Prostate Cancer - Diagnosis

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Diagnosis

ON THIS PAGE: You will find a list of the common tests, procedures, and scans that doctors can use to find out what?s wrong and identify the cause of the problem. To see other pages in this guide, use the colored boxes on the right side of your screen, or click ?Next? at the bottom.

Doctors use many tests to diagnose cancer and find out if it has metastasized. Some tests may also determine which treatments may be the most effective. For most types of cancer, a biopsy is the only way to make a definitive diagnosis of cancer. If a biopsy is not possible, the doctor may suggest other tests that will help make a diagnosis, but this situation is rare for prostate cancer. For example, a biopsy may not be done when a patient has another medical problem that makes it difficult to do a biopsy, or when a person has a very high PSA level and a bone scan that indicates cancer. Imaging tests may be used to find out whether the cancer has spread. This list describes options for diagnosing this type of cancer, and not all tests listed will be used for every person. Your doctor may consider these factors when choosing a diagnostic test:

- Age and medical condition
- Type of cancer suspected
- Signs and symptoms
- Previous test results

In addition to a physical examination, the following tests may be used to diagnose prostate cancer:

PSA test [2]. As described in the Overview [3] and Risk Factors and Prevention [4] section, PSA is a type of protein released by prostate tissue that is found in higher levels in a man's blood when there is abnormal activity in the prostate, including prostate cancer, BPH, or inflammation of the prostate. Doctors can look at features of the PSA value, such as absolute level, change over time, and level in relation to prostate size, to decide if a biopsy is needed. In addition, a version of the PSA test allows the doctor to measure a specific component, called the ?free? PSA, which can sometimes help find out if a tumor is noncancerous or cancerous.

DRE [5]. A doctor uses this test to find abnormal parts of the prostate by feeling the area using a finger (see the Risk Factors and Prevention [4] section for more information). It is not very precise; therefore, most men with early prostate cancer have normal DRE test results.

If the PSA or DRE test results are abnormal, the following tests can confirm a diagnosis of cancer:

Transrectal ultrasound (TRUS) [6]. A doctor inserts a probe into the rectum that takes a picture of the prostate using sound waves that bounce off the prostate. This procedure is usually done at the same time as a biopsy (see below).

Biopsy [7]. A biopsy is the removal of a small amount of tissue for examination under a microscope. Other tests can suggest that cancer is present, but only a biopsy can make a definite diagnosis. To get a tissue sample, a surgeon most often uses TRUS and a biopsy tool to take very small slivers of prostate tissue. The sample removed during the biopsy is then analyzed by a pathologist (a doctor who specializes in interpreting laboratory tests and evaluating cells, tissues, and organs to diagnose disease). A patient usually can have this procedure at the hospital or doctor?s office without needing to stay overnight. The patient is given local anesthesia beforehand to numb the area. A patient may also receive antibiotics before the procedure to prevent an infection afterwards.

To find out if cancer has spread outside of the prostate, doctors may perform the imaging tests listed below. Because prostate cancer is unlikely to have spread, many of these tests are not used when a man?s PSA level is only slightly increased. Learn more about when these tests are recommended to find out if the cancer has spread [8].

Bone scan [9]. A bone scan uses a radioactive tracer to look at the inside of the bones. The tracer is injected into a patient?s vein. It collects in areas of the bone and is detected by a special camera. Healthy bone appears gray to the camera, and areas of injury, such as those caused by cancer, appear dark.

Computed tomography (CT or CAT) scan **[10].** A CT scan creates a three-dimensional picture of the inside of the body with an x-ray machine. A computer then combines these images into a detailed, cross-sectional view that shows any abnormalities or tumors. A CT scan can also be used to measure the tumor?s size. Generally, a contrast medium (a special dye) is injected into a patient?s vein or given orally (by mouth) to provide better detail.

Magnetic resonance imaging (MRI) **[11].** An MRI uses magnetic fields, not x-rays, to produce detailed images of the body. A contrast medium may be injected into a patient?s vein or given orally to create a clearer picture. By creating detailed pictures of the prostate, MRI scans are able to show whether the cancer has spread outside the prostate into nearby tissues or structures.

After these diagnostic tests are done, your doctor will review all of the results with you. If the diagnosis is cancer, these results also help the doctor describe the cancer; this is called staging.

Choose ?Next? (below, right) to continue reading this guide to learn about the different stages for this type of cancer. Or, use the colored boxes located on the right side of your screen to visit any section.

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