

Oncology nurses have many opportunities to implement cancer prevention and early detection recommendations across the cancer trajectory. Understanding the principles that guide the recommendations is important to providing comprehensive oncology care; many readily available resources can assist oncology nurses with this education. Guidelines for the prevention and early detection of malignancy are based on a comprehensive cancer risk assessment that includes past medical history, lifestyle factors, family history, and, in some cases, genetic testing.

#### AT A GLANCE

- Cancer risk assessment occurs regularly in oncology nursing practice.
- Oncology nurses have opportunities to provide patients and their families with education about cancer prevention, early detection, and screening for second malignancies.
- Nurses can use many readily available resources to facilitate cancer prevention education.

#### KEYWORDS

cancer prevention; detection; guidelines; education; genetic testing

#### DIGITAL OBJECT IDENTIFIER

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# Cancer Prevention and Detection

## Application across the cancer trajectory

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**P**inciples of cancer prevention, early detection, and epidemiology permeate all aspects of oncology nursing. Many terms are often used in cancer prevention and early detection. An understanding of commonly used terms and their clinical application is fundamental to providing comprehensive cancer care (see Figure 1). Throughout the trajectory of cancer care, there are many opportunities for patient and family education. This article will review the principles and application of cancer prevention to clinical care.

### Risk Assessment

The cancer risk assessment is based on past medical history, personal lifestyle factors, and family history. Examples of medical history risk factors might include a past diagnosis of cancer, colon polyps, atypical moles, fair complexion, or a breast biopsy demonstrating hyperplasia with atypia. Lifestyle factors include excessive weight, poor diet, sedentary lifestyle, or tobacco use. Family history is a critical piece of cancer risk assessment (Mahon, 2016). This includes assessment of the maternal and paternal sides and referral to a genetics professional for further evaluation when multiple family members have been diagnosed with cancer(s) or multiple members have early onset cancer (Kelly, 2017).

Risk models for some cancers combine risk factors in a mathematical fashion, and many are available as online tools (National Cancer Institute, 2016). Oncology nurses routinely make assessments that include

these risk factors. The challenge is in educating patients and families of the meaning of these risk factors and using this information to guide recommendations for cancer prevention and early detection.

### Primary Cancer Prevention

Risk factors can be modifiable (e.g., diet, exercise) or nonmodifiable (e.g., age, family history). Many aspects of primary prevention focus on modifiable risk factors. The American Cancer Society ([ACS], 2017b) estimated that, in 2017, 190,500 cancer deaths were caused by tobacco use and 20% of all new cancers diagnosed were related to excess body weight, physical inactivity, alcohol consumption, and poor nutrition. These risk factors are clearly modifiable.

Oncology nurses need to consider all potential opportunities to implement primary prevention into clinical practice. It begins with personally developing a healthy lifestyle, including exercising, eating a healthy diet, reducing ultraviolet light exposure, wearing sunscreen and protective clothing, and avoiding tobacco use and excess alcohol consumption. Patients may be less likely to value the education and advice of nurses who do not model a healthy lifestyle, particularly when nurses are overweight or use tobacco products (While, 2014).

Patients who present for cancer screening examinations should be reminded of primary prevention measures. For example, a woman having a mammogram might benefit from information