

## **Family Medicine Clerkship Plain Language Summary Template**

**Title:** CT Scans: What are the Risks?

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**Plain Language Summary:**

A CT scan, or CAT scan, is a medical test to look inside your body. This test is allows doctors to see your heart, lungs, liver, brain, and many other organs. It also gives pictures of blood vessels and bones too. CT scans can see many diseases better than X-rays, MRI, and other imaging. When you get a CT scan, you lie flat and pass through a donut shaped scanner. Sometimes, you will receive a dye through an IV before the CT scan called “contrast.” Contrast causes blood vessels to light up brighter on the CT scan. Rarely, contrast can cause an allergic reaction. The CT scan does not take long. The scan lasts no longer than a few minutes.

The CT scan works by taking many different X-rays at different angles. These x-rays form a 360-degree picture of the organs inside the body. As your body travels through the CT scanner, the machine is able to take pictures from head to toe. This allows doctors to see pictures of the body in cross-section. The CT scan is usually limited to a certain part of the body like the head, chest, or abdomen.



When you get a CT scan, you are exposed to a small amount of radiation. This radiation is necessary make detailed pictures of what’s inside your body. The radiation dose in a CT scan is larger than the dose from an X-ray. The amount of radiation exposure from a CT scan depends on many factors. These factors include age, sex, patient size, and what part of your body is scanned. For example, the radiation dose of a single chest CT scan is about the same as the dose from 400 chest X-rays. People are exposed to radiation in everyday life. This is called background radiation. A single chest CT scan has a radiation dose similar to three years of background radiation.

CT scans have some risk. The radiation dose from a CT scan is small, but it is thought to be large enough to cause cancer in a very small number of people. CT

scans are thought to cause cancer by damaging DNA. For a fifty-year-old man, the risk of getting cancer from a single CT scan of the abdomen is estimated to be 8 in 10,000. This number is very small, but it is still significant. Your risk for cancer increases with each scan. In most cases, the benefits of a CT scan largely outweigh the risks. CT scans often provide information that saves lives. It is important to talk to your doctor and discuss the risks and benefits of a CT scan.

**Additional Resources:**

**For more information:**

Mayo Clinic: <http://www.mayoclinic.com/health/ct-scan/MY00309>

Medline Plus: <http://www.nlm.nih.gov/medlineplus/ency/article/003330.htm>

FDA: <http://www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/MedicalImaging/MedicalX-Rays/default.htm>

**Key Words:**

CT Scan

Radiation

Cancer

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