



## What Firefighters Should Know About Bladder Cancer

By: Barry Stein, M.D., Urologist

Firefighters are among the most prominent occupational groups at increased risk for bladder cancer. Surprisingly, many firefighters and their physicians are unaware of their risk for this cancer.

Men get screened for prostate and colon cancers; they are not immune from lung cancer if they smoke or are exposed to tobacco smoke; and watch for signs of skin cancer. Yet, one of the most deadly cancers, if not detected early, is not on their cancer watch list.

Bladder cancer is the forgotten cancer. How can this be? Unlike the “ribbon cancers” bladder cancer does not have a celebrity face or spokesperson, or the sponsorship from major pharmaceutical companies. There aren’t walks or runs, or major news coverage.

Bladder cancer is one of the most deadly cancers, if not detected early and treated while the cancer is still confined to the bladder lining. If diagnosed in its early stages, bladder cancer has a five-year survival rate of almost 95%. If diagnosed at an advanced stage, the five-year survival rate is less than ten percent (10%). Previously, bladder cancer screening required expensive and invasive testing. Modern technology now allows for simple, inexpensive and noninvasive screening. It now costs far more to treat one victim of advanced stage bladder cancer than to screen thousands of firefighters.

Studies have shown that firefighters are twice as likely to have bladder cancer than the general population. People who are exposed to certain chemicals, burning material, and soot have a higher risk for the cancer. Prolonged exposure to benzene compounds found in burning debris is associated with bladder cancer risk. Even though firefighters wear an air pack, once the fire is knocked down, and they take their packs off, they are exposed to the smoldering material.

### **Are there other risk factors?**

Cigarette smoking is the most common risk factor for bladder cancer. In fact, *cigarette smokers are 4 to 7 times more likely to develop bladder cancer than nonsmokers.*

As physicians, it’s important that we recognize our role in the early detection of bladder cancer, when it is most treatable. Although bladder cancer hasn’t been a major focus of men’s health medicine, it is a serious men’s health issue, especially for firefighters.

Bladder cancer is about as common in men as colon cancer. It also has the highest recurrence rate of any cancer - even skin cancer. Bladder cancer is the second most common urologic malignancy in the U.S. (prostate cancer is the most common). Its prevalence is higher than lung cancer. Today, more than a half million people have had or are living with bladder cancer.

### **Catch bladder cancer early**

Learn the warning signs. One of the first signs is blood in the urine (hematuria). Sometimes the urine appears normal and blood is detected only through a test. Other signs can include painful urination, increased frequency of urination, a feeling of needing to urinate but not being able to do so, and chronic bladder inflammation from recurrent urinary tract infections. While each of these symptoms might have benign causes, the possibility of bladder cancer should not be excluded, especially for those who are at higher risk. Hematuria is the most frequent symptom of bladder cancer. However, there are many reasons for hematuria, including urinary tract infections and nephrolithiasis (kidney stones).

### **Don't postpone seeing a doctor or urologist**

Screening tests have been used to detect a variety of cancers early in their development in an effort to improve survival. In the absence of screening, one in four bladder cancers is detected when it is already advanced, requiring expensive treatment and reduced survival.

We now have the means to screen people at risk for bladder cancer using a test that detects elevated levels of the NMP22 protein marker in a single urine sample. Most healthy individuals have very small amounts of the NMP22 protein marker in their urine, but bladder cancer patients commonly have elevated levels, even at early stages of the disease. The test is done in the doctor's office and we have results during the patient's visit. If the test is positive, the individual should be further evaluated for bladder cancer by a urologist.

Although we still have a way to go, progress is being made, albeit slowly, in raising the awareness of the risk of bladder cancer. In San Francisco, doctors screened more than 1,000 active and retired firefighters for bladder cancer. The results of the testing confirmed that firefighters may be at an increased risk of developing transitional cell carcinoma (TCC, or bladder cancer) and should be considered for routine annual screening. And, in a number of smaller communities throughout the country, other voluntary screenings of firefighters have occurred.

Legislation was just passed in my home state of Rhode Island creating a firefighters cancer wellness program. The program emphasizes the need for both annual testing and keeping firefighters informed about developments concerning links between firefighters' exposure to hazardous materials and bladder cancer.

We know the risk factors and signs of bladder cancer. Even if the celebrities aren't speaking out, as physicians we have an obligation to educate each other and our patients. We now have the means to screen people at-risk for bladder cancer. Let's tell them about it, so they can do something about it.

***Bladder cancer can be detected early. At the first sign, see your doctor.***

#### **Know these facts:**

- Firefighters are twice as likely than the general population to have bladder cancer
- More prevalent in men than women
- Almost as prevalent as colon cancer in American males
- Smoking, major risk factor
- Blood in urine, most frequent symptom
- Other signs – painful urination, frequency, urge
- Bladder cancer has the highest cost per patient of all cancers from diagnosis to death. It is estimated that the annual direct costs of bladder cancer management are \$4 billion.

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**About the author:** Barry Stein, M.D., a urologist in Providence, RI, has advocated for early detection and education of bladder cancer for many years. Most recently he participated as a medical advisor for the kick-off of the firefighter screening program in Rhode Island. Dr. Stein is a co-author of several medical studies regarding bladder cancer diagnosis and surveillance and has spoken to groups on the subject.

For more information on bladder cancer, visit [www.matritech.com](http://www.matritech.com)  
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