the value is normal before intravascular contrast can be administered (i.e., before a CT study of the upper abdomen with IV contrast can be performed):
  - Age > 60
  - History of renal disease, including:
    - Dialysis
    - Kidney transplant
    - Single kidney
    - Renal Cancer
    - Renal surgery
    - Multiple Myeloma
  - History of Diabetes Mellitus
  - Metformin or Metformin containing drug combinations
  - ALL INPATIENTS

\*\* Serum creatinine determination must be current, i.e., done within the 30 days immediately prior to the study. If the determination is to be made the day of the study, blood must be drawn at least 45 minutes prior to the scheduled time of the study such that the results will be available by the scheduled time.

\*Metformin should be discontinued before or at the time of the procedure, withheld for 48 hours after the procedure, and be *restarted only after renal function has been re-evaluated (i.e., via a repeat serum creatinine determination) and found to be normal.*

3. *CT – MRI – X-RAY Information Form and IV Contrast Record* form must be completed and signed before the study is begun.

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**Brent Bullis, MD**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department / Patient Preparation**

**CTA – CT Angiogram – Carotids, AAA, Legs**

1. Nothing to eat for four (4) hours prior to exam.
2. May drink liquids up to one (1) hour before exam.
3. The following clinical situations require a **current serum creatinine/GFR**\*\* measurement to insure that the value is normal before intravascular contrast can be administered (i.e., before a CT study of the upper abdomen with IV contrast can be performed):
  - Age > 60
  - History of renal disease, including:
    - Dialysis
    - Kidney transplant
    - Single kidney
    - Renal Cancer
    - Renal surgery
    - Multiple Myeloma
  - History of Diabetes Mellitus
  - Metformin or Metformin containing drug combinations
  - ALL INPATIENTS

\*\* Serum creatinine determination must be current, i.e., done within the 30 days immediately prior to the study. If the determination is to be made the day of the study, blood must be drawn at least 45 minutes prior to the scheduled time of the study such that the results will be available by the scheduled time.

\*Metformin should be discontinued before or at the time of the procedure, withheld for 48 hours after the procedure, and be *restarted only after renal function has been re-evaluated (i.e., via a repeat serum creatinine determination) and found to be normal.*

4. *CT – MRI – X-RAY Information Form and IV Contrast Record* form must be completed and signed before the study is begun.

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**Brent Bullis, MD**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department / Patient Preparation**

**C.T. CHEST**

1. Nothing to eat for four (4) hours prior to exam.
2. May drink liquids up to one (1) hour before exam.
3. The following clinical situations require a **current serum creatinine/GFR**\*\* measurement to insure that the value is normal before intravascular contrast can be administered (i.e., before a CT study of the upper abdomen with IV contrast can be performed):
  - Age > 60
  - History of renal disease, including:
    - Dialysis
    - Kidney transplant
    - Single kidney
    - Renal Cancer
    - Renal surgery
    - Multiple Myeloma
  - History of Diabetes Mellitus
  - Metformin or Metformin containing drug combinations
  - ALL INPATIENTS

\*\* Serum creatinine determination must be current, i.e., done within the 30 days immediately prior to the study. If the determination is to be made the day of the study, blood must be drawn at least 45 minutes prior to the scheduled time of the study such that the results will be available by the scheduled time.

\*Metformin should be discontinued before or at the time of the procedure, withheld for 48 hours after the procedure, and be *restarted only after renal function has been re-evaluated (i.e., via a repeat serum creatinine determination) and found to be normal.*

4. *CT – MRI – X-RAY Information Form and IV Contrast Record* form must be completed and signed before the study is begun.

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**Brent Bullis, MD**

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**Date**

## HEAD CT WITH INTRAVENOUS CONTRAST

1. Nothing to eat for four (4) hours prior to exam.
2. May take liquids up to one (1) hour before exam.
3. The following clinical situations require a **current serum creatinine/GFR**\*\* measurement to insure that the value is normal before intravascular contrast can be administered (i.e., before a CT study of the upper abdomen with IV contrast can be performed):
  - Age > 60
  - History of renal disease, including:
    - Dialysis
    - Kidney transplant
    - Single kidney
    - Renal Cancer
    - Renal surgery
    - Multiple Myeloma
  - History of Diabetes Mellitus
  - Metformin or Metformin containing drug combinations
  - ALL INPATIENTS

\*\* Serum creatinine determination must be current, i.e., done within the 30 days immediately prior to the study. If the determination is to be made the day of the study, blood must be drawn at least 45 minutes prior to the scheduled time of the study such that the results will be available by the scheduled time.

\*Metformin should be discontinued before or at the time of the procedure, withheld for 48 hours after the procedure, and be *restarted only after renal function has been re-evaluated (i.e., via a repeat serum creatinine determination) and found to be normal.*
4. *CT – MRI – X-RAY Information Form and IV Contrast Record* form must be completed and signed before the study is begun.

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**Brent Bullis, MD**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department / Patient Preparation**

**HEAD CT WITHOUT INTRAVENOUS CONTRAST**

1. No prep needed.
2. CT-MRI-X-ray Information Form and IV Contrast Record form must be completed and signed before the study is begun.

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**Brent Bullis, MD**

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**Date**

**MISCELLANEOUS C.T. EXAMS WHICH MAY REQUIRE  
ADMINISTRATION OF INTRAVASCULAR CONTRAST**

(e.g., Neck Soft Tissues, Extremities, Post-op Spine, etc.)

1. No solid food for 4 hours prior to the exam.
2. The patient may take liquids up to one (1) hour before exam.
3. The following clinical situations require a **current serum creatinine/GFR**\*\* measurement to insure that the value is

normal before intravascular contrast can be administered (i.e., before a CT study of the upper abdomen with IV contrast can be performed):

- Age > 60
- History of renal disease, including:
  - Dialysis
  - Kidney transplant
  - Single kidney
  - Renal Cancer
  - Renal surgery
  - Multiple Myeloma
- History of Diabetes Mellitus
- Metformin or Metformin containing drug combinations
- ALL INPATIENTS

\*\* Serum creatinine determination must be current, i.e., done within the 30 days immediately prior to the study. If the determination is to be made the day of the study, blood must be drawn at least 45 minutes prior to the scheduled time of the study such that the results will be available by the scheduled time.

\*Metformin should be discontinued before or at the time of the procedure, withheld for 48 hours after the procedure, and be *restarted only after renal function has been re-evaluated (i.e., via a repeat serum creatinine determination) and found to be normal.*

4. *CT – MRI – X-RAY Information Form and IV Contrast Record* form must be completed and signed before the study is begun.

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**Brent Bullis, MD**

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**Date**

**Prairie Lakes HealthCare System**  
**Radiology Department / Patient Preparation**

**CT OF THE PELVIS**

**(not as part of a combined CT of ABD/PELVIS)**

1. Nothing to eat or drink for 4 hours prior to the exam, except for oral prep. Patient will need to drink 2 glasses of Omni 300 10cc with 500cc water in each glass that will be given in the x-ray department.
2. The following clinical situations require a **current serum creatinine/GFR\*\*** measurement to insure that the value is normal before intravascular contrast can be administered (i.e., before a CT study of the upper abdomen with IV contrast can be performed):
  - Age > 60
  - History of renal disease, including:
    - Dialysis
    - Kidney transplant
    - Single kidney
    - Renal Cancer
    - Renal surgery
    - Multiple Myeloma
  - History of Diabetes Mellitus
  - Metformin or Metformin containing drug combinations
  - ALL INPATIENTS

\*\* Serum creatinine determination must be current, i.e., done within the 30 days immediately prior to the study. If the determination is to be made the day of the study, blood must be drawn at least 45 minutes prior to the scheduled time of the study such that the results will be available by the scheduled time.

\***Metformin** should be discontinued before or at the time of the procedure, withheld for 48 hours after the procedure, and be *restarted only after renal function has been re-evaluated (i.e., via a repeat serum creatinine determination) and found to be normal.*

3. *CT – MRI – X-RAY Information Form and IV Contrast Record* form must be completed and signed before the study is begun.

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**Brent Bullis, MD**

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**Date**



**Prairie Lakes HealthCare System  
Radiology Department / Patient Preparation**

**C.T. OF THE SPINE  
(in studies not requiring intravascular contrast)**

1. No preparation necessary.
2. Scan time will be about 30 minutes.

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department / Patient Preparation**

**C.T. CARDIAC SCORING  
Screening of the Coronary Arteries**

1. No Caffeine or Smoking 2 hours before study.
2. This is a **SCREENING TOOL**. Patients who have had Cardiovascular treatment or surgery, including coronary stenting, coronary bypass surgery, pacemaker or valve replacement are not candidates for this CT procedure and cannot be scheduled.
3. Allow 15 minutes in the schedule.
4. The patient will pay the \$45 fee at the time of registration.

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System**  
**Radiology Department / Patient Preparation**

**IMAGE-GUIDED NEEDLE BIOPSY OR ABSCESS DRAINAGE**  
**(C.T.-, US-, or Fluoro-Guided)**

1. Schedule with Radiology.
2. Attending doctor needs these labs ordered:
  - a. Platelets
  - b. INR
  - c. GFR (if procedure is to be done under CT guidance)(SEE GUIDELINES BELOW)
  - d. Patient should be off Coumadin and or Plavix for 5 days prior to the procedure (must be approved by primary and or referring physician)
  - e. Heparin
    - IV-needs to be stopped for 4-6 hrs
    - SQ-
      - 5000 units, procedure can be done in 4-6 hrs
      - 10,000-20,000 units procedure can be done next day

The following clinical situations require a current serum creatinine\*\* measurement to insure that the value is normal before intravascular contrast can be administered (i.e., before a CT study of the upper abdomen with IV contrast can be performed):

- Age > 60
- History of renal disease, including:
  - Dialysis
  - Kidney transplant
  - Single kidney
  - Renal Cancer
  - Renal surgery
  - Multiple Myeloma
- History of Diabetes Mellitus
- Metformin or Metformin containing drug combinations
- ALL INPATIENTS

\*\* Serum creatinine determination must be current, i.e., done within the 30 days immediately prior to the study. If the determination is to be made the day of the study, blood must be drawn at least 45 minutes prior to the scheduled time of the study such that the results will be available by the scheduled time.

**\*Metformin** should be discontinued before or at the time of the procedure, withheld for 48 hours after the procedure, and be *restarted only after renal function has been re-evaluated (i.e., via a repeat serum creatinine determination) and found to be normal.*

3. Attending doctor's History and Physical must be on the patient's chart before the procedure.
4. Patient should be NPO but may take oral meds with small amounts of water.
5. *Surgical Consent* form and *CT – MRI – X-ray Information Form and IV Contrast Record* form signed by patient.
6. **PATIENT'S CHART MUST ACCOMPANY PATIENT TO X-RAY!!**
7. Time required to complete exam 1 ½ hours.
8. Must have Surgical backup.

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**Brent Bullis, MD.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department / Patient Preparation**

**CT WITH INTRAVENOUS CONTRAST**

1. The following clinical situations require a current serum creatinine\*\* measurement to insure that the value is normal before intravascular contrast can be administered (i.e., before a CT study with IV contrast can be performed):

- Age > 60
- History of Renal disease, including:
  - Dialysis
  - Kidney transplant
  - Single kidney
  - Renal Cancer
  - Renal surgery
  - Multiple Myeloma
- History of Diabetes Mellitus
- Metformin or Metformin containing drug combinations
- ALL INPATIENTS

\*\* Serum creatinine determination must be current, i.e., done within the 30 days immediately prior to the study. If the determination is to be made the day of the study, blood must be drawn at least 45 minutes prior the scheduled time of the study such that the results will be available by the scheduled time.

\***Metformin** should be discontinued at the time of the procedure, and withheld for 48 hours after the procedure. And to be restarted only after renal function has been re-evaluated (i.e., via a repeat serum creatinine determination) and found to be normal.

**2 .CT-MRI-X-ray Information Form and IV Contrast Record from must be completed and signed before the study is begun.**

Nuclear Medicine  
Imaging Exams

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparations**

**NUCLEAR MEDICINE BONE SCAN**

1. The patient should have had no barium studies performed 72 hours or less prior to study.  
*Exceptions:*
  - Bone scans of the extremities may proceed even if a recent barium study has been performed.
  - If the acquisition of the bone scan of skeletal parts other than extremities is considered urgent and the patient has had a barium study within the last 48 hours, a bowel-cleansing regimen with cathartics may be instituted and KUBs obtained to document clearance of barium from the colon. As soon as barium clearance is successful, the bone scan study may proceed.
2. No other restrictions or preparations necessary.
3. The *Nuclear Medicine Information and Consent Form* must be completed and signed by the patient or his guardian prior to the injection of the radiopharmaceutical.
4. After injection of radiopharmaceutical and during the two hours prior to scanning, the patient must drink at least 48 ounces of fluid unless he/she has a medical condition that contraindicates this amount of fluid intake. Water, juice, coffee, tea, soup, soda, etc. are all acceptable. Patient should also void frequently during the two hours prior to and immediately prior to scanning.
5. After completion of the scan, the patient should drink more fluids than usual for the remainder of the day and evening.
6. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**NUCLEAR MEDICINE CYSTOGRAM**

1. The patient's urinary bladder must be catheterized before he/she is transported to Nuclear Medicine.
2. A nurse must accompany the pediatric patient to Nuclear Medicine.
3. *Nuclear Medicine Information and Consent Form* must be completed and signed by the parent before the procedure is begun.
4. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is cancelled.**

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**GALLIUM SCAN**

1. No barium studies 72 hours or more prior to scan.
2. Adverse drug reactions may cause gallium uptake in the lungs which is not related to infection or tumor; some of the drugs known to be associated with abnormal uptake in the lungs are: cytoxin, busulfan, bleomycin, amiodarone, and nitrofurantoin. If the patient is taking any of these drugs, it is important that that information be known by the radiologist interpreting the study.
3. Radiologist may order a bowel cleansing prep, depending on patient condition and history.
4. *Nuclear Medicine Information and Consent Form* must be completed and before the radiopharmaceutical is injected.
5. The patient should be informed that he/she may have to return for scanning multiple times after injection; scanning will be done routinely at 6 and 24 hours and often at 48 and 72 hours. Repeat bowel-cleansing preps may be necessary before each scanning session.
6. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

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**Brent Bullis, M.D.**

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**Date**



**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**NUCLEAR MEDICINE GASTRIC EMPTYING STUDY**

1. No smoking and no food or liquids for a minimum of 8 hours before the study.
2. Drugs affecting gastrointestinal motility should be withdrawn for at least 3 half-lives of the drug, as per order of requesting physician. Many drugs are known to delay gastric emptying; some of these are: anticholinergics, antidepressants, nicotine, progesterone, opiates, levodopa, contraceptive pills, beta-adrenergic agonists, and alcohol.
3. *Nuclear Medicine Information and Consent Form* must be completed and signed before the test is begun.

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**Brent Bullis, M.D.**

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**Date**

## HIDA SCAN (CHOLESCINTIGRAPHY) WITH CCK STIMULATION

1. The patient should not have had barium studies within the previous 72 hours. If barium study was done shortly before the HIDA study was ordered, have attending physician write order for KUB to determine if barium has cleared to an extent that the study may proceed.
2. For elective studies the patient should be NPO at least 4 hours prior to the study. If the scan is scheduled in the afternoon, the patient may have an early light breakfast, but at least 4 hours prior to the exam
3. If the patient has fasted longer than 24 hours, a “clearing dose” of CCK analog sincalide will be given (0.02 micrograms/kilogram in 30cc saline IV with infusion pump over 30 minutes) prior to the administration of the HIDA radiopharmaceutical.
4. Emergency study to rule out acute cholecystitis:  
The patient must have been fasting for at least 2 hours before the study.
5. *Nuclear Medicine Information and Consent Form* must be completed and signed before the study is begun.
6. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

**IMPORTANT NOTE:** The following drugs are associated with poor gallbladder emptying. Patient taking these drugs may have low gallbladder ejection fractions in response to sincalide stimulation which is not related to primary gallbladder or other biliary tract disease.

\*\*\*\*\* **Morphine and derivatives – The patient must be off this medicine for 12 hours**  
**Atropine**  
**Calcium channel blockers**  
**Indomethacin**  
**Progesterone, Oral Contraceptives**  
**Octreotide**  
**Theophylline**  
**Erythromycin**

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**NUCLEAR MEDICINE GASTROINTESTINAL BLEEDING STUDY**

1. The patient should not have had a barium study in the previous 72 hours
2. Patient should void immediately prior to coming to Nuclear Medicine. If patient has no bladder control, a Foley catheter must be placed in the urinary bladder before patient comes to Nuclear Medicine for the study.

No other special preparation is necessary, but a few drugs (heparin, doxorubicin, methyldopa, hydralazine, and quinidine) and iodinated contrast media are known to interfere with good RBC radionuclide labeling. If the patient has had any of these, poor labeling may detract from the accuracy of the study.

3. *Nuclear Medicine Information and Consent Form* must be completed and signed before the study is begun.
4. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**NUCLEAR MEDICINE LIVER / SPLEEN SULFUR COLLOID SCAN**

1. Patient must NOT have had a barium study done within 48 hours.
2. No other preparation necessary.
3. Regular diet.
4. Nuclear Medicine Information and Consent Form must be completed and signed.
5. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

\_\_\_\_\_  
**Brent Bullis, M.D.**

\_\_\_\_\_  
**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparations**

**NUCLEAR MEDICINE LUNG SCAN**

1. Chest X-ray within 12-24 hours of exam.
2. The Radiologist and Nuclear Medicine Technologists must be notified if the scheduled patient is known to be *pregnant*, is known to have *severe pulmonary arterial hypertension*, or is *post-pneumonectomy* so that adjustments in dose of the perfusion agent may be made for the safety of the patient. For patients with known *right-to-left cardiac shunts* perfusion imaging with macroaggregated albumin is relatively contraindicated and alternative methods of evaluation (e.g., CT pulmonary angio) should be considered.
3. Regular diet.
4. *Nuclear Medicine Information and Consent Form* must be signed before the study is begun.
5. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

\_\_\_\_\_  
**Brent Bullis, M.D.**

\_\_\_\_\_  
**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**MECKEL’S DIVERTICULUM SCAN**

1. The patient should be fasting for 8 hours before study to reduce the size of the stomach.
2. No barium studies should have been performed within 3 to 4 days of the study..
3. Premedication:
  - a. may be done without any premedication
  - b. there are **advantages to premedicating** the patient with an H2 blocker which inhibits excretion of the Tc-99m pertechnetate from gastric mucosa-containing structures and has the effect of relatively increasing the concentration in that structure thus enhancing its detectability.
    - cimetidine (Tagamet) 20 mg/kg orally for 2 days before the study
4. *Nuclear Medicine Information and Consent Form* must completed and signed before the study is begun.
5. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**MUGA SCAN (EQUILIBRIUM EKG-GATED BLOOD POOL  
VENTRICULOGRAPHY)**

1. No special preparation is necessary, but a few drugs (heparin, doxorubicin, methyldopa, hydralazine, and quinidine) and iodinated contrast media are known to interfere with good RBC radionuclide labeling. If the patient has had any of these, poor labeling may detract from the accuracy of the study.
2. *Nuclear Medicine Information and Consent* form must be completed and signed.
3. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**RENOGRAM/RENAL OR CAPTOPRIL RENAL NUCLEAR MEDICINE IMAGING SCAN**

1. Patient should be well hydrated.
  - 1.1. The Radiologist usually uses lasix on all of his renal scans so a BUN and CREATININE will need to be done prior to the exam. If lasix is used, the patient must drink at least 300 to 500 ml of water 30 minutes prior to the start of the procedure. (if it is a child 15ml/kg over 30 min)
2. Patient should void before study.
3. Pediatric patients:
  - Insertion of IV line (either 25 gauge butterfly or 24 gauge intracath) at least 15 minutes prior to the study
  - Nurse to accompany child to Nuclear Medicine
  - Child will be catheterized in Nuclear Medicine department just prior to the study. (Specific catheters are used for certain conditions. Check with Nuclear Medicine.)
4. When doing a Captopril Renal scan the patient must be well hydrated. The patient can not have any solid food 4 hours prior to the exam.
  - 4.1. The patient must be off any ACE inhibitor blood pressure medicine 3 to 5 days prior to the exam.
  - 4.2. Inform the patient that they will be in the hospital for approximately 3 hours for a Captopril Renal scan.
  - 4.3. Insert an IV line into the patients arm prior to starting the test.
  - 4.4. Bun and Creatine will need to be done prior to the exam
5. *Nuclear Medicine Information and Consent Form* must be signed before the study is begun.
6. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled**

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**Brent Bullis, M.D.**

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**Date**



**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**SCROTUM/TESTES NUCLEAR MEDICINE IMAGING STUDY**

1. No preparation necessary.
2. *Nuclear Medicine Information and Consent Form* must be signed before the study is begun.
3. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**MYOCARDIAL PERFUSION WITH REST AND STRESS IMAGING**

1. No smoking or caffeine intake after midnight and until both the stress and rest portions of the study are completed. Small glasses of water are permitted. Ideally the patient should be otherwise NPO for 4 hours prior to the first tracer injection.
2. The following cardiac drugs may interfere with stress testing. The various drugs and the recommended withdrawal interval of these drugs are as follows:
  - For **EXERCISE STRESS TESTING**:
    - Beta-blockers (e.g., propranolol) off for 72 hours
    - Calcium channel blockers off for 48 to 72 hours
    - Nitrates (long-acting) off for 12 hours
    - Nitrates (short-acting) off for at least 2 hours
  - For **PHARMACOLOGICAL STRESS TESTING** (persantine or adenosine):
    - For 24 hours before the test, please do not eat or drink any of the foods, and do not take any of the medications, on the list below.**
    - NO coffee or tea that is brewed, instant, iced or decaffeinated.
    - NO colas or other soft drinks that contain caffeine, including those labeled “caffeine-free.”
    - NO chocolates, including candies, frosting, cookies, pies, cocoa and chocolate milk.
    - NO aspirin products that contain caffeine, such as Anacin and Excedrin.
    - NO Persantine (dipyridamole).
    - NO theophylline or theophylline-containing products such as Constant-T, Primatene, Quibron, Slo-Phylline, or Theo-Dur.
3. Patient should wear comfortable clothing; e.g., sweat suit bottoms, gown, robe, and walking shoes.
4. Nuclear Medicine Information and Consent form must be completed and signed before the study is begun.
5. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

***Note:** Although the above withdrawal periods are recommended to achieve the most accurate stress test results, withdrawal of these drugs from the patient’s treatment regimen may not be feasible for medical reasons. The ordering physician should be consulted to get his okay before any of these agents are withheld.*

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**IODINE-123 THYROID UPTAKES AND SCAN**

1. The following medications, diagnostic contrast media, and medical conditions may have an adverse effect on thyroid uptake of radioiodine such that test results may be spuriously low or occasionally spuriously high\*\*

<b>Decreased or Increased**</b>	<b>Duration of Effect</b>
Thyroxine (T4), Synthroid	4 to 6 weeks
Triiodothyronine (T3)	2 to 3 weeks
Lugol's solution	2 to 4 weeks
Saturated solution of potassium iodide	2 to 4 weeks
Some mineral supplements, cough meds, And vitamin preparations	2 to 4 weeks
Iodinated food supplements (strawberries, kiwi, table salt, vitamins, and fish)	2 to 5 days
Iodinated drugs	
Iodinated skin ointments	2 to 4 weeks
Water-soluble contrast agents (e.g., CT and IVP dye)	2 to 4 weeks
Oral cholecystographic agents (x-ray contrast)	4 weeks or longer
Fat-soluble media (e.g., lymphogram dye)	months to years
Lithium**	
Antithyroid drug cessation rebound**	
Corticosteroids	
Monovalent anions (perchlorate)	
Penicillin	
Goitrogenic foods (e.g., cabbage, turnips)	
Bromides	
Prior neck radiation	
Pregnancy**	
Recovery from subacute thyroiditis**	
Molar pregnancy; choriocarcinoma** [HCG has a TSH effect]	

2. The patient should be NPO after midnight and until one hour after ingesting the radiopharmaceutical.
3. The test involves the patient coming to Nuclear Medicine in the morning of the first day for oral administration of the radiopharmaceutical, then 6 hours later for the first determination of thyroid uptake of the material, and finally 24 hours after the oral administration for a final thyroid uptake and scanning.
4. *The Nuclear Medicine Information and Consent* form must be completed and signed prior to the administration of the radiopharmaceutical.
5. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes Healthcare System  
Radiology Department – Patient Preparation**

**COLORECTAL CANCER STUDY (CEA SCAN)**

1. CEA-Scan is contraindicated in patients who are hypersensitive to products of murine origin.
2. Explain to the patient that CEA-Scan is a foreign (mouse) protein and that:
  - 2.1. There is a <1% chance of inducing human anti-murine antibodies (HAMA). HAMA may interfere with subsequent murine-antibody based diagnostic tests and therapeutic agents.
  - 2.2. There is a <1% chance of having a mild limited reaction consisting of fever, urticaria, generalized itching, nausea, or headache at the time of injection; severe reactions are rare.
3. Patients may be injected with CEA-Scan at least twice without a decrease in efficacy or an increase in adverse reactions.
4. Patients should not have a serum assay for CEA for 1 week following a CEA-Scan.
5. Nuclear Medicine Information and Consent form must be completed and signed before the study is begun.
6. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

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Brent Bullis, M.D.

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Date

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**I-131 THERAPY FOR HYPERTHYROIDISM**

1. The patient must not have taken antithyroid medications like propylthiouracil (PTU), for at least 7 days prior to the exam.
2. The patient must not have had intravenous or intrathecal iodinated contrast material (IVP, CT with contrast, myelogram, angiogram, arthrogram) for at least 4 to 6 weeks prior to the therapy.
3. Special written consent must be signed by the patient prior to taking the radioisotope.
4. If the patient is a female, and is menstruating, a pregnancy test must be completed before the dose is administered to this patient.
5. The patient can not be on any thyroid medicine like synthroid or thyroxin.
6. The radiologist will explain the expected benefits and possible complications to the patient.
7. Nuclear Medicine Information and Consent form must be completed and signed before the study is begun.
8. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes Healthcare System  
Radiology Department – Patient Preparation**

**BONE THERAPY FOR PAINFUL OSSEOUS METASTASES**

1. The ordering physician must write on the order how much Sm-153 or Sr-89 they want their patient injected with. (Sm-153 usually is 1.0 mCi/kg and Sr-89 40-60 uCi/kg or 4.0 mCi)
  - 1.1. The technologist must have an order, the patients weight, labs, and the patients consent before ordering the dose.
2. The patient must have a recent complete blood count. This must be done before ordering the isotope.
  - 2.1. A low white blood cell count (<3,000) is a relative contraindication.
  - 2.2. A low platelet count (<60,000) is a relative contraindication.
  - 2.3. Anemia can be corrected with transfusions.
3. Patients with urinary incontinence:
  - 3.1. Give instructions in toilet discipline. Make sure to tell them to flush the toilet twice after using.
  - 3.2. If patient is totally incontinent, the ordering physician may want to place a Foley catheter in for a couple of days.
4. The radiologist will explain the expected benefits and possible complications from having this procedure done.
5. The patient will sign several consent forms and the technologist will follow the QMP.
6. If Sm-153 is used, the patient should be hydrated with 2 liters of fluid prior to injection of the radiopharmaceutical and should void frequently after the injection of the radiopharmaceutical.
7. The technologist should place an IV line into the patients arm before the radiologist comes into the room to inject the radiopharmaceutical.
8. Nuclear Medicine Information and Consent form must be completed and signed before the study is begun.
9. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

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Brent Bullis, M.D.

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Date

**Prairie Lakes Healthcare System  
Radiology Department – Patient Preparation**

**I-131 WHOLE BODY IMAGING FOR THYROID CANCER**

1. The patient must be off of any thyroid medicine for 4 to 6 weeks prior to radiopharmaceutical administration.
  - 1.1. If the ordering physician has any questions about the patients meds, have them talk to the radiologist.
  - 1.2. The patient should not take any vitamins or eat any type of fish or strawberries for at least 48 hours before the start of the procedure.
2. The patient should be NPO for at least 4 hours prior to radiopharmaceutical administration and for at least 1 hour afterwards.
3. The patient must not have had intravenous or intrathecal iodinated contrast material(IVP,CT with contrast, myelogram, angiogram, arthrogram) for 4 to 6 weeks prior to the scan.
4. Inform the patient that they will be here for 15 minutes to take the iodine pill and they will come back for the imaging 48 hours later, which will take around 1 hour to perform.
5. Follow the QMP manual and have the patient sign the correct consent form.
6. Nuclear Medicine Information and Consent form must be completed and signed before the study is begun.
7. **If the ordering physician cancels the exam, please notify the Nuclear Medicine technologist on call ASAP regardless of the time of day or night the test is canceled.**

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**Date**

## X-Ray Exams



Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation

**BARIUM ENEMA**

1. Lunch and supper the day before exam should be clear liquids. No solid food until the exam is completed.
2. 9:00 a.m., 10:00 a.m., 11:00 a.m., drink 8 ounces of water.
3. 12:00p.m. take 2 ounces of Castor Oil.
4. 3:00p.m., 4:00p.m., 5:00p.m., drink 8 ounces of water.
5. 3:00p.m. take 2 Dulcolax tablets.
7. 7:00p.m. take 2 Dulcolax tablets.
8. Water and other clear liquids throughout the evening.
9. 6:00 a.m. the morning of the examination insert Dulcolax suppository into rectum.
10. May have clear liquid breakfast.

**POST BARIUM ENEMA:** 3 tablespoons of Milk of Magnesia following the exam to aid in expulsion of the barium.

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**BARIUM SWALLOW ESOPHAGRAM**

No preparation necessary.

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Radiology Department – Patient Preparation**

**CHEST FLUOROSCOPY**

No preparation necessary.

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**ORAL CHOLECYSTOGRAM**

1. The patient should take four (4) Bilopaque tablets orally at 8:00 pm 2 nights prior to the x-ray examination.
2. Patient should adhere to a low fat diet (as much as is practicable) after the initial dose of Bilopaque until after the completion of filming on the third morning of the study.
3. The patient should take an additional four (4) Bilopaque tablets at 8:00 p.m. the night before the exam.
4. Patient should remain NPO after midnight.
5. The patient should report to the Radiology Department the morning after the last dose of Bilopaque for x-ray filming of the gallbladder.

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**GASTROGRAFIN ENEMA**

Although the study may be done on an emergent basis (e.g., to rule out colonic obstruction or perforation) without any preparation, it is preferred that the patient be NPO for 4 hours prior to the study.

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**UPPER GI SERIES and/ or SMALL BOWEL SERIES**

1. NPO after midnight.

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**RETROGRADE PYELOGRAM**

1. Lunch and supper the day before exam should be clear liquids.
2. 9:00 a.m., 10:00 a.m., 11:00 a.m., drink 8 ounces of water.
3. 12:00p.m. take 2 ounces of Castor Oil.
4. 3:00p.m., 4:00p.m., 5:00p.m., drink 8 ounces of water.
5. 3:00p.m. take 2 Dulcolax tablets.
7. 7:00p.m. take 2 Dulcolax tablets.
8. Water throughout the evening but NPO after midnight.
9. 6:00 a.m. the morning of the examination insert Dulcolax suppository into rectum.

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**MYELOGRAM WITH NON-IONIC IODINATED CONTRAST**

1. Administration of phenothiazine drugs near the time of the myelogram is contraindicated since their use in conjunction with intrathecal contrast may precipitate seizures. It is recommended that these neuroleptic drugs be discontinued for at least 24 hours prior to and until at least 24 hours after the myelographic procedure.
2. Patient may have clear liquids up until 2 hours before but solid food intake should be stopped at least 4 hours before the procedure.
3. Patient must sign consent form before the procedure is begun.
4. The patient will be kept in Same Day Surgery for approximately 4 hours after the procedure for observation during which time the patient will be kept in reclining position with the head of bed elevated to approximately 30 degrees. Fluid intake will be encouraged.
5. A post-myelogram CT study of the spine will be obtained between 3 and 4 hours after completion of the myelogram and before the patient is discharged home from Same Day Surgery. The patient should not drive but should arrange for friends or relatives to drive him home.
6. Bed rest with head elevated to approximately 30 degrees is strongly recommended for at least 12 and preferably 24 hours after the procedure. The patient should increase fluid intake during that period.
7. The patient should report to the ER immediately if symptoms of fever, stiff neck, or severe back or head pain occur.

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**Date**



# Prairie Lakes HealthCare System Radiology Department – Patient Preparation

## PEDIATRIC BARIUM ENEMA

1. In pediatric patients being evaluated for the following reasons **no preparation** is advised:
  - Hirschsprung's disease
  - Ulcerative colitis
  - Acute surgical abdomen (e.g., to exclude intussusception, appendicitis, malrotation/volvulus)
  
2. Solid Column Barium Enema and Air Contrast Enema
  - a. Clear liquid diet for 24 hours before the examination. No milk or dairy products, except that **infants** may have regular formula
  - b. Dulcolax (bisacodyl) suppository at bedtime
  - c. NPO for 4 hours [infants NPO for 3 hours] before the exam until the exam is completed
  - d. Dulcolax (bisacodyl) suppository 90 minutes before the procedure; repeat 45 minutes before the procedure if the patient does not have large bowel movement after the first suppository is given.

Reference: The Harriet Lane Handbook, Johns Hopkins Hospital, 7<sup>th</sup> Edition

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**T -TUBE CHOLANGIOGRAM**

1. No preparation required
2. Regular diet
3. *CT-MRI-X-ray Information Form and IV Contrast Record* form must be signed.

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**FLUOROSCOPICALLY GUIDED LUMBAR PUNCTURE**

1. Requisite laboratory results on chart before procedure:
  - Protime (PT)
  - Partial thromboplastin time (PTT)
  - Platelet count
  
2. Requisite History and Physical on chart before procedure:
  - Referring physician's written H & P on chart which indicates:
    - a No history or physical findings to indicate brain or spine tumor
    - b No history to indicate the patient is on anticoagulant therapy
    - c No ophthalmoscopic findings to indicate papilledema
  
3. Pre-procedure patient preparation:
  - No solid food for 4 hours prior to procedure
  - Increased clear liquid intake the evening before and the morning of the procedure; patient may have oral fluids up until 2 hours before procedure
  
4. Post-procedure patient care and precautions:
  - Reclining position on cart during 3 hour post-procedure period of observation in Same Day Surgery; may have 2 pillows and/or elevation of head of cart to 30 degrees
  - May have regular diet ad lib
  - Should have increased fluid intake during stay in SDS and should continue taking increased fluids over the next 24 hours after discharge
  - Bed rest for 12 to 24 hours after discharge
  - Patient should come to the ER immediately if he develops stiff neck, fever, or severe head or back pain

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**DEXA BONE MINERAL DENSITY SCAN**

The patient should have had NO recent barium study (e.g., UGI , BE, Nuclear Medicine Procedure or CT with oral barium-based contrast) since barium in the intestine may cause spurious bone mineral density measurements in the spine. If the patient has had a barium study 72 hours or less before the scheduled study, a KUB should be obtained to insure that all barium has been evacuated from the colon before the DEXA scan is performed.

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**Date**

## Ultrasound Exams

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**ULTRASOUND-GUIDED BIOPSY, CYST ASPIRATION, THORACENTESIS,  
PARACENTESIS, MYLEOGRAM**

1. Schedule with Radiology.
2. Attending doctor needs these labs ordered for Ultrasound Guided Biopsy
  - a. Platelets
  - b. INR
  - c. Patient should be off Coumadin and or Plavix for 5 days prior to the procedure (must be approved by primary or referring physician)
- a. Heparin
  - IV-needs to be stopped for 4-6 hrs
  - SQ-
    - 5000 units, procedure can be done in 4-6 hrs
    - 10,000-20,000 units procedure can be done next day
3. Attending doctor's History and Physical must be on the patient's chart before the procedure.
4. Patient should be NPO but may take oral meds with small amounts of water.
5. Start IV with normal saline [*may be* requested by Radiologist performing procedure depending on complexity of the procedure; usually not required for paracentesis procedures or breast cyst aspirations].
6. *Surgical Consent* form signed by patient.
7. Lab collection sheets to accompany patient to X-Ray.
8. Surgical Pathology form stamped to accompany patient to X-Ray (e.g., histology, microbiology).
9. Six white stickers with the patient's name stamped to accompany patient to X-Ray.

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**CAROTID DUPLEX DOPPLER ULTRASONOGRAPHY**

1. All male patients must have neck shaved.

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**Date**

**UPPER ABDOMINAL ULTRASONOGRAPHY**  
**(e.g., Gallbladder, Liver, Pancreas, etc.)**

The patient should fast for 8 to 12 hours prior to the study. Small amounts of water or ice chips may be taken orally up to the time of the study, but no other liquids or solid food should be taken until completion of the study.

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**Date**



**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**KIDNEY ULTRASONOGRAPHY**

1. Two 8 oz. glasses of non-carbonated beverage one-half hour prior to the exam.
2. Regular diet.

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**Date**

**ULTRASONOGRAPHY OF PANCREAS, AORTA, SPLEEN**

NPO after midnight except for small amounts of water. No gum chewing or smoking after midnight.

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**TRANSABDOMINAL PELVIC ULTRASOUND**

1. The patient must drink **at least four 8-ounce glasses of water starting 60 minutes before the scheduled time of the exam and finishing 45 minutes prior to the exam** so that she will have a very full bladder for the study. She should take the water gradually over that period since rapid oral hydration may lead to nausea and vomiting and to the appearance of fluid-filled loops of small bowel in the pelvis which can occasionally be mistaken for a true mass.
2. The patient should be specifically instructed **that she must not void from one hour before the exam until the transabdominal part of the exam is completed.**
3. Depending on the findings on the transabdominal study, a transvaginal sonographic study may be indicated. If the patient consents, this will be done at the same appointment. For this exam the patient must completely empty her bladder.

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**TRANSVAGINAL ULTRASONOGRAPHY**

1. No preparation needed if the patient has had a recent transabdominal study and/or if the study is a follow-up for assessment of ovarian cyst or other abnormality immediately adjacent to or within the uterus.
2. If the patient has not had a transabdominal study, the patient's bladder must be full such that an overview transabdominal study may be obtained prior to performance to the transvaginal study. The following is recommended to achieve optimal bladder filling such that a good quality transabdominal study to be performed:
  - a. The patient must drink **at least four 8-ounce glasses of water starting 60 minutes prior and ending 45 minutes prior to the scheduled time of the exam** so that she will have a very full bladder for the study.
  - b. The patient should be specifically instructed **the she must not void from one hour before the exam until that portion of the exam is begun.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**OBSTETRICAL ULTRASONOGRAPHY**

1. The patient must drink **at least four 8-ounce glasses of water starting 60 minutes and finishing 45 minutes prior to the scheduled time of the exam** so that she will have a very full bladder for the study. She should take the water gradually over that period since rapid oral hydration may lead to nausea and vomiting and to the appearance of fluid-filled loops of small bowel in the pelvis which can occasionally be mistaken for a true mass.
2. The patient should be specifically instructed **that she must not void from one hour before the exam until the transabdominal part of the exam is completed.**
3. Depending on the findings on the transabdominal study, a transvaginal sonographic study may be indicated. If the patient consents, this will be done at the same appointment. For this exam the patient must completely empty her bladder.

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**Date**

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Radiology Department – Patient Preparation**

**RENAL ARTERY DOPPLER ULTRASONOGRAPHY**

1. Nothing to eat or drink after midnight.
2. Hydrate well the day prior to the exam

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**Date**

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Radiology Department / Patient Preparation**

**ULTRASOUND SCREENINGS  
(Stroke/Carotid Artery , Abdominal Aortic , Peripheral Arterial Disease)**

**PLEASE ARRIVE NO MORE THAN 15 MINUTES BEFORE YOUR SCHEDULED SCREENING TIME.**

**Stroke / Carotid Artery Screening:**

1. You will be asked to get on an exam table and lie on your back. The technologist will be examining your neck.

**Abdominal Aortic Screening:**

1. You must fast for four (4) hours prior to your screening.
2. The meal four (4) hours prior to your screening should be a “light meal” (less than ½ of what you normally eat on non-gassy food)
3. You may have ½ cup of coffee or tea during your fasting period and a moderate amount of water if you are thirsty.
4. If you take medication, we ask that you take it as prescribed.
5. If you are diabetic and are not comfortable fasting for four (4) hours, please limit yourself to a “diabetic meal” (piece of toast, 1 cup of any kind of juice and ½ cup coffee or tea). If you are in doubt, please follow your diabetic care plan.
6. You will be asked to get on an exam table and lie on your back. The technologist will be examining your abdominal area.

**Peripheral Arterial Disease Screening:**

1. You will be asked to remove your socks and shoes.
2. The technician will be placing blood pressure cuffs on your upper arms and ankles.

## Required Forms



**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**COMPENDIUM OF X-RAY PROCEDURES WHICH REQUIRE PATIENT  
INFORMATION AND CONSENT FORMS**

1. The **CT-MRI-X-ray Information Form and IV Contrast Record** form must be completed before the following procedures may be undertaken:
  - CT of the cervical, thoracic or lumbar/sacral spine with IV Contrast
  - CT-Guided Biopsy which may require IV Contrast
  - CT of the soft tissues of the neck with IV Contrast
  - CT of the head with IV Contrast
  - CT of the posterior fossa with IV Contrast
  - CT of the abdomen and pelvis with IV Contrast
  - CT of the abdomen with IV Contrast
  - CT Pulmonary Angiogram
  - CT of upper or lower extremities with IV Contrast
  - CT of the pelvis with IV Contrast
  
2. The **CT-MRI-X-ray Information Form and IV Contrast Record \*** form and the **REQUEST FOR ADMINISTRATION OF ANESTHESIA AND FOR PERFORMANCE OF OPERATIONS AND OTHER PROCEDURES** form must be completed before the following procedures may be undertaken:
  - Arterial angiograms including aortograms and all other arteriograms (e.g., renal, iliofemoral, hepatic, celiac, superior mesenteric, carotid, etc...)
  - Venous angiograms including superior vena cavaograms, inferior vena cavaograms, upper and lower extremity venograms, etc...
  - Arthrograms\*
  - Fistulograms\*
  - Hysterosalpingograms\*
  - Myelograms\*
  - T-tube cholangiograms and intraoperative cholangiograms\*
  - Image-guided needle biopsies (most)\*
  - Sialograms\*
  - Cystograms\*
  - Mammo-guided breast lesion needle localization\*

\*These procedures even though not requiring **Intravascular Contrast** do involve injection of contrast into various body cavities and tubular structures with some (although small) consequent risk of adverse reaction. Hence, the need for the patient to sign this form after being informed of risks.

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department Patient Preparation**

**COMPENDIUM OF ULTRASOUND PROCEDURES WHICH REQUIRE  
SPECIAL PATIENT CONSENT FORM**

The following ultrasound-guided procedures require the patient (after being informed of the risks and alternatives) to sign a REQUEST FOR ADMINISTRATION OF ANESTHESIA AND FOR PERFORMANCE OF OPERATIONS AND OTHER PROCEDURES form before the exam is undertaken:

- Amniocentesis
- Needle biopsy (Core and FNA)
- Cyst aspiration
- Abscess drainage
- Percutaneous nephrostomy
- Breast lesion needle localization
- Thoracentesis
- Peritoneocentesis
- PICC line placement
- Paracentesis

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**REQUISITE FORMS FOR MRI EXAMINATIONS**

1. The patient (with the aid of attending nursing personnel or Radiology Department personnel) must complete the following form before any MRI examination is undertaken:
  - MRI PATIENT PRE-SCREENING FORM \*
  
2. The patient (with the aid of attending nursing personnel or Radiology Department personnel) must complete the following forms before MRI exams which involve the administration of intravenous contrast (i.e., gadolinium-based contrast agents) are undertaken:
  - MRI PATIENT PRE-SCREENING FORM \*

\*That the patient completes this form is extremely important for safety reasons! The aim of the form is to establish with certainty that the patient has no ferromagnetic appliances in his body of the type which may sustain tissue damaging torque or harmful current induction in the rapidly changing magnetic fields inherent to the MR exam

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**REQUISITE FORMS FOR NUCLEAR MEDICINE IMAGING PROCEDURES**

1. The patient must complete (with the aid of nursing personnel or Radiology Department personnel) & sign the NUCLEAR MEDICINE INFORMATION AND CONSENT FORM for **all** Nuclear Medicine imaging procedures.
  
2. The patient must complete (with the aid of nursing personnel or Radiology Department personnel) the REQUEST FOR ADMINISTRATION OF ANESTHESIA AND FOR PERFORMANCE OF OPERATIONS AND OTHER PROCEDURES form in addition to the NUCLEAR MEDICINE INFORMATION AND CONSENT FORM before the following Nuclear Medicine imaging procedures are undertaken:
  - Radioisotopic cisternography
  - CSF shunt patency examination

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**Date**

Post-Procedure Order and Patient Discharge  
Instructions Forms

**Prairie Lakes HealthCare System  
Radiology Department - Patient Preparation**

**POST MYELOGRAM ORDERS**

1. T, P, R, and BP now and q1h x 4
2. Monitor patient for seizure activity, visual disturbances, nausea, vomiting, headache, stiff neck, fever; immediately report any of these changes to the Radiologist who performed the myelogram.
3. Bed rest with head of bed elevated to at least 30 degrees until after CT scan is performed or until discharged.
4. Encourage fluids orally.
5. Regular diet ad lib.
6. Do not give phenothiazine anticonvulsant or antiemetic medication (e.g., Compazine, Thorazine, etc...)
7. Patient will be transported to X-ray on a cart at approximately 3 hours after the myelogram for the CT portion of the study.
8. Patient will discharged home usually about 4 hours after the beginning of the procedure, if vital signs remain stable and the patient has no new complaints during the period of observation in Same Day Surgery.
9. Patient should have family or friends drive him home from the hospital. He should not drive for at least 24 hours following the procedure.
10. Patient will be visited by the Radiologist before discharged home.

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**Brent Bullis, M.D.**

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**POST LUMBAR PUNCTURE DISCHARGE INSTRUCTIONS**

1. The patient should not drive for at least 24 hours after the procedure.
2. Bed rest for at least 12 hours and preferably 24 hours after discharge is strongly recommended. If headache occurs when the patient assumes erect position, the period of bed rest should be extended.
3. Increase fluid intake over the afternoon and evening after discharge.
4. Regular diet as tolerated.
5. Continue medications as previously ordered.
6. Patient is encouraged to call the Radiologist on call if there are questions or concerns.
7. Patient should go to the Emergency Room immediately for evaluation if fever, severe headache, or stiff neck develops.

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**Date**

**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**POST MYELOGRAM DISCHARGE INSTRUCTIONS**

1. The patient should not drive for at least 24 hours after the procedure.
2. Bed rest for at least 12 hours and preferably 24 hours after discharge is strongly recommended. If headache occurs when the patient assumes erect position, the period of bed rest should be extended.
3. Increase fluid intake over the afternoon and evening after discharge.
4. Regular diet as tolerated.
5. No phenothiazine type drugs until at least 24 hours after the procedure. May resume other previously ordered medications.
6. Patient is encouraged to call the radiologist on call if there are questions or concerns.
7. Patient should go to the Emergency Room immediately for evaluation if fever, severe headache, or stiff neck develops.

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---

**Date**



**Prairie Lakes HealthCare System  
Radiology Department – Patient Preparation**

**POST LUMBAR PUNCTURE ORDERS**

1. T, P, R. and BP now and q1h x 4.
2. Immediately report seizure activity, visual disturbances, nausea, vomiting, headache, stiff neck, or fever to the radiologist who performed the procedure.
3. Bed rest until discharge.
4. Encourage fluids orally.
5. Regular diet ad lib.
6. Patient will be discharged home about 4 hours after the procedure, if vital signs remain stable and the patient has no new complaints during the period of observation in Same Day Surgery.
7. Patient should have family or friends drive him home from the hospital. He should not drive for at least 24 hours following the procedure.
8. Patient should be advised to stay at bed rest for at least 12 and preferably 24 hours after discharge. If headache occurs when patient assumes erect position, the period of bed rest should be extended.
9. Patient will be visited by the radiologist before discharge.

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**Date**