RISK ASSESSMENT, PREVENTION, AND EARLY DETECTION: CHALLENGES FOR THE ADVANCED PRACTICE NURSE

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OBJECTIVES: *To review research and evidence-based resources on risk assessment, prevention, and early detection and its application in clinical nursing practice.*

DATA SOURCES: *Journal articles, texts, and personal cancer prevention and early detection clinical program experience.*

CONCLUSION: *There are multiple roles and clinical settings for advance practice nurses to implement cancer risk assessment and promote the prevention and early detection of cancer for patients and their families.*

IMPLICATIONS FOR NURSING PRACTICE: *Every patient deserves cancer risk assessment and clear recommendations for the primary, secondary, and tertiary prevention of cancer as appropriate.*

KEY WORDS: *Cancer prevention, early detection, cancer survivors, risk assessment, tertiary prevention, advanced practice nurse, APN*

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There are a growing number of practice opportunities and challenges for the advanced practice nurse (APN) (Nurse Practitioner and Clinical Nurse Specialist) in the area of cancer prevention and early detection. APNs have advanced knowledge and skills to initiate screening programs for early detection and intervention. This article will review best practices and opportunities for the development and expansion of the APN's role in promoting quality cancer prevention, screening, and early detection programs in various clinical settings.

COMPONENTS OF RISK ASSESSMENT

There are multiple levels of cancer prevention, including primary, secondary, and tertiary prevention, with applications to both patients and their families. Comprehensive assessment is needed before applying cancer prevention and early detection measures.

Cancer Risk Assessment

Basic elements of a cancer risk assessment may include a review of medical history, a history of exposures to carcinogens in daily living, and a detailed family history (see Table 1). Once all information is gathered, it must be interpreted to the patient in understandable terms. Often this is accomplished by using various risk calculations such as absolute risk, relative risk, or specific risk models for various cancers. Collection of all of these parameters will provide the necessary data for a comprehensive cancer risk assessment. Nurses working in subspecialty clinics can modify assessment patterns to meet the needs of the population served and targeted areas of cancer care.

Absolute risk is a measure of the occurrence of cancer, either incidence (new cases) or mortality (deaths), in the general population. Absolute risk is helpful when a patient needs to understand what the chances are for all people in a population of developing or dying of a particular disease. Absolute risk can be expressed as a cumulative risk up to a specified age (such as one in eight women will develop breast cancer if they live to age 85).[1] *Relative risk* is a comparison of the incidence or deaths among those with a particular risk factor compared with those without the risk factor. By reviewing relative risk factors, individuals can determine their risk factors and thus better understand their personal chances of developing a specific cancer as compared with individuals without such risk factors. If the risk for a person with no known risk factors is 1.0, one can evaluate the risk of those with risk factors in relation to this figure. A number greater than 1.0 suggests increased risk; a number less than 1.0 suggests a possible protective factor.

Communication of the risk information should begin by reminding the patient of the strengths and limitations of the risk assessment, as well as the purpose of a cancer risk assessment. The patient should clearly understand that the assessment will be only as accurate as the patient provides. Because risk assessment guides preven-

TABLE 1. Cancer Risk Assessment Parameters	
Male Risk Assessment	Female Risk Assessment
Family history of cancer	Family history of cancer
Prostate	Breast
Colon/polyps	Pancreas
Testicular	Prostate
Pancreatic	Colon/polyps
Skin/melanoma	Ovarian
Breast/gynecologic	Uterine
Medical history	Skin/melanoma
Surgeries	Reproductive history
Medications	Menarche
HPV vaccination	Menopause
Most recent screening	Hormone history
tests (colonoscopy,	Pregnancy history
PSA, rectal	Early parity
examination, skin	Previous breast biopsies
exam, oral exam)	Early first coitus; multiple
Height/weight/BMI	partners
Lifestyle history	History of cervical
High-fat diet	dysplasia
Exercise habits	Exposure to
Chemical exposure	diethylstilbestrol
Light/fair complexion	Infertility
Previous skin cancer/	Medical history
nevi removal	Surgeries
Previous x-ray exposure	Medications
Sun exposure	HPV vaccination
Tanning parlor use	Most recent screening
Tobacco use	tests (Pap smear,
Alcohol use	pelvic exam, breast
	exam, mammogram,
	colonoscopy, oral
	exam, dermatology
	exam)
	Height/weight/BMI
	Lifestyle history
	Obesity
	High-fat diet
	Light/fair complexion
	Previous skin cancer/
	nevi removal
	Previous x-ray exposure
	Sun exposure
	Tanning parlor use
	Chemical exposure
	Tobacco use
	Alcohol use

Abbreviation: BMI, body mass index; HPV, human papilloma virus; PSA, prostate specific antigen.

tion and early detection decisions, patients need basic information on the risk factors for the cancer(s) for which the person desires screening. This discussion should include basic information