

Cancer: Caring and Conquering

Linda H. Yoder

Let's Talk 'Cancer Prevention'

In the inaugural column of this feature, Dr. Connie Curran (2005), executive director of C-Change, talked about her belief that medical-surgical nurses are at the forefront of health care delivery in the United States. I could not agree more! Because of their roles, medical-surgical nurses interface with various types of patients on mixed medical-surgical units and in clinics or physician practices. Additionally, we interface with cancer survivors as our patients or as family members of patients, and we work with well people to maintain their health. Last, but not least

Linda H. Yoder, PhD, MBA, RN, AOCN®, FAAN, is Program Director, Evidence-Based Practice, Outcomes, & Research, Adventist HealthCare, Rockville, MD.

Note: This column is made possible through an educational grant from C-Change, a Washington, DC, based organization comprising the nation's key cancer leaders from government, business, and nonprofit sectors. These cancer leaders share the vision of a future where cancer is prevented, detected early, and cured or is managed successfully as a chronic illness. The mission of C-Change is to leverage the combined expertise and resources of its members to eliminate cancer as a (major) public health problem at the earliest possible time. C-Change is both a forum and a catalyst for identifying issues and major challenges facing the cancer community and for initiating collaborative actions to complement the efforts of individual C-Change members. Medical-Surgical nurses are invited to learn more about this important organization by visiting www.ndoc.org

important, medical-surgical nurses work with our colleagues who may be at risk for cancer, receiving treatment for cancer, or celebrating survivorship. Cancer prevention and early detection are important to all of us because we know that if cancer is detected early, it is more manageable. With that in mind, the purpose of this column is to provide an overview of prevention and early detection. Some of the concepts may be familiar and will serve as a review, while other information will be new and useful to your practice.

Cancer Prevention

Cancer prevention is defined as the reduction of cancer mortality by reducing the incidence of cancer. This can be accomplished by avoiding a carcinogen or altering its metabolism; pursuing lifestyle or dietary practices that modify cancer-causing factors or genetic predispositions; and/or medical intervention (chemoprevention) to successfully treat precancerous lesions (National Cancer Institute [NCI], 2005). Preventive health care is more dynamic than health maintenance because it requires the individual to enhance his or her health status actively, rather than maintain the status quo. The three levels of prevention are *primary*, *secondary*, and *tertiary* (Haas & Hackbarth, 2001).

Primary prevention. Primary prevention consists of health promotion activities that are focused on protecting against the occurrence of cancer. It includes teaching patients about healthy lifestyle behaviors such as smoking cessation. The most consistent finding,

over decades of research, is the strong association between tobacco use and cancers of many sites. Hundreds of epidemiologic studies have confirmed this statistical relationship. Further support comes from the fact that lung cancer death rates in the United States have mirrored smoking patterns, with increases in smoking followed by dramatic increases in lung cancer death rates and, more recently, decreases in smoking followed by decreases in lung cancer death rates in men. Additional examples of modifiable cancer risk factors that are amenable to primary prevention include alcohol consumption (associated with increased risk of oral, esophageal, breast, and other cancers), physical inactivity (associated with increased risk of colon, breast, and possibly other cancers), and being overweight (associated with colon, breast, endometrial, and possibly other cancers). Based on current evidence, it is now thought that avoiding excessive alcohol consumption, being physically active, and maintaining recommended body weight may all contribute to reductions in risk of certain cancers; however, compared with tobacco exposure, the strength of the effect is modest or small, and therefore the strength of evidence is often weaker. Other lifestyle and environmental factors known to affect cancer risk (either beneficially or detrimentally) include certain sexual and reproductive practices, the use of exogenous estrogens, exposure to ionizing radiation and ultraviolet radiation, certain occupational and chemical exposures, and infectious agents (NCI, 2005).

Secondary prevention. Sec-

ondary prevention refers to health behaviors that promote early detection, early treatment, and limited disability. For example, genetic testing for high-risk individuals, with enhanced surveillance or prophylactic surgery for those who test positive, is already available for certain types of cancer, including breast and colon cancers. Screening for colon cancer through fecal occult blood testing can reduce both colon cancer incidence and mortality, presumably through the detection and removal of precancerous polyps. Similarly, cervical cytology testing (using the Pap test) leads to the identification and excision of precancerous lesions. Over time, such testing has been followed by a dramatic reduction of cervical cancer incidence and mortality (Haas & Hackbarth, 2001).

Tertiary prevention. Tertiary prevention is directed toward rehabilitation after a disease or condition already exists to minimize disability and help the person to live productively with limitations. Tertiary prevention is used when disability is permanent and irreversible. This type of prevention is aimed at minimizing disease progression effects and disability.

Prevention and Early Detection Resources

Each year the American Cancer Society (ACS) provides estimates of the number of new cancer cases and deaths expected in the current year. It uses information from the NCI and the National Center for Health Statistics to compile the most recent data regarding incidence, mortality, and survival. In their recent statistical summary of these data, Jemal et al. (2005) provided tables and charts displaying estimates of new cancer cases by state and by anatomic sites in both males and females. It is sobering to note that 1,372,910 new cases of cancer are estimated to be diagnosed and 570,280 people are projected to die from this disease in 2005. Cancer continues to be one of the five leading causes of death, ranking second only to heart disease in all ages. When age-adjusted death rates are analyzed, cancer is the leading cause of death among both genders under age 85.

Alarmingly, cancer is the leading cause of death for women aged 40 to 79 and men aged 60 to 79 (Jemal et al., 2005).

Clearly, screening and early detection are challenging in any disease, but the possibility of receiving a cancer diagnosis remains a barrier for some individuals when they suspect an abnormality. In January 2000, the ACS began publishing an annual summary of its recommendations for early cancer detection, including updates (Smith, Cokkinides, & Eyre, 2005). The ACS recommendations for the early detection of cancer in average-risk asymptomatic individuals are summarized in Table 1. For a more detailed discussion of the rationale for these recommendations, see Smith and colleagues (2005). Additionally, guideline reviews and detailed guideline updates can be found at <http://CAonline.AmCancerSoc.org>.

The NCI also provides information in the "Cancer Prevention" section of the PDQ (Physician Data Query), which is NCI's comprehensive cancer database (NCI, 2005). It contains peer-reviewed summaries about cancer treatment, screening, prevention, genetics, supportive care, and complementary and alternative medicine. It also consists of a registry of approximately 2,000 open and 13,000 closed cancer clinical trials from around the world, as well as directories of physicians and other health care professionals who provide genetic services. Additionally, organizations that provide cancer care are identified in the PDQ.

C-Change also provides information about cancer prevention, early detection, and related informational Web sites at <http://www.ndoc.org>. C-Change is comprised of about 130 members — including the heads of federal and state governmental agencies, private businesses, the motion picture industry, and nonprofit groups — whose missions relate to cancer research, control, and/or patient advocacy. Other individuals with a deep concern about cancer and who have achieved prominence in the entertainment, news, and other industries or endeavors also are engaged in C-Change.

Teachable Moments

From the recommendations in Table 1, it is evident that cancer screening should occur in the context of health and wellness examinations. As individuals age, they may acquire chronic health problems. In the midst of ongoing care for these problems, cancer screening and early detection should continue. Medical-surgical nurses meet people in a variety of settings within health care, as well as in social situations. They must use these opportunities to serve as role models by engaging in appropriate screening practices themselves and must make use of the "teachable moments" to educate patients, family, and friends about cancer risk factors, screening, and early detection. Many challenges exist in this regard; Smith et al. (2005) stated that among adult women 50+ years, 34% were adherent with all the early detection tests for breast, cervical, and colorectal screening; 25% were adherent with breast and cervical cancer screening; and 41% *were not adherent with any of the screening recommendations*. The statistics are equally poor for men aged 50+. Only 9% were adherent with colorectal cancer screening, 41% reported undergoing colorectal screening and PSA testing, 23% reported PSA testing alone, and 27% reported not receiving any screening for colorectal cancer or PSA testing for prostate cancer detection.

It would be naive to think that health care access factors do not play a role in screening adherence. Factors such as health insurance coverage and having a regular provider and a usual source of care are related to adherence with screening recommendations. Delayed access or late reporting of symptoms is clearly related to late-stage cancer at diagnosis. Late-stage diagnosis is found among the uninsured, the underinsured, older adults, and underserved ethnic and socially disadvantaged groups. Even for insured groups, barriers of time constraints in hectic schedules and lack of reminder systems for patients have played a role in reducing screening.

**Table 1.
American Cancer Society Recommendations**

Cancer Site	Population	Test or Procedure	Frequency
Cancer-related physical exam (check-up)	Men and women aged 20+	Should include exam for cancers of the thyroid, lymph nodes, oral cavity, skin, testicles, ovaries, uterus, as well as health counseling about tobacco cessation, sun exposure, diet and nutrition, sexual practices, environmental and occupational exposures, and other applicable risk factors.	At routine physical exam for age.
Breast	Women aged 20+	Breast self-exam (BSE)	Beginning in their early 20s, women should be instructed about the benefits and limitations of BSE, as well as need for prompt reporting of any abnormal findings. Women should receive appropriate instruction and have their technique reviewed at the time of their periodic health exam. <i>It is acceptable for women to choose not to perform BSE or to perform BSE irregularly.</i>
		Clinical breast exam (CBE)	CBE should be part of a periodic health exam for women in their 20s and 30s, preferably at least every 3 years. Asymptomatic women aged 40+ should receive CBE as part of their health exam, preferably annually.
		Mammography	Begin annual mammography at age 40 (annual CBE should be performed prior to mammography).
Cervix	Women aged 18+	Pap test	Cervical cancer screening should begin about 3 years after a woman begins having vaginal intercourse, but no later than 21 years of age. Screening should be conducted annually with conventional Pap tests or every 2 years using liquid-based Pap tests. At or after age 30, women who have had three normal tests sequentially may get screened every 2-3 years with cervical cytology, or every 3 years with HPV DNA testing plus cervical cytology. Women 70+ years of age who have had three or more normal Pap tests and no abnormal pap tests in the last 10 years, and women who have had a total hysterectomy may choose to stop cervical cancer screening.
Endometrial	Women at menopause	At menopause, women at average risk should be counseled about risks and symptoms of endometrial cancer and strongly encouraged to report any unexpected bleeding or spotting to their physicians.	

**Table 1. (continued)
American Cancer Society Recommendations**

Cancer Site	Population	Test or Procedure	Frequency
Colorectal	Men and women aged 50+	Fecal occult blood test (FOBT) or fecal immunochemical test (FIT)	Annual starting at age 50
		Flexible sigmoidoscopy (Flex sigmoidoscopy plus FOBT is preferred compared with FOBT alone.)	Every 5 years starting at age 50
		Fecal occult blood test (FOBT) or fecal immunochemical test (FIT), and flexible sigmoidoscopy	Annual FOBT or FIT, and flexible sigmoidoscopy every 5 years starting at age 50
		Colonoscopy	Every 10 years starting at age 50
		Double contrast barium enema	Every 5 years starting at age 50
Prostate	Men aged 50+	Digital rectal exam (DRE) and prostate-specific antigen (PSA)	PSA test and DRE should be offered annually starting at age 50 for men who have a life expectancy of at least 10 years. (Information should be given to men about the benefits and limitations of testing so the men can make an informed decision about testing.)

Have You Been Screened?

As medical-surgical nurses, we must use every opportunity we have in our practice to educate about screening and early detection, whether we use marketing tools from ACS or other cancer-related organizations. Additionally, we can work with the media to educate members of our local communities about screening recommendations and the positive outcomes of early detection. The ACS, the American Diabetes Association, and the American Heart Association recently announced a collaboration to address a common preventive health agenda (Eyre, Kahn, & Robertson, 2004a; Eyre, Kahn, & Robertson, 2004b; Eyre, Kahn, & Robertson et al., 2004a; Eyre, Kahn, & Robertson et al., 2004b). The goal of this partnership is to stimulate substantial improvements in primary prevention and early detection through teamwork with key organizations, legislative action that produces increased funding for and access to primary prevention programs and research, greater public awareness about healthy lifestyles, and reconsideration of the periodic medical examination as an effective platform for prevention, early detection, and

treatment. When I read about this alliance, I asked myself, "Where are the nurses?" Nurses have been focused on prevention since the time of Nightingale, so why are we not part of such a joint venture to improve the health care of our nation? Nurses are pervasive in the health care system and we should be able to problem-solve these issues with creative, innovative ideas, as well as plain old-fashioned education. So let me take this opportunity to ask: "Have you undergone cancer screenings lately?" ■

References

- Curran, C.R. (2005). Enlisting medical-surgical nurses in the battle against cancer. *MED-SURG Nursing, 14*(1), 73-74.
- Eyre, H., Kahn, R., & Robertson, R.M., & the American Cancer Society, the American Diabetes Association, and the American Heart Association Collaborative Writing Committee. (2004a). Preventing cancer, cardiovascular disease, and diabetes: A common agenda for the American cancer Society, the American Diabetes Association, and the American Heart Association. *CA: A Cancer Journal for Clinicians, 54*(4), 190-207.
- Eyre, H., Kahn, R., Robertson, R.M. & the American Cancer Society, the American Diabetes Association, and the American Heart Association Collaborative Writing Committee. (2004b). Preventing cancer, cardiovascular disease, and diabetes: A common agenda for the American Cancer Society, the American Diabetes Association, and the American Heart Association. *Diabetes Care, 27*(7), 1812-1824.
- Eyre, H., Kahn, R., Robertson, R.M., Clark, N.G., Doyle, C., Hong, Y., et al. (2004a). Preventing cancer, cardiovascular disease, and diabetes: A common agenda for the American Cancer Society, the American Diabetes Association, and the American Heart Association. *Circulation, 109*(25), 3244-3255.
- Eyre, H., Kahn, R., Robertson, R. M., Clark, N.G., Doyle, C., Hong, Y., et al. (2004b). Preventing cancer, cardiovascular disease, and diabetes: A common agenda for the American Cancer Society, the American Diabetes Association, and the American Heart Association. *Stroke, 35*(8), 1999-2010.
- Haas, S.A., & Hackbarth, D.P. (2001). In J.M. Black, J.H. Hawks, & A.M. Keene (Eds.), *Medical-surgical nursing: Clinical management for positive outcomes* (6th edition) (pp. 84-87). Philadelphia: W.B. Saunders.
- Jemal, A., Murray, T., Ward, E., Samuels, A., Tiwari, R.C., Ghafoor, A., et al. (2005). *Cancer statistics, 2005, 55*(1), 10-30.
- National Cancer Institute (NCI). (2005). *Cancer topics*. Retrieved April 8, 2005 from http://www.cancer.gov/cancer_topics/pdq/prevention/overview/health_professional/allpages.
- Smith, R.A., Cokkinides, V., & Eyre, H.J. (2005). American Cancer Society guidelines for the early detection of cancer, 2005. *CA: A Cancer Journal for Clinicians, 55*(1), 31-44.