

REDUCING RECURRENCE

# Bladder Cancer



# **A** growing body of evidence shows that certain vitamins and nutritional supplements may significantly reduce the risk of superficial bladder cancer recurrence.



**B**ladder cancer is the fourth most common cancer in men in the U.S. It also occurs in women, although it is less common than in men. An estimated 70,530 new cases of bladder cancer were diagnosed in the U.S. in 2010. Although several factors are believed to increase the risk of developing bladder cancer, cigarette smoking is by far the biggest single risk factor. Symptoms of bladder cancer can include blood in the urine, painful urination, and increased frequency of urination.

## **Diagnosis and Initial Treatment**

Most bladder cancers are diagnosed through the use of cystoscopy, a procedure in which the urologist views the inside of the bladder using a fiberoptic scope. Once a tumor has been found, it will usually be removed with a procedure called a Transurethral Resection of Bladder Tumor or TURBT.

## **Superficial or Invasive?**

When a bladder cancer is removed, the urologist and pathologist determine whether the tumor is superficial (confined to the lining of the bladder) or invasive (extends below the lining into the wall of the bladder). This is an important distinction, since a superficial cancer cannot spread beyond the bladder, while invasive bladder cancers can quickly spread to other areas of the body. Fortunately, 4 out of 5 bladder cancers are superficial when first diagnosed.

## **The Risk of Recurrence**

Although a superficial bladder tumor poses no immediate risk of spread, it can, if left untreated, become invasive. Complete removal of a superficial bladder cancer effectively cures that particular tumor, but the bladder remains at risk for recurrent tumors

in other areas. Once the bladder lining has grown one superficial cancer, there is a 60 to 80% chance that additional cancers will appear in the future. Your individual risk of recurrence is based on several factors, including the tumor grade (speed of growth), number (single vs. multiple tumors), and size of original cancer.

## **Monitoring for Recurrence**

After a superficial (noninvasive) cancer has been removed, the urologist will periodically perform cystoscopy to check the bladder for recurrences. During the first two years after the removal of a tumor, the cystoscopies are typically done every three months. If no recurrences are found during those two years, the interval is increased to six months for the following two years. If four years pass with no recurrences, most urologists recommend that the procedure be done yearly thereafter.

## **Reducing the Risk of Recurrence**

There are steps that can be taken to reduce your risk of superficial bladder cancer recurrence. These include medical treatments provided by your urologist, as well as nutritional supplements and lifestyle changes you can pursue yourself.

## **Medical Treatments**

The medical treatments used to prevent recurrence of superficial bladder cancer consist of medications that are instilled into the bladder—a technique known as intravesical therapy. These medications include chemotherapy agents such as Mitomycin C and Thiotepa (drugs that stop malignant cells from dividing), as well as immunotherapy agents such as BCG and Interferon (used to stimulate the body's immune system and encourage its natural defenses against cancer). Depending on your risk of recurrence, your urologist may advise one of these treatments.



## Lifestyle Changes

Cigarette smoking is the single largest risk factor for bladder cancer, and more than 50% of all bladder cancers are believed to be associated with smoking. Simply put, if you still smoke, you MUST quit. Research has shown that when smokers quit, their bladder cancer risk declines in two to four years. Occupational exposure to certain solvents or chemicals can also increase the risk of bladder cancer. If you suspect this is a factor for you, discuss the issue with your doctor.

## Nutrition

Our understanding of the relationship between nutrition and bladder cancer is continually expanding. Current data supports an increased intake of fruits and vegetables and a reduction in animal fat. In addition, a growing body of evidence shows that certain vitamins and nutritional supplements may significantly reduce the risk of superficial bladder cancer recurrence.

## Nutritional Supplementation

In the early 1990s, Donald Lamm, M.D., a leading bladder cancer researcher, conducted a prospective, randomized, double-blind clinical trial testing the effectiveness of high-dose vitamin supplementation in the prevention of bladder cancer recurrence. Trial participants were men and women with superficial bladder cancer, who were randomized into one of two groups. The treatment group received BCG therapy along with a daily multivitamin supplement, PLUS high doses of vitamins A, B<sub>6</sub>, C, E, and zinc. The control group received BCG therapy and a daily multivitamin only. The results were highly encouraging—the “high-dose” vitamin group had a cancer recurrence rate only half that of the multivitamin group.

A more recent clinical trial, presented at the 2008 American Urological Association meeting, showed that adding this same combination of high-dose nutrients (this time with more vitamin D and folic acid) to BCG therapy was as effective in reducing bladder cancer recurrence as adding interferon to BCG therapy.

**For more information,  
speak to your healthcare provider.**