

# *Ultrasound Patient Prep Information*



Cannon Memorial Hospital  
Watauga Medical Center

<b>Table Weight Limits for each facility</b>		
	<b>Cannon Memorial Hospital</b>	<b>Watauga Medical Center</b>
MRI 1 (High Field)	350 lbs.	440 lbs.
MRI 2 (Open)		490 lbs.
CT 1 (VCTXT)		500 lbs.
CT 2		450 lbs.
CT Scan Table	450 lbs.	
Diagnostic x-ray room 1	300 lbs.	300 lbs.
Diagnostic x-ray room 2		300 lbs.
Diagnostic x-ray room 3		300 lbs.
Diagnostic ER x-ray		460 lbs.
Nuclear Medicine	400 lbs.	440 lbs.
Ultrasound		500 lbs.
Ultrasound Stretcher	500 lbs.	
Outpatient/Lab Center X-ray		460 lbs.
Dexa scan		350 lbs.
Dexa table	300 lbs.	

## **Scheduling / General information**

- All Imaging exams must be scheduled with the scheduling department with exception to some diagnostic radiology exams.
- To schedule an appointment please contact our scheduling department at 828-268-9037 between the hours of 8:00am-5:00pm. If you reach the voicemail please leave a detailed message and someone will answer your call as soon as possible.
- On the day of your exam please arrive 15 minutes prior to your exam time to register at outpatient registration.
- To have an imaging exam done there must be a physicians order.
- According to the patient preps for certain exams, lab results should be available prior to the exam.

## If you have any questions about your exam please call the Imaging Department

**Watauga Medical Center:** (828) 262-4153

**Watauga Medical Outpatient Imaging/Lab Center:**  
(828) 266-2498

**Cannon Memorial Hospital:** (828) 737-7620

### General description of each Imaging department

- **Radiography (“X-Ray”)** – Uses x-rays to create images.

X-rays created in an x-ray tube pass through a patient to reach the ‘image receptor’ (‘cassette’). The cassette is then inserted into a computed radiography ‘reader’ that converts the energy absorbed by that cassette into a visible image seen on a computer. Radiography best visualizes bones, lungs, and contrast-filled organs (i.e. GI tract, kidneys). Radiography can be used in conjunction with or to enhance another modality, i.e. injecting a joint with contrast before an MRI is obtained or injecting contrast into the spinal canal before a CT is obtained. The contrast media used is usually barium, iodine, or air, depending on the study being performed.

- **Computed Tomography (“CT”)** – Uses x-rays to create images.

Multiple x-rays of ‘slices’ or planes of the body are obtained and reconstructed by a computer to form an image. CT is frequently performed for patients with trauma, kidney stones, cardiac issues, suspected stroke or pulmonary embolism, or abdominal pain. Biopsies are also frequently performed using CT to guide the radiologist. The contrast media used can be orally-ingested barium, IV iodine, or rectally-induced air, depending on the area to be imaged. CT can be used to visualize bone or soft tissue.

- **Magnetic Resonance Imaging (“MRI”)** – Uses a strong magnetic field and radio waves to create images. The patient lies on a table within a strong magnetic field with a ‘coil’ placed over the body part of interest. The body emits ‘signals’ in response to changes in the magnetic fields, which are transmitted by the coil to a computer. The computer converts these signals to images of planes (‘slices’) of the body. Gadolinium is the most frequently used contrast agent used. MRI is best for visualization of soft tissues.

- **Ultrasound (“Sonography”)** – Uses sound waves to create images. High-frequency sound waves are sent through the patient’s body and the ‘echoes’ are converted by a computer into images. The patient may be asked to be NPO or have a full bladder so that these ‘echoes’ may be enhanced. Ultrasound is often used to guide biopsies of soft tissue organs. Ultrasound is used to visualize soft tissue structures.

- **Nuclear Medicine** – Uses ingested or injected radioactive materials to create images. The patient is given either an orally or intravenously administered radioisotope that targets a specific part of the body. The patient is then (after a specified period of time) placed under a ‘camera’ which detects the radiation emitted by the patient’s body. A computer then converts those detections to an image. Nuclear medicine is used to assess a specific system function and is not used to image anatomy.

- **Mammography** – Uses x-rays to create images of the breast. X-rays are produced in an x-ray tube, which pass through a patient’s breast to a detector. The detector absorbs the x-rays and converts them to an electrical signal which is then converted by a computer into an image. It is used as a screening exam for detection of breast cancer and also for diagnosis of breast lumps, microcalcifications, etc. It may also be used to guide placement of localization devices such as wires or needles in a breast prior to surgery, as well as to image breast tissue removed during surgery. Watauga Medical Center only offers mammography at Outpatient Imaging/Lab Center. Cannon Memorial does mammography at the hospital.

- **Bone Densitometry (“Dexa”)** – Uses x-rays to measure bone density. A ‘pencil-beam’ (tightly restricted x-ray beam) is used to scan the lower back and the hip. The beam passes through the body and a detector absorbs the energy of the x-ray beam. That energy is then converted to a non-diagnostic image and a numerical value, providing a calculation of bone density. That calculation is also compared to other age groups and to previous scans a patient may have had. This modality is only used to diagnose osteoporosis or osteopenia. There is not a preparation prior to this exam. Watauga Medical Center only offers Dexa scans at the Outpatient Imaging/Lab Center. Cannon Memorial offers Dexa scans at the hospital.

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## Imaging Department

### ULTRASOUND

Ultrasound imaging, which has many uses in medicine, uses “high-frequency” sound waves. These are sound waves humans are unable to hear. This imaging test is used to “see” inside the body. An easy way to understand how ultrasound works is to relate it to sonar. With sonar, ultrasonic waves are sent out, bounce off an object, and return. The same is true with ultrasound within the human body. It is this principle that creates the images seen on an ultrasound machine. Many times, when people hear the word “ultrasound,” they think of pregnancy. However, ultrasound can be used to evaluate major organs such as the liver, kidneys, gallbladder, and heart.

What makes this kind of test so widely used is the fact that it is very effective and does not use radiation. It is one of the safest tests in the Imaging or Radiology Department. The only thing most patients do not like about the procedure is that ultrasound gel is used. The gel allows the sound waves to enter the body, and it also aids in moving the ultrasound probe over the skin. We try to make our patients more comfortable by warming the gel.

The Imaging Department wants to make your experience as pleasant as possible. The following information may help you avoid delays in your exam. Be sure to arrive 15 minutes before your appointment time because Admissions can be a busy place. After you have checked in with Admissions you will proceed to Radiology or the Imaging Department. Ultrasound exams usually begin on time. However, at times we have emergencies which may delay your exam. Please be patient with us; we strive to provide the best care possible.

*The following is a list of ultrasound exams and other tests.*

### GENERAL ULTRASOUND:

These exams include the following ultrasounds:

- Abdominal (Belly)
- Aorta (Main heart vessel)
- Biliary (Bile ducts and gallbladder)
- Breast
- Gallbladder
- Hepatic (Liver)
- Obstetrical (Pregnancy)
- Pelvic (Female Reproductive Organs)
- Renal (Kidney)
- Scrotal (Testicles)
- Spleen
- Thyroid
- Transvaginal (Female Reproductive Organs)

### SPECIAL PROCEDURES, BIOPSY, FINE NEEDLE ASPIRATION (FNA):

- Biopsy
- Breast Needle Localization
- Fine Needle Aspiration (FNA)
- Paracentesis
- Mammotome Breast Biopsy
- Thoracentesis

## Abdominal Ultrasound:

### **What is an abdominal ultrasound?**

An abdominal ultrasound looks at many major internal organs. When doing this exam we will look at your aorta, pancreas, liver, gallbladder (if you still have one), kidneys and spleen.

### **How do I get ready for an abdominal ultrasound?**

You should not eat or drink after midnight the night before the exam. The exam will take between 45 minutes and 1 hour.

NOTE: You may take your morning pills with a sip of water but, DO NOT eat breakfast or even have a cup of coffee.

### **What will happen in the room?**

Our rooms are small, but if necessary you may have someone come with you. In the room you will need to undress from the waist up, and a gown will be provided. You will then be instructed to lie on your back. Warm gel and the ultrasound probe will be applied to your abdomen while the technologist obtains images. To help take better images you may be instructed to take in a deep breath or to roll up onto your side.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your abdominal ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

## Aorta Ultrasound:

### **What is an aorta ultrasound?**

The aorta is the blood vessel that comes out of the heart and brings blood to the rest of the body. The portion imaged during this exam lies between the bottom of your rib cage and your belly button. We may also need to look at both of your kidneys during this exam.

### **How do I get ready for an aorta ultrasound?**

You should not eat or drink after midnight the night before the exam. The exam will take between 45 minutes and 1 hour.

*NOTE: You may take your morning pills with a sip of water, but DO NOT eat breakfast or even have a cup of coffee.*

### **What will happen in the room?**

Our rooms are small, but if necessary you may have someone come with you. In the room you will need to undress from the waist up, and a gown will be provided. You will then be instructed to lie on your back. Warm gel and the ultrasound probe will be applied to your abdomen while the technologist obtains images.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your aorta ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

## Gallbladder:

### **What is a gallbladder ultrasound?**

Your gallbladder usually lies on your right side under or just below your rib cage. The gallbladder stores bile that helps you digest food. When doing this exam, we will look at your pancreas, liver, gallbladder, bile ducts, and right kidney.

### **How do I get ready for a gallbladder ultrasound?**

You should not eat or drink after midnight the night before the exam. The exam will take between 45 minutes and 1 hour.

*NOTE: You may take your morning pills with a sip of water, but DO NOT eat breakfast or even have a cup of coffee.*

### **What will happen in the room?**

Our rooms are small, but if necessary you may have someone come with you. In the room, you will need to undress from the waist up, and a gown will be provided. You will then be instructed to lie on your back. Warm gel and the ultrasound probe will be applied to your abdomen while the technologist obtains images. To help take better images, you may be instructed to take in a deep breath or to roll up onto your side.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your gallbladder ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days. *Ultrasound 5*

## Biliary Ultrasound:

### **What is a biliary ultrasound?**

A biliary ultrasound is nearly the same as a gallbladder ultrasound. When doing this exam, we will look at your pancreas, liver, gallbladder (if you still have one), bile ducts, and right kidney.

### **How do I get ready for a biliary ultrasound?**

You should not eat or drink after midnight the night before the exam. The exam will take between 45 minutes and 1 hour.

*NOTE: You may take your morning pills with a sip of water, but DO NOT eat breakfast or even have a cup of coffee.*

### **What will happen in the room?**

Our rooms are small, but if necessary you may have someone come with you. In the room you will need to undress from the waist up, and a gown will be provided. You will then be instructed to lie on your back. Warm gel and the ultrasound probe will be applied to your abdomen while the technologist obtains images. To help take better images, you may be instructed to take in a deep breath or to roll up onto your side.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your biliary ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

## Liver Ultrasound:

### **What is a liver ultrasound?**

Your liver is one of your largest organs. It lies under the rib cage from the middle of your abdomen to the right side. When doing this exam, we will look at your pancreas, liver, gallbladder (if you still have one), right kidney, and spleen.

### **How do I get ready for a liver ultrasound?**

You should not eat or drink after midnight the night before the exam. The exam will take approximately 45 minutes to 1 hour.

*NOTE: You may take your morning pills with a sip of water, but DO NOT eat breakfast or even have a cup of coffee.*

### **What will happen in the room?**

Our rooms are small, but if necessary you may have someone come with you. In the room you will need to undress from the waist up, and a gown will be provided.

You will then be instructed to lie on your back. Warm gel and the ultrasound probe will be applied to your abdomen while the technologist obtains images. To help take better images, you may be instructed to take in a deep breath or to roll up onto your side.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your liver ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

## Spleen Ultrasound:

### **What is a spleen ultrasound?**

Your spleen lies on the left side of your body usually above your left kidney. When doing a spleen ultrasound, we will focus mostly on your spleen; and we may also look at your liver.

### **How do I get ready for a spleen ultrasound?**

You should not eat or drink after midnight the night before the exam. The exam will take approximately 45 minutes to 1 hour.

*NOTE: You may take your morning pills with a sip of water, but DO NOT eat breakfast or even have a cup of coffee.*

### **What will happen in the room?**

Our rooms are small, but if necessary you may have someone come with you. In the room you will need to undress from the waist up, and a gown will be provided.

You will then be instructed to lie on your back. Warm gel and the ultrasound probe will be applied to your abdomen while the technologist obtains images. To help take better images, you may be instructed to take in a deep breath or to roll up onto your side.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your spleen ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

## Breast:

### **What is a breast ultrasound?**

This is an ultrasound that will focus on just one area, the entire breast, or both breasts. This will depend on what your doctor has ordered.

### **How do I get ready for a breast ultrasound?**

You do not have to do anything special to prepare for this exam. The exam will take approximately 45 minutes to 1 hour.

### **What will happen in the room?**

Our rooms are small, but if necessary you may have someone come with you. In the room you will need to undress from the waist up, and a gown will be provided. You will then be instructed to lie on your back and a pillow will be placed under the shoulder on the side being scanned. You will be asked to raise your arm up if you are able. Warm gel and the ultrasound probe will be applied to your breast while the technologist obtains images.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your breast ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

## Kidney (Renal) Ultrasound:

### **What is a kidney ultrasound?**

You normally have two kidneys, one on each side of your body. The kidneys create urine and send it down to your bladder. When we look at your kidneys, we also look at your bladder. That is why you must come with a full bladder.

### **How do I get ready for a kidney ultrasound?**

For a kidney ultrasound you need to have a full bladder. Drinking several glasses of fluid 1 hour before the exam should be sufficient. Remember not to use the restroom before your test. The exam will take between 45 minutes and 1 hour.

### **What will happen in the room?**

Our rooms are small, but if necessary you may have someone come with you. In the room you will need to undress from the waist up, and a gown will be provided. You will then be instructed to lie on your back. Warm gel and the ultrasound probe will be applied to your abdomen while the technologist obtains images. To help take better images, you may be instructed to take in a deep breath or to roll up onto your side.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your kidney ultrasound exam will

be read by a radiologist, and the ordering physician should receive the results in a few days.

## **Obstetrical Ultrasound (Pregnancy):**

### **What is an obstetrical ultrasound?**

An obstetrical ultrasound is done on women who are pregnant. This can be done during the first, second, or third trimesters. Ultrasound is used to check the baby's health and development. Ultrasound is also used to detect multiple babies, certain birth defects, and conditions that could be problems during the pregnancy and/or delivery.

Ultrasound has been determined to be safe for both the mother and the baby. We perform ultrasounds for medical reasons only and do not provide photographs or videos. We also do not allow you to bring in recording devices to use during the exam.

**First Trimester**  
**Second Trimester**  
**Third Trimester**

### **First Trimester:**

#### **How do I get ready for a first trimester ultrasound?**

For a first trimester obstetrical ultrasound you need to have a full bladder. To do this you need to finish drinking 36 ounces (or 4 glasses) of water one hour before the exam time. You should also hold your urine and not use the bathroom.

Example: If your appointment time is 1:00 pm you will need to finish drinking your 36 ounces of water by 12:00 noon.

The exam will take approximately 45 minutes to 1 hour.

After drinking this much fluid you might be uncomfortable. Fortunately, the exam does not take long, IF YOU HAVE A FULL BLADDER!

*NOTE: If you are very early in your pregnancy you may also need a transvaginal pelvic ultrasound.*

### **What will happen in the room?**

Our rooms are small, but if necessary you may have someone come with you. In the room you will need to undress from the waist up. Some women just pull their shirt up and push their pants down a little. You will have a choice. Gowns will be provided. You will then be instructed to lie on your back. Warm gel and the ultrasound probe will be applied to your abdomen while the technologist obtains images.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed. You will be able to empty your bladder and then be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

### **Second Trimester:**

#### **How do I get ready for a second trimester ultrasound?**

You will need to have a full bladder for this exam. Start drinking 32 ounces of water one hour prior to the exam and do not empty your bladder prior to your appointment. The exam will take approximately 1 to 1 ½ hours.

## What will happen in the room?

Our rooms are small, but if you would like you may bring one person with you. In the room you will need to undress from the waist up and a gown will be provided.

You will then be instructed to lie on your back. Warm gel and the ultrasound probe will be applied to your abdomen while the technologist obtains images.

## Are there any special instructions after the test?

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

## Third Trimester:

### How do I get ready for a third trimester ultrasound?

You do not have to do anything special to prepare for this exam. The exam will take approximately 1 to 1 ½ hours.

## What will happen in the room?

Our rooms are small, but if necessary you may have someone come with you. In the room you will need to undress from the waist up, and a gown will be provided. You will then be instructed to lie on your back. Warm gel and the ultrasound probe will be applied to your abdomen while the technologist obtains images.

## Are there any special instructions after the test?

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your ultrasound will be read by a radiologist, and the ordering physician should receive the results in a few days.

## Pelvic Ultrasound:

### What is a pelvic ultrasound?

A pelvic ultrasound usually looks at your uterus and ovaries. If they have been surgically removed, then we will just be looking at your lower abdomen, which includes your urinary bladder.

### How do I get ready for a pelvic ultrasound?

You need to finish drinking 36 ounces (4 glasses) of water one hour before the exam time. You should also hold your urine and not use the bathroom.

*Example: If your appointment time is 1:00 pm you will need to finish drinking your 36 ounces of water by 12:00 noon. The exam will take between 45 minutes and 1 hour.*

After drinking this much fluid, you will be uncomfortable. Fortunately, the exam does not take long, IF YOU HAVE A FULL BLADDER!

*NOTE: To insure that you receive the highest quality of care, there is a good chance that you might need to also have a transvaginal pelvic ultrasound after the regular pelvic ultrasound.*

## What will happen in the room?

Our rooms are small, but if necessary you may have someone come with you. In the room you will need to pull up your shirt just a little and pull your pants down a little. You will then be instructed to lie on your back. Warm gel and the ultrasound probe will be applied to your lower abdomen while the technologist obtains images.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed. You will be able to empty your bladder and then be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

### **Transvaginal Pelvic Ultrasound:**

#### **What is a transvaginal pelvic ultrasound ultrasound?**

A transvaginal (sometimes called endovaginal) ultrasound exam is done to get a closer look at the uterus and ovaries. This exam is often done after a transabdominal pelvic ultrasound has been completed or when a patient's bladder is not full enough to perform a transabdominal pelvic ultrasound. It is also performed on women during their first trimester of pregnancy.

#### **How do I get ready for a transvaginal pelvic ultrasound ultrasound?**

Even though your doctor ordered a transvaginal pelvic exam, our radiologists require us to first scan your pelvic transabdominally (probe placed on top of lower abdomen). This requires you to have a full bladder.

You need to finish drinking 36 ounces (4 glasses) of water one hour before the exam time. You should also hold your urine and not use the bathroom.

Example: If your appointment time is 1:00 pm you will need to finish drinking your 36 ounces of water by 12:00 noon. The exam will take between 45 minutes and 1 hour.

After drinking this much fluid, you will be uncomfortable. After the technologist takes some images transabdominally you will be allowed to empty your bladder and the transvaginal part of the exam will be performed

The exam will take approximately 30 to 45 minutes.

This exam can be performed during a woman's menstrual period, but if the patient prefers and the ordering physician approves, it can be rescheduled to a later date.

#### **What will happen in the room?**

For this exam you will need to take off all clothing from the waist down, and a gown will be provided. Your privacy will be maintained at all times. During a transvaginal pelvic ultrasound, you will have a tampon shaped ultrasound probe inserted into your vagina approximately 2 inches. With this procedure there may be some discomfort and a feeling of pressure. Communicate any questions or

concerns to your technologist.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

### **Scrotal ultrasound:**

#### **What is a scrotal ultrasound?**

A scrotal ultrasound looks at the male testicles.

#### **How do I get ready for a scrotal ultrasound?**

You do not have to do anything special to prepare for this exam. The exam will take between 30 and 45 minutes.

#### **What will happen in the room?**

Our rooms are small, but if necessary you may have someone come with you. In the room, you will be asked to undress from the waist down, and a gown will be provided. You will lie on your back for this exam, and towels will be given to you for privacy reasons. Your privacy will be maintained at all times. Warm gel and the ultrasound probe will be placed on the scrotum, and images will be obtained by the technologist.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; and you will be allowed to leave. Please do not ask the technologist about your exam results. He or she is not allowed to interpret exams. Your ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

### **Thyroid Ultrasound:**

#### **What is a thyroid ultrasound?**

The thyroid is a small gland located in the lower portion on the front of the neck.

#### **How do I get ready for a thyroid ultrasound?**

You do not have to do anything special to prepare for this exam. The exam will take approximately 30 to 45 minutes.

#### **What will happen in the room?**

Our rooms are small, but if necessary you may have someone come with you. If you are wearing loose clothing around your neck, the technologist may just place a towel around your neckline. If it is necessary, you may have to put on a gown. You will then be instructed to lie on your back with your head tilted back (if you are able). Warm gel and the ultrasound probe will be placed on your neck while images are taken by the technologist.

### **Are there any special instructions after the test?**

Once your exam is complete, the technologist will confirm with a radiologist that the images taken are all that are needed; you will be allowed to leave. Please do not ask

the technologist about your exam results. He or she is not allowed to interpret exams. Your ultrasound exam will be read by a radiologist, and the ordering physician should receive the results in a few days.

## **Biopsies:**

### **What is a Biopsy?**

A biopsy is a special procedure performed by a radiologist in which tissue samples are obtained. The samples are then examined by a pathologist to aid in determining a diagnosis.

### **How do I get ready for a biopsy?**

All ultrasound guided biopsies require that you are not taking blood thinners for at least 48 hours prior to the procedure. These include prescription, over the counter, and herbal formulas. Please check with your doctor prior to the biopsy for instructions.

Prior to the biopsy, the technologist will go over the procedure with you. A radiologist will review with you the benefits and risks of having the procedure, and you will be required to sign a consent form. Feel free to ask any questions or express any concerns you may have. Prior to the procedure, please inform the technologist of allergies or other medical conditions you have.

Some biopsies require the patient to be sedated by a nurse before the procedure. You will need to follow the instructions given to you by the doctor who ordered the biopsy for you. If you are to be sedated, you should not eat or drink after midnight the night before the exam. You will receive instructions about your arrival time from your physician. This procedure can last from 30 minutes to 1 ½ hours.

### **What will happen in the room?**

You will be lying on a stretcher and monitored by a nurse (if you are being sedated). The technologist and/or radiologist will use the ultrasound machine to locate the area to be biopsied.

The radiologist will clean the area to be biopsied with an alcohol based agent and will inject Lidocaine (numbing medication similar to what dentists use). It is very common to feel a stinging type of pain, which only lasts for a short time, during this injection.

### **Are there any special instructions after the procedure?**

You may have to stay longer depending on the type of procedure and any sedation given. Please bring someone with you to drive you home. The tissue collected will be sent to the laboratory for analysis. The results will be sent to your ordering physician in a few days.

## **Breast Needle Localization:**

### **What is a breast needle localization?**

It is a procedure done using either ultrasound or mammography to place a wire into a breast mass before going to surgery. This wire is a guide for the surgeon to use in locating the mass being removed from the breast.

### **How do I get ready for a breast needle localization?**

You should not eat or drink after midnight the night before the exam. This procedure lasts between 30 and 45 minutes.

### **What will happen in the room?**

You will be lying on your back and an ultrasound machine will be used to locate the breast mass. The radiologist will clean and numb the area where the wire will be inserted. Then the radiologist will place a thin wire into the breast tissue, and it will be secured in place until your surgical time.

### Mammotome Breast Biopsy:

#### **What is a mammotome breast biopsy?**

A mammotome breast biopsy is a procedure used to take samples of breast tissue for diagnosis. It is considered as accurate as a surgical biopsy, yet this is less invasive and less costly. This procedure is performed by either a Radiologist or a Surgeon in the Imaging Department using an ultrasound machine for guidance.

#### **How do I get ready for a mammotome breast biopsy?**

Please check with your doctor for instructions prior to a Mammotome biopsy.

All patients having a Mammotome should not be taking blood thinners prior to the procedure. Please bring a tight fitting bra (such as a sports bra) to wear home after the procedure. Some doctors prefer that you have a mild sedative prior to this procedure. If so, you should not eat or drink after midnight the night before the biopsy.

This procedure lasts approximately 1 hour.

#### **What will happen in the room?**

You will be lying on a stretcher, and you may be monitored by a nurse. You may also be given some medication to help you relax. The Radiologist or Surgeon will clean and numb the area that is going to be biopsied. The doctor will insert

a vacuum assisted biopsy probe through a 1/4inch incision made in your breast. The doctor will remove tissue samples and place a small marker in your breast for future follow-up exams. The small incision will be closed with an adhesive bandage. Someone will go over aftercare instructions with you.

#### **Are there any special instructions after the test?**

Please have someone with you who can drive you home. We will supply you with an ice pack to help reduce bruising and swelling of the area biopsied. The tissue collected will be sent to the Pathology Department for analysis. The results will be sent to your ordering physician within 1 week.

### Fine Needle Aspiration (FNA):

#### **What is a fine needle aspiration?**

A fine needle aspiration is a type of biopsy in which a very small needle is used to obtain cell samples from an area in your body to aid in a diagnosis.

#### **How do I get ready for a fine needle aspiration?**

You may eat a light breakfast prior to this procedure. The use of blood thinners should be avoided prior to this procedure. Check with your doctor if you are taking any. You will need to check in at Admissions and then come to the Radiology Department. A fine needle aspiration usually requires approximately 45 minutes to 1 hour.

#### **What will happen in the room?**

You will be asked to put on a gown. After the radiologist has gone over the procedure with you, he or she will clean and numb the area. An ultrasound will be performed during the biopsy so that the radiologist can confirm that the samples taken are from the area in question. The radiologist will then insert a small needle to get some cells out.

### **Are there any special instructions after the test?**

We will clean your skin, and you will be given a discharge sheet with instructions. You will then be free to go home. The tissue collected will be sent to the Pathology Department for analysis. The results will be sent to your ordering physician within 1 week.

### **Paracentesis:**

#### **What is a paracentesis?**

A paracentesis is a procedure that is done because your abdomen has accumulated extra fluid. A radiologist will be removing the fluid through a tube-like structure called a catheter.

#### **How do I get ready for a paracentesis?**

Prior to this procedure you will need to have blood drawn, which your doctor will have to order. The use of blood thinners should be avoided prior to this procedure. Check with your doctor if you are taking any. You may eat a light meal prior to this procedure. You will need to check in at Admissions, and then go to the Radiology or Imaging Department.

#### **What will happen in the room?**

You will be asked to put on a gown. Before we can begin you must sign a consent form. Ultrasound will be used to help the doctor locate the best area to do the procedure. The radiologist will clean and numb an area on your abdomen. The radiologist will then insert a small needle and place a catheter in your abdomen to drain the fluid. A paracentesis can last approximately 45 minutes to 1 ½ hours.

#### **Are there any special instructions after the test?**

We will clean your skin and place an adhesive bandage over the area. You will be given a discharge sheet with instructions. You will then be free to go home.

### **Thoracentesis:**

A thoracentesis is a procedure performed because of extra fluid in the space around your lung. A radiologist will be removing the fluid using a tube-like catheter that is inserted into the space around the lung.

#### **How do I get ready for a thoracentesis?**

Prior to this procedure you will need to have blood drawn, which your doctor will have to order. The use of blood thinners should be avoided prior to this procedure. Check with your doctor if you are taking any. You may eat a light meal prior to the procedure. You will need to check in at Admissions, and then come to Radiology or Imaging Department.

#### **What will happen in the room?**

You will be asked to put on a gown. Before we can begin you must sign a consent form.

Ultrasound will be used to help the doctor locate the best area to do the procedure.

The radiologist will clean and numb an area on your upper back. The radiologist will then insert a tube-like structure called a catheter to drain the fluid. The procedure usually takes approximately 1/2 to 1 ½ hours.

### **Are there any special instructions after the test?**

We will clean your skin and place an adhesive bandage over the area. You will be given a discharge sheet with instructions, and you will be free to go home.

# **Peripheral Vascular Ultrasound**

## **Description of Vascular Ultrasound Procedures**

### **What is an Ankle Brachial Index (ABI)?**

This test is done by measuring blood pressure at the ankle and in the arm while a person is at rest. No radiation (x-ray) is involved.

### **Why is it done?**

The purpose of the test is to evaluate blood flow into your legs.

### **How is it done?**

You do not need to remove your clothes for this exam. You will be asked to take off your socks and shoes. The vascular technician will start by reviewing your medical history. You will be asked to lie on your back while standard blood pressure cuffs are placed around your ankles and arms. The cuffs will be inflated and a small ultrasound probe will be placed against the leg. As the cuffs are deflated, waveforms will be documented assessing blood flow. You will hear sounds during this examination. This will be blood flowing through the vessels. This is normal.

### **How long does it take?**

This test takes approximately one hour.

### **How do I prepare?**

No preparation is needed for this exam.

### **What is an Arterial Duplex?**

An arterial duplex exam is an ultrasound test that looks at the major arteries of the upper extremities (arms) or lower extremities (legs). No radiation (x-ray) is involved in ultrasound imaging.

### **Why is it done?**

An arterial duplex is done to identify blockages or a narrowing of your arteries. This test can determine the severity of the blockages, or patency of the vessel.

### **How is it done?**

If you are having an arterial duplex of the upper extremities you will be asked to remove your shirt. A gown will be provided.

If you are having an arterial duplex of the lower extremities you will be asked to remove your pants. A cover will be provided.

You will lie flat on your back with your head elevated. Ultrasound gel will be applied to the appropriate extremity. A transducer will be moved around on the extremity being examined. Pictures are taken of the blood vessels and recorded for the physician to interpret.

### **How long will it take?**

This test takes approximately one hour.

### **How do I prepare?**

No preparation is needed for this exam.

### **What is a Carotid Artery Ultrasound?**

Carotid artery ultrasound is also called a carotid duplex scan. This procedure uses sound waves to obtain color images of the arteries in your neck. There are two carotid arteries, one on each side of your neck. These are the main

arteries in the neck that supply blood to the head and brain. Usually, both sides will be checked during the procedure. No radiation (x-ray) is involved in ultrasound imaging.

### **Why is it done?**

To detect blood clots, plaque (fatty material), or other problems with blood flow in the carotid arteries.

### **How is it done?**

You do not need to undress for this exam. You will be asked to lie on your back. A transducer will be placed on your neck with a small amount of ultrasound gel. The transducer sends sound waves through your neck to the carotid arteries and back.

### **How long does it take?**

This test takes approximately one hour.

### **How do I prepare?**

No preparation is needed for this exam.

### **What are Segmental Pressures?**

It is similar to the ankle brachial index (ABI) exam, with the addition of two or three additional blood pressure cuffs. No radiation (x-ray) is involved.

### **Why is it done?**

To check the arterial blood flow into your legs.

### **How is it done?**

You will be asked to undress from the waist down. You may leave your underwear on. A cover will be provided. You will be asked to lie on your back.

Blood pressure cuffs will be put on both arms, thighs, calves, and ankles. One at a time, the blood pressure cuffs will be inflated, and then slowly deflated. A doppler probe is used to monitor the pulse while a blood pressure cuff is inflated above the artery. When cuff is deflated the pressure at which the pulse returns is recorded. The pressures in the legs will be compared to the arm pressures to assess blood flow.

### **How long will it take?**

This test takes approximately one hour.

### **How do I prepare?**

No preparation is needed for this exam.

### **What is a Venous Duplex?**

A venous duplex exam is an ultrasound test that looks at the major veins of the upper extremities (arms) or lower extremities (legs). No radiation (x-ray) is involved in ultrasound imaging.

### **Why is it done?**

This procedure is performed to evaluate symptoms including leg pain or swelling, varicose veins, shortness of breath, or suspected blood clots in your legs and/or lungs.

### **How is it done?**

If you are having a venous duplex of the upper extremities you will be asked to remove your shirt. A gown will be provided.

If you are having a venous duplex of the lower extremities you will be asked to remove your pants. A cover will be

provided.

You will lie flat on your back with your head elevated. Ultrasound gel will be applied to the appropriate extremity. A transducer will be moved around on the extremity being examined. You will feel mild pressure from the transducer as the technologist applies pressure to your veins at various locations. Pictures are taken of the blood vessels and recorded for the physician to interpret.

### **How long will it take?**

This test takes approximately one hour.

### **How do I prepare?**

No preparation is needed for this exam.

### **What is a Venous Mapping Study?**

Venous mapping is an ultrasound test that looks at the major veins of the upper extremities (arms). No radiation (x-ray) is involved in ultrasound imaging

### **Why is it done?**

Upper extremity venous mapping is done to assess the availability of vessels prior to creation of a permanent dialysis access in patients with chronic renal failure (CRF).

### **How is it done?**

If you are having a venous mapping of the upper extremities you will be asked to remove your shirt. A gown will be provided.

You will lie flat on your back with your head elevated. Ultrasound gel will be applied to the appropriate extremity.

A transducer will be moved around on the extremity being examined. You will feel mild pressure from the transducer as the technologist applies pressure to your veins at various locations. Pictures are taken of the blood vessels and recorded for the physician to interpret.

**How long will it take?**

This test takes approximately one hour.

**How do I prepare?**

No preparation is needed for this exam.

**What is a Venous Reflux Study?**

A venous reflux study is an ultrasound test that allows your physician to evaluate the venous system in your legs for evidence of valvular incompetence. No radiation (x-ray) is involved in ultrasound imaging

**Why is it done?**

To evaluate the valves that prevent back-flow of blood in the veins of your legs.

**How is it done?**

You will be asked to undress from the waist down. You may leave your underwear on. A cover will be provided. You will be asked to lie on your back with your head elevated. Ultrasound gel will be applied to the appropriate extremity. A transducer will be moved around on the extremity being examined. You may be asked to hold your breathe for short periods of time. You will feel pressure from the transducer as the technologist applies pressure to your veins at various locations. Pictures are taken of the blood vessels and

recorded for the physician to interpret.

**How long will it take?**

This test takes approximately one hour.

**How do I prepare?**

No preparation is needed for this exam.