BC Cancer Protocol Summary for the Adjuvant Treatment of Resected Triple Negative Breast Cancer using Pembrolizumab

Protocol Code	BRAJPEM
Tumour Group	*Breast*
Contact Physician	*Dr. Nathalie Levasseur* *Dr. Stephen Chia*

ELIGIBILITY:

Patients must have:
- Triple negative breast cancer (ER, PR, and HER2 negative based on ASCO/CAP guidelines*),
- Completed NEOAdjuvant treatment with BRPCTAC or BRPCWTAC,
- Clinical stage IIA or greater disease, and
- Fully resected or planned surgical resection is pending

  * Patients are considered triple negative if ER and PR Allred score 0 to 2 out of 8, and/or immunohistochemistry (IHC) score is 0. All other cases require approval via BC Cancer Compassionate Access Program (CAP)

Patients should have:
- ECOG 0 to 2
- Adequate baseline hematological, hepatic and renal function
- Access to a treatment centre with expertise in managing immunotherapy mediated toxicities of pembrolizumab

Notes:
- PD-L1 status not required
- For pembrolizumab monotherapy only. BRAJPEM is not funded for use with concurrent chemotherapy
- Adjuvant radiotherapy is permitted at any time post-operatively and can be given concurrently with BRAJPEM, when clinically indicated.

EXCLUSIONS:

Patients must not have:
- Stage I disease
- Metastatic disease

CAUTIONS:

- Active, known or suspected autoimmune disease
- Patients with long term immunosuppressive therapy or systemic corticosteroids (requiring more than 10 mg predniSONE/day or equivalent)

TESTS:

- Baseline: CBC & Diff, platelets, creatinine, alkaline phosphatase, ALT, total bilirubin, LDH, sodium, potassium, TSH, morning serum cortisol
- Before each treatment: CBC & Diff, platelets, creatinine, alkaline phosphatase, ALT, total bilirubin, LDH, sodium, potassium, TSH
- If clinically indicated: chest x-ray, morning serum cortisol, creatine kinase, lipase, serum or urine HCG (required for woman of child bearing potential if pregnancy suspected), Free T3 and Free T4, serum ACTH levels, testosterone, estradiol, FSH, LH, glucose, ECG
- Weekly telephone nursing assessment for signs and symptoms of side effects while on treatment (Optional).

PREMEDICATIONS:

- Antiemetics are not usually required.
- Antiemetic protocol for low emetogenicity (see protocol SCNAUSEA).
- If prior infusion reactions to pembrolizumab: diphenhydrAMINE 50 mg PO, acetaminophen 325 to 975 mg PO, and hydrocortisone 25 mg IV 30 minutes prior to treatment

TREATMENT:

Drug	Dose	BC Cancer Administration Guideline
pembrolizumab	2 mg/kg (maximum 200 mg)	IV in 50 mL NS over 30 minutes using a 0.2 micron in-line filter

- Repeat **every 3 weeks** for 17 cycles* maximum (approximately 1 year), unless disease progression or unacceptable toxicity.
  *Includes cycles received as BRPCTAC or BRPCWTAC.

DOSE MODIFICATIONS:

No specific dose modifications. Toxicity managed by treatment delay and other measures (see SCIMMUNE protocol for management of immune-mediated adverse reactions to checkpoint inhibitors immunotherapy, http://www.bccancer.bc.ca/chemotherapy-protocols-site/Documents/Supportive%20Care/SCIMMUNE_Protocol.pdf**)**

PRECAUTIONS:

- **Serious immune-mediated reactions**: these can be severe to fatal and usually occur during the treatment course. They may include enterocolitis, intestinal perforation or hemorrhage, hepatitis, dermatitis, neuropathy, endocrinopathy, as well as toxicities in other organ systems. Early diagnosis and appropriate management are essential to minimize life-threatening complications (**see SCIMMUNE protocol for management of immune-mediated adverse reactions to checkpoint inhibitors immunotherapy,** http://www.bccancer.bc.ca/chemotherapy-protocols-site/Documents/Supportive%20Care/SCIMMUNE_Protocol.pdf)
- **Infusion-related reactions:** isolated cases of severe reaction have been reported. In case of a severe reaction, pembrolizumab infusion should be discontinued and appropriate medical therapy administered. Patients with mild or moderate infusion reaction may receive pembrolizumab with close monitoring. Premedications with acetaminophen and anti-histamine may be considered if there is a history of reaction.

Call Dr. Nathalie Levasseur or Dr. Stephen Chia or tumour group delegate at 604-877-6000 or 1-800-663-3333 with any problems or questions regarding this treatment program.

References

1. Schmid P, Cortes J, Pusztai L, et al. KEYNOTE-522 Investigators. Pembrolizumab for Early Triple-Negative Breast Cancer. N Engl J Med. 2020 Feb 27;382(9):810-821.