PCV

INDICATION (ICD10) C71, C72

1. Oligodendroglioma (grade 2 or 3) adjuvant following radiotherapy and / or relapse after first line treatment.
2. Astrocytoma grade 2 adjuvant following radiotherapy.
   PS 0, 1, 2

REGIMEN

Day 1	**LOMUSTINE (CCNU)**	100mg/m^2 (maximum 200mg)	oral	single dose only
	VINCRISTINE	1.5mg/m^2 (maximum 2mg)	IV infusion	50ml sodium chloride 0.9% over 10 minutes
Days 1 to 10	**PROCARBAZINE**	100mg/m^2/day (maximum 200mg/day)	oral	in 3 divided doses

CYCLE FREQUENCY AND NUMBER OF CYCLES

Every 42 days for up to 6 cycles

ADMINISTRATION

Lomustine
Available as 40mg capsules
Take at night on an empty stomach

Procarbazine
Available as 50mg capsules
With or without food

ANTI-EMETICS

Moderate risk day 1 (take before lomustine dose)
Patients may already be taking dexamethasone for raised intracranial pressure
Low emetogenic risk days 2 to 10

CONCURRENT MEDICATION REQUIRED

Lomustine	Lorazepam 1mg single dose may be helpful

EXTRAVASATION AND TYPE OF LINE / FILTERS

Vincristine - vesicant (peripheral line free flow or central line via pump)

No filter
Peripheral or central line

INVESTIGATIONS

Blood results required before SACT administration
FBC, U&E and LFTs every cycle
Neutrophils x 10^9/L ≥1.5
Platelets x 10^9/L ≥100
Serum creatinine every cycle
Baseline weight and every cycle

MAIN TOXICITES AND ADVERSE REACTIONS

Lomustine	Myelosuppression
Procarbazine	Rash – allergic can be severe, often occurs after cycles 2 or 3
Vincristine	Neuropathy

INTERACTIONS WHICH MAY REQUIRE DOSE MODIFICATIONS
(not exhaustive list check SPC/BNF/Stockleys)

Procarbazine	Avoid weak MAO inhibitors, alcohol, narcotic analgesics, drugs with anticholinergic effects (including phenothiazine derivatives and tricyclic antidepressants), other CNS depressants and antihypertensive agents. High tyramine containing foods.
Vincristine	Lots of interactions, check carefully.

DOSE MODIFICATIONS

Haematological

If neutrophils <1.5x10^9/L and / or platelets <100x10^9/L, delay 1 week or until count recovered then restart at 75% dose, then at 50% dose with further myelosuppression, dose can be reduced further to 25% dose.

Non-haematological

Procarbazine
Rash stop procarbazine – do not restart.

Vincristine
Significant neuropathy omit vincristine.

Hepatic impairment

Lomustine
Mild and moderate no need for dose adjustment is expected
Severe not recommended

Procarbazine
No need for dose adjustments is expected.

Vincristine

Bilirubin >51micromol/L	give 50% dose

Renal impairment

Lomustine

CrCl >50ml/min	give 100%
CrCl 30-50ml/min	give 75%
CrCl <30ml/min	Not recommended

Procarbazine

CrCl <10ml/min	not recommended

Vincristine
No dose adjustment is needed.

REFERENCES

1. Thomas D et al. J Clin Oncol 2001; 19: 509 518
2. Cairncross et al. 2013 RTOG 9402 trial
3. Giraud EL, de Lijster B, Krens SD, Desar IME, Boerrigter E, van Erp NP. Dose recommendations for anticancer drugs in patients with renal or hepatic impairment: an update. Lancet Oncol 2023; 24: e229.

Assessments

	Pre	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Ongoing
Clinical assessment	X		Pre cycle		Pre cycle	Every cycle
SACT assessment (PS and toxicities)	X	X	X	X	X	Every cycle
FBC	X	X	X	X	X	Every cycle
U&E, calcium, magnesium & LFT	X	X	X	X	X	Every cycle
CrCl	X	X	X	X	X	Every cycle
CT scan	X					At cycle 6, Inform consultant team if not booked
Informed consent	X					Verbal each cycle
Height	X					
Weight recorded	X	X	X	X	X	Every cycle