SOCIETY OF UROLOGIC NURSES AND ASSOCIATES
POSITION PAPER: BLADDER CANCER AND SMOKING

Bladder cancer is the 9th most common cause of cancer death in the US and the 4th most common cause of cancer death in the US among octogenarian males. Bladder cancer is a disease with significant morbidity. Treatment modalities for superficial and muscle invasive bladder cancer involves surgery, radiation therapy, chemotherapy, vaccine and biological therapy. Surgical treatment will depend on the TNM stage and may involve transurethral resection of the bladder tumor, partial cystectomy, radical cystoprostatectomy, and prostate-sparing cystectomy, lymphadenectomy and urethrectomy. If the native bladder is removed, a urinary diversion utilizing intestinally substituted bladder is done. The diagnosis and treatment result in psychological stress and a disruption of life style.

Smoking is one of the major risk factors associated with bladder cancer. Data from the pooled European study on the relationship of bladder cancer and women showed a dose-response relationship between bladder cancer and the number of cigarettes smoked per day up to a threshold limit of 15 to 20 cigarettes per day.

1 Studies have shown that cigarette, pipe and cigar smokers are three times more at risk in developing bladder cancer compared to non-smokers. 2 Tobacco smoking leads to oxidative stress and DNA damage via exposure to polycyclic aromatic hydrocarbons (PAHs) and aromatic amines. 3 Myeloperoxidase (MPO) produces a strong oxidant for micbicidal activity and activates carcinogens in tobacco smoke. 4 Meta analyzed studies showed that bladder cancer risk is stronger on patients who are smokers and have slow


3 Hung, RJ, Bofetta P et al; “Genetic Polymorphisms of MPO, COMT, MnSOD, NQQ1 Interactions with Environmental Exposures and Bladder Cancer Risk” Carcinogenesis, Jan 2004, Oxford University Press

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NAT2 (N-Acetyltransferase 2) acetylation status. The ability to detoxify aromatic amines is compromised in persons who have slow acetylation status. On patients with superficial transitional cell carcinoma of the bladder, studies showed that continued smokers experience worse disease-associated outcomes than patients who quit smoking. In some populations, it has been estimated that 50% of bladder cancer in males and 25% of bladder cancer in females could be prevented by elimination of cigarette smoking.

It is therefore the position of the Society of Urologic Nurses to advocate smoking cessation as a preventive strategy to bladder cancer. Smoking cessation education should begin with schools, health care agencies and the media. Specific targeted audience must include the African-American population as they have poorer survival due to greater extent of disease at diagnosis and a higher proportion of more aggressive histologies compared with white patients.

The Society of Urologic Nurses advocates that the financial costs of education be borne by tobacco companies.

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