Consequences of Chemotherapy on the Sexuality of Patients With Lung Cancer

Susan Schwartz, BSN, RN, OCN®, and Henry M. Plawecki, RN, PhD

Lung cancer occurs most frequently in the more developed countries of North America and northern Europe. Each year, it kills about 158,900 Americans (Dest, 2000). Recent demographic information indicates that the incidence of lung cancer has decreased slightly in men but continues to rise in women (Hoffman, Mauer, & Vokes, 2000). Although diagnosis and treatment of lung cancer have become more sophisticated, the overall one-year survival rate is 41% (Bakas, Lewis, & Parsons, 2001).

The two types of lung cancer are non-small cell and small cell carcinoma. Non-small cell lung cancer, the most common type (Cooley, 1998), constitutes 85% of lung cancer cases (John, 2001). Small cell lung cancer usually presents with distant metastasis at the time of diagnosis (John). Bone and brain metastases are common pathologies associated with small cell lung cancer.

Several chemotherapeutic agents are used to treat lung cancer (see Table 1). Paclitaxel and carboplatin are first-line therapy for non-small cell lung cancer. Paclitaxel can cause peripheral neuropathy, myalgia, arthralgia, fatigue, and myelosuppression. Carboplatin can cause nausea, vomiting, alopecia, and fatigue. Many of these side effects, such as fatigue, nausea, vomiting, and myalgia, affect sexual desire and the physical ability to engage in sexual activity. Neutropenia and thrombocytopenia may be significant enough that women with lung cancer must avoid penetration during sexual activity (Wilkes, Ingwerson, & Barton-Burke, 2002).

Many healthcare providers have long ignored the impact that these side effects can have on intimate aspects of patients’ lives. In addition, scant research and few reports about this topic exist in the biomedical literature. The purpose of this article is threefold. It will

- Describe the consequences that chemotherapy has on sexuality
- Identify the barriers to counseling patients about sexuality
- Make recommendations that may improve the sexual health of patients with lung cancer.

Chemotherapy can cause a variety of physical and emotional changes that affect all aspects of patients’ lives, including sexuality. Alterations in physical appearance can significantly influence people’s perceptions of their sexual identities, attractiveness, and worthiness. Patients with lung cancer receiving chemotherapy may need sexual counseling. Therefore, patients and healthcare providers should create an environment that allows adequate time to discretely discuss the impact that chemotherapy treatment may have on appearance, self-esteem, and sexuality. Nurses and physicians might hesitate to discuss sexuality with patients for various reasons, including time limitations, privacy considerations, readiness, and comfort level. Employers should provide support, educational programs, and professional resources so that healthcare providers can obtain the knowledge, develop the skills, and recognize that counseling patients about sexual issues is an important aspect in providing comprehensive holistic care to patients with lung cancer.

Consequences of Lung Cancer and Chemotherapy

Chemotherapy treatment can have a devastating impact on the quality of patients’ lives. A Polish study examined aspects of quality of life (QOL) in patients with lung, gastric, and colorectal cancers (Scieszka, Zielinski, Machalski, & Herman, 2000). These three groups were surveyed before treatment and after 6–9 courses of adjuvant chemotherapy. Patients with lung cancer displayed the most dramatic changes in physical, emotional, and functional well-being as measured by the Functional Assessment of Cancer Therapy questionnaire. These patients experienced increased weakness, nausea, vomiting, and alopecia related to a more aggressive chemotherapy regimen that increased toxicity levels. Patients with lung cancer had decreased abilities to carry out household tasks, enjoy meals, spend time with family and friends, and maintain daily functional activities. Chemotherapy affected QOL of patients with lung cancer more adversely when compared to QOL of patients with gastrointestinal cancers.

Submitted July 2001. Accepted for publication January 25, 2002. (Mention of specific products and opinions related to those products do not indicate or imply endorsement by the Clinical Journal of Oncology Nursing or the Oncology Nursing Society.)

Digital Object Identifier: 10.1188/02.CJON.212-216

212 JULY/AUGUST 2002 • VOLUME 6, NUMBER 4 • CLINICAL JOURNAL OF ONCOLOGY NURSING
Patients with lung cancer undergoing chemotherapy treatment may experience pain, fatigue, dyspnea, peripheral neuropathy, malaise, sterility, anemia, alopecia, weight loss, and anorexia. Pain may have significant effects on mood, QOL, and the ability to perform activities of daily living. Adequate pain control is essential in comforting and enhancing patients’ sense of well-being. Fatigue is the most frequent, distressing, and frustrating side effect of cancer treatment (Hughes, 2000). Patients should be encouraged to perform necessary daily tasks when their energy levels peak.

Maintaining patients’ nutritional status can be a major challenge. Nutritional disturbances induced by chemotherapy may include nausea, vomiting, mucositis, diarrhea, anorexia, constipation, dry mouth, and taste alteration. These side effects have dramatic effects on patients’ energy levels, moods, and general lifestyles. These conditions may adversely affect interest, willingness, and ability to engage in emotionally related activities such as kissing, touching, or sex (Hughes, 2000).

Dyspnea is a common symptom of lung cancer that affects patients’ physical, social, and psychological well-being. Smith et al. (2001) examined the relationships among QOL, dyspnea, trait anxiety, and body consciousness in 120 outpatients with stage I–IV lung cancer and reported that 87% of the patients experienced dyspnea. In addition, the investigators found the following:

- Patients with high scores for dyspnea had lower QOL measurements.
- Dyspnea was more severe in men than in women.
- Older patients reported more severe dyspnea than their younger counterparts did.
- Increased dyspnea produced higher scores for pain and anxiety.
- Patients taking opioid analgesics reported more severe levels of dyspnea than patients treated with nonopioids or patients not taking prescribed pain medications.

The researchers concluded that when dyspnea is problematic, symptom management to relieve anxiety and pain should be considered (Smith et al.). Dyspnea, therefore, is another symptom that may significantly influence patients’ sexual activities and satisfaction.

Undergoing cancer treatment can change patients’ physical appearances and, consequently, alter their perceptions of their attractiveness, desirability, and social acceptance (Schover, 1997). “A change of body image may be defined as a loss of psychological self, including loss of self-concept, self-esteem, and self-identity” (Burt, 1995, p. 36). Perceived negative changes in body image can affect patients’ willingness to engage in a spectrum of social relationships, ranging from interacting with casual acquaintances to engaging in intimate activities. Alopecia is a side effect that can have dramatic effects on perception of body image, resulting in loss of self-esteem and feelings of unattractiveness. Self-esteem can be defined as “the reputation we have with ourselves” (Cantor, 1979, p. 51). Women experiencing chemotherapy-induced alopecia have a lessened sense of self-esteem and, as a result, may become more socially withdrawn and irritable and have a lowered libido (Burt). Feelings of worthiness and competence underlie sexual responses (Cantor).

Sensory nerves help people feel pain, touch, temperature, position, and vibration. Some chemotherapy agents used to treat lung cancer can cause damage to sensory nerves that may lead to sexual dysfunction. Peripheral neuropathy, often limited to nerves in the fingers, hands, arms, toes, feet, and legs, may be manifested as numbness, tingling, painful burning, or electric shocks in some patients. Experiencing numbness, tingling, and pain may affect sexual activity negatively.

Many patients who undergo chemotherapy treatment experience emotional distress or depression. Clinical depression most likely is present if a patient has a severe and lasting change in mood, an inability to enjoy life, and a change in mental alertness. Depression is more common when cancer causes limitation of activities of daily living (Schover, 1997). Depression can cause feelings of isolation, which, in turn, cause a loss of interest in being involved in situations that require active social interaction. Possible interventions for depression include cognitive and pharmacologic therapy. In addition to elevating patients’ sense of well-being, antidepressants may improve ability to sleep, appetite, energy levels, and stamina. Improving patients’ physical conditions may increase their self-esteem, willingness to socialize, and libido.

### Barriers to Counseling Patients

Sexual counseling frequently is neglected in the oncology setting. Patients and healthcare providers should create a process that allows adequate time to discreetly discuss the impact that chemotherapy treatments have on appearance, self-esteem, and sexuality. Schover (1999) reported that the average duration of an outpatient visit to a physician was about 10 minutes. During that short time, physicians interacted with patients and completed physical examinations. When patients reported emotional distress, the duration of visits increased but still was less than 13 minutes (Schover, 1999). Time limitations may discourage caregivers from initiating discussion about the impact that chemotherapy treatments for lung cancer have on intimate aspects of patients’ lives.

Discussions about sexuality must occur in locations that facilitate interaction while ensuring privacy. Discussions will occur only when healthcare professionals are prepared, schedule adequate time, and are willing to initiate this type of interaction. Healthcare professionals must objectively and subjectively assess their readiness and comfort levels before integrating such a discussion process into regular assessment regimens. Nurses and physicians may be uncomfortable initiating discussion about sexuality because providers or patients might perceive it as intrusive, disrespectful, or inappropriate. Differences in gender, age, religious orientation, race, culture, or socioeconomic factors also may dissuade nurses and physicians from attempting to discuss sexuality with patients. The absence of perceived need by an institution’s leadership, the lack of institutionally sponsored programs, and professional resource personnel might discourage healthcare professionals from obtaining sexual histories. Nurses and physicians often ignore the ramifications of major illnesses and treatments on patients’ sexuality because their clinical focus often is on more immediate, life-threatening problems (Walbroehl, 1985).

### Table 1. Pharmacologic Agents Used in the Treatment of Lung Cancer

<table>
<thead>
<tr>
<th>Pharmacologic Agent</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisplatin</td>
<td>Peripheral neuropathy, ototoxicity, nephrotoxicity, fatigue</td>
</tr>
<tr>
<td>Docetaxel</td>
<td>Fluid retention, fatigue</td>
</tr>
<tr>
<td>Etoposide</td>
<td>Transient hypotension, fatigue</td>
</tr>
<tr>
<td>Gemcitabine</td>
<td>Myelosuppression, fatigue, rash, flu-like symptoms, fatigue</td>
</tr>
<tr>
<td>Vinorelbine</td>
<td>Peripheral neuropathy, constipation, myelosuppression, injection-site phlebitis, fatigue</td>
</tr>
</tbody>
</table>

Note. Based on information from Wilkes et al., 2002.
Recommendations

Discussions between patients and healthcare providers about the impact of the diagnosis of lung cancer, the initiation of chemotherapy and its side effects, and how these factors affect patients’ sexuality generally are ignored. Failing to recognize the importance of sexuality diminishes the importance that clinicians usually place on patients’ self-images, lifestyles, and relationships with their significant others. Nurses, the professionals who often have the greatest access to and trust of patients, must assume the responsibility for addressing this long-ignored aspect of care. Helping patients to discuss their concerns about the impact that cancer and its treatment have on their sexuality must become a routine aspect of comprehensive nursing care.

Patients generally are hesitant to initiate discussion of sexuality with nurses because they fear being rebuffed, embarrassed, or labeled as sexually aggressive. Nurses must overtly, professionally, and discreetly initiate discussion of any issues that can profoundly affect the health and well-being of their patients. Nurses may rationalize that waiting for patients to bring up sexuality is appropriate, but often the topic is avoided because of providers’ discomfort and reluctance to initiate discussion. Acceptance of this reactive rather than proactive approach contradicts other aspects of care, where healthcare providers openly discuss symptoms to anticipate, neutralize, and prevent possible consequences (Cort, 1998). Providers’ reluctance, combined with limited knowledge and a lack of resources such as formal training, leads to the predictable consequences of rationalization, avoidance, and neglect. Nurses should express a willingness to foster communication with patients to help them discuss any sexual problems related to the diagnosis of lung cancer and its treatment. To initiate conversation, nurses could distribute education sheets that outline some of the consequences of chemotherapy on sexuality and have patients read them and ask questions. Sexuality is a vital part of healthy people’s lives (Walbroehl, 1985) and should be considered an important facet of identity. Although survival is the most important issue after diagnosis of lung cancer, the joys of other psychosocial experiences, including intimate sexual relationships, give meaning to life. Sharing experiences that make life meaningful, pleasurable, and stimulating can contribute to the overall well-being of patients with lung cancer and their significant others.

A number of common myths and misconceptions exist regarding the relationship between sexuality and cancer. Some patients believe they should avoid intimate sexual activity because cancer is contagious. Other patients believe that engaging in sexual activity can make cancer grow, even though the scientific community dismisses that relationship. Some believe that abstinence from sexual activity will help cure cancer. These patients perceive sexual abstinence as a sacrifice that will ensure a healthy future. In reality, the only caution regarding sexual activity is related to periods of severe immunosuppression (Schover, 1999).

Obtaining sexual histories is a therapeutic intervention, a fundamental part of the assessment process, and an essential component of holistic nursing care (Warner, Rowe, & Whipple, 1999). Sexual histories should be completed soon after diagnosis of lung cancer has been confirmed, and open-ended discussion should begin at the time treatment is planned (Hughes, 2000). Sexual histories should be taken in nonthreatening, quiet, private environments, and patients must be assured that everything discussed will be kept strictly confidential. Taking

Failing to recognize the importance of sexuality diminishes the importance that clinicians usually place on patients’ self-images, lifestyles, and relationships with their significant others.

Nurses and physicians must be sensitive and tactful and ask gender-neutral questions to develop trust with patients. Patient-education sheets (see Figure 1) may address myths associated with sexual activity during chemotherapy and include information about safer sexual practices and helpful hints for coping with factors that may interfere with the enjoyment of sex (e.g., fatigue, pain, nausea). Patients must be reassured continuously and encouraged to initiate discussions about sexuality-related issues. Presenting patients with education sheets may facilitate communication. Nurses must recognize the need, accept the responsibility, and actively seek opportunities to develop their interview techniques when completing sexual assessments and facilitating discussions about intimate topics. Nurses may refer to Annon’s PLISSIT (permission, limited information, specific suggestions, and intensive therapy) model, which is a classic intervention used to perform sexual assessments (Hughes, 2000). The components of the PLISSIT model follow.

Permission: Healthcare providers should give permission to patients to be sexually active when undergoing and recovering from treatment and when living with lung cancer. Nurses can have an active role in patients’ sexual rehabilitation through assessment, education, and support (Hughes, 2000). Patients must know that engaging in sexual activity while receiving chemotherapy for lung cancer is not unhealthy.

Limited information: One of the first steps toward sexual rehabilitation is education. Healthcare providers should offer facts about the effects of lung cancer and its treatment on sexuality, sexual function, and fertility. Some issues may require discussion, specifically with physicians if sexual limitations result from surgery for lung cancer. Nurses should inform patients about the side effects of chemotherapy on sexuality as part of the pretreatment education process (Hughes, 2000). Patient-education sheets may be a helpful tool.

Specific suggestions: When indicated, physicians and nurses should suggest reading materials, videos, planning, communicating more openly about needs, safe practices, positions, various means of sexual expression, and ways to control physical symptoms (Hughes, 2000). They should base suggestions on assessment of patients’ needs and desires. Nurses must recognize that some patients, because of choice or circumstance (e.g., widowhood), may not be interested in receiving specific suggestions about sexual activity. Healthcare providers can offer specific suggestions for coping with symptoms
Sexuality is individual and unique. A cancer diagnosis and treatment may change sexual feelings, desire, and functioning. After diagnosis and during treatment, sexual response may be different from what you are used to experiencing. Changes in appearance and negative thoughts may influence enjoyment of sex. Sexuality is an important part of the quality of everyday life. Changes in sexuality can affect self-image and relationships with others. You may find that intimacy takes on new meaning. Hugging, touching, holding, and cuddling may become more important, and sexual intercourse may become less important. There is no “right” way to express your sexuality. It is up to you and your partner to decide together what is pleasurable and satisfying to both of you. This information sheet offers some facts about cancer and sexuality.

**Facts, not myths**
- Engaging in sexual activity does not make cancer grow or spread.
- Cancer is not a punishment for past sins or past sexual behavior.
- Refraining from sex will not cure cancer.

**Safer sex**
- Use latex condoms during oral sex and intercourse while undergoing chemotherapy treatment.
- Use contraceptives once chemotherapy begins and continue for three months after the last treatment, or as advised by your healthcare provider.
- Wash hands thoroughly before and after caressing the genital area.
- Use water-based lubrication (e.g., K-Y Jelly® [Johnson & Johnson Medical Inc., New Brunswick, NJ]), Surgilube® [E. Fougera & Co., Melville, NY]). Do not use petroleum jelly or other oil-based lubricants.
- Clean sexual aids (e.g., vibrators) thoroughly after each use.

**Helpful hints to cope with symptoms that may interfere with your enjoyment of sex**
- Emotional distress: Let your nurse or doctor know if you have been feeling anxious, worried, distressed, or depressed. Many ways to manage these symptoms exist, and your healthcare team will help you decide which method is best for you.
- Fatigue: Some patients have found it helpful to nap before sexual activities or engage in sexual activity in the morning, when well rested. Others have found it helpful to avoid heavy meals. Try several positions that require minimal effort, such as side-lying positions.
- Pain: Relaxation, warm baths, and massages may be helpful. Use cushions and pillows to position for comfort.
- Nausea: A light meal or crackers and antinausea medications may be helpful before engaging in sexual activity.

Being comfortable with your sexuality to maximize sexual function and quality of life is important. Sexuality can enhance self-esteem, improve overall comfort, and make coping with cancer easier. For more information regarding support groups, books, and organizations, please speak with your healthcare team.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emphysema</td>
<td>Lung cancer remains the leading cause of cancer death in both men and women (John, 2001). The consequences of chemotherapy used to treat lung cancer may alter perception of body image that may lead to sexual concerns and, sometimes, sexual dysfunction. Nurses and physicians may be uncomfortable discussing sexuality with patients for various reasons, including time limitations, privacy considerations, readiness, and comfort levels. However, as healthcare providers, they must help patients discuss their concerns about the impact that cancer and its treatment have or will have on their sexuality. Employers must provide support, educational programs, and professional resources so that healthcare providers can help patients explore the impact of their illness on their sexuality.</td>
</tr>
<tr>
<td>Exercise</td>
<td>Exercise: Older adults are encouraged to exercise 3–5 times a week for 15–30 minutes, depending on physical status and treatment regimen. Walking, swimming, and cycling can accomplish this (Shell &amp; Smith, 1994).</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Nutrition: Good nutrition can help prevent symptoms that can adversely affect sexual performance. Overindulgence in food and alcohol before sexual activity should be discouraged. Small, frequent meals may be beneficial (Shell &amp; Smith, 1994).</td>
</tr>
<tr>
<td>Self-image</td>
<td>Self-image: Cleanliness, skin products (e.g., makeup, cologne, perfume), hair care, and attractive clothing may enhance positive self-images. The “Look Good, Feel Better” program is available through the American Cancer Society (Shell &amp; Smith, 1994).</td>
</tr>
<tr>
<td>Musculoskeletal changes</td>
<td>Musculoskeletal changes: Elderly people may need to try different positions to promote comfort and safety during sexual activity. The American Cancer Society publishes two booklets about sexuality and cancer, one for females and one for males.</td>
</tr>
<tr>
<td>Intensive therapy</td>
<td>Intensive therapy: Healthcare providers should refer patients to therapists or psychotherapists to manage dysfunctions, permanent disabilities, distress from sexual changes, or marital distress.</td>
</tr>
</tbody>
</table>

**Conclusion**

Lung cancer remains the leading cause of cancer death in both men and women (John, 2001). The consequences of chemotherapy used to treat lung cancer may alter perception of body image that may lead to sexual concerns and, sometimes, sexual dysfunction. Nurses and physicians may be uncomfortable discussing sexuality with patients for various reasons, including time limitations, privacy considerations, readiness, and comfort levels. However, as healthcare providers, they must help patients discuss their concerns about the impact that cancer and its treatment have or will have on their sexuality. Employers must provide support, educational programs, and professional resources so that healthcare providers can help patients explore the impact of their illness on their sexuality.
obtain knowledge, develop skills, and recognize that assessing and counseling their patients about sexual issues are important aspects of comprehensive, holistic care of patients with lung cancer.

Author Contact: Susan Schwartz, BSN, RN, OCN®, can be reached at schwarsl@umdnj.edu.

References


For more information on this topic, visit the following Web sites:

Cancersurvivor
www.cancersurvivor.com

National Ovarian Cancer Resource Center
www.ovarian.org/press.asp?releaseID=88

Sexuality and Reproductive Issues (PDQ)

These Web sites are provided for information only. Hosts are responsible for their own content and availability. Links can be found using ONS Online at www.ons.org.

Rapid Recap

Consequences of Chemotherapy on the Sexuality of Patients With Lung Cancer

- Chemotherapy can cause alterations in physical appearance, which can significantly influence patients’ perceptions of their sexual identities, attractiveness, and worthiness.
- Dyspnea is a common symptom of lung cancer that affects physical, social, psychological, and sexual well-being.
- Barriers to counseling patients about sexuality include time limitations, readiness and comfort levels of healthcare professionals, and differences in gender, age, religious orientation, race, culture, and socioeconomic factors.
- Patient-education sheets can enhance communication about sexuality and cancer treatment.
- Rapid, specific sexual assessments of patients with lung cancer undergoing chemotherapy should include the following questions.
  - Has being ill affected your being a husband and father or wife and mother?
  - Has your illness changed the way you see yourself as a man or woman?
  - Has your illness affected your sexual interest or functioning?