

SINTOMA 2026

Flash Clinical Cases

Acute Lymphoblastic Leukemia

Day 2 · Friday May 15, 2026

B-ALL · Ph+ ALL · Ph-like ALL · T-ALL · ETP-ALL

5 Cases · 3–5 min discussion each

 PATIENT

- 34F, Ph+ B-ALL, newly diagnosed
- Petechiae, fatigue; ECOG PS 1
- Planning future pregnancy; 10/10 MUD identified

 DIAGNOSTICS

- BCR-ABL1: e1a2 (p190); WBC $68 \times 10^9/L$
- IKZF1 deletion, PAX5 deletion
- Karyotype: 46,XX,t(9;22)[20/20]; CSF negative

 PRIOR THERAPY

- Treatment-naïve
- Fertility consultation completed
- Discussed with patient: dasatinib + reduced-intensity chemo vs. dasatinib + intensive HCVAD

 CLINICAL DILEMMA

34-year-old with IKZF1-deleted Ph+ ALL. Dasatinib is the TKI backbone. How intensive should the chemotherapy be — and does IKZF1 deletion mandate allo-SCT in CR1?

 MANAGEMENT OPTIONS — no single correct answer

- Dasatinib + reduced-intensity chemo (HyperCVAD-lite) — proven
- Dasatinib + intensive HCVAD — IKZF1 deletion warrants full intensification
- Dasatinib + blinatumomab (no chemo) — chemo-free backbone
- Dasatinib + steroids → CMR → MUD transplant — minimize chemo; MRD-guided SCT
- MRD-adaptive: dasatinib + reduced chemo; defer SCT if CMR sustained at 6 months

PATIENT

- 38M, adult B-ALL (Ph-negative), CR1 after HCVAD
- MRD positive by NGS: 0.08% (10^{-3}) after induction + 2 consolidations
- ECOG PS 0; MSD available (sister, 10/10 HLA); transplant planned

DIAGNOSTICS

- Pre-B ALL: CD19+, CD22+, CD10+; Ph-negative; no KMT2A
- MRD by NGS (IGH): 0.08% after induction + 2 consolidation cycles
- Standard-risk cytogenetics; no IKZF1 deletion

PRIOR THERAPY

- Induction: HCVAD cycle 1 → CR1
- Consolidation × 2 cycles → MRD positive (0.08%)
- MSD available; SCT planned; transplant team requesting MRD-negative status

CLINICAL DILEMMA

38M in MRD-positive CR1 after 3 cycles of HCVAD. MSD available. Transplant team prefers MRD-negative pre-SCT. Should blinatumomab be used to deepen MRD before transplant — and does MRD negativity before SCT meaningfully change outcomes?

MANAGEMENT OPTIONS — no single correct answer

- A. Blinatumomab × 1–2 cycles → MRD-negative → SCT** — MRD clearance pre-SCT improves post-transplant outcomes
- B. Proceed to SCT with MRD-positive** — 0.08% is low; SCT with GVL may clear residual disease
- C. Additional HCVAD consolidation × 1–2 cycles** — more chemo before blinatumomab; may achieve MRD negativity
- D. Blinatumomab × 2 cycles then reassess** — if MRD converts: SCT; if persistent: re-evaluate
- E. Inotuzumab ozogamicin × 1 cycle** — CD22+; potent MRD-clearing agent; VOD risk with SCT to follow

PATIENT

- 44F, relapsed B-ALL — CR2 after inotuzumab ozogamicin × 2 cycles
- MRD negative by flow; MUD 10/10 available
- Mild elevation ALT (1.8× ULN) post-inotuzumab; no jaundice

DIAGNOSTICS

- Pre-B ALL: CD19+, CD22+, CD10+; Ph-negative
- MRD by flow: negative post-inotuzumab cycle 2
- ALT 1.8× ULN (new, post-inotuzumab); bilirubin normal
- Imaging: no ascites; no hepatomegaly beyond baseline

PRIOR THERAPY

- L1: HCVAD × 6 → CR1 × 14 months; relapse BM only
- L2: Inotuzumab × 2 cycles → CR2; MRD negative
- ALT 1.8× ULN post-inotuzumab; MUD 10/10 confirmed
- SCT planned; hepatology consulted

CLINICAL DILEMMA

CR2 MRD-negative after inotuzumab. MUD available. ALT mildly elevated post-inotuzumab. SOS/VOD risk with SCT is significantly increased after inotuzumab. How do you proceed — and what can you do to mitigate VOD risk?

MANAGEMENT OPTIONS — no single correct answer

- Proceed to SCT with defibrotide prophylaxis** — VOD prophylaxis; reduced-intensity conditioning; minimize busulfan
- Delay SCT 2–3 months** — allow liver recovery; recheck ALT; proceed when normalized
- Reduced-intensity conditioning (RIC)** — lower hepatotoxicity; less sinusoidal stress; VOD risk reduced
- Blinatumomab consolidation first** — delay SCT further; consolidate MRD negativity; allow liver recovery
- Proceed to SCT without prophylaxis** — ALT 1.8× is mild; VOD risk acceptable; don't delay curative SCT

PATIENT

- 9-year-old girl, B-ALL, 1st relapse (early — 18 months from diagnosis)
- Bone marrow relapse; no CNS involvement
- PS 0 at relapse; no significant comorbidities
- Matched sibling donor available (brother, 10/10)

DIAGNOSTICS

- B-ALL: CD19+, CD22+, CD10+; ETV6-RUNX1 negative
- High-risk relapse features: early BM relapse (<30 months from diagnosis)
- Post-blinatumomab cycle 1: CR2 achieved; MRD undetectable by flow
- Karyotype: normal; no high-risk cytogenetics

PRIOR THERAPY

- L1: COG AALL0434-based protocol → CR1
- Relapse: 18 months from diagnosis (early relapse — high-risk)
- Salvage: blinatumomab × 1 cycle → CR2, MRD undetectable
- Sibling donor (brother): 10/10 HLA match confirmed

CLINICAL DILEMMA

9-year-old in MRD-negative CR2 after blinatumomab. Early BM relapse defines high-risk disease. Matched sibling donor available. Does MRD-negative CR2 mandate allo-SCT — or can consolidation chemotherapy alone be sufficient in a child?

MANAGEMENT OPTIONS — no single correct answer

A. AlloSCT with matched sibling donor — early relapse + CR2: SCT is standard

B. Consolidation chemotherapy alone — MRD undetectable CR2

C. Additional blinatumomab cycles then reassess SCT — deepen and confirm MRD negativity before committing to SCT

D. CAR-T (tisagenlecleucel) then reassess SCT — CD19+ relapsed B-ALL

E. SCT with MSD vs. MUD risk stratification — MSD is available

PATIENT

- 8-month-old girl, B-ALL, newly diagnosed
- Hepatosplenomegaly, WBC $280 \times 10^9/L$
- CNS positive (CNS-3)
- No sibling donor; MUD search initiated

DIAGNOSTICS

- KMT2A::AFF1 (t(4;11)) — infant KMT2A-r ALL
- CD19+, CD22+, CD10 negative (pro-B)
- EFS with standard therapy: ~20–30% at 3 years
- MRD post-induction: positive (1.2% by flow)

PRIOR THERAPY

- Interfant-06 protocol initiated
- Post-induction MRD: 1.2% (high-risk MRD-positive)
- CNS-3 at diagnosis; IT chemotherapy ongoing
- MUD 9/10 identified; 10/10 search pending
- No prior blinatumomab

CLINICAL DILEMMA

8-month-old with KMT2A::AFF1 infant ALL, CNS-positive, MRD-positive after induction. EFS ~25% with standard therapy. Does MRD-positive disease mandate allo-SCT in CR1 — and can blinatumomab improve MRD before transplant?

MANAGEMENT OPTIONS — no single correct answer

- Allo-SCT in CR1 regardless of MRD** — KMT2A-r infant ALL: SCT is standard
- Blinatumomab to clear MRD first, then SCT** — improve transplant conditions
- Intensify Interfant chemotherapy** — MRD-positive
- Continue Interfant without SCT** — MRD declining
- Menin inhibitor + chemotherapy (investigational)** — KMT2A-r: compelling menin inhibitor target