

Regimen Monograph

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A - Regimen Name

CVP(PO) Regimen

Cyclophosphamide (oral)-VinCRISTine-Prednisone

Disease Site Hematologic - Lymphoma - Non-Hodgkin's Low Grade

Intent 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.

Rationale and Uses First-line/salvage therapy for indolent lymphoma

Supplementary Public Funding [cyclophosphamide](#)
ODB - General Benefit (cyclophosphamide - oral tablets) ([ODB Formulary](#))

prednisone
ODB - General Benefit (prednisone) ([ODB Formulary](#))

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B - Drug Regimen

[cyclophosphamide](#) 400 mg /m² PO Days 1 to 5
(Outpatient prescription in multiples of 25mg & 50mg tablets)

[vinCRISTine](#) 1.4 mg /m² IV Day 1
(Round to nearest 0.1 mg;
maximum dose = 2 mg)

(continued on next page)

prednisone 100 mg PO Days 1 to 5
(Outpatient prescription in multiples of 50mg tablets)

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C - Cycle Frequency**REPEAT EVERY 21 DAYS**

For a usual total of 6 to 8 cycles unless disease progression or unacceptable toxicity occurs

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D - Premedication and Supportive Measures

Antiemetic Regimen: Minimal
Consider prophylaxis daily for cyclophosphamide PO

Other Supportive Care:

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

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E - Dose Modifications

Doses should be modified according to the protocol by which the patient is being treated.

Dosage with toxicity

See Appendix 6 for general recommendations.

Toxicity	Vincristine¹ (% previous dose)	Cyclophosphamide¹ (% previous dose)
Grade 4 hematological \geq 7 d, febrile neutropenia, bleeding	100%	75% or G-CSF for low ANC
Grade 3 non-hematological toxicity	100%	75%
Toxicity (Continued)	Vincristine¹ (% previous dose)	Cyclophosphamide¹ (% previous dose)
Grade 4 organ toxicity	Discontinue	Discontinue
Neurotoxicity	Mild: 67%; Moderate: Hold until recovery, then \downarrow 50%; Severe: Discontinue	100%

¹Prior to retreatment, major organ toxicity should have recovered to \leq grade 2 and ANC to \geq $1.5 \times 10^9/L$ and platelets \geq $100 \times 10^9/L$.

Hepatic Impairment

Also consider dose modification for vincristine for severe increase in transaminases.

Bilirubin	Vincristine (% previous dose)	Cyclophosphamide (% previous dose)
1 – 2 X ULN	50%	100%
2 – 4 x ULN	25%	Caution
> 4 ULN	OMIT	Caution

Renal Impairment

Creatinine	Vincristine	Cyclophosphamide
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Clearance (mL/min)	(% previous dose)	(% previous dose)
>30-50	No dose adjustment required.	100%
10-30		50-75%
< 10		50% or Omit

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F - Adverse Effects

Refer to prednisone, [vinCRISStine](#), [cyclophosphamide](#) drug monograph(s) for additional details of adverse effects

Most Common Side Effects	Less Common Side Effects, but may be Severe
<ul style="list-style-type: none"> • Alopecia • Nausea and vomiting • Myelosuppression ± infection and bleeding (may be severe) • Constipation • Anorexia • Peripheral neuropathy • Steroid effects (e.g. weight gain, GI irritation, hyperglycemia, insomnia) 	<ul style="list-style-type: none"> • ↑ Antidiuretic hormone • ↑ LFTs • Arterial or venous thromboembolism • Cardiotoxicity • Hemolytic uremic syndrome • Nephrotoxicity • Pancreatitis • Pneumonitis • GI perforation • Tumor lysis syndrome • Steroid effects (e.g. myopathy, cataracts, osteoporosis)

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G - Interactions

Refer to [cyclophosphamide](#), [vinCRISStine](#), prednisone drug monograph(s) for additional details

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H - Drug Administration and Special Precautions

Refer to [cyclophosphamide](#), [vinCRISStine](#), prednisone drug monograph(s) for additional details

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I - Recommended Clinical Monitoring

Recommended Clinical Monitoring

- CBC; baseline and before each cycle. Interim counts should be done in first cycle and repeated if dose modification necessary.
- Blood glucose testing; baseline and regular
- Baseline and regular liver & renal function tests and urinalysis.
- Clinical toxicity assessment (including gastrointestinal, neurotoxicity, constipation and cystitis); at each visit
- Grade toxicity using the current [NCI-CTCAE \(Common Terminology Criteria for Adverse Events\) version](#)

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J - Administrative Information

Approximate Patient Visit	0.25 hour
Pharmacy Workload (average time per visit)	15.99 minutes
Nursing Workload (average time per visit)	36.667 minutes

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K - References

Bagley CM, DeVita VT, et al. Advanced lymphosarcoma: intensive cyclical combination chemotherapy with cyclophosphamide, vincristine and prednisone. *Ann Int Med*, 1972; 76: 227-234.

Cyclophosphamide, vincristine drug monographs, Cancer Care Ontario.

Klasa RJ, Meyer RM, Shustik C, et al. Randomized phase III study of fludarabine phosphate versus cyclophosphamide, vincristine, and prednisone in patients with recurrent low-grade non-Hodgkin's lymphoma previously treated with an alkylating agent or alkylator-containing regimen. *J Clin Oncol* 2002;20:4649-4654.

Marcus R, Imrie K, Belch A, et al. CVP chemotherapy plus rituximab compared with CVP as first-line treatment for advanced follicular lymphoma. *Blood* 2005;105(4):1417-23.

July 2019 Updated hyperlink to vincristine drug monograph

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M - Disclaimer

Regimen Abstracts

A 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). It is intended for healthcare providers and is to be used for informational purposes only. It is not intended to constitute or be a substitute for medical advice, and all uses of the Regimen Abstract are subject to clinical judgment. Such information is provided on an "as-is" basis, without any representation, warranty, or condition, whether express, or implied, statutory or otherwise, as to the information's quality, accuracy, currency, completeness, or reliability, and Cancer Care Ontario disclaims all liability for the use of this information, and for any claims, actions, demands or suits that arise from such use.

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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