

**Supplementary Table S1: Cox Proportional Hazard Model for Primary Tumors with *CDKN2A* Loss as a Continuous Variable**

Hazard ratios:

Female Sex 0.524919  
 WHO Grade 1.661930  
 Age at Resection 1.028102  
 CDKN2A Homo Del 1.031800

	coef	exp(coef)	se(coef)	coef lower 95%	coef upper 95%	exp(coef) lower 95%	exp(coef) upper 95%	z	p	-log2(p)
<b>Sex</b>	-0.64	0.52	0.34	-1.31	0.02	0.27	1.02	-1.89	0.06	4.10
<b>Grade</b>	0.51	1.66	0.23	0.07	0.95	1.07	2.59	2.25	0.02	5.37
<b>Age</b>	0.03	1.03	0.01	0.00	0.05	1.00	1.06	2.07	0.04	4.71
<b>CDKN2A Homo Del</b>	0.03	1.03	0.01	0.01	0.05	1.01	1.05	3.17	<0.005	9.35

<b>Concordance</b>	0.69
<b>Partial AIC</b>	304.18
<b>log-likelihood ratio test</b>	23.13 on 4 df
<b>-log2(p) of ll-ratio test</b>	13.03

**Supplementary Table S2: Cox Proportional Hazard Model for Primary Tumors with  $\geq 30\%$  Cutoff**

Hazard ratios:

Female Sex 0.535655  
 WHO Grade 1.773531  
 Age at Resection 1.030576  
 CDKN2A Homo Del 4.220045

	coef	exp(coef)	se(coef)	coef lower 95%	coef upper 95%	exp(coef) lower 95%	exp(coef) upper 95%	z	p	$-\log_2(p)$
<b>Sex</b>	-0.62	0.54	0.34	-1.29	0.04	0.28	1.04	-1.85	0.06	3.95
<b>Grade</b>	0.57	1.77	0.22	0.15	1.00	1.16	2.72	2.63	0.01	6.86
<b>Age</b>	0.03	1.03	0.01	0.00	0.06	1.00	1.06	2.24	0.02	5.33
<b>CDKN2A Homo Del <math>\geq 30\%</math></b>	1.44	4.22	0.54	0.37	2.51	1.45	12.25	2.65	0.01	6.95

<b>Concordance</b>	0.70
<b>Partial AIC</b>	307.00
<b>log-likelihood ratio test</b>	20.31 on 4 df
<b><math>-\log_2(p)</math> of ll-ratio test</b>	11.17

**Supplementary Table S3: Cox Proportional Hazard Model for First Recurrence Tumors with  $\geq 30\%$  Cutoff**

Hazard ratios:

Female Sex 0.605481  
 WHO Grade 2.638756  
 Age at Resection 0.995928  
 CDKN2A Homo Del 3.855558

	coef	exp(coef)	se(coef)	coef lower 95%	coef upper 95%	exp(coef) lower 95%	exp(coef) upper 95%	z	p	-log2(p)
<b>Sex</b>	-0.50	0.61	0.53	-1.53	0.53	0.22	1.70	-0.95	0.34	1.56
<b>Grade</b>	0.97	2.64	0.35	0.29	1.66	1.33	5.23	2.78	0.01	7.51
<b>Age</b>	-0.00	1.00	0.02	-0.05	0.04	0.96	1.04	-0.19	0.85	0.24
<b>CDKN2A Homo Del <math>\geq 30\%</math></b>	1.35	3.86	0.56	0.26	2.44	1.29	11.51	2.42	0.02	6.00

<b>Concordance</b>	0.80
<b>Partial AIC</b>	122.88
<b>log-likelihood ratio test</b>	23.36 on 4 df
<b>-log2(p) of ll-ratio test</b>	13.19