



## Understanding Diagnostic Imaging

### Computed Tomography (CT) Scan

or

### Computed Axial Tomography (CAT) Scan

The procedure employs a computer that processes information from a x-ray beam that creates cross sectional 3 dimensional images of a patient's organs or body areas. It was the forerunner of MRI and is still very valuable in detecting cancer and heart disease and other problems that may be missed on routine medical examinations.

### Magnetic Resonance Imaging (MRI)

MRI uses magnetic field technology and radio signals to peer inside the body. In some ways it works better than CT to produce images of small soft tissue details. It is excellent for determining abnormalities in the brain and is also used widely in the diagnosis of various tumors.

### Ultrasound

This technology uses sound waves and a probe that scans body organs. Ultrasound does not use radiation and it is safe to all patients. This is why it is used during pregnancy for example to view the fetus.

### Positron Emission Tomography (PET) Scan

In this technique a radioactive tracer is injected into the body and the metabolic functions in various organs can be studied by following the radioactive tracer that is injected.

PET scans are used to monitor cancers and are particularly useful in the brain. They are also used for evaluating degenerative brain diseases such as Alzheimer's, Huntington's, and Parkinson's.



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