

Predictors of Patient and Partner Satisfaction Following Radical Prostatectomy



Cailey Guercio, BS, and Akanksha Mehta, MD, MS

ABSTRACT

Introduction: The diagnosis and treatment of prostate cancer adversely affects the physical and emotional well-being of patients and partners and has been associated with sexual dysfunction in patients and their intimate partners.

Aim: To identify predictors of sexual satisfaction in prostate cancer survivors and their partners based on a review of the current literature.

Methods: We performed a comprehensive review of the PubMed database from January 2000 to May 2017 focused on the (i) prevalence of patient and partner sexual dysfunction related to radical prostatectomy, (ii) differences in patient and partner perspectives of sexual function and dysfunction, and (iii) predictors of patient and partner sexual satisfaction after radical prostatectomy.

Main Outcome Measures: Patient- and partner-reported sexual satisfaction.

Results: There is a paucity of published data examining sexual satisfaction in prostate cancer survivors and their partners. Patients and partners can have different expectations of sexual outcomes after radical prostatectomy and different attitudes toward the relative importance of recovery of sexual function after surgery. Available data suggest that patients' and partners' mental and physical health and the quality of communication between them are important contributors to their sexual satisfaction. Patient-perceived partner support also is associated with better patient-reported erectile function and greater relationship satisfaction.

Conclusion: Mental health, physical health, quality of interpersonal communication, and patient-perceived partner support appear to be the most important predictors of sexual satisfaction for patients and partners in the post-prostatectomy period. There is a definite need for further research on this topic to develop interventions to improve sexual function and quality of life for prostate cancer survivors and their intimate partners. **Guercio C, Mehta A. Predictors of Patient and Partner Satisfaction Following Radical Prostatectomy. Sex Med Rev 2018;6:295–301.**

Copyright © 2017, International Society for Sexual Medicine. Published by Elsevier Inc. All rights reserved.

Key Words: Sexual Dysfunction; Sexual Satisfaction; Prostate Cancer; Radical Prostatectomy; Sexual Partners; Spouses

INTRODUCTION

Erectile dysfunction (ED) has meaningful biological, psychological, and social effects on the quality of life of affected individuals and their sexual partners. Of men undergoing radical prostatectomy (RP), the estimated prevalence of ED varies from 50% to 80%, depending on how ED is defined, when in the postoperative period it is measured, and how successfully it is treated.^{1–3} Untreated ED can cause frustration, anxiety, and

depression for patients and partners, potentially culminating in separation and/or divorce.^{4–6} Prostate cancer survivors and their partners are especially at risk for these undesirable outcomes.

The goal of treatment of ED is achievement of a satisfactory sex life for couples engaged in sexual relationships. Understanding the predictors of sexual satisfaction for patients and partners is essential for achieving this overall goal. Demographic factors, such as age, clinical factors, such as overall health, relationship and psychological factors, and sexual function have been shown to be critical predictors of sexual and relationship satisfaction in the general population.⁷

A growing body of literature supports the use of sexual partner-engaged approaches to assist ED treatment and rehabilitation.⁸ Partner involvement in the evaluation and treatment of

Received July 13, 2017. Accepted August 17, 2017.

Department of Urology, Emory University School of Medicine, Atlanta, GA, USA

Copyright © 2017, International Society for Sexual Medicine. Published by Elsevier Inc. All rights reserved.

<https://doi.org/10.1016/j.sxmr.2017.08.005>

ED results in increased adherence to ED rehabilitation and treatment, improved sexual function, and better relationship satisfaction for the patient and the partner.⁸ Furthermore, patients' and partners' sexual function are correlated. According to a study by Jiann et al,⁹ women whose partners were affected by ED scored lower on the Female Sexual Function Index (FSFI) than women whose partners did not have ED. Thus, it is likely that a failure to address female sexual function and sexual satisfaction ultimately leads to a failure in adequately treating the male patient.

That said, the sexual history, goals, and expectations of the female partner are often overlooked. Discussion of sexual function is not a comfortable topic for patients, partners, and physicians alike. Sex of the physician has been shown to independently affect the frequency with which a sexual history is obtained from the female partner of a patient with ED and how detailed that history is.¹⁰ As a result, much of the published literature discussing the etiology, prevalence, and treatment of ED excludes the female partner altogether.

It is evident that partners play a critical role in the sexual recovery of prostate cancer survivors by providing emotional and logistical support.¹¹ Partners' sexual interest has been shown to be important for patients' recovery of sexual function.¹² In addition, partners' level of depression is predictive of the patients' relationship satisfaction, sexual satisfaction, and perceived quality of communication.¹³ However, our understanding of the partner's role with respect to survivorship care remains incomplete. There are still gaps in our knowledge about how important erectile function and sexual recovery are to partners, what the determinants of sexual satisfaction are in partners, and how sexual satisfaction correlates between patients and their partners after treatment for prostate cancer.

This goal of this study was to evaluate the published literature to identify known predictors of patient and partner sexual satisfaction after radical prostatectomy (RP), with the understanding that predictors of patients might differ from those of their partners.

METHODS

We performed a comprehensive review of the PubMed database from January 2000 to May 2017 focused on the (i) prevalence of patient and partner sexual dysfunction related to RP, (ii) differences in patient and partner perspectives of sexual function and dysfunction, and (iii) predictors of patient and partner sexual satisfaction after RP.

Specifically, the following search terms were used: "radical prostatectomy AND sexual satisfaction," "radical prostatectomy AND sexual recovery," and "radical prostatectomy AND sexual function AND partner OR spouse." Full-length original studies and review articles published in the English language that addressed patient and partner sexual function were considered in the preparation of this report (Figure 1).

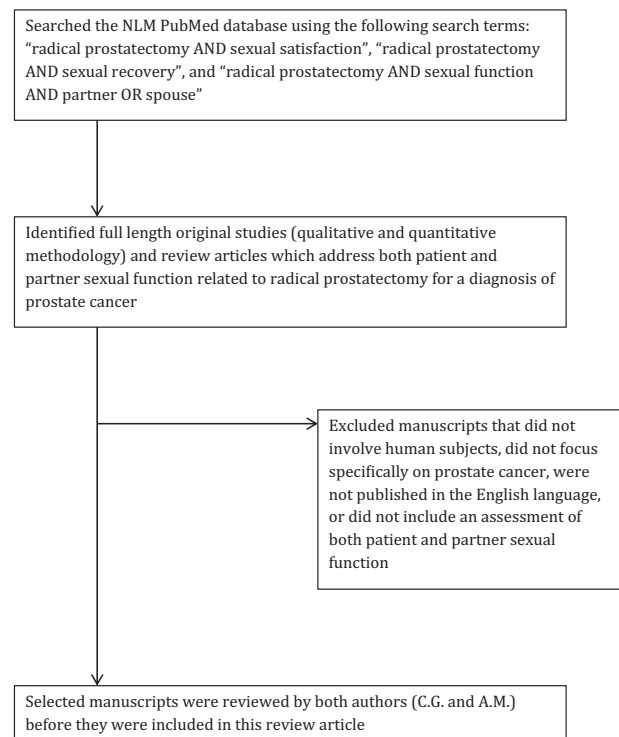


Figure 1. Overview of search criteria for identification and selection of published literature for the preparation of this review article.

RESULTS

There are a limited number of studies examining the impact of post-prostatectomy sexual dysfunction on the partners of prostate cancer survivors. The studies that do exist focus primarily on married heterosexual couples and provide little to no insight on the experiences of unmarried or same-sex partners. Many of these studies are qualitative analyses only; few involve quantitative analyses, performed using different validated instruments (Table 1). The studies used in the preparation of this review, and referenced below, are presented in Table 2.

Prevalence of Patient and Partner Sexual Dysfunction

Sexual dysfunction is the most common health-related quality-of-life complaint in prostate cancer survivors and includes not only ED but also decreased libido, impaired arousal, and muted orgasm.¹⁴ Partners of prostate cancer survivors likewise report a negative impact on their sexual function and sexual relationships. In a prospective study of 88 patient-partner pairs undergoing treatment for localized prostate cancer, the proportion of partners reporting problems with their sexual relationship increased substantially from 51% to 71% 6 to 12 months after treatment.¹⁵ In contrast, a minority of partners reported significant negative effects in other areas involving their relationship, work, or personal activities. Interestingly, partners were significantly more likely to report that their sexual relationship was worse when the

Table 1. Validated instruments used for the measurement of sexual and relationship satisfaction in studies of prostate cancer survivors and their partners

Instrument	Respondent	Description
International Index of Erectile Function (IIEF)*	Man	15-item questionnaire addressing 5 domains of sexual function in men (erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction)
Female Sexual Function Index (FSFI)	Woman	19-item instrument assessing 6 domains of sexual function in women (desire, arousal, lubrication, orgasm, satisfaction, and pain)
Locke-Wallace Marital Adjustment Test (MAT)	Man and woman	15-item scale measuring marital satisfaction, including extent of agreement and disagreement
Personal Assessment of Intimacy in Relationships (PAIR)	Man and woman	7-item scale assessing emotional closeness and intimacy within healthy married couples
Dyadic Adjustment Scale (DAS)	Man and woman	32-item scale measuring relationship quality between respondents and their partners across 3 categories (consensus, satisfaction, and affectional expression)
Index of Sexual Life (ISL)	Woman	11-item instrument measuring sexual life satisfaction, sexual drive, and general life satisfaction
Expanded Prostate Cancer Index (EPIC) [†]	Man	50-item questionnaire evaluating health-related quality-of-life outcomes in men treated for organ-confined prostate cancer across 5 domains (urinary incontinence, urinary irritability, sexual bowel, and hormonal)
University of California—Los Angeles Prostate Cancer Index (UCLA-PCI)	Man	20-item scale assessing health-related quality-of-life outcomes in men treated for organ-confined prostate cancer across 3 domains (urinary, sexual, and bowel)

*Also available as an abridged 5-item questionnaire (IIEF-5) for determining the presence and severity of erectile dysfunction.

[†]Also available as an abridged 26-item questionnaire (EPIC-26), which evaluates the same urinary, sexual, bowel, and hormonal concerns.

patient reported having surgery compared with other treatments or active surveillance.¹⁵

We hypothesized that partners' expectations about recovery of sexual function after cancer treatment could explain the worsening impact on partners' sexual relationships over time; partners might have expected a 6-month recovery period after cancer therapy but lost hope for their sexual relationship returning to the pretherapy state by 12 months.¹⁵ This reasoning also might explain why partner disappointment was greater after surgery compared with other treatment modalities.

Patient and partner sexual function after RP are interrelated. Shindel et al¹⁶ retrospectively assessed sexuality in prostate cancer patients and their female partners using the International Index of Erectile Function (IIEF) and the FSFI after RP for localized prostate cancer. Despite a very low response rate, they confirmed a statistical correlation between IIEF and FSFI domain scores in matched couples. In a more recent study, Tran et al¹⁷ used the IIEF, FSFI, and Lock-Wallace Marital Adjustment Test (MAT) to prospectively evaluate the impact of RP on male, female, and conjugal sexual function by assessing patient and partner sexual function before and 6 months after robotic-assisted laparoscopic prostatectomy with and without nerve sparing. IIEF and FSFI scores decreased postoperatively compared with baseline, and this decrease was associated within the 21 couples included in the study. Bilateral nerve sparing had a protective effect on patient and partner sexual dysfunction in the early post-prostatectomy period, as demonstrated by significant changes in IIEF and

FSFI scores before and after robotic-assisted laparoscopic prostatectomy in couples who underwent bilateral vs unilateral nerve-sparing surgery.¹⁷ Interestingly, conjugal complicity, reflected by MAT scores, remained stable during the study period, despite the decrease in sexual function. The small sample and limited study duration might have precluded the detection of a true association between sexual function and couple complicity.

Differences in Patient and Partner Perspectives

Soloway et al¹⁸ were among the first to investigate disparities in sexual function and psychological distress between prostate cancer patients and their partners using self-reported questionnaires. In addition to perceiving a higher level of distress compared with patients, partners perceived their sexual performance as being better than that of the patients. In addition, partner ratings of patients' erection quality were lower than those provided by the patients themselves.¹⁸ Soloway et al used their findings to emphasize the importance of hearing the voice of the "couple" rather than the patient or partner alone when designing interventions targeting sexual and psychological functioning in prostate cancer survivors.

Patients and partners certainly can have distinct expectations of sexual outcomes after RP and different attitudes toward the relative importance of recovery of sexual function after cancer treatment. Sato et al¹⁹ evaluated sexual function, sexual bother, and expectations for postoperative sexual life in 162 patients and partners before and after RP and found a significant dissociation

Table 2. Summary of the published literature examining the predictors of patient and partner satisfaction after radical prostatectomy

Study	Year	Methodology	Findings
Resendes and McCorkle	2006	Literature review conducted using CINAHL, Medline, and Cochrane databases	Spouses are significantly more distressed overall than patients. Sources of distress include lack of information, fear of the unknown, fear of what the future will hold, and treatment-related concerns.
Wittmann et al	2014	Individual interviews of 10 men and 9 partners	Partner's own sexual interest, not function, is critical to the couple's sexual recovery after RP.
Garos et al	2007	Mail survey completed by 77 patients and 57 partners, including the Beck Depression Inventory, Life Satisfaction Index, Index of Sexual Satisfaction, and Dyadic Adjustment Scale	Patients and partners had higher levels of depression and sexual dissatisfaction compared with the general population. Partner's level of depression was a predictor of patient's relationship satisfaction, sexual satisfaction, and perceived quality of communication about the sexual relationship.
Ramsey et al	2013	Mail survey completed by 88 patient-partner pairs over 12 mo, including the Expanded Prostate Cancer Index Composite questionnaire	From the partners' perspectives, prostate cancer therapy has a negative impact on sexual relationships, which appears to worsen over time.
Shindel et al	2005	Mail survey completed by 90 patient-partner pairs, including the International Index of Erectile Function and the Female Sexual Function Index	Patient and partner sexual dysfunction is correlated. Evaluation and treatment of sexual dysfunction after RP should involve patients and partners.
Tran et al	2015	Standardized questionnaires completed by 21 patient-partners pairs 6 mo before and after RP, including the International Index of Erectile Function, Female Sexual Function Index, and Locke-Wallace Marital Adjustment Test	Patient and partner sexual function declined after RP, but marital satisfaction remained stable. Bilateral nerve-sparing surgery was associated with preservation of patient and partner sexual function.
Soloway et al	2005	Standardized questionnaires completed by 103 patient-partners pairs, including the Beck Depression Inventory, Visual Analog Scales of Distress, Sexual Adjustment Questionnaire, and Dyadic Adjustment Scale	There were significant differences in patient- and partner-perceived distress, depression, and sexual dysfunction, with partners consistently rating patients lower than they rated themselves in sexual performance.
Sato et al	2013	UCLA-PCI completed by 162 patient-partner pairs before and 12 mo after RP	There were significant differences in patient- and partner-perceived sexual life after RP. Partners' cooperative attitude can help maintain patients' sexual desire and motivation.
Tsivian et al	2009	Mail survey of 28 patient-partner pairs, including the International Index of Erectile Function and Female Sexual Function Index	Patients and partners might interpret changes in sexual function associated with RP differently. Nevertheless, most men and women reported being satisfied with their ability to climax.
Ross et al	2016	Standardized questionnaires completed by 159 patient-partner pairs, including the Marital Quality Index	Patients and partners had a decline on physical and mental health after RP. Patients' and partners' mental health consistently related to their own relationship satisfaction. Patients' and partners' physical health had an effect on each other's relationship satisfaction.
Manne et al	2015	Standardized questionnaires completed by 139 patient-partner pairs, including the Mental Health Inventory, International Index of Erectile Function, Personal Assessment of Intimacy in Relationships, UCLA-PCI, and Dyadic Adjustment Scale	Holding back (not sharing concerns) was particularly detrimental for couples' intimacy and relationship satisfaction.
Knoll et al	2009	Standardized questionnaires completed by 139 patient-partner pairs before and 12 mo after RP, including the International Index of Erectile Function	Patient-reported spousal support was associated with better relationship satisfaction and better erectile function before and after RP.

RP = radical prostatectomy; UCLA-PCI = University of California—Los Angeles Prostate Cancer Index.

in perspectives of postoperative sexual life between patients and their partners. In particular, patients were more likely to verbalize that sexual life was important, hope for preservation of erectile function, and accept the use of phosphodiesterase type 5 inhibitor therapy compared with their partners.¹⁹

It is well documented that partners place greater value on cancer-specific survival than cancer-treatment-related sexual dysfunction.^{20,21} In particular, spouses are unwilling to trade life expectancy for an improvement in sexual or urinary function.²² In addition, Tsivian et al²³ proposed that patients and partners might interpret differently the same physiologic outcomes of prostate cancer surgery. In their study of 28 couples, they found that only 40% of men and women were happy with their levels of sexual interest, albeit with 82% concordance. Conversely, 86% of men described a change in orgasm experience compared with 36% of female partners. Nevertheless, patient and partner satisfaction with the ability to climax remained high in this analysis. These data illustrate that patient and partner concordance in sexual function is not necessarily synonymous with patient and partner satisfaction.

Predictors of Patient and Partner Satisfaction

Although much research has focused on predictors of recovery of erectile function after RP, relatively little attention has been paid to how satisfied patients and their partners are with postoperative sexual function. As stated earlier, sexuality and related dysfunction encompass more than intercourse and include physical, behavioral, and cognitive impairments, which are difficult to measure comprehensively. Regret and feelings of loss are commonly reported by patients and partners with regard to loss of sexual function,¹¹ guaranteeing at least some degree of sexual dissatisfaction at least early in the post-prostatectomy period. No studies have specifically examined whether and how patient and partner satisfaction evolves over time after prostate cancer surgery.

Available data suggest that patients' and partners' mental and physical health^{13,24} and the quality of communication between them²⁵ are important contributors to their sexual satisfaction. Specifically, patients' and partners' mental health is predictive of their respective relationship satisfaction after prostatectomy in prospective studies.²⁴ Partners' mental health also is predictive of patients' relationship satisfaction,²⁴ which reflects the complex and multidimensional role that partners play in supporting the recovery of men with prostate cancer. Although 1 study has demonstrated an association among patient age, patient and partner age difference, and post-prostatectomy erectile function,²⁶ the role of these characteristics as predictors of overall patient and partner satisfaction have not been specifically examined.

Ultimately, patients' acceptance of altered sexual function after RP is strongly affected by the attitudes and support provided by their spouses.^{19,21} Indeed, patient-perceived partner support is associated with better patient-reported erectile function and

greater relationship satisfaction before and after prostatectomy.²⁷ In the study by Sato et al,¹⁹ patients who had partners with a negative sexual attitude lost sexual motivation 1 year after RP. Conversely, patients with cooperative partners maintained sexual motivation, although they endorsed greater sexual bother 1 year after RP.¹⁹

It is well accepted that partners provide invaluable emotional and logistical support after prostate cancer surgery and play a critical role in promoting the recovery of sexual function.¹² Patients and partners identify the partners' own sexual interest, rather than sexual function, as being key for sexual recovery. Some men even endorse feeling insecure about their sexual performance when faced with partners who take the lead in initiating sexual activities.¹²

Partners' attitudes toward the caregiver role can evolve over time. Harden et al²⁰ studied quality-of-life outcomes of 121 partners of prostate cancer survivors and found that partners developed a more negative view of their caregiving experience and a lower quality of life 2 years after treatment for prostate cancer compared with their pretreatment baseline. This change in partner attitude could be due to partners' frustration with lack of sexual function recovery or partners' unmet sexual needs or needs for support.¹² Partners also are more likely to hold back their feelings and concerns compared with prostate cancer patients, which has a negative impact on partners' well-being and is detrimental for a couples' intimacy and relationship satisfaction.²⁵

DISCUSSION

The diagnosis of prostate cancer has a significant impact on the mental and emotional well-being of prostate cancer patients and their partners,^{28,29} with partners often reporting higher levels of stress and anxiety compared with patients.¹¹ Sources of distress include lack of information, fear of the unknown, fear of what the future could hold, and treatment-related concerns.¹¹ Similarly, treatment of prostate cancer has adverse effects on sexual function, intimacy, and communication for patients and partners irrespective of treatment modality.^{13,30–33}

That said, prostatectomy is specifically associated with impaired quality of life in patients and partners. Interestingly, in 1 large cross-sectional survey of prostate cancer patients and their partners, although patients' quality of life was affected by various predictors, including dyadic adjustment and body image, sexual satisfaction emerged as the most important predictor of partners' quality of life.³⁰ Therefore, several researchers have advocated for psychosocial interventions that target patients and their partners after RP to meaningfully promote sexual recovery and improve quality of life.

Nelson and Kenowitz³⁴ examined 3 types of psychosocial interventions aimed at enhancing couples' intimacy after prostate cancer treatment and found that patients and partners can derive differential benefit from different aspects of the interventions.

Although results were not consistent within or across studies, they concluded that intimacy-enhancing interventions can be effective for couples; although patients might benefit more from a focus on specific side effects of prostate cancer treatment, partners might benefit more from couples work.³⁴

CONCLUSION

This review highlights the interrelation of patient and partner sexual function and dysfunction after the diagnosis and treatment of prostate cancer and its impact on sexual and relationship satisfaction. Identifying the various predictors of patient- and partner-perceived satisfaction remains an active area of research. In addition, there is an unmet need for psychosocial interventions that engage, target, and benefit prostate cancer patients and their intimate partners.

Corresponding Author: Akanksha Mehta, MD, MS, 1365 Clifton Road, Building B, Suite 1400, Atlanta, GA 30322, USA. Tel: 404-778-4898; Fax: 404-778-4006; E-mail: akanksha.mehta@emory.edu

Conflicts of Interest: The authors report no conflicts of interest.

Funding: This work was supported by the National Center for Advancing Translational Sciences of the National Institutes of Health under award UL1TR000454. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

STATEMENT OF AUTHORSHIP

Category 1

(a) Conception and Design

Cailey Guercio; Akanksha Mehta

(b) Acquisition of Data

Cailey Guercio; Akanksha Mehta

(c) Analysis and Interpretation of Data

Cailey Guercio; Akanksha Mehta

Category 2

(a) Drafting the Article

Cailey Guercio; Akanksha Mehta

(b) Revising It for Intellectual Content

Akanksha Mehta

Category 3

(a) Final Approval of the Completed Article

Cailey Guercio; Akanksha Mehta

REFERENCES

- Nelson CJ, Scardino PT, Eastham JA, et al. Back to baseline: erectile function recovery after radical prostatectomy from the patients' perspective. *J Sex Med* 2013;10:1636-1643.
- Steineck G, Helgesen F, Adolffson J, et al. Quality of life after radical prostatectomy or watchful waiting. *N Engl J Med* 2002;347:790-796.
- Sanda MG, Dunn RL, Michalski J, et al. Quality of life and satisfaction with outcome among prostate-cancer survivors. *N Engl J Med* 2008;358:1250-1261.
- Cobo Cuenca AI, Sampietro-Crespo A, Virseda-Chamorro M, et al. Psychological impact and sexual dysfunction in men with and without spinal cord injury. *J Sex Med* 2015;12:436-444.
- Chou PS, Chou WP, Chen MC, et al. Newly diagnosed erectile dysfunction and risk of depression: a population-based 5-year follow-up study in Taiwan. *J Sex Med* 2015;12:804-812.
- Aghighi A, Grigoryan VH, Delavar A. Psychological determinants of erectile dysfunction among middle-aged men. *Int J Impot Res* 2015;27:63-68.
- Cameron A, Rosen RC, Swindle RW. Sexual and relationship characteristics among an internet-based sample of U.S. men with and without erectile dysfunction. *J Sex Marital Ther* 2005;31:229-242.
- Li H, Gao T, Wang R. The role of the sexual partner in managing erectile dysfunction. *Nat Rev Urol* 2016;13:168-177.
- Jiann BP, Su CC, Tsai JY. Is female sexual function related to the male partners' erectile function? *J Sex Med* 2013;10:420-429.
- Burd ID, Nevadunsky N, Bachmann G. Impact of physician gender on sexual history taking in a multispecialty practice. *J Sex Med* 2006;3:194-200.
- Resendes LA, McCorkle R. Spousal responses to prostate cancer: an integrative review. *Cancer Invest* 2006;24:192-198.
- Wittmann D, Carolan M, Given B, et al. Exploring the role of the partner in couples' sexual recovery after surgery for prostate cancer. *Support Care Cancer* 2014;22:2509-2515.
- Garos S, Kluck A, Aronoff D. Prostate cancer patients and their partners: differences in satisfaction indices and psychological variables. *J Sex Med* 2007;4:1394-1403.
- Fode M, Serefoglu EC, Albersen M, et al. Sexuality following radical prostatectomy: is restoration of erectile function enough? *Sex Med Rev* 2017;5:110-119.
- Ramsey SD, Zeliadt SB, Blough DK, et al. Impact of prostate cancer on sexual relationships: a longitudinal perspective on intimate partners' experiences. *J Sex Med* 2013;10:3135-3143.
- Shindel A, Quayle S, Yan Y, et al. Sexual dysfunction in female partners of men who have undergone radical prostatectomy correlates with sexual dysfunction of the male partner. *J Sex Med* 2005;2:833-841; discussion 841.
- Tran SN, Wirth GJ, Mayor G, et al. Prospective evaluation of early postoperative male and female sexual function after radical prostatectomy with erectile nerves preservation. *Int J Impot Res* 2015;27:69-74.
- Soloway CT, Soloway MS, Kim SS, et al. Sexual, psychological and dyadic qualities of the prostate cancer 'couple'. *BJU Int* 2005;95:780-785.
- Sato Y, Tanda H, Nakajima H, et al. Dissociation between patients and their partners in expectations for sexual life after radical prostatectomy. *Int J Urol* 2013;20:322-328.
- Harden JK, Sanda MG, Wei JT, et al. Partners' long-term appraisal of their caregiving experience, marital satisfaction,

- sexual satisfaction, and quality of life 2 years after prostate cancer treatment. *Cancer Nurs* 2013;36:104-113.
21. Bertero C. Altered sexual patterns after treatment for prostate cancer. *Cancer Pract* 2001;9:245-251.
 22. Smith DS, Krygiel J, Nease RF Jr, et al. Patient preferences for outcomes associated with surgical management of prostate cancer. *J Urol* 2002;167:2117-2122.
 23. Tsivian M, Mayes JM, Krupski TL, et al. Altered male physiologic function after surgery for prostate cancer: couple perspective. *Int Braz J Urol* 2009;35:673-682.
 24. Ross KM, Ranby KW, Wooldridge JS, et al. Effects of physical and mental health on relationship satisfaction: a dyadic, longitudinal examination of couples facing prostate cancer. *Psychooncology* 2016;25:898-904.
 25. Manne SL, Kissane D, Zaider T, et al. Holding back, intimacy, and psychological and relationship outcomes among couples coping with prostate cancer. *J Fam Psychol* 2015;29:708-719.
 26. Descazeaud A, Debre B, Flam TA. Age difference between patient and partner is a predictive factor of potency rate following radical prostatectomy. *J Urol* 2006;176:2594-2598. discussion 2598.
 27. Knoll N, Burkert S, Kramer J, et al. Relationship satisfaction and erectile functions in men receiving laparoscopic radical prostatectomy: effects of provision and receipt of spousal social support. *J Sex Med* 2009;6:1438-1450.
 28. Nanton V, Osborne D, Dale J. Maintaining control over illness: a model of partner activity in prostate cancer. *Eur J Cancer Care (Engl)* 2010;19:329-339.
 29. Illingworth N, Forbat L, Hubbard G, et al. The importance of relationships in the experience of cancer: a re-working of the policy ideal of the whole-systems approach. *Eur J Oncol Nurs* 2010;14:23-28.
 30. Perez MA, Skinner EC, Meyerowitz BE. Sexuality and intimacy following radical prostatectomy: patient and partner perspectives. *Health Psychol* 2002;21:288-293.
 31. Merz EL, Malcarne VL, Ko CM, et al. Dyadic concordance among prostate cancer patients and their partners and health-related quality of life: does it matter? *Psychol Health* 2011;26:651-666.
 32. Wooten AC, Abbott JM, Farrell A, et al. Psychosocial interventions to support partners of men with prostate cancer: a systematic and critical review of the literature. *J Cancer Surviv* 2014;8:472-484.
 33. Eisemann N, Waldmann A, Rohde V, et al. Quality of life in partners of patients with localised prostate cancer. *Qual Life Res* 2014;23:1557-1568.
 34. Nelson CJ, Kenowitz J. Communication and intimacy-enhancing interventions for men diagnosed with prostate cancer and their partners. *J Sex Med* 2013;10(Suppl 1): 127-132.