

Ependymoma

Ependymal tumor after maximal safe resection

Low grade Ependymoma (WHO grade I- II)
Residual tumor present

High-grade ependymoma
(anaplastic grade III)

YES – 2nd look surgery if feasible consider safe re-excision **(B)**

If 2nd look surgery is not safe Post-operative adjuvant focal conformal RT 54Gy/30#/6wks **(A)**

NO: Amenable for Observation & close follow-up **(B)**

Neuraxis staging: MRI spine CSF cytology

Negative MRI spine and CSF

Positive MRI spine and/or CSF

Post operative adjuvant focal conformal RT **(A)**

- 59.4Gy/33#/6½ weeks
- 55.8Gy/31#/6wks in younger children and/or tumours in close in close proximity to critical structures like brainstem, optic apparatus, etc

Treat like embryonal CNS tumour with CSI + local tumour boost + adjuvant chemotherapy **(A)**

Progression

Re surgery if not causing morbidity **(A)**

Salvage Chemotherapy or Metronomic Chemotherapy **(C)**

Re-irradiation if ≥2yrs since primary RT **(B)**

1. High Grade (Gr III):
Children > 18months → RT
Children < 18months → Chemotherapy
2. Supratentorial RELA fusion +ve - Poor prognosis
Posterior Fossa EPN A – Poor prognosis
Posterior Fossa EPN B – Good prognosis
3. Spinal EPN – Good prognosis

Re-irradiation (if primary course of irradiation ≥2yrs ago) **(B)**

A= MANDATORY

B= OPTIMAL

C= OPTIONAL

Spinal ependymomas: follow similar algorithm as brain, but with reduced doses of RT

Recommended chemotherapy regimens in Ependymoma

Drugs	Dose	Days and Route
Baby Brain Protocol		
For infants (<3 years): every 4-weekly for 12 cycles		
Cyclophosphamide	1000mg/m ²	Day 1 only IV
Carboplatin	565mg/m ²	Day 1 only IV
Etoposide	150mg/m ²	Days 1-3 IV
Salvage Chemotherapy		
Regimen A- VCE chemotherapy (every 3-weekly for 6 cycles)		
Vincristine	1.5mg/m ²	Day 1 only IV
Cisplatin	30mg/m ²	Days 1-3 IV
Etoposide	150mg/m ²	Days 1-3 IV
OR		
Regimen B- ICE chemotherapy (every 3-weekly for 6 cycles)		
Ifosfamide	1500mg/m ²	Days 1-5 IV
Carboplatin	600mg/m ²	Day 1 only IV
Etoposide	100mg/m ²	Days 1-3 IV