

## Regimen Monograph

[Regimen Name](#) | [Drug Regimen](#) | [Cycle Frequency](#) | [Premedication and Supportive Measures](#) | [Administrative Information](#) | [References](#) | [Other Notes](#) | [Disclaimer](#)

## A - Regimen Name

# CRBPPEME+PEMB Regimen

CARBOplatin-Pemetrexed-Pembrolizumab

**Disease Site** Lung  
Non-Small Cell  
  
(Non-squamous)

**Intent** Neoadjuvant

**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** Neoadjuvant treatment for resectable early-stage II to IIIB (N2) non-small cell lung cancer (NSCLC)

(Refer to the NDFP eligibility form for detailed funding criteria.)

**Supplementary** [pembrolizumab](#)**Public Funding** New Drug Funding Program (Pembrolizumab - (Neo)adjuvant Therapy for Resectable Non-Small Cell Lung Cancer) ([NDFP Website](#))[back to top](#)**B - Drug Regimen**

<a href="#">pembrolizumab</a> <sup>1,2</sup>	2 mg /kg	IV (max 200 mg)	Day 1
<a href="#">pemetrexed</a>	500 mg /m <sup>2</sup>	IV	Day 1
<a href="#">CARBOplatin</a> <sup>**</sup>	AUC 5 to 6 <sup>**</sup>	IV	Day 1

<sup>1</sup>Dosing based on NDFP funding criteria.

<sup>2</sup>Give pembrolizumab before chemotherapy when given on the same day.

<sup>\*\*</sup>Adjust Carboplatin dose to AUC target (using Calvert formula) as outlined in "Other Notes" section.

[back to top](#)**C - Cycle Frequency****REPEAT EVERY 3 WEEKS (Q21 DAYS)**

For 4 cycles unless disease progression or unacceptable toxicity occurs

Refer to PEMB for adjuvant treatment phase.

[back to top](#)

## D - Premedication and Supportive Measures

**Antiemetic Regimen:** Moderate + NK1 antagonist (Carboplatin AUC  $\geq 5$ )

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

### **Pembrolizumab Premedication (prophylaxis for infusion reactions):**

- Routine pre-medication is not recommended.
- May consider antipyretic and H1-receptor antagonist in patients who experienced a grade 1-2 infusion reaction.

### **Other Supportive Care:**

**Screen for hepatitis B virus in all cancer patients starting systemic treatment.** Refer to the [hepatitis B virus screening and management](#) guideline.

Avoid the use of corticosteroids or immunosuppressants before starting pembrolizumab treatment.

### Pemetrexed:

- Vitamin B12 1000mcg IM every 9 weeks, Folic acid 0.4 - 1 mg PO daily (both starting  $\geq 1$  week prior to pemetrexed administration continue throughout and 3 weeks after last dose of Pemetrexed).
- Dexamethasone 4mg PO BID for 3 days starting day before chemotherapy suggested for rash prophylaxis.
- Note: NSAIDs should be held for 2-5 days prior and 2 days after pemetrexed (refer to pemetrexed monograph)

[back to top](#)

## J - Administrative Information

Approximate Patient Visit	2-3 hours
Pharmacy Workload (average time per visit)	42.319 minutes
Nursing Workload (average time per visit)	51.667 minutes

[back to top](#)

## K - References

Canada's Drug Agency. Reimbursement Recommendation: Pembrolizumab (Keytruda). Canadian Journal of Health Technologies. April 2025.

Carboplatin drug monograph. Ontario Health (Cancer Care Ontario).

Pembrolizumab drug monograph. Ontario Health (Cancer Care Ontario).

Pemetrexed drug monograph. Ontario Health (Cancer Care Ontario).

Wakelee H, Liberman M, Kato T, et al. Perioperative pembrolizumab for early-stage non-small-cell lung cancer. N Engl J Med 2023 Aug 10;389(6):491-503.

**July 2025** Updated Rationale/Uses, Supplemental Public Funding, and Drug Regimen sections

[back to top](#)

## L - Other Notes

### Calvert Formula

**DOSE (mg) = target AUC X (GFR + 25)**

- AUC = product of serum concentration (mg/mL) and time (min)
- GFR (glomerular filtration rate) expressed as measured Creatinine Clearance or estimated from Serum Creatinine (by Cockcroft and Gault method or Jelliffe method)

(Calvert AH, Newell DR, Gumbrell LA, et al, Carboplatin dosage: Prospective evaluation of a simple formula based on renal function. J Clin Oncol, 1989; 7: 1748-1756)

[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](#)