ALL Management Guideline

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DIAGNOSIS:

- **1-Bone marrow aspiration and biopsy** are the definitive diagnostic tests to confirm the diagnosis of leukemia. At least 20% lymphoblast are present in the bone marrow and/or peripheral blood
- **2-Immunophenotyping:** according to cell surface antigen, ALL can be broadly classified into 3 groups which include **precursor B-cell ALL, mature B-cell ALL and T-cell ALL.**
- **3-Karyotypin, FISH** for major recurrent genetic abnormalities, **RT-PCR** for fusion genes (e.g. BCR-ABL); other fusions that describe Ph. like ALL.

WORK UP:

- history and physical examination
- CBC (differential count), chemistry profile, DIC panel,
- CT/MRI of head with contrast if neurologic symptoms,
- Lumber puncture, with initial intrathecal therapy,
- CT chest with contrast for patients with T-ALL and/or mediastinal mass,
- Testicular evaluation,
- Echocardiography, (anthracyclines are important in ALL therapy),
- HLA typing unless there is major contraindication to HSC transplantation.

Prognostic factors and risk stratification:

-Age >35years and high initial WBC count (> 30*10/l for B-cell lineage and >100*10/l for T-cell ALL) are predictive of decreased remission duration.

-Among adult ALL, Ph-positive abnormality is most common and associated with poor prognosis.

Management of ALL patients according to risk stratification:

- 1- Ph + ALL (AYA) (age 15-39 y)
- 2- Ph + ALL (adult) (age≥ 40)
- 3- Ph ALL (AYA) (age15-39)
- 4- Ph ALL (adult) (age≥ 40)







Minimal residual disease assessment

The most frequently employed methods for MRD assessment include multicolor flow cytometry to detect abnormal immune-phenotyping and real-time quantitative polymerase chain reaction (RQ-PCR) to detect fusion genes

Timing of MRD assessment:

- Upon complete of initial reduction
- Additional time points may be useful depending on the regimen used.

