

8: Cancers of the Female Reproductive Tract

Learning Objectives

Upon completion of the chapter, you will be able to:

- **1.** Define the key terms used in the chapter.
- **2.** Evaluate the major modifiable risk factors for reproductive tract cancers.
- **3.** Analyze the screening methods and treatment modalities for cancers of the female reproductive tract.
- **4.** Outline the nursing management needed for the most common malignant reproductive tract cancers in women.
- **5.** Examine lifestyle changes and health screenings that can reduce the risk of or prevent reproductive tract cancers.
- **6.** Assess at least three web site resources available for a woman diagnosed with cancer of the reproductive tract.
- **7.** Appraise the psychological distress felt by women diagnosed with cancer, and outline information that can help them to cope.

KEY TERMS

cervical cancer

cervical dysplasia

colposcopy

cone biopsy

cryotherapy

endometrial cancer

human papillomavirus

ovarian cancer

Papanicolaou (Pap) test

vaginal cancer

vulvar cancer

Carmella is an obese, 55-year-old woman who presents to her woman's health care provider with vaginal bleeding. She has been through menopause and wonders why she is having a period again. Her history includes infertility and hypertension. Three years ago she had a mastectomy for breast cancer, and she has been taking tamoxifen (Nolvadex) to prevent recurrent breast cancer since her surgery. What risk factors in Carmella's history

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might predispose her to a reproductive tract cancer? What additional information is needed to make a diagnosis?

WOW: Words of Wisdom

The word “cancer” can strike fear into anyone who hears it. But when it involves a reproductive organ, this fear is often magnified.

Cancer is the second leading cause of death for women in the United States, surpassed only by cardiovascular disease (Centers for Disease Control and Prevention [CDC], 2011a). Cardiovascular disease is, and should continue to be, a major focus of efforts in women's health. However, this should not overshadow the fact that many women between the ages of 35 and 74 are developing and dying of cancer (National Cancer Institute [NCI], 2011a). Women have a one-in-three lifetime risk of developing cancer, and one out of every four deaths is from cancer (Alexander, LaRosa, Bader, & Garfield, 2010). African American women have the highest death rates from both heart disease and cancer (CDC, 2011a). The American Cancer Society (ACS) (2011b) estimated that in 2011 about 171,600 cancer deaths were caused by tobacco use. Scientific evidence suggested that about one third of the 571,950 cancer deaths expected to occur in 2011 were related to obesity, physical inactivity, and poor nutrition and thus could have been prevented. Certain cancers are related to infectious agents, such as hepatitis B virus (HBV), human papillomavirus (HPV), human immunodeficiency virus (HIV), and *Helicobacter pylori* (*H. pylori*), and can be prevented through behavioral changes, vaccines, or antibiotics. (Petraacci, Decarli, Schairer et al., 2011). In addition, many of the more than 2 million skin cancers that are diagnosed annually could be prevented by protecting the skin from the sun's rays and avoiding indoor tanning (Rowney 2011).

It has been estimated that in the United States half of all premature deaths, one third of acute disabilities, and one half of chronic disabilities are preventable, including some cancers (NCI, 2011e). Nurses need to focus their energies on screening, education, and early detection to reduce these numbers. Because cancer risk is strongly associated with lifestyle and behavior, screening programs are of particular importance for early detection. There is evidence that prevention and early detection have reduced cancer mortality rates and prevented reproductive cancers (CDC, 2011b).

This chapter begins with a nursing process overview of the care of women with reproductive cancer. It then describes selected cancers of the reproductive system: ovarian, endometrial, cervical, vaginal, and vulvar cancer. The chapter discusses the nurse's role through diagnosis, intervention, and follow-up care. Cancer management requires a multidisciplinary approach, including specialists in surgical, medical, and radiation oncology. The nurse can provide guidance and support to the client as she finds her way through the health care maze.

NURSING PROCESS OVERVIEW FOR THE WOMAN WITH CANCER OF THE REPRODUCTIVE TRACT

The word *cancer* is laden with fear and dread. These feelings may be worsened when the cancer involves a woman's reproductive tract. The diagnosis of a reproductive tract cancer can have a profound impact on a woman's sexuality because it affects the very core of her identity as a female. The loss of the reproductive body part as well as the possible loss of childbearing ability can have a significant effect on women and their partners. Nurses need to remember this impact when counseling women and their partners about cancer treatment and side effects and changes in gender roles and sexuality.

When a woman is first diagnosed with a reproductive tract cancer, two primary needs arise: information and emotional support. When the diagnosis is made, the woman typically has many questions, such as "What is going to happen to me?" "How will this change my life?" and "Will I survive?" Nurses can play a major role in helping women find the answers to their questions and directing them to the resources they need. Two reliable sources of general cancer information are the National Cancer Institute and the American Cancer Society. They can be reached via the Internet or by phone.

The nurse also plays a key role in offering emotional support, determining appropriate sources of support, and helping the woman use effective coping strategies. Many research studies have found that social support from the woman's family, friends, and coworkers is one of the strongest predictors of how well she will cope. Implications for nurses working with women following a cancer diagnosis include assessing women's definitions and availability of support; respecting varied needs for informational support; providing a supportive clinical environment; educating clinicians, family, and friends regarding unsupportive responses within the cultural context; and validating women's control and balancing of support needs (Dickerson, Alqaissi, Underhill, & Lally, 2011). Women without a social support network may need a social work referral or may need to be guided toward support groups to receive the emotional support they need.

In addition, cancer clients have a strong need for hope. Strategies for inspiring hope may include active listening, touch, presence, and helping clients overcome communication barriers. Often it is not what nurses say or do but just their presence that counts.

Assessment

Assessment of a woman with cancer of the reproductive tract involves a thorough history and physical examination. In addition, various laboratory and diagnostic tests may be done to evaluate for a malignancy.

Health History and Physical Examination

Interview the woman carefully to determine any current or past factors that might increase her risk of cancer, such as early menarche, late menopause, sexually transmitted infections (STIs), use of hormonal agents, or infertility. Find out if the woman has a family history of cancer. Be thorough in obtaining the

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woman's past medical history, especially her reproductive, obstetric, and gynecologic history. Ask about her lifestyle and behaviors, including risky behaviors such as engaging in unprotected sexual intercourse or sexual intercourse with multiple partners. Find out if she has had routine or recommended screening procedures.

Ask if the woman has had any symptoms, such as abnormal vaginal bleeding or discharge or vaginal discomfort. Often the symptoms of cancer are vague and nonspecific and the woman may attribute them to another problem, such as aging, stress, or improper diet.

Perform a complete physical examination, including a review of body systems and a pelvic examination. Observe for lesions or masses in the perineal area. Note any masses when palpating the abdomen or when performing the pelvic examination.

Laboratory and Diagnostic Testing

Some of the laboratory and diagnostic tests used to help diagnose cancer of the reproductive tract are discussed in [Common Laboratory and Diagnostic Tests 8.1](#).

COMMON LABORATORY AND DIAGNOSTIC TESTS 8.1

Test	Explanation	Indications	Nursing Implications
Clinical breast examination	Assessment of the breast for abnormal findings; client may discover lump herself; high-risk history for breast cancer	Identifies palpable mass, skin change, inverted nipple, or unresolved rash	<ul style="list-style-type: none">Educate client to perform breast self-examination and report any abnormalities if high risk.Reinforce need for frequent clinical breast examinations if risk factors are present.
Mammography Screening modality for	breast cancer or any distortion in breast tissue architecture	Detects calcifications, densities, and nonpalpable cancer lesions	Stress importance of annual mammograms for all women after the age of 40 or 50, depending on their risk history.
Pap smear	Cervical cytology screening to diagnose cervical cancers	Aids in detecting abnormal cells of the cervix (from squamocolumnar	Encourage all sexually active women to receive a pelvic examination, including a Pap smear if they have a high

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Test	Explanation	Indications	Nursing Implications
		junction of the cervix; most cervical cancers arise here)	risk profile, to promote early detection of cervical cancer.
Transvaginal ultrasound	Screening for pelvic pathology to assist in diagnosing endometrial cancers	Allows measurement of endometrial thickness to determine if endometrial biopsy is needed for postmenopausal bleeding	<ul style="list-style-type: none"> Review the risk factors for the development of endometrial cancer and reason for this screening test. Assist in preparing the client for this examination.
CA-125	Nonspecific blood test used as a tumor marker	Elevation of marker suggests malignancy but is not specific to ovarian cancer.	<ul style="list-style-type: none"> Review risk factors for ovarian cancer and explain that a series of diagnostic tests may be performed (transvaginal ultrasound, CT scan, CA-125) to assist in the diagnosis and treatment plan. Elevated marker levels are not specific to ovarian cancer; they can be elevated in other types of cancer.
<p>Adapted from American Cancer Society [ACS]. (2011a). <i>American Cancer Society guidelines for the early detection of cancer</i>. Retrieved from http://www.cancer.org/Healthy/FindCancerEarly/CancerScreeningGuidelines/american-cancer-society-guidelines-for-the-early-detection-of-cancer; American College of Obstetricians and Gynecologists [ACOG]. (2011). <i>Committee opinion #483, Primary and preventive care: Periodic assessments</i>. Retrieved from http://www.acog.org/About%20ACOG/News%20Room/News%20Releases/2011/Routine%20Screening%20Recommendations%20Released%20for%20Annual%20Well%20Woman%20Exam.aspx; Centers for Disease Control and Prevention [CDC]. (2011b). <i>Cancer prevention and control</i>. Retrieved from http://www.cdc.gov/cancer/dcpc/prevention/other.htm; and National Cancer Institute [NCI]. (2011e). <i>Lifetime risk of developing or dying of cancer</i>. Retrieved from http://seer.cancer.gov/statistics/types/lifetimerisk.html.</p>			

Nursing Diagnoses and Related Interventions

Upon completion of a thorough assessment, the nurse might identify several nursing diagnoses, including:

- Deficient knowledge
- Disturbed body image
- Anxiety
- Fear
- Pain

Nursing goals, interventions, and evaluation for the woman with a reproductive cancer are based on the nursing diagnoses. [Nursing Care Plan 8.1](#) may be used as a guide in planning nursing care for the woman with a reproductive cancer. It should be individualized based on the woman's symptoms and needs.

NURSING CARE PLAN 8.1: Overview of a Woman with a Reproductive Tract Cancer

Molly, a thin 28-year-old woman, comes to the free health clinic complaining of a thin, watery vaginal discharge and spotting after sex. She says she is homeless and has lived "on the streets" for years. Molly says she has had multiple sex partners to pay for her food and cigarettes. She had an abnormal Pap smear "a while back" but didn't return to the clinic for follow-up. She hopes nothing "bad" is wrong with her because she just found a job that will allow her to get off the streets. "I'm worried that I won't be the same if there is something wrong. I don't know what I'd do if there is a problem," she tells you. Cervical cancer is suspected.

NURSING DIAGNOSIS: Anxiety related to uncertainty of diagnosis, possible diagnosis of cancer, and eventual outcome as evidenced by client's report of signs and symptoms and statements of being worried and not knowing what she would do

Outcome Identification and Evaluation

The client will demonstrate measures to cope with anxiety *as evidenced by statements acknowledging anxiety, use of positive coping strategies, and verbalization that anxiety has decreased.*

Interventions: *Reducing Anxiety*

- Encourage client to express her feelings and concerns *to reduce her anxiety and to determine appropriate interventions.*
- Assess the meaning of the diagnosis to the client, clarify misconceptions, and provide reliable, realistic information *to enhance her*
- Identify and address verbalized concerns, providing information about what to expect *to decrease uncertainty about the unknown.*
- Assess the client's use of coping mechanisms in the past and their

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understanding of her condition, subsequently reducing her anxiety.

- Assess client's psychological status to *determine degree of emotional distress related to diagnosis and treatment options.*
- *effectiveness to foster use of positive strategies.*
- Teach client about early signs of anxiety and help her recognize them (e.g., fast heartbeat, sweating, or feeling flushed) *to minimize escalation of anxiety.*
- Provide positive reinforcement that the client's condition can be managed *to relieve her anxiety.*

NURSING DIAGNOSIS: Deficient knowledge related to diagnosis, prevention strategies, disease course, and treatment as evidenced by client's statements about hoping nothing bad is wrong, lack of follow-up for previous abnormal Pap test, and high-risk behaviors

Outcome Identification and Evaluation

The client will demonstrate an understanding of diagnosis, *as evidenced by making health-promoting lifestyle choices, verbalizing appropriate health care practices, describing condition once diagnosed, and adhering to measures to comply with therapy.*

Interventions: *Providing Client Teaching*

- Assess client's current knowledge about her diagnosis and proposed therapeutic regimen *to establish a baseline from which to develop a teaching plan.*
- Review contributing factors associated with development of reproductive tract cancer, including lifestyle behaviors, *to foster an understanding of the etiology of cervical cancer.*
- Encourage client to obtain prompt treatment of any vaginal or cervical infections *to minimize the risk for cervical cancer.*
- Urge the client to have an annual Pap smear *to allow screening and early detection.*
- Describe the treatment measures used *to provide client with knowledge of what may be necessary.*
- Review information about treatments and procedures and recommendations for healthy lifestyle, obtaining feedback frequently *to validate adequate understanding of instructions.*
- Discuss strategies, including using condoms and limiting the number of sexual partners, *to reduce the risk of transmission of STIs, including HPV, which is associated with cervical cancer.*
- Provide written material with pictures *to allow for client review and to help her visualize what is occurring in her body.*
- Inform client about available community resources and make appropriate referrals as needed *to provide additional education and support.*
- Document details of teaching and learning *to allow for continuity of care and further education, if needed.*

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NURSING DIAGNOSIS: Disturbed body image related to suspected reproductive tract cancer and impact on client's sexuality and sense of self as evidenced by statement of being worried about not being the same

Outcome Identification and Evaluation

The client will verbalize or demonstrate a positive self-esteem in relation to body image as evidenced by positive statements about self, sexuality, and participation in activities with others.

Interventions: *Promoting Healthy Body Image*

- Assess client's use of self-criticism *to determine client's current state of coping and adjustment.*
- Determine if the client's change in body image has contributed to social isolation *to provide a direction for care.*
- Provide opportunities for client to explore her feelings related to issues of sexuality, including past behaviors that may have placed her at risk, *to minimize feelings of guilt about her condition.*
- Acknowledge the client's feelings about possible changes in her body and sexuality and her illness *to foster trust and allow client to ventilate feelings and concerns.*
- Facilitate contact with other clients with the same type of cancer *to promote sharing of feelings and decrease feelings of isolation.*
- Initiate referrals for counseling and community support groups as necessary *to assist client in gaining a positive image of herself.*

Nurses have traditionally served as advocates in the health care arena and should continue to be on the forefront of health education and diagnosis, acting as leaders in the fight against cancer. Over half a million women in the United States will be diagnosed with cancer this year alone and more than half will die of it. The public needs to know that not only are these deaths preventable, but many of the cancers themselves are preventable. Nurses need to work to improve the availability and quality of cancer-screening services, making them accessible to underserved and socioeconomically disadvantaged clients. Through a unified effort by health care professionals, health policy experts, government agencies, health insurance companies, the media, educational institutions, and women themselves, along with consistency and continuity, nurses can offer quality care to all women with cancer.

educating to Prevent Cancer

Nurses need to provide clients with information to help prevent disease and enhance quality of life. Educate women about the importance of consistent and timely screenings to identify cancer early. Emphasize the importance of having an annual pelvic examination. Also stress the need for follow-up screenings as recommended. Provide clients with information if further diagnostic testing is required.

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Nurses also play a key role in promoting cancer awareness, prevention, and control. Advocate improving the availability of cancer-screening services and work to provide public education about risk factors for cancer.

Nurses can be instrumental in helping women to identify and change behaviors that put them at risk for various reproductive tract cancers (**Teaching Guidelines 8.1**). Do not limit your interventions to providing preventive education only: inform women about the consequences of doing nothing about their conditions and what the long-range outcomes might be without treatment. For example, stress the importance of visiting a health care professional if certain signs and symptoms appear:

- Blood in a bowel movement
- Unusual vaginal discharge or chronic vulvar itching
- Persistent abdominal bloating or constipation
- Irregular vaginal bleeding
- Persistent low backache not related to standing
- Elevated or discolored vulvar lesions
- Bleeding after menopause
- Pain or bleeding after sexual intercourse

Teaching Guidelines 8.1: REDUCING YOUR RISK FOR CANCER

- Don't smoke.
- Drink alcohol only in moderation (no more than one drink daily).
- Be physically active daily.
- Eat a healthy diet.
- Stay current with immunizations.
- Use a condom with every sexual encounter
- Reach and maintain a healthy weight.
- Take preventive medicines if needed.
- Get recommended screening tests:
- Body mass index (BMI) to identify obesity
- Mammogram every 1 to 2 years starting at age 40
- Pap smear every 1 to 3 years if sexually active, between the ages of 21 and 65
- Cholesterol checked annually starting at age 45
- Blood pressure checked at least every 2 years
- Diabetes test if hypertensive or hypercholesterolemic
- Check for STIs if sexually active

Adapted from Agency for Healthcare Research and Quality. (2010). *Women: Stay healthy at any age—Your checklist for health* (AHRQ Publications No. 07-IP005-A). Retrieved from <http://www.ahrq.gov/ppip/healthywom.htm>; American Cancer Society [ACS]. (2011a). *American Cancer Society*

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Teaching the Client About Her Diagnosis

Provide information about tests that may be required to confirm or rule out the diagnosis. Review with the woman what she has been told about her diagnosis and her understanding of her condition. It is not unusual for the woman to hear the diagnosis and then become overwhelmed by the thought of cancer, blocking out whatever is said after that. Answer any questions she may have. Go slowly and repeat the information as necessary. Use written materials to explain and reinforce the teaching. Provide information about her condition and recommended therapies. For example, if a client is undergoing surgery, discuss postoperative issues such as incision care, pain, and activity level. Instruct the client on health maintenance activities after treatment, and inform her and her family about available support resources.

Providing Emotional Support

Once the diagnosis is made, provide the woman and her family with emotional support. Validate the client's feelings and provide realistic hope, using a nonjudgmental approach and therapeutic communication skills during all interactions. Nurses can be invaluable when assisting women who are coping with the uncertainty of their future by providing positive communication and support. Individualize the care based on the client's cultural traditions and beliefs.

ENSURING CULTURALLY ATTUNED CANCER CARE

Cultural diversity in America is increasing, and as diverse cultures interact, conflicts inevitably ensue. These conflicts can affect health care outcomes. Providing culturally attuned cancer care can improve outcomes and decrease disparities in care. If nurses are to meet the needs of ethnically diverse populations, they must be culturally sensitive, appreciative of differing health beliefs and practices, and very flexible in the way they approach health care. It is we who must adapt, expand, and learn.

Nurses have the opportunity to learn about diverse cultures, religions, and faith traditions that support clients and families during their cancer journey and while facing a serious life-limiting illness. Nurses' care practices embrace all clients that they come in contact with, and by having a better understanding of diverse groups, nurses can build trust in clients seeking oncology care needs that range from detection to diagnosis and treatment through palliative care and end of life.

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Be aware of the client's cultural background, religion, migration history, degree of acculturation, living conditions, educational level, and legal status, because each of these factors can affect the client's understanding of her diagnosis and the eventual outcome. A woman's reaction to a cancer diagnosis and her decisions about treatment are influenced by an individual's cultural values and how the community views cancer. Nurses need to understand the disparities and the influence of those disparities on health outcomes (Saca-Hazboun & Glennon, 2011).

In some cultures, sharing news of a serious illness like cancer is considered disrespectful and impolite. For example, some Europeans view such sharing as inhumane; the Asian culture views a cancer diagnosis as unnecessarily cruel. The Chinese, out of respect for aging family members, withhold discussions of serious illness to avoid causing unnecessary anxieties (Zhang, Meng, Chang, & Wan, 2010). Integrate this knowledge in your care to ensure a culturally attuned approach.

Take Note!

When a diagnosis of cancer is made, assessing an individual's strengths and weaknesses from a cultural perspective will help the nurse to provide culturally attuned care.

As life becomes increasingly multilingual, multicultural, and multireligious, learning about clients' values and cultural beliefs becomes challenging. Be willing to learn about client preferences; doing so promotes caring and nurturing.

SUPPORTING THE PREGNANT WOMAN WITH CANCER

Pregnancy complicated by cancer is relatively rare but, because women in Western societies are tending to delay childbearing to the third and fourth decade of life, this phenomenon is going to be encountered more often in the future. The most frequent malignancies diagnosed during pregnancy are breast cancer, cervical cancer, hematologic malignancies (lymphomas and acute leukemia), and melanoma. Less common tumors are gastrointestinal, urologic, and lung cancers (Pavlidis, 2011). Theoretically, changes in the mother's immune system during pregnancy can increase the risk of malignancy because cell-mediated immunity, which is suppressed in pregnant women, normally protects against cancerous tumors (Holtan & Creedon, 2011). Some research has hinted at an increased rate of progression and decreased survival times in women who develop breast and cervical cancer and then become pregnant, but this generally has not been validated by research studies. With the cooperation of multidisciplinary teams, treatment of cancer during pregnancy with normal fetal outcome is feasible (Voulgaris, Pentheroudakis, & Pavlidis, 2011).

Ovarian cancer during pregnancy is rare because the disease typically occurs in older women. Because most pregnant women receive frequent medical care, including pelvic examinations, most ovarian cancers in pregnant women are found at early stages; this carries a good prognosis for both the mother

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and the newborn (Kwon et al., 2010). Endometrial cancer is the most common neoplasia of the female reproductive system, with the highest incidence among uterine malignancies. It is rarely associated with pregnancy. Since routine screening for endometrial cancer is currently not recommended in the general population, few cases would be detected in the relatively young pregnant population (Pocobelli et al., 2011). Cervical cancer is more common in the pregnant population than other reproductive malignancies, and it can affect the woman's health status and the pregnancy. Management of cervical cancer during pregnancy depends on five factors:

- 1. Stage of the disease (and the tumor size)
 - 2. Nodal status
 - 3. Histologic subtype of the tumor
 - 4. Term of the pregnancy
 - 5. Whether the client wishes to continue her pregnancy
-
- In women with early-stage disease and absence of nodal involvement who are diagnosed during the first two trimesters of pregnancy, there is an increasing tendency to preserve the pregnancy while awaiting fetal maturity. The birth (when the fetal maturity is attained) should be performed using a cesarean section (van de Vijver, Poppe, Verguts, & Arbyn, 2010). Treatment decisions are influenced by the stage of the cancer, the histologic type, the stage of the pregnancy, and the client's wishes. Both maternal and fetal safety and well-being have to be taken into account. Termination of pregnancy is not indicated in all cases. Pregnancy preservation in tumors diagnosed during early gestation is feasible in carefully selected cases. Discussion with the client and her family is essential and treatment has to be individualized (le Grange & McCormack, 2011).
 - Nurses caring for young clients with cervical cancer must be aware of the surgical fertility preservation options, which clients are candidates for these surgeries, and the options for future assisted reproductive technology. Nurses need to be able to coordinate care for these clients with gynecologic oncologists and reproductive endocrinologists in order to facilitate optimal outcomes.
 - Women diagnosed with any malignancy during pregnancy must confront the reality of the disease and its impact on their future fertility and live with the risk of recurrence (Dicken, Lieman, Dayal, Mutyala, & Einstein, 2010). The wishes of the pregnant woman and her family are of paramount importance when making decisions about continuing the pregnancy and undergoing cancer treatment. Some women will decide to terminate the pregnancy for the sake of their own health; others will undergo treatment during the pregnancy to preserve the life of the unborn child. Regardless of the woman's decision, provide support, hope, and education during treatment, birth, and beyond.
- **OVARIAN CANCER**
 - **Ovarian cancer** is malignant neoplastic growth of the ovary ([Fig. 8.1](#)). It is the ninth most common cancer among women and the fifth most common cause of cancer deaths for women in the United States. It accounts for more deaths than any other cancer of the reproductive system (ACS, 2011i). A woman's risk of getting invasive ovarian cancer in her lifetime is about 1 in 71. Her lifetime chance of dying from invasive ovarian cancer is about 1 in 95 (ACS, 2011i). This cancer mainly develops in older women. About half of

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the women who are diagnosed with ovarian cancer are 60 years or older. It is more common in Caucasian women than African American women (ACS, 2011i).

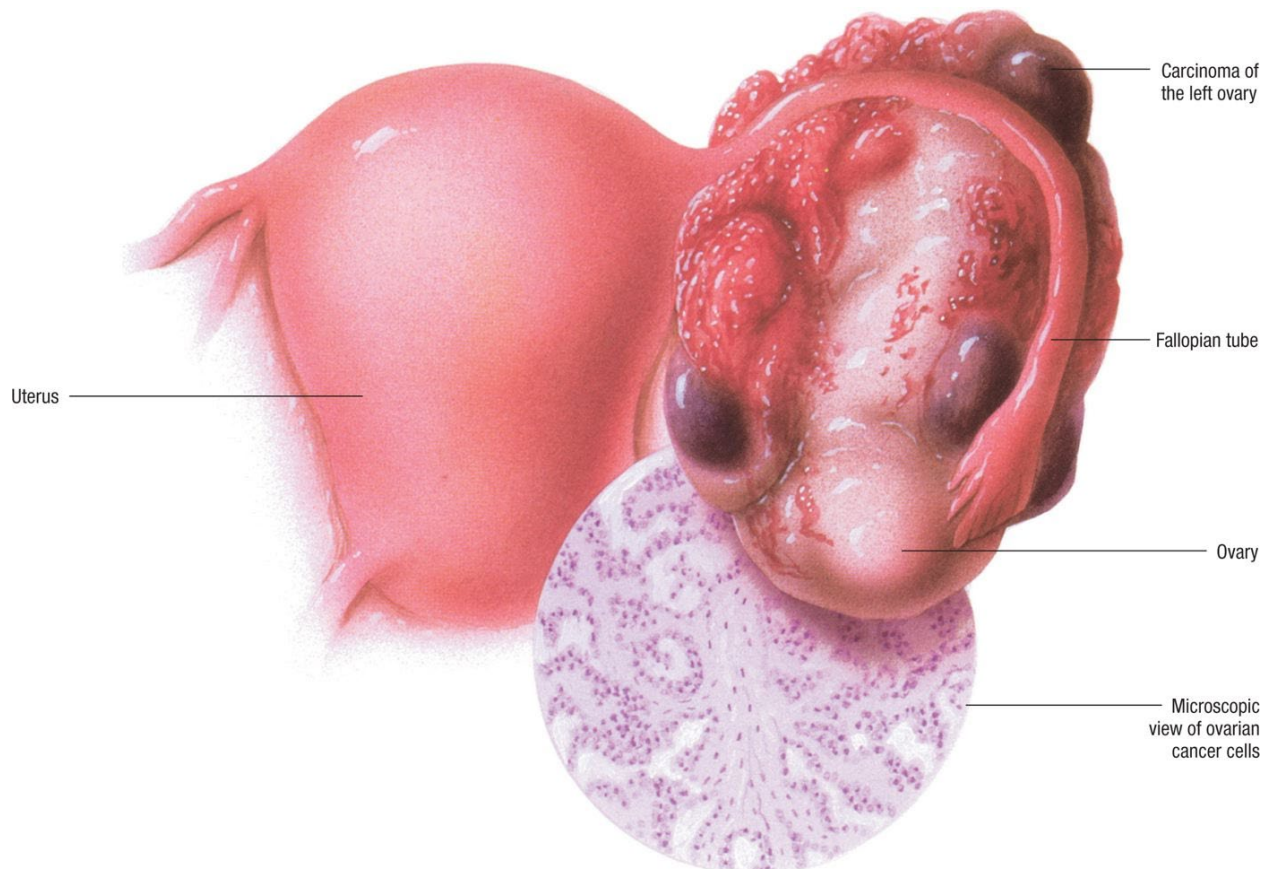


FIGURE 8.1

Ovarian cancer. (Asset provided by Anatomical Chart Co.)

The most important variable influencing the prognosis is the extent of the disease. Survival depends on the stage of the tumor, grade of differentiation, gross findings at surgery, amount of residual tumor after surgery, and effectiveness of any adjunct treatment postoperatively. Many women with ovarian cancer will experience recurrence despite best efforts to eradicate the cancer through surgery, radiation, or chemotherapy to eliminate residual tumor cells. The likelihood of long-term survival in the event of recurrence is dismal (Moore, MacLaughlan, & Bast, 2010). The 5-year survival rates (the percentage of women who live at least 5 years after their diagnosis) are shown in **Table 8.1** according to stage.

TABLE 8.1: FIVE-YEAR SURVIVAL RATES FOR OVARIAN CANCER

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Stage	Five-Year Relative Survival Rates
I	80% to 94%
II	57% to 76%
III	34% to 45%
IV	18%

Adapted from American Cancer Society [ACS]. (2011f). *Ovarian cancer: Survival by stage*. Retrieved from <http://www.cancer.org/Cancer/OvarianCancer/DetailedGuide/ovarian-cancer-survival-rates>.

Pathophysiology

Ovarian cancer, the cause of which is unknown, can originate from different cell types. Most ovarian cancers originate in the ovarian epithelium. They usually present as solid masses that have spread beyond the ovary and seeded into the peritoneum prior to diagnosis. An inherited genetic mutation is the causative factor in 13% to 15% of cases of epithelial ovarian cancer (Khalil, Brewer, Neyarapally, & Runowicz, 2010).

Screening and Diagnosis

Seventy-five percent of ovarian cancers are not diagnosed until the cancer has advanced to stage III or IV, primarily because there is still no adequate screening test. Two genes, *BRCA1* and *BRCA2*, are linked with hereditary breast and ovarian cancers. Blood tests can be performed to assess DNA in white blood cells to detect mutations in the *BRCA* genes. These genetic markers do not predict whether the person will develop cancer. Rather, they provide information regarding the risk of developing cancer: a woman who is *BRCA* positive may have up to an 80% chance of developing breast cancer and a 40% chance of developing ovarian cancer (Kurian, 2010).

To assist in screening, researchers have developed an ovarian cancer symptom index that includes pelvic and abdominal pain, urinary frequency and urgency, increased abdominal size (bloating), and difficulty eating (feeling full). But this symptom index is not much help in detecting the disease, suggests a new study. When the presentation of such symptoms triggers a medical evaluation for ovarian cancer, the disease is diagnosed in only 1 in 100 women. The researchers reported that the present symptom index has a "low positive predictive value," especially for early-stage disease (Rossing, Wicklund, Cushing-Haugen, & Weiss, 2010).

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Specific clinical guidelines for ovarian cancer screening have not been developed, so the disease is often not diagnosed until it has metastasized. The U.S. Preventive Services Task Force (USPSTF) recommends against routine screening for ovarian cancer with serum CA-125 or transvaginal ultrasound because earlier detection would have a small effect, at best, on mortality. CA-125 is a biologic tumor marker associated with ovarian cancer. Although levels are elevated in many women with ovarian cancer, CA-125 is not specific for this cancer and levels may be elevated with other malignancies (pancreatic, liver, colon, breast, and lung cancers). Despite the discovery that CA-125 and other serum markers increase before the clinical onset of ovarian cancer, it has proven surprisingly difficult to devise a successful screening program for asymptomatic women with ovarian cancer. Currently, it is not sensitive enough to serve as a screening tool alone (Hartge, 2010). The USPSTF (2011) reports that there is no supporting evidence that any screening test, including CA-125, ultrasound, or pelvic exam, reduces mortality from ovarian cancer. Thus they recommend against routine screening for ovarian cancer.

Therapeutic Management

Treatment options for ovarian cancer vary depending on the stage and severity of the disease. Usually a laparoscopy (abdominal exploration with an endoscope) is performed for diagnosis and staging, as well as evaluation for therapy. In stage I the cancer is limited to the ovaries. In stage II the growth involves one or both ovaries, with pelvic extension. Stage III cancer has spread to the lymph nodes and other organs or structures inside the abdominal cavity. In stage IV, the cancer has metastasized to distant sites (Alexander et al., 2010). **Figure 8.2** shows the likely metastatic sites for ovarian cancer.

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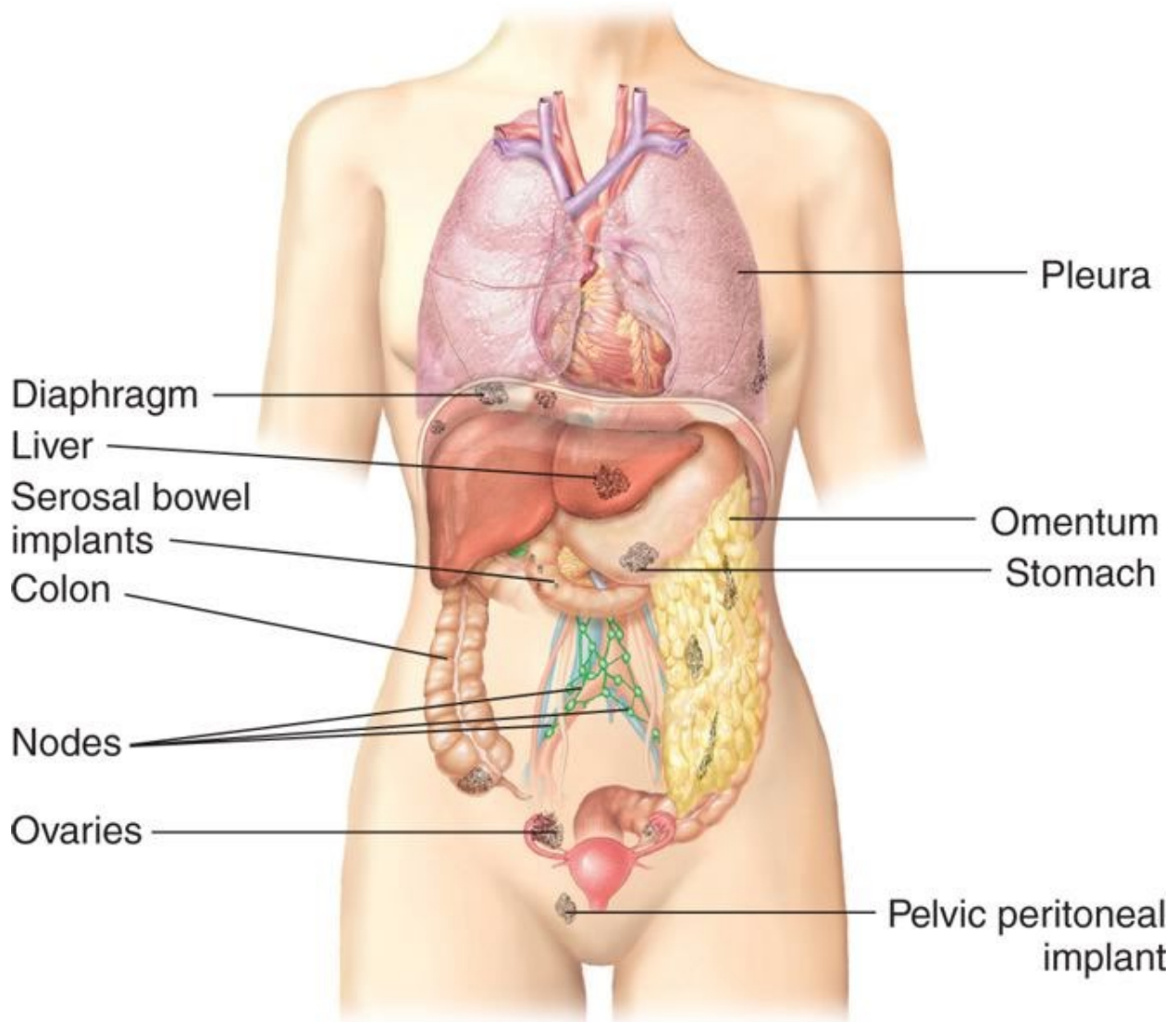


FIGURE 8.2

Common metastatic sites for ovarian cancer. (Asset provided by Anatomical Chart Co.)

Surgical intervention remains the mainstay of management of ovarian cancer. Surgery generally includes a total abdominal hysterectomy, bilateral salpingo-oophorectomy, peritoneal biopsies, omentectomy (excision of all or part of the omentum, which is a sheet of fat covered by the peritoneum that protects the abdominal structures), and pelvic para-aortic lymph node sampling to evaluate cancer extension (Tixier et al., 2010). Because most women are diagnosed with advanced-stage ovarian cancer, aggressive management involving debulking or cytoreductive surgery is commonly performed. This surgery involves resecting all visible tumors from the peritoneum, taking peritoneal biopsies, sampling lymph nodes, and removing all reproductive organs and the omentum. This aggressive surgery has been shown to improve long-term survival rates.

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Additional therapy with radiation may be warranted. Chemotherapy is recommended for all stages of ovarian cancer.

Nursing Assessment

Ovarian cancers are considered the worst of all the gynecologic malignancies, primarily because they develop slowly and remain silent and without symptoms until the cancer is far advanced. It has been described as the "overlooked disease" or "silent killer" because women and health care practitioners often ignore or rationalize early symptoms. For example, women may attribute gastrointestinal problems to stress and midlife changes. However, these vague complaints may precede more obvious symptoms by months. The most common early symptoms include abdominal bloating, early satiety, fatigue, vague abdominal pain, urinary frequency, diarrhea or constipation, and unexplained weight loss or gain. The later symptoms include anorexia, dyspepsia, ascites, a palpable abdominal mass, pelvic pain, and back pain (Mulcahy, 2010).

Obtain a thorough history of the woman's symptoms, including their onset, duration, and frequency. Review the woman's history for risk factors such as:

- Nulliparity
- Early menarche (before 12 years old)
- Late menopause (after 55 years old)
- Increasing age (over 50 years of age)
- High-fat diet
- Obesity
- Persistent ovulation over time
- First-degree relative with ovarian cancer
- Use of perineal talcum powder or hygiene sprays
- Older than 30 years at first pregnancy
- Positive *BRCA1* and *BRCA2* mutations
- Personal history of breast, bladder, or colon cancer
- Hormone replacement therapy for more than 10 years
- Infertility (CDC, 2011d)

Perform a complete physical examination. Inspect the abdomen, noting any distention or bloating.

Palpate the abdomen. Be alert for a mass or pain on palpation. Anticipate further testing to confirm the diagnosis.

Nursing Management

The complexities of ovarian cancer make a multidisciplinary approach necessary for optimal management. With the subtle nature and high risk of recurrence and mortality of this condition, most women find it an emotionally exhausting and devastating experience. The presence of hope is essential for women at the time of the diagnosis; they want to believe in being cured and able to continue their life as usual with loved ones, friends, and relatives. Still, the newly received cancer diagnosis makes women oscillate between hope and hopelessness, between positive expectations of getting cured and

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frightening feelings of the disease taking command. Nurses are invaluable resources in inspiring clients to find hope in life when diagnosed with cancer. Nursing management needs to focus on measures to promote early detection, educate the woman about the disease and its treatments, and provide emotional support. Nurses should show a positive attitude that communicates understanding and reassurance.

Promoting Early Detection

Nurses need to ensure that women are aware of the risk factors for ovarian cancer. Urge women not to dismiss seemingly innocuous symptoms as “just a part of aging.” Encourage women to describe such nonspecific complaints at health visits.

Assess the woman's family and personal history for risk factors and encourage genetic testing for women with affected family members. Outline screening guidelines for women with hereditary cancer syndrome and inform women at high risk about the appropriate screening strategies.

Urge women to have yearly bimanual pelvic examinations and a transvaginal ultrasound to allow identification of ovarian masses in their early stages. After menopause, a mass on an ovary is not a cyst: physiologic cysts can arise only from a follicle that has not ruptured or from the cystic degeneration of the corpus luteum.

Take Note!

A small ovarian “cyst” found on ultrasound in an asymptomatic postmenopausal woman should arouse suspicion. Any mass or ovary palpated in a postmenopausal woman should be considered cancerous until proven otherwise (Helm, 2011).

Educating the Client

Education is a major focus of nursing care. This teaching involves risk reduction and health promotion. Teach the woman about risk reduction strategies; for instance, pregnancy, use of oral contraceptives, and breast-feeding reduce the risk of ovarian cancer. Instruct women to avoid using talc and hygiene sprays on their genitals. Review the lifetime risks related to *BRCA1* and *BRCA2* genes and options available should the woman test positive for these genes. Help to promote community awareness of ovarian cancer by educating the public about risk-reducing behaviors.

Instruct the woman about the importance of healthy life-styles. Stress the importance of maintaining a healthy weight to reduce risk. Encourage women to eat a low-fat diet.

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For the woman who is diagnosed with ovarian cancer, describe in simple terms the tests, treatment modalities, and follow-up needed. For example, if the woman will be having surgery, provide thorough teaching about what to expect before, during, and after surgery. Outline treatment options and the implications of choices. Assist the woman and her family to decipher the myriad of information related to staging, tests, and treatments. Teach the woman about additional treatment measures, such as radiation therapy or chemotherapy, including how to handle the common adverse effects of treatment.

Supporting the Client and Family

The diagnosis of ovarian cancer, like any cancer, can be overwhelming. In addition, the treatments and their effects can be highly stressful, both physically and emotionally. Provide one-to-one support for women facing treatment for ovarian cancer. Ovarian cancer involves the reproductive system, which has a direct impact on the woman's view of herself. Encourage open discussion of sexuality and the impact of cancer. Listen and support the woman and her family as they try to cope with this disease. By being aware of women's individual needs and different coping strategies, nurses can improve support to women in this vulnerable situation. Encourage the use of appropriate coping strategies to allow for the best quality of life. Try to restore hope to women with ovarian cancer, and stress treatment compliance. If appropriate, encourage participation in clinical trials to offer hope for all women. Continue to offer support to the woman and her family members as they experience sadness and grief.

Consider This

I felt I was a lucky woman because I had been in remission from breast cancer for 12 years, and I had been given the gift of life to share with my beloved family. Recently I became ill with stomach problems: pain, indigestion, bloating, and nausea. My doctor treated me for gastric reflux disease, but the symptoms persisted. I then was referred to a gastroenterologist, a urologist, and then a gynecologist, who did an ultrasound, which was negative. I received reassurance from all three that there was nothing wrong with me. As time went by, I experienced more pain, more symptoms, and increased frustration. Six months after seeing all three specialists, a repeat ultrasound revealed I had ovarian cancer, and I needed surgery as soon as possible. I underwent a complete hysterectomy and my surgeon found I was in stage III. Since then, I have undergone chemotherapy and participated in a clinical cancer study that wasn't successful for me, and now I am facing the fact that I am going to die soon.

Thoughts: This woman has tried everything to save her life, but, alas, time has run out for her with advanced ovarian cancer. Women diagnosed with breast cancer are at a significant risk for developing ovarian cancer later in life. Of the string of doctors she saw, one has to ponder why none ordered a CA-125 blood test given her history of breast cancer. We are haunted with the question: If they had and it was elevated, would she be in stage III now? I guess we will never know.

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Endometrial Cancer

Endometrial cancer (also known as uterine cancer) is malignant neoplastic growth of the uterine lining. It is the fourth most common gynecologic malignancy and accounts for 6% of all cancers in women in the United States or 1 in 40 women. The NCI (2011d) estimated that 45,000 new cases were diagnosed in women in 2011 and that approximately 8,000 of these women died. It is uncommon before the age of 40, but as women age, their risk of endometrial cancer increases. Approximately 95% of these malignancies are carcinomas of the endometrium. Because endometrial cancer is usually diagnosed in the early stages, it has a better prognosis than cervical or ovarian cancer (ACS, 2011d).

Pathophysiology

Two mechanisms are believed to be involved in the development of endometrial cancer. A history of exposure to unopposed estrogen is the cause in 75% of women. Those that are spontaneous and are unrelated to estrogen or endometrial hyperplasia represent the other 25% of endometrial cancers (Creasman, 2011a).

Endometrial cancer may originate in a polyp or in a diffuse multifocal pattern. The pattern of spread partially depends on the degree of cellular differentiation. Well-differentiated tumors tend to limit their spread to the surface of the endometrium. Metastatic spread occurs in a characteristic pattern and most commonly involves the lungs, inguinal and supraclavicular nodes, liver, bones, brain, and vagina (NCI, 2011d). Early tumor growth is characterized by friable and spontaneous bleeding. Later tumor growth is characterized by myometrial invasion and growth toward the cervix ([Fig. 8.3](#)).

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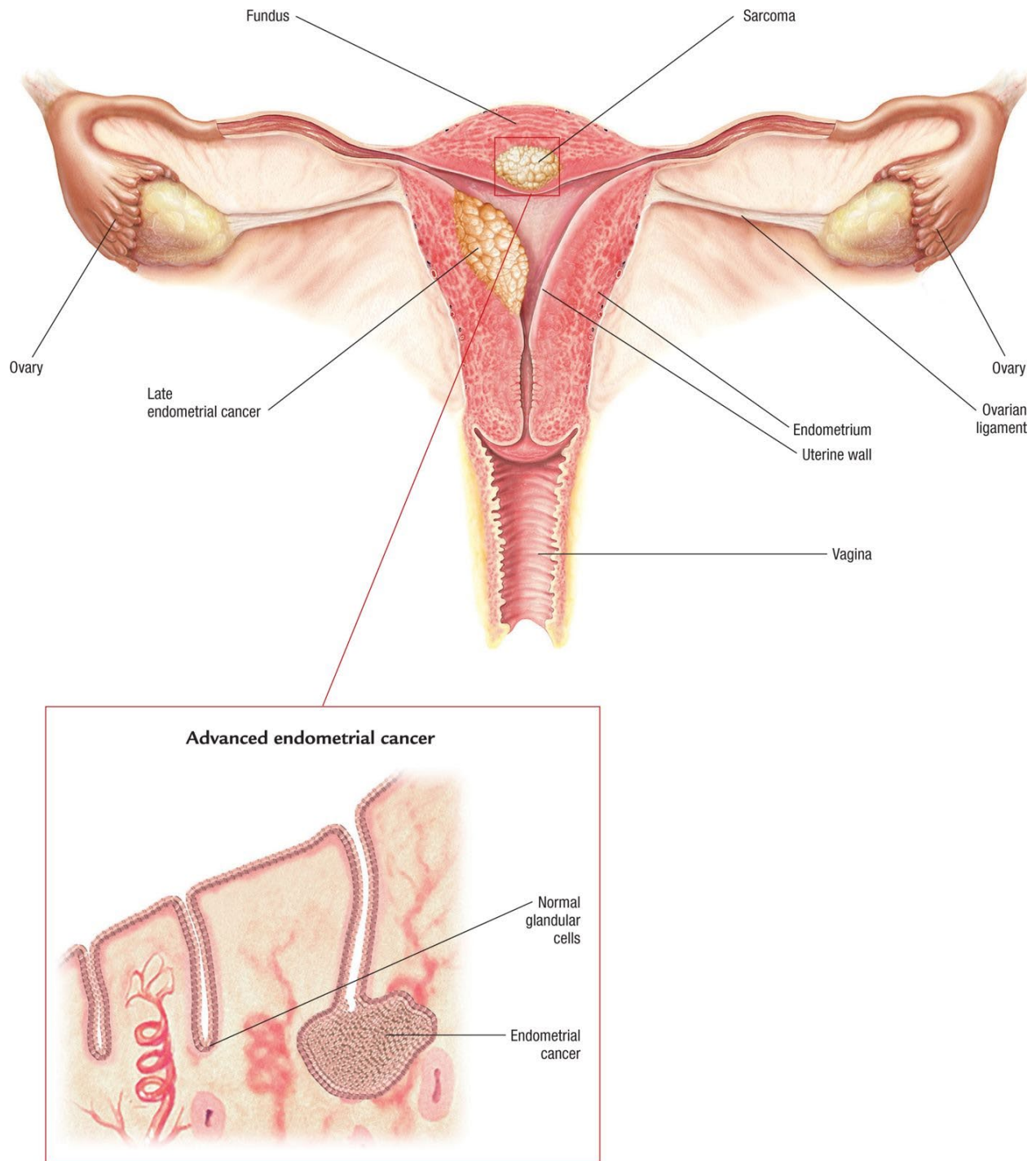


FIGURE 8.3

Progression of endometrial cancer. (Image 1 provided by Anatomical Chart Co.)

Adenocarcinoma of the endometrium is typically preceded by hyperplasia. Carcinoma in situ is found only on the endometrial surface. Type I carcinomas, the most common, begin as endometrial

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hyperplasia and progress to carcinomas. Giving estrogen preparations without progestin for hormone replacement therapy leads to an increased risk for endometrial cancer. Type I is generally found at an earlier stage and treatment results are more favorable.

Unlike type I endometrial carcinoma, type II carcinomas appear spontaneously, are associated with a poorly differentiated cell type, and have a poor prognosis. They account for less than 10% of all endometrial cancers but contribute to the majority of all endometrial deaths (Vandenput et al., 2011).

Remember Carmella, the woman with postmenopausal bleeding? In postmenopausal women, any bleeding is abnormal and warrants further assessment. What testing would the nurse anticipate as being ordered to confirm the diagnosis? What would be the nurse's role during this testing?

Screening and Diagnosis

Screening for endometrial cancer is not routinely done because it is not practical or cost effective. The ACS (2011d) recommends that women be informed about the risks and symptoms of endometrial cancer at the onset of menopause and strongly encouraged to report any unexpected bleeding or spotting to their health care provider. A pelvic examination is frequently normal in the early stages of the disease. Changes in the size, shape, or consistency of the uterus or its surrounding support structures may exist when the disease is more advanced.

During the past two decades, the role of ultrasound in the evaluation of postmenopausal bleeding has changed markedly, from little or no role to a major role today. In the intervening years, numerous studies have shown that ultrasound is at least as sensitive as endometrial biopsy for endometrial cancer and that ultrasound can reliably exclude cancer without the need for biopsy in some women with postmenopausal bleeding. In particular, numerous studies have shown that women with an endometrial thickness of 4 mm or less have an extremely low likelihood of endometrial cancer and thus do not need to undergo endometrial biopsy. Ultrasound can also help in the selection of an appropriate biopsy technique. In a woman with postmenopausal bleeding and a thick endometrium, a sonohysterogram can determine whether the endometrium is diffusely thick or has focal areas of thickening. With diffuse thickening, an endometrial biopsy is appropriate. When one or more focal areas of thickening are present, hysteroscopic biopsy is likely to be the better choice. Typically the noninvasive ultrasound is done first before an invasive endometrial biopsy is attempted (Creasman, 2011a).

Transvaginal ultrasound can be used to evaluate the endometrial cavity and measure the thickness of the endometrial lining. It can be used to detect endometrial hyperplasia. If the endometrium measures less than 4 mm, then the client is at low risk for malignancy. Large prospective studies have shown that an endometrial thickness of ≤ 4 mm on transvaginal ultrasound in postmenopausal women with bleeding has a risk of malignancy of 1 in 917. Thus, in postmenopausal clients with bleeding, biopsy is not indicated when endometrial thickness is ≤ 4 mm (Doubilet, 2011).

Staging is the process of looking at all of the information the doctors have learned about the tumor to determine how much the cancer may have spread. The stage of an endometrial cancer is the most important factor in choosing a treatment plan. It can spread *locally* to other parts of the uterus or *regionally* to nearby lymph nodes. The regional lymph nodes are found in the pelvis and farther away

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along the aorta. Finally, the cancer can spread (*metastasize*) to distant lymph nodes or organs such as lung, liver, bone, brain, and others

In stage I, the tumor has spread to the muscle wall of the uterus. In stage II, it has spread to the cervix, but not outside the uterus. In stage III, it has spread regionally to the bowel or vagina, with metastases to pelvic lymph nodes. In stage IV, it has invaded the bladder mucosa, with distant metastases to the lungs, liver, and bone (International Federation of Gynecology and Obstetrics, 2011).

Therapeutic Management

Typically, the stage of the disease directs treatment. It usually involves surgery with adjunct therapy based on pathologic findings. Surgery most often involves removal of the uterus (hysterectomy) and the fallopian tubes and ovaries (salpingo-oophorectomy). Removal of the fallopian tubes and ovaries is recommended because tumor cells spread early to the ovaries, and any dormant cancer cells could be stimulated to grow by ovarian estrogen. In more advanced cancers, radiation and chemotherapy are used as adjuncts to surgery. Routine surveillance intervals for follow-up care are typically every 3 to 4 months for the first 2 years, since 85% of recurrences occur in the first 3 years after diagnosis (Gehrig & Bae-Jump, 2010).

Nursing Assessment

Obtain a thorough history from the woman, ascertaining her primary complaint. Most commonly, the major initial symptom of endometrial cancer is abnormal and painless vaginal bleeding.

Take Note!

Any episode of bright-red bleeding that occurs after menopause should be investigated. Abnormal uterine bleeding is rarely the result of uterine malignancy in a young woman, but in the postmenopausal woman it should be regarded with suspicion.

Also review the woman's history for any risk factors, including:

- Nulliparity
- Obesity (more than 50 pounds overweight)
- Liver disease
- Infertility
- Diabetes mellitus
- Hypertension
- History of pelvic radiation
- Polycystic ovary syndrome

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- Early menarche (before 12 years old)
- High-fat diet
- Use of prolonged exogenous unopposed estrogen with an intact uterus
- Endometrial hyperplasia
- Family history of endometrial cancer
- Personal history of hereditary nonpolyposis colon cancer
- Personal history of breast, colon or ovarian cancer
- History of uterine fibroids
- Late onset of menopause (after age 52 years)
- Tamoxifen use
- Chronic anovulation (Rowlands, Nagle, Spurdle, & Webb, 2011)

Assess the woman for additional manifestations, such as dyspareunia, low back pain, purulent genital discharge, dysuria, pelvic pain, weight loss, and a change in bladder and bowel habits. These may suggest advanced disease.

Perform a physical examination or assist with, as appropriate, a pelvic examination. Observe for vaginal discharge. Note any changes in the size, shape, or consistency of the uterus or surrounding structures or client reports of pain during examination. Anticipate the need for transvaginal ultrasound to identify endometrial hyperplasia (usually greater than 4 mm) and endometrial biopsy to identify malignant cells.

Nursing Management

Ensure that the woman understands all of the treatment options. Address any concerns the woman expresses, including those of a sexual nature. Ensure that follow-up appointments are scheduled appropriately. Refer the client to a support group. Offer the woman and family explanations and emotional support throughout.

Educate the client about preventive measures or follow-up care if she has been treated for cancer. Education may be the most important tool currently available for the early detection of endometrial cancer. Many risk factors for endometrial cancer are modifiable or treatable, including obesity, hypertension, and diabetes. Educating women about risk factors and ways to decrease the risks is essential so that women can learn about their own risk and can become partners in the fight against the number-one gynecologic cancer ([Teaching Guidelines 8.2](#)).

Teaching Guidelines 8.2: PREVENTIVE AND FOLLOW-UP MEASURES FOR ENDOMETRIAL CANCER

- Schedule regular pelvic examinations after the age of 21.
- Visit health care practitioner for early evaluation of any abnormal bleeding after menopause.

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- Maintain a low-fat diet throughout life.
- Exercise daily.
- Manage weight to discourage hyperestrogenic states, which predispose to endometrial hyperplasia.
- Pregnancy serves as a protective factor by reducing estrogen.
- Ask your doctor about the use of combination estrogen and progestin pills.
- When combination oral contraceptives are taken to facilitate the regular shedding of the uterine lining, take risk reduction measures.
- Be aware of risk factors for endometrial cancer and make modifications as needed.
- Report any of the following symptoms immediately:
 - Bleeding or spotting after sexual intercourse
 - Bleeding that lasts longer than a week
 - Reappearance of bleeding after 6 months or more of no menses
- After cancer therapy, schedule follow-up appointments for the next few years.
- After cancer therapy, frequently communicate with your health care provider concerning your status.
- After surgery, maintain a healthy weight.

Carmella's endometrial biopsy indicates endometrial adenocarcinoma. Her health care provider recommends surgery and adjuvant radiation therapy. How long will Carmella need to follow up after surgery? What lifestyle changes will the nurse need to stress with Carmella?

Cervical Cancer

Cervical cancer is cancer of the uterine cervix. The ACS (2011c) estimated that over 13,000 cases of invasive cervical cancer were diagnosed in the United States in women in 2011 and that approximately 4,000 of these women died. Some researchers estimate that noninvasive cervical cancer (carcinoma in situ) is about four times more common than invasive cervical cancer. The 5-year survival rate for all stages of cervical cancer is 72% (ACS, 2011c). Cervical cancer is five to eight times more common in women affected with HIV or AIDS than those who do not have this virus.

Cervical cancer tends to occur in midlife. Most cases are found in women younger than age 50. It rarely develops in women younger than age 20. Many older women do not realize that the risk of developing cervical cancer is still present as they age. Almost 20% of women with cervical cancer are diagnosed when they are over 65 years old. That is why it is important for older women to continue having regular Pap tests (ACS, 2011c). The probability of a woman in the United States developing cervical cancer is approximately 1 in 120, but this statistic is age dependent; the highest incidence is in women 40 to 49 years of age (Broadman & Matthews, 2011).

Cervical cancer is more common in Hispanic, African American, and Native American women than in Caucasian women. Hispanic women have the highest rates of cervical cancer in the United States, and also have the highest rates of poverty, poor access to health care, and language and cultural barriers. Barriers to screening and prevention of cervical cancer include procrastination, fear of finding out that they have cancer, and embarrassment about having a Pap test. In addition, most have little to no knowledge about HPV and its link with cancer (Dean, 2010).

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The incidence and mortality rates of cervical cancer have decreased noticeably in the past several decades, with most of the reduction attributed to the **Papanicolaou (Pap) test**, which detects cervical cancer and precancerous lesions. The Pap test (also known as a Pap smear) is a procedure used to obtain cells from the cervix for cytology screening. Cervical cancer is one of the most treatable cancers when detected at an early stage (ACS, 2011c). *Healthy People 2020* identifies several goals that address cervical cancer ([Healthy People 2020 8.1](#); U.S. Department of Health & Human Services, 2010).

8-1: HEALTHY PEOPLE 2020

Objective	Nursing Significance
<ul style="list-style-type: none">• C-3 Reduce the female breast cancer death rate• C-4 Reduce the death rate from cancer of the uterine cervix• C-10 Reduce invasive uterine cervical cancer• C-11 Reduce late-stage female breast cancer• C-15 Increase the proportion of women who receive a cervical cancer screening based on the most recent guidelines• C-17 Increase the proportion of women who receive a breast cancer screening based on the most recent guidelines• C-18 Increase the proportion of women who were counseled about mammograms and pap smear cancer screening consistent with current guidelines• C-20 Increase the proportion of persons who participate in behaviors that reduce their exposure to harmful ultraviolet (UV) irradiation and avoid sunburn	<ul style="list-style-type: none">• Will help improve mortality rates and quality of life for women, and reduce health care costs related to treatment of malignancies.• Will help to promote screening and early detection. The National Institutes of Health (2011) reported that half of women diagnosed with invasive cervical cancer have never had a Pap smear and 10% have not had Pap smears during the past 5 years.• Will raise awareness of cancer screening and prevention on a local and national level to improve and promote the health of all women.• Will reduce the number of new cancer cases, as well as the illness, disability, and death caused by cancer.• Will reflect the importance of promoting evidence-based screening for cervical and breast cancer by lower mortality rates.

Note: All cancer objectives project a 10% improvement from the baseline by 2020. Healthy People objectives based on data from www.healthypeople.gov.

Pathophysiology

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Cervical cancer starts with abnormal changes in the cellular lining or surface of the cervix. Typically these changes occur in the squamous–columnar junction of the cervix. Here, cylindrical secretory epithelial cells (columnar) meet the protective flat epithelial cells (squamous) from the outer cervix and vagina in what is termed the transformation zone. The continuous replacement of columnar epithelial cells by squamous epithelial cells in this area makes these cells vulnerable to taking up foreign or abnormal genetic material (ACS, 2011d). [Figure 8.4](#) shows the pathophysiology of cervical cancer.

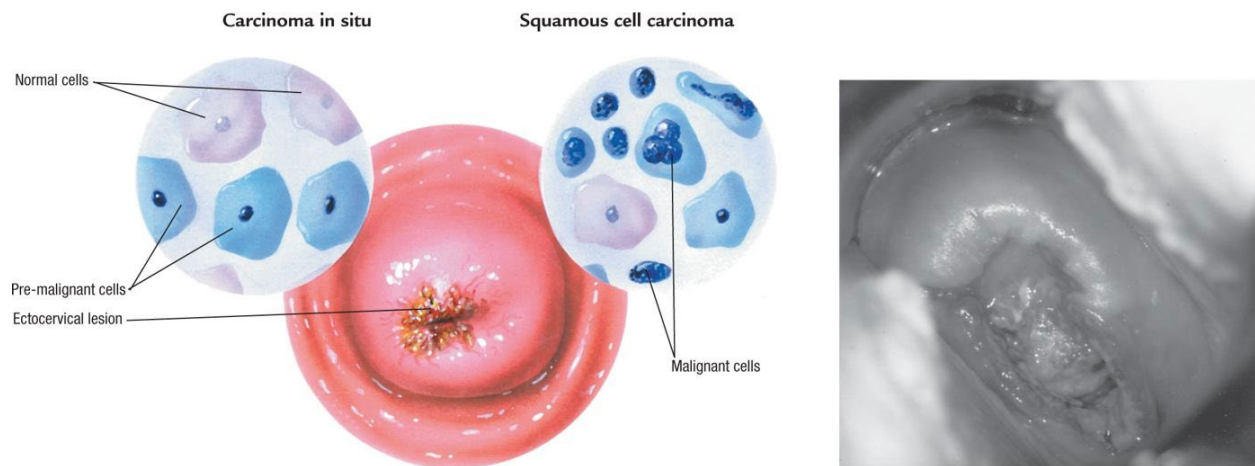


FIGURE 8.4

Cervical cancer. (Illustration is from The Anatomical Chart Company. [2009]. *Atlas of pathophysiology* [3rd ed.]. Philadelphia, PA: Lippincott Williams & Wilkins.)

Cervical cancer is the second leading cause of cancer deaths among women worldwide (Forouzanfar, Foreman, Delossantos et al., 2011).

It has been linked to the **human papillomavirus (HPV)**, which is acquired through sexual activity (Faridi, Zahra, Khan, & Idrees, 2011). HPV is the most common type of STI, with at least 50% of sexually active men and women becoming infected at some point in their lifetime. Most people who have HPV are asymptomatic and, therefore, do not realize they have the virus. More than 90% of squamous cervical cancers contain HPV DNA, and the virus is now accepted as a major causative factor in the development of cervical cancer and its precursor, **cervical dysplasia** (disordered growth of abnormal cells).

Screening and Diagnosis

Screening for cervical cancer is very effective because the presence of a precursor lesion, cervical intraepithelial neoplasia (CIN), helps determine whether further tests are needed. Lesions start as dysplasia and progress in a predictable fashion over a long period, allowing ample opportunity for intervention at a precancerous stage. Progression from low-grade to high-grade dysplasia takes an average of 9 years, and progression from high-grade dysplasia to invasive cancer takes up to 2 years. Three main factors have been postulated to influence the progression of low-grade dysplasia to high-grade. These include the type and duration of viral infection, with high-risk HPV type and persistent infection predicting a higher risk for progression; host conditions that compromise immunity, such as

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multiparity or poor nutritional status; and environmental factors such as smoking, oral contraceptive use, or vitamin deficiencies. In addition, various gynecologic factors, including age of menarche, age of first intercourse, and number of sexual partners, significantly increase the risk for cervical cancer (Broadman & Matthews, 2011).

Widespread use of the Pap test is credited with saving tens of thousands of women's lives and decreasing deaths from cervical cancer by more than 75% (ACS, 2011c). Routine Pap smear testing for all sexually active women is the primary screening method for early detection of cervical irregularities related to HPV and is crucial for the prevention of cervical cancer.

Despite its outstanding record of success as a screening tool for cervical cancer (it detects approximately 90% of early cancer changes), the conventional Pap smear has a 20% false-negative rate. High-grade abnormalities missed by human screening are frequently detected by computerized instruments (NCI, 2011b). Thus, many technologies have been developed to improve the sensitivity and specificity of Pap testing, including:

- *Thin-Prep*: In this liquid-based technique, the cervical specimen is placed into a vial of preservative solution rather than on a glass slide.
- *Computer-assisted automated Pap test rescreening (Autopap)*: An algorithm-based decision-making technology identifies slides that should be rescreened by cytopathologists by selecting samples that exceed a certain threshold for the likelihood of abnormal cells.
- *HPV-DNA typing (Hybrid Capture)*: This system uses the association between certain types of HPV (16, 18, 31, 33, 35, 45, 51, 52, and 56) and the development of cervical cancer. This system can identify high-risk HPV types and improves detection and management.
- *Computer-assisted technology (Cytoc CDS-1000, AutoCyte, AcCell)*: These computerized instruments can detect abnormal cells that are sometimes missed by technologists (Warman, 2010).

The high rate of false-negative results may also be due to other factors, including errors in sampling the cervix, in preparing the slide, and in client preparation.

Although professional medical organizations disagree as to the recommended frequency of screening for cervical cancer, American College of Obstetricians and Gynecologists (ACOG) (2011) recommends that cervical cancer screening should begin at age 21 years (regardless of sexual history), since women younger than age 21 are at very low risk of cancer. In addition, ACOG advises Pap smears every 2 years for women between the ages of 21 and 29 years and every 3 years for women ages 30 and older who have had three consecutive negative cervical cytology screening test results and who have no high-risk Pap smear history. In addition, women must have a clear understanding of the results of Pap smear testing and follow-up guidelines. High-risk women should continue to have annual Pap smears throughout their life ([Table 8.2](#)).

TABLE 8.2: PAP SMEAR GUIDELINES

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First Pap	Age 21
Until age 30	Yearly based on risk profile—using glass slide method
	Every 2 years—using liquid-based method
Ages 30–70	Every 2–3 years if last three Papsmears were normal
After age 70	May discontinue if: <ul style="list-style-type: none"> • Past three Pap smears were normal and • No Pap smears in the past 10 years were abnormal
Adapted from American Cancer Society [ACS]. (2011a). <i>American Cancer Society guidelines for the early detection of cancer</i> . Retrieved from http://www.cancer.org/Healthy/FindCancerEarly/CancerScreeningGuidelines/american-cancer-society-guidelines-for-the-early-detection-of-cancer .	

Pap smear results are classified using the Bethesda System ([Box 8.1](#)), which provides a uniform diagnostic terminology that allows clear communication between the laboratory and the health care provider. The information provided by the laboratory is divided into three categories: specimen adequacy, general categorization of cytologic findings, and interpretation/result (ACS, 2011e).

BOX 8.1: THE BETHESDA SYSTEM FOR CLASSIFYING Pap SMEARS

Specimen Type: Conventional Pap smear vs. liquid-based

Specimen Adequacy: Satisfactory or unsatisfactory for evaluation

General Categorization: (optional)

- Negative for intraepithelial lesion or malignancy
- Epithelial cell abnormality. See interpretation/result

Automated Review: If case was examined by automated device or not

Ancillary Testing: Provides a brief description of the test methods and report results so health care provider understands

Interpretation/Result:

- Negative for intraepithelial lesion or malignancy
- Organisms: *Trichomonas vaginalis*; fungus; bacterial vaginosis; herpes simplex
- Other non-neoplastic findings: Reactive cellular changes associated with inflammation, radiation, intrauterine devices, atrophy
- Other: Endometrial cells in a woman >40 years of age

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- Epithelial cell abnormalities:
- *Squamous cell*
 - Atypical squamous cells
 - Of undetermined significance (ASC-US)
 - Cannot exclude HSIL (ASC-H)
 - Low-grade squamous intraepithelial lesion (LSIL)
 - Encompassing HPV/mild dysplasia/CIN-1
 - High-grade squamous intraepithelial lesion (HSIL)
 - Encompassing moderate and severe dysplasia CIS/CIN-2 and CIN-3
 - With features suspicious for invasion
 - Squamous cell carcinoma
- *Glandular Cell: Atypical*
 - Endocervical, endometrial, or glandular cells
 - Endocervical cells—favor neoplastic
 - Glandular cells—favor neoplastic
 - Endocervical adenocarcinoma in situ
 - Adenocarcinoma
 - Endocervical, endometrial, extrauterine
- Other malignant neoplasms (specify)

Educational Notes and Suggestions: (optional)

Adapted from Healthwise. (2010). *The Bethesda System*. Retrieved from <http://health.msn.com/healthtopics/articlepage.aspx?cp-documentid=100069016>; National Cancer Institute [NCI]. (2011c). *Cervical cancer prevention*. Retrieved from <http://www.cancer.gov/cancertopics/pdq/prevention/cervical/Patient/page3#Keypoint11>; and Schulling, K. D., & Likis, F. E. (2011). *Women's gynecologic health* (2nd ed.). Sudbury, MA: Jones & Bartlett.

Therapeutic Management

Treatment for abnormal Pap smears depends on the severity of the results and the health history of the woman. Therapeutic choices all involve destroying as many affected cells as possible. [Box 8.2](#) describes treatment options.

BOX 8.2: TREATMENT OPTIONS FOR CERVICAL CANCER

- **Cryotherapy**—destroys abnormal cervical tissue by freezing with liquid nitrogen, Freon, or nitrous oxide. Studies show a 90% cure rate (NCI, 2011b). Healing takes up to 6 weeks, and the client may experience a profuse, watery vaginal discharge for 3 to 4 weeks.
- **Cone biopsy or conization**—removes a coneshaped section of cervical tissue. The base of the cone is formed by the ectocervix (outer part of the cervix) and the point or apex of the cone is from the endocervical canal. The transformation zone is contained within the cone sample. The cone biopsy is also a treatment and can be used to completely remove any precancers and very early cancers. Two methods are commonly used for cone biopsies:
- **LEEP (loop electrosurgical excision procedure) or LLETZ (large loop excision of the transformation zone)**—the abnormal cervical tissue is removed with a wire that is heated

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by an electrical current. For this procedure, a local anesthetic is used. It is performed in the health care provider's office in approximately 10 minutes. Mild cramping and bleeding may persist for several weeks after the procedure.

- **Cold knife cone biopsy**—a surgical scalpel or a laser is used instead of a heated wire to remove tissue. This procedure requires general anesthesia and is done in a hospital setting. After the procedure, cramping and bleeding may persist for a few weeks.
- **Laser therapy**—destroys diseased cervical tissue by using a focused beam of high-energy light to vaporize it (burn it off). After the procedure, the woman may experience a watery brown discharge for a few weeks. Very effective in destroying precancers and preventing them from developing into cancers.
- **Hysterectomy**—removes the uterus and cervix surgically
- **Radiation therapy**—delivered by internal radium applications to the cervix or external radiation therapy that includes lymphatics of the pelvis
- **Chemoradiation**—weekly cisplatin therapy concurrent with radiation. Investigation of this therapy is ongoing (ACS, 2011c, 2011e)

Using the Bethesda System, the following management guidelines for abnormal Pap results were developed by the NCI to provide direction to health care providers and clients:

- *ASC-US*: Repeat the Pap smear in 4 to 6 months or refer for colposcopy.
- *ASC-H*: Refer for colposcopy with HPV testing.
- *Atypical glandular cells (AGC) and adenocarcinoma in situ (AIS)*: Immediate colposcopy; follow-up is based on the findings.

Colposcopy is a microscopic examination of the lower genital tract using a magnifying instrument called a colposcope. Specific patterns of cells that correlate well with certain histologic findings can be visualized.

Nursing Assessment

Obtain a thorough history and physical examination of the woman. Investigate her history for risk factors such as:

- Early age at first intercourse (within 1 year of menarche)
- Lower socioeconomic status
- Promiscuous male partners
- Unprotected sexual intercourse
- Family history of cervical cancer (mother or sisters)
- Sexual intercourse with uncircumcised men
- Female offspring of mothers who took diethylstilbestrol (DES)
- Infections with genital herpes or chronic chlamydia
- Multiple sex partners
- Cigarette smoking
-
- Immunocompromised state
- HIV infection
- Oral contraceptive use
- Moderate dysplasia on Pap smear within past 5 years

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- HPV infection (CDC, 2011c)

Question the woman about any signs and symptoms. Clinically, the first sign is abnormal vaginal bleeding, usually after sexual intercourse. Also be alert for reports of vaginal discomfort, malodorous discharge, and dysuria. In some cases the woman is asymptomatic, with detection occurring at an annual gynecologic examination and Pap test.

Perform a physical examination. Inspect the perineal area for vaginal discharge or genital warts. Perform or assist with a pelvic examination, including the collection of a Pap smear as indicated ([Nursing Procedure 8.1](#)).

NURSING PROCEDURE 8.1: Assisting With Collection of a Pap Smear

Purpose: To Obtain Cells From the Cervix for Cervical Cytology Screening

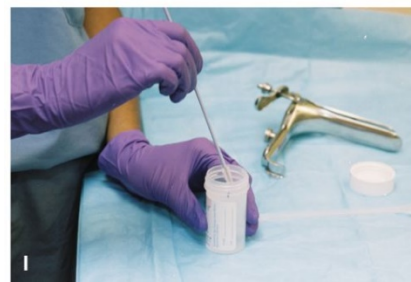
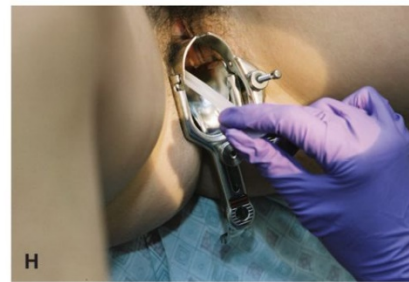
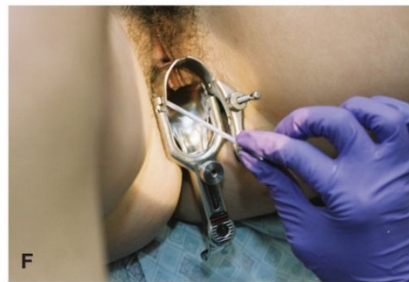
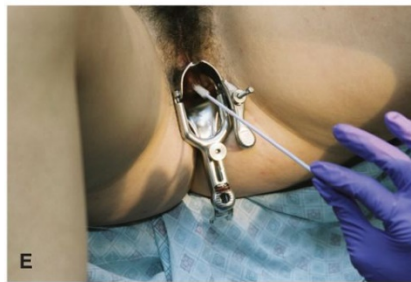
- 1. Explain procedure to the client (Fig. A).
- 2. Instruct client to empty her bladder.
- 3. Wash hands thoroughly.
- 4. Assemble equipment, maintaining sterility of equipment (Fig. B).
- 5. Position client on stirrups or foot pedals so that her knees fall outward.
- 6. Drape client with a sheet for privacy, covering the abdomen but leaving the perineal area exposed.
- 7. Open packages as needed.
- 8. Encourage client to relax.
- 9. Provide support to client as the practitioner obtains a sample by spreading the labia; inserting the speculum; inserting the cytobrush and swabbing the endocervix; and inserting the plastic spatula and swabbing the cervix (Figs. C–H).
- 10. Transfer specimen to container (Fig. I) or slide. If a slide is used, spray the fixative on the slide.
- 11. Place sterile lubricant on the practitioner's fingertip when indicated for the bimanual examination.
- 12. Wash hands thoroughly.
- 13. Label specimen according to facility policy.
- 14. Rinse reusable instruments and dispose of waste appropriately (Fig. J).
- 15. Wash hands thoroughly.

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Used with permission from Klossner, N. J., & Hatfield, N. T.



(2009). *Introductory maternity and pediatric nursing* (2nd ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

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Prepare the woman for further diagnostic testing if indicated, such as a colposcopy. In a colposcopy, the woman is placed in the lithotomy position and her cervix is cleansed with acetic acid solution. Acetic acid makes abnormal cells appear white, which is referred to as *acetowhite*. These white areas are then biopsied and sent to the pathologist for assessment. Although this test is not painful, has minor side effects (minor bleeding, cramping, and a risk of an infection developing after the biopsy), and can be performed safely in the clinic or office setting, women may be apprehensive or anxious about it because it is done to identify and confirm potential abnormal cell growth. Some health care providers request that the woman premedicate with a mild analgesic such as ibuprofen prior to undergoing the procedure. Provide appropriate physical and emotional preparation for this test ([Evidence-Based Practice 8.1](#)).

EVIDENCE-BASED PRACTICE 8.1: ANXIETY REDUCTION FOR WOMEN UNDERGOING A COLPOSCOPY

STUDY

Getting abnormal Pap smear results can be upsetting for a woman. A colposcopy is a follow-up examination that is commonly used to identify these suspicious cells and obtain a specimen for biopsy. A woman's anxiety about this examination is increased by the possibility of a cancer diagnosis. High levels of anxiety before and during colposcopy can have psychological consequences including pain, discomfort, and failure to return for follow-up. Studies have shown that anxiety can heighten discomfort, so researchers sought to discover which method of preparation for colposcopy best reduces a woman's anxiety. They conducted a detailed search of databases, clinical trial registers, and protocols to evaluate all randomized and quasi-randomized controlled trials involving interventions to reduce anxiety during colposcopy. Eleven trials involving 1,441 women were identified. The trials compared the anxiety levels of the intervention group with those of a control group. The methods used to reduce anxiety were informational leaflets, counseling, informational videos, video during colposcopy, music, and verbal information.

Findings

Three methods were found to significantly reduce anxiety during colposcopy: listening to music, watching informational videos, and viewing the video during the procedure. Other methods, such as informational leaflets, counseling, and verbal information, were not found to reduce anxiety vs. control groups. The knowledge provided by the leaflets did not reduce anxiety levels, they did increase knowledge levels and are therefore useful in obtaining clinical consent to the colposcopic procedure. Leaflets also contributed to improved client quality of life by reducing psychosexual dysfunction.

Nursing Implications

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Nurses can use the information from this study to design appropriate strategies for client teaching and can encourage women to use these measures to reduce anxiety. For example, the nurse can suggest that the client listen to her favorite music during the procedure to help her relax. Nurses can urge women to seek agencies or settings that include these measures as part of their procedure, and nurses can work with their facilities to ensure that music, informational videos, and videotape equipment are available for use during this procedure.

Adapted from Galaal, K., Bryant, A, Deane, K.H.O., Al-Khaduri, M., & Lopes, A. D. (2011). Interventions for reducing anxiety in women undergoing colposcopy. *Cochrane Database of Systematic Reviews*, 2011 (12). doi:10.1002/14651858.CD006013.pub3.

Nursing Management

The nurse's role involves primary prevention by educating women about risk factors and ways to prevent cervical dysplasia. Cervical cancer rates have decreased in the United States because of the widespread use of Pap testing, which can detect precancerous lesions of the cervix before they develop into cancer.

Gardasil and Cervarix are vaccines approved by the U.S. Food and Drug Administration to protect girls and women from HPV and thus prevent cervical cancer. The vaccines prevent infection from four HPV types: HPV 6, 11, 16, and 18. These types are responsible for 70% of cervical cancers and 90% of genital warts (NCI, 2011c). Clinical trials indicate that the vaccine has high efficacy in preventing persistent HPV infection, cervical cancer precursor lesions, vaginal and vulvar cancer precursor lesions, and genital warts (NCI, 2011c). The vaccine is administered by intramuscular injection, and the recommended schedule is a three-dose series with the second and third doses administered 2 and 6 months after the first dose. The recommended age for vaccination of females is 9 to 26 years old (Association of Women's Health, Obstetric and Neonatal Nurses, 2010). The vaccines protect against infection with these types of HPV for 6 to 8 years. It is not known if the protection lasts longer. The vaccines do not protect women who are already infected with HPV (NCI, 2011c). However, the vaccine is not a substitute for routine cervical cancer screening, and vaccinated women should have Pap smears as recommended.

Focus primary prevention education on the following:

- Identify high-risk behaviors in clients and teach them how to reduce such behaviors:
- Take steps to prevent STIs.
- Avoid early sexual activity.
- Faithfully use barrier methods of contraception.
- Avoid smoking and drinking.
- Receive the HPV vaccine.
- Instruct women on the importance of screening for cervical cancer by having annual Pap smears. Outline the proper preparation before having a Pap smear ([Teaching Guidelines 8.3](#)). Reinforce specific guidelines for screening.

Teaching Guidelines 8.3: STRATEGIES TO OPTIMIZE Pap SMEAR RESULTS

- Schedule your Pap smear appointment about 2 weeks (10 to 18 days) after the first day of your last menses to increase the chance of getting the best sample of cervical cells without menses.
- Refrain from intercourse for 48 hours before the test because additional matter such as sperm can obscure the specimen.
- Do not douche within 48 hours before the test to prevent washing away cervical cells that might be abnormal.
- Do not use tampons, birth control foams, jellies, vaginal creams, or vaginal medications for 72 hours before the test, because they could cover up or obscure the cervical cell sample.
- Cancel your Pap appointment if vaginal bleeding occurs, because the presence of blood cells interferes with visual evaluation of the sample (Schuiling & Likis, 2011).

Nurses also can advocate for clients by making sure that the Pap smear is sent to an accredited laboratory for interpretation. Doing so reduces the risk of false-negative results.

Secondary prevention focuses on reducing or limiting the area of cervical dysplasia. Tertiary prevention focuses on minimizing disability or the spread of cervical cancer. Explain in detail all procedures that might be needed. Encourage the client who has undergone any cervical treatment to allow the pelvic area to rest for approximately 1 month. Discuss this rest period with the client and her partner to gain his cooperation. Outline alternatives to vaginal intercourse, such as cuddling, holding hands, and kissing. Remind the woman about any follow-up procedures that are needed and assist her with scheduling if necessary.

Throughout the process, provide emotional support to the woman and her family. During the decision-making process, the woman may be overwhelmed by the diagnosis and all the information being presented. Refer the woman and her family to appropriate community resources and support groups as indicated. It is crucial for all women to be given correct information regarding safe sexual practices, informed about the preventive role of the HPV vaccination, and become educated about the role of the Pap test as a secondary screening measure for cervical cancer. Nurses across all settings are in a powerful position to be advocates for safe health care practices of women through education at personal, community, and national levels.

Vaginal Cancer

Vaginal cancer is malignant tissue growth arising in the vagina. Vaginal cancer is rare. Only about 1 of every 100 cancers of the female reproductive system is a vaginal cancer. In 2011, the most recent year for which data are available for vaginal cancer in the United States, the ACS (2011g) estimated that more than 2,500 new cases were diagnosed in women and that about 800 of those women died from this cancer. The peak incidence of vaginal cancer occurs at 60 to 65 years of age. The prognosis of vaginal cancer depends largely on the stage of disease and the type of tumor. The overall 5-year survival rate for

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squamous cell carcinoma is about 42%; that for adenocarcinoma is about 78% (NCI, 2011f). Vaginal cancer can be effectively treated, and when found early it is often curable.

Pathophysiology

The etiology of vaginal cancer has not been identified. Malignant diseases of the vagina are either primary vaginal cancers or metastatic forms from adjacent or distant organs. About 80% of vaginal cancers are metastatic, primarily from the cervix and endometrium. These cancers invade the vagina directly. Cancers from distant sites that metastasize to the vagina through the blood or lymphatic system are typically from the colon, kidneys, skin (melanoma), or breast. Tumors in the vagina commonly occur on the posterior wall and spread to the cervix or vulva (NCI, 2011f).

Squamous cell carcinomas (SCCs) that begin in the epithelial lining of the vagina account for about 85% of vaginal cancers. This type of cancer usually occurs in women over age 50. The SCCs develop slowly over a period of years, commonly in the upper third of the vagina. They tend to spread early by directly invading the bladder and rectal walls. They also metastasize through blood and lymphatics. The remaining 15% are adenocarcinomas, which differ from SCC by an increase in pulmonary metastases and supraclavicular and pelvic node involvement (ACS, 2011g).

Therapeutic Management

Treatment of vaginal cancer depends on the type of cells involved and the stage of the disease. If the cancer is localized, radiation, laser surgery, or both may be used. If the cancer has spread, radical surgery might be needed, such as a hysterectomy, or removal of the upper vagina with dissection of the pelvic nodes in addition to radiation therapy.

Nursing Assessment

Begin the history and physical examination by reviewing for risk factors. Although direct risk factors for the initial development of vaginal cancer have not been identified, associated risk factors include advancing age (over 60 years old), previous pelvic radiation, exposure to DES in utero, vaginal trauma, history of genital warts (HPV infection), HIV infection, cervical cancer, chronic vaginal discharge, smoking, and low socioeconomic level (ACS, 2011g).

Question the woman about any complaints. Most women with vaginal cancer are asymptomatic. Those with symptoms have painless vaginal bleeding (often after sexual intercourse), abnormal vaginal discharge, dyspareunia, dysuria, constipation, and pelvic pain (NCI, 2011f). During the physical examination, observe for any obvious vaginal discharge or genital warts or changes in the appearance of the vaginal mucosa. Anticipate colposcopy with biopsy of suspicious lesions to confirm the diagnosis.

Nursing Management

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Nursing management for this cancer is similar to that for other reproductive cancers, with emphasis on sexuality counseling and referral to local support groups. Women undergoing radical surgery need intensive counseling about the nature of the surgery, risks, potential complications, changes in physical appearance and physiologic function, and sexuality alterations.

Vulvar Cancer

Vulvar cancer is an abnormal neoplastic growth on the external female genitalia ([Fig. 8.5](#)). Vulvar cancer accounts for approximately 5% of all female genital malignancies. It occurs in about 1.5 per 100,000 women-years in developed countries. It is the fourth most common gynecologic cancer, after endometrial, ovarian, and cervical cancers (NCI, 2011g). The ACS (2011h) estimated that in 2011, over 4,000 cancers of the vulva were diagnosed in the United States and over 900 women died of this cancer. When detected early, it is highly curable.

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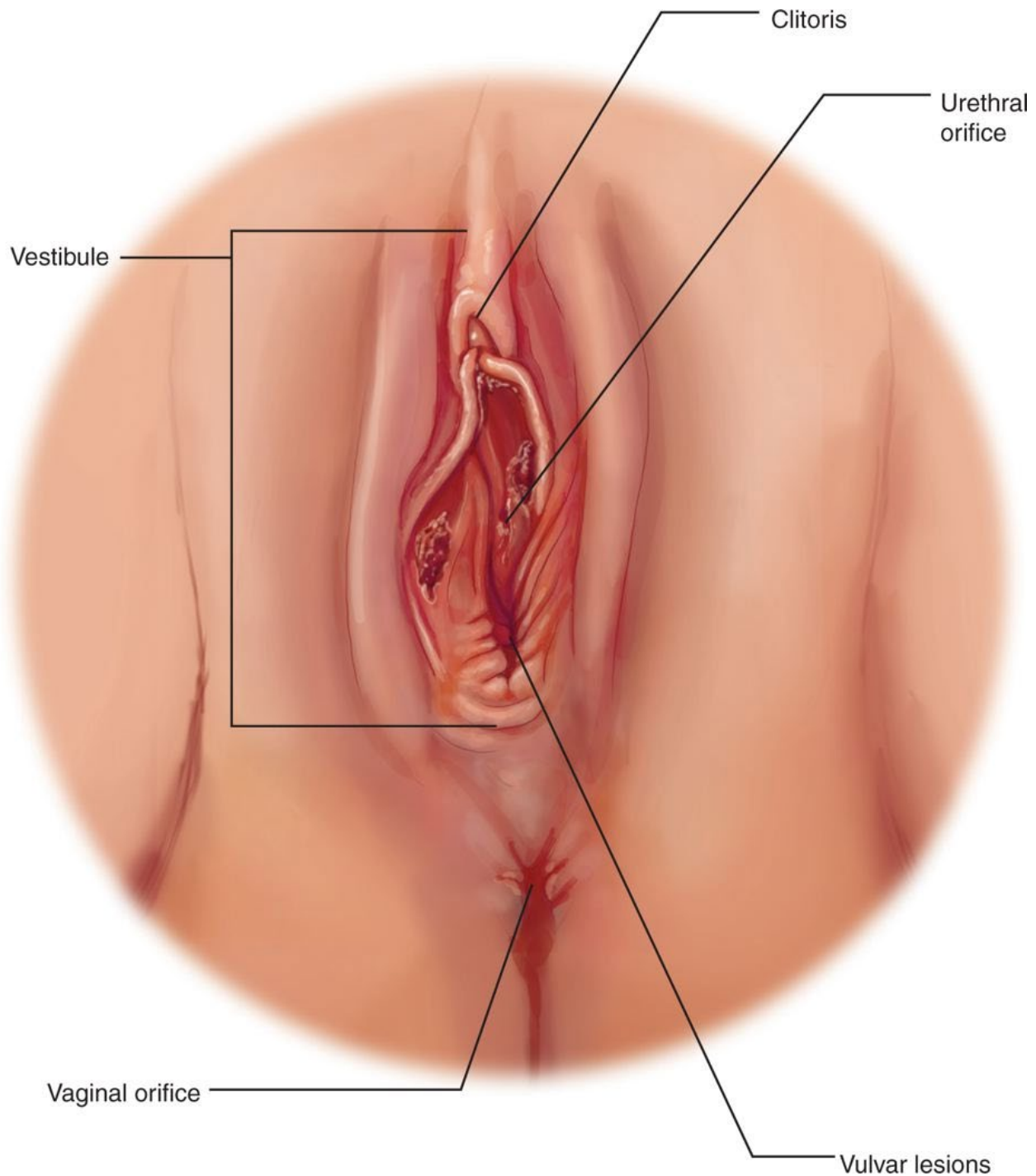


FIGURE 8.5

Vulvar cancer. (The Anatomical Chart Company. [2009]. [3rd ed.]. Philadelphia, PA: Lippincott Williams & Wilkins.)
Vulvar cancer is found most commonly in older women in their mid-60s to mid-70s, but the incidence in women younger than 35 years old has increased during the past few decades.

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The overall 5-year survival rate when lymph nodes are not involved is 90%, but it drops to 50% to 70% when the lymph nodes have been invaded (ACS, 2011h).

Pathophysiology

Approximately 90% of vulvar tumors are squamous cell carcinomas. This type of cancer forms slowly over several years and is usually preceded by precancerous changes. These precancerous changes are termed vulvar intraepithelial neoplasia (VIN). The two major types of VIN are classic (undifferentiated) and simplex (differentiated). Classic VIN, the more common one, is associated with HPV infection (genital warts due to types 16, 18, 31, 33, 35, and 51) and smoking (Dittmer, Fischer, Diedrich, & Thill, 2012). It typically occurs in women between 30 and 40 years old. In contrast to classic VIN, simplex VIN usually occurs in postmenopausal women and is not associated with HPV (Ghebre, Posthuma, Vogel, Geller, & Carson, 2011).

Screening and Diagnosis

Annual vulvar examination is the most effective way to prevent vulvar cancer. Careful inspection of the vulva during routine annual gynecologic examinations remains the most productive diagnostic technique. Liberal use of biopsies of any suspicious vulvar lesion is usually necessary to make the diagnosis and to guide treatment. However, many women do not seek health care evaluation for months or years after noticing an abnormal lump or lesion.

The diagnosis of vulvar cancer is made by a biopsy of the suspicious lesion, which is usually found on the labia majora.

Take Note!

Vulvar pruritus or a lump is present in the majority of women with vulvar cancer. Lumps should be biopsied even if the woman is asymptomatic.

Therapeutic Management

Treatment varies depending on the extent of the disease. Laser surgery, cryosurgery, or electrosurgical incision may be used. Larger lesions may need more extensive surgery and skin grafting. The traditional treatment for vulvar cancer has been radical vulvectomy, but more conservative techniques are being used to improve psychosexual outcomes.

Nursing Assessment

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Typically, no single specific clinical symptom heralds this disease, so diagnosis is often delayed significantly. Therefore, it is important to review the woman's history for risk factors such as:

- Exposure to HPV type 16
- Age over 50 years
- HIV infection
- VIN
- Lichen sclerosus
- Melanoma or atypical moles
- Exposure to HSV type 2
- Multiple sex partners
- Smoking
- Herpes simplex
- History of breast cancer
- Immune suppression
- Hypertension
- Diabetes mellitus
- Obesity (ACS, 2011h)

In most cases, the woman reports persistent vulvar itching, burning, and edema that do not improve with the use of creams or ointments. A history of condyloma, gonorrhea, and herpes simplex are some of the factors for greater risk for VIN. Diagnosis of vulvar carcinoma is often delayed. Women neglect to seek treatment for an average of 6 months from the onset of symptoms. In addition, a delay in diagnosis often occurs after the client presents to her physician. In many cases, a biopsy of the lesion is not performed until the problem fails to respond to numerous topical therapies. During the physical examination, observe for any masses or thickening of the vulvar area. A vulvar lump or mass most often is noted. The vulvar lesion is usually raised and may be fleshy, ulcerated, leukoplakic, or warty. The cancer can appear anywhere on the vulva, although about three fourths arise primarily on the labia (Creasman, 2011b). Less commonly, the woman may present with vulvar bleeding, discharge, dysuria, and pain.

Nursing Management

Women with vulvar cancer must clearly understand their disease, treatment options, and prognosis. To accomplish this, provide information and establish effective communication with the client and her family. Act as an educator and advocate.

Teach the woman about healthy lifestyle behaviors, such as smoking cessation and measures to reduce risk factors. For example, instruct the woman how to examine her genital area, urging her to do so monthly between menstrual periods. Tell her to look for any changes in appearance (e.g., whitened or reddened patches of skin); changes in feel (e.g., areas of the vulva becoming itchy or painful); or the development of lumps, moles (e.g., changes in size, shape, or color), freckles, cuts, or sores on the vulva. Urge the woman to report these changes to the health care provider (ACS, 2011h).

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Teach the woman about preventive measures such as not wearing tight undergarments and not using perfumes and dyes in the vulvar region. Also educate her about the use of barrier methods of birth control (e.g., condoms) to reduce the risk of contracting HIV, HSV, and HPV.

For the woman diagnosed with vulvar cancer, provide information and support. Discuss potential changes in sexuality if radical surgery is performed. Encourage her to communicate openly with her partner. Refer her to appropriate community resources and support groups.

KEY CONCEPTS

- Women have a one-in-three lifetime risk of developing cancer, and one out of every four deaths is from cancer; thus, nurses must focus on screening and educating all women regardless of risk factors.
- The nurse plays a key role in offering emotional support, determining appropriate sources of support, and helping the woman use effective coping strategies when facing a diagnosis of cancer of the reproductive tract. Although reproductive tract cancer is rare during pregnancy, the woman's vigilance and routine screenings should continue throughout.
- A woman's sexuality and culture are inextricably interwoven, and it is essential that nurses working with women of various cultures recognize this and remain sensitive to the vast changes that will take place when the diagnosis of cancer is made.
- Ovarian cancer is the eighth most common cancer among women and the fourth most common cause of cancer deaths for women in the United States, accounting for more deaths than any other cancer of the reproductive system.
- Ovarian cancer has been described as the "overlooked disease" or "silent killer" because women and health care practitioners often ignore or rationalize early symptoms. It is typically diagnosed in advanced stages.
- Unopposed endogenous and exogenous estrogens, obesity, nulliparity, menopause after the age of 52 years, and diabetes are the major etiologic risk factors associated with the development of endometrial cancer.
 - The American Cancer Society recommends that women should be informed about risks and symptoms of endometrial cancer at the onset of menopause and strongly encouraged to report any unexpected bleeding or spotting to their health care providers.
 - Malignant diseases of the vagina are either primary vaginal cancers or metastatic forms from adjacent or distant organs. Vaginal cancer tumors can be effectively treated and, when found early, are often curable.
 - Cervical cancer incidence and mortality rates have decreased noticeably in the past several decades, with most of the reduction attributed to the Pap test, which detects cervical cancer and precancerous lesions.
 - The nurse's role involves primary prevention of cervical cancer through education of women regarding risk factors and preventive vaccines to avoid cervical dysplasia.

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- Diagnosis of about 80% of vaginal cancers are metastatic, primarily from the cervix and endometrium. These cancers invade the vagina directly. Vulvar cancer is often delayed significantly because there is no single specific clinical symptom that heralds it. The most common presentation is persistent vulvar itching that does not improve with the application of creams or ointments.