



# Penis cancer

# Table of contents

<b>What is penis cancer?</b> .....	<b>3</b>
<b>Symptoms</b> .....	<b>3</b>
<b>Risk factors</b> .....	<b>3</b>
<b>Types of penis cancer</b> .....	<b>4</b>
<b>Diagnosis</b> .....	<b>4</b>
<b>Classification</b> .....	<b>5</b>
Pattern of spread .....	5
<b>Treatment</b> .....	<b>5</b>
Treating carcinoma in situ .....	5
Treating the penis tumour .....	5
Treating the lymph nodes .....	6
Treating distant metastases .....	6
<b>More About Penectomy</b> .....	<b>6</b>
Penectomy Procedure .....	6
<b>Life After Treatment</b> .....	<b>7</b>
Follow-up .....	7
Sex .....	7
Recurrence .....	7
<b>Glossary of terms</b> .....	<b>8</b>

## **This information was produced by the European Association of Urology**

This leaflet contains general information about penis cancer. If you have any specific questions about your individual medical situation you should consult your doctor or other professional healthcare provider.

This information is in line with the EAU Guidelines on Penis cancer 2017.

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This information was updated by the EAU Patient Information Working Group, March 2018.

You can find this and other information on urological diseases at our website: <http://patients.uroweb.org>

# Penis cancer

## What is penis cancer?

Cancer is abnormal cell growth in the skin or organ tissue. When this cell growth starts in the penis, it is called penis cancer or penile cancer.

Penis cancer is rare and affects less than 1% of men in Europe. It is more common in men older than age 40, but younger men can get it. Most penis cancer patients are 60–70 years old.

## Symptoms

Penis cancer usually appears on the penis skin. It can look like a rash or a sore that doesn't heal. You might notice bleeding or a bad smell. If you have a foreskin, it might change in appearance or may have become too tight to pull back. If you notice these symptoms, ask your doctor if you have penis cancer or another medical problem.

Problems with your penis might make you feel embarrassed or worried. Your doctor will be used to talking about these kinds of problems. Don't wait to see your doctor.

- If it is cancer, early treatment is better.
- If the symptoms are caused by another medical problem, like a sexually transmitted disease, treatment can help resolve it quickly.

If penis cancer is not treated right away, it can continue to grow deeper into tissue or spread to other organs. This is called advanced penis cancer.

Signs of advanced penis cancer:

- Swollen lymph node in the groin (may feel like a lump)
- Fatigue
- Weight loss
- Bone pain
- Pain in the abdomen

## Risk factors

The exact cause of penis cancer is not known. Men with certain conditions have a higher risk of getting penis cancer:

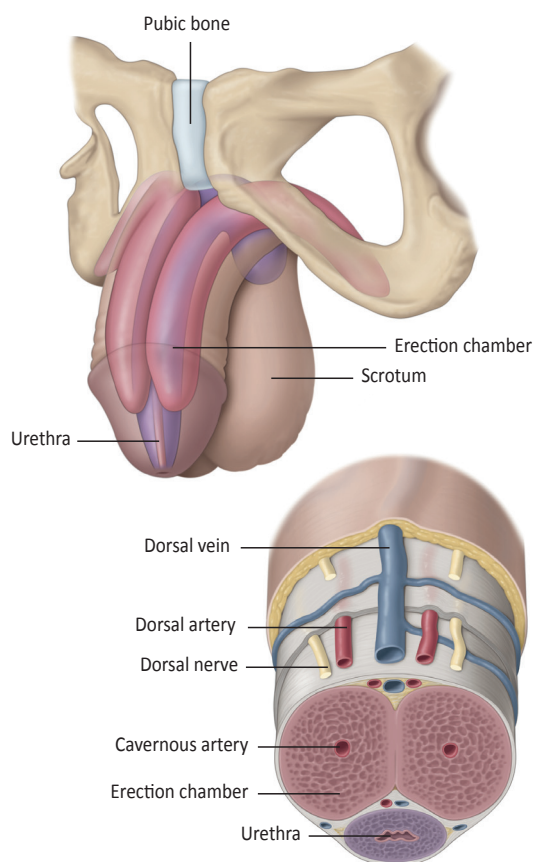
- A foreskin
- A tight foreskin that cannot be pulled back over the head of the penis (phimosis)

- Human papilloma virus (HPV) infection, usually of the foreskin
- A condition called lichen sclerosus, which only affects men with a foreskin and causes inflammation of the penis
- Long-term irritation or inflammation of the penis
- Treatment of a severe skin condition using chemotherapy and ultraviolet light (PUVA)

Men who have had the foreskin removed surgically (circumcision) have the lowest risk of getting penis cancer. Circumcision prevents phimosis and lichen sclerosus and makes men less likely to get HPV.

Other risk factors for penis cancer include:

- Using tobacco products
- Age 60 or older
- Having many sexual partners
- Young age at first intercourse



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Fig. 1: Anatomy of the penis.

Female sexual partners of men with penis cancer do not have a higher risk of cervical cancer from HPV.

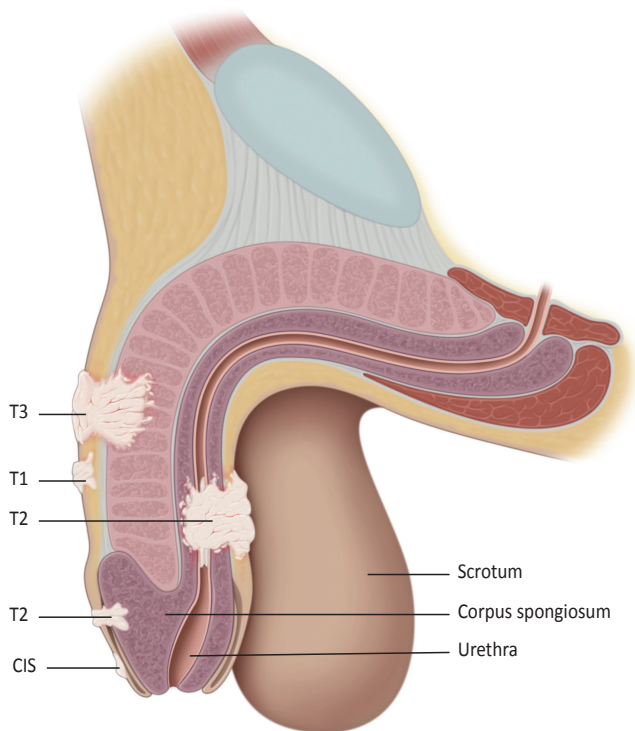
## Types of penis cancer

The type of penis cancer depends on the type of cell that started growing. More than 90% of penis cancer starts in skin cells called squamous cells. Penis cancer develops mostly on the skin at the glans (head) or in the inner layer of the foreskin.

Carcinoma in situ (CIS) is a type of squamous cell cancer that affects only the cells in the skin of the penis and has not grown any deeper. Ask your doctor for details about other types of cells than can cause penis cancer.

Cancer that develops from the urethra is discussed in the EAU Patient Information leaflet on Urethral Cancer.

Penis cancer can arise from different cell types. The prognosis is usually dependent on the stage of the disease. But some specific cell types are more aggressive, and others are never life-threatening. Ask your doctor for details about specific cell types.



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Fig. 2: Penis cancer stages 1–3.

Tumour (T)	Where is the tumour growing into?
T0	No cancer
CIS	Carcinoma in situ, cancer only in the top layer of the skin
Ta	A wart-like type of cancer that does not grow into deeper layers
T1	Cancer growing into deeper layers of the skin or tissue under the skin. Subtype 1a and 1b are have different features when tissue is examined under the microscope
T2	Cancer growing into the corpus spongiosum (including the head of the penis)
T3	Cancer growing into the erection chambers of the penis
T4	Cancer growing into tissues other than the penis, for example the scrotum
Node	Which lymph nodes contain cancer?
N0	No lymph nodes contain cancer
N1	One or two lymph nodes in the groin contain cancer
N2	More than one lymph node contain cancer. This can be in one groin or in both groins
N3	The cancer grows from the lymph node into the tissues around it, or pelvic lymph nodes contain cancer
Metastasis (M)	Do other organs contain cancer?
M0	The cancer has not spread to other organs or tissues
M1	The cancer has spread to other organs or tissues, such as lung or bone
Grade (G)	Abnormality of the tissue (under a microscope)
G1	Low grade or well-differentiated. Cancer with some features of normal tissue
G2	Intermediate grade or intermediately differentiated. Cancer with few features of normal tissue
G3	High grade or poorly differentiated. Cancer with hardly any features of normal tissue

## Diagnosis

Your doctor will talk with you about your symptoms and medical history. The doctor will do a physical exam of your penis and check the lymph nodes in your groin for swelling.

Tests might be arranged if your doctor thinks you could have penis cancer:

- Blood might be drawn for test for certain proteins linked to penis cancer.
- Fluid might be drawn from swollen lymph nodes for examination under a microscope (biopsy) to check for cancer cells.
- A small piece of abnormal skin might be removed for biopsy to look for cancer cells.
- Imaging tests like ultrasound, MRI, or CT scan can show what's happening inside the tissue or organ.

- A sentinel node biopsy marks the lymph nodes closest to the penis with a radioactive fluid, and then the lymph nodes are removed and examined for cancer cells; if cancer is found, more lymph nodes might have to be removed to prevent spread.

Ask your doctor about what to expect when you have tests for penis cancer:

- Will the test show whether I have cancer?
- Will it hurt?
- Does the test have side effects?
- How long will it take to get the results?

## Classification

Penis cancer is classified by stage based on the aggressiveness of the cancer cells. Staging is a standard way to describe whether the cancer has spread. The kind of treatment you receive will depend on the stage.

For staging, the Tumour Node Metastasis (TNM) classification is used. This classification system describes the penile tumour (T), spread to lymph nodes (N) and spread to other tissues or organs in the body (M).

### Pattern of spread

A growth of abnormal cells forms a tumour. The first tumour on the penis, called primary tumour, can spread (metastasize) to other sites and form new tumours there (metastases). Penis cancer spreads gradually. In most cases, the tumour spreads first to the lymph nodes in the groin (inguinal) and then to the pelvic lymph nodes in the abdomen, both called regional spread. After that, new tumours can form in the lungs, bones, skin, or other organs. This is the usual pattern of spread, but exceptions may occur .

## Treatment

This section offers general information. Your specific treatment will be recommended by your doctor based on your individual needs. Individual recommendations may depend on your country and health care system.

The treatment you have will depend on:

- what you prefer
- what your doctor thinks is best for your type of cancer
- which treatments are available at your hospital

Penis cancer treatment involves removing the primary tumour and managing the lymph nodes and other tumours. The type of treatment depends on how deep the tumour has

grown into the penis tissue. This is based on cancer stage, as discussed under Classification.

### Treating carcinoma in situ

Various options exist to treat penis CIS. The goal is to keep the penis looking healthy and working normally:

- Skin cream to put on the affected skin may include medicines to treat cancer (chemotherapy).
- Laser therapy to remove affected skin
- Cryotherapy to freeze and remove affected skin
- Surgery called “glans resurfacing” to remove the top layers of skin from the head of the penis and resurface it with skin from another area of the body (skin graft)

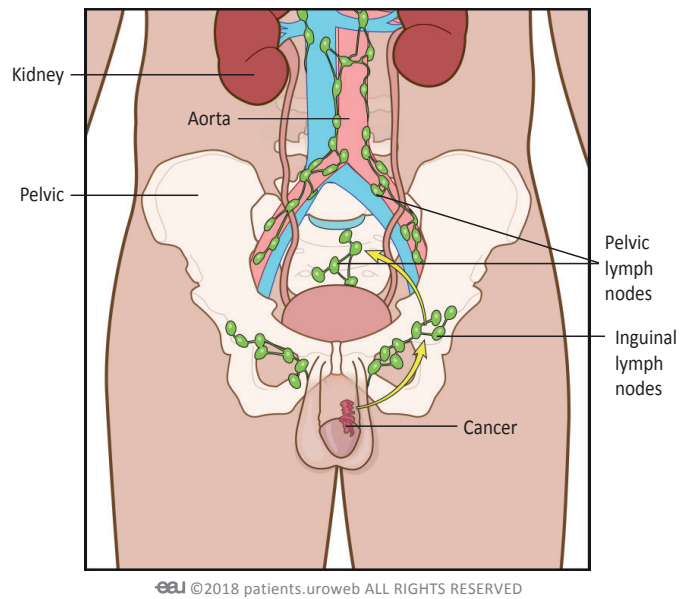


Fig. 3: Penis tumour with regional spread.

### Treating the penis tumour

Treatment of the penis tumour depends on the size of the tumour and the tissues the tumour has grown into.

Penis tumours are mostly treated with surgery.

- Circumcision (removing the foreskin) if penis cancer is only in the foreskin
- Laser therapy
- Glans resurfacing to remove the top layers of skin from the head of the penis and resurface it with a skin graft
- Glansectomy
- Removal of part of the penis where the tumour is growing (partial penectomy)
- Removal of the whole penis (total penectomy)
- Radiation therapy to the penis to help kill cancer cells
- Chemotherapy to help shrink the tumour (usually only for T4 tumours that are too large to be removed with surgery)

If the whole penis is removed, a new opening must be created surgically to carry urine out of the body. This opening is usually placed on the perineum—the space between your scrotum and anus—between your legs.

### Treating the lymph nodes

- If the cancer has spread to one or more lymph nodes, the lymph nodes will be treated with surgery, radiation therapy or chemotherapy. Removal of affected lymph nodes in the groin or abdomen
- Radiation therapy to help kill cancer cells
- Chemotherapy to help kill cancer cells

Your doctor may also choose to give more than one treatment. For example, radiation before or after removal of the lymph nodes.

### Treating distant metastases

When the cancer has spread to other tissues than lymph nodes in your body, you are very unlikely to be cured by therapy. The goal of treatment is to control or stop the cancer and relieve symptoms.

- Radiation therapy
- Chemotherapy

## More About Penectomy

If a tumour has grown into surrounding tissue, removing it surgically is the best chance of cure. If the tumour is in your penis tissue, some or all of your penis might need to be removed to get rid of the cancer.

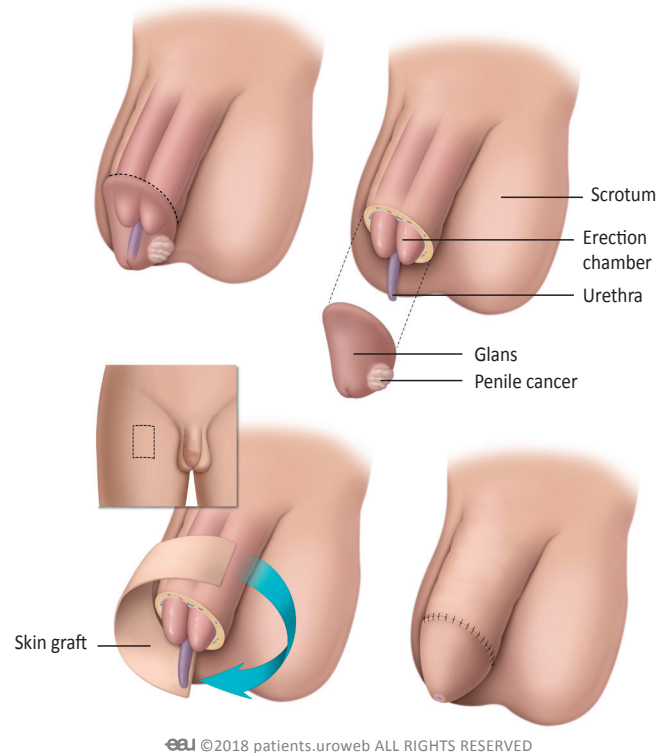
A recommendation of penectomy raises many questions. Talk with your doctor about your concerns, for example:

- Are there other treatment options?
- Will this cure my cancer?
- What will my penis look like?
- How long will it take to heal?
- How will I urinate?
- Will I be able to have sex?
- Is reconstructive surgery an option?

### Penectomy Procedure

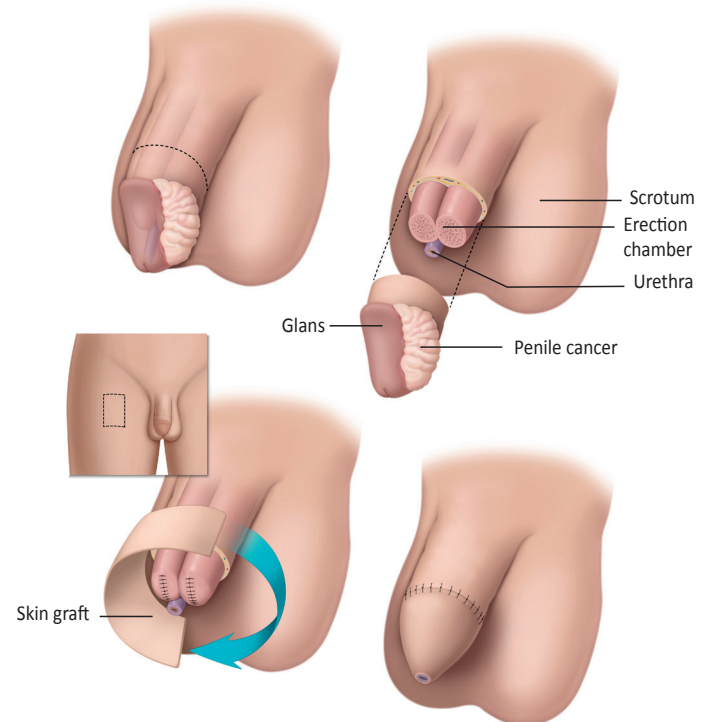
If only the end of the penis will be removed, the surgery is called a partial penectomy (**Fig. 5**). Removal of just the head of the penis is called a glansectomy (**Fig. 4**). The surgeon will remove the end but leave as much of your penis as possible. A new end will be built using a skin graft from your thigh. If possible, your penis will be long enough for you to urinate standing up.

Total penectomy is removal of the whole penis. This includes the shaft and the root, which is inside your body. Also, a new opening may be created surgically to carry urine out of the body. This opening is usually placed on the perineum—the space between your scrotum and anus—between your legs.



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Fig.4: Glansectomy.



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Fig.5: Partial penectomy.

\* The underlined terms are listed in the glossary.

## Life After Treatment

### Follow-up

After penis cancer treatment, your doctor will schedule you for regular visits to check your progress. Visits will be more frequent in the first year or two after surgery and then less often over time.

Your doctor will talk with you about how you're feeling and any symptoms or concerns. A physical exam will look at your penis and check for new signs of cancer (recurrence).

You should examine your penis and lymph nodes regularly (self-examination). Get to know what is normal for you. Contact your doctor if you notice changes.

### Sex

A satisfying sex life is part of your quality of life after penis surgery. Your doctor will consider this in recommending treatment. And surgery will preserve as much of your penis as possible. The type of treatment you have will affect your sex life after penis cancer.

Men treated for CIS and stage 1 penis cancer can usually continue their sex lives as before.

Partial penectomy for stage 2 or 3 penis cancer will preserve as much of the penis as possible. Many men are still able to have an erection and perform penetrative sex after surgery.

The whole penis may be removed to treat stage 3 or 4 penis cancer. You can have a fulfilling sex life after total penectomy, but it will likely be different. Your scrotum, testicles, and perineum will still be sensitive, and orgasm may be possible. Explore new ways to be sexual with your partner.

An erection might be possible after penis reconstruction surgery. It will depend on whether your nerves and blood supply can be reconnected. Ask your surgeon about what results are possible.

### Recurrence

Sometimes penis cancer comes back after treatment is complete. This is called recurrence. Your doctor will check for recurrence during your follow-up visits. Regular self-examination will also help catch recurrence early.

Treatment is based on your previous type of treatment and the location of the new cancer:

- On the penis: Surgery to remove cancer cells, possibly followed by radiation therapy

- In the lymph nodes: Surgery to remove the lymph nodes and/or radiation therapy or chemotherapy
- In other tissues or organs: chemotherapy or radiation therapy to shrink tumours

# Glossary of terms

## **Biopsy**

Taking a small piece of tissue to look for cancer cells by examination under a microscope

## **Cancer**

Abnormal cell growth in the skin or organ tissue

## **Carcinoma in situ (CIS)**

A type of squamous cell cancer that affects only the cells in the skin and has not grown any deeper

## **Chemotherapy**

Medicines used to treat cancer

## **Circumcision**

Surgical removal of the foreskin of the penis

## **Cryotherapy**

Freezing of the tissue surface to remove cancer cells

## **Glans**

The head of the penis

## **Glansectomy**

Removal of the head of the penis

## **HPV infection**

Infection with Human Papillomavirus (HPV), which is a sexually transmitted disease; some types of HPV can cause cancer

## **Laser therapy**

Use of a laser to cut away cancer cells

## **Metastases**

Cancer cells that have spread from the original site of cancer to other tissues or organs

## **Penectomy**

Surgical removal of part (partial) or all (total) of the penis

## **Penis**

The male organ for sex and urination

## **Phimosis**

A tight foreskin that cannot be pulled back over the head of the penis

## **PUVA**

A type of chemotherapy (psoralens) combined with exposure to ultraviolet light, used to treat severe skin disorders

## **Radiation therapy**

Use of radiation to a specific area to kill cancer cells and/or shrink a tumour

## **Sentinel node**

The lymph node closest to the tumour that would hold metastatic cells, if present

## **Skin graft**

A piece of skin taken from one part of the body and placed on another part (usually a wound)

## **Tumour**

A growth of abnormal cells

## **Urethra**

The tube that connects the bladder to the opening that allows urine to pass out of the body



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