1. Prostate Cancer – The Problem

When I talk to men about their health, one common topic is the prostate, a gland located below a man’s bladder and behind the penis.

Prostate cancer is one of the few cancers that affect only men. In fact, it is the second most common male cancer – with over 185,000 cases each year. It is also more frequent as we get older.

Although 1 in 6 men will have prostate cancer during their lifetime, a diagnosis is not a death sentence. Prostate cancer is typically slow growing and treatments are improving. Today, only 1 in 35 men diagnosed will die from it.

2. Testing for Prostate Cancer

In 2018, the U.S. Preventive Services Task Force (USPSTF) updated their testing (or screening) guidelines for prostate cancer as follows:

- Men 55 – 69 years old should be offered PSA screening by their doctors
- Men 70 and older should not undergo PSA-based screening.

These guidelines were based on a long-term study (the European Randomized Study of Screening for Prostate Cancer). This showed that men 55 - 69 who had PSA screenings had a 25% lower risk of dying from prostate cancer and a 35% lower risk of needing palliative treatment for advanced (metastatic) prostate cancer compared to those who were not screened.

The USPSTF also noted that the decision to be screened is an individual one; men should talk with their doctors about the potential benefits and harms of prostate cancer screening.

Prostate cancer screening is still recommended by the American Cancer Society and the American Urological Society for men starting at age 40 (if highest risk), age 45 (if high risk) or age 50 (average risk).
If you have been told you have prostate cancer, you need to understand your options.

Based on your age and the severity or stage of the cancer, recommendations for treatment may include:

**A. Active Surveillance** – In this case we do not treat the prostate cancer until we see more aggressive growth. This is appropriate when the cancer is limited to the prostate and is low to medium in aggressiveness. It is usually offered to older men in poor health because it avoids potential risks and side effects of treatment. Active surveillance can also be an option for younger men who want to avoid potential side effects or postpone treatment as long as possible.

**B. Radical Prostatectomy** – During radical prostatectomy (open or robotic), the entire prostate is removed through an incision in the lower abdomen. Since the prostate wraps around the urethra, once it is removed the surgeon reconnects the bladder with the urethra. This can be done by hand with a scalpel, using laparoscopic instruments or with a robot. The nerves that surround the prostate and go to the penis can either be spared or removed. Many studies have shown no difference in outcomes using a scalpel, laparoscope or robot.

Sparing nerves may impact sexual performance and ability to hold urine (continence). A recent review of over 460 robotic prostatectomies showed that about 25% of men were incontinent (wearing pads) and 75% of men could not have sexual intercourse one year after surgery. (Chang P. et. al. Beth Israel Deaconess Medical Center)

**C. Radiation** – During radiation treatment, prostate cancer cells are targeted using high doses of radiation. This aims to kill the cancer or disrupt its ability to grow or spread.

There are two different kinds of radiation treatments used for prostate cancer: external beam radiation or internal radiation.

With external beam radiation therapy (EBRT), a machine directs X-ray beams onto the prostate from outside the body. EBRT can last for several sessions, sometimes over a period of weeks. This is because the amount of radiation needed to kill the cancer is usually too high to be given at one time.

Internal radiation therapy (brachytherapy or IRT) is done by placing small radioactive pellets on the prostate inside the body. Some pellets are designed to be removed in a few minutes or a few days. Others are only removed when they are no longer radioactive.

Radiation for prostate cancer is complex. It has risks and side effects as well as benefits. Please talk to your doctor for more details.
D. Focal Cryotherapy

This new technology lets us treat the lesions only, rather than remove the whole prostate. CHA is the only provider doing this procedure in New England.

During cryoablation, we use an MRI to guide small needle-shaped probes into the prostate. The probes use special gas to freeze tiny sections of the gland and kill prostate cancer cells. We then do a repeat MRI to confirm the destruction of the lesion.

This is a minimally invasive, incision-free procedure with no major surgery. It can be done as an outpatient procedure or with a one-night hospital stay. Patients often recover in a matter of days and usually experience minimal after effects.

Focal therapy can be an excellent option. It is also effective for men who have had previous radiation treatment for prostate cancer and have a recurrence of their cancer.

E. Whole Gland Cryotherapy

While Focal Cryotherapy can be beneficial based on the type of prostate cancer you have, there may be circumstances when Whole Gland Cryotherapy is a better option. It has successfully been used to treat the whole prostate with results comparable to radiotherapy and surgery.

New Diagnostic and Prognostic Tools

Multi parametric magnetic resonance imaging (mpMRI)

If you have an elevated PSA, we can use new technology to look for prostate cancer. This “fusion guided biopsy” approach blends the power and detail of an MRI scan with the real-time convenience of ultrasound.

A patient first undergoes a specialized MRI scan, which can identify suspicious areas that may be cancer. During a later office visit, the urologist inserts an ultrasound probe into the rectum to examine the prostate. Special software “fuses” the images from the previous MRI with the live ultrasound images. The result is a three-dimensional, highly detailed view of the prostate that guides a biopsy needle to obtain a sample for testing. It can be done regardless of whether you have had a prior biopsy.

Genomics

It is helpful to get as much information as possible from the cells we retrieve. That’s where gene testing comes in. Results may be able to indicate if your cancer can be safely observed or whether you need treatment. Please note that not all insurance plans cover this testing.

Dr. Liou performed the cryoablation procedure in 2008 on the right side of my prostate. I was impressed with his skills, compassion and the care I received during my one night stay in the hospital. Afterward, I felt a little pain and had some blood in the urine but it stopped after a week. I bike everywhere and teach yoga. This procedure helped me maintain my active lifestyle. It did not slow me down. – Bob S.
4. The Ultimate Goal

At CHA, we know that every patient is different and every cancer is different. That’s why we are advocates for shared decision making.

We believe your decision should be made based on your health, your lifestyle and the best available data. We are here to provide guidance and support as you weigh your options.

Effective prostate cancer treatment keeps you alive while preserving your quality of life. CHA is proud to offer effective treatment that also reduces risks of side effects like incontinence or sexual dysfunction.

About Louis Liou, MD, PhD

Dr. Liou is Chief of Urology at Cambridge Health Alliance (CHA) and has been in urologic practice for over 20 years. He trained at the Cleveland Clinic, known as one of the top urology departments in the nation. His work on bladder, kidney, and prostate cancer is well published.

He has been a key opinion leader within his field working directly on improving cancer diagnosis. He holds a PhD in molecular biology and genomics.

While at Boston University, he ran the research lab and co-developed novel bladder cell lines used throughout the world in research today.

His work is known both nationally and internationally within his field. He has introduced many new innovative treatments at CHA. It is his main intention to think globally but act locally for the benefit of all of his patients at CHA.

My focus is on the care of my patients, before, during and after treatment. Your health and wellbeing are my priority – always.