

Penile cancer

Penile cancer is a [cancer](#) that develops on the penis. A cancerous (malignant) tumour starts from one abnormal cell. The exact reason why a cell becomes cancerous is unclear. It is thought that something damages or alters certain genes in the cell. This makes the cell abnormal and multiply 'out of control'. [See the separate leaflet called Causes of Cancer for more details.](#)

Symptoms of penile cancer

Most penile cancers first develop on the head of the penis (the glans) or on the underside skin of the foreskin (if you are not circumcised). It is rare to develop penile cancer on the main shaft of the penis. Therefore, you may only notice an early cancer if you pull back your foreskin.

Typically, the first symptom is a change in colour of the skin of the affected part of the glans or foreskin of the penis. The affected skin can also become thickened or appear like a small red rash. The affected area of skin may then gradually develop into a small flat growth (often bluish-brown in colour) or a growth or sore which may bleed. It does not usually cause pain. In some cases the early cancer develops as small crusty bumps.

Left untreated, the cancer typically grows to involve the entire surface of the glans and/or foreskin. It then eventually spreads further to deeper parts of the penis and to other areas of the body to cause various other symptoms.

Risk factors for penile cancer

In most cases, the reason why penile cancer develops is not known. However, there are factors which are known to alter the risk of penile cancer developing. These include:

- Age. Penile cancer is more common in men over the age of 50.

- Many cases of penile cancer are associated with an infection with certain types of human papillomavirus (HPV) – see below.
- Some skin conditions of the foreskin are can increase the risk of having penile cancer in the future. These include a condition called erythroplasia of Queyrat and [balanitis xerotica obliterans](#). These are both rare conditions.
- [Phimosis](#) in adults and poor hygiene around the foreskin can increase the risk of penile cancer. Phimosis describes a condition where the foreskin remains unusually tight and cannot be drawn back from the head of the penis.
- [Having a circumcision as a baby or child](#) seems to protect against penile cancer.

HPV and penile cancer

There are many strains of HPV. Two types, HPV 16 and 18, are involved in the development of many cases of penile cancer. **Note:** some other strains of HPV cause common warts and verrucas. These strains of HPV are **not** associated with penile cancer.

The strains of HPV associated with penile cancer are nearly always passed on by having sex with an infected person. An infection with one of these strains of HPV does not usually cause symptoms. So, you cannot tell if you or the person you have sex with are infected with one of these strains of HPV.

In some men, the strains of HPV that are associated with penile cancer seem to affect the cells of the penis. This makes them more likely to become abnormal which may later (usually many years later) turn into cancerous cells. **Note:** within two years, 9 out of 10 infections with HPV will clear completely from the body. This means that most men who are infected with these strains of HPV will never develop cancer.

In 2018, HPV vaccination was introduced for boys at 12–13 years, as well as for girls. There is no catch-up programme for boys aged over 13, on the basis that female vaccination has resulted in significant herd immunity for boys. [See the separate leaflet called Human Papillomavirus Vaccination \(HPV\)](#).

How common is penile cancer?

Penile cancer is rare in the UK. It occurs in fewer than 1 in every 100,000 men each year in Europe. However, it is more common in some areas of Asia, Africa and South America.

How is penile cancer diagnosed?

Anyone who has an abnormal growth or sore on their penis will have a thorough examination by their doctor. This will usually include feeling for any enlarged lymph glands in the groin. You will then be referred to see a specialist in the hospital.

Dr Krishna Vakharia, 16th October 2023

The National Institute for Health and Care Excellence (NICE) has recommended that a person should receive a diagnosis or ruling out of cancer within 28 days of being referred urgently by their GP for suspected cancer.

It is likely that further tests in the hospital will be arranged. These may include:

- [A biopsy](#). This is a procedure which involves a small piece of tissue being taken from the cancer and sent to the laboratory. Sometimes biopsies are also taken from the lymph glands in the groin. Results of a biopsy can take two weeks.
- [An MRI scan of the penis](#) may be performed to assess the size of the cancer.
- [A CT scan of the chest, tummy \(abdomen\) and pelvis may be performed](#). These scans can provide detail on the structure of the internal organs.

Stages of penile cancer range from stage 1 (where the cancer is confined to the skin of the penis) to stage 4 (where there is spread to lymph nodes deep in the pelvis or to other parts of the body).

Grading of the cancer cells

If a biopsy of the cancer is taken then the cells can be assessed. By looking at certain features of the cells under the microscope the cancer can be 'graded'.

- Grade 1 (low grade) – the cells look reasonably similar to normal cells. The cancer cells are said to be 'well differentiated'. The cancer cells tend to grow and multiply quite slowly and are not so 'aggressive'.
- Grade 2 – is a middle grade.
- Grade 3 – the cells look very abnormal and are said to be 'poorly differentiated'. The cancer cells tend to grow and multiply quite quickly and are more 'aggressive'.

Finding out the stage and grade of the cancer helps doctors to advise on the best treatment options. It also gives a reasonable indication of outlook (prognosis).

[See the separate leaflet called Stages of Cancer for more details.](#)

What is the treatment for penile cancer?

The treatment advised for each case depends on various factors such as the stage and grade of the cancer, and your general health. A specialist will be able to give the pros and cons, likely success rate, possible side-effects and other details about the various possible treatment options for your type and stage of cancer.

- Surgery is the main treatment for penile cancer.
- [Chemotherapy](#) and [radiotherapy](#) may also be used.

[See also the separate leaflet called Cancer Treatment.](#)

Surgery

An operation is advised in most cases. The type of operation depends upon the size of the cancer and its position on the penis. If the cancer is small and only on the skin of the penis then the cancer and a small amount of normal tissue can be removed. Recent advances have revolutionised the lives of patients who can avoid more radical surgery without compromising their cancer treatment. A margin of more than 2 cm used to be required around any removed tumour. Now less than 5 mm is considered adequate which increases the number of organ-sparing operations performed.

If the cancer is larger then either part of the penis or even the entire penis is removed but reconstructive surgery is an option for many men. Your surgeon will be able to discuss the different types of reconstructive surgery with you in more detail. The lymph glands in the groin are often also removed during the operation.

Other treatments

If the cancer is at an early stage and is only on the head of the penis (the glans), sometimes doctors prescribe a cell-killing (cytotoxic) cream that can be used on the cancer.

What is the outlook?

There is a good chance of a cure if penile cancer is diagnosed and treated when it is at an early stage (confined to the penis and has not spread to the lymph glands). In general, the later the stage and the higher the grade of the cancer, the poorer the outlook. Even if a cure is not possible, treatment can often slow down the progression of the cancer.

The treatment of cancer is a developing area of medicine. New treatments continue to be developed and the information about outlook given above is very general. The specialist who knows your case can give more accurate information about your particular outlook, and how well your stage and grade of cancer are likely to respond to treatment.

Most treatments for penile cancer will not affect your ability to have sex, even if you need an operation.

Further reading

- [Suspected cancer: recognition and referral](#); NICE guideline (2015 – last updated October 2023)
- [Penile Cancer](#); European Association of Urology Guidelines (2020)
- [Johnston MJ, Nigam R](#); Recent advances in the management of penile cancer. F1000Res. 2019 Apr 26;8. doi: 10.12688/f1000research.18185.1. eCollection 2019.
- [Casco NC, Carmona MJ, Soto AJ](#); Therapeutic and Surgical Indications for Patients with Penile Cancer in the COVID-19 era. Int Braz J Urol. 2020 Jul;46(suppl.1):86–92. doi: 10.1590/S1677-5538.IBJU.2020.S110.
- [Beech BB, Chapman DW, Rourke KF](#); Clinical outcomes of glansctomy with split-thickness skin graft reconstruction for localized penile cancer. Can Urol Assoc J. 2020 Oct;14(10):E482–E486. doi: 10.5489/cuaj.6277.

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Authored by:	Peer Reviewed by: Dr Colin Tidy, MRCGP	
Originally Published: 19/11/2023	Next review date: 25/01/2021	Document ID: doc_9337

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