Regimen Monograph

A - Regimen Name

AC+PEMB Regimen

ADRIAMYCIN ® (DOXOrubicin)-Cyclophosphamide-Pembrolizumab

Disease Site Breast

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

For neoadjuvant treatment of high-risk triple negative breast cancer (TNBC)

AC+PEMB is given as either the first or second phase of various chemotherapy backbone options (AC-PACL, AC-PACL(W), or CRBPPACL(W)-AC).

Supplementary Public Funding	**pembrolizumab** New Drug Funding Program (Pembrolizumab - Previously Untreated High-Risk Early-Stage Triple Negative Breast Cancer) (NDFP Website)

back to top

B - Drug Regimen

pembrolizumab[1,2]	2 mg /kg	IV (max 200 mg)	Day 1
DOXOrubicin	60 mg /m²	IV	Day 1
cyclophosphamide	600 mg /m²	IV	Day 1

[1]Dosing based on NDFP funding criteria. Refer to NDFP form for alternative pembrolizumab dosing schedule (4 mg/kg IV q6 weeks).

[2]Give pembrolizumab before chemotherapy when given on the same day.

back to top

C - Cycle Frequency

REPEAT EVERY 21 DAYS

For 4 cycles unless disease progression or unacceptable toxicity occurs.

Neoadjuvant AC-PACL with Pembrolizumab (AC+PEMB x 4 cycles, then PACL+PEMB or PACL(W)+PEMB x 4 cycles):

- Refer to PACL+PEMB or PACL(W)+PEMB for details on the second neoadjuvant treatment phase.

Neoadjuvant CRBPPACL(W)-AC with Pembrolizumab (CRBPPACL(W)+PEMB x 4 cycles, then AC+PEMB x 4 cycles)**:**

- Refer to PEMB for the adjuvant pembrolizumab monotherapy phase.

back to top

D - Premedication and Supportive Measures

Antiemetic Regimen: High

Febrile Neutropenia Risk: Low

(AC-PACL)

Moderate
(CRBPPACL(W)-AC)

Also refer to CCO Antiemetic Recommendations.

Premedication for pembrolizumab (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.

Screen for hepatitis B virus in all cancer patients starting systemic treatment. Refer to the hepatitis B virus screening and management guideline.

Other Supportive Care:

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

back to top

J - Administrative Information

Approximate Patient Visit	2 hours
Pharmacy Workload (average time per visit)	39.814 minutes
Nursing Workload (average time per visit)	57.333 minutes

back to top

K - References

BC Cancer Protocol Summary for NEOAdjuvant Therapy for Triple Negative Breast Cancer Using Carboplatin and Weekly PACLitaxel Followed by DOXOrubicin and Cyclophosphamide. June 14, 2021.

CADTH Reimbursement recommendation - Pembrolizumab: For the treatment of adult patients with high-risk early-stage triple negative breast cancer. September 2022.

Cyclophosphamide, doxorubicin, and pembrolizumab drug monographs, Ontario Health (Cancer Care Ontario).

Loibl S, O'Shaughnessy J, Untch M et al. Addition of the PARP inhibitor veliparib plus carboplatin or carboplatin alone to standard neoadjuvant chemotherapy in triple-negative breast cancer (BrighTNess): a randomised, phase 3 trial. Lancet Oncol. 2018; 19(4): 497–509.

Schmid J, Cortes L, Pusztai L, et al. Pembrolizumab for early triple-negative breast cancer. N Engl J Med 2020;382:810-21.

Schmid P, Cortes J, Dent R, et al. Event-free survival with pembrolizumab in early triple-negative breast cancer. N Engl J Med 2022;386:556-67.
DOI: 10.1056/NEJMoa2112651

Sikov WM, Berry DA, Perou CM et al. Impact of the addition of carboplatin and/or bevacizumab to neoadjuvant once-per-week paclitaxel followed by dose-dense doxorubicin and cyclophosphamide on pathologic complete response rates in stage II to III triple-negative breast cancer: cALGB 40603 (Alliance). J Clin Oncol 2015; 33(1): 13–21.

September 2023 Updated the "Administration Information" section with nursing and pharmacy workload.

back to top

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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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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back to top