

# Acute Lymphoblastic Leukemia (ALL)

ALL, one of the four main types of leukemia, is a blood cancer that starts in bone marrow and moves into the blood quickly. ALL is an aggressive type of leukemia; without treatment, most patients with acute leukemia would live only a few months.<sup>1</sup>



## FACTS AND FIGURES

- Estimated that by 2020, nearly **412,000** people worldwide will be diagnosed with some type of leukemia.<sup>2</sup>
- ALL accounts for **approximately 12%** of all leukemia cases worldwide.<sup>3</sup>
- For adult patients with relapsed or refractory ALL, the five-year overall survival rate is **less than 10%**.<sup>4,5</sup>



## RISK FACTORS

- The risk for developing ALL is highest in children younger than 5 years of age. Overall, about **4 of every 10 cases** of ALL are in adults.<sup>1</sup>
- Possible risk factors for ALL include:<sup>1</sup>
  - ◇ Being male
  - ◇ Being older than 70<sup>6</sup>
  - ◇ Being Caucasian
  - ◇ Previously treated with chemotherapy or radiation therapy
  - ◇ High dose radiation exposure (e.g., survivor of an atomic bomb blast or nuclear reactor accident)
  - ◇ Having certain genetic disorders, such as Down syndrome



## DIAGNOSIS

- A diagnosis of ALL is usually made through blood and bone marrow tests, based on information on blood cell counts, blood chemistry studies and bone marrow sampling.<sup>1</sup>
- Patients with ALL often have several non-specific symptoms, including **weight loss, fever, night sweats, fatigue and loss of appetite**.<sup>1</sup>



## PROGNOSIS & TREATMENT

- Prognosis for ALL remains poor. While about 80-90% of adult patients will have complete remissions at some point during treatment, about **half will relapse**, so the overall cure rate is around 40%.<sup>1</sup>
- Long-term chemotherapy and various combination chemotherapy regimens are widely used to treat first line ALL. Additional treatment options include targeted therapies, T-cell therapies and tyrosine kinase inhibitors (TKIs).<sup>1,5</sup>
- Because leukemia cells spread widely throughout the bone marrow and to many other organs, it is not possible to cure ALL with surgery.<sup>1</sup>
- For patients who do not respond to chemotherapy and have an advanced case of ALL, **stem cell transplant may be the best chance for a cure**.<sup>7</sup>
  - ◊ Additional therapeutic options are needed to help patients achieve hematologic remission, which may help them become eligible for transplant.<sup>7</sup>

## REFERENCES

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