

Imaging Procedures Overview/FAQ's

WHAT IS AN MRI?

MRI is short for Magnetic Resonance Imaging. An MRI machine uses a magnetic field and radio waves to create detailed images of structures inside the body.

WHY IS A BRAIN MRI IMPORTANT FOR THIS STUDY?

An MRI takes pictures of basic brain structures.

- In early Parkinson's disease (PD), MRI of the brain is usually normal so researchers use it to check to be sure there is no other neurological reason for a patient's PD symptoms. Using special analysis techniques researchers may also obtain useful information about PD and assess how MRI results in individuals with Parkinson's disease change over time.
- It is also important that researchers obtain similar imaging data from control participants so that they can learn which changes are unique to Parkinson's disease and which are associated with normal aging.

WILL I BE EXPOSED TO RADIATION DURING THE MRI?

No. There is no radiation exposure in an MRI.

WILL I GET CLAUSTROPHOBIA DURING THE MRI?

Brain MRIs are very common, and most individuals tolerate the procedure quite well. If you are concerned about claustrophobia, speak to your study doctor before the procedure. The study team will make their best effort to make the process as comfortable for you as possible.

WHAT SHOULD I DO TO PREPARE FOR AN MRI?

Little to no preparation is required before an MRI. When you arrive at the clinic you will be asked to remove all accessories such as jewelry, credit cards, and any metallic objects. This is because an MRI scanner involves magnets, which may interact with objects in your possession and could affect the image quality.

WHAT IS DATSCAN™ IMAGING?

DaTSCAN™ is a specialized imaging technique that allows doctors to capture detailed pictures of the dopamine neurons in your brain. This technique involves the use of a radiopharmaceutical agent (a chemical compound containing an isotope, or radioactive element). The radiopharmaceutical agent is injected into a vein and taken up by the brain's dopamine cells. The cells can then be detected through SPECT (single photon emission computed tomography) scanning. In this way it is possible to determine whether there is a reduction in dopamine cells, which usually occurs in the presence of Parkinson's disease.

WHY IS DATSCAN™ IMPORTANT FOR RESEARCH STUDIES?

DaTSCAN™ allows researchers to take detailed pictures of activity in the brain and measure dopamine cells. This is important for two reasons in PPMI:

- For Parkinson's patients volunteering for the study, the DaTSCAN™ data will be crucial to understanding the neurologic changes associated with PD. In some studies it is also a required element to determine your eligibility for enrollment.
- For control participants volunteering for the study, the data ensure that brain function is normal, which is a required element to confirm your eligibility for enrollment. This scan also provides researchers with an age- and gender-matched image that can be compared to images of PD patients enrolled in the study.

WHAT DOES DATSCAN™ OFFER THAT MRI DOES NOT?

DaTSCAN™ provides a more detailed picture of the dopamine system of the brain and richer information about how the brain is functioning. This is critical because loss of cells in



the dopamine system is the pathological hallmark of Parkinson's disease.

WILL I BE EXPOSED TO RADIATION DURING THE DATSCAN™?

There is a small amount of radiation exposure from the chemical substance injected prior to SPECT scanning. The amount of radiation exposure is in the range between a chest X-ray and a chest and abdominal CT scan. This kind of radioactivity is also used routinely in other common procedures, such as imaging of the thyroid gland. The level of exposure from this study is well within the limits specified by the United States Food and Drug Administration (FDA) in its guidelines for acceptable radiation exposure for research participants.

WHY HAVEN'T I HAD A DATSCAN™ BEFORE?

DaTSCAN™ is a relatively new imaging procedure in the United States, only becoming available to patients in summer of 2011. DaTSCAN™ has been in use for quite some time in Europe. To date, more than 180,000 people worldwide have undergone DaTSCAN™, and the procedure has posed no significant safety issues. One reason why some patients may not have received DaTSCAN™ previously is that it remains relatively expensive and is only available at select medical centers.

WHAT IF THE DATSCAN™ SHOWS SOMETHING UNEXPECTED?

The information obtained in this procedure will be used primarily for the purposes of research. If a medically significant abnormality is observed on your scan, study personnel will be in contact with you. If given your permission, your study doctor will contact your primary physician to recommend that you receive additional medical attention.

