Cover Page to Accompany ClinicalTrials.gov Document

Informed Consent: February 11, 2021

For Protocol:

PET Imaging of Chronic Pain Syndromes

Thomas Jefferson University IRB ID: 17D.163

Clinical Trial Number: NCT03233594

Thomas Jefferson University
Informed Consent Document for Human Subjects Research – OHR-8
Version Date – FOR OHR USE: 10/2/17

Department: Emergency Medicine and Radiology

Principal Investigator: Andrew B. Newberg, MD, **Telephone**: 215-503-3422

Co -Investigator: Daniel A. Monti, MD **Telephone**: 215-955-4410

Medical Study Title: PET Imaging of Chronic Pain Syndromes

Lay Study Title: PET-MRI in Chronic Pain

What Is Informed Consent?

You are being asked to take part in a medical research study. As required by federal regulations, this research study has been reviewed and approved by an Institutional Review Board (IRB), a University committee that reviews, approves and monitors research involving humans. Before you can make a knowledgeable decision about whether to participate, you should understand the possible risks and benefits related to this study. This process of learning and thinking about a study before you make a decision is known as *informed consent* and includes:

- Receiving detailed information about this research study;
- Being asked to read, sign and date this consent form, once you understand the study and have decided to participate. If you don't understand something about the study or if you have questions, you should ask for an explanation before signing this form;
- Being given a copy of the signed and dated consent form to keep for your own records.

You should understand that your relationship with the study doctor is different than your relationship with your treating or personal doctor. The treating doctor treats a specific health problem with the goal of improving a medical condition. A study doctor treats all subjects according to a research plan to obtain information about the experimental drug, device or procedure being studied and with the understanding that you may or may not benefit from being in the study. You should ask questions of the study doctor if you want to know more about this.

What is the purpose of this study?

People have symptoms of chronic pain which means that they have experienced significant pain in one or more body areas such as the head, neck, or lower back pain. It is important to understand the brain and body mechanisms of chronic pain in order to better determine therapeutic interventions to reduce pain. Part of the difficulty in treating chronic pain is to determine how better to diagnose what specific issues are affecting the brain and body that result in chronic pain. You are asked to be in this study to take part in the healthy control group.

This study will be the first to utilize scans (described below) of both the brain and body in order to assess Central Nervous System (CNS) changes and peripheral body changes related to chronic pain and its potential management. This will conducted on a scanner that can perform a positron emission tomography (PET) scan and an magnetic resonance imaging (MRI) at the same time. In order to assess the brain and body function more effectively, we would like to have you undergo a small battery of diagnostic tests that include an FDG (fluorodeoxyglucose) PET scan. The test is sometimes called an FDG-PET-MRI or PET-MR scan. Before the PET scan, a small amount of FDG is injected into the patient. The FDG is referred to as a tracer because the scanner can detect where the FDG is detected in the body and brain. Scans may be performed at the Marcus Institute of Integrative Health PET-MRI scanner (Ceresensa: London, ON) that poses no additional risk to the patient. In addition, you will receive several questionnaires and initial evaluations.

How many individuals will participate in the study and how long will the study last?

We hope to enroll up to 10 healthy **adults (≥18 years)** subjects at Jefferson. The entire study will take about 3 years to complete. Your involvement in the study will last up to the completion of the PET-MRI scan.

What will happen during the study?

The informed consent process will be completed with you. You will be asked questions about your medical history and about the medications you are taking. You will also be asked to complete several questionnaires about your mood, memory, your pain, and how you feel and will take up to 1 hour to complete. You will also undergo a clinical examination. Throughout the study, you will continue to take whatever medications your doctor has prescribed for you. However, we will ask you to try to remain at the same dosage of any medication throughout the study unless your doctor changes the dose because of worsening symptoms or because of side effects.

You will simultaneously receive two different scans that will be performed in a special combined scanner. One scan, called positron emission tomography (PET), will evaluate your brain and body metabolism to determine which areas of your brain and which parts of your body are functioning differently. The other scan, called magnetic resonance imaging (MRI) will evaluate the structure and function of the brain, along with the connecting fibers affected by pain. On the day of both scans, you will report to the Marcus Institute of Integrative Health at 789 E. Lancaster Avenue in Villanova, PA 19085.

Female subjects of child bearing potential will first have a pregnancy test and if negative will proceed with the remainder of the study. The PET scan measures the energy metabolism in the brain and body which is particularly affected by pain symptoms. The PET scan works by injecting into your vein a radioactive medicine called FDG. FDG is a form of the sugar, glucose, that is used by your brain for energy. By injecting the FDG, we can see where in the brain and body it goes so that we can take a picture of the activity in these areas. After injection of the

tracer, you will be asked to rest quietly in a dimly lit room for approximately 30 minutes. At that point, you will be brought into the scanner room and will lie down on the PET imaging table. The remainder of the procedure involves having your head held comfortably in a special head holder as a reminder not to move your head and remain still while the scanner takes pictures of your brain. Immediately after the brain scan, you will be allowed to have a brief break (no more than 5 minutes) and then we will scan the rest of the body.
The MRI scan is performed simultaneously with the PET scan using a special PET-MRI scanner that can do both at the same time. Before the MRI scan, we will ask you a number of questions to make sure you do not have any metal in your body that might affect the scanner. While you are lying on the imaging table for the PET scan, the MRI scan will also be performed. The MRI scans add no radiation, but do make loud banging noises for which you will be given ear plugs to block the sound. The MRI, along with the PET scan, is done over about 60 minutes. Your head will be in a special head holder surrounded by a head coil that enables us to take pictures of your brain.

After you receive the initial diagnostic testing above, you will not receive specific therapeutic intervention and there will be no additional testing performed.

The control group to be compared to pain patients will receive no specific therapeutic intervention, but will still undergo the scanning, electroencephalography (EEG), and neurocognitive testing initially and then after approximately 2 months.

What are the side effects and other risks or discomforts involved?

PET Risks
Use of FDG PET imaging is commercially approved, and has resulted in very rare adverse effects of skin redness, facial swelling, fever, and short lasting rise in blood pressure. This research study involves exposure to radiation from the FDG PET scan and therefore you will receive a radiation dose that you would not receive if you did not have the scans. The radiation dose obtained as the result of participating in this study is the same as standard clinical brain scans using the same tracers. Therefore, at the doses you will receive, it is very likely that you will see no effects at all. Please inform the investigator of any participation in previous studies involving radiation exposure. Some persons may experience some discomfort while lying flat on the table for the PET-MRI scan or may feel uncomfortable or anxious in the scanner. Since the injection of the FDG requires inserting a needle into your arm vein, there can be pain and discomfort at the injection site. Bleeding and infection may also occur.

MRI Risks
You will be asked to complete a MRI Patient Information History form. The MRI scan does not involve any radiation exposure. You will have the scan performed by placing your head within a standard head coil or a 32-channel research head coil to obtain better images. There is no added risk with either of these head coils. Due to the strength of the magnetic field of the MRI, there is a risk of being injured by receiving a burn on your skin or if an unsecured metal object flies into the MRI scanner. In order to minimize this risk, you will be asked to remove all metal objects

from your person. Also, all metal objects will be cleared from the area prior to the scan. This is the standard practice when patients undergo MRI exams. It is important when discussing the study that you inform the staff if you have any of the following:

- Surgically implanted electrical devices
- Pacemaker
- Surgically placed metallic clips (aneurysm clips)
- Ear implants
- Any history of metal fragments in the eye

Some persons may experience some discomfort while lying flat on the table for PET MRI scans or may feel uncomfortable or anxious in the scanner.

Survey Question and Clinical Examination Risks

Some of the questions we will ask you as part of this study, as well as the neurological examination, might make you feel uncomfortable. You can refuse to answer any of the questions and you are free to take a brief break at any time when answering these questions or while undergoing the clinical exam. However, you must complete the questionnaire or clinical exam during the study period.

Risks of Discovering an Incidental Finding

The result of the scans will be reported in a clinical report by a trained specialist. If an unknown abnormality (also called an incidental finding) is discovered on the PET or MRI scan, you will be thoroughly counseled by the study doctor and will have an opportunity to ask any questions. Such a finding may make you feel anxious or depressed. However, the information and scans will be made available to your primary care doctor or referring physician in order to manage the finding as quickly and effectively as possible.

What To Do If You Experience Any Adverse Effects

You should call the study doctor as soon as possible at 215-503-3422 if, during the course of this study, you develop any side effects or symptoms. The study doctor has told you that if your condition worsens, if side effects become very severe, or if it turns out that being in this study is not in your best interest, you will be taken out of the study.

What are the risks to fetuses, infants and pregnant women

Pregnant women or women who are breast-feeding should not be in this study because exposure to the radioactive materials may be hazardous to an embryo, fetus or nursing infant. Even medications that are well known and prescribed may have adverse effects on an embryo or fetus. Since this study also includes radiation related to the FDG PET scans, pregnant women or women who are breast-feeding should not be in this study. As with any medication, there are unknown risks. To be in this study you and your partner must practice adequate birth control measures. The study doctor will discuss acceptable methods of birth control with you. If you are a woman of childbearing potential, you will have a pregnancy test before making a decision

about being in this study. This requires either a urine test or that blood be drawn from a vein in your arm (1-2 tsp.) one or two days prior to the start of the study. The results of this pregnancy test will be made available to you prior to the start of the study.

If you become pregnant during the course of this study, you should notify the study doctor as soon as possible.

If you are a person in a same sex relationship, it is not necessary for you to practice birth control. However, if you are female of childbearing potential, you will still have to have pregnancy tests according to the study protocol.

Are there benefits from being in this study?

You may not benefit from being in this research, but we hope that what we learn may be helpful to future patients or society in general.

Are there alternatives to being in the study?

You do not have to participate in this study.

How will privacy and confidentiality (identity) be protected?

Federal regulations require that certain information about individuals be kept confidential. This information is called "protected health information" (PHI). PHI includes information that identifies you personally such as name, address and social security number, or any medical or mental health record, or test result, that may have this sort of information on it. The laws state that you may see and review your TJU or Thomas Jefferson University Hospital medical records at any time. However, in a research study, you may not see the study results or other data about the study until after the research is completed unless the study doctor decides otherwise.

If you join this study, the following individuals or entities may have access to your PHI and by law must protect it. These include investigators listed on this consent form and other personnel of Thomas Jefferson University and Thomas Jefferson University Hospitals, Inc. involved in this specific study, the University's Division of Human Subjects Protection and the Institutional Review Board (IRB), and your health insurance company (if necessary for billing for standard medical care).

Your PHI may also be shared with the following entities that, while not obligated by law to protect PHI, will protect it to the best of their ability:

- Andrew Newberg or designated research staff who will oversee the study and review medical records to ensure study-related information is correct
- With any person or agency required by law.
- De-identified imaging data will be analyzed at the laboratory of Dr. Abass Alavi

If you develop an illness or injury during the course of your participation in this study, other PHI about treating and following the condition may be generated and disclosed as it relates to this study. Your PHI may be used/disclosed until the end of the research study.

You may quit the study and revoke permission to use and share your PHI at any time by contacting the principal investigator, in writing, at: Andrew Newberg, 925 Chestnut Street, Suite 120, Philadelphia, PA 19107. If you quit the study, further collection of PHI will be stopped, but PHI that has already been collected may still be used.

The results of clinical tests and procedures performed as part of this research may be included in your medical records. The information from this study may be published in scientific journals or presented at scientific meetings but you will not be personally identified in these publications and presentations.

A description of this clinical trial will be available on http://www.ClinicalTrials.gov, as required by U.S. Law. This Web site will not include information that can identify you. At most, this Web site will include a summary of the results. You can search this Web site at any time.

What happens in case of injury as a result of being in this study?

In the event that you experience a research-related injury, necessary and available medical care (including hospitalization) will be provided. A research-related injury is a physical injury or illness resulting to you that is directly caused by any procedure or treatment used in this study that is different from the treatment you would receive if you were not participating in a research study. Please note that the chiropractic care you intend to receive is not part of the research study, only the diagnostic imaging and questionnaires are. If you are physically injured due to any drug/substance or procedure properly given under the plan for this study, medical expenses for treating the injury will be billed to your insurance carrier. You should be aware that some costs may not be covered by insurance. There is no plan to provide compensation for loss of wages, lost time from work, personal discomfort, or for injuries or problems related to your underlying medical condition(s).

If you receive a bill related to a research-related injury that seems wrong, please discuss it with the study doctor or research coordinator.

Are there costs related to being in this study?

There will be no charge to you or your health insurance for any of the PET or MRI, or for the upper cervical manipulation as a part of this study.

If you receive a bill that you think is wrong, please discuss it with the study doctor or research coordinator.

Standard Testing Procedures

Procedures, tests and doctor's charges resulting that are considered standard of care will be billed to your health insurance carrier. These are charges that you would have whether or not you were participating in a research study which include standard physical and neurological examinations, medications prescribed by your physician, and any other medical treatment you undergo. It is possible that your insurance company may deny payment. If that happens you may be responsible for some or all of these charges. The study doctor will explain to you which procedures, tests and doctor visits are considered standard of care.

If you receive a bill that you think is wrong, please discuss it with the study doctor or research coordinator.

Will I be paid for being in this study?

You will not receive any payment for participating in the study, but you will have access to your scans.

Disclosure of Financial Interest

None of the investigators has any financial interest in the companies that provide products for this study.

What if the research results in new findings?

Anything learned during the study, beneficial or not, that may affect your health or your willingness to continue in the study, will be told to you and explained.

Can I be removed from the study or quit the study?

Your decision to participate in this research study is entirely voluntary. You have been told what being in this study will involve, including the possible risks and benefits.

Your participation in this research project may be terminated by the study doctor without your consent/assent for any reason that he/she feels is appropriate.

You may refuse to participate in this investigation or withdraw consent and quit this study without penalty and without affecting your ability to receive medical care at Thomas Jefferson University.

If you withdraw from this study, you may continue treatment with your Jefferson doctor, or you may seek treatment from another doctor of your choice.
Should you decide to withdraw from the study, please be sure to inform the study doctor.
Additional tests or procedures may be needed to ensure your safety. The study doctor will explain why these tests or procedures are necessary.

CONTACT INFORMATION

If you are having a medical emergency, call 911 or go directly to an emergency room. You should let emergency personnel or providers know that you are participating in this study.

Telephone number for questions about your rights as a research participant	The Jefferson Institutional Review Board	215-503-8966
For questions, concerns or complaints about the research, or if you suspect a research-related injury	Principal Investigator Andrew B. Newberg, MD Co-Investigator, Daniel A. Monti, MD Program Manager, Nancy Wintering, LCSW	215-503-3422 215-955-4410 215-503-3423
If you have difficulty contacting the study staff	Call the Jefferson Office of Human Research	215-503-0203

If you want more information about the Jefferson Institutional Review Board or Jefferson's Human Research Protection Program, please visit our website at http://www.jefferson.edu/university/human_research.html

Non-Waiver of Legal Rights Statement

- ✓ **By your agreement to participate in this study, and by signing this consent form, you are not waiving any of your legal rights.**
- ✓ **In order to be in this research study, you must sign this consent form.**
- ✓ **You affirm that you have read all pages of this consent form. You have been told that you will receive a copy.**

SIGNATURES

_____	_____	_____
Your Name	Your Signature	Date

_____	_____	_____
Name of **Person Conducting Consent Interview**	Signature of **Person Conducting Consent Interview**	Date

The investigator's signature certifies that s/he personally provided the study participant with a description of the study, study procedures, risks, benefits and alternatives to participation.

_____	_____	_____
Name of **Investigator or Co-Investigator**	Signature of **Investigator or Co-Investigator**	Date

☐ **Copy of Signed and Dated Consent Form Given to the Subject/Parent/LAR**

_____	_____	_____
Name of **Witness**	Signature of **Witness**	Date

(Witness required if the only language the subject speaks and understands is English, but the subject cannot read English, or if the subject is blind or cannot physically sign the consent form.)

Thomas Jefferson University
Informed Consent Document for Human Subjects Research

Department: Integrative Medicine and Nutritional Sciences Emergency Medicine and Radiology

Principal Investigator: Andrew B. Newberg, MD, **Telephone**: 215-503-3422

Co -Investigator: Daniel A. Monti, MD **Telephone**: 215-955-4410

Medical Study Title: PET Imaging of Chronic Pain Syndromes

Lay Study Title: PET-MRI in Chronic Pain

What Is Informed Consent?

You are being asked to take part in a medical research study. As required by federal regulations, this research study has been reviewed and approved by an Institutional Review Board (IRB), a University committee that reviews, approves and monitors research involving humans. Before you can make a knowledgeable decision about whether to participate, you should understand the possible risks and benefits related to this study. This process of learning and thinking about a study before you make a decision is known as *informed consent* and includes:

- Receiving detailed information about this research study;
- Being asked to read, sign and date this consent form, once you understand the study and have decided to participate. If you don't understand something about the study or if you have questions, you should ask for an explanation before signing this form;
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You should understand that your relationship with the study doctor is different than your relationship with your treating or personal doctor. The treating doctor treats a specific health problem with the goal of improving a medical condition. A study doctor treats all subjects according to a research plan to obtain information about the experimental drug, device or procedure being studied and with the understanding that you may or may not benefit from being in the study. You should ask questions of the study doctor if you want to know more about this.

What is the purpose of this study?

You have symptoms of chronic pain which means that you have experienced significant pain in one or more body areas such as your head, neck, or lower back pain. It is important to understand the brain and body mechanisms of chronic pain in order to determine better therapeutic interventions to reduce pain. Part of the difficulty in treating chronic pain is to determine how better to diagnose what specific issues are affecting the brain and body that result in chronic pain. You are also asked to be in this study since you are receiving chiropractic care techniques for your chronic pain. This study will be the first to utilize scans (described below) of both the

brain and body in order to assess Central Nervous System (CNS) changes and peripheral body changes related to chronic pain and its potential management. This will conducted on a scanner that can perform a positron emission tomography (PET) scan and an magnetic resonance imaging (MRI) at the same time.The test is called an FDG-PET-MRI or PET-MR scan. In order to assess the brain and body function more effectively, we would like to have you undergo a small battery of diagnostic tests that include anFDG (fluorodeoxyglucose) PET scan Before the PET scan, a small amount of FDG is injected into the patient. The FDG is referred to as a tracer because the scanner can detect where the FDG is detected in the body and brain. ,. Scans may be performed at the Marcus Institute of Integrative Health PET-MRI scanner (Ceresensa: London, ON) that poses no additional risk to the patient. In addition, you will receive several questionnaires and a clinical evaluation to determine the nature and level of your pain. A secondary goal of this study is to determine if undergoing a chiropractic care technique called the NeuroEmotive Technique (NET) alters body or brain physiology. Prior to starting your NET appointments or being assigned to the waitlist group, and at the end of approximately 2 months you will undergo the brain and body scan evaluation and receive clinical and pain testing. If you are unable to undergo the chiropractic care technique, you may still be asked to have a second clinical and imaging evaluation.

How many individuals will participate in the study and how long will the study last?

We hope to enroll up to 34 patients and 10 persons without chronic pain at Jefferson. The entire study will take about 3 years to complete. Your involvement in the study will last about 3 months.

We are including a small cohort of healthy controls who will receive a single PET-MR using the same method as for the patients with chronic pain. This information will be necessary to better compare the results from the persons with chronic pain to data from persons without pain. .

What will I have to do during the study?

The informed consent process will be completed with you. You will be asked questions about your medical history and about the medications, you are taking. You will also be asked to complete several questionnaires about your mood, memory, your pain, and how you feel. These questions will take up to 1 hour to complete. You will also undergo a clinical examination evaluating your pain symptoms in order to determine how much the pain affects you. You will repeat this process including the questionnaires and examination again in 1-2 months days. Throughout the study, you will continue to take whatever medications your doctor has prescribed for you. However, we will ask you to try to remain at the same dosage of any medication throughout the study unless your doctor changes the dose because of worsening symptoms or because of side effects.

You will initially receive two different scans that will be performed simultaneously in a special combined scanner. One scan, called positron emission tomography (PET), will evaluate your brain and body metabolism to determine which areas of your brain and which parts of your body are functioning differently. The other scan, called magnetic resonance imaging (MRI) will evaluate the structure and function of the brain, along with the connecting fibers affected by

pain. On the day of both scans, you will report to the Marcus Institute of Integrative Health at 789 E. Lancaster Avenue in Villanova, PA 19085.

Female subjects of childbearing potential will first have a pregnancy test and if negative will proceed with the remainder of the study. The PET scan measures the energy metabolism in the brain and body, which is particularly affected by pain symptoms. The PET scan works by injecting into your vein a radioactive medicine called FDG. FDG is a form of the sugar, glucose that is used by your brain for energy. By injecting the FDG, we can see where in the brain and body it goes so that we can take a picture of the activity in these areas. After injection of the tracer, you will be asked to rest quietly in a dimly lit room for approximately 30 minutes. At that point, you will be brought into the scanner room and will be asked to lie down on the PET imaging table. The remainder of the procedure involves having your head held comfortably in a special head holder as a reminder not to move your head and remain still while the scanner takes pictures of your brain. Immediately after the brain scan, you will be allowed to have a brief break (no more than 5 minutes) and then we will scan the rest of the body.
The MRI scan is performed simultaneously with the PET scan using a special PET-MRI scanner that can do both at the same time. Before the MRI scan, we will ask you a number of questions to make sure you do not have any metal in your body that might affect the scanner. While you are lying on the imaging table for the PET scan, the MRI scan will also be performed. The MRI scans add no radiation, but do make loud banging noises for which you will be given earplugs to block the sound. The MRI, along with the PET scan, is done over about 60 minutes. Your head will be in a special head holder surrounded by a head coil that enables us to take pictures of your brain.

After you receive the initial diagnostic testing above, you will be assigned into either a waitlist group or a group that receives the chiropractic technique. Instead of randomization, which is like flipping a coin with a 50/50 chance of being in the heads or tails group, or the treatment or waitlist group, we are using what is called a Permuted block randomization. It is a way to assign a participant to a group or a "block" randomly while maintaining a balance across the groups. That way subjects with pain will be assigned to either the treatment or waitlist group. Each "block" receives a specified treatment assignments.

Subjects will undergo a practice that was developed out of the chiropractic approach that is called NeuroEmotional Technique (NET) that we have used in previous IRB approved protocols. The Neuro Emotional Technique (NET), a mind-body approach, is a stress-reduction intervention procedure aimed at improving health.
During the first NET session, you and the NET practitioner will discuss the emotions surrounding the pain you have experienced and how pain affects your behavior and accomplishing tasks. The NET practitioner will show you a feedback technique called the muscle test, which will involve applying light pressure to the right and left shoulder. By the end of the two to five NET sessions, the goal is to have an understanding of the emotions that the pain cause and how pain affects thoughts and actions.

With direction in the chiropractic technique, while thinking about the pain and connecting to the emotions associated with them, you may be asked to do some simple breathing exercises. You may be instructed to touch points along your wrists (as Chinese doctors do when they are

assessing people for acupuncture) while you will continue to do the breathing exercises. At the completion of the chiropractic NET sessions, you will be asked to complete the same questionnaires as before while thinking about pain.

The wait list control group to be compared to pain patients will receive no specific therapeutic intervention, but will still undergo the scanning, electroencephalography (EEG), and neurocognitive testing initially and then after approximately 2 months.

What are the risks or discomforts involved?

PET Risks

Use of FDG PET imaging is commercially approved, and has resulted in very rare adverse effects of skin redness, facial swelling, fever, and short lasting rise in blood pressure. This research study involves exposure to radiation from the FDG PET scan and therefore you will receive a radiation dose that you would not receive if you did not have the scans. The radiation dose obtained as the result of participating in this study is the same as standard clinical brain scans using the same tracers. Therefore, at the doses you will receive, it is very likely that you will see no effects at all. Please inform the investigator of any participation in previous studies involving radiation exposure. Some persons may experience some discomfort while lying flat on the table for the PET-MRI scan or may feel uncomfortable or anxious in the scanner. Since the injection of the FDG requires inserting a needle into your arm vein, there can be pain and discomfort at the injection site. Bleeding and infection may also occur.

MRI Risks

You will be asked to complete a MRI Patient Information History form. The MRI scan does not involve any radiation exposure. You will have the scan performed by placing your head within a standard head coil, or a 32-channel research head coil, to obtain better images. There is no added risk with either of these head coils. Due to the strength of the magnetic field of the MRI, there is a risk of being injured by receiving a burn on your skin or if an unsecured metal object flies into the MRI scanner. In order to minimize this risk, you will be asked to remove all metal objects from your person. In addition, all metal objects will be cleared from the area prior to the scan. This is the standard practice when patients undergo MRI exams. It is important when discussing the study that you inform the staff if you have any of the following:

- Surgically implanted electrical devices
- Pacemaker
- Surgically placed metallic clips (aneurysm clips)
- Ear implants
- Any history of metal fragments in the eye

Some persons may experience some discomfort while lying flat on the table for PET MRI scans or may feel uncomfortable or anxious in the scanner.

Risks from NET

The risks for this intervention are very low. You may feel some discomfort when talking about pain or distressing recollections or any emotional problems that you have had in the past. We will make every effort to make you feel comfortable during this interview. You can stop at any time

you are feeling uncomfortable. We do not anticipate any additional risks from the breathing exercises or the NET technique.

Survey Question and Clinical Examination Risks

Some of the questions we will ask you as part of this study, as well as the neurological examination, might make you feel uncomfortable. You can refuse to answer any of the questions and you are free to take a brief break at any time when answering these questions or while undergoing the clinical exam. However, you must complete the questionnaire or clinical exam during the study period.

Risks of Discovering an Incidental Finding

The result of the scans will be reported in a clinical report by a trained specialist. If an unknown abnormality (also called an incidental finding) is discovered on the PET or MRI scan, you will be thoroughly counseled by the study doctor and will have an opportunity to ask any questions. Such a finding may make you feel anxious or depressed. However, the information and scans will be made available to your primary care doctor or referring physician in order to manage the finding as quickly and effectively as possible.

What To Do If You Experience Any Adverse Effects

You should call the study doctor as soon as possible at 215-503-3422 if, during the course of this study, you develop any side effects or symptoms. The study doctor has told you that if your condition worsens, if side effects become very severe, or if it turns out that being in this study is not in your best interest, you will be taken out of the study.

What are the risks to fetuses, infants and pregnant women?

Pregnant women or women who are breast-feeding should not be in this study because exposure to the radioactive materials may be hazardous to an embryo, fetus or nursing infant. Even medications that are well known and prescribed may have adverse effects on an embryo or fetus. Since this study also includes radiation related to the FDG PET scans, pregnant women or women who are breast-feeding should not be in this study. As with any medication, there are unknown risks. To be in this study you and your partner must practice adequate birth control measures. The study doctor will discuss acceptable methods of birth control with you. If you are a woman of childbearing potential, you will have a pregnancy test before making a decision about being in this study. This requires either a urine test or that blood be drawn from a vein in your arm (1-2 tsp.) one or two days prior to the start of the study. The results of this pregnancy test will be made available to you prior to the start of the study.

If you become pregnant during the course of this study, you should notify the study doctor as soon as possible.

If you are a person in a same sex relationship, it is not necessary for you to practice birth control. However, if you are female of childbearing potential, you will still have to have pregnancy tests according to the study protocol.

Are there alternatives to being in the study?

You do not have to participate in this study.

How will privacy and confidentiality (identity) be protected?

Federal regulations require that certain information about individuals be kept confidential. This information is called "protected health information" (PHI). PHI includes information that identifies you personally such as name, address and social security number, or any medical or mental health record, or test result, that may have this sort of information on it. The laws state that you may see and review your TJU or Thomas Jefferson University Hospital medical records at any time. However, in a research study, you may not see the study results or other data about the study until after the research is completed unless the study doctor decides otherwise.

If you join this study, the following individuals or entities may have access to your PHI and by law must protect it. These include investigators listed on this consent form and other personnel of Thomas Jefferson University and Thomas Jefferson University Hospitals, Inc. involved in this specific study, the University's Division of Human Subjects Protection and the Institutional Review Board (IRB), and your health insurance company (if necessary for billing for standard medical care).

Your PHI may also be shared with the following entities that, while not obligated by law to protect PHI, will protect it to the best of their ability:

- Andrew Newberg or designated research staff who will oversee the study and review medical records to ensure study-related information is correct
- With any person or agency required by law.
- De-identified imaging data will be analyzed at the laboratory of Dr. Abass Alavi

If you develop an illness or injury during the course of your participation in this study, other PHI about treating and following the condition may be generated and disclosed as it relates to this study. Your PHI may be used/disclosed until the end of the research study.

You may quit the study and revoke permission to use and share your PHI at any time by contacting the principal investigator, in writing, at: Andrew Newberg, 925 Chestnut Street, Suite 120, Philadelphia, PA 19107. If you quit the study, further collection of PHI will be stopped, but PHI that has already been collected may still be used.

The results of clinical tests and procedures performed as part of this research may be included in your medical records. The information from this study may be published in scientific journals or presented at scientific meetings but you will not be personally identified in these publications and presentations.

A description of this clinical trial will be available on http://www.ClinicalTrials.gov, as required by U.S. Law. This Web site will not include information that can identify you. At most, this Web site will include a summary of the results. You can search this Web site at any time.

What if I am injured as a result of being in this study?

In the event that you experience a research-related injury, necessary and available medical care (including hospitalization) will be provided. A research-related injury is a physical injury or illness resulting to you that is directly caused by any procedure or treatment used in this study that is different from the treatment you would receive if you were not participating in a research study. If you are physically injured due to any drug/substance or procedure properly given under the plan for this study, medical expenses for treating the injury will be billed to your insurance carrier. You should be aware that some costs may not be covered by insurance. There is no plan to provide compensation for loss of wages, lost time from work, personal discomfort, or for injuries or problems related to your underlying medical condition(s).

If you receive a bill related to a research-related injury that seems wrong, please discuss it with the study doctor or research coordinator.

Will I benefit from being in this study?

You may not benefit from being in this research, but we hope that what we learn may be helpful to future patients or society in general.

Will I be paid for being in this study?

You will not receive any payment for participating in the study, but you will have access to your scans.

Will I be told about any new findings?

Anything learned during the study, beneficial or not, that may affect your health or your willingness to continue in the study, will be told to you and explained.

Disclosure of Financial Interest

None of the investigators has any financial interest in the companies that provide products for this study.

Are there costs related to being in this study?

There will be no charge to you or your health insurance for any of the PET or MRI or for the NET visits conducted as a part of this study. If you receive a bill that you think is wrong, please discuss it with the study doctor or research coordinator.

Standard Testing Procedures

Procedures, tests and doctor's charges resulting that are considered standard of care will be billed to your health insurance carrier. These are charges that you would have whether or not you were participating in a research study which include standard physical and neurological examinations, medications prescribed by your physician, and any other medical treatment you undergo. It is

possible that your insurance company may deny payment. If that happens you may be responsible for some or all of these charges. The study doctor will explain to you which procedures, tests and doctor visits are considered standard of care.

If you receive a bill that you think is wrong, please discuss it with the study doctor or research coordinator.

Can I be removed from the study or quit the study?

Your decision to participate in this research study is entirely voluntary. You have been told what being in this study will involve, including the possible risks and benefits.

Your participation in this research project may be terminated by the study doctor without your consent/assent for any reason that he/she feels is appropriate.

You may refuse to participate in this investigation or withdraw consent and quit this study without penalty and without affecting your ability to receive medical care at Thomas Jefferson University.

If you withdraw from this study, you may continue treatment with your Jefferson doctor, or you may seek treatment from another doctor of your choice.
Should you decide to withdraw from the study, please be sure to inform the study doctor.
Additional tests or procedures may be needed to ensure your safety. The study doctor will explain why these tests or procedures are necessary.

CONTACT INFORMATION

Telephone number for questions about your rights as a research participant	The Jefferson Institutional Review Board	215-503-8966
For questions, concerns or complaints about the research, or if you suspect a research-related injury	Principal Investigator Andrew B. Newberg, MD Co-Investigator, Daniel A. Monti, MD Program Manager, Nancy Wintering, LCSW Research Coordinator, Chloe Hriso	215-503-3422 215-955-4410 215-503-3423 215-503-4886
If you have difficulty contacting the study staff	Call the Jefferson Office of Human Research	215-503-0203

If you want more information about the Jefferson Institutional Review Board or Jefferson's Human Research Protection Program, please visit our website at http://www.jefferson.edu/human_research/irb/index.cfm

Non-Waiver of Legal Rights Statement

By your agreement to participate in this study, and by signing this consent form, you are not waiving any of your legal rights.

In order to be in this research study, you must sign this consent form.

You affirm that you have read this consent form. You have been told that you will receive a copy.

Signatures:

_____(Date)
Your Name *(please print or type)*

_____(Date)
Your Signature

_____(Date)
Witness Signature
(Only required if subject understands and speaks English, but cannot read English, or if subject is blind or cannot physically sign the consent form—delete if inapplicable)

_____(Date)
Name of Person Conducting Consent Interview

_____(Date)
Signature of Person Conducting Consent Interview

The investigator's signature certifies that s/he personally provided the study participant with a description of the study, study procedures, risks, benefits and alternatives to participation.

_____(Date)
Signature of Principal Investigator or Co-Investigator