blood

Continuing Medical Education (CME) Questions

Risk-stratified therapy for infant ALL

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1. **Your patient is a 5-month-old male infant with newly diagnosed acute lymphoblastic leukemia (ALL) with rearrangement of the KMT2A gene (KMT2A-r). According to findings of the Japanese Pediatric Leukemia/Lymphoma Study Group (JPLSG) trial MLL-10 by Tomizawa and colleagues, which of the following statements about the outcomes of infants with higher-risk (HR) KMT2A-r ALL and lower-risk (LR) KMT2A-g ALL is correct?**

   ☐ Three-year event-free survival (EFS) was 66.2% ± 5.6% for KMT2A-r ALL (intermediate risk [IR] plus HR); 93.3% ± 6.4% for LR KMT2A-g ALL; 94.4% ± 5.4% for IR KMT2A-g ALL; and 56.6% ± 6.8% for HR KMT2A-g ALL

   ☐ For HR patients, 3-year overall survival (OS) was 49%; 5-year OS was 29%

   ☐ Chemotherapy for IR/HR patients appeared to be limited by significant toxicities and early deaths

   ☐ Of HR cases achieving complete remission (CR), 47% received hematopoietic stem cell transplantation (HSCT) in first complete response, and 27% are alive in CR

2. **According to the findings of the JPLSG trial MLL-10 by Tomizawa and colleagues, which of the following statements about the impact of minimal residual disease (MRD) and other prognostic factors on the outcomes of infants with KMT2A-r ALL and KMT2A-g ALL is correct?**

   ☐ Infants with ALL were stratified into 3 risk groups only, according to KMT2A status and age

   ☐ Male sex was significantly associated with poor prognosis

   ☐ In multivariable analysis, MRD ≥ 0.01% at the end of early consolidation was significantly associated with poor prognosis

   ☐ Three-year and 5-year EFS rates of patients with positive MRD were significantly worse than those of patients with negative MRD only at early time points

3. **According to findings of the JPLSG trial MLL-10 by Tomizawa and colleagues, which of the following statements about clinical implications of the outcomes of infants with KMT2A-r ALL and KMT2A-g ALL is correct?**

   ☐ The findings supported conventional therapeutic approaches, including HSCT, in the conventional HR group and infants with residual MRD

   ☐ Novel purine nucleoside analogs, epigenetic modifiers, BCL-2 inhibitors, menin inhibitors, and immunotherapies are novel therapeutics expected to be active against infant KMT2A-r ALL

   ☐ Outcomes in the MLL-10 trial were similar to those seen in previous Japanese infant ALL trials

   ☐ MLL-10 had longer follow-up and larger sample size than the Interfant-06 study