BC Cancer Protocol Summary for Alternative Adjuvant Treatment of Squamous Cell Carcinoma of the Head and Neck using Pembrolizumab and Concurrent CISplatin and Radiation

Protocol Code:	*HNAJALPPRT*
Tumour Group:	*Head and Neck*
Contact Physician:	*HN Systemic Therapy*

ELIGIBILITY:

Patients must have:

- Resected locally advanced squamous cell carcinoma of the head and neck (HNSCC) at high risk of recurrence (with positive margins or extracapsular extension),
- PD-L1 CPS score greater than or equal to 1%
- Eligible for and completed neoadjuvant treatment with HNNAPMB prior to resection,
- Inability to receive or tolerate HNAJPMBPRT (CISplatin 100mg/m^2 every 3-week regimen), per provider discretion

EXCLUSIONS:

Patient must not have:

- Distant metastases
- Tumours outside the oropharynx, larynx, hypopharynx or oral cavity
- Contraindication to CISplatin (e.g. deafness, intolerance to fluid load, neuropathy)

CAUTIONS:

- Active uncontrolled autoimmune disease
- Known active hepatitis B, C or HIV
- Patients with long term immunosuppressive therapy or systemic corticosteroids (requiring more than 10 mg predniSONE/day or equivalent)

TESTS:

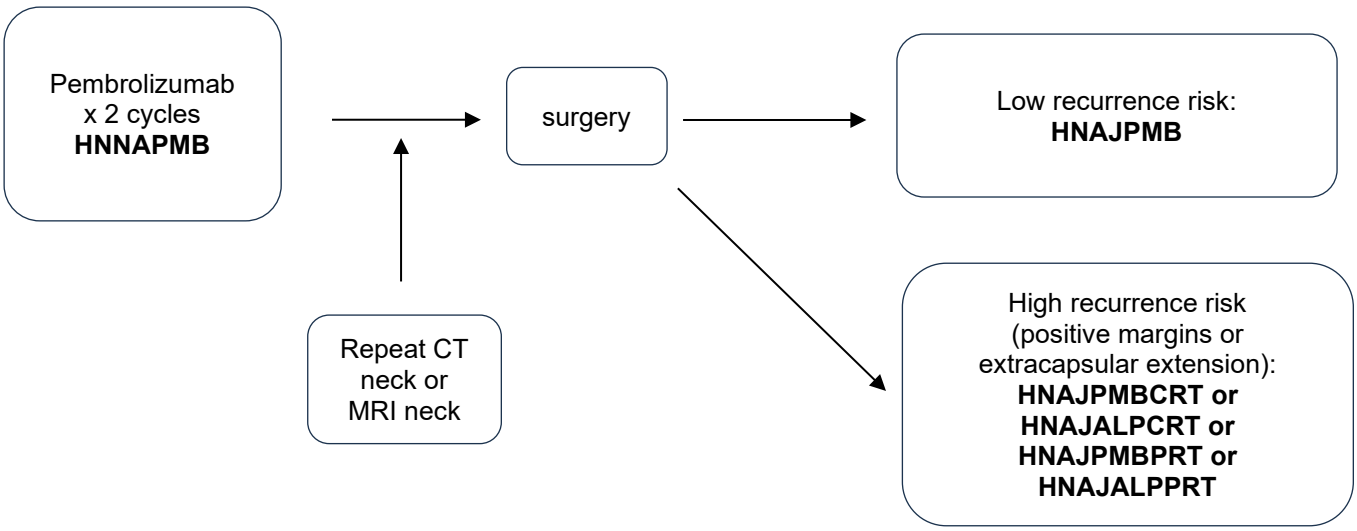
- Baseline: CBC & Diff, creatinine, ALT, total bilirubin, alkaline phosphatase, sodium, potassium, urea, albumin, magnesium, calcium, phosphate, TSH, serum or urine HCG (required for women of childbearing potential if pregnancy suspected)
- Cycles 1 to 2:
    - Before Day 1 of each cycle: CBC & Diff, creatinine, alkaline phosphatase, ALT, total bilirubin, LDH, sodium, potassium, calcium, albumin, magnesium TSH
    - Before Day 8 and 15: CBC & Diff, creatinine, sodium, potassium, calcium, albumin, magnesium
- Cycle 3: CBC & Diff, creatinine, alkaline phosphatase, ALT, total bilirubin, LDH, sodium, potassium, calcium, albumin, magnesium TSH
- Cycle 4 and onwards, before each treatment: CBC & Diff, creatinine, alkaline phosphatase, ALT, total bilirubin, LDH, sodium, potassium, TSH

- If clinically indicated: chest x-ray, morning serum cortisol, lipase, random glucose, serum or urine HCG (required for women of childbearing potential if pregnancy suspected), free T3 and free T4, serum ACTH levels, testosterone, estradiol, FSH, LH, HBV viral load, ECG
- Weekly telephone nursing assessment for signs and symptoms of side effects while on treatment (optional).

PREHYDRATION:
1,000 mL NS with 20 mmol potassium chloride and 2 g magnesium sulphate over 60 minutes, prior to CISplatin

PREMEDICATIONS:
- For Cycles 1 to 2 (and 3 if CISplatin ordered): Antiemetic protocol for highly emetogenic chemotherapy (see protocol SCNAUSEA).
- For Cycle 3 and onwards (if only pembrolizumab ordered): Antiemetics are not usually required. If required, antiemetic protocol for low emetogenicity (see 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 SCHEMA:



TREATMENT:
Note: Since CISplatin is a radio-sensitizing as well as an active agent, it is to be administered on a day on which radiation therapy is delivered. If radiation therapy is cancelled, do not give CISplatin that day: postpone until radiation therapy resumes. Pembrolizumab may be continued during CISplatin or radiation therapy delay.

Cycle 1 to 2: treatment to start on Day 1 of radiation therapy

Drug	Dose	BC Cancer Administration Guidelines
pembrolizumab	2 mg/kg* on Day 1 (maximum 200 mg)	IV in 50 mL NS over 30 minutes using a 0.2 micron in-line filter
CISplatin	40 mg/m^2 on Days 1, 8 and 15	IV in 100 to 500 mL NS over 30 to 60 minutes

*Select dose per Dose Banding Table (appendix).

- Repeat every 21 days for 2 cycles

Cycle 3: starts 21 days after Cycle 2 Day 1

Drug	Dose	BC Cancer Administration Guidelines
pembrolizumab	2 mg/kg* on Day 1 (maximum 200 mg)	IV in 50 mL NS over 30 minutes using a 0.2 micron in-line filter
CISplatin	40 mg/m^2 on Days 1 (optional)**	IV in 100 to 500 mL NS over 30 to 60 minutes

*Select dose per Dose Banding Table (appendix).

**If radiation therapy is planned for longer than 6 weeks, CISplatin may be ordered.

Cycles 4 and onwards: starts 21 days after Cycle 3 Day 1

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

*Select dose per Dose Banding Table (appendix).

- Repeat every 21 days until disease progression, unacceptable toxicity up to a maximum of 17 cycles of 3-weekly dosing (or equivalent combination of 3-weekly and 6-weekly doses), including doses given as part of HNNAPMB. Patients may have treatment breaks for reasons other than progression (e.g. toxicities).

OR

Drug	Dose	BC Cancer Administration Guideline
pembrolizumab	4 mg/kg* (maximum 400 mg)	IV in 50 mL NS over 30 minutes using a 0.2 micron in-line filter

*Select dose per Dose Banding Table (appendix).

- Repeat every 42 days until disease progression, unacceptable toxicity up to a equivalent maximum of 17 cycles of 3-weekly dosing (equivalent combination of 3-weekly and 6-weekly doses), including doses given as part of HNNAPMB. Patients may have treatment breaks for reasons other than progression (e.g. toxicities).

DOSE MODIFICATIONS:

1. **For pembrolizumab:** 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).

2. **Hematological toxicity: for CISplatin**

ANC (x 10^9/L)		Platelets (x 10^9/L)	Dose
Greater than or equal to 0.8	and	Greater than or equal to 100	100%
Less than 0.8	or	Less than 100	Consider 50% dose reduction or delay

3. Renal dysfunction: for CISplatin

Creatinine clearance (mL/minute)	Dose
Greater than or equal to 50	100%
Less than 50	Delay chemotherapy, recheck in 1 week
Less than 50 after overnight hydration	Discontinue protocol

PRECAUTIONS:

1. **Renal Toxicity:** Nephrotoxicity is common with CISplatin. Encourage oral hydration. Avoid nephrotoxic drugs such as aminoglycosides.
2. **Ototoxicity:** CISplatin is ototoxic and its use must be cautioned in individuals with existing hearing loss.
3. **Neutropenia**: Fever or other evidence of infection must be assessed promptly and treated aggressively.
4. **Serious immune-mediated reactions**: can be severe to fatal and usually occur during the treatment course, but may develop months after discontinuation of therapy. They may include enterocolitis, intestinal perforation or hemorrhage, hepatitis, dermatitis, neuropathy, endocrinopathy, pneumonitis, 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).
5. **Infusion-related reactions:** isolated cases of severe infusion reactions have been reported. Discontinue pembrolizumab with severe reactions (Grade 3 or 4). Patients with mild or moderate infusion reactions may receive pembrolizumab with close monitoring and use of premedication.

Contact the HN Systemic Therapy physician at your regional centre or the HN Systemic Therapy Chair with any problems or questions regarding this treatment program.

References:

1. Uppaluri R, Haddad RI, Tao Y et al. Neoadjuvant and Adjuvant Pembrolizumab in Locally Advanced Head and Neck Cancer. N Engl J Med 2025;393:37-50.
2. Pembrolizumab (Keytruda) Canada's Drug Agency (CDA-AMC) Reimbursement Recommendation. Canadian Journal of Health Technologies. October 2025; 5(10): 1-21.

Appendix. Dose Bands

PEMBROLIZUMAB DOSE BANDING TABLE (2 mg/kg capped 200 mg)

Ordered Dose (mg)		Rounded dose (mg)
From:	To:	
Less than 70		**Pharmacy prepares specific dose**
70	80.49	**75**
80.5	92.49	**85**
92.5	110.49	**100**
110.5	137.49	**125**
137.5	162.49	**150**
162.5	187.49	**175**
187.5	200	**200**

PEMBROLIZUMAB DOSE BANDING TABLE (4 mg/kg capped 400 mg)

Ordered Dose (mg)		Rounded dose (mg)
From:	To:	
Less than 137.5		**Pharmacy prepares specific dose**
137.5	162.49	**150**
162.5	187.49	**175**
187.5	221.49	**200**
221.5	242.49	**225**
242.5	264.49	**250**
264.5	284.49	**275**
284.5	332.49	**300**
332.5	374.49	**350**
374.5	400	**400**