VUMC Institutional Review Board
Informed Consent Document for Research

Study Title:	Multiparametric MRI as a Non-Invasive Biomarker of the Tumor Microenvironment in Breast Cancer NCT04803084
Version Date:	11/23/2020
PI:	Laura Kennedy, MD PhD

Name of participant: _____ Age: _____

The following is given to you to tell you about this research study. Please read this form with care and ask any questions you may have about this study. Your questions will be answered. Also, you will be given a copy of this consent form.

Key Information:
The first section of this document contains some key points that the research team thought you would find important. The study is described in more detail after this section. If you do not understand something, please ask someone.

Key information about this study:
You are invited to participate in a research study. This study is looking at how an imaging test could help doctors understand if a patient with early breast cancer will respond to drugs that use the patient's immune system to fight cancer. In the future, we hope that this test will assist a doctor in picking the best treatment for a patient with early breast cancer.

This study is paired with another clinical trial (I-SPY2) that is testing a drug that uses the immune system to fight cancer. This study does not change your treatment as part of the I-SPY2 study and is optional. As part of the I-SPY2 study, patients will have breast MRIs (imaging test) performed over the course of treatment. Three of these MRIs will be utilized for this study. People who agree to join this study are giving permission to Dr. Kennedy and her team to use the breast MRI images for additional research. They are also giving permission for Dr. Kennedy's team to look in their chart to collect data for the study. Patients in I-SPY2 also will have two breast biopsies for research: one before treatment, and one during treatment. People in this study will give additional tissue during the I-SPY2 biopsies as well as two tubes of blood specifically for this study. There are no additional study visits to be part of this study.

You do not have to join this study to continue to participate in the I-SPY2 study. You can choose to not share your images or tissue with this study. Although this study will not benefit participants directly, we hope the information we learn will help people with early breast cancer like yours in the future.

You may experience side effects during your participation in this study. You also may be having biopsies and blood draws performed during your participation in this study and some of the more common side effects include: bruising, bleeding, and pain at the biopsy site.

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Detailed Information:
The rest of this document includes detailed information about this study (in addition to the information listed above).

You are being asked to take part in this research study because you have a type of breast cancer known as triple-negative breast cancer and you have agreed to participate in the I-SPY2 study.

You do not have to be in this research study to continue to participate in the I-SPY2 study. You may choose not to be in this study and get other treatments without changing your healthcare, services, or other rights. You can stop being in this study at any time. If we learn something new that may affect the risks or benefits of this study, you will be told so that you can decide whether you would like to continue your participation in this study. Your medical record will contain a note saying you are in a research study and may contain some research information about you. Anyone you authorize to receive your medical record will also get this information.

Side effects and risks that you can expect if you take part in this study:
You might have side effects from the research biopsy. The side effects for the biopsy are listed below:

- These effects are most commonly seen:
  - Bruising or bleeding at the biopsy site
  - Pain at the biopsy site
- Less likely side effects of the biopsy are:
  - infection

You might have side effects from blood draws. The side effects for the blood draws are listed below:

- Blood Draw risks:
  - pain from the puncture
  - bruising
  - bleeding
  - infection
  - fainting

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Breach of confidentiality: As this study involves the use of your identifiable information, there is a potential for a breach of confidentiality.

Good effects that might result from this study:
The benefits to science and humankind that might result from this study: This study will teach us about the ability of an imaging test, breast MRI, to predict and/or track the body's immune response to treatment. In the future, this imaging test might be used to help a doctor decide if adding immunotherapy to a patient's pre-surgical treatment regimen would help shrink the breast tumor.

Procedures to be followed:
You will undergo breast research biopsies, and blood draws on the schedule outlined by the I-SPY2 study. As part of **this** study you may:

- As part of the interventional I-SPY2 study, you will undergo several research biopsies. During these procedures, you will receive local anesthetic to numb the area, and a hollow needle will be inserted into the tumor to cut out a small sample. The radiologist may use ultrasound or other imaging modalities to guide the needle. As part of the standard process, the needle will be inserted several times to collect multiple samples ("cores") for evaluation. As part of this study, we will ask the radiologist to collect two additional cores at two timepoints.
- Have two tubes of blood at the time of a scheduled blood draw (either during a standard of care draw or for I-SPY2)
- Allow researchers may obtain tissue samples from your diagnostic biopsy and surgical tissue specimen for further testing

Payments for your time spent taking part in this study or expenses:
There is no payment for being in this study.

Costs to you if you take part in this study:

If you agree to take part in this research study, you and/or your insurance will not have to pay for the tests and treatments that are being done only for research. However, you are still responsible for paying for the usual care you would normally receive for the treatment of your illness. This includes treatments and tests you would need even if you were not in this study. These costs will be billed to you and/or your insurance.

You have the right to ask what it may cost you to take part in this study. If you would like assistance, financial counseling is available through the Vanderbilt Financial Assistance Program. The study staff

can help you contact this program. You have the right to contact your insurance company to discuss the costs of your routine care (non-research) further before choosing to be in the study. You may choose not to be in this study if your insurance does not pay for your routine care (non-research) costs and your doctor will discuss other treatment plans with you.

Payment in case you are injured because of this research study:
If it is determined by Vanderbilt and the Investigator that an injury occurred as a direct result of the tests or treatments that are done for research, then you and/or your insurance will not have to pay for the cost of immediate medical care provided **at Vanderbilt** to treat the injury.

There are no plans for Vanderbilt to pay for any injury caused by the usual care you would normally receive for treating your illness or the costs of any additional care. There are no plans for Vanderbilt to give you money for the injury.

Who to call for any questions or in case you are injured:
If you should have any questions about this research study or if you feel you have been hurt by being a part of this study, please feel free to contact **Dr. Laura Kennedy** at [redacted]

For additional information about giving consent or your rights as a person in this study, to discuss problems, concerns, and questions, or to offer input, please feel free to call the VUMC Institutional Review Board Office at (615) 322-2918 or toll free at (866) 224-8273.

What will happen if you decide to stop being in this study?
If you decide to stop being part of the study, you should tell your study doctor.

Clinical Trials Registry:
A description of this clinical trial will be available on 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 Web site at any time.

Clinical Trials Reporting Program:
Vanderbilt's NCI-Designated Cancer Center or the Sponsor registers National Cancer Institute (NCI)-supported clinical trials with NCI though their Clinical Trials Reporting Program (CTRP) to provide study related information. The data provided will include the following identifiable information that may identify you: birth month/year and five-digit zip code. NCI uses the data to manage and enhance the nation's investment in cancer research.

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Confidentiality:
If you join this study, some people and organizations might need to look at your medical or research records for quality assurance or data analysis. They include:

- Researchers involved with this study.
- Institutional Review Boards (IRB), including the Vanderbilt University Medical Center IRB. An IRB is a group that reviews the study to protect your rights as a research participant.
- Vanderbilt University Medical Center
- Office for Human Research Protections

We will do our best to keep your personal information confidential. But we cannot guarantee total confidentiality. Your personal information may be given out if required by law. For example, workplace safety rules may require health workers to contact you about lab tests. Or a court may order study information to be disclosed. Such cases are rare. We will not use your personal information in any reports about this study, such as journal articles or presentations at scientific meetings.

If you join this study, information about your participation would be made part of your permanent medical record. This information would include a copy of this consent form. If an insurance company or employer or anyone else were authorized to see the medical record, they would see a copy of this consent form.

This study may have some support from the National Institutes of Health (NIH). If so, your study information is protected by a Certificate of Confidentiality. This Certificate allows us, in some cases, to refuse to give out your information even if requested using legal means.

It does not protect information that we have to report by law, such as child abuse or some infectious diseases. The Certificate does not prevent us from disclosing your information if we learn of possible harm to yourself or others, or if you need medical help.

Disclosures that you consent to in this document are not protected. This includes putting research data in the medical record or sharing research data for this study or future research. Disclosures that you make yourself are also not protected.

Privacy:

Study Title:	Multiparametric MRI as a Non-Invasive Biomarker of the Tumor Microenvironment in Breast Cancer
Version Date:	11/23/2020
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Any samples and information about you may be made available to others to use for research. To protect your privacy, we will not release your name. You will not receive any benefit as a result of the tests done on your samples. These tests may help us or other researchers learn more about the causes, risks, treatments, or how to prevent this and other health problems.

Your samples may be used to make new products or tests. These may have value and may be developed and owned by the study staff, Vanderbilt University, Vanderbilt University Medical Center, and/or others. If this happens, there are no plans to provide money to you. This research does include whole genome sequencing (human germline and somatic).

Study Results:
You will not be directly informed of study results; however, results of this study may be presented in meetings or in publications. A summary of results will be available on www.clinicaltrials.gov, as required by U.S. Law.

Authorization to Use/Disclose Protected Health Information
What information is being collected, used, or shared?
To do this research, we will need to collect, use, and share your private health information. By signing this document, you agree that your health care providers (including both Vanderbilt University Medical Center and others) may release your private health information to us, and that we may use any and all of your information that the study team believes it needs to conduct the study. Your private information may include things learned from the procedures described in this consent form, as well as information from your medical record (which may include information such as HIV status, drug, alcohol or STD treatment, genetic test results, or mental health treatment).

Who will see, use or share the information?
The people who may request, receive or use your private health information include the researchers and their staff. Additionally, we may share your information with other people at Vanderbilt, for example if needed for your clinical care or study oversight. By signing this form, you give permission to the research team to share your information with others outside of Vanderbilt University Medical Center. This may include the sponsor of the study and its agents or contractors, outside providers, study safety monitors, government agencies, other sites in the study, data managers and other agents and contractors used by the study team. We try to make sure that everyone who sees your information keeps it confidential, but we cannot guarantee that your information will not be shared with others. If your information is disclosed by your health care providers or the research team to others, federal and state confidentiality laws may no longer protect it.

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Version Date:	11/23/2020
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Do you have to sign this Authorization?
You do not have to sign this Authorization, but if you do not, you may not join the study.

How long will your information be used or shared?
Your Authorization for the collection, use, and sharing of your information does not expire. Additionally, you agree that your information may be used for similar or related future research studies.

What if you change your mind?
You may change your mind and cancel this Authorization at any time. If you cancel, you must contact the Principal Investigator in writing to let them know by using the contact information provided in this consent form. Your cancellation will not affect information already collected in the study, or information that has already been shared with others before you cancelled your authorization.

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Informed Consent Document for Research

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If you decide not to take part in this research study, it will not affect your treatment, payment or enrollment in any health plans or affect your ability to get benefits. You will get a copy of this form after it is signed.

STATEMENT BY PERSON AGREEING TO BE IN THIS STUDY

I have read this consent form and the research study has been explained to me verbally. All my questions have been answered, and I freely and voluntarily choose to take part in this study.

Date _____ Signature of patient/volunteer _____

Consent obtained by:

Date _____ Signature _____

Printed Name and Title _____

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Consent for Genetic Research

The purpose of this study is to look at genes (DNA) and how they affect health and disease. Genes are the instruction manual for your body. The genes you get from your parents decide what you look like and how your body behaves. They can also tell us a person's risk for certain diseases and how they will respond to treatment.

You are being asked to give a blood and tumor sample for genetic research. What we learn about you from this sample will not be put in your health record. Your test results will not be shared with you or your doctor. No one else (like a relative, boss, or insurance company) will be given your test results.

A single blood sample of 4 teaspoons (two tubes of 2 teaspoons each) will be drawn from a vein in your arm using a needle; extra biopsy tissue will be obtained by through a breast biopsy. This will take about 15 minutes of your time for the blood draw and about 2 hours of your time for the breast biopsy.

Blood samples – You may feel bothered or pained from the needle stick. You may have a bruise or the site may get infected. It is rare, but some people faint.
Breast biopsy –You may feel bothered or pained at the biopsy site. You may have a bruise or the site may get infected.

One risk of giving samples for this research may be the release of your name that could link you to the stored samples and/or the results of the tests run on your samples. This may cause problems with insurance or getting a job.

To prevent this, these samples will be given a code. Only the study staff will know the code. The name that belongs to the code will be kept in a locked file or in a computer with a password. Only Dr. Kennedy and the research study staff will have access to your name.

Health insurance companies and group health plans may not use your genetic information when making decisions regarding your eligibility or premiums. Employers with 15 or more employees may not use your genetic information that comes from this research when making a decision to hire, promote, or fire you or when setting the terms of your employment.

Your sample will be used to make DNA that will be kept for an unknown length of time (maybe years) for future research. The sample will be destroyed when it is no longer needed.

Your samples may be used to make new products, tests or findings. These may have value and may be developed and owned by the study staff, Vanderbilt University, Vanderbilt University Medical Center, and/or others. If this happens, there are no plans to provide money to you.

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Version Date:	11/23/2020
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Your samples and information about you may be shared with others to use for research. To protect your privacy, we will not release your name.

You will not receive any benefit as a result of the tests done on your samples. These tests may help us learn more about the causes, risks, treatments, or how to prevent this and other health problems.

At any time, you may ask to have your sample destroyed. You should contact Dr. Kennedy or study staff at [redacted] to have your sample destroyed and no longer used for research. We will not be able to destroy research data that has already been gathered using your sample. Also, if your identity was removed from the samples, we will not be able to locate and destroy them.

There will be no costs to you for any of the tests done on your samples. You will not be paid for the use of your samples.

Please check Yes or No to the questions below:

My blood and tissue samples may be used for gene research in this study.

☐ Yes ☐ No

My blood and tissue samples may be stored/shared for future gene research in breast cancer or immunotherapy response.

☐ Yes ☐ No

My blood and tissue samples may be stored/shared for future gene research for other health problems (such as cancer, heart disease, etc).

☐ Yes ☐ No

Signature: _____ Date: _____