HOKKAIDO UNIVERSITY

Title	A Nucleoside Anticancer Drug, 1-(3-C-Ethynyl- β -D-Ribo-Pentofuranosyl)Cytosine, Induces Depth-Dependent Enhancement of Tumor Cell Death in Spread-Out Bragg Peak (SOBP) of Proton Beam
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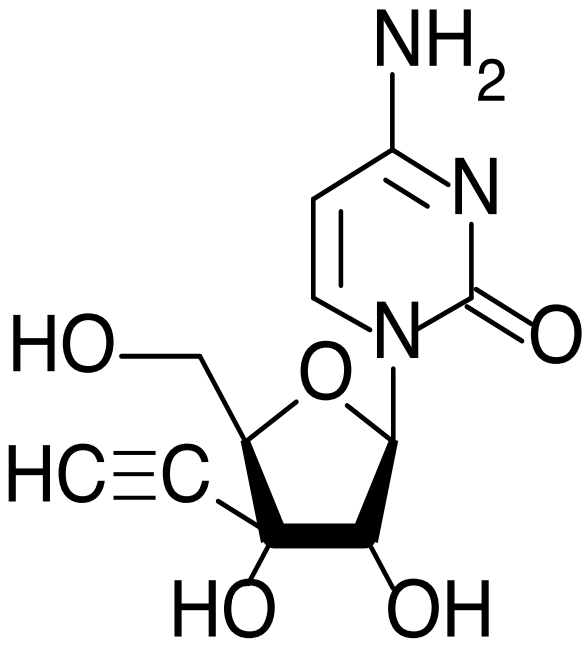


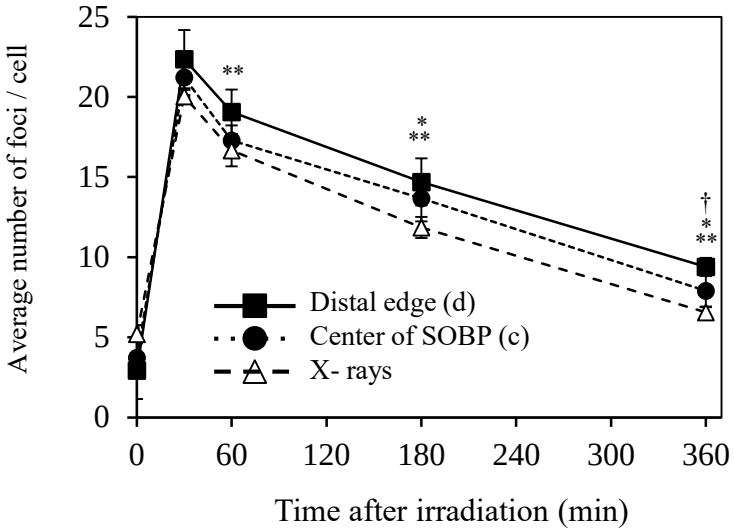
S1 Figure. Maeda *et al.*

Supplementary Table 1. Summary of RBE_{10}, RBE_{2Gy} and RBE_{4Gy} values

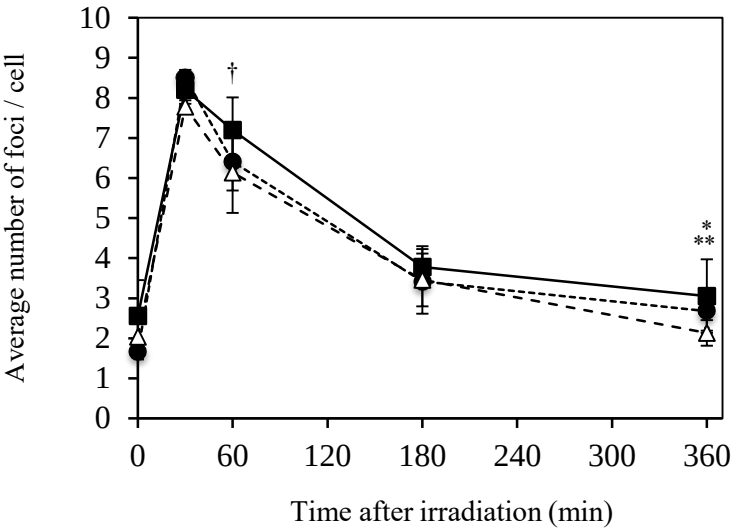
Cell line	Position	Depth (mm)	LET_d (keV/μm)	ECyd	D_{10} (Gy)	RBE_{10}	SER	D_{4Gy} (Gy)	RBE_{4Gy}	SER_{4Gy}	D_{2Gy} (Gy)	RBE_{2Gy}	SER_{2Gy}
A549	a	5	0.857	-	6.414 ± 0.197	1.068 ± 0.051	1.209	4.087 ± 0.212	0.981 ± 0.052	1.293	2.300 ± 0.200	0.874 ± 0.077	1.418
				+	5.304 ± 0.531	1.299 ± 0.125		3.161 ± 0.453	1.282 ± 0.173		1.622 ± 0.325	1.264 ± 0.232	
	b	165	2.847	-	6.436 ± 0.181	1.065 ± 0.030	1.215	4.035 ± 0.092	0.992 ± 0.022	1.280	2.215 ± 0.098	0.904 ± 0.040	1.365
				+	5.296 ± 0.987	1.327 ± 0.277		3.153 ± 0.744	1.325 ± 0.360		1.623 ± 0.481	1.323 ± 0.460	
	c	190	3.695	-	6.021 ± 0.332	1.132 ± 0.062	1.157	3.763 ± 0.221	1.065 ± 0.065	1.239	2.059 ± 0.190	0.977 ± 0.093	1.360
				+	5.204 ± 0.230	1.316 ± 0.029		3.036 ± 0.127	1.319 ± 0.055		1.514 ± 0.105	1.326 ± 0.091	
	d	220	9.457	-	4.372 ± 0.206	1.568 ± 0.073	1.038	2.359 ± 0.255	1.709 ± 0.180	1.049	1.092 ± 0.176	1.863 ± 0.290	1.061
				+	4.211 ± 0.822	1.656 ± 0.257		2.249 ± 0.501	1.836 ± 0.392		1.029 ± 0.285	2.040 ± 0.527	
V79	a	5	0.857	-	8.439 ± 0.348	1.034 ± 0.046	1.167	3.836 ± 0.135	1.044 ± 0.036	1.225	1.904 ± 0.060	1.051 ± 0.033	1.290
				+	7.233 ± 0.567	1.211 ± 0.092		3.131 ± 0.230	1.282 ± 0.092		1.476 ± 0.102	1.359 ± 0.092	
	b	165	2.847	-	7.939 ± 0.671	1.102 ± 0.093	1.068	3.652 ± 0.307	1.100 ± 0.093	1.223	1.831 ± 0.155	1.098 ± 0.095	1.353
				+	7.433 ± 0.172	1.172 ± 0.031		2.987 ±0.088	1.340 ± 0.040		1.353 ± 0.056	1.480 ± 0.061	
	c	190	3.695	-	6.947 ± 0.112	1.254 ± 0.020	1.157	2.928 ± 0.043	1.366 ± 0.020	1.340	1.348 ± 0.056	1.486 ± 0.060	1.440
				+	6.003 ± 0.419	1.456 ± 0.127		2.229 ± 0.161	1.801 ± 0.123		0.936 ± 0.077	2.146 ± 0.176	
	d	220	9.457	-	6.263 ± 0.170	1.392 ± 0.073	1.038	2.352 ± 0.103	1.702 ± 0.073	1.040	0.993 ± 0.053	2.017 ± 0.108	1.037
				+	6.031± 0.152	1.445 ± 0.165		2.262 ± 0.202	1.778 ± 0.165		0.958 ± 0.122	2.111 ± 0.281	

RBE_{10}, RBE_{4Gy} and RBE_{2Gy} were calculated as the ratio of 10% survival fraction (D_{10}) and isosurviving fraction at 4 Gy (D_{4Gy}) and 2 Gy (D_{2Gy}) to that of 250 kV X-rays, respectively. D_{10}s of X-rays were 6.8 Gy and 8.71 Gy for A549 cells and V79 cells, respectively.

(A) A549

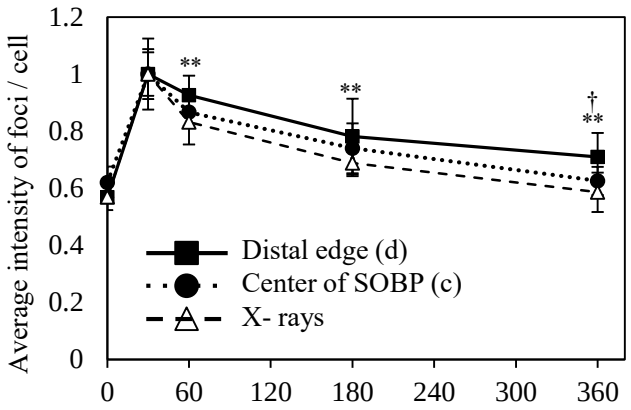


(B) V79

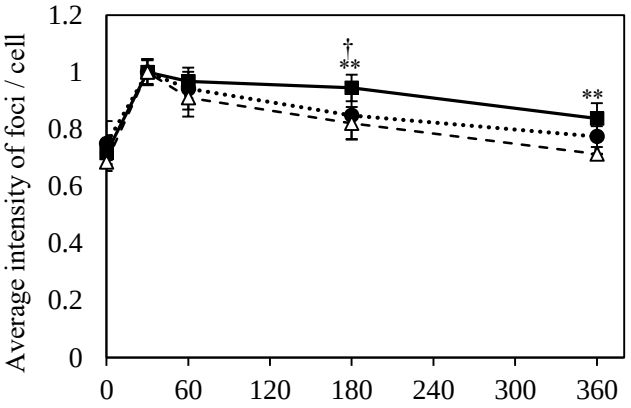


S2 Figure. Maeda *et al.*

(A) A549

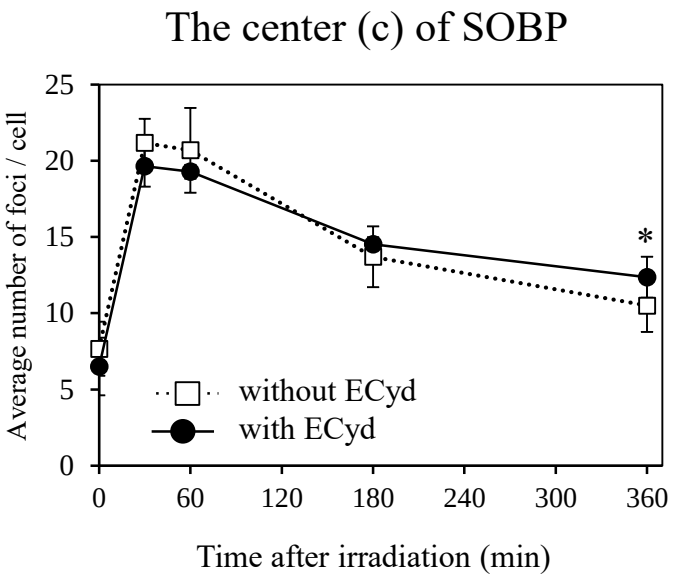


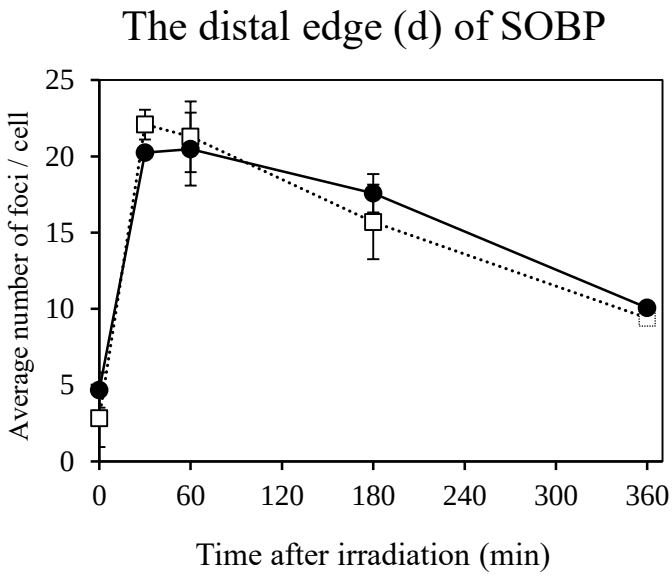
(B) V79



S3 Figure. Maeda *et al.*

A549





S4 Figure. Maeda *et al.*