

## 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<sup>6</sup> and externally validated on the HERMES data.<sup>8</sup> 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 reperused <90, 90 to 180 minutes, and not reperused

Onset to CTP time (min)	CTP to reperfusion time (min)	Tmax (sec)
<180	<90	15.8
	90-180	12.0
	Non-reperfuser	10.1
>180	<90	13.8
	90-180	11.8
	Non-reperfuser	10.0

CTP, computed tomographic perfusion.