Genetic Counseling Service
75 Claremont Rd Suite 305
Bernardsville, NJ 07924

Dear Family Member,

A member of your family has been identified as having a genetic mutation in the **RAD51C** gene. Mutations in this gene are known to be associated with an increased risk for certain cancers. This means that other family members are at risk to carry this same gene mutation and hence at an increased risk for certain cancers. This letter has been written to summarize information regarding RAD51C mutations.

A mutation in RAD51C are associated with an increased risk for ovarian and breast cancer. In general, women identified to have a mutation in RAD51C have an estimated lifetime ovarian cancer risk of approximately 9%, compared to the general population risk of 1.5%. This risk may be higher in individuals who have a family history of ovarian cancer. Mutations in RAD51C have been reported in patients with other types of cancer, such as breast cancer, however more research is needed to determine the exact risk.

Understanding risk is an important tool in prevention and management of cancer. It is important to note that many individuals with *RAD51C* mutations will never develop cancer over their lifetime. When one inherits an *RAD51C* mutation, he/she is not inheriting cancer; rather they are inheriting a predisposition to cancer.

When an individual has one copy of the *RAD51C* gene mutation they have an increased risk for cancers as outlined above. Because everyone has two copies of the gene for *RAD51C,* this means that a parent who carries an *RAD51C* mutation has a 50% chance of passing the mutation onto each of their children. It also means that if a person carries such a mutation, their siblings have a 50% chance to carry the same mutation. Extended family members may also be at risk for having the same mutation. If a person does not carry the mutation, they cannot pass it onto their children. It should be noted that very rarely an individual may have two *RAD51C* mutations, one inherited from their mother, and one inherited from their father. If a person has two *RAD51C* mutations they have a condition known as Fanconi Anemia. Individuals with Fanconi Anemia may have bone marrow failure, physical abnormalities, organ defects, and an increased risk of certain cancers (leukemia/lymphoma).

We strongly recommend that you and all persons in your family who are at risk for carrying the *RAD51C* gene mutation consider scheduling an appointment for cancer genetic counseling to discuss the benefits and limitations of genetic testing. To pursue cancer genetic testing, it is helpful if you have a copy of your family member's genetic testing report indicating that they have an *RAD51C* mutation.

GeneScreen is available to discuss this information in more detail with you and coordinate appropriate testing. Please visit the following website to submit your request for genetic counseling: https://hipaa.jotform.com/200926739003048. You can also contact Genescreen directly at 908-766-2800 to schedule a remote consultation with a genetic counselor.

Sincerely,

Stephanie Nunziato-Virga, MS, LGC
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Genescreen

Jill Chisholm, APN
President
Genescreen