Regimen Monograph

Regimen Name | Drug Regimen | Cycle Frequency | Premedication and Supportive Measures | Administrative Information | References | Other Notes | Disclaimer

A - Regimen Name

IE-VAC Regimen

Ifosfamide-Etoposide-VinCRIStine-ADRIAMYCIN ® (DOXOrubicin)-Cyclophosphamide

Disease Site

Sarcoma - Ewing's
Sarcoma - Soft Tissue

Intent

Neoadjuvant
Adjuvant
Palliative

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

Please report **ETOPIFOS** while on the IE portion and **VAC** while on the VAC portion. Refer to ETOPIFOS and VAC regimen monographs.

ETOPIFOS schedule:

etoposide	100 mg /m²	IV	Days 1 to 5
ifosfamide	1800 mg /m²	IV	Days 1 to 5

mesna

Various dosing schedules have been used. The following is an example (from ASCO guideline, Hensley 2009):

Mesna	Route	Timing
20% of Ifosfamide dose	IV	15 minutes pre-Ifosfamide
40% of Ifosfamide dose	PO	4 hours and 8 hours post-ifosfamide

VAC schedule:

vinCRIStine	1.5 mg /m²	IV (maximum 2 mg)	Day 1
DOXOrubicin[1]	75 mg /m²	IV	Day 1
cyclophosphamide[2]	1200 mg /m²	IV	Day 1

[1]Doxorubicin is omitted during radiation therapy. Some studies split the dose of doxorubicin over 2 days. Give for a maximum of 5-6 cycles and then VC thereafter.

[2] Prophylactic diuresis to reduce the incidence of cystitis is recommended. Consider usage of Mesna (refer to local protocols), especially for younger patients or those with risk factors (e.g. previous radiation to the pelvic area).

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C - Cycle Frequency

Standard schedule: ETOPIFOS alternating with VAC*/VC for a total of 14 cycles given every **3 weeks** (7 of each) in the absence of progression or unacceptable toxicity.

Intensified schedule†(for Ewing's sarcoma)**:** ETOPIFOS alternating with VAC*/VC for a total of 14 cycles given every **2 weeks** (7 of each) in the absence of progression or unacceptable toxicity. G-CSF prophylaxis is recommended with this regimen.

*VAC for a maximum of 5-6 cycles then VC

† Note that only patients less than 50 years old were included in the clinical trial by Womer et al.

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D - Premedication and Supportive Measures

Antiemetic Regimen: High (VAC)
Moderate (IE)

Other Supportive Care:

Also refer to CCO Antiemetic Recommendations.

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J - Administrative Information

Approximate Patient Visit	IE: 4.5 hours; VAC: 2 hours

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K - References

Arndt CAS, Nascimento AG, Schroeder G, et al. Treatment of intermediate rish rhabdomyosarcoma and undifferentiated sarcoma with alternating cycles of vincristine/ doxorubicin/ cyclophosphamide and etoposide/ifosfamide. European Journal of Cancer 1998; 34(8) : 1224-1229.

Granowetter L, Womer R, Devidas M, et al. Dose-intensified compared with standard

chemotherapy for nonmetastatic Ewing sarcoma family of tumors: a Children's Oncology Group Study. J Clin Oncol 2009;27(15):2536-41.

Grier HE, Krailo MD, Tarbell NJ, et al. Addition of ifosfamide and etoposide to standard chemotherapy for Ewing's sarcoma and primitive neuroectodermal tumor of bone. N Engl J Med. 2003;348(8):694-701.

Paulussen M, Craft AW, Lewis I, et al. Results of the EICESS-92 Study: two randomized trials of Ewing's sarcoma treatment--cyclophosphamide compared with ifosfamide in standard-risk patients and assessment of benefit of etoposide added to standard treatment in high-risk patients. J Clin Oncol. 2008;26(27):4385-93.

Wexler LH, DeLaney TF, Tsokos M, et al. Ifosfamide and etoposide plus vincristine, doxorubicin, and cyclophosphamid for newly diagnosed Ewing's sarcoma family for tumors. Cancer 1996 (Aug 15th) ; 78 (4):901- 911.

Womer RB, West DC, Krailo MD, Dickman PS, Pawel BR, Grier HE, Marcus K, Sailer S, Healey JH, Dormans JP, Weiss AR. Randomized controlled trial of interval-compressed chemotherapy for the treatment of localized Ewing sarcoma: a report from the Children's Oncology Group. J Clin Oncol. 2012 Nov 20;30(33):4148-54.

June 2019 Updated emetic risk category

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L - Other Notes

Sarcomas are rare tumours and as such benefit from referral to specialized centres where there will be access to multidisciplinary expertise including good radiology, orthopedic and thoracic surgery, medical oncology, radiation oncology, pathology, and other supportive care disciplines.

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M - Disclaimer

Regimen Abstracts

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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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