

PERSPECTIVE

JOHN ABBOTT



Bridging the gender gap

Bladder cancer is more deadly in women than in men. That needs to change, say **James McKiernan** and **Denise Asafu-Adjei**.

Worldwide, bladder cancer occurs more often in men than in women. In the United States, for example, it is the fourth-most-common cancer in men and the seventh-most-common in women. Men are three to four times more likely than women to develop bladder cancer¹, but women, especially African American women, have higher death rates. To save more lives, it is essential to understand and address the causes of this disparity — and there are many.

One reason why women have a higher death rate is that they tend to be diagnosed when the cancer is more advanced, so it is harder to eradicate. A major cause of this later diagnosis is that women are more likely to miss or misinterpret the main sign of bladder cancer: blood in the urine, known as haematuria. Men typically stand when they urinate, which means that they are more likely to notice blood before flushing. Even if women do notice blood, they are accustomed to seeing it in the toilet, either from menstruation or from urinary-tract infections, which are more prevalent in women than in men. As a result, women are less likely to recognize that the blood could be a sign of a serious problem.

The way that men and women progress through the health system also differs. Men who find blood in their urine are generally referred by their primary-care provider to a urologist for a follow-up, which enables early intervention. However, most women in the United States have a gynaecologist as well as a primary-care provider, and gynaecologists who learn of blood in the urine may respond differently from a urologist. For example, in the case of microscopic haematuria (defined as three or more red blood cells per high-power field on microscopic urinalysis) in an asymptomatic woman aged 35–50 who has never smoked, the American College of Obstetricians and Gynecologists recommends further tests only if 25 red blood cells are visible in a sample². By contrast, guidelines from the American Urological Association call for further testing at a lower threshold of just three red blood cells³.

This divergence means that many women are not examined for bladder cancer if they visit their gynaecologist rather than a urologist. This lack of follow-up may partly explain why women tend to be diagnosed with more advanced stages of cancer. In addition, a UK cancer study⁴ in 2012 found that women were more than twice as likely as men to have at least three consultations with a general practitioner before being referred to a specialist after reporting visible blood in their urine.

Men and women also differ in their management of contributing factors. Consider smoking, which is the most common risk factor for bladder cancer and increases the risk by between twofold and sixfold. A higher proportion of men smoke, but men are also more likely than women to give up the habit⁵. In recent years, the rate of women stopping smoking seems to be rising, but there are still several reasons why it remains lower than that for men. For example, women

are more likely to report that smoking calms them down and eases their response to external pressures. More women than men report using smoking for weight control, and they fear the weight gain that is associated with stopping⁵. Additionally, women have higher smoking relapse rates, and there is evidence that nicotine-based preventive therapies are less effective in women.

A multifaceted approach must be adopted to improve the prevention and diagnosis of bladder cancer in women. Bladder cancer in both men and women is generally diagnosed later than other cancers, perhaps in part because people tend to be embarrassed about discussing issues pertaining to urination. Campaigns to eliminate the stigma of urination issues could help this.

For women, patient education is vital, so that women become more suspicious if they see blood in their urine and seek medical attention promptly. Strategies to get people to stop smoking have to be prioritized and targeted more aggressively at women.

Given that smoking is the most common cause of bladder cancer, this prevention strategy is essential to decreasing its incidence. Women-specific advocacy groups, such as those in the US-based Bladder Cancer Advocacy Network and the American Bladder Cancer Society, have been helpful in disseminating accurate information about bladder cancer, and require more support and use by medical providers.

There also need to be better partnerships and enhanced communication between urologists and both primary-care physicians and gynaecologists, with the aim of achieving quicker referrals to urologists, and hence diagnosis and treatment at earlier stages of cancer. This warrants improved coordination of referrals and integration of urological services. Similarly, family

doctors and gynaecologists need to work with either urologists or advocacy groups to better educate themselves and their patients about the risk factors for bladder cancer, how to prevent it, and the signs of the disease.

Gender-specific issues in bladder cancer can be addressed at several stages in the care process. Taking these steps could ensure earlier diagnosis for women and improved survival outcomes. ■

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1. American Cancer Society. *Key Statistics for Bladder Cancer*; available at <http://go.nature.com/2gdfmey>
2. The American College of Obstetricians and Gynecologists. *Asymptomatic Microscopic Hematuria in Women*; available at <http://go.nature.com/216vqox>
3. American Urological Association. *Diagnosis, Evaluation and Follow-up of Asymptomatic Microhematuria (AMH) in Adults*; available at <http://go.nature.com/2xoyyb5>
4. Lyratzopoulos, G., Neal, R. D., Barbiere, J. M., Rubin, G. P. & Abel, G. A. *Lancet Oncol.* **13**, 353–365 (2012).
5. *Women and Smoking: A Report of the Surgeon General* (Department of Health and Human Services, 2001).

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