Informed Consent Cover Page for FDAAA consent posting:

Official Title:	NHLBI SESAME (SEptal Scoring Along Midline Endocardium) Early Feasibility Study
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SITE PRINCIPAL INVESTIGATOR: *Vasilis Babaliaros, MD*

STUDY TITLE: NHLBI SESAME (SEptal Scoring Along Midline Endocardium) Early Feasibility Study

STUDY SITE: *Emory University and Saint Joseph's Hospital*

Cohort: *Hypertrophic cardiomyopathy (HCM)*

Consent Version: 2024-01-22

WHOM DO YOU CONTACT ABOUT THIS STUDY?

Vasilis Babaliaros, MD

404-686-2513 (Monday-Friday 8am-5pm)

404-686-1249 (24 hours)

KEY INFORMATION ABOUT THIS RESEARCH

This consent form describes a research study and is designed to help you decide if you would like to be a part of the research study. This study is taking place at more than one site.

You are being asked to take part in a research study at Emory and Saint Joseph's Hospital. This section provides the information we believe is most helpful and important to you in making your decision about participating in this study. Additional information that may help you decide can be found in other sections of the document. Taking part in research at Emory and Saint Joseph's Hospital is your choice.

Your heart doctors have found that you have an inherited condition called "hypertrophic cardiomyopathy" that causes thick heart muscle. One of the specific problems in you is that a specific part of your heart called "septum" that separates the two main pumping chambers is too thick. The thick septum blocks flow out of your heart and causes symptoms such as shortness of breath, chest pain, and loss-of-consciousness.

This study will test an investigational procedure called *SEptal Scoring Along Midline Endocardium*, or "SESAME." SESAME is a new catheter-based minimally invasive procedure to slice and thin the septum in your heart, to preserve blood flow out of your heart by treating "left ventricular outflow tract obstruction (LVOTO)."

If you agree to participate you would be among the first subjects in the world to undergo the SESAME procedure.

The main risks of SESAME include:

- SESAME cutting too deeply, or in the wrong wall of the heart, risking immediate death or surgery
- Failure of the SESAME procedure to prevent left ventricular outflow tract obstruction

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- Dangerous heart rhythms or cardiac arrest requiring electric shock treatment
- Damaging your aortic or mitral valves, requiring emergency surgery or catheter treatment
- A blood clot that could cause a stroke or heart attack or damage to another organ in your body
- Complications of catheter procedures including bleeding, blood transfusion, blood vessel damage
- Kidney injury from the contrast medication used in the CT scans after the SESAME procedure
- Heart congestion or fluid overload that could cause breathing problems. These might require you to be connected to a breathing machine.
- Radiation injury including skin ulcers that do not heal
- Allergic reaction to anesthesia or x-ray contrast medications

If SESAME is successful, it may improve blood flow out of your heart (reducing LVOTO (left ventricular outflow tract obstruction)) without open heart surgery.

If you participate in the study, we will follow you closely with standard heart care. This involves follow-up return trips to this medical center after 30 days, 6 months and 1 year after the SESAME procedure. You will have many tests including blood tests, questionnaires, walking tests, and pictures of your heart with ultrasound (echocardiography), X-rays (CT scans), and magnetic resonance imaging (MRI). You will also allow your doctors to send your medical records to the researchers.

The remaining document will now describe the research study in more detail. This information should be considered before you make your choice. Members of the study team will talk with you about the information in this document. Some people have personal, religious, or ethical beliefs that may limit the kinds of medical or research interventions in which they would want to participate. Take the time you need to ask any questions and discuss this study with Emory and Saint Joseph's Hospital staff, and with your family, friends, and personal health care providers.

For re-consent purpose only for those who lose capacity to consent, if the individual being asked to re-consent for this research study is not able to give consent for themselves, you, as the Legally Authorized Representative, will be their decision-maker and you are being asked to give permission for this person to be in this study. For the remainder of this document, the term "you" refers to you as the decision-maker and/or the individual being asked to participate in this research.

IT IS YOUR CHOICE TO TAKE PART IN THE STUDY

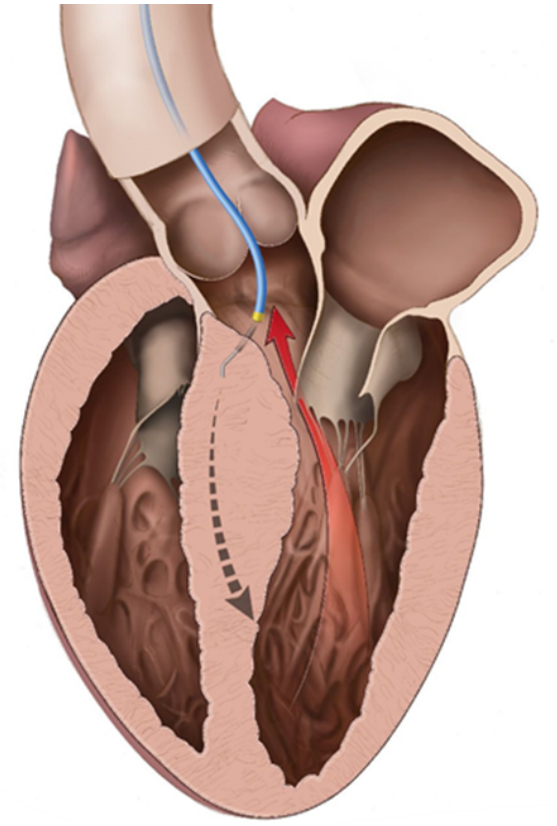
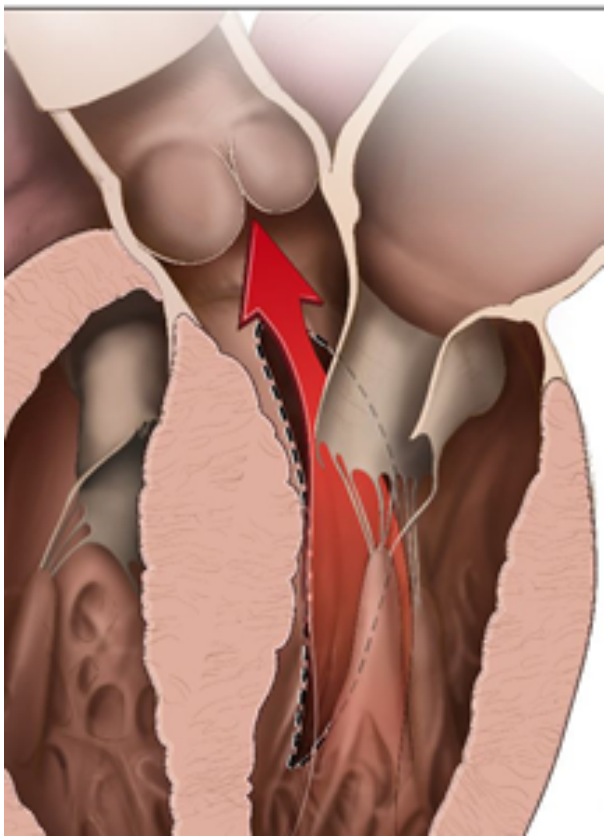
You may choose not to take part in this study for any reason. If you join this study, you may change your mind and stop participating in the study at any time and for any reason. In either case, you will not lose any benefits to which you are otherwise entitled. If you do choose to leave the study, please inform your study team to ensure a safe withdrawal from the research.

WHY IS THIS STUDY BEING DONE?

Your heart doctors have found that you have an inherited condition called "hypertrophic cardiomyopathy" that causes thick heart muscle. One of the specific problems with this condition is that a wall or "septum" that separates the two main pumping chambers of your heart is too thick. The thick septum blocks blood flow out of your heart. This problem of "left ventricular outflow tract obstruction (LVOTO)" causes serious symptoms such as heart failure and even death.

In this study, we will test a new catheter-based minimally invasive procedure called SESAME. While you are asleep from sedation or anesthesia, study doctors will slice and thin the thick septum using SESAME. They will slice the septum using an electrified guidewire positioned inside. SESAME mimics an older surgical treatment for thick septum.

SESAME is pictured in the diagrams below:

Before SESAME, blood flow (red arrow) is restricted by the thick septum.	SESAME makes a slice in the thick septum to increase blood flow (red arrow).
	

If you agree to participate you would be among the first subjects in the world to undergo the SESAME procedure.

SESAME uses commercially-available medical devices called guidewires approved for insertion into arteries and artery blockages. However, the use of these guidewires are considered

investigational in this study because they have not been approved by the U.S. Food and Drug Administration (FDA) for slicing septum. During the SESAME procedure the doctors will modify the guidewires using a scalpel and possibly scissors. With these modifications, the guidewires will be inserted into the heart septum and will be electrified, to slice the heart septum.

WHAT WILL HAPPEN DURING THE STUDY?

If you agree to participate in this study, your doctors will prepare you for the investigational SESAME procedure.

First you will have baseline testing. We will take pictures of your heart. You will have walking tests, take questionnaires, and blood tests. We will review recent CT scans of your heart.

SESAME is done in the hospital catheterization laboratory. We expect the SESAME procedure to take about two to four hours. You will either be completely asleep (general anesthesia) or partially asleep (sedation). In SESAME doctors use catheters (tubes) and wires, while watching using X-rays and ultrasound, to cross and slice the thickened portion of your heart muscle causing problems ("the septum"). The tubes are inserted into the arteries and veins in your groin, wrists, and/or neck. You will be given a blood thinner to prevent clotting of the tubes inserted in your body.

A detailed description of the SESAME procedure is included below:

<u>Preparation steps</u>

- While you are asleep or sedated, tubes will be placed from your groin, wrists, or neck into your blood vessels to perform heart catheterization so we can measure pressures and flows in the chambers of your heart.
- A tube will be inserted through your mouth into your swallowing tube ("esophagus") to take ultrasound pictures of your heart ("transesophageal echocardiography"). Similar pictures will be taken using ultrasound from outside your chest ("transthoracic echocardiography") and even inside your heart using tubes inserted inside your heart pumping chamber ("intracardiac ultrasound in the left ventricle"). Special techniques may be used to place the ultrasound catheter across the walls of your heart.

<u>SESAME procedure steps</u>

- Next two tubes will be placed from arteries in your groin into your largest blood vessel ("aorta") and from there into the main pumping chamber ("left ventricle") to straddle the thick septal wall.
- Next guidewires and thin catheters will be inserted into the septum and steered along that path doctors have chosen to slice the septum. The path is confirmed by doctors looking at pictures using X-ray and ultrasound. When the doctors are satisfied that the guidewire is in the correct position, the guidewire is grabbed using other catheters and electrified to cut the septum. Care is taken to make sure only the septum is cut. At that point, doctors take more pictures and measure pressures to make sure the SESAME procedure was successful.

Afterwards, you will recover in the hospital, where you will receive standard cardiology care and undergo additional tests including ultrasound, ECG, cardiac MRI, and questionnaires.

After the SESAME procedure

We will ask you allow your doctors to send detailed medical records and images of your future treatments so we can track safety of the SESAME procedure that we did.

After you recover, you will return to the hospital for follow-up testing. Below is a schedule of study activities including follow-up.

Timepoint	**Activity and explanation**
Before the procedure (up to 6 months)	Standard tests of your heart structure and function necessary for medical care, including at least some of: cardiac CT scan, cardiac catheterization, echocardiogram.
Before the procedure (up to 6 weeks)	Research tests including blood draw if not done during your standard medical care (approximately 1 tablespoon), electrocardiogram, questionnaires, and walking tests. If you can get pregnant, we will do a blood pregnancy test. Optional cardiac MRI, optional genetic testing for hypertrophic cardiomyopathy, optional exercise VO2 exam SESAME research consent signed
Day 0 (during the procedure)	The invasive SESAME procedure, which includes X-rays and ultrasound of the heart
Inpatient (until discharge)	Standard medical care after catheter procedures including electrocardiogram, physical examination and blood tests Research procedures including echocardiogram, cardiac MRI, and blood draw (approximately 2 teaspoons) and questionnaires. Check for problems (“adverse events”)
Day 30 (-7d, +14d)	Standard medical care after catheter procedures including physical examination, blood draw (approximately 1 tablespoon), electrocardiogram, echocardiogram, and pacemaker check (if any) Research procedures including cardiac CT, walking tests, and questionnaires Optional exercise VO2 exam Optional invasive hemodynamic catheterization procedure Check for problems (“adverse events”)

Day 180 (±4 weeks)	Standard medical care for heart disease including physical examination, electrocardiogram, echocardiogram, and pacemaker check (if any) Research procedures including walking tests and questionnaires. Check for problems (“adverse events”)
One year (±4 weeks)	Standard medical care after catheter procedures including physical examination, blood draw (approximately 1 teaspoon), electrocardiogram, echocardiogram, and pacemaker check (if any) Research procedures including cardiac CT, walking tests, optional cardiac MRI and questionnaires Check for problems (“adverse events”)

The detailed explanations of study procedures are below.

Chart Review

As part of this study, we will collect information from your medical record. This will include your age, sex, race, height and weight, pain level, number of blood transfusions, medications you are taking and the results of tests.

Questionnaires

Kansas City Cardiomyopathy Questionnaire (KCCQ)

We will ask you to complete a questionnaire that will take approximately 15 minutes. The questionnaire will ask about your heart failure and how it affects your life.

Modified Rankin Scale (NIHSS) and NIH Stroke Scales

A research coordinator or neurology specialist will complete two questionnaires to discover problems related to a previous stroke, before the SESAME procedure, or if you have suffered a stroke after the SESAME procedure. This will take approximately 15 minutes.

Blood Draws

You will have a blood drawn from a vein. This will require a needle stick in your arm or hand.

Intravenous catheter

We will place an intravenous catheter which is a small plastic tube inserted into a vein in your arm using a needle.

Walking Test

We will test how far you walk in 6 minutes, at your own pace, down a hallway. You may use your cane or walker if you walk with one. You will be wearing a device on your finger to measure oxygen while you walk.

Exercise VO2 Exam

A VO2 test will be used to measure the amount of oxygen that is used during exercise. You will pedal on a stationary bicycle while breathing into a soft rubbery mouthpiece. Electrodes will be placed on your body to monitor your heart activity throughout the session. A blood pressure cuff will be placed on your arm to monitor your blood pressure for each minute that you are cycling. Once you begin cycling, the difficulty will increase until you can no longer continue. During this visit, a small needle (catheter) will be placed in your arm so that your blood can be drawn.

Electrocardiogram

An electrocardiogram (ECG) measures the electrical activity of your heart. It involves placing electrodes (small stickers that are attached to wires that go to the machine) on the chest and arms/legs.

Echocardiogram

An echocardiogram takes pictures of your heart using sound waves. A technician puts an ultrasound probe and jelly on your chest while you lay on your side. A small tube may be placed in your vein so that an FDA-approved contrast agent/drug may be injected to improve the pictures. The test takes about 30 minutes.

CT Scan

The CT scanner is a doughnut-shaped machine that uses x-rays to create computer pictures showing the inside of your body. During the procedure, you will need to lie still on a table inside the CT machine. The table will move you in and out of the machine during the scan and you will be instructed to hold your breath. The scan itself will take a few minutes to complete, the entire visit will take about 30 minutes.

Invasive hemodynamic catheterization procedure

Medicine called a sedative goes through the IV into your arm or hand. The medicine helps you feel relaxed, calm or sleepy. While you are asleep or sedated, tubes will be placed from your groin, wrists, and/or neck into your blood vessels. The catheters are guided by X-ray fluoroscopy into the chambers of your heart. We will measure the pressures in your heart.

Magnetic Resonance Imaging

Before you leave the hospital, you will have a cardiac MRI. You will be asked to fill out a screening form to verify that it is safe for you to have the MRI scan. For the MRI scan, you will also be asked to remove any metallic objects you may be wearing (for example, watches, earrings or piercings) and change into a hospital gown.

An MRI creates pictures of the inside of your body using strong magnets instead of x-ray energy. You will lie on a narrow bed that will move into the MRI scanner. Once you are comfortable, the table will be moved into the scanner (the scanner is a long, narrow tube that is open at each end). You will need to lie still on the table during the scan which will take about 30-60 minutes to complete. You will hear normal “hammering” or clicking and squealing noises during the scan. While in the scanner you will be fitted with headphones and/or earplugs to muffle the sound.

You will be able to communicate with the technician running the scan the entire time and will be provided an emergency button to squeeze at any time if you decide you want the scan to stop.

Optional Genetic Testing for Hypertrophic Cardiomyopathy

You may be offered a genetic testing for hypertrophic cardiomyopathy. Hypertrophic cardiomyopathy can be caused by a change in your genes, which is passed on from generation to generation within a family. Genetic testing looks for these changes in your genes. Genetic tests are collected using a blood or saliva sample. For a saliva sample a cotton swab will be rubbed against inside of your cheek, it is called a buccal swab.

I agree to genetic testing for hypertrophic cardiomyopathy.

_____ Yes _____ No

Initial Initial

Autopsy Request

In the event of your death, we will request an autopsy. We will also request your heart be removed and sent to the National Institutes of Health for additional analysis. This would help the study doctor understand the effects of SESAME. Your family and/or your legally authorized representatives have the right to refuse the autopsy, even if you sign and date this consent form.

HOW LONG WILL THE STUDY TAKE?

If you agree to take part in this study, your involvement is expected to last for 12 months.

There is one outpatient visit for baseline testing, one in-patient hospital visit for the SESAME procedure, and 3 outpatient visits for follow-up testing.

Your inpatient (hospital) visit for SESAME will take about 2-6 days, depending on your health.

Your outpatient follow-up visits will usually take about 3 hours.

HOW MANY PEOPLE WILL PARTICIPATE IN THIS STUDY?

Up to 30 people will be screened to see if they are eligible to participate in this study.

15 people will have the SESAME procedure.

WHAT ARE THE RISKS AND DISCOMFORTS OF BEING IN THE STUDY?

The Risks of SESAME Procedure

We do not know the exact risks of SESAME. Our understanding of SESAME procedure is based on experiments in animals, and in SESAME treatment of several dozen patients.

We believe the risks may include:

Risks
Death

Risks
Stroke or transient ischemic attack or paralysis
Heart attack
Emergency heart surgery
Permanent disability
Slicing too deeply into your heart, creating a dangerous connection between the right and left pumping chambers (“ventricles”) and requiring emergency catheter or surgery treatment.
The SESAME procedure cutting a hole the wrong wall of the heart, risking immediate death or surgery
Failure to slice the septum, requiring a different approach to treatment
Dangerous heart rhythms or cardiac arrest requiring electric shock treatment
Damaging your aortic or mitral valves, requiring emergency surgery or catheter treatment.
Embolization (release) of clot, air, muscle to your heart, brain, organs, arms, or legs, possibly causing symptoms or even stroke or heart attack.
Bleeding into the (“pericardial”) sac around your heart, requiring catheter drainage or surgical repair.
Dangerously low blood pressure and failure of the heart to pump effectively, possibly requiring cardiopulmonary resuscitation (CPR), insertion of a breathing machine, insertion of artificial heart pumps (“mechanical circulatory support”), or emergency surgery
Heart conduction system damage which may require a temporary or permanent pacemaker
Heart enlargement (“remodeling”) over time, including causing heart failure
Failure of the guidewire your doctors use to enter or slice the heart, causing unintended heart damage
Complications of placing large catheters (tubes) into the arteries and veins through the skin, including bleeding into the retroperitoneal space, hematoma, fistula, chronic nerve damage or pain, or other access site injury
Bleeding leading to anemia and blood transfusion
Heart congestion, high blood pressure, or fluid overload causing breathing problems even requiring connection to a breathing machine
Heart rhythm abnormalities that can be permanent or temporary, atrial fibrillation, atrial flutter, ventricular fibrillation that can require treatment including electrical shocks or a temporary or permanent pacemaker
Radiation injury including skin ulcers that fail to heal
Allergic reaction to anesthesia, contrast media, or catheter device materials
Infection including of your heart valve or some other part of your body (including blood vessels, catheter puncture sites, lung, urinary tract)
Kidney damage from the SESAME procedure or from contrast dye, that can be reversible or permanent, requiring temporary or permanent dialysis or medical treatment
Breathing (“respiratory”) insufficiency failure requiring oxygen therapy, mechanical support or mechanical ventilation (life support)
Damage to your heart or lungs causing fluid buildup around your heart, blood or fluid or gas buildup around your lungs, or lung collapse, requiring treatment

Risks
Abnormal blood tests including serum chemistry tests (creatinine, troponin), electrolyte imbalance, and including hematology tests (hemoglobin, hematocrit, platelets, white blood cells)
Pain including chest pain, angina, back pain, access site pain, neuropathy, and generalized pain

WHAT ARE THE RISKS OF OTHER TESTS IN THIS STUDY?

Chart Review:

Because this study involves collecting personal, identifiable information about you, there is a possibility that people who are not supposed to see this information might somehow gain access to it. We will take precautions to prevent this, but we cannot ever be certain that it won't happen. To minimize this chance, we will assign you a study number instead of labeling the information we collect from you with your name [or medical record number]. All of the information we collect will be stored in a secure manner, such as in a locked cabinets or password protected computer files.

Questionnaires:

Some of the questions in the questionnaires may be upsetting or make you feel uncomfortable. You can skip any of the questions you do not want to answer, and you can stop at any time.

Electrocardiogram:

Other than possibly experiencing some minor skin irritation from the electrodes, there are no anticipated risks related to complete the electrocardiogram.

Echocardiogram:

Other than the possibility of some mild discomfort during the test, there are no known risks to an echocardiogram.

Intravenous contrast for echocardiography can cause a severe allergic reaction. This is very rare.

Intravenous catheter:

The risks of an IV catheter include bleeding, infection, or inflammation of the skin and vein with pain and swelling.

Hemodynamic catheter:

The procedure is usually very safe. But possible risks of cardiac catheterization may include:

- Bleeding
- Blood clots
- Bruising
- Damage to the artery, heart or the area where the catheter was inserted
- Heart attack
- Infection
- Irregular heart rhythms

- Kidney damage
- Stroke
- Allergic reactions to the contrast dye or medicines

Walking test:

You may get tired, chest pain, fast heart rate, and shortness of breath may occur during the test. Medical staff will be present to help keep you safe. These complications are rare.

Exercise VO2 exam:

This test may cause some physical discomfort. The risks include occasional irregular heartbeat or abnormal blood pressure. Upon test completion, you may experience temporary muscle aches and joint pain. Although extremely rare, there is a minimal risk of serious injury or death. This test will be monitored by a physician.

Blood collection:

Blood draws may cause pain, redness, bruising or infection at the site of the needle stick. Rarely some people faint.

CT Scan:

There is a chance of developing an allergic reaction from the contrast material, which may cause symptoms ranging from mild itching or a rash to severe difficulty breathing, shock or rarely, death. The contrast material may also cause kidney problems. The study doctors will do a blood test prior to the test to confirm that it is safe you to receive the contrast.

For IV contrast: You may feel discomfort when the contrast material is injected. You may feel warm, flushed, get a metallic taste in your mouth or, rarely, may make you vomit or feel sick to your stomach.

Saliva collection and buccal swab

There are no risks of saliva collection or buccal swab.

Genetic test for hypertrophic cardiomyopathy

It is possible that learning about your gene changes that cause hypertrophic cardiomyopathy and could be passed on to your children could lead to emotional or psychological stress. It is also possible that your relatives would be upset to learn that they may be at risk for a disorder. You may decide to receive or not receive the test result after discussing with the research team.

There are privacy risks associated with the kind of information that can be obtained from doing any genetic testing. To the best of our ability, we will not release any medical information about you to any third party without your written permission. This includes insurance companies or employers. However, instances are known in which information has been obtained through legal means by third parties.

- Protections against misuse of genetic information

This study involves genetic testing on samples. Some genetic information can help predict future health problems of you and your family. This information might be of interest to your employers or insurers. The Genetic Information Nondiscrimination Act (GINA) is a federal law that prohibits health plans and health insurers from asking for or using your genetic information.

In addition to GINA, the State of Georgia has laws that prohibit insurers from using genetic testing information for any non-treatment purpose. However, like GINA, this state law protection has exclusions for life insurance and other types of insurance policies.

MRI

People are at risk for injury from the MRI magnet if they have some kinds of metal in their body. It may be unsafe for you to have an MRI scan if you have older pacemakers or other implanted electrical devices, brain stimulators, some types of dental implants, aneurysm clips (metal clips on the wall of a large artery), metal prostheses (including metal pins and rods, heart valves, and cochlear implants), permanent eyeliner, tattoos, an implanted delivery pump, or shrapnel fragments. Welders and metal workers may have small metal fragments in the eye. You will be screened for these conditions before having any MRI scan. If you have a question about metal in your body, you should inform the staff. You will be asked to complete an MRI screening form before each MRI scan you have.

In addition, all magnetic objects (like watches, coins, jewelry, and credit cards) must be removed before entering the MRI scan room.

People with fear of confined spaces may become anxious during an MRI. Those with back problems may have back pain or discomfort from lying in the scanner. The noise from the scanner is loud enough to damage hearing, especially in people who already have hearing loss. Everyone having a research MRI scan will be fitted with hearing protection. If the hearing protection comes loose during the scan, you should let us know right away.

Since you may feel extra warmth from the scanner, please report any sensation of heat during the test. During the scan, it is possible that you may experience something called "peripheral nerve stimulation." This usually takes the form of a mild sensation in the skin like a vibration. If you feel pain or a twitch in the muscle, you should report it to the person performing the scan.

There are no known long-term risks of MRI scans.

Risks and discomforts from Gadolinium Based Contrast Agents (GBCA)

If your kidney function is good enough, during part of the MRI you will receive gadolinium, a contrast agent, through an intravenous (IV) catheter (small tube). It will be done for both research and medical purposes.

It is not known if MRI with contrast is completely safe for a developing fetus. Therefore, if you are able to get pregnant, you will have a pregnancy test performed no more than 24 hours before each MRI scan with contrast.

Mild symptoms from gadolinium infusion occur in fewer than 1% of those who receive it and usually go away quickly. Mild symptoms may include coldness in the arm during the injection, a metallic taste, headache, and nausea. In an extremely small number, fewer than one in 300,000 people, more severe symptoms have been reported including shortness of breath, wheezing, hives, and lowering of blood pressure. You should not receive gadolinium if you previously had an allergic reaction to it. You will be asked about such allergic reactions before gadolinium is given.

People with kidney disease are at risk for a serious reaction to gadolinium contrast called "nephrogenic systemic fibrosis (NSF)". This condition always involves the skin and can also involve the muscles, joints and internal organs. NSF has resulted in a very small number of deaths. A blood test of your kidney function may be done within the month before an MRI scan with gadolinium contrast. You will not receive gadolinium for a research MRI scan if your kidney function is below the safe level.

Most of the gadolinium contrast leaves the body in the urine. However, the FDA has issued a safety alert that indicates small amounts of gadolinium may remain in the body for months to years. The long-term effects of the retained gadolinium are unknown. Some types of gadolinium contrast drugs are less likely to remain in the body than others. In this study, we will use the gadolinium contrast drugs that are less likely to remain in the body.

Gadolinium used in this research study may be considered "off-label" since it may be given faster and at a higher dose than approved by the FDA.

What are the risks of radiation from being in the study?

You will be exposed to radiation from CT scans, fluoroscopy and other x-rays. These procedures are necessary for your medical care and will occur even if you do not participate in this study. The radiation dose estimate that you will receive is equal to or less than the radiation exposure allowed to be received by a radiation worker for 2 years. The principal risk associated with a radiation dose is the possibility of developing a radiation-induced cancer later in life. Although the risk from radiation is cumulative it is not expected to adversely affect your condition or treatment. The Emory University Radiation Safety Committee has reviewed and approved the use of radiation in this research study. You will receive radiation exposure from the fluoroscope that produces pictures of your internal organs. Your soft tissue and bones will receive a radiation exposure, but the highest radiation exposure will be to your skin. Very high skin exposure can cause reddening of the skin, blistering and even ulceration. Sometimes this will be delayed for weeks or months after exposure. If you should experience skin discomfort in the area that was pictured, report this to your personal physician.

What are the risks related to pregnancy?

You cannot participate in the study if you are pregnant. If you can become pregnant, we will ask you to have a pregnancy test before beginning this study. SESAME, and the radiation required for SESAME, may be dangerous for a fetus (baby).

If you become pregnant after the SESAME procedure, you can remain in the study to complete the follow up visits and safety assessments. There are no invasive or dangerous procedures required for study follow-up. **However, you would not be allowed to undergo the follow-up CT or cardiac magnetic resonance tests (MRI) if you are pregnant.**

WHAT ARE THE BENEFITS OF BEING IN THE STUDY?

You might not benefit from being in this study.

However, the potential benefit to you might be thinning of the thick septum, to improve symptoms of left ventricular outflow tract obstruction (LVOTO).

We hope that SESAME will be safe for your condition, thick septum that is causing or threatening left ventricular outflow tract obstruction (LVOTO).

Are there any potential benefits to others that might result from the study?

In the future, other people might benefit from this study, if SESAME is safe to treat left ventricular outflow tract obstruction (LVOTO).

WHAT OTHER OPTIONS ARE THERE FOR YOU?

It is very important that you know about standard treatments you can have instead of the investigational SESAME procedure.

Symptoms of left ventricular outflow tract obstruction (LVOTO) can be improved or relieved by medications including a new class called "myosin inhibitors." You should not consider SESAME or other approaches to thin your thick septum unless you have considered or tried medications first.

The standard or preferred approach to thin your thick, septum is surgical myotomy or myectomy. Surgical myotomy or myectomy, is a technique for thinning thicker septum via an open-heart surgical procedure (by opening your chest). Surgical myectomy/myotomy is currently recognized as a standard of care for hypertrophic cardiomyopathy patients who can undergo surgery, and has a high success rate at centers of excellence with expertise in performing the procedure. Surgery usually requires a prolonged period of recovery lasting weeks to months. This treatment is not an option unless you are eligible for surgery.

An alternative standard approach to thin your thick septum is called catheter-based alcohol septal ablation. In this non-surgical procedure, doctors inject a small amount of alcohol into the arteries supplying the heart muscle. This causes a controlled heart attack. The alcohol is approved by the US Food and Drug Administration for this procedure, but the catheter tools are not. Alcohol septal ablation avoids the complications and discomforts of surgery but fails to relieve the left ventricular outflow tract obstruction (LVOTO) in 20-30%. The alcohol also causes damage to the electrical system of the heart in about 10% of patients (about 1 in 10) requiring a permanent pacemaker.

In order to be in this study, you need to be aware of these standard treatments, and you must actively choose to have investigational SESAME instead.

DISCUSSION OF FINDINGS

New information about the study

If we find out any new information that may affect your choice to participate in this study, we will get in touch with you to explain what we have learned. This may be information we have learned while doing this study, or information we have learned from other scientists doing similar research in other places.

Return of research results

If you request the results of this research study, we will send you a summary of the results and what they mean. You may not receive the individual results.

EARLY WITHDRAWAL FROM THE STUDY

You may withdraw from this research study at any time. To do so, please contact the study doctor at the telephone number listed on the first page of this consent document. The study doctor or the sponsor can stop your participation at any time without your consent.

STORAGE, SHARING AND FUTURE RESEARCH USING YOUR DATA

As part of this study, we are obtaining data from you. All your data obtained during this study will be transferred to NIH. Although this study is taking place at more than one site, researchers at NIH will review and analyze the data from all study participants, no matter where they underwent the SESAME procedure.

It is important for you to know that **your name and other personal identifiers will be kept attached to your medical images and your medical records** when they are sent to NIH and when they are stored at NIH.

Will your data be saved by the study team for use in other studies?

As part of this study, we are obtaining data from you. We plan to store and use these data for studies other than the one described in this consent form that are going on right now, as well as studies that may be conducted in the future. The data will be kept in a way that we will still know that they came from you (i.e., they will be identifiable to us). If we use your identifiable data for future research, our study will be reviewed and approved by an Institutional Review Board who will make sure that we are protecting your confidentiality. These future studies might help us better understand non-surgical treatments of heart and valve disease] or other diseases or conditions. This could include studies to develop other research tests, treatments, drugs, or devices, that may lead to the development of a commercial product by the NIH and/or its research or commercial partners. There are no plans to provide financial compensation to you if this happens. Also, it is unlikely that we will learn anything from these studies that may directly benefit you.

I give permission for my identifiable data to be stored and used by the study team for future studies as described above.

_____ Yes _____ No

Initial Initial

Will your data be shared with other researchers for use in other studies?

We may share your data with other researchers. The other researchers may be doing studies in similar areas to this study or in other unrelated areas. These researchers may be at NIH, other research centers and institutions, or at commercial entities.

If we do share your data, we will know that the and data came from you. However, the other researchers will not know that they came from you (i.e., they will be de-identified).

I give permission for my **de-identified** data to be shared with and used by other researchers for future studies.

_____ Yes _____ No

Initial Initial

In addition to the planned use and sharing described above, we might remove any labels from your data that might identify you (i.e., anonymize them), and use them or share them with other researchers for future studies at the NIH or other places. When we or the other researchers use your anonymized data for these projects, there will be no way to know that they came from you. We want to make sure that you understand that this is a possibility if you participate in this study. Once we do this, we would not be able to remove your data from these studies or prevent their use in future studies because we would not be able to tell which data belong to you.

Can you change your mind about use and sharing for future research?

If you change your mind and do not want us to store and use your data for future studies, you should contact the study team. We will do our best to comply with your request but cannot guarantee that we will always be able to destroy your data. For example, if some research with your data is already complete, the information from that research may still be used. Also, if the data have been shared already, it might not be possible to withdraw them.

How long will your data be stored by the NIH?

Your data may be stored by the NIH indefinitely.

Risks of storage and sharing of data

When we store your data, we take precautions to protect your information from others that should not have access to it. When we share your data, we will do everything we can to protect your identity, for example, when appropriate, we remove information that can identify you. Even with the safeguards we put in place, we cannot guarantee that your identity will never become

known, or that no one will gain unauthorized access to your information. New methods may be created in the future that could make it possible to re-identify your data.

MEDICAL RECORD

If you have been an Emory and Saint Joseph's Hospital patient before, then you already have an Emory and Saint Joseph's Hospital medical record. If you have never been an Emory and Saint Joseph's Hospital patient, you do not have one. An Emory and Saint Joseph's Hospital medical record will be made for you if an Emory Atlanta provider or facility or Saint Joseph's Hospital gives you any services or procedures for this study. Copies of the consent form/HIPAA authorization that you sign will be put in any Emory and Saint Joseph's Hospital medical record you have now or any time during the study.

PAYMENT

Will you receive any type of payment for taking part in this study?

You will not receive any payment for taking part in this study.

COSTS

Will taking part in this research study cost you anything?

The study sponsor does not plan to pay for any items or services that you may receive if you take part in this study. You will have to pay for the items or services that are part of this study. The sponsor will not pay for your regular medical care. If you have insurance, Emory and Saint Joseph's Hospital will submit claims to your insurance for items and services that are part of this study. Emory and Saint Joseph's Hospital will send in only those claims for items and services that it reasonably believes your insurance will pay and that the sponsor has not paid.

The actual amount that you have to pay depends on whether or not you have health insurance and whether or not that insurance will pay for any research study costs. Generally, insurance companies will not pay for items and services that are required just for a research study. Some insurance companies will not pay for regular medical treatment or treatment for complications if you are in a study. How much you will have to pay for any co-payments, deductibles or co-insurance depends on your plan. Emory, Saint Joseph's Hospital, and the sponsor will not pay for these costs.

It is a good idea to contact your insurance provider and tell them you want to be in this research study. Ask them what they will pay for and what they will not pay for. You can also ask the study team for help in figuring out what you will have to pay.

If you do not have insurance, Emory and Saint Joseph's Hospital will review your case as part of its program for low-income patient care. The standard policies of that program will apply. The program will figure out if you have to pay any costs for taking part in the study and what those costs will be.

CONFLICT OF INTEREST

The National Institutes of Health and the research team for this study have co-developed devices for the SESAME procedure. They are not used in this study. This means it is possible that the results of this study could lead to payments to NIH. By law, the government is required to share such payments with the employee inventors. You will not receive any money from the development of SESAME devices.

CLINICAL TRIAL REGISTRATION AND RESULTS REPORTING

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.

CONFIDENTIALITY PROTECTIONS PROVIDED IN THIS STUDY

Will your medical information be kept private?

Your name, birthdate, and medical record number will be kept in your medical records when they are sent to NIH for research planning and analysis. This includes your heart CT scans, your heart ultrasounds, your heart MRI, and your X-ray (fluoroscopy) pictures. We believe this is safer and protects against mis-identification when planning or reviewing your invasive procedures.

There is a chance your records and identifying information will be disclosed by accident. However, we think that this risk is small.

We will do our best to make sure that the personal information in your medical record will be kept private. However, we cannot guarantee total privacy. Organizations that may look at and/or copy your medical records for research, quality assurance, and data analysis include:

- The NIH and other government agencies, like the Food and Drug Administration (FDA), which are involved in keeping research safe for people.
- The NIH Institutional Review Board, other Ethics Boards at NIH and participating medical centers, and the Data and Safety Monitoring Board
- Qualified representatives at the study site where your SESAME procedure is performed, as well contractors and representatives from National Heart Lung and Blood Institute, who will examine your medical records and research records to make sure they are accurate.

The researchers conducting this study and the NIH follow applicable laws and policies to keep your identifying information private to the extent possible. However, there is always a chance that, despite our best efforts, your identity and/or information about your participation in this research may be inadvertently released or improperly accessed by unauthorized persons.

In most cases, the NIH will not release any identifiable information collected about you without your written permission. However, your information may be shared as described in the section of this document on sharing of data, and as further outlined in the following sections.

Further, the information collected for this study is protected by NIH under a Certificate of Confidentiality.

Certificate of Confidentiality

To help us protect your privacy, the NIH Intramural Program has received a Certificate of Confidentiality (Certificate). With this certificate, researchers may not release or use data or information about you except in certain circumstances.

NIH researchers must not share information that may identify you in any federal, state, or local civil, criminal, administrative, legislative, or other proceedings, for example, if requested by a court.

The Certificate does not protect your information when it:

1. is disclosed to people connected with the research, for example, information may be used for auditing or program evaluation internally by the NIH; or
2. is required to be disclosed by Federal, State, or local laws, for example, when information must be disclosed to meet the legal requirements of the federal Food and Drug Administration (FDA);
3. is for other research;
4. is disclosed with your consent.

The Certificate does not prevent you from voluntarily releasing information about yourself or your involvement in this research.

The Certificate will not be used to prevent disclosure to state or local authorities of harm to self or others including, for example, child abuse and neglect, and by signing below you consent to those disclosures. Other permissions for release may be made by signing NIH forms, such as the Notice and Acknowledgement of Information Practices consent.

PRIVACY ACT

The Federal Privacy Act generally protects the confidentiality of your NIH research information that we collect under the authority of the Public Health Service Act during your participation in this research study. This study's data will be stored under system 09-25-0200, Clinical, Basic and Population-based Research Studies of the National Institutes of Health (NIH). In some cases, the Privacy Act protections differ from the Certificate of Confidentiality. For example, sometimes the Privacy Act allows release of information from your record without your permission, for example, if it is requested by Congress. Information may also be released for certain research purposes with due consideration and protection, to NIH staff (such as contractors and volunteers), to those engaged by the agency for research purposes, to certain federal and state agencies, for HIV partner notification, for infectious disease or abuse or neglect reporting, to morbidity, mortality, disease, or tumor registries, when authorized by the Secretary of HHS, or when the NIH is involved in a lawsuit. However, NIH will only release information from your medical record if it is

permitted by both the Certificate of Confidentiality and the Privacy Act. If you do not want to share your information with us, then you cannot participate in this study.

WHAT HAPPENS IF YOU ARE INJURED BECAUSE YOU TOOK PART IN THIS STUDY?

If you get ill or injured from your participation in this research, contact the person listed in the contact section of this form. Emory and Saint Joseph's Hospital will help you get immediate medical care. However, Emory and Saint Joseph's Hospital do not have a program (or do not plan) to pay for this medical care or compensate you if you are hurt from being in this study.

The costs for any treatment or hospital care you receive from a study-related injury not covered by a health insurer may be billed to you if you do not have insurance. You will be responsible for deductibles, co-payments, and co-insurance.

There are no plans to pay you or give you other compensation for the injury. You do not give up any legal rights you may have by being in this study, including any right to pursue a claim through the legal system.

PROBLEMS OR QUESTIONS

If you have any problems or questions about this study, about your rights as a research participant, or about any research-related injury, contact the site Principal Investigator, Dr. Vasilis Babaliaros at 404-686-2513 (Monday-Friday 8 am-5 pm) or 404-686-1249 (24 hours). For questions about your rights while in this study, call the NIH Institutional Review Board at 301-402-3713.

Authorization to Use and Disclose Protected Health Information

The privacy of your health information is important to us. We call your health information that can be used to identify you and relates to your treatment or payment, your "protected health information" or "PHI." To protect your PHI, we will follow federal and state privacy laws, including the Health Insurance Portability and Accountability Act and regulations (HIPAA). We refer to all of these laws as the "Privacy Rules." Here we let you know how we will use and disclose your PHI for this study.

PHI that Will be Used/Disclosed:
The PHI that we will use or disclose for this study includes:

- Medical information about you including your medical history and present/past medications
- Results of exams, procedures and tests you have before and during the study
- Laboratory test results

Purposes for Which Your PHI Will be Used/Disclosed:

- To conduct this research study
- To evaluate the safety and effectiveness of the drug, device and/or other intervention being studied and ensure integrity of the data

- To provide study-related treatment and for payment for such treatment
- To conduct healthcare operations
- To ensure compliance with state and federal regulations and provide oversight of the study
- To determine your health, vital status or contact information should you be unreachable during the study
- For the administration and payment of any costs relating to subject injury from the study

Use and Disclosure of Your Information That is Required by Law:
We will use and disclose your PHI when we are required to do so by law. This includes laws that require us to report child abuse or abuse of elderly or disabled adults.

Authorization to Use PHI is Required to Participate:
By signing this form, you give us permission to use and disclose your PHI for this research study. You do not have to sign this form. If you do not sign this form, you may not join this study, but you can still receive non-research related treatment.

People Who will Use/Disclose Your PHI:
- The Principal Investigator and the research staff
- The supporter of the research, its agents, study monitors and contractors including laboratories if applicable
- Institutional Review Boards (people who provide ethical review of research)
- Other Emory and Saint Joseph's Hospital offices and persons who watch over the safety, effectiveness and conduct of the research
- Government agencies that regulate the research as applicable to this study (e.g. regulatory agencies within and outside the United States such as the Office for Human Research Protections, Food and Drug Administration and Veterans Administration)

In certain cases where a researcher moves to a different institution, your PHI may be disclosed to that new institution and their oversight offices. The PHI will be disclosed in a secure manner and under a legal agreement signed by both institutions to ensure it continues to be used under the terms of this consent and HIPAA authorization.

Expiration of Your Authorization
Your HIPAA authorization will expire when this research study ends.

Revoking Your Authorization
If you sign this form, at any time later you may revoke (take back) your permission for the use of your information. If you want to do this, you must contact the study team in writing at:

5665 Peachtree Dunwoody Road
Atlanta, Georgia 30342
404-686-2513

404-686-1249 (after hours)

At that point, we will stop collecting your PHI. We may use or disclose the PHI already collected so we can follow the law, protect your safety, make sure that the study was done properly and the data is correct. If you revoke your authorization you will not be able to stay in the study.

Other Items You Should Know about Your Privacy

Not all people and entities are covered by the Privacy Rules. HIPAA only applies to health care providers, health care payers, and health care clearinghouses. If we disclose your PHI to people who are not covered by the Privacy Rules, then your PHI won't be protected by the Privacy Rules. People who do not have to follow the Privacy Rules can use or disclose your PHI to others without your permission if they are not required by law to protect the privacy of your PHI.

To maintain the integrity of this research study, you generally will not have access to your PHI related to this research until the study is complete. When the study ends, and at your request, you generally will have access to your PHI that we maintain in a designated record set. A designated record set is data that includes medical information or billing records that your health care providers use to make decisions about you. If it is necessary for your health care, your health information will be provided to your doctor.

We may remove specific identifying information from your PHI. Once we do this, the remaining information will not be subject to the Privacy Rules. Information without those specific identifiers may be used or disclosed to other people or organizations for purposes besides this study without your further consent.

CONSENT DOCUMENT

TO BE FILLED OUT BY SUBJECT ONLY

Print your name, **sign**, and **date** below if you choose to be in this research study. You will not give up any of your legal rights by signing this form. We will give you a copy of the signed form to keep.

_____

Name of Subject

_____ _____

Signature of Subject (18 or older and able to consent) **Date** **Time**

_____ _____

Signature of Legally Authorized Representative **Date** **Time**

_____

Authority of Legally Authorized Representative or Relationship to Subject

TO BE FILLED OUT BY STUDY TEAM ONLY

_____

Name of Person Conducting Informed Consent Discussion

_____ _____

Signature of Person Conducting Informed Consent Discussion **Date** **Time**