21-003046

Comprehensive Single-Cell Transcriptional Analysis of Aromatase Inhibitor-Resistant Breast Cancer

NCT05447910

Document Date: 05/08/2023

MAYO CLINIC

Name and Clinic Number

Approval Date: **May 8, 2023**
Not to be used after: **May 7, 2024**

RESEARCH PARTICIPANT CONSENT AND PRIVACY AUTHORIZATION FORM

Study Title: Comprehensive Single-Cell Transcriptional Analysis of Aromatase Inhibitor-Resistant Breast Cancer

IRB#: 21-003046

Principal Investigator: Saranya Chumsri, M.D., and Colleagues

Key Study Information

This section provides a brief summary of the study. It is important for you to understand why the research is being done and what it will involve before you decide. **Please take the time to read the entire consent form carefully and talk to a member of the research team before making your decision.** You should not sign this form if you have any questions that have not been answered.	
It's Your Choice	This is a research study. Being in this research study is your choice; you do not have to participate. If you decide to join, you can still stop at any time. You should only participate if you want to do so. You will not lose any services, benefits or rights you would normally have if you choose not to take part.
Research Purpose	The purpose of this study is to examine the blood and tissue samples of patients with early-stage hormone receptor-positive HER2-negative breast cancer who are receiving oral hormone therapy prior to breast cancer surgery. You have been asked to take part in this research because You have recently been diagnosed with breast cancer following a biopsy.
What's Involved	Study participation involves two blood draws and allowing access to your stored tissue samples for analysis, as well as taking the study medication, Letrozole, which is an FDA-approved drug for hormone receptor-positive HER-2 negative breast cancer.

Key Information	Post-menopausal women diagnosed with hormone receptor-positive breast cancer are often prescribed oral hormone therapy, called aromatase inhibitors, to control the amount of estrogen in their bodies to prevent cancer from coming back. The risks from the aromatase inhibitors are the same whether you are on a study or not. The most common risks are those associated with a loss of estrogen: hot flashes, hair thinning, vaginal dryness, joint or bone stiffness, or aches. The common side effects of Letrozole are increased hot flashes, fatigue, and sweating. All risk associated with letrozole are detailed later in this form. Your doctor will discuss with you the risks associated with the blood draw, and tissue collection, as these are part of your standard clinical care. There are alternatives to taking part in this research. The research team will discuss the other treatment options with you.
Learn More	If you are interested in learning more about this study, read the rest of this form carefully. The information in this form will help you decide if you want to participate in this research or not. A member of our research team will talk with you about taking part in this study before you sign this form. If you have questions at any time, please ask us.

Making Your Decision

Taking part in research is your decision. Take your time to decide. Feel free to discuss the study with your family, friends, and healthcare provider before you make your decision. Taking part in this study is completely voluntary and you do not have to participate.

If you decide to take part in this research study, you will sign this consent form to show that you want to take part. We will give you either a printed or electronic copy of this form to keep.

For purposes of this form, Mayo Clinic refers to Mayo Clinic in Arizona, Florida and Rochester, Minnesota; Mayo Clinic Health System; and all owned and affiliated clinics, hospitals, and entities.

MAYO CLINIC

Name and Clinic Number

Approval Date: **May 8, 2023**
Not to be used after: **May 7, 2024**

Contact Information

If you have questions about …	You can contact …
▪ Study tests and procedures ▪ Materials you receive ▪ Research-related appointments ▪ Research-related concern or complaint ▪ Research-related injuries or emergencies ▪ Withdrawing from the research study	**Principal Investigator:** Saranya Chumsri, Ph.D. **Phone:** (904) 953-0294 **Institution Name and Address:** Mayo Clinic Jacksonville 4500 San Pablo Road Jacksonville, FL 32224
▪ Rights of a research participant	**Mayo Clinic Institutional Review Board (IRB)** **Phone:** (507) 266-4000 **Toll-Free:** (866) 273-4681
▪ Rights of a research participant ▪ Any research-related concern or complaint ▪ Use of your Protected Health Information ▪ Stopping your authorization to use your Protected Health Information ▪ Withdrawing from the research study	**Research Participant Advocate (RPA)** **(The RPA is independent of the Study Team)** **Phone:** (507) 266-9372 **Toll-Free:** (866) 273-4681 **E-mail:** researchparticipantadvocate@mayo.edu
▪ Billing or insurance related to this research study	**Patient Account Services** **Toll-Free:** (844) 217-9591

Other Information:
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. A description of this research study will be available on ClinicalTrials.Mayo.edu. This website will not include information that can identify you. You can search this website at any time.

A description of this research study will be available on ClinicalTrials.Mayo.edu. This website will not include information that can identify you. You can search this website at any time.

Why are you being asked to take part in this research study?

You are being asked to take part in this study because you have recently been diagnosed with breast cancer.

Why is this research study being done?

The purpose of this study is to examine the effects of a standard of care oral hormone therapy, called aromatase inhibitors letrozole, in blood and tumor tissue samples of patients with hormone receptor-positive HER2-negative breast cancer.

The plan is to have up to 50 women take part in this study at Mayo Clinic.

Information you should know

Who is Funding the Study?

This study is being funded by Mayo Clinic.

Information Regarding Conflict of Interest:

Your healthcare provider may be referring you to this research study. If your healthcare provider is also an investigator on this study, there is the chance that his or her responsibilities for the study could influence his or her recommendation for your participation. If you prefer, your healthcare provider will be happy to refer you to another investigator on the research study team for you to decide if you want to participate in the study and to see you for the research study activities while you are in the study.

How long will you be in this research study?

It will take you around 8 weeks to complete this research study. During this time, we will ask you to make 2 study visits to Mayo Clinic.

What will happen to you while you are in this research study?

If you agree to be in the study, you will sign this informed consent document and will be asked to participate in the following:

The Screening Visit - During this visit, we will do some tests and procedures to see if you are eligible to take part in this research study. The study team will review the results of these tests and procedures. If you aren't eligible, the study team will tell you why. At this visit we will:

- Ask you about your medical history and medications
- Obtain your stored biopsy sample for further analysis.

Visit 1-At this visit we will:

- Ask you about symptoms and health problems
- Give you a physical exam, including height, weight, and "vital signs" (blood pressure, temperature, heart and breathing rates)
- You will start treatment with standard of care letrozole, which is a tablet (pill) you take once per day with water.
- Draw a research blood sample (about 4.7 tablespoons)
- If you miss a dose of letrozole, take it as soon as possible. However, if it is almost time for your next dose, skip the missed dose and go back to your regular dosing schedule. Do not take a double dose.

You will take letrozole once every day for 2-8 weeks prior to surgery. You will need to keep a diary of when you take letrozole and bring the diary with you to your appointments.

Visit 2- After taking letrozole for 2-8 weeks, you will return for visit 2. At this visit we will:

- Ask you about side effects or health problems since your last visit

- Give you a physical exam, including height, weight, and "vital signs" (blood pressure, temperature, heart and breathing rates)
- Draw a research blood sample (about 4.7 tablespoons) after you take letrozole.

Visit 4/Surgery – After visit 2, you will continue letrozole until the day before your surgery. At the time of your surgery, we will collect tumor tissue from your surgical sample for research.

Tests done only for research purposes are not meant to provide clinical information or help care for you. The results are only important for research. Therefore, the results of tests done with your information and samples will not be provided to you. In the rare event that a finding might affect the health of you or your family, we will contact you and you can choose whether to receive or refuse the information. If you decide to follow up and further medical testing or care is needed, the costs will be billed to you or your insurance.

What are the possible risks or discomforts from being in this research study?

The risks from the aromatase inhibitors are the same whether you are on a study or not.

Risks and side effects of letrozole
Some of these side effects, such as hot flashes, hair loss or vaginal bleeding, may be due to the lack of estrogen in your body.

Very Common risks of letrozole *(events occurring more than 10% of the time)*
- Hot flashes
- Fatigue
- Excessive sweating (diaphoresis)
- Bone or joint aches and pains
- Thinning of the bones which may lead to a break in the bone (osteopenia, osteoporosis)

Common risks of letrozole *(events occurring 1 to 10% of the time)*
- Increased cholesterol in the blood (hypercholesterolemia)
- Skin rash
- Headache
- Dizziness, feeling lightheaded
- Sense of discomfort or unease (malaise)
- Feeling sick to your stomach (nausea)

- Throwing up (vomiting)
- Sour stomach (indigestion)
- Difficulty passing stool (constipation)
- Loose, frequent stools (diarrhea)
- Increased or decreased appetite
- Muscle pain
- Swelling of arms, hands, legs, or feet (edema)
- Feeling down or blue (depression)
- Weight gain
- Hair thinning or loss (alopecia)
- High blood pressure (hypertension)
- Abdominal pain
- Dry skin
- Vaginal bleeding or spotting

Uncommon risks of letrozole *(events occurring less than 1% of the time)*

- Anxiety
- Nervousness
- Irritability
- Drowsiness or Excessive sleepiness (somnolence)
- Difficulty falling or staying asleep (insomnia)
- Impairment of sensation, especially of touch
- Blurred vision
- Eye irritation
- Heart palpitations
- Rapid heartbeat (tachycardia)
- Itching, hives (urticaria)
- Vaginal discharge
- Vaginal dryness
- Joint swelling and pain (arthritis)
- Breast pain
- Fever
- Excessive thirst
- Changes in taste
- Dry mouth
- Dryness of mucous membranes (like those lining nose and mouth)
- Weight loss

- Infection of the bladder and or kidney (urinary tract infection)
- Frequent urination
- Cough
- Increased level of liver enzymes in the blood

Rare risks of letrozole *(events occurring 0.01-1% of the time)*

- Weakness, paralysis or loss of feeling in any part of the body (particularly arm or leg), loss of coordination, nausea, or difficulty speaking or breathing (sign of a brain disorder, e.g. stroke)
- Sudden oppressive chest pain (sign of a heart disorder)
- Difficulty breathing, chest pain, fainting, rapid heart rate, bluish skin discoloration, or sudden arm, leg or foot pain (signs that a blood clot may have formed)
- Swelling and redness along a vein which is extremely tender and possibly painful when touched
- Severe fever chills, or mouth ulcers due to infections (lack of white blood cells).
- Severe persistent blurred vision

You should inform the doctor immediately if you experience any of the following symptoms during treatment.

- Swelling mainly of the face and throat (signs of allergic reaction)
- Yellow skin and eyes, nausea, loss of appetite, dark-colored urine (signs of hepatitis)
- Rash, red skin, blistering of the lips, eyes or mouth, skin peeling, fever (signs of skin disorder)

Risks for Pregnancy and Nursing

Because you are post-menopausal, there is very little risk that you might become pregnant. However, because the drugs used in this study can affect an unborn fetus or nursing child, you must not get pregnant or nurse a child while on this study. If you become pregnant, you need to tell your doctor immediately.

Standard of Care Risks
Your doctor will discuss the risks of other tests and procedures, including biopsy and surgery, which are part of regular care for your cancer.

There is a possibility you will undergo stereotactic biopsy as part of your standard of care biopsy. This will expose you to radiation during the procedure. The amount of radiation from these studies has a low risk of harmful effects.

Blood draws
The risks of drawing blood include pain, bruising, lightheadedness, and/or fainting, or rarely, infection at the site of the needle stick.

Genetic Information Nondiscrimination Act (GINA)
The Genetic Information Nondiscrimination Act (GINA) may help protect you from health insurance or employment discrimination based on genetic information.
The law provides that health insurance companies and group health plans

- may not ask for genetic information from this research and
- may not use genetic information when making the decision about eligibility or premiums

The law will not stop health insurance companies from using genetic information to decide whether to pay claims. The law also will not help you get other types of insurance (such as life, disability, or long-term care).

Risks Associated with Genomic Testing
Despite the GINA protections and the best efforts of the research team, there may still be a risk if information about you were to become known to people outside of this study.

Genetic information is unique to you, even without your name or other identifiers. For this reason, genetic information like DNA may be used to identify you and possibly your family members. We have procedures (such as, labeling your biospecimens with a password protected code known only to select research staff) to prevent people working with your DNA from discovering if it belongs to you. However, there is the risk this can happen as new ways of tracing genetic information are being developed that may make re-identification of genetic information possible.

Unforeseeable Risks
Side effects may range from mild to severe. Other drugs may be given to make side effects less serious and less uncomfortable. Talk to the researcher and/or your healthcare provider about side effects and ask any other questions.

This study involves testing your DNA, which is the genetic information you inherited from your parents (also known as genetic testing). This testing may include whole genome sequencing (mapping your entire genetic code). You will not be notified of the genetic test results and they will not be put into your medical record.

The risks of drawing blood include pain, bruising, lightheadedness, and/or fainting, or rarely, infection at the site of the needle stick. Your doctor will discuss the risks of the blood draw and tissue collection, as these tests and procedures are part of your standard clinical care.

As with all research, there is a chance that confidentiality could be compromised; however, we take precautions to minimize this risk.

Are there reasons you might leave this research study early?

You may decide to stop at any time. You should tell the Principal Investigator if you decide to stop, and you will be advised whether any additional tests may need to be done for your safety.

In addition, the Principal Investigator or Mayo Clinic may stop you from taking part in this study at any time:

- If it is in your best interest,
- If you don't follow the study procedures,
- If the study is stopped.

If you leave this research study early, or are withdrawn from the study, no more information about you will be collected; however, information already collected about you in the study may continue to be used.

We will tell you about any new information that may affect your willingness to stay in the research study.

What if you are injured from your participation in this research study?

Where to get help:

If you think you have suffered a research-related injury, you should promptly notify the Principal Investigator listed in the Contact Information at the beginning of this form. Mayo Clinic will offer care for research-related injuries, including first aid, emergency treatment and follow-up care as needed.

Who will pay for the treatment of research related injuries?

Care for such research-related injuries will be billed in the ordinary manner, to you or your insurance. Treatment costs for research-related injuries not covered by your insurance will be paid by Mayo Clinic.

What are the possible benefits from being in this research study?

This study may not make your health better. However, it may allow you and your doctor to know if your body responds well to aromatase inhibitor letrozole. It may also allow other patients with breast cancer to benefit in the future from what we learn in this research study.

What alternative do you have if you choose not to participate in this research study?

You don’t have to be in this study to receive treatment for your condition. Your other choices may include: proceed with the biopsy without being on a study, treatment on a different research study, or no treatment. Talk to the Principal Investigator or your doctor if you have any questions about any of these treatments or procedures.

What tests or procedures will you need to pay for if you take part in this research study?

You won't need to pay for the two research blood draws which are done just for this research study.

You and/or your insurance will need to pay for all other tests and procedures (the tissue collection) that are part of this research study and/or needed for your clinical care including copayments and deductibles.

You and/or your insurance will need to pay for letrozole used in this study, because they are part of regular care for your cancer.

Before you take part in this study, you should call your insurer to find out if the cost of these tests and/or procedures will be covered. You will have to pay for any costs not covered by your insurance.

If you have billing or insurance questions call Patient Account Services at the telephone number provided in the Contact Information section of this form.

Will you be paid for taking part in this research study?

You won't be paid for taking part in this study.

There is a very small chance that some commercial value may result from the use of your sample. This could include new products like a drug or a test to diagnose a disease. If that happens, you will not be offered a share in any profits.

MAYO CLINIC

Name and Clinic Number

Approval Date: **May 8, 2023**
Not to be used after: **May 7, 2024**

Will your information or samples be used for future research?

Unless you give your permission below, your information or samples collected for this study will not be used or shared for future research, even if the identifiable information such as your name, Mayo Clinic number or date of birth is removed.

We would like to keep your information and samples for future research. You can still take part in this current study even if you don't want your information or samples used for future research.

Researchers at Mayo Clinic who aren't involved with this study may ask to use your information and/or samples for future research. Researchers at other institutions may also ask for a part of your information and/or samples for future studies. Unless you indicate otherwise, the future research may be on any topic. No direct benefits to you are expected from the future research. Your information and/or samples will only be shared consistent with your consent, and with all applicable laws and regulations.

If you approve release of your information and/or samples by checking 'yes' below, Mayo may send the information and/or samples to researchers who request them, but Mayo will not send your name, address, phone number, social security number, or any other identifying information with the information and/or samples. Your information and/or samples may be sent with a code, and only the researchers for this study at Mayo Clinic would be able to link the code to you.

Some future studies may examine your DNA, the genetic information you inherited from your parents (genetic testing). If there are findings which may be useful for your health care, the researchers may contact Mayo Clinic, so Mayo Clinic can give you the option of learning the results. You would be given general information on the potential risks, benefits, and costs of choosing to learn about the findings.

To support future research, de-identified genetic information may be placed in databases accessible by the internet. Some of the information may be available to anyone using the internet, and some will be released only to approved researchers. Combined study information (including genomic summary results) may be published, but the information will not identify you.

Even though information traditionally used to identify you will not be shared, people may develop ways in the future to allow someone to link your genetic information back to you. For this reason, confidentiality cannot be guaranteed. It is also possible that reidentified information could be used in discriminating ways, and there could be additional unknown risks. We will make every effort to protect your confidentiality.

Please read the following statements and mark your choices:
1. I permit my information and samples to be stored and used in future research of breast cancer at Mayo Clinic:

☐ Yes ☐ No Please initial here: _____Date: _____

2. I permit my information and samples to be stored and used in future research at Mayo Clinic to learn about, prevent, or treat any other health problems:

☐ Yes ☐ No Please initial here: _____Date: _____

3. I permit Mayo Clinic to give my information and samples to researchers at other institutions:

☐ Yes ☐ No Please initial here: _____Date: _____

You may withdraw your consent for future use of your information and/or samples at any time, by writing to the Principal Investigator at the address provided in the "Contact Information" section of this consent form.

Your information and/or samples would be removed from any repository where they are stored, if possible. Information and/or samples already distributed for research use will not be retrieved.

How will your privacy and the confidentiality of your records be protected?

Mayo Clinic is committed to protecting the confidentiality of information obtained about you in connection with this research study.

To ensure that your health information is kept confidential, you will be assigned a unique patient identification number. Your forms, records, and samples associated with this study will be labeled with this identification number; they will not be labeled with your name, picture, or any other personally identifying information.

During this research, information about your health will be collected. Under Federal law called the Privacy Rule, health information is private. However, there are exceptions to this rule, and you should know who may be able to see, use and share your health information for research and why they may need to do so. Information about you and your health cannot be used in this research study without your written permission. If you sign this form, it will provide that permission (or "authorization") to Mayo Clinic.

Your health information may be collected from:

- Past, present and future medical records.
- Research procedures, including research office visits, tests, interviews, and questionnaires.

Your health information will be used and/or given to others to:

- Do the research.
- Report the results.
- See if the research was conducted following the approved study plan, and applicable rules and regulations.

Your health information may be used and shared with:

- Mayo Clinic research staff involved in this study.
- Other Mayo Clinic staff involved in your clinical care.
- The people or groups hired by Mayo Clinic to help perform this research.
- The Mayo Clinic Institutional Review Board that oversees the research.
- Federal and State agencies (such as the Food and Drug Administration, the Department of Health and Human Services, the National Institutes of Health, and other United States agencies) or government agencies in other countries that oversee or review research.

How your information may be shared with others:

While taking part in this study, you will be assigned a code that is unique to you but does not include information that directly identifies you. This code will be used if your study information is sent outside of Mayo Clinic. The groups or individuals who receive your coded information will use it only for the purposes described in this consent form.

If the results of this study are made public (for example, through scientific meetings, reports or media), information that identifies you will not be used.

In addition, individuals involved in study oversight and not employed by Mayo Clinic may be allowed to review your health information included in past, present, and future medical and/or research records. This review may be done on-site at Mayo Clinic or remotely (from an off-site location). These records contain information that directly identifies you. However, the individuals will not be allowed to record, print, or copy (using paper, digital, photographic or other methods), or remove your identifying information from Mayo Clinic.

Is your health information protected after it has been shared with others?

Mayo Clinic asks anyone who receives your health information from us to protect your privacy; however, once your information is shared outside Mayo Clinic, we cannot promise that it will remain private and it may no longer be protected by the Privacy Rule.

Your Rights and Permissions

Participation in this study is completely voluntary. You have the right not to participate at all. Even if you decide to be part of the study now, you may change your mind and stop at any time. You do not have to sign this form, but if you do not, you cannot take part in this research study.

Deciding not to participate or choosing to leave the study will not result in any penalty. Saying 'no' will not harm your relationship with your own doctors or with Mayo Clinic.

If you cancel your permission for Mayo Clinic to use or share your health information, your participation in this study will end and no more information about you will be collected; however, information already collected about you in the study may continue to be used.

You can cancel your permission for Mayo Clinic to use or share your health information at any time by sending a letter to the address below:

Mayo Clinic
Office for Human Research Protection
ATTN: Notice of Revocation of Authorization
201 Building 4-60
200 1st Street SW
Rochester, MN 55905

Alternatively, you may cancel your permission by emailing the Mayo Clinic Research Participant Advocate at: researchparticipantadvocate@mayo.edu.

MAYO CLINIC

Name and Clinic Number

Approval Date: **May 8, 2023**
Not to be used after: **May 7, 2024**

Please be sure to include in your letter or email:

- The name of the Principal Investigator,
- The study IRB number and /or study name, and
- Your contact information.

Your permission for Mayo Clinic to use and share your health information lasts forever, unless you cancel it.

There is no expiration or end date related to the Sponsor's use of your health information received from Mayo Clinic as part of this study.

Enrollment and Permission Signatures

Your signature documents your permission to take part in this research.

Printed Name Date (mm/dd/yyyy) Time (hh:mm am/pm)

Signature

Person Obtaining Consent

- I have explained the research study to the participant.
- I have answered all questions about this research study to the best of my ability.

Printed Name Date (mm/dd/yyyy) Time (hh:mm am/pm)

Signature