ACUTE LYMPHOBLASTIC LEUKEMIA (ALL)

Subtypes and Genomic Alterations

What are ALL subtypes?

Based on the type of white blood cell (lymphocyte) affected, ALL is classified as either:

B-cell ALL or **T-cell ALL**

Additional subtypes are based on genetic abnormalities in the leukemia cells. The most common subtypes in adults and children include:

ADULTS

BCR/ABL1 (Philadelphia-positive ALL):
Formed by the fusion of *BCR* and *ABL1* genes

CHILDREN

ETV6/RUNX1:
Formed by the fusion of *ETV6* and *RUNX1* genes

High hyperdiploidy:
The leukemia cells have extra chromosomes

Why are ALL subtypes important?

Determining your ALL subtype will help your healthcare provider select more targeted treatment options.

Identifying the genetic changes present in leukemia cells will help to further understand the disease.

What tests may I need?

Your blood and bone marrow samples will be tested for specific genetic changes. Tests could involve:

Karyotyping: Checks for changes in the structure or number of chromosomes

Fluorescence in situ hybridization (FISH): Checks for abnormalities in chromosomes and genes, some of which are too small to identify with karyotyping

Your healthcare provider can advise you on which tests are right for you.

Normally, a sample of blood or bone marrow will be taken to carry out these tests; the type of test being performed will determine which sample is needed.

If you could benefit from genetic testing, your healthcare provider will refer you to a clinic or hospital.

Once you have received your results, your healthcare provider will be able to answer any questions you may have.

What questions should I ask my healthcare provider?

- Which type of ALL do I have and what does this mean?
- What factors are likely to affect my prognosis?
- What type of testing might I undergo?

My ALL My Story

Name:

Country:

Subtype:

My ALL Story

Resources: KNOW ALL know-alleukemia.com • **American Cancer Society** Acute lymphocytic leukemia (ALL) subtypes and prognostic factors. Updated Oct 2018. Accessed Aug 2022 • **Cancer Research UK** Types Updated May 2021. Accessed Aug 2022 • **Leukemia & Lymphoma Society** ALL subtypes Accessed Aug 2022.

Supported by: AMGEN, Bristol Myers Squibb, Jazz Pharmaceuticals, Kite Pharma

ALAN Acute Leukemia Advocates Network

Know ALL is brought to you by Scientific Education Support (SES), in collaboration with Acute Leukemia Advocates Network (ALAN). Thank you to the funders of Know ALL, which can be found on know-alleukemia.com. All content is developed independently by SES in collaboration with an expert ambassador group; funders are allowed no influence on the content of Know ALL.