

NON-HODGKIN LYMPHOMA TREATMENT REGIMENS: Extranodal NK/T-cell Lymphoma

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. The cancer treatment regimens below 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.

Radiotherapy alone may yield more benefits on survival in patients with Stage I^{1,2}

REGIMEN	DOSING
Concurrent Chemoradiation: All stages of Nasal and Extranasal	
Radiotherapy , followed by DeVic (carboplatin [Paraplatin], etoposide [Etopophos, VP-16], ifosfamide [Ifex], dexamethasone) ^{1,3}	Day 1: Carboplatin 200mg/m ² IV. Days 1-3: Etoposide 67mg/m ² IV + ifosfamide 1.0g/m ² IV (plus mesna) + dexamethasone 40mg IV. Repeat every 3 weeks for 3 cycles.
Radiotherapy + cisplatin (Platinol), followed by VIPD (etoposide + ifosfamide + cisplatin + dexamethasone) ^{1,4}	Prior to VIPD: Cisplatin 30mg/m ² IV weekly, followed by Days 1-3: Etoposide 100mg/m ² IV + ifosfamide 1,200mg/m ² IV (plus mesna) + cisplatin 33mg/m ² IV. Days 1-4: Dexamethasone 40mg IV or orally. Repeat every 3 weeks for 3 cycles.

Combination Chemotherapy Regimen (L-asparaginase based): Nasal Stage IV, Extranasal Stages I-IV

SMILE (dexamethasone + methotrexate [MTX] + ifosfamide + L-asparaginase [Kidrolase] + etoposide) ^{1,5}	Day 1: MTX 2g/m ² IV. Days 2-4: Leucovorin 15mg IV or orally for 4 doses + ifosfamide 1,500mg/m ² IV (plus mesna) + dexamethasone 40mg IV or orally + etoposide 100mg/m ² IV. Days 8, 10, 12, 14, 16, 18, and 20: L-asparaginase 6,000 units/m ² IV. Repeat cycle every 4 weeks.
AspaMetdex (L-asparaginase + MTX + dexamethasone) ^{1,6} NOTE: Second-line therapy	Days 2, 4, 6, and 8: L-asparaginase 6,000 units/m ² IM. Day 1: MTX 3g/m ² IV. Days 1-4: Dexamethasone 40mg. Repeat every 3 weeks.

Sequential Chemoradiation (Nasal Stages I-II)

SMILE (dexamethasone + MTX + ifosfamide + L-asparaginase + etoposide), followed by radiotherapy ¹	Day 1: MTX 2g/m ² IV. Days 2-4: Leucovorin 15mg IV or orally for 4 doses + ifosfamide 1,500mg/m ² IV (plus mesna) + dexamethasone 40mg IV or orally + etoposide 100mg/m ² IV. Days 8, 10, 12, 14, 16, 18, and 20: L-asparaginase 6,000 units/m ² IV. Repeat cycle every 4 weeks.
VIPD (etoposide + ifosfamide + cisplatin + dexamethasone), followed by radiotherapy ¹	Days 1-3: Etoposide 100mg/m ² IV + ifosfamide 1,200mg/m ² IV (plus mesna) + cisplatin 33mg/m ² IV. Days 1-4: Dexamethasone 40mg IV or orally. Repeat every 3 weeks for 3 cycles.

References

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| <ol style="list-style-type: none"> NCCN Clinical Practice Guidelines in Oncology™. Non-Hodgkin's Lymphoma. v.3.2012. Available at: http://www.nccn.org/professionals/physician_gls/pdf/nhl.pdf. Accessed July 12, 2012. Huang MJ, Jiang Y, Liu WP, et al. Early or up-front radiotherapy improved survival of localized extranodal NK/T-cell lymphoma, nasal-type in the upper aerodigestive tract. <i>Int J Radiat Oncol Biol Phys.</i> 2008;70:166-174. Yamaguchi M, Tobinai K, Oguchi M, et al. Phase I/II study of concurrent chemoradiotherapy for localized nasal natural killer/T-cell lymphoma: Japan Clinical Oncology Study JCOG0211. <i>J Clin Oncol.</i> 2009;27:5594-5600. Kim SJ, Kim K, Kim BS, et al. Phase II trial of concurrent radiation and weekly cisplatin followed by VIPD chemotherapy in | <p>newly diagnosed, stage IE to IIE, nasal, extranodal NK/T-cell lymphoma: consortium for Improving Survival of Lymphoma study. <i>J Clin Oncol.</i> 2009;27:6027-6032.</p> <ol style="list-style-type: none"> Yamaguchi M, Kwong YL, Kim WS, et al. Phase II study of SMILE chemotherapy for newly diagnosed stage IV, relapsed, or refractory extranodal natural killer (NK)/T-cell lymphoma, nasal type: the NK-Cell Tumor Study Group study. <i>J Clin Oncol.</i> 2011;29:4410-4416. Jaccard A, Gachard N, Coppo P, et al. A prospective phase II trial of an L-asparaginase containing regimen in patients with refractory or relapsing extra nodal NK/T-cell lymphoma. Presented at: 50th American Society of Hematology Annual Meeting & Exposition; December 6-9, 2008; San Francisco, CA. <i>Blood.</i> 2008;112:Abstract 579. |
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