

Sexual dysfunction after breast cancer treatment: Common problems, diagnosis, and management

Sexual dysfunction encompasses a broad spectrum of issues in the psychological, physical, interpersonal, and physiological realms, all of which are susceptible to insult after treatment for cancer. Therefore, it is not surprising that sexual dysfunction affects up to 90% of women treated for breast cancer, with some reports suggesting that nearly all women have some form of sexual complaint following treatment.¹ The multifactorial nature of sexual dysfunction can make it difficult to initiate a discussion on the topic during the short time a patient is seen in clinic. Nevertheless, sex is an important component of most women's lives, and the breast cancer survivor is no exception. This report will focus on highlighting common problems, diagnosis, and management of sexual dysfunction to help initiate this important discussion between breast cancer survivors and the clinicians who care for them.

Sexual issues after treatment

Both lumpectomy and mastectomy have been associated with changes in sexuality. The reasons are psychological, including significant changes in body image and self-esteem, and anatomic, resulting from loss of feeling or hyperesthesia in the surgically treated area. In addition, lymphedema (a common sequela of axillary node dissection) can affect comfort during sexual activity and may make sexual intimacy difficult or even painful. Taken together, these issues can not only affect normal sexual health but also partner relationships. Even if the partner



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is not bothered by the surgical results, the woman may wrongly perceive her partner to be repulsed, prompting her to withdraw from the relationship both emotionally and sexually.²

In addition to surgical treatment, almost all anticancer agents cause a range of side effects, which can contribute to a lack of interest and loss of libido.³ For premenopausal women, chemotherapy has the capacity to induce ovarian failure, leading to an acute and sudden loss of estrogen. This in turn has multiple effects, including thinning of the vaginal membrane with attendant dryness, premature menopausal symptoms, and lack of sexual interest. Due to these changes, a woman may experience dyspareunia and chafing during penetration, which can sometimes result in bleeding.

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KEY POINT

Use of estrogen with breast cancer remains controversial and is contraindicated in women with hormone-receptor positive disease

When uncomfortable symptoms are constant reminders of their life-changing disease, women may place sexuality much lower in priority. Alopecia often ranks among the most feared effects of chemotherapy.⁴ Frith et al have even described the loss of hair in women as akin to a loss of self or identity.⁵

Research evaluating the effects of tamoxifen on sexual function in women has been conflicting and inconclusive. For example, the Breast Cancer Prevention Trial found only minor differences in sexual function among tamoxifen users versus nonusers.⁶ In contrast, Mortimer et al demonstrated no changes in any phase of the sexual response cycle for women on tamoxifen.⁷ The impact of aromatase inhibitors (eg, letrozole, anastrozole) on sexual function is even less clear and, at this time, more trials are needed to specifically address the sexual ramifications of these agents.

Radiotherapy may induce local changes that affect sensitivity of the breast. It can result in fibrosis, skin thickening, contractures, or changes in skin texture and color, and sometimes mastalgia, any of which can affect a woman's desire or ability to enjoy sexual function.

Diagnosing sexual dysfunction

The diagnosis of hypoactive sexual desire disorder (HSDD) can be made when a woman (1) reports absent desire before sexual activity, (2) states that desire is not triggered during sexual experiences, and (3) rates herself as distressed about the problem.⁸ A consensus committee convened by the American Urological Association has likewise recommended that any diagnosis of female sexual dysfunction includes the criterion that a woman has "personal distress" about her sexual problem.⁹

Among the major issues in addressing sexual dysfunction is the lack of recognition that it is a problem. Too often, cure and control are the only goals in the mind of the oncologist and in the context of a busy practice, issues such as sexuality, fertility, and routine medical follow-up, are relegated to other providers, such as gynecologists, primary care providers, nurses, or social workers.

Addressing sexual dysfunction requires a multimodal and sensitive approach, and

it is best accomplished by open-ended communication. The standard history and physical must be supplemented by an opportunity to discuss and explore sexual complaints in an honest and non-judgmental forum. It may be useful to approach these issues using the PLISSIT framework for sexual assessment and rehabilitation: Permission, Limited Information, Specific Suggestions, and Intensive Therapy¹⁰ (TABLE).

Many health care providers wrongly assume that their cancer patients are involved in heterosexual relationships. Bisexual and same-sex relationships are also affected by cancer, and sexuality is as important to this group of people as to those in more traditional relationships. Health care providers must be sensitive to the sexual issues that women who have sex with women may be experiencing. Intake office forms, as well as questions from the provider, should be generic and not assume that traditional relationships exist.

Treatment of sexual dysfunction

Estrogen is the key hormone in sexual function, playing a central role in arousal, peripheral sexual response, and pelvic sexual response. Additionally, estrogen affects the urogenital system and not only promotes epithelial maturation and proliferation, increased vascularity, and blood flow, but also stimulates glandular secretions. A decrease of estrogen causes decreased vasocongestion and increased atrophic vaginitis, and it leads to dyspareunia; reduced desire may be a secondary consequence. Despite the importance of estrogen, its use in women with breast cancer remains controversial and is contraindicated in women with hormone-receptor positive disease. Indeed, a recent randomized trial showed that hormone therapy increases the risk of new primary or recurrent breast cancers by 3-fold.¹¹

Still, for women whose sexual dysfunction is severely impacting their relationship or their quality of life, estrogen therapy may provide significant relief. For these patients, the use of topical preparations may be reasonable. Local vaginal preparations are effective for localized symptoms and are believed to be minimally absorbed. Vaginal preparations containing estriol have been shown to be as effective in symptom management as

TABLE

The PLISSIT Model

	Description	Sample
Permission	Allows a woman to discuss sexuality by providing an opportunity to address the topic.	“Your body is going through many changes right now, and some of those changes may affect your sexuality. Many women have questions about sex during and after breast cancer treatment. Do you have any concerns you’d like to discuss?”
Limited Information	Gives the woman just enough information to help improve her sexual functioning.	A woman may wonder if she is radioactive after she receives radiation and whether she can have intercourse. The physician can explain that radiation administered by a machine does not leave someone radioactive. A woman treated with a radiation implant ceases to be radioactive once the implant is removed. Sex is fine as long as the patient is not bleeding from a tumor.
Specific Suggestions	Provides counseling or a referral specific to the woman’s condition rather than general counseling.	If a woman is experiencing symptoms that are very specific, treatment that targets those symptoms should be recommended or provided.
Intensive Therapy	Refers to conditions that require treatment by a physician, specialist, or therapist.	A woman experiencing severe mood disorders may need to be seen by a psychiatrist. Women with dyspareunia may benefit from practicing pelvic floor muscle relaxation exercises with a

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KEY POINT

Venlafaxine and paroxetine appear to be most effective in breast cancer survivors experiencing menopausal symptoms

those containing estradiol and may be preferable in breast cancer survivors.¹² An alternative (or even in addition) to estrogen therapy is the liberal use of local vaginal moisturizers or vitamin E suppositories, which can provide relief from vaginal dryness. In addition, water-based vaginal lubricants should be encouraged with intercourse, although they should be devoid of microbicides, perfumes, coloration, and flavors to avoid irritation.

Women who lack interest in sexual activity may be curious about testosterone supplementation. Although its benefits in women without a cancer history have been demonstrated, similar outcomes do not appear to extend to breast cancer survivors. The North Central Cancer Treatment Group (NCCTG) performed a randomized trial in 150 women with cancer using either 2% testosterone in Vanicream, or placebo. Patients used it for 4 weeks and then underwent crossover. Sexual function was evaluated by questionnaire at baseline, 4 weeks, and

8 weeks. No difference in sexual function was observed using testosterone compared with placebo.¹³

For women who experience menopausal symptoms—of which sexual dysfunction may be one manifestation—and who wish to avoid hormone therapy, studies have shown that some selective serotonin reuptake inhibitors (SSRIs) and serotonin norepinephrine reuptake inhibitors (SNRIs) are effective. Venlafaxine and paroxetine appear to be the most effective in breast cancer survivors, although it is important to note that sexual dysfunction can occur with SSRI/SNRIs; in breast cancer patients, at least one trial noted that libido was increased with these agents.¹⁴ An alternative may be gabapentin. A gamma-aminobutyric acid analog used as an anti-epileptic, it has been shown to be effective in reducing hot flashes in breast cancer patients, in women with chemically and/or surgically induced menopause, and in symptomatic women during spontaneous



KEY POINT

Follow-up of a patient with breast cancer extends beyond her medical needs; it should include addressing issues affecting her sexuality

menopause. Unlike SSRI/SNRIs, gabapentin has no known drug interactions and no absolute contraindications in any patient population, and it does not cause sexual dysfunction. This may be a good option to consider if sexual dysfunction is a problem before or during treatment with SSRI/SNRIs.

Conclusion

The quality of life of breast cancer survivors remains of paramount importance. For health care providers involved in the follow-up care of women with breast

cancer, the recognition and diagnosis of sexual dysfunction may be important. Because of the multifaceted nature of sexual dysfunction and HSDD, collaboration between all health care providers is essential to ensure that the patient's quality of life remains as important as her prognosis. To this end, it is important to forge relationships within local communities to ensure that the objectives in the follow-up of the patient with breast cancer extend beyond her medical needs and include addressing those issues that may affect her sexually. ■

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