



Talking to cancer survivors about **dyspareunia** and **self-management**

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IN 2012, ABOUT 13 million people were living with cancer in the United States. According to the National Cancer Institute, 67% of women have survived 5 years beyond their diagnosis of cancer.¹ These statistics are encouraging, yet survivors may still be challenged with issues related to quality of life.

Sexual health concerns are among the most frequently reported issues interfering with the quality of life of cancer survivors.^{2,3} Surgery, chemotherapy, and radiation treatments cause complex biologic and psychological changes that affect how women feel about their sexuality.⁴

Among female cancer survivors, vaginal pain with penetration (dyspareunia) is one of the most frequently reported sexual health concerns.⁵⁻⁷ This article focuses on how nurses can help women address dyspareunia using nonpharmacologic self-care methods.

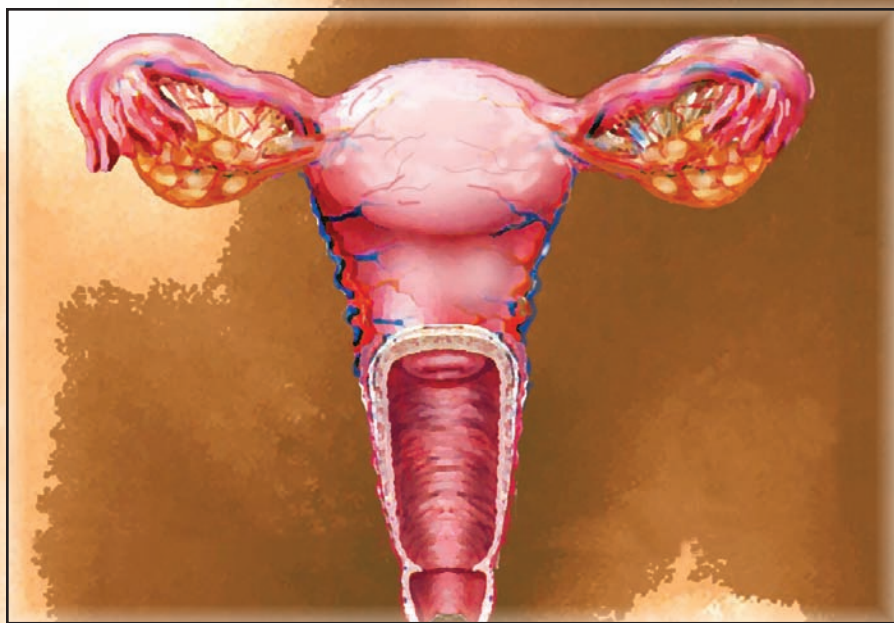
Unfortunately, much of the information needed to counsel women about sexual health self-care methods is scattered, disorganized, and not readily available for use in nursing practice. The Minimizing Painful Vaginal Penetration (MPVP) model developed by the authors and introduced in this article can help healthcare professionals educate and support patients by:

- providing a conceptual model that clinicians can use to help organize their thinking about the causes and consequences of painful vaginal penetration
- identifying nonpharmacologic self-care interventions that can be used to minimize painful penetration
- linking clinical concepts (such as vaginal dryness) and interventions (such as use of lubricants) to quality-of-life outcomes such as arousal and desire.

Multifaceted impact on sexual health

The impact of cancer and cancer treatment on a woman's sexual health is complex and multifaceted. Multiple biological and psychological factors, such

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as surgical loss of a body part, radiation-related changes in pelvic and/or genital tissues, and altered body image from altered weight and/or hair loss can impair sexuality.⁴

Many cancer treatments contribute to changes in vaginal tissues due to suppression of ovarian function and may induce early onset of menopause.⁴ Decreased ovarian function and decreased estrogen levels may cause vaginal changes such as dryness, loss of elasticity, and atrophy.⁸ In addition, surgery and radiation can alter the vaginal anatomy and interfere with local blood supply, both of which can lead to vaginal pain with penetration.⁹ Importantly, anticipatory fear of vaginal pain with penetration has also been noted to influence women's sexual health responses.^{10,11}

Sexual activity between couples may include many different aspects of intimacy such as mutual masturbation, oral sex, intercourse, and non-penile penetration. Although all types of sexual activity are considered important expressions of intimacy between couples, in the clinical setting, women frequently express concerns regarding vaginal pain with penetration. Ussher, Perz, and Gilbert have noted that, among cancer patients, a decrease in the incidence of sexual intercourse due to dyspareunia or other factors is accompanied by a collateral decrease in all forms of sexual intimacy.⁶ This is consistent with the authors' clinical experience and supports the notion

that the possibility of vaginal pain with penetration should be addressed when attending to sexual health concerns.

Managing vaginal pain may require the treatment of vaginal atrophy with medical interventions such as local estrogen therapy, although this approach may be contraindicated in some cancer survivors.^{8,12} The use of local hormone therapy for the treatment of vaginal atrophy, which is considered a second-line therapy by the North American Menopause Society (NAMS), is beyond the scope of this article.⁸ However, nonpharmacologic therapies have also been shown to decrease vaginal pain with penetration. As will be discussed in detail below, examples include use of vaginal dilators, vaginal moisturizers and lubricants, and vaginal stimulation.^{4,12,13} In order to choose an appropriate intervention, nurses must be able to assess each patient's individual sexual health concerns.

Barriers to sexual health assessment

Although assessment is essential to addressing sexual health concerns such as dyspareunia, many healthcare professionals don't discuss sexual health with their patients due to a lack of expertise or discomfort discussing the topic.^{14,15} An assessment tool specific to sexual health such as the PLISSIT model can be used to open the assessment dialogue, guide decision making about the amount of information one

should provide, and help determine when a referral is needed for more intensive counseling or treatment.¹⁶ See *Sample application of the PLISSIT model for discussing pain with intercourse* for an example of how a nurse could apply this model when interacting with a patient with dyspareunia.

When it comes to recommending self-care strategies for dyspareunia, the authors' experience is that using a conceptual model is important to organize the clinician's thinking about evidence-based, nonpharmacologic self-care strategies that should be discussed. Linking the self-care interventions to other quality-of-life indicators, such as arousal and desire, helps nurses address these additional common concerns.

The MPVP model was developed by the authors to address vaginal pain with penetration as well as the impact that vaginal pain with penetration may have on arousal and desire. (See *Minimizing pain with vaginal penetration [MPVP] model*.) The relationship between vaginal pain, arousal, and desire, which is somewhat speculative, will be discussed later in this article.

Introducing the MPVP model

The central concept of the MPVP model is *pain with vaginal penetration*. As shown in red on the model, three clinical conditions can contribute to pain with vaginal penetration: vaginal atrophy, loss of vaginal elasticity, and vaginal dryness. Each of these clinical conditions can be treated with non-pharmacologic self-care interventions with varying degrees of success.

The most common cause of pain with vaginal penetration, **vaginal dryness** may or may not be associated with vaginal atrophy.^{6,17} Several factors associated with cancer treatments can cause vaginal dryness. For example, hormonal changes (induced menopause from oophorectomy, radiation to the pelvic floor, or chemotherapy), vaginal radiation, vaginal or pelvic surgery, and medications such

Sample application of the PLISSIT model for discussing pain with intercourse¹⁶

P	Permission	"May I ask you more about the pain with intercourse?"
LI	Limited Information	"When did the pain with intercourse begin?" "Have you tried anything to help with the pain?"
SS	Specific Suggestions	"Silicone lubricants can help with vaginal dryness and pain. You may also consider a vaginal moisturizer to use on a regular basis."
IT	Intensive Treatment	"It seems this problem has been going on for several years, even before your treatment for cancer. Would you consider meeting with a therapist to discuss this further?"

as aromatase inhibitors may cause vaginal dryness.^{4,18,19}

As depicted in the MPVP model, decreasing vaginal dryness can help decrease pain during vaginal penetration. Nurses can help patients relieve vaginal dryness by discussing available nonpharmacologic self-care options.

Counseling women about the use of vaginal lubricants and moisturizers, which are both available over the counter, is an important aspect of patient education and nursing care because many women don't distinguish between the two products.¹³

- *Vaginal lubricants* create a moisture barrier inside the vagina along the vaginal lining. Available as a liquid or gel, they're applied before intercourse to help reduce friction and make vaginal penetration more comfortable.^{13,18,20,21}

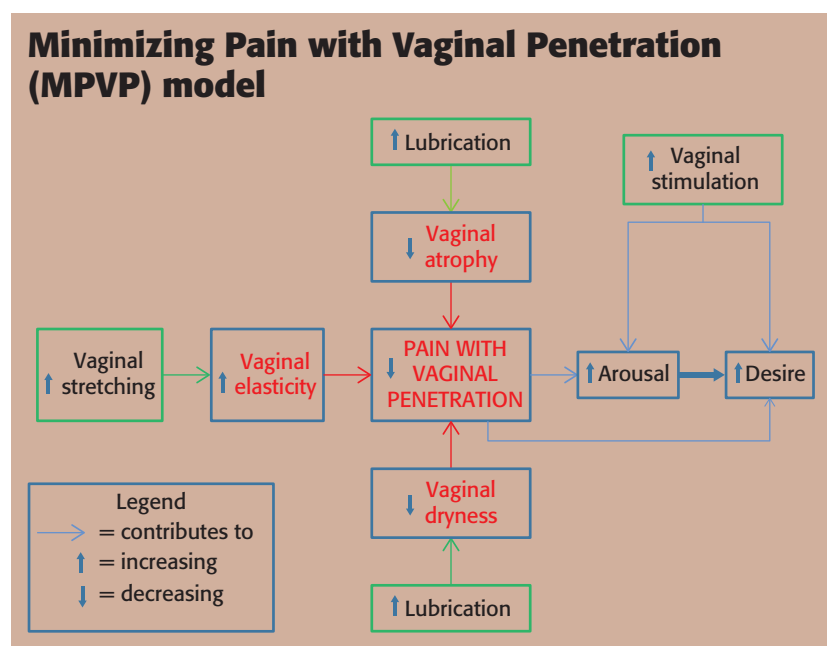
Advise women to avoid oil- and petroleum-based lubricants because they can damage condoms and cause vaginal irritation. Water-based lubricants are safe for use with condoms and are nonstaining, but they may dry out quickly and cause more discomfort.^{13,18,21} Silicone-based lubricants are safe with all condoms and don't absorb into the skin, so they may be preferred.²¹

- Intended to help replenish vaginal secretions, *vaginal moisturizers* may provide long-term benefits when applied regularly. Unlike lubricants, they needn't be applied immediately before sexual activity to be effective.²¹

Moisturizers won't cure vaginal dryness, but they can help to relieve the discomfort associated with vaginal penetration, especially if they're used regularly every 3 to 4 days, with or without sexual activity.

Some patients use both a lubricant and a moisturizer. Encourage patients to try various products to determine what works best for them.²¹

Lubricants and moisturizers are both available in estrogen-free formulations for patients who aren't candidates for vaginal estrogen therapy.²¹ Vaginal preparations containing hyal-



uronic acid are nonhormonal and may be used as both a moisturizer and a lubricant. Some evidence suggests that vaginal preparations containing hyaluronic acid decrease vaginal dryness, which in turn will decrease pain with penetration. Interestingly, hyaluronic vaginal cream may also reverse some of the physiologic effects of vaginal atrophy by improving vaginal pH and cellular maturation.²²

Decreased **vaginal elasticity** has been mentioned in the literature as a cause for vaginal pain with penetration.^{12,23} Decreased elasticity has been noted primarily in women who've been treated with pelvic floor radiation, but women who've avoided intercourse due to pain or the anticipation of pain with penetration may also experience a loss of vaginal elasticity.

An evidence-based treatment for women treated with pelvic floor radiation who are experiencing decreased vaginal elasticity includes dilator therapy.²³ This involves inserting graduated sizes of dilators into the vagina as a type of rehabilitation to stretch the vagina and reduce vaginal pain with penetration. Some evidence suggests that dilator therapy may also

help reduce vaginal pain with penetration for women who have vaginal pain from other causes, such as pelvic surgery or other therapies.^{12,13} A clinician may teach patients how to use a vaginal dilator or refer them to a pelvic physical therapist.²⁴

Use of dilator therapy may also reduce anticipatory vaginal pain by allowing a woman to become gradually used to inserting something into her vagina.¹³ Clinically, the authors have noted that for women who haven't engaged in sexual activities that include vaginal penetration due to pain or other factors, vaginal dilators enable them to regain vaginal comfort when used with other modalities such as vaginal lubricants and moisturizers.

Stimulation, either manually or through use of a vibrator applied directly to the vagina and/or clitoris, is also discussed in the literature as a modality that women may use to improve their sexual health.^{12,25} In one classic study, vaginal stimulation was noted to improve sexual satisfaction on multiple endpoints, such as increased arousal and orgasm, increased desire, and increased sexual satisfaction.²⁵ Vaginal stimulation may also increase vaginal blood flow

and vaginal lubrication, thereby reducing pain with penetration.

Before recommending vaginal stimulation, discuss with patients any cultural and/or religious concerns that may prohibit the use of vaginal stimulation manually or with a vibrator. If the patient has no objections to vaginal stimulation, nurses may encourage her to engage in vaginal stimulation either alone or with a partner.

The third cause of vaginal pain with penetration is **vaginal atrophy**. This term refers to the changes that occur to the vagina after estrogen levels decrease, either naturally or due to cancer therapies. Changes include thinning of the vaginal tissues, decreased lubrication, reduction in the size of the labia minora, and retraction of the vaginal introitus.²⁶ Any of these changes may lead to significant vaginal pain with penetration. According to the NAMS Position Statement for the treatment of vaginal atrophy, first-line therapies for vaginal atrophy include use of lubricants and vaginal moisturizers.⁸ Other treatments for vaginal atrophy are primarily prescriptive therapies, which are beyond the scope of nursing practice and aren't discussed here.

Vaginal pain, arousal, and desire

Arousal can be understood as having both a physiologic and a subjective component. This article focuses on the subjective component of arousal. In this context, arousal can be thought of as a subjective experience of pleasure from physical stimuli, including mental receptivity and the absence of distraction.¹¹

Clinically, patients report that arousal is diminished if penetration is painful, suggesting that merely anticipating vaginal pain with penetration dampens arousal.¹¹ Although the relationship between vaginal pain and diminished arousal is somewhat speculative, Schroder and colleagues noted that direct clitoral stimulation improved overall arousal, reduced

vaginal pain, and increased desire in cervical cancer survivors.²⁵ Nurses may suggest self-care interventions noted in the MPVP model and counsel patients that minimizing pain with penetration may improve arousal.

Decreased desire has been mentioned as one of the most common sexual health concerns expressed by women with a history of cancer.^{5,6} Desire, or the subjective experience of wanting to engage in sexual thoughts, fantasies, or activity alone or with a partner, has been discussed in the literature as also being a subjective experience that may be dependent on arousal.²⁷ Decreased desire may be caused by many factors associated with cancer therapies, such as fatigue, adverse reactions to chemotherapy, or body image-related issues. However, in the authors' clinical experience, when vaginal pain with penetration is managed, patients are more likely to experience increased desire.

In the literature, decreased desire has also been linked to vaginal pain with penetration.²⁸⁻³⁰ One way nurses may address decreased desire with patients is to discuss vaginal pain with penetration and the suggested self-care modalities that have been described.

Nurses may also discuss with patients the relationship between arousal and desire. Some evidence in the literature suggests that arousal may actually precede desire.^{31,32} After arousal associated with sexual activity, the patient may experience desire; this has been termed "responsive sexual desire."³¹

Basson and colleagues refer to multiple factors that regulate the processing of sexual information in the mind; these include biological factors (fatigue, depression, sex hormone fluctuations) and psychological factors, such as fear of a negative outcome (dyspareunia, previous negative sexual experiences).³² The complex relationships between biological and psychological factors may reduce a woman's ability to become aroused

and experience desire. Therefore, addressing arousal by decreasing vaginal pain via the interventions described in the MPVP model may improve or create desire for women with multiple biological and psychological factors that may be interfering, such as pain with penetration.

Initiate a discussion

Although patients may be reluctant to broach the subject themselves, research has shown that they want their healthcare professionals to ask about their sexual health concerns.³³⁻³⁷ Nurses are in an ideal position to address female cancer survivors' sexual health concerns related to painful vaginal penetration. The MPVP model introduced in this article can be used by nurses to organize their thinking about the clinical causes of painful vaginal penetration and suggest self-care and over-the-counter therapies. Equally important, the model also encourages nurses to evaluate quality-of-life outcomes related to women's healthy sexual responses. ■

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