About Penile Cancer

Overview and Types

If you have been diagnosed with penile cancer or worried about it, you likely have a lot of questions. Learning some basics is a good place to start.

- What Is Penile Cancer?

Research and Statistics

See the latest estimates for new cases of penile cancer and deaths in the US and what research is currently being done.

- Key Statistics for Penile Cancer
- What’s New in Penile Cancer Research and Treatment?

What Is Penile Cancer?

Penile cancer develops in or on the penis. Cancer starts when cells begin to grow out of control. Cells in nearly any part of the body can become cancer, and can spread to other areas in the body. To learn more about how cancers start and spread, see What Is Cancer?

To understand penile cancer, it helps to know about the normal structure and function of the penis.

About the penis

The penis is the external male sexual organ, as well as part of the urinary system. It has several types of body tissues, including skin, nerves, smooth muscle, and blood
vessels.

The main part of the penis is known as the *shaft*, and the head of the penis is called the *glans*. At birth, the glans is covered by a piece of skin called the *foreskin*, or prepuce. The foreskin is often removed in infant boys in an operation called a *circumcision*.

Inside the penis are 3 chambers that contain a soft, spongy network of blood vessels. Two of these cylinder-shaped chambers, known as the *corpora cavernosa*, are on either side of the upper part of the penis. The third chamber is below them and is known as the *corpus spongiosum*. This chamber widens at its end to form the glans. The corpus spongiosum surrounds the *urethra*, a thin tube that starts at the bladder and runs through the penis. Urine and semen travel through the urethra and leave the body through an opening in the glans of the penis, called the *meatus*. 

When a man gets an erection, nerves signal his body to store blood in the vessels inside the corpora cavernosa. As the blood fills the chambers, the spongy tissue expands, causing the penis to elongate and stiffen. During ejaculation, semen (which contains sperm cells and fluids) enters the urethra and passes out of the body through the meatus. After ejaculation, the blood flows back into the body, and the penis becomes soft again.

**Benign conditions of the penis**

Sometimes, growths can develop on the penis that are abnormal but are not cancers (they are benign). These lesions can look like warts or irritated patches of skin. Like penile cancer, they are most often found on the glans or on the foreskin, but they can
also occur along the shaft of the penis.

**Condylomas (genital warts)**

These growths tend to look like tiny cauliflowers. Some are so small that they can only be seen with a magnifying lens. Others may be as large as an inch or more across. Condylomas are caused by infection with some types of human papilloma virus (HPV).

**Bowenoid papulosis**

This condition is also linked to infection with HPV and tends to occur in younger, sexually active men. It is seen as small, red or brown spots or patches on the shaft of the penis. These often look like genital warts, but when looked at under a microscope, dysplastic (abnormal) cells are seen in the surface layer of the penile skin.

Bowenoid papulosis can also be mistaken for an early-stage cancer called carcinoma in situ (CIS), also known as Bowen disease (described below). Usually Bowenoid papulosis doesn’t cause any problems, and it can even go away on its own after a few months. But if it doesn’t go away and is not treated, rarely it can progress to Bowen disease.

**Cancers of the penis**

Each type of tissue in the penis contains several types of cells. Different types of penile cancer can develop from these cells. The differences are important because they determine the seriousness of the cancer and the type of treatment needed.

Almost all penile cancers start in skin cells of the penis.

**Squamous cell carcinoma**

About 95% of penile cancers develop from flat skin cells called squamous cells. Squamous cell carcinoma (also known as squamous cell cancer) can develop anywhere on the penis. Most of these cancers occur on the foreskin (in men who have not been circumcised) or on the glans. These tumors tend to grow slowly. If they are found at an early stage, they can usually be cured.

**Verrucous carcinoma:** This is an uncommon form of squamous cell cancer that can occur in the skin in many areas. A verrucous carcinoma growing on the penis is also
known as *Buschke-Lowenstein tumor*. This cancer looks a lot like a large genital wart. Verrucous carcinomas tend to grow slowly but can sometimes get very large. They can grow deep into surrounding tissue, but they rarely spread to other parts of the body.

**Carcinoma in situ (CIS):** This is the earliest stage of squamous cell cancer of the penis. In this stage the cancer cells are found only in the top layers of skin. They have not yet grown into the deeper tissues of the penis. Depending on the location of a CIS of the penis, doctors may use other names for the disease. CIS of the glans is sometimes called *erythroplasia of Queyrat*. CIS on the shaft of the penis (or other parts of the genitals) is called *Bowen disease*.

**Melanoma**

Melanoma is a type of skin cancer that starts in melanocytes, the cells that make the brownish color in the skin that helps protect it from the sun. These cancers tend to grow and spread quickly and are more dangerous than the more common types of skin cancer. Melanomas are most often found in sun-exposed skin, but rarely they occur in other areas like the penis. Only a very small portion of penile cancers are melanomas. For more information about melanoma and its treatment, see [Melanoma Skin Cancer](#).

**Basal cell carcinoma**

Basal cell carcinoma (also known as *basal cell cancer*) is another type of skin cancer that can develop on the penis. It makes up only a small portion of penile cancers. This type of cancer is slow-growing and rarely spreads to other parts of the body.

**Adenocarcinoma (Paget disease of the penis)**

This very rare type of penile cancer can develop from sweat glands in the skin of the penis. It can be very hard to tell apart from carcinoma in situ (CIS) of the penis.

**Sarcoma**

A small number of penile cancers are *sarcomas*. These cancers develop from blood vessels, smooth muscle, or other connective tissue cells of the penis. For more about this type of cancer, see [Soft Tissue Sarcoma](#).

- [References](#)
- [See all references for Penile Cancer](#)
Key Statistics for Penile Cancer

The American Cancer Society estimates for penile cancer in the United States for 2018 are:

- About 2,320 new cases of penile cancer diagnosed
- About 380 deaths from penile cancer

For statistics related to survival, see Survival Rates for Penile Cancer.

Penile cancer is rare in North America and Europe. It is diagnosed in less than 1 man in 100,000 each year and accounts for less than 1% of cancers in men in the United States. Penile cancer is, however, much more common in some parts of Asia, Africa, and South America.

Visit the American Cancer Society’s Cancer Statistics Center for more key statistics.

- References
  See all references for Penile Cancer

example, it is hard to get large numbers of men to enroll in clinical trials to test newer forms of treatment, simply because there are fewer men with this type of cancer.

**Preventing penile cancer**

Vaccines that protect against infection with types of HPV linked to certain cancers have been developed. One of these, Gardasil, is now approved for use in young men to help prevent genital warts and anal cancer. While it has not yet been studied, the hope is that the vaccine may eventually help prevent other cancers linked to HPV in men, including penile cancers.

**Treating penile cancer**

Doctors are looking for better ways to preserve as much of the penis as possible in treating early-stage cancers. For example, in some cases, laser therapy can cure or control the disease and preserve the appearance and function of the penis. Research is being done to identify the best type of laser to use in these early tumors.

Scientists are working to find the best ways to use radiation. This may mean combining radiation with chemotherapy to avoid surgical removal of the penis, whenever possible.

Doctors are also looking at using different chemotherapy drugs to treat penile cancer, such as irinotecan (Camptosar) and vinflunine.

Scientists are learning much more about how certain genes called oncogenes and tumor suppressor genes control cell growth and how changes in these genes cause normal cells to become cancerous. Learning more about these abnormal genes in penile cancer might also help guide use of targeted therapies. Targeted therapy is a term used for drugs that target certain cell changes and signals that are needed for a cancer to develop and keep growing. Targeted therapies might sometimes work when standard chemo drugs don’t, and they tend to have different (and often less severe) side effects than most standard chemo drugs.

For example, some drugs such as cetuximab (Erbitux) and dacomitinib target a cell protein called EGFR. Squamous cell cancers (which includes most penile cancers) sometimes have too much of this protein, so these drugs might be helpful against them.

But it’s not yet clear how useful these or other targeted drugs might be against penile cancer. Early results suggest some benefit, but more research is needed.

- References