

High Intensity Focused Ultrasound

Patient Information



Sonablate[®] HIFU
The Choice for HIFU Worldwide

The prostate cancer treatment
that *treats* you to a higher quality of life.

▶ A Patient's Guide to Prostate Cancer and Sonablate® HIFU

Contents

Prostate Cancer	4
Prostate Cancer Therapy Options	5
What is HIFU?	7
Sonablate® 500 HIFU	8
Comparison of HIFU Devices	10
Your Sonablate® HIFU Treatment	11
Sonablate® HIFU Clinical Data	13
Frequently Asked Questions	15

Important Information about this Medical Device

The Sonablate® 500 is only approved for investigational use in clinical trials by the United States Food and Drug Administration. HIFU with the Sonablate® 500 is only available in countries where the device has already been approved.

The content in this brochure is provided for informational purposes ONLY. The health information contained herein is provided for educational purposes only and is not intended to replace sound professional medical advice and care. All decisions regarding patient care should be made with a healthcare provider.

► Prostate Cancer

What is Prostate Cancer?

Prostate cancer is the most common non-skin cancer in men and the third leading cause of male cancer deaths. Typically, prostate cancer is very slow growing, but sometimes the disease can grow and spread quickly. Even with the latest research, it is extremely difficult for doctors to know which men have a slow growing cancer and which have a cancer that will spread rapidly.

What are the Symptoms of Prostate Cancer?

The early stages of prostate cancer generally show few symptoms. When a tumor becomes more advanced, patients may experience

- A weak urinary stream
- Inability to urinate
- Interruption of urinary stream
- Frequent urination (especially at night)
- Pain or burning during urination
- Blood in urine

Who's at Risk for Prostate Cancer?

- Men between ages 60 and 80
- Known risk factors include age, race and family history
- African-American men have a higher incidence of prostate cancer than Caucasian or Asian men in the U.S.

Many physicians, as well as the American Cancer Society, recommend that all men over the age of 50 have a prostate-specific antigen (PSA) test regularly.



► Prostate Cancer Treatments

Traditional Treatments for Prostate Cancer

There are numerous treatment options for prostate cancer. Each treatment has benefits and drawbacks. Together, patients and their physicians need to weigh all the factors as they search for the best treatment option.

Hormone Therapy

Advantages	Disadvantages
Excellent means of dealing with complications and pain of metastatic cancer	Not curative
Therapy can easily be stopped; allowing return of normal hormone production	Frequent Side Effects: loss of libido & potency - loss of muscle & bone strength - flushing, breast swelling & anemia
May prolong survival of patients with extensive prostate cancer	Only works for a limited time that is variable
Easily administered (surgery/drugs)	Can be very expensive
	1 - 3 month recovery period

Radiation Therapy

Advantages	Disadvantages
<p>No prolonged hospitalization is required</p> <p>Less risk associated with radiation than with surgery</p> <p>Outcomes relatively predictable</p>	<p>Treatment program is prolonged (may require more than 30 sessions of radiation over 4 to 6 weeks)</p> <p>Side effects of radiation include: impotence - urinary frequency & urgency - rectal bleeding - Proctitis (inflammation of the lower rectum [1%]) - may decrease energy levels</p> <p>Seed migration (with brachytherapy)</p> <p>Risks of complications from anesthesia</p> <p>The prostate is not removed (possibility of tumor regrowth)</p> <p>Surgical retreatments carry a high degree of risk for severe complications</p>

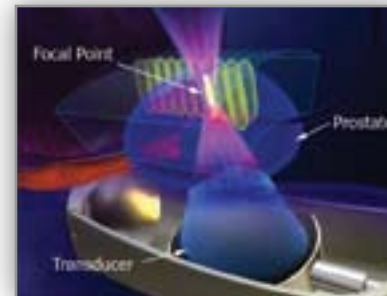
Cryotherapy

Advantages	Disadvantages
<p>Little Blood Loss</p> <p>Minimally invasive</p> <p>Shorter recovery time than surgery</p>	<p>Potential side effects may include: high degree of impotence with full gland ablation - incontinence - rectal injury</p> <p>Temporary soreness</p> <p>No long term data on “nerve sparing therapy”</p>

Radical Prostatectomy

Advantages	Disadvantages
<p>Prostate removed</p> <p>Cancer potentially removed</p> <p>Long history of use</p> <p>Results easy to monitor with post-operative PSA tests</p> <p>Failures can be followed with radiation if necessary</p>	<p>Surgery can take 2-8 hours depending on type of surgery (open, laparoscopic, robotic)</p> <p>Requires 3 to 7 day hospital stay</p> <p>Risks associated with procedure include: blood loss - infection, leaks - fistulae etc. - mortality</p> <p>Side effects of radical prostatectomy include: risk of impotence - chance of incontinence - risk of urinary stricture</p> <p>1 - 3 month recovery period</p>

► High Intensity Focused Ultrasound (HIFU)



A Revolutionary Way to Treat Prostate Cancer

HIFU is a precise and targeted therapy that reduces some of the risk of complications caused by surgery and radiation.

HIFU uses ultrasound energy, or sound waves, to

heat and destroy specifically targeted areas of tissue. During HIFU, the sound waves pass through healthy tissue without causing damage. However, at the focal point of the sound waves (like a magnifying glass focusing the rays of the sun to burn a leaf), the tissue temperature rises to 90 degrees Celsius destroying the targeted tissue.

Features of the Sonablate® 500

The Sonablate® 500 is the **only** HIFU device for prostate cancer that can

- Locate nerves during HIFU, decreasing the risk of erectile dysfunction caused by nerve damage
- Monitor rectal wall temperatures for patient safety
- Maintain rectum and tissue temperatures by circulating chilled water through the probe during the procedure
- Safely treat different types of body tissue by adjusting power levels
- Treat patients who have previously received hormone therapy

Therapeutic Advantages Over Traditional Prostate Cancer Treatments

- Takes only one to three hours
- Performed as an outpatient procedure under a spinal (epidural) anesthesia
- Recovery time is minimal
- Patients are usually up and walking around within hours after the procedure and may return to a normal lifestyle within a couple of days
- International studies show HIFU results in very low rates of both impotence and incontinence

Sonablate® HIFU - A Safer Way to Treat Prostate Cancer

The Sonablate® 500 is a *non-invasive* medical device developed by Focus Surgery, Inc. (Indianapolis, IN), that uses HIFU to treat prostate cancer and benign prostatic hyperplasia (BPH). The Sonablate® 500 is a revolutionary way to treat prostate cancer - and a safer treatment for the thousands of men who will be diagnosed with the disease.

Precise and Controlled

The Sonablate® obtains real-time ultrasound images of the prostate and surrounding areas. From these images, the doctor plans where the HIFU will be delivered. The Sonablate® software allows the surgeon to precisely define the treatment zones in order to safely destroy the entire gland.

The control and precision of HIFU means most patients only require one treatment and the risk of common side effects such as impotence and incontinence are much lower compared to other therapies.

Unlike radiation, HIFU is non-ionizing so it can be repeated, if necessary, without damaging healthy tissue. This means that HIFU can also be used as a salvage technique if other prostate cancer treatments fail.

The Sonablate® is the only truly *non-invasive* prostate cancer treatment that does not require a transurethral resection of the prostate (TURP), an invasive, surgical procedure, prior to treatment in order to achieve effective results.



▲ Sonablate® 500 with Sonachill™

► Comparison of HIFU Devices for Prostate Cancer Therapy

HIFU Device for Prostate Disease	Sonablate® 500	Ablatherm®
TURP* Required?	NO. Can treat up to a 40 gram prostate without invasive surgery prior to HIFU	YES. Requires a transurethral resection of the prostate (TURP) for prostates larger than 24cc
Image Quality	Real-time images and Reference images give immediate feedback to physician during HIFU Physician can view the prostate in 3D	No 3D imaging available Not able to view prostate from multiple angles
Nerve Detection	During treatment planning, blood flow around nerves is identified with colored overlay in real-time, which protects nerves responsible for preserving potency	Not capable of identifying or monitoring blood flow around neurovascular bundles resulting in a higher statistical incidence of erectile dysfunction - reported as high as 66%
Physician Control	The probe is positioned by the physician for optimal outcomes and comfort	A larger diameter probe is fixed on the treatment table and not directly controlled by the physician
Power Adjustment	Power can be adjusted to compensate for treating different types of tissue in the body	Three pre-set power levels which can not be adjusted to tissue response
Precision	12mm lesions are so precise in the focal zone that the physician can pinpoint an area without damaging surrounding tissue	19-24mm lesions could miss some prostatic tissue and increase the chance for a recurrence of the cancer
Safety Features	Reflexivity Index Measure (RIM™) monitors rectal wall heating Rectal wall monitoring and cooling Sonachill™ system circulates chilled water to protect delicate tissue outside the focal zone Energy display provides immediate feedback on effectiveness of treatment	External motion detection Refrigerated / temperature controlled gel to keep rectal wall temperature low

*A TURP (Transurethral Resection of the Prostate) is an invasive surgical procedure with risk of complications, excessive blood loss, infection, painful urination and 4-6 weeks recovery.

► Your HIFU Treatment

Who is a Candidate for HIFU with the Sonablate® 500?

Sonablate® HIFU is most effective for men who have early stage, localized prostate cancer that has not spread or metastasized outside the prostate. It is recommended that you discuss your individual medical records and history with a physician in order to confirm whether or not you are a candidate for Sonablate® HIFU.

Sonablate® HIFU is also an effective therapy for recurrent prostate cancer when patients may not have any other treatment options. Many patients who have had radiation therapy experience a rise in PSA and discover that the cancer is back. These patients may be candidates for the Sonablate® HIFU treatment as well.

Additionally, patients who have a local recurrence after receiving a radical prostatectomy may be candidates for Sonablate® HIFU.



The Sonablate® HIFU Procedure

Before HIFU

Patients are given two enemas two hours prior to the procedure. It is very important that the patient does not move during Sonablate® HIFU thus patients are given an epidural (spinal) anesthesia and light intravenous sedation.

During HIFU

There is no pain during treatment. A small probe inserted into the rectum emits ultrasound waves directly to the prostatic tissue. During the procedure, the Sonablate® 500 delivers real-time images of the prostate and the surrounding area giving the physician immediate and detailed feedback. Treatment time varies, but generally lasts one to three hours.

After HIFU

Immediately after Sonablate® HIFU patients spend one to two hours recovering at the treatment facility and then are discharged. The doctor will prescribe medications, but most patients do not experience any pain after the procedure. A catheter will be inserted for two to three weeks to ensure the bladder empties properly. Most patients are able to resume a normal diet and lifestyle almost immediately. Patients should have their PSA checked three months after the procedure.

Effectiveness of the Sonablate® HIFU

International studies and presentations report that HIFU with the Sonablate® 500 is as effective a treatment for prostate cancer as surgery or radiation. The disease-free rate with the Sonablate® 500 after 6 years is 97% for low risk patients. One recent study showed that 92% of men had Nadir PSA of 0.2ng/ml or lower after 3 months.

Potential Side Effects and Complication Rates

Sonablate® HIFU is *non-invasive* and spares the nerves responsible for preserving potency. Additionally, the procedure does not damage muscles that control urinary function. Therefore Sonablate® HIFU has fewer side effects than traditional treatments.

Sonablate® 500 HIFU Clinical Trial Results

▲ Fig 1 Efficacy Chart	Follow-Up	Percentage	Physician	Presentation/ Study
Negative Biopsy Rate	1 year	91%	Sumitomo, Hayakawa, Nagakura	One Year outcomes following HIFU Japan Endourology & ESWL Conference 2005
Biochemical Disease-Free Rate	6 years	97% (low risk group: pre-HIFU PSA <10)	Uchida, Shoi, Nagata	HIFU for Localized Prostate Cancer 6 year Experience Japan Endourology & ESWL Conference 2004
Nadir PSA after HIFU	3 months	92% (PSA of 0.2ng/ml or lower)	Emberton, Illing, Dawkins, Ogden	British Prostate Group- Autumn Meeting 2005

▲ Fig 2 Impotence & Incontinence	USHIFU experience	Other studies	Comments
Impotence	Less than 1%*	0-20%	Higher rates of impotence are most likely due to <ol style="list-style-type: none"> 1. Procedures done before recent upgrades (NVB) 2. HIFU performed on Sonablate® 200, the predecessor to the Sonablate® 500 3. Patients were impotent before HIFU, meaning that impotence didn't result from HIFU
Incontinence	Less than 1%*	1%**	** British Journal of Urology. Treatment of Localized Prostate Cancer Using High Intensity Focused Ultrasound. Uchida et al. 2006.

*Clinical Experience in Canada, Mexico & Dominican Republic: Publication in Progress



► Frequently Asked Questions

How long has the Sonablate® 500 been in use?
Where is it being used?

HIFU was originally researched in the United States almost 50 years ago. Focus Surgery, Inc., the developers of the Sonablate®, introduced the first application for prostate disease in the early 1990s. Worldwide, over 5,500 treatments have been done with the Sonablate®. There are nearly 100 Sonablate® 500 centers worldwide.

Is it a one-time procedure or do I need multiple treatments?

HIFU with the Sonablate® 500 is a one-time procedure that lasts approximately 1-3 hours.

What should I expect after I have HIFU?

Because Sonablate® HIFU is a *non-invasive* procedure it has minimal side effects. During the first one to two weeks after the procedure, a patient may experience very mild urinary symptoms such as frequency and/or urgency to void. In the first one to two months, a patient may pass an occasional small amount of blood or mucus-like materials in the urine stream which is normal. A urinary catheter is inserted after the procedure and must be kept in place for 2-3 weeks.

Is this a type of radiation like brachytherapy? Which one is a better minimally invasive procedure?

HIFU is completely radiation free. Unlike radiation, ultrasound energy is non-ionizing meaning it will not harm any tissue outside of the targeted area. Although brachytherapy and HIFU are considered minimally invasive, HIFU only requires one treatment. Also the ►

◀ radioactive seeds that are implanted during brachytherapy remain in the prostate and could potentially cause damage to tissue around the prostate, even several years after having the procedure. HIFU is a targeted and precise procedure, nothing outside of the target zone is affected.

During Sonablate® HIFU is the entire prostate treated or does the doctor only treat the tumor or diseased area?

During the HIFU procedure the entire prostate gland will be ablated or destroyed. Because it can be very difficult to determine the exact location of the cancer or tumor within the prostate, the Sonablate® 500 is programmed for treatment of the entire gland. By treating the entire prostate the chance for recurrence is minimized.

How do I know if I am a candidate for HIFU? What are the qualifications?

If you have been diagnosed with localized prostate cancer that has not spread or metastasized outside of the gland, you may be a candidate for HIFU. It is recommended that you discuss your individual medical records and history with a HIFU certified physician in order to confirm whether or not you qualify for HIFU.

Is this procedure repeatable?

Yes, Sonablate® HIFU can be repeated if necessary. In most cases, Sonablate® HIFU is a one-time procedure, however, unlike radiation it will not prevent patients from having other treatments (radiation, cryotherapy etc.) if needed.

What happens to the urethra during HIFU? Since it runs through the center of the prostate is it destroyed during the procedure?

During HIFU, the entire prostate is ablated, including the prostatic urethra. However, the urethra is derived from a different type of tissue (bladder squamous-type epithelium) rather than prostatic tissue (glandular, fibrotic and muscular) and does regenerate with time.

While the urethra is an important anatomical structure, the sphincter and bladder neck are more important to maintaining the urinary function. During HIFU the sphincter and bladder neck are identified and avoided.

How long will I have to stay in the hospital?

Sonablate® HIFU is an outpatient procedure and does not normally require an overnight hospital stay. The procedure usually takes 1-3 hours and recovery time 2-3 hours. After recovery, the patient is discharged.

Where is the procedure available?

Sonablate® HIFU is available in countries where the device is already approved including Canada, Costa Rica, Mexico, South Africa and the Dominican Republic. To find out more about scheduling a treatment call 1-888-874-4384.

Why can't I have it done in the United States?

HIFU with the Sonablate® HIFU is only approved for investigational use by the FDA. This means that a series of clinical trials first must be conducted in the United States before the device will be available. Until it is approved by the FDA, anyone wishing to have the procedure can travel to an International HIFU Center outside the U.S.

To learn more visit www.InternationalHIFU.com.



Benefits of Sonablate® HIFU

- Sonablate® HIFU is “clean” energy - the patient is not exposed to radiation that might weaken or damage cells and tissue surrounding the prostate
- Sonablate® HIFU is non-surgical - causing minimal blood loss and is less invasive than other treatments
- Sonablate® HIFU is preformed under spinal (epidural) anesthesia - eliminating risk associated with general anesthesia
- Sonablate® HIFU is an outpatient procedure; no overnight hospital stay is required
- Sonablate® HIFU can be repeated, if necessary
- After Sonablate® HIFU, if needed, patients may pursue other treatment options (radiation, cryotherapy, surgery etc)
- Sonablate® HIFU may be used as a salvage treatment for local prostate cancer recurrence
- Sonablate® HIFU preserves patient quality of life by minimizing side effects such as impotence and incontinence

The Sonablate® 500 is a safer, more effective treatment for prostate cancer. To find out more about scheduling a treatment, call 1-888-874-4384.



USHIFU is the exclusive distributor of the Sonablate® 500 in the Americas and South Africa and the funding source for Phase II-III U.S. clinical trials for the device. The device was created by Focus Surgery, Inc. of Indianapolis, IN and is manufactured by the combined efforts of Focus Surgery, Inc. and Misonix, Inc. (NASDAQ: MSON) of Farmingdale, NY.

200 South Tryon Street, Suite 1700
Charlotte, NC 28202
1-888-USHIFU4