

Regimen Monograph

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A - Regimen Name

FCM+ALEM Regimen

Fludarabine-Cyclophosphamide-mitoXANTRONE-Alemtuzumab

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.

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.

Rationale and Uses For the treatment of T-cell prolymphocytic leukemia

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B - Drug Regimen

mitoXANTRONE	8 mg /m ²	IV	Day 1 ONLY
fludarabine	25 mg /m ²	IV	Days 1 to 3
cyclophosphamide	200 mg /m ²	IV	Days 1 to 3

Within 1 to 3 months after FCM completion, give:

Week 1:

alemtuzumab ^{a, b, c}	3 mg	IV / Subcut	(first dose)
alemtuzumab ^{a, b, c}	10 mg	IV / Subcut	(second dose)
alemtuzumab ^{a, b, c}	30 mg	IV / Subcut	(third dose)

(This drug is not publicly funded. Universal compassionate access program is available.)

Weeks 2 to 13:

alemtuzumab ^{a, b, c}	30 mg	IV / Subcut	3 times per week
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(This drug is not publicly funded. Universal compassionate access program is available.)

a. Although not approved by Health Canada, alemtuzumab has been given subcutaneously instead of intravenously; the incidence of infusion reactions may be lower.

b. Gradual dose escalation is required at the initiation of therapy and after treatment interruptions of 7 days or more. In most patients, escalation to 30mg can be accomplished in 3-7 days. Initial doses can be administered in various ways; sequentially (daily on days 1 to 3) and on alternate days (i.e. days 1, 3, and 5). Both schedules were used in clinical trials.

c. Single doses of alemtuzumab greater than 30 mg or cumulative weekly doses of greater than 90 mg should not be administered since higher doses are associated with an increased incidence of pancytopenia.

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C - Cycle Frequency

For **FCM: REPEAT EVERY 28 DAYS** for a usual total of 4 cycles unless disease progression or unacceptable toxicity.

In the clinical trial, **alemtuzumab** was given within 1 to 3 months of completion of FCM for a **SINGLE COURSE** (first week titration plus 12 weeks of maintenance).

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D - Premedication and Supportive Measures

Antiemetic Regimen: Moderate (FCM)
Minimal (Alemtuzumab)

Other Supportive Care:

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

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K - References

Hopfinger G, Busch R, Pflug N, et al. Sequential chemoimmunotherapy of fludarabine, mitoxantrone, and cyclophosphamide induction followed by alemtuzumab consolidation is effective in t-cell prolymphocytic leukemia. *Cancer* 2013;119:2258-67

June 2019 Updated emetic risk category

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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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