

**Table S1** Survival analysis for recurrence

Characteristics	P value	Method
Gender	0.839	Log rank
Age	0.059	Cox PH
Histologic grade	0.320	Log rank
Location	0.093	Log rank
Smoking	0.726	Log rank
Hypertension	0.049	Log rank
Family history of cancer	0.655	Log rank
Diabetes	0.823	Log rank
CEA level	0.001	Log rank
CA242	0.021	Log rank
CA724	0.105	Log rank
CA199	0.071	Log rank
Ki-67 level	0.038	Cox PH
T stage	0.037	Log rank
Lymphovascular invasion	<0.001	Log rank
Perineural invasion	<0.001	Log rank
IOP status	0.001	Log rank
Number of nodes examined	<0.001	Log rank
Mismatch repair status	0.014	Log rank
DR	<0.001	Log rank
TBd	0.127	Log rank
TSR	0.154	Log rank

MSI, microsatellite instability; CEA, carcinoembryonic antigen; CA242, carbohydrate antigen 242; CA724, carbohydrate antigen 724; CA199, carbohydrate antigen199; IOP status, internal obstruction or perforation; DR, desmoplastic reaction; TBd, tumour budding; TSR, tumor-stroma ratio.