Study Title: Evaluation of a 68Ga Small Molecule PSMA Antagonist Produced by Two Different Methods

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Weill Cornell Medicine

Informed Consent and HIPAA Authorization for Research

Project Title:	Evaluation of a ^{68}Ga Small Molecule PSMA Antagonist Produced by Two Different Methods
Research Project/Protocol #:	19-11021092
Principal Investigator:	Joseph R. Osborne
Arm/Group	
Subject Name or number:	
MRN	

Please note, are you currently or have been (within the last 6 months) a participant in any other research study at Weill Cornell Medicine, New York Presbyterian Hospital or elsewhere? If so, please inform the research team.

INSTITUTION: Weill Cornell Medicine/ NewYork Presbyterian

INTRODUCTION

You are invited to participate in a research study. You were selected as a possible participant in this study because you have been diagnosed with metastatic prostate cancer.

Please take your time to make your decision. It is important that you read and understand several general principles that apply to all who take part in our studies:

(a) Taking part in the study is entirely voluntary.

(b) If you choose not to participate in the study or if your decision changes, your regular care will not be affected. In addition, you will not lose any of the benefits to which you are entitled.

(c) Personal benefit to you may or may not result from taking part in the study, but knowledge gained from your participation may benefit others.

The purpose and nature of the study, possible benefits, risks, and discomforts, other options, your rights as a participant, and other important information about the study are discussed below. Any new information discovered which might affect your decision to participate or remain in the study will be provided to you while you are a participant in this study. You are urged to ask any questions you have about this study with members of the research team. Please take whatever time you need to discuss the study with your physician and family/loved ones/friends. The decision to participate or not to participate is yours. If you decide to participate, please sign and date where indicated at the end of this form.

The study will take place at the Genitourinary Clinic of WCMC and the Citigroup Biomedical Imaging Center (CBIC) or Weill Cornell Imaging NewYork-Presbyterian (WCINYP).

WHY IS THE STUDY BEING DONE?

Prostate Cancer is a very common type of cancer in US. The ability to monitor the presence and progression of prostate cancer is very important. To help your doctor understand the extent of your disease you can undergo a PET/CT scan.

PET stands for **P**ositron **E**mission **T**omography and CT stands for **C**omputed **T**omography. PET/CT is a combination of PET images and CT images into one image. Gallium-68 citrate is a special form of the metal gallium that is radioactive. It is injected through a small needle into a vein in the arm.

PET imaging or PET scan takes detailed 3-dimensional pictures of areas of the body. The imaging helps doctors see how the organs and tissues inside your body are functioning. A CT scanner is a special kind of X-ray machine. A computer then processes data into two- and three-dimensional pictures that are displayed on a computer monitor.

When Gallium-68 citrate is used with PET/CT, the scanner can form images and give the doctor information about the size, shape and functional nature of abnormal tissues. The images can be reviewed by a physician to provide information about various medical conditions.

Gallium-68 (^{68}Ga) can be produced with two different methods. The one method of production is now used widely but is very expensive and difficult to use. The other method to produce this molecule is not yet established but it is easier to use and cheaper. This research study is being conducted to assess whether the PET/CT imaging results, as generated from the two different ^{68}Ga production methods, are equivalent. For that purpose, a range of standard-of-care and parametric PET images, as generated with each method, will be comparatively evaluated.

HOW MANY PEOPLE WILL TAKE PART IN THE STUDY?

Participants in the study are referred to as subjects.

About 30 subjects will take part in this study worldwide; All subjects will be recruited at this site.

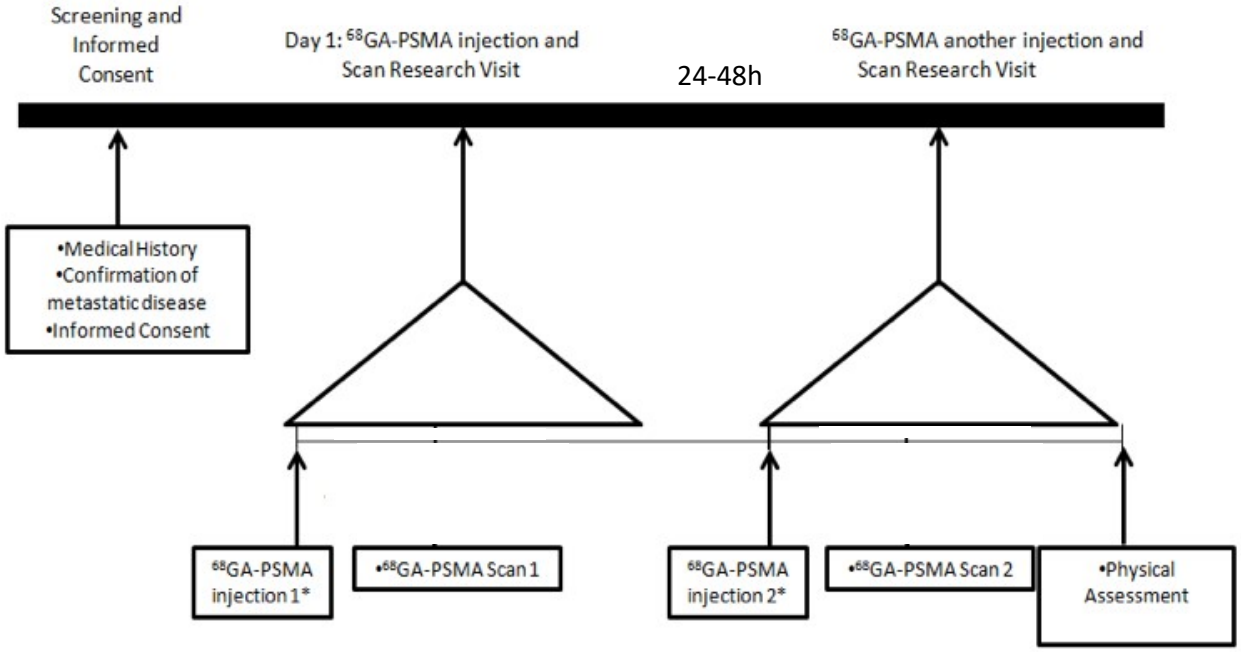
WHAT IS INVOLVED IN THE STUDY?

During the investigation for metastatic prostate cancer as a standard of care procedure you can undergo a CT or MR imaging or a bone scan. However, these imaging modalities are not very specific and can not always show the extent of the disease. The PET imaging with ^{68}Ga-citrate PSMA that you will undergo is more specific for evaluating the presence and extent of metastatic disease.

For this study you will undergo a total of two whole-body dynamic ^{68}Ga-PSMA PET/CT scans with a 6 to 48h gap. Each scan will involve the same amount of 68Ga-PSMA dose and is expected to last approximately 75 min. The first scan will occur after a baseline clinical evaluation, which will include a history, physical, and baseline lab draw. Blood draws will be collected post 68Ga-PSMA injection immediately before, during and immediately after each PET/CT scan. Research blood draws will be performed only in a subset of patients and are not required for participation in the study. The blood samples will be drawn through the vein using the same catheter previously placed for the 68Ga-PSMA administration

A subset of patients will have serum blood draws (approximately 5 ml) for pharmacokinetic analysis. This is **only** required in a subset of patient (3-5 patients). The data gathered from the serum blood analysis will be used to calculate and generalize the amount of radiation absorbed by organs and lesions in the body. The planned timepoints are as follows: pre tracer injection, 5 minutes (+/- 10 minutes) 15 minutes (+/- 10 minutes), 30 minutes (+/-10 minutes), 60 minutes (+/-10 minutes). A blood draw will also be performed after each scan (12 blood draws in total per patient at most). This will be done through the IV placed to administer the PET tracer during the imaging visit. Apart from routine laboratory tests, samples will also be evaluated for the presence of ^{68}Ga, as well as ^{66}Ga, potential contaminants for generator-produced and cyclotron-produced products.

Scan procedure: You will be pretreated with hydration and encouraged to void immediately prior to imaging. You will be positioned on a flat couch. Following the installation of an intra venous catheter in one of your arms, you will be invited to the PET/CT scanner room and comfortably positioned on the scanner table. A low dose whole-body CT scan will initially be performed from mid-skull to mid-thigh including the prostate or a pre-determined index lesion. Subsequently, you will be injected intravenously with a standard dose of the 68Ga-PSMA radiotracer. At the same time, a dynamic whole-body PET scan will begin. Initially, a 10 min scan over the pelvis region will be conducted followed by a series of successive PET passes from 10-75 min post injection with each pass covering the same body region as that of the previous CT scan. All CT and PET images will be acquired in a supine position with your arms comfortably positioned and secured by the side of your body. You will be allowed to get off from the couch in between the twelve dynamic whole body passes if required (such as for a bathroom break). If the amount of injected dose is considerably lower than the standard, you may be scanned for a maximum of an additional 15min period.



After 6 hours or within 48h, you will be asked to undergo the same PET/CT imaging protocol after injection of the second experimental radiotracer. The same exam procedures will apply.

Overall, this study involves the procedures listed below:

	Screening- Visit 1 (Baseline or D0)	Imaging 1* (Visit 2 or D1)	Imaging 2* (Visit 3 or D2)
Medical History	X		
Physical Exam	X		X
Complete Blood Count (Blood draw)	X		
Serum BUN and Creatinine (Blood draw)	X		
AST, ALT, ALP, bil, albumin	X		
^{68}Ga-PSMA administration		X	X
^{68}Ga-PSMA PET scans		X	X
Research Blood draws (*performed before, during and after the scan)		X	X

*Two scans *with* ^{68}Ga-PSMA-cyclotron and ^{68}Ga-PSMA-generator radiotracers will be performed at least 24h apart (max 48h)

** Research blood draws will be performed only in a subset of patients (3-5) and are not required for participation in the study. The planned timepoints are as follows: pre tracer injection, 5 minutes (+/- 10 minutes) 15 minutes (+/- 10 minutes), 30 minutes (+/-10 minutes), 60 minutes (+/-10 minutes). A blood draw will also be performed after each scan (12 blood draws in total per patient at most).

Please advise the researchers of any medications you are taking. In addition, if you are taking any over-the-counter drugs or herbal supplements which you have obtained from the drug store, grocery store, etc., you should advise the researchers.

HOW LONG WILL I BE IN THE STUDY?

The study intervention consists of the two scans described above. The time from screening to completion of the scans will be up to 4 weeks. You will not have to come back to the clinic for a follow-up visit. However, the data from your records and the next follow-up scans performed as part of your standard of care procedures will be used as part of this study.

You can stop participating at any time. However, if you decide to stop participating in the study, we encourage you to talk to the researcher and your regular doctor first.

If you choose to not participate in the study or to leave the study, your regular care will not be affected nor will your relations with WCMC, NewYork-Presbyterian Hospital, your physicians, or other personnel. In addition, you will not lose any of the benefits to which you are entitled.

Withdrawal by investigator, physician, or sponsor

The investigators, physicians or sponsors may stop the study or take you out of the study at any time if they feel it is in your best interest, if you experience a study-related injury, if you need additional or different medication, or if you do not follow the study plan. They may remove you from the study for various other administrative and medical reasons. They can do this without your consent.

WHAT ARE THE RISKS OF THE STUDY?

There may be risks associated with participation in a research study. These risks will be discussed with you by the research doctor. The risks and side effects related to the PET/CT scan include:

1. There is the possibility of the **common** discomforts associated with the needles entering your skin for the introduction of the venous catheter. These risks may include: discomfort (such as minor pain or soreness), lightheadedness and/or minor bruising at the site of the catheter insertions, and less commonly, the formation of a small clot or swelling of the vein and bleeding into the tissues surrounding the puncture site. A rare chance of infection also exists. Experienced medical personnel will be involved to minimize the possible risks associated with insertion of catheter. However, please note that you will have a needle placed through your skin for your clinically indicated standard of care CT exam whether or not you participate in this research study. So this does not represent an increased risk over routine standard of care procedures for your clinical condition.

2. Exposure to radiation. As part of this scan there is radiation delivered from the ^{68}Ga and from the low dose CT scan that are performed as part of the PET/CT. Although any exposure to ionizing radiation has the potential to cause some harm to tissue, the radiation exposures in this study are comparable to the low-level exposures associated with common diagnostic procedures such as CT scanning. There remains **a low theoretical risk** of developing a cancer at some point later in life as a result of the radiation exposure received in this study. This risk is much smaller than the clinical risks posed by the patient's current cancer or the salvage radiation therapy the patient would be receiving. Participants should not father a baby while on this study. Acceptable birth control methods include abstinence, double barrier method, surgically sterilized patient or partner.

3. There is **low risk** of an allergic reaction from administration of the radioactively labeled tracer. Allergic reactions are **very rare**, and most commonly are mild such as a rash, cough, dizziness or fainting, hives, itching, chest tightness, shortness of breath, or wheezing. **Rarely,** a more severe and possibly even life-threatening reaction can occur, such as anaphylaxis (a reaction which may involve shortness of breath, swelling or closing of the airway and/or drop in blood pressure). In the event of an allergic reaction, medical treatment will be immediately available from the study staff. The risks of an allergic reaction from participating in this study are **very low**. PSMA has been injected for PET imaging in more than 500 published patients. No drug related side effects have been observed.

PET/CT studies might involve unsuspected, incidental findings that might or might not be a sign of disease and might or might not lead to further medical work-up. This further medical work-up (if it is performed) might have associated risks, potentially cause anxiety, and may incur costs to you and/or your insurer.

Of note, there are not known risks related to the new production method of Ga-68-PSMA. The end product generated by both methods is the same in terms of chemical structure thus we anticipate no increased risk compare to the standard production method.

For more information about risks and side effects, ask the researcher.

There may also be side effects, other than listed above that we cannot predict. Other drugs may be given to make side effects that occur less serious and less uncomfortable.

Considerations for Pregnancy and Sexual Activity (if applicable)

Participants should not father a baby while on this study. Acceptable birth control methods include abstinence, double barrier method, surgically sterilized patient or partner. If your partner becomes pregnant while participating in the study please inform the study team immediately.

If there are any unsuspected, incidental laboratory or pathological findings that you should know about, the Principal Investigator will share the findings with you or a physician who you may designate. Incidental findings noted on the PET/CT studies might or might not have clinical significance and might or might not lead to further medical tests or treatments. It will be up to you and your designated physician to determine if any further testing or treatment is necessary on the basis of this information. However, you should know that the limited CT/imaging that is done in conjunction with this study is not meant to be a comprehensive examination, therefore we may not detect abnormalities or diseases which may be present and might be detected in a full clinical and diagnostic CT examination.

ARE THERE ANY BENEFITS TO TAKING PART IN THE STUDY?

We cannot and do not guarantee that you will receive any benefits from this study. We hope the information learned from this study will benefit other patients with metastatic prostate cancer in the future.

WHAT OTHER OPTIONS ARE THERE?

Instead of being in this study, you may choose not to participate in this study and undergo CT or MRI alone as standard of care.

You may choose not to participate in this study.

WHAT ABOUT CONFIDENTIALITY?

Efforts will be made to protect your medical records and other personal information to the extent allowed by law. However, we cannot guarantee absolute confidentiality. Records of study participants are stored and kept according to legal requirements and may be part of your medial record. You will not be identified personally in any reports or publications resulting from this study. Organizations that may request to inspect and/or copy your research and medical records for quality assurance and data analysis include groups such as:

- Weill Cornell Medical College and NewYork-Presbyterian Hospital
- The Institutional Review Board (IRB)
- The Office of Human Research Protection (OHRP)
- Department of Health and Human Services and National Institutes of Health
- The Food and Drug Administration (FDA) and/or their representatives

By signing this consent form, you authorize access to this confidential information. You also authorize the release of your medical records to Weill Cornell Medical College and NewYork-Presbyterian Hospital by any other hospitals or institutions where you might receive medical care of any kind while you are participating in this study.

If information about your participation in this study is stored in a computer, we will take the following precautions to protect it from unauthorized disclosure, tampering, or damage by requiring a unique ID and password to log into the database.

Please also note that your PET/CT that is done as part of this study will be read and interpreted by a WCMC Department of Radiology radiologist and the report will be provided to the Principal Investigator. If there are any unsuspected, incidental findings that you should know about, the Principal Investigator will share the findings with you or a physician who you may designate. Incidental findings noted on the PET/CT study might or might not have clinical significance and might or might not lead to further medical tests or treatments. It will be up to you and your designated physician to determine if any further testing or treatment is necessary on the basis of this information. However, you should know that the limited CT/imaging that is done in conjunction with this study is not meant to be a comprehensive examination, therefore we may not detect abnormalities or diseases which may be present and might be detected in a full clinical and diagnostic CT examination. Should we find abnormalities in our limited CT examination of your brain, your doctor might recommend that you undergo the full diagnostic CT, which would then no longer be considered a part of this study.

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

HIPAA AUTHORIZATION TO USE or DISCLOSE PROTECTED HEALTH INFORMATION FOR RESEARCH

Purposes for Using or Sharing Protected Health Information If you decide to join this study, WCMC researchers need your permission to use your protected health information. If you give permission, Weill Cornell Medical College (WCMC) and/or NewYork-Presbyterian Hospital (NYPH) researchers may use your information or share (disclose) information about you for their research that is considered to be protected health information.

Voluntary Choice: The choice to give WCMC and/or NYPH researcher's permission to use or share your protected health information for their research is voluntary. It is completely up to you. No one can force you to give permission. However, you must give permission for WCMC and/or NYPH researchers to use or share your protected health information if you want to participate in the study. If you decline to sign this form, you cannot participate in this study, because the researchers will not be able to obtain and/or use the information they need in order to conduct their research. Refusing to give permission will not affect your ability to get usual treatment, or health care from WCMC and/or NYPH.

Protected Health Information To Be Used or Shared: Government rules require that researchers get your permission (authorization) to use or share your protected health information. Your medical information may be disclosed to authorized public health or government officials for public health activities when required or authorized by law. If you give permission, the researchers could use or share with the entities identified above any protected health information related to this research study from your medical records and from any test results including the results from blood tests performed in this study and results from the two 68-Ga-PSMA PET/CT scans.

Other Use and Sharing of Protected Health Information: If you give permission, the researchers could also use your protected health information to develop new procedures or commercial products. They could share your protected health information with the study sponsor the WCMC Institutional Review Board, inspectors who check the research, government agencies and research study staff.

The information that may be shared with the sponsor and/or government agencies could include your medical record and your research record related to this study. They may not be considered covered entities under the Privacy Rule and your information would not be subject to protections under the Privacy Rule.

Future Research

You may agree to allow your data, tissue, and/or blood sample(s) to be used for future research either within or outside WCMC and/or NYPH. If information goes to an outside entity then the privacy rule may not apply.

RESEARCH REPOSITORY

What is a Research Repository? A research repository (database) is a collection of information from the health and medical records of many individuals and can sometimes include identifiable specimens (like your tissue). The repository (database) may share the information with researchers who study medical conditions and diseases.

The repository (database) includes codes that identify each person whose information is collected. However, the repository does not share information with researchers unless the researchers promise to keep the information confidential.

RESEARCH PARTICIPANT: Please check the box below that describe your wishes:

☐ The WCMC Repository may keep my protected health information and/or specimens and share it with qualified researchers studying the research described above. If information goes to an outside entity then the Privacy Rule may not apply.

☐ The WCMC Repository may keep my protected health information and/or specimens and share it with qualified researchers studying the research described above **AND** for unspecified research to be done in the future. I understand that the samples will be stored for 3 years and will be destroyed after the research is completed. If information goes to an outside entity then the Privacy Rule may not apply.

☐ The WCMC Repository may not keep my protected health information for a research repository.

By signing this consent form, you agree to give these samples to WCMC for research purposes.

CANCELING AUTHORIZATION

Canceling Permission: If you give the WCMC researchers permission to use or share your protected health information, you have the right to cancel your permission whenever you want. However, canceling your permission will not apply to information that the researchers have already used or shared.

If you wish to cancel your permission, you may do so at any time by writing to:

Privacy Office
1300 York Avenue, Box 303
New York, NY 10065
Email: privacy@med.cornell.edu

If you have questions about this and would like to discuss, call (646) 962-6930.

End of Permission: Unless you cancel it, permission for WCMC and/or NYPH researchers to use or share your protected health information for their research will never end.

ACCESS TO RESEARCH RECORDS

During the course of this study**, you will have access** to see or copy your protected health information as described in this authorization form in accordance with Weill Cornell Medical College (WCMC) and/or NewYork-Presbyterian Hospital (NYPH) policies. During your participation in this study, you will have access to your research record and any study information that is part of that record.

CERTIFICATE OF CONFIDENTIALITY

A Certificate of Confidentiality has been granted by the Department of Health and Human Services (DHHS). This Certificate will protect the investigators (research/study staff) from being forced to release any research data in which the subject is identified even under a court order or subpoena. This protection is not absolute. For instance, it does not override any state requirement to report child abuse to the appropriate authorities.

WHAT ARE THE COSTS?

You will not have to pay for the any of the study procedures including the screening procedure, two PET/CTs and the blood draws performed as part of this study. All the research procedures will be covered under the trial.

If unsuspected, incidental findings are noted in the review of the PET/CT study and further medical tests and/or treatments are considered, such tests and/or treatments are no longer considered part of the study and therefore would be billed to you or your insurer. You should expect no compensation or reimbursement for these costs or any risks and anxieties associated with any such follow up care. You or your insurance company will also be charged for any continuing medical care and/or hospitalization that are not a part of the study.

POLICY/PROCEDURES FOR RESEARCH RELATED INJURY

The Policy and Procedure for Weill Cornell Medical College are as follows:

We are obligated to inform you about WCMC's policy in the event injury occurs. If, as a result of your participation, you experience injury from known or unknown risks of the research procedures as described, immediate medical care and treatment, including hospitalization, if necessary, will be available at the usual charge for such treatment. No monetary compensation is available from WCMC or NewYork-Presbyterian Hospital. Further information can be obtained by calling the Institutional Review Board at (646) 962-8200.

COMPENSATION FOR PARTICIPATION

You will not receive compensation for participating in this study

WHAT ARE MY RIGHTS AS A PARTICIPANT?

Taking part in this study is voluntary. You may choose to not take part in the study or to leave the study at any time. If you choose to not participate in the study or to leave the study, your regular care will not be affected nor will your relations with the Weill Cornell Medical College, NewYork-Presbyterian Hospital, your physicians, or other personnel. In addition, you will not lose any of the benefits to which you are entitled.

We will tell you about new information that may affect your health, welfare, or participation in this study.

WHOM DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?

For questions about the study, a research-related injury, any problems, unexpected physical or psychological discomforts, or if you think that something unusual or unexpected is happening, call *Dr Joseph R. Osborne* at 212-746-6797or the Department of Molecular Imaging and Therapeutics. Be sure to inform the physician of your participation in this study.

If you have questions about your rights as a research participant, contact the WCMC IRB Office. Direct your questions to:

Institutional Review Board at:
Address: 1300 York Avenue Box 89 Telephone:(646) 962-8200
New York, New York 10065

RESEARCHER'S STATEMENT

I have fully explained this study to the subject. As a representative of this study, I have explained the purpose, the procedures, the benefits and risks that are involved in this research study. Any questions that have been raised have been answered to the individual's satisfaction.

_____	_____	_____
Signature of person obtaining the consent (Principal Investigator or Co-investigator)	Print Name of Person	Date

In case the patient/legal representative does not speak English, an official interpreter has been informed about the purpose, procedures, benefits, risks of and alternatives to the proposed research project and has told the subject/legal representative everything pertaining to her participation in this study and verifies this by signing below.

_____	_____/_____
Interpreter's Name (Print)	Interpreter's Signature Date

_____	_____/_____
Name of Person Present (Print) During Oral Presentation	Signature of Person Present Date During Oral Presentation

SUBJECT'S STATEMENT

I, the undersigned, have been informed about this study's purpose, procedures, possible benefits and risks, and I have received a copy of this consent. I have been given the opportunity to ask questions before I sign, and I have been told that I can ask other questions at any time. I voluntarily agree to participate in this study. I am free to withdraw from the study at any time without need to justify my decision. This withdrawal will not in any way affect my future treatment or medical management and I will not lose any benefits to which I otherwise am entitled. I agree to cooperate with Dr Joseph R. Osborne and the research staff and to inform them immediately if I experience any unexpected or unusual symptoms.

_____	_____	_____
Signature of Subject	Print Name of Subject	Date

LEGALLY AUTHORIZED REPRESENTATIVE

I, _____, on behalf of the research project participant, signed above, have been fully informed of the purpose, benefits, risks of and alternatives to the proposed research project and as his/her legal representative consent to his/her participation in this research project. I have also been informed on the ways in which his/her protected health information will be used and disclosed in connection with participation in the project described above.

_____	_____
Signature of Legally Authorized Representative or Healthcare Proxy and Relationship to Participant (When Appropriate)	Date