McGuire Institutional Review Board Consent Form

Template Version Date: (10/29/2019)

Title of Research Study: Low Intensity Extracorporeal Shock Wave Therapy (Li-ESWT) for Erectile Dysfunction

Sponsor: NA

Protocol No.:

Investigator Name & Address: Sarah C. Krzastek MD
1201 Broad Rock Blvd
Richmond, VA 23249

KEY INFORMATION:

We are asking you to consider taking part in this research study about an investigational treatment for erectile dysfunction. This initial information is provided to help you decide whether or not to participate in the study. By doing this study, we hope to learn more about an investigational treatment which delivers shockwaves (sound waves) to the penile tissue to improve erectile function. This treatment is delivered by a device with a hand-held probe placed directly on the penis. The device, the Storz Duolith SD-1 T-top Ultra, is not Food and Drug Administration (FDA) approved for treating erectile dysfunction.

Your participation in this study could last approximately 6-7 months and you would be required to come for up to 17 study visits (screening, then twice weekly treatments for 6 weeks, followed by visits at about 1, 3 and 6 months after treatment is completed). Each visit will last approximately 1-2 hours.

During these visits, you will be asked to complete questionnaires evaluating your erectile function. An ultrasound of the penis will be performed to assess blood flow in the non-erect state. An erection will be induced with injection of a medicine (alprostadil) through a small needle directly into the penis. The ultrasound will be repeated during the erection, a small amount of blood will be drawn from the penis for testing and penile pressures will be measured through the needle. During the treatment phase, treatment shockwaves will be delivered to the penile tissue, lasting approximately 15 minutes.

You may want to participate in this study because this treatment may improve your erections and results from this study may help other men in the future. Or you may not want to participate because of the risk of side effects from study procedures. You may

choose to not participate in the study, in which case the Urology team will continue to manage your erectile dysfunction based on standard treatment options.
Additional detailed information is provided for your review in the sections below. Ask the research team questions until you feel you have enough information to make your decision.to participate or not. Participating in this research study is completely voluntary. Your decision to participate or not will have no effect on any of the services, benefits or rights that you are otherwise entitled.

The person in charge of this study is **Sarah C. Krzastek, MD**, and can be reached at 804-675-5409.

Other important contact information is listed below.

1. Whom should I contact for questions? (Contacts)
If you have any questions, concerns or complaints regarding this study, unexpected reactions, or you are injured and become ill as a result of participation in this study please call AM or PM:

	Office	Off Hours
Dr. Sarah Krzastek	**(804) 675-5409**	**(804) 657-5000 pager 3041**
Dr. Adam Klausner	**(804) 675-6486**	**(804) 675-5000 pager 3106**

If you are unable to reach any of the study staff listed and need immediate medical assistance, please call the VAMC hospital operator at 800-784-8381 and ask for the Emergency Room physician to obtain advice or call the **Emergency Room directly at (804)-675-5527**. If you have any questions, concerns or complaints about your rights as a research subject you may contact the **McGuire Institutional Review Board (IRB) at (804) 675-5676.** The IRB is responsible for reviewing research in humans and making sure that their safety and rights are protected.

2. What is this research study about? (Introduction)
You are being asked to take part in this study because you have erectile dysfunction (ED). This study involves research on the effect of an investigational treatment for ED, using the Storz Duolith SD-1 T-top Ultra Low Intensity Extracorporeal Shock Wave Therapy (Li-ESWT) device. The Li-ESWT device consists of a hand-held probe that is placed on the penis to deliver shock waves (sound waves) which are thought to stimulate nerve and blood vessel growth and to hopefully improve erectile function.

The purpose of this research study is to better understand how this treatment works. The expected duration of your participation is about 6 months. The approximate number of research subjects in this study is 24.

While the Li-ESWT device has been approved by the FDA for treatment of heel spurs and other conditions, it has not been approved for the treatment of ED and is investigational.

3. What is expected of me? (Procedures)
In order to be eligible to participate in this study, you must be a male Veteran with a history of ED and in an active sexual relationship. If you are eligible and choose to participate in this study, you will be asked to return for up to 17 visits. These visits include Screening, Baseline, Treatment (twice a week for 6 weeks), and Follow-Up (at 1, 3 and 6 months following Li-ESWT treatment). You may need to come for additional visits if the study doctor feels that they are needed for your safety.

To confirm eligibility, you will be asked to complete 4 questionnaires about your erectile function, and you will have blood drawn for a testosterone level and to test for diabetes. These blood tests and questionnaires are part of the standard work-up in the Urology ED Clinic.

At your first visit, you will be asked to complete the same 4 questionnaires previously completed. An ultrasound of the penis will be performed to evaluate penile blood flow in the non-erect state. A small needle will then be inserted into the side of the base of the penis and a medication (alprostadil) will be injected to induce an erection. The ultrasound will be repeated. Another small needle will be placed into the side of the penis and a small sample of blood will be collected. Measurements of erectile pressure will be recorded using this needle. The needle will then be removed and you will be monitored in clinic until the erection goes away. While a penile ultrasound or induced artificial erection may be performed in the standard workup of erectile dysfunction, these tests are not routinely performed for all patients and are predominantly being performed in this setting as part of the study protocol.

You will then be asked to return to clinic for the Li-ESWT treatments. This treatment is considered EXPERIMENTAL and use of the Storz Duolith device is not yet FDA approved for treatment of erectile dysfunction. Treatments consist of two weekly visits for a total of 6 weeks. During these visits, your doctor will place the shockwave probe on each side of the penile shaft, and on two locations in the perineum (the area between the anus and the scrotum) to treat the entire penile tissue. Each treatment session will last approximately 15 minutes.

After the treatment sessions are completed, you will be asked to return to clinic 4-6 weeks after treatment, 3 months after treatment, and 6 months after treatment, to complete the same 4 questionnaires and repeat the penile ultrasound, artificial erection, penile blood draw and measurement of penile pressures..

The following tests and procedures are experimental and being done because you are in a research study.

<u>Screening</u>

- Complete paper questionnaire forms. This will take approximately 5-10 minutes.

- Have any needed blood work drawn to determine eligibility to participate in the study

Baseline (before treatments)

- Complete paper questionnaire forms
- Penile Doppler in the flaccid (not erect) state with the use of sound waves to measure blood flow
- Injection of alprostadil into the penis to induce erection
- Repeat penile Doppler with erect penis
- Measurement of penile pressures by placing a small needle into the side of the erect penis
- Drawing of blood from the same needle in the side of the penis
- Monitoring until the erection goes away

Treatment

- Application of shock waves to each side of the shaft of the penis and two locations in the perineum, twice per week for 6 weeks. Each session will last about 15 minutes.

Follow-Up. The following tests and procedures will be performed immediately following the final shock wave treatment, 1 month after completion of treatment, 3 months after completion of treatment, and 6 months after completion of treatment (for a total of 4 clinic visits after treatment is complete):

- Complete paper questionnaire forms
- Penile Doppler in the flaccid state
- Injection of alprostadil into the penis to induce erection
- Repeat penile Doppler with erect penis
- Measurement of penile pressures by placing a small needle into the side of the erect penis
- Drawing of blood from the same needle in the side of the penis
- Monitoring for resolution of the erection

4. Will my data and/or samples be kept for use in the future? (Future use of data/samples)

Information and data collected from this research study may be used as part of future research studies. Identifiers (i.e. information that could link your identity to the information or data) will be removed from the identifiable private information that are collected. After that removal, the information could be used for future research studies or distributed to another investigator for future research studies without additional consent from you. This data will be stored on the Principal Investigator's personal password-protected desktop computer in the locked office within the Richmond VAMC, accessible only to the Principal Investigator.

Biospecimens collected as part of this research, even if identifiers are removed, will not

be used or distributed for future research studies. Blood samples taken from the penis during erection will be labeled with your study ID number and transported to a laboratory at Virginia Commonwealth University, where the samples will be processed and analyzed.

Blood samples collected as part of this research study will be analyzed and destroyed following completion of this study.

5. Will the research benefit me? (Benefits)
No benefit is guaranteed. However, the information we get from this study might help others with ED in the future.

6. What are my alternatives to being a research subject? (Alternative Therapy)
You do not have to participate in this study to receive treatment for your condition. If you choose not to participate, your Urologist will continue to treat your ED using standard treatment options, including oral medications, injectable medication, vacuum-assisted erectile devices, and surgical implants. The study doctor will discuss these alternative treatments with you.

7. What are my risks? (Risks, Inconveniences, Discomforts)
Li-ESWT SIDE EFFECTS
Possible side effects resulting from Li-ESWT treatment include discomfort at the site of probe placement on the penis. You may also note some bruising at the treatment sites.

ALPROSTADIL SIDE EFFECTS
Risks of alprostadil injection into the penis include high or low blood pressure, headache, dizziness, bruising or swelling at the injection site, infection, penile pain or prolonged erection (priapism). Most side effects are mild. Risks of untreated high blood pressure may include heart attack or stroke. Prolonged erections may require administration of another medication, phenylephrine, into the penis to counteract the effect of alprostadil and make the erection go away. Erections that last longer than 4 hours and remain untreated can result in loss of blood flow to the erectile tissues within the penis, with possible permanent erectile dysfunction. Repeated injections of medication into the penis may rarely result in penile curvature which can make intercourse painful or difficult.

PHENYLEPHRINE SIDE EFFECTS
The risks of phenylephrine injection into the penis include pain, bruising or swelling at the injection site, headache, high blood pressure with resulting low heart rate, irregular heart rate, or stroke. If phenylephrine injection into the penis is unable to reverse the erection, additional more invasive procedures may be required to make the erection go away. If needed, these procedures will be explained to you and you will sign a separate consent form.

All drugs have the potential to cause allergic reactions including the drugs used in this study. Allergic reactions may be mild to severe, and include the following symptoms:

chills, fever, skin rash, hives, itching, watery eyes, swelling, headache, difficulty breathing, difficulty swallowing, severely low blood pressure, organ failure, and death. Serious allergic reactions require immediate medical attention.

BLOOD DRAWS

Drawing blood from a vein may cause local pain, bruising, occasional lightheadedness, fainting, and very rarely, infection at the site of the blood draw. The total amount of blood that will be collected from you during the study is about 1 teaspoon.

Drawing blood from the penis during the study may also result in pain, infection, bruising, and may cause loss of the erection – this does not result in permanent worsened erectile function. The total amount of blood that will be collected from the penis during the study is 1 teaspoon per visit, at the baseline appointment, immediately following completion of treatments, and 1 month, 3 months, and 6 months following completion of treatments.

UNFORESEEN RISKS: Participation in this study may involve risks that are unknown at this time. Your condition may stay the same, may improve or may worsen from study participation.

Erectile dysfunction may get worse with time, whether or not you participate in this study.

8. Will I get paid? (Compensation)

You will be paid $50 for the Screening and Baseline visits, following completion of the twice a week Li-ESWT treatments, and for the 1, 3 and 6 month Follow-Up visits. You will be paid an additional $50 if you complete all visits.

If you receive payments from McGuire Research Institute greater than $600 in a calendar year, they will be reported to the IRS along with your social security number.

The information that you are providing for this research study, including biospecimens, may lead to new clinical or educational knowledge, tests, treatments or products. These products could have some financial value. There are no plans to provide financial payment to you or your relatives if this occurs.

9. Will I have to pay? (Cost of Participation)

You will not have to pay, and your insurance will not be billed for care received as a subject in a VA research project regardless of whether you are a Veteran or a non-Veteran. If you get a bill for research services, contact your study doctor or research nurse. Some Veterans are required to pay co-payments for medical care and services provided by the VA. These co-payment requirements will continue to apply to medical care and services provided by the VA that are not part of the study. There is no cost to participate in this study.

There is no guarantee that the medicines or treatment you will receive during this study will be continued after the study is completed.

10. Does pregnancy prevent me from participating? (Pregnancy)
Female patients are not eligible for participation in this study.

11. What if I get injured? (Research Related Injury)
In the event of injury resulting from your participation in this research study, McGuire Veterans Affairs Medical Center may or may not provide compensation, depending on applicable federal regulations. A research injury is any injury or illness caused by your participation in the study. In the event of a research injury, necessary medical treatment will be provided to assist your recovery from the injury. For research related injury, the VA must provide necessary medical treatment regardless of whether you are a Veteran or a non-Veteran.

This agreement does not include treatment for injury/illness that is not a result of the study. To help avoid injury, it is very important to follow all study directions. You are not giving up any of your legal rights by signing this form

12. Who Will See My Information? (Confidentiality)
The confidentiality of your research records will be maintained according to professional standards of confidentiality and VA regulations. Records identifying you may be reviewed by the members of the research team, the Research and Development Committee and its sub-committees, accrediting agencies, officials from the Veterans Health Administration, the Office of Research Oversight, the VA Office of the Inspector General, Richmond VAMC, McGuire Research Institute and its auditor, and other federal oversight agencies such as the Food and Drug Administration, Office for Human Research Protections, or as required by law.

Protected health information collected as part of this research study, including social security numbers, and other paper records and data pertaining to you and your participation in the study will be kept in a locked file cabinet in the Investigator's locked office within the McGuire VAMC. Only authorized personnel will have access to these records. Electronic data will be stored in encrypted password protected data storage and analysis software, on the Investigator's password protected desktop computer in a locked office. Although blood samples will be sent to VCU for analysis, other data and files will not be transported outside of the VA.

Clinically relevant research results will not be disclosed to you during the study but may be disclosed following completion of the study and analysis of the data.

You will not have access to your research related health records while participating in this study.

The ways your study doctor will use your study-related health information and the people who may receive it are identified in a separate form entitled, Authorization for Use & Release of Individual Identifiable Health Information for Veterans Health Administration Research. You will be asked to sign that form to show that you give

permission for these uses and sharing of your information. You do not have to sign the authorization form. However, if you do not sign, you will not be able to participate in the study.

As this study treatment may improve your erectile function, and participation in this study may be relevant to your medical care, we will include information about your study participation in your medical record.

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.

Information published or presented about the results of this study will not identify you.

13. Do I have to participate in this study, or can I withdraw from the study? (Voluntary Participation and Withdrawal)

Participation in this study is voluntary and you may refuse to participate without penalty or loss of benefits to which you are otherwise entitled. The study staff will answer any questions you may have about the study. You are free to withdraw your consent and stop participation at any time. If you decide to withdraw from this study, you should contact Sarah Krzastek, MD, to discuss termination of your participation. It is important that you do this so that Dr. Krzastek can withdraw you safely. Stopping will in no way change the quality of care you receive now or in the future at this institution or your right to participate in other studies.

Any data collected prior to withdrawal will continue to be used for the study by the investigator and samples collected cannot be withdrawn.

Any significant new findings that develop during the research study that may affect your decision to continue participating will be provided to you as soon as possible.

Your participation in this research study may be ended without your consent for the following reasons:

- If the study doctor believes, for any reason, that it is within your best interest.
- If you develop side effects that are considered dangerous.
- If you refuse to receive Li-ESWT treatments or fail to return for follow-up as recommended by your study doctor or fail to follow the study doctor's instructions.
- If you refuse to have tests that are needed to determine whether Li-ESWT treatments are safe and effective.
- If you require treatment with drugs that are not allowed in this study.
- If other causes prevent continuation of the clinical research study.
- The FDA may also end the study at any time.
- The McGuire IRB may also end the study at any time.

14. Date of Consent Form Revision:
06/05/2020; Updated 02/09/2021

Subject Name:_____ **Date:**_____

Title of Research Study: Low Intensity Extracorporeal Shock Wave Therapy (Li-ESWT) for Erectile Dysfunction

Principal Investigator: Sarah C. Krzastek **VAMC:** Richmond

RESEARCH SUBJECTS' RIGHTS: I have read or have had read to me all of the above.

Dr. **Krzastek** (or an associate) has explained the study to me and answered all my questions. I have been told of the risks or discomforts and possible benefits of the study. I have been told of other choices of treatment available to me. I have been given the chance to ask questions and obtain answers.

I understand that I do not have to take part in this study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw from this study at any time without penalty or loss of VA or other benefits to which I am entitled. The results of this study may be published, but my records will not be revealed unless required by law. By signing below, I am agreeing to participate in this research study. I will receive a signed copy of this consent form.

_____ _____
Subject's Signature **Date**

_____ _____
Signature of Person Obtaining Informed Consent **Print name/Date**

Department of Veterans Affairs	**Authorization for Use and Release of Individually Identifiable Health Information Collected for VHA Research**

Subject Name (Last, First, Middle Initial):	**Subject SSN** (last 4 only):	**Date of Birth:**

VA Facility (Name and Address):
Hunter Holmes McGuire Veterans Affairs Medical Center
1201 Broad Rock Boulevard
Richmond, Virginia 23249

VA Principal Investigator (PI):	**PI Contact Information:**
Sarah Krzastek, MD	Sarah.Krzastek@VA.gov 804-675-2037

Study Title:
Low Intensity Extracorporeal Shock Wave Therapy (Li-ESWT) for Erectile Dysfunction

Purpose of Study:

The purpose of this study is to learn more about an investigational treatment which delivers shockwaves (sound waves) to the penile tissue to improve erectile function. This treatment is delivered by a device with a hand-held probe placed directly on the penis. The device, the Storz Duolith SD-1 T-top Ultra, is not FDA approved for treating erectile dysfunction.

USE OF YOUR INDIVIDUALLY IDENTIFIABLE HEALTH INFORMATION (IIHI):

Your individually identifiable health information is information about you that contains your health information and information that would identify you such as your name, date of birth, or other individual identifiers. VHA is asking you to allow the VA Principal Investigator (PI) and/or the VA research team members to access and use your past or present health information in addition to new health information they may collect for the study named above. The investigators of this study are committed to protecting your privacy and the confidentiality of information related to your health care.

Signing this authorization is completely voluntary. However, your authorization (permission) is necessary to participate in this study. Your treatment, payment, enrollment, or eligibility for VA benefits will not be affected, whether or not you sign this authorization.

Your individually identifiable health information used for this VA study includes the information marked below:

☒ Information from your VA Health Records such as diagnoses, progress notes, medications, lab or radiology findings

☒ Specific information concerning:

☒ alcohol abuse ☒ drug abuse ☒ sickle cell anemia ☒ HIV

☒ Demographic Information such as name, age, race

☐ Billing or Financial Records

☐ Photographs, Digital Images, Video, or Audio Recordings

☒ Questionnaire, Survey, and/or Subject Diary

☐ Other as described: 0