

## CYCLOPOSPHAMIDE ETOPOSIDE – local funding required

### INDICATION (ICD10) C71.6

1. Medulloblastoma or other widespread intracranial tumour (unlicensed). PS 0, 1, 2

### REGIMEN

Days 1 to 21	<b>ETOPOSIDE</b>	100mg (50mg if heavily pretreated)	oral	once daily
Days 22 to 42	<b>CYCLOPHOSPHAMIDE</b>	100mg	oral	once daily

### CYCLE FREQUENCY AND NUMBER OF CYCLES

Every 42 days for up to 1 year

### ADMINISTRATION

Cyclophosphamide is available as 50mg tablets.

Etoposide is available as 50mg and 100mg capsules

### ANTI-EMETICS

Low emetic risk

### CONCURRENT MEDICATION REQUIRED

Sodium valproate 20mg/kg/day po days 1 to 42

Co-trimoxazole 480mg OD on Monday, Wednesday and Friday

### EXTRAVASATION AND TYPE OF LINE / FILTERS

Not applicable

### INVESTIGATIONS

Blood results required before SACT administration

FBC, U&E and LFTs days 1 and 14, then monthly

Neutrophils x 10<sup>9</sup>/L ≥1.5

Platelets x 10<sup>9</sup>/L ≥100

Baseline weight and every cycle

### MAIN TOXICITIES AND ADVERSE REACTIONS

Cyclophosphamide	may irritate bladder, increase oralhydration.
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### INTERACTIONS WHICH MAY REQUIRE DOSE MODIFICATIONS

(not exhaustive list check SPC/BNF/Stockleys)

Cyclophosphamide	<p>Cytochrome P450 enzyme inducers (e.g. rifampicin, carbamazepine, phenytoin, St Johns Wort, corticosteroids): may increase active cyclophosphamide metabolites.</p> <p>Allopurinol, Cimetidine and protease inhibitors: may increase active metabolites.</p> <p>Aprepitant, Ciprofloxacin, Fluconazole, Itraconazole: may reduce activation of cyclophosphamide and alter the effectiveness of treatment.</p> <p>Grapefruit juice: decreased or delayed activation of cyclophosphamide.</p> <p>Patients should be advised to avoid grapefruit juice.</p>
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## DOSE MODIFICATIONS

### Haematological

Platelets <100 or neutrophils <1.5x10<sup>9</sup>/L delay until recovered and then give 50% dose of both drugs

### Hepatic impairment

#### Cyclophosphamide

Bilirubin >86micromol/L	Discuss with clinician and consider omitting
Bilirubin 53-86micromol/L	Give 75% dose

#### Etoposide

Bilirubin ≥50micromol/L or decreased albumin	give 50% dose
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### Renal impairment

#### Cyclophosphamide

CrCl 10-29ml/min	Consider giving 75% dose
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#### Etoposide

CrCl >50ml/min	give 100% dose
CrCl 15-50ml/min	give 75% dose
CrCl <15ml/min	Further dose reduction

## REFERENCES

1. Adaptation from SIOP High Risk Medulloblastoma maintenance therapy proposal
2. Giraud EL, de Lijster B, Krens SD, Desai 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