

# Bladder Cancer

## The Bladder

The bladder is a hollow organ in the lower abdomen. It stores urine, the waste that is produced when the kidneys filter the blood. The bladder has an elastic and muscular wall that allows it to get larger and smaller as urine is stored or emptied. See Figure 1.

Urine passes from the two kidneys into the bladder through tubes called ureters. Urine leaves the bladder through another tube, the urethra.

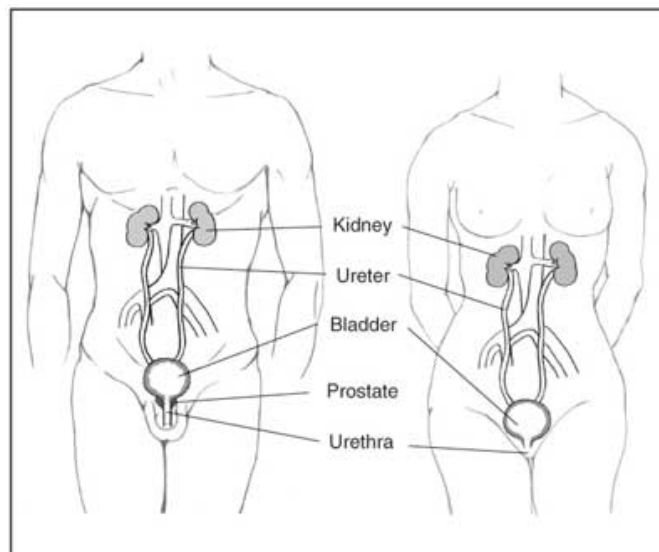


Figure 1.  
The bladder and nearby organs  
Adapted from NIDDK

## About Cancer

The body is made up of many types of cells. Normally, cells grow and divide to produce more cells only when the body needs them. Sometimes cells keep dividing when new cells are not needed. These cells form a mass of extra tissue, called a growth or tumor. Tumors can be benign or malignant.

- Benign tumors are not cancer. They often can be removed and in most cases, they do not come back.
- Malignant tumors are cancer. Cells in malignant tumors are abnormal and divide without control or order.

## Bladder Cancer

Bladder cancer is a disease in which malignant cells are found in the bladder. Different types of bladder cancer are:

- Transitional cell: About 90 percent of bladder cancers are transitional cell carcinomas – cancers that begin in the cells lining the bladder. Cancer that is confined to the lining of the bladder is called superficial bladder cancer.
- Squamous cell: Cancer that begins in squamous cells, which are thin, flat cells that may form in the bladder after long-term infection or irritation.
- Adenocarcinoma: Cancer that develops in the inner lining of the bladder as a result of chronic irritation and inflammation.

## Treatment

Different types of treatment are available for bladder cancer. Some treatments are standard – the currently used treatment – and some are being tested in clinical trials. Before starting treatment, patients may want to think about taking part in a clinical trial.

A treatment clinical trial is a research study meant to help improve current treatments or obtain information on new treatments for patients with cancer. When clinical trials show that a new treatment is better than the standard treatment, the new treatment may become the standard treatment.

Choosing the most appropriate cancer treatment is a decision that ideally involves the patient, family and health care team.

### Four Types of Standard Treatment

#### Surgery

What type of surgery is chosen depends on the type of bladder cancer you have. Superficial cancer may be treated by removing only the tumor. If surgery to remove the bladder is your best treatment option, your doctor will discuss the procedure with you. In some cases, patients receive chemotherapy after surgery to kill any cancer cells that are left. Treatment given after surgery, to increase the chances of a cure, is called adjuvant therapy.

#### Radiation Treatment

Radiation treatment uses high-energy X-rays or other types of radiation to kill cancer cells or keep them from growing. There are two types of radiation. External radiation therapy uses a machine outside the body to send radiation toward the cancer. Internal radiation therapy uses a radioactive substance sealed in needles, seeds, wires or catheters that are placed directly into or near the cancer. The way the radiation treatment is given depends on the type and stage of the cancer being treated.

#### Chemotherapy

Chemotherapy is a cancer treatment that uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping them from dividing. Chemotherapy plays a major role in the treatment of bladder cancer that has spread to other parts of the body (called metastasis) such as the lymph nodes. Chemotherapy is the main treatment for patients whose bladder cancer has spread.

#### Immunotherapy

Immunotherapy (sometimes called biologic therapy) is a treatment that uses the patient's immune system to fight cancer. Substances made by the body or made in a laboratory are used to boost, direct or restore the body's natural defenses against cancer.

New types of treatment are tested in clinical trials. Ask your doctor if a clinical trial is available for your type of cancer.