Regimen Monograph

A - Regimen Name

CVP(PO) Regimen

Cyclophosphamide (oral)-VinCRIStine-Prednisone

Disease Site	Hematologic - Leukemia - Chronic Lymphocytic (CLL)
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.
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 (maximum 2 mg)	Day 1
prednisone	100 mg	PO daily	Days 1 to 5
(Outpatient prescription in multiples of 50mg tablets)			

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C - Cycle Frequency

REPEAT EVERY 21 DAYS

For 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

Also see general recommendations.

Toxicity	Vincristine[1] (% previous dose)	Cyclophosphamide[1] (% previous dose)
Grade 4 hematological ≥ 7 d, febrile neutropenia, bleeding	100%	75% or G-CSF for low ANC
Grade 3 non-hematological toxicity	100%	75%
Grade 4 organ toxicity	Discontinue	Discontinue
Neurotoxicity	***Mild***: 67%; ***Moderate***: Hold until recovery, then ↓ 50%; ***Severe***: Discontinue	100%

[1]Prior to retreatment, major organ toxicity should have recovered to ≤ grade 2 and ANC to ≥ 1.5 x 10^9/L and platelets ≥ 100 x 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 Clearance (mL/min)	Vincristine (% previous dose)	Cyclophosphamide (% 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 cyclophosphamide, vinCRIStine, prednisone drug monograph(s) for additional details of adverse effects

Most Common Side Effects	Less Common Side Effects, but may be Severe
• 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)	• ↑ 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, vinCRIStine, prednisone drug monograph(s) for additional details

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H - Drug Administration and Special Precautions

Refer to cyclophosphamide, vinCRIStine, 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

Raphael B, Andersen JW, Silber R, et al. Comparison of chlorambucil and prednisone versus cyclophosphamide, vincristine, and prednisone as initial treatment for chronic lymphocytic leukemia: long-term follow-up of an Eastern Cooperative Oncology Group randomized clinical trial. J Clin Oncol 1991;9(5):770-6.

July 2019 Updated hyperlink to vincristine drug monograph

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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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