<table>
<thead>
<tr>
<th>Surgical specimen staining pattern</th>
<th>Biopsy specimen staining pattern</th>
<th>HER2 overexpression assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 No reactivity or membranous reactivity in &lt;10% of tumour cells</td>
<td>No reactivity or no membranous reactivity in any tumour cell</td>
<td>Negative</td>
</tr>
<tr>
<td>1+ Faint or barely perceptible membranous reactivity in ≥10% of tumour cells; cells are reactive only in part of their membrane</td>
<td>Tumour cell cluster with a faint or barely perceptible membranous reactivity irrespective of percentage of tumour cells stained</td>
<td>Negative</td>
</tr>
<tr>
<td>2+ Weak to moderate complete, basolateral or lateral membranous reactivity in ≥10% of tumour cells</td>
<td>Tumour cell cluster with a weak to moderate complete, basolateral or lateral membranous reactivity irrespective of percentage of tumour cells stained</td>
<td>Equivocal</td>
</tr>
<tr>
<td>3+ Strong complete, basolateral or lateral membranous reactivity in ≥10% of tumour cells</td>
<td>Tumour cell cluster with a strong complete, basolateral or lateral membranous reactivity irrespective of percentage of tumour cells stained</td>
<td>Positive</td>
</tr>
</tbody>
</table>

HER2—human epidermal growth factor receptor 2 (also known as ERBB2).

**Table 1: Immunohistochemistry scoring for HER2 in gastric and gastro-oesophageal junction cancer, by type of diagnostic specimen**
<table>
<thead>
<tr>
<th>Staining characteristics</th>
<th>Score / classification</th>
<th>Example staining patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>No staining / membrane staining in</td>
<td>0/negative</td>
<td><img src="B" alt="Image" /></td>
</tr>
<tr>
<td>&lt;10% of tumour cells</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faint/barely perceptible membrane staining in &gt;10% of tumour cells; cells are only stained in part of their membrane</td>
<td>1+/negative</td>
<td><img src="B" alt="Image" /></td>
</tr>
<tr>
<td>Weak or moderate complete staining in &gt;10% of tumour cells</td>
<td>2+/equivocal</td>
<td><img src="B" alt="Image" /></td>
</tr>
<tr>
<td>Strong complete membrane staining in &gt;10% of tumour cells</td>
<td>3+/positive</td>
<td><img src="B" alt="Image" /></td>
</tr>
</tbody>
</table>

*Although other commercial IHC-testing kits are available, HercepTest™ is the most commonly used. Images from Dako*  
IHC, immunohistochemistry; ISH, in situ hybridisation.
Supplementary Figure 1: Immunohistochemistry (IHC) and Fluorescence in situ hybridization (FISH) scoring for gastroesophageal adenocarcinoma. (A) Detailed IHC scoring criteria. (B) IHC imaging examples (left) and FISH imaging example (right). (C) Current Her2 status testing recommendation for identifying GEC patients eligible for trastuzumab (Herceptin) therapy. Taken from Bang et al Lancet 2010;376(9742):687-97 and Hoffmann et al Histopathology 2008;52(7):797-805.
**Supplementary Figure 2:** (A) Breakdown of FISH and IHC status in the TOGA trial. (B) Clinical outcome based on pre-specified subgroup analyses. As in *Supplementary Figure 1C*, ‘HER2+’ now includes IHC2+/FISH+ and IHC3+ groups. Taken from Bang *et al* Lancet 2010;376(9742):687-97.
Supplementary Figure 3: Development of (A) Fgfr2 and (B) Her3 SRM assays. The fragmentation spectrum for heavy peptides (top lefts) and the standard curve generated in human PC3 cell lysates (bottom lefts) The total ion chromatograms for the light and heavy isotopically labeled peptides (top rights), with the transition ions used to identify and quantitate each peptide (bottom rights).
Supplementary Figure 4: GEC cell lines (N=27) (A) and tissues (N=139) (B) multiplex expression for HER2, Met, Egfr, and Her3 within the ‘GEC-Plex’. Samples sorted by HER2 expression. When adjusting for Her3-, Met-, and Egfr-SRM covariates, the correlation between HER2-SRM and HER2 FISH significantly improved for both sample sets (see text and Supplementary Table 5 for further details).