Objectives:

To provide an overview of the alterations in sexuality and sexual function that occur in women with cancer.

Data Sources:

Research and review articles, books, clinical experience.

Conclusions:

Although initial concerns of women with cancer may not focus on sexuality issues, most women want support in dealing with body changes. Cancer and cancer treatment for women can result in changes in sexuality and sexual function that may or may not improve over time. Sexual assessment can provide the basis for various approaches to intervention.

Implications for Nursing Practice:

Sexual assessment is an essential part of nursing practice across the trajectory of cancer. With this information, nurses can plan interventions tailored to address these important alterations in the lives of women with cancer.

Keywords:

Female sexuality, female sexual dysfunction, female cancer, Annon's PLISSIT Model

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Alterations of Sexual Function in Women With Cancer

Mary K. Hughes

The American Cancer Society[1] estimates that almost three quarters of a million women will be diagnosed with cancer and about two thirds will survive. As survival rates increase, more attention is being paid to quality-of-life issues such as sexuality.[2] Since the early 1970s, sexual function has been identified as an important aspect of patient care.[3] For decades, the Oncology Nursing Society has included sexuality along with the diagnosis and treatment of cancer in its "Statement on the Scope and Standards of Oncology Nursing Practice."[4]

Women may be able to advocate for their cancer care, but many are not able to advocate for their sexuality. Nappi et al[5] suggest that because the vagina is associated with a large number of derogatory terms, it is difficult for many women to talk about the vagina or anything associated with it, such as sexuality. However, despite this struggle, Soothill et al[6] found that 52% of cancer patients wanted support in dealing with body changes and Lindau et al[7] reported that 62% of genital tract cancer survivors never had a doctor talk to them about treatment effects on sexuality. Initially, patients are concerned about their lifestyle changes or limitations that their cancer will cause and do not focus on sexuality issues until there is a treatment plan and they are resuming their lives.[8] What may surprise many clinicians is their patients' continued interest in sexual issues, given their age, illness, or disability.

Female Sexual Functioning

Sexual function includes a wide range of activities and is defined by the woman, not society. One must understand normal sexual functioning in order to diagnose and treat sexual dysfunction. Unfortunately, the concept of one linear sequence of mainly genitally focused events is not how women respond sexually.[9]

Basson[10] describes a more recent conceptualization of women's sexuality that does not follow one set pattern and notes that there

are many facets of women's sexual function and dysfunction. Understanding the various aspects of women's sexual response is essential to providing support and interventions for women experiencing sexual dysfunction related to cancer and cancer treatment. In addition, it is important to understand the context in which many women may view their sexuality and sexual health. The field of women's sexual health lags 20 to 30 years behind men's,[11] and this is probably rooted in women's historical, political, social, and religious disenfranchisement. Numerous authors have provided insights into these concepts and have given context to the concerns that may impact providers' abilities to discuss sexual issues and for women to advocate for their own sexuality.[12-20]

A woman's sexual response cycle is strongly influenced by the quality of relationship with her partner.[21] With age, initial desire typically lessens, but increases with a new partner at any age. Basson[22] asserts that women often have little or no initial sense of sexual desire if they are in an established relationship, but are able to access desire (responsive desire) if sexual stimulation triggers excitement and pleasure (subjective arousal) and genital congestion (physical genital arousal). Having a physically and emotionally rewarding experience reinforces the woman's original motivations.

Arousal is complex and involves activation of brain areas involved in cognition, emotion, motivation, and organization of genital congestion. Genital congestion is a reflexive autonomic response to erotic stimulus and causes genital engorgement and lubrication. Women are not always aware of congestion, which may occur without subjective arousal. During orgasm (peak excitement) there are vaginal contractions, which slowly release genital congestion. The chemicals released during orgasm may contribute to the sense of well-being, relaxation, or fatigue that follows. Some women experience these feelings without orgasm.[9]

Female Sexual Dysfunction and Evaluation

Unlike many other physiological side effects of cancer treatment, sexual changes do not necessarily improve over time, and may even increase in severity.[23,24] Treatments that helped patients survive can cause physical and psychological difficulties including problems with sexuality and body image.[25-29] There are temporary changes such as alopecia or weight loss that affect sexuality, as well as permanent changes such as scarring or loss of a body part that can cause sexual dysfunction.[30] Carelle et al[31] found that female patients ranked body image among the most severe side effects of chemotherapy treatment and placed more emphasis on appearance and sexuality related side effects than did males. Additionally, Schover et al[32] found that the more types of cancer treatments a woman has, the more likely she is to have sexual dysfunction.

According to Basson,[33] women's sexual dysfunction includes persistent or recurrent disorders of sexual interest/desire, disorders of subjective and genital arousal, orgasm disorder, and/or pain and difficulty with attempted or completed intercourse. Klusmann[34] reported that when defining desire disorder in women, normative lifecycle changes and relationship duration must be taken into account. Table 1 lists several types of female sexual dysfunction.[9,33,35-37]

Clayton[35] stresses the importance of identifying the nature of the onset of the dysfunction (lifelong or acquired type), as well as the context (generalized or situational type) to help define subgroups of dysfunction. Sexual desire may be reduced by the diminished capacity to experience orgasm, which may be a sexual disorder, but not a dysfunction. Bancroft et al[38] suggest that women are more prone to sexual inhibition than men and cautions against "medicalizing" female sexual dysfunction. The health care practitioner should consider whether the woman has a sexual complaint, sexual dysfunction, or a sexual disorder in order to treat each appropriately.[35]

Effects of Cancer and Treatments on Female Sexuality

Cancer and its treatments affect the physiological, psychological, and sociological realms of the woman's life and her ability to maintain sexual health.[39] As early as 1981, Derogatis and Kourlesis[40] reported that the majority of patients have sexual problems after various cancer treatments. In a study by Hughes,[41] 78% of women with cancer seen by a psychiatric clinical nurse specialist reported some type of sexual dysfunction. Sexual dysfunction can result from premature ovarian failure from chemotherapy or pelvic radiation therapy, especially when estrogen replacement is contraindicated.[24]

TABLE 1.
Types of Female Sexual Dysfunction[9,33,35-37]

Type	Description
Persistent or recurrent disorders of interest/desire (hypoactive sexual desire disorder [HSDD])	An absence of desire at anytime during the sexual experience designates disorder.
Disorders of subjective and genital arousal	If subjective, no response to any type of sexual stimulation, but may have genital arousal.
	If genital arousal disorder, subjective arousal to nongenital stimulation (usually postmenopausal women), but impaired or absent genital sexual arousal.
	Combined - Absence or very diminished feelings of sexual arousal from any type of sexual stimulation as well as absent genital sexual arousal.
Persistent sexual arousal disorder	In the absence of sexual interest and desire, spontaneous, intrusive, unwanted genital throbbing unrelieved by orgasm.
Orgasmic disorder (female orgasmic disorder [FOD])	Lack of, markedly diminished, or delay of orgasms despite high sexual arousal regardless of stimulation.
Sexual pain disorders	
Vaginismus	Reflexive tightening around the vagina when vaginal entry is attempted despite woman's desire for penetration. No physical abnormalities present. Often associated with fear, anticipation or pain.
Dyspareunia	Pain with attempted or completed vaginal entry
Sexual aversion disorder involving dysfunctions of sexual desire (FSAD)	Extreme anxiety and/or disgust at the anticipation of or attempt to have any sexual activity.
Sexual dysfunction secondary to a general medical condition or substance induced	Medications, chronic or acute illnesses, fatigue, pain.

Abbreviation: FSAD, female sexual aversion disorder.

Cancer Treatments

Chemotherapy

Ganz et al[42] reported that women with breast cancer who receive chemotherapy had more sexual dysfunction than those who did not. Chemotherapy often causes fatigue and is associated with loss of desire and decreased frequency of intercourse for most women. One of the most devastating events for a woman with cancer is the loss of hair, because of the importance society places on appearance. She is reminded of the pre-adolescent period in her life before sexual awareness was heightened, so she may not feel very sexual.[43] Chemotherapy can affect gonadal function causing menopause that can lead to decreased sexual arousal, libido, and orgasms, as well as sexual stimulation, sexual energy, and erotic pleasure.[44] Chemotherapy can cause neuropathies that affect not only the hands and feet, but also the clitoris, which can decrease sexual arousal and woman's sexual pleasure.

Radiation Therapy

Radiotherapy to the pelvis can cause vascular or nerve damage that can result in delayed arousal and orgasm in women,[45] as well as changes in the vagina that can lead to vaginal stenosis and fibrosis, which in turn can cause long-term sexual dysfunction, painful pelvic examinations, dyspareunia, potential gonadal toxicity, infertility, and low-birth-weight pregnancy outcomes.[46,47] This treatment can also irritate the intestinal lining and may cause diarrhea. The fatigue associated with radiotherapy as well as changes in bowel habits can affect desire and decrease sexual activity.

Surgery

Sexual function can be affected by surgery because of impairment of the vascular supply or innervations to pelvic organs, by amputation of pelvic organs, or by reducing circulating hormone levels.[39] Surgery can also affect body image by the scars left behind or body parts that are missing.

Hormonal Therapy

Women receiving hormonal therapy often report sexual dysfunction, which usually improves after treatment has stopped.[48] Aromatase inhibitors can cause musculoskeletal problems and hot flashes that affect a woman's interest in and ability to perform sexually.[49,50]

Medications

There are numerous medications that can affect sexual functioning, but which the woman must take either for treatment of her cancer or for other chronic or acute conditions.[51] Selective serotonin reuptake inhibitors (SSRI) can intensify sexual dysfunction in women, and there is no association between improvement in depression and improvement in sexual functioning with SSRIs.[52,53] Medications such as antihistamines, anticholinergics, narcotics, anxiolytics, sedatives, nicotine, alcohol, anticonvulsives, biologic agents, chemotherapy, aromatase inhibitors, steroids, butyrophenes, and phenothiazines can cause vaginal dryness, decreased libido, decreased sexual interest, anorgasmia, delayed orgasm, akathisia, sedation, mucositis, or infertility.[54-56] Any medication that has anticholinergic side effects can cause vaginal dryness. Sedating medications can cause decreased libido, decreased arousal, and lack of sexual pleasure.

Menopausal Symptoms

A frequent complaint of women during, as well as after, cancer treatment is menopausal symptoms. Often menopausal symptoms resulting from treatments are not discussed with women before treatment, so women experiencing these symptoms suffer alone and in silence. Menopause can have an immense impact on a woman's sexuality because of body changes from the symptoms. These symptoms include vaginal dryness, hot flashes, insomnia, irritability, mood swings, and loss of tissue elasticity,[42,57-60] each of which can affect sexual interest and sexual function. Table 2 provides a complete list of menopausal symptoms.

Nutritional Changes

Often chemotherapy affects a woman's nutritional status because of changes in functioning of the gastrointestinal tract. These can include weight changes (loss or gain), changes in taste and smell, and anorexia, and can leave the woman feeling asexual.[27,61] Weight changes can also affect a woman's body image. Any of the changes in the mouth, including dry mouth, mucositis, nausea and vomiting, and taste changes can greatly hinder kissing and other forms of oral intimacy. With diarrhea or constipation there can be discomfort in the pelvic area that can hinder genital activity. Table 3 lists

TABLE 2.
Menopausal Symptoms[42,57-60]

Menopausal Symptoms	Sexual Effects
Vaginal dryness and atrophy	Painful intercourse
Decreased vaginal ridges	Decreased friction to the vagina
Labia minora and vulvar atrophy	Painful intercourse
Hot flashes	Decreased libido and arousal and difficulty having an orgasm
Change in body aroma	Deceased libido and arousal
Decreased clitoral sensation	Decreased arousal and longer time to achieve orgasm
Insomnia	Fatigue
Joint pain and decreased muscle mass	Harder to engage in sexual activities
Irritability, mood swings	Lower libido and arousal
Decreased bone density	Fear of fractures and sexual activity
Skin and hair changes	Poor body image, decreased libido
Migraine headaches	Decreased libido
Stature loss	Poor body image
Decreased sexual hair	Poor body image
Increased urinary tract infections	Painful intercourse
Vaginal itching	Painful intercourse
Loss of tissue elasticity	Painful intercourse
Infertility	Change in body image

physiological causes of sexual changes in women.[58,61-66]

Psychological Issues: Body Image, Mood and Depression

Body image was described by DeFrank et al[30] as a focus on patients' feelings and attitudes toward their body that develop as a result of cancer diagnosis and treatment. They found that mental health and sexual functioning were affected by poor body image in female cancer survivors. Studies have shown that women receiving breast-conserving surgery report fewer body image problems than those with a mastectomy[24,67,68]; while recurrent disease or a more serious cancer diagnosis has negative effects on female body image.[30]

Mood can affect sexual functioning in a negative or positive way.[69] Clinical depression is the main psychological cause of deceased libido in patients with cancer, but it often goes undiagnosed and untreated.[70] Other psychological issues that can alter sexual functioning include frustration, stigma and embarrassment, anxiety, anger and irritability, loneliness and despair, sadness, grief at the numerous losses experienced as a result of the cancer, misinformation, guilt and shame, disappointment, and fear.[57,71,72] Fears of death, rejection, or loss of control affect libido and ability to enjoy sex.[58] The woman may also have a lowered self- esteem as well as performance anxiety and changes in her personality.[30,57,62,71,72] Her age-appropriate developmental goals (education, marriage, pregnancy, child rearing, career, retirement) may be affected by treatment.[62] She may be unable to continue working, which may affect her self-esteem and her ability to provide financially for her family. Consideration of the patient's past history of anxiety and depressive disorders as well as specific reversible disease and treatment history needs to be taken into account during the assessment.[73] Unfortunately, there are barriers to diagnosis and treatment of psychiatric conditions. These include lack of agreed-upon screening instruments, lack of psychosocial support, shame, uncertainty about diagnosis, and cost.[73,74]

Sociocultural Influences

The culture in which a woman grew up as well as the culture in which she currently lives will affect how she copes with cancer, as well as how it influences her sexually. If a woman lives in an isolated, rural area, she may feel a lack of support and may not have resources available to address her sexual changes. She might not have a partner or she or her partner may fear her cancer is contagious. Lack of privacy may hinder her from discussing sexual issues during her clinic visits or while hospitalized. Her partner may fear hurting her because of misinformation or lack of permission from the provider to resume sexual activity.[58] Certain types of cancer, such as colorectal cancer or one of the gynecologic cancers, may elicit an element of shame that makes revealing the type of cancer or planned cancer treatment, as well as discussing any sexual changes, much more difficult.

It is common for women with gynecologic cancer to feel alone, poorly understood, and guilty.[57] Women feel a loss of control with cancer and often have more difficulty asking for caregiver help. It also may be necessary for women to receive care at a treatment center that is far removed from her normal support systems. For example, if a woman is Native American and uses the Indian Health Service, cancer care may not be provided in her location and may require her to leave her

TABLE 3.
Physiological Changes that Alter Sexual Activity[27,58,61-66]

Loss of estrogen	Damage to pelvic area	Alopecia
Fatigue	Type of treatment	Loss of pubic hair
Pain	Lymphedema	Pelvic surgery
Location of cancer	Sterility	Thrombocytopenia
Shortness of breath	Muscle atrophy	Loss of control of bodily functions
Draining wounds	Immunosuppression	Hormone and electrolyte imbalances
Anemia	Insomnia	Central nervous system changes
Menopausal symptoms	Nutritional changes	Decreased stamina

family and support system to find treatment. Additionally, in some Native American cultures, a woman cannot talk about her cancer because she would be bringing the cancer into the family; thus, needed support may not be available.

Women who have had a mastectomy have a greater need to talk about concerns than do their partners, and they often feel frustrated by their partners' unwillingness to discuss negative feelings, including changes in body image and self-esteem.[75] The stress of cancer and its treatments can exacerbate underlying marital tension and likewise affect the sexual relationship. One of the most important factors in adjusting sexually after surviving cancer is a woman's feelings about sexuality before cancer. Table 4 identifies other potential cultural influences.[43,57,58,64,72,76,77]

Effects of Specific Cancer Types on Sexuality

Breast Cancer

There is a 25% chance for sexual dysfunction (loss of desire, decreased frequency of intercourse, and diminished sexual excitement) in women with a modified radical mastectomy.[78] Breast cancer raises issues of sexual identity and female attractiveness, as well as issues of pain and suffering.[72] Breast cancer creates a condition of emotional vulnerability and attacks a woman's life as well as her femininity. A disproportionately large number of young women with breast cancer (younger than 40 years) seek psychiatric help and are especially concerned about sexual side effects of treatments, fertility, and child-rearing and body-image issues.[62]. Fifteen percent to 64% of women with breast cancer experience sexual dysfunction, which includes reduced arousal and desire, and vaginal dryness.[79,80] Hill and White[81] describe women with TRAM flap breast reconstruction as self-conscious about exposing their bodies. They had to redefine normality as it related to body image, self-esteem, relationships, family dynamics, lifestyle. and self.

Gynecologic Cancers

There is a 50% or greater chance for sexual dysfunction in women treated for gynecologic cancer because of changes in body image, sexual function, and fertility.[82] From 15% to 80% of women with gynecologic cancers, such as cervical or ovarian, experience sexual dysfunction such as reduced interest, vaginal dryness, less orgasms, or dyspareunia.[26,63,83,84] Long-term survivors of vaginal and cervical cancer report dyspareunia and vaginal dryness.[7]

Other Cancers

In a study of people with lung cancer, 95% performed below the norm for sexual function, complaining of vaginal dryness, as well as low libido and poor body image.[44] Women with lung cancer had a greater disturbance in their quality of life, including sexual functioning, when compared with women with other types of cancer.[85] From 13% to 33% of women with leukemia experience vaginal

TABLE 4.
Sociocultural Influences on Sexual Changes[43,57,58,64,72,76,77]

Marital status	Race	Role change
Attitude toward cancer	Education	Disfigurement
Attitude toward treatment	Insurance loss	Performance anxiety
Gender preference	Geographic location	Job loss
Location of support	Financial concerns	Job pressures
Finances	Loss of fertility	Social withdrawal
Family traditions	Relationship inequalities	Appearance concerns
Isolation	Cancer site	Misinformation
Stigmatization	Significance of body part	Cancer site
Change in touch	Masturbation history	End of life issues
Change in intimacy	Conflict in extended family	Abandonment issues
Fears of rejection	Religion	Lack of privacy
Lack of partner	Difficulty initiating sexual activity	Fear of contagion
Communication difficulties	Fear of physically hurting partner	Reassigned priorities

dryness, decreased sexual interest, or less sexual satisfaction.[86] It had been noted that married female allogeneic bone marrow transplant recipients were less satisfied with their sexual life, had less interest in sexual relationships, and were less sexually active compared with married males.[87] Women with head and neck cancers may fear being rejected by others, which leads to social isolation because of an altered body image and self-esteem.[88,89] This can also lead to depression and anxiety, which can affect libido and arousal. Additionally, women with stomas most commonly report dyspareunia, vaginal dryness, loss of perineal sensation, and anhedonia.[90]

Sexual Assessment

If sexual dysfunction is distressing to the woman, it must be addressed. More than half of women surveyed in a study of sexual dysfunction wanted professional help, but only 10% received any help.[91] Women may erroneously expect to lose libido as they age or after menopause, which may interfere with their discussing these issues with their practitioners.

There are a wide variety of questionnaires that can aid in taking a sexual assessment, but are lacking in addressing pertinent areas of concern for women treated for breast or gynecologic cancer.[92] The nurse can help a woman cope with sexual changes by addressing these issues early in the cancer trajectory. Asking open-ended questions can be a way for the nurse to illicit sexual information. Questions such as: "Sexually, how are things going?" or "What sexual changes have you noticed?" can be helpful in identifying sexual concerns. Using the word "partner" can help lesbian patients be more comfortable in addressing sexual issues.[93] Using the PLISSIT[94] or BETTER[95] models discussed in the article on assessment and intervention (elsewhere in this issue) can be helpful in matching the range of problems to the intensity of the intervention.

Management of Sexual Dysfunction in Women With Cancer

Treatment of sexual dysfunction includes behavioral, psychological, medical, surgical, complementary and alternative medicine, and physical interventions.[39] Treating sexual disorders depends on their cause. However, sometimes sympathetic understanding of the patient's problems and careful evaluation of the patient's concerns may in and of themselves be therapeutic.

For any sexual dysfunction it is important to treat both the physical symptoms and psychological conditions. Anxiety and depression as well as physiologic symptoms can be treated with medications, acupuncture, and/or therapy (behavioral, marital, sexual, psychotherapy, physical therapy, or speech therapy).[57,58,62] Substitution of SSRI antidepressants for another type of antidepressant may be helpful if sexual dysfunction is believed to be caused by the current medication.[51] It is essential to address changes in body image or weight change, teach sensate focus exercises, recommend non-sexual touching, and facilitate improved communication patterns.[57,58,62,96,97] Other treatments may include getting regular exercise, and using erotica, masturbation, and/or vibrators. As appropriate, referral for reconstructive surgery or a prosthesis should be considered. Additionally, current medications should be assessed and, if indicated and possible, alternates that do not affect sexuality should be prescribed.[57,58,62,96] Kendall et al[98] suggest a short holiday from aromatase inhibitor (AI) therapy and the substitution of a combination of vaginal estrogens and tamoxifen to treat severe atrophic vaginitis before returning to AIs.

Libido

For hypoactive sexual desire disorder, an EROS-CTD can be prescribed.[58] This is a battery-operated vacuum device with a small funnel that fits over the clitoris to increase blood flow to the clitoris. Some couples like to role-play during their sexual encounters or watch erotica. They can be encouraged to talk about their sexual fantasies. Regular sexual encounters may need to be scheduled, with the couple deciding on their own schedule. Helping the woman to talk about how she feels about her body is beneficial and, if her body image is low, it may be helpful to assist her in exploring reconstruction possibilities. If she does not like the looks of her reconstructed breast, it is important to help her explore what she does like about her body. If she is uncomfortable with her ostomy bag, the nurse can suggest planning sexual encounters when her bag is empty and/or covering the bag using a decorative bag covering or sexy clothing. There is lingerie that can cover scars and some women with breast scarring prefer to

wear camisoles during sexual activity. The nurse can encourage non-sexual touching with her partner and help the woman talk about what sexual cues she gets from her partner and how she knows when sexual encounters will occur. Other suggestions are to ask the woman and her partner how they communicate sexually with each other; what they like and what they do not like. Additionally, it is valuable to address the issue of weight change, especially in women with breast cancer who usually gain weight during treatment.

Arousal

If the woman is having problems with genital arousal, vaginal lubricants and moisturizers can help. Vaginal lubricants are used before and during sexual activity, whereas vaginal moisturizers are used several times a week to help maintain normal vaginal moisture and comfort. Erotica can also help with arousal; some women like videos while others prefer books. Having a list of erotic videos and books to recommend is helpful. Evaluating hormone levels is essential to determine if the patient has entered menopause. Various options are available for hormone management. Referral to an endocrinologist for hormone replacement is worthwhile if not contraindicated by disease or treatment.[58] Using an estrogen vaginal ring that is changed every 3 months and emits a very low dose of estrogen vaginally can be prescribed with the oncologist's approval. Over-the-counter L-arginine does not stimulate estrogen, but may improve genital blood flow.[58] Using estrogen, soy, or black cohosh may also be helpful if the tumor is not estrogen-dependent.[58]

If vaginal stenosis is a problem following radiotherapy, vaginal dilators can be used 6 weeks after pelvic radiation (used with water-soluble lubricants and lidocaine). A written prescription for a vaginal dilator with specific instructions on how to use the dilator is essential. Kegel exercises as well as sensate focus exercises can be recommended and explained. Sensate focus exercises are a way for the couple to explore each other's bodies using all of their senses (sight, sound, touch, taste, smell) without focusing on the genitals.[97] The importance of patience and taking time should be stressed. Look Good - Feel Better (www.lookgoodfeelbetter.org) can be helpful in improving body image.[57,62] For dyspareunia, in addition to the above recommendations, the woman may need medications such as lorazepam or alprazalam to help her relax.[57]

Orgasm

Orgasm can be delayed or non-existent. Encouraging self-stimulation (masturbation) is a way for women to learn what feels good and what does not, but some women have no experience with masturbation.[58] Giving them permission and instructions on how to explore their own body can be helpful. Using vibrators can also be a way of self-stimulation as well as a way to introduce sex toys into the relationship. Women may not be aware of the clitoris and the important role it plays in orgasms, so sex education can be important in helping the woman become aware of not only the clitoris, but the role it and the vagina play in her sexuality, particularly orgasms.[99] The woman may need more direct clitoral stimulation as well as longer stimulation to achieve orgasm. Psychotherapy can help a woman identify and manage issues of trust, vulnerability, and fear of relinquishing control in her relationship. Being able to tell her partner what feels good and how and where to touch her involves improving communication in the relationship. It is important to address body image issues such as scarring, weight change, and neuropathies as well.

Fertility

It is important to preserve fertility whenever possible. This topic needs to be discussed before treatment begins; unfortunately, most women with a new cancer diagnosis do not have the luxury of time. Being able to bank eggs or embryo cryopreservation takes planning, is expensive, and can delay treatment. Using surrogates after treatment is an option for women who have saved their eggs. For women dealing with infertility issues, they can be referred to an endocrinologist for further testing. Fertility organizations such as Fertile Hope (www.fertilehope.org) and Reprotech Limited (www.reprot.com) can help with fertility choices. Referring the patient to support groups and/or grief therapy can help her deal with the loss of reproduction as well as to help define her own meaning of infertility. If fertility and child bearing are related to other side effects of cancer or cancer treatment, referrals to appropriate individuals such as the social worker, dietician, bowel management specialist, cardiologist, fatigue

specialist, and pain specialist should be made.[58] As a component of discussions about infertility, information about adoption and surrogacy also can be provided.[57,58,62,64]

Conclusion

Recognizing the possibility of alterations in sexual function from cancer and/or its treatment can help the nurse to conduct a sexual assessment with each patient visit along the cancer trajectory. Being able to do this involves the nurses' willingness to be educated about possible sexual dysfunctions as well as treatment options for sexual dysfunction. Being able to address sexual issues with female patients lets them know that they can bring up this topic as sexual concerns arise. This helps legitimize a woman's sexual concerns and decreases her sense of isolation when no one is addressing this important alteration in her life.

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