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) orally single dose only
VINCRISTINE 1.5mg/m^2 (maximum 2mg) in 50ml sodium chloride 0.9% IV infusion over 10 minutes

Days 1 to 10 PROCARBAZINE 100mg/m^2/day (maximum 200mg/day) orally 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

No filter
Peripheral 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.

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-haematogical
Procarbazine
Rash stop procarbazine – do not restart.

Vincristine
Significant neuropathy omit vincristine.

Hepatic impairment
Procarbazine

Bilirubin >50micromol/L	consider giving 50%
Bilirubin >85micromol/L or AST >180iu	omit

Vincristine

Bilirubin 25-51 or AST 60-180u/L	give 50%
Bilirubin >51micromol/L and normal AST	give 50%
Bilirubin >51micromol/L and AST >180u/L	omit

Renal impairment
Lomustine

CrCl >60ml/min	give 100%
CrCl 45-60ml/min	give 75%
CrCl 30-45ml/min	give 50%
CrCl <30ml/min	Not recommended

Procarbazine

Serum creatinine >120micromol/L	Discuss
Serum creatinine >177micromol/L	give 50%
severe renal impairment	not recommended

REFERENCES
1. Thomas D et al. J Clin Oncol 2001; 19: 509 518
2. Cairncross et al. 2013 RTOG 9402 trial