What is prostate cancer?

The prostate gland is important to male sexual function and urinary control. As men age, their prostate cells undergo changes in shape and size that may lead to cancer. Most prostate cancers progress very slowly, but aggressive forms of the disease can become life-threatening, spreading to the bone marrow and other organs in a process called “metastasis.” Early detection of these aggressive cancers is the key to survival.

Risk factors

Although the specific cause of prostate cancer is unknown, a number of possible risk factors have been identified:

- Age (risk rises rapidly after age 50)
- Race/ethnic background (prostate cancer occurs more often in men of African ancestry)
- Family history of prostate cancer (risk is more than doubled for men who have a father or brother with prostate cancer)
- Diet high in red meat or high-fat dairy products, and low in fruits and vegetables
- Obesity
- Smoking
- Excessive alcohol intake
- Certain genetic mutations
- Exposure to Agent Orange

Warning signs

Prostate cancer usually shows no symptoms in its early stages. Symptoms of advanced disease may include:

- Problems with urination, including difficulty starting to urinate, a weak urinary stream, or more frequent urination, especially at night
- Blood in the urine
- Painful urination or ejaculation
- Difficulty achieving or maintaining an erection
- Bone pain, often in the spine, hips, or ribs
- Leg weakness and urinary or bowel incontinence (if cancer has spread to the spine and compressed the spinal cord)

How it works

1. STEP 1
   GET TESTED
   The PHI test can be easily ordered to assess your risk of having prostate cancer. It is intended to help you and your provider determine if you would benefit from a prostate biopsy.

2. STEP 2
   UNDERSTAND THE RESULT
   The PHI test result will include values for several different forms of PSA, and a PHI score. If your PHI score is high, you may be at greater risk for having prostate cancer that requires treatment.

3. STEP 3
   FOLLOW THE PLAN ESTABLISHED BY YOUR MEDICAL PROVIDER
   When caught in its earliest stages, prostate cancer can be beaten. It is critical that you follow your medical provider’s advice, which may include other diagnostic tests such as a prostate biopsy, or dietary and lifestyle changes that may reduce prostate cancer risk, including:
   - Weight loss (as needed)
   - Exercise
   - Smoking cessation
   - Decreased alcohol consumption
   - Increased consumption of green tea
   - Increased intake of foods that have been shown to significantly reduce inflammation and cancer risk, including fresh fruits, non-starchy vegetables, raw nuts and seeds, and omega-3 fatty acid-containing foods such as oily fish
   - Decreased intake of foods that may increase inflammation and cancer risk, such as red/processed meat, refined grains and sugars, highly heated or oxidized oils, and trans fats
   - Increased intake of foods containing folate (e.g., asparagus, avocado, beans and lentils, broccoli, mangoes, oranges) and soy
   - Vitamin D supplementation

8751 Park Central Drive, Suite 200, Richmond, VA 23227
p. 1.855.420.7140 | f. 1.804.515.7291
www.MyInnovativeLab.com

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Prostate cancer is the most common cancer for men in the U.S. Each year, there are more than 230,000 new diagnoses and approximately 30,000 lives claimed by this disease. Over 15% of US men will be diagnosed with prostate cancer in their lifetime.

Prostate cancer has a nearly 100% survival rate if it is detected early. But currently used methods for prostate cancer screening can be inaccurate, suggesting that cancer is present when it is not. In fact, the harm caused by misleading results often outweighs the potential benefits of testing.

The solution: Improve the accuracy of prostate cancer testing with the Prostate Health Index (PHI)

PHI is a simple blood test that is significantly better than either PSA or percent free PSA (%fPSA), an improved version of the PSA test, for detecting prostate cancer. PHI provides a personalized assessment of prostate cancer risk, helping you and your doctor determine whether biopsy is the right choice for you. A higher PHI score means you are more likely to have prostate cancer, and that the cancer may be a more aggressive form.

Your PHI test results help you and your doctor understand whether you would benefit from a biopsy—and make better decisions for your prostate health.

The problem: PSA testing for prostate cancer leads to unnecessary biopsies

Testing for prostate-specific antigen (PSA) is one of the most common prostate cancer screening methods used today. But increased PSA levels can also be caused by non-cancerous conditions such as prostatitis and enlargement of the prostate (known as benign prostatic hyperplasia, or BPH). This means that PSA testing alone may not distinguish between cancer and less serious conditions. It also detects a high number of slow-growing tumors that otherwise may persist for many years with no ill effects. As a result, a positive PSA test result may subject men to needless biopsies and other medical procedures:

- Over 1 million US men per year have prostate biopsies due to elevated PSA, but only 25% actually have cancer.
- Biopsies can have complications such as fever, infection, bleeding, urinary problems, and pain.
- It is currently difficult to distinguish prostate tumors that are destined to be lethal (~15%) from those that will remain indolent and non-life threatening (~85%). As a result, overtreatment often occurs, which can lead to erectile dysfunction, urinary or bowel incontinence, and serious surgical complications.
- It is estimated that for every life saved by PSA screening, 48 men suffer harm from treatment.

Unlike standard tests, can better detect potentially life-threatening cancers that require treatment

References