NON-HODGKIN LYMPHOMA TREATMENT REGIMENS: Peripheral T-Cell Lymphoma (Part 1 of 3)

Clinical Trials: The NCCN 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 only provided 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 National Comprehensive Cancer Network 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 Peripheral T-Cell

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

First-Line Therapy ALCL, ALK+ histology[1]

REGIMEN	DOSING
CHOP-21[2-4]	**Day 1:** Cyclophosphamide 750mg/m² IV, doxorubicin 50mg/m² IV, and vincristine 2mg IV **Days 1–5:** Prednisone 100mg PO. Repeat every 3 weeks for 6 cycles.
CHOEP-21[3,4]	**Day 1:** Cyclophosphamide 750mg/m² IV, doxorubicin 50mg/m² IV, and vincristine 2mg IV **Days 1–3:** Etoposide 100mg/m² IV **Days 1–5:** Prednisone 100mg PO. Repeat every 3 weeks for 6 cycles.

First-Line Therapy Other Histologies (ALCL, ALK, PTCL, NOS, AITL, EATL)[1]

CHOEP (preferred)[3,4]	**Day 1:** Cyclophosphamide 750mg/m² IV, doxorubicin 50mg/m² IV, and vincristine 2mg IV **Days 1–3:** Etoposide 100mg/m² IV **Days 1–5:** Prednisone 100mg PO. Repeat every 3 weeks for 6 cycles.
CHOP-14 (preferred)[2-4]	**Day 1:** Cyclophosphamide 750mg/m² IV, doxorubicin 50mg/m² IV, and vincristine 2mg IV **Days 1–5:** Prednisone 100mg PO. Repeat every 2 weeks for 6 cycles.
CHOP-21 (preferred)[3,4]	**Day 1:** Cyclophosphamide 750mg/m² IV, doxorubicin 50mg/m² IV, and vincristine 2mg IV **Days 1–5:** Prednisone 100mg PO. Repeat every 3 weeks for 6 cycles.
CHOP followed by IVE alternating with intermediate-dose methotrexate[5,6*]	**Day 1:** Cyclophosphamide 750mg/m² IV, doxorubicin 50mg/m² IV, vincristine 1.4mg/m² (max dose 2mg), and prednisone 100mg PO daily for 1 cycle. Repeat every 3 weeks for 6–8 cycles. **Followed by** **Days 1–3:** Ifosfamide 3000mg/m² IV, etoposide 200mg/m² IV, epirubicin 50mg/m² IV, and methotrexate 1500mg/m² IV. Repeat every 3 weeks for 3 cycles.
Dose-adjusted EPOCH[7-9]	**Days 1–4, via continuous infusion for 96 hours:** Etoposide 50mg/m² IV, vincristine 0.4mg/m² IV, and doxorubicin 10mg/m² IV **Days 1–6:** Prednisone 60mg PO **Day 6:** Cyclophosphamide 750mg/m² IV. Repeat every 21 days until complete response.
HyperCVAD alternating with high-dose methotrexate and cytarabine[10–12]	**Days 1–2:** Methotrexate 200mg/m² IV bolus followed by methotrexate 800mg/m² IV over 24 hours **Days 1–3:** Cyclophosphamide 300mg/m² IV every 12 hours for 6 doses with mesna 600mg/m²/day **Days 1–4 and Days 11–14:** Dexamethasone 40mg PO **Day 3:** Cytarabine 3000mg/m² IV every 12 hours for 4 doses. **OR** **Day 3:** Cytarabine 1000mg/m² IV for patients >60 years or serum creatinine >1.5mg/dL and folic acid 50mg PO 24 hours after the end of methotrexate followed by folic acid 15mg PO every 6 hours for 8 doses. **Days 4–5:** Doxorubicin 25mg/m² IV via continuous infusion over 24 hours; G-CSF 5mcg/kg 24 hours after the end of doxorubicin until granulocyte count >4500/uL followed by methotrexate and cytarabine (begins immediately after clinical and hematologic recovery from HyperCVAD course) **Days 4 and 11:** Vincristine 2mg/m² IV (first dose 12 hours after last dose of cyclophosphamide). Repeat every 3 weeks for 4 cycles.

continued

NON-HODGKIN LYMPHOMA TREATMENT REGIMENS: Peripheral T-Cell Lymphoma (Part 2 of 3)

Systemic Therapy for Peripheral T-Cell (continued)

First-Line Consolidation[1]

REGIMEN	DOSING
Consider consolidation with high-dose therapy and stem cell rescue	ALCL, ALK+ is a subtype with good prognosis and does not need consolidative transplant if in remission

Second-Line Therapy (candidate for transplant)[1]

Bendamustine[13]	**Days 1 and 2:** Bendamustine 120mg/m²/day IV. Repeat every 3 weeks for 6 cycles.
Belinostat (Category 2B)[14]	**Days 1–5:** Belinostat 1,000mg/m² IV over 30 minutes. Repeat every 3 weeks until disease progression or unacceptable toxicity.
Brentuximab vedotin for systemic ALCL excluding primary cutaneous ALCL[15]	**Day 1:** Brentuximab vedotin 1.8mg/kg IV over 30 minutes. Repeat every 3 weeks for 16 doses.
Brentuximab vedotin for systemic CD30+ PTCL (Category 2B)[16]	**Day 1:** Brentuximab vedotin 1.8mg/kg IV over 30 minutes. Repeat every 3 weeks until disease progression.
DHAP[17,18]	**Day 1:** Cisplatin 100mg/m² IV via continuous infusion over 24 hours **followed by** **Day 2:** Cytosine arabinoside in 2 pulses each at a 2g/m² given 12 hours apart **Days 1–4:** Dexamethasone 40mg PO or IV. Repeat every 3–4 weeks for 6–10 cycles.
ESHAP[19]	**Days 1–4:** Etoposide 40mg/m² and cisplatin 25mg/m² IV via 24-hour continuous infusion **Days 1–5:** Methylprednisolone 500mg IV **Day 5:** Cytarabine 2g/m² IV over 2–3 hours. Repeat every 3–4 weeks for 6–8 cycles.
Dose-adjusted EPOCH[7–9]	**Days 1–4:** Etoposide 50mg/m² IV, vincristine 0.4mg/m² IV, and doxorubicin 10mg/m² IV via continuous infusion for 96 hours **Days 1–6:** Prednisone 60mg PO **Day 6:** Cyclophosphamide 750mg/m² IV. Repeat every 21 days until complete response.
GDP[20,21]	**Day 1:** Cisplatin 75mg/m² IV over 1 hour **Days 1 and 8:** Gemcitabine 100mg/m² IV over 30 minutes **Days 1–4:** Dexamethasone 40mg PO divided dose. Repeat every 21 days for 6 cycles.
GemOx[22]	Gemcitabine 1000mg/m² Oxaliplatin 100mg/m². Repeat every 15–21 days for 4 cycles.
ICE[23]	**Day 1:** Ifosfamide 5g/m² via 24-hour continuous infusion **Days 1–3:** Etoposide 100mg/m² IV bolus **Day 2:** Carboplatin 5 × AUC. Repeat every 2 weeks for 3 cycles.
Pralatrexate[24†]	**Day 1:** Pralatrexate 30mg/m²/week starting for 6 weeks followed by 1 week of rest. Repeat every 7 weeks until disease progression or unacceptable toxicity.
Romidepsin[25]	**Days 1, 8, and 15:** Romidepsin 14mg/m² IV infusion over 4 hours. Repeat every 28 days for up to 6 cycles.

Second-Line Therapy (non-candidates for transplant)[1]

Alemtuzumab[26]	**Day 1:** Alemtuzumab 3mg **Day 3:** Alemtuzumab 10mg, followed by 30mg three times a week. Repeat every week for a max of 12 weeks.
Bendamustine[13]	**Days 1 and 2:** Bendamustine 120mg/m2/day IV. Repeat every 3 weeks for 6 cycles.
Belinostat (Category 2B)[14]	**Days 1–5:** Belinostat 1,000mg/m2 IV over 30 minutes. Repeat every 3 weeks until disease progression or unacceptable toxicity.
Bortezomib (Category 2B)[27]	**Days 1, 4, 8, and 11:** Bortezomib 1.3mg/m² followed by a 1-week rest period. Repeat every 21 days for 6 cycles.
Brentuximab vedotin for systemic ALCL excluding primary cutaneous ALCL[15]	**Day 1:** Brentuximab vedotin 1.8mg/kg IV over 30 minutes. Repeat every 3 weeks for 16 doses.
Brentuximab vedotin for systemic CD30+ PTCL[16]	**Day 1:** Brentuximab vedotin 1.8mg/kg IV over 30 minutes. Repeat every 3 weeks until disease progression.
Cyclosporine for AITL only[28]	Cyclosporine 3–5mg/kg PO for 6–8 weeks; taper by 50mg every 1–3 weeks. Responding patients received maintenance dose of 50–100mg with gradual taper after maximal response was achieved.

continued

NON-HODGKIN LYMPHOMA TREATMENT REGIMENS: Peripheral T-Cell Lymphoma (Part 3 of 3)

Systemic Therapy for Peripheral T-Cell (continued)

Second-Line Therapy (non-candidates for transplant)[1] (continued)

REGIMEN	DOSING
Dose-adjusted EPOCH[7-9]	**Days 1–4:** Etoposide 50mg/m² IV, vincristine 0.4mg/m² IV, and doxorubicin 10mg/m² IV via continuous infusion for 96 hours **Days 1–6:** Prednisone 60mg PO **Day 6:** Cyclophosphamide 750mg/m² IV. Repeat every 21 days until complete response.
Gemcitabine[29,30]	**Days 1, 8, and 15:** Gemcitabine 1200mg/m². Repeat every 28 days for 3 cycles.
Pralatrexate[24†]	**Day 1:** Pralatrexate 30mg/m²/week for 6 weeks followed by 1 week of rest. Repeat every 7 weeks until disease progression or unacceptable toxicity.
Romidepsin[25]	**Days 1, 8, and 15:** Romidepsin 14mg/m² IV infusion over 4 hours. Repeat every 28 days for up to 6 cycles.

* Studied only in patients with EATL. † Limited activity in AITL.

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