Appendix 1

Time depended Tmax thresholds using GE CTP 4D
The Tmax thresholds for defining core and penumbra were initially derived on the Prove-IT data and externally validated on the HERMES data. Specifically, GE computed tomographic perfusion (CTP) 4D Tmax (GE Healthcare, Waukesha, WI, USA) >10 was used to define the penumbra. Optimal Tmax thresholds for defining core are dependent on stroke onset-to-computed tomography (CT) time and CT-to-reperfusion time, which are reproduced in the Table 1.

Criteria for the judgment on CCC, ICC, and DSC values
Both concordance correlation coefficient (CCC; -1 to 1) and interclass correlation coefficient (ICC; -1 to 1) measure the strength and direction of a linear relationship between two variables. Basically, CCC and ICC are close to
- 0. No linear relationship
- 0.30. A weak positive linear relationship
- 0.50. A moderate positive relationship
- 0.70. A strong positive linear relationship
- Exactly +1. A perfect positive linear relationship

Dice similarity coefficient (DSC; 0 to 1) measures the spatial overlap of two regions. DSC is close to
- 0. No overlap
- 0.30. A weak overlap
- 0.50. A moderate overlap
- 0.70. A strong overlap
- Exactly +1. A perfect overlap

Supplementary Table 1. Optimal Tmax thresholds for infarction when reperfused <90, 90 to 180 minutes, and not reperfused

<table>
<thead>
<tr>
<th>Onset to CTP time (min)</th>
<th>CTP to reprefusion time (min)</th>
<th>Tmax (sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;180</td>
<td>&lt;90</td>
<td>15.8</td>
</tr>
<tr>
<td></td>
<td>90–180</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>Non-reperfuser</td>
<td>10.1</td>
</tr>
<tr>
<td>&gt;180</td>
<td>&lt;90</td>
<td>13.8</td>
</tr>
<tr>
<td></td>
<td>90–180</td>
<td>11.8</td>
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<tr>
<td></td>
<td>Non-reperfuser</td>
<td>10.0</td>
</tr>
</tbody>
</table>

CTP, computed tomographic perfusion.