

A computed tomography (CT) scan, or computer axial tomography (CAT) scan, is a non-invasive type of imaging. It uses multiple X-ray images to produce detailed, cross-sectional images of the body that show the internal anatomy. For head and neck cancer patients, CT scans may be used to detect cancers of the sinuses and nasal cavity. CT scans of the chest may also help determine if cancer has spread to the lungs.

What to Expect

CT scans are non-invasive, painless and take just a few minutes. While CT scans are commonly used as a diagnostic tool at the beginning of your cancer treatment journey, your doctor may also request intermittent follow-up scans to monitor your cancer during and after your treatment. CT scans to assess for cancer often require contrast, which allows doctors to more easily identify cancerous tissue.

Protocol varies depending on the type of contrast needed.

- You may receive an iodine-based dye intravenously (IV). IV contrast is used to highlight blood vessels, organs, and other structures.
- Alternatively, you may be asked to drink a barium-based dye. Barium contrast allows for better visualization of the stomach and bowels.

If you are sensitive to iodine, you will be given steroids before a contrast injection to prevent an allergic reaction. You will remove any metal objects (jewelry, belt, glasses) and lie flat on a fairly open, well-aerated table with your neck in a special headrest to minimize movement. CT imaging scans may be accompanied by intense emotions. Many patients feel anxious about what the imaging studies will show, and this is completely normal. It is important to recognize these feelings and utilize healthy strategies to cope or find support.



Please note that this information is intended for educational purposes. It does not replace consultation with your doctor, and it should not be interpreted as medical advice. We encourage you to speak to your health care provider if you have further questions or concerns regarding your medical care.

Advantages

- Relatively quick.
- Excellent for showing bone anatomy.

Disadvantages

- Involves a small amount of radiation exposure.
- Not typically recommended during pregnancy.

CT versus MRI

Both CT and magnetic resonance imaging (MRI) produce cross-sectional images to view inside the body. MRI, however, relies on a magnetic field and radio waves, while CT scans use X-rays. CT imaging and MRI have different advantages and uses. MRI is well-suited to soft tissue, while CT is excellent for showing bone anatomy.

PET-CT

CT scans may be used in combination with positron emission tomography (PET) scans. The combination provides more accurate diagnoses than either type of scan alone. PET-CT is especially useful for detecting primary tumors of the head and neck, as well as metastases and recurrences during follow-up. A combination of CT, MRI, and PET-CT may be used to confirm a diagnosis of head or neck cancer.



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