

DICOM Correction Proposal

STATUS	Final Text
Date of Last Update	2013/06/12
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Submission Date	2012/03/16

Correction Number	CP-1220
Log Summary: Editorial Corrections for PS3.16	
Name of Standard PS 3.16 2011	
Rationale for Correction There are several categories of issues in PS3.16 Annex A addressed by this correction: <ul style="list-style-type: none"> • Missing “Units =” in some Value Set Constraints • Missing “DT” or “EV” for specified Code Value • Missing Coding Scheme Designator in specified Code Value • Incorrectly specified Value Multiplicity • Incorrect Code Value and incorrect Context ID number 	
Correction Wording:	

TID 300
Measurement
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
9	>	INFERRED FROM	NUM	\$DerivationParameter	1-n	UC	XOR Row 10	<u>Units</u> =\$DerivationParameterUnits
10	>	R-INFERRED FROM	NUM	\$DerivationParameter	1-n	UC	XOR Row 9	<u>Units</u> =\$DerivationParameterUnits
...								

TID 2001
BASIC DIAGNOSTIC IMAGING REPORT OBSERVATIONS
Type: Non-Extensible Order: Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			IMAGE	BCID(7003) Diagnostic Imaging Report Purposes of Reference	1	MC	XOR Rows 2,3,4,5.	
2			INCLUDE	<u>DTID</u> (1400) Linear Measurements	1	MC	XOR Rows 1,3,4,5. Shall not be present if the NUM value type is not supported by	

							the IOD.	
3			INCLUDE	DTID(1401) Area Measurements	1	MC	XOR Rows 1,2,4,5. Shall not be present if the NUM value type is not supported by the IOD.	
4			INCLUDE	DTID(1402) Volume Measurements	1	MC	XOR Rows 1,2,3,5. Shall not be present if the NUM value type is not supported by the IOD.	
5			INCLUDE	DTID (1404) Numeric Measurements	1	MC	XOR Rows 1,2,3,4. Shall not be present if the NUM value type is not supported by the IOD.	

TID 2020
Spectacle Prescription Report
Type: Extensible Order: Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (111671, DCM, "Spectacle Prescription Report")	1	M		
2	>	CONTAINS	CONTAINER	EV (111688, DCM, "Right Eye Rx")	1	UC	IF Right Spectacle Lens is prescribed	
3	>>	CONTAINS	INCLUDE	DTID (2021) Spectacle Prescription Details	1	M		
4	>	CONTAINS	CONTAINER	EV (111689, DCM, "Left Eye Rx")	1	UC	IF Left Spectacle Lens is prescribed	
5	>>	CONTAINS	INCLUDE	DTID (2021) Spectacle Prescription Details	1	M		
6	>	CONTAINS	NUM	EV (111679, DCM, "Distance Pupillary Distance")	1	U		\$UNITS=EV(mm,UCUM,"mm")
7	>	CONTAINS	NUM	EV (111680, DCM, "Near Pupillary Distance")	1	U		\$UNITS=EV(mm,UCUM,"mm")
8	>	CONTAINS	TEXT	EV (121106, DCM, "Comments")	1	U		

TID 2100
Macular Grid Thickness and Volume Report
Type: Extensible Order: Significant

	NL	Rel with	VT	Concept Name	VM	Req	Condition	Value Set Constraint
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		Parent				Type		
1			CONTAINER	EV (111690, DCM, "Macular Grid Thickness and Volume Report")	1	M		
2	>	HAS CONCEPT MOD	INCLUDE	DTID (1204) Language of Content Item and Descendants	1	M		
3	>	HAS OBS CONTEXT	INCLUDE	DTID (1001) Observation Context	1	M		
4	>	CONTAINS	INCLUDE	DTID (2101) Macular Grid Thickness and Volume Measurement	1	MC	IF Row 5 is absent.	\$Laterality = EV (G-A100,SRT, "Right")
5	>	CONTAINS	INCLUDE	DTID (2101) Macular Grid Thickness and Volume Measurement	1	MC	IF Row 4 is absent.	\$Laterality = EV (G-A101,SRT, "Left")

TID 3114

Patient Assessment

Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
2	>	HAS PROPERTIES	INCLUDE	DTID (300) Measurement	1	MC	IF Row 1 value = (PA-00500, SRT, "Observation of Vital Signs")	\$Measurement = EV (F-008EC, SRT, "Systolic blood pressure") \$Units = DCID (3500) \$Method = BCID (3560) Blood Pressure Methods
3	>	HAS PROPERTIES	INCLUDE	DTID (300) Measurement	1	MC	IF Row 1 value = (PA-00500, SRT, "Observation of Vital Signs")	\$Measurement = EV (F-008ED, SRT, "Diastolic blood pressure") \$Units = DCID (3500)
4	>	HAS PROPERTIES	INCLUDE	DTID (300) Measurement	1	MC	IF Row 1 value = (PA-00500, SRT, "Observation of Vital Signs")	\$Measurement = EV (8867-4, LN, "Heart rate") \$Units = EV ("{H.B.}/min", UCUM, "BPM")
5	>	HAS PROPERTIES	INCLUDE	DTID (300) Measurement	1	MC	IF Row 1 value = (PA-00500, SRT, "Observation of Vital Signs")	\$Measurement = EV (8310-5, LN, "Body temperature") \$Units = EV (Cel, UCUM, "°C")
6	>	HAS PROPERTIES	INCLUDE	DTID (300) Measurement	1	MC	IF Row 1 value = (PA-00500, SRT, "Observation of Vital Signs")	\$Measurement = DCID (3526) Blood gas saturation \$Units = EV (% , UCUM, "%")
7	>	HAS PROPERTIES	INCLUDE	DTID (300) Measurement	1	MC	IF Row 1 value = (PA-00500, SRT, "Observation of Vital Signs")	\$Measurement = EV (F-043E7, SRT, "Respiration rate") \$Units = EV (/min, UCUM, "breaths/min")
8	>	HAS PROPERTIES	INCLUDE	DTID (300) Measurement	1-n	MC	IF Row 1 value = (PA-00500, SRT, "Observation of Vital Signs")	\$Measurement = EV (122195, DCM, "Pulse Strength") \$Method = BCID (3442) Peripheral Pulse Methods \$TargetSite = BCID (3440) Peripheral Pulse Locations \$Units = DT ("{0:4}", UCUM, "range 0:4")
9	>	HAS PROPERTIES	INCLUDE	DTID (300) Measurement	1	MC	IF Row 1 value = (PA-00500, SRT, "Observation of Vital Signs")	\$Measurement = EV (F-009EA, SRT, "Pain Score") \$Units = DT ("{1:10}", UCUM, "range 1:10")

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
14	>	HAS PROPERTIES	CODE	DT (F-04317, <u>SRT</u> , "Patient mental state assessment")	1	U		No BCID
...								

TID 3208
FRAME-TO-FRAME RESULT
Type: Extensible Order: Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
5	>	CONTAINS	INCLUDE	DTID (300) Measurement	<u>1-n</u>	M		\$Measurement = DCID (3471) Estimated Volumes \$TargetSite = DCID (3462) Chamber Identification \$Unit = DT (ml, UCUM, "ml")
6	>	CONTAINS	INCLUDE	DTID (300) Measurement	<u>1-n</u>	U		\$Measurement = EV (122445, DCM, "Wall Thickness") \$Unit = DT (mm, UCUM, "mm")
...								

TID 3214
ANALYZED SEGMENT
Type: Extensible Order: Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
12	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		\$Measurement = EV (G-0364, SRT, "Vessel Luminal Diameter") \$Derivation = <u>EV</u> (R-404FB, SRT, "Minimum") \$Unit = DT (mm, UCUM, "mm")
13	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		\$Measurement = EV (G-0364, SRT, "Vessel Luminal Diameter") \$Derivation = <u>EV</u> (G-A437, SRT, "Maximum") \$Unit = DT (mm, UCUM, "mm")
...								

TID 3215
ANGIOGRAPHIC LESION ANALYSIS
Type: Extensible Order: Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
5	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		\$Measurement = EV (G-0364, SRT, "Vessel Luminal Diameter") \$Derivation = <u>EV</u> (R-404FB, SRT, "Minimum") \$Unit = DT (mm, UCUM, "mm")
6	>	CONTAINS	INCLUDE	DTID (300) Measurement	1-n	U		\$Measurement = EV (G-0366, SRT, "Vessel Lumen Cross-Sectional Area")

NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
							\$Method = DCID (3470) Vessel Lumen Cross-Sectional Area Calculation Methods \$Derivation = EV (R-404FB, SRT, "Minimum") \$Unit = DT (mm2, UCUM, "mm^2")
...							

**TID 3219
SEGMENT VALUES**

Type: Extensible Order: Significant

NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		\$Measurement = EV (122510, DCM, "Length Luminal Segment") \$Unit = DT (mm, UCUM, "mm")
2	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		\$Measurement = EV (G-0364, SRT, "Vessel Luminal Diameter") \$Derivation = EV (R-404FB, SRT, "Minimum") \$Unit = DT (mm, UCUM, "mm")
3	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		\$Measurement = EV (G-0364, SRT, "Vessel Luminal Diameter") \$Derivation = EV (G-A437, SRT, "Maximum") \$Unit = DT (mm, UCUM, "mm")
4	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		\$Measurement = EV (G-0364, SRT, "Vessel Luminal Diameter") \$Derivation = EV (R-00317, SRT, "Mean") \$Unit = DT (mm, UCUM, "mm")
5	CONTAINS	INCLUDE	DTID (300) Measurement	1	U		\$Measurement = EV (G-0364, SRT, "Vessel Luminal Diameter") \$Derivation = EV (R-10047, SRT, "Standard Deviation") \$Unit = DT (mm, UCUM, "mm")

**TID 3253
IVUS Measurements**

Type: Extensible Order: Significant

NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		INCLUDE	<u>D</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3481) IVUS Distance Measurements \$Units = EV (mm, UCUM, "mm") \$Derivation = DCID (3488) Min/Max/Mean \$TargetSite = BCID (3486) Vascular Measurement Sites
2		INCLUDE	<u>D</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3482) IVUS Area Measurements \$Units = EV (mm2, UCUM, "mm2") \$Derivation = DCID (3488) Min/Max/Mean \$TargetSite = BCID (3486) Vascular Measurement Sites
3		INCLUDE	<u>D</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3483) IVUS Longitudinal Measurements

								\$Units = EV (mm, UCUM, "mm")
4			INCLUDE	<u>D</u> TID (300) Measurement	1-n	U		\$Measurement = EV (122355, DCM, "Arc of Calcium") \$Units = EV (deg, UCUM, "degrees") \$TargetSite = BCID (3486) Vascular Measurement Sites
5			INCLUDE	<u>D</u> TID (300) Measurement	1	U		\$Measurement = EV (R-101BA, SRT, "Lumen Area Stenosis") \$Units = EV (% , UCUM, "%")
6			INCLUDE	<u>D</u> TID (300) Measurement	1	U		\$Measurement = EV (122354, DCM, "Plaque Burden") \$Units = EV (% , UCUM, "%") \$TargetSite = BCID (3486) Vascular Measurement Sites
7			INCLUDE	<u>D</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3484) IVUS Indices and Ratios \$Units = EV (1, UCUM, "ratio") \$TargetSite = BCID (3486) Vascular Measurement Sites
8			INCLUDE	<u>D</u> TID (3255) IVUS Volume Measurement	1-n	U		
9			INCLUDE	<u>D</u> TID (300) Measurement	1	U		\$Measurement = EV (122339, DCM, "Stent Volume Obstruction") \$Units = EV (% , UCUM, "%")

TID 3254
IVUS Qualitative Assessments
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
11			CODE	EV (111009, <u>DCM</u> , "Calcification Type")	1	U		DCID (3489) Calcium Distribution

TID 3255
IVUS Volume Measurement
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			INCLUDE	<u>D</u> TID (300) Measurement	1	M		\$Measurement = DCID (3485) IVUS Volume Measurements \$Units = EV (mm3, UCUM, "mm3") \$TargetSite = BCID (3487) Intravascular Volumetric Regions
...								

TID 3304
Stress Test Measurement Group
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
14	>	CONTAINS	NUM	DT (122707, DCM, "Number of Ectopic Beats")	1	U		UNITS = <u>EV</u> ({beats}, UCUM, "beats")
...								

TID 3312
Physiological Summary
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
19			INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = DT (F-04FCC, SRT, "Functional capacity") See note.
20			TEXT	DT (F-04FCC, SRT, "Functional capacity")	1	U		
21			INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = EV(122760, DCM, "Stress test score") \$Method = BCID (3238) Stress Scoring Scales
...								

TID 3313
Stress ECG Summary
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
''								
4			INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = EV (F-03204, SRT, "ST Elevation") \$Units = DT(mV, UCUM, "mV") \$Derivation = <u>EV</u> (G-A437, SRT, "Maximum") \$TargetSite = DCID (3001) ECG Leads
5			INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = EV (F-38279, SRT, "ST Depression") \$Units = DT(mV, UCUM, "mV") \$Derivation = <u>EV</u> (G-A437, SRT, "Maximum") \$TargetSite = DCID (3001) ECG Leads
6			INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = EV (F-38287, SRT, "T wave alternans") \$Units = DT(uV, UCUM, "uV") \$Derivation = <u>EV</u> (G-A437, SRT, "Maximum") \$TargetSite = DCID (3001) ECG Leads
...								
10			NUM	DT (122707, DCM, "Number of Ectopic Beats")	1	U		UNITS = <u>EV</u> (({beats}), UCUM, "beats")
...								

TID 3510
Vital Signs
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (8716-3, LN, "Vital Signs")	1	M		

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
2	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (F-008EC, SRT, "Systolic blood pressure") \$Units = DCID (3500) \$Method = BCID (3560) Blood Pressure Methods
3	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (F-008ED, SRT, "Diastolic blood pressure") \$Units = DCID (3500)
4	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (8867-4, LN, "Heart rate") \$Units = EV ("{H.B.}/min", UCUM, "BPM")
5	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (8310-5, LN, "Body temperature") \$Units = EV (Cel, UCUM, "°C")
6	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = DCID (3526) Blood gas saturation \$Units = EV (% , UCUM, "%")
7	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (F-043E7, SRT, "Respiration rate") \$Units = EV (/min, UCUM, "breaths/min")
8	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (122195, DCM, "Pulse Strength") \$Units = DT("{0:4}", UCUM, "range 0:4")
9	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (F-009EA, SRT, "Pain Score") \$Units = DT("{1:10}", UCUM, "range 1:10")
...								

TID 3713
ECG Global Measurements
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
13	>	CONTAINS	NUM	DT (2:16032, MDC, "Count of all beats")	1	U		UNITS = EV ({beats}, UCUM, "beats")
14	>	CONTAINS	NUM	DT (122707, DCM, "Number of Ectopic Beats")	1	U		UNITS = EV ({beats}, UCUM, "beats")
...								

TID 3515
Cardiac Output Measurement by Indicator Dilution
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (P2-34201, SRT, "Cardiac Output measurement")	1	M		
2	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	M		\$Measurement = EV (8737-9, LN, "Cardiac Output by Indicator Dilution") \$Units = EV (l/min, UCUM,

									"/min") \$Method = DCID (3628) Cardiac Output Methods \$WavePurpose = DT (121112, DCM, "Source of measurement")
...									

TID 3516
Blood Lab Measurements
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122125, DCM, "Blood lab measurements")	1	M		
2	>	HAS ACQ CONTEXT	CODE	EV (R-00254, SRT, "Specimen Type")	1	M		DCID (3520) Blood Source Type
3	>	HAS ACQ CONTEXT	CODE	EV (G-C0E9, SRT, "Procedure site")	1	M		BCID (3630) Cardiovascular Anatomic Locations
4	>		INCLUDE	DTID (1000) Quotation	1	U		
5	>	CONTAINS	INCLUDE	<u>DT</u> ID (300) Measurement	1	U		\$Measurement = EV (718-7, LN, "Hemoglobin") \$Units = DT (g/dl, UCUM, "g/dl")
6	>	CONTAINS	INCLUDE	<u>DT</u> ID (300) Measurement	1-n	U		\$Measurement = DCID (3524) Blood Gas Pressures \$Units = DCID (3500)
7	>	CONTAINS	INCLUDE	<u>DT</u> ID (300) Measurement	1-n	U		\$Measurement = DCID (3525) Blood Gas Content \$Units = DT (ml/dl, UCUM, "ml/dl")
8	>	CONTAINS	INCLUDE	<u>DT</u> ID (300) Measurement	1-n	U		\$Measurement = DCID (3528) Blood pH \$Units = EV ([pH], UCUM, "pH")
9	>	CONTAINS	INCLUDE	<u>DT</u> ID (300) Measurement	1-n	U		\$Measurement = DCID (3526) Blood Gas Saturation \$Units = EV (% , UCUM, "%")
10	>	CONTAINS	INCLUDE	<u>DT</u> ID (300) Measurement	1-n	U		\$Measurement = DCID (3527) Blood Base Excess \$Units = DT (meq/dl, UCUM, "meq/dl")
11	>	CONTAINS	INCLUDE	<u>DT</u> ID (300) Measurement	1	U		\$Measurement = EV (122183, DCM, "Blood temperature") \$Units = EV (Cel, UCUM, "°C")

TID 3550
Pressure Waveform Measurements
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CONTAINS	INCLUDE	<u>DT</u> ID (300) Measurement	1-n	U		\$Measurement = DCID (3611) Pressure Measurements \$Units = DCID (3500)
2		CONTAINS	INCLUDE	<u>DT</u> ID (300) Measurement	1-n	U		\$Measurement = DCID (3612) Blood Velocity Measurements \$Units = EV (mm/s, UCUM, "mm/s")
3		CONTAINS	INCLUDE	<u>DT</u> ID (300) Measurement	1-n	U		\$Measurement = DCID (3613) Hemodynamic Time Measurements \$Units = DT (ms, UCUM, "ms")
4		CONTAINS	INCLUDE	<u>DT</u> ID (300) Measurement	1	U		\$Measurement = EV (F-32100,

								SRT, "Cardiac Output") \$Units = EV (l/min, UCUM, "l/min")
5		CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (F-32120, SRT, "Stroke Volume") \$Units = DT (ml, UCUM, "ml")
6		CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (10230-1, LN, "LV Ejection Fraction") \$Units = EV (% , UCUM, "%")
7		CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (8867-4, LN, "Heart rate") \$Units = DT ("{H.B.}/min", UCUM, "BPM")
8		CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (F-043E7, SRT, "Respiration rate") \$Units = DT ("/min", UCUM, "breaths/min")
9		CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (109025, DCM, "Max dp/dt") \$Units = DT (mm[Hg]/s, UCUM, "mmHg/s")
10		CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (109026, DCM, "Max neg dp/dt") \$Units = DT (mm[Hg]/s, UCUM, "mmHg/s")
11		CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (122190, DCM, "Max dp/dt/P") \$Units = DT (s-1, UCUM, "/s")
12		CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (122192, DCM, "Indicator appearance time") \$Units = DT (s, UCUM, "s")
13		CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (122193, DCM, "Maximum pressure acceleration") \$Units = DT (mm[Hg]/s2, UCUM, "mmHg/s/s")
14		CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3617) Valve Flows \$Units = DT (ml/min, UCUM, "ml/min")

TID 3560
Derived Hemodynamic Measurements
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122126, DCM, "Derived Hemodynamic Measurements")	1	U		
2	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3614) Valve Areas, non-Mitral \$Units = EV (cm2, UCUM, "cm2") \$Equation = DT (122262, DCM, "Area = Flow / 44.5 * sqrt(Gradient[mmHg])")
3	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (F-02320, SRT, "Mitral Valve Area") \$Units = EV (cm2, UCUM, "cm2") \$Equation = DT (122263, DCM, "MVA= Flow / 38.0 * sqrt(Gradient[mmHg])")
4	>	CONTAINS	INCLUDE	<u>DT</u> TID (300)	1-n	U		\$Measurement = DCID (3615) Valve

				Measurement				Areas \$ModType = EV (121425, DCM, "Index") \$ModValue = EV (8277-6, LN, "Body Surface Area") \$Units = DT (cm2/m2, UCUM, "cm2/m2")
5	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3616) Hemodynamic Period Measurements \$Units = DT ("s/min", UCUM, "s/min")
6	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3617) Valve Flows \$Units = DT (ml/s, UCUM, "ml/s")
7	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (F-32110, SRT, "Cardiac Index") \$Units = DT (l/min/m2, UCUM, "l/min/m2")
8	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3529) Arterial / Venous Content \$Units = DT (ml/dl, UCUM, "ml/dl")
9	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3618) Hemodynamic Flows \$Units = DT (l/min, UCUM, "l/min")
10	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (8736-1, LN, "FICK Cardiac Output") \$Units = DT (l/min, UCUM, "l/min")
11	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (8750-2, LN, "FICK Cardiac Index") \$Units = DT (l/min/m2, UCUM, "l/min/m2")
12	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (122229, DCM, "Arteriovenous difference") \$Units = DT (ml/dl, UCUM, "ml/dl")
13	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = BCID (3620) Hemodynamic Ratios \$Units = DT (1, UCUM, "ratio")
14	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (122237, DCM, "Corrected Sinus Node Recovery Time") \$Units = DT (ms, UCUM, "ms")
15	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (8861-7, LN, "Left Ventricular Stroke Work") \$Units = DT (gf.m, UCUM, "gf.m")
16	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (8862-5, LN, "Right Ventricular Stroke Work") \$Units = DT (gf.m, UCUM, "gf.m")
17	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (8863-3, LN, "Left Ventricular Stroke Work Index") \$Units = DT (gf.m/m2, UCUM, "gf.m/m2")
18	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (8864-1, LN, "Right Ventricular Stroke Work Index") \$Units = DT (gf.m/m2, UCUM, "gf.m/m2")
19	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (122238, DCM, "Max volume normalized to 50mmHg pulse pressure") \$Units = DT (ml, UCUM, "ml")
20	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (122239, DCM, "Oxygen Consumption") \$Units = DT (ml/min, UCUM, "ml/min")

								\$Equation = BCID (3664) Oxygen Consumption Equations and Tables
21	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (19217-9, LN, "Oxygen partial pressure at 50% saturation (P50)") \$Units = DCID (3500) \$Equation = BCID (3666) P50 Equations
22	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (11556-8, LN, "Blood Oxygen partial pressure") \$Units = DCID (3500)
23	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3618) Hemodynamic Flows \$ModType = EV (121425, DCM, "Index") \$ModValue = EV (8277-6, LN, "Body Surface Area") \$Units = DT (l/min/m2, UCUM, "l/min/m2")
24	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3619) Hemodynamic Resistance Measurements \$Units = BCID (3502) Hemodynamic Resistance Units
25	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3619) Hemodynamic Resistance Measurements \$ModType = EV (121425, DCM, "Index") \$ModValue = EV (8277-6, LN, "Body Surface Area") \$Units = BCID (3503) Indexed Hemodynamic Resistance Units
26	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (122227, DCM, "Left to Right Flow") \$Units = DT (l/min, UCUM, "l/min")
27	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (122228, DCM, "Right to Left Flow") \$Units = DT (l/min, UCUM, "l/min")
28	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (F-32120, SRT, "Stroke Volume") \$Units = DT (ml, UCUM, "ml")
29	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (F-32120, SRT, "Stroke Volume") \$ModType = EV (121425, DCM, "Index") \$ModValue = EV (8277-6, LN, "Body Surface Area") \$Units = DT (ml/m2 UCUM, "ml/m2")
30	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1	U		\$Measurement = EV (F-042BA, SRT, "Total blood volume") \$Units = DT (l, UCUM, "l")
31	>	CONTAINS	INCLUDE	<u>DT</u> TID (300) Measurement	1-n	U		\$Measurement = DCID (3667) Framingham Scores \$Units = DT (% , UCUM, "%") \$Equation = DCID (3668) Framingham Tables

TID 3802
Cardiovascular Patient History
Type: Extensible Order: Significant

NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
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	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
23	>>	CONTAINS	NUM	DT (2086-7, LN, "Cholesterol.in HDL")	1	U		UNITS= <u>EV</u> (mg/dl, UCUM, "mg/dl")
24	>>	CONTAINS	NUM	DT (2089-1, LN, "Cholesterol.in LDL")	1	U		UNITS= <u>EV</u> (mg/dl, UCUM, "mg/dl")
...								

**TID 3806
Cath Procedure**

Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
12	>	CONTAINS	CONTAINER	EV (F-04460, <u>SRT</u> , "Medication Given")	1	M		
...								

TID 3807

Percutaneous Coronary Intervention Procedure

Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
13	>	CONTAINS	NUM	EV (122175, DCM, "Number of lesion interventions attempted")	1	M		UNITS = <u>EV</u> (1, UCUM, "units")
14	>	CONTAINS	NUM	EV (122176, DCM, "Number of lesion interventions successful")	1	M		UNITS = <u>EV</u> (1, UCUM, "units")
...								

TID 3814

Left Ventriculography Findings

Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	EV (121070, DCM, "Findings")	1	M		
2	>	HAS CONCEPT MOD	CODE	EV (121058, DCM, "Procedure reported")	1	M		DT (P5-30041, SRT, "Left Ventriculography")
3	>	CONTAINS	CODE	EV (F-30117, SRT, "Left Ventricular Function - Finding")	1	M		DCID (242) Normal-Abnormal
4	>		INCLUDE	<u>DT</u> TID (300) Measurement	1	M		\$Measurement = EV (10230-1, LN, "LV Ejection Fraction") \$Units = EV (% , UCUM, "%") \$Method = DCID (3748) Angiographic EF Testing Method \$Derivation = DCID (3745) Calculation Method
...								

TID 3815
Right Ventriculography Findings
Type: Extensible Order: Significant

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
3	>		INCLUDE	<u>DTID</u> (300) Measurement	1	M		\$Measurement = EV (10231-9, LN, "RV Ejection Fraction") \$Units = EV (% , UCUM, "%") \$Method = DCID (3748) Angiographic EF Testing Method \$Derivation = DCID (3745) Calculation Method
4	>	CONTAINS	CODE	EV (F-022A1, SRT, "Right Ventricular Cavity Size")	1	U		DCID (3705) Chamber Size
5	>	CONTAINS	CODE	EV (F-0227A, <u>SRT</u> , "Right Ventricular Contractility")	1	U		DCID (3706) Overall Contractility
...								

TID 3905
Calcium Scoring Results
Type: Extensible Order: Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
7	>	CONTAINS	NUM	EV(122660, DCM, "Calcium Volume")	1	U		Units= <u>UCUM</u> EV(mm3, UCUM, "mm^3")
8	>	CONTAINS	NUM	EV(122661, DCM, "Calcium Mass")	1	U		Units= <u>UCUM</u> EV(mg, UCUM, "mg")
...								

TID 3910
Flow Quantification
Type: Extensible Order: Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
17	>>	CONTAINS	INCLUDE	DTID(300) Measurement	1	U		\$Measurement = EV(122645, DCM, "Net Forward Volume") \$ModType=EV(121425, DCM, "Index") \$ModValue= DT(8277-6, LN, "BSA") \$Units = <u>DT</u> (ml/m2, UCUM, "ml/m^2")
...								

TID 3916
Stent Properties
Type: Extensible Order: Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		HAS PROPERTIES	CODE	EV(155122685 , DCM, "Stent Composition")	1-n	M		DCID(380143814) Stent Composition
...								

TID 4005
MAMMOGRAPHY CAD COMPOSITE FEATURE BODY
Type: Non-Extensible Order: Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
4			NUM	EV (111011, DCM, "Certainty of Feature")	1	U		UNITS = <u>EV</u> (%, UCUM, "Percent") Value = 0 – 100
5			NUM	EV (111047, DCM, "Probability of cancer")	1	UC	May be present only if value of parent is not (111102, DCM, "Non-lesion")	UNITS = <u>EV</u> (% , UCUM, "Percent") Value = 0 – 100
...								

TID 4205
BREAST COMPOSITION SECTION
Type: Non-Extensible Order: Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
5	>	CONTAINS	NUM	EV (111046, DCM, "Percent Fibroglandular Tissue")	1-n	MC	At least one of row 3, 5 shall be present	UNITS = <u>EV</u> (%, UCUM "Percent")

TID 5220
Pediatric, Fetal and Congenital Cardiac Ultrasound Reports
Type: Extensible

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
15	>	CONTAINS	INCLUDE	TID TID (5228) Cardiac Ultrasound Fetal Measurement Section	1-n	UC	For Fetal Report only.	No more than one inclusion per fetus

TID 9003
PREVIOUS PROCEDURE
Type: Extensible Order: Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
13	>>	HAS PROPERTIES	INCLUDE	<u>D</u> TID (4207) Pathology Results	1-n	U		

TID 10003
IRRADIATION EVENT X-RAY DATA
Type: Extensible Order: Non-Significant

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
...								
47	>	CONTAINS	NUM	EV (111633, DCM, "Compression Thickness")	1	U		Units = <u>EV</u> (mm, UCUM, "mm")
48	>	CONTAINS	NUM	EV (111634, DCM, "Half Value Layer")	1	U		Units = <u>EV</u> (mm, UCUM, "mm")
...								
55	>	CONTAINS	NUM	EV (113845, DCM, "Exposure Index")	1	U		Units = <u>EV</u> (1,UCUM, "no units")
56	>	CONTAINS	NUM	EV (113846, DCM, "Target Exposure Index")	1	U		Units = <u>EV</u> (1,UCUM, "no units")
57	>	CONTAINS	NUM	EV (113847, DCM, "Deviation Index")	1	U		Units = <u>EV</u> (1,UCUM, "no units")