



### **The Urinary Tract** - Source: NIH NIDDK

1% of women and 3.7% of men will develop bladder cancer. Nearly all bladder cancers begin in the lining of the bladder and are called urothelial carcinoma or transitional cell carcinoma. Rarer subtypes of bladder cancer include adenocarcinoma, squamous cell carcinoma, small cell carcinoma, and sarcoma.

### **Risk Factors for Bladder Cancer**

There are many different causes and risk factors for developing bladder cancer, including genetics, environment, and chance. As with most cancers, a specific cause for the great majority of these cancers cannot be identified. Rather it is likely that there are multiple factors which play a part in the development of the cancer.

### **Demographics**

- Age: the risk for bladder cancer (and most other cancers) increases as we get older.
- Race: Whites are at a slightly higher risk of bladder cancer when compared to Blacks and Hispanics.
- Gender: Compared with women, men are three to four times more likely to develop



bladder cancer.

### **Environmental**

- Tobacco use: Cigarette smoke is considered to be one of the strongest risk factors for bladder cancer and is thought to cause as many as 50% of these cancers. Smokers are three times as likely to develop bladder cancer compared with non-smokers.
- Chemical exposure: Chemicals used in the dye, rubber, leather, textile, paint, printing, hairdressing, and truck driving industries have been associated with a higher chance of developing bladder cancer. Arsenic in drinking water is a risk factor for bladder cancer, but this is not a major source of risk in most Americans.
- Medications: The herbal supplement aristolochic acid has been linked with bladder cancer. There is some evidence that pioglitazone (brand name Actos), a medication used to treat diabetes, is associated with a higher risk of bladder cancer.

### **Medical history**

- Chronic bladder infections, bladder stones, and kidney stones are linked with a higher risk of squamous cell carcinoma of the bladder
- Rare birth defects, specifically involving the urachus or a condition called exstrophy, may be the cause of some bladder cancers.
- Chemotherapy: Treatment with the drug Cytoxan can irritate the bladder and put someone at a higher risk of bladder cancer
- Previous radiation to the pelvis puts an individual at increased risk of bladder cancer

### **Family history**

- Having a close relative diagnosed with bladder cancer increases one's risk to develop the same disease. This may be because relatives are exposed to the same environmental risk factors.

### **Genetics**

Bladder cancer alone is not known to be caused by a single genetic factor, however there are some hereditary cancer syndromes that have been possibly associated with a higher risk of bladder cancer in addition to an increased risk of other cancers. These include:



- [PTEN Hamartoma Tumor syndrome/Cowden syndrome](#)
- [Lynch syndrome](#)

Click [here](#) to learn more about scheduling a genetic counseling appointment for questions about hereditary cancer predisposition.