

## What you need to know

# APC Gene

**What does it mean to have an APC pathogenic variant?**

Having an APC pathogenic variant, also known as a mutation, means a person has a version of the APC gene that may cause the following cancer predisposition conditions:

- Familial Adenomatous Polyposis (FAP) syndrome (also known as Classic FAP)
- Attenuated Familial Adenomatous Polyposis (AFAP) syndrome

**What is my risk for cancer if I have an APC pathogenic variant?**

If you have an APC pathogenic variant, you have a greater risk of developing gastrointestinal polyps (pre-cancerous growths also known as adenomas), as well as certain types of cancer.

**What is the difference between FAP and AFAP syndrome?*****Classic FAP:***

- All individuals with FAP are at an increased risk to develop many precancerous polyps (100s-1000s of polyps).
- Children with FAP are at risk for developing intestinal polyps and certain cancers.
- There is a nearly 100% chance of developing colon cancer by age 50 without regular screening and/or surgery.
  - This is based on individuals who did not have regular screening and/or other treatments such as preventative surgery. There are data suggesting that **people with an APC pathogenic variant can significantly decrease their risk of developing cancer by careful medical and surgical follow-up.**
- Individuals with FAP may also develop cancer of the small bowel, thyroid, liver, central nervous system (brain), bile ducts, and stomach.
- Non-cancerous features of FAP may include: polyps of the stomach, polyps of the small intestine, bony growths (typically on the jaw or skull), dental problems, unusual pigment in the eye (CHRPE), and soft tissue tumors.

***Attenuated FAP (AFAP):***

- The features of AFAP are similar to those seen in classic FAP; however, they are typically milder and begin at a later age.
- Individuals with AFAP usually have between 10 and 100 precancerous colon polyps.
- Without intervention, there is a 70% lifetime chance of colon cancer, which is usually diagnosed after the age of 50.

**If I have an APC pathogenic variant, what is the chance my family members will have it?**

There is a 50% chance that a person with a pathogenic variant will pass it on to each of their children. In most cases, siblings of a person with a pathogenic variant each have a 50% chance to have the pathogenic variant. Additionally, other family members are at risk to have the pathogenic variant.

