

A Call for a Greater Emphasis upon
Smoking Cessation in UrologyJohn Maa^{1*}, Tom Feng² and Mark Vogel²¹Division of General and Trauma Surgery, Marin General Hospital, University of California, USA²Division of Urology and Surgery, Cedars Sinai Medical Center, USA

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Editorial

During a Capitol Hill summit in 2013 on cancer prevention, a scientific panel discussed the link between lung, esophageal, bladder and other human cancers with smoking. A United States Senator on the panel was puzzled and asked “Why does tobacco cause bladder cancer if cigarette smoke doesn’t come in contact with the bladder? The Senator’s unfamiliarity of the role of the renal system in the metabolism of carcinogens in cigarette smoke, the subsequent exposure to the uroepithelial lining, and concentration within the bladder reflect an opportunity for the field of urology to educate not only our Elected Officials but also the general public about the link between smoking with renal, ureteral, and bladder cancer.

Beyond the important role in neoplasia, active smoking also causes and exacerbates myocardial ischemia, vascular disease, sepsis, and kidney disease, which are all chronic comorbidities known to be associated with a worse pathological and survival outcome following surgery [1]. Many perioperative complications, including pulmonary embolism, stroke, pneumonia, respiratory failure, reintubation and wound infection are highest among smokers following urologic surgery [2], and the associated healthcare costs represent a major potential source of savings to the American healthcare system.

Considerable evidence has shown that medical optimization (including smoking cessation) enhances bladder surgery outcomes, as smoking plays a key role in carcinogenesis, cancer progression, and treatment response [3]. Smoking cessation at diagnosis has been shown to improve performance status and survival. Accordingly, early assessment of smoking status to identify those patients likely to continue smoking is essential in managing bladder cancer. Patients diagnosed at earlier stages are more likely to continue smoking, and prolonged smoking exposure is associated with disease progression. In both superficial and invasive disease, smoking intensity and duration shows a dose-responsive negative effect on tumor stage, regional metastasis, and disease recurrence [3,4]. Smoking also negatively impacts postoperative adjuvant bladder cancer treatments [5].

Smoking doubles the risk of Renal Cell Carcinoma (RCC) and contributes to as many as one-third of all cases. In surgery for RCC, smoking is associated with bleeding, pulmonary and renal complications. One study demonstrated that long-term smoking is associated with increased hemorrhagic complications during laparoscopic partial nephrectomy [6]. By mechanisms mediated through inflammation, oxidative damage, or immune suppression, smoking may also contribute to RCC progression. Additionally, both overall and cancer-specific survival was significantly worse after nephrectomies in patients who smoked [7].

Given the clear evidence of the harm of smoking on the genitourinary system, urologists are presented with a key opportunity to counsel patients about the benefits of smoking cessation, and to capitalize upon the teachable moment of the new diagnosis of a kidney or bladder malignancy. The challenge is that smoking cessation counseling is practice dependent, and few set cessation protocols have been implemented to promote smoking cessation in the traditional urologic practice. Brief counseling as short as 3 minutes can increase rates of smoking cessation. However, even with appropriate counseling, the failure rate of smoking cessation remains high, and often multiple quit attempts are required.

A 2013 study in an outpatient urology clinic demonstrated smoking cessation rates as high as 19.5%, but these required intense intervention and repeat personal contact, which were the likely keys to success [8]. More intensive smoking cessation programs are associated with higher quit rates and are effective in surgical settings, whereas other briefer and less intensive programs are less effective.

The time has arrived for the field of urology to assume a leadership role to reduce the burden of tobacco related urologic illnesses on the American healthcare system. In 2014, the American College of Surgeons published a policy statement entitled “The effects of tobacco use on surgical

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complications and the utility of smoking cessation counseling”. The American Urological Association could adopt a similar policy position statement, and call for further research to better characterize the metabolism, degradation, and carcinogenic properties of nicotine and other components of cigarette smoke in the genitourinary system. Additional areas of future research include the deleterious effect of electronic cigarettes upon urologic outcomes, as well as the potential deleterious impact of marijuana and its metabolites on the kidney and bladder. By clarifying persistent misunderstandings as evidenced by the Senator’s question, and educating the public, urologists can play an essential role in raising awareness to reduce the toll of tobacco on our healthcare systems worldwide.

References

1. Khullar D, Maa J. The impact of smoking on surgical outcomes. *J Am Coll Surg.* 2012; 215: 418-426.
2. Turan A, Mascha EJ, Roberman D, Turner PL, You J, Kurz A, et al. Smoking and perioperative outcomes. *Anesthesiology.* 2011; 114: 837-846.
3. Rink M, Furberg H, Zabor EC, Xylinas E, Babjuk M, Pycha A, et al. Impact of smoking and smoking cessation on oncologic outcomes in primary non-muscle-invasive bladder cancer. *Eur Urol.* 2013; 63: 724-732.
4. Rink M, Zabor EC, Furberg H, Xylinas E, Ehdaie B, Novara G, et al. Impact of smoking and smoking cessation on outcomes in bladder cancer patients treated with radical cystectomy. *Eur Urol.* 2013; 64: 456.
5. Gritz ER, Dresler C, Sarna L. Smoking, the missing drug interaction in clinical trials: ignoring the obvious. *Cancer Epidemiol Biomarkers Prev.* 2005; 14: 2287-2293.
6. Richstone L, Montag S, Ost MC, Reggio E, Seideman C, Permpongkosol S, et al. Predictors of hemorrhage after laparoscopic partial nephrectomy. *Urology.* 2011; 77: 88-91.
7. Kroeger N, Klatte T, Birkhauser FD, Rampersaud EN, Seligson DB, Zomorodian N, et al. Smoking negatively impacts renal cell carcinoma overall and cancer-specific survival. *Cancer.* 2012; 118: 1795.
8. Bjurlin MA, Cohn MR, Kim DY, Freeman VL, Lombardo L, Hurley SD, et al. Brief smoking cessation intervention: a prospective trial in the urology setting. *J Urol.* 2013; 189: 1843-1849.