About acute myeloid leukaemia (AML)

Acute myeloid leukaemia (AML) is a fast-growing blood cancer. It develops when myeloid stem cells in your bone marrow divide and mature uncontrollably. Find out about the signs and symptoms of AML, tests you might have, and what to expect.

Summary

- AML is a fast-growing type of blood cancer. It starts in blood-forming cells in your bone marrow called myeloid stem cells.
- We do not know the exact cause of AML, but it is not because of anything you have or have not done.
- The signs and symptoms of AML vary from person to person. You may:
    - Feel exhausted for no reason (fatigue)
    - Have infections that last a long time or keep coming back
    - Feel tired, dizzy or short of breath
    - Get unexpected bruising or bleeding like nosebleeds, bleeding gums, blood spots or rashes
    - Have a high temperature (fever)
    - Have bone pain
    - Have tummy pain or fullness
- AML is diagnosed based on blood tests and bone marrow tests. Depending on your symptoms you might have further tests and scans.
- As with most cancers outcomes vary from person to person and depend on many different factors. Your haematology team are best placed to discuss what they expect for you because they know your individual circumstances.
- We have separate information about treatment for AML.

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What is AML?

AML is a fast-growing type of blood cancer. It starts in blood-forming cells in your bone marrow called myeloid stem cells.

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If you have AML, these cells multiply too much. They divide and mature uncontrollably. This leads to an increase in the different types of white blood cells in your blood and bone marrow. As the leukaemia cells build up, they can fill up your bone marrow stopping it from making enough healthy red and white blood cells.

There are different subtypes of AML, which can affect what treatment you have. They are based on:

- The genetic changes in your leukaemia cells
- What your leukaemia cells look like under a microscope

Your haematology team should tell you what subtype of AML you have and what it means for you. Some of the more common subtypes include:

- Acute promyelocytic leukaemia (APL)
- Acute myelomonocytic leukaemia (AMML)
- Acute megakaryoblastic leukaemia (AMKL)
- Secondary acute myeloid leukaemia (secondary AML)

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Who gets AML?

AML is one of the most common types of leukaemia. Around 2,710 people are diagnosed with it each year in the UK.

AML can affect people of any age, but it is more common in people over 65.

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What causes AML?

We do not know the exact cause of AML. People with AML have genetic changes in their leukaemia cells that stop the cells from working properly. We do not know why these genetic changes occur. These changes are not because of anything you have or have not done. But some factors can increase your chance of getting AML, which include:

- Your age – AML is more common in people over 65
- If you have previously had chemotherapy, radiotherapy or another type of blood cancer

- Exposure to certain chemicals or radiation
- Smoking

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Signs and symptoms of AML

The signs and symptoms of AML vary from person to person. They also depend on how many leukaemia cells you have, and how much your normal blood cell production has been affected.

Signs and symptoms include:

- Feeling exhausted for no reason (fatigue)
- Infections that last a long time or keep coming back
- Feeling tired, breathless or dizzy due to a low red blood cell count (anaemia)
- Bruising or bleeding easily (for example nosebleeds or bleeding gums when you brush your teeth)
- A high temperature (fever)
- Bone pain
- Tummy pain, bloating or discomfort due to a swollen spleen or liver (you may particularly notice this feeling under your ribs on the left-hand side)
- A feeling of fullness after eating, again due to a swollen spleen

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Diagnosis of AML

Your haematology team will diagnose AML based on blood tests and bone marrow tests.

They will send your blood and bone marrow samples for specialised tests in the lab. Depending on your symptoms you might have further tests and scans.

It can be difficult waiting for test results. Our Helpline is here for you if you need support.

Blood tests

You will have blood tests to check the number of white blood cells, red blood cells and platelets in your blood.

If you have AML the blood test will usually show:

- A low level of healthy white blood cells, red blood cells and platelets
- A higher number of immature white blood cells

Bone marrow tests

You will usually also need a bone marrow test to help your haematology team make an accurate diagnosis.

The test involves taking a sample of your bone marrow, usually from the back of your pelvis, under local anaesthetic. They send the sample to the lab for testing.

Lab tests

Your team will send your samples for specialised tests in the lab.

- They look at the samples under a microscope to check for abnormal cells.
- They do tests to find out what proteins are on the surface of your cells.
- They also do tests to look for genetic changes in your cells.

We have separate information about the genetic changes in AML.

Other tests

You might have an X-ray, ECG, CT scan or other scans to help work out which treatment options are best for you.

Depending on your symptoms, you may have a lumbar puncture to find out if there are any leukaemia cells in the fluid around your brain and spinal cord.

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Outcomes of AML

As with most cancers, outcomes vary from person to person and depend on many different factors. These include:

- Your age
- Your AML subtype
- The genetic changes in your leukaemia cells
- Your overall fitness

- Your blood cell counts
- If you have any leukaemia cells left after treatment

Your haematology team are best placed to discuss what they expect for you because they know your individual circumstances.

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Need support?

You are not alone. We're here for you whether you have a diagnosis yourself or know someone who has. If you'd like advice, support, or a listening ear, call our freephone helpline on 08088 010 444 or send a WhatsApp message to 07500 068 065.

Helpline and WhatsApp →

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