

Table S1. Inhibitors used

Targets	Drugs	Molarity	Source	Cat#
DNA Topoisomerase I	SN-38 (NK012)	2.5 mM	Selleckchem	S4908
CHK1/2	AZD7762	25 mM	Selleckchem	S1532
DNA-PK	NU7441 (KU57788)	5 mM	Selleckchem	S2638
DNA-PK	NU7026	5mM	Selleckchem	S2893
PARP 1/2	Rucaparib (AG-014699)	25 mM	Selleckchem	S1098
ATM	KU55933	10 mM	Selleckchem	S1092
BCL-2	Navitoclax (ABT-263)	5 mM	Selleckchem	S1001
ATR	BAY1895344	10mM	Selleckchem	S8666

Table S2. Concentration range of inhibitors

Drugs	Lower concentration	Intermediate concentration	First high concentration	Second high concentration
SN-38 (NK012)	0.1 nM	1 nM	5 nM	—
AZD7762	5 nM	50 nM	500 nM	—
NU7441 (KU57788)	1 μM	5 μM	10 μM	—
Rucaparib (AG-014699)	0.1 μM	1 μM	10 μM	—
KU55933	1 μM	10 μM	25 μM	50 μM
Navitoclax (ABT-263)	5 nM	25 nM	50 nM	500 nM

Table S3. Antibodies used

Antibodies	Dilution	Cat	Source
Tubulin	1:5000	32-2500	Invitrogen
p21	1:1000	sc-397	Santa Cruz
Cyclin D1	1:200	sc-20044	Santa Cruz
Cyclin A	1:200	sc-596	Santa Cruz
γ-H2AX (S139)	1:500	sc-517348	Santa Cruz
p53	1:400	sc-126	Santa Cruz
BCL-2	1:200	15071	Cell Signaling
pKAP-1 (S824)	1:1000	NB100-2350	Novus
pCHK-1 (S317)	1:2000	A304-673A	Bethyl
Vinculin	1:1000	4650	Cell Signaling

Table S4. BLISS and HSA synergy analyses

GRANTA-519						
Treatment	BLISS Mean	BLISS SD	BLISS p-value	HSA Mean	HSA SD	HSA p-value
0.1nM SN-38 + 0.1μM Rucaparib	0.054	0.068	0.210	0.162	0.085	0.031*
5nM AZD7762 + 0.1μM Rucaparib	0.115	0.072	0.265	0.240	0.023	0.043*
MINO						
Treatment	BLISS Mean	BLISS SD	BLISS p-value	HSA Mean	HSA SD	HSA p-value
10nM AZD7762 + 10μM KU5933	-0.037	0.081	0.312	-0.108	0.089	0.031*
25nM AZD7762 + 10μM KU5933	0.229	0.106	0.003*	0.111	0.099	0.039*
50nM AZD7762+ 10μM KU5933	0.147	0.123	0.033*	0.164	0.063	0.001*
JEKO-1						
Treatment	BLISS Mean	BLISS SD	BLISS p-value	HSA Mean	HSA SD	HSA p-value
AZD7762 10nM + 10μM KU5933	0.039	0.014	0.043*	0.033	0.038	0.265
AZD7762 25nM + 10μM KU5933	0.263	0.104	0.048*	0.320	0.088	0.024*
AZD7762 50nM + 10μM KU5933	0.065	0.074	0.269*	0.165	0.083	0.075*

*p<0.05 significant