Table S1. Sensitivity analysis of the prognostic impact of SIRT1 using Cox models

Cox model formula[a)]	HR (95% CI)	*P*
OS ~ SIRT1 + Clinical stage[b)]	0.58 (0.35-0.97)	0.037
OS ~ SIRT1 + Clinical stage + Chemoresponse	0.62 (0.37-1.03)	0.065
OS ~ SIRT1 + Clinical stage + ypN	0.6 (0.35-1)	0.051
OS ~ SIRT1 + Clinical stage + Smoking	0.58 (0.34-0.96)	0.034
OS ~ SIRT1 + Clinical stage + Chemoresponse + ypN	0.64 (0.38-1.09)	0.101
OS ~ SIRT1 + Clinical stage + Chemoresponse + Smoking	0.61 (0.36-1.02)	0.058
OS ~ SIRT1 + Clinical stage + ypN + Smoking	0.58 (0.34-0.99)	0.046
OS ~ SIRT1 + Clinical stage + Chemoresponse + ypN + Smoking	0.63 (0.37-1.08)	0.091

[a)]Clinical stage was dichotomized into I-III and IV, chemoresponse into CR/PR and SD/PD, ypN into 0-1 and 2-3, and smoking into the never-smoker and the current or ex-smoker.

[b)]This is the selected optimal model displayed in Table 3.

HR, hazard ratio; 95% CI, 95% confidence interval; OS, overall survival; SIRT1, Silent mating-type information regulation 2 homologue 1; ypN, pathological N stage.

Table S2. Grambsch and Therneau test p-values of the correlation between the scaled Schoenfeld residuals versus transformed survival time for each optimal multivariable Cox model

Markers	Variables	Model for PFS		Model for OS	
		Per-variable *P*	Global *P*	Per-variable *P*	Global *P*
ATM	ATM-high versus ATM-low	0.834	0.776	0.791	0.148
	Clinical stage IV versus I-III	0.497		0.052	
RAD51	RAD51-positive versus RAD51-negative	0.849	0.754	0.961	0.139
	Clinical stage IV versus I-III	0.453		0.057	
LKB1	LKB1-positive versus LKB1-negative	0.095	0.197	0.033	0.016
	Clinical stage IV versus I-III	0.406		0.027	
H2AX	H2AX-positive versus H2AX-negative	0.239	0.395	0.717	0.143
	Clinical stage IV versus I-III	0.478		0.051	
SIRT1	SIRT1-positive versus SIRT1-negative	0.746	0.781	0.801	0.181
	Clinical stage IV versus I-III	0.665		0.106	

PFS, progression-free survival; OS, overall survival; SIRT1, Silent mating-type information regulation 2 homologue 1.