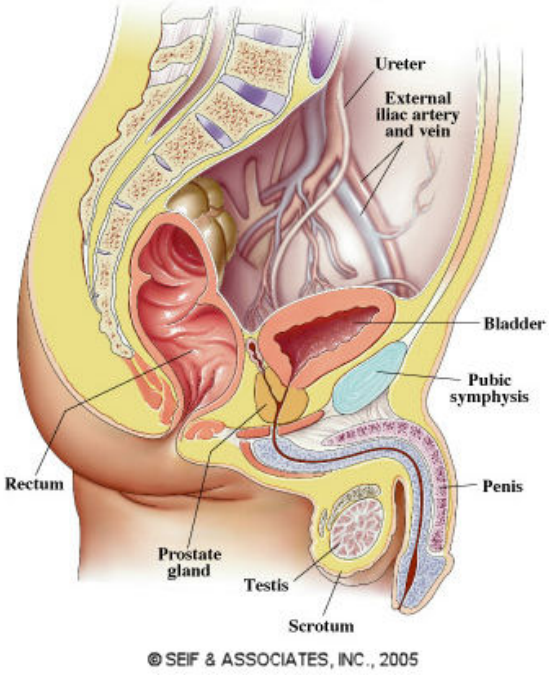
Testicular Cancer Staging

After testicular cancer has been diagnosed, tests are done to find out if cancer cells have spread within the testicles or to other parts of the body. This process is called staging. The information gathered from the staging process determines the stage of the disease. It is important to know the stage in order to plan treatment.



THE FOLLOWING TESTS AND PROCEDURES MAY BE USED IN THE STAGING PROCESS:

- **Chest x-ray:** An x-ray of the organs and bones inside the chest. An x-ray is a type of energy beam that can go through the body and onto film, making a picture of areas inside the body.
- **CT scan (CAT scan):** A procedure that makes a series of detailed pictures of areas inside the body, taken from different angles. The pictures are made by a computer linked to an x-ray machine. A dye may be injected into a vein or swallowed to help the organs or tissues show up more clearly. This procedure is also called computed tomography, computerized tomography, or computerized axial tomography.
- **Lymphangiography:** A procedure used to x-ray the lymph system. A dye is injected into the lymph vessels in the feet. The dye travels upward through the lymph nodes and lymph vessels, and x-rays are taken to see if there are any blockages. This test helps find out whether cancer has spread to the lymph nodes.
- **Abdominal lymph node dissection:** A procedure to examine lymph nodes in the abdomen. Lymph nodes are removed and a pathologist checks them for cancer cells. For patients with nonseminoma, removing the lymph nodes may help stop the spread of disease. Cancer cells in the lymph nodes of seminoma patients can be treated with radiation therapy.
- **Radical inguinal orchiectomy and biopsy:** A procedure to remove the entire testicle through an incision in the groin. A tissue sample from the testicle is then viewed under a microscope to check for cancer cells. (The surgeon does not cut through the scrotum into the testicle to remove a sample of tissue for biopsy, because if cancer is present, this procedure could cause it to spread into the scrotum and lymph nodes.)
- **Serum tumor marker test:** A procedure in which a sample of blood is examined to measure the amounts of certain substances released into the blood by organs, tissues, or tumor cells in the body. Certain substances are linked to specific types or cancer when found in increased levels in the blood. These are called tumor markers. **The following 3 tumor markers are used in staging testicular cancer:**
  - Alpha-fetoprotein (AFP)
  - Beta-human chorionic gonadotropin (ß-hCG).
  - Lactate dehydrogenase (LDH).

Tumor marker levels are measured again, after radical inguinal orchiectomy and biopsy, in order to determine the stage of the cancer. This helps to show if all of the cancer has been removed or if more treatment is needed. Tumor marker levels are also measured during follow-up as a way of checking if the cancer has come back.

THE FOLLOWING STAGES ARE USED FOR TESTICULAR CANCER:

Stage 0

In stage 0, abnormal cells are found only in the tiny tubules where the sperm cells begin to develop. The cells do not invade normal tissues. This is sometimes called a "precancerous condition." Stage 0 cancer is also called carcinoma in situ. All tumor marker levels are normal.

Stage I

STAGE I IS DIVIDED INTO STAGE IA, STAGE IB, AND STAGE IS AND IS DETERMINED AFTER

A RADICAL INGUINAL ORCHIECTOMY IS DONE.

Stage IA

The cancer is in the testicle and epididymis and may have spread to the inner layer of the membrane surrounding the testicle. All tumor marker levels are normal.

Stage IB

The cancer is in the testicle and the epididymis and has spread to the blood or lymph vessels in the testicle.

- Or has spread to the outer layer of the membrane surrounding the testicle.
- Or is in the spermatic cord or the scrotum and may be in the blood or lymph vessels of the testicle.
- All tumor marker levels are normal.

Stage IS

- The cancer is found anywhere within the testicle, spermatic cord, or the scrotum.
- All tumor marker levels are slightly above normal.
- Or one or more tumor marker levels are moderately above normal or high.

Stage II

STAGE II IS DIVIDED INTO STAGE IIA, STAGE IIB, AND STAGE IIC AND IS DETERMINED AFTER A RADICAL INGUINAL ORCHIECTOMY IS DONE.

Stage IIA

The cancer is anywhere within the testicle, spermatic cord, or scrotum; it has spread to up to 5 lymph nodes in the abdomen, none larger than 2 centimeters. All tumor marker levels are normal or slightly above normal.

Stage IIB

The cancer is anywhere within the testicle, spermatic cord, or scrotum and either:

- Has spread to up to 5 lymph nodes in the abdomen.
- At least one of the lymph nodes is larger than 2 centimeters, but none are larger than 5 centimeters.
- Has spread to more than 5 lymph nodes; the lymph nodes are not larger than 5 centimeters.
- All tumor markers levels are normal or slightly above normal.

Stage IIC

- The cancer is anywhere within the testicle, spermatic cord, or scrotum.
- The cancer has spread to a lymph node in the abdomen that is larger than 5 centimeters.
- All tumor marker levels are normal or slightly above normal.

Stage III

STAGE III IS DIVIDED INTO STAGE IIIA, STAGE IIIB, AND STAGE IIIC AND IS DETERMINED AFTER A RADICAL INGUINAL ORCHIECTOMY IS DONE.

Stage IIIA

- The cancer is anywhere within the testicle, spermatic cord, or scrotum.
- The cancer may have spread to one or more lymph nodes in the abdomen.
- The cancer has spread to distant lymph nodes or to the lungs.
- The level of one or more tumor markers may range from normal to slightly above normal.

Stage IIIB

- The cancer is anywhere within the testicle, spermatic cord, or scrotum.
- The cancer may have spread to one or more nearby or distant lymph nodes or to the lungs.
- The level of one or more tumor markers may range from normal to high.

Stage IIIC

- The cancer is anywhere within the testicle, spermatic cord, or scrotum.
- The cancer may have spread to one or more nearby or distant lymph nodes or to the lungs or anywhere else in the body.
- The level of one or more tumor markers may range from normal to very high.

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