Susan G. Komen for the Cure Maryland — Teaching Providers, Reaching Women

Hereditary Cancer Risk Assessment and Genetic Testing

Your patient may benefit from comprehensive hereditary cancer risk assessment if personal and/or family history (maternal or paternal) shows one or more of the following:

- **Multiple relatives** on the same side of the family with the same or related cancers – a common example of related cancers may include breast, ovarian, and pancreatic cancers
- **Early onset of cancer** – pre menopausal breast cancer or cancers before age 50
- **Individuals with multiple primary cancers**
- **History of a rare cancer –** common examples may include ovarian cancer, sarcoma, male breast cancer, etc.
- **Ashkenazi Jewish ancestry** with a personal or family history of cancer
- **There is a known genetic mutation** in the family which increases the risk for cancers

Genetic counseling is recommended prior to ordering genetic testing for hereditary cancer syndromes. During genetic counseling, a trained clinician will:

- **Elicit and assess a detailed three generation family history** and collect/review pathology reports or other pertinent medical records.
- **Determine which genetic testing is the most appropriate**. In addition to the BRCA1/2 genes, other genetic syndromes may cause an increased risk for breast and other cancers.
- **Coordinate testing** in the patient or in the most informative family member.
- **Discuss insurance coverage** for genetic testing as well as benefits and limitations of current legislation protecting against genetic discrimination.
- **Review specific cancer risks implications** of genetic testing and available screening and risk reducing options.
- **Address psychosocial challenges** that commonly arise when discussing genetic testing that has the implication to greatly increase cancer risks in individuals and their family members.
- **Interpret genetic testing results and implications for cancer risks in the family**. In many cases, a negative genetic testing result does not reduce a woman's risk for breast or other cancers. Additionally, genetic testing has the possibility to discover a genetic variant of uncertain significance. A positive result requires identification of at-risk family members.
- **Make cancer screening recommendations**. For individuals with a negative or uncertain result, it is crucial to interpret genetic test results in the context of the family and personal history. For individuals who are found to carry a genetic mutation known to cause an increased risk for cancers, specific recommendations are made regarding increased screening and risk reducing options (chemoprevention and/or prophylactic surgeries).

Resources:

- www.nsgc.org - Provides contact information for cancer genetic services in your area.
- www.cancer.gov/cancertopics/genetics - Additional information regarding cancer genetics.

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