

## Regimen Monograph

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## A - Regimen Name

## FC(PO)+R Regimen

Fludarabine (oral)-Cyclophosphamide (oral)-Rituximab

**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.

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

Treatment of follicular lymphoma or other indolent histology, CD20-positive B-cell lymphoma\* after disease progression following first-line treatment, in patients who:

- Have not received previous treatment with rituximab for indolent B-cell lymphoma
- Have previously received rituximab (including combination rituximab-chemotherapy and/or rituximab monotherapy or maintenance rituximab) and have sustained a response and remained disease-free for at least 6

months after the last dose of rituximab

**\*excluding** small lymphocytic lymphoma, CLL

Refer to the NDFP eligibility forms for detailed funding criteria.

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

[riTUXimab](#)  
 New Drug Funding Program (Rituximab (Biosimilar IV) and Rituximab SC in Combination with Chemotherapy - Indolent B-cell Lymphoma) ([NDFP Website](#) )

[riTUXimab](#)  
 New Drug Funding Program (Rituximab (Biosimilar IV) and Rituximab SC - Retreatment - Indolent Lymphoma) ([NDFP Website](#)) (in combination with chemotherapy )

[riTUXimab \(subcut\)](#)  
 New Drug Funding Program (Rituximab (Biosimilar IV) and Rituximab SC in Combination with Chemotherapy - Indolent B-cell Lymphoma)

[riTUXimab \(subcut\)](#)  
 New Drug Funding Program (Rituximab (Biosimilar IV) and Rituximab SC - Retreatment - Indolent Lymphoma) (in combination with chemotherapy )

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## B - Drug Regimen

**Note:** Different rituximab products are NOT INTERCHANGEABLE.

**Cycle 1: All patients must receive their first dose of rituximab by IV infusion.**

<a href="#">riTUXimab</a> <sup>1</sup>	375 mg /m <sup>2</sup>	IV	Day 1
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(1) Give before FC chemotherapy.

<a href="#">fludarabine</a>	25 mg /m <sup>2</sup>	PO	Days 1 to 5
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(This drug is not currently publicly funded for this regimen and intent)

<a href="#">cyclophosphamide</a>	150 mg /m <sup>2</sup>	PO	Days 1 to 5
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**Cycle 2 and onwards:** (For a usual total of 6 cycles, including initial IV rituximab cycle(s) )

**Rituximab IV:**

<a href="#">riTUXimab</a>	375 mg /m <sup>2</sup>	IV	Day 1
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OR

**Rituximab (subcut):**

The subcutaneous formulation must only be given at the second or subsequent cycles, and only after at least 1 full rituximab IV dose.

<a href="#">riTUXimab (subcut)</a>	1400 mg	Subcut	Day 1
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**PLUS FC chemotherapy**

<a href="#">fludarabine</a>	25 mg /m <sup>2</sup>	PO	Days 1 to 5
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<a href="#">cyclophosphamide</a>	150 mg /m <sup>2</sup>	PO	Days 1 to 5
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## C - Cycle Frequency

**REPEAT EVERY 28 DAYS** until evidence of desired disease response or for usual total of 6 cycles.

For patients who responded to induction therapy, and were rituximab-naïve prior to induction, refer to maintenance rituximab regimen - RITU(MNT) or RITU(MNT-SC).

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## J - Administrative Information

Approximate Patient Visit	1-5 hours
Pharmacy Workload (average time per visit)	28.643 minutes
Nursing Workload (average time per visit)	84.167 minutes

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## K - References

Eve HE, Linch D, Qian W, et al. Toxicity of fludarabine and cyclophosphamide with or without rituximab as initial therapy for patients with previously untreated mantle cell lymphoma: results of a randomised phase II study. *Leuk Lymphoma*. 2009 Feb;50(2):211-5.

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Fabbri A, Lenoci M, Gozzetti A, et al. Low-dose oral fludarabine plus cyclophosphamide as first-line treatment in elderly patients with indolent non-Hodgkin lymphoma. *Br J Haematol*. 2007 Oct;139(1):90-3.

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Sacchi S, Pozzi S, Marcheselli R, et al. Rituximab in combination with fludarabine and cyclophosphamide in the treatment of patients with recurrent follicular lymphoma. *Cancer* 2007 Jul 1;110(1):121-8.

Tam CS, Wolf M, Prince HM, Januszewicz EH, et al. Fludarabine, cyclophosphamide, and rituximab for the treatment of patients with chronic lymphocytic leukemia or indolent non-Hodgkin lymphoma. *Cancer*. 2006 Jun 1;106(11):2412-20.

Tam CS, Wolf MM, Januszewicz EH, et al. Fludarabine and cyclophosphamide using an attenuated dose schedule is a highly effective regimen for patients with indolent lymphoid malignancies.

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Cancer 2004;100:2181–9.

Eucker J, Schille C, Schmid P, et al. The combination of fludarabine and cyclophosphamide results in a high remission rate with moderate toxicity in low-grade non-Hodgkin's lymphomas. *Anti-Cancer Drugs* 2002;13:907–13.

Thomas DW, Owen RG, Johnson SAN, et al. Superior quality and duration of responses among patients with mantle cell lymphoma treated with fludarabine and cyclophosphamide with or without rituximab compared with prior responses to CHOP. *Leukemia & Lymphoma* 2005;46(4):549 – 52.

### **PEBC Advice Documents or Guidelines**

- [Rituximab in Lymphoma and Chronic Lymphocytic Leukemia](#)

**August 2020** Updated NDFP forms and interchangeability information in Drug Regimen section

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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.*

*The information set out in the drug monographs, regimen monographs, appendices and symptom management information (for health professionals) contained in the Drug Formulary (the "Formulary") is intended for healthcare providers and is to be used for informational purposes only. The information is not intended to cover all possible uses, directions, precautions, drug interactions or adverse effects of a particular drug, nor should it be construed to indicate that use of a particular drug is safe, appropriate or effective for a given condition. The information in the Formulary is not intended to constitute or be a substitute for medical advice and should not be relied upon in any such regard. All uses of the Formulary are subject to clinical judgment and actual prescribing patterns may not follow the information provided in the Formulary.*

*The format and content of the drug monographs, regimen monographs, appendices and symptom management information contained in the Formulary will change as they are reviewed and revised on a periodic basis. The date of last revision will be visible on each page of the monograph and regimen. Since standards of usage are constantly evolving, it is advised that the Formulary not be used as the sole source of information. It is strongly recommended that original references or product monograph be consulted prior to using a chemotherapy regimen for the first time.*

*Some Formulary documents, such as the medication information sheets, regimen information sheets and symptom management information (for patients), are intended for patients. Patients should always consult with their healthcare provider if they have questions regarding any information set out in the Formulary documents.*

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