

Regimen Monograph

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A - Regimen Name

ICE Regimen

Ifosfamide (with Mesna)-Carboplatin-Etoposide

Disease Site Hematologic - Lymphoma - Non-Hodgkin's High Grade
Hematologic - Lymphoma - Non-Hodgkin's Intermediate Grade

Intent Curative

Regimen Category **Evidence-informed :**

Regimen is considered appropriate as part of the standard care of patients; meaningfully improves outcomes (survival, quality of life), tolerability or costs compared to alternatives (recommended by the Disease Site Team and national consensus body e.g. pan-Canadian Oncology Drug Review, pCODR). Recommendation is based on an appropriately conducted phase III clinical trial relevant to the Canadian context OR (where phase III trials are not feasible) an appropriately sized phase II trial. Regimens where one or more drugs are not approved by Health Canada for any indication will be identified under Rationale and Use.

This **Regimen Abstract** is an **abbreviated** version of a Regimen Monograph and contains only top level information on usage, dosing, schedule, cycle length and special notes (if available). Information in regimen abstracts is accurate to the extent of the ST-QBP regimen master listings, and has not undergone the full review process of a regimen monograph. Full regimen monographs will be published for each ST-QBP regimen as they are developed.

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B - Drug Regimen

Adapted for outpatient administration

ifosfamide	1667 mg /m ²	IV	Days 1 to 3
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together with:

mesna	1667 mg /m ²	IV	Days 1 to 3
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THEN:

mesna	2000 mg	PO	Days 1 to 3; 2 and 6 hours after each ifosfamide dose
CARBOplatin	AUC 5	IV	Day 1

etoposide	100 mg /m ²	IV	Days 1 to 3
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C - Cycle Frequency**REPEAT EVERY 21 TO 28 DAYS**

After 2-3 cycles, responding patients may be considered for high-dose chemotherapy and autologous stem cell transplant.

Patients with stable disease who were not candidates for stem cell transplant or patients who had any response after 2-3 cycles of ICE may receive up to 6 cycles of treatment.

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D - Premedication and Supportive Measures

Antiemetic Regimen: Moderate + NK1 antagonist (Carboplatin AUC ≥ 5)

Other Supportive Care:

Filgrastim is given after each chemotherapy cycle (refer to references).

Also refer to [CCO Antiemetic Recommendations](#).

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J - Administrative Information

Pharmacy Workload (average time per visit) 39.232 minutes

Nursing Workload (average time per visit) 52.5 minutes

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K - References

Hertzberg MS, Crombie C, Benson W, et al. Outpatient-based ifosfamide, carboplatin and etoposide (ICE) chemotherapy in transplant-eligible patients with non-Hodgkin's lymphoma and Hodgkin's disease. *Ann Oncol*. 2003;14 Suppl 1:i11-6.

Hertzberg MS, Crombie C, Benson W, et al. Outpatient fractionated ifosfamide, carboplatin and etoposide as salvage therapy in relapsed and refractory non-Hodgkin's and Hodgkin's lymphoma. *Ann Oncol*. 2006 May;17 Suppl 4:iv25-30.

Kewalramani T, Zelenetz AD, Nimer SD, et al. Rituximab and ICE as second-line therapy before autologous stem cell transplantation for relapsed or primary refractory diffuse large B-cell lymphoma. *Blood* 2004;103:3684-8.

Moskowitz CH, Bertino JR, Glassman JR, et al. Ifosfamide, Carboplatin, and Etoposide: A highly effective cytoreduction and peripheral-blood progenitor-cell mobilization regimen for transplant-eligible patients with non-Hodgkin's lymphoma. *J Clin Oncol* 1999;17:3776-85.

Zelenetz AD, Hamlin P, Kewalramani T, et al. Ifosfamide, carboplatin, etoposide (ICE)-based second-line chemotherapy for the management of relapsed and refractory aggressive non-Hodgkin's lymphoma. *Ann Oncol* 2003;14 Suppl 1:i5-10.

May 2019 Updated emetic risk category

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M - Disclaimer

Regimen Abstracts

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Information in regimen abstracts is accurate to the extent of the ST-QBP regimen master listings, and has not undergone the full review process of a regimen monograph. Full regimen monographs will be published for each ST-QBP regimen as they are developed.

Regimen Monographs

Refer to the [New Drug Funding Program](#) or [Ontario Public Drug Programs](#) websites for the most up-to-date public funding information.

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