

Acute Lymphoblastic Leukaemia: Suspected ALL: the first 24–48 hours

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Lymphoblasts on the smear, cytopenias, bone pain, nodes or a mediastinal mass → CBC and smear, PT/aPTT/fibrinogen, chemistry with urate, phosphate, LDH; chest X-ray

EMERGENCIES NOW

Mass → airway, SVC, pericardium
before any sedation

TLS: WBC ≥100,000 or LDH ≥2×
ULN → rasburicase

Fever + neutropenia → antibiotics
now

Leukostasis, DIC, infection: AML module

CONFIRM AND CLASSIFY

Flow: TdT+, MPO–

B → CD19, CD79a, CD22

T → CD3, CD7

BCR::ABL1 within days; karyotype,
FISH

Mass + <20% marrow blasts = LBL

PLAN

Age, fitness, comorbidity

Ph+ → Algorithm 4

Ph– → Algorithm 2

LP with the first intrathecal dose

HLA-type patient and siblings; fertility

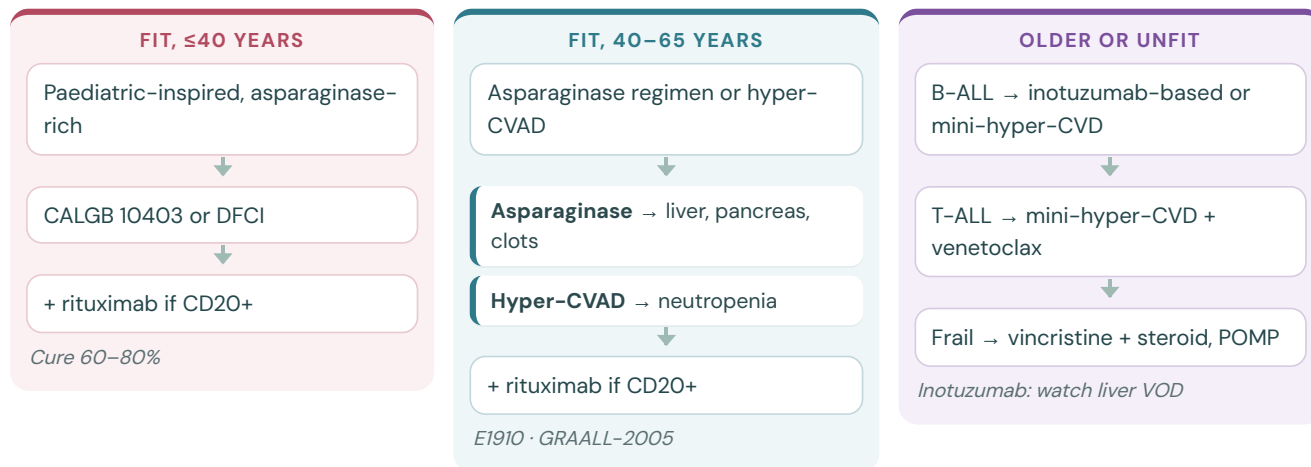
All: central line · echo and ECG · HBV/HCV/HSV/CMV · leukodepleted, irradiated products for transplant candidates · referral to a leukaemia centre.

Acute Lymphoblastic Leukaemia: Ph-negative ALL: induction by age, fitness and lineage

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Ph-negative → fitness and comorbidity; CD20, CD22, T markers; CNS grade

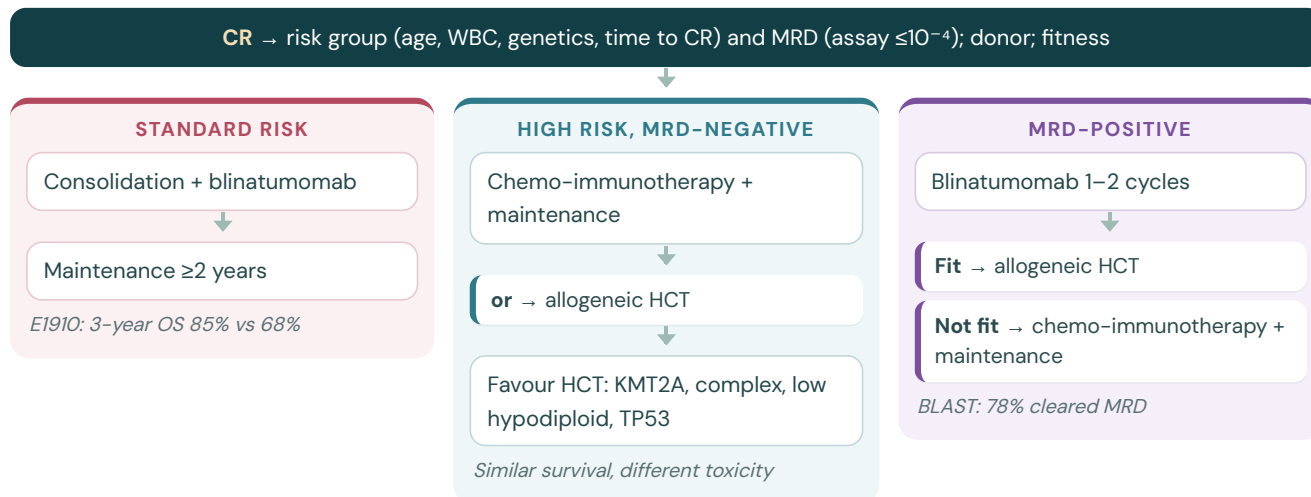


All: CNS prophylaxis from the first lumbar puncture · marrow and MRD at count recovery · no CR → Algorithm 5.

Acute Lymphoblastic Leukaemia: Ph-negative ALL in first remission

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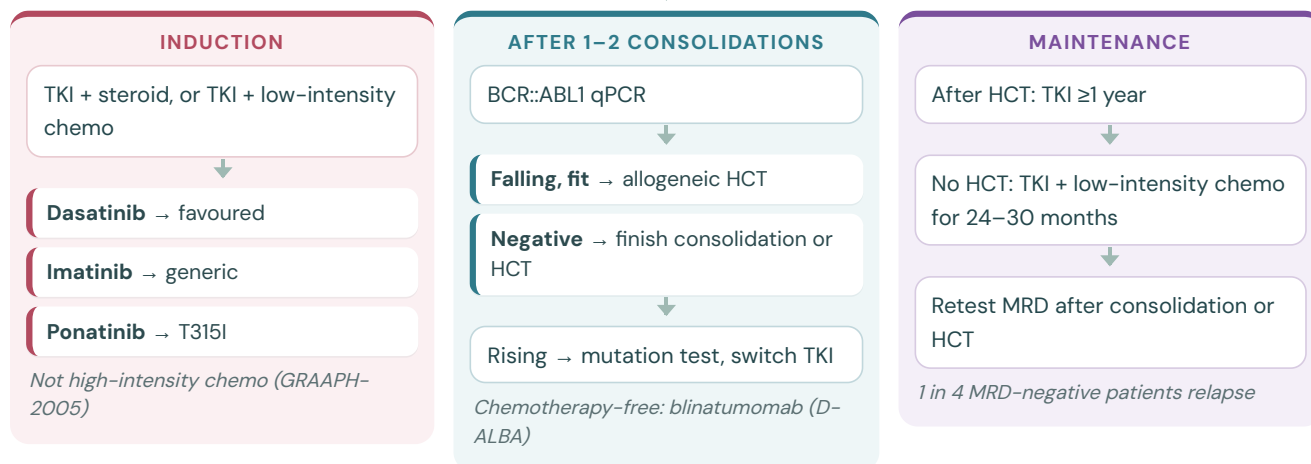
Maintenance: daily 6-mercaptopurine + weekly methotrexate $\pm$ vincristine-steroid pulses · TPMT/NUDT15 if counts fall · Pneumocystis prophylaxis · no live vaccines.

Acute Lymphoblastic Leukaemia: Ph-positive ALL

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BCR::ABL1 positive → TKI today; baseline BCR::ABL1 qPCR; heart, bleeding and effusion history guide TKI choice



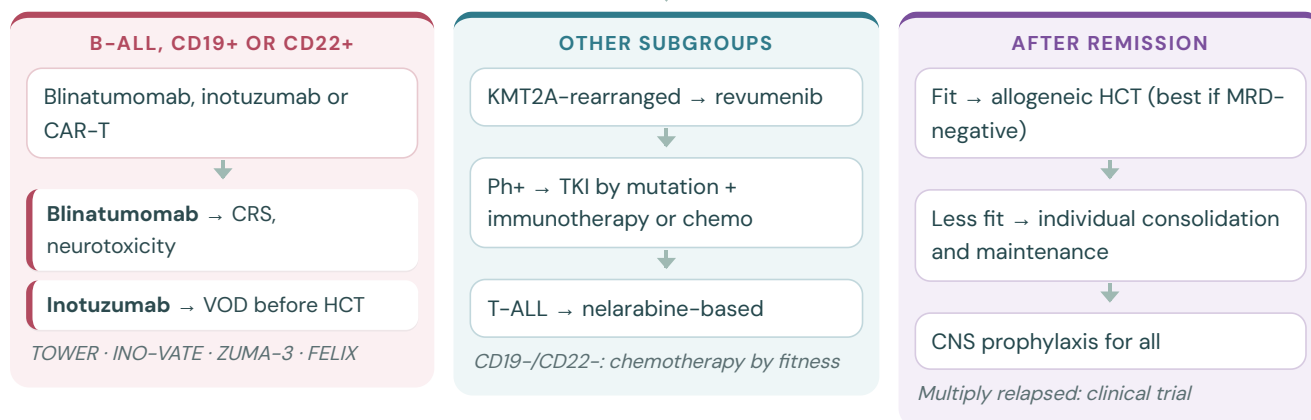
Frail: TKI + steroid · weak heart: avoid dasatinib, nilotinib and ponatinib where possible; no anthracycline if EF <30%.

Acute Lymphoblastic Leukaemia: Relapsed or refractory ALL

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Relapse or no CR → marrow flow (CD19, CD22, CD20), cytogenetics, KMT2A, BCR::ABL1 mutations; LP; testes; fitness; donor search now



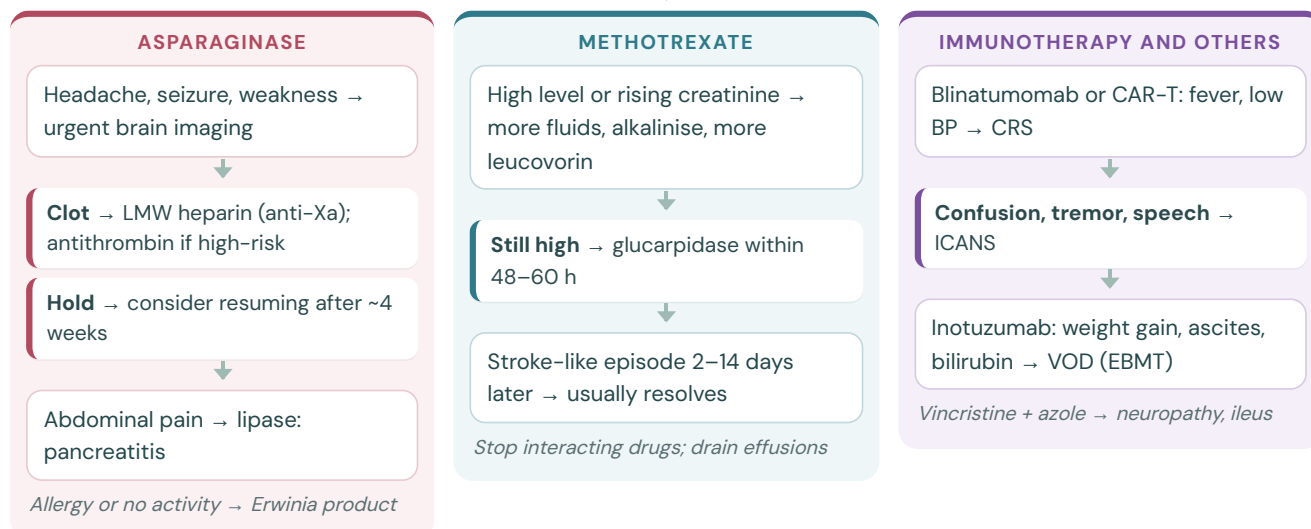
Isolated CNS relapse: intrathecal + cranial RT 24 Gy · residual testicular disease: RT 24 Gy to both testes · relapse ≥3 years: first regimen again.

Acute Lymphoblastic Leukaemia: Problems during treatment: what to do first

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New symptom on ALL treatment → which drug, which day, counts and clotting



Neutropenic fever, DIC, leukostasis: AML module emergencies section · CRS and ICANS grading: Aggressive B-cell Lymphomas module.

Acute Lymphoblastic Leukaemia: Follow-up and survivorship plan

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Help the treatment work

- Take every tablet exactly on time
- Maintenance tablets at home for 2–3 years
- Ask before any new medicine, even antacids or painkillers
- Keep the central line clean and dry
- Never miss a clinic or blood-test day

Red flags to report

- Fever of 38 °C or chills: come now
- Severe headache, fits, weakness, confusion
- Swollen arm or leg, chest pain, breathlessness
- Belly pain, vomiting, yellow eyes
- Bleeding, black stools, new bruises

Do not forget

- Brothers and sisters for HLA typing
- Fertility questions before treatment
- No live vaccines; flu vaccine for the family
- Keep the written treatment summary
- Tell us early if travel or money is a problem