

# DICOM Correction Proposal

STATUS	New
Date of Last Update	2019/10/30
Person Assigned	Tronnier
Submitter Name	Uwe Tronnier
Submission Date	2019/10/28 <a href="mailto:dclunie@dclunie.com">mailto:dclunie@dclunie.com</a>

<The box shall precede each new section to be modified>

Correction Number	CP-1986
Log Summary:	Give Planned IAASR the ability to be treaded in a specific order.
Name of Standard	PS3.16, 2019c, TID 11007 (Imaging Agent Administration Step)
Rationale for Correction:	For sequencing the individual phases of TID 11008 there is a Content Item Description of row 2 "Imaging Agent Administration Phase Identifier" which describes the format to be an ordinal number. As for Performed Steps the time stamps may be sufficient (as shown in the example in part 17 MMMM.1, row 1.21.3.1), ordinal numbering is needed also for <u>Planned</u> Steps. Since combing the Step purpose and the sequencing information into one entity seems to be inconvenient for implementation purposes, a new row "Imaging Agent Administration Step Sequence Number" should be introduced.
Correction Wording:	<p>Add a row 20 to TID 11007, which defines the order of the steps being operated. The VT shall be TEXT and the Relation with it's parent shall be CONTAINS. VM is 1, Required Type is MC, Condition is: IF root Concept Name Code Sequence = (130226, DCM, "Planned Imaging Agent Administration"). So this field must be present for a plan and may be present for a performed object.</p> <p>Add a Content Item Description for row 20 with the following text: "Imaging Agent Administration Step Sequence Number shall be treated as the ordinal of the defined administration step within the administration steps (i.e., "1" for the first step, "2" for the second, etc.)."</p> <p>Define a new Concept Name EV(99cp1986newcode0001, DCM, "Imaging Agent Administration Step Sequence Number") which have the following definition to be added to part 16 section D: "Defines the sequence order in which a set of Imaging Agent administration steps shall be / was operated".</p>

*Amend DICOM PS3.16 2019c as follows  
(changes to existing text are bold and underlined for additions and ~~struckthrough~~ for removals):*

## TID 11007 Imaging Agent Administration Step

This template provides detailed information on an Imaging Agent Administration step. A step is part of a plan. Steps are usually distinguished from other steps because an operator's intervention is required between steps. Steps are also distinguished when they have different routes of administration. A step may consist of multiple phases.

**Type:** Extensible  
**Order:** Non-Significant  
**Root:** No

### Table TID 11007. Imaging Agent Administration Step

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (130195, DCM, "Imaging Agent Administration Step")	1	M		
2	>	CONTAINS	TEXT	EV (130196, DCM, "Imaging Agent Administration Step Identifier")	1	M		
3	>	CONTAINS	UIDREF	EV (130246, DCM, "Imaging Agent Administration Performed Step UID")	1	MC	IFF root Concept Name Code Sequence = (130227, DCM, "Performed Imaging Agent Administration")	
4	>	CONTAINS	CODE	EV (130181, DCM, "Administration Mode")	1	M		DCID 63 "Imaging Agent Administration Mode"
5	>	CONTAINS	CODE	EV (113874, DCM, "Person Role in Organization")	1-n	MC	IF Row 4 = (130174, DCM, "Manual Administration")	DCID 7450 "Person Roles"
6	>	CONTAINS	CODE	EV (130250, DCM, "Administration Step Type")	1	M		DCID 72 "Imaging Agent Administration Step Type"
7	>	CONTAINS	NUM	EV (130197, DCM, "Administration Delay")	1	U		UNITS = EV (s, UCUM, "s")
8	>	CONTAINS	NUM	EV (130198, DCM, "Scan Delay")	1	U		UNITS = EV (s, UCUM, "s")
9	>	CONTAINS	NUM	EV (130193, DCM, "Pressure Limit")	1	UC	IFF Row 4 = (130173, DCM, "Automated Administration")	UNITS = EV (kPa, UCUM, "kPa")
10	>	CONTAINS	CODE	EV (410675002, SCT, "Route of Administration")	1	M		DCID 11 "Route of Administration"
11	>>	HAS PROPERTIES	CODE	EV (272737002, SCT, "Site of")	1	UC	IF Row 10 equals(47625008, SCT, "Intravenous route")  OR (12130007, SCT, "Intra-articular route")	DCID 3746 "Percutaneous Entry Site"
12	>>>	HAS CONCEPT MOD	CODE	EV (272741003, SCT, "Laterality")	1	UC	IF Row 11 has laterality	DCID 247 "Left-Right Only"

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
13	>	CONTAINS	INCLUDE	DTID 11008 "Imaging Agent Administration Phase"	1-n	M		
14	>	CONTAINS	INCLUDE	DTID 11023 "Imaging Agent Administration Graph"	1-n	UC	IFF root Concept Name Code Sequence = (130227, DCM, "Performed Imaging Agent Administration")	
15	>	CONTAINS	NUM	EV (130219, DCM, "Number of Injector Heads")	1	UC	IFF Row 4 = (130174, DCM, "Automated Administration")	
16	>	CONTAINS	CODE	EV (130218, DCM, "Programmable Device")	1	UC	IFF Row 4 = (130174, DCM, "Automated Administration")	DCID 231 "Yes-No Only"
17	>	CONTAINS	CONTAINER	EV (130172, DCM, "Manually triggered injection information")	1	UC	IF Row 4 = (130173, DCM, "Automated Administration")  AND  IFF root Concept Name Code Sequence = (130227, DCM, "Performed Imaging Agent Administration")	
18	>>	CONTAINS	NUM	EV (130241, DCM, "Total Step Volume Administered")	1	M		UNITS = EV (ml, UCUM, "ml")
19	>>	CONTAINS	NUM	EV (130242, DCM, "Total number of manually triggered injections")	1	M		
<u>20</u>	<u>&gt;</u>	<u>CONTAINS</u>	<u>TEXT</u>	<u>EV(99cp1986newcode0001, DCM, "Imaging Agent Administration Step Sequence Number")</u>	<u>1</u>	<u>MC</u>	<u>IF root Concept Name Code Sequence = (130226, DCM, "Planned Imaging Agent Administration")</u>	

### Content Item Descriptions

Row 14	For a multi- syringe/pump injector there will be one graph per syringe/pump system. This is only included in the performed administration because it is descriptive not prescriptive.
<u>Row 20</u>	<u>Imaging Agent Administration Step Sequence Number shall be treated as the ordinal of the defined administration step within the administration steps (i.e., "1" for the first step, "2" for the second, etc.).</u>

# D DICOM Controlled Terminology Definitions (Normative)

This Annex specifies the meanings of codes defined in DICOM, either explicitly or by reference to another part of DICOM or an external reference document or standard.

The contents of this table are available in OWL format at <ftp://medical.nema.org/medical/dicom/resources/ontology/dcm/dcm.owl> and in Bioportal.

**Table D-1. DICOM Controlled Terminology Definitions (Coding Scheme Designator "DCM" Coding Scheme Version "01")**

Code Value	Code Meaning	Definition	Notes
...	...	...	...
<u>99cp1986new code0001</u>	<u>Imaging Agent Administration Step Sequence Number</u>	<u>Defines the sequence order in which a set of Imaging Agent administration steps shall be / was operated.</u>	
...	...	...	...