Automated Ultrasound Flow Monitoring for Maturation of Peripheral Arteriovenous Fistulae

Stage 1:
EchoSure Criteria Development and Early Assessment Trial

Stage 2:
EchoSure Fistula Maturation Prediction Trial

Version: May 14, 2019
NCT: NCT04017910

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RESEARCH SUBJECT CONSENT FORM

TITLE: Automated Ultrasound Flow Monitoring for Maturation of Peripheral Arteriovenous Fistulae

PROTOCOL NO.: [redacted]

SPONSOR: Sonavex, Inc.

INVESTIGATOR: [redacted]

STUDY-RELATED PHONE NUMBER(S): [redacted]

RESEARCH CONSENT SUMMARY

You are being asked for your consent to take part in a research study. This document provides a concise summary of this research. It describes the key information that we believe most people need to decide whether to take part in this research. Later sections of this document will provide all relevant details.

What should I know about this research?

- Someone will explain this research to you.
- Taking part in this research is voluntary. Whether you take part is up to you.
- If you don't take part, it won't be held against you.
- You can take part now and later drop out, and it won't be held against you.
- If you don't understand, ask questions.
- Ask all the questions you want before you decide.

How long will I be in this research?

We expect that your taking part in this research will last 12 weeks.

Why is this research being done?

The purpose of this research is to determine if implanting an ultrasound guide at the site of the arteriovenous (AV) fistula will help with monitoring the healing of the fistula. With careful

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monitoring, we think that we can increase the chances that a newly made fistula will ultimately heal properly and become safe for use in dialysis.

What happens to me if I agree to take part in this research?

If you decide to take part in this research study, the general procedures are very similar to how an AV fistula is normally made. The major difference during surgery will be that an ultrasound locator will be placed at the site of the fistula creation. During your recovery process, the fistula will be analyzed with an ultrasound probe at planned intervals so that the healing of the fistula can be monitored. This would require you to come to the doctor's office periodically for the ultrasound exams; these exams are painless and usually take less than 30 minutes. There would be no other differences from the standard fistula creation process.

Could being in this research hurt me?

The most important risks or discomforts that you may expect from taking part in this research are those inherent to undergoing fistula creation. There is minimal added risk to participating in the research and having the ultrasound locator placed during the AV fistula creation surgery. There is a risk of infection at the surgical site if the ultrasound locator is placed there. Additionally, because the ultrasound locator will help perform high quality ultrasound exams after surgery, it may demonstrate problems with the healing of your fistula; these problems may require further treatment (such as procedures or medications).

Will being in this research benefit me?

The most important benefits that you may expect from taking part in this research include close monitoring of the healing of your fistula. The placement of the ultrasound locator will help provide your doctors high quality information about how the fistula is healing. In instances in which the fistula is not healing properly, there may be an opportunity to provide a treatment that can reverse the improper healing and increase the odds of the fistula healing properly. This will ultimately make it more likely that you can begin dialysis safely and on time.

Possible benefits to others include the development of a new method by which AV fistula creation can be monitored closely, allowing for interventions to prevent improper healing of the fistula. If this is shown to be possible with this research, more people will be able to have successful creation of a fistula that can be used to provide life saving dialysis.

What other choices do I have besides taking part in this research?

Instead of being in this research, you may choose to have the standard AV fistula creation surgery and normal post-operative monitoring of the fistula healing per your surgeon's practice.

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What else should I know about this research?

Other information that may be important for you to consider so you can decide whether to take part in this research is that you will need to come to the doctor's office periodically after surgery to have the ultrasound exams. Ultrasound exams are painless and do not use x-rays or other dangerous radiation.

DETAILED RESEARCH CONSENT

You are being invited to take part in a research study. A person who takes part in a research study is called a research subject, or research participant.

What should I know about this research?

- Someone will explain this research to you.
- This form sums up that explanation.
- Taking part in this research is voluntary. Whether you take part is up to you.
- You can choose not to take part. There will be no penalty or loss of benefits to which you are otherwise entitled.
- You can agree to take part and later change your mind. There will be no penalty or loss of benefits to which you are otherwise entitled.
- If you don't understand, ask questions.
- Ask all the questions you want before you decide.

Why is this research being done?

The purpose of this research is to study whether or not placing an ultrasound locator at the time of arteriovenous (AV) fistula creation surgery is helpful in monitoring the healing of the fistula after surgery. More specifically, we are studying whether this fistula monitoring can identify a fistula that is not healing properly and thus permit earlier interventions to salvage the fistula and restore the normal healing process. This is all for the purpose of increasing the odds that a newly created fistula is ultimately useable for dialysis.

About 60 subjects will take part in this research.

How long will I be in this research?

We expect that your taking part in this research will last 12 weeks.

What happens to me if I agree to take part in this research?

There is no randomization or placebo (sham treatment) group in this study. If you enroll in the study, you will undergo the entire study protocol as long as you wish to be enrolled.

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You will undergo AV fistula creation surgery as previously described by your surgeon. The only difference will be that a small ultrasound locator (EchoMark, manufactured by Sonavex, Inc.) will be placed near the fistula after it is created. This adds about 5 minutes to the total time of the operation. The ultrasound locator is approved for use in people by the FDA. The data collection and the evaluation of that data of the two devices is the research component of this study.

Your early post-operative recovery will be identical to the standard recovery. You will have the normal follow-up appointments with your surgeon as per the standard of his or her practice. Additionally, you will need to come to your doctor's office about once a week for serial ultrasound exams. These exams take about 30 minutes, are entirely painless, and do not use dangerous radiation (such as x-rays). You will be able to go home and perform your regular activities, per your surgeon's instructions for the recovery period. These weekly exams will take place for about 6 weeks, with the end of the exams coming when the fistula has healed completely and can be used for dialysis or your surgeon declares that the fistula has not healed properly and is considered to have failed. At this point, your enrollment in the study will be complete.

The research does not include whole genome sequencing (determining the order of DNA building blocks (nucleotides) in your genetic code).

What are my responsibilities if I take part in this research?

If you take part in this research, you will be responsible for coming to your scheduled follow-up appointments for the weekly ultrasound examinations. Otherwise, your responsibilities will be identical to the standard AV fistula creation surgery. Those responsibilities will be discussed with you by your surgeon and are particular to his or her standard practice.

Could being in this research hurt me?

The risks of participating in this research are very similar to the risks of the standard AV fistula creation. Your surgeon will discuss the risk, benefits, and alternatives of the standard surgery. The placement of the ultrasound locator during your AV fistula creation is experimental so neither the exact percentages of risk nor an exhaustive list of specific risks are known. Placement of the device does theoretically confer a small increased risk of infection at your surgical site and possibly an increased risk of needing a repeat operation. Additionally, the ultrasound locator may be placed incorrectly or it could move as you heal, making it less effective in monitoring the healing of your fistula.

The ultrasound examinations are well known to be safe and painless. Ultrasound does not use dangerous radiation (like x-rays). It is possible that the ultrasound examinations will provide your surgeon with information that indicates the fistula is not healing properly; if this occurs, your surgeon may recommend further treatment to restore healthy healing of the fistula (such as procedures, medicines, or diagnostic studies) per his or her standard practice.

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There could be risks to you that are currently unknown. There is also the potential risk of a loss of confidentiality of your research-related information.

Will it cost me money to take part in this research?

Taking part in this research will not lead to added costs for you. You or your insurance company will be billed for your routine care, which includes the surgery to create the fistula. Please talk to your study doctor to determine which costs will be billed to you or your insurance and which costs will be paid by the sponsor.

Will being in this research benefit me?

The most important benefits that you may expect from taking part in this research include close monitoring of the healing of your fistula. The placement of the ultrasound locator will help provide your doctors high quality information about how the fistula is healing. In instances in which the fistula is not healing properly, there may be an opportunity to provide a treatment that can reverse the improper healing and increase the odds of the fistula healing properly. This will ultimately make it more likely that you can begin dialysis safely and on time.

Possible benefits to others include the development of a new method by which AV fistula creation can be monitored closely, allowing for interventions to prevent improper healing of the fistula. If this is shown to be possible with this research, more people will be able to have successful creation of a fistula that can be used to provide life-saving dialysis.

What other choices do I have besides taking part in this research?

Instead of being in this research, you may choose to have AV fistula creation surgery and post-operative monitoring of the fistula per your surgeon's standard practice which could include receiving the EchoMark and EchoSure without being in this study.

What happens to the information collected for this research?

Your private information and your medical record will be shared with individuals and organizations that conduct or watch over this research, including:

- The research sponsor
- People who work with the research sponsor
- Government agencies, such as the Food and Drug Administration
- The Institutional Review Board (IRB) that reviewed this research

We may publish the results of this research. However, we will keep your name and other identifying information confidential.

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We protect your information from disclosure to others to the extent required by law. We cannot promise complete secrecy.

A description of this clinical trial will be available on http://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.

Data or specimens collected in this research might be deidentified and used for future research or distributed to another investigator for future research without your consent.

Who can answer my questions about this research?

If you have questions, concerns, or complaints, or think this research has hurt you or made you sick, talk to the research team at the phone number listed above on the first page.

This research is being overseen by an Institutional Review Board ("IRB"). An IRB is a group of people who perform independent review of research studies. You may talk to them at (800) 562-4789, help@wirb.com if:

- You have questions, concerns, or complaints that are not being answered by the research team.
- You are not getting answers from the research team.
- You cannot reach the research team.
- You want to talk to someone else about the research.
- You have questions about your rights as a research subject.

What if I am injured because of taking part in this research?

If you are injured or get sick because of being in this research, call the study doctor immediately. The study doctor will provide emergency medical treatment. Your insurance may be billed for this treatment. The sponsor will pay any charges that are not covered by insurance policy or the government, provided the injury was not due to your underlying illness or condition and was not caused by you or some other third party. No other payment is routinely available from the study doctor or sponsor.

Can I be removed from this research without my approval?

The person in charge of this research can remove you from this research without your approval. Possible reasons for removal include:

- You need a treatment not allowed in this research, such as unexpected angiography of the fistula
- The research is canceled by the FDA or the sponsor
- You are unable to keep your scheduled appointments

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We will tell you about any new information that may affect your health, welfare, or choice to stay in this research.

What happens if I agree to be in this research, but I change my mind later?

If you decide to leave the research early, the research team will promptly remove you from the study. This will consist mainly of cancelling your remaining appointments for ultrasound examinations of your fistula. There are no expected risks to this decision. This will not impact you receiving appropriate care for your AV fistula per your surgeon's standard practice.

Will I be paid for taking part in this research?

You will not be paid for taking part in this research.

Statement of Consent:

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

Signature of adult subject capable of consent	Date
Signature of person obtaining consent	Date