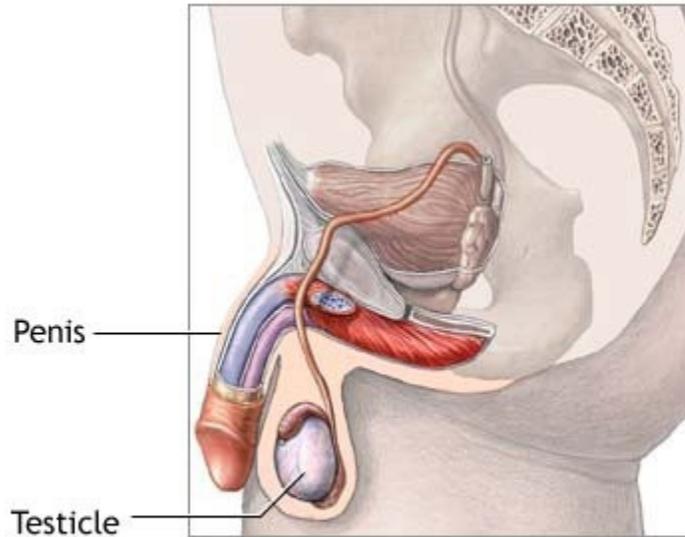


Testicular cancer



ADAM.

Definition

Testicular cancer is cancer that starts in the testicles, the male reproductive glands located in the scrotum.

Alternative Names

Cancer - testes; Germ cell tumor; Seminoma testicular cancer; Nonseminoma testicular cancer

Causes

The exact cause of testicular cancer is unknown. There is no link between **vasectomy** and testicular cancer. Factors that may increase a man's risk for testicular cancer include:

- Abnormal testicle development
- History of testicular cancer
- History of **undescended testicle(s)**
- **Klinefelter syndrome**

Other possible causes include exposure to certain chemicals and **HIV** infection. A family history of testicular cancer may also increase risk.

Testicular cancer is the most common form of cancer in men between the ages of 15 and 35. It can occur in older men, and rarely, in younger boys.

White men are more likely than African-American and Asian-American men to develop this type of cancer.

There are two main types of testicular cancer: seminomas and non-seminomas. These cancers grow from germ cells, the cells that make sperm.

Seminoma: This is a slow-growing form of testicular cancer usually found in men in their 30s and 40s. The cancer is usually just in the testes, but it can spread to the lymph nodes. Seminomas are very sensitive to radiation therapy.

Non-seminoma: This more common type of testicular cancer tends to grow more quickly than seminomas. Non-seminoma tumors are often made up of more than one type of cell, and are identified according to these different cell types:

- Choriocarcinoma (rare)
- Embryonal carcinoma
- Teratoma
- Yolk sac tumor

A stromal tumor is a rare type of testicular tumor. They are usually not cancerous. The two main types of stromal tumors are **Leydig cell tumors** and Sertoli cell tumors. Stromal tumors usually occur during childhood.

Symptoms

There may be no symptoms. Symptoms that may occur can include:

- Discomfort or pain in the testicle, or a feeling of heaviness in the scrotum
- Dull ache in the back or lower abdomen
- Enlargement of a testicle or a change in the way it feels
- Excess development of breast tissue (gynecomastia), however, this can occur normally in adolescent boys who do not have testicular cancer
- Lump or swelling in either testicle

Symptoms in other parts of the body, such as the lungs, abdomen, pelvis, back, or brain, may also occur if the cancer has spread.

Exams and Tests

A physical examination typically reveals a firm lump (mass) in one of the testicles. When the health care provider holds a flashlight up to the scrotum, the light does not pass through the lump.

Other tests include:

- **Abdominal and pelvic CT scan**
- Blood tests for tumor markers: alpha fetoprotein (AFP), human chorionic gonadotrophin (beta HCG), and lactic dehydrogenase (LDH)
- Chest x-ray
- Ultrasound of the scrotum

A biopsy of the tissue is usually done after the entire testicle is surgically removed.

Treatment

Treatment depends on the:

- Type of testicular tumor
- Stage of the tumor

Once cancer is found, the first step is to determine the type of cancer cell by examining it under a microscope. The cells can be seminoma, non-seminoma, or both.

The next step is to determine how far the cancer has spread to other parts of the body. This is called "staging."

- Stage I cancer has not spread beyond the testicle
- Stage II cancer has spread to lymph nodes in the abdomen
- Stage III cancer has spread beyond the lymph nodes (it could be as far as the liver, lungs, or brain)

Three types of treatment can be used.

1. Surgical treatment removes the testicle (orchiectomy) and nearby lymph nodes (lymphadenectomy). This is usually performed in the case of both seminoma and non-seminomas.
2. Radiation therapy using high-dose x-rays or other high-energy rays may be used after surgery to prevent the tumor from returning. Radiation therapy is usually only used for treating seminomas.
3. Chemotherapy uses drugs such as cisplatin, bleomycin, and etoposide to kill cancer cells. This treatment has greatly improved survival for patients with both seminomas and non-seminomas.

Support Groups

Joining a support group where members share common experiences and problems can often help the stress of illness. Your local branch of the American Cancer Society may have a support group. See: www.cancer.org for more information.

Lance Armstrong, a famous cyclist, is a survivor of testicular cancer. His web site -- www.laf.org -- offers support and information for patients with testicular cancer.

The National Cancer Institute website also provides further information: www.cancer.gov

Outlook (Prognosis)

Testicular cancer is one of the most treatable and curable cancers.

The survival rate for men with early-stage seminoma (the least aggressive type of testicular cancer) is greater than 95%. The disease-free survival rate for Stage II and III cancers is slightly lower, depending on the size of the tumor and when treatment is begun.

Possible Complications

Testicular cancer may spread to other parts of the body. The most common sites include the:

- Abdomen
- Lungs
- Retroperitoneal area (the area near the kidneys)
- Spine

Complications of surgery can include:

- Bleeding and infection after surgery
- Infertility (if both testicles are removed)

If you are of childbearing age, ask your doctor about methods to save your sperm for use at a later date.

When to Contact a Medical Professional

Call your health care provider if you have symptoms of testicular cancer.

Prevention

The U.S. Preventive Services Task Force recommends against routine screening for testicular cancer because there is no known effective screening technique.

A **testicular self-examination** (TSE) performed on a monthly basis, however, may help detect such cancer at an early stage, before it spreads. Finding it early is important to successful treatment and survival. Young men are sometimes taught how to perform self-exams shortly after puberty.

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Reviewed By: David C. Dugdale, III, MD, Professor of Medicine, Division of General Medicine, Department of Medicine, University of Washington School of Medicine; Yi-Bin Chen, MD, Leukemia/Bone Marrow Transplant Program, Massachusetts General Hospital. Also reviewed by David Zieve, MD, MHA, Medical Director, A.D.A.M., Inc.

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