Supplementary table 1. Molecular diagnosis-based ongoing clinical trials for DIPG

Clinical trial	Title	Inclusion Criteria for DIPG	Intervention	Purpose
NCT03416530 (Phase1, Recruiting)	ONC201 in Newly Diagnosed Diffuse Intrinsic Pontine Glioma and Recurrent/Refractory Pediatric H3 K27M Gliomas	1) 2 to less than 19 years of age. 2) Arm B: Patients with newly diagnosed diffuse intrinsic pontine glioma (DIPG) are eligible with or without histologic confirmation. Post-mortem biopsy is required if H3 K27M status of tumor is unknown and archival tumor tissue not available.	Drug: ONC201. ONC201 is an orally active, small molecule DRD2 antagonist that kills cancer cells but not normal cells.	Arm B will define the recommended Phase 2 dose for ONC201 in combination with radiation in pediatric patients with newly diagnosed DIPG.
NCT03352427 (Phase 2, Recruiting)	Study of Dasatinib in Combination With Everolimus for Children and Young Adults With Gliomas Harboring PDGFR/FGFR Alterations	Histological confirmation of a newly diagnosed high-grade glioma or DIPG (Stratum A)	Drug: Dasatinib 60 mg/m2 orally twice daily Drug: Everolimus 3.0 mg/m2, with titration of dosing after first cycle to keep trough level of 5-15 ug/ml	This trial will evaluate the activity of dasatinib in combination with everolimus for children with gliomas harboring PDGFR or FGFR
NCT01644773 (Phase 1; Active, not recruiting)	Phase I Study of the Combination of Crizotinib and Dasatinib in Pediatric Research Participants With Diffuse Pontine Glioma (DIPG) and High-Grade Glioma (HGG)	Diagnosis of recurrent or progressive HGG or DIPG.	Drug: Crizotinib Drug: Dasatinib	To find the highest tolerable dose of crizotinib and dasatinib given in combination to patients with diffuse intrinsic pontine glioma (DIPG) and other types of high grade
NCT02960230 (Phase1, Recruiting)	H3.3K27M Peptide Vaccine for Children With Newly Diagnosed DIPG and Other Gliomas	Newly diagnosed children (3-21 years old) with DIPG who are positive for the H3.3K27M mutation (positive testing in CLIA laboratory) that underwent standard radiation therapy.	Biological: K27M peptide. K27M peptide vaccine, combined with Tetanus Toxoid peptide, emulsified in montanide. Poly-ICLC will be given concurrently	This study will assess the safety of repeated administration of the H3.3K27M specific vaccine in HLA-A2+ children and young adults with H3.3K27M DIPGs and other gliomas
NCT02717455 (Phase1, Recruiting)	Phase 1 Trial of Panobinostat in Children With Diffuse Intrinsic Pontine Glioma	STRATUM 1: Patients with progressive DIPG. STRATUM 2: Patients with DIPG who have not yet progressed by clinical or radiographic criteria.	Drug: LBH589 (Panobinostat)	This phase I trial studies the side effects and best dose of panobinostat in treating younger patients with diffuse intrinsic pontine glioma (DIPG)
NCT02274987 (Active, not recruiting)	Molecular Profiling for Individualized Treatment Plan for DIPG	Patients with newly diagnosed DIPG, who undergo a biopsy are eligible. Patients with disseminated disease are not eligible, and MRI of the spine must be performed if disseminated disease is suspected by the treating physician.	Other: Specialized tumor board recommendation A combination of up to four FDA approved drugs based on the molecular profile of the patient's tumor as determined by gene expression analysis, WES and predictive modeling. Radiation: Standard radiation therapy Initial therapy will consist of standard radiation therapy per institutional guidelines followed by molecular based therapy with	This is a single arm multi-center pilot trial within the Pacific Pediatric Neuro-Oncology Consortium (PNOC). The current study will use a new treatment approach based on each patient's tumor genomic profiling consisting of whole exome sequencing and RNA sequencing as well as predictive modeling.