

## FEATURE ARTICLE

# Intravesical Antineoplastic Therapy Following Transurethral Resection of Bladder Tumors: Nursing Implications From the Operating Room to Discharge

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An aging population and latent effects from exposure to carcinogens will likely augment the current trend of increased incidence of urinary bladder cancer. Intravesical antineoplastic therapy is a common treatment for urinary bladder cancer. Transurethral resection of bladder tumors often is followed immediately by the instillation of an antineoplastic agent in the operating room or postanesthesia care unit. Oncology nurses, who have a unique knowledge of safe handling and patient care, can improve staff safety and patient outcomes in several areas of healthcare organizations, as well as reduce the mortality and morbidity of urinary bladder cancer by learning more about the disease and intravesical antineoplastic therapy.

Urinary bladder cancer is one of the most common cancers in the United States, with an estimated 50,040 new cases in men and 17,120 in women in 2007 (Jemal et al., 2007). For men, urinary bladder cancer is more common than leukemia, non-Hodgkin lymphoma, and melanoma of the skin, which were estimated to have 24,800, 34,200, and 33,910 new cases in 2007, respectively (Jemal et al.). In addition, the American Cancer Society ([ACS], 2006) estimated that 48% of deaths from urinary bladder cancer in men are linked directly to smoking.

Urinary bladder cancer typically is a cancer of older adults who have a history of smoking or occupational exposure to hazardous chemicals (American Urological Association [AUA], 1999). Laborers in the chemical, dye, rubber, petroleum, leather, and printing industries are at increased risk because of exposure to chemicals, such as benzidine, beta-naphthylamine, and aminobiphenyl-4 (Tanagho & McArinch, 2004). Industrial chemical exposures often result in latency periods of more than 30 years before cancer occurs (AUA, 1999).

Urinary bladder cancer related to the use of cyclophosphamide for the treatment of cancers, such as Hodgkin disease, often is high grade, with a latency period of approximately 6–13 years (AUA, 1999). According to the National Institute for Occupational Safety and Health ([NIOSH], 2004), cyclophosphamide was detected in the urine of nurses. No study has confirmed or disproved a significant relationship between nurses' exposures to cyclophosphamide and the development of urinary bladder cancer. However, NIOSH reported in 2004, "Several

### At a Glance

- ◆ Urinary bladder cancer is one of the most common cancers in the United States and is expected to increase in incidence with the aging population.
- ◆ To reduce recurrence of bladder tumors, intravesical antineoplastic therapy often immediately follows transurethral resection of bladder tumors. Oncology nurses can improve patient outcomes and reduce hazardous exposure to antineoplastic drugs.
- ◆ Oncology nurses can help reduce urinary bladder cancer morbidity and mortality by teaching risk reduction, educating patients about the disease's signs and symptoms, and advocating for screening and early detection.

reports have addressed the relationship of cancer occurrence to healthcare workers' exposures to antineoplastic drugs" (p. 6). Healthcare professionals also suffer from acute and delayed

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