

DICOM Correction Proposal Form

Correction Number CP-260	
Log Summary: Add Numeric Measurement Qualifier	
Type of Modification Clarification	Name of Standard PS 3.3-2001
<p>Rationale for Correction</p> <p>Initial experience with DICOM Structured Reporting has identified a problem with the NUM Value Type.</p> <p>If the value is unknown or non-computable, the standard allows the Measured Value Sequence that encodes the NUM to be an empty sequence. This is good. However, it is important for the Content Item to also carry the reason for the absence of a value; this is provided with a new optional coded entry sequence.</p>	
<p>Sections of documents affected</p> <p>PS 3.3, Section C.18</p> <p>PS 3.6, Section 6</p> <p>PS 3.16, Section B</p>	
Correction Wording:	

Update PS3.3 Section C.18

C.18.1 Numeric Measurement Macro

Table C.18.1-1 specifies the Attributes that convey a NUM (numeric measurement) value.

Note: The Measured Value Sequence (0040,A300) may be empty to convey the concept of a measurement whose value is unknown or missing, or a measurement or calculation failure.

**Table C.18.1-1
NUMERIC MEASUREMENT MACRO ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
Measured Value Sequence	(0040,A300)	2	This is the value of the Content Item. Shall consist of a Sequence of Items conveying the measured value(s), which represent integers or real numbers and units of measurement. Zero or one Items shall be permitted in this sequence.
>Numeric Value	(0040,A30A)	1	Numeric measurement value. Only a single value shall be present.
>Measurement Units Code Sequence	(0040,08EA)	1	Units of measurement. Only a single Item shall be permitted in this sequence.
<i>>>Include 'Code Sequence Macro' Table 8.8-1</i>			<i>Defined Context ID is 82.</i>
<u>Numeric Value Qualifier Code Sequence</u>	<u>(0040,A301)</u>	3	<u>Qualification of Numeric Value in Measured Value Sequence, or reason for absence of Measured Value Sequence Item. Only a single Item shall be permitted in this sequence.</u>
<i>>Include 'Code Sequence Macro' Table 8.8-1</i>			<i>Defined Context ID is 42.</i>

Update PS3.6 Section 6

Tag	Name	VR	VM	
<u>(0040,A301)</u>	<u>Numeric Value Qualifier Code Sequence</u>	<u>SQ</u>	<u>1</u>	

Update PS3.16 Section B

**CID 42
Numeric Value Qualifier**

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
DCM	114000	Not a number
DCM	114001	Negative Infinity
DCM	114002	Positive Infinity
DCM	114003	Divide by zero
DCM	114004	Underflow
DCM	114005	Overflow
DCM	114006	Measurement failure
DCM	114007	Measurement not attempted
DCM	114008	Calculation failure
DCM	114009	Value out of range
DCM	114010	Value unknown
DCM	114011	Value indeterminate

Update PS3.16 Section D

Code Value	Code Meaning	Definition	Notes
114000	Not a number	Measurement not available: Not a number (per IEEE 754)	
114001	Negative Infinity	Measurement not available: Negative Infinity (per IEEE 754)	
114002	Positive Infinity	Measurement not available: Positive Infinity (per IEEE 754)	
114003	Divide by zero	Measurement not available: Divide by zero (per IEEE 754)	
114004	Underflow	Measurement not available: Underflow (per IEEE 754)	
114005	Overflow	Measurement not available: Overflow (per IEEE 754)	
114006	Measurement failure	Measurement not available: Measurement failure	
114007	Measurement not attempted	Measurement not available: Measurement not attempted	

114008	Calculation failure	Measurement not available: Calculation failure	
114009	Value out of range	Measurement not available: Value out of range	
114010	Value unknown	Measurement not available: Value unknown	
114011	Value indeterminate	Measurement not available: Value indeterminate	