SpeakUp™: X-rays, MRIs and other medical imaging tests

**Medical imaging tests** help diagnose health problems. Some tests use radiation, which makes parts of your body show up better. The dye can be given through an intravenous (IV) tube or a syringe in your arm. Some dye is given in a drink. Ask your health care provider:

- Why do you need this test?
- Does this test use radiation?
- Is there another test that does not use radiation?
- What can you expect during the test?
- What should you do to prepare for the test?
- Does the health care provider’s office keep track of your medical imaging tests? You should also keep copies for your files.
- Does the hospital or imaging center use the lowest amount of radiation needed to get information – especially for children?
- Is the hospital or imaging center accredited?

Tip: Ask a friend or relative to be your support person and advocate. They can help you ask questions, write down answers and reassure you.

**X-ray**

- **What is it?** Uses a small amount of radiation to take pictures inside your body.
- **Used for?** Diagnosing broken bones, pneumonia, dental problems.
- **Mammograms** are a common type of X-ray used to help diagnose breast cancer.
- **What happens?** You may be asked to lie still on an X-ray table or sit or stand by the table. You may wear a lead apron to protect certain parts of your body.
- **Fact:** The amount of radiation you get from an X-ray is small. For example, a chest X-ray gives out a radiation dose similar to the amount of radiation you’re naturally exposed to from the environment over 10 days.

**Ultrasound**

- **What is it?** Uses sound waves to create an image.
- **Used for?** Diagnosing conditions of the heart, blood vessels, kidneys, liver, and other organs. During pregnancy, a health care provider uses an ultrasound to look at the baby.
- **What happens?** You lie on a table. The person giving the test places gel and a device called a transducer on your skin. The transducer sends out sound waves that bounce off tissues inside your body.

**CT or CAT scan**

- **What is it?** Uses special X-ray equipment to take pictures that show a “slice” of your body.
- **Used for?** Diagnosing broken bones, cancer, blood clots, abdominal conditions, internal bleeding.
- **What happens?** You lie still on a table and may have to hold your breath for a short time. The CT machine is aimed at the part of your body the health care provider needs to see. For some CT scans you may receive a “contrast dye,” which makes parts of your body show up better. The dye may be given through an intravenous (IV) tube or a syringe in your arm. Some dye is given in a drink.

**MRI (magnetic resonance imaging)**

- **What is it?** Uses a large magnet and radio waves to look inside your body. Does not expose you to radiation.
- **Used for?** Diagnosing torn ligaments, tumors, brain or spinal cord conditions, examining organs.
- **What happens?** You lie still on a table that slides inside a tunnel-shaped machine. You may have to hold your breath for parts of the exam. For some MRI scans you may receive a “contrast dye,” which makes parts of your body show up better. The dye can be given through an intravenous (IV) tube or a syringe in your arm. Some dye is given in a drink.
- **Tip:** The MRI makes a lot of noise. You may be offered earplugs.

**Nuclear scans**

- **What is it?** Uses radioactive substances and a special camera to see inside your body. These scans can show how organs, such as your heart and lungs, are working.
- **Used for?** Diagnosing blood clots, cancer, heart disease, injuries, infections, thyroid problems.
- **What happens?** Before the test, you receive a small amount of radioactive material, which makes parts of your body show up better. The material can be given through an intravenous (IV) tube or a syringe in your arm. Some is given in a drink and sometimes you inhale it. You wait as the material is absorbed by your body. This may take an hour or more. Then you lie still on a table while the camera takes images.

For more information

- Image Gently (for children): www.imagegently.org
- Image Wisely (for adults): www.imagewisely.org
- RadiologyInfo: www.radiologyinfo.org
- Society for Pediatric Radiology: www педрад.org

The goal of Speak Up™ is to help patients become active in their care.