Correction Number CP-1587
Log Summary: Add Tmax perfusion parameter
Name of Standard
PS3.16 2016d
Rationale for Correction:
For stroke perfusion imaging, Tmax represents the time delay to the maximum of the residue function after deconvolution. It is not
the same as the nondeconvolved time-to-peak (TTP).

The definition required for stroke perfusion imaging is more specific than the generic definition of (C2348796, UMLS, "Tmax") (C70919, NCIt, "Tmax"), which is "The time it takes to reach the maximum concentration (Cmax) of an exogenous compound or drug in the
plasma or a tissue after a dose is administered", hence the NCIt concept is not used.

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

CID 4108 Perfusion Model Parameters

<table>
<thead>
<tr>
<th>Coding Scheme Designator</th>
<th>Code Value</th>
<th>Code Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCM</td>
<td>113055</td>
<td>Regional Cerebral Blood Flow</td>
</tr>
<tr>
<td>DCM</td>
<td>126390</td>
<td>Regional Blood Flow</td>
</tr>
<tr>
<td>DCM</td>
<td>113056</td>
<td>Regional Cerebral Blood Volume</td>
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<tr>
<td>DCM</td>
<td>126391</td>
<td>Regional Blood Volume</td>
</tr>
<tr>
<td>DCM</td>
<td>113052</td>
<td>Mean Transit Time</td>
</tr>
<tr>
<td>DCM</td>
<td>113069</td>
<td>Time To Peak</td>
</tr>
<tr>
<td>DCM</td>
<td>126392</td>
<td>Oxygen Extraction Fraction</td>
</tr>
<tr>
<td>DCM</td>
<td>113084</td>
<td>Tmax</td>
</tr>
</tbody>
</table>

Note

CID 7203 Image Derivation

<table>
<thead>
<tr>
<th>Coding Scheme Designator</th>
<th>Code Value</th>
<th>Code Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>DCM</td>
<td>113069</td>
<td>Time To Peak</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>DCM</td>
<td>113084</td>
<td>Tmax</td>
</tr>
</tbody>
</table>

Table D-1. DICOM Controlled Terminology Definitions

<table>
<thead>
<tr>
<th>Code Value</th>
<th>Code Meaning</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>113069</td>
<td>Time To Peak</td>
<td>The time from the start of the contrast agent injection to the maximum enhancement value.</td>
</tr>
<tr>
<td>113084</td>
<td>Tmax</td>
<td>The time delay to the maximum of the residue function after deconvolution.</td>
</tr>
</tbody>
</table>
