Pembrolizumab for neo/adjuvant treatment of head & neck cancer

Indication

Resectable locally advanced head and neck squamous cell carcinoma as neoadjuvant treatment, continued as adjuvant treatment in combination with radiation therapy with or without concomitant cisplatin and then as monotherapy in adults whose tumours express PD-L1 with a CPS ≥ 1.

Regimen details

Pre-operatively:
Pembrolizumab 200mg intravenously every 3 weeks for 2 doses

Post-operatively:
Pembrolizumab 400mg intravenously every 6 weeks for 8 doses
Given in combination with radiotherapy +/- concurrent chemotherapy.

If given in combination with chemotherapy, consult the relevant chemotherapy protocol

Cycle frequency

As above

Number of cycles

As above

Administration

Delivery
Except for the dose(s) given concurrently with radiotherapy (which should be given at the cancer centre), treatment should be given at the local chemotherapy unit

Administration
Pembrolizumab should be administered in 100mL sodium chloride 0.9% over 30 minutes.

Pembrolizumab should be administered via an infusion set with an in-line sterile, non-pyrogenic, low protein binding filter (pore size 0.2 – 5.0µm).

After the infusion the line should be flushed with 30mL sodium chloride 0.9%.

Patients should be monitored during the infusion for infusion related reactions. For mild to moderate reactions, decrease the infusion rate and closely monitor. Premedication with paracetamol and chlorphenamine should be used for further doses. For severe infusion related reactions discontinue treatment.

Pre-medication

Nil

Emetogenicity

This regimen has low emetogenic potential

Additional supportive medication

None

Extravasation
Neutral (Group 1)

Investigations – pre first cycle
Standard pre-SACT tests as per network policy

Investigations – pre subsequent cycles

Investigation	**Validity period** (or as per local policy)
FBC	48 hours
U+E (including creatinine)	48 hours
LFT inc AST	48 hours
LDH (melanoma only)	48 hours
Thyroid function	Every 6 weeks unless otherwise clinically indicated
Glucose	As clinically indicated
Calcium	As clinically indicated
Cortisol	At consultant discretion

Standard limits for administration to go ahead
If blood results not within range, authorisation to administer **must** be given by prescriber/ consultant.

Investigation	**Limit**
Neutrophil count	≥ 1.0 x 10^9/L
Platelets	≥ 75 x 10^9/L
Creatinine Clearance (CrCl)	≥ 30mL/min
Bilirubin	Serum total bilirubin ≤1.5 X ULN or direct bilirubin ≤ULN for patient with total bilirubin level >1.5 ULN
ALT/AST	≤2.5 X ULN or ≤5 X ULN with liver metastases
Alkaline Phosphatase	< 5 x ULN

Dose modifications
Do not amend the dose of pembrolizumab

Consider immunotherapy driven toxicity as a potential reason for all changing laboratory results and discuss with a consultant if any concerns.

- **Haematological toxicity**

Discuss with the consultant if:
Neutrophils <1.0 x 10^9/L
Platelets <75 x 10^9/L

- **Renal impairment/toxicity**

The safety and efficacy of pembrolizumab has not been studied in patients with renal impairment. No specific dose adjustments are recommended in mild to moderate renal impairment.
Discuss with consultant if CrCl <30mL/min.

- **Hepatic impairment/toxicity**

The safety and efficacy of pembrolizumab has not been studied in patients with hepatic impairment. No specific dose adjustments are recommended in mild hepatic impairment. See below for management of hepatitis.

- **Endocrine toxicity**

Dose delays are not routinely required for abnormalities in endocrine function. Please seek advice from patient's treating clinician.

- **Other toxicities**

Patients must be advised to seek specialist advice of they experience side effects as these can worsen rapidly.

Immune reactions may occur during or after completion of treatment.

Treatment of toxicities

Immunotherapy toxicities should be aggressively managed as can cause permanent and life-threatening complications.
Refer to UKONS and ESMO guidance for treatment of immune related toxicities.
Available at:

https://www.healthierlsc.co.uk/application/files/7916/8977/4069/UKONS_AO_initial_management_Guidelines_FINAL_VERSION_2023.pdf

https://www.healthierlsc.co.uk/application/files/8916/8744/0377/ESMO_IO_Toxicity_Treatment_Guidance.pdf

- **Toxicity monitoring and dose delays/discontinuation.**

All toxicities should be actively management and monitored. Any dose delays or discontinuation should be supervised by the treating clinician and made on an individual patient basis.

Adverse effects - for full details consult product literature/ reference texts

- **Serious side effects**

Myelosuppression
Pneumonitis
Colitis
Hepatitis
Nephritis
Endocrinopathies
Pancreatitis

- **Frequently occurring side effects**

Myelosuppression
Reduced appetite
Headache Dizziness
Dry eyes
Cough
Diarrhoea
Nausea Rash
Fatigue
Hyperglycaemia
Hypocalcaemia

- **Other side effects**

Arthralgia

Significant drug interactions – for full details consult product literature/ reference texts

Corticosteroids: use of systemic corticosteroids at baseline, before starting pembrolizumab, should be avoided because of their potential interference with the pharmacodynamic activity and efficacy of pembrolizumab. However, systemic corticosteroids or other immunosuppressants can be used after starting pembrolizumab to treat immune-related adverse reactions.

Additional comments

Women of childbearing potential should use effective contraception during treatment and for at least 4 months after the last dose.

References

Pembrolizumab SPC: https://www.medicines.org.uk/emc/product/2498/smpc
NICE guidance: https://www.nice.org.uk/guidance/indevelopment/gid-ta11599
Uppaluri R, Haddad RI, Tao Y, Le Tourneau C, Lee NY, Westra W, *et al.* Neoadjuvant and adjuvant pembrolizumab in locally advanced head and neck cancer. **N Engl J Med.** 2025;393(1):37–50

THIS PROTOCOL HAS BEEN DIRECTED BY DR MIRZA, DESIGNATED LEAD CLINICIAN FOR HEAD & NECK CANCER

RESPONSIBILITY FOR THIS PROTOCOL LIES WITH THE HEAD OF SERVICE

Date: April 2026
Review: April 2028
VERSION: 1