VANDERBILT UNIVERSITY MEDICAL CENTER

Cryospray Therapy Versus Standard of Care for Benign Airway Stenosis (CryoStasis)

NCT04996173

Informed Consent

Version Date: 4Mar2022

Expiration Date: 28May2026

VUMC Institutional Review Board
Informed Consent Document for Research

Study Title:	Cryospray Therapy for Benign Airway Stenosis
Version Date:	3/4/2022
PI:	Fabien Maldonado, MD

Name of participant: _____ Age: _____

The following is given to you to tell you about this research study. Please read this form with care and ask any questions you may have about this study. Your questions will be answered. Also, you will be given a copy of this consent form.

Key Information:
The first section of this document contains some key points that the research team thought you would find important. The study is described in more detail after this section. If you do not understand something, please ask someone.

Key information about this study:

This is a study of a treatment for narrowing or the trachea ("tracheal stenosis") due to scar tissue or inflammation. The treatment we are studying is a freezing spray ("spray cryotherapy"). Airway narrowing often comes back over time after its initial treatment. We would like to know if spray cryotherapy slows down or prevents recurrent airway narrowing by scar or inflammation. Spray cryotherapy is a treatment cleared by the Food and Drug Administration that some, but not all physicians use to prevent recurrence of tracheal stenosis. All patients enrolled in this study will have their airway narrowing treated with other standard treatments, such as airway dilation procedure, and laser therapy for removal of scar tissue. We will in addition flip a coin to determine if we will use spray cryotherapy *in addition to* these treatments in your case. We anticipate 40 participants being in the study. The goal is to compare the rate of recurrence of tracheal stenosis in both groups to determine whether cryospray treatment offers any additional benefit.

The spray cryotherapy system we are using is called the truFreeze cryospray system, developed by STERIS. It is an FDA-cleared device. It is currently used to treat airway narrowing at various centers around the world. This study will be funded by STERIS cooperation, but the protocol of the study was designed by Vanderbilt researchers.

Study Title: Cryospray Therapy for Benign Airway Stenosis
Version Date: 3/4/2022
PI: Fabien Maldonado, MD

Detailed Information:
The rest of this document includes detailed information about this study (in addition to the information listed above).

You are being asked to take part in this research study because you have a type of non-cancerous airway stenosis that would qualify for this study with treatment options that include endoscopic management. You have also not met the exclusion criteria of our study.

You do not have to be in this research study. You may choose not to be in this study and get other treatments without changing your healthcare, services, or other rights. You can stop being in this study at any time. If we learn something new that may affect the risks or benefits of this study, you will be told so that you can decide whether you still want to be in this study. Your medical record will contain a note saying you are in a research study and may contain some research information about you. Anyone you authorize to receive your medical record will also get this information.

Side effects and risks that you can expect if you take part in this study:
Risks associated with bronchoscopy:

Common (>10%): cough, sore throat, temporary hoarseness

Uncommon (<10%): lung collapse (when air leaks into the space between your lung and chest wall) requiring chest tube and admission to the hospital.

Rare (<1%): bleeding, respiratory distress, infection, trauma to the airway or perforation, adverse reaction to medications used during the procedure, and extremely rarely (1/100,000) death.

Risk associated with tracheal dilation: include airway obstruction, airway rupture (partial or complete), chest pain, airway spasm, bleeding, and fluid in the lungs.

Risks associated with carbon dioxide laser include heat ("thermal") tissue damage, perforation of tissue, air blocking blood flow in the lungs ("air embolism"). These would be incurred regardless of participation in the study including general complications related to surgical procedures such as local and systemic infections.

Additional Risk associated with the study include:

Study Title: Cryospray Therapy for Benign Airway Stenosis
Version Date: 3/4/2022
PI: Fabien Maldonado, MD

Cryospray therapy: Air embolism, transient drops in oxygen during the procedure, airway bleeding, collapse of a lung (partial or complete), airway tear (partial or complete). Limited data is available on the probability of these events in the lungs, however the manufacturer (CSA Medical) is now on its third generation of the truFreeze system which has been designed to mitigate these risks. A recent study of 26 patients with this new system showed none of the risks mentioned above. One patient in the study had a transient drop in blood pressure not related to the device.

Cryobiopsy: Some of the risks include bleeding and pneumothorax (air leak between the lung and the chest wall).

CT Scan: This research study may involve exposure to radiation from up to 1 CT scan of the chest. This radiation exposure is not necessary for your medical care and is for research purposes only. The total amount of radiation that you may receive by participating in this study is equal to your body receiving 20 months (1.6 years) of radiation from your natural surroundings or about 10% of the amount allowed in a year for people who are exposed to radiation as part of their work

Breathing tests: You may experience shortness of breath or an exacerbation of your underlying airway narrowing with the breathing tests.

Surveys/Questionnaire: You may experience underlying anxiety or psychological trauma from filling out the questionnaire related to your underlying condition and symptoms.

Collection of public health information (PHI): While your health information is protected in our secure HIPPA compliant database, the participant takes a risk of data breach's outside of our, the institutions and the sponsor's control.

Risks that are not known:
The FDA approves this device under the 510k clearance act as it resembles a similar device currently or previously in use. It has presently ongoing safety analysis and data collection. While cleared by the FDA and used as standard of care treatment by many physicians, large studies evaluating side effect are not yet available and we acknowledge that some risks are currently unforeseeable.

Good effects that might result from this study:
You may or may not benefit from being in this study. This study may benefit you by slowing down repeat airway narrowing, leading to having fewer follow-repeat up procedures and improved breathing. It is also possible the treatment we are studying will not slow down repeat narrowing or improve your breathing. You may benefit from optimized medical management of your condition or disease.

Study Title: Cryospray Therapy for Benign Airway Stenosis
Version Date: 3/4/2022
PI: Fabien Maldonado, MD

If you take part in this study, you may also help others who undergo treatment for benign central airway stenosis in the future.

Procedures to be followed:
If you decide to participate in this study, you will randomly be entered into one of two groups, both of which are considered standard of care around the country and around the world. One group will undergo normal standard of care treatments for airway narrowing, while the others will undergo standard of care treatments **in addition to** the liquid nitrogen treatment. We will get a questionnaire from you several weeks before the treatment and then several weeks after. We will also get a CAT scan of your neck within 5 weeks after the procedure to see the changes that have been made in your airway. You will then see get another survey at 3 months. Finally at 6 months we will get a final survey, and a final CAT scan.

If you have a diagnosis of idiopathic subglottic stenosis, we will do a liquid nitrogen ("cryobiopsy") of airway for the first five patients enrolled with this condition. The cryobiopsy is performed through the bronchoscope with or without using nitrogen gas. It has become standard of care for decreasing the size of airway tumors.

Participating in this study will not change how we help you if your airway narrowing comes back. We will also provide you with a breathing monitoring device for you to use at home so we can track how well you move air between in-clinic breathing tests.

Payments for your time spent taking part in this study or expenses:
You will not be paid for participating in this study.

Costs to you if you take part in this study:
If you agree to take part in this research study, you and/or your insurance will not have to pay for the tests and treatments that are being done only for research. However, you are still responsible for paying for the usual care you would normally receive for the treatment of your illness. This includes treatments and tests you would need even if you were not in this study. These costs will be billed to you and/or your insurance.

You have the right to ask what it may cost you to take part in this study. If you would like assistance, financial counseling is available through the Vanderbilt Financial Assistance Program. The study staff can help you contact this program. You have the right to contact your insurance company to discuss the costs of your routine care (non-research) further before choosing to be in the study. You may choose

Study Title: Cryospray Therapy for Benign Airway Stenosis
Version Date: 3/4/2022
PI: Fabien Maldonado, MD

not to be in this study if your insurance does not pay for your routine care (non-research) costs and your doctor will discuss other treatment plans with you.

Payment in case you are injured because of this research study:

If it is determined by Vanderbilt and the Investigator with Sponsor (Steris Corporation) input that an injury occurred, then you and/or your insurance may be billed for the cost of medical care provided at Vanderbilt to treat the injury. You will be responsible for any copayments or deductibles associated with the treatment of that injury. There are no plans for Vanderbilt or the sponsor (Steris Corporation) to pay for the costs of any additional care. There are no plans for Vanderbilt or the sponsor (Steris Corporation) to give you money for the injury.

Who to call for any questions or in case you are injured:
If you should have any questions about this research study or if you feel you have been hurt by being a part of this study, please feel free to contact 615-322-5000 and ask for Dr. Fabien Maldonado. If you cannot reach the research staff, please page Dr. Fabien Maldonado at 615-875-8278.

For additional information about giving consent or your rights as a person in this study, to discuss problems, concerns, and questions, or to offer input, please feel free to call the VUMC Institutional Review Board Office at (615) 322-2918 or toll free at (866) 224-8273.

Reasons why the study doctor may take you out of this study:
You may be taken out of the study if:

- Staying in the study would be harmful
- The study doctor believes it is best for you to be out of the study
- You do not follow directions and requirements for the study
- You become pregnant
- The study is cancelled
- You have a new injury or illness
- There may be other reasons to take you out of the study that we do not know at this time

What will happen if you decide to stop being in this study?
If you decide to stop being part of the study, you should tell your study doctor. Deciding to not be part of the study will not change your regular medical care in any way.

Clinical Trials Registry:

Study Title: Cryospray Therapy for Benign Airway Stenosis
Version Date: 3/4/2022
PI: Fabien Maldonado, MD

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

Confidentiality:
All efforts, within reason, will be made to keep your personal information in your research record confidential but total confidentiality cannot be guaranteed. Your information will be stored on password protected Vanderbilt computers and protected databases. Your data will be coded so they do not contain your name.

The Vanderbilt University Office of Research will be used as a central location for data processing and management. REDCap (Research Electronic Data Capture) is a secure, web-based application that is the database. REDCap servers are housed in a local data center at Vanderbilt, and all web-based information transmission is encrypted. REDCap was developed specifically around HIPAA-Security guidelines. Only those involved with this study will have access to your information. Any information that is shared or published will not include identifiable information. Your information will be kept indefinitely. Vanderbilt may share your information, without identifiers, to others or use it for other research projects not listed in this form. Vanderbilt, Dr. Maldonado, and his staff will comply with any and all laws regarding the privacy of such information. There are no plans to pay you for the use or transfer of this de-identified information.

Privacy:
Any samples and information about you may be made available to others to use for research. To protect your privacy, we will not release your name. You will not receive any benefit as a result of the tests done on your samples. These tests may help us, or other researchers learn more about the causes, risks, treatments, or how to prevent this and other health problems.

Five patients with idiopathic subglottic stenosis will have airway biopsies performed. Your samples may be used to make new products or tests in the future. These may have value and may be developed and owned by the study staff, Vanderbilt University, Vanderbilt University Medical Center, and/or others. If this happens, there are no plans to provide money to you. The research may be used in whole genome sequencing (human germline or somatic specimen with the intent to generate genome or exome sequencing).

Study Results:
This study involves research tests that may produce information that could be useful for your clinical care. We will share this information with you.

Study Title: Cryospray Therapy for Benign Airway Stenosis
Version Date: 3/4/2022
PI: Fabien Maldonado, MD

The results of your bronchoscopic biopsy will be shared with you by your treating physician, according to the standard institutional procedure. If a diagnosis is not obtained after the procedure, further recommendations regarding treatment will be made by the treating physician (e.g. follow-up CT chest, surgery, or further diagnostic testing).

Authorization to Use/Disclose Protected Health Information
What information is being collected, used, or shared?
To do this research, we will need to collect, use, and share your private health information. By signing this document, you agree that your health care providers (including both Vanderbilt University Medical Center and others) may release your private health information to us, and that we may use any and all of your information that the study team believes it needs to conduct the study. Your private information may include things learned from the procedures described in this consent form, as well as information from your medical record (which may include information such as HIV status, drug, alcohol or STD treatment, genetic test results, or mental health treatment).

Who will see, use or share the information?
The people who may request, receive or use your private health information include the researchers and their staff. Additionally, we may share your information with other people at Vanderbilt, for example if needed for your clinical care or study oversight. By signing this form, you give permission to the research team to share your information with others outside of Vanderbilt University Medical Center. This may include the sponsor of the study and its agents or contractors, outside providers, study safety monitors, government agencies including the FDA, other sites in the study, data managers and other agents and contractors used by the study team. We try to make sure that everyone who sees your information keeps it confidential, but we cannot guarantee that your information will not be shared with others. If your information is disclosed by your health care providers or the research team to others, federal and state confidentiality laws may no longer protect it.

Do you have to sign this Authorization?
You do not have to sign this Authorization, but if you do not, you may not join the study.

How long will your information be used or shared?
Your Authorization for the collection, use, and sharing of your information does not expire. Additionally, you agree that your information may be used for similar or related future research studies.

What if you change your mind?
You may change your mind and cancel this Authorization at any time. If you cancel, you must contact the Principal Investigator in writing to let them know by using the contact information provided in this consent

Study Title: Cryospray Therapy for Benign Airway Stenosis
Version Date: 3/4/2022
PI: Fabien Maldonado, MD

form. Your cancellation will not affect information already collected in the study, or information that has already been shared with others before you cancelled your authorization.

You have the right to see and copy the PHI we gather on you for as long as the study doctor or research site holds this data. To ensure the scientific quality of the research study, you will not be able to review some of your research data until after the research study is finished.

If you decide not to take part in this research study, it will not affect your treatment, payment or enrollment in any health plans or affect your ability to get benefits. You will get a copy of this form after it is signed.

STATEMENT BY PERSON AGREEING TO BE IN THIS STUDY

I have read this consent form and the research study has been explained to me verbally. All my questions have been answered, and I freely and voluntarily choose to take part in this study.

_____ _____
Date Signature of patient/volunteer

Consent obtained by:

_____ _____
Date Signature

_____
Printed Name and Title

Time: _____