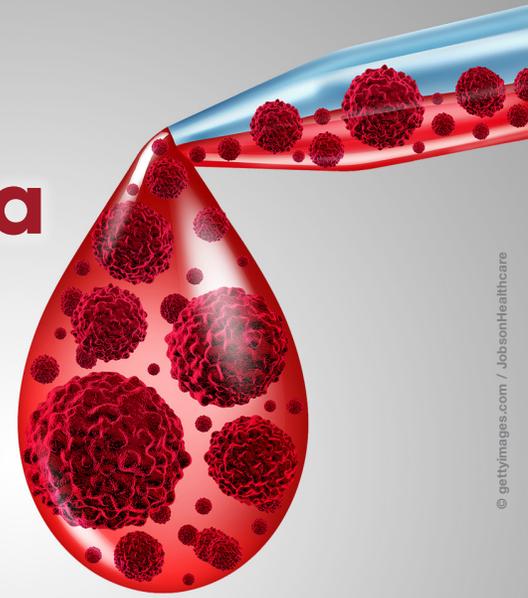


Acute Myeloid Leukemia

Point of Care Reference Tool



Pearls: Induction regimens

1. 7+3 (cytarabine and an anthracycline)

- a. Cytarabine = 100-200 mg/m²/day continuous IV infusion for 7 days (no clear benefit to doses above 100 mg/m²)
- b. Choice of anthracycline
 - i. Daunorubicin = 60-90 mg/m² IV push daily x 3 days
 - ii. Idarubicin = 12 mg/m² IV push daily x 3 days
- c. No need for prophylactic eyedrops (only needed with high-dose cytarabine)

2. Liposomal daunorubicin and cytarabine

- a. Indicated for adults with newly diagnosed therapy-related acute myeloid leukemia (t-AML) or AML with myelodysplasia-related changes (AML-MRC)
- b. Induction dosing: daunorubicin 44 mg/m² and cytarabine 100 mg/m²; liposome over 90 minutes on days 1, 3, and 5 and on days 1 and 3 for subsequent cycles of induction, if needed
- c. Adverse event profile similar to conventional 7+3

3. Gemtuzumab ozogamicin

- a. Adult and pediatric approval for newly diagnosed and relapsed/refractory CD33-positive AML
- b. Premedications
 - i. Corticosteroid (e.g., methylprednisolone 1 mg/kg IV)
 - ii. Diphenhydramine 25-50 mg PO
 - iii. Acetaminophen 650 mg PO
- c. Dosing
 - i. Newly diagnosed, combination regimen: 3 mg/m² (up to one 4.5-mg vial) on days 1, 4, and 7 in combination with daunorubicin and cytarabine
 - ii. Newly diagnosed, single-agent regimen: 6 mg/m² on day 1 and 3 mg/m² on day 8
 - iii. Relapsed or refractory, single-agent regimen: 3 mg/m² on days 1, 4, and 7
- d. Monitor for hepatotoxicity (veno-occlusive disease) with serial bilirubin measurement and daily weights

Abbreviations: AML, acute myeloid leukemia; IV, intravenously; PO, by mouth.

Pearls: Drug use

1. Midostaurin

- a. Dosing = 50 mg PO BID (with food for nausea minimization) on days 8-21 of induction and consolidation therapy, then continuous after completion of consolidation
- b. Prophylactic antiemetics needed (e.g., ondansetron)
- c. Optimal (not absolute) to avoid strong CYP3A4 inhibitors such as posaconazole or voriconazole (effects most significant early in therapy)
- d. Unusual adverse events
 - i. Pneumonitis
 - ii. Hyperglycemia

2. Enasidenib

- a. Dosing = 100 mg PO daily
- b. No concern with food, antacids, or other interactions
- c. Watch for:
 - i. Early tumor lysis syndrome (consider allopurinol prophylaxis)
 - ii. Differentiation syndrome (like that seen with tretinoin, arsenic trioxide)
- d. Unusual adverse events:
 - i. Hyperbilirubinemia (reduce dose to 50 mg if elevations reach 3 times or more of the upper limit of normal)
 - ii. Leukocytosis (may require hydroxyurea if over 30,000/mm³)

Abbreviations: BID, twice daily; CYP, cytochrome P450; PO, by mouth.