Introduction:
The testicles are 2 egg-shaped glands located inside the scrotum that are the male sex glands. The testicles produce testosterone and sperm. Germ cells within the testicles produce immature sperm that travel through a network of tubules (tiny tubes) and a larger tubule called the epididymis where the sperm mature and are stored.

Testicular cancer is classified in one of two ways:
• Seminoma: This type of testicular cancer usually occurs in men between their late 30s and early 50s.
• Nonseminoma: This group of testicular cancer includes choriocarcinoma, embryonal carcinoma, teratoma, and yolk sac tumors. These types of tumors occur earlier in life than seminomas, usually occurring in men between their late teens and early 40s.

Testicular cancer is the most common cancer in men 20 to 35 years old and is often curable.

Risk factors for developing testicular cancer:
• Having had an undescended testicle
• History of an abnormal development of the testicles
• Having a personal or family history of testicular cancer
• Having Klinefelter’s syndrome

Signs or symptoms to watch for:
• A painless lump or swelling in either testicle
• A change in how the testicle feels
• A dull ache in the lower abdomen or groin
• A sudden build-up of fluid in the scrotum
• Pain or discomfort in a testicle or in the scrotum

Tests and procedures used to diagnose testicular cancer:
• Ultrasound: A painless test that passes sound waves through your scrotum to make an image of your testicles
• Serum tumor marker test: A blood test that is used to measure the amount of certain substances released into the blood by organs, tissues, or tumor cells. Certain substances are linked to specific types of cancer when found in increased levels.

There are 3 types of tumor markers used to detect testicular cancer:
• Alpha-fetoprotein (AFP)
• Beta-human chorionic gonadotropin (B-hCG)
• Lactate dehydrogenase (LDH)

Treatment:
• Radical inguinal orchietomy: A surgical procedure that involves removing one or both testicles through a cut in the groin. Lymph nodes may also be removed (lymph node dissection). If cancer is found, the cell type will be determined (seminoma or nonseminoma) to help plan treatment.

• External beam radiation therapy: This treatment used high-dose X-rays or other high-energy radiation to kill cancer cells.
• Chemotherapy: Used to kill cancer cells that have spread outside of the testicle. This drug therapy is usually given by infusions into your veins, which is typically done on an outpatient basis.

Surgery may be used in combination with radiation therapy or chemotherapy or both. This depends on the type and stage of the cancer.

Post-treatment implications:
• Certain treatments for testicular cancer can cause infertility that may be permanent. Patients who want to have children should consider sperm banking prior to treatment. Sperm banking is freezing sperm and storing it for later use.
• After the surgical removal of a testicle, you can have an artificial testicle (prosthesis) placed inside your scrotum. The artificial implant has the weight and feel of a normal testicle.

Prevention:
There is no way to prevent testicular cancer. However, a simple procedure called a testicular self-examination (TSE) can improve your chances of finding a tumor. You should examine your testicles regularly beginning in your midteenage years and continuing throughout life.

A good time to examine your testicles is after a warm bath or shower. The heat from the water relaxes your scrotum, making it easier to find anything unusual. Do this once a month.

To perform a testicular self-examination, follow these steps, as recommended by the American Cancer Society:
• Stand in front of a mirror. Look for any swelling on the skin of the scrotum.
• Examine each testicle with both hands. Place the index and middle fingers under the testicle while placing your thumbs on top.
• Gently roll the testicle between the thumbs and fingers. The testicles are usually smooth, oval shaped and somewhat firm. It’s normal for one testicle to be slightly larger than the other. Also, the cord leading upward from the top of the testicle (epididymis) is a normal part of the scrotum.
• If you find a lump, seek prompt medical evaluation and treatment.

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