

A biopsychosocial approach to sexual recovery after prostate cancer treatment: Suggestions for oncology nursing practice

by Lauren M. Walker, Andrea M. Beck, Amy J. Hampton, and John W. Robinson

Abstract

In the past decade there has been a surge of literature documenting the impact of prostate cancer (PCa) treatment-induced erectile dysfunction (ED) on intimate relationships. While there have been significant advances in the treatment of ED, with phosphodiesterase inhibitors, vacuum erection devices and intracavernous injections, patients and their partners continue to struggle to find ways to maintain enjoyable sexual activity. Only half of PCa patients are willing to try ED treatments, and less than half of those patients, who find ED treatments helpful in improving erectile function, will continue to use them long-term.

While there are effective strategies that can be taught to patients for overcoming the barriers associated with the use of ED treatments, many patients struggle on their own with these challenges, become discouraged, and quickly give up. Nurses play a large role in patient education and counselling, both in preparing patients for PCa treatment, and in follow-up. Consequently, they are well positioned to play a significant part in promoting sexual recovery among PCa patients and, thus, increasing patients' and partners' experiences of success. Nurses are well versed in providing holistic biopsychosocial care, which is a much-needed approach to complement the use of biomedical ED treatments.

We begin by providing suggestions for nurses to increase their competence in discussing, assessing and intervening in the area of sexual difficulties. We follow with specific suggestions, based on the PCa literature, to guide nurses in supporting patients receiving ED treatment. Guidance is offered regarding approaches to patient education that fosters the development of realistic treatment expectations. Not only should these suggestions help improve adherence to ED treatments, but they should also help patients think more broadly about the sexual recovery process, encouraging the development of goals in sexual recovery beyond restoration of erectile function. Flexibility in sexual practice is found to be a key in successful sexual renegotiation, therefore, non-penetrative sexual strategies—that are not dependent on erections—should be offered to patients, as a routine part of clinical practice. Additional suggestions regarding couple communication, persistence in the treatment process, and working through grief associated with sexual losses are also offered in addition to strategies for overcoming specific barriers such as loss of libido and demoralization associated with treatment failures.

Key words: prostate cancer, erectile dysfunction, sexual adaptation, counselling, patient education

Introduction

Treatment of prostate cancer (PCa) often results in significant loss of erectile function (Barry, Gallagher, Skinner, & Fowler, 2012; Johansson et al., 2011; Steinsvik et al., 2012; Stephenson et al., 2005). Erectile dysfunction (ED) rates are as high as 90% post-radical prostatectomy (Barry et al., 2012) and 71% post radiation treatment (Wiegner & King, 2010). Moreover, loss of erectile function is often one of the most difficult survivorship issues, negatively impacting intimate relationships, and contributing to declines in quality of life for both patients and partners (Badr & Carmack-Taylor, 2009; Crowe & Costello, 2003; Le et al., 2010; Manne, Badr, Zaider, Nelson, & Kissane, 2010; Penson, 2001). Despite the high prevalence and deleterious effects of ED, patients often report being poorly prepared to cope with ED after PCa treatment and commonly report a lack of knowledge about sexual health and ED treatments (Boberg et al., 2003; Letts, Tamlyn, & Byers, 2010; Lintz et al., 2003; Rivers et al., 2011; Steginga et al., 2001; Stephenson et al., 2005; Wittmann, Montie, Hamstra, Sandler, & Wood, 2009).

Current sexual rehabilitation approaches for PCa patients tend to focus on the biological factors associated with ED, overlooking psychosocial factors, and primarily focusing on penile rehabilitation and the use of ED treatments to produce erections (Althof & Needle, 2007; Montorsi et al., 2010; Nelson, Scardino, Eastham, & Mulhall, 2013; Schover et al., 2002). This emphasis on the biological perspective is likely because of the biomedical nature of treatment options: phosphodiesterase inhibitors, intracavernous injections, vacuum erection devices, penile implants (reviewed in Kirby et al., 2014; Montorsi et al., 2010).

About the authors



Lauren M. Walker, PhD, Faculty of Medicine, University of Calgary, Calgary, Alberta, Department of Psychosocial Resources, Tom Baker Cancer Centre, Calgary, Alberta



Andrea M. Beck, PhD, RPsych, Prostate Cancer Centre Calgary, Independent Contractor.



Amy J. Hampton, MA, Department of Psychology, University of Regina, Regina, Saskatchewan



John W. Robinson, RPsych, Faculty of Medicine, University of Calgary, Calgary, Alberta, Department of Psychosocial Resources, Tom Baker Cancer Centre, Calgary, Alberta, Department of Psychology, University of Calgary, Calgary, Alberta

Corresponding author: Lauren Walker, PhD, Department of Psychosocial Resources, Tom Baker Cancer Centre, 1339-29 St. NW, Calgary, AB

Phone: 403-355-3214

When sexual recovery overly emphasizes biomedical strategies, long-term adherence to ED treatments is poor and satisfaction rates are low (Althof, 2002; Gray et al., 2002; McCarthy & Fucito, 2005; Stephenson et al., 2005). An estimated 50% to 73% of patients will discontinue using these ED treatments, despite reporting that they are effective at improving erectile rigidity (Althof, 2002; Bergman, Gore, Penson, Kwan, & Litwin, 2009; Matthew et al., 2005; Salonia et al., 2012; Schover et al., 2004). The discrepancy between the effectiveness of ED treatments and the low rate of long-term use suggests that physiological erectile response is an insufficient indicator of successful ED treatment.

The most effective sexual rehabilitation interventions in oncology utilize a multi-disciplinary approach and emphasize that the sexual recovery process involves a dynamic interaction among biological, psychological and social factors (Sadovsky et al., 2010; Schover et al., 2014). This biopsychosocial approach to sexual recovery presents a comprehensive context for identifying, assessing, and treating sexual difficulties (Berry & Berry, 2013). Such an approach uniquely facilitates the assessment of barriers to treatment and offers multiple perspectives on intervention (Wittmann, Foley, & Balon, 2011).

There are many complex psychosocial barriers to the successful use of ED treatments including: 1) the length of time a couple waits before seeking treatment; 2) the patient's and partner's attitudes, expectations, and readiness to begin a treatment protocol; 3) the meaning of using a medical intervention to restore sexual activity, the quality of the couples' relationship outside of the sexual context; 4) the presence of sexual dysfunction in the partner; 5) lack of desire for sexual intercourse in the patient or partner; and 6) lack of opportunity (Althof, 2002; Fisher, Eardley, McCabe, & Sand, 2009; Klotz, Mathers, Klotz, & Sommer, 2005; Shindel, Quayle, Yan, Husain, & Naughton, 2005; Wittmann, Foley, & Balon, 2011; Wittmann et al., 2014). Furthermore, only half of patients are willing to try an ED treatment post PCa treatment (Bergman et al., 2009; Schover et al., 2002). Some patients will elect to cease sexual activities rather than treat ED, though they may or may not perceive this as a loss. Some may choose to find new ways apart from sexual activity to be intimate in their relationship, and others were already non-sexual prior to commencing PCa treatment. Still, a significant proportion of patients are either not open to, or are not interested in, biomedical treatments to restore erections (Letts et al., 2010), yet, they are still interested in maintaining sexual activity. Moreover, the barriers to the use of ED treatments (such as medications) are abundant, indicating a need to supplement biomedical ED intervention with counselling to address the complex psychosocial needs and concerns that arise in this context. In addition, patients should be offered treatment alternatives to those treatments aimed exclusively at restoring erections.

Table 1: Specific Suggestions for Promoting Sexual Recovery in the PCa Patient
<ul style="list-style-type: none"> · Begin preparing couples for sexual recovery in advance of PCa treatment · Promote persistence in the sexual recovery process · Facilitate communication within the couple · Promote flexibility and renegotiation of sexual practices · Actively address grief associated with loss of sexual functioning · Encourage couples to adapt the goal of sexual activity · Facilitate sexual resilience introducing the good enough sex model · Be sexual even when spontaneous desire is lacking

However, typical follow-up consultations after PCa treatments are relatively brief and topics needing review are broad (e.g., discussion of general concerns, review of PSA, assessment of other treatment side effects such as bowel and bladder dysfunction, and commencement of intervention for those side effects). Little time can be afforded to specific counselling regarding the use of ED treatments. Hence, patients are rarely sufficiently prepared for successful use of ED treatments (Davison, Matthew, Elliott, Breckon, & Griffin, 2012; Wittmann et al., 2009). Nurses are playing an increasingly important role in counselling patients regarding management of the sexual implications of cancer treatment (Julien, Thom, & Kline, 2010; Kotronoulas, Papadopoulou, & Patiraki, 2009; Mick, 2007). With increasing demands, physicians rely heavily on nurses to spend more time on patient education and counselling. Moreover, nurses are in an ideal position to complement the often-unbalanced biomedical emphasis on erectile recovery, with special attention to the psychosocial needs of PCa patients, and their partners, seeking treatment for ED.

While the majority of nurses appear to be "theoretically" keen on the idea of addressing patients' sexual health needs, a review of the literature on nurses' attitudes toward addressing the sexual health needs of patients reveals many barriers (Kotronoulas et al., 2009). Barriers include 1) inadequate training, resulting in insufficient knowledge base or experience, 2) low confidence, embarrassment, or discomfort of the health care provider; 3) perceived patient embarrassment or discomfort; 4) the assumption that inquiring about sexuality is an invasion of patient privacy; 5) concerns over uncertainty regarding patients' cultural or religious beliefs about sexuality; and 6) assuming that it is the responsibility of other health care providers on the team to address sexuality (Arrington, 2004; Bober & Sanchez Varela, 2012; Hordern, 2008; Katz, 2005; Kotronoulas et al., 2009).

Hence, continuing education is an important tool for increasing nurses' competence and confidence in addressing the sexual health concerns of oncology patients. In Canada, nurses interested in gaining specialized training in this area are encouraged to consider the Interdisciplinary Professional Oncology Distance Education courses in Sexual Health (<http://www.capo.ca/ipode-project/>) or the annual Intensive Sex Therapy Training Program offered through the University of Guelph (<http://guelph-sexualityconference.ca/>). Nurses new to the area of sexuality can begin with a multi-step approach described by Kotronoulas et al. (2009). These authors suggest beginning with self-study of the literature, followed by continuing medical education and specialized training, seeking consultation or mentorship on a case-by-case and offering clinical intervention via brief successive sessions that will allow a nurse to seek additional resources and information in between sessions (Kotronoulas et al., 2009). A good resource for commencing self-study is the Sadovsky et al. (2010), expert guidelines for sexual intervention in cancer patients.

Initially, it can be daunting to address the sexual concerns of patients, therefore, some nurses may begin by learning how to initiate conversations about sexuality with their patients. In their comprehensive article, Bober and Sanchez Varela provide specific suggestions, including example questions that can be used to initiate conversations about sexuality (Bober & Sanchez Varela, 2012). Mick (2007) describes a list of 10 strategies for improving the uptake of sexuality assessment in nursing practice. Summarized, these strategies include understanding and learning about sexuality, addressing personal discomfort, making a sexual assessment a standard part of the broader assessment process, objectively listening, avoiding assumptions, and providing information to and encouraging questions from patients. Another helpful resource, for both patients and health care providers,

is the Canadian Cancer Society's "Cancer and Sexuality" booklet (Canadian Cancer Society, 2012), which contains education and simple suggestions for many frequently reported sexual difficulties arising in the context of cancer. In addition, nurses should be encouraged to familiarize themselves with one of these models for assessing and discussing sexual difficulties (e.g., ALARM, Anderson, 1990; PLISSIT, Annon, 1976; BETTER, Mick, Hughes, & Cohen, 2007) and begin to routinely implement sexual assessment with their patients.

In addition to implementing sexual assessment as a routine part of holistic care, nurses can also aid in patient education and counselling regarding well-documented challenges that arise in the sexual recovery process. An abundance of literature documenting the psychosocial impact of ED on couples and interventions to help couples adapt has surfaced in the past decade; however, transferring knowledge into practice is often a slow process (Agency for Health Research and Quality, 2001; Straus, Tetroe & Graham, 2009). One reason for this delay is the challenge faced by health care providers in consuming the volume of literature, and in critically evaluating primary research findings in order to apply them in the clinic context (Straus, Tetroe & Graham, 2009). Therefore, specific suggestions are provided in Table 1, based on our review of this literature, and on the clinical and research experience of the authors. These suggestions offer a tailored guide to help nurses anticipate and address challenges that may occur for PCa patients and/or partners during the sexual recovery process.

Begin preparing couples for sexual recovery in advance of PCa treatment

Counselling about ED treatments and sexual recovery should commence prior to PCa treatment (Althof & Needle, 2007; Schover et al., 2002). This will increase the likelihood that expectations will be realistic. Moreover, this prospective approach allows for future challenges and barriers to be anticipated and addressed before they occur. Because pre-treatment expectations are overly optimistic (Wittmann, Chang et al., 2011), patients are poorly prepared to cope with challenges in ED and its treatment that lie ahead. For example, patients often assume that their erections will recover naturally after PCa treatment and that, should they struggle with ED, biomedical treatments will restore their erections with minimal effort (Mulhall, Bella, Briganti, McCullough, & Brock, 2010). Hence, the role of the health care provider is essential in encouraging patients and partners to develop positive, but also realistic expectations about sexual recovery (McCarthy & Fucito, 2005; McCarthy & Thestrup, 2009).

Patients should be provided with accurate erectile recovery rates (Salonia et al., 2012). For example, approximately 50% of all prostatectomy patients take two years, and 25% take longer than three years, to recover some erectile function (Rabbani et al., 2010; Tal, Alphs, Krebs, Nelson, & Mulhall, 2009). Conversely, men who undergo radiation therapy experience gradual declines in sexual functioning, which appear to stabilize approximately three years following treatment (Wiegner & King, 2010). Patients should also be informed that the road to sexual recovery, with or without ED treatments, can take months or years, and may require persistence and flexibility throughout the process (Beck, Robinson, & Carlson, 2013).

In addition, education and intervention should be provided in the couples' context. Research demonstrates that a couples-based approach leads to more effective use of and acceptance of ED treatments (Carvalho, Pereira, Maroco, & Forjaz, 2012). A partner's attitude plays a significant role in whether the patient approaches a health care provider for ED treatment, and also greatly impacts the patient's persistence in seeking effective treatments (Wittmann et al., 2014). Since sexual recovery is enhanced when the sexual needs of both the patient and the

partner are prioritized (Sadovsky et al., 2010), couples should be encouraged to contextualize the sexual recovery process as a shared experience—requiring mutual effort and acceptance (Wittmann et al., 2014).

Promote persistence in the sexual recovery process

Patients, who are willing to try more than one ED treatment, are more likely to find an effective treatment for them (Schover et al., 2002). Most patients fail to appreciate that identifying effective treatments, or combination of treatments, is a process that will require considerable persistence (Beck, Robinson, & Carlson, 2013). Therefore, in the process of trial and error, patients are bound to have experiences when ED treatments fail to produce erections. Unfortunately, repeated "failures" can quickly demoralize couples, and can have a compounding negative effect on expectancy. Efforts can be made to help patients anticipate that failures are bound to occur and that persistence is a key ingredient for successful recovery (Beck, 2011; Beck, Robinson & Carlson, 2013). Realistic expectations about the success of using ED treatments, as well as potential challenges, may buffer patients' sense of failure when ED treatments are not effective (Beck, 2011; Beck, Robinson & Carlson, 2013).

Facilitate communication within the couple

As much as possible, attempts to promote communication and a shared and mutual responsibility for the sexual recovery process will help to strengthen a couple's bond and sense of support (Badr & Carmack-Taylor, 2009; Ezer, Chachamovich, & Chachamovich, 2011; Lambert et al., 2012; Li & Loke, 2013; Regan et al., 2014). Many couples express that communicating about sexual activity and sexual preferences is challenging (Wittmann et al., 2014). However, dyadic sexual communication is positively associated with better sexual functioning, for both male and female cancer patients (Perz, Ussher, & Gilbert, 2014). Nurses can model open and candid conversation when they talk with patients and partners. It provides an excellent opportunity to model for couples, how to communicate about this challenging topic. For example, the language and nature of the conversation may be demonstrated and topics of discussion can be offered. We also recommend that patients and partners be

Table 2: Questions to Promote Couples' Communication about Sexual Renegotiation (Wassersug, Walker & Robinson, 2014, p. 107)
<p>The patient may want to ask the partner:</p> <ul style="list-style-type: none"> · What should we do when you get aroused and I don't? · Is it okay if I bring you to orgasm through touching or oral caressing even though I no longer have full erections? · How do you feel about me using or exploring ED treatments and/or sex toys?
<p>The partner may want to ask the patient:</p> <ul style="list-style-type: none"> · Do you still enjoy me touching you even though you don't get fully sexually aroused? · What kinds of touching do you most enjoy now?
<p>Each may ask each other:</p> <ul style="list-style-type: none"> · Are you comfortable with one of us reaching orgasm even if the other does not? · How do you feel about us touching, caressing, and cuddling without either of us reaching or attempting to reach orgasm? · What do you think about us acquiring a sex toy to use in our sex play?

encouraged to have these conversations about sex outside of the bedroom, rather than in a sexual moment. We speculate that the potential risk for offence or misinterpretation is more likely, when hopes and emotions are high. Moreover, couples can benefit from preparing together, and doing so ahead of time, for how they plan to address sexual difficulties as they arise (Regan et al., 2014). The list of questions included in Table 2 may be used as a guide for couples to prepare and plan for adapting their sexual practices (Wassersug, Walker, & Robinson, 2014, p. 107).

Promote flexibility and renegotiation of sexual practices

Although many patients are initially determined to maintain a sexual relationship, few fully appreciate, in advance of treatment, the significant adjustments this will require to their sexual practices (Boehmer & Babayan, 2004; Fergus, Gray, & Fitch, 2002; Klaeson, Sandell, & Bertero, 2012; Wittmann et al., 2009). Wittmann et al. (2009) recommend encouraging patients to define sexual activity in a broader sense—one that incorporates far more than just intercourse or penetration. Since erections are not necessary for orgasm, couples can be encouraged to engage in a variety of non-penetrative sexual activities that promote pleasure. Such strategies may include sensual full body massage, masturbation in the presence of one's partner, mutual genital touching, oral sex, genital on genital outercourse, and the use of sexual toys such as vibrators or dildos.

Couples can also be introduced to a novel form of penetrative intercourse that does not rely on erections—through the use of a strap-on dildo (an external prosthetic penis harnessed to the man's hips), penetration of the partner is achieved, while the partner engages in manual stimulation of the man's genitals facilitating pleasurable stimulation (Gray & Klotz, 2004). By allowing the body to engage in the same physical movements (e.g. pelvic thrusting, physical contact) paired with sexual stimulation, orgasm can be achieved and sensation is reported to be remarkably similar to penile-vaginal intercourse for both the patient, and his partner (Warkentin, Gray, & Wassersug, 2006). If engaging in these strategies, couples should be advised that stimulation of a non-erect penis can require more effort and care should be taken to avoid irritation of the skin by using a good water or silicone-based lubricant available at most grocery stores and pharmacies.

Hawkins et al. argue that health care providers should encourage cancer patients to try alternative modes of sexual behaviour, in a way that challenges or circumvents "feelings of guilt or inadequacy" (2009, p 8). A nurse, who openly discusses these options with their patients, demonstrates that these options are viable, acceptable, and rewarding alternatives to sexual activity that do not require an erection. Expanding the sexual repertoire to include more options for activity can help couples experience pleasure and enjoyment and can promote a rewarding sexual experience, even in the absence of erections.

While many couples are ultimately able to achieve penetrative intercourse, appreciating a wider repertoire of sexual activity has been associated with greater satisfaction and less devastation when sexual encounters do not culminate in intercourse and orgasm (Beck, 2011; Reese, Keefe, Somers, & Abernethy, 2010). Many patients have described success in renegotiating sexual practices to include more focus on pleasurable touching and caressing, and non-penetrative forms of sex, rather than aiming to achieve penetration and orgasm (Barsky, Friedman, & Rosen, 2006; Beck, 2011; Reese et al., 2010; Ussher, Perz, Gilbert, Wong, & Hobbs, 2013; Walker & Robinson, 2011a). However, the process of sexual renegotiation may be challenging. It is estimated that only 15% of couples are actually successful renegotiating sexuality on their own (Gilbert et al., 2009), therefore, couples will likely require support in this process.

Communication is an essential feature of successful renegotiation (Gilbert, Ussher, & Hawkins, 2009; Reese et al., 2010); therefore, strategies targeted at enhancing communication in this area may be helpful (see Table 1 for suggestions). This process of redefining a construct that prior to ED did not need a definition will require the couple to discuss and develop a new mutually shared definition of sexual intimacy. Helping patients and their partners redefine and broaden their sexual practices is an essential part of helping couples adapt their sexual activities, as this offers patients a wider variety of options from which to choose.

Actively address grief associated with loss of sexual functioning

Any change in sexual activity requires a period of adaptation. Learning a new sexual repertoire requires effort. It can be difficult for patients and partners to adapt to these changes and many individuals report experiencing an overwhelming sense of grief and loss (Gilbert et al., 2009; Walker & Robinson, 2011b; Wittmann, Foley, & Balon, 2011). As long as couples are seeking restoration of the same sexual relationship they had prior to treatment, it is likely that they will be disappointed. The desire for restoring the sexual relationship couples had prior to treatment is exacerbated by the presentation of ED treatments in the media. Namely, the media often mislead couples to believe that with their use, men will function "as good as new" (Irvine, 2006), yet, in reality, patients struggle with an immense disturbance to their sense of masculinity (Fergus et al., 2002; Gannon, Guerro-Blanco, Patel, & Abel, 2010). Patients frequently report that one of the main reasons they give up trying to recover a sexual relationship after treatment, is that when they try, they are reminded of their immense loss, because of course, they are not "as good as new" (Beck, 2011; Fergus et al., 2002; Walker & Robinson, 2011b; Wittmann et al., 2014).

By way of comparison, a person with a spinal cord injury may be reluctant to use a wheelchair because they believe that doing so makes them "disabled". This reluctance prevents the individual from recovering mobility. Yet, by grieving the loss of functioning legs, and embracing the use of a wheelchair the individual, while not regaining the use of his legs, does recover mobility (Wassersug, 2009). This process certainly requires some degree of acceptance of a loss (d'Ardenne, 2004; Perez, Skinner, & Meyerowitz, 2002). Grieving is an important step in the acceptance process. We believe that until patients are able to grieve the loss of their former sex life, they will find their new sex life unsatisfying.

Couples should be advised that grieving is an encouraged and healthy part of the sexual recovery process (Wittmann, Foley, & Balon, 2011). Nurses can assist patients (and partners) in their grief by normalizing and validating the process. In addition, many tertiary cancer centres have psychosocial staff (e.g., psychologists, social workers) that are trained in grief counselling, and referrals or consultation with these staff, regarding patients with more severe grief or depression may also be helpful.

Encourage couples to examine the goal of sexual activity

Redirecting goals to ensure that they are attainable is key in adapting to chronic illness (Wrosch & Scheier, 2003; Wrosch, Miller, Scheier, & de Pontet, 2007). In the sexual context, unattainable goals need to be abandoned and new goals developed; where penetration may not be attainable, sexual pleasure and relational intimacy still are. A certain degree of acceptance of one's situation is necessary before a new and redefined sexual reality can be embraced. The more couples see the goal of sexual activity to be a means to relational intimacy, the more flexible they may be about what they include in their sexual practices (Beck, Robinson, & Carlson, 2013). Nurses can help couples identify their motivations for continuing to be sexual. For example, Meston and Buss (2007) document four different categories for sexual motivation:

1) Physical, including stress reduction, pleasure, physical desirability, and experience seeking; 2) Goal Attainment, such as resources, social status, revenge, and utilitarian; 3) Emotional, including love, commitment and expression and; 4) Insecurity, including self-esteem boost, duty/pressure, and mate guarding. As much as possible, positive motivations—many of which are physical and emotional—such as pleasure, desirability, expression of commitment, and love, can all be considered desirable and attainable goals of sexual intimacy. A patient may have to grieve the specific loss of their previous goals in order to be able to shift to new goals. Such a shift can both help to promote acceptance and to assist with the process of renegotiating sexuality.

Facilitate sexual resilience by challenging the pass/fail mentality of sexual activity

Sexual resilience is a term used to describe the process of withstanding, adapting, and finding solutions, to events and experiences that challenge a sexual relationship (Beck & Robinson, in press). Sexual renegotiation and goal adjustment, as discussed previously, are examples of sexual resilience. One way to promote sexual resilience is to encourage patients to adopt the “good enough sex” model, which broadens their definition of sex by challenging the idea that sex must include intercourse, and/or orgasm, to be deemed successful (McCarthy & Fucito, 2005; McCarthy & Thestrup, 2009). These authors suggest that sexually resilient men, women, and couples, “are open to sensual and erotic alternative scenarios”, which are rewarding and enjoyable experiences, even when erections fail to develop (McCarthy & Thestrup, 2009, p 593). “Sensual scenarios” are considered intimate moments that do not involve sexual stimulation (e.g. giving sensual massage, sharing an intimate meal, dancing, lying naked together, being playful), whereas “erotic scenarios” are those which focus on non-penetrative forms of sexual pleasuring (McCarthy, 2001). Couples, who eliminate this pass/fail mentality of sexual activity, and are open to other experiences, may experience less devastation when sexual encounters do not turn out as they had hoped, and in turn higher rates of satisfaction with ED treatments. These authors argue that healthy sexuality includes some sexual encounters that are great for both partners, some that are better for one more than the other, some that are mediocre, and others that are “failures”, and propose that resilience is fostered when patients learn to expect (and accept) some degree of erectile failure as a part of normal variation (McCarthy, 2001). Moreover, this perspective to sexual activity may result in greater success in the implementation of non-penetrative sexual strategies as “erotic scenarios” as seen to be as valuable and rewarding as sexual intercourse. While there is substantial research demonstrating the health rewards for heterosexual couples associated with penile-vaginal intercourse (Brody, 2010; Brody & Weiss, 2011; Costa & Brody, 2012), importantly, couples report that the maintenance of alternative sexual practices (a.k.a. erotic scenarios; McCarthy, 2001) is important for a myriad of psychosocial aspects of their lives, including marital satisfaction, relational intimacy, and physical pleasure (Beck, 2011).

In addition, patients may benefit from learning that sexual difficulties are quite common and that the likelihood of experiencing ED increases with age (Laumann et al., 2005). For instance, even couples that are satisfied with their sexual relationship report experiencing, on average, one to three sexual problems (Lindau et al., 2007). Sexual difficulties do not automatically stop couples from having a satisfying sexual relationship, especially in the context of PCa recovery. Furthermore, patients and their partners can be encouraged to reflect upon what they value about sexual activity (e.g., intimacy, pleasure, closeness, fun, being desired, feeling

attractive, stress relief etc.). Identifying their values will help determine if those important aspects of the sexual experience can still be maintained, despite the loss of erectile function or ability to have penetrative intercourse.

Be sexual even when spontaneous desire is lacking

Declines in libido frequently result from PCa treatment (Le et al., 2010; Potosky et al., 2004); with declines being the most profound in PCa patients on androgen deprivation therapy. Therefore, sexual activity will likely require engaging in sexual stimulation before a man becomes aroused. We have found it helpful to remind patients that, while they may not initially experience physiological or spontaneous sexual desire, they can make a conscious choice to engage in sexual activity and, in the process, become sexually aroused (Basson, 2005; Basson & Schultz, 2007). For many patients this process is facilitated by identifying what they value about sexual intimacy (Meston & Buss, 2007). The broader the values are, the stronger their motivations should be to engage in “renegotiated” sexual activity or alternatives forms of sexuality beyond intercourse. Likewise, sexual renegotiation is often more associated with valuing sexual activity for relational intimacy (e.g., a means of staying connected with one’s partner, feeling close and comforted (Beck et al., 2013). Such motivators can act as a catalyst for sexual activity, rather than being motivated only for physical pleasure, where one may rely more heavily on spontaneous physiological desire. As well, patients and partners motivated to engage in sexual activity because of relational intimacy, may find that once they begin engaging in sexual stimulation, that sexual arousal and excitement follow (Basson, 2005). In addition, once sexual activity is started, the process of attuning to sensations of arousal in the body other than erections (e.g., increased heart rate, vasocongestion, increased sensitivity of skin to touch) should also help increase self-awareness of arousal.

In addition, couples can be encouraged to schedule sexual activity as a way of addressing reduced libido. Similarly to how looking at the clock may remind a person to eat when they are not particularly hungry, a routine for sexual activity keeps the benefits of sexual activity salient and present in one’s memory. This may, in turn, increase motivation to engage in future sexual activity (Robinson & Lounsbury, 2010). Complementing the discussion on sexual values, a routine for sexual activity also has the benefit of maintaining emotional and intimate connection between partners. Moreover, when the sexual relationship is largely dependent on the male’s libido for instigation of sexual activity, some partners have considerable difficulty assuming the initiator role in instigating sexual activity (Wittmann et al., 2014). Therefore, scheduling sexual activity can be offered as a work-around for waiting for spontaneous urges that may never come.

To encourage planning for sexual activity, patients can be invited to reflect on the fact there are very few other valued activities in one’s lives that are left unplanned (e.g., vacations, seeing friends, golfing, dinner out). Considering that one of the most commonly cited reasons for the discontinuation of ED treatment using Sildenafil, is lack of opportunity (Klotz et al., 2005), scheduling sexual activities can help to circumvent this barrier. Scheduling an activity demonstrates its priority. For some, witnessing their partner faithfully setting aside time for sexual intimacy makes them feel more valued by their partner and can improve the overall sexual experience (Beck, 2011).

Conclusion

Patients recovering from ED after PCa treatment have many biomedical options aimed to restore erectile function; however, patients routinely report being inadequately prepared to cope with difficulties with these treatments. Furthermore, the vast

majority of ED treatments are biomedical in nature, and are introduced to patients in such a way that psychosocial concerns are typically overlooked. This may be a key contributing factor to the low rates of satisfaction with ED treatment use. Approximately half of all patients are willing to try ED treatments, thus these treatments are not applicable for a significant proportion of patients. Therefore, non-penetrative strategies for maintaining sexual intimacy should also be offered to patients and should not solely be offered to patients as a default when ED treatments fail, but rather as a practical and viable way of maintaining sexual activity without necessitating erections. If introduced at the outset of PCa treatment, these broader strategies should help promote and encourage flexibility in sexual practices, which is a key part of successful sexual renegotiation. ED treatments are not without their challenges and few patients (or partners) appreciate that the road to erectile recovery is a long one, which will require flexibility and persistence.

The oncology or urology nurse plays an increasingly important role in the education and counselling of PCa patients. They can

offer patients a perspective that de-emphasizes the solely biomedical approach to erectile recovery, and addresses sexual issues from a biopsychosocial perspective. While additional training in sexual counselling may be important to increase nurses' confidence and competence in addressing sexuality issues, nurses can have a huge impact on the sexual recovery of PCa patients through patient education. Namely, they have the opportunity to provide information to patients prior to their treatment, well before ED has set in. In many cases, nurses are also involved in ongoing follow-up with patients and therefore familiarizing oneself with specific strategies and suggestions will also equip them to offer ongoing support to PCa patients engaged in the sexual recovery process. These strategies, specific to PCa patients, are designed to enhance the success of ED treatments and promote sexual recovery in general. Promoting preparation and development of realistic expectations, along with persistence, communication, flexibility, actively addressing grief, adjusting goals, and exploring motivators for sexual activity other than sexual libido, are all practical ways to help promote sexual recovery in PCa patients. ❏

REFERENCES

- Agency for Health Research and Quality (2001). Making health care safer: A critical analysis of patient safety practices. *Evidence Report/Technology Assessment*, No. 43.
- Althof, S., & Needle, R. (2007). Sex therapy in male sexual dysfunction. In J. P. Mulhall, L. Incrocci, I. Goldstein & R. C. Rosen (Eds.), *Cancer and sexual health* (pp. 731-739). New York, New York: Humana Press.
- Althof, S.E. (2002). When an erection alone is not enough: Biopsychosocial obstacles to lovemaking. *International Journal of Impotence Research*, 14(Suppl 1), S99-S104.
- Anderson, B.L. (1990). How cancer affects sexual functioning. *Oncology*, 4(6), 81-88.
- Annon, J.S. (1976). The PLISSIT model: A proposed conceptual scheme for the behavioral treatment of sexual problems. *Journal of Sex Education & Therapy*, 2(2), 1-15.
- Arrington, M.I. (2004). To heal or not to heal? On prostate cancer, physician-patient communication, and sexuality. *Journal of Loss and Trauma*, 9, 159-166.
- Badr, H., & Carmack-Taylor, C.L. (2009). Sexual dysfunction and spousal communication in couples coping with prostate cancer. *Psycho-Oncology*, 18(7), 735-746.
- Barry, M.J., Gallagher, P.M., Skinner, J.S., & Fowler, F.J., (2012). Adverse effects of robotic-assisted laparoscopic versus open retropubic radical prostatectomy among a nationwide random sample of medicare-age men. *Journal of Clinical Oncology*, 30(5), 513-518.
- Barsky, J.L., Friedman, M.A., & Rosen, R.C. (2006). Sexual dysfunction and chronic illness: The role of flexibility in coping. *Journal of Sex and Marital Therapy*, 32(3), 235-253.
- Basson, R. (2005). Women's sexual dysfunction: Revised and expanded definitions. *Canadian Medical Association Journal*, 172(10), 1327-1333.
- Basson, R. & Schultz, W.W. (2007). Sexual sequelae of general medical disorders. *Lancet*, 369(9559), 409-424.
- Beck, A.M. & Robinson, J.W. (in press). *Sexual resilience in couples*.
- Beck, A.M., Robinson, J.W., & Carlson, L.E. (2013). Sexual values as the key to maintaining satisfying sex after prostate cancer treatment: The physical pleasure-relational intimacy model of sexual motivation. *Archives Sexual Behavior*, 42, 1637-47.
- Beck, A.M. (2011). *Couples' maintenance of sexual intimacy after treatment for prostate cancer: A grounded theory study*. University of Calgary, Calgary, AB.
- Bergman, J., Gore, J., Penson, D., Kwan, L., & Litwin, M. (2009). Erectile aid use by men treated for localized prostate cancer. *The Journal of Urology*, 182(2), 649-54.
- Berry, M.D., & Berry, P.D. (2013). Contemporary treatment of sexual dysfunction: Reexamining the biopsychosocial model. *Journal of Sexual Medicine*, 10(11), 2627-43.
- Bober, S.L., & Sanchez Varela, V. (2012). Sexuality in adult cancer survivors: Challenges and intervention. *Journal of Clinical Oncology*, 30(30), 3712-3719.
- Boberg, E.W., Gustafson, D.H., Hawkins, R.P., Offord, K.P., Koch, C., Wen, K., et al. (2003). Assessing the unmet information, support and care delivery needs of men with prostate cancer. *Patient Education and Counselling*, 49(3), 233-242.
- Boehmer, U., & Babayan, R.K. (2004). Facing erectile dysfunction due to prostate cancer treatment: Perspectives of men and their partners. *Cancer Investigation*, 22(6), 840-848.
- Brody, S. (2010). The relative health benefits of different sexual activities. *The Journal of Sexual Medicine*, 7(4 Pt 1), 1336-1361.
- Brody, S., & Weiss, P. (2011). Simultaneous penile-vaginal intercourse orgasm is associated with satisfaction (sexual, life, partnership, and mental health). *The Journal of Sexual Medicine*, 8(3), 734-741.
- Canadian Cancer Society. (2012). Sexuality and cancer. Canada: Canadian Cancer Society.
- Carvalho, A.A., Pereira, N.M., Maroco, J., & Forjaz, V. (2012). Dropout in the treatment of erectile dysfunction with PDE5: A study on predictors and a qualitative analysis of reasons for discontinuation. *The Journal of Sexual Medicine*, 9(9), 2361-2369.
- Costa, R.M., & Brody, S. (2012). Greater resting heart rate variability is associated with orgasms through penile-vaginal intercourse, but not with orgasms from other sources. *The Journal of Sexual Medicine*, 9(1), 188-197.
- Crowe, H., & Costello, A.J. (2003). Prostate cancer: Perspectives on quality of life and impact of treatment on patients and their partners. *Urologic Nursing*, 23(4), 279-285.
- d'Ardenne, P. (2004). The couple sharing long-term illness. *Sexual and Relationship Therapy*, 19(3), 1468-1479.
- Davison, B.J., Matthew, A., Elliott, S.L., Breckon, E., & Griffin, S. (2012). Assessing couples' preferences for postoperative sexual rehabilitation before radical prostatectomy. *BJU International*, 110, 1529-535.

- Ezer, H., Chachamovich, J.L., & Chachamovich, E. (2011). Do men and their wives see it the same way? Congruence within couples during the first year of prostate cancer. *Psycho-Oncology*, 20(2), 155-164.
- Fergus, K.D., Gray, R.E., & Fitch, M.I. (2002). Sexual dysfunction and the preservation of manhood: Experiences of men with prostate cancer. *Journal of Health Psychology*, 7(3), 303-316.
- Fisher, W.A., Eardley, I., McCabe, M., & Sand, M. (2009). Erectile dysfunction (ED) is a shared sexual concern of couples II: Association of female partner characteristics with male partner ED treatment seeking and phosphodiesterase type 5 inhibitor utilization. *The Journal of Sexual Medicine*, 6(11), 3111-3124.
- Gannon, K., Guerro-Blanco, M., Patel, A., & Abel, P. (2010). Re-constructing masculinity following radical prostatectomy for prostate cancer. *The Aging Male*, 13(4), 258-264.
- Gilbert, E., Ussher, J.M., & Hawkins, Y. (2009). Accounts of disruptions to sexuality following cancer: The perspective of informal carers who are partners of a person with cancer. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*, 13(5), 253-260.
- Gray, R.E., & Klotz, L.H. (2004). Restoring sexual function in prostate cancer patients: An innovative approach. *Canadian Journal of Urology*, 11(3), 2285-2289.
- Gray, R.E., Fitch, M.I., Phillips, C., Labrecque, M., Fergus, K.D., & Klotz, L. (2002). Prostate cancer and erectile dysfunction: Men's experiences. *International Journal of Men's Health*, 1, 15-29.
- Hawkins, Y., Ussher, J., Gilbert, E., Perz, J., Sandoval, M., & Sundquist, K. (2009). Changes in sexuality and intimacy after the diagnosis and treatment of cancer. *Cancer Nursing*, 32(4), 271-280.
- Hordern, A. (2008). Intimacy and sexuality after cancer: A critical review of the literature. *Cancer Nursing*, 31(2), E9-17.
- Irvine, J.M. (2006). Selling viagra. *Contexts*, 5(2), 39-44.
- Johansson, E., Steineck, G., Holmberg, L., Johansson, J.E., Nyberg, T., Ruutu, M., et al. (2011). Long-term quality-of-life outcomes after radical prostatectomy or watchful waiting: The Scandinavian prostate cancer group-4 randomised trial. *The Lancet Oncology*, 12(9), 891-899.
- Julien, J.O., Thom, B., & Kline, N.E. (2010). Identification of barriers to sexual health assessment in oncology nursing practice. *Oncology Nursing Forum*, 37(3), E186-190.
- Katz, A. (2005). The sounds of silence: Sexuality information for cancer patients. *Journal of Clinical Oncology*, 23(1), 238-241.
- Kirby, M.G., White, I.D., Butcher, J., Challacombe, B., Coe, J., Grover, L., et al. (2014). Development of UK recommendations on treatment for post-surgical erectile dysfunction. *International Journal of Clinical Practice*, 68(5), 590-608.
- Klaeson, K., Sandell, K., & Bertero, C.M. (2012). Sexuality in the context of prostate cancer narratives. *Qualitative Health Research*, 22(9), 1184-94.
- Klotz, T., Mathers, M., Klotz, R., & Sommer, F. (2005). Why do patients with erectile dysfunction abandon effective therapy with sildenafil (viagra®)? *International Journal of Impotence Research*, 17, 2-4.
- Kotronoulas, G., Papadopoulou, C., & Patiraki, E. (2009). Nurses' knowledge, attitudes, and practices regarding provision of sexual health care in patients with cancer: Critical review of the evidence. *Supportive Care Cancer*, 17(5), 479-501.
- Lambert, S.D., Girgis, A., Turner, J., McElduff, P., Kayser, K., & Vallentine, P. (2012). A pilot randomized controlled trial of the feasibility of a self-directed coping skills intervention for couples facing prostate cancer: Rational and design. *Health and Quality of Life Outcomes*, 10, 119.
- Laumann, E.O., Nicolosi, A., Glasser, D.B., Paik, A., Gingell, C., Moreira, E., et al. (2005). Sexual problems among women and men aged 40-80 y: Prevalence and correlates identified in the global study of sexual attitudes and behaviors. *International Journal of Impotence Research*, 17, 39-57.
- Le, J.D., Cooperberg, M.R., Sadetsky, N., Hittelman, A.B., Meng, M.V., Cowan, J.E., et al. (2010). Changes in specific domains of sexual function and sexual bother after radical prostatectomy. *BJU International*, 106(7), 1022-1029.
- Letts, C., Tamlyn, K., & Byers, E. S. (2010). Exploring the impact of prostate cancer on men's sexual well-being. *Journal of Psychosocial Oncology*, 28(5), 490-510.
- Li, Q., & Loke, A.Y. (2013). A literature review on the mutual impact of the spousal caregiver—cancer patients dyads: 'Communication', 'reciprocal influence' and 'caregiver-patient congruence'. *European Journal of Oncology Nursing*, 18(1), 58-65.
- Lindau, S., Schumm, L., Laumann, E., Levinson, W., O'Muircheartaigh, C., & Waite, L. (2007). A study of sexuality and health among older adults in the United States. *New England Journal of Medicine*, 357, 762-74.
- Lintz, K., Moynihan, C., Steginga, S., Norman, A., Eeles, R., Huddart, R., et al. (2003). Prostate cancer patient's support and psychological care needs: Survey from a non-surgical oncology clinic. *Psycho-Oncology*, 12, 769-783.
- Manne, S., Badr, H., Zaider, T., Nelson, C., & Kissane, D. (2010). Cancer-related communication, relationship intimacy, and psychological distress among couples coping with localized prostate cancer. *Journal of Cancer Survivorship: Research and Practice*, 4(1), 74-85.
- Matthew, A.G., Goldman, A., Trachtenberg, J., Robinson, J., Horsburgh, S., Currie, K., et al. (2005). Sexual dysfunction after radical prostatectomy: Prevalence, treatments, restricted use of treatments and distress. *The Journal of Urology*, 174, 2105-2110.
- McCarthy, B. (2001). Relapse prevention strategies and techniques with erectile dysfunction. *Journal of Sex & Marital Therapy*, 27(1), 1-8.
- McCarthy, B., & Fucito, L.M. (2005). Integrating medication, realistic expectations, and therapeutic interventions in the treatment of male sexual dysfunction. *Journal of Sex & Marital Therapy*, 31, 319-328.
- McCarthy, B., & Thestrup, M. (2009). Men, intimacy and eroticism. *Journal Sexual Medicine*, 6(2), 588-94.
- Meston, C.M., & Buss, D.M. (2007). Why humans have sex. *Archives of Sexual Behavior*, 36(4), 477-507.
- Mick, J., Hughes, M., & Cohen, M.Z. (2007). Using the BETTER model to assess sexuality. *Clinical Journal of Oncology Nursing*, 8(1), 84-86.
- Mick, J.M. (2007). Sexuality assessment: 10 strategies for improvement. *Clinical Journal of Oncology Nursing*, 11(5), 671-675.
- Montorsi, F., Adakan, G., Becher, E., Giuliano, F., Khoury, S., Lue, T.F., et al. (2010). Summary of the recommendations on sexual dysfunctions in men. *The Journal of Sexual Medicine*, 7(11), 3572-3588.
- Mulhall, J.P., Bella, A.J., Briganti, A., McCullough, A., & Brock, G. (2010). Erectile dysfunction rehabilitation in the radical prostatectomy patient. *Journal of Sexual Medicine*, 7(4), Pt 2, 1687-1698.
- Nelson, C.J., Scardino, P.T., Eastham, J.A., & Mulhall, J.P. (2013). Back to baseline: Erectile function recovery after radical prostatectomy from the patients' perspective. *Journal of Sexual Medicine*, 10, 1636-1643.
- Penson, D.F. (2001). The effect of erectile dysfunction on quality of life following treatment for localized prostate cancer. *Reviews in Urology*, 3(3), 113-119.

- Perez, M.A., Skinner, E.C., & Meyerowitz, B.E. (2002). Sexuality and intimacy following radical prostatectomy: Patient and partner perspectives. *Health Psychology, 21*(3), 288-293.
- Perz, J., Ussher, J.M., & Gilbert, E. (2014). Feeling well and talking about sex: Psycho-social predictors of sexual functioning after cancer. *BMC Cancer, 14*, 22-19.
- Potosky, A.L., Davis, W.W., Hoffman, R.M., Stanford, J.L., Stephenson, R.A., Penson, D.F., et al. (2004). Five-year outcomes after prostatectomy or radiotherapy for prostate cancer: The prostate cancer outcomes study. *Journal of the National Cancer Institute, 96*(18), 1358-1367.
- Rabbani, F., Schiff, J., Piecuch, M., Yunis, L.H., Eastham, J.A., Scardino, P.T., et al. (2010). Time course of recovery of erectile function after radical retropubic prostatectomy: Does anyone recover after 2 years? *The Journal of Sexual Medicine, 7*(12), 3984-3990.
- Reese, J.B., Keefe, F.J., Somers, T.J., & Abernethy, A.P. (2010). Coping with sexual concerns after cancer: The use of flexible coping. *Supportive Care in Cancer, 18*(7), 785-800.
- Regan, T.W., Lambert, S.D., Kelly, B., McElduff, P., Girgis, A., Kayser, K., et al. (2014). Coping with cancer: Cross-sectional relationship between dyadic coping and anxiety, depression, and relationship satisfaction for patients with prostate cancer and their spouses. *Patient Education and Counselling*. Epub ahead of print.
- Rivers, B.M., August, E.M., Gwede, C.K., Hart, A., Donovan, K.A., Pow-Sang, J.M., et al. (2011). Psychosocial issues related to sexual functioning among African-American prostate cancer survivors and their spouses. *Psycho-Oncology, 20*(1), 106-110.
- Robinson, J.W., & Lounsbury, J.J. (2010). Communication about sexuality in cancer care. In D. Kissane, B. D. Bultz, P. Butor & I. Finlay (Eds.), *Handbook of communication in oncology and palliative care* (pp. 409-424). New York, N.Y.: Oxford Press.
- Sadovsky, R., Basson, R., Krychman, M., Morales, A.M., Schover, L., Wang, R., et al. (2010). Cancer and sexual problems. *International Society for Sexual Medicine, 7*, 349-373.
- Salonia, A., Burnett, A.L., Graefen, M., Hatzimouratidis, K., Montorsi, F., Mulhall, J.P., et al. (2012). Prevention and management of postprostatectomy sexual dysfunctions part 2: Recovery and preservation of erectile function, sexual desire, and orgasmic function. *European Urology, 62*(2), 273-286.
- Salonia, A., Gallina, A., Zanni, G., Briganti, A., Deho, F., Sacca, A., et al. (2008). Acceptance of and discontinuation rate from erectile dysfunction oral treatment in patients following bilateral nerve-sparing radical prostatectomy. *European Urology, 53*(3), 564-570.
- Schover, L. R., Fouladi, R. T., Warneke, C. L., Neese, L., Klein, E. A., Zippe, C., et al. (2002). The use of treatments for erectile dysfunction among survivors of prostate carcinoma. *Cancer, 95*, 2397-2407.
- Schover, L.R., van der Kaaij, M., van Dorst, E., Cruetzberg, C., Huyghe, E., & Kiserud, C.E. (2014). Sexual dysfunction and infertility as late effects of cancer treatment. *EJC Supplements*. Epub ahead of print.
- Schover, L.R., Fouladi, R.T., Warneke, C.L., Neese, L., Klein, E.A., Zippe, C., et al. (2004). Seeking help for erectile dysfunction after treatment for prostate cancer. *Archives of Sexual Behavior, 33*(5), 443-454.
- Shindel, A., Quayle, S., Yan, Y., Husain, A., & Naughton, C. (2005). Sexual dysfunction in female partners of men who have undergone radical prostatectomy correlates with sexual dysfunction of the male partner. *Journal of Sexual Medicine, 2*(6), 833-841.
- Steginga, S.K., Occhipinti, S., Dunn, J., Gardiner, R.A., Heathcote, P., & Yaxley, J. (2001). The supportive care needs of men with prostate cancer (2000). *Psycho-Oncology, 10*(1), 66-75.
- Steinsvik, E.A., Axcrone, K., Dahl, A.A., Eri, L.M., Stensvold, A., & Fossa, S.D. (2012). Can sexual bother after radical prostatectomy be predicted preoperatively? Findings from a prospective national study of the relation between sexual function, activity and bother. *BJU International, 109*(9), 1366-1374.
- Stephenson, R.A., Mori, M., Hsieh, Y.C., Beer, T.M., Stanford, J.L., Gilliland, F.D., et al. (2005). Treatment of erectile dysfunction following therapy for clinically localized prostate cancer: Patient reported use and outcomes from the surveillance, epidemiology, and end results prostate cancer outcomes study. *The Journal of Urology, 174*(2), 646-50.
- Straus, S.E., Tetroe, J., & Graham, I. (2009). Defining knowledge translation. *CMAJ, 181*(3-4) 165-168.
- Tal, R., Alphs, H.H., Krebs, P., Nelson, C.J., & Mulhall, J.P. (2009). Erectile function recovery rate after radical prostatectomy: A meta-analysis. *The Journal of Sexual Medicine, 6*(9), 2538-2546.
- Ussher, J.M., Perz, J., Gilbert, E., Wong, W.K.T., & Hobbs, K. (2013). Renegotiating sex after cancer: Resisting the coital imperative. *Cancer Nursing, 36*(6), 454-462.
- Walker, L.M., & Robinson, J.W. (2011a). A description of heterosexual couples' sexual adjustment to androgen deprivation therapy for prostate cancer. *Psycho-Oncology, 20*(8), 880-888.
- Walker, L.M., & Robinson, J.W. (2011b). Sexual adjustment to androgen deprivation therapy: Struggles and strategies. *Qualitative Health Research, 21*, 444-53.
- Warkentin, K.M., Gray, R.E., & Wassersug, R.J. (2006). Restoration of satisfying sex for a castrated cancer patient with complete impotence: A case study. *Journal of Sex & Marital Therapy, 32*, 389-399.
- Wassersug, R.J. (2009). Mastering emasculation. *Journal of Clinical Oncology, 27*(4), 634-636.
- Wassersug, R.J., Walker, L.M., & Robinson, J.W. (2014). *Androgen deprivation therapy: An essential guide for prostate cancer patients and their loved ones*. New York: Demos Health.
- Wiegner, E.A., & King, C.R. (2010). Sexual function after stereotactic body radiotherapy for prostate cancer: Results of a prospective clinical trial. *International Journal of Radiation Oncology, Biology, Physics, 78*(2), 442-448.
- Wittmann, D., Carolan, M., Given, B., Skolarus, T.A., An, L., Palapattu, G., et al. (2014). Exploring the role of the partner in couples' sexual recovery after surgery for prostate cancer. *Supportive Care Cancer*. Epub ahead of print
- Wittmann, D., Chang, H., Coelho, M., Hollenbeck, B., Montie, J.E., & Wood, D.P. (2011). Patient preoperative expectations of urinary, bowel, hormonal and sexual functioning do not match actual outcomes 1 year after radical prostatectomy. *The Journal of Urology, 186*, 494-499.
- Wittmann, D., Foley, S., & Balon, R. (2011). A biopsychosocial approach to sexual recovery after prostate surgery: The role of grief and mourning. *Journal of Sex & Marital Therapy, 37*(2), 130-44.
- Wittmann, D., Montie, J.E., Hamstra, D.A., Sandler, H., & Wood, D.P. (2009). Counselling patients about sexual health when considering post-prostatectomy radiation treatment. *International Journal of Impotence Research, 21*(5), 275-284.
- Wrosch, C., Miller, G.E., Scheier, M.F., & de Pontet, S.B. (2007). Giving up on unattainable goals: Benefits for health? *Personality Social Psychology Bulletin, 33*(2), 251-65.
- Wrosch, C., & Scheier, M.F. (2003). Personality and quality of life: The importance of optimism and goal adjustment. *Qualitative Life Research, 12*(Suppl. 1), 59-72.