About Clonal Hematopoiesis (CH)

This information will help you learn about clonal hematopoiesis (hee-MA-toh-poy-EE-sis), also known as CH. It also explains Memorial Sloan Kettering (MSK)’s CH clinic.

What is CH?

Your blood cells are made in your bone marrow (the soft tissue in the center of your bones) by hematopoietic (hee-MA-toh-poy-EH-tik) stem cells.

CH is when a hematopoietic stem cell starts making blood cells that all have the same change in their DNA. This is called a genetic mutation. The blood cells with the genetic mutation are different than the rest of your blood cells.

How do I know if I have CH?

There are no warning signs of developing CH. Most people with CH never have any symptoms. Most people find out they have CH accidently if they have a blood test to look for other genetic mutations.

What are the risks of CH?

CH can lead to blood cancer, but most people with CH never get blood cancer. Less than 1% of people (no more than 1 out of every 100 people) with CH get blood cancer each year.

People with CH also have a higher risk of having cardiovascular (heart) disease, such as heart attacks. People with CH have close to twice the risk of having heart disease compared to people without CH. This is about the same risk of having heart disease as people with diabetes.
What causes CH?

There is no single thing that causes CH. Some things can increase your risk of developing CH. These things include:

- Getting older
- Being male
- Being white
- Smoking

Radiation therapy and some types of chemotherapy may also be linked to CH, but more research is needed.

Should I be tested for CH?

Most people shouldn’t be tested for CH. This is because:

- There aren’t currently any treatments for CH.
- Most people with CH have a low risk of developing a blood cancer.
- We’re still learning about the relationship between heart disease and CH.

Your doctor will tell you if you should be tested for CH.

What should I do if I have CH?

There is no treatment for CH, but you should tell your doctor if you’ve been diagnosed with CH. They will monitor you for any risks related to CH. You can also make an appointment with MSK’s CH clinic.

If you’re at a higher risk for blood cancers (such as if you have low blood counts or certain genetic mutations), you may need to have tests to check for blood cancers and other blood disorders. Less than 5% of people with CH (fewer than 5 out of every 100) need to do this. If you do, your doctor will give you more information. These tests may include:

- Regular blood tests, such as a complete blood count (CBC) every 6 to 12 months.
- A bone marrow biopsy. For more information about bone marrow biopsies, read the resource Bone Marrow Aspiration and Biopsy
If you have CH, it’s important to follow guidelines to lower your risk of heart disease. Talk with your primary care doctor or cardiologist (heart doctor) about ways to do this, including:

- Keeping track of your blood pressure and controlling it if it’s high.
- Keeping track of your cholesterol and controlling it if it’s high.
- Following a healthy lifestyle.
- Quitting smoking, if you smoke.

Some people may need other heart tests to check for heart disease, such as a computed tomography (CT) scan of their chest. If you do, your doctor will give you more information.

**If I have CH, what are the risks to my children?**

CH can’t be passed to your children. They aren’t at a higher risk of getting it.

**What is MSK’s CH clinic?**

MSK’s CH clinic team is made up of nurses and CH specialists, including hematologists (doctors who specialize in blood diseases) and cardiologists. If you would like more information about MSK’s CH clinic, or to make an appointment, talk with a member of your healthcare team.

In the CH clinic:

- If you’re at a higher risk for blood cancers, you will have tests (such as blood tests or a bone marrow biopsy) to check for blood cancers and other blood disorders.
- You will meet with a cardiologist to be screened for heart disease. This includes blood tests and, in some cases, additional heart testing.

If you’re diagnosed with a blood cancer, your CH clinic team will work with blood cancer specialists at MSK to create a treatment plan.
If you have any questions or concerns, talk with a member of your healthcare team. You can reach them Monday through Friday from 9:00 AM to 5:00 PM at ____________________. After 5:00 PM, during the weekend, and on holidays, please call____________________. If there’s no number listed, or you’re not sure, call 212-639-2000.