Background: A bladder cancer diagnosis and the effects of treatment can have a significant impact on a patient’s physical, emotional, and psychological well-being. Because healthcare providers tend to focus on these aspects of care, a patient’s concerns with changes regarding sexual health are often overlooked.

Objectives: The purpose of this article is to provide oncology nurses with an overview of causes of and treatment for sexual dysfunction as it relates to patients with bladder cancer.

Methods: Data were extracted using key words and phrases such as bladder cancer, cystoscopy, cystectomy, pelvic exenteration, and sexual dysfunction.

Findings: Oncology nurses are ideal healthcare providers to assess the sexual health concerns of patients with bladder cancer. Oncology nurses can be valuable resources for patients by giving them permission to discuss sexual health, educating them and their partners about potential implications of treatment on sexuality, reviewing treatment options, and facilitating referrals to other providers who specialize in treating sexual dysfunction.

Bladder cancer is the sixth most common cancer diagnosed in the United States (American Cancer Society, 2015a). Risk factors include cigarette smoking, exposures (e.g., aniline dye, cyclophosphamide, textiles, pelvic radiation), chronic cystitis, and genetic mutations (Baney, 2009). Signs and symptoms of bladder cancer include painless hematuria; irritative urinary symptoms including frequency, urgency, and dysuria; and, in advanced stage, pain from metastatic disease. Screening guidelines for bladder cancer do not exist because evidence is inadequate to determine whether screening for bladder cancer has an impact on mortality (National Cancer Institute, 2013).

Treatment varies widely among the stages of bladder cancer. Treatment of nonmuscle invasive bladder cancer (NMIBC) (stage CIS-T1) may include one or more transurethral resections of the bladder tumor (TURBT), instillation of intravesical therapy, and a strict follow-up schedule with evaluation for recurrence using local cystoscopy. Patients with muscle invasive bladder cancer (MIBC) (stages T2–T4a) may undergo neoadjuvant systemic chemotherapy, cystectomy, adjuvant chemotherapy or trimodal therapy with TURBT, chemotherapy, and radiation therapy.

Many patients with bladder cancer receive treatment that may temporarily or permanently cause some degree of sexual dysfunction. For example, during a cystectomy, men may have a prostatectomy and women may undergo a hysterectomy; prostatectomies and hysterectomies have well-studied negative impacts on sexual functioning (Bober & Varela, 2012). Sexual dysfunction has been studied and reported in cancer literature but remains one of the least-addressed aspects of cancer care. Unlike other treatment-related side effects, sexual dysfunction is less likely to resolve with time (Schover, 2005). Throughout the literature, an emphasis is placed on the relationship between cancer treatment and the impact of treatment on sexual function, and many studies limit the scope of sexuality to fertility, contraception, menopause, erectile function, or the capacity for intercourse (Hordern, 2008). The terms intimacy and sexuality often are used interchangeably when discussing sexual health and sometimes used as blanket terms to describe connectivity between behavior, activity, partnership, function, and attitude (Lindau, Laumann, Levinson, & Waite, 2003). The World Health Organization (2006) offers a patient-centered definition of sexuality. Intimacy infrequently is defined as a separate entity to sexuality but has been described as the sharing and closeness between partners, encompassing touch and intimate communication (Hordern, 2008).
Causes of sexual dysfunction in patients with bladder cancer may be multifactorial and unrelated to the diagnosis or treatment complications; they include advanced age, tobacco use, and chronic illness. The average age of a patient diagnosed with bladder cancer is 73 years (American Cancer Society, 2015b). Lindau et al. (2007) reported that, despite the prevalence of sexual activity declining with age, many older adults still participate in some form of sexual function including intercourse, oral sex, and masturbation. This is important to remember when working with older adult patients with bladder cancer, and nurses should use caution not to overlook educating this population about potential sexual dysfunction. In addition, cigarette smoking is a known risk factor for bladder cancer. Nicotine can be responsible for genital hemodynamic disruption, facilitating a cascade of vascular and chemical events that disrupt normal sexual arousal responses (Harte & Meston, 2008).

Many patients also have underlying comorbidities including hypertension, diabetes, pulmonary disorders, depression, and anxiety. Sexual dysfunction is more likely in patients with poor physical and emotional health (Laumann, Paik, & Rosen, 1999).

Establishing a baseline sexual function for patients prior to the beginning of treatment is a key component to providing comprehensive oncology nursing care. Nurses should use caution not to make assumptions about patients’ sexual orientation and provide education and counseling regardless of sexual preference. Along with a thorough sexual, medical, and psychosocial assessment, validated questionnaires can be used to assess baseline sexual function, and several tools also are available to nurses to help promote communication about sexuality between patients and healthcare providers (see Figure 1). Although these tools can be useful in evaluating sexual function, nurses still may face barriers to discussing patient sexuality and intimacy in the context of cancer care. Identified barriers include time constraints; knowledge deficit; inexperience; embarrassment; believing the discussion may be construed as disrespectful or inappropriate; and assumptions based on age, gender, culture, socioeconomic status, and religion (Hordern, 2008).

Although communication between patients with bladder cancer and healthcare providers is a crucial part of assessing for sexual dysfunction, the communication between patients and partners is equally important. The experiences of partners often are neglected in clinical practice and research on sexuality and intimacy. Nurses can give patients and partners permission to discuss changes in sexual function and legitimate sexuality by giving permission for couples to be intimate or sexually active during or after treatment (Hawkins et al., 2009). Studies have suggested that communication between partners about sexual function is valued more highly than communication with healthcare professionals (Perz, Ussher, & Gilbert, 2013). Minimal research has been conducted exploring the communication needs of single patients with cancer. Special considerations for single patients include how to communicate with future partners about their cancer diagnosis, sexual dysfunction, and changes in body image.

Nurses take great pride in providing holistic patient care. However, they sometimes fail to recognize that addressing sexuality is an integral component of providing such care. Wilmoth (2006) identified four processes that nurses must address to implement standards of care that ensure that patients with cancer have knowledge about the side effects of cancer treatment on sexuality. The processes are (a) achieving comfort with one’s own sexuality and talking about sexuality; (b) gaining sufficient knowledge about sexuality, illnesses, and treatments that affect sexuality; (c) honing effective communication skills; and (d) identifying practitioners who can help incorporate sexual health care into practice. Having a knowledge base about the anatomic, physiologic, and pathophysiologic components of sexual function helps nurses understand treatment-related effects. Engaging in a multidisciplinary approach to providing comprehensive, holistic care for patients includes consulting with physician and pharmacy colleagues about sexual side effects and potential treatments. For patients requiring counseling or expressing emotional distress related to sexual dysfunction, referrals to mental health professionals, including licensed clinical social workers, advanced practice nurses, psychologists, psychiatrists, and sex therapists, should be considered.

Nonmuscle Invasive Bladder Cancer

The majority of research that has been conducted on the impact of sexual function in patients with bladder cancer has focused on the treatments of MIBC by radical cystectomy (Van der Aa et al., 2009). Although less research is available regarding sexual dysfunction in patients with NMIBC, nurses should address this issue and recognize potential sexual impairments that may be directly related to treatment and surveillance. Cystoscopy is the principal means by which to diagnose and survey bladder cancer. In a longitudinal study of adverse effects of cystoscopy by Stav et al. (2004), 28 of 51 patients who considered themselves to be sexually active reported some degree of decline in libido following rigid cystoscopic examination, and 39 patients reported impaired satisfaction from sexual relations for as many as two weeks following the examination. None of the patients reported dyspareunia, and all patients reported a return to baseline sexual function one month following cystoscopic examination.

Van der Aa et al. (2009) conducted a cross-sectional questionnaire of sexual function in patients with primary or recurrent NMIBC who were starting a surveillance protocol, with the

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<th>Promoting Communication</th>
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<td>• ALARM model (activity, libido/desire, arousal/orgasm, resolution, medical history)</td>
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<td>• BETTER model (bring up, explain, tell, timing, educate, record)</td>
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<tr>
<td>• PLISSIT model (permission, limited information, specific suggestions, intensive therapy)</td>
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FIGURE 1. Tools for Assessing Sexual Function and Promoting Communication About Sexuality

Note. Based on information from Hordern, 2008; Rosen et al., 2000, 2002; Rust & Golombok, 1986.
primary objective of describing the prevalence of sexual dysfunction and evaluating risk factors in this population. A subset of 150 patients from the 448 participants (33%) was approached to complete questionnaires at certain time intervals during surveillance, with a response rate of 95%. Sexual function was assessed using a validated subset of questions, including male erectile and ejaculatory function, level of lubrication in women, interest, enjoyment, level of activity, and fear of harming partner. Eighty-seven of 142 participants (61%) were sexually active in the four weeks after diagnosis, including 70 of the 105 male participants (66%) and 17 of the 37 female participants. Forty-seven of 87 participants reported some degree of sexual dysfunction during this time frame but no impact on libido. This was the first study of its kind to report that patients with bladder cancer are afraid of harming their partner by sexual contact.

Side effects following a TURBT include short-term bleeding and discomfort. Many patients are not sexually active immediately after surgery but may delay resuming sexual activity because of fear of discomfort or damaging the urethra or bladder, even after their discomfort has resolved. Nurses should inform patients that resuming sexual activity is safe once bleeding and discomfort subside, indicating complete postoperative healing (Albaugh, Kellog-Spadt, Krebs, Lewis, & Kramer-Levien, 2009). Intravesical immunotherapy is a common treatment option for patients with NMIBC, and bacillus Calmette-Guerin (BCG) is thought to be the most effective of these medications. Patients may experience flu-like symptoms, leading to fatigue and disinterest in physical or sexual contact. Patients also may have dysuria or other irritative urinary symptoms, which may lead to abstinence. Nurses should instruct patients and their partners to abstain from intercourse or use a condom for up to one week after instillation of BCG because the medicine can be excreted in the urine up to that point (Durek et al., 2001).

Muscle Invasive and Advanced Bladder Cancer

MIBC and advanced bladder cancer may be treated with surgery, radiation, chemotherapy, or combination therapy. These treatment modalities, whether used alone or in combination, can negatively affect sexual function. Radical cystectomy is considered the standard of care in the United States. Men who undergo radical cystectomy typically undergo a radical prostatectomy, and women undergo pelvic exenteration with removal of the uterus, ovaries, part of the vagina, and the fallopian tubes. Patients who undergo radical cystectomy will necessitate a urinary diversion. Examples include an incontinent cutaneous (ileal conduit), continent cutaneous, or orthotopic neobladder diversion. Radiation therapy may be used in combination with TURBT and systemic chemotherapy. Chemotherapy is used in the neoadjuvant, adjuvant, trimodal, and palliative setting. The most common chemotherapy regimens for treating bladder cancer include gemcitabine and cisplatin (GC); methotrexate, vinblastine, doxorubicin, and cisplatin (MVAC); and dose-dense MVAC in the neoadjuvant or adjuvant setting. Chemotherapy regimens in advanced bladder cancer include GC, MVAC, or others, including carboplatin, ifosfamide, or pemetrexed (National Comprehensive Cancer Network, 2014.)

Mohamed et al. (2014) examined the unmet needs of 30 patients with MIBC at the time of diagnosis, postoperatively, and during survivorship. At the time of diagnosis, only six of the patients surveyed reported that their providers educated them about the possibility of sexual dysfunction following treatment. In the survivorship phase, 13 patients reported sexual dysfunction, including erectile dysfunction and low libido in men, and vaginal dryness, pain during intercourse (dyspareunia), and lost desire because of body changes and stoma in women. Nurses play a key role in patient education related to sexual dysfunction and body changes in these three phases and should evaluate patients for understanding of these issues during all phases.

Sexual Dysfunction
Female Sexual Dysfunction

Female sexual dysfunction is a multifactorial problem that has been classified into sexual desire disorder, subjective sexual arousal disorder, genital arousal disorder, combined sexual arousal disorder, persistent sexual arousal disorder, orgasmic disorder, vaginismus, and dyspareunia (El-Bahnasawy et al., 2011). These classifications encompass a complex variety of sexual dysfunction components that are relevant to women undergoing treatment for MIBC.

Female sexual function depends on the integrity of the internal genitalia including the vagina, fallopian tubes, uterus, and ovaries, and the external genitalia including the labia, clitoris, and vestibular bulbs. During radical cystectomy, transection of the neurovascular bundle on the lateral walls of the vagina results in a lack of blood engorgement to the clitoris and vagina. Denervation can result in loss of lubrication, leading to sexual arousal disorder. Nerve-sparing techniques have become available but are not widely accepted. Devascularization of the clitoris can occur if the distal part of the urethra is removed. The upper vagina is resected during cystectomy, which may result in vaginal narrowing and shortening and dyspareunia (Gontero, Fontana, Kocjancic, Frea, & Tizzani, 2006). The removal of reproductive organs, resulting in loss of ovarian hormones, can cause decreased libido, vaginal dryness, and other menopausal symptoms, including hot flashes, mood swings, and fatigue, all of which can negatively affect women’s sexual health. Women also may experience significant body image concerns following cystectomy because of surgical scars and urinary diversions.

Chemotherapy can cause nausea, vomiting, anorexia, fatigue, neuropathy, and alopecia, all of which can lead to decreased

Implications for Practice

- Be aware of the impact of bladder cancer treatment on sexuality.
- Perform a sexual function assessment of all patients with bladder cancer.
- Educate patients with bladder cancer and their partners about implications of treatment on sexual function, treatment options, and resources.
sexual interest. Premenopausal women should be informed that chemotherapy could lead to menopausal symptoms. External beam radiation therapy can cause fatigue, leading to decreased interest in sexual activity and vaginal dryness, shortening, and narrowing that causes dyspareunia (Albaugh et al., 2009).

Treatment for female sexual dysfunction following treatment for bladder cancer should include physical and emotional therapy. Nurses can educate patients about different ways to manage fatigue, nausea, and pain. Water-soluble lubricants can be used to improve vaginal dryness. Prescription estrogen cream can keep vaginal tissue soft and supple. For women who experience pain and difficulty achieving orgasm because of vaginal shortening, vaginal dilators are available to help gradually stretch vaginal tissue and keep it pliable. Referrals to a gynecology practitioner or physical therapist trained in women’s health can be greatly beneficial. Women have reported that using the female superior position during sexual intercourse helps control the depth of penile penetration and thrusting, which helps control discomfort (Albaugh et al., 2009). Women who have ileal conduit urinary diversions can experience body image disturbances and anxiety related to sexual activity and the possibility of urinary leakage. Nurses should teach women to empty their pouch prior to sexual activity and make sure it is fitted correctly around the stoma to reduce the chance of leaking. Pouch covers, some of which resemble lingerie, are widely available online. Women with neobladders may experience leaking and should be advised to void or catheterize prior to sexual activity. Referrals to mental health providers should be facilitated for women who experience any emotional distress because of sexual dysfunction. Although the vast majority of women diagnosed with bladder cancer are not of child-bearing age, those who are need to be counseled about the impact of treatment on fertility.

Male Sexual Dysfunction

Many men with MIBC will undergo cystoprostatectomy, or surgical removal of the bladder and prostate. Although some surgical techniques preserve sexual function (i.e., prostate-sparing surgery), they carry a risk of urothelial carcinoma involvement of the prostate and prostatic urethra (Tai & Daniel, 2005). Prostatectomy can result in erectile dysfunction (ED) because the neurovascular bundle (NVB) that controls erectile function wraps around the posterior aspect of the prostate. The NVB consists of a complex structure related to the vascularization of the outer prostate and to the innervation of the urethra and corpora cavernosa (Gontero et al., 2006). The prostate is an accessory reproductive gland that secretes alkaline fluids that form part of the ejaculate, which aids motility and nourishment of sperm. Following cystoprostatectomy, men will no longer produce seminal fluid, resulting in dry orgasm and infertility. Men who desire to father a child should be given the opportunity to bank sperm preoperatively (Prostate Cancer Foundation, 2014).

Chemotherapy and radiation therapy can cause the same side effects in men as women, with the addition of ED. Treatment for ED should be tailored toward men’s preference and previous treatments. Given the advanced age of many patients with bladder cancer, men may already suffer a degree of ED prior to cancer therapy. The Sexual Health Inventory for Men is a questionnaire used to determine the severity of ED and should be evaluated prior to cancer therapy. Treatment options for ED include vacuum erectile devices, oral phosphodiesterase 5 inhibitors, the intraurethral Medicated Urethral System for Erection, intracavernosal injections, and penile implants. Men should be educated that orgasm is still possible, even in the absence of erection.

Men may experience emotional distress related to sexual dysfunction. Men may express feeling like “less of a man” because of sexual dysfunction and body changes. The same tips should be offered to men with ileal conduits as for female patients. Gender-neutral pouch covers are available, and some men choose to wear a comfortable T-shirt during sexual activity to make the conduit more discreet. Men may experience urinary leakage through the urethra and should be advised to wear a condom during sex to absorb the urine.

The Bladder Cancer Advocacy Network

The Bladder Cancer Advocacy Network (BCAN) (www.bcan.org) is the only national organization devoted to advancing bladder cancer research and supporting those affected by the disease. BCAN offers a plethora of resources for patients and caregivers, including an extensive website, a handbook for patients with newly diagnosed bladder cancer, an online support community, clinical trials information, an annual walk with locations across the country, and newsletters, and it has established several local BCAN chapters. For nine years, BCAN has held an annual Bladder Cancer Think Tank Meeting during which providers, researchers, scientists, advocates, and survivors convene to discuss the latest research in bladder cancer.

American Cancer Society
http://bit.ly/1BreXhI
American Society of Clinical Oncology
www.cancer.net/navigating-cancer-care/side-effects/sexual-problems
Association of Online Cancer Resources
www.acor.org
Bladder Cancer Advocacy Network
www.bcan.org
Cancer Support Community
http://bit.ly/14q3HIO
Fertile Hope
www.fertilehope.org
Livestrong Foundation (for men)
http://bit.ly/1BB1FwY
Livestrong Foundation (for women)
National Cancer Institute
www.cancer.gov/cancertopics/pdq/supportivecare/sexuality/Patient
OncoLink
www.oncoline.org/coping/coping.cfm?c=4
Survivorship A to Z
www.survivorshipatoz.org/cancer/topics/sex-and-intimacy/?sid=1218
United Ostomy Association of America
www.ostomy.org/ostomy_info/#sexuality

FIGURE 2. Patient Education and Support Resources
to discuss issues and challenges surrounding bladder cancer research, treatment, and advocacy. During the think tank, several work groups meet in breakout sessions to focus on specific aspects of bladder cancer care. The survivorship work group focuses on raising public and healthcare provider awareness about bladder cancer. One of the most notable achievements of the work group is the development of a survivorship care plan for early- and late-stage bladder cancer (Svatek et al., 2013). The 2013 think tank featured an elite panel of speakers highlighting the importance of addressing sexual dysfunction in patients with bladder cancer.

Implications for Nursing and Conclusion

Oncology nurses play a crucial role in evaluating and educating patients with bladder cancer about the potential implications of their disease and treatment on sexuality and intimacy. By providing patients with permission to discuss questions or concerns about sexuality in a private setting, nurses establish a trusting, nonjudgmental relationship with patients that will be a tremendous resource before, during, and after treatment. Nurses have long been a trusted source for patient education, and the topic of sexuality should be no different. Figure 2 includes a list of resources that nurses can provide to patients with bladder cancer. Nurses play an integral role in educating patients about modifying sexual practices, facilitating communication, and recommending alternatives to intercourse to promote intimacy (e.g., touching, hand holding, cuddling). Nurses also should facilitate referrals to other healthcare providers, such as a mental health provider, advanced practice nurse, gynecologist, endocrinologist, urologist, or sex therapist. Patients with bladder cancer see many healthcare providers over the course of their treatment and follow-up, and nurses are an integral part in every setting, making them the ideal resource for issues related to sexual health.

References


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