

# Radiation Exposure in Diagnostic Imaging Exams

Radiation is energy that comes from a source and travels through some material or through space. Radiation is a normal part of our daily lives that is unavoidable.

Small amounts of natural radiation are absorbed from foods, water, and air, as well as the environment. Where and how a person lives also affects the amount of radiation that is naturally absorbed. Living in a mountainous region, airplane travel, and some medical diagnostic imaging exams add to the amount of radiation received.

There is exposure to radiation with some diagnostic imaging exams. The level of radiation received by having a diagnostic imaging exam, such as an x-ray or CT scan is relatively low.

## Diagnostic Imaging

Diagnostic imaging is used to scan your body for cancer. Images provided by diagnostic imaging can tell your care team where the cancer is, how large tumors are, or if the cancer has spread to other parts of the body which allows more effective treatment and monitoring of treatment.

You may have concerns that having diagnostic imaging will cause cancer. For an adult patient who already has cancer, the risk of developing a second cancer from a diagnostic imaging exam is very small.

You are more likely to develop a second cancer from these risk factors:

- Aging
- Smoking
- Poor diet or being obese
- Overexposure to sunlight
- Alcohol use
- Family history of cancer
- Chemical exposure
- Some viral infections

## Benefits and Risks of Diagnostic Imaging

Even though every effort is made to reduce risks associated with radiation from diagnostic imaging exams, there are some effects. These effects typically occur very slowly, taking 10 to 20 years to appear.

The benefits of diagnostic imaging are real and immediate while the risks are minimal. You will have a better chance of earlier diagnosis and reduce the need for risky exploratory surgeries. These exams help to get an accurate picture of your cancer and help to determine your treatment.

## Leaders in the Field

MD Anderson is very careful about the radiation exposure to our patients. Our experts tailor each exam to your body size, select the most effective exam possible, and use as little radiation as is necessary.

Our staff are international leaders in the field of radiation dose reduction and patient safety.

## Questions To Ask Your Doctor



To make sure you understand your risks and are comfortable with receiving diagnostic imaging exams, ask your doctor these questions:

- How do these exams help me?
- What happens if I do not have them?
- How often will I need them?