Regimen Monograph

A - Regimen Name

ABFM+NELA(CONS) Regimen

Augmented Berlin-Frankfurt-Münster regimen (Consolidation) - Nelarabine

Disease Site

Hematologic
Leukemia - Acute Lymphoblastic (ALL)

Intent

Curative

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.

The information provided in this document is intended for use only in the management of adults with leukemia, and for cancer centres with expertise in treating acute leukemia.

Rationale and Uses

Treatment of adult patients (up to 30 years) with newly diagnosed intermediate- or high-risk T-cell acute lymphoblastic leukemia (T-ALL)

Supplementary Public Funding

mercaptopurine
ODB - General Benefit (mercaptopurine) (ODB Formulary)

pegaspargase
New Drug Funding Program (Pegaspargase (Outpatient) - Adult Acute Lymphoblastic Leukemia (ALL) Lymphoblastic Lymphoma Mixed or Biphenotypic Leukemia) (NDFP Website)

calaspargase pegol
New Drug Funding Program (Calaspargase Pegol (Outpatient) - Newly Diagnosed Acute Lymphoblastic Leukemia, Lymphoblastic Lymphoma or Mixed_Biphenotypic Leukemia) (NDFP Website)

nelarabine
New Drug Funding Program (Nelarabine - Newly Diagnosed T-cell Acute Lymphoblastic Leukemia) (NDFP Website)

back to top

B - Drug Regimen

Based on the AALL0434 protocol, after completion of the induction phase:

nelarabine	650 mg /m²	IV	Days 1-5, 43-47
cyclophosphamide	1000 mg /m²	IV	Days 8, 50
cytarabine	75 mg /m²	IV / Subcut	Days 8-11, 15-18, 50-53, 57-60
mercaptopurine	60 mg /m²	PO	Days 8-21, 50-63
methotrexate	15 mg	IT	Days 15, 22*, 57, 64

* Omit on day 22 for CNS3 patients (refer to AALL0434 protocol for definition).

vinCRIStine	1.5 mg /m²	IV	Days 22, 29, 64, 71

(maximum 2 mg per dose)

pegaspargase†	2500 units /m²	IV / IM	Days 22, 64

†May consider calaspargase pegol instead of pegaspargase. Switches may be considered based on product availability; however, patients should not be switched from pegaspargase to calaspargase pegol (or vice versa) for toxicity or silent inactivation.

Different asparaginase products are **not interchangeable** and dosing schedules are different. For example, giving calaspargase pegol at the same dose and frequency as pegaspargase may result in higher asparaginase activity exposures, which may increase toxicities. Refer to local protocols for dosing information.

back to top

C - Cycle Frequency

Single 11-week cycle, followed by Interim Maintenance - ABFM(INTERIM MNT)

back to top

D - Premedication and Supportive Measures

Antiemetic Regimen: Moderate (Days 8, 50)
Low (Days 9-11, 15-18, 51-53, 57-60)
Minimal (Other treatment days)

Other Supportive Care:

- Also refer to CCO Antiemetic Recommendations.
- Antiemetics should be given as per institutional guidelines.
- Consider PJP and other prophylaxis for infection based on institutional guidelines.

back to top

J - Administrative Information

Pharmacy Workload (average time per visit)	31.424 minutes
Nursing Workload (average time per visit)	52.806 minutes

back to top

K - References

Angiolillo AL, Schore RJ, Devidas M, et al. Pharmacokinetic and pharmacodynamic properties of calaspargase pegol Escherichia coli L-asparaginase in the treatment of patients with acute lymphoblastic leukemia: results from Children's Oncology Group Study AALL07P4. J Clin Oncol 2014 Dec 1;32(34):3874-82.

CADTH reimbursement recommendation: Calaspargase Pegol (Asparlas; acute lymphoblastic leukemia). Canadian Journal of Health Technologies 2024 January;4(1).

CADTH reimbursement review. Calaspargase Pegol (Asparlas; acute lymphoblastic leukemia). Canadian Journal of Health Technologies 2024 April;4(4).

CADTH reimbursement recommendation: Nelarabine (for addition to front-line multiagent therapy of pediatric, adolescent, and young adult patients (aged 1 year to 30 years at diagnosis) with intermediate- or high-risk T-cell acute lymphoblastic leukemia). October 2023.

Dunsmore KP, Winter SS, Devidas M, et al. Children's Oncology Group AALL0434: A phase III randomized clinical trial testing nelarabine in newly diagnosed T-cell acute lymphoblastic leukemia. J Clin Oncol. 2020 Oct 1;38(28):3282-93. doi: 10.1200/JCO.20.00256.

November 2024 Updated info on non-interchangeability of asparaginase products in section B

back to top

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.

While care has been taken in the preparation of the information contained in the Formulary, 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.

CCO and the Formulary's content providers shall have no liability, whether direct, indirect, consequential, contingent, special, or incidental, related to or arising from the information in the Formulary or its use thereof, whether based on breach of contract or tort (including negligence), and even if advised of the possibility thereof. Anyone using the information in the Formulary does so at his or her own risk, and by using such information, agrees to indemnify CCO and its content providers from any and all liability, loss, damages, costs and expenses (including legal fees and expenses) arising from such person's use of the information in the Formulary.

back to top