### 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.\(^a\)

<table>
<thead>
<tr>
<th></th>
<th>Internal validation set (set 1, (n=493))</th>
<th>External validation set (set 2, (n=538))</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LR</td>
<td>GBM</td>
</tr>
<tr>
<td>Accuracy (95% CI)</td>
<td>0.491 (0.467-0.502)</td>
<td>0.473 (0.451-0.479)</td>
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<tr>
<td>Sensitivity (95% CI)</td>
<td>0.933 (0.834-0.978)</td>
<td>0.967 (0.878-0.994)</td>
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<tr>
<td>Specificity (95% CI)</td>
<td>0.430 (0.416-0.436)</td>
<td>0.404 (0.392-0.408)</td>
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<tr>
<td>PPV (95% CI)</td>
<td>0.185 (0.165-0.194)</td>
<td>0.184 (0.167-0.189)</td>
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<tr>
<td>NPV (95% CI)</td>
<td>0.979 (0.948-0.993)</td>
<td>0.989 (0.959-0.998)</td>
</tr>
<tr>
<td>AUROC (95% CI)</td>
<td>0.828 (0.769-0.879)</td>
<td>0.837 (0.782-0.884)</td>
</tr>
</tbody>
</table>

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 (\(n=425 \rightarrow 400\)); 5 patients (1 with micropapillary adenocarcinoma and 4 with GCLS) were excluded in the “surgery after non-curative endoscopic resection” group (\(n=123 \rightarrow 118\)); 94 patients (35 with micropapillary adenocarcinoma, 51 with GCLS, 8 with mucinous adenocarcinoma) were excluded in the “surgery as initial treatment” group (\(n=2,556 \rightarrow 2,462\)).