

Table S1. Dose of radiation and chemotherapy administered, side effects, relapses, and death percentages associated with treatment methods.

Author	CSI (Gy)	Tumor bed (Gy)	Posterior fossa (Gy)	Whole brain (Gy)	Total (Gy)	Chemotherapy	ASCR	Histology	Side effects (%)	relapses (%)	deaths (%)
Allen et al., 2009 [12]	40	72	-	-	112	CDDP, ETOP, CYCLO, VCR, CARBO	N	NR	hematological toxicity (1.6) infection (14.5) progressive disease (16.9)	0.8	2.4
Ashley et al., 2012 [13]	-	23.4	23.4	-	46.8	Pre-radiation: CDDP, CYCLO, VCR, ETOP Post-radiation: CYCLO, VCR, ETOP	N	DMB (39) NMB (13) NOS (22)	infection (1.4) progressive disease (43.2)	39.2	4.1
Carrie et al., 2009 [14]	36	32	-	-	68	NO CHEMO	N	CMB (43) DMB (5)	endocrine dysfunction (16.4) hormone deficiency (3.6) hypothyroidism (9.1) panhypopituitarism (3.6)	26.0	NR
Christopherson et al., 2014 [15]	28.8	25	-	-	53.8	VCR, CCNU, CDDP, ETOP, CARBO, DXR	N	DMB (6) LCA (1) NOS (46)	nausea/vomiting (64.2) ototoxicity (15.1) cognitive dysfunction (49) secondary malignancy (7.5) hypothyroidism (15.1) hormone deficiency (1.9) visual disturbance (7.5) seizure (5.7) stroke (7.5) neurotoxicity (9.4) radio necrosis (3.8)	NR	5.7
Dufour et al., 2021 [16]	36 or 24	54		-	78 or 90	CARBO, ETOP, INN, TMZ	Y	CMB (34) DMB (4) LCA (11) NOS (2)	leukopenia (21.6) neutropenia (21.6) thrombocytopenia (68.7) febrile neutropenia (7.8) mucositis (7.8) diarrhea (2.0) hepatotoxicity (2.0) seizures (3.9)	29.4	31.4

Gajjar et al., 2006 [5]	SR: 23.4 HR: 38.5	SR: 55.8 HR: 55.8	SR: 36 HR: 50.4	-	SR: 115.2 HR: 144.7	CDDP, VCR, CYCLO, TOPO	Y	<u>SR</u> CMB (45) DMB (16) LCA (12) NOS (13) <u>HR</u> CMB (26) DMB (6) LCA (11) NOS (5)	<u>Both</u> infection (26.7) cardiotoxicity (2.2) hyperbilirubinemia (1.5) stomatitis (6.7) hepatotoxicity (6.0) secondary malignancy (0.7)	<u>SR</u> aseptic meningitis (1.2) myocarditis (1.2) progressive disease (2.3)	<u>HR</u> nephrotoxicity (2.1) congestive heart failure (2.1) seizures (2.1) progressive disease (2.1)	17.9 SR: 15.1 HR: 27.1	0.0
Gupta et al., 2022 [17]	36	32	-	-	68	NO CHEMO	N	CMB (6) DMB (4) NOS (10)	secondary malignancy (5)			30.0	25.0
Jakacki et al., 2012 [18]	36	19.8	-	-	55.8	Regimen A: CYCLO, VCR Regimen B: CYCLO, VCR, CDDP	N	NR	<u>Both</u> anaplasia (50.3) progressive disease (2.5)	<u>Regimen A#</u> neutropenia (18.0) thrombocytopenia (13.3) ototoxicity (0.0) infection (3.9)	<u>Regimen B#</u> neutropenia (78.8) thrombocytopenia (81.8) ototoxicity (12.1) infection (24.2)	2.5	0.0
Lannering et al., 2012 [19]	STR T: 23.4 HFR T: 36	STRT: 0 HFRT: 68	STRT: 55.8 HFRT: 60	-	STRT: 79.2 HFRT : 164	VCR, CDDP, CCNU	N	CMB: 273 DMB (47) LCA (16) NOS (2)	<u>Overall</u> neurotoxicity (15.1)	<u>STRT</u> ototoxicity (36.7)	<u>HFRT</u> ototoxicity (38.5)	19.5 STRT: 20.7 HFRT: 18.3	0.3
Lee et al., 2020 [20]	23.4	30.6	21.6	-	75.6	CARBO, INN, ETOP, CYCLO, MEL	Y	CMB (29) DMB (3) LCA (11)	stomatitis (70.0) vomiting (12.5) diarrhea (32.5) hepatotoxicity (60.0) hyperbilirubinemia (5.0) hypokalemia (42.5) hyperkalemia (7.5) hypernatremia (2.5) hepatic VOD (2.5) myocarditis (2.5)			10.0	15.0
Massimino et al., 2012 [21]	<10yr: 19.8 >10yr: 36	-	54	-	<10yr: 73.8 >10yr: 90	MTX, VCR, CCNU	N	NR	secondary malignancy (5.5)			56.2	2.7

Merchant et al., 2008 [8]	23.4	55.8	36	-	115.2	CDDP, VCR, CYCLO	Y	NR	progressive disease (15.1)	NR	NR
Michalski et al., 2021 [7]	SD: 23.4 LD: 18	-	-	-	54**	VCR, CDDP, CCNU, CYCLO	N	NR	secondary malignancy (3.8) mild hearing loss (23.9) severe hearing loss (7.1)	IFRT: 1.3 PFRT: 2.9	1.1
Okada et al., 2020 [22]	18	50	-	-	68	CYCLO, CDDP, VCR, ETOP, MTX, INN, MEL	Y	<u>AR</u> CMB (24) DMB (1) LCA (3) NOS (7) <u>HR</u> CMB (10) DMB (0) LCA (1) NOS (2)	hematological toxicity (100.0) hepatotoxicity (4.2) VZV encephalitis (2.1) HUS (2.1) hemorrhagic ileum ulcer (2.1) constipation (2.1) nephrotoxicity (2.1) anorexia (2.1) hearing loss (6.25) ataxia (2.1) cognitive dysfunction (2.1) secondary malignancy (4.2)	AR: 17.0 HR: 0.0	2.1
Packer et al., 1994 [23]	SD: 36 LD: 23.4	54	-	-	SD: 90 LD: 77.4	CCNU, CDDP, VCR	N	NR	secondary malignancy (4.8) ototoxicity (47.6) nephrotoxicity (20.6) hematological toxicity (52.4) ileus (3.2) neurotoxicity (25.4) peripheral neuropathy (23.4) progressive disease (12.7)	NR	6.3
Packer et al., 2006 [24]	23.4	-	32.4	-	55.8	Regimen A: CCNU, CDDP, VCR Regimen B: CYCLO, CDDP, VCR	N	NR	<u>Regimen A[#]</u> hematological toxicity (97.0) hepatotoxicity (12.0) nephrotoxicity (9.0) pulmonary toxicity (3.4) neurotoxicity (51.0) hearing impairment (28.0) electrolyte abnormality (6.2) infection (18.0, p < 0.01) performance (21.0) <u>Regimen B[#]</u> hematological toxicity (98.0) hepatotoxicity (11.0) nephrotoxicity (5.0) pulmonary toxicity (2.2) neurotoxicity (46.0) hearing impairment (23.0) electrolyte abnormality (12.0) infection (30.0, p < 0.01) performance (14.0)	16.4	14.2

Pezzotta et al., 1996 [25]	SR: 32.38 ± 5.46 HR: 33.23 ± 4.27	-	Overall: 52.42 ± 4.43 SR: 51.75 ± 2.92 HR: 52.70 ± 4.98	Overall: 39.09 ± 2.84 SR: 39.02 ± 3.63 HR: 39.12 ± 2.50	Overall: 124.48 ± 3.96 SR: 123.15 ± 4 HR: 125.05 ± 3.92	SR: NO CHEMO HR: VM26, PRO, MTX, VCR, CCNU	N	NR	<u>SR</u> headache (18.2) vomiting (18.2) hematological toxicity (9.1)	<u>HR</u> headache (25.9) vomiting (25.9) constipation (14.8) hematological toxicity (44.4) herpes zoster (3.7) stomatitis (11.1) asthenia (7.4) peripheral neuropathy (3.7) allergic reaction (3.7)	55.3	50.0
Rieken et al., 2011 [26]	RCT 31.8 RT: 34.2	-	54	-	RCT: 85.8 RT: 88.2	Varied*	N	CMB (19) DMB (20) UNK (27)	<u>RT</u> hematological toxicity (6.0) nausea/vomiting (11.0) neuropathy (0.0) dermal toxicity/alopecia (11.0) hypopituitarism (6.0) secondary malignancy (0.0) cognitive dysfunction (39.0)	<u>RCT</u> hematological toxicity (15.0) nausea/vomiting (13.0) neuropathy (29.0) dermal toxicity/alopecia (13.0) hypopituitarism (13.0) secondary malignancy (6.0) cognitive dysfunction (31.0)	47.0	7.6
Rutkowski et al., 2009 [27]	< 3yr: 24 > 3yr: 35.2	-	20	-	< 3yr: 44 > 3yr: 55.2	PRO, IFO, ETOP, CDDP, ARA-C, MTX, VCR	N	<u>HIT-SKK'87</u> CMB (20) DMB (4) NMB (5) <u>HIT-SKK-92</u> CMB (23) DMB (13) NMB (7)	secondary malignancy (1.4)		16.7	1.4
Sirachainan et al., 2018 [28]	36	-	54 - 56	-	90 - 92	CYCLO, VCR, CDDP, ETOP	Y	CMB (17) LCA (1) DMB (1) UNK (3)	febrile neutropenia (26.1) leukopenia (78.3) neutropenia (87.0) anemia (60.1) thrombocytopenia (56.5) hormone deficiency (47.8) ototoxicity (52.2)		43.5	39.1

Sung et al., 2013 [29]	27.9	4.32	28.08	-	60.3	CARBO, INN, ETOP, CYCLO, MEL	Y	CMB (14) DMB (2) LCA (4)	stomatitis (95.0) vomiting (15.0) diarrhea (40.0) hepatotoxicity (60.0) hypokalemia (50.0) hyperkalemia (5.0) hypernatremia (5.0) hepatic VOD (5.0)	20.0	30.0
Tian et al., 2020 [30]	36	-	55		91	Varied*	N	NR	NR	43.8 PF: 45.5 TB: 40	NR
Wahba et al., n.d. [31]	24	-	30.6	-	54.6	CDDP, VCR, CYCLO	N	NR	vomiting (30.3) neutropenia (39.4) thrombocytopenia (42.4) anemia (45.5) nephrotoxicity (9.1) neuropathy (18.2) cognitive dysfunction (24.2)	21.2	NR
Yasuda et al., 2008 [32]	≤ 5yr: 18 > 5yr: 24	≤ 5yr: 30 - 36 > 5yr: 30	-	-	≤ 5yr: 48 - 54 > 5yr: 54	IFO, CDDP, ETOP	N	NR	≤ 5yr dissemination (12.5) hormone deficiency (37.5) hemangioma (12.4) IQ reduction (25.0) > 5yr myelosuppression (12.5) dissemination (12.5) hormone deficiency (62.5)	≤ 5yr: 0.0 > 5yr: 25.0	≤ 5yr: 25.0 > 5yr: 37.5

Chemotherapy regimen varied between patients as it is a retrospective analysis.

**Patients were randomly assigned to receive radiation to the posterior fossa or involved field to a total cumulative radiation dose of 54Gy.

#Regimen A and B report toxicities after course three of chemotherapy

#Regimen A and B grade 3 or 4 toxicities

CSI: craniospinal irradiation, ASCR: autologous stem cell rescue, N: no ASCR, Y: yes ASCR, SR/AR: standard/average-risk, HR: high-risk, STRT: standard radiation therapy, HFRT: hyperfractionated radiation therapy, SD: standard-dose, LD: low-dose, RCT: radiochemotherapy, RT: radiation therapy, CMB: classic medulloblastoma, DMB: desmoplastic medulloblastoma, NMB: nodular medulloblastoma, LCA: large cell/anaplastic medulloblastoma, NOS: not otherwise specified, UNK: unknown, IQ: intelligence quotient, VOD: veno-occlusive disease, VZV: varicella zoster virus, HUS: hemolytic-uremic syndrome

ARA-C: cytarabine, CARBO: carboplatin, CCNU: lomustine, CDDP: cisplatin, CYCLO: cyclophosphamide, DXR: doxorubicin/Adriamycin, ETOP: etoposide; IFO: ifosfamide, INN: thiotepa, MEL: melphalan, MTX: methotrexate, PRO: procarbazine, TMZ: temozolomide, TOPO: topotecan, VCR: vincristine, VM26: teniposide