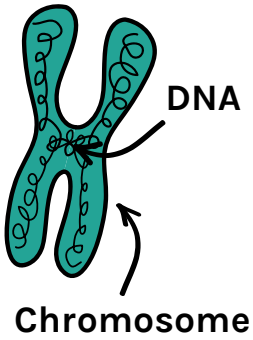
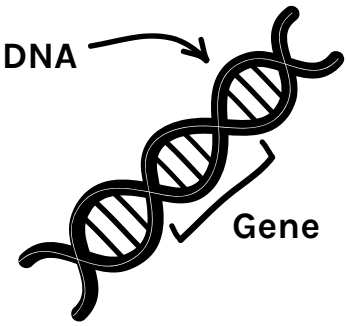
Leukaemia Care
YOUR Blood Cancer Charity

Acute myeloid leukaemia (AML)

Genetics in acute myeloid leukaemia (AML)

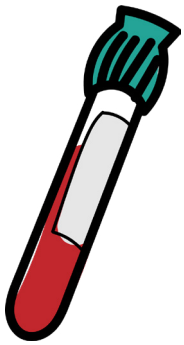
People with acute myeloid leukaemia (AML) have **genetic changes** in their leukaemia cells. These genetic changes stop the cells working as they should, leading to **abnormal cell growth** and cancer.





Genetic changes can affect either whole chromosomes (long, coiled strands of DNA containing lots of genes) or individual genes. Changes can affect more than one gene.

To find out what genetic changes you have in your leukaemia cells, your haematologist should send your blood or bone marrow samples for **testing**. They will talk to you about what your results mean.



Knowing the genetic changes you have can help your haematology team work out the **best treatments** for you. It can also help them predict how well your AML is likely to **respond** to treatment.

Most of the genetic changes in AML happen by chance

These genetic changes happen during your **lifetime**. You do not inherit them from your parents, and you cannot pass them on to any children. They are not due to anything you have done.

Your haematology team will tell you about any important genetic changes they find. They will explain what it means for your diagnosis, treatment and outcome (prognosis).

Less commonly, some genetic changes in AML are inherited

These changes can be passed down from **parent to child**. AML due to inherited genetic changes is called **familial AML**.

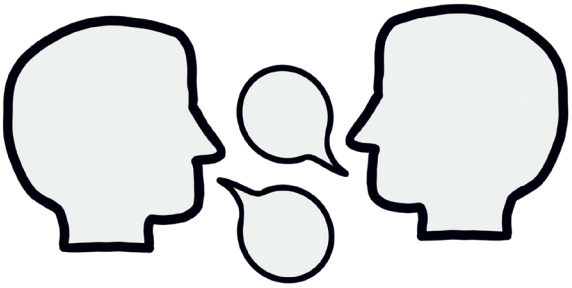
People with familial AML do not inherit AML directly. They inherit a changed gene that can increase their chance of getting it in the future. It does not mean they will definitely get AML. It means they may develop AML later in life.

Inherited genetic changes can affect a number of different genes. Knowing which gene is affected can help with planning treatment.

If you have an inherited genetic change

If your tests show you have an inherited genetic change, other close members of your family might also have it. This means they may have a higher chance of getting AML than people without the genetic change. It does not mean they will definitely get AML.

- You should be offered genetic counselling to learn more about what this means for you and your family.
- You may be advised to tell close family members such as parents, adult children, brothers and sisters.
- They should also be offered genetic counselling to help them decide if they want to be tested for the genetic change.

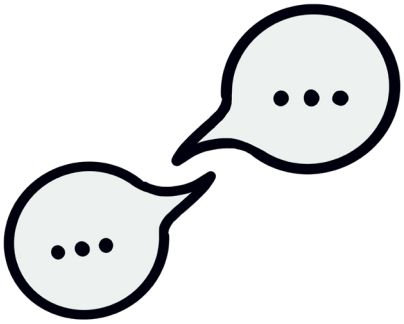


Finding out you have an inherited genetic change can be a **shock**. You might experience a number of **emotions**. If you need support, please contact us on our freephone helpline on **08088 010 444** or by emailing **support@leukaemiacare.org.uk**. Alternatively, you can scan the QR to access our support services.

For more information about AML, you can download a digital copy or order a hard copy of our free dedicated booklets by scanning this QR code.

Want to talk?

Call our freephone helpline on **08088 010 444**
(free from landlines and all major mobile networks)
Message us on WhatsApp at **07500068065**
www.leukaemiacare.org.uk
support@leukaemiacare.org.uk



Financial support was provided as an Independent Medical Education Grant from Pfizer Limited. In accordance with our policies, Pfizer had no editorial input into the content.

Leukaemia Care is registered as a charity in England and Wales (no. 1183890) and Scotland (no. SC049802). Company number: 11911752 (England and Wales). Registered office address: One Birch Court, Blackpole East, Worcester, WR3 8SG