

# NON-HODGKIN LYMPHOMA TREATMENT REGIMENS: Extranodal NK/T-Cell Lymphoma (Part 1 of 2)

**Clinical Trials:** The National Comprehensive Cancer Network recommends cancer patient participation in clinical trials as the gold standard for treatment.

Cancer therapy selection, dosing, administration, and the management of related adverse events can be a complex process that should be handled by an experienced healthcare team. Clinicians must choose and verify treatment options based on the individual patient; drug dose modifications and supportive care interventions should be administered accordingly. The cancer treatment regimens below may include both U.S. Food and Drug Administration-approved and unapproved indications/regimens. These regimens are provided only to supplement the latest treatment strategies.

These Guidelines are a work in progress that may be refined as often as new significant data becomes available. The NCCN Guidelines® are a consensus statement of its authors regarding their views of currently accepted approaches to treatment. Any clinician seeking to apply or consult any NCCN Guidelines® is expected to use independent medical judgment in the context of individual clinical circumstances to determine any patient's care or treatment. The NCCN makes no warranties of any kind whatsoever regarding their content, use, or application and disclaims any responsibility for their application or use in any way.

## Systemic Therapy for Extranodal NK/T-cell Lymphomas<sup>1</sup>

**Note:** All recommendations are Category 2A unless otherwise indicated.

### Combination Chemotherapy Regimens (pegaspargase-based)

REGIMEN	DOSING
<b>AspaMetDex<sup>2,a,b</sup></b>	<p><b>Day 1:</b> Methotrexate 3g/m<sup>2</sup> IV</p> <p><b>Days 1–4:</b> Dexamethasone 40mg orally</p> <p><b>Days 2, 4, 6, and 8:</b> L-asparaginase 6000U/m<sup>2</sup> IM.</p> <p>Repeat every 21 days for 3 cycles.</p>
<b>SMILE<sup>3,4</sup></b>	<p><b>Day 1:</b> Methotrexate 2g/m<sup>2</sup> IV</p> <p><b>Days 2–4:</b> Dexamethasone 40mg IV or orally + leucovorin 15mg × 4 doses/day IV or orally + ifosfamide 1500mg/m<sup>2</sup> IV + etoposide 100mg/m<sup>2</sup> IV</p> <p><b>Days 8, 10, 12, 14, 16, 18, and 20:</b> L-asparaginase 6000U/m<sup>2</sup> IV.</p> <p>Repeat every 21 days for 3 cycles.</p>
<b>GELOX<sup>5</sup></b>	<p><b>Day 1:</b> Oxaliplatin 130mg/m<sup>2</sup> IV + pegaspargase 2500U/m<sup>2</sup> IM</p> <p><b>Days 1 and 8:</b> Gemcitabine 1000mg/m<sup>2</sup> IV.</p> <p>Repeat every 21 days for a maximum of 6 cycles (including 3 cycles induction chemotherapy for stage stage IE/IE patients followed by involved-field radiotherapy).</p>

### Concurrent Chemoradiation Therapy

<b>DeVIC + RT<sup>6,7</sup></b>	<p>Radiation 50Gy and 3 courses of DeVIC (dexamethasone, etoposide, ifosfamide, carboplatin)</p> <p><b>Level 1 (2/3 DeVIC)</b></p> <p><b>Day 1:</b> Carboplatin 200mg/m<sup>2</sup> IV over 30 minutes</p> <p><b>Days 1–3:</b> Dexamethasone 40mg IV + etoposide 67mg/m<sup>2</sup> IV over 2 hours + ifosfamide 1g/m<sup>2</sup> IV over 3 hours.</p> <p><b>Level 2 (100% DeVIC)</b></p> <p><b>Day 1:</b> Carboplatin 300mg/m<sup>2</sup></p> <p><b>Days 1–3:</b> Dexamethasone 40mg IV + etoposide 100mg/m<sup>2</sup> IV + ifosfamide 1.5mg/m<sup>2</sup>.</p> <p>Repeat chemotherapy every 3 weeks for 3 cycles.</p>
<b>VIPIID + RT<sup>7,8</sup></b>	<p>Radiation 40–52.8Gy and cisplatin 30mg/m<sup>2</sup> IV for 3–5 weeks followed by 3 cycles of VIPIID:</p> <p><b>Days 1–3:</b> Etoposide 100mg/m<sup>2</sup> IV over 90 minutes + ifosfamide 1200mg/m<sup>2</sup> IV over 1 hour + cisplatin 33mg/m<sup>2</sup> IV over 1 hour + dexamethasone 40mg orally or IV.</p> <p>Repeat chemotherapy every 3 weeks for 3 cycles.</p>

### Sequential Chemoradiation

<b>SMILE + RT (for stage I, II disease)<sup>4</sup></b>	<p><b>Day 1:</b> Methotrexate 2g/m<sup>2</sup> IV</p> <p><b>Days 2–4:</b> Dexamethasone 40mg IV or orally + leucovorin 15mg × 4 IV or orally + ifosfamide 1500mg/m<sup>2</sup> IV + etoposide 100mg/m<sup>2</sup> IV</p> <p><b>Days 8, 10, 12, 14, 16, 18, and 20:</b> L-asparaginase 6000U/m<sup>2</sup>.</p> <p>Repeat every 21 days for 3 cycles, following by radiation treatment at a dose of 45–50.4Gy for 2 to 4 cycles.</p>
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# NON-HODGKIN LYMPHOMA TREATMENT REGIMENS: Extranodal NK/T-Cell Lymphoma (Part 2 of 2)

## Systemic Therapy for Extranodal NK/T-cell Lymphomas (continued)

### Sandwich Chemoradiation

#### GELOX + RT<sup>9,c</sup>

**Day 1:** Oxaliplatin 100mg/m<sup>2</sup> IV + pegaspargase 2500U/m<sup>2</sup> IM  
**Days 1 and 8:** Gemcitabine 800mg/m<sup>2</sup> IV.  
 Repeat every 21 days for 2 cycles, followed by radiation treatment at a dose of 56Gy, followed by 2 to 4 additional cycles of GELOX.

### Radiotherapy Alone

#### •Radiotherapy<sup>10</sup>

- Recommended tumor dose is ≥ 50Gy
- Early or up-front RT had an essential role in improved overall survival and disease-free survival in patients with localized extranodal NK/T-cell lymphoma, nasal-type, in the upper aerodigestive tract
- Up-front RT may yield more benefits on survival in patients with stage I disease.

a Reported as a second-line regimen.

b In patients older than 70 years old: methotrexate and dexamethasone doses were decreased to 2g/m<sup>2</sup> and 20mg for 4 days, respectively.

c Pegaspargase-based regimens are preferred. However, there are no data to recommend 1 particular regimen over another.

Treatment should be individualized based on patient's tolerance and comorbidities. GELOX is an option for selected patients who cannot tolerate intensive chemotherapy.

### References

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