

What is testicular cancer?

Testicular cancer is caused by the abnormal development of cells in the testes (also known as testicles), which results in the formation of so-called testicular germ cell tumours (TGCTs).

There are many different types of testicular cancer¹:

- Testicular tumours in children are more often benign than malignant.
- Testicular tumours in adolescents and young men are almost always malignant, and can be divided into seminomatous or non-seminomatous germ cell tumours (SGCT or NSGCT, respectively).
- Testicular tumours in older men are usually benign stromal tumours (e.g. Leydig or Sertoli cell tumours).

Testicular cancer occurs in 1 in 25,000-30,000 Australian men. Around 900 Australian men are diagnosed with testicular cancer each year³ and almost 90% of them are aged under 50 years².

Although testicular cancer accounts for less than¹. of cancers in men, it's the most common type of tumour in men aged in their 20s and 30s^{1,4}.

Symptoms of testicular cancer

The most common symptom of testicular cancer is a [lump](#) that can be felt on, or enlargement or hardening of, one testicle (testicular cancer usually doesn't occur on both sides). The lump may or may not be painful.

Some men with testicular cancer that has metastasised might not seek help until they have severe symptoms, like weight loss, breathlessness or coughing blood.

Causes of testicular cancer

Many characteristics of testicular cancer suggest that the disease begins in early life, from genetic changes in the stem cells that usually go on to form sperm⁵.

Testicular cancer is more common in boys and men with abnormalities in genital development, including [cryptorchidism](#) and hypospadias, than in those without.

Some people have a higher risk of testicular cancer than others⁵, including people who:

- Have Down syndrome
- Are intersex
- Were firstborn or had a low birth weight
- Are [infertile](#).

Diagnosis of testicular cancer

Testicular cancer is diagnosed through an ultrasound to examine a testicular lump, and blood tests to measure molecules that indicate the presence of cancer¹.

MRI or CT scans are used to look for the spread of cancer to other parts of the body.

Treatment of testicular cancer

If you have testicular cancer, you'll usually have surgery to remove the affected testicles (orchidectomy). This cures most men with tumours that have not spread outside of the testicle. You can have a prosthetic testicle inserted so the appearance of your genitals is not affected.

If your testicular cancer has spread to nearby lymph nodes or other parts of the body, your treatment will usually include radiotherapy or chemotherapy as well as surgery to remove the tumour. Biopsy of tissues might be needed to confirm if the cancer has spread.

Health effects of testicular cancer

Almost all men with testicular cancer that hasn't spread are cured by orchidectomy, although some need chemotherapy or radiotherapy as well, depending on the tumour type¹.

Most men with testicular cancer that has metastasised are cured by chemotherapy⁴, but 20-30% may relapse and need further treatment.

97% of all men diagnosed with testicular cancer survive for at least another five years.

Chemotherapy and radiotherapy can affect your fertility, so you might need to think about taking steps to preserve your fertility, such as [sperm banking](#), before your treatment begins.

What to do about testicular cancer

You should regularly perform a [testicular self-examination](#) (TSE). A TSE is a quick and simple process. You might find it easier after a warm bath or shower, when the skin of your scrotum is relaxed.

Stand in front of a mirror. To start with, check for any swelling on the skin of your scrotum. Hold your scrotum in your hands and feel the size and weight of each testicle. Don't worry if one testicle is a little bigger or hangs lower than the other, that's normal.

Feel each ball and roll it between your thumb and finger, one at a time, checking for any lumps or swelling. The testicles should feel firm, and the surface should feel smooth. You should be able to feel your epididymis, a soft tube toward the back of each testicle that carries sperm to the ejaculatory ducts. Check for any swelling in this area. You shouldn't feel any pain when checking your testicles.

See your doctor if you notice any changes, pain or discomfort.

Questions to ask your doctor about testicular cancer

- What treatment will I need for my type of testicular cancer?
- What are the side effects of treatment and what are their pros and cons?
- Where can I get more information about my treatment options?
- What can I do if I want to have children?

References

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- [2] Tempo et al., 2020. Bladder, penile, renal pelvis and testis cancers: A population based analysis of incidence and survival 1977-2013. *Cancer Epidemiology*
- [3] <https://www.canceraustralia.gov.au/affected-cancer/cancer-types/testicular-cancer/statistics>
- [4] Gilligan et al., 2019. Testicular Cancer, Version 2.2020, NCCN Clinical Practice Guidelines in Oncology. *Journal of the National Comprehensive Cancer Network*
- [5] Rajpert-De Meyts, 2006. Developmental model for the pathogenesis of testicular carcinoma in situ: genetic and environmental aspects. *Human Reproduction Update*

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