Table S1. Markers of the Senescence-associated Secretory Phenotype (SASP) queried by cBioPortal in our virtual study.

Regulation of the cell cycle	**DNA damage response and repair**	**Inflammatory response and cytokines**
CDKN1A, CDKN2A	ATM, TP53, CHEK2, PPP1R12A	IL6, IL7, CXCL8, IL1B, IL13, IL15, CXCL1, CCL13, CCL3, CCL20, CCL16, CCL11, CCL24, CCL26, CCL25, CXCL5, CCL1, CXCL11, TGFB1, TGFB2, TGFB3, CSF2, CSF3, IFNG, CXCL13, MIF, AREG, NRG1
Growth factors	**Insulin-like growth factor-binding proteins**	**Matrix metalloproteinases**
EGF, FGF2, HGF, FGF7, VEGFA, VEGFB, VEGFC, VEGFD, PGF, ANG, KITLG, CXCL12, PIGF, NGF	IGFBP2, IGFBP3, IGFBP4, IGFBP6, IGFBP7	MMP1, MMP3, MMP10, MMP12, MMP13, MMP14
Tissue inhibitors of metalloproteinases	**Serine protease inhibitors**	**Plasminogen activators and inhibitors**
TIMP1, TIMP2	SERPINE1, SERPINE2	PLAT, PLAU, PLAUR
Cathepsins	**Intercellular adhesion molecules**	**Tumor necrosis factor receptors**
CTSB	ICAM1, ICAM3	TNFRSF10D, TNFRSF11B, TNFRSF1A, TNFRSF1B, TNFRSF10C
Transcription factors and regulatory proteins	**Other receptors and proteins**	
BHLHE40, MECP2	SAβG, FAS, IL6ST, EGFR, FN1, HMGA1, HMGA2, CBX5, CBX1, CBX3, LMNB1	

Table S2. Changes across malignancy grades and between LGG and HGG grade groups.

Contingency Tables

	GRADE				
Altered	I	II	III	IV	Total
0	7	330	232	466	1,035
1	0	337	408	1,540	2,285
Total	7	667	640	2,006	3,320

Note. Each cell displays the observed counts

Chi-Squared Tests

	Value	df	p
X^2	186.3	3	< .001
N	3,320		

Note. Continuity correction is available only for 2x2 tables.

Contingency Tables

	GRADE GROUP		
Altered	I&II	III&IV	Total
0	337	698	1,035
1	337	1,948	2,285
Total	674	2,646	3,320

Note. Each cell displays the observed counts

Chi-Squared Tests

	Value	df	p
X^2	139.7	1	< .001
N	3,320		

Odds Ratio

		95% Confidence Intervals		
	Odds Ratio	Lower	Upper	p
Odds ratio	2.791	2.345	3.321	
Fisher's exact test	2.790	2.335	3.334	< .001