

TESTICULAR CANCER SCREENING

The value of routine screening of men without symptoms for testicular cancer are not known. In a report of a single-center case series of men being evaluated for infertility, testicular symptoms, or erectile dysfunction, over 1,300 men underwent testicular ultrasound.

Focal abnormalities were found in 2% and in about two thirds the abnormality could be felt and in about one third it was only found on ultrasound exam.

Eighty percent of the abnormalities were ultimately shown to be harmless (benign). It is not clear if the early discovery of testicular cancers will result in clinical benefit, and the value of screening is likely to be even lower in the target population of men without symptoms in the screening setting.

Most testicular cancers are first detected by the patient, either unintentionally or by self-examination (see figure below). Some are discovered by routine physical examination by a health care provider.

However, no studies have been done to determine the effectiveness of testicular self-examination or clinical testicular examination in reducing the death rate from testicular cancer.

Benefits of Screening

Screening will be very unlikely to decrease the death rate substantially because treatment is so effective at virtually all stages of disease. However, early detection may change treatment by reducing the extent of surgery and the need for chemotherapy thus the consequent adverse effects of treatment will be lessened.

Harms of Screening

Harms of screening for testicular cancer are poorly quantified. They may include false positive tests and resulting anxiety as well as subsequent unwarranted invasive diagnostic procedures.

The benefits appear to outweigh the harms.

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Sources: National Institutes of Health - National Cancer Institute & Cleveland Clinic.

Testicular Self-Examination



TESTICULAR CANCER RISK FACTORS

It is estimated that 8,430 new cases of testicular cancer will be diagnosed in men, and 380 men will die of this disease in the United States in 2015. Testicular cancer is the most common cancer in men aged 15 to 34 years but accounts for only about 1% of all cancers in men. Worldwide, testicular cancer has more than doubled in the last 40 years. Incidence varies in different countries, the highest rates are in Scandinavia and Switzerland and intermediate risk in the United States, Australia, and the United Kingdom; the lowest rates are in Asia and Africa.

Testicular cancer rates vary according to ethnic groups with a much higher rate among whites than blacks in the American population. An annual increase of 3% is reported for white populations. Despite the increase in observed incidence, there has been a dramatic decrease in mortality as a result of increasingly effective treatments. The majority of testicular cancers are curable even at advanced stages, and it is not realistic to associate a further decrease in mortality with screening.

Risk Factors

Testicular cancer is more than four times more common among white men than black men, with intermediate incidence rates for Hispanics, American Indians, and Asians.

Increased Risk Groups

Men with cryptorchidism have 3 to 17 times the average risk. Approximately 7% to 10% of patients with testicular tumors have a history of undescended testis (cryptorchidism). Although the association is established, the mechanism underlying the association is unknown.

Men with abnormal testicular development (gonadal dysgenesis).
Klinefelter syndrome, a rare genetic disorder.

Men with a family history of testicular cancer may be at a higher risk of this disease.
A personal history of testicular cancer is associated with a higher risk of cancer in the other testis.

Other less certain risk factors are infertility, testicular atrophy and the second twin where one has testicular cancer and abnormal semen have been associated with a higher risk of testicular cancer.


Carcinoma in situ (CIS), also called intratubular germ cell neoplasia, is a risk factor for the development of testicular cancer. Reports suggest that CIS is associated with the development of contralateral testicular cancer in the opposite in 50% of patients at 5 years of follow-up. CIS will be found in approximately 5% of contralateral testes which is approximately the same rate as is found in an undescended testis.

There is controversy regarding the clinical significance and management of CIS of the testis. Options to try and prevent the development of cancer include observation, radiation therapy, chemotherapy, and orchiectomy. Although low-dose radiation therapy can preserve sperm cell function and prevent cancer development, a conservative approach of observation and early detection may also be warranted as treatment is so successful.

Individuals at high risk (undescended testis, underdeveloped atrophic testis, and intersex conditions and other those with other increased risks) require close screening by physical exam, ultrasound exam and monthly self-examination.



April is National Testicular Cancer Awareness Month

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