

1	Status	Sep 2016 Voting Packet
2	Date of Last Update	2016/05/25
3	Person Assigned	David Clunie
4		mailto:dclunie@dclunie.com
5	Submitter Name	David Clunie
6		mailto:dclunie@dclunie.com
7	Submission Date	2016/01/21

8	Correction Number CP-1587
9	Log Summary: Add Tmax perfusion parameter
10	Name of Standard
11	PS3.16
12	Rationale for Correction:
13	For stroke perfusion imaging, Tmax represents the time delay to the maximum of the residue function after deconvolution. It is not
14	the same as the nondeconvolved time-to-peak (TTP).
15	The definition required for stroke perfusion imaging is more specific than the generic definition of (C2348796, UMLS, "Tmax") (C70919,
16	NCIt, "Tmax"), which is "The time it takes to reach the maximum concentration (Cmax) of an exogenous compound or drug in the
17	plasma or a tissue after a dose is administered", hence the NCIt concept is not used.
18	Correction Wording:

1

Amend DICOM PS3.16 as follows (changes to existing text are bold and underlined for additions and ~~struckthrough~~ for removals):

2

CID 4108 Perfusion Model Parameters

3

Type: Extensible
Version: ~~20141110~~yyyymmdd

6

7

Table CID 4108. Perfusion Model Parameters

8

Coding Scheme Designator	Code Value	Code Meaning
DCM	113055	Regional Cerebral Blood Flow
DCM	126390	Regional Blood Flow
DCM	113056	Regional Cerebral Blood Volume
DCM	126391	Regional Blood Volume
DCM	113052	Mean Transit Time
DCM	113069	Time To Peak
DCM	126392	Oxygen Extraction Fraction
<u>DCM</u>	<u>ddd001</u>	<u>Tmax</u>

10

11

12

13

14

15

16

17

Note

18

CID 7203 Image Derivation

20

Type: Extensible
Version: ~~20151113~~yyyymmdd

22

23

Table CID 7203. Image Derivation

24

Coding Scheme Designator	Code Value	Code Meaning
...	...	...
DCM	113069	Time To Peak
...	...	...
<u>DCM</u>	<u>ddd001</u>	<u>Tmax</u>

25

26

27

28

29

Table D-1. DICOM Controlled Terminology Definitions

30

Code Value	Code Meaning	Definition	Notes
113069	Time To Peak	The time from the start of the contrast agent injection to the maximum enhancement value.	
<u>ddd001</u>	<u>Tmax</u>	<u>The time delay to the maximum of the residue function after deconvolution.</u> <u>Shih LC, Saver JL, Alger JR, Starkman S, Leary MC, Vinuela F, et al. Perfusion-Weighted Magnetic Resonance Imaging Thresholds Identifying Core, Irreversibly Infarcted Tissue. Stroke. 2003 Jun 1;34(6):1425–30. doi:10.1161/01.STR.0000072998.70087.E9 http://stroke.ahajournals.org/content/34/6/1425.abstract</u> <u>Østergaard L, Weisskoff RM, Chesler DA, Gyldensted C, Rosen BR. High resolution measurement of cerebral blood flow using intravascular tracer bolus passages. Part I: Mathematical approach and statistical analysis. Magnetic Resonance in Medicine. 1996;36(5):715–25. doi:10.1002/mrm.1910360510 http://onlinelibrary.wiley.com/doi/10.1002/mrm.1910360510/abstract</u>	

31

32

33

34

35

36

37

38

39

40

41

42

43