The extensive study of human genetics, especially the completed mapping of the human genome, has emphasized the importance and utility of information obtained from the family history. A pedigree presents a family history of disease in a diagram, which allows for the identification of patterns of cancer and family members who are at risk (Loescher, 1999). Information obtained from family history data can provide valuable insight into the biologic and environmental etiologies of an individual’s personal and family history of disease.

Former U.S. Surgeon General Richard H. Carmona, MD, MPH, launched the Family History Initiative, a national public health campaign to focus attention on the importance of family health history. Other agencies involved in the project include the National Human Genome Research Institute, the Centers for Disease Control and Prevention, the Agency for Healthcare Research and Quality, and the Health Resources and Services Administration (U.S. Department of Health and Human Services, 2005). Carmona is a nurse and physician, and he echoed the beliefs of Beery and Shoerner (2004) in that genetics needs to be a part of every clinical practice. Nurses working in oncology should help patients with cancer obtain their family health histories.

Family history information is a core tool in cancer risk assessment, counseling, and personalization of cancer screening guidelines for family members. Based on information gained from family histories and genetic testing, at-risk individuals are identified, which can lead to targeted therapies, early diagnosis of cancer, and prevention of certain cancer types (Arrigoni et al., 2005; Boland, 2002; Madlensky, Flatt, Bardwell, Rock, & Pierce, 2005). Family histories are the basic component in research to identify other hereditary cancer syndromes (National Cancer Institute, 2005).

The purpose of this article is to provide a brief introduction to cancer genetics and discuss ways to obtain accurate family histories in a time-efficient manner. The focus is on the family history, which should be a standard component of the initial intake for any patient and updated regularly to keep the information current.

At a Glance
✦ Approximately 5%–10% of cancers are familial or hereditary.
✦ Family histories are essential to identify hereditary cancer syndromes.
✦ Nurses need to verify patient-completed family history questionnaires for accuracy.

Brief Introduction to Cancer Genetics

A normal somatic cell is composed of 23 pairs of chromosomes, which contain genes. An individual inherits two copies of the genetic material from each parent. This genetic material is passed down from parents to offspring, forming a family history that can be used to identify patterns of disease and potential for hereditary cancer.

Information obtained from family history data can provide valuable insight into the biologic and environmental etiologies of an individual’s personal and family history of disease. The purpose of this article is to provide a brief introduction to cancer genetics and discuss ways to obtain accurate family histories in a time-efficient manner to identify families with a hereditary cancer syndrome. The focus is on gathering family history information, which should be a standard component of the initial intake for any patient and updated regularly to keep the information current.