

S4 Table. Performances of LR model, GBM model, and JGCA guideline (previous expanded criteria and eCuraC-2) on both internal validation set (set 1) and external validation set (set 2) when patients with GCLS, micropapillary adenocarcinoma, and mucinous adenocarcinoma were excluded^{a)}

	Internal validation set (set 1, n=493)			External validation set (set 2, n=538)		
	LR	GBM	Beyond expanded Criteria	LR	GBM	eCuraC-2
Accuracy (95% CI)	0.491 (0.467-0.502)	0.473 (0.451-0.479)	0.623 (0.598-0.635)	0.792 (0.775-0.798)	0.779 (0.762-0.782)	0.799 (0.783-0.803)
Sensitivity (95% CI)	0.933 (0.834-0.978)	0.967 (0.878-0.994)	0.917 (0.814-0.969)	0.913 (0.711-0.985)	0.957 (0.765-0.998)	0.957 (0.766-0.998)
Specificity (95% CI)	0.430 (0.416-0.436)	0.404 (0.392-0.408)	0.582 (0.568-0.589)	0.786 (0.777-0.790)	0.771 (0.762-0.773)	0.792 (0.784-0.794)
PPV (95% CI)	0.185 (0.165-0.194)	0.184 (0.167-0.189)	0.233 (0.207-0.246)	0.160 (0.125-0.173)	0.157 (0.126-0.164)	0.171 (0.137-0.178)
NPV (95% CI)	0.979 (0.948-0.993)	0.989 (0.959-0.998)	0.981 (0.957-0.993)	0.995 (0.984-0.999)	0.997 (0.986-1.000)	0.998 (0.987-1.000)
AUROC (95% CI)	0.828 (0.769-0.879)	0.837 (0.782-0.884)	0.749 (0.703-0.788)	0.940 (0.905-0.970)	0.923 (0.861-0.968)	0.874 (0.822-0.909)

CI of each performance indicators are calculated with bootstrapping method. AUROC, area under receiver operating characteristic curve; CI, confidence interval; GBM, gradient boosting machine; GCLS, gastric carcinoma with lymphoid stroma; JGCA, Japanese Gastric Cancer Association; LR, logistic regression; NPV, negative predictive value; PPV, positive predictive value. ^{a)}Among the 2,556 patients with early gastric cancer who underwent surgery and 704 patients who underwent endoscopic resection for early gastric cancer, 5 patients (all of them were classified as micropapillary adenocarcinoma) were excluded in the “follow-up after endoscopic resection” group (n=425 → 400); 5 patients (1 with micropapillary adenocarcinoma and 4 with GCLS) were excluded in the “surgery after non-curative endoscopic resection” group (n=123 → 118); 94 patients (35 with micropapillary adenocarcinoma, 51 with GCLS, 8 with mucinous adenocarcinoma) were excluded in the “surgery as initial treatment” group (n=2,556 → 2,462).