

Supplemental Table 1: Simulated perfusion values for healthy tissue, penumbral tissue and infarct core based on results from PET-CT studies and CT-perfusion studies.^{S1,S2,S3,S4} The values for benign oligaemia were chosen to lie above typical CBV/CBF-thresholds for penumbral tissue, but below the mean values for healthy tissue. Physiological differences in gray/white matter perfusion within the healthy, oligaemic and penumbral tissue were respected. The infarct core was simulated to show no perfusion differences and hence, to be a homogeneously hypoperfused infarct core.

	CBF	CBV
Gray matter	44.4	3.8
GM oligaemia	35	3
GM penumbra	17.3	2.7
GM infarct core	4.9	0.8
White matter	22.2	2.0
WM oligaemia	17	1.9
WM penumbra	10.2	1.8
WM infarct core	4.9	0.8

Supplemental Literature:

S1 Leenders KL, Perani D, Lammertsma AA et al. Cerebral blood flow, blood volume and oxygen utilization. Normal values and effect of age. *Brain* 1990; 113(1):27-47

S2 Chen C, Bivard A, Lin L et al. Thresholds for infarction vary between gray matter and white matter in acute ischemic stroke: A CT perfusion study. *J Cereb Blood Flow Metab* 2019;39(3):536-546

S3 Ito H, Kanno I, Kato C et al. Database of normal human cerebral blood flow, cerebral blood volume, cerebral oxygen extraction fraction and cerebral metabolic rate of

oxygen measured by positron emission tomography with ^{15}O -labelled carbon dioxide or water, carbon monoxide and oxygen: a multicentre study in Japan. Eur J Nucl Med Mol Imaging. 2004;31(5):635-43

S4 Watabe T, Shimosegawa E, Kato H et al. CBF/CBV maps in normal volunteers studied with (^{15}O) PET: a possible index of cerebral perfusion pressure. Neurosci Bull. 2014;30(5):857-62