Acute Myelogenous Leukemia – Adult (Age ≥ 18 years)

INITIAL EVALUATION

- CBC with platelets, comprehensive metabolic panel
- Bone marrow exam with cytogenetics and molecular analysis
- Echocardiogram
- Chest x-ray

TREATMENT

- Acute myelogenous leukemia (AML)
  - t(8;21) and inv(16)
  - Age < 60 years
  - Other
  - Age ≥ 60 years or not eligible for intensive chemotherapy

- Acute promyelocytic leukemia
  - FAB M3

Arsenic trioxide plus all-trans retinoic acid (ATRA)
- For patients with white blood cell count > 10 K/microliter, add idarubicin and/or gemtuzumab ozogamicin

Fludarabine, cytarabine, filgrastim plus gemtuzumab ozogamicin or Clinical trials

Idarubicin plus cytarabine with or without cladribine or Clinical trials
- If FLT3 mutated, add midostaurin or sorafenib

Low intensity therapy or Clinical trials
- If FLT3 mutated add midostaurin or sorafenib

Repeat bone marrow exam approximately 2-3 weeks after initiation of therapy depending on the induction regimen

Complete remission?

Yes
- Maintenance
  or Surveillance
  or Stem cell transplant (if high risk) or consolidation, then consider maintenance or surveillance

No
- Clinical trials

Notes: Consider Clinical Trials as treatment options for eligible patients. Stem cell transplant guidelines are not included with this algorithm. Leukemia patients should be referred and treated at a comprehensive cancer center.

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care. This algorithm should not be used to treat pregnant women.
SUGGESTED READINGS


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This practice algorithm is based on majority expert opinion of the Leukemia Center providers at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

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