The Ohio State University Combined Consent to Participate in Research and HIPAA Research Authorization

Study Title:	**Multi-Institution Phase II Trial of Intraoperative Electron Beam Radiotherapy Boost at the Time of Breast Conserving Surgery with Oncoplastic Reconstruction in Women with Early-Stage Breast Cancer**
Principal Investigator:	**Sachin Jhawar, MD**
Principal Sponsor:	**The Ohio State University**
Funding Sponsor:	**IntraOp Medical**

- **This is a consent form for research participation.** It contains important information about this study and what to expect if you decide to participate. Please consider the information carefully. Feel free to discuss the study with your friends and family and to ask questions before making your decision whether or not to participate.
- **Your participation is voluntary.** You may refuse to participate in this study. If you decide to take part in the study, you may leave the study at any time. No matter what decision you make, there will be no penalty to you and you will not lose any of your usual benefits. Your decision will not affect your future relationship with The Ohio State University. If you are a student or employee at Ohio State, your decision will not affect your grades or employment status.
- **You may or may not benefit as a result of participating in this study.** Also, as explained below, your participation may result in unintended or harmful effects for you that may be minor or may be serious depending on the nature of the research.
- **You will be provided with any new information that develops during the study that may affect your decision whether or not to continue to participate.** If you decide to participate, you will be asked to sign this form and will receive a copy of the form. You are being asked to consider participating in this study for the reasons explained below.

1. Why is this study being done?

You are being invited to participate in this study because you have been diagnosed with early stage non-metastatic breast cancer.

The purpose of this study is to test the safety and effectiveness of using a radiation therapy boost with high energy rays, called electrons, in women with early stage breast cancer. This radiation therapy will be given using a device called, Intraop Mobetron, after the tumor has been removed from the breast and before the breast is reconstructed.

This therapy is called Intraoperative Electron Beam Radiotherapy (IOERT) Boost therapy.

2. How many people will take part in this study?

This study is being conducted at multiple institutions including the Ohio State University. Approximately 78 subjects will take part in this study at The Ohio State University and approximately 129 total subjects will participate in this study across all sites.

3. What will happen if I take part in this study?

Prior to taking part in this study you will be asked to review and sign this consent form.

Screening/Registration:
After you have signed this consent form you will be asked to come to the clinic to complete the following to verify that you are eligible to participate in this study:

- Physical Examination
- Measurement of your weight
- Measurement of your ability to carry out daily living activities
- Breast examination
- Assess how you are feeling before starting the treatment.
- Doctor's breast assessment and photos
- Complete a questionnaire about how breasts feel and look

If the results of the screening testing indicate that you are not eligible for this study alternative therapies for your breast cancer may be discussed with you.

Study Treatment:
After you have completed the screening/registration portion of this study and it is found that you are eligible to participate you will undergo your breast surgery and receive the IOERT boost therapy. The type of surgery you receive will be determined by the surgeon at the time of your consultation. During this surgery your tumor will be removed first, then the IOERT boost therapy will be applied to the area where the tumor was located. After the IOERT boost therapy your breast will be reconstructed. Information related to your surgery/IOERT boost therapy treatment will be recorded for this study.

After Study Treatment and Prior to Full Breast Radiotherapy:
After your surgery and IOERT boost therapy treatment you will be asked to complete the following before full breast radiotherapy:

- Physical Examination
- Measurement of your weight
- Measurement of your ability to carry out daily living activities

- Breast examination
- Doctor's assessment and photos
- Assess how you are feeling and if you have had any adverse effects from the treatment
- Complete a questionnaire about how breasts feel and look

You may receive chemotherapy, anti-endocrine therapy, or other cancer medications at the discretion of your medical oncologist.

Full Breast Radiotherapy:
Within 12 weeks after your surgery/IOERT boost therapy treatment or 2-8 weeks after the last chemotherapy treatment you will receive either 15 or 25 treatments of whole breast radiotherapy. The number of radiotherapy treatments you receive is dependent on what your treating doctor thinks is appropriate for you. You will not be able to receive chemotherapy while you are receiving your radiation therapy. You may receive anti-HER2 therapy and/or anti-endocrine therapy along with radiation therapy.

The day of your last radiotherapy you will be asked to complete the following:

- Assess how you are feeling and if you have had any adverse effects from the treatment

After Full Breast Radiotherapy:
When you have completed the full breast radiotherapy you will be asked to come back to the clinic at 1 month, 6 months, and 1 year after completion of radiotherapy and annually after for 5 years to complete the following:

- Physical Examination
- Measurement of your weight
- Measurement of your ability to carry out daily living activities
- Breast examination
- Doctor's assessment and photos (only for year 1 and 3)
- Assess how you are feeling and if you have had any adverse effects from the treatment
- Complete a questionnaire about how breasts feel and look (except for years 4 and 5)

After you have completed the 5 years post full breast radiation follow-up visit your participation in the study will be complete.

4. How long will I be in the study?

You will be in this study for approximately 6 years. You will receive the study treatment, IOERT boost, during your surgery, then you will receive radiotherapy to your full breast. Once the radiotherapy is completed you will be followed for 5 more years.

5. Can I stop being in the study?

You may leave the study at any time. If you decide to stop participating in the study, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled. Your decision will not affect your future relationship with The Ohio State University.

6. What risks, side effects or discomforts can I expect from being in the study?

You may have side effects while on the study. Everyone taking part in the study will be watched carefully for any side effects. However, the study team don't know all the side effects that may happen. Side effects may be mild or very serious. Your health care team may give you medicines to help lessen side effects. Many side effects go away soon after you stop radiation**.** In some cases, side effects can be serious, long lasting, or may never go away.

You should talk to your study doctor about any side effects that you have while taking part in the study.

Risks and discomforts related to this study include the IOERT boost and full breast radiation risks, confidentiality risks, and possible discomfort answering some of the questionnaires.

Risk of IOERT Boost Therapy:

IOERT Boost therapy is a type of radiotherapy. The risk of this treatment is exposure to radiation. The amount of radiation given during the IOERT Boost is 8 Gy and it will be given localized to your breast area. Some people develop side effects from treatment. The side effects of IOERT are very similar to external beam radiation therapy. The type and how severe they are depend on how much radiation you received and your overall health.

Your skin in the treated area will become:

- Red
- Dark
- Dry
- Irritated (similar to a sunburn)

The redness and irritation will get better after your treatment is done. Your skin in the treated areas will always be drier than usual. Your nurse will teach you how to care for your skin.

Permanent side effects from IOERT are not common; however, you may notice a change in your treated breast. Your breast may feel hard and may change in appearance. This may happen 6 months or more after your treatment has been completed. However, the IOERT boost is unlikely to cause an increased risk of poor breast appearance compared to a standard radiation boost.

The main difference of IOERT compared to standard surgery is that you will be in the operating room longer (approximately 30 minutes to 1 hour). In some cases, lead shielding may be performed to protect your thoracic wall.

Risks of Full Breast Radiation Therapy with a Boost (Intraoperative or Standard)

Likely (*these side effects occur in **10% or more** of patients):*

- Reddening of the skin during treatment and for several weeks following treatment
- Tanning of the skin lasting months and may be permanent
- Slightly smaller breast size or change in the way the breast looks
- Tiredness and weakness during treatment and for several weeks following treatment
- Swelling of the breast
- Peeling of the skin in the area treated with radiation
- Mild pain at the site of radiation treatment requiring over the counter pain relievers

Less Likely (*these side effects occur in **3-9%** of patients):*

- Soreness or tightness in muscles of the chest wall under the treated breast
- Severe pain at the site of radiation requiring prescription pain relievers

Rare but serious (*these side effects occur in less than **3**% of patients):*

- Cough
- Difficulty breathing
- Inflammation of the heart muscle
- Rib fracture
- Slight increase in risk for heart disease for patients with cancer in the left breast
- Risk of developing another cancer

Risk of Breach of Confidentiality:
As part of this study you are at risk for a breach in confidentiality of your protected health information (PHI). We will protect your PHI by storing your data in a secure database and coding your PHI however you are still at risk for a breach in confidentiality.

Discomfort during Questionnaire and Photo:
You will be asked to answer questions about your body (including your breasts), your ability to perform daily living activities, and photos of your breasts. It is possible that answering these questions and/or getting breast photos may make you feel uncomfortable. You will be given as much time is needed to complete these questionnaires.

Reproductive Risks:
You are required to use a highly effective form of contraception (e.g. sterilization, implant, intrauterine device, or barrier method, etc.) throughout the study duration, and until after the final dose of radiation therapy or chemotherapy, whichever occurs last. If you feel you might be pregnant, even though you practiced birth control, you must notify your study doctor immediately. You should also not breastfeed while receiving radiation therapy. For more information about risks and side effects, ask your study doctor.

Standard Medical Care Risks:
The standard medical treatment that you will receive in addition to the IOERT Boost Therapy also has risks. These risks include surgical risks, mammogram risks, PET/CT or CT risks, blood draw risks, whole breast radiotherapy risks, chemotherapy risks, hormonal therapy risks and anti-HER2 therapy risks. You may be exposed to these risks regardless as to whether or not you participate in this study. Your doctor will discuss these risks with you.

7. What benefits can I expect from being in the study?

There may be no direct benefit to you for participating in this study. The information collected in this study will help researchers learn more about IOERT boost therapy during surgery to remove tumors and reconstruct the breast which may help future patients with breast cancer.

8. What other choices do I have if I do not take part in the study?

You may choose not to participate without penalty or loss of benefits to which you are otherwise entitled.

Other choices include receiving the breast surgery without IOERT boost therapy or receiving no surgery at all.

9. What are the costs of taking part in this study?

All procedures/treatments for this study are considered routine medical treatment for breast cancer. This includes medications such as chemotherapy, anti-endocrine therapy, or anti-HER2 therapy as well as medications to treat complications or side effects. Routine medical costs include:

- Mammograms and bone scans
- CT chest/abdomen/pelvis
- Ultrasound
- Blood tests
- Tumor removal and breast reconstruction surgery
- IOERT boost therapy
- Radiotherapy

Most private and government health plans cover routine medical costs when you are participating in an approved clinical trial. The routine costs of your care will be billed to you and/or your insurance. You will be responsible for any deductibles, coinsurance or co-payments required by your health plan. Some plans limit the amount they will pay. We recommend that you ask your insurance carrier about any limitations or restrictions that may be specific to your plan.

If you are a Medicare Advantage Plan participant (HMO or PPO), original Medicare is billed first for routine, study-related services while you participate in an approved trial. Your Advantage Plan is billed second for their share of your costs. You may or may not have additional out of pocket costs after Medicare or your Advantage Plan pays. Additional information can be obtained from your Advantage Plan and online at:

https://www.medicare.gov/Pubs/pdf/02226-Medicare-and-Clinical-Research-Studies.pdf

10. Will I be paid for taking part in this study?

You will not be paid or reimbursed for taking part in this study.

11. What happens if I am injured because I took part in this study?

If you suffer an injury from participating in this study, you should notify the researcher or study doctor immediately, who will determine if you should obtain medical treatment at The Ohio State University Wexner Medical Center.

The cost for this treatment will be billed to you or your medical or hospital insurance. The Ohio State University has no funds set aside for the payment of health care expenses for this study.

12. What are my rights if I take part in this study?

If you choose to participate in the study, you may discontinue participation at any time without penalty or loss of benefits. By signing this form, you do not give up any personal legal rights you may have as a participant in this study.

You will be provided with any new information that develops during the course of the research that may affect your decision whether or not to continue participation in the study.

You may refuse to participate in this study without penalty or loss of benefits to which you are otherwise entitled.

An Institutional Review Board responsible for human subjects research at The Ohio State University reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

13. Will my study-related information be kept confidential?

Efforts will be made to keep your study-related information confidential. However, there may be circumstances where this information must be released. For example, personal information regarding your participation in this study may be disclosed if required by state law.

Also, your records may be reviewed by the following groups (as applicable to the research):

- Office for Human Research Protections or other federal, state, or international regulatory agencies;
- U.S. Food and Drug Administration;
- The Ohio State University Institutional Review Board or Office of Responsible Research Practices;
- The sponsor supporting the study, their agents or study monitors; and
- Your insurance company (if charges are billed to insurance).

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 the website at any time.

14. HIPAA authorization to use and disclose information for research purpose

I. What information may be used and given to others?

- Past and present medical records;
- Research records;
- Records about phone calls made as part of this research;
- Records about your study visits;
- Information that includes personal identifiers, such as your name, or a number associated with you as an individual;
- Information gathered for this research about:
  - Physical exams
  - Laboratory, x-ray, and other test results
  - Questionnaires
  - Photos
- Records about the study device

II. Who may use and give out information about you?

Researchers and study staff.

III. Who might get this information?

- The sponsor of this research. "Sponsor" means any persons or companies that are:

  - working for or with the sponsor; or
  - owned by the sponsor.
- Authorized Ohio State University staff not involved in the study may be aware that you are participating in a research study and have access to your information;
- If this study is related to your medical care, your study-related information may be placed in your permanent hospital, clinic or physician's office record;

IV. Your information may be given to:

- The U.S. Food and Drug Administration (FDA), Department of Health and Human Services (DHHS) agencies, and other federal and state entities;
- Governmental agencies in other countries;
- Governmental agencies to whom certain diseases (reportable diseases) must be reported; and
- The Ohio State University units involved in managing and approving the research study including the Office of Research and the Office of Responsible Research Practices.

V. Why will this information be used and/or given to others?

- To do the research;
- To study the results; and
- To make sure that the research was done right.

VI. When will my permission end?

There is no date at which your permission ends. Your information will be used indefinitely. This is because the information used and created during the study may be analyzed for many years, and it is not possible to know when this will be complete.

VII. May I withdraw or revoke (cancel) my permission?

Yes. Your authorization will be good for the time period indicated above unless you change your mind and revoke it in writing. You may withdraw or take away your permission to use and disclose your health information at any time. You do this by sending written notice to the researchers. If you withdraw your permission, you will not be able to stay in this study. When you withdraw your permission, no new health information identifying you will be gathered after that date. Information that has already been gathered may still be used and given to others.

VIII. What if I decide not to give permission to use and give out my health information?

Then you will not be able to be in this research study and receive research-related treatment. However, if you are being treated as a patient here, you will still be able to receive care.

IX. Is my health information protected after it has been given to others?

There is a risk that your information will be given to others without your permission. Any information that is shared may no longer be protected by federal privacy rules.

X. May I review or copy my information?

Signing this authorization also means that you may not be able to see or copy your study-related information until the study is completed.

15. Who can answer my questions about the study?

For questions, concerns, or complaints about the study, or if you feel you have been harmed as a result of study participation, you may contact ***Dr. Sachin Jhawar at 614-688-7040***.

For questions related to your privacy rights under HIPAA or related to this research authorization, please contact the HIPAA Privacy Officer at 614-293-4477 or write to:

Medical Center Office of Compliance & Integrity
1590 N. High Street, Suite 500
Columbus OH, 43201

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

If you are injured as a result of participating in this study or for questions about a study-related injury, you may contact ***Dr. Sachin Jhawar at 614-688-7040***.

Signing the consent form

I have read (or someone has read to me) this form and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study.

I am not giving up any legal rights by signing this form. I will be given a copy of this combined consent and HIPAA research authorization form**.**

Printed name of subject	**Signature of subject**
	AM/PM **Date and time**
Printed name of person authorized to consent for subject (when applicable)	**Signature of person authorized to consent for subject (when applicable)**
Relationship to the subject	**AM/PM** **Date and time**

Investigator/Research Staff

I have explained the research to the participant or his/her representative before requesting the signature(s) above. There are no blanks in this document. A copy of this form has been given to the participant or his/her representative.

Printed name of person obtaining consent	**Signature of person obtaining consent**
	AM/PM **Date and time**

Witness(es) - *May be left blank if not required by the IRB*

Printed name of witness	**Signature of witness**
	AM/PM **Date and time**
Printed name of witness	**Signature of witness**
	AM/PM **Date and time**