

## DICOM Correction Item

Correction Number CP-1079	
Log Summary: Update ECG Report TID 3700	
Type of Modification Addition	Name of Standard PS 3.6-2009 PS 3.16-2009
<p>Rationale for Correction:</p> <p>CP-729 implemented changes to ECG nomenclature, but did not address the ECG report of TID 3700. The IHE Cardiology Technical Committee has recommended this general update of TID 3700 (and its subsidiary templates) in association with the Trial Implementation of the Resting ECG Workflow Profile.</p> <p>This proposal aligns the ECG Report template with the structures used in other cardiovascular SR templates, and applies the IEEE 11073 nomenclature.</p>	
<p>Sections of documents affected</p> <p>PS 3.6 Annex A PS 3.16 Section 8; Annexes A, C, D</p>	
Correction Wording:	
<i>Add new rows to PS 3.6 Annex A Table A-3</i>	

**Table A-3  
CONTEXT GROUP UID VALUES**

Context UID	Context Identifier	Context Group Name
...		
<u>1.2.840.10008.6.1.927</u>	<u>3689</u>	<u>ECG Global Waveform Durations</u>
<u>1.2.840.10008.6.1.928</u>	<u>3690</u>	<u>ECG Control Variables Numeric</u>
<u>1.2.840.10008.6.1.929</u>	<u>3691</u>	<u>ECG Control Variables Text</u>
<u>1.2.840.10008.6.1.930</u>	<u>3692</u>	<u>ICDs</u>

*Add the following to PS3.16 Section 8*

**Table 8-1 Coding Schemes**

Coding Scheme Designator	Coding Scheme UID	Description
...		
<b><u>NBD</u></b>	<u>2.16.840.1.113883.15.2</u>	<b><u>NASPE/BPEG Defibrillator Code</u></b> <b><u>Bernstein AD, et al. "The NASPE/BPEG Defibrillator Code"</u></b> <b><u>PACE, 16:1776-1780, 1993</u></b>
<b><u>NBG</u></b>	<u>2.16.840.1.113883.15.3</u>	<b><u>NASPE/BPEG Generic Pacemaker Code (2000)</u></b> <b><u>Bernstein AD, et al. "The Revised NASPE/BPEG Generic Code</u></b>

		<b>for antibradycardia, adaptive-rate, and multisite pacing" <i>PACE</i>, <u>25:260-264, 2000</u></b>
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Modify the following in PS3.16 Annex A

### TID 3700 ECG Report

The ECG Report template is the root structure for the representation of analysis of an ECG waveform, potentially in comparison to a prior ECG waveform analysis. The analyzed waveform may or may not be stored as a DICOM SOP Instance.

#### TID 3700 ECG Report Type: Extensible

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (28010-7, LN, "ECG Report")	1	M		
2	>	HAS CONCEPT MOD	CODE	EV (121058, DCM, "Procedure reported")	1	U		DCID (3670) ECG Procedure Types
3	>	HAS CONCEPT MOD	INCLUDE	DTID (1204) Language of Content Item and Descendants	1	M		
4	>	CONTAINS	INCLUDE	DTID (1002) Observer Context	1-n	M		
5	>	<b>CONTAINS</b>	<b>INCLUDE</b>	<b>DTID (3701) "Clinical Context, ECG"</b>	4	<b>U</b>		
<u>5</u>	≥	<b>CONTAINS</b>	<b>CONTAINER</b>	<b>EV (121109, DCM, "Indications for Procedure")</b>	1	<b>U</b>		
<u>6</u>	≥	<b>CONTAINS</b>	<b>CODE</b>	<b>EV (121071, DCM, "Finding")</b>	<u>1-n</u>	<b>U</b>		<b>DCID (3671) Reason for ECG Exam</b>
<u>7</u>	≥	<b>CONTAINS</b>	<b>TEXT</b>	<b>EV (121071, DCM, "Finding")</b>	1	<b>U</b>		
<u>8</u>	>	<b>CONTAINS</b>	<b>INCLUDE</b>	<b>DTID (3802) Cardiovascular Patient History</b>	1	<b>U</b>		
<u>9</u>	≥	<b>CONTAINS</b>	<b>INCLUDE</b>	<b>DTID (3704) Patient Characteristics for ECG</b>	1	<b>U</b>		
<u>610</u>	>	CONTAINS	INCLUDE	DTID (3702) Prior ECG Exam	1	U		
<u>711</u>	>	CONTAINS	INCLUDE	DTID (3708) ECG Waveform Information	1	M		
<u>812</u>	>	CONTAINS	CONTAINER	EV (122144, DCM, "Quantitative Analysis")	1	M		
<u>913</u>	>>	CONTAINS	INCLUDE	DTID (3713) Global Measurements	1-n	U		
<u>4014</u>	>>	CONTAINS	INCLUDE	DTID (3714) ECG Lead Measurements	1-n	U		<b>One instantiation per reported lead</b>
<u>4415</u>	>	CONTAINS	INCLUDE	DTID (3717) ECG Qualitative Analysis	1	U		
<u>1216</u>	>	CONTAINS	INCLUDE	DTID (3719) "Summary, ECG"	1	U		

**TID 3701 Clinical Context, ECG (retired)**  
**This Template has been retired (see PS3.16-2009).**

**TID 3701**  
**Clinical Context, ECG**  
**Type: Extensible**

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	EV (122127, DCM, "Clinical Context")	1	U		
2	>	CONTAINS	CODE	EV (122139, DCM, "Reason for Exam")	1-n	U		DCID (3671) Reason for ECG Exam
3	>	CONTAINS	TEXT	EV (122139, DCM, "Reason for Exam")	1	U		
4	>	CONTAINS	CODE	EV (109054, DCM, "Patient State")	1	U		DCID (3262) ECG Patient State Values
5	>	CONTAINS	CODE	EV (G-02D0, SRT, "Regular Medication")	1-n	U		No-BCID
6	>	CONTAINS	TEXT	EV (G-02D0, SRT, "Regular Medication")	1	U		
7	>	CONTAINS	CODE	EV (G-02EC, SRT, "Pacemaker in situ")	1-n	U		DCID (3672) Pacemakers
8	>	CONTAINS	TEXT	EV (G-02EC, SRT, "Pacemaker in situ")	1	U		
9	>	CONTAINS	CODE	EV (121060, DCM, "History")	1-n	U		DCID (3673) Diagnosis
10	>	CONTAINS	TEXT	EV (121060, DCM, "History")	1	U		

**TID 3702 Prior ECG Exam**

**TID 3702**  
**Prior ECG Exam**  
**Type: Extensible**

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	EV (121066, DCM, "Prior Procedure Descriptions ")	1	M		
2	>	CONTAINS	CODE	EV (122140, DCM, "Comparison with Prior Exam Done")	1	M		DCID (230) Yes-No
3	>	CONTAINS	DATETIME	EV (122146, DCM, "Procedure DateTime")	1	U		
<u>4</u>	≥	<b>CONTAINS</b>	<b>UIDREF</b>	<b>EV (121018, DCM, "Procedure Study Instance UID")</b>	<b>1</b>	<b>U</b>		
<u>45</u>	>	CONTAINS	COMPOSITE	EV (122075, DCM, "Prior report for current patient")	1	U		
<u>56</u>	>	CONTAINS	WAVEFORM	EV (121112, DCM, "Source of Measurement")	1	U		

**TID 3708 ECG Waveform Information**

The ECG Waveform Information template provides reference to, and important parameters of, the analyzed waveform.

**TID 3708  
ECG Waveform Information  
Type: Extensible**

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (121064, DCM, "Current Procedure Descriptions")	1	M		
2	>	CONTAINS	WAVEFORM	EV (121112, DCM, "Source of Measurement")	1	U		
3	>	<b>HAS ACQ CONTEXT CONTAINS</b>	CODE	<b>EV (5.4.5-33-1, SCPECG [1.3], "Electrode Placement")</b> <b>EV (10:11345, MDC, "Lead System")</b>	1	U		DCID (3263) Electrode Placement Values
4	>	<b>HAS ACQ CONTEXT</b>	CODE	<b>EV (5.4.5-33-2, SCPECG [1.3], "XYZ Electrode Configuration")</b>	4	<u>U</u>		<b>DCID (3264) XYZ Electrode Placement Values</b>
<u>54</u>	>	<b>HAS ACQ CONTEXT CONTAINS</b>	TEXT	EV (122142, DCM, "Acquisition Device Type")	1	U		
<u>65</u>	>	<b>HAS ACQ CONTEXT CONTAINS</b>	TEXT	EV (121122, DCM, "Equipment Identifier")	1	U		
<u>76</u>	>	<b>HAS ACQ CONTEXT CONTAINS</b>	INCLUDE	DTID (1003) Person Observer Identifying Attributes	1	U		<b>Person performing the ECG acquisition</b>
<u>87</u>	>	<b>HAS ACQ CONTEXT CONTAINS</b>	TEXT	EV (121121, DCM, "Room Identification")	1	U		
<u>98</u>	>	<b>HAS ACQ CONTEXT CONTAINS</b>	DATETIME	EV (122146, DCM, "Procedure DateTime")	1	M		
10	>	<b>HAS ACQ CONTEXT</b>	NUM	<b>EV (5.4.5-27, SCPECG [1.3], "Baseline Filter Frequency")</b>	4	<u>U</u>		<b>UNITS = EV (Hz, UCUM, "Hz")</b>
11	>	<b>HAS ACQ CONTEXT</b>	NUM	<b>EV (5.4.5-28, SCPECG [1.3], "Low-Pass Filter Frequency")</b>	4	<u>U</u>		<b>UNITS = EV (Hz, UCUM, "Hz")</b>
12	>	<b>HAS ACQ CONTEXT</b>	CODE	<b>EV (5.4.5-29, SCPECG [1.3], "Filters")</b>	1-n	<u>U</u>		<b>DCID (3675) Other Filters</b>
<u>9</u>	≥	<b>CONTAINS</b>	<b>NUM</b>	<b>DCID (3690) ECG Control Variables Numeric</b>	1-n	<u>U</u>		
<u>10</u>	≥	<b>CONTAINS</b>	<b>TEXT</b>	<b>DCID (3691) ECG Control Variables Text</b>	1-n	<u>U</u>		
<u>11</u>	≥	<b>CONTAINS</b>	<b>INCLUDE</b>	<b>DTID (4019) CAD Algorithm Identification</b>	1	<u>U</u>		

**TID 3713 ECG Global Measurements**

The ECG Global Measurements Template provides a structure for measurements calculated across the ECG waveform as a whole (multiple leads).

**As an Extensible Template, applications may include any ECG global measurements, such as angles of the electrical vector of various ECG waves. The recommended vocabulary for such concepts is ISO/IEEE 11073-10102.**

**TID 3713  
ECG Global Measurements  
Type: Extensible**

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122158, DCM, "ECG Global Measurements")	1	M		
2	>	HAS OBS CONTEXT	INCLUDE	DTID (3715) ECG Measurement Source	1	U		
3	>	CONTAINS	NUM	<u>EV (5.10.2.5-3, SCPECG[1.3], "Atrial Heart Rate")</u> <u>DT (2:16020, MDC, "Atrial Heart Rate")</u>	1	U		UNITS = EV ((H.B.)/min, UCUM, "heart beats per minute")
4	>	CONTAINS	NUM	<u>EV (5.10.2.5-4, SCPECG[1.3], "Ventricular Heart Rate")</u> <u>DT (2:16016, MDC, "Ventricular Heart Rate")</u>	1	M		UNITS = EV ((H.B.)/min, UCUM, "heart beats per minute")
5	>	CONTAINS	NUM	<u>EV ( F-38292, SRT, "QT Duration")</u> <u>DT (2:16160, MDC, "QT interval global")</u>	1	M		UNITS = EV (ms, UCUM, "ms")
6	>	CONTAINS	NUM	<u>EV (5.10.2.5-5, SCPECG[1.3], "QT Corrected Duration")</u> <u>DT (2:15876, MDC, "QTc interval global")</u>	1	U		UNITS = EV (ms, UCUM, "ms")
7	>=	<b><u>CONTAINS HAS PROPERTIES</u></b>	CODE	<u>EV (5.10.2.5-7, SCPECG[1.3], "Correction Algorithm")</u> <u>DT (111001, DCM, "Algorithm Name")</u>	1	U		DCID (3678) QT Correction Algorithms
8	>	CONTAINS	NUM	<u>EV ( F-025C5, SRT, "PR Duration")</u> <u>DT (2:15872, MDC, "PR interval global")</u>	1	M		UNITS = EV (ms, UCUM, "ms")
9	>	CONTAINS	NUM	<u>EV ( F-025C6, SRT, "QRS Duration")</u> <u>DT (2:16156, MDC, "QRS duration global")</u>	1	M		UNITS = EV (ms, UCUM, "ms")
<b>10</b>	<b>≥</b>	<b><u>CONTAINS</u></b>	<b><u>NUM</u></b>	<b><u>DT (2:16168, MDC, "RR interval global")</u></b>	<b><u>1</u></b>	<b><u>M</u></b>		<b><u>UNITS = EV (ms, UCUM, "ms")</u></b>
<b>11</b>	<b>≥</b>	<b><u>CONTAINS</u></b>	<b><u>NUM</u></b>	<b><u>DCID (x3689) ECG Global Waveform Durations</u></b>	<b><u>1- n</u></b>	<b><u>U</u></b>		<b><u>UNITS = EV (ms, UCUM, "ms")</u></b>
<b>10 12</b>	>	CONTAINS	NUM	<u>EV (5.10.3-11, SCPECG [1.3], "P Axis")</u> <u>DCID (3229) ECG Axis Measurements</u>	<u>1- n</u>	U		UNITS = EV (deg, UCUM, "°")

11	>	CONTAINS	NUM	EV (5.10.3-13, SCPECG [1.3], "QRS Axis")	4	U		UNITS = EV (deg, UCUM, "°")
12	>	CONTAINS	NUM	EV (5.10.3-15, SCPECG [1.3], "T Axis")	4	U		UNITS = EV (deg, UCUM, "°")
13	≥	CONTAINS	NUM	DT (2:16032, MDC, "Count of all beats")	1	U		UNITS = ({beats}, UCUM, "beats")
14	≥	CONTAINS	NUM	DT (122707, DCM, "Number of Ectopic Beats")	1	U		UNITS = ({beats}, UCUM, "beats")
15	>>	HAS PROPERTIES	CODE	EV (G-C504, SRT, "Associated Morphology")	1-n	U		BCID (3234) Ectopic Beat Morphology

### TID 3714 ECG Lead Measurements

The ECG Lead Measurements Template provides a structure for measurements calculated on individual ECG leads.

**As an Extensible Template, applications may include any ECG per lead measurements, such as integrals over time of various ECG wave voltages. The recommended vocabulary for such concepts is ISO/IEEE 11073-10102.**

### TID 3714 ECG Lead Measurements Type: Extensible

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122159, DCM, "ECG Lead Measurements")	1	M		
2	>	HAS CONCEPT MOD	CODE	EV (122148, DCM, "Lead ID")	1	M		BCID (3001) ECG Leads
3	>	HAS OBS CONTEXT	INCLUDE	DTID (3715) ECG Measurement Source	1	U		
4	>	CONTAINS	NUM	DCID (3687) Electrophysiology Waveform Durations	1-n	U		UNITS = EV (ms, UCUM, "ms")
5	>	CONTAINS	NUM	DCID (3688) Electrophysiology Waveform Voltages	1-n	U		UNITS = EV (mv, UCUM, "mv")
6	>	CONTAINS	CODE	EV (5.13.5-47, SCPECG [1.3], "T Morphology Description")	4	U		DCID (3679) ECG Morphology Descriptions
7	>	CONTAINS	CODE	EV (5.13.5-45, SCPECG [1.3], "P Morphology Description")	4	U		DCID (3679) ECG Morphology Descriptions
8	>	CONTAINS	NUM	EV (5.13.5-43, SCPECG [1.3], "ST Slope")	4	U		UNITS = EV (uV/s, UCUM, "uV/s ")
6	≥	CONTAINS	CODE	EV (F-38035, SRT, "ST Segment Finding")	1	U		DCID (3233) ST Segment Morphology
97	>	CONTAINS	CODE	DCID (3680) ECG Lead Noise Descriptions EV (121071, DCM, "Finding")	1-n	U		DCID (3680) ECG Lead Noise Modifiers Descriptions

**TID 3715 ECG Measurement Source**

The ECG Measurement Source Template provides a structure for identifying the particular cardiac cycle, or beat, in an analyzed ECG waveform used for the measurement group for which this template provides Observation Context. The cardiac cycle is identified by beat number, and optionally by specific temporal coordinates within a DICOM ECG waveform SOP Instance.

**TID 3715  
ECG Measurement Source  
Type: Extensible**

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			TEXT	EV (122149, DCM, "Beat Number")	1	U		Up to three numeric characters
2			CODE	EV (G-C036, SRT, "Measurement Method")	1	U		DCID (3676) Lead Measurement Technique
3			TCOORD	EV (121112, DCM, "Source of measurement")	1	U		
4	>	SELECTED FROM	WAVEFORM		1	U		

**Content Item Descriptions**

Row 1	Beat Number is specified as a numeric text string, and shall be treated as the ordinal of the beat (cardiac cycle) within the waveform acquisition for this lead that was analyzed for the measurements in this container (i.e., "1" for the first beat, "2" for the second, etc.). If absent, the measurements may have been made by a technique across multiple cycles as specified in Row 2 Measurement Method.
Rows 3-4	Source of measurement identify the specific channel and time period within a DICOM ECG Waveform SOP Instance that was analyzed for the measurements in this container.

**TID 3717 ECG Qualitative Analysis**

The ECG Qualitative Analysis template allows a free text qualitative interpretation of the analyzed ECG, as well as a structure for a coded analysis.

**TID 3717  
Qualitative Analysis, ECG  
Type: Extensible**

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	EV (122145, DCM, "Qualitative Analysis")	1	M		
2	>	CONTAINS	TEXT	<del>EV (122147, DCM, "Clinical Interpretation")</del> EV (F-00033, SRT, "ECG Finding")	1	MC	<u>At least one of rows 2 and 3 shall be present</u>	
3	>	CONTAINS	CONTAINER	EV (122150, DCM, "Compound Statement")	1-n	U		
4	>>	CONTAINS	INCLUDE	<del>DTID (3718) ECG Interpretive Statement</del>	1-n	U		



3	≥	<u>CONTAINS</u>	<u>CODE</u>	<u>EV (F-00033, SRT, "ECG Finding")</u>	<u>1- n</u>	<u>MC</u>	<u>At least one of rows 2 and 3 shall be present</u>	<u>BCID (3230) ECG Findings</u>
4	>>	<u>HAS CONCEPT MOD</u>	<u>TEXT</u>	<u>EV (121051, DCM, "Equivalent Meaning of Value")</u>	1	<u>U</u>		<u>Interpretive statement</u>
5	>>	<u>INFERRED FROM</u>	<u>CODE</u>	<u>EV (F-00033, SRT, "ECG Finding")</u>	<u>1- n</u>	<u>U</u>		<u>No BCID; may use implementation-specific codes</u>
6	>>>	<u>HAS CONCEPT MOD</u>	<u>TEXT</u>	<u>EV (121051, DCM, "Equivalent Meaning of Value")</u>	1	<u>U</u>		<u>Interpretive statement</u>

**Content Item Descriptions**

Row 3-4	<u>Interpretive Statement is a container for one or more coded statements, defined in Template 3718. This container will typically have the Continuity of Content (0040,A050) flag set to CONTINUOUS, as multiple interpretive statements in one container may be linked by conjunctive terms, and should be understood as a continuous semantic unit.</u>  <u>ECG Finding provides one or more coded interpretive statements using standard or implementation-specific codes. Each coded finding will include a Code Meaning (0008,0104) using the LO Value Representation (64 characters); longer human-readable text strings may be conveyed in the Row 4 Equivalent Meaning of Value Content Item.</u>
Row 5-6	<u>Each primary ECG Finding of Row 3 may have multiple supporting coded findings in Row 5, with longer human-readable text strings if necessary in Row 6.</u>

**TID 3718 ECG Interpretive Statement (Retired)**

This Template is retired. See PS3.16-2009.

The ECG Interpretive Statement template provides a structure for an atomic coded interpretation of an ECG, optionally followed by a conjunctive term to another interpretation coded in a subsequent invocation of this template.

**TID 3718  
-ECG Interpretive Statement  
Type: Extensible**

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value-Set Constraint
1			CODE	EV (122151, DCM, "Trend")	1	U		DCID (3684) Trend
2	>	HAS CONCEPT MOD	CODE	EV (122157, DCM, "Probability")	1	U		DCID (3682) Probability
3			CODE	EV (122152, DCM, "Statement")	1	M		DCID (3686) ECG Interpretive Statements
4	>	HAS CONCEPT MOD	CODE	EV (122153, DCM, "Statement Modifier")	1	U		DCID (3683) Modifiers
5			CODE	EV (122154, DCM, "Conjunctive Term")	1	U		DCID (3685) Conjunctive Terms

**TID 3719 Summary, ECG**

**TID 3719  
Summary, ECG  
Type: Extensible**

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	EV (121111, DCM, "Summary")	1	M		
2	>	CONTAINS	TEXT	EV (121111, DCM, "Summary")	1	U		
3	>	CONTAINS	CODE	<del>EV (121071, DCM, "Finding")</del> <u>DT(18810-2, LN, "ECG overall finding")</u>	1	U		DCID (3677) Summary Codes ECG

Add the following in PS3.16 Annex A

**TID 3704 Patient Characteristics for ECG**

**TID 3704  
Patient Characteristics for ECG  
Type: Extensible**

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (121118, DCM, "Patient Characteristics")	1	M		
2	>	CONTAINS	NUM	EV (121033, DCM, "Subject Age")	1	M		UNITS = DCID (7456) Units of Measure for Age
3	>	CONTAINS	CODE	EV (121032, DCM, "Subject Sex")	1	M		DCID (7455) Sex
4	>	CONTAINS	NUM	EV (8302-2, LN, "Patient Height")	1	U		UNITS = EV (cm, UCUM, "cm")
5	>	CONTAINS	NUM	EV (29463-7, LN, "Patient Weight")	1	U		UNITS = EV (kg, UCUM, "kg")
6	>	CONTAINS	NUM	EV (F-008EC, SRT, "Systolic Blood Pressure")	1	U		UNITS = DCID (3500)
7	>	CONTAINS	NUM	EV (F-008ED, SRT, "Diastolic Blood Pressure")	1	U		UNITS = DCID (3500)
8	>	CONTAINS	CODE	EV (109054, DCM, "Patient State")	1	U		DCID (3262) ECG Patient State Values
9	>	CONTAINS	CODE	EV (R-00728, SRT, "Pacemaker in situ")	1	U		DCID (3672) Pacemakers
10	>	CONTAINS	CODE	EV (R-0077C, SRT, "ICD in situ")	1	U		DCID (x3692) ICDs



**CID 3670 ECG Procedure Types**

**Context ID 3670  
ECG Procedure Types**

Type: Extensible Version: ~~20030327~~20110330

Coding Scheme Designator	Code Value	Code Meaning
SRT	P2-3120A	12-Lead ECG
<del>DCMSRT</del>	<del>122062P2-3120E</del>	15-Lead ECG
<u>SRT</u>	<u>P2-3120C</u>	<u>18-Lead ECG</u>

**CID 3671 Reason for ECG Exam**

**Context ID 3671  
Reason for ECG Exam**

Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-00300	Emergency <u>procedure</u>
SRT	P1-00410	Pre-Surgery <u>testing</u>
SRT	R-00348	Outpatient <u>procedure</u>
SRT	R-0035A	<u>Procedure in</u> Cardiac Care Unit
SRT	P2-10700	Emergency department <u>patient visit</u>
SRT	R-00302	<u>Evaluation of</u> murmur
SRT	R-0036E	Routine <u>procedure</u>

**CID 3672 Pacemakers**

**This Context Group includes the full set of codes for types of pacemakers specified in the NASPE/BPEG Generic Pacemaker Code (NBG). The Coding Scheme Designator (0008,0102) shall be NBG.**

**Notes:** 1. A prior version of this context group used codes from the SCP-ECG vocabulary.

2. Further information at <http://www.hrsonline.org/News/ep-history/topics-in-depth/modocodehistory.cfm>. For reference, the scheme is reproduced here:

Code Position	1 - Chamber(s) paced	2 - Chamber(s) sensed	3 - Response to sensing	4 - Rate modulation	5- Multisite pacing
Code values	O = None A = Atrium V = Ventricle D = Dual (A+V) S = Single (A or V - Mfr designation only)	O = None A = Atrium V = Ventricle D = Dual (A+V) S = Single (A or V - Mfr designation only)	O = None T = Triggered I = Inhibited D = Dual (T+I)	O = None R = Rate modulation	O = None A = Atrium V = Ventricle D = Dual (A+V)

~~Context ID 3672~~  
~~Pacemakers~~

~~Type: Extensible~~ ~~Version: 20030327~~

<del>Coding Scheme Designator</del>	<del>Coding Scheme Version</del>	<del>Code Value</del>	<del>Code Meaning</del>
<del>SCPECG</del>	<del>4.3</del>	<del>D.3.2.6-PAVVI</del>	<del>VVI pacemaker</del>
...			

CID 3673      Diagnosis (Retired)

This Context Group is retired. See PS3.16-2009.

~~Context ID 3673~~  
~~Diagnosis~~

~~Type: Extensible~~ ~~Version: 20030327~~

<del>Coding Scheme Designator</del>	<del>Coding Scheme Version</del>	<del>Code Value</del>	<del>Code Meaning</del>
<del>SCPECG</del>	<del>4.3</del>	<del>5.4.5-32-1</del>	<del>Apparently healthy</del>
...			

CID 3675      Other Filters (Retired)

This Context Group is retired. See PS3.16-2009.

~~Context ID 3675~~  
~~Other Filters~~

~~Type: Extensible~~ ~~Version: 20030327~~

<del>Coding Scheme Designator</del>	<del>Coding Scheme Version</del>	<del>Code Value</del>	<del>Code Meaning</del>
<del>SCPECG</del>	<del>4.3</del>	<del>5.4.5-29-0</del>	<del>60 Hertz notch filter</del>
...			

CID 3677      Summary Codes ECG

~~Context ID 3677~~  
~~Summary Codes ECG~~

~~Type: Extensible~~ ~~Version: 20030327~~ 20110330

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
<u>SCPECG SRT</u>	4.3	<u>D.3.2-NORM F-000B7</u>	Normal ECG
<u>SCPECG SRT</u>	4.3	<u>D.3.2-ABECG F-38002</u>	Abnormal ECG
<u>SCPECG SRT</u>	4.3	<u>D.3.2-BOECG F-38056</u>	Borderline Normal ECG

**Note:** A prior version of this context group used codes from the SCP-ECG vocabulary.

**CID 3679 ECG Morphology Descriptions (Retired)**

This Context Group is retired. See PS3.16-2009.

~~Context ID 3679  
ECG Morphology Descriptions  
Type: Extensible Version: 20030327~~

<del>Coding Scheme Designator</del>	<del>Coding Scheme Version</del>	<del>Code Value</del>	<del>Code Meaning</del>
<del>SCPECG</del>	<del>4.3</del>	<del>5.13.5.1-0</del>	<del>Unknown</del>
<del>...</del>			

Replace CID 3680

**CID 3680 ECG Lead Noise Descriptions**

**Context ID 3680  
ECG Lead Noise Descriptions  
Type: Extensible Version: 2003032720110330**

<del>Coding Scheme Designator</del>	<del>Coding Scheme Version</del>	<del>Code Value</del>	<del>Code Meaning</del>
<del>SCPECG</del>	<del>4.3</del>	<del>5.13.5.2-0</del>	<del>AC (mains) noise</del>
<del>...</del>			

Coding Scheme Designator	Code Value	Code Meaning	IEEE 11073 MDC Equivalent Reference ID (informative)
MDC	10:11200	No noise	MDC_ECG_NOISE_CLEAN
MDC	10:11216	Moderate noise	MDC_ECG_NOISE_MODERATE
MDC	10:11232	Severe noise	MDC_ECG_NOISE_SEVERE
MDC	10:11248	No signal	MDC_ECG_NOISE_NOSIGNAL

**Note:** A prior version of this context group used codes from the SCP-ECG vocabulary.

**CID 3681      ECG Lead Noise Modifiers (Retired)**

This Context Group is retired. See PS3.16-2009.

~~Context ID 3681  
ECG Lead Noise Modifiers  
Type: Extensible      Version: 20030327~~

<del>Coding Scheme Designator</del>	<del>Coding Scheme Version</del>	<del>Code Value</del>	<del>Code Meaning</del>
<del>SCPECG</del>	<del>1.3</del>	<del>5-13-5-2-0</del>	<del>None</del>
<del>...</del>			

**CID 3682      Probability (Retired)**

This Context Group is retired. See PS3.16-2009.

~~Context ID 3682  
Probability  
Type: Extensible      Version: 20030327~~

<del>Coding Scheme Designator</del>	<del>Coding Scheme Version</del>	<del>Code Value</del>	<del>Code Meaning</del>
<del>SCPECG</del>	<del>1.3</del>	<del>D.2.2-DE</del>	<del>definite</del>
<del>...</del>			

**CID 3683      Modifiers (Retired)**

This Context Group is retired. See PS3.16-2009.

~~Context ID 3683  
Modifiers  
Type: Extensible      Version: 20030327~~

<del>Coding Scheme Designator</del>	<del>Coding Scheme Version</del>	<del>Code Value</del>	<del>Code Meaning</del>
<del>SCPECG</del>	<del>1.3</del>	<del>D.2.3-AB</del>	<del>abnormal</del>
<del>...</del>			

**CID 3684      Trend (Retired)**

This Context Group is retired. See PS3.16-2009.

~~Context ID 3684  
Trend~~

~~Type: Extensible      Version: 20030327~~

<del>Coding Scheme Designator</del>	<del>Coding Scheme Version</del>	<del>Code Value</del>	<del>Code Meaning</del>
<del>SCPECG</del>	<del>1.3</del>	<del>D.2.3-4-SE</del>	<del>serial changes consistent with...</del>
<del>...</del>			

**CID 3685      Conjunctive Terms (Retired)**

This Context Group is retired. See PS3.16-2009.

~~Context ID 3685  
Conjunctive Terms~~

~~Type: Extensible      Version: 20030327~~

<del>Coding Scheme Designator</del>	<del>Coding Scheme Version</del>	<del>Code Value</del>	<del>Code Meaning</del>
<del>SCPECG</del>	<del>1.3</del>	<del>D.2.5-1-AND</del>	<del>and</del>
<del>...</del>			

**CID 3686      ECG Interpretive Statements (Retired)**

This Context Group is retired. See PS3.16-2009.

~~Context ID 3686  
ECG Interpretive Statements~~

~~Type: Extensible      Version: 20030327~~

<del>Coding Scheme Designator</del>	<del>Coding Scheme Version</del>	<del>Code Value</del>	<del>Code Meaning</del>
<del>SCPECG</del>	<del>1.3</del>	<del>D.3-SVPCS</del>	<del>(multiple) supraventricular premature complexes</del>
<del>...</del>			

Replace CID 3687



**CID 3687            Electrophysiology Waveform Durations**

**This Context Group consists of the per-lead terms under the hierarchy of Reference ID MDC\_ECG\_TIME\_PD in the ISO/IEEE 11073-10102 nomenclature.**

**The base terms from that hierarchy are included in the table below for reference. The per-lead base terms are pre-coordinated with concept discriminators for specific leads, and the code values for those pre-coordinated terms are arithmetically derived from the code values of the base terms. For the complete current list of terms and discriminator values, see the ISO/IEEE Standard. All pre-coordinated terms (measurements plus discriminators) within the identified hierarchy are part of this Context Group.**

**Note:    A prior version of this context group used codes from the SCP-ECG coding system.**

**Context ID 3687  
Electrophysiology Waveform Durations  
Type: Extensible                      Version: 2003032720110330**

<b>Coding Scheme Designator</b>	<b>Coding Scheme Version</b>	<b>Code Value</b>	<b>Code Meaning</b>
<b>SCPECG</b>	<b>4.3</b>	<b>5.13.5-5</b>	<b>P Duration</b>
...			

<b>Coding Scheme Designator</b>	<b>Code Value</b>	<b>Code Meaning</b>	<b>IEEE 11073 MDC Equivalent Reference ID (informative)</b>
MDC	2:6656	P duration, per lead	MDC_ECG_TIME_PD_P
MDC	2:4608	P onset to P1 duration, per lead	MDC_ECG_TIME_PD_P1
MDC	2:4864	P onset to P2 duration, per lead	MDC_ECG_TIME_PD_P2
MDC	2:5120	P onset to P3 duration, per lead	MDC_ECG_TIME_PD_P3
MDC	2:7168	P offset to QRS onset duration, per lead	MDC_ECG_TIME_PD_PR
MDC	2:7680	Q duration, per lead	MDC_ECG_TIME_PD_Q
MDC	2:7936	QRS duration, per lead	MDC_ECG_TIME_PD_QRS
MDC	2:8192	QT duration, per lead	MDC_ECG_TIME_PD_QT
MDC	2:11264	R1 duration, per lead	MDC_ECG_TIME_PD_R_1
MDC	2:11520	R2 duration, per lead	MDC_ECG_TIME_PD_R_2
MDC	2:11776	R3 duration, per lead	MDC_ECG_TIME_PD_R_3
MDC	2:12032	S1 duration, per lead	MDC_ECG_TIME_PD_S_1
MDC	2:12288	S2 duration, per lead	MDC_ECG_TIME_PD_S_2
MDC	2:12544	S3 duration, per lead	MDC_ECG_TIME_PD_S_3
MDC	2:11008	Ventricular activation time, per lead	MDC_ECG_TIME_PD_VENT_ACTIV
MDC	2:32768	PP time period, per lead	MDC_ECG_TIME_PD_PP
MDC	2:33024	RR time period, per lead	MDC_ECG_TIME_PD_RR
MDC	2:33280	PQ time period, per lead	MDC_ECG_TIME_PD_PQ
MDC	2:33536	PQ segment time period, per lead	MDC_ECG_TIME_PD_PQ_SEG
MDC	2:34560	QTU time period, per lead	MDC_ECG_TIME_PD_QTU

<b>Replace CID 3688</b>
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**CID 3688      Electrophysiology Waveform Voltages**

**This Context Group consists of the codes of the hierarchies under Reference IDs MDC\_ECG\_ELEC\_POTL and MDC\_ECG\_AMPL of the ISO/IEEE 11073-10102 nomenclature.**

**The base terms from those hierarchies are included in the table below for reference. The per lead base terms are pre-coordinated with concept discriminators for specific leads, and the code values for those pre-coordinated terms are arithmetically derived from the code values of the base terms. For the complete current list of terms and discriminator values, see the ISO/IEEE Standard. All pre-coordinated terms (measurements plus discriminators) within the identified hierarchies are part of this Context Group.**

**Note:      A prior version of this context group used codes from the SCP-ECG coding system.**

**Context ID 3688  
Electrophysiology Waveform Voltages  
Type: Extensible                      Version: ~~20030327~~20110330**

<b>Coding Scheme Designator</b>	<b>Coding Scheme Version</b>	<b>Code Value</b>	<b>Code Meaning</b>
<b>SCPECG</b>	<b>4.3</b>	<b>5.13.5-23</b>	<b>Q Amplitude</b>
...			

<b>Coding Scheme Designator</b>	<b>Code Value</b>	<b>Code Meaning</b>	<b>IEEE 11073 MDC Equivalent Reference ID (informative)</b>
MDC	2:1024	J point Amplitude, per lead	MDC_ECG_AMPL_J
MDC	2:14848	Amplitude at 20 ms into ST segment, per lead	MDC_ECG_ELEC_POTL_ST_20
MDC	2:15104	Amplitude at 40 ms into ST segment, per lead	MDC_ECG_ELEC_POTL_ST_40
MDC	2:14336	Amplitude at 60 ms into ST segment, per lead	MDC_ECG_ELEC_POTL_ST_60
MDC	2:14592	Amplitude at 80 ms into ST segment, per lead	MDC_ECG_ELEC_POTL_ST_80
MDC	2:1280	P maximum amplitude, per lead	MDC_ECG_AMPL_P_MAX
MDC	2:1536	P minimum amplitude, per lead	MDC_ECG_AMPL_P_MIN
MDC	2:3072	P3 amplitude, per lead	MDC_ECG_AMPL_P3
MDC	2:1792	Q amplitude, per lead	MDC_ECG_AMPL_Q
MDC	2:2048	R amplitude, per lead	MDC_ECG_AMPL_R
MDC	2:12800	R1 amplitude, per lead	MDC_ECG_ELEC_POTL_R_1
MDC	2:13056	R2 amplitude, per lead	MDC_ECG_ELEC_POTL_R_2
MDC	2:13312	R3 amplitude, per lead	MDC_ECG_ELEC_POTL_R_3
MDC	2:2304	S amplitude, per lead	MDC_ECG_AMPL_S
MDC	2:13568	S1 amplitude, per lead	MDC_ECG_ELEC_POTL_S_1
MDC	2:13824	S2 amplitude, per lead	MDC_ECG_ELEC_POTL_S_2
MDC	2:14080	S3 amplitude, per lead	MDC_ECG_ELEC_POTL_S_3
MDC	2:2560	T maximum amplitude, per lead	MDC_ECG_AMPL_T_MAX
MDC	2:2816	T minimum amplitude, per lead	MDC_ECG_AMPL_T_MIN

MDC	2:768	ST amplitude, per lead	MDC_ECG_AMPL_ST
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Add the following in PS3.16 Annex B

**CID x3689 ECG Global Waveform Durations**

This Context Group consists of the global terms under the hierarchy of Reference ID MDC\_ECG\_TIME\_PD in the ISO/IEEE 11073-10102 nomenclature.

The base terms from that hierarchy are included in the table below for reference. The base terms may be pre-coordinated with concept discriminators, and the code values for those pre-coordinated terms are arithmetically derived from the code values of the base terms. For the complete current list of terms and discriminator values, see the ISO/IEEE Standard. All pre-coordinated terms (measurements plus discriminators) within the identified hierarchy are part of this Context Group.

**Context ID 3689**  
**ECG Global Waveform Durations**  
**Type: Extensible                      Version: 20110330**

<b>Coding Scheme Designator</b>	<b>Code Value</b>	<b>Code Meaning</b>	<b>IEEE 11073 MDC Equivalent Reference ID (informative)</b>
MDC	2:16184	P duration, global	MDC_ECG_TIME_PD_P_GL
MDC	2:16140	PP time period, global	MDC_ECG_TIME_PD_PP_GL
MDC	2:16144	PQ time period, global	MDC_ECG_TIME_PD_PQ_GL
MDC	2:15872	PR time period, global	MDC_ECG_TIME_PD_PR_GL
MDC	2:16148	PQ segment time period, global	MDC_ECG_TIME_PD_PQ_SEG_GL
MDC	2:16156	QRS duration, global	MDC_ECG_TIME_PD_QRS_GL
MDC	2:16160	QT duration, global	MDC_ECG_TIME_PD_QT_GL
MDC	2:16000	RR time period, global	MDC_ECG_TIME_PD_RR_GL
MDC	2:16004	QTU time period, global	MDC_ECG_TIME_PD_QTU_GL

**CID x3690 ECG Control Variables Numeric**

This Context Group includes the ECG control variables specified in the ISO/IEEE 11073-10102 nomenclature that take numeric values. The terms are included in the table below for reference; these may not constitute the complete current list (see the ISO/IEEE Standard).

**Context ID 3690**  
**ECG Control Variables Numeric**  
**Type: Extensible                      Version: 20110330**

<b>Coding Scheme Designator</b>	<b>Code Value</b>	<b>Code Meaning</b>	<b>IEEE 11073 MDC Equivalent Reference ID (informative)</b>
MDC	10:11393	Sample rate	MDC_ECG_CTL_VBL_SAMPLE_RATE
MDC	10:11394	Sensitivity	MDC_ECG_CTL_VBL_SENSITIVITY
MDC	10:11395	Zero offset	MDC_ECG_CTL_VBL_ZERO_OFFSET
MDC	10:11397	Pad value	MDC_ECG_CTL_VBL_PAD_VALUE
MDC	10:11398	Time skew	MDC_ECG_CTL_VBL_TIME_SKEW
MDC	10:11399	Sample skew	MDC_ECG_CTL_VBL_SAMPLE_SKEW
MDC	10:11400	Time offset	MDC_ECG_CTL_VBL_TIME_OFFSET
MDC	10:11403	Low pass filter cutoff freq	MDC_ECG_CTL_VBL_ATTR_FILTER_CUTOFF_FREQ

MDC	10:11408	Notch filter frequency	MDC_ECG_CTL_VBL_ATTR_FILTER_NOTCH_FREQ
MDC	10:11409	Notch filter bandwidth	MDC_ECG_CTL_VBL_ATTR_FILTER_NOTCH_BANDWIDTH
MDC	10:11418	Interpolator SNR	MDC_ECG_CTL_VBL_INTERPOLATOR_SNR

**CID x3691 ECG Control Variables Text**

This Context Group includes the ECG control variables specified in the ISO/IEEE 11073-10102 nomenclature that take text or coded values. The terms are included in the table below for reference; these may not constitute the complete current list (see the ISO/IEEE Standard).

**Context ID 3691  
ECG Control Variables Text**

**Type: Extensible Version: 20110330**

<b>Coding Scheme Designator</b>	<b>Code Value</b>	<b>Code Meaning</b>	<b>IEEE 11073 MDC Equivalent Reference ID (informative)</b>
MDC	10:11402	Low pass filter	MDC_ECG_CTL_VBL_ATTR_FILTER_LOW_PASS
MDC	10:11404	High pass filter	MDC_ECG_CTL_VBL_ATTR_FILTER_HIGH_PASS
MDC	10:11406	High pass filter	MDC_ECG_CTL_VBL_ATTR_FILTER_DESCRIPTION
MDC	10:11407	Notch filter	MDC_ECG_CTL_VBL_ATTR_FILTER_NOTCH
MDC	10:11410	Notch filter description	MDC_ECG_CTL_VBL_ATTR_FILTER_DESCRIPTION
MDC	10:11412	Baseline description	MDC_ECG_CTL_VBL_BASELINE_DESC
MDC	10:11414	Interpolator	MDC_ECG_CTL_VBL_INTERPOLATOR
MDC	10:11416	Interpolator description	MDC_ECG_CTL_VBL_INTERPOLATOR_DESC

**CID x3692 ICDs**

This Context Group includes the full set of codes for types of implanted cardioverter/defibrillators (ICDs) specified in the NASPE/BPEG Defibrillator Code (NBD). The Coding Scheme Designator (0008,0102) shall be NBD.

Note: Further information at <http://www.hrsonline.org/News/ep-history/topics-in-depth/modocodehistory.cfm>. For reference, the scheme is reproduced here:

<b>Code Position</b>	<b>Shock chamber</b>	<b>Antitachycardia pacing chamber</b>	<b>Tachycardia detection</b>	<b>Antibradycardia pacing chamber</b>
<b>Code values</b>	O = None A = Atrium V = Ventricle D = Dual (A+V)	O = None A = Atrium V = Ventricle D = Dual (A+V)	E = Electro-gram H = Hemo-dynamic	O = None A = Atrium V = Ventricle D = Dual (A+V)

**Short Form**

ICD-S = ICD with shock capability only  
 ICD-B = ICD with bradycardia pacing as well as shock  
 ICD-T = ICD with tachycardia (and bradycardia) pacing as well as shock

Modify the following in Annex D

**DICOM Code Definitions (Coding Scheme Designator “DCM” Coding Scheme Version “01”)**

Code Value	Code Meaning	Definition	Notes
...			
122062	15-Lead ECG	15-Lead electrocardiography	<b><u>Retired, Replaced with (P2-3120E, SRT, “15-Lead ECG”)</u></b>