

**Table S1.** Selected genes that are involved in DNA repair mechanisms.

Gene name				
ALKBH2	ERCC5	MMS19	POLN	SHPRH
ALKBH3	ERCC6	MNAT1	POLQ	SLX1A
APEX1	ERCC8	MPG	PRKDC	SLX4
APEX2	EXO1	MPLKIP	PRPF19	SMUG1
APLF	FAAP20	MRE11	RAD1	SPO11
APTX	FAAP24	MSH2	RAD17	SPRTN
ATM	FAN1	MSH3	RAD18	TDG
ATR	FANCA	MSH4	RAD23A	TDP1
ATRIP	FANCB	MSH5	RAD23B	TDP2
AURKB	FANCC	MSH6	RAD50	TOPBP1
BAP1	FANCD2	MUS81	RAD51	TP53
BARD1	FANCE	MUTYH	RAD51B	TP53BP1
BLM	FANCF	NBN	RAD51C	TREX2
BRCA1	FANCG	NEIL1	RAD51D	TTK
BRCA2	FANCI	NEIL2	RAD52	UBE2A
BRIP1	FANCL	NEIL3	RAD54B	UBE2B
BUB1	FANCM	NHEJ1	RAD54L	UBE2N
CCNH	FEN1	NTHL1	RAD9A	UBE2V2
CDK12	GEN1	NUDT1	RBBP8	UNG
CDK7	GPN1	OGG1	RDM1	UVSSA
CENPE	GTF2H1	PALB2	RECQL	WRN
CETN2	GTF2H2	PARP1	RECQL4	XPA
CHAF1A	GTF2H3	PARP2	RECQL5	XPC
CHEK1	GTF2H4	PARP3	REV1	XRCC1
CHEK2	GTF2H5	PAXIP1	REV3L	XRCC2
CLK2	H2AFX	PCNA	RFC1	XRCC3
CRIP1	HELQ	PER1	RFC2	XRCC4
DCLRE1A	HLTF	PMS1	RFC3	XRCC5
DCLRE1B	HUS1	PMS2	RFC4	XRCC6
DCLRE1C	KMT2C	PMS2P3	RFC5	ZW10
DDB1	KNTC1	PNKP	RNF168	
DDB2	LIG1	POLB	RNF4	
DMC1	LIG3	POLD1	RNF8	
DUT	LIG4	POLE	RPA1	
EME1	MAD2L2	POLG	RPA2	
ENDOV	MBD4	POLH	RPA3	
ERCC1	MDC1	POLI	RPA4	
ERCC2	MGMT	POLK	RRM2B	
ERCC3	MLH1	POLL	SEM1	
ERCC4	MLH3	POLM	SETMAR	