

Understanding Your *POLE* Carrier Genetic Test Result

INFORMATION FOR PATIENTS WITH ONE PATHOGENIC OR LIKELY PATHOGENIC VARIANT

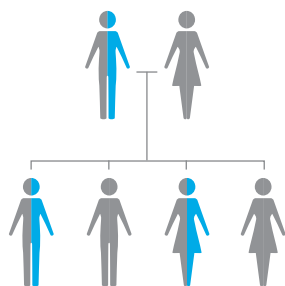
5 Things to know

1	Result	Your testing shows that you have a specific type of pathogenic or likely pathogenic (P/LP) variant in the <i>POLE</i> gene called a loss of function mutation.
2	Carrier	<p>People with one loss of function mutation in the <i>POLE</i> gene are carriers of <i>POLE</i> deficiency. People with two loss of function mutations in the <i>POLE</i> gene have <i>POLE</i> deficiency. <i>POLE</i> deficiency is a multisystem disorder characterized by growth problems, skeletal differences, distinct facial features, a deficiency of the immune system, developmental delay, and other medical concerns.</p> <p>Your result shows that you do <u>not</u> have <i>POLE</i> deficiency, but your family members may be at risk for it.</p>
3	Cancer risks	There is currently no evidence to suggest an increased cancer risk for carriers (people with only one loss of function <i>POLE</i> mutation) over that of the general population.
4	What you can do	Risk management decisions are very personal. It is important to discuss options with your healthcare provider and decide on a plan that works for you.
5	Family	Family members may be at risk - they can be tested for the P/LP <i>POLE</i> variant that was identified in you, as well as other P/LP variants in the <i>POLE</i> gene. It is recommended that you share this information with family members so they can learn more and discuss with their healthcare providers.

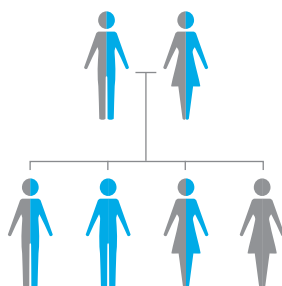
POLE in the Family

There is a 50/50 random chance to pass on the *POLE* loss of function mutation to each of your children. If your partner also happens to carry one *POLE* loss of function mutation, there is a 25% chance that you will both pass on the *POLE* mutation to your child (who will have *POLE* deficiency).

One carrier parent, one non-carrier parent



Two carrier parents



- Has two loss of function *POLE* mutations (*POLE* deficiency)
- Has one loss of function *POLE* mutation (carrier)
- No loss of function *POLE* mutations

RESOURCES

- National Society of Genetic Counselors [nsgc.org](https://www.nsgc.org)
- Canadian Association of Genetic Counsellors [cagc-accg.ca](https://www.cagc-accg.ca)

Please discuss this information with your healthcare provider. The cancer genetics field is continuously evolving, so updates related to your *POLE* result, medical recommendations, and/or potential treatments may be available over time. This information is not meant to replace a discussion with a healthcare provider, and should not be considered or interpreted as medical advice.