Genetic Counseling for Cancer Risk: Knowledge is Power

By Maude Blundell, M.S., CGC

Cancer is a fact of life for the more than 1.4 million people each year who are diagnosed with the disease and the physicians who diagnose it. Cancer remains one of the greatest challenges in medicine, with a myriad of possible causes, including environmental exposure, lifestyle and diet. It also weighs on our economy--cancer treatment costs in the U.S. totaled an estimated $219.2 billion in 2007.

One of the most exciting and promising areas of research in the identification and possible prevention of certain cancers is cancer genetics. An estimated 5-10% of cancer cases occur in individuals who have a genetic predisposition to the disease.

SSCC Now Offers Genetic Counseling

To help patients learn all they can about cancer risk, the Sutter Solano Cancer Center (SSCC) now offers an educational program about genetics as a risk factor. SSCC provides genetic counseling, risk assessment, screening recommendations and, when appropriate, genetic testing. There's a great need for these services in the North Bay, and the SSCC is keeping pace with technology and the ever-changing field of genetics by offering cancer risk genetic counseling to its patients.

Genetic counselors aim to:

- determine the likelihood that cancer in a family is inherited
- discuss options for early identification and risk reduction
- provide information about the benefits, risks and limitations of genetic testing
- coordinate the testing process and accurately interpret the results
- give referrals for appropriate research studies

Advances in genetics have made improvements in prevention, diagnosis and treatment possible. For people with certain known risk factors, knowledge is power. Genetic

counseling allows people to make decisions about their life on their own time, not on cancer's time.

Often patients who have been referred to a genetic counselor have been diagnosed with cancer at an exceptionally young age and want to understand their risk of recurrence, or whether their family members may be at increased risk. Others have a strong family history of cancer and want to know if they are also at risk for the disease. An individual diagnosed with breast cancer under age 45, or with colon cancer under age 50, would be a good candidate for genetic counseling.

Genetic Risk Factors for Breast Cancer

Each year, more than 182,000 American women and almost 2,000 men learn they have breast cancer. An estimated 5-10% of these women have a hereditary form of the disease.

Women with family histories of breast and ovarian cancers are among the most commonly referred to my practice. A diagnosis at an early age is often the most important risk factor. For example, a woman whose mother was diagnosed with breast cancer at age 35 may be at increased risk, while a woman whose mother was diagnosed at age 60 might not. Any man diagnosed with breast cancer should be referred for genetic counseling. Another risk factor to consider is ancestry. Women of Ashkenazi Jewish heritage, for example, are at increased risk for carrying a genetic change that increases the likelihood of breast and ovarian cancer. It's also important to realize that patients can inherit a risk of breast and ovarian cancer from their father's side.

Changes or mutations in certain genes make some women more susceptible to developing breast and other types of cancer. Inherited alterations in the genes called BRCA1 and BRCA2 are involved in many cases of hereditary breast and ovarian cancer. A woman's chance of developing breast and ovarian cancer within their lifetime is greatly increased if she inherits these alterations. She is also more likely to develop these cancers at a young age (before menopause), and to have multiple close family members with the

disease. These women may also have an increased chance of developing colon cancer. Researchers are searching for other genes that may also increase a woman's cancer risk.

To Test or Not to Test

The decision to pursue genetic counseling and testing is an individual one. One goal of the genetic counseling session is to help the patient work through the decision-making process regarding testing. Before making this decision, the patient should clearly understand how the results of the test may affect his or her life. I've never had anyone regret doing the testing, but I have, unfortunately, had patients regret putting it off.

Whether a person receives a positive or a negative result, there can be benefits to genetic testing. A negative result may provide a sense of relief and may eliminate the need for special preventive checkups, tests or surgeries. A positive test result may bring relief from uncertainty and allow people to make informed decisions about their future, including taking steps to reduce cancer risk. In addition, many people may choose to participate in medical research that could, in the long run, decrease the risk of death from breast cancer.

First and foremost, it is important to stress to patients that early screening for cancer, such as mammograms, colonoscopies and pap tests, are the best defense against cancer. A patient's knowledge of their family health history is an added weapon in the fight against cancer. Lastly, as medical professionals we can work together to address patients' fears regarding cancer by providing information and services that offer the best in disease management and treatment.

Maude Blundell, M.S., CGC, is a board-certified genetic counselor with SSCC in Vallejo. She is the only genetic counselor in Solano and Napa counties. For more information on SSCC's genetic testing program, visit suttersolano.org/cancer or call 707-551-3400.