NOVARTIS

Acute Myeloid Leukemia (AML)

Understanding acute myeloid leukemia (AML)

AML is an aggressive cancer of the blood and bone marrow.[1] AML prevents white blood cells from maturing, causing an accumulation of immature “blasts” (leukemic cells) which do not allow room for normal, healthy cells to grow.1 These leukemic cells can spread outside of the bloodstream and into other areas of the body, such as the central nervous system, skin and gums.[1] As the leukemia spreads, infection, anemia or easy bleeding may occur due to a diminished number of healthy blood cells.[1] In some cases, early signs of AML are vague and may be confused with those of other common diseases.[1]

AML is the most common form of acute leukemia in adults and is also responsible for the largest number of leukemia annual deaths.[2] AML gets worse quickly if it is not treated; therefore it is important to begin treatment as soon as possible.[1] Many patients may feel overwhelmed as they get rushed into therapy, leaving little time to prepare (i.e. understand the diagnosis, notify work, etc.).[3]

Mutations in AML

Mutations in specific genes are found in many cases of AML and can be identified using genetic tests.[4] The results of the tests can be used for diagnosis and patient risk stratification.[4] While some mutations are associated with favorable outcomes, others are more aggressive and are associated with a poor prognosis.[4] The most common mutations found in AML include FLT3, NPM1, DNMT3A, NRAS, CEBRA, TET2, WT1, IDH2, IDH1 and KIT.[5] These genetic mutations affect the growth and development of cells, leading to cancerous cell formation.

Patient journey

An AML diagnosis is made based on:[6]

- Medical history and physical examination
- Complete blood count
- A sample of cells taken from the bone marrow (bone marrow biopsy) to look at the types of cells present and for any signs of leukemia
- Genetic tests

Once diagnosis is confirmed, a treatment regimen will be started to reduce the number of cancer cells.[6] Treatment should be started as soon as possible.[6] Due to intense treatment resulting in a compromised immune system, it is recommended to stay in hospital for the first few weeks.[7] Bone marrow and blood samples are taken regularly to determine if the treatment is working or if more needs to be given.[2] If the cancer returns and the patient relapses, several options are available, including restarting treatment or taking part in a clinical trial.[2]

Prognosis and survival rate may depend on numerous factors including age, location of disease, recurrence

status, etc.[1]

Questions to ask your doctor

- What type of AML do I have?
- What will happen next?
- What tests will I have done?
- How and when will I get the results?
- What is my prognosis?
- What are the risks associated with my treatment?
- Will I need a stem cell transplant?
- If my disease stops responding to treatment, what are my options?
- Should I consider clinical trials?
- As a caregiver, how can I provide support?
- Where can I find AML resources and support?

Additional resources

- AML Interactive Guide
- AML Infographic

References

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7. Cancer.net. Leukemia - Acute Myeloid - AML: Treatment Options. http://www.cancer.net/cancer-types/leukemia-acute-myeloid-aml/treatment-.... Accessed January 20, 2017.
