GRN Gene Information

Key Points

- You have a variant in the *GRN* gene.
- *GRN* variants have been associated with frontotemporal dementia (FTD), which can include movement problems like those seen in Parkinson's disease.
- You should talk about this result with your neurologist to understand what this means for you.

GRN

What is *GRN*?

GRN is a gene that all people have. A gene is an instruction for your body. When there is a variant in the *GRN* gene, it doesn't work well, causing problems related to a condition called *GRN*-FTD. Note that FTD stands for frontotemporal dementia, but not everyone will be diagnosed with this condition. People with *GRN* variants can have changes in how they act (behavior), trouble with language, and problems thinking.

Some people with *GRN* variants also have movement problems like those seen in Parkinson's disease. These symptoms can be different for each person.

What does this mean for me?

- Conditions caused by *GRN* variants can look like Parkinson's disease or other conditions.
- You should talk to your neurologist or a movement disorder specialist to understand how this result relates to you and your symptoms.
- Please refer to these website pdfs/links for more information:
    - https://medlineplus.gov/download/genetics/condition/grn-related-frontotemporal-lobardegeneration.pdf
    - https://www.passagebio.com/pipeline/frontotemporal-dementia-1/default.aspx

What does this result mean for my family?

- *GRN* variants are inherited, meaning they are passed down in families. *GRN* conditions happen when a person has one variant in the *GRN* gene, from one parent. This is called dominant inheritance.
- Your close family members (like your children, siblings, and parents) have a 50% (1 in 2) chance of having the same *GRN* variant. However, not everyone with a *GRN* variant will get symptoms. Sometimes it can remain "silent", meaning it does not cause any problems. Researchers are studying what other things influence whether the gene variant affects people.

- If both partners have *GRN* variants that they pass on, they can have a child with a more severe *GRN* condition caused by having two GRN variants.
- Close family members (like your children, siblings, and parents) may benefit from meeting with a genetic counselor to learn about their risks and genetic testing options.

What should I do next?

- Tell your neurologist about these results.
- Talk to your neurologist, movement disorder specialist, or a neurology genetic counselor if you have more questions or concerns.
- Consider sharing these results with your family members.
- Consider participating in additional studies to help researchers better understand the potential link between *GRN* variants and Parkinson's disease or its symptoms.

For additional information about Parkinson's disease genetics and research visit PDNexus.org

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