

Associated Urologists



of Orange County

PROSTATE CRYOSURGERY

PATIENT INFORMATION HANDBOOK

COMPILED BY

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Prostate Cryosurgery

Dear Patient,

I am pleased to provide you with this patient information handbook including FAQs (Frequently Asked Questions) on prostate cryosurgery to help you better understand this relatively new technique for the treatment of localized prostate cancer.

Please read it before your consultation to be better prepared to ask questions that you might have about prostate cryosurgery.

Thanks,

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FREQUENTLY ASKED QUESTIONS (FAQS)

Q. What is prostate cryosurgery?

A. Prostate cryosurgery (also called cryoablation, cryotherapy or cryo for short), is a surgical technique that involves the controlled freezing of the prostate gland to destroy cancerous cells. This is a minimally invasive procedure. It is done by inserting specialized needles called “cryoprobes” into the prostate through the perineum, the area between the scrotum and the anus (Fig. 1). After the cryoprobes are inserted, freezing of the prostate gland is performed by using Argon gas (Fig. 2). The process is monitored accurately with the help of a computer. Temperature sensors are also used to monitor the process. There are no incisions. The procedure is done under general or spinal anesthesia. It takes about one and a half hours. Patients usually are discharged from the hospital after an overnight stay. This is a one-time procedure with no additional procedures or treatments needed.

Q. How does cryosurgery treat cancer?

A. It has been well known to physicians that extreme temperatures, either hot or cold, can destroy biological tissues. Cryosurgery has been used experimentally to treat various cancers since the 1960's. The idea behind using cryo is that rapid cooling of body tissues to a temperature of -60°C or lower causes ice crystals to form, disrupting the cell structure and, ultimately, killing the cell. In addition to the cells, surrounding connective tissue and blood vessels are damaged as well leading to more complete tissue destruction. There is also mounting evidence that by-products of the dead cells, like intracellular proteins, trigger an immune response attracting natural antibodies, thus adding to the efficacy of the procedure.

Today, cryosurgery is increasingly used in various medical fields like dermatology, gynecology, general surgery and urology.

The main indications for the use of cryosurgery in urology are localized prostate cancer and small kidney tumors up to 4 cm in diameter.

CRYOSURGERY: TECHNIQUE

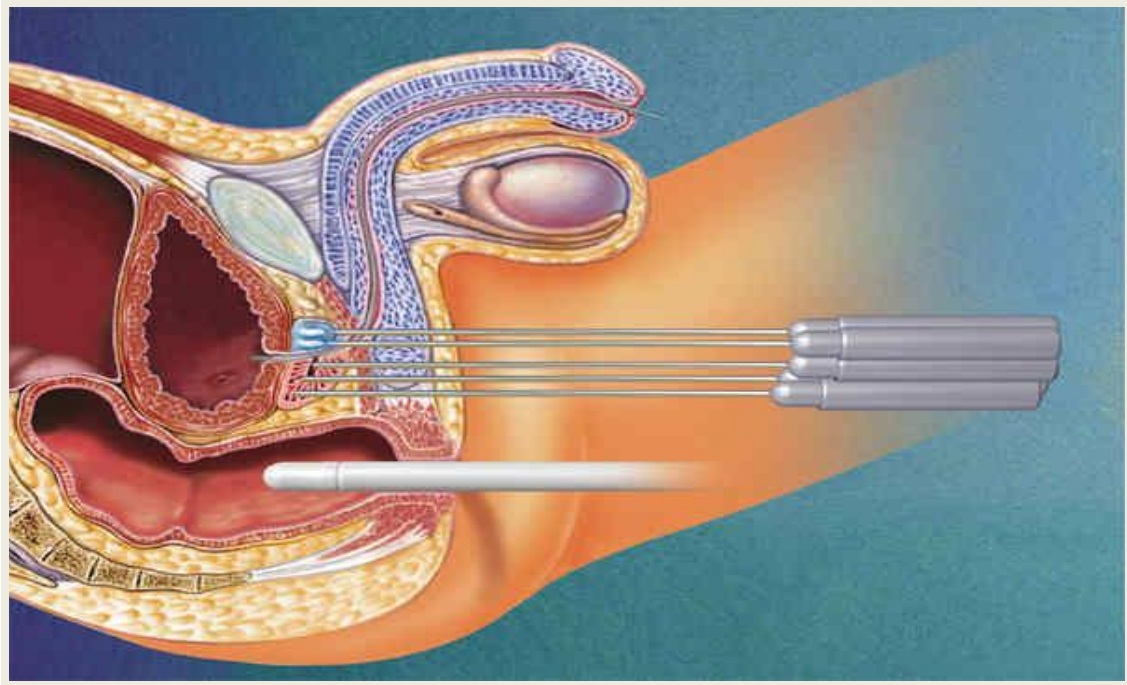


Figure 1: Cryoprobes are inserted in the prostate

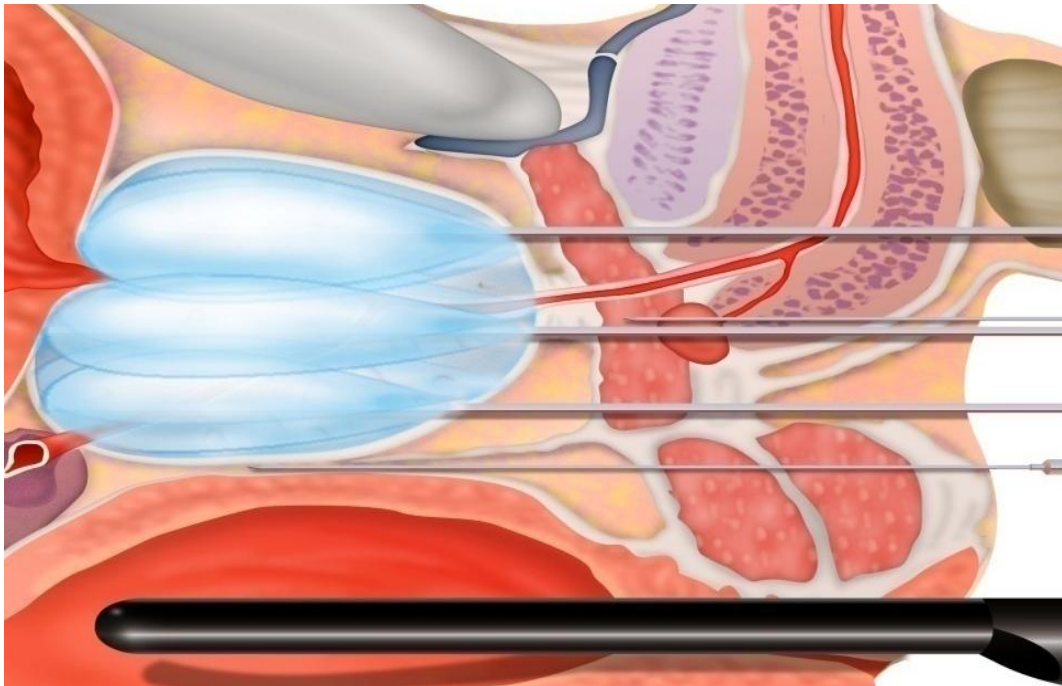


Figure 2: Prostate is frozen (iceball formation)

Q. How is the decision to have cryosurgery made?

A. You are seen in consultation by Dr. Tertzakian. Your medical records, imaging studies and laboratory tests are reviewed. The doctor also examines your prostate gland. Next, he covers the various options available for treating localized prostate cancer, which include active surveillance, surgery, radiation therapy and cryosurgery. You will be informed about the risks and benefits of those treatment modalities. After considering your options, you will need to make your own decision regarding treatment. If you decide to proceed with cryosurgery, further instructions regarding scheduling of the procedure, pre-operative testing, etc., will be given to you. The cryosurgery procedure is performed at Saint Joseph Hospital in Orange, California.

Q. What are the risks, benefits and potential complications of cryosurgery?

A. The main benefit of cryosurgery is its truly minimally invasive yet very effective nature. Recovery is quick and with no serious complications.

With considerable technical improvements in the cryosurgical equipment and the use of computers making the procedure safer, there has been a significant decrease in the number of complications associated with the procedure. Incontinence occurs in less than 2% of patients treated. The risk is slightly higher in patients who have had previous radiation to the prostate. Damage to the bladder or rectum resulting in fistula formation is rare and occurs in less than 1% of cases.

Erectile dysfunction (ED) is the main complication resulting from cryosurgery (incidence of 70-80%). New treatment protocols are being developed to reduce ED (focal or partial gland cryosurgery). With penile rehabilitation techniques and passage of time, about one third to half of the patients recover satisfactory erectile function. Patients with persistent ED can be treated with medication, injections or surgery with satisfactory recovery of erectile function.

Q. How long will I be in the hospital?

A. The average length of stay is one day (overnight stay). After surgery, the patient is taken to the recovery room and monitored. Once stable, he is taken to a regular hospital room. Most of the patients can take a regular diet after the procedure and are able to move around. Patients are discharged the next morning with the urethral catheter attached to a leg bag. Antibiotics and pain medications are prescribed for one week. After cryosurgery, patients need to have a urethral catheter to secure urine drainage. The catheter is removed in the office 5-7 days after the procedure.

Q. Are there any immediate or late post-procedure complications?

A. About 50% of the time, there will be some swelling of the penis and scrotum that will subside within 1-2 weeks. Some patients report a sensation of lower abdominal tightness due to fluid retention. Patients can also experience temporary urinary irritative symptoms like frequency, urgency and slow stream and occasional blood in the urine. Often, there will be some bruising and ecchymoses in the genital and perineal areas. All these problems are temporary and usually resolve within a couple of weeks after the procedure.

Q. How will I be followed? Will I need additional testing?

A. The response to the treatment is monitored by obtaining a PSA blood test every three months after cryosurgery for the first two years, and every six months after that. In certain situations, a follow-up prostate biopsy can be recommended. Other tests like bone scan and CT scan can be performed as needed.

Q. How successful is cryosurgery?

A. Prostate cryosurgery has long-term results comparable to surgery and radiation therapy. Recent 10-year results of cryosurgery from Allegheny General Hospital and Columbia University compare very favorably with those achieved by surgery and radiation therapy.

According to their published results, the odds of being cancer-free ten years after cryosurgery appear to be 80 to 89% for low-risk patients, 74 to 84% for medium-risk patients, and 46 to 80% for high-risk patients.

Q. What type of patient is a good candidate for cryosurgery?

A. This procedure works well in all patients with localized prostate cancer. In particular, it works very well in patients who are at high risk of failing more conventional treatments. Such patients include those with locally advanced tumors (Stage T3), patients with high-grade tumors (Gleason score 8 to 10), and patients with a high initial PSA greater than 15 ng/ml. Cryosurgery is often used in combination with other treatment modalities for high-risk patients to improve odds of success. Cryosurgery is considered to be the treatment of choice for patients who have failed radiation therapy.

Because of its safety profile, older patients who are high-risk for other treatments can safely undergo cryosurgery with minimal risk for morbidity, thus minimizing their risk of developing advanced local or metastatic disease.

Q. Does my insurance cover cryosurgery?

A. Most insurance companies, including Medicare, Blue Cross, Aetna and other major insurance companies cover cryosurgery as a treatment modality for both primary prostate cancer and as a salvage procedure after failure of radiation therapy. Before scheduling your procedure, our office staff will check your benefits with your insurance company and make sure that cryosurgery is a covered benefit.

CRYOSURGERY : PROS & CONS

| Pros: | Cons: |
|---|---|
| A minimally invasive treatment with quick return to normal activities | A relatively new modality compared to surgery and radiation therapy |
| Is effective in locally advanced prostate cancer like stage T3 and high grade tumors (Gleason >7) | Erectile dysfunction is relatively high after cryosurgery with partial recovery with time |
| Very few urinary side effects like incontinence or fistulae (<2%) | Not widely available because of new and expensive technology |
| Can be repeated, and does not preclude any type of future treatment like surgery | Clinical outcomes can be highly dependent on experience of surgeon and institution |
| Treatment f choice for salvage therapy after radiation failure (Iodine seeds and external beam) | Difficult to do in patients with very large prostates and in patients with prior prostate surgery |

USEFUL INTERNET LINKS

www.cryocarepca.org/

<http://urologyhealth.org/adult/index.cfm?cat=09&topic=42>

www.cancer.org/docroot/CRI/content/CRI_2_4_4x_Cryosurgery_36.asp?rnav=cri

***CONSENSUS STATEMENTS FROM THE
AMERICAN UROLOGICAL ASSOCIATION'S
BEST PRACTICE POLICY STATEMENT* ON
CRYOSURGERY FOR THE
TREATMENT OF
LOCALIZED PROSTATE CANCER***

Primary Cryosurgery (Evidence Level II-2/3)

“The consensus opinion of the Panel is that primary cryosurgery is an option, when treatment is appropriate, to men who have clinically organ-confined disease of any grade with a negative metastatic evaluation. High-risk patients may require multi-modal therapy. There are even more limited data regarding the outcomes for clinical T3 disease, and the role of cryosurgery in this setting is currently undetermined.”

Salvage Cryosurgery (Evidence Level II-3)

“It is the opinion of the expert Panel that salvage cryosurgery can be considered as a treatment option for curative intent in men who have failed radiation therapy. The most appropriate candidates have biopsy proven persistent organ-confined prostate cancer, a PSA <10 ng/mL, and a negative metastatic evaluation as determined by standard assessment tools such as imaging modalities.”

****Published in 2008***

Meet your cryosurgeon, Dr. Garo M. Tertzakian
(<http://www.ocurology.com/gmtinfo.html>)



Dr. Garo M. Tertzakian is a board certified urologist. He completed his urology residency training at the University of California, Irvine. He has been in private practice in Orange County since 1980. He is well known for his interest in using the latest minimally invasive techniques for the treatment of various urological conditions.

Dr. Tertzakian has been performing prostate cryosurgery since 2005. He is one of a handful of urologists in California trained and certified to perform cryosurgery. He lectures on the subject and teaches other urologists to perform cryosurgery. In view of his expertise in cryoablation, Dr. Tertzakian was made a member of Cryocare ICE, a select group of physicians who specialize and have wide experience in cryoablation.

Dr. Tertzakian has performed close to 100 prostate cryosurgeries with excellent cancer control and preservation of the quality of life of the treated patients.