This consent form is not valid without a TTUHSC IRB stamp in the lower left corner of each page.

CONSENT TO TAKE PART IN A RESEARCH STUDY

This is a research study for people who voluntarily choose to take part. Please take your time to make a decision, and discuss the study with your personal doctor, family and friends if you wish.

STUDY TITLE: Phase II trial of effect of the Nutritional Supplement Sulforaphane on Doxorubicin-Associated Cardiac Dysfunction

INVESTIGATORS: Sharda Singh, PhD; Sanjay Awsathi, MD; Nadini Nair, MD, PhD; Sriman Swarup, MBBS, MD

CONTACT TELEPHONE NUMBERS: 806-743-1540
(You may contact the investigators at the number listed above during normal business hours if you develop any of the conditions listed in Question # 7 of this form or if you have any unexpected complications.)

INSTITUTION: Texas Tech University Health Sciences Center, Lubbock, TX

1. Why is this study being done?

The purpose of this study to see if patients taking a nutritional supplement called sulforaphane (SFN) will help protect the heart from damage from doxorubicin (DOX) of patients on DOX chemotherapy. DOX may cause heart damage as the results of previous studies have suggested.

SFN is a supplement made out of mostly broccoli seed and sprout extracts. You should not join the study if you are already taking SFN or glucoraphanin. The brand name supplement the will receive is Avmacol. The tablets of Avmacol and the placebos will be purchased from Nutramax Laboratories, Inc.

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

60 women will take part in this study

3. Why am I being asked to take part in this research study?

You are being asked to participate in this study because you have breast cancer and will receive DOX chemotherapy.

4. What will happen during this study? What will be done that is different from my usual care?

Screening Visit:

- We will review this consent form with you, if you agree you will sign and proceed with the study.

- Your cancer status will be reviewed per your standard of care.
- You will have an echocardiogram (ECHO) and EKG as per your standard of care. These tests will tell us more about your heart
- You will have a PET CT done for research purposes. This will procedure will tell us more about your body structure and the function of your cells and tissues.
- If you are of child bearing age you will have a urine pregnancy test to confirm that you are not pregnant.

Baseline Visit:

- There will be two groups in this study: one group will receive the SFN and the other will receive placebo.
- You will be randomized (like flipping a coin) into either the study group or the placebo group. You and your doctor will not know which group you are in until the end of the study.
- You will be given your pills and instructions on how to take them.
    - **You will be asked NOT to take any other OTC supplements while you are in this study.**
- You will complete a questionnaire about your general health.
- You will have about 2 tablespoons of blood drawn according to your standard of care and some of the blood will be used for research purposes to tell us more about your heart health related to the DOX treatment.
- You will be weighed per your standard of care.

First through Fourth DOX infusion:

- You will receive your DOX infusion according to your standard of care.
- You will have about 2 tablespoons of blood drawn according to your standard of care and some of the blood will be used for research purposes to tell us more about your heart health related to the DOX treatment.
- You will need to bring your pills so we can count them. We will also give you more pills.
- You will be weighed per your standard of care.

One week after your Fourth DOX infusion:

- You will have about 2 tablespoons of blood drawn according to your standard of care and some of the blood will be used for research purposes to tell us more about your heart health related to the DOX treatment.
- You will have an ECHO and PET CT done for research purposes and complete a questionnaire about your general health.
- You will be weighed per your standard of care.
- You will need to bring your pills so we can count them and we will give you more. You will take the pills for one year.

A year after your DOX treatment is done:

- You will have about 2 tablespoons of blood drawn according to your standard of care and some of the blood will be used for research purposes to tell us more

about your heart health related to the DOX treatment.
- You will have an ECHO done for research purposes.
- You will have your pills counted.

While you are in this study we will also take information from your medical record such as ethnicity, age, height and information about your cancer.

5. How much of my time will this study take? How long will I be in the study?
You will be in this study for a year.

6. Are there any benefits to me if I take part in this study?
None ~~No. However the subjects that receive the SFN may benefit from the supplement, but this is not guaranteed.~~

7. What are the risks and/or discomforts to me if I join this study?
Sulforaphane Risks:
- Side effects may include vomiting, abdominal pain, constipation, increased appetite

Blood Draw Risks:
- Pain, discomfort, redness, infection, bleeding, bruising and swelling at the draw site.

There may be other risks that are unknown.

8. Will there be any added risks to me from this study if I am a female?
Only females will be enrolled in this study therefore the risks above apply to you.

9. What other choices do I have if I do not take part in the research study?
This study does not involve treatment. You do not have to take part in this study.

10. What about confidentiality and the privacy of my records?
We will keep your involvement in this research study confidential to the extent permitted by law. In addition to the staff carrying out this study, others may learn that you are in the study. This might include federal regulatory agencies such as the Food and Drug Administration (FDA) and the Office for Human Research Protection (OHRP), Texas Tech University Health Sciences Center (TTUHSC) representatives, representatives from any hospital or site where the research takes place, and the TTUHSC Institutional Review Board (a committee that reviews and approves research). These people may review and copy records involving your participation in this research. A copy of this document may be placed in your medical record.

Study results that are used in publications or presentations will not use your name.

11. Who is funding this study?
This study will be funding by the NIH and DoD and interamural funding and the

Department of Internal Medicine are providing the space and supplies for this study. No one on the research staff will receive anything of value from other agencies, organizations, or companies to carry out this research.

12. Will it cost me anything to take part in this research study?
You will be responsible for the costs related to your standard of care including the blood work and ECHO/EKG. If your insurance denies covering these we will pay for it. You will not be charged for the supplement or PET CT scan.

13. Will I receive anything for taking part in this research study?
No.

14. Does anyone on the research staff have a personal financial interest in this study?
No.

15. What if I am hurt by participating in this study?
Texas Tech University Health Sciences Center does not offer to pay for or cover the cost of medical treatment for research related illness or injury. No funds have been set aside to pay or reimburse you in the event of such injury or illness unless specifically stated.

If you have a research related illness or injury, care will be available to you as usual, but you and/or your medical or hospital insurance company will be responsible for the cost of treatment. Before entering this study, you should check whether your insurance company might limit your insurance coverage if you take part in a research study.

16. What are my rights as a voluntary participant?
Taking part in this study is your choice. If you sign this form, it means that you choose to be in the study.

You may also choose not to be in this study. If you decide not to be in the study, it will not affect any medical care, benefits or rights to which you are entitled.

If new information becomes available during the study that may affect your willingness to take part in the study, you will be told.

17. Can I stop being in the study?
You may leave the study at any time. If you leave the study, we cannot remove any information we have collected to that point.

18. Can someone else end my participation in the study?
Under certain circumstances, the investigators, TTUHSC, or the study sponsor may decide to end your participation in this research study earlier than planned. This might happen because your doctor thinks it's in your best interest to stop being in the study or the study ends for any other reason.

19. What if I have questions?

For questions about this study, contact the Investigator, Dr. Sharda Singh at 806-743-1540.

If you would like to speak to someone who is not involved in the study about your rights as a participant, research-related injuries, or any other matter related to the study, you can call the TTUHSC EthicsPoint Hotline: 1-866-294-9352.

Or, you can file an EthicsPoint report online: https://secure.ethicspoint.com/domain/media/en/gui/12958/index.html. Please choose the "Regulatory Compliance" option when making an online report.

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

Your signature indicates that:

- **this research study has been explained to you;**
- **you have been given the opportunity to ask questions and have received answers;**
- **you accept your responsibility to follow the instructions given to you by the research team regarding study participation and, if applicable, research medication;**
- **you agree to take part in this study.**

You will be given a signed copy of this form.

_____
Printed Name of Subject

_____ _____
Signature of Subject Date Time

_____ _____
Signature of Parent/Guardian or Authorized Representative Date Time

_____ Subject was unable to read and understand the written consent.

The elements of informed consent required by 45 CFR 46.116 and 21 CFR 50 have been presented orally to the subject or the subject's authorized representative in a language understandable to the subject or representative.

_____ _____

Signature of Witness to Oral Presentation Date Time

I have discussed this research study with the subject and his or her authorized representative, using language that is understandable and appropriate. I believe I have fully informed the subject of the possible risks and benefits, and I believe the subject understands this explanation. I have given a copy of this form to the subject.

_____ _____

Signature of authorized research personnel who conducted the informed consent discussion Date Time

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER
AUTHORIZATION TO USE AND/OR DISCLOSE YOUR PROTECTED HEALTH INFORMATION for a RESEARCH STUDY

STUDY TITLE: Phase II trial of effect of the Nutritional Supplement Sulforaphane on Doxorubicin-Associated Cardiac Dysfunction

This form is intended to tell you about the use and/or disclosure (sharing) of your personal **Protected Health Information** (PHI) if you decide to participate in the research study described on the previous pages. The health information about you that may be used or disclosed is described below. This information is usually found in your medical records. Only the health information about you that is needed for this research study will be used or disclosed. When you consider taking part in this research study, you are also being asked to give your permission for your Protected Health Information to be released from your doctors, clinics, and hospitals to the research personnel approved for this research study. This Authorization specifically relates to the research study described in the attached Informed Consent document.

1. This Authorization is valid indefinitely or until such time as legal requirements will allow this Authorization to be destroyed.

2. If you choose to cancel this Authorization, please give notice in writing to:

Institutional Privacy Officer
Office of Institutional Compliance
3601 4th St MS 8165

Lubbock TX 79430

If you sign this Authorization, the following persons, groups or organizations may rely on this Authorization to disclose your Protected Health Information to the Principal Investigator and other research personnel who are conducting this Study:

- your treating physicians and healthcare providers and their staff,
- associated healthcare institutions and hospitals where you have or may receive care.

While this research study is in progress, the Principal Investigator or research personnel working on this study will inform you whether or not you will be allowed to see the research related health information that is created about you or collected by the research personnel prior to the end of the study. After the study is finished you may request this information as allowed by the TTUHSC Notice of Privacy Practices.

The Protected Health Information that you authorize to be used or disclosed for research purposes may include your current or future health information from some or all of your health records, including:

• hospital records and reports • admission history, and physical examination • X-ray films and reports; operative reports • laboratory reports, treatment and test results (including sexually transmitted diseases, HIV or AIDS) • any other Protected Health Information needed by the research personnel listed above. (* use separate form for disclosure of psychotherapy notes)	• immunizations • allergy reports • prescriptions • consultations • clinic notes • mental health records • alcohol / substance abuse records

For the purposes of this study, your Protected Health Information may need to be reviewed or disclosed to individuals or organizations within and/or outside of TTUHSC who sponsor, approve, assist with, monitor or oversee the conduct of research studies. This includes, but is not limited to, the TTUHSC Institutional Review Board, TTUHSC compliance reviews, the US Food and Drug Administration (FDA) or governmental agencies in other countries. Some of these individuals or organizations may share your health information further, and your health information may not be protected by the same privacy standards that TTUHSC is required to meet.

If you choose to sign this Authorization form, you can change your mind about this later. If you change your mind, send a letter to the person identified above telling us to stop collecting and sharing your Protected Health Information. When we receive your request, you may be asked to leave the research study if all the necessary information has not been collected. We may still use the information about you that we have already collected. We need to know what happens to everyone who starts a research study, not just those people who stay in it.

You have the right to refuse to sign this form. If you choose not to sign this form, your regular health care will not be affected. However, not signing this form will prevent you from participating in this research study and prevent you from receiving research related health care services provided under this study.

I have had the opportunity to review and ask questions regarding this Authorization to use or disclose my personal health information, and I will receive a copy of this form. By signing this Authorization, I am confirming that it reflects my wishes.

_____
Printed Name

_____ _____
Signature of Individual or Authorized Representative Date

_____
If applicable, Relationship of Authorized Representative or Authority to Sign