A Guide to Combination Cancer Chemotherapy Regimens

Acute Myelogenous (AML)

Cytarabine and Daunorubicin (7 plus 3)

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>Route</th>
<th>Administered on day(s)</th>
<th>Total dose/cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daunorubicin</td>
<td>45 to 90 mg/m²</td>
<td>IV</td>
<td>X X X</td>
<td>135 to 270 mg/m²</td>
</tr>
<tr>
<td>Cytarabine</td>
<td>100 to 200 mg/m²</td>
<td>CIVI</td>
<td>X X X X X X X X</td>
<td>700 to 1400 mg/m²</td>
</tr>
</tbody>
</table>

If necessary, repeat when hematologic recovery is complete.

CONSTITUENT DRUGS
- Cytarabine (Cytosar-U)
- Daunorubicin (Cerubidine)

SYNONYMS
- 7 + 3
- 7 plus 3

USES
- Induction therapy for acute myelogenous leukemia (AML), excluding acute promyelocytic leukemia¹-³

SUPPORTIVE CARE

Emetogenicity
- Predicted: 30% to 90% (moderate) (see p. 519)

Hydration
- No special precautions required.

Hypersensitivity Precaution
- Daunorubicin (see p. 521)

Myeloid Growth Factors
- Febrile neutropenia is an expected complication in AML, especially following induction chemotherapy.
- Grade 3 or 4 febrile neutropenia rates of 35% to 36% were reported in the studies reviewed.²
- In AML, use of myeloid growth factors is usually limited to postinduction supportive care in selected older patients.¹

Extravasation
- Daunorubicin (see p. 522)

TOXICITIES

Common (> 50%)
- Hematologic
  - Anemia
    - Grade 3 or 4: 77%²
  - Leukopenia
    - Grade 3 or 4: 98%²
  - Neutropenia
    - Grade 3 or 4: 95%²
    - Grade 3 or 4 febrile neutropenia: 35% to 36%²
  - Thrombocytopenia
    - Grade 3 or 4: 98%²
- Infection
  - Grade 3 or 4: 83%³
  - Neutropenic infection
    - Grade 3 or 4: 49%²

Infrequent (5% to 19%)
- Cardiovascular
  - Cardiac event
    - Grade 3 or 4: 8%²
    - Decrease in left ventricular ejection fraction: 1%²
  - Hemorrhage
    - Grade 3 or 4: 10%²
- Dermatologic
  - Rash or desquamation
    - Grade 3 or 4: 5%²
- Gastrointestinal
  - Anorexia
Leukemias

- Grade 3 or 4: 9%²
  - Nausea
  - Grade 3 or 4: 6%²
- Metabolic
  - Fatigue
    - Grade 3 or 4: 6%²
  - Fever
    - Grade 3 or 4: 7%²
- Pulmonary
  - Dyspnea
    - Grade 3 or 4: 5%²
- Treatment-related mortality, all causes: 5%²
  - Infection: 2%²
  - Pulmonary failure: 0.9%²
  - Cardiac failure: 0.6%²
  - Hemorrhage: 0.5%²
  - Hypotension: 0.3%²
  - Ileus: 0.2%²
- 30-day mortality, all causes: 12%³

RECOMMENDED LABORATORY TESTS

Baseline
- AST/ALT
- Total bilirubin
- Serum creatinine
- CBC with differential

Prior to Each Induction Cycle
- AST/ALT
- Total bilirubin
- Serum creatinine
- CBC with differential

Recommended Pretreatment Values
- Because AML often presents with extremely abnormal values of leukocytes, granulocytes, neutrophils, hemoglobin/hematocrit, and platelets, pretreatment values for these hematologic parameters are used to monitor the disease, not to determine fitness for chemotherapy.

DOSAGE MODIFICATIONS

Renal Function (see p. 526)

Liver Function (see p. 531)

Myelosuppression
- Because the goal of AML induction chemotherapy is bone marrow aplasia, no dose adjustments are made for leukocyte, granulocyte, neutrophil, hemoglobin/hematocrit, or platelet values determined prior to therapy.

REFERENCES