

PET/CT IMAGING SERVICES

Positron Emission Tomography (PET) imaging is a Nuclear Medicine procedure that shows the molecular functioning of organs and tissues. It is used to evaluate a variety of diseases, and is able to detect the chemical and physiological changes of disease at a cellular level. This diagnostic examination develops images of the human body that provide information that often allows for earlier detection and more accurate diagnosis of diseases.

At Affiliated PET Systems LLC, PET Scans and CT scans are done simultaneously for a more accurate reading of the patient's findings. With a combined PET/CT, the PET image provides a measurement of metabolic activity and the CT image provides a detailed picture of the internal anatomy.

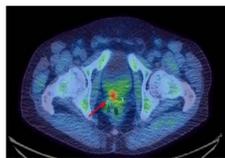
Being able to see metabolic changes at their earliest stages can be vital in discovering and treating many diseases with the most widely used imaging agent and traditional PET/CT Tracer ^{18}F FDG (^{18}F Fluorodeoxyglucose):

- ◆ **Cancer:** PET scans can detect cancer and determine its spread. They can also be used to examine the effects of cancer therapy by characterizing biochemical changes in the cancer. These scans can be performed on the whole body.
- ◆ **Heart Disease:** PET scans of the heart determine blood flow to the heart muscle and help evaluate signs of coronary artery disease. PET scans of the heart can verify whether areas of the heart that show decreased function are alive or scarred because of a prior heart attack. Combined with a Myocardial Perfusion Study, PET scans can differentiate between nonfunctioning heart muscle and heart muscle that would benefit from a procedure, such as angioplasty or coronary artery bypass surgery, to reestablish adequate blood flow and to improve heart function.
- ◆ **Brain Disorders:** PET scans of the brain are performed to evaluate patients with memory disorders of an undetermined cause, suspected or proven brain tumors, or seizure disorders that are not responsive to medical therapy and make the patient a candidate for surgery.

NEW PET/CT IMAGING TRACERS AVAILABLE

Prostate Cancer - Axumin™ (fluciclovine F 18)

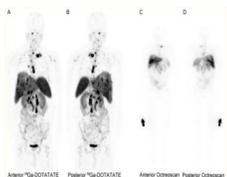
Prostate Cancer - Axumin™ (fluciclovine F 18) is indicated for PET imaging in men with suspected prostate cancer recurrence based on elevated blood prostate specific antigen (PSA) levels following prior treatment. Benefits of this radiopharmaceutical:



- ◆ Pinpoint the overexpression of amino acids associated with prostate cancer
- ◆ Increased visualization of the prostate bed – no bladder interference during imaging
- ◆ Can lead to quicker detection of tumors – detects changes on the physiological (cellular) level, which can occur weeks, even months quicker than physical changes.
- ◆ A standard 10 mCi dose of ^{18}F -Fluciclovine is provided
- ◆ Patient is injected and imaging immediately
- ◆ Exam takes about 45 minutes from start to finish

Neuroendocrine Tumors - NETSPOT (^{68}Ga -Dotatate)

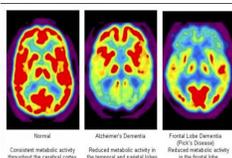
Neuroendocrine Tumors - NETSPOT (^{68}Ga -Dotatate) is indicated for use with PET for localization of somatostatin neureceptor positive neuroendocrine tumors (NETs) in adult and pediatric patients. Benefits of this radiopharmaceutical:



- ◆ Results are conclusive vs Octreotide scan which often leaves doctors without answers
- ◆ Improved patient satisfaction; no bowel prep needed or dietary restrictions, 3 hours to complete exam
- ◆ Results are quantitative and qualitative (Octreotide scan is only qualitative and takes up 72 hours to acquire entire exam)
- ◆ A patient specific, weight based dose of ^{68}Ga -Dotatate is provided
- ◆ Patient is injected and imaged at 40-90 minutes post administration
- ◆ Must be off somatostatin receptor blocking agents (scheduling will instruct when blocking agents need to be withheld)

Alzheimer's Disease - Neuraceq (^{18}F -Florbetaben), Amyvid (^{18}F -Florbetapir), Vizamyli (^{18}F -Flutemetamol)

Alzheimer's Disease - Neuraceq (^{18}F -Florbetaben), Amyvid (^{18}F -Florbetapir), Vizamyli (^{18}F -Flutemetamol) are 3 approved PET/CT imaging agents that are available for Adults with cognitive impairment who are being evaluated for Alzheimer's disease and other possible causes of cognitive decline. Benefits of these radiopharmaceutical's:



- ◆ A positive scan indicates an increase β -amyloid plaque which is consistent with AD and other cognitive disorders: to be used in conjunction with other neurological testing to establish a diagnosis
- ◆ A negative scan indicates there is a low amount of β -amyloid plaque which is inconsistent with a neuropathological diagnosis of AD
- ◆ Helps to rule out the possibility of AD
- ◆ Each radiopharmaceutical has its own prescribing and dosing information
- ◆ Patient is injected and imaged
- ◆ Entire exam takes less than 90 minutes from start to finish