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Testicular Cancer

Seminoma of the Testis

Definitions

Germ cell: Cells that produce sperm. Ninety percent of testicular cancers start here.

Testicle: The male reproductive organ that produces sperm and the hormone testosterone.

Scrotum: A sack of loose skin holding the testicles, located directly below the penis.

Malignant: Cancerous and capable of spreading.

Pathologist: A physician who examines tissues and fluids to diagnose disease in order to assist in making treatment decisions.

What is seminoma of the testis?

Seminoma of the testis is a form of germ cell testicular cancer. About 30 to 40 percent of the 8,500 testicular cancers diagnosed each year are one of two types of seminomas—seminoma, classic or seminoma, spermatocytic. The cancer can occur in one or both testicles. The cure rate is 70 to 95 percent, depending upon how extensively the cancer has spread. Nearly 140,000 men in the United States have survived testicular cancer, according to the American Cancer Society.

Who is likely to have seminoma of the testis?

Testicular cancer is the most common form of cancer among young men. It can occur in boys as well but rarely. White-American men have about five times the risk of testicular cancer as African-American men and about twice the risk of Asian-American men. The occurrence of this cancer among white men also has doubled over the past 40 years. The reasons for this increased occurrence are unknown.

Risk factors include a medical history of undescended testicles, abnormal testicular development, Klinefelter's syndrome (a sex chromosome disorder), or previous testicular cancer. Other possible risk factors include human immunodeficiency virus (HIV) infection and a family history of testicular cancer.

What characterizes seminoma of the testis?

These tumors are usually confined to the testicles. In some cases, the cancer spreads to the lymph nodes and beyond. Symptoms include:

- A painless lump or swelling in either testicle
- A change in how the testicle feels
- An ache in the lower abdomen or groin
- A sudden build-up of fluid in the scrotum
- Pain, discomfort, or a feeling of heaviness in the scrotum

Sometimes, no symptoms occur.

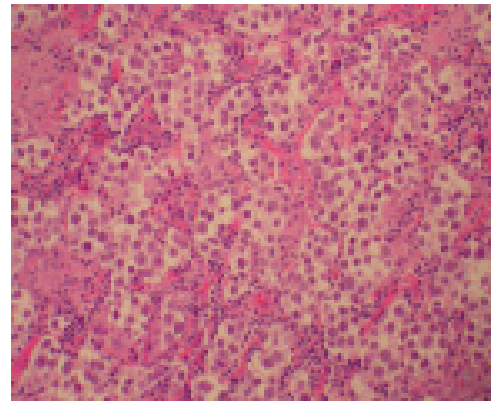
How does the pathologist make the diagnosis?

You or your primary care doctor may discover an unusual, firm mass within the testicle. Your physician may hold a flashlight to the scrotum to see if light passes through the mass. If light does not pass through, your physician may order a **scrotal**

ultrasound for the pathologist to examine to confirm a solid mass.

Your physician also may order a **blood test**. The pathologist will search your blood sample for tumor markers associated with seminoma of the testis including human chorionic gonadotrophin (beta HCG) and lactic dehydrogenase (LDH). These blood marker tests also can monitor the response to treatment.

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Seminoma of the testis.



Normal testicular cells.

What kinds of questions should I ask my doctors?

Ask any question you want. There are no questions you should be reluctant to ask. Here are a few to consider:

- Please describe the type of cancer I have and what treatment options are available.
- What is the stage of my cancer?
- What are the chances for full remission?
- What treatment options do you recommend? Why do you believe these are the best treatments?
- What are the pros and cons of these treatment options?
- What are the side effects?
- Is your medical team experienced in treating the type of cancer I have?
- Can you provide me with information about the physicians and others on the medical team?
- If I want a second opinion, could you provide me with the names of physicians and/or institutions that you would recommend?

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What else does the pathologist look for?

If the initial tests point toward cancer, a surgeon will remove the testicle containing the unusual mass to obtain a **biopsy specimen** for the pathologist to examine. The surgeon also may gather lymph nodes from the abdominal area for the pathologist to examine to determine if the cancer has spread. Your pathologist also may review a **chest x-ray** or **CT scan** results to see if the cancer has spread beyond the lymph nodes. With the results of the biopsy and all tests, the pathologist can determine the type and **stage** of the cancer. Stage 1 cancers are confined to the testicle, stage 2 to the lymph nodes in the abdomen, and stage 3 beyond the lymph nodes.

How do doctors determine what treatment will be necessary?

The pathologist consults with your primary care physician or specialist after reviewing the test results and determining the stage of the cancer. Together, using their combined experience and knowledge, they determine treatment options most appropriate for your condition. It's important to learn as much as you can about your treatment options and make the decision that's right for you.

What kinds of treatments are available for seminoma of the testis?

In addition to surgically removing the cancerous testicle, physicians may recommend **radiation therapy**—pinpointed high-energy beams—which can be used to shrink tumors or destroy cancer cells. It can be used alone or with surgery or chemotherapy.

Chemotherapy—using drugs such as cisplatin, bleomycin, and etoposide—delivers drugs throughout the body to slow the cancer's progression and reduce pain. Physicians use this treatment if the cancer has spread.

Testicular cancer treatments may cause permanent infertility. For this reason, men who wish to father children may consider sperm banking before treatment begins. This process freezes sperm and stores it for later use.

Also, follow-up testing is very important because of the risk of testicular cancer returning.

Clinical trials of new treatments for seminoma of the testis may be found at www.cancer.gov in the clinical trials section of the website. These treatments are experimental in nature but may be the best option for advanced cancers.

For more information, go to www.cancer.gov (National Cancer Institute) or www.nlm.nih.gov/medlineplus (US Library of Medicine). Type the keywords **testicular cancer** or **seminoma of the testis** into the search box.

Healing begins with the pathologist's diagnosis. Pathologists are the doctors who ensure you receive the right tests, the right diagnosis, and the right treatment.