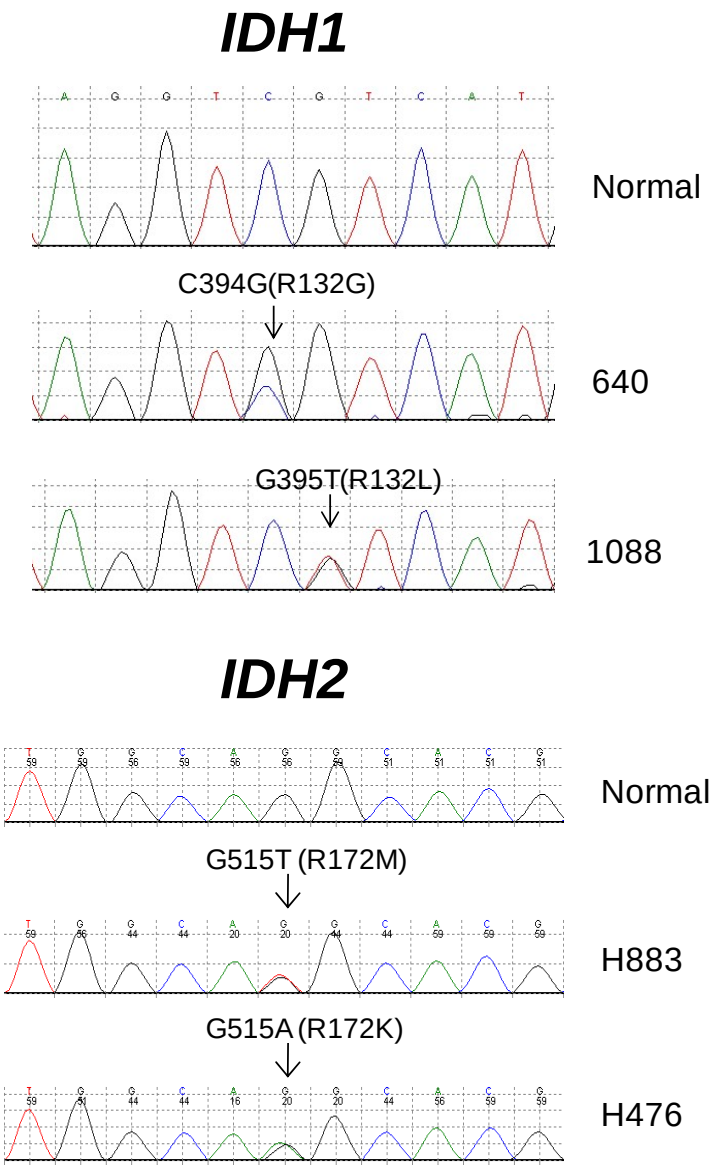
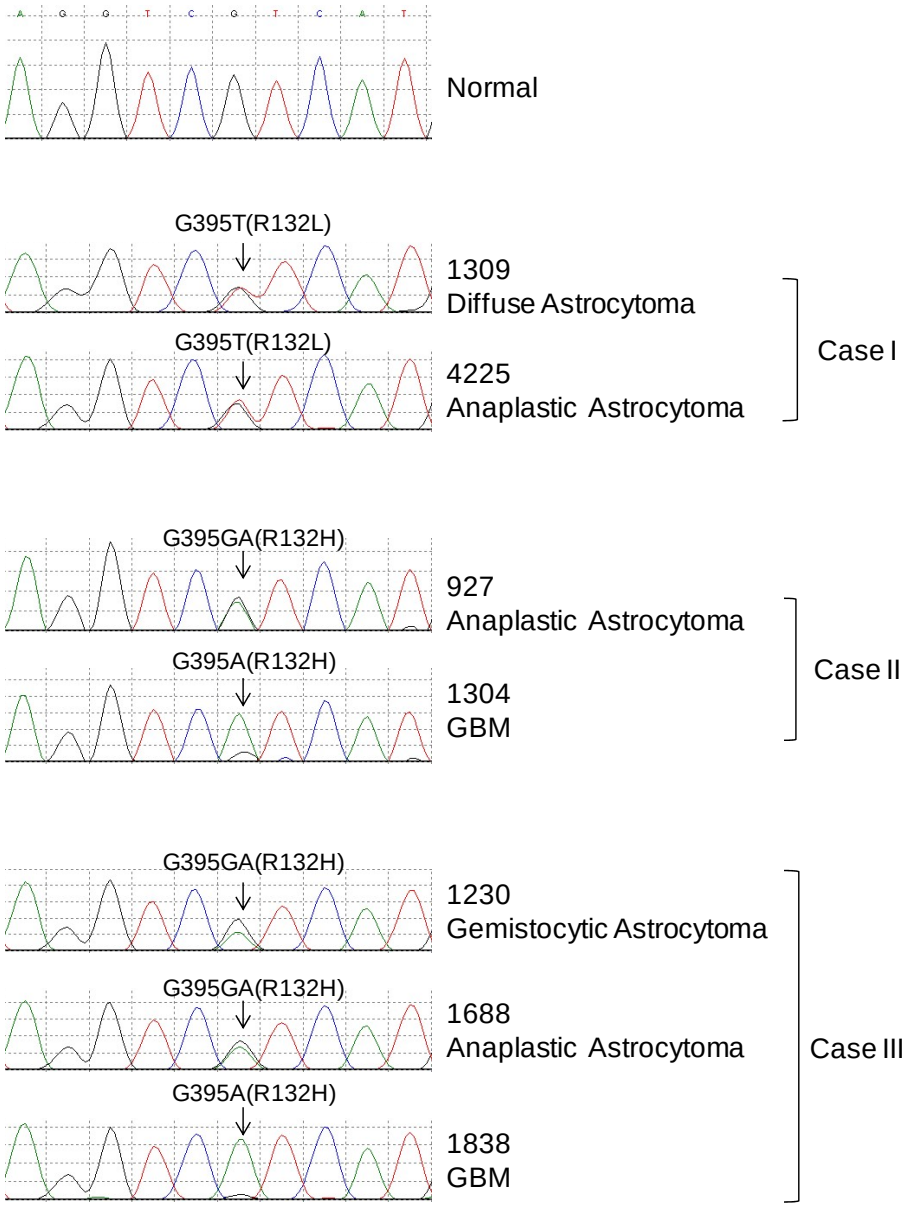
Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Yan H, Parsons DW, Jin G, et al. *IDH1* and *IDH2* mutations in gliomas. N Engl J Med 2009;360: 765-73.

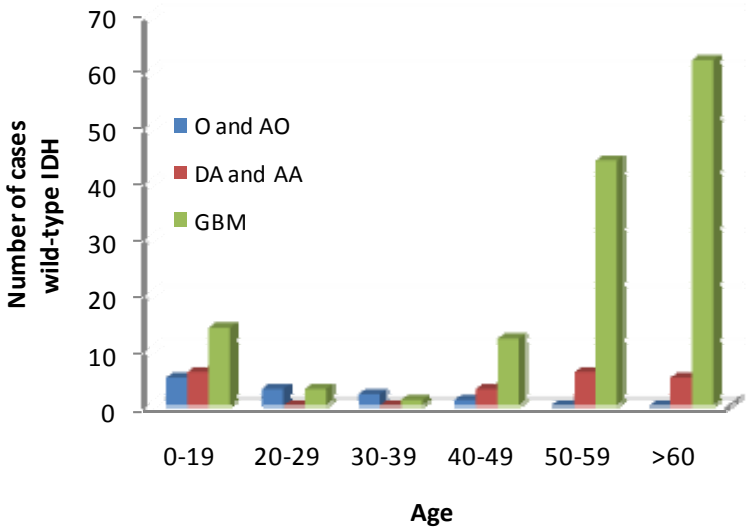


Supplementary Figure 1. Sequence alterations in *IDH1* and *IDH2*. Representative examples of somatic mutations at codon 132 of the *IDH1* gene (top) and codon 172 of the *IDH2* gene (bottom). In each case, the top sequence chromatogram was obtained from analysis of DNA from a representative normal tissue while the lower chromatograms were obtained from the indicated tumor samples. All *IDH1* and *IDH2* mutations identified were confirmed as somatic through analysis of matched normal DNA from the same patient. Arrows indicate the location of the missense mutations and resulting amino acid changes in *IDH1* in tumor 640 (anaplastic astrocytoma), and 1088 (anaplastic oligodendroglioma), and in *IDH2* in tumor H883 (anaplastic astrocytoma) and H476 (anaplastic oligodendroglioma).

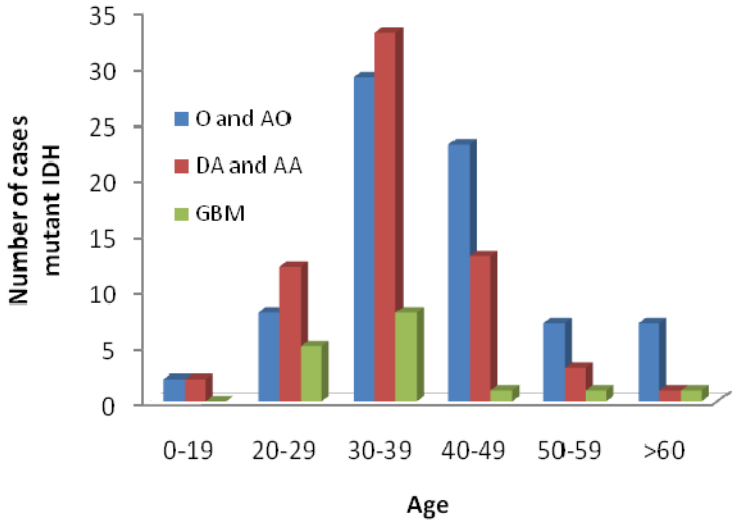


Supplementary Figure 2. Sequence alterations in *IDH1* in progressive gliomas. Representative examples of somatic mutations at codon 132 of the *IDH1* are indicated in three representative cases. The top sequence chromatogram was obtained from analysis of DNA from representative normal tissue while the lower chromatograms were obtained from the indicated brain tumor samples. All *IDH1* mutations identified were confirmed as somatic through analysis of matched normal DNA from the same patient. Arrows indicate the location of the mutations and the resulting amino acid changes in *IDH1*. In all cases, the identical *IDH1* mutations were found in the lower- and higher-grade tumors from each patient.

A



B



Supplementary Figure 3. Age distribution of glioma patients with mutated and wild-type *IDH*. Age distribution of oligodendroglioma (O), anaplastic oligodendroglioma (AO), diffuse astrocytoma (DA), anaplastic astrocytoma (AA), and glioblastoma multiforme (GBM) in patients with wild type *IDH* genes (panel A) or mutated *IDH* genes (panel B).

Supplementary table 1. Identification of *IDH1* mutations in progressive gliomas

Patient	Diagnosis	WHO Grade	Age at diagnosis	IDH1 mutation
#1	Anaplastic astrocytoma	III	32	R132H
	Glioblastoma multiforme	IV	34	R132H
#2	Diffuse astrocytoma (gemistocytic)	II	33	R132H
	Anaplastic astrocytoma	III	35	R132H
	Glioblastoma multiforme	IV	36	R132H
#3	Diffuse astrocytoma	II	36	R132L
	Anaplastic astrocytoma	III	44	R132L
#4	Diffuse astrocytoma	II	17	R132C
	Anaplastic astrocytoma	III	20	R132C
#5	Diffuse astrocytoma (gemistocytic)	II	30	R132H
	Anaplastic astrocytoma	III	34	R132H
#6	Diffuse astrocytoma	II	31	R132H
	Anaplastic astrocytoma	III	35	R132H
#7	Oligoastrocytoma	II	38	R132H
	Anaplastic astrocytoma	III	40	R132H