

83.2. Leukemia: Acute lymphoblastic leukemia in children

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Emerging Prognostic Factors for Clinical Care

Factor	Definition	Clinical significance	Level of evidence
NOTCH activation	t(7;9), <i>NOTCH</i> or <i>FBXW7</i> mutations	Targeted therapy	III
MRD	Next-generation sequencing	More sensitive	II

Risk Assessment Models

Many classification models are in use for risk stratification of childhood ALL. Although the exact details may vary somewhat among the major cooperative groups worldwide, nearly all use age, WBCs, immunophenotype, and CNS status at diagnosis, as well as blast cytogenetics and molecular genetics and early response to therapy, to define risk groups with a very favorable prognosis, for whom future clinical trials may focus on lowering the burden of therapy, as well as very high-risk groups, for whom HCST and/or novel therapy are indicated to improve survival. As overall outcome improves, it is anticipated that some prognostic factors may lose significance while targeted therapy for biological subgroups such as Ph-like ALL is evolving.

Recommendations for Clinical Trial Stratification

The authors have not provided any recommendations for clinical trial stratification at this time.

Bibliography