

**Table S1. Characteristics of patient-derived high-grade glioma cell cultures, Related to Figures 2 and 4.**

Culture ID	Tumor type, location and grade	Age at diagnosis (years)	Sex	Histone-3 mutational status	Other genomic characteristics	Timepoint tissue obtained	Prior therapy	Survival (months)
SU-DIPG-IV	DIPG; pons; WHO grade III	2	F	H3.1K27M	<i>P53</i> WT; <i>MDM4</i> amplified; <i>ACVR1</i> G328V	Early postmortem autopsy	XRT; cetuximab; irinotecan	8
SU-DIPG-VI	DIPG; pons; WHO grade III	7	F	H3.3K27M	<i>P53</i> mutated	Early postmortem autopsy	XRT; vorinostat	6
SU-DIPG-XIII	DIPG; pons; WHO grade IV	6	F	H3.3K27M	N/A	Early postmortem autopsy	XRT	4
SU-DIPG-XXVII	DIPG; pons; WHO grade IV	8	M	H3.3K27M	N/A	Early postmortem autopsy	XRT + avastin; panobinostat; everolimus	13
SU-DIPG-XIX	DIPG; pons; WHO grade IV	2	M	H3.3K27M	N/A	Early postmortem autopsy	XRT; cabazataxal	18
SU-DIPG-XXI	DIPG; pons; WHO grade IV	7	M	H3.1K27M	N/A	Early postmortem autopsy	XRT + MK1775	18
SU-DIPG-XXIV	DIPG; pons; WHO grade IV	6	F	H3.3K27M	N/A	Early postmortem autopsy	XRT; avastin	8
SU-DIPG-XXV	DIPG; pons; WHO grade IV	4	F	H3.3K27M	N/A	Early postmortem autopsy	XRT	11
SU-DIPG-XXVII	DIPG; pons; WHO grade IV	5	M	H3.3K27M	N/A	Early postmortem autopsy	XRT; ABT888	6
SU-DIPG-XXIX	DIPG; pons; WHO grade IV	6	F	H3.3K27M	N/A	Early postmortem autopsy	XRT; panobinostat; avastin; THC oil	12
SU-pSCG-1	Pediatric spinal cord glioma; spinal cord; WHO grade IV	12	M	H3K27M	N/A	Early postmortem autopsy	XRT; thioguanine; procarbazine; CCNU; IV vincristine	11
SU-pGBM3	Disseminated glioblastoma; left frontal lobe; WHO grade IV	20	M	N/A	<i>IDH-1</i> WT; <i>P53</i> mutated	Early postmortem autopsy	XRT; temozolomide; avastin	9
SU-pcGBM2	Pediatric cortical glioblastoma; frontal lobe; WHO grade IV	15	M	WT	<i>P53</i> mutated; <i>EGFR</i> amplified; <i>PTEN</i> WT	Biopsy at diagnosis	none	N/A
SU-GBM034	Glioblastoma; temporal lobe; WHO grade IV	70	M	N/A	<i>IDH-1</i> WT; <i>PTEN</i> mutated	Biopsy at diagnosis	none	N/A
SU-GBM035	Glioblastoma; temporal lobe; WHO grade IV	61	M	N/A	<i>IDH-1</i> WT	Biopsy at recurrence	XRT; TMZ	N/A
SU-GBM047	Epithelioid glioblastoma; temporal lobe; WHO grade IV	26	M	N/A	<i>BRAF</i> <sup>V600E</sup> ; <i>P53</i> WT; <i>EGFR</i> WT; <i>PTEN</i> WT	Second resection	Prior resection, no other therapy	<2
SU-GBM081	Glioblastoma; temporal lobe; WHO grade IV	72	M	N/A	<i>IDH-1</i> WT; <i>P53</i> mutated	Biopsy at diagnosis	none	N/A
SU-O1	Oligodendroglioma; WHO grade II	19	M	N/A	1p/19q deletion	Biopsy at diagnosis	none	N/A
SU-AO2	Anaplastic oligodendroglioma; frontal lobe; WHO grade III	36 (44 at recurrence)	M	N/A	1p/19q deletion; <i>IDH-1</i> mutated	Biopsy at time of recurrence	TMZ	N/A

**Short tandem repeat DNA fingerprinting of HGG cell cultures:**

STR Fingerprint	AMEL	CSF1P01	D13S317	D16S539	D21S11	D5S818	D7S820	TH01	TPOX	vWA
SU-DIPG-IV	X/X	9/10	7/12	9/12	29/31	12/13	10/11	6/9.3	8/	15/19
SU-DIPG-VI	X/X	9/10	11/11	8/13	29/31	10/12	8/9	7/8	8/11	17/18
SU-DIPG-XIII	X/X	9/10	11/12	11/12	30/OL	12/12	9/9	6/7	OL/8	13/18
SU-DIPG-XVII	X/Y	13/13	9/9	9/12	28/29	11/11	8/9	7/7	8/11	18/19
SU-DIPG-XIX	X/Y	10/11	13/14	9/13	30/30	11/12	10/10	9.3/9.3	8/11	17/18
SU-DIPG-XXI	X/Y	11/12	8/13	10/10	30/32	10/11	8/9	6/6	8/12	16/19
SU-DIPG-XXIV	X/X	10/12	11/11	11/13	30/31	11/11	8/10	6/9.3	8/11	17/19
SU-DIPG-XXV	X/X	12/12	8/11	12/13	30/35	11/13	10/12	9/9	7/8	14/18
SU-DIPG-XXVII	X/Y	11/12	9/12	10/12	30/33.2	11/11	9/12	6/6	8/11	16/17
SU-DIPG-XXIX	X/X	10/11	11/12	11/11	28/32.2	12/14	8/11	6/9.3	8/11	15/19
SU-pSCG-1	X/Y	10/12	12/	11/12	28/29	11/12	10/	9.3/	8/11	16/18
SU-pGBM3	X/Y	12/12	8/15,16	9/14	30/31	9/11	8/10	9/9.3	8/9	14/17
SU-pcGBM2	X/Y	10/11	11/	9/11	28/30.2	11/	11/12	9.3/	8/12	17/18
SU-GBM034	X/Y	10/12	8/8	10/12	29/30	11/13	8/1	7/7	8/11	18/18
SU-GBM035	X/Y	10/11	12/	12/13	30/	11/13	10/	7/9.3	9/12	18/20
SU-GBM047	X/Y	12/12	8/8	11/12	29/31	12/12	9/11	6/9.3	8/11	19/19
SU-GBM081	X/Y	10/11	11/11	9/9	28/31.2	9/12	8/13	9/9.3	8/8	16/17
SU-O1	X/Y	10/12	11/11	12/13	30/30	12/13	8/11	8/9.3	8/11	14/14
SU-AO2	X/Y	11/13	8/12	8/11	30/33.2	11/12	8/10	9/9	8/11	16/18

**Table S1. Characteristics of patient-derived high-grade glioma cell cultures, Related to Figures 2 and 4.** WHO = World Health Organization; DIPG = diffuse intrinsic pontine glioma; XRT = radiotherapy; TMZ = temozolomide; STR = short tandem repeat.