***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 **NBN 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 NBN mutations.

Cancer risks associated with NBN mutations are not fully understood; however, individuals with *a mutation* in the NBN gene have a moderate risk of breast cancer (up to a 30% risk). Men with mutations in the *NBN* gene are thought to have an increased risk for prostate cancer. Although NBN mutations have been reported in patients with other types of cancer, such as ovarian cancer, more research is needed to determine the exact associated cancer types and possible risks.

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

When an individual has one copy of the NBN gene mutation they have an increased risk for cancers as outlined above. Because everyone has two copies of the gene for NBN, this means that a parent who carries an NBN 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 NBN mutations, one inherited from their mother, and one inherited from their father. If a person has two NBN mutations they have a condition known as Nijmegen Breakage Syndrome (NBS). NBS is a rare inherited disorder that can cause an increased risk for childhood cancers, infection, and intellectual disabilities

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

***Genetic Counseling Service***
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Bernardsville, NJ 07924

GENESCREEN

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