



We often like to say [cancer](#) is always genetic but not always hereditary. What we mean is that [cancer](#) develops as a result of accumulated DNA damage, also called variants. Most of the time those variants are acquired from a variety of different sources over the course of a lifetime like environmental exposures, lifestyle habits, occupational hazards, or certain types of viruses. Sometimes these variants happen by random chance. Acquired variants are also called somatic variants, or somatic mutations.

[Cancer](#) occurs because these DNA variants cause a cell to quickly grow and divide without normal cellular regulation while continuing to accumulate more and more genetic variants. At some point, this leads to formation of [cancer](#) (or a tumor). Because tumor cells have acquired so many genetic variants along the way, the sequence of DNA isolated from a person's tumor can be **very different** from that individual's inherited DNA.

In some cases, testing for the specific variants that are driving a [cancer](#) can help to determine what treatments would be best to use. More and more therapies are being developed that can more accurately target these variants that are specific to one [cancer](#), which often results in better outcomes with fewer side effects.

Click [here](#) to learn more about scheduling a genetic counseling appointment for questions about pediatric or adult genetic conditions.

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