

Chemotherapy drugs approved by the NCCN for CNS tumors			
Drug name	Cross the BBB	References	More info
Carboplatin	V	<a href="#">Carboplatin drug monographs</a> <a href="#">CNS_NCCN</a> <a href="#">Pediatric CNS_NCCN</a>	NCCN approved for pediatric CNS tumors, Adult Glioma, Adult Intracranial and Spinal Ependymoma, Adult Medulloblastoma,
Cisplatin	V	<a href="#">Cisplatin drug monographs</a> <a href="#">CNS_NCCN</a>	NCCN approved as adjunct for the treatment of astrocytic tumors, medulloblastoma, oligodendroglioma, high-risk neuroblastoma
Cyclophosphamide	V	<a href="#">Cyclophosphamide drug monographs</a> <a href="#">CNS_NCCN</a>	NCCN approved for Adult Medulloblastoma, Primary CNS Lymphoma.
Etoposide	V	<a href="#">Etoposide drug monographs</a> <a href="#">Pediatric CNS_NCCN</a> <a href="#">CNS_NCCN</a>	NCCN approved for pediatric CNS tumors, Adult glioma, Adult Intracranial and Spinal Ependymoma, Adult Medulloblastoma, Primary CNS Lymphoma,
Ifosfamide	V	<a href="#">Ifosfamide drug monographs</a>	NCCN approved for brain metastasis
Methotrexate	V	<a href="#">Kozmiński et al. 2020</a> <a href="#">CNS_NCCN</a>	NCCN approved for Primary CNS Lymphoma, Brain Metastases
Paclitaxel	V	<a href="#">Shi et al. 2019</a> <a href="#">CNS_NCCN</a>	NCCN approved to treat brain metastasis
Pemetrexed	V	<a href="#">Ye et al. 2021</a> <a href="#">Linhares et al. 2022</a> <a href="#">CNS_NCCN</a>	NCCN approved for Primary CNS Lymphoma, Leptomeningeal Metastases
Temozolomide	V	<a href="#">Temozolomide drug monographs</a>	Approved by the NCCN
Topotecan	V	<a href="#">Topotecan drug monographs</a> <a href="#">CNS_NCCN</a>	NCCN approved to treat brain metastasis, Leptomeningeal Metastases
Vincristine	V/X	<a href="#">Vincristine drug monographs</a> <a href="#">Pediatric CNS_NCCN</a> <a href="#">CNS_NCCN</a>	NCCN approved for Pediatric CNS tumors, Adult Oligodendroglioma, Adult Glioma, Adult Medulloblastoma, Primary CNS Lymphoma,
Thiotepa	V	<a href="#">Thiotepa drug monographs</a> <a href="#">CNS_NCCN</a>	NCCN approved for Primary CNS Lymphoma, Leptomeningeal Metastases,
Busulfan	V	<a href="#">Busulfan drug monographs</a> <a href="#">CNS_NCCN</a>	NCCN approved for Primary CNS Lymphoma,
Lomustine	V	<a href="#">Lomustine drug monographs</a> <a href="#">Pediatric CNS_NCCN</a> <a href="#">CNS_NCCN</a>	NCCN approved for Pediatric Diffuse High-Grade Gliomas, Pediatric CNS tumors, Adult Glioma, Glioblastoma,
Chemotherapy drugs in trials that have been proven to penetrate the BBB			
5-fluorouracil / Capacitabin	V	<a href="#">5FU drug monographs</a>	Readily penetrates the BBB and CSF concentrations of about 7 mcM are reached within 30 minutes after intravenous administration
Cabazitaxel	V	<a href="#">Cabazitaxel drug monographs</a>	Was shown to cross the blood brain barrier in pre-clinical trials.
Dacarbazine	V/X	<a href="#">Dacarbazine drug monographs</a>	Minimal crossing of the BBB
Dactinomycin	V/X	<a href="#">Dactinomycin drug monographs</a>	Less than 10% cross the BBB
Docetaxel	V/X	<a href="#">Docetaxel drug monographs</a>	Low levels were found in the brain after intravenous administration
Eribulin	V (after WBRT)	<a href="#">Matsuoka et al. 2013</a>	Eribulin does not cross the healthy blood-brain barrier, but could have the potential to do so after WBRT
Gemcitabine	V	<a href="#">Bastiancich et al. 2018</a>	Passes BBB in GBM patients
Irinotecan	V	<a href="#">McDannold et al. 2020</a> <a href="#">Friedman et al. 2009</a>	Cross the BBB and diffused in the brain- a preclinical study on animal models Tested in recurrent glioblastoma patients
Melphalan	V/X	<a href="#">Melphalan drug monographs</a>	limited penetration of the blood-brain barrier ~ 10%
Mitomycin	V	<a href="#">Quader. et al. 2022</a>	
Oxaliplatin	V	<a href="#">Wei et al. 2021</a>	E.F.- platinum accumulated in the brain
Trabectedin	V	<a href="#">Preusser et al. 2019</a>	In trials for WHO grade II or III meningioma
Vinblastine	V/X	<a href="#">Vinblastine drug monographs</a>	poorly; not in therapeutic concentrations
Vinorelbine	V	<a href="#">Vinorelbine drug monographs</a>	Brain and plasma levels comparable in animal studies
Chemotherapy drugs that do not penetrate the BBB			
Bleomycin	X	<a href="#">Bleomycin drug monographs</a>	
Doxorubicin	X	<a href="#">Doxorubicin drug monographs</a>	
Epirubicin	X	<a href="#">Epirubicin drug monographs</a>	
Mitoxantrone	X	<a href="#">Mitoxantrone drug monographs</a>	