

# CANCER TREATMENT REGIMENS

## Hematologic Cancers

### Leukemia

The selection, dosing, and administration of anticancer agents and the management of associated toxicities are complex. Drug dose modifications and schedule and initiation of supportive care interventions are often necessary because of expected toxicities and because of individual patient variability, prior treatment, and comorbidities. Thus, the optimal delivery of anticancer agents requires a healthcare delivery team experienced in the use of such agents and the management of associated toxicities in patients with cancer. These cancer treatment regimens may include both FDA-approved and unapproved uses/regimens and are provided as references only to the latest treatment strategies. Clinicians must choose and verify treatment options based on the individual patient.

NOTE: Grey shaded boxes contain updated regimens.

## LEUKEMIA (Part 1 of 2)

| REGIMEN   | DOSING  |
|---|---|
| <b>Acute Myeloid Leukemia (AML)<sup>1</sup></b>   |   |
| <b>Induction Therapy</b>  |   |
| <b>Cytarabine</b> (Cytosar-U; ARA-C) + <b>an anthracycline</b> (daunorubicin [Cerubidine], idarubicin [Idamycin], mitoxantrone [Novantrone]) <sup>2,3</sup> | <p><b>Days 1-3:</b> An anthracycline (eg, daunorubicin at least 60mg/m<sup>2</sup>/day IV, idarubicin 10-12mg/m<sup>2</sup>/day IV, or mitoxantrone 10-12mg/m<sup>2</sup>/day IV), <b>plus</b></p> <p><b>Days 1-7:</b> Cytarabine 100-200mg/m<sup>2</sup>/day continuous IV infusion.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Days 1-3:</b> An anthracycline (eg, daunorubicin 45mg/m<sup>2</sup>/day IV, idarubicin 12mg/m<sup>2</sup>/day IV, or mitoxantrone 12mg/m<sup>2</sup>/day IV), <b>plus</b></p> <p><b>Days 1-7:</b> Cytarabine 100mg/m<sup>2</sup>/day continuous IV infusion.</p>   |
| Intermediate-dose cytarabine <sup>4</sup>   | <p><b>Cycle 1</b></p> <p><b>Days 1-7:</b> Cytarabine 200mg/m<sup>2</sup>/day continuous IV infusion, <b>plus</b></p> <p><b>Days 5-6:</b> Idarubicin 12mg/m<sup>2</sup>/day IV.</p> <p><b>Cycle 2</b></p> <p><b>Days 1-6:</b> Cytarabine 1,000mg/m<sup>2</sup> continuous IV infusion for 3 hrs twice daily, <b>plus</b></p> <p><b>Days 3, 5 and 7:</b> Amsacrine 120mg/m<sup>2</sup>/day.</p>   |
| <b>Consolidation Therapy</b>  |   |
| <b>Cytarabine + idarubicin</b> <sup>5</sup>   | <p><b>Days 1:</b> Idarubicin 9mg/m<sup>2</sup> IV, <b>plus</b></p> <p><b>Days 1-5:</b> Cytarabine 60mg/m<sup>2</sup> SQ every 12 hrs.</p> <p>Repeat cycle monthly for 6 cycles.</p>   |
| <b>Cytarabine + daunorubicin</b> <sup>5</sup>   | <p><b>Days 1:</b> Daunorubicin 45mg/m<sup>2</sup> IV, <b>plus</b></p> <p><b>Days 1-5:</b> Cytarabine 60mg/m<sup>2</sup> SQ every 12 hrs.</p> <p>Repeat cycle monthly for 6 cycles.</p>  |
| <b>Relapsed/Refractory AML</b>  |   |
| <b>ADE</b> (cytarabine + daunorubicin + etoposide [Toposar, VePesid, Etopophos; VP-16]) <sup>6</sup>  | <p><b>Course 1</b></p> <p><b>Days 1-10:</b> Cytarabine 100mg/m<sup>2</sup> IV every 12 hrs, <b>plus</b></p> <p><b>Days 1, 3 and 5:</b> Daunorubicin 50mg/m<sup>2</sup>/day IV, <b>plus</b></p> <p><b>Days 1-5:</b> Etoposide 100mg/m<sup>2</sup>/day IV.</p> <p><b>Course 2</b></p> <p><b>Days 1-8:</b> Cytarabine 100mg/m<sup>2</sup> IV every 12 hrs, <b>plus</b></p> <p><b>Days 1, 3 and 5:</b> Daunorubicin 50mg/m<sup>2</sup>/day IV, <b>plus</b></p> <p><b>Days 1-5:</b> Etoposide 100mg/m<sup>2</sup>/day IV.</p>  |
| <b>CLAG-M</b> (cladribine [Leustatin] + cytarabine + mitoxantrone) <sup>7</sup>   | <p><b>Induction therapy</b></p> <p><b>Days 1-5:</b> Cladribine 5mg/m<sup>2</sup>/day IV followed by cytarabine 2g/m<sup>2</sup>/day IV, <b>plus</b></p> <p><b>Days 1-3:</b> Mitoxantrone 10mg/m<sup>2</sup>/day IV.</p> <p>Repeat cycle if partial response. Proceed with consolidation chemotherapy once complete response is achieved.</p> <p><b>Consolidation therapy—Course 1</b></p> <p><b>Days 1-3:</b> Cytarabine 1.5g/m<sup>2</sup>/day IV, <b>plus</b></p> <p><b>Days 3-5:</b> Mitoxantrone 10mg/m<sup>2</sup>/day IV.</p> <p><b>Consolidation therapy—Course 2</b></p> <p><b>Days 1, 3 and 5:</b> Cytarabine 2g/m<sup>2</sup> IV every 12 hrs ± cladribine 5mg/m<sup>2</sup>/day.</p> |
| <b>Azacitidine</b> (Vidaza) <sup>8</sup>  | <p><b>Days 1-7:</b> Azacitidine 75mg/m<sup>2</sup>/day SQ.</p> <p>Repeat cycle every 28 days for at least 4 cycles.</p>   |
| <b>Tipifarnib</b> (Zarnestra) <sup>9</sup>  | <p><b>Days 1-21:</b> Tipifarnib 600mg orally twice a day.</p> <p>Repeat cycle every 28 days. After 3 cycles, may increase dose to tipifarnib 900mg orally twice daily if no significant drug-related toxicity.</p>  |
| <b>Lenalidomide</b> (Revlimid) <sup>10</sup>  | <p><b>Cycle 1</b></p> <p><b>Days 1-14:</b> Lenalidomide 50mg/day orally once daily; <b>followed by</b> 30 days off therapy.</p> <p><b>Cycle 2</b></p> <p><b>Days 1-21:</b> Lenalidomide 35mg/day orally once daily; <b>followed by</b> 30 days off therapy.</p> <p>No therapy Cycle 3.</p> <p><b>Subsequent cycles</b></p> <p><b>Days 1-28:</b> Lenalidomide 5mg/day orally once daily for 5 cycles.</p>  |

*continued*

## LEUKEMIA (Part 2 of 2)

| REGIMEN   | DOSING  |
|---|---|
| <b>Acute Promyelocytic Leukemia</b>   |   |
| <b>Arsenic trioxide (Trisenox)<sup>11</sup></b>   | <p><b>Induction therapy</b><br/>Arsenic trioxide 0.15mg/kg IV daily until bone marrow remission; max 60 doses.</p> <p><b>Consolidation therapy</b><br/>Initiate 3–6 weeks after completion of induction therapy.<br/>Arsenic trioxide 0.15mg/kg IV daily for 25 doses over a period of up to 5 weeks.</p>   |
| <b>Chronic Myelogenous Leukemia (CML)<sup>12</sup></b>  |   |
| <b>Imatinib (Gleevec)<sup>13-15</sup></b>   | Imatinib 400mg orally once daily.<br>May increase to imatinib 600–800mg orally once daily if complete response not achieved within 3 months.  |
| <b>Dasatinib (Sprycel)<sup>16,17</sup></b>  | <p><b>Newly diagnosed Philadelphia chromosome-positive chronic phase myeloid leukemia (Ph+ CML-CP)</b><br/>Dasatinib 100mg orally once daily; up to 140mg once daily.</p> <p><b>Resistant or intolerant accelerated phase Ph+ CML, myeloid or lymphoid blast CML, Ph+ acute lymphoblastic leukemia (ALL)</b><br/>Dasatinib 140mg orally once daily; up to 180mg once daily.</p>   |
| <b>Nilotinib (Tasigna)<sup>18-20</sup></b>  | <p><b>Newly diagnosed Ph+ CML-CP</b><br/>Nilotinib 300mg orally twice daily.</p> <p><b>Resistant or intolerant chronic and accelerated phase Ph+ CML</b><br/>Nilotinib 400mg orally twice daily.</p>  |
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