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 **AXIN2 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 AXIN2 mutations.

Individuals with a mutation in the AXIN2 gene have a diagnosis of Oligodontia-colorectal cancer syndrome. Oligodontia, defined as the congenital agenesis of six or more permanent teeth, is relatively rare. The AXIN2 gene is essential for the development of permanent teeth; mutations in this gene are known to cause oligodontia and features of ectodermal dysplasia including sparse eyebrows, scalp, and body hair. Recent evidence has also found that individuals who test positive for mutation in AXIN2 are also predisposed to developing adult-onset colon adenomas, polyps, and colorectal cancer; although the risks for each is currently unclear because the number of reported cases is limited.

Understanding risk is an important tool in prevention and management of cancer. It is important to note that many individuals with AXIN2 mutations will never develop cancer over their lifetime. When one inherits an AXIN2 mutation, he/she is not inheriting cancer; rather they are inheriting a predisposition to cancer.

When an individual has one copy of the AXIN2 gene mutation they have an increased risk cancer as outlined above. Because everyone has two copies of the gene for AXIN2, this means that a parent who carries an AXIN2 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.

We strongly recommend that you and all persons in your family who are at risk for carrying the AXIN2 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 AXIN2 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