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PATIENT & CAREGIVER EDUCATION

# About Mutations in the ATM Gene

This information explains how having a mutation in the *ATM* gene may affect you and your family.

In this resource, the word “family” means family members related to you by blood. They are not related to you through marriage or adoption.

Your *ATM* gene normally helps prevent cancers. A mutation in this gene causes it to stop working like it should. This increases your risk for certain types of cancers.

## What is my cancer risk if I have an *ATM* mutation?

An *ATM* mutation increases your risk for breast cancer. It can also increase your risk for pancreatic cancer, but this is less common.

An *ATM* mutation may also increase your risk for ovarian and prostate cancer, but more research is needed for us to better understand these risks. Your genetic counselor will give you more information about what we know so far and what it means for you.

While an *ATM* mutation means you have a somewhat higher risk of developing cancer than the average person, it may not fully explain why your blood relatives has cancer.

As we learn more about these mutations, we may learn they increase the risk for other types of cancers. Your genetic counselor will give you more information about your cancer risk if you have a mutation.

For more information, read *Hereditary Breast Cancer* -

## What can I do about my cancer risk if I have an *ATM* mutation?

If you have a mutation, your genetic counselor will review your results and your personal and family history of cancer and give you cancer screening recommendations.

They may recommend you start having cancer screenings at a younger age, have them more often than most people, or get specialized screenings to help find cancer as early as possible.

Some examples of these cancer screenings include having breast magnetic resonance imaging (MRI) scans and mammograms (x-rays of your breast).

Your genetic counselor will also talk with you about whether there are any other screening or prevention options that may be right for you.

## What happens if I don't have an *ATM* mutation?

If you don't have a mutation, your genetic counselor will review your personal and family history and talk with you about the general cancer screening guidelines you should follow.

## What does an *ATM* mutation mean for my blood relatives?

If you have a mutation, your biological parents, siblings, and children each have a 50% chance of having the same mutation. This means there's an equal chance they will or won't have the mutation. Your distant family members may also be at risk for having the same mutation.

Males and females have an equal chance of passing down a mutation in their

family. You only need to inherit a mutation from one parent to have an increased risk for cancer.

Your genetic counselor will review your family history and talk with you about whether they recommend genetic testing for your blood relatives.

## What does this mean for family planning?

If you have an *ATM* mutation and plan to have children, there are options to prevent your children from inheriting the mutation. You may want to consider discussing these options especially if both you and your partner have an *ATM* mutation.

If you both have a mutation in the *ATM* gene, which is rare, there's a chance your child could be born with a serious condition called ataxia-telangiectasia (uh-TAK-see-uh-teh-LAN-jee-ek-TAY-zhuh), or AT. AT is a rare disorder that affects the nervous system, immune system, and other body systems. If you already have children, it's unlikely they have AT since this is usually diagnosed early in life. For more information about genetic testing and family planning, talk with your genetic counselor.

## Contact Information

If you have any questions or concerns, talk with a genetic counselor in the Clinical Genetics Service. You can reach them Monday through Friday from 9:00 AM to 5:00 PM at 646-888-4050.

For more resources, visit [www.mskcc.org/pe](http://www.mskcc.org/pe) to search our virtual library.

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