Digital Imaging and Communications in Medicine (DICOM)

Supplement 66: Catheterization Lab Structured Reports

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Foreword

This Supplement to the DICOM Standard introduces Templates for the following types of cath lab structured reports:

- Procedure Log
- Hemodynamic Measurements Report
- Electrocardiography Report
- Cath Lab Clinical Report

To facilitate use of SR documents for measurement reporting, the Frame of Reference Information Entity (both spatial and temporal) is added as an option to the Comprehensive SR SOP Class. The Hemodynamic Measurements, Electrocardiography, and Cath Lab Clinical Reports may be exchanged using the Comprehensive SR SOP Class.

This Supplement introduces a new Service Class for Application Event Logging, and a specific SOP Class for Procedural Event Logging. This SOP Class would be used for multiple independent devices to cooperatively participate in the construction of a Procedure Log.

This Supplement was developed by Working Group 1 (Cardiovascular Information) of the DICOM Standards Committee in accordance with the procedures of the Committee, with significant input from the European Society of Cardiology and the American College of Cardiology.

Scope and Field of Application

The information objects and services defined in this Supplement are part of the effort to fully digitize and integrate data flow within and beyond the cardiac catheterization laboratory. The cath procedure is an image-guided interventional procedure, involving the acquisition and analysis of images and waveforms, the administration of drugs and therapies, and consultation and interaction between many medical disciplines. The cath lab is a multi-modality mix of many types of equipment from many different manufacturers.

Integration of this mix involves various structured data interchanges in the cath lab. This structured data includes procedure logs, quantitative and qualitative measurements, and clinical reports, and requires several specializations of the DICOM Structured Report capabilities.

Procedure Log

One of the critical items in coordinating the information products of the cath lab is a time-stamped record of all events that occur during a procedure that may last several hours. This is essential to documenting the acquisition context for images, waveforms, and measurements. In the cath lab, acquisition context is a complex set of interrelated components, including various aspects of patient medical state, current and prior therapies, and diagnostic task. Because the particular aspects of acquisition context that may be relevant for any specific data acquisition cannot be predetermined or known at the time of acquisition, it is crucial to have a comprehensive record of all procedural events for retrospective clinical analysis.

The procedure logs also may be mined for administrative measures of the efficacy or efficiency of particular procedures or devices.

The Procedure Log defined in this Supplement, while initially developed for the cardiac catheterization lab, is sufficiently generic that it may be adapted by extension of the templates and context groups for use in other image-guided interventional procedures.

The fundamental log entry is a time-stamped free text comment (e.g., under the concept category of General Notes). This is supplemented by log entries of structured data (coded and numeric values), which are critical for effective automatic data extraction. Note that many types of log entries may be represented either as free text or as structured data; which form is used will be dependent on the capabilities of the

logging system to record structured data, and on the desire to be able to apply automatic extraction and analysis (data mining) tools to the Procedure Log objects. The template defined for the Procedure Log defines a quite comprehensive set of structured data constructs to facilitate advanced applications, but it does not cover all possible desires for coded data logging.

Procedural Event Logging

In the multi-modality catheterization laboratory, there may be as many as ten devices that will be generating information that could be included in the procedure log. To facilitate the distributed contribution of items to the log, this Supplement defines a Procedural Event Logging SOP Class. The Service Class Provider for this SOP Class would be the device constructing the Procedure Log SOP Instance. The Service Class Users would create mini-procedure logs (typically with a single log entry), which are passed by this SOP Class to the SCP. Even "dumb" devices without knowledge of the patient or study identification can act as SCUs if they can provide enough context information (e.g., device location) for the SCP to match their submissions to the proper procedure log.

Hemodynamics Report

The purpose of the Hemodynamics Report is to detail the scientific findings obtained from waveforms and other measurements taken during a catheterization procedure, together with data derived from these measurements. It does not contain any clinical interpretation, which is more appropriate to other DICOM SR documents such as the cath lab clinical results.

The report contains one or more measurement containers, each corresponding to a phase of the cath procedure. Within each container may be one or more sub-containers, each associated with a single measurement set. A full description is provided in a new Annex N to Part 3.

The existing Hemodynamics Waveform SOP Class is a critical adjunct to the Hemodynamics Report. It provides the means to transfer the raw data from which the hemodynamics measurements were made, so that a receiver of the Hemodynamics Report can, if desired, review the data and perhaps recalculate some of the measurement values.

Electrocardiography Report

The Electrocardiography Report provides the findings associated with an ECG acquisition, including standard resting 12-lead ECGs, stress ECGs, pediatric 15-lead ECGs, and others. Findings may also include serial comparison with one or more prior ECGs.

The Electrocardiography Report may be generated by the ECG device, an ECG management system, or a physician.

The Electrocardiography Report and the existing Electrocardiography Waveform SOP Classes are together essential for effective clinical use of ECGs under DICOM. Both the SCP-ECG standard and proprietary ECG interchange formats include aspects of both waveform and report data. The DICOM standard formats provide for a robust and extensible ECG interchange environment.

Cardiac Cath Report

The Cardiac Cath Report provides the overall clinical results of the catheterization procedure. This report, or a subset thereof, may be used for interchange between database applications, or may be distributed to the referring physician, to the attending physician, to a surgeon, or to a consulting physician.

The Cardiac Cath Report template defined herein is simply another baseline report template that may be replaced; it is therefore in no sense binding for exchange of this type of report. It is solely an example of a possible encoding of Cardiac Cath Report. One salient feature of this template is that it provides a large set of coded concepts that may be useful in automatically extracting data for submission to regional or national outcomes registries, such as the ACC NCDR™.

Part 3 Addendum

Update PS3.3 Annex A Table A.1-2:

Table A.1-2
COMPOSITE INFORMATION OBJECT MODULES OVERVIEW - NON-IMAGES

IODs Modules	…	Comp SR
Patient		M
Patient Summary		
Specimen Identification		C
General Study		M
Patient Study		U
…		
SR Document Series		M
Key Object Document Series		
Frame Of Reference		**U**
Synchronization		**U**
…		
General Equipment		M
…		
SR Document General		M
SR Document Content		M
…		
SOP Common		M

Update PS3.3 Annex A Section A.35.3:

A.35.3.2 Comprehensive SR IOD Entity-Relationship Model

The E-R Model in Section A.1.2 of this Part applies to the Comprehensive SR IOD. The ~~**Frame of Reference IE, and the**~~ IEs at the level of the Image IE in Section A.1.2 are not components of the Comprehensive SR IOD. Table A.35.3-1 specifies the Modules of the Comprehensive SR IOD.

A.35.3.3 Comprehensive SR IOD Module Table

Table A.35.3-1
COMPREHENSIVE SR IOD MODULES

IE	Module	Reference	Usage
Patient	Patient	C.7.1.1	M

	Specimen Identification	C.7.1.2	C - Required if the Observation Subject is a Specimen
Study	General Study	C.7.2.1	M
	Patient Study	C.7.2.2	U
Series	SR Document Series	C.17.1	M
Frame of Reference	**Frame of Reference**	**C.7.4.1**	**U**
	Synchronization	**C.7.4.2**	**U**
Equipment	General Equipment	C.7.5.1	M
Document	SR Document General	C.17.2	M
	SR Document Content	C.17.3	M
	SOP Common	C.12.1	M

Add the following to PS3.3 Annex A:

A.35.7 Procedure Log Information Object Definition

A.35.7.1 Procedure Log Information Object Description

The Procedure Log IOD is intended for the representation of reports or logs of time-stamped events occurring during an extended diagnostic or interventional procedure, typical of the cardiac catheterization lab.

A.35.7.2 Procedure Log IOD Entity-Relationship Model

The E-R Model in Section A.1.2 of this Part applies to the Procedure Log IOD. Table A.35.7-1 specifies the Modules of the Procedure Log IOD.

Note: Unlike some other SR IODs, the Frame of Reference IE is critical to the synchronized time stamping of events in the Procedure Log IOD and to multi-modality coordination.

A.35.7.3 Procedure Log IOD Module Table

Table A.35.7-1
PROCEDURE LOG IOD MODULES

IE	Module	Reference	Usage
Patient	Patient	C.7.1.1	M
	Clinical Trial Subject	C.7.1.3	U
Study	General Study	C.7.2.1	M
	Clinical Trial Study	C.7.2.3	U
Series	SR Document Series	C.17.1	M
	Clinical Trial Series	C.7.3.2	U
Frame of Reference	Synchronization	C.7.4.2	M
Equipment	General Equipment	C.7.5.1	M
Document	SR Document General	C.17.2	M

	SR Document Content	C.17.3	M
	SOP Common	C.12.1	M

A.35.7.3.1 Procedure Log IOD Content Constraints

A.35.7.3.1.1 Template

The document may be constructed from Baseline TID 3001 "Procedure Log" (defined in PS3.16) invoked at the root node.

Note: This template defines a container (the root) with subsidiary content items, each of which represents a single procedure log entry. There is a defined recording observer (the person responsible for recording the log, generally a technician or nurse). The log entries follow a canonical model of a coded log entry type (the concept name of the content item), the value associated with the concept name as one of the SR Value Types, and optionally a subsidiary free text comment and/or an identifier of the author or device source of the log entry (which may be other than the recording observer).

A.35.7.3.1.2 Observation DateTime

Each Item in the Content Sequence (0040,A730) of the SR Document Content Module that is a target of a "CONTAINS" relationship from the root node, i.e., the first level Log Content Items, shall include the Observation DateTime (0040,A032) as a Type 1 attribute. This attribute shall represent the datetime at which the event recorded in the Content Item occurred, not the time at which the Item was recorded.

The first level Procedure Log Content Items in the Content Sequence shall be strictly ordered by monotonically increasing Observation DateTime values.

The Observation DateTime shall be specified to a precision of one second or finer.

A.35.7.3.1.3 Value Type

Value Type (0040,A040) in the Content Sequence (0040,A730) of the SR Document Content Module is constrained to the following Enumerated Values (see Table C.17-7 for Value Type definitions):

CODE
CONTAINER
COMPOSITE
DATETIME
DATE
IMAGE
NUM
PNAME
TEXT
TIME
UIDREF
WAVEFORM

A.35.7.3.1.4 Relationship Constraints

Relationships between Content Items in the content of this IOD shall be conveyed in the by-value mode. See Table C.17-8 for Relationship Type definitions.

Notes: 1. Relationships by-reference are forbidden. Therefore, Referenced Content Item Identifier (0040,DB73) is not present in any of the Content Items within the SR Document Content Module.
2. CONTAINERs are not permitted as a target of any relationship.

Table A.35.7-2 specifies the relationship constraints of this IOD.

Table A.35.7-2
RELATIONSHIP CONTENT CONSTRAINTS FOR PROCEDURE LOG IOD

Source Value Type	Relationship Type (Enumerated Values)	Target Value Type
CONTAINER	CONTAINS	TEXT, CODE, NUM, PNAME, COMPOSITE, IMAGE, WAVEFORM
any type	HAS OBS CONTEXT	TEXT, CODE, NUM, DATETIME, UIDREF, PNAME
CONTAINER, IMAGE, WAVEFORM, COMPOSITE	HAS ACQ CONTEXT	TEXT, CODE, NUM, DATETIME, DATE, TIME, UIDREF, PNAME
any type	HAS CONCEPT MOD	TEXT, CODE
any type (except CONTAINER)	HAS PROPERTIES	TEXT, CODE, NUM, DATETIME, UIDREF, PNAME
TEXT, CODE, NUM	INFERRED FROM	IMAGE, WAVEFORM, COMPOSITE

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Update PS3.3 Section C.7.4.2.1.

C.7.4.2.1 Synchronization Attribute Descriptions

…

C.7.4.2.1.4 Acquisition Time Synchronized

The Acquisition Time Synchronized (0018,1800) attribute specifies whether the Acquisition Datetime (0008,002A) attribute of the Waveform Identification Module or the General Image Module represents an accurate synchronized timestamp for the acquisition of the waveform and/or image data . For triggered multi-frame images, the Acquisition Datetime applies to the trigger for the first image frame (see attribute Image Trigger Delay (0018,1067) in the Cine Module).

For IODs which include the SR Document Content Module, the Acquisition Time Synchronized (0018,1800) attribute specifies whether the Observation Datetime (0040,A032) attribute of Items in the Content Sequence (0040,A730) of the SR Document Content Module represents an accurate synchronized timestamp for the Item.

Update PS3.3 Table C.17-2 and Section C.17.2.3.

C.17.2 SR Document General Module

…

Table C.17-2
SR DOCUMENT GENERAL MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
…			
Current Requested Procedure Evidence Sequence	(0040,A375)	1C	Full set of Composite SOP Instances created to satisfy the current Requested Procedure(s) for which this SR Document is generated. One or more Items may be included in this sequence. Required if Composite Objects were acquired in order to satisfy the Requested Procedure(s) for which the SR Document is generated **and Completion Flag (0040,A491) value is COMPLETE. May be present otherwise.** See C.17.2.3 for further explanation.
…			

…

C.17.2.3 Current Requested Procedure Evidence Sequence and Pertinent Other Evidence Sequence

The intent of the Current Requested Procedure Evidence Sequence is to reference all evidence created in order to satisfy the current Requested Procedure(s) for this SR Document. This shall include, but is not limited to, all current evidence referenced in the content tree.

For a completed SR Document satisfying (i.e., being the final report for) the current Requested Procedure(s), this sequence shall list the full set of Composite SOP Instances created for the current Requested Procedure(s). For other SOP Instances that include the SR Document General Module, this sequence shall contain at minimum the set of Composite SOP Instances from the current Requested Procedure(s) that are referenced in the content tree.

The Pertinent Other Evidence Sequence attribute is …

Update PS3.3 Table C.17-6.

C.17.3 SR Document Content Module

…

Table C.17-6
DOCUMENT RELATIONSHIP MACRO ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
Observation DateTime	(0040,A032)	1C	The date and time on which this Content Item was completed**. For the purpose of recording measurements or logging events, completion time is defined as the time of data acquisition of the measurement, or the time of occurrence of the event**. Required if the date and time are different from the Content Date (0008,0023) and Content Time (0008,0033) or the Observation DateTime (0040,A032) defined in higher items. Note: When Content Items are copied into successor reports, the Content Date (0008,0023) and Content Time (0008,0033) of the new report are likely to be different than the date and time of the original observation. Therefore this attribute may need to be included in any copied Content Items to satisfy the condition.
…			

Update PS3.3 Section C.17.5

C.17.5 OBSERVATION CONTEXT ENCODING

....

Initial Observation Context is defined outside the SR Document Content tree by other modules in the SR IOD (i.e., Patient Module, Specimen Identification, General Study, Patient Study, SR Document Series, **Frame of Reference, Synchronization,** General Equipment and SR Document General modules). Observation Context defined by attributes in these modules applies to all Content Items in the SR Document Content tree and need not be explicitly coded in the tree. The initial Observation Context from outside the tree can be explicitly replaced.

…

Add new informative Annex to PS3.3:

Annex N Hemodynamics Report Structure (Informative)

The Hemodynamics Report is based on TID 3500. The report contains one or more measurement containers, each corresponding to a phase of the cath procedure. Within each container may be one or more sub-containers, each associated with a single measurement set. A measurement set consists of measurements from a single anatomic location. The resulting hierarchical structure is depicted in Figure N-1.

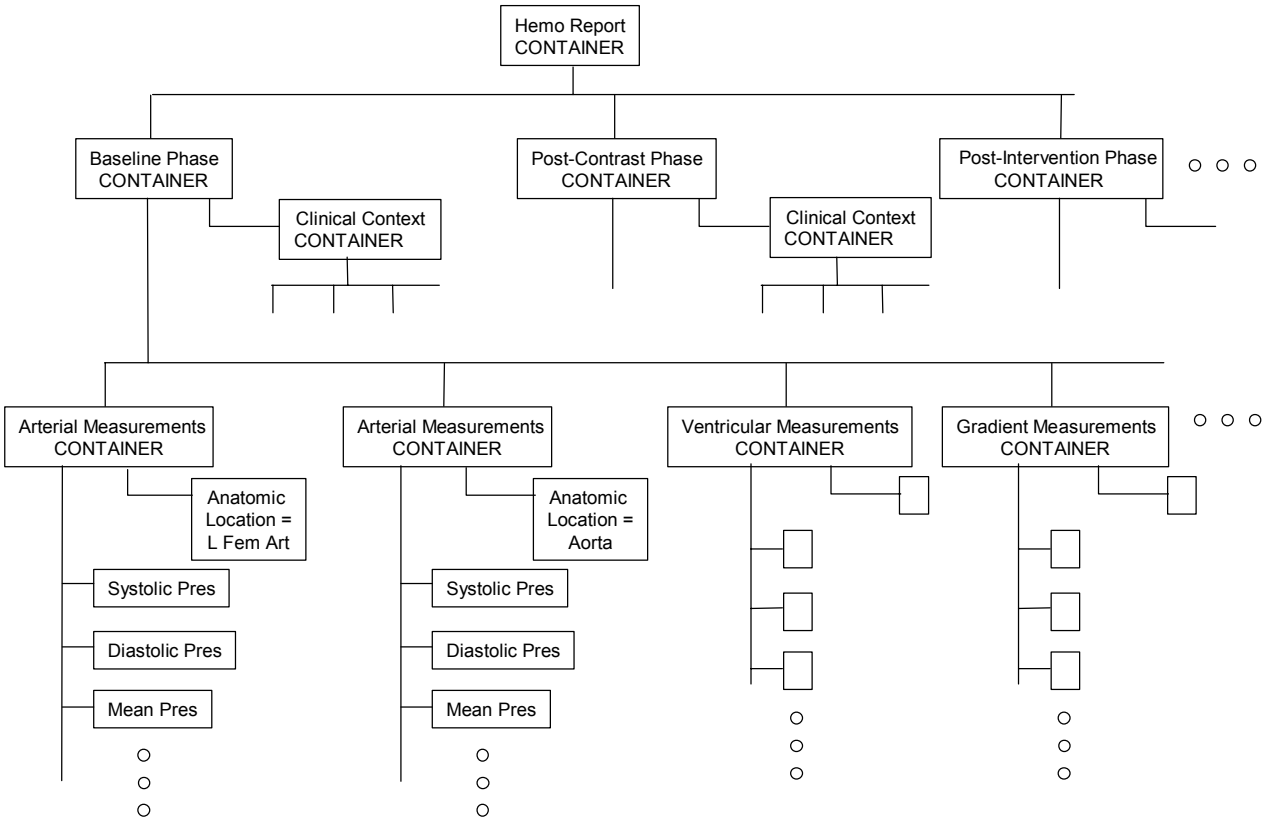

Figure N-1 Hemodynamics Report Structure

The container for each phase has an optional subsidiary container for Clinical Context with a parent-child relationship of has-acquisition-context. This Clinical Context container allows the recording of pertinent patient state information that may be essential to understanding the measurements made during that procedure phase. It should be noted that any such patient state information is necessarily only a summary; a more complete clinical picture may be obtained by review of the cath procedure log.

The lowest level containers for the measurement sets are specialized by the class of anatomic location - arterial, venous, atrial, ventricular - for the particular measurements appropriate to that type of location. These containers explicitly identify the anatomic location with a has-acquisition-context relationship. Since such measurement sets are typically measured on the same source (e.g., pressure waveform), the container may also have a has-acquisition-context relationship with a source DICOM waveform SOP Instance.

The "atomic" level of measurements within the measurement set containers includes three types of data. First is the *specific measurement data* acquired from waveforms related to the site. Second is *general measurement data* that may include any hemodynamic, patient vital sign, or blood chemistry data. Third, *derived data* are produced from a combination of other data using a mathematical formula or table, and may provide reference to the equation.

Part 4 Addendum

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Add to PS3.4 Annex B.5.

B.5 Standard SOP Classes

Table B.5-1
STANDARD SOP CLASSES

SOP Class Name	SOP Class UID	IOD (See PS 3.3)
…		
Procedure Log	**1.2.840.10008.5.1.4.1.1.88.40**	**Procedure Log**

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B.5.1.5 Structured Reporting Storage SOP Classes

The requirements of Annex O apply to the following SOP Classes:

Basic Text SR
270 Enhanced SR
Comprehensive SR
Mammography CAD SR
Procedure Log

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Add to PS3.4 Annex C.

C.6.1.1.5 Composite object instance Level

Table C.6-4 defines the keys at the Composite object instance Information level of the Patient Root
280 Query/Retrieve Information Model.

Table C.6-4
COMPOSITE OBJECT INSTANCE LEVEL KEYS FOR THE PATIENT ROOT QUERY/RETRIEVE INFORMATION MODEL

Description	Tag	Type
Instance Number	(0020,0013)	R
Overlay Number	(0020,0022)	O
Curve Number	(0020,0024)	O
LUT Number	(0020,0026)	O
SOP Instance UID	(0008,0018)	U
SOP Class UID	(0008,0016)	O
Concept Name Code Sequence	**(0040,A043)**	**O**
>Code Value	**(0008,0100)**	**O**
>Coding Scheme Designator	**(0008,0102)**	**O**

>Coding Scheme Version	**(0008,0103)**	**O**
>Code Meaning	**(0008,0104)**	**O**
Content Template Sequence	**(0040,A504)**	**O**
>Template Identifier	**(0040,DB00)**	**O**
>Mapping Resource	**(0008,0105)**	**O**
All Other Attributes at composite object instance Level		O

Notes: 1. Ideally, Overlay Number (0020,0022), Curve Number (0020,0024), LUT Number (0020,0026) and Report Number (0020,00AA) would be of Type R rather than Type O to require an SCP to match on these keys. However for backward compatibility with SCPs that are not aware of the revised model, they remain Type O. An SCP that is aware of the revised model can state in its Conformance Statement that matching on these keys IS performed. Instance Number (0020,0013), if present in non-image objects is the preferred key if present in revised objects.

2. SOP Class UID (0008,0016) is an optional key, but it is strongly recommended that it always be returned by all SCPs, if matching is requested.

3. The Concept Name Code Sequence (0040,A043) and Content Template Sequence (0040,A504) are optional keys that are useful for identifying instances of various Structured Reporting Storage SOP Classes. It is strongly recommended that these keys be supported by the SCP for query against such instances.

Add to PS3.4 Annex I.4.

I.4 Media Standard Storage SOP Classes

Table I.4-1
Media Storage Standard SOP Classes

SOP Class Name	SOP Class UID	IOD (See PS 3.3)
…		
Procedure Log	**1.2.840.10008.5.1.4.1.1.88.40**	**Procedure Log**

I.4.1.2 Structured Reporting Storage SOP Classes

The requirements of Annex O apply to the following SOP Classes:

Basic Text SR
Enhanced SR
Comprehensive SR
Mammography CAD SR
Procedure Log

Add to PS3.4 Annex O.

O.4.1 Conformance Statement for an SCU

The following shall be documented in the Conformance Statement of any implementation claiming conformance to the Structured Reporting Storage SOP Classes as an SCU:

- The Image or other composite object Storage SOP Classes that are also supported by the SCU and which may be referenced by instances of Structured Reporting Storage SOP Class.
- The range of Value Types and Relationship Types that are supported by the SCU.
- The conditions under which a new SOP Instance UID is generated for an existing SR Document.
- **If the implementation provides Query/Retrieve of Structured Reporting SOP Instances stored by the implementation, whether it supports query of the Concept Name Code Sequence or the Content Template Sequence.**

…

Add new Annex P to PS3.4

Annex P APPLICATION EVENT LOGGING SERVICE CLASS (Normative)

P.1 Overview

P.1.1 Scope

The Application Event Logging Service Class defines an application-level class-of-service that facilitates the network transfer of Event Log Records to be logged or recorded in a central location.

The Application Event Logging Service Class addresses the class of application specific logs (e.g., procedural event logs) that are managed by a medical application. The Application Event Logging Service Class does not specify the means of accessing the central logs.

Note: This Service Class does not address system security or audit logs that are managed by general system logging applications, and which may use non-DICOM protocols (e.g., SYSLOG).

P.1.2 Service Definition

Two peer DICOM AEs implement a SOP Class of the Application Event Logging Service Class with one serving in the SCU role and one serving in the SCP role. SOP Classes of the Application Event Logging Service Class are implemented using the DIMSE-N N-ACTION service as defined in PS 3.7.

The N-ACTION service conveys the following semantics:

— The SCU notifies the SCP that an event has occurred that the SCP should record in a log. The Action Information of the N-ACTION-RQ contains the information about the event.

— The SCP responds with a confirmation of the status of the recording action.

The association negotiation procedure is used to negotiate the supported SOP Classes. PS 3.7 specifies the association procedure. The Application Event Logging Service Class does not support extended negotiation.

The release of an association shall not have any effect on the contents of the log managed by the SCP.

P.2 Procedural Event Logging SOP Class Definition

The Procedural Event Logging SOP Class allows SCUs to report to an SCP the events that are to be recorded in a Procedure Log SOP Instance, as described in PS3.3. This allows multiple devices participating in a Study to cooperatively construct a log of events that occur during that Study.

The multiple procedural events reported through this SOP Class are related by Patient ID, Study Instance UID, Study ID, and/or Performed Location. The mechanism by which multiple devices obtain these shared identifiers is not defined by this SOP Class.

Note: The Modality Worklist or General Purpose Worklist SOP Classes may be used for this purpose. For simple devices that cannot support worklist SOP classes, the SCP may be able to use Performed Location, or the SCU AE Title, to relate the use of the device to a particular procedure.

The SCP may also provide for recording events for which the SCU does not provide identifiers for matching. The mechanism by which the SCP determines the association of such an unidentified event with the log for a specific procedure is not defined by this SOP Class.

Note: The network address and/or AE Title of the SCU may be used to identify the device as a participant in a particular procedure.

P.2.1 DIMSE Service Group

The DIMSE-N Services applicable to the Procedural Event Logging SOP Class are shown in Table P.2-1.

Table P.2-1
DIMSE SERVICE GROUP

DIMSE Service Element	Usage SCU/SCP
N-ACTION	M/M

The DIMSE-N Services and Protocol are specified in PS 3.7.

P.2.2 Operation

The DICOM AEs which claim conformance to this SOP Class as an SCU shall invoke the N-ACTION request. The DICOM AEs which claim conformance to this SOP Class as an SCP shall support the N-ACTION request.

P.2.2.1 Action Information

The DICOM AEs which claim conformance to this SOP Class as an SCU and/or an SCP shall support the Action Type and Action Information in the N-ACTION-RQ as specified in Table P.2-2.

Table P.2-2
PROCEDURAL EVENT LOGGING ACTION INFORMATION

Action Type Name	Action Type ID	Attribute	Tag	Requirement Type SCU/SCP
Record Procedural Event	1	Specific Character Set	(0008,0005)	1C/1C (Required if an extended or replacement character set is used)
		Patient ID	(0010,0020)	2/2
		Study Instance UID	(0020,000D)	2/2
		Study ID	(0020,0010)	2/2
		Synchronization Frame of Reference UID	(0020,0200)	2/2
		Performed Location	(0040,0243)	2/2
		All other Attributes of the SR Document Content Module (PS3.3) using Procedure Log IOD Content Constraints		See Section P.2.2.1.3

P.2.2.1.1 Study Matching Attributes

The SCU may provide Patient ID (0010,0020), Study Instance UID (0020,000D), Study ID (0020,0010), and/or Performed Location (0040,0243) attributes to allow the SCP to match the N-ACTION with a Study for which a procedure log is being created.

P.2.2.1.2 Synchronization Frame of Reference UID

The Synchronization Frame of Reference UID (0020,0200) attribute identifies the temporal frame of reference for the Observation DateTime (0040,A032) attributes in the Procedural Event record. If the Observation DateTime attribute values are not synchronized in an identifiable Frame of Reference, the attribute shall be zero length.

P.2.2.1.3 Constraints on Attributes of the SR Document Content Module

The Procedural Event record shall be conveyed in a (top level) Content Item, and subsidiary Content Items, as specified by the SR Document Content Module definition in PS3.3.

The top level and subsidiary Content Items shall be constructed in accordance with the Procedure Log IOD Content Constraints of PS3.3.

Notes: 1. These constraints specify use of BTID 3001 Procedure Log defined in PS3.16, and specific particular use of the Observation DateTime (0040,A032) attributes.

2. TID 3001 requires the explicit identification of the Observer Context of the top level CONTAINER through TID 1002.

3. There may be multiple events (subsidiary Content Items) included in a single N-ACTION-RQ message.

P.2.2.2 Service Class User Behavior

The SCU shall request logging of events that occur during a Study, using the N-ACTION request primitive.

The SCU shall receive N-ACTION responses. The actions taken upon a response status of Failure, or upon non-response of the SCP, are implementation dependent.

P.2.2.3 Service Class Provider Behavior

The SCP shall manage the creation of SOP Instances of the Procedure Log Storage Service. It shall receive, via the N-ACTION request primitive, requests for logging of events that occur during a Study. The SCP shall (consonant with application dependent constraints) incorporate those event records into a Procedure Log SOP Instance for the specified Study.

The SCP shall return, via the N-ACTION response primitive, the N-ACTION Response Status Code applicable to the associated action request.

P.2.2.4 Status Codes

The Service Class specific status values defined for the N-ACTION Service are specified in Table P.2-3. See PS 3.7 for additional general response status codes.

Table P.2-3
RESPONSE STATUS

Service Status	Response Status Code	Further Meaning
Success	0000	
Warning	B101	Specified Synchronization Frame of Reference UID does not match SCP Synchronization Frame of Reference
Warning	B102	Study Instance UID coercion; Event logged under a different Study Instance UID
Warning	B104	IDs inconsistent in matching a current study; Event logged
Failure	C101	Procedural Logging not available for specified Study Instance UID
Failure	C102	Event Information does not match Template
Failure	C103	Cannot match event to a current study
Failure	C104	IDs inconsistent in matching a current study; Event not logged

P.2.2.5 Action Reply

With any response status indicating Success or Warning, the identifiers of the study into which the event has been logged shall be returned in the N-ACTION-RSP Action Reply as specified in Table P.2-4.

Table P.2-4
PROCEDURAL EVENT LOGGING ACTION REPLY

Action Type Name	Action Type ID	Attribute	Tag	Requirement Type SCU/SCP
Record Procedural Event	1	Study Instance UID	(0020,000D)	3/1
		Patient ID	(0010,0020)	3/1

P.2.3 Procedural Event Logging SOP Class UID

The Procedural Event Logging SOP Class shall be uniquely identified by the Procedural Event Logging SOP Class UID, which shall have the value "1.2.840.10008.1.40".

P.2.4 Procedural Event Logging Instance Identification

The well-known UID of the Procedural Event Logging SOP Instance shall have the value "1.2.840.10008.1.40.1".

P.2.5 Conformance Requirements

The DICOM AE's Conformance Statement shall be formatted as defined in PS 3.2.

P.2.5.1 SCU Conformance

The SCU shall document in its Conformance Statement the behavior and actions that cause the SCU to generate an N-ACTION primitive (Procedural Event Notification). It shall specify the Template used for constructing the Event Information, and the Coding Schemes used for coded entries in the Event Information.

The SCU shall document the identifiers it sends for matching purposes, and how it obtains those attributes (e.g., through a Modality Worklist query, manual entry, etc.).

The SCU shall document the behavior and actions performed when a success, warning, or failure status is received.

The SCU shall document the mechanisms used for establishing time synchronization and specifying the Synchronization Frame of Reference UID.

P.2.5.2 SCP Conformance

The SCP shall document in its Conformance Statement how it uses the identifiers it receives for matching the N-ACTION (Procedural Event Notification) to a specific procedure.

The SCP shall document the behavior and actions that cause the SCP to generate a success, warning, or failure status for a received N-ACTION.

The SCP shall document the behavior and actions that cause the SCP to generate a Procedure Log SOP Instance including the received Event Information.

The SCP shall document how it assigns the value of the Observation Datetime (0040,A032) attribute when the SCU-provided Synchronization Frame of Reference UID is absent, or differs from that of the SCP.

Part 6 Addendum

Add the following UIDs to PS3.6 Annex A.

Annex A Registry of DICOM Unique Identifiers (UID)

UID Value	UID NAME	UID TYPE	Part
…			
1.2.840.10008.5.1.4.1.1.88.40	Procedure Log Storage	SOP Class	PS 3.4
1.2.840.10008.1.40	Procedural Event Logging SOP Class	SOP Class	PS 3.4
1.2.840.10008.1.40.1	Procedural Event Logging SOP Instance	Well-known SOP Instance	PS 3.4

Part 16 Addendum

Update PS3.16 Section 2

2 Normative references

Manuel D. Cerqueira, et al., "Standardized Myocardial Segmentation and Nomenclature for Tomographic Imaging of the Heart", 2001

Note: This document is available at http://www.asecho.org/freepdf/CardiacSegmentation.pdf .

Update PS3.16 Table 8-1:

8 Coding Schemes

Table 8-1 Coding Schemes

Coding Scheme Designator	Description
…	
NCDR	**American College of Cardiology National Cardiovascular Data Registry™ Cath Lab Module Version 1.1, 1997; Version 2.0b, 1999**

Update the following template in PS3.16 Annex A

Annex A Structured Reporting Templates (Normative)

TID 1350 Negation Modifier, Presence Of Finding

…

TID 1350
NEGATION MODIFIER, PRESENCE OF FINDING

	NL	Rel with Parent	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		HAS CONCEPT MOD	CODE	EV(121052,DCM,"Presence of property")	1	M		~~EV (121053,DCM, "Present")~~ ~~or~~ ~~EV (121054,DCM, "Absent")~~ **DCID (240) Present-Absent**

Add the following to PS3.16 Annex A:

PROCEDURE LOG IOD TEMPLATES

TID 3001 Procedure Log

The Procedure Log template is intended for the representation of reports or logs of time-stamped events occurring during an image-guided interventional or other procedure.

This Template does not require a particular ordering of the subsidiary Content Items.

Notes: 1. The Procedure Log IOD (PS3.3) requires ordering by Observation Datetime; thus log entries of different types (i.e., specified by different Rows in the Template) may appear in any order.
2. While this Template is extensible, the Procedure Log IOD forbids Container Content Items subsidiary to the top level Container.

Type: Extensible

TID 3001
Procedure Log

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	DCID (3400) Procedure Log Titles	1	M		
2	>		INCLUDE	DTID (1002) Observer Context	1-n	M		
3	>		INCLUDE	DTID (3601) Procedure Context	1	M		
4	>	HAS ACQ CONTEXT	TEXT	EV (121121, DCM, "Room identification")	1	U		
5	>	HAS ACQ CONTEXT	TEXT	EV (121122, DCM, "Equipment identification")	1-n	U		
6	>	CONTAINS	TEXT	DCID (3401) Types of Log Notes	1-n	U		
7	>>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		
8	>	CONTAINS	CODE	EV (121123, DCM, “Patient Status or Event”)	1-n	U		DCID (3402) Patient Status and Events
9	>>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		
10	>	CONTAINS	PNAME	DCID (3404) Staff Actions	1-n			
11	>>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		
12	>	CONTAINS	TEXT	DCID (3427) Equipment Events	1-n	U		Equipment identifier
13	>>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		
14	>	CONTAINS	INCLUDE	DTID (3100) Procedure Action	1-n	U		
15	>	CONTAINS	INCLUDE	DTID (3101) Image Acquisition	1-n	U		
16	>	CONTAINS	INCLUDE	DTID (3102) Waveform Acquisition	1-n	U		

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
17	>	CONTAINS	INCLUDE	DTID (3103) Referenced Object	1-n	U		
18	>	CONTAINS	INCLUDE	DTID (3104) Consumables	1-n	U		
19	>	CONTAINS	INCLUDE	DTID (3105) Lesion Identification and Properties	1-n	U		
20	>	CONTAINS	INCLUDE	DTID (3106) Drugs/Contrast Administered	1-n	U		
21	>	CONTAINS	INCLUDE	DTID (3107) Device Used	1-n	U		
22	>	CONTAINS	INCLUDE	DTID (3108) Intervention	1-n	U		
23	>	CONTAINS	CODE	EV (DD-60002, SRT, “Complication of Procedure”)	1-n	U		DCID (3413) Adverse Outcomes
24	>>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		
25	>	CONTAINS	INCLUDE	DTID (3109) Measurements	1-n	U		
26	>	CONTAINS	INCLUDE	DTID (3110) Impressions or Findings	1-n	U		
27	>	CONTAINS	INCLUDE	DTID (3111) Percutaneous Entry	1-n	U		
28	>	CONTAINS	INCLUDE	DTID (3112) Specimen Obtained	1-n	U		
29	>	CONTAINS	INCLUDE	DTID (3113) Patient Support	1-n	U		
30	>	CONTAINS	INCLUDE	DTID (3114) Patient assessment	1-n	U		
31	>	CONTAINS	INCLUDE	DTID (3115) ECG ST assessment	1-n	U		

Content Item Descriptions

Row 2 includes TID 1002 Observer Context. TID 1002 shall be used to record the identity of the person responsible for recording the log, as well as all other participants in the procedure, even though these personnel may not technically be "observers" of the Procedure Log. As participants in the procedure, they are potential sources for events and observations recorded in the Log. TID 1002 allows the specification of the person’s role in the organization (e.g., physician, nurse), as well as the role in the procedure (e.g., circulating, performing, etc.).

Row 5 shall be used to record the identity of the major equipment used in the procedure.

Row 6 may be used to record any event not covered by a specific log entry template.

TID 3010 Log Entry Qualifiers

The Log Entry Qualifiers Template provides a common means for adding additional description to a procedure log content item. It allows identification of a source for the procedure log entry (other than the recording observer for the log as a whole), a free text comment, a link to a particular Procedure Action item, a link to a particular lesion, or the date/time of recording (if different than the time of the event occurrence recorded in the Observation Datetime of the parent content item).

Type: Extensible

TID 3010
Log Entry Qualifiers

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			INCLUDE	DTID (1000) Quotation	1	U		
2		HAS PROPERTIES	TEXT	EV (121106, DCM, “Comment”)	1	U		
3		HAS OBS CONTEXT	TEXT	EV (121124, DCM, "Procedure Action ID")	1-n	U		
4		HAS OBS CONTEXT	TEXT	EV (121151, DCM, "Lesion Identifier")	1-n	U		Up to 3 numeric characters
5		HAS OBS CONTEXT	DATETIME	EV (121125, DCM, "DateTime of Recording of Log Entry")	1	U		
6		INFERRED FROM	IMAGE		1-n	U		
7		INFERRED FROM	WAVEFORM		1-n	U		
8		INFERRED FROM	COMPOSITE		1-n	U		
9		HAS OBS CONTEXT	CODE	EV (121135, DCM, ”Observation Datetime Qualifier”)	1	U		DCID (3430) Datetime Qualifiers

Content Item Descriptions

Row 3 Procedure Action ID allows linking recorded events to a particular action, step, or phase of a procedure. See description for TID 3100 Procedure Action.

Row 4 Lesion Identifier is specified as a numeric text string, and allows linking recorded events to the diagnosis or therapy of particular lesion. See description for TID 3105 Lesion Identifier.

TID 3100 Procedure Action

The Procedure Action Template is intended for the recording of the beginning or end of procedure steps or action items in a procedure. The level of granularity of the recorded events is not specified, and may vary between institutions, or even be at multiple levels within a single procedure log. There is no requirement for the real-world procedure step or action item recorded with this template to end before another one begins; there may be overlapping or simultaneous procedure steps or action items.

This log entry template may be used to record the start or stop of timers.

Other recorded events in the procedure may be linked to a particular step or action item by Procedure Action ID (see TID 3010 Log Entry Qualifiers).

Type: Extensible

TID 3100
Procedure Action

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	DCID (3421) Procedure Action	1	M		BCID (3405) Procedure Action Values
2	>	HAS PROPERTIES	TEXT	EV (121124, DCM, "Procedure Action ID")	1	M		

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
3	>	HAS PROPERTIES	PNAME	BCID (7453) Performing Roles	1-n	U		
4	>	HAS PROPERTIES	NUM	EV (121128, DCM, "Procedure Action Duration")	1	U		
5	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		
6	>	HAS PROPERTIES	UIDREF	EV (121126, DCM, "Performed Procedure Step SOP Instance UID")	1	MC	IFF DICOM Modality or General Purpose Performed Procedure Step SOP Class is used to provide status of the Procedure Step	
7	>	HAS PROPERTIES	UIDREF	EV (121127, DCM, "Performed Procedure Step SOP Class UID")	1	MC	IFF DICOM Modality or General Purpose Performed Procedure Step SOP Class is used to provide status of the Procedure Step	

Content Item Descriptions

Row 2 - The value of the Procedure Action ID shall be uniquely associated with the step or action within the context of the Study, and may be used to associate various Procedure Log entries with the step or action.

Row 3 may be used to record the identity of staff roles for the purpose of this Procedure Action, which may differ from their roles in the procedure as a whole.

TID 3101 Image Acquisition

The Image Acquisition Template allows recording of the essential parameters of a digital image acquired during the procedure.

Type: Extensible

TID 3101
Image Acquisition

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			IMAGE	EV (121138, DCM, “Image Acquired”)	1	M		
2	>	HAS ACQ CONTEXT	UIDREF	EV (112002, DCM, "Series Instance UID")	1	M		
3	>	HAS ACQ CONTEXT	CODE	EV (121139, DCM, “Modality”)	1	M		DCID (29) Modalities Derived from referenced image SOP Instance attribute (0008,0060)
4	>	HAS PROPERTIES	NUM	EV (121140, DCM, “Number of Frames”)	1	U		
5	>	HAS PROPERTIES	TEXT	EV (121141, DCM, “Image Type”)	1	U		From referenced image SOP Instance attribute (0008,0008)

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
6	>	HAS ACQ CONTEXT	NUM	EV (112011, DCM, “Positioner Primary Angle”)	1	U		UNITS = EV (deg, UCUM, “º”)
7	>	HAS ACQ CONTEXT	NUM	EV (112012, DCM, “Positioner Secondary Angle”)	1	U		UNITS = EV (deg, UCUM, “º”)
8	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

TID 3102 Waveform Acquisition

The Waveform Acquisition Template allows recording of the essential parameters of a digital waveform acquired during the procedure.

Type: Extensible

TID 3102
Waveform Acquisition

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			WAVEFORM	EV (121143, DCM, “Waveform Acquired”)	1	M		
2	>	HAS ACQ CONTEXT	CODE	EV (121139, DCM, “Modality”)	1	M		DCID (29) Modalities Derived from referenced waveform SOP Instance attribute (0008,0060)
3	>	HAS ACQ CONTEXT	NUM	EV (121142, DCM, “Acquisition Duration”)	1	U		
4	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

TID 3103 Referenced Object

The Referenced Object Template allows reference to measurement or report objects, such as prior medical reports, laboratory results, hemodynamic measurement reports, or quantitative analysis reports.

Type: Extensible

TID 3103
Referenced Object

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			COMPOSITE	BCID (3407) Purpose of Reference to Object	1	M		
2	>	HAS PROPERTIES	CODE	EV (121144, DCM, “Document Title")	1	MC	IFF Row 1 references an SR object	Root node concept of referenced SR object
3	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

TID 3104 Consumables

The Consumables Template allows recording of devices (e.g., catheters or stents), drugs, or contrast agents accessed in a procedure. This content item is directed towards inventory control and billing. The actual clinical use of the particular consumable is recorded using TID 3106 Drugs/Contrast Administered or TID 3107 Device Used.

This template allows recording both consumable retrieval from, and return to, inventory or stock, and disposal of used material. The quantity involved in each recorded transaction may be specified.

Type: Extensible

TID 3104
Consumables

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	DCID (3408) Actions with Consumables	1	M		Vendor or local bar coded values
2	>	HAS PROPERTIES	TEXT	DCID (3426) Consumables Parameters	1-n	U		
3	>	HAS PROPERTIES	NUM	EV (121146, DCM, "Quantity of Material")	1	U		
4	>	HAS PROPERTIES	CODE	EV (121147, DCM, "Billing Code")	1	U		local billing codes
5	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

TID 3105 Lesion Identification and Properties

The Lesion Identification and Properties Template allows recording the identification of each lesion addressed in a procedure. The lesion identifier may be used to relate diagnostic or therapeutic actions with their target lesion (see Row 4 in TID 3010 Log Entry Qualifiers). This content item may include the initial visually estimated measurements of stenosis or TIMI flow; measured values from a quantitative measurement report may be referenced indirectly (through TID 3103 Referenced Object), or by quotation (TID 3109 Measurements template). Subsequent (e.g., post-intervention) stenosis measurements may be encoded using TID 3109 Measurements, with the Lesion Identifier conveyed through its subsidiary TID 3010 Log Entry Qualifiers template.

Type: Extensible

TID 3105
Lesion Identification and Properties

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			TEXT	EV (121151, DCM, “Lesion Identifier")	1	M		Up to 3 numeric characters
2	>	HAS PROPERTIES	CODE	EV (G-C0E3, SRT, “Finding Site”)	1	M		DCID (3604) Arterial lesion locations
3	>>	HAS CONCEPT MOD	CODE	EV (G-A1F8, SRT, “Topographical modifier")	1	U		DCID (3019) Cardio-vascular Anatomic Location Modifiers
4	>	HAS PROPERTIES	CODE	EV (121153, DCM, “Lesion Risk")	1	U		DCID (3418) Lesion Risk

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
5	>	HAS PROPERTIES	NUM	EV (122107, DCM, "Baseline Stenosis Measurement")	1	U		UNITS = EV (%, UCUM, "%")
6	>>	HAS CONCEPT MOD	CODE	EV (121401, DCM, “Derivation”)	1	U		DCID (3745) Calculation Method
7	>	HAS PROPERTIES	CODE	EV (122109, DCM, "Baseline TIMI Flow")	1	UC	IFF Row 2 specifies a coronary artery	DCID (3713) TIMI Flow Characteristics
8	>	HAS PROPERTIES	CODE	EV (122131, DCM, "Degree of Thrombus")	1	U		DCID (3714) Thrombus
9	>	HAS PROPERTIES	CODE	EV (122133, DCM, "Lesion Morphology")	1	U		DCID (3715) Lesion Morphology
10	>	HAS PROPERTIES	CODE	EV (122134, DCM, "Vessel Morphology")	1-n	U		DCID (3712) Vessel Descriptors
11	>	HAS PROPERTIES	CODE	EV (122132, DCM, "Severity of Calcification")	1	U		DCID (3716) Severity
12	>	HAS PROPERTIES	IMAGE	DT (121080, DCM, "Best illustration of finding"	1	U		
13	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

Content Item Descriptions

600 Row 1 Lesion Identifier is specified as a numeric text string in order to facilitate transcoding to DICOM Attribute (0018,3105) Lesion Number and to formats for outcomes registries, such as the ACC National Cardiovascular Data Registry™.

605 ## TID 3106 Drugs/Contrast Administered

The Drugs/Contrast Administered Template allows the recording of the start or end of that type of event, together with its parameters. If start and end are represented by a single log entry (e.g., for an injection), the concept name “Drug/contrast administered” shall be used.

610 **Type: Extensible**

TID 3106
Drugs/Contrast Administered

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	DCID (3409) Administration of Drugs/Contrast	1	M		BCID (10) Interventional Drug, or BCID (12) Radiographic Contrast Agent
2	>	HAS PROPERTIES	TEXT	EV (121145, DCM, "Description of Material")	1	U		
3	>	HAS PROPERTIES	CODE	EV (G-C295, SRT, "Route of administration")	1	U		BCID (11) Route of Administration
4	>	HAS PROPERTIES	NUM	DCID (3410) Numeric Parameters of Drugs/Contrast	1-n	U		

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
5	>	HAS PROPERTIES	PNAME	EV (121152, DCM, “Person administering drug/contrast”)	1	U		
6	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

TID 3107 Device Used

The Device Used Template allows recording of the use of interventional diagnostic and therapeutic devices.

The identification of one device used to deploy another device (e.g., a balloon catheter to deploy a stent) may be described with two entries, with one identified as a deployment device in the Concept Modifier of Row 6 of this template, and linked by the same Procedure Action ID in the Log Entry Qualifiers of the included TID 3010.

Type: Extensible

TID 3107
Device Used

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	DCID (3422) Device Use Actions	1	M		BCID (3429) Catheterization Devices
2	>	HAS PROPERTIES	CODE	EV (121150, DCM, "Device Code")	1-n	U		Vendor or local bar coded values
3	>	HAS PROPERTIES	TEXT	EV (121145, DCM, "Description of Material")	1	U		
4	>	HAS PROPERTIES	NUM	DCID (3423) Numeric Device Characteristics	1-n	U		
5	>	HAS PROPERTIES	CODE	EV (G-C0E9, SRT, “Procedure site”)	1	U		BCID (3630) Cardiovascular Anatomic Locations
6	>	HAS CONCEPT MOD	CODE	EV (G-C0E8, SRT, “Has Intent")	1	U		DT (121155, DCM, “Deployment")
7	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

TID 3108 Intervention

The Intervention Template allows recording of interventions, including atherectomy, angioplasty, stent placement, brachytherapy, etc. The record may include reference to an image that documents the intervention.

Type: Extensible

TID 3108
Intervention

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	EV (122090, DCM, "Intervention Action")	1	M		DCID (3412) Intervention Actions and Status

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
2	>	HAS PROPERTIES	CODE	EV (G-C0E9, SRT, “Procedure site”)	1	M		DCID (3604) Arterial Lesion Locations
3	>>	HAS CONCEPT MOD	CODE	EV (G-A1F8, SRT, “Topographical modifier")	1	U		DCID (3019) Cardio-vascular Anatomic Location Modifiers
4	>	HAS PROPERTIES	TEXT	EV (121154, DCM, "Intervention attempt identifier")	1	M		Up to 3 numeric characters
5	>	HAS PROPERTIES	CODE	EV (G-C50A, SRT, "Uses Equipment")	1-n	U		BCID (3411) Intracoronary Devices
6	>>	HAS CONCEPT MOD	CODE	EV (122111, DCM, "Primary Intervention Device")	1	MC	IF Device is Primary for this Lesion	DCID (230) Yes-No
7	>	HAS PROPERTIES	NUM	DCID (3425) Intervention Parameters	1-n	U		
8	>	HAS PROPERTIES	IMAGE	BCID (7003) Diagnostic Imaging Report Purposes of Reference	1	U		
9	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

Content Item Descriptions

Row 4 Intervention attempt Identifier is specified as a numeric text string, and shall be treated as the ordinal of the recorded attempted intervention within this procedure (i.e., “1” for the first attempted intervention, “2” for the second, etc.).

TID 3109 Measurements

The Measurements Template allows recording of significant measurements, such as vital signs, laboratory results, hemodynamic measurements, or quantitative analysis measurements. These measurements are often quoted from another source, which would be documented in the included TID 3010 Log Entry Qualifiers.

Type: Extensible

TID 3109
Measurements

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			NUM	No BCID	1	U		
2	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		
3	>	HAS PROPERTIES	INCLUDE	DTID (310) Measurement Properties	1	U		
4			CODE	No BCID	1	U		
5	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

TID 3110 Impressions or Findings

The Impressions or Findings Template allows the recording of unconfirmed (provisional) impressions or findings noted during the procedure. It is not intended to convey the Cath Lab Clinical Report (the formal report from the performing physician), although it may be used (like any Procedure Log entry) for the subsequent construction of the Cath Lab Clinical Report.

A finding that is supported by a specific image frame may reference that image in the INFERRED FROM / IMAGE row of the included TID 3010 Log Entry Qualifiers template.

Type: Extensible

TID 3110
Impressions or Findings

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	EV (121071, DCM, "Finding")	1	U		BCID (3728) Cath Findings
2	>	HAS PROPERTIES	CODE	EV (G-C197, SRT, "Severity")	1	U		DCID (3716) Severity
4	>	HAS PROPERTIES	CODE	EV (G-C0E3, SRT, “Finding Site”)	1	U		
5	>>	HAS CONCEPT MOD	CODE	EV (G-A1F8, SRT, “Topographical modifier")	1	U		DCID (3019) Cardio-vascular Anatomic Location Modifiers
6	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		
7			TEXT	BCID (3419) Findings Titles	1	U		
8	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

Content Item Descriptions

Row 4 Finding Site has no Baseline Context ID specified. Typically terms would be drawn from coronary segments, other arterial segments, myocardial segments, etc.

TID 3111 Percutaneous Entry

The Percutaneous Entry Template allows recording of the opening or closing of invasive access ports.

Type: Extensible

TID 3111
Percutaneous Entry

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	EV (121156, DCM, “Percutaneous Entry Action”)	1	M		DCID (3403) Percutaneous Entry
2	>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT, “Laterality")	1	U		DCID (244) Laterality
3	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

TID 3112 Specimen Obtained

The Specimen Obtained Template allows recording of obtaining a specimen, and the identifiers for that specimen. This is particularly designed for blood samples that will be analyzed for blood oxygen-related measurements. The analysis of the sample may be recorded in one or more log entries using TID 3109 Measurements Template, or in a separate Structured Report SOP Instance referenced by a log entry using TID 3103 Referenced Object Template.

Type: Extensible

TID 3112
Specimen Obtained

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	EV (121123, DCM, “Patient Status or Event”)	1	M		DCID (3515) Specimen Collection
2	>	HAS ACQ CONTEXT	CODE	EV (121042, DCM, "Specimen Type”)	1	UC	IFF specimen is blood sample	DCID (3520) Blood Source Type
3	>	HAS ACQ CONTEXT	CODE	EV (G-C0E9, SRT, “Procedure site”)	1	U		BCID (3630) Cardiovascular Anatomic locations
4	>	HAS PROPERTIES	INCLUDE	DTID (1009) Subject Context, Specimen	1	U		

TID 3113 Patient Support

The Patient Support Template allows recording of the use of various support technologies, including oxygen, ventilation, pacing, etc.

Type: Extensible

TID 3113
Patient Support

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	DCID (3530) Oxygen Administration Actions	1	U		DCID (3531) Oxygen Administration
2	>	HAS PROPERTIES	NUM	EV (121160, DCM, “Oxygen Administration Rate")	1	MC	IFF Row 1 Concept is (121161, DCM, "Begin Oxygen Administration")	Units = DT (l/min, UCUM, "l/min")
3	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		
4			CODE	DCID (3550) Circulatory Support Actions	1	U		DCID (3553) Circulatory Support
5	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		
6			CODE	DCID (3551) Ventilation Actions	1	U		DCID (3554) Ventilation
7	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		
8			CODE	DCID (3552) Pacing Actions	1	U		DCID (3555) Pacing

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
9	>		INCLUDE	DTID (3010) Log Entry Qualifiers	1	U		

695

TID 3114 Patient Assessment

The Patient Assessment Template allows recording of the assessment of the patient's cardiovascular, neurological, and/or respiratory condition. A particular use of this template is for "vital signs", which are a specific subset of mandatory patient assessment measurements.

700

Type: Extensible

TID 3114
Patient Assessment

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	EV (121123, DCM, "Patient Status or Event")	1	M		DT (121165, DCM, "Patient Assessment Performed") or DT (PA-00500, SRT, "Observation of Vital Signs")
2	>	HAS PROPERTIES	INCLUDE	TID (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	TID (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	TID (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	TID (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	TID (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	TID (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	TID (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")

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
9	>	HAS PROPERTIES	INCLUDE	TID (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")
10	>	HAS PROPERTIES	CODE	DT (8884-9, LN, "Cardiac Rhythm")	1	U		BCID (3415) Cardiac Rhythms
11	>	HAS PROPERTIES	CODE	DT (9304-7, LN, "Respiration Rhythm")	1	U		BCID (3416) Respiration Rhythms
12	>	HAS PROPERTIES	CODE	DT (F-043E6, SRT, “Respiration Assessment”)	1	U		BCID (3448) Airway Assessment
13	>	HAS PROPERTIES	CODE	DT (F-046D8, SRT, “Skin condition")	1-n	U		BCID (3446) Skin Condition
14	>	HAS PROPERTIES	CODE	DT (F-04317, “Patient mental state assessment”)	1	U		No BCID
15	>	HAS PROPERTIES	TEXT	BCID (3441) Patient Assessments	1-n	U		

Content Item Descriptions

Row 8 Pulse Strength allows the assessment of the patient’s pulse at multiple locations using the Topographical concept modifier. It may also be used for a single pulse strength measurement from an unspecified location, as is typical of vital signs assessments.

Row 16 allows free text description of patient assessments that are not expressible by coded entries of Rows 10 to 14.

TID 3115 ECG ST Assessment

The ECG ST Assessment Template allows recording of the assessment of changes in the patient ECG relative to baseline.

Type: Extensible

TID 3115
ECG ST Assessment

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	EV (121123, DCM, “Patient Status or Event”)	1	M		DT (R-41D8B, SRT, “ECG Analysis”)
2	>	HAS PROPERTIES	NUM	DT (122099, DCM, “ST change from baseline”)	1-n	M		Units = EV(uV, UCUM, “uV”)
3	>>	HAS CONCEPT MOD	CODE	DT (122148, DCM, "Lead ID")	1	M		BCID (3001) ECG Leads

HEMODYNAMICS REPORT TEMPLATES

The templates that comprise the Hemodynamic Report are interconnected as shown in Figure A -3.

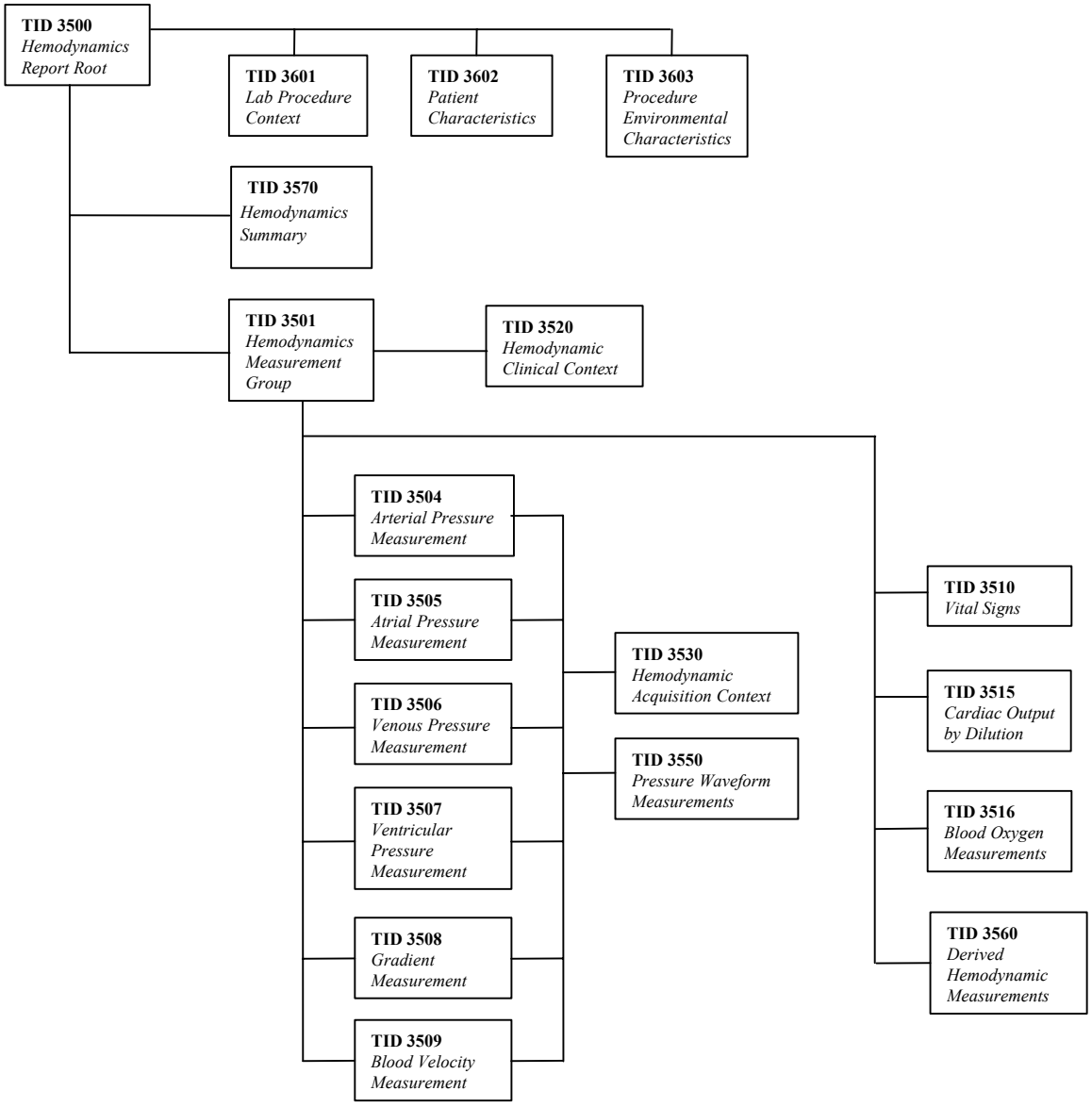

Figure A-3 Hemodynamic Report Template Hierarchy

The figure shows only the use of templates specific to the Hemodynamic Report; it does not show common structural templates such as TID 300.

Note: The figure shows the relationship of templates; it does not show the structural hierarchy of Content Items in the IOD. See PS 3.3 Annex N.

TID 3500 Hemodynamics Report

The Hemodynamic Report template is the root structure for the representation of measurements acquired during a procedure in a cardiac catheterization lab.

Type: Extensible

TID 3500
Hemodynamics Report

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122120, DCM, “Hemodynamics Report”)	1	M		
2	>	HAS OBS CONTEXT	INCLUDE	DTID (1002) Observer Context	1	M		
3	>		INCLUDE	DTID (3601) Procedure Context	1	M		
4	>	HAS OBS CONTEXT	INCLUDE	DTID (3602) Cath Patient Characteristics	1	M		
5	>	HAS ACQ CONTEXT	INCLUDE	DTID (3603) Procedure Environmental Characteristics	1	U		
6	>	CONTAINS	INCLUDE	DTID (3501) Hemodynamic Measurement Group	1-n	M		
7	>	CONTAINS	INCLUDE	DTID (3570) "Summary, Hemodynamics"	1	U		

TID 3501 Hemodynamics Measurement Group

The Hemodynamic Measurement Group template provides a structure for measurements acquired during a single procedure phase in a cardiac catheterization lab.

Type: Extensible

TID 3501
Hemodynamics Measurement Group

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	DCID (3651) Hemodynamic Measurement phase	1	M		
2	>	HAS ACQ CONTEXT	INCLUDE	DTID (3520) Hemodynamic Clinical Context	1	U		
3	>	HAS ACQ CONTEXT	TEXT	EV (121124, DCM, "Procedure Action ID")	1	U		
4	>	CONTAINS	INCLUDE	DTID (3510) Vital signs	1-n	U		
5	>	CONTAINS	INCLUDE	DTID (3504) Arterial Pressure Measurement	1-n	U		
6	>	CONTAINS	INCLUDE	DTID (3505) Atrial Pressure Measurement	1-n	U		
7	>	CONTAINS	INCLUDE	DTID (3506) Venous Pressure Measurement	1-n	U		
8	>	CONTAINS	INCLUDE	DTID (3507) Ventricular Pressure Measurement	1-n	U		

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
9	>	CONTAINS	INCLUDE	DTID (3508) Gradient Measurement	1-n	U		
10	>	CONTAINS	INCLUDE	DTID (3509) Blood Velocity Measurements	1-n	U		
11	>	CONTAINS	INCLUDE	DTID (3515) Cardiac Output Measurement by Indicator Dilution	1-n	U		
12	>	CONTAINS	INCLUDE	DTID (3516) Blood lab measurements	1-n	U		
13	>	CONTAINS	INCLUDE	DTID (3560) Derived Hemodynamic Measurements	1-n	U		

Content Item Descriptions

Row 3 Procedure Action ID allows linkage between the hemodynamic measurements recorded in this Template and a procedure step or phase recorded in the Procedure Log, e.g., using TID 3100.

TID 3504 Arterial Pressure Measurement

The Arterial Pressure Measurement template consists of a CONTAINER, with an acquisition context of the measurement anatomic site, and containing systolic, diastolic, and mean measurements. This implies that the name of the measurement is effectively post-coordinated from the measurement name, the Hemodynamic Measurement Group container (procedure phase) name, and the acquisition context (finding site) value.

Type: Extensible

TID 3504
Arterial Pressure Measurement

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (P2-36102, SRT, “Arterial pressure measurements")	1	M		
2	>		INCLUDE	DTID (3530) Hemodynamic Acquisition Context	1	M		$LocationName = EV (G-C0E3, SRT, “Finding Site”) $LocationValue = DCID (3606) Arterial source locations
3	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		$Measurement = EV (8480-6, LN, “Intravascular arterial Systolic pressure”) $Units = DCID (3500) Pressure Units
4	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		$Measurement = EV (8462-4, LN, “Intravascular arterial Diastolic pressure”) $Units = DCID (3500) Pressure Units

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
5	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		$Measurement = EV (8478-0, LN, “Intravascular arterial mean pressure”) $Units = DCID (3500) Pressure Units
6	>	CONTAINS	INCLUDE	DTID (3550) Pressure waveform measurements	1-n	U		

TID 3505 Atrial Pressure Measurement

The Atrial Pressure Measurement template consists of a CONTAINER, with an acquisition context of the measurement anatomic site, and containing a-wave, v-wave, and mean measurements. This implies that the name of the measurement is effectively post-coordinated from the measurement name, the Hemodynamic Measurement Group container (procedure phase) name, and the acquisition context (finding site) value.

Type: Extensible

TID 3505
Atrial Pressure Measurement

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122121, DCM, “Atrial pressure measurements")	1	M		
2	>		INCLUDE	DTID (3530) Hemodynamic Acquisition Context	1	M		$LocationName = EV (G-C0E3, SRT, “Finding Site”) $LocationValue = DCID (3608) Atrial source locations
3	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		$Measurement = EV (109016, DCM, “A-wave peak pressure”) $Units = DCID (3500) Pressure Units
4	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		$Measurement = EV (109034, DCM, “V-wave peak pressure”) $Units = DCID (3500) Pressure Units
5	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		$Measurement = EV (109027, DCM, “Mean blood pressure”) $Units = DCID (3500) Pressure Units
6	>	CONTAINS	INCLUDE	DTID (3550) Pressure waveform measurements	1-n	U		

TID 3506 Venous Pressure Measurement

The Venous Pressure Measurement template consists of a CONTAINER, with an acquisition context of the measurement anatomic site, and containing a mean measurement. This implies that the name of the

measurement is effectively post-coordinated from the measurement name, the Hemodynamic Measurement Group container (procedure phase) name, and the acquisition context (finding site) value.

Type: Extensible

TID 3506
Venous Pressure Measurement

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (P2-36110, SRT, "Venous pressure measurements")	1	M		
2	>		INCLUDE	DTID (3530) Hemodynamic Acquisition Context	1	M		$LocationName = EV (G-C0E3, SRT, "Finding Site") $LocationValue = DCID (3607) Venous source locations
3	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		$Measurement = EV (109027, DCM, "Mean blood pressure") $Units = DCID (3500) Pressure Units
4	>	CONTAINS	INCLUDE	DTID (3550) Pressure waveform measurements	1-n	U		

TID 3507 Ventricular Pressure Measurement

The Ventricular Pressure Measurement template consists of a CONTAINER, with an acquisition context of the measurement anatomic site, and containing systolic and end-diastolic measurements. This implies that the name of the measurement is effectively post-coordinated from the measurement name, the Hemodynamic Measurement Group container (procedure phase) name, and the acquisition context (finding site) value.

Type: Extensible

TID 3507
Ventricular Pressure Measurement

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122122, DCM, "Ventricular pressure measurements")	1	M		
2	>		INCLUDE	DTID (3530) Hemodynamic Acquisition Context	1	M		$LocationName = EV (G-C0E3, SRT, "Finding Site") $LocationValue = DCID (3609) Ventricular source locations
3	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		$Measurement = EV (122194, DCM, "Ventricular Systolic blood pressure") $Units = DCID (3500) Pressure Units

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
4	>	CONTAINS	INCLUDE	DTID (300) Measurement	1	M		$Measurement = EV (122191, DCM, “Ventricular End Diastolic pressure”) $Units = DCID (3500) Pressure Units
5	>	CONTAINS	INCLUDE	DTID (3550) Pressure waveform measurements	1-n	U		

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TID 3508 Gradient Measurement

The Gradient Measurement template consists of a CONTAINER, with an acquisition context of the measurement anatomic site, and containing the gradient measurement. This implies that the name of the measurement is
800 effectively post-coordinated from the measurement name, the Hemodynamic Measurement Group container (procedure phase) name, and the acquisition context (finding site) value.

Type: Extensible

805 **TID 3508**
Gradient Measurement

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122123, DCM, “Gradient assessment”)	1	M		
2	>		INCLUDE	DTID (3530) Hemodynamic Acquisition Context	1	MC	XOR with Rows 3 & 4 IFF single location is appropriate	$LocationName = EV (G-C0E3, SRT, “Finding Site”) $LocationValue = DCID (3610) Gradient Source Locations
3	>		INCLUDE	DTID (3530) Hemodynamic Acquisition Context	1	MC	XOR with Row 2 IFF a dual location is appropriate	$LocationName = EV (121116, DCM, “Proximal Finding Site”) $LocationValue = DCID (3630) Cardiovascular Anatomic Locations
4	>		INCLUDE	DTID (3530) Hemodynamic Acquisition Context	1	MC	XOR with Row 2 IFF a dual location is appropriate	$LocationName = EV (121117, DCM, “Distal Finding Site”) $LocationValue = DCID (3630) Cardiovascular Anatomic Locations
5	>	CONTAINS	INCLUDE	DTID (300) Measurement	1-n	M		$Measurement = EV (F-023F7, ”Pressure Gradient”) $Units = DCID (3500) Pressure Units $Derivation = DCID (3627) Measurement Type
6	>	CONTAINS	INCLUDE	DTID (3550) Pressure waveform measurements	1-n	U		

Content Item Descriptions

Row 5, which is used to encode the gradient measurements, uses Template 300 for the content item structure of the measurements. That template allows an INFERRED FROM relationship to other numeric measurements used in the computation or derivation of the current measurement. In the case of a gradient measurement, the pressure measurements at the distal and proximal locations may thus be explicitly conveyed.

TID 3509 Blood Velocity Measurement

The Blood Velocity Measurement template consists of a CONTAINER, with an acquisition context of the measurement anatomic site, and containing primary (not derived) velocity measurements, e.g., from a Doppler catheter. Derived velocity measurements may be recorded using TID 3560.

TID 3509
Blood Velocity Measurement

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122124, DCM, “Blood velocity measurements")	1	M		
2	>		INCLUDE	DTID (3530) Hemodynamic Acquisition Context	1	M		$LocationName = EV (G-C0E9, SRT, “Procedure site”) $LocationValue = BCID (3606) Arterial source locations
3	>	CONTAINS	INCLUDE	DTID (300) Measurement	1-n	M		$Measurement = DCID (3612) Blood Velocity Measurements $Units = EV (mm/s, UCUM, "mm/s")
4	>	CONTAINS	INCLUDE	DTID (3550) Pressure waveform measurements	1-n	U		

TID 3510 Vital Signs

The Vital Signs template consists of a CONTAINER containing the various vital signs measurements. These measurements may be acquired automatically from patient monitoring equipment, or may be entered based on manual measurements.

Type: Extensible

TID 3510
Vital Signs

	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	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	TID (300) Measurement	1	U		$Measurement = EV (F-008ED, SRT, "Diastolic blood pressure") $Units = DCID (3500)
4	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (8867-4, LN, "Heart rate") $Units = EV ("{H.B.}/min", UCUM, "BPM")
5	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (8310-5, LN, "Body temperature") $Units = EV (Cel, UCUM, "°C")
6	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = DCID (3526) Blood gas saturation $Units = EV (%, UCUM, "%")
7	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (F-043E7, SRT, "Respiration rate") $Units = EV (/min, UCUM, "breaths/min")
8	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (122195, DCM, "Pulse Strength") $Units = DT("{0:4}", UCUM, "range 0:4")
9	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (F-009EA, SRT, "Pain Score") $Units = DT("{1:10}", UCUM, "range 1:10")
10	>	CONTAINS	CODE	DT (8884-9, LN, "Cardiac Rhythm")	1	U		BCID (3415) Cardiac Rhythms
11	>	CONTAINS	CODE	DT (9304-7, LN, "Respiration Rhythm")	1	U		BCID (3416) Respiration Rhythms

TID 3515 Cardiac Output Measurement by Indicator Dilution

The Cardiac Output Measurement by Indicator Dilution template consists of a CONTAINER containing the measurement and significant parameters of the technical method. If the measurement is based on a DICOM Hemodynamic Waveform SOP Instance, that object may also be referenced.

Note: Fick Cardiac Output is encoded in the Derived Hemodynamic Measurements Template 3560.

Type: Extensible

TID 3515
Cardiac Output Measurement by Indicator Dilution

	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		

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
2	>	CONTAINS	INCLUDE	TID (300) Measurement	1	M		$Measurement = EV (8737-9, LN, “Cardiac Output by Indicator Dilution”) $Units = EV (l/min, UCUM, ”l/min”) $Method = DCID (3628) Cardiac Output Methods $WavePurpose = DT (121112, DCM, "Source of measurement”)
3	>	HAS ACQ CONTEXT	NUM	EV (122319, DCM, “Catheter Size”)	1	MC	IFF Row 2 indicates a thermal method	UNITS = DCID (3510) Catheter Size Units
4	>	HAS ACQ CONTEXT	NUM	EV (122320, DCM, “Injectate Temperature”)	1	MC	IFF Row 2 indicates a thermal method	UNITS = EV (Cel, UCUM, “°C”)
5	>	HAS ACQ CONTEXT	NUM	EV (122321, DCM, “Injectate Volume”)	1	M		UNITS = DT (ml, UCUM, “ml”)
6	>	HAS ACQ CONTEXT	NUM	EV (122322, DCM, “Calibration Factor”)	1	M		UNITS = DT (1, UCUM, “no units”)

TID 3516 Blood Lab Measurements

The Blood Lab Measurements template provides for the recording of measurements made on blood samples obtained during a catheterization procedure. The type and anatomic source of the blood is recorded as acquisition context. The results from the blood chemistry measurement system are quoted; the measurement names may be pre-coordinated with the type or source of the blood, or generic measurement names may be reported. In the latter case, the full measurement concept name may be effectively post-coordinated using the recorded acquisition context.

Type: Extensible

TID 3516
Blood Lab Measurements

	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 (121042, DCM, "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	TID (300) Measurement	1	U		$Measurement = EV (718-7, LN, “Hemoglobin”) $Units = DT (g/dl, UCUM, "g/dl")
6	>	CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3524) Blood Gas Pressures $Units = DCID (3500)

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
7	>	CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3525) Blood Gas Content $Units = DT (ml/dl, UCUM, "ml/dl")
8	>	CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3528) Blood pH $Units = EV ([pH], UCUM, "pH")
9	>	CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3526) Blood Gas Saturation $Units = EV (%, UCUM, "%")
10	>	CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3527) Blood Base Excess $Units = DT (meq/dl, UCUM, "meq/dl")
11	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (122183, DCM, "Blood temperature") $Units = EV (Cel, UCUM, "°C")

TID 3520 Hemodynamic Clinical Context

The Clinical Context template allows the recording of information about the patient's clinical state that may affect interpretation of the hemodynamic measurements. This Template includes several coded conditions (e.g., complications, drugs, physiological challenges, etc.), each of which may have a Concept Modifier of "Relative Time". This Modifier indicates the temporal relationship of the hemodynamic measurements to the conditions recorded in this template. E.g., the Content Item structure:

[CONTAINER] "Post-intervention phase"
  HAS ACQ CONTEXT [CONTAINER] "Clinical Context"
    CONTAINS [CODE] "Complication" "Arrhythmia"
      HAS CONCEPT MOD [CODE] "Relative Time" "After"
  CONTAINS [CONTAINER] "Arterial Measurements"
…

conveys the semantics that this group of measurements for the post-intervention phase of a cath procedure was made after an occurrence of arrhythmia in the patient.

In the absence of a Relative Time modifier, the acquisition context is during the identified event or state.

Type: Extensible

TID 3520
Hemodynamic Clinical Context

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122127, DCM, "Clinical Context")	1	M		
2	>	CONTAINS	CODE	EV (109054, DCM, "Patient State")	1-n	U		BCID (3602) Hemodynamic Patient State
3	>	CONTAINS	TEXT	EV (109054, DCM, "Patient State")	1	U		
4	>	CONTAINS	INCLUDE	DTID (3521) Relative Time	1-n	U		$ConditionName = EV (DD-60002, SRT, "Complication of Procedure") $ConditionValue = DCID (3413) Adverse Outcomes

5	>	CONTAINS	INCLUDE	DTID (3521) Relative Time	1-n	U		$ConditionName = EV (122086, DCM, "Contrast administered") $ConditionValue = BCID (12) Radiographic Contrast Agent
6	>	CONTAINS	INCLUDE	DTID (3521) Relative Time	1-n	U		$ConditionName = EV (122083, DCM, "Drug administered") $ConditionValue = BCID (10) Interventional Drug
7	>	CONTAINS	INCLUDE	DTID (3521) Relative Time	1-n	U		$ConditionName = EV (109059, DCM, ”Physiological challenges”) $ConditionValue = BCID (3271) Hemodynamic Physiological Challenges
8	>	CONTAINS	INCLUDE	DTID (3521) Relative Time	1-n	U		$ConditionName = EV (122138, DCM, "Circulatory Support") $ConditionValue = DCID (3553) Circulatory Support
9	>	CONTAINS	INCLUDE	DTID (3521) Relative Time	1-n	U		$ConditionName = EV (P2-2200A, SRT, "Ventilatory assistance") $ConditionValue = DCID (3554) Ventilation
10	>	CONTAINS	INCLUDE	DTID (3521) Relative Time	1-n	U		$ConditionName = EV (P2-35000, SRT, "Cardiac Pacing") $ConditionValue = BCID (3555) Pacing
11	>	CONTAINS	INCLUDE	DTID (3521) Relative Time	1-n	U		$ConditionName = EV (P0-0000, SRT, "Procedure") $ConditionValue = BCID (3405) Procedure Action Values

TID 3521 Relative Time

The Relative Time template is invoked by 3520 Hemodynamic Acquisition Context template. It specifies an applicable clinical context condition and the time of the current measurements relative to that condition.

TID 3521 Parameters

Parameter Name	Parameter Usage
$ConditionName	Coded term for Concept Name of condition
$ConditionValue	Context Group for condition values

Type: Non-Extensible

TID 3521
Relative Time

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CODE	$ConditionName	1	M		$ConditionValue
2	>	HAS CONCEPT MOD	CODE	EV (G-D709, SRT, "Relative time")	1	U		BCID (3600) Relative times

TID 3530 Hemodynamic Acquisition Context

The Hemodynamic Acquisition Context template is invoked by the various hemodynamic measurement templates.

Parameter Name	Parameter Usage
$LocationName	Coded term for Concept Name of measurement location
$LocationValue	Context Group for appropriate anatomic locations

Type: Extensible

TID 3530
Hemodynamic Acquisition Context

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		HAS CONCEPT MOD	CODE	$LocationName	1	M		$LocationValue
2	>	HAS CONCEPT MOD	CODE	EV (G-A1F8, SRT, “Topographical modifier”)	1	U		BCID (3019) Cardiovascular anatomic location modifiers
3		HAS ACQ CONTEXT	CODE	EV (G-C036, SRT, “Measurement Method ")	1	U		BCID (3241) Hemodynamic Measurement Technique
4		HAS ACQ CONTEXT	WAVEFORM	DT (121112, DCM, "Source of measurement”)	1	UC	XOR Row 5	
5		HAS ACQ CONTEXT	TCOORD	DT (121112, DCM, "Source of measurement”)	1	UC	XOR Row 4	
6	>	SELECTED FROM	WAVEFORM		1	M		

TID 3550 Pressure Waveform Measurements

The Pressure Waveform Measurements template is invoked by the various hemodynamic measurement templates for recording general measurements made in conjunction with the specific required measurements for that anatomic location.

Type: Extensible

TID 3550
Pressure Waveform Measurements

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3611) Pressure Measurements $Units = DCID (3500)
2		CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3612) Blood Velocity Measurements $Units = EV (mm/s, UCUM, "mm/s")

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
3		CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3613) Hemodynamic Time Measurements $Units = DT (ms, UCUM, "ms")
4		CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (F-32100, SRT, "Cardiac Output") $Units = EV (l/min, UCUM, "l/min")
5		CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (20562-5, LN, "Stroke Volume") $Units = DT (ml, UCUM, "ml")
6		CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (10230-1, LN, "LV Ejection Fraction") $Units = EV (%, UCUM, "%")
7		CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (8867-4, LN, "Heart rate") $Units = DT ("{H.B.}/min", UCUM, "BPM")
8		CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (F-043E7, SRT, "Respiration rate") $Units = DT ("/min", UCUM, "breaths/min")
9		CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (109025, DCM, "Max dp/dt") $Units = DT (mm[Hg]/s, UCUM, "mmHg/s")
10		CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (109026, DCM, "Max neg dp/dt") $Units = DT (mm[Hg]/s, UCUM, "mmHg/s")
11		CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (122190, DCM, "Max dp/dt/P") $Units = DT (s-1, UCUM, "/s")
12		CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (122192, DCM, "Indicator appearance time") $Units = DT (s, UCUM, "s")
13		CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (122193, DCM, "Maximum pressure acceleration") $Units = DT (mm[Hg]/s2, UCUM, "mmHg/s/s")
14		CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3617) Valve Flows $Units = DT (ml/min, UCUM, "ml/min")

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TID 3560 Derived Hemodynamic Measurements

The Derived Hemodynamic Measurements template consists of a CONTAINER containing measurements derived from one or more other measurements. These measurements are associated with a particular procedure phase,
910 but not necessarily with a particular anatomic location.

Type: Extensible

TID 3560
Derived Hemodynamic Measurements

	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	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	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	TID (300) Measurement	1-n	U		$Measurement = DCID (3615) Valve Areas $ModType = EV (121425, DCM, “Index”) $ModValue = EV (8277-6, LN, “Body Surface Area”) $Units = DT (cm2/m2, UCUM, "cm2/m2")
5	>	CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3616) Hemodynamic Period Measurements $Units = DT ("s/min", UCUM, "s/min")
6	>	CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3617) Valve Flows $Units = DT (ml/s, UCUM, "ml/s")
7	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (F-32110, SRT, "Cardiac Index”) $Units = DT (l/min/m2, UCUM, "l/min/m2")
8	>	CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3529) Arterial / Venous Content $Units = DT (ml/dl, UCUM, "ml/dl")
9	>	CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3618) Hemodynamic Flows $Units = DT (l/min, UCUM, "l/min")
10	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (8736-1, LN, "FICK Cardiac Output”) $Units = DT (l/min, UCUM, "l/min")

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
11	>	CONTAINS	INCLUDE	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	TID (300) Measurement	1	U		$Measurement = EV (122229, DCM, "Arteriovenous difference") $Units = DT (ml/dl, UCUM, "ml/dl")
13	>	CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = BCID (3620) Hemodynamic Ratios $Units = DT (1, UCUM, "ratio")
14	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (122237, DCM, "Corrected Sinus Node Recovery Time") $Units = DT (ms, UCUM, "ms")
15	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (8861-7, LN, "Left Ventricular Stroke Work") $Units = DT (g.m, UCUM, "g.m")
16	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (8862-5, LN, "Right Ventricular Stroke Work") $Units = DT (g.m, UCUM, "g.m")
17	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (8863-3, LN, "Left Ventricular Stroke Work Index") $Units = DT (g.m/m2, UCUM, "g.m/m2")
18	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (8864-1, LN, "Right Ventricular Stroke Work Index") $Units = DT (g.m/m2, UCUM, "g.m/m2")
19	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (122238, DCM, "Max volume normalized to 50mmHg pulse pressure") $Units = DT (ml, UCUM, "ml")
20	>	CONTAINS	INCLUDE	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	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	TID (300) Measurement	1	U		$Measurement = EV (11556-8, LN, "Blood Oxygen partial pressure") $Units = DCID (3500)

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
23	>	CONTAINS	INCLUDE	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	TID (300) Measurement	1-n	U		$Measurement = DCID (3619) Hemodynamic Resistance Measurements $Units = BCID (3502) Hemodynamic Resistance Units
25	>	CONTAINS	INCLUDE	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	TID (300) Measurement	1	U		$Measurement = EV (122227, DCM, "Left to Right Flow”) $Units = DT (l/min, UCUM, "l/min")
27	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (122228, DCM, "Right to Left Flow”) $Units = DT (l/min, UCUM, "l/min")
28	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (20562-5, LN, "Stroke Volume”) $Units = DT (ml, UCUM, "ml")
29	>	CONTAINS	INCLUDE	TID (300) Measurement	1	U		$Measurement = EV (20562-5, LN, "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	TID (300) Measurement	1	U		$Measurement = EV (F-042BA, SRT, "Total blood volume”) $Units = DT (l, UCUM, "l")
31	>	CONTAINS	INCLUDE	TID (300) Measurement	1-n	U		$Measurement = DCID (3667) Framingham Scores $Units = DT (%, UCUM, "%") $Equation = DCID (3668) Framingham Tables

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TID 3570 Summary, Hemodynamics

This Template allows the recording of any significant numeric measurements or findings.

Type: Extensible

TID 3570
Summary, Hemodynamics

	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	INCLUDE	DTID (300) Measurement	1-n	U		
4	>	CONTAINS	CODE	EV (D3-40300, SRT, "Pulmonary Hypertension")	1	U		DCID (240) Present-Absent

TID 3601 Procedure Context

The Procedure Context template describes acquisition context for measurements made or events recorded in a procedure.

Type: Extensible

TID 3601
Procedure Context

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		HAS ACQ CONTEXT	TEXT	EV (121065, DCM, "Procedure Description")	1	U		Defaults to Study Description (0008,1030) of the General Study Module
2		HAS ACQ CONTEXT	CODE	EV (G-C0E8, SRT, “Has Intent”)	1	U		BCID (3629) Procedure Intent
3		HAS ACQ CONTEXT	CODE	EV (G-C09C, SRT, “Procedure Priority”)	1	U		BCID (3414) Procedure Urgency
4		HAS OBS CONTEXT	CODE	EV (121023, DCM, ”Procedure Code”)	1-n	U		Defaults to Procedure Code Sequence (0008,1032) of General Study Module

TID 3602 Cath Patient Characteristics

Patient Characteristic concepts in this template, which may replicate attributes in the Patient Study Module, are included here as possible targets of by-reference relationships from other content items in the SR tree.

Note: Several of the concepts in this template duplicate concepts in TID 1007 “Subject Context, Patient”. The difference in use is that this template has those concepts as primary observations of the patient, while in TID 1007 the concepts are used to set (or reset) the context for other observations.

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Type: Extensible

TID 3602
Cath Patient Characteristics

	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	M		UNITS = EV (cm, UCUM, “cm”)
5	>	CONTAINS	NUM	EV (29463-7, LN, “Patient Weight”)	1	M		UNITS = EV (kg, UCUM, “kg”)
6	>	CONTAINS	NUM	EV (122221, DCM, “Thorax diameter, sagittal”)	1	U		UNITS = EV (cm, UCUM, “cm”)
7	>	CONTAINS	NUM	EV (8277-6, LN, “Body Surface Area”)	1	M		UNITS = EV (m2, UCUM, "m^2")
8	>>	INFERRED FROM	CODE	EV (8248-4, LN, "Body Surface Area Formula")	1	U		BCID (3663) Body Surface Area Equations
9	>	CONTAINS	NUM	EV (F-01860, SRT, “Body Mass Index”)	1	U		UNITS = EV (kg/m2, UCUM, "kg/m^2")
10	>>	INFERRED FROM	CODE	EV (121420, DCM, "Equation")	1	U		DT (122265, DCM, "BMI = Wt/Ht^2")

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TID 3603 Procedure Environmental Characteristics

Type: Extensible

TID 3603
950 **Procedure Environmental Characteristics**

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122222, DCM, “Procedure Environmental Characteristics”)	1	M		
2	>	CONTAINS	NUM	EV (122223, DCM, “Room oxygen concentration”)	1	U		UNITS = EV (%, UCUM, “%”)
3	>	CONTAINS	NUM	EV (122224, DCM, “Room temperature”)	1	U		UNITS = EV (Cel, UCUM, “ºC”)
4	>	CONTAINS	NUM	EV (122225, DCM, “Room Barometric pressure”)	1	U		UNITS = DT (mbar, UCUM, “millibar”)

ECG REPORT TEMPLATES

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.

Type: Extensible

TID 3700
ECG Report

	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	M		
5	>	CONTAINS	INCLUDE	DTID (3701) "Clinical Context, ECG"	1	U		
6	>	CONTAINS	INCLUDE	DTID (3702) Prior ECG Exam	1	U		
7	>	CONTAINS	INCLUDE	DTID (3708) ECG Waveform Information	1	M		
8	>	CONTAINS	CONTAINER	EV (122144, DCM, "Quantitative Analysis")	1	M		
9	>>	CONTAINS	INCLUDE	DTID (3713) Global Measurements	1-n	U		
10	>>	CONTAINS	INCLUDE	DTID (3714) ECG Lead Measurements	1-n	U		
11	>	CONTAINS	INCLUDE	DTID (3717) ECG Qualitative Analysis	1	U		
12	>	CONTAINS	INCLUDE	DTID (3719) "Summary, ECG"	1	U		

TID 3701 Clinical Context, ECG

Type: Extensible

TID 3701
Clinical Context, ECG

	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		

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
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

Type: Extensible

TID 3702
Prior ECG Exam

	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		
4	>	CONTAINS	COMPOSITE	EV (122075, DCM, "Prior report for current patient")	1	U		
5	>	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.

Type: Extensible

TID 3708
ECG Waveform Information

	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	>	HAS ACQ CONTEXT	CODE	EV (5.4.5-33-1, SCPECG [1.3], “Electrode Placement”)	1	U		DCID (3263) Electrode Placement Values
4	>	HAS ACQ CONTEXT	CODE	EV (5.4.5-33-2, SCPECG [1.3], “XYZ Electrode Configuration”)	1	U		DCID (3264) XYZ Electrode Placement Values
5	>	HAS ACQ CONTEXT	TEXT	EV (122142, DCM, "Acquisition Device Type")	1	U		
6	>	HAS ACQ CONTEXT	TEXT	EV (121122, DCM, "Equipment Identifier")	1	U		
7	>	HAS ACQ CONTEXT	INCLUDE	DTID (1003) Person Observer Identifying Attributes	1	U		
8	>	HAS ACQ CONTEXT	TEXT	EV (121121, DCM, "Room Identification")	1	U		
9	>	HAS ACQ CONTEXT	DATETIME	EV (122146, DCM, "Procedure DateTime")	1	M		
10	>	HAS ACQ CONTEXT	NUM	EV (5.4.5-27, SCPECG [1.3], "Baseline Filter Frequency")	1	U		UNITS = EV (Hz, UCUM, "Hz")
11	>	HAS ACQ CONTEXT	NUM	EV (5.4.5-28, SCPECG [1.3], "Low-Pass Filter Frequency ")	1	U		UNITS = EV (Hz, UCUM, "Hz")
12	>	HAS ACQ CONTEXT	CODE	EV (5.4.5-29, SCPECG [1.3], "Filters")	1-n	U		DCID (3675) Other Filters

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).

Type: Extensible

TID 3713
ECG Global Measurements

	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	EV (5.10.2.5-3, SCPECG[1.3], "Atrial Heart Rate")	1	U		UNITS = EV ({H.B.}/min, UCUM, "heart beats per minute")

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
4	>	CONTAINS	NUM	EV (5.10.2.5-1, SCPECG[1.3], "Ventricular Heart Rate")	1	M		UNITS = EV ({H.B.}/min, UCUM, "heart beats per minute")
5	>	CONTAINS	NUM	EV (F-38292, SRT, "QT Duration")	1	M		UNITS = EV (ms, UCUM, "ms")
6	>	CONTAINS	NUM	EV (5.10.2.5-5, SCPECG[1.3], "QT Corrected Duration")	1	U		UNITS = EV (ms, UCUM, "ms")
7	>	CONTAINS	CODE	EV (5.10.2.5-7, SCPECG[1.3], "Correction Algorithm")	1	U		DCID (3678) QT Correction Algorithms
8	>	CONTAINS	NUM	EV (F-025C5, SRT, "PR Duration")	1	M		UNITS = EV (ms, UCUM, "ms")
9	>	CONTAINS	NUM	EV (F-025C6, SRT, "QRS Duration")	1	M		UNITS = EV (ms, UCUM, "ms")
10	>	CONTAINS	NUM	EV (5.10.3-11, SCPECG [1.3], "P Axis")	1	U		UNITS = EV (deg, UCUM, "°")
11	>	CONTAINS	NUM	EV (5.10.3-13, SCPECG [1.3], "QRS Axis")	1	U		UNITS = EV (deg, UCUM, "°")
12	>	CONTAINS	NUM	EV (5.10.3-15, SCPECG [1.3], "T Axis")	1	U		UNITS = EV (deg, UCUM, "°")

TID 3714 ECG Lead Measurements

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

Type: Extensible

TID 3714
ECG Lead Measurements

	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")	1	U		DCID (3679) ECG Morphology Descriptions
7	>	CONTAINS	CODE	EV (5.13.5-45, SCPECG [1.3], "P Morphology Description")	1	U		DCID (3679) ECG Morphology Descriptions

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
8	>	CONTAINS	NUM	EV (5.13.5-43, SCPECG [1.3], "ST Slope")	1	U		UNITS = EV (uV/s, UCUM, "uV/s ")
9	>	CONTAINS	CODE	DCID (3680) ECG Lead Noise Descriptions	1-n	U		DCID (3681) ECG Lead Noise Modifiers

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.

Type: Extensible

TID 3715
ECG Measurement Source

	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 and 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.

Type: Extensible

TID 3717
Qualitative Analysis, ECG

	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	EV (122147, DCM, "Clinical Interpretation")	1	M		
3	>	CONTAINS	CONTAINER	EV (122150, DCM, "Compound Statement")	1-n	U		
4	>>	CONTAINS	INCLUDE	DTID (3718) ECG Interpretive Statement	1-n	U		

Content Item Descriptions

Row 3 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.

TID 3718 ECG Interpretive Statement

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.

Type: Extensible

TID 3718
ECG Interpretive Statement

	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

Type: Extensible

TID 3719
Summary, ECG

	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	EV (121071, DCM, "Finding")	1	U		DCID (3677) Summary Codes ECG

CATH LAB CLINICAL REPORT TEMPLATES

The templates that comprise the Cardiac Catheterization Report are interconnected as shown in Figure A-4.

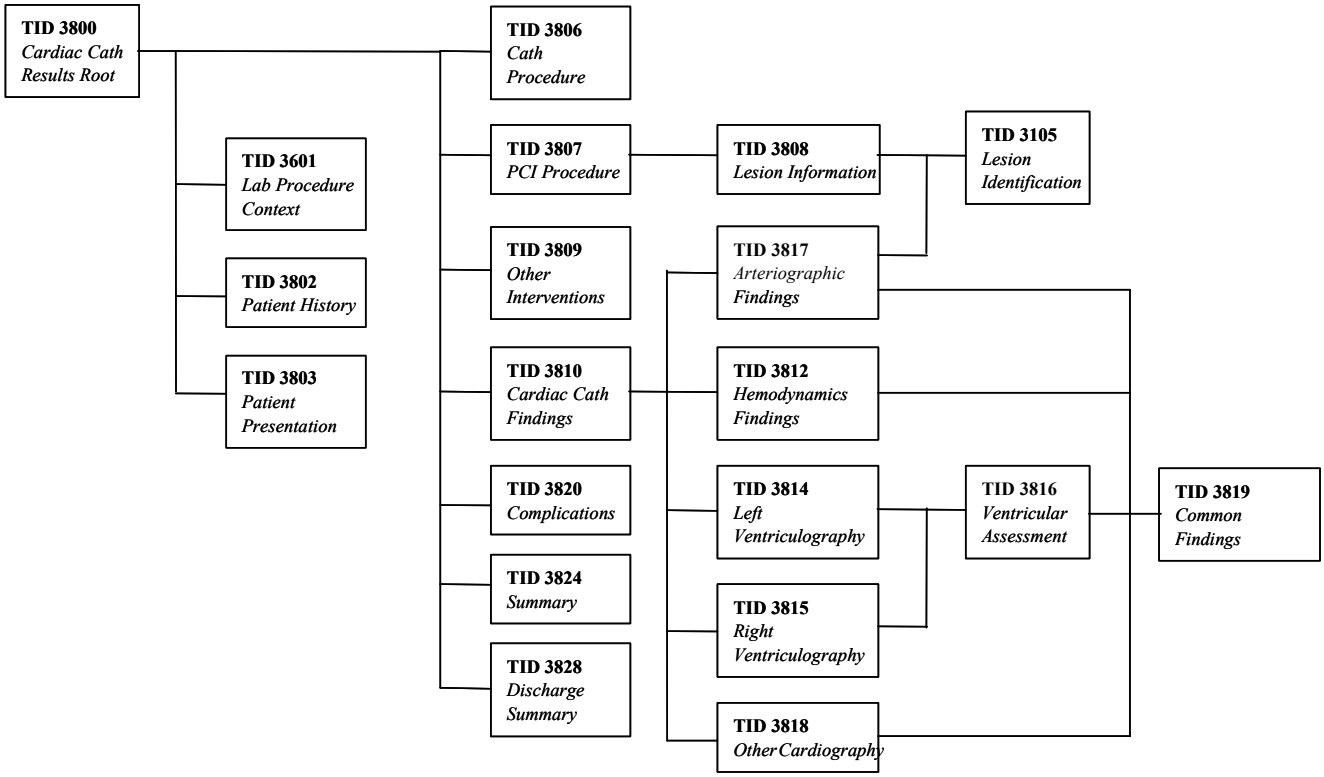

Figure A-4 Cardiac Catheterization Report Template Hierarchy

Note: The figure shows the relationship of templates; it does not show the structural hierarchy of Content Items in the IOD.

TID 3800 Cardiac Catheterization Report Root

The Cardiac Cath Report provides the overall clinical results of the catheterization procedure and interventions. In many cases, more detailed information is optionally available in other reports (Hemodynamic Measurements, Procedure Log, etc.). That information is collected and summarized here (and referenced when available).

When a Discharge Summary section (row 12) is included, this report template covers the full set of information required for submission to the ACC NCDR™ (version 2.0) registry.

Notes: 1. The information required for such a submission must sometimes be reformatted from a single concept in these templates to two data elements for the registry, or vice versa.
2. This Template is expected to be used with the Basic Text SR or Enhanced SR IOD.
3. This Cardiac Cath Report template is a baseline template within these SOP Classes that may be replaced; it is therefore in no sense binding for exchange of this type of report. It is solely an example of a possible encoding of the Cardiac Cath Report.

Type: Extensible

TID 3800
Cardiac Catheterization Report Root

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (18745-0, LN, "Cardiac Catheterization Report")	1	M		
2	>	HAS CONCEPT MOD	CODE	EV (121058, DCM, ”Procedure reported”)	1	M		DCID (3739) Cath Procedure Type
3	>	HAS CONCEPT MOD	INCLUDE	DTID (1204) Language of Content Item and Descendants	1	M		
4	>		INCLUDE	DTID (3601) Procedure Context	1	M		
5	>	CONTAINS	INCLUDE	DTID (3802) "Patient History, Cath"	1	U		
6	>	CONTAINS	INCLUDE	DTID (3803) "Patient Presentation, Cath"	1	M		
7	>	CONTAINS	INCLUDE	DTID (3806) Cath Procedure	1	M		
8	>	CONTAINS	INCLUDE	DTID (3810) Cardiac Catheterization Findings	1	M		
9	>	CONTAINS	INCLUDE	DTID (3807) Percutaneous Coronary Intervention Procedure	1	U		
10	>	CONTAINS	INCLUDE	DTID (3809) Other Interventional Procedures	1-n	U		
11	>	CONTAINS	INCLUDE	DTID (3820) "Adverse Outcomes, Cath"	1	M		
12	>	CONTAINS	INCLUDE	DTID (3824) "Summary, Cath"	1	M		
13	>	CONTAINS	INCLUDE	DTID (3828) "Discharge Summary, Cath"	1	U		

TID 3802 Patient History, Cath

This template contains information about the catheterization patient’s past medical history. This information is considered to have some degree of “persistence” across different episodes.

Type: Extensible

TID 3802
Patient History, Cath

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (121060, DCM, "History")	1	M		
2	>	CONTAINS	TEXT	EV (121060, DCM, "History")	1	U		
3	>	CONTAINS	CODE	DCID (3721) Cath Patient History	1-n	U		DCID (230) Yes-No
4	>	CONTAINS	CODE	DCID (3756) Cath Patient Risk Factors	1-n	U		DCID (240) Present-Absent

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
5	>	CONTAINS	DATE	DCID (3720) Cardiac History Dates	1-n	U		
6	>	CONTAINS	CODE	EV (36, NCDR [2.0b], "Previous Myocardial Infarction, > 1 week prior")	1	U		DCID (230) Yes-No
7	>>	HAS PROPERTIES	CODE	DT (122170, DCM, "Type of Myocardial Infarction")	1	U		DCID (3723) MI Types
8	>	CONTAINS	CODE	EV (31.1, NCDR [2.0b], "Diabetic Therapy")	1	U		DCID (3722) Diabetic Therapy
9	>	CONTAINS	CODE	EV (39.1, NCDR [2.0b], "Lipid Lowering Therapy")	1	U		DCID (230) Yes-No
10	>	CONTAINS	CODE	EV (38, NCDR [2.0b], "Smoking History")	1	U		DCID (3724) Smoking History
11	>	CONTAINS	COMPOSITE	EV (122075, DCM, "Prior report for current patient")	1-n	U		
12	>>	HAS PROPERTIES	CODE	EV (121144, DCM, "Document Title")	1	U		

TID 3803 Patient Presentation, Cath

This template describes the aspects of the patient that are specific to this clinical presentation (admission).

Type: Extensible

TID 3803
Patient Presentation, Cath

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (121110, DCM, "Patient Presentation")	1	M		
2	>	CONTAINS	TEXT	EV (122128, DCM, "Patient Transferred From")	1	U		
3	>	CONTAINS	DATETIME	EV (15, NCDR [2.0b], "Admission Date/Time")	1	U		
4	>	CONTAINS	CODE	EV (17, NCDR [2.0b], "Admission Status")	1	U		DCID (3729) Admission Status
5	>	CONTAINS	CODE	EV (18, NCDR [2.0b], "Insurance Payor Type")	1	U		DCID (3730), Insurance Payor
6	>	CONTAINS	CODE	EV (46, NCDR [2.0b], "Congestive Heart Failure Prior to Procedure")	1	U		DCID (230) Yes-No
7	>	CONTAINS	CODE	EV (47, NCDR [2.0b], "NYHA Classification")	1	UC	IFF Row 6 Value code meaning is <yes>	DCID (3736) NYHA Classification
8	>	CONTAINS	CODE	EV (48, NCDR [2.0b], "Noninvasive Testing - Ischemia")	1	U		DCID (3737) Non-Invasive Test - Ischemia
9	>	CONTAINS	CODE	EV (49, NCDR [2.0b], "Pre-Cath Angina Type")	1	U		DCID (3738) Pre-Cath Angina Type
10	>	CONTAINS	CODE	EV (50, NCDR [2.0b], "Pre-Cath Canadian Classification")	1	U		DCID (3719) Canadian Clinical Classification
11	>	CONTAINS	CODE	EV (51, NCDR [2.0b], "Acute Coronary Syndrome	1	UC	IFF Row 9 Value code meaning is <ACS>	DCID (3735) Acute Coronary Syndrome

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
				Time Period")				Time Period
12	>	CONTAINS	CONTAINER	EV (121109, DCM, "Indications for Procedure")	1	U		
13	>>	CONTAINS	CODE	EV (121071, DCM, "Finding")	1-n	U		DCID (3727) Indications for Catheterization
14	>	CONTAINS	NUM	EV (10230-1, LN, "LV Ejection Fraction")	1-n	U		Units = EV (%, UCUM, "%")
15	>>	HAS CONCEPT MOD	CODE	EV (G-C036, SRT, "Measurement method")	1	U		DCID (3744) EF Testing Method
16	>>		INCLUDE	DTID (1000) Quotation	1	U		
17	>	CONTAINS	CODE	EV (121069, DCM, “Previous Finding”)	1-n	U		DCID (3700) Cath Diagnosis
18	>	CONTAINS	TEXT	EV (121110, DCM, "Patient Presentation")	1	U		

TID 3806 Cath Procedure

1100 This template describes the patient-related information about this specific clinical encounter (catheterization).

Type: Extensible

TID 3806
Cath Procedure

	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	DATETIME	EV (52, NCDR [2.0b], "Procedure DateTime")	1	M		
3	>	CONTAINS	TEXT	EV (53, NCDR [2.0b], "Procedure Number in this admission")	1	U		Up to three numeric characters
4	>	CONTAINS	TEXT	EV (121065, DCM, "Procedure Description")	1	U		
5	>	CONTAINS	COMPOSITE	EV (121120, DCM, "Cath Lab Procedure Log")	1-n	U		
6	>	CONTAINS	NUM	EV (55, NCDR [2.0b], "Fluoroscopy Time")	1	U		UNITS = DT (min, UCUM, "min")
7	>	CONTAINS	NUM	EV (122130, DCM, "Dose Area Product")	1	U		UNITS = DT (mGycm2, UCUM, "mGycm2")
8	>	CONTAINS	PNAME	EV (76, NCDR [2.0b], "Catheterization Operator")	1	M		
9	>	CONTAINS	PNAME	EV (121088, DCM, "Fellow")	1-n	U		
10	>	CONTAINS	PNAME	BCID (7453) Performing Roles	1-n	U		
11	>	CONTAINS	CODE	EV (122129, DCM, "PCI during this procedure")	1	U		DCID (230) Yes-No
12	>	CONTAINS	CONTAINER	EV (F-04460, "Medication Given")	1	M		
13	>>	CONTAINS	CODE	EV (57, NCDR [2.0b],	1	U		DCID (3740)

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
				"Thrombolytics")				Thrombolytic Administration
14	>>	CONTAINS	CODE	EV (58, NCDR [2.0b], "IIb/IIIa Blockade")	1	U		DCID (3741) Medication Administration, Lab Visit
15	>>	CONTAINS	CODE	EV (59, NCDR [2.0b], "Heparin")	1-n	U		DCID (3742) Medication Administration, PCI
16	>>	CONTAINS	CODE	EV (60, NCDR [2.0b], "Aspirin")	1	U		DCID (3741) Medication Administration, Lab Visit
17	>>	CONTAINS	CODE	EV (61, NCDR [2.0b], "Clopidogrel/Ticlopidine")	1	U		DCID (3743) Clopidogrel/Ticlopidine Administration
18	>>	CONTAINS	TEXT	EV (122083, DCM, “Drug administered”)	1-n	U		
19	>	CONTAINS	CODE	EV (122138, DCM, "Circulatory Support")	1-n	U		DCID (3553) Circulatory Support
20	>	CONTAINS	CODE	EV (74, NCDR [2.0b], "Percutaneous Entry Site")	1	M		DCID (3746) Percutaneous Entry
21	>	CONTAINS	CODE	EV (75, NCDR [2.0b], "Closure Device")	1	U		DCID (3747) Percutaneous Closure

Content Item Descriptions

Row 3 Procedure Number (this admission) is specified as a numeric text string, and shall be treated as the ordinal of this catheterization procedure within the admission (i.e., “1” for the first catheterization, “2” for the second, etc.).

TID 3807 Percutaneous Coronary Intervention Procedure

This template describes the various aspects of a coronary intervention.

Type: Extensible

TID 3807
Percutaneous Coronary Intervention Procedure

	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	>	HAS CONCEPT MOD	CODE	EV (121058, DCM, ”Procedure reported”)	1	M		DT (122061, DCM, “Percutaneous Coronary Intervention”)
2	>	CONTAINS	PNAME	EV (121114, DCM, "Performing Physician")	1	M		
3	>	CONTAINS	PNAME	EV (121088, DCM, "Fellow")	1-n	U		
4	>	CONTAINS	PNAME	DCID (7452) Organizational Roles	1-n	U		
5	>	CONTAINS	CODE	EV (G-C09C, SRT, “Procedure Priority”)	1	M		DCID (3414) Procedure Urgency
6	>	CONTAINS	CONTAINER	EV (121109, DCM, "Indications for Procedure")	1	U		
7	>>	CONTAINS	CODE	EV (121071, DCM, "Finding")	1-n	U		DCID (3726) Indications for Coronary Intervention

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
8	>>	CONTAINS	CODE	EV (122172, DCM, "Acute MI Present")	1	U		DCID (230) Yes-No
9	>>>	HAS PROPERTIES	CODE	DT (122170, DCM, “Type of Myocardial Infarction”)	1	U		DCID (3723) MI Types
10	>>>	HAS PROPERTIES	DATETIME	EV (122173, DCM, "ST Elevation Onset Datetime")	1	U		
11	>>	CONTAINS	TEXT	EV (121071, DCM, "Finding")	1-n	U		
12	>	CONTAINS	NUM	EV (122175, DCM, "Number of lesion interventions attempted")	1	M		UNITS = (1, UCUM, "units")
13	>	CONTAINS	NUM	EV (122176, DCM, "Number of lesion interventions successful")	1	M		UNITS = (1, UCUM, "units")
14	>	CONTAINS	CODE	EV (122177, DCM, "Procedure Result")	1	M		DCID (3749) PCI Procedure Result
15	>	CONTAINS	TEXT	EV (122177, DCM, "Procedure Result")	1	U		
16	>	CONTAINS	INCLUDE	DTID (3808) Lesion Intervention Information	1-n	M		

Content Item Descriptions

Rows 7 and 10 allow the recording of findings as either codes or as text; the same finding shall not be recorded as both.

Similarly, rows 14 and 15 allow the recording of procedure results as either codes or as text, but not as both.

TID 3808 Lesion Intervention Information

Type: Extensible

TID 3808
Lesion Intervention Information

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (122178, DCM, "Lesion Intervention Information")	1	M		
2	>	CONTAINS	INCLUDE	DTID (3105) Lesion Identification and Properties	1	M		
3	>	CONTAINS	CODE	EV (108, NDR [2.0b, "Previous Dilation")	1	U		DCID (3750) Previously Dilated Lesion
4	>	CONTAINS	CODE	EV (103, NDR [2.0b], “Guidewire crossing lesion")	1	U		DCID (3752) Guidewire Crossing
5	>	CONTAINS	CODE	EV (G-C50A, SRT, "Uses Equipment")	1-n	M		DCID (3411) Coronary Intervention Devices
6	>>	HAS CONCEPT MOD	CODE	EV (122111, DCM, "Primary Intervention Device")	1	MC	IF Device is Primary for this Lesion	DCID (230) Yes-No
7	>>	HAS PROPERTIES	TEXT	EV (121145, DCM, "Description of Material")	1	U		
8	>>	HAS PROPERTIES	NUM	DCID (3423) Numeric Device Characteristics	1-n	U		

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
9	>>	HAS PROPERTIES	NUM	DCID (3425) Intervention Parameters	1-n	U		
10	>>	HAS PROPERTIES	DATETIME	EV (122105, DCM, "DateTime of Intervention")	1	U		
11	>>	HAS PROPERTIES	NUM	EV (122106, DCM, “Duration of Intervention”)	1	U		UNITS = EV (s, UCUM, “s”)
12	>	CONTAINS	NUM	EV (122108, DCM, "Post-Intervention Stenosis Measurement ")	1	M		UNITS = EV (%, UCUM, "%")
13	>>	HAS CONCEPT MOD	CODE	EV (121401, DCM, “Derivation”)	1	U		DCID (3745) Calculation Method
14	>>		INCLUDE	DTID (1000) Quotation	1	U		
15	>	CONTAINS	CODE	EV (122110, DCM, "Post-Intervention TIMI Flow")	1	U		DCID (3713) TIMI Flow Characteristics
16	>	CONTAINS	CODE	EV (115, NCDR [2.0b], "Dissection in segment observed")	1	U		DCID (230) Yes-No
17	>	CONTAINS	CODE	EV (116, NCDR [2.0b], "Acute closure observed")	1	U		DCID (230) Yes-No
18	>	CONTAINS	CODE	EV (117, NCDR [2.0b], "Acute closure re-opened")	1	UC	IFF Row 17 value is <yes>	DCID (230) Yes-No
19	>	CONTAINS	CODE	EV (118, NCDR [2.0b], "Perforation occurred")	1	U		DCID (230) Yes-No
20	>	CONTAINS	IMAGE	DT (121080, DCM, "Best illustration of finding"	1	U		
21	>	CONTAINS	TEXT	DT (122177, DCM, "Procedure Result")	1	U		

TID 3809 Other Interventional Procedures

Type: Extensible

TID 3809
Other Interventional Procedures

	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	>	HAS CONCEPT MOD	CODE	EV (121058, DCM, ”Procedure reported”)	1	M		BCID (3406) Non-Coronary Transcatheter Interventions
3	>	CONTAINS	TEXT	EV (121065, DCM, "Procedure Description")	1	U		
4	>	CONTAINS	CODE	DT (121065, DCM, "Procedure Description")	1	U		No BCID
5	>	CONTAINS	TEXT	DT (122177, DCM, "Procedure Result")	1	U		

Content Item Descriptions

Rows 3 and 4 allow the recording of procedure description as either code or as text; the same description shall not be recorded as both.

TID 3810 Cardiac Catheterization Findings

The Cardiac Catheterization Findings Template provides the structure for the diagnostic findings of the cath procedure, organized into sub-sections based on type of sub-procedure. It also provides for top-level summary findings and diagnoses.

Type: Extensible

TID 3810
Cardiac Catheterization Findings

	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	>	CONTAINS	INCLUDE	DTID (3812) Hemodynamic Findings	1	U		
3	>	CONTAINS	INCLUDE	DTID (3817) Coronary Arteriography Findings	1	U		
4	>	CONTAINS	INCLUDE	DTID (3814) Left Ventriculography Findings	1	U		
5	>	CONTAINS	INCLUDE	DTID (3815) Right Ventriculography Findings	1	U		
6	>	CONTAINS	INCLUDE	DTID (3818) Other Cardiographic Findings	1-n	U		
7	>	CONTAINS	CODE	EV (121071, DCM, "Finding")	1-n	U		DCID (3700) Cath Diagnosis
8	>>	HAS PROPERTIES	CODE	EV (G-C197, SRT, "Severity")	1	U		DCID (3716) Severity
9	>	CONTAINS	TEXT	EV (121071, DCM, "Finding")	1-n	U		

Content Item Descriptions

Rows 7 and 9 allow the recording of findings as either codes or as text; the same finding shall not be recorded as both.

TID 3812 Hemodynamic Findings

Type: Extensible

TID 3812
Hemodynamic Findings

	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 (PA-50030, SRT, "Hemodynamic measurements")

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
3	>	CONTAINS	CODE	EV (D3-40300, SRT, "Pulmonary Hypertension")	1	U		DCID (240) Present-Absent
4	>	CONTAINS	INCLUDE	DTID (3819) Common Findings	1-n	U		$Report = DT (122120, DCM, “Hemodynamics Report”)

Content Item Descriptions

Row 4 (through DTID 3819 Common Findings Template) may be used to encode any significant hemodynamic numeric measurements. For reference, see Templates 3550 Pressure Waveform Measurements, and 3560 Derived Hemodynamic Measurements.

TID 3814 Left Ventriculography Findings

The information contained here about the left ventricle is relatively qualitative in nature. It is a high-level summary of the more detailed information that may be contained in an optional Quantitative Ventricular Analysis report. This template addresses findings about any ventricular septal defect (Row 7), the myocardial wall (Row 11), and about the aortic root (Row 16).

Type: Extensible

TID 3814
Left Ventriculography Findings

	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	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
5	>	CONTAINS	CODE	EV (F-0224E, SRT, "Left Ventricular Cavity Size")	1	U		DCID (3705) Chamber Size
6	>	CONTAINS	CODE	EV (F-02225, SRT, "Left Ventricular Contractility")	1	U		DCID (3706) Overall Contractility
7	>	CONTAINS	CODE	EV (121071, DCM, "Finding")	1	U		EV (D4-31159, SRT, "Ventricular Septal Defect")
8	>>	HAS PROPERTIES	CODE	EV (G-C504, SRT, "Associated Morphology")	1	U		DCID (3707) VSD Description
9	>	CONTAINS	INCLUDE	DTID (3816) Ventricular Assessment	1	U		
10	>	CONTAINS	CONTAINER	EV (121070, DCM,	1	U		

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
				"Findings")				
11	>>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT, “Finding Site”)	1	M		DT (T-D0772, SRT, ”Myocardial Wall”)
12	>>	CONTAINS	CODE	EV (LN, 18179-2, "Wall Segment”)	1-n	M		BCID (3717) Myocardial Wall Segments
13	>>>	HAS PROPERTIES	CODE	EV (F-32050, SRT, ”Cardiac Wall Motion”)	1	M		DCID (3703) Wall Motion
14	>>>	HAS PROPERTIES	CODE	EV (G-C504, SRT, "Associated Morphology")	1	U		DCID (3704) Myocardium Wall Morphology Findings
15	>>>	HAS PROPERTIES	NUM	DT (G-C1E3, SRT, “Score”)	1	U		
16	>	CONTAINS	CONTAINER	EV (121070, DCM, "Findings")	1	U		
17	>>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT, “Finding Site”)	1	M		DT (F-04403, SRT, "Aortic Root")
18	>>	CONTAINS	CODE	EV (121071, DCM, "Finding")	1-n	M		DCID (3709) Aortic Root Description

TID 3815 Right Ventriculography Findings

The information contained here about right ventricle is relatively qualitative in nature. It is a high-level summary of the more detailed information that may be contained in an optional Quantitative Ventricular Analysis report.

Type: Extensible

TID 3815
Right Ventriculography Findings

	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 (P5-3003F, SRT, "Right Ventriculography")
3	>		INCLUDE	TID (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, "Right Ventricular Contractility")	1	U		DCID (3706) Overall Contractility
6	>	CONTAINS	INCLUDE	DTID (3816) Ventricular Assessment	1	U		

TID 3816 Ventricular Assessment

Type: Extensible

TID 3816
Ventricular Assessment

	NL	Relation with Parent	Value Type	Concept Name	V M	Req Type	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	EV (121070, DCM, "Findings")	1-n	U		
2	>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT, “Finding Site”)	1	M		DCID (3701) Cardiac Valves and Tracts
3	>	CONTAINS	CODE	EV (121071, DCM, "Finding")	1-n	M		DCID (3711) Valvular Abnormalities
4	>>	HAS PROPERTIES	CODE	EV (G-C197, SRT, "Severity")	1	U		DCID (3716) Severity
5	>>	HAS PROPERTIES	NUM	DT (G-C1E3, SRT, “Score”)	1	U		
6		CONTAINS	INCLUDE	DTID (3819) Common Findings	1-n	U		$Report = DT (122292, DCM, “Quantitative Ventriculography Report”)

TID 3817 Coronary Arteriography Findings

The information contained here about with regards to coronary artery lesions is relatively qualitative in nature. It is a high-level summary of the more detailed information that may be contained in an optional Quantitative Coronary Arteriography report. This template addresses findings about the individual arteries (Row 4), and about individual lesions (Row 9).

Type: Extensible

TID 3817
Coronary Arteriography Findings

	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 (P5-30100, SRT, "Coronary Arteriography")
3	>	CONTAINS	CODE	EV (68, NCDR[2.0b], "Coronary Dominance")	1	U		DCID (3710) Coronary Dominance
4	>	CONTAINS	CONTAINER	EV (121070, DCM, "Findings")	1-n	U		
5	>>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT, “Finding Site”)	1	M		BCID (3015) Coronary Arteries
6	>>>	HAS CONCEPT MOD	CODE	EV (G-A1F8, SRT, “Topographical modifier”)	1	U		BCID (3019) Cardiovascular Anatomic Location Modifiers
7	>>	CONTAINS	CODE	EV (122134, DCM, "Vessel	1-n	U		DCID (3712) Vessel

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
				Morphology")				Descriptors
8	>>	CONTAINS	INCLUDE	DTID (3819) Common Findings	1-n	U		
9	>	CONTAINS	CONTAINER	EV (121070, DCM, "Findings")	1-n	U		
10	>>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT, “Finding Site”")	1	M		DT (R-002EF, SRT, "Coronary artery lesion (culprit)")
11	>>	CONTAINS	INCLUDE	DTID (3105) Lesion Identification and Properties	1	M		
12	>>	CONTAINS	INCLUDE	DTID (3819) Common Findings	1-n	U		$Report = DT (122291, DCM, “Quantitative Arteriography Report”)

TID 3818 Other Cardiographic Findings

Type: Extensible

TID 3818
Other Cardiographic Findings

	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		BCID (3428) Imaging Procedures
3	>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT, “Finding Site”)	1	U		BCID (3630) Cardiovascular Anatomic Locations
4	>	CONTAINS	INCLUDE	DTID (3819) Common Findings	1-n	M		

TID 3819 Common Findings

TID 3819 Parameters

Parameter Name	Parameter Usage
$Report	Title of composite object (evidence document) referenced

Type: Extensible

TID 3819
Common Findings

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			TEXT	EV (121071, DCM, "Finding")	1	U		
2			IMAGE	DT (121080, DCM, "Best	1	U		

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
				illustration of finding")				
3			NUM	No BCID	1	U		
4	>		INCLUDE	DTID (1000) Quotation	1	U		
5			COMPOSITE	DT (122073, DCM, "Current procedure evidence")	1	U		
6	>	HAS PROPERTIES	CODE	EV (121144, DCM, “Document Title")	1	U		$Report

Content Item Descriptions

Row 3 may be used to encode any significant image- or waveform-based numeric measurements, with post-coordination of the Concept Name using child Content Items (with relationship HAS CONCEPT MOD), as permitted by Section 6.2.4. The source of the measurement may be noted using the Quotation Template in Row 4.

TID 3820 Adverse Outcomes, Cath

Type: Extensible

TID 3820
Adverse Outcomes, Cath

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	EV (121113, DCM, "Complications")	1	M		
2	>	CONTAINS	CODE	EV (DD-60002, SRT, "Complication of Procedure")	1-n	U		DCID (3755) Cath Complications
3	>	CONTAINS	CODE	EV (DD-60002, SRT, "Complication of Procedure")	1-n	U		DCID (3754) Vascular Complications
4	>	CONTAINS	TEXT	EV (DD-60002, SRT, "Complication of Procedure")	1-n	U		
5	>	CONTAINS	CODE	EV (122179, DCM, "Peri-procedural MI occurred")	1	U		DCID (230) Yes-No
6	>>	INFERRED FROM	NUM	EV (122181, DCM, "CK-MB peak")	1	U		UNITS = EV ([iU], UCUM, "International unit")
7	>>>	HAS PROPERTIES	NUM	EV (R-0038B, SRT, "Normal Range Upper Limit")	1	M		UNITS = EV ([iU], UCUM, "International unit")
8	>>	INFERRED FROM	NUM	EV (122180, DCM, "CK-MB baseline")	1	M		UNITS = EV ([iU], UCUM, "International unit")
9	>	CONTAINS	IMAGE	DT (121080, DCM, "Best illustration of finding"	1-n	U		

Content Item Descriptions

Rows 2, 3 and 4 allow the recording of outcomes as either codes or as text; the same outcome shall not be recorded as both.

TID 3824 Summary, Cath

Type: Extensible

TID 3824
Summary, Cath

	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	CODE	EV (121071, DCM, "Finding")	1-n	U		DCID (3728) Cath Findings
3	>>	HAS PROPERTIES	CODE	EV (G-C197, SRT, "Severity")	1	U		DCID (3716) Severity
4	>	CONTAINS	TEXT	EV (121111, DCM, "Summary")	1	U		
5	>	CONTAINS	TEXT	EV (121075, DCM, "Recommendation")	1-n	U		

TID 3828 Discharge Summary, Cath

Type: Extensible

TID 3828
Discharge Summary, Cath

	NL	Relation with Parent	Value Type	Concept Name	VM	Req Type	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	EV (121115, DCM, "Discharge Summary")	1	M		
2	>	CONTAINS	DATETIME	EV (122163, DCM, "Discharge DateTime")	1	U		
3	>	CONTAINS	CODE	EV (122164, DCM, "Coronary Artery Bypass During This Admission")	1	U		DCID (230) Yes-No
4	>>	HAS PROPERTIES	CODE	EV (G-C09C, SRT, “Procedure Priority”)	1	U		BCID (3414) Procedure Urgency
5	>>	HAS PROPERTIES	DATETIME	EV (122146, DCM, "Procedure Datetime")	1	U		
6	>	CONTAINS	CODE	EV (122166, DCM, "Death During This Admission")	1	U		DCID (230) Yes-No
7	>>	HAS PROPERTIES	DATETIME	EV (122165, DCM, "Date of Death")	1	U		
8	>>	HAS PROPERTIES	CODE	EV (25, NCDR [2.0b], "Primary Cause of Death")	1	U		DCID (3733) Primary Cause of Death
9	>>	HAS PROPERTIES	CODE	EV (122167, DCM, “Death During Catheterization")	1	U		DCID (230) Yes-No
10	>	CONTAINS	TEXT	EV (121111, DCM, "Summary")	1	U		

Annex B DCMR Context Groups (Normative)

Add the following terms to existing Context Groups in PS3.16 Annex B:

CID 3019 Cardiovascular Anatomic Location Modifiers

Type: Extensible **Version: ~~20011231~~ 20030327**

Context ID 3019
Cardiovascular Anatomic Location Modifiers

Coding Scheme	Coding Scheme Version	Code Value	Code Meaning
…			
SRT		**T-40003**	**Entire Vessel**
DCM		**122101**	**Aneurysm on cited vessel**
DCM		**122102**	**Graft to cited segment, proximal section**
DCM		**122103**	**Graft to cited segment, mid section**
DCM		**122104**	**Graft to cited segment, distal section**

CID 3250 Catheterization Procedure Phase

Type: Extensible **Version: ~~20011231~~ 20030327**

Context ID 3250
Catheterization Procedure Phase

Coding Scheme	Coding Scheme Version	Code Value	Code Meaning
…			
SRT		**P2-71317**	**Drug Infusion Challenge**
SRT		**P2-71310**	**Exercise challenge**
SRT		**F-01604**	**Resting State**

CID 7001 Diagnostic Imaging Report Headings

Type: Extensible **Version: ~~20011231~~ 20030327**

Context ID 7001
DIAGNOSTIC IMAGING REPORT HEADINGS

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)

…		
DCM	**121109**	**Indications for Procedure**
DCM	**121110**	**Patient Presentation**
DCM	**121113**	**Complications**
DCM	**121111**	**Summary**

CID 7002 Diagnostic Imaging Report Elements

Type: Extensible **Version: ~~20011231~~ 20030327**

Context ID 7002
DIAGNOSTIC IMAGING REPORT ELEMENTS

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
…		
SRT	**DD-60002**	**Complication of Procedure**
DCM	**121110**	**Patient Presentation**
DCM	**121111**	**Summary**

CID 7003 Diagnostic Imaging Report Purposes Of Reference

Type: Extensible **Version: ~~20011231~~ 20030327**

Context ID 7003
DIAGNOSTIC IMAGING REPORT PURPOSES OF REFERENCE

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
…		
DCM	**121112**	**Source of Measurement**

CID 7452 Organizational Roles

Type: Extensible **Version: ~~20011231~~ 20030327**

Context ID 7452
Organizational Roles

Coding Scheme Designator	Code Value	Code Meaning
…		
DCM	**121105**	**Radiation Physicist**

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Modify the following terms in existing Context Groups in PS3.16 Annex B:

CID 3337 Hemodynamic Annotations

Type: Extensible **Version: ~~20011231~~ 20030327**

Context ID 3337
Hemodynamic Annotations

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
DCM	01	109014	35% of thermal/dye dilution CO
DCM	01	109015	70% of thermal/dye dilution CO
DCM	01	109016	A wave **peak pressure**
DCM	01	109017	A wave **pressure,** average
DCM	01	109018	Beat detected (accepted)
DCM	01	109019	Beat detected (rejected)
DCM	01	109020	Diastolic **pressure,** average
DCM	01	109021	Diastolic **pressure** nadir
DCM	01	109022	End diastole
DCM	01	109023	End of expiration
DCM	01	109024	End of inspiration
DCM	01	109070	End of systole
DCM	01	109071	Indicator mean transit time
DCM	01	109025	Max dp/dt
DCM	01	109026	Max neg dp/dt
DCM	01	109027	Mean **blood** pressure
DCM	01	109028	Peak of thermal~~/dye dilution CO~~ **cardiac output bolus**
DCM	01	109029	Start of expiration
DCM	01	109030	Start of inspiration
DCM	01	109031	Start of thermal ~~CO~~ **cardiac output bolus**
DCM	01	109032	Systolic **pressure,** average
DCM	01	109033	Systolic peak **pressure**
DCM	01	109072	Tau
DCM	01	109073	V max **myocardial**
DCM	01	109034	V wave **peak pressure**
DCM	01	109035	V wave **pressure,** average
DCM	01	109036	Valve close
DCM	01	109037	Valve open

Add the following new Context Groups to PS3.16 Annex B.

CID 220 Level of Significance

Context ID 220
Level of Significance
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-00333	Most significant
SRT	R-0030C	Highly significant
SRT	R-10045	Significant
SRT	R-00345	Not significant
SRT	R-10046	Significance Undetermined

CID 221 Measurement Range Concepts

Context ID 221
Measurement Range Concepts
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
INCLUDE CID 226 Population Statistical Descriptors		
INCLUDE CID 227 Sample Statistical Descriptors		

CID 222 Normality Codes

Context ID 222
Normality Codes
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	G-A460	Normal
SRT	R-42037	Abnormal
SRT	R-002C4	Abnormally High
SRT	R-002C5	Abnormally Low
SRT	G-A385	Normality Undetermined

CID 223 Normal Range Values

Context ID 223
Normal Range Values
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-0038B	Normal Range Upper Limit
SRT	R-10041	Normal Range Lower Limit

CID 224 Selection Method

Context ID 224
Selection Method
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121410	User chosen value
DCM	121411	Most recent value chosen
DCM	121412	Mean value chosen

CID 225 Measurement Uncertainty Concepts

Context ID 225
Measurement Uncertainty Concepts
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-00363	+/- , range of measurement uncertainty
SRT	R-00364	+ , range of upper measurement uncertainty
SRT	R-00362	- , range of lower measurement uncertainty

CID 226 Population Statistical Descriptors

Context ID 226
Population Statistical Descriptors
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-00337	95th Percentile Value of population
SRT	R-00338	90th Percentile Value of population

SRT	R-00346	1 Sigma Upper Value of population
SRT	R-00387	2 Sigma Upper Value of population
SRT	R-00317	Mean Value of population
SRT	R-00319	Median Value of population
SRT	R-00377	10th Percentile Value of population
SRT	R-00397	5th Percentile Value of population
SRT	R-00347	1 Sigma Lower Value of population
SRT	R-00388	2 Sigma Lower Value of population
DCM	121414	Standard deviation of population
DCM	121417	2 Sigma deviation of population

CID 227 Sample Statistical Descriptors

Context ID 227
Sample Statistical Descriptors
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121415	Percentile Ranking of measurement
DCM	121416	Z-Score of measurement

CID 228 Equation or Table

Context ID 228
Equation or Table
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121420	Equation
DCM	121421	Equation Citation
DCM	121424	Table of Values
DCM	121422	Table of Values Citation
DCM	121423	Method Citation

CID 230 Yes-No

Context ID 230
Yes-No
Type: Non-extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-0038D	Yes
SRT	R-00339	No
SRT	R-0038A	Undetermined

CID 240 Present-Absent

Context ID 240
Present-Absent
Type: Non-extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121053	Present
DCM	121054	Absent
DCM	121059	Presence Undetermined

CID 242 Normal-Abnormal

This Context Group is a subset of CID 222 Normality Codes.

Context ID 242
Normal-Abnormal

Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	G-A460	Normal
SRT	R-42037	Abnormal
SRT	G-A385	Normality Undetermined

CID 3015 Coronary Arteries

Context ID 3015
Coronary Arteries
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	T-4311A	Left Anterior Descending Coronary Artery
SRT	T-43203	Right Coronary Artery
SRT	T-43120	Circumflex Coronary Artery

INCLUDE CID 3014 Coronary Artery Segments

CID 3400 Procedure Log Titles

Context ID 3400
Procedure Log Titles
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121120	Cath Lab Procedure Log

CID 3401 Types of Log Notes

Context ID 3401
Types of Log Notes
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121171	Tech Note
DCM	121172	Nursing Note
DCM	121173	Physician Note
DCM	121174	Procedure Note
DCM	121123	Patient Status or Event

CID 3402 Patient Status and Events

Context ID 3402
Patient Status and Events
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122001	Patient called to procedure room
DCM	122002	Patient admitted to procedure room
DCM	122003	Patient given pre-procedure instruction
DCM	122004	Patient informed consent given
DCM	122005	Patient advance directive given
DCM	122006	Nil Per Os (NPO) status confirmed
DCM	122007	Patient assisted to table

DCM	122008	Patient prepped and draped
DCM	122009	Patient connected to continuous monitoring
DCM	122010	Patient transferred to holding area
DCM	122011	Patient transferred to surgery
DCM	122012	Patient transferred to CCU
DCM	122020	Patient disoriented
DCM	122021	Patient reports nausea
DCM	122022	Patient reports discomfort
DCM	122023	Patient reports chest pain
DCM	122024	Patient reports no pain
DCM	122025	Patient alert
DCM	122026	Patient restless
DCM	122027	Patient sedated
DCM	122028	Patient asleep
DCM	122029	Patient unresponsive
DCM	122030	Patient has respiratory difficulty
DCM	122031	Patient coughed
DCM	122032	Patient disconnected from continuous monitoring
DCM	122033	Hemostasis achieved
DCM	122034	Hemostasis not achieved – oozing
DCM	122035	Hemostasis not achieved – actively bleeding
DCM	122036	Patient given post-procedure instruction
DCM	122038	Patient pronounced dead
DCM	122039	Patient transferred to morgue
DCM	122037	Patient discharged

CID 3403 Percutaneous Entry

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Context ID 3403
Percutaneous Entry
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
INCLUDE CID 3746 Percutaneous Entry		
INCLUDE CID 3747 Percutaneous Closure		

CID 3404 Staff Actions

Context ID 3404
Staff Actions
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122041	Personnel Arrived
DCM	122042	Personnel Departed
DCM	122043	Page Sent To
DCM	122044	Consultation With
DCM	122045	Office called

CID 3405 Procedure Action Values

Context ID 3405
Procedure Action Values
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	P1-30350	Atherectomy
SRT	P1-30351	Atherectomy by rotary cutter
SRT	P1-30352	Atherectomy by laser
SRT	P1-30530	Selective embolization of artery
SRT	P5-31500	Percutaneous transluminal balloon angioplasty
SRT	P5-39010	Transcatheter therapy for embolization
SRT	P5-39050	Percutaneous retrieval of intravascular foreign body
SRT	P1-05550	Stent placement
SRT	P5-39015	Transcatheter deployment of detachable balloon
SRT	P5-39191	Percutaneous insertion of intravascular filter
INCLUDE CID 3250 Catheterization Procedure Phases		
INCLUDE CID 3406 Non-Coronary Transcatheter Interventions		
INCLUDE CID 3428 Imaging Procedures		

CID 3406 Non-Coronary Transcatheter Interventions

Context ID 3406
Non-Coronary Transcatheter Interventions
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122053	Valvular Intervention
DCM	122054	Aortic Intervention
DCM	122055	Septal Defect Intervention
DCM	122056	Vascular Intervention
DCM	122057	Myocardial biopsy

CID 3407 Purpose of Reference to Object

Context ID 3407
Purpose of Reference to Object

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
DCM	122072	Pre-procedure log
DCM	122073	Analysis or measurements for current procedure
DCM	122075	Prior report for current patient

CID 3408 Actions with Consumables

Context ID 3408
Actions with Consumables

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
DCM	122076	Consumable taken from inventory
DCM	122077	Consumable returned to inventory
DCM	122078	Remaining consumable disposed
DCM	122079	Consumable unusable

CID 3409 Administration of Drugs/Contrast

Context ID 3409
Administration of Drugs/Contrast

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
DCM	122081	Drug start
DCM	122082	Drug end
DCM	122083	Drug administered
DCM	122084	Contrast start
DCM	122085	Contrast end
DCM	122086	Contrast administered
DCM	122087	Infusate start
DCM	122088	Infusate end

CID 3410 Numeric Parameters of Drugs/Contrast

Context ID 3410
Numeric Parameters of Drugs/Contrast
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122091	Volume administered
DCM	122092	Undiluted dose administered
DCM	122093	Concentration
DCM	122094	Rate of administration
DCM	122095	Duration of administration
DCM	122096	Volume unadministered or discarded

CID 3411 Intracoronary Devices

Context ID 3411
Intracoronary Devices
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning	NCDR Equivalent
SRT	A-26912	Percutaneous Transluminal Angioplasty Balloon	113-1
SRT	R-002F0	Cutting Balloon Angioplasty (CBA) Device	113-2
SRT	A-25500	Stent	113-3
SRT	R-002FD	Directional Coronary Atherectomy (DCA) Device	113-4
SRT	A-25610	Rotational Atherectomy Device, Rotablator™	113-5
SRT	R-0036F	Saline Thrombectomy, AngioJet™	113-6

SRT	A-26920	Transluminal Extraction Catheter (TEC)	113-7
SRT	A-81080	Laser	113-8
SRT	R-00312	Intravascular Ultrasound (IVUS) Device	113-9
SRT	R-00310	Intracoronary Doppler guide wire, Flowire™	113-10
SRT	R-00311	Intracoronary pressure guide wire	113-11
SRT	A-040ED	Brachytherapy Device	
SRT	R-00361	Radiofrequency Ablation Device	

CID 3412 Intervention Actions and Status

Context ID 3412
Intervention Actions and Status
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122301	Guidewire crossing lesion unsuccessful
DCM	122302	Guidewire crossing lesion successful
DCM	122303	Angioplasty balloon inflated
DCM	122304	Angioplasty balloon deflated
DCM	122305	Device deployed
DCM	122306	Stent re-expanded
DCM	122307	Object removed
DCM	122308	Radiation applied
DCM	122309	Radiation removed
DCM	122310	Interventional device placement unsuccessful
DCM	122311	Interventional device placed
DCM	122312	Intervention performed
DCM	122313	Interventional device withdrawn

CID 3413 Adverse Outcomes

Context ID 3413
Adverse Outcomes
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122167	Death During Catheterization
INCLUDE CID 3754 Vascular Complications		
INCLUDE CID 3755 Cath Complications		

CID 3414 Procedure Urgency

Context ID 3414
Procedure Urgency
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning	NCDR Equivalents
SRT	G-D210	Elective Procedure	21-1, 78-1, 92-1
SRT	G-D216	Urgent Procedure	21-2, 78-2, 92-2
SRT	G-D209	Emergent Procedure	21-3, 78-3, 92-3
SRT	R-41C8D	Salvage Procedure	21-4, 78-4, 92-4

CID 3415 Cardiac Rhythms

Context ID 3415
Cardiac Rhythms
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SCPECG	D.3.2.6-SR	sinus rhythm
SCPECG	D.3.2.6-NSR	normal sinus rhythm
SCPECG	D.3.2.6-SARRH	sinus arrhythmia
SCPECG	D.3.2.6-MSAR	marked sinus arrhythmia
SCPECG	D.3.2.6-SVARR	supraventricular arrhythmia
SCPECG	D.3.2.6-STACH	sinus tachycardia
SCPECG	D.3.2.6-ETACH	extreme tachycardia
SCPECG	D.3.2.6-SBRAD	sinus bradycardia
SCPECG	D.3.2.6-EBRAD	extreme bradycardia
SCPECG	D.3.2.6-JTACH	junctional tachycardia
SCPECG	D.3.2.6-SVTAC	supraventricular tachycardia
SCPECG	D.3.2.6-JBRAD	junctional bradycardia
SCPECG	D.3.2.6-SVBRA	supraventricular bradycardia
SCPECG	D.3.2.6-WQTAC	wide QRS tachycardia
SCPECG	D.3.2.6-NQTAC	narrow QRS tachycardia
SCPECG	D.3.2.6-TACHO	tachycardia, origin unknown or not specified
SCPECG	D.3.2.6-BRADO	bradycardia, origin unknown or not specified
SCPECG	D.3.2.6-ARRHY	arrhythmia, origin unknown
SCPECG	D.3.2.6-IRREG	irregular rhythm

SCPECG	D.3.2.6-REGRH	regular rhythm
SCPECG	D.3.2.6-JESCR	junctional escape rhythm
SCPECG	D.3.2.6-VESCR	ventricular escape rhythm
SCPECG	D.3.2.6-ACAR	accelerated atrial rhythm
SCPECG	D.3.2.6-ACVR	accelerated ventricular rhythm
SCPECG	D.3.2.6-ACJR	accelerated junctional rhythm
SCPECG	D.3.2.6-AVJR	AV-junctional rhythm
SCPECG	D.3.2.6-ARHYT	atrial rhythm
SCPECG	D.3.2.6-SVRHY	supraventricular rhythm
SCPECG	D.3.2.6-JRHYT	junctional rhythm
SCPECG	D.3.2.6-VRHYT	ventricular rhythm
SCPECG	D.3.2.6-UNRHY	undetermined rhythm
SCPECG	D.3.2.6-EAR	ectopic atrial rhythm
SCPECG	D.3.2.6-LAR	left atrial rhythm
SCPECG	D.3.2.6-MAR	multifocal atrial rhythm
SCPECG	D.3.2.6-NODRH	nodal rhythm
SCPECG	D.3.2.6-RAR	low right atrial rhythm
SCPECG	D.3.2.6-LGL	Lown-Ganong-Levine syndrome
SCPECG	D.3.2.6-SHTPR	Short PR-interval
SCPECG	D.3.2.6-AFIB	atrial fibrillation
SCPECG	D.3.2.6-AFLT	atrial flutter
SCPECG	D.3.2.6-ATACH	atrial tachycardia
SCPECG	D.3.2.6-PSVT	paroxysmal supraventricular tachycardia
SCPECG	D.3.2.6-PAT	paroxysmal atrial tachycardia
SCPECG	D.3.2.6-MFAT	multifocal atrial tachycardia
SCPECG	D.3.2.6-RATAC	run of atrial tachycardia
SCPECG	D.3.2.6-RJTAC	run of junctional tachycardia
SCPECG	D.3.2.6-AVNRT	atrioventricular nodal re-entrant tachycardia
SCPECG	D.3.2.6-AVRT	atrioventricular reciprocating tachycardia
SCPECG	D.3.2.6-IDIOR	idioventricular rhythm
SCPECG	D.3.2.6-VFIB	ventricular fibrillation
SCPECG	D.3.2.6-VTACH	ventricular tachycardia
SCPECG	D.3.2.6-RVTAC	run of ventricular tachycardia
SCPECG	D.3.2.6-SVT	sustained ventricular tachycardia
SCPECG	D.3.2.6-NSVT	non-sustained ventricular tachycardia
SCPECG	D.3.2.6-TORSA	torsade des pointes ventricular tachycardia
SCPECG	D.3.2.6-MTACH	multifocal tachycardia, supraventricular or ventricular
SCPECG	D.3.2.6-VFLT	ventricular flutter
SCPECG	D.3.2.6-ASYST	asystole

CID 3416 Respiration Rhythms

Context ID 3416
Respiration Rhythms
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	F-21301	normal respiratory rhythm
SRT	F-21303	irregular breathing
SRT	F-20130	gasping respiration
SRT	F-21334	abnormal respiratory rhythm
SRT	F-21331	respiration intermittent

CID 3418 Lesion Risk

Context ID 3418
Lesion Risk
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	111-1	Low Risk Lesion
NCDR	2.0b	111-2	Moderate Risk Lesion
NCDR	2.0b	111-3	High Risk Lesion

CID 3419 Findings Titles

Context ID 3419
Findings Titles
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121071	Finding
DCM	121073	Impression
DCM	121075	Recommendation

CID 3421 Procedure Action

Context ID 3421
Procedure Action
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121130	Start Procedure Action
DCM	121131	End Procedure Action
DCM	121132	Suspend Procedure Action
DCM	121133	Resume Procedure Action

CID 3422 Device Use Actions

Context ID 3422
Device Use Actions
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-002F8	Device inserted into sheath
SRT	R-002F7	Device at site of interest
SRT	R-002FB	Device withdrawn / removed
SRT	R-002F6	Device applied to patient
SRT	R-002FA	Device used
SRT	R-10042	Device crossed septum
DCM	122089	Device crossed lesion

CID 3423 Numeric Device Characteristics

Context ID 3423
Numeric Device Characteristics
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	G-A22A	Length
SRT	M-02550	Diameter
DCM	122097	Catheter Curve
DCM	122098	Transmit Frequency

CID 3425 Intervention Parameters

Context ID 3425
Intervention Parameters
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-002D0	Angioplasty Inflation pressure
SRT	R-002CF	Angioplasty Inflation duration
SRT	R-0036C	Rotational Atherectomy Speed
SRT	R-002F2	Delivered Radiation Dose
SRT	R-10043	Ablation power
SRT	R-10044	Ablation frequency

CID 3426 Consumables Parameters

Context ID 3426
Consumables Parameters
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121145	Description of Material
DCM	121148	Unit Serial Identifier
DCM	121149	Lot Identifier

CID 3427 Equipment Events

Context ID 3427
Equipment Events
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122046	Equipment failure
DCM	122047	Equipment brought to procedure room
DCM	122048	Equipment ready
DCM	122049	Equipment removed

CID 3428 Imaging Procedures

Context ID 3428
Imaging Procedures
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	P5-009A0	Angiography
SRT	P5-32130	Aortography
SRT	P5-30100	Coronary Arteriography
SRT	P5-3003A	Cardiac ventriculography
SRT	P5-30041	Left Ventriculography
SRT	P5-3003F	Right Ventriculography
SRT	P5-30107	Bypass graft angiography
DCM	122058	Arterial conduit angiography
SRT	P5-B3002	Transesophageal echocardiography
SRT	P5-B3003	Transthoracic echocardiography
SRT	P5-B3004	Epicardial echocardiography
SRT	P5-B001D	Intravascular ultrasound
SRT	P5-B3006	Intracardiac echocardiography

CID 3429 Catheterization Devices

Context ID 3429
Catheterization Devices
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	A-28051	Intra-Aortic Balloon Pump (IABP)
SRT	R-00306	Fluid filled catheter
SRT	R-00304	Fiberoptic catheter
SRT	R-0030A	Hall catheter
SRT	R-00379	Thermistor catheter
SRT	R-00383	Tip manometer
SRT	A-26860	Swann-Ganz catheter
SRT	F-9B75C	Sheath
SRT	R-10041	Transseptal catheter
DCM	122052	Bioptome
INCLUDE CID 3411 Intracoronary Devices		

CID 3430 DateTime Qualifiers

Context ID 3430
DateTime Qualifiers
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121136	Datetime Unsynchronized
DCM	121137	Datetime Estimated

CID 3440 Peripheral Pulse Locations

Context ID 3440
Peripheral Pulse Locations
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	T-47160	Brachial Artery
SRT	T-45100	Carotid Artery
SRT	T-47741	Dorsalis Pedis Artery
SRT	T-47400	Femoral Artery
SRT	T-47500	Popliteal Artery
SRT	T-47600	Posterior Tibial Artery
SRT	T-47300	Radial Artery
SRT	T-47200	Ulnar Artery

CID 3441 Patient assessments

Context ID 3441
Patient assessments
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
LN	8884-9	Cardiac Rhythm
LN	9304-7	Respiration Rhythm
SRT	F-046D8	Skin condition assessment
SRT	F-043E6	Respiration assessment
SRT	F-04317	Patient mental state assessment

CID 3442 Peripheral Pulse Methods

Context ID 3442
Peripheral Pulse Methods
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	P2-01510	Palpation
SRT	P1-30022	Doppler

CID 3446 Skin Condition

Context ID 3446
Skin Condition
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122271	skin condition Warm
DCM	122272	skin condition Cool
DCM	122273	skin condition Cold
DCM	122274	skin condition Dry
DCM	122275	skin condition Clammy
DCM	122276	skin condition Diaphoretic
DCM	122277	skin condition Flush
DCM	122278	skin condition Mottled
DCM	122279	skin condition Pale

CID 3448 Airway Assessment

Context ID 3448
Airway Assessment
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122281	airway unobstructed
DCM	122282	airway partially obstructed
DCM	122283	airway severely obstructed

CID 3500 Pressure Units

Context ID 3500
Pressure Units
Type: Non-Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
UCUM	mm[Hg]	mmHg
UCUM	Kpa	kPa

CID 3502 Hemodynamic Resistance Units

Context ID 3502
Hemodynamic Resistance Units
Type: Non-Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
UCUM	[PRU]	Wood units
UCUM	dyn.s.cm-5	dyn.s.cm-5

CID 3503 Indexed Hemodynamic Resistance Units

Context ID 3503
Indexed Hemodynamic Resistance Units
Type: Non-Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
UCUM	[PRU].m2	Wood units * m2
UCUM	dyn.s.cm-5.m2	dyn.s.cm-5 * m2

CID 3510 Catheter Size Units

Context ID 3510
Catheter Size Units
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
UCUM	[Ch]	French

UCUM	Mm	mm

CID 3515 Specimen Collection

Context ID 3515
Specimen Collection
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	P3-02000	specimen collection
SRT	PA-20110	collection of blood specimen for laboratory
SRT	PA-2011E	blood sampling from extracorporeal blood circuit

CID 3520 Blood Source Type

Context ID 3520
Blood Source Type
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-00376	Systemic Artery Blood
SRT	T-C2007	Mixed Venous Blood
SRT	R-0035B	Pulmonary Artery Blood
SRT	R-0035E	Pulmonary Vein Blood

CID 3524 Blood Gas Pressures

Context ID 3524
Blood Gas Pressures
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
LN	11557-6	Blood Carbon dioxide partial pressure
LN	2019-8	Arterial Blood Carbon dioxide partial pressure
LN	2021-4	Venous Blood Carbon dioxide partial pressure
LN	11556-8	Blood Oxygen partial pressure
LN	2703-7	Arterial Oxygen partial pressure

LN	2705-2	Venous Oxygen partial pressure
LN	19217-9	Oxygen partial pressure at 50% saturation (P50)
LN	19214-6	Arterial Oxygen partial pressure at 50% saturation
LN	19216-1	Venous Oxygen partial pressure at 50% saturation

CID 3525 Blood Gas Content

Context ID 3525
Blood Gas Content
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
LN	20565-8	Blood Carbon dioxide content
LN	2026-3	Arterial Blood Carbon dioxide content
LN	2027-1	Venous Blood Carbon dioxide content
DCM	122185	Blood Oxygen content
LN	19218-7	Arterial Oxygen content
LN	19220-3	Venous Oxygen content
LN	10232-7	Aortic Root Oxygen content
LN	10245-9	Pulmonary Artery Main Oxygen content
LN	10247-5	Pulmonary Wedge Oxygen content

CID 3526 Blood Gas Saturation

Context ID 3526
Blood Gas Saturation
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122187	Blood Carbon dioxide saturation
LN	20564-1	Blood Oxygen saturation
LN	2708-6	Arterial Oxygen saturation
LN	2711-0	Venous Oxygen saturation
LN	2709-4	Capillary Blood Oxygen Saturation
LN	2710-2	Capillary Blood Oxygen Saturation, by Oximetry

CID 3527 Blood Base Excess

Context ID 3527
Blood Base Excess
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
LN	11555-0	Blood Base Excess
LN	1925-7	Arterial Blood Base Excess
LN	1927-3	Venous Blood Base Excess

CID 3528 Blood pH

Context ID 3528
Blood pH
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
LN	11558-4	Blood pH
LN	2744-1	Arterial Blood pH
LN	2746-6	Venous Blood pH

CID 3529 Arterial / Venous Content

Context ID 3529
Arterial / Venous Content
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
LN	19218-7	Arterial Content (FCa)
LN	19220-3	Venous Content (FCv)
DCM	122188	Pulmonary Arterial Content (FCpa)
DCM	122189	Pulmonary Venous Content (FCpv)

CID 3530 Oxygen Administration Actions

Context ID 3530
Oxygen Administration Actions
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121161	Begin oxygen administration
DCM	121162	End oxygen administration

CID 3531 Oxygen Administration

Context ID 3531
Oxygen Administration
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-0034A	Oxygen Administration by nasal canula
SRT	R-00349	Oxygen Administration by mask
DCM	121163	Oxygen Administration by ventilator

CID 3550 Circulatory Support Actions

Context ID 3550
Circulatory Support Actions
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121157	Begin Circulatory Support
DCM	121158	End Circulatory Support

CID 3551 Ventilation Actions

Context ID 3551
Ventilation Actions
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121168	Begin Ventilation
DCM	121169	End Ventilation

CID 3552 Pacing Actions

Context ID 3552
Pacing Actions

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
DCM	121166	Begin Pacing
DCM	121167	End Pacing

CID 3553 Circulatory Support

Context ID 3553
Circulatory Support

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
SRT	A-28051	Intra-Aortic Balloon Pump
SRT	R-00303	External Counter-Pulsation
SRT	A-11FCD	Left Ventricular Assist Device
SRT	P2-77110	Extra-corporeal circulation
SRT	P1-36858	Cardiopulmonary bypass

CID 3554 Ventilation

Context ID 3554
Ventilation

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-002CC	Ambu Bag
SRT	R-00359	Pressure Support Ventilator
SRT	R-0038C	Volume Support Ventilator

CID 3555 Pacing

Context ID 3555
Pacing

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
SRT	P2-35000	Pacing
SRT	R-00315	pacing with magnet
SRT	P2-35200	atrial pacing
SRT	P2-35002	ventricular pacing
SRT	R-002D9	A-V sequential pacing
SRT	P2-35440	temporary transcutaneous pacing

CID 3560 Blood Pressure Methods

Context ID 3560
Blood Pressure Methods

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-00318	Blood pressure cuff method

CID 3600 Relative times

Context ID 3600
Relative times

Type: Non-Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-407E0	Before
SRT	R-407E1	During
SRT	R-42517	After

CID 3602 Hemodynamic Patient State

Context ID 3602
Hemodynamic Patient State

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
SRT	F-01602	Baseline state
SRT	F-10340	Supine body position
SRT	F-01604	Resting state
SRT	F-01606	Exercise state
SRT	F-01608	Post-exercise state

CID 3604 Arterial lesion locations

Context ID 3604
Arterial lesion locations

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
INCLUDE CID 3015 Coronary Arteries		
INCLUDE CID 3606 Arterial source locations		

CID 3606 Arterial source locations

Context ID 3606
Arterial source locations
Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
SRT	T-42500	Abdominal aorta
SRT	T-45530	anterior communicating artery
SRT	T-45530	anterior spinal artery
SRT	T-42000	Aorta
SRT	T-42300	Aortic Arch
SRT	D3-81922	Aortic fistula
SRT	T-41000	Artery (NOS)

SRT	T-42100	Ascending aorta
SRT	T-47100	Axillary Artery
SRT	A-00203	Baffle
SRT	T-45800	basilar artery
SRT	T-47160	Brachial artery
SRT	T-46010	brachiocephalic trunk
SRT	T-45010	Carotid Artery
SRT	T-45510	cerebral artery
SRT	T-45100	Common carotid artery
SRT	T-43000	Coronary Artery (NOS)
SRT	T-42400	Descending aorta
SRT	T-45240	facial artery
SRT	T-47400	Femoral artery
SRT	D4-32504	Fistula coronary to left atrium
SRT	D4-32506	Fistula coronary to left ventricle
SRT	D4-32508	Fistula coronary to right atrium
SRT	D4-32510	Fistula coronary to right ventricle
SRT	T-47490	geniculate artery
SRT	T-46420	Hepatic artery
SRT	T-46700	Iliac artery
SRT	T-46010	Innominate artery
SRT	T-45300	internal carotid artery
SRT	T-46200	Internal mammary artery
SRT	T-45410	lactrimal artery
SRT	T-47651	lateral plantar artery
SRT	T-44400	Left pulmonary artery
SRT	T-45230	lingual artery
SRT	T-46960	lumbar artery
SRT	T-46500	mesenteric artery
SRT	T-47661	medial plantar artery
SRT	T-F7001	Neo-aorta (primitive aorta)
SRT	T-F7040	Neonatal pulmonary artery (primitive PA)
SRT	T-45250	occipital artery
SRT	T-45400	ophthalmic artery
SRT	D4-32012	patent ductus arteriosus
SRT	T-47630	peroneal artery
SRT	T-47500	popliteal artery
SRT	T-45320	posterior communicating artery
SRT	R-F5517	Pulmonary arteriovenous fistula
SRT	T-44000	Pulmonary artery

SRT	D4-33142	Pulmonary artery conduit
SRT	R-00360	Pulmonary vein wedge
SRT	T-47300	radial artery
SRT	T-46600	Renal artery
SRT	T-47410	Right femoral artery
SRT	T-44200	Right pulmonary artery
SRT	T-46100	Subclavian Artery
SRT	T-45270	superficial temporal artery
SRT	T-45270	superior thyroid artery
SRT	T-44007	Systemic collateral Artery to lung
SRT	T-42070	Thoracic aorta
SRT	T-4704C	tibial artery
SRT	D4-31400	Truncus Arteriosus Communis
SRT	T-88810	Umbilical artery
SRT	T-45700	Vertebral artery

CID 3607 Venous Source locations

1725

Context ID 3607
Venous Source locations
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	T-48503	Anomalous pulmonary vein
SRT	T-49215	Antecubital Vein (NOS)
SRT	T-49110	Axillary vein
SRT	T-48340	Azygos vein
SRT	T-48052	Basilic vein
SRT	T-49424	Boyd perforating vein
SRT	T-49350	Brachial vein
SRT	T-48003	Central venous system
SRT	T-49240	cephalic vein
SRT	T-49429	Dodd perforating vein
SRT	T-49410	Femoral vein
SRT	T-48820	gastric vein
SRT	T-48720	hepatic vein
SRT	T-4942A	Hunterian perforating vein
SRT	T-48710	Inferior Vena cava
SRT	T-48620	Innominate vein

SRT	T-4884A	mesenteric vein
SRT	T-48810	portal vein
SRT	T-49535	posterior medial tributary
SRT	T-48500	Pulmonary vein
SRT	D4-33512	Pulmonary vein confluence
SRT	T-48740	Renal vein
SRT	T-D930A	Saphenofemoral junction
SRT	T-49530	Saphenous vein
SRT	T-48890	splenic vein
SRT	T-48330	Subclavian vein
SRT	T-48610	Superior vena cava
SRT	T-48817	Umbilical vein
SRT	T-48000	Vein (NOS)
SRT	R-003AA	Vena anonyma
SRT	T-48710	Vena jugularis interna

CID 3608 Atrial source locations

Context ID 3608
Atrial source locations
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	A-00203	Baffle
SRT	D4-31320	Common atrium
SRT	T-32320	Coronary sinus
SRT	D4-31052	Juxtaposed appendage
SRT	T-32300	Left atrium
SRT	G-DB27	Pulmonary artery wedge
SRT	G-DB26	Pulmonary capillary wedge
SRT	D4-33514	Pulmonary venous atrium
SRT	T-32190	Pulmonary chamber in cor triatriatum
SRT	T-32200	Right Atrium
SRT	D4-33516	Systemic venous atrium

CID 3609 Ventricular source locations

Context ID 3609
Ventricular source locations
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	T-32400	Common ventricle
SRT	T-32600	Left ventricle
SRT	T-32602	Left ventricle apex
SRT	T-32640	Left ventricle inflow
SRT	D4-31022	Left ventricle outflow chamber
SRT	T-32650	Left ventricle outflow tract
SRT	T-32500	Right ventricle
SRT	T-32502	Right ventricle apex
SRT	T-32540	Right ventricle inflow
SRT	D4-31032	Right ventricle outflow chamber
SRT	T-32550	Right ventricle outflow tract

CID 3610 Gradient Source Locations

Context ID 3610
Gradient Source Locations
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	T-35300	Mitral Valve
SRT	T-35400	Aortic Valve
SRT	T-35100	Tricuspid valve
SRT	T-35200	Pulmonary valve
SRT	T-44000	Pulmonary artery
SRT	T-32650	Left ventricle outflow tract
SRT	T-32550	Right ventricle outflow tract
SRT	D4-31150	Ventricular Septal defect
SRT	D4-31220	Atrial Septal defect
SRT	D4-32014	Coarctation of aorta

CID 3611 Pressure Measurements

Context ID 3611
Pressure Measurements
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	109016	A wave peak pressure
DCM	122196	C wave pressure
LN	8462-4	Intravascular diastolic blood pressure
DCM	109020	Diastolic pressure, average
DCM	109021	Diastolic pressure, nadir
DCM	122191	Ventricular End Diastolic pressure
DCM	122197	Gradient pressure, average
DCM	122198	Gradient pressure, peak
DCM	109027	Mean blood pressure
DCM	122199	Pressure at dp/dt max
LN	8480-6	Intravascular Systolic Blood pressure
DCM	109032	Systolic pressure, average
DCM	109033	Systolic peak pressure
DCM	109034	V wave peak pressure
DCM	122208	x-descent pressure
DCM	122209	y-descent pressure
DCM	122210	z-point pressure

CID 3612 Blood Velocity Measurements

Context ID 3612
Blood Velocity Measurements
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122201	Diastolic blood velocity, mean
DCM	122202	Diastolic blood velocity, peak
DCM	122203	Systolic blood velocity, mean
DCM	122204	Systolic blood velocity, peak
DCM	122205	Blood velocity, mean
DCM	122206	Blood velocity, minimum
DCM	122207	Blood velocity, peak

CID 3613 Hemodynamic Time Measurements

Context ID 3613
Hemodynamic Time Measurements
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122182	R-R interval
DCM	109072	Tau
DCM	122211	Left Ventricular ejection time
DCM	122212	Left Ventricular filling time
DCM	122213	Right Ventricular ejection time
DCM	122214	Right Ventricular filling time
DCM	109071	Indicator mean transit time

CID 3614 Valve Areas, non-Mitral

Context ID 3614
Valve Areas, non-Mitral
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	F-0231F	Aortic Valve Area
SRT	F-02321	Pulmonic Valve Area
SRT	F-02322	Tricuspid Valve Area
DCM	122160	Derived Non-Valve Area

CID 3615 Valve Areas

Context ID 3615
Valve Areas
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
Include CID 3614		
SRT	F-02320	Mitral Valve Area

CID 3616 Hemodynamic Period Measurements

Context ID 3616
Hemodynamic Period Measurements
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-002D2	Aortic Systolic Ejection Period (SEPa)
SRT	R-0035C	Pulmonary Systolic Ejection Period (SEPp)
SRT	R-0032C	Mitral Diastolic Filling Period (DFPm)
SRT	R-003A9	Tricuspid Diastolic Filling Period (DFPt)
SRT	R-002F5	Derived Period, Non-Valve

CID 3617 Valve Flows

Context ID 3617
Valve Flows
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-002D3	Aortic Valve Flow
SRT	R-0032D	Mitral Valve Flow
SRT	R-0035D	Pulmonary Valve Flow
SRT	R-00385	Tricuspid Valve Flow
SRT	R-00394	Derived Flow, Non-Valve

CID 3618 Hemodynamic Flows

Context ID 3618
Hemodynamic Flows
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122161	Pulmonary Flow
DCM	122162	Systemic Flow

CID 3619 Hemodynamic Resistance Measurements

Context ID 3619
Hemodynamic Resistance Measurements
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	F-03E86	Pulmonary Vascular Resistance
SRT	F-03E7E	Systemic Vascular Resistance
DCM	122215	Total Pulmonary Resistance
DCM	122216	Total Vascular Resistance

CID 3620 Hemodynamic Ratios

Context ID 3620
Hemodynamic Ratios
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
LN	8581-1	Tibial/brachial index
SRT	F-0238B	Pulmonary/Systemic Flow Ratio
DCM	122217	Coronary Flow reserve
DCM	122218	Diastolic/Systolic velocity ratio
DCM	122219	Hyperemic ratio
SRT	F-031A2	Pulsatility Index
DCM	122220	Hemodynamic Resistance Index
INCLUDE CID 3621 Fractional Flow Reserve		

CID 3621 Fractional Flow Reserve

Context ID 3621
Fractional Flow Reserve
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-00307	Fractional flow reserve
SRT	R-00308	Fractional Flow Reserve using intracoronary bolus
SRT	R-00309	Fractional Flow Reserve using intravenous infusion

CID 3627 Measurement Type

Context ID 3627
Measurement Type
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-002E1	Best value
SRT	R-00317	Mean
SRT	R-00319	Median
SRT	R-0032E	Mode
SRT	R-00355	Point source measurement
SRT	R-00353	Peak to peak
SRT	R-41D27	Visual estimation
DCM	121427	Estimated
DCM	121428	Calculated

CID 3628 Cardiac Output Methods

Context ID 3628
Cardiac Output Methods
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-002E5	Thermal Bath
SRT	R-002E7	Thermal Inline
SRT	R-002E6	Dye Dilution

CID 3629 Procedure Intent

Context ID 3629
Procedure Intent
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-408C3	Diagnostic Intent
SRT	R-41531	Therapeutic Intent
SRT	R-002E9	Combined Diagnostic and Therapeutic Procedure

CID 3630 Cardiovascular Anatomic Locations

Context ID 3630
Cardiovascular Anatomic Locations
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
INCLUDE CID 3606 Arterial Source Locations		
INCLUDE CID 3607 Venous Source Locations		
INCLUDE CID 3608 Atrial Source Locations		
INCLUDE CID 3609 Ventricular Source Locations		
INCLUDE CID 3610 Gradient Source Locations		

CID 3651 Hemodynamic Measurement Phase

This context group is a subset of CID 3250.

Context ID 3651
Hemodynamic Measurement Phase
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	G-7293	Cardiac catheterization baseline phase
SRT	G-729B	Cardiac catheterization post contrast phase
SRT	G-7298	Cardiac catheterization post-intervention phase
SRT	G-929D	Cardiac catheterization test/challenging phase
SRT	R-002E3	Cardiac catheterization gradient assessment phase
SRT	P2-71317	Drug Infusion Challenge
SRT	P2-71310	Exercise challenge
SRT	F-01604	Resting State

CID 3663 Body Surface Area Equations

Context ID 3663
Body Surface Area Equations
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122240	BSA = 0.003207*WT^(0.7285-0.0188 log (WT))*HT^0.3
DCM	122241	BSA = 0.007184*WT^0.425*HT^0.725

DCM	122242	BSA = 0.0235*WT^0.51456*HTcm^0.42246
DCM	122243	BSA = 0.024265*WT^0.5378*HTcm^0.3964
DCM	122244	BSA = (HT * WT/36)^0.5

CID 3664 Oxygen Consumption Equations and Tables

Context ID 3664
Oxygen Consumption Equations and Tables
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122247	VO2male = BSA (138.1 - 11.49 * loge(age) + 0.378*HRf)
DCM	122248	VO2female = BSA (138.1 - 17.04 * loge(age) + 0.378*HRf)
DCM	122249	VO2 = VeSTPD * 10 * (FIO2 - FE02)
DCM	122250	VO2 = 152 * BSA
DCM	122251	VO2 = 175 * BSA
DCM	122252	VO2 = 176 * BSA
DCM	122253	Robertson & Reid table
DCM	122254	Fleisch table
DCM	122255	Boothby table

CID 3666 P50 Equations

Context ID 3666
P50 Equations
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122256	if (prem age< 3days) P50= 19.9
DCM	122257	if (age < 1day) P50= 21.6
DCM	122258	if (age < 30day) P50= 24.6
DCM	122259	if (age < 18y) P50= 27.2
DCM	122260	if (age < 40y) P50= 27.4
DCM	122261	if (age > 60y) P50= 29.3

CID 3667 Framingham Scores

Context ID 3667
Framingham Scores
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122230	10 Year CHD Risk
DCM	122231	Comparative Average 10 Year CHD Risk
DCM	122232	Comparative Low 10 Year CHD Risk

CID 3668 Framingham Tables

Context ID 3668
Framingham Tables
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122233	LDL Cholesterol Score Sheet for Men
DCM	122234	LDL Cholesterol Score Sheet for Women
DCM	122235	Total Cholesterol Score Sheet for Men
DCM	122236	Total Cholesterol Score Sheet for Women

CID 3670 ECG Procedure Types

Context ID 3670
ECG Procedure Types
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	P2-3120A	12-Lead ECG
DCM	122062	15-Lead ECG

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
SRT	P1-00410	Pre-Surgery
SRT	R-00348	Outpatient
SRT	R-0035A	Cardiac Care Unit
SRT	P2-10700	Emergency Department
SRT	R-00302	Murmur
SRT	R-0036E	Routine

CID 3672 Pacemakers

Context ID 3672
Pacemakers
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	D.3.2.6-PAVVI	VVI pacemaker
SCPECG	1.3	D.3.2.6-PAAAI	AAI pacemaker
SCPECG	1.3	D.3.2.6-PAVAT	VAT pacemaker
SCPECG	1.3	D.3.2.6-PAVDD	VDD pacemaker
SCPECG	1.3	D.3.2.6-PADVI	DVI pacemaker
SCPECG	1.3	D.3.2.6-PADDD	DDD pacemaker

CID 3673 Diagnosis

Context ID 3673
Diagnosis
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	5.4.5-32-1	Apparently healthy
SCPECG	1.3	5.4.5-32-10	Acute myocardial infarction
SCPECG	1.3	5.4.5-32-11	Myocardial infarction
SCPECG	1.3	5.4.5-32-12	Previous myocardial infarction
SCPECG	1.3	5.4.5-32-15	Ischemic heart disease
SCPECG	1.3	5.4.5-32-18	Peripheral vascular disease
SCPECG	1.3	5.4.5-32-20	Cyanotic congenital heart disease
SCPECG	1.3	5.4.5-32-21	Acyanotic congenital heart disease

SCPECG	1.3	5.4.5-32-22	Valvular heart disease
SCPECG	1.3	5.4.5-32-25	Hypertension
SCPECG	1.3	5.4.5-32-27	Cerebrovascular accident
SCPECG	1.3	5.4.5-32-30	Cardiomyopathy
SCPECG	1.3	5.4.5-32-35	Pericarditis
SCPECG	1.3	5.4.5-32-36	Myocarditis
SCPECG	1.3	5.4.5-32-40	Post-operative cardiac surgery
SCPECG	1.3	5.4.5-32-42	Implanted cardiac pacemaker
SCPECG	1.3	5.4.5-32-45	Pulmonary embolism
SCPECG	1.3	5.4.5-32-50	Respiratory disease
SCPECG	1.3	5.4.5-32-55	Endocrine disease
SCPECG	1.3	5.4.5-32-60	Neurological disease
SCPECG	1.3	5.4.5-32-65	Alimentary disease
SCPECG	1.3	5.4.5-32-70	Renal Disease
SCPECG	1.3	5.4.5-32-80	Pre-operative general surgery
SCPECG	1.3	5.4.5-32-81	Post-operative general surgery
SCPECG	1.3	5.4.5-32-90	General medical
SCPECG	1.3	5.4.5-32-100	Other

CID 3675 Other Filters

Context ID 3675
Other Filters
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	5.4.5-29-0	60 Hertz notch filter
SCPECG	1.3	5.4.5-29-1	50 Hertz notch filter
SCPECG	1.3	5.4.5-29-2	Artifact filter
SCPECG	1.3	5.4.5-29-3	Baseline filter

CID 3676 Lead Measurement Technique

Context ID 3676
Lead Measurement Technique
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-002DA	Averaged

SRT	R-0036D	Routine
SRT	R-00319	Median
SRT	R-0036A	Representative
SRT	R-00373	Single Beats

CID 3677 Summary Codes ECG

Context ID 3677
Summary Codes ECG
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	D.3.2-NORM	Normal ECG
SCPECG	1.3	D.3.2-ABECG	Abnormal ECG
SCPECG	1.3	D.3.2-BOECG	Borderline Normal ECG

CID 3678 QT Correction Algorithms

Context ID 3678
QT Correction Algorithms
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	5.10.2.5-7-1	Bazett QT Correction Algorithm
SCPECG	1.3	5.10.2.5-7-2	Hodges QT Correction Algorithm
SCPECG	1.3	5.10.2.5-7-3	Other QT Correction Algorithm

CID 3679 ECG Morphology Descriptions

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

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	5.13.5.1-0	Unknown
SCPECG	1.3	5.13.5.1-1	Positive
SCPECG	1.3	5.13.5.1-2	Negative
SCPECG	1.3	5.13.5.1-3	positive/negative

SCPECG	1.3	5.13.5.1-4	negative/positive
SCPECG	1.3	5.13.5.1-5	positive/negative/positive
SCPECG	1.3	5.13.5.1-6	negative/positive/negative
SCPECG	1.3	5.13.5.1-7	notched M-shaped
SCPECG	1.3	5.13.5.1-8	notched W-shaped

CID 3680 ECG Lead Noise Descriptions

Context ID 3680
ECG Lead Noise Descriptions
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	5.13.5.2-0	AC (mains) noise
SCPECG	1.3	5.13.5.2-2	overrange
SCPECG	1.3	5.13.5.2-4	wander
SCPECG	1.3	5.13.5.2-6	tremor or muscle artifact
SCPECG	1.3	5.13.5.2-8	spikes or sudden jumps
SCPECG	1.3	5.13.5.2-10	electrode loose or off
SCPECG	1.3	5.13.5.2-12	pacemaker
SCPECG	1.3	5.13.5.2-14	interchanged lead

CID 3681 ECG Lead Noise Modifiers

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

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	5-13-5-2-0	None
SCPECG	1.3	5-13-5-2-1	Moderate
SCPECG	1.3	5-13-5-2-2	Severe
SCPECG	1.3	5-13-5-2-3	Unknown

CID 3682 Probability

Context ID 3682
Probability
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	D.2.2-DE	definite
SCPECG	1.3	D.2.2-PR	probable
SCPECG	1.3	D.2.2-PS	possible
SCPECG	1.3	D.2.2-CE	rule out/cannot exclude
SCPECG	1.3	D.2.2-CO	consider
SCPECG	1.3	D.2.2-SS	strongly suggestive
SCPECG	1.3	D.2.2-CW	consistent with
SCPECG	1.3	D.2.2-UN	unknown

CID 3683 Modifiers

Context ID 3683
Modifiers
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	D.2.3-AB	abnormal
SCPECG	1.3	D.2.3-AC	acute
SCPECG	1.3	D.2.3-AF	antero-inferior
SCPECG	1.3	D.2.3-AI	age indeterminate
SCPECG	1.3	D.2.3-AL	anterolateral
SCPECG	1.3	D.2.3-AN	anterior
SCPECG	1.3	D.2.3-AS	anteroseptal
SCPECG	1.3	D.2.3-AT	atrial
SCPECG	1.3	D.2.3-AU	age undetermined
SCPECG	1.3	D.2.3-BA	basal
SCPECG	1.3	D.2.3-BA	borderline abnormal
SCPECG	1.3	D.2.3-BN	borderline normal
SCPECG	1.3	D.2.3-BO	borderline
SCPECG	1.3	D.2.3-CP	complete
SCPECG	1.3	D.2.3-DI	diffuse
SCPECG	1.3	D.2.3-EL	compatible with electrolyte abnormalities
SCPECG	1.3	D.2.3-EV	evolving

SCPECG	1.3	D.2.3-EX	extensive
SCPECG	1.3	D.2.3-HL	high lateral
SCPECG	1.3	D.2.3-IC	incomplete
SCPECG	1.3	D.2.3-IL	inferolateral
SCPECG	1.3	D.2.3-IN	inferior
SCPECG	1.3	D.2.3-IP	inferoposterior
SCPECG	1.3	D.2.3-LA	lateral
SCPECG	1.3	D.2.3-LV	compatible with left ventricular strain
SCPECG	1.3	D.2.3-MA	major
SCPECG	1.3	D.2.3-MD	compatible with myocardial ischemic damage
SCPECG	1.3	D.2.3-MI	minor
SCPECG	1.3	D.2.3-MO	moderate
SCPECG	1.3	D.2.3-ND	nodal
SCPECG	1.3	D.2.3-NO	within normal limits
SCPECG	1.3	D.2.3-NX	may be normal variant
SCPECG	1.3	D.2.3-OL	old
SCPECG	1.3	D.2.3-PE	compatible with pericarditis
SCPECG	1.3	D.2.3-PL	posterolateral
SCPECG	1.3	D.2.3-PO	posterior
SCPECG	1.3	D.2.3-RE	recent
SCPECG	1.3	D.2.3-SE	septal
SCPECG	1.3	D.2.3-SI	sinus
SCPECG	1.3	D.2.3-SN	subendocardial
SCPECG	1.3	D.2.3-SP	subepicardial
SCPECG	1.3	D.2.3-SU	subacute
SCPECG	1.3	D.2.3-SV	supraventricular
SCPECG	1.3	D.2.3-TY	typical
SCPECG	1.3	D.2.3-VE	ventricular
SCPECG	1.3	D.2.3-WI	widespread
SCPECG	1.3	D.2.3-XA	probably acute (recent)
SCPECG	1.3	D.2.3-XO	probably old
SCPECG	1.3	D.2.3-YA	possibly acute (recent)
SCPECG	1.3	D.2.3-YO	possibly old
SCPECG	1.3	D.2.3-YT	atypical

CID 3684 Trend

1955

Context ID 3684
Trend
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	D.2.3-4-SE	serial changes consistent with...
SCPECG	1.3	D.2.3-4-CC	continuing changes of...
SCPECG	1.3	D.2.3-4-OC	occasional
SCPECG	1.3	D.2.3-4-IM	intermittent
SCPECG	1.3	D.2.3-4-TE	temporary
SCPECG	1.3	D.2.3-4-EV	evolving
SCPECG	1.3	D.2.3-4-NE	new
SCPECG	1.3	D.2.3-4-MU	multiple
SCPECG	1.3	D.2.3-4-TR	transient
SCPECG	1.3	D.2.3-4-UF	unifocal
SCPECG	1.3	D.2.3-4-MF	multifocal
SCPECG	1.3	D.2.3-4-FR	frequent

CID 3685 Conjunctive Terms

Context ID 3685
Conjunctive Terms
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	D.2.5-1-AND	and
SCPECG	1.3	D.2.5-1-OR	or
SCPECG	1.3	D.2.5-1-NOT	not
SCPECG	1.3	D.2.5-1-XOR	exclusive or
SCPECG	1.3	D.2.5-3-SER	serial changes of
SCPECG	1.3	D.2.5-3-DEC	decreased in comparison to previous ECG
SCPECG	1.3	D.2.5-3-INC	increased in comparison to previous ECG
SCPECG	1.3	D.2.5-3-UNC	unchanged in comparison to previous ECG
SCPECG	1.3	D.2.5-3-CHG	changed in comparison to previous ECG
SCPECG	1.3	D.2.5-3-DIS	disappeared in comparison to previous ECG
SCPECG	1.3	D.2.5-3-REP	replaced statement reported previously
SCPECG	1.3	D.2.5-3-IMP	improved (compared to)
SCPECG	1.3	D.2.5-3-WRS	worse (compared to)
SCPECG	1.3	D.2.5-4-RES	results in, or causes
SCPECG	1.3	D.2.5-4-SEC	is secondary to
SCPECG	1.3	D.2.5-4-ASS	is associated with
SCPECG	1.3	D.2.5-4-EXC	exclude, rule out, or consider also
SCPECG	1.3	D.2.5-4-WTH	with

SCPECG	1.3	D.2.5-4-ALT	alternating with

CID 3686 ECG Interpretive Statements

Context ID 3686
ECG Interpretive Statements
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	D.3-NORM	normal ECG
SCPECG	1.3	D.3-NLQRS	normal QRS
SCPECG	1.3	D.3-NLP	normal P wave
SCPECG	1.3	D.3-NLSTT	normal ST-T
SCPECG	1.3	D.3-WHNOR	ECG within normal limits for age and sex
SCPECG	1.3	D.3-POSNL	possibly normal ECG
SCPECG	1.3	D.3-BOECG	borderline ECG
SCPECG	1.3	D.3-ABECG	abnormal ECG
SCPECG	1.3	D.3-POSAB	possibly abnormal ECG
SCPECG	1.3	D.3-ABQRS	abnormal QRS
SCPECG	1.3	D.3-ABSTT	abnormal ST-T
SCPECG	1.3	D.3-NFA	normal for age
SCPECG	1.3	D.3-NFB	normal for build
SCPECG	1.3	D.3-ABFA	abnormal for age
SCPECG	1.3	D.3-ABFB	abnormal for build
SCPECG	1.3	D.3-UFB	unusual for build
SCPECG	1.3	D.3-LVH	left ventricular hypertrophy
SCPECG	1.3	D.3-VCLVH	voltage criteria (QRS) for left ventricular hypertrophy
SCPECG	1.3	D.3-RVH	right ventricular hypertrophy
SCPECG	1.3	D.3-VCRVH	voltage criteria (QRS) for right ventricular hypertrophy
SCPECG	1.3	D.3-BVH	biventricular hypertrophy
SCPECG	1.3	D.3-SEHYP	septal hypertrophy
SCPECG	1.3	D.3-PRANT	prominent anterior forces
SCPECG	1.3	D.3-MI	myocardial infarction
SCPECG	1.3	D.3-AMI	anterior myocardial infarction
SCPECG	1.3	D.3-ASMI	anteroseptal myocardial infarction
SCPECG	1.3	D.3-ALMI	anterolateral myocardial infarction
SCPECG	1.3	D.3-LMI	lateral myocardial infarction
SCPECG	1.3	D.3-HLMI	high-lateral myocardial infarction

SCPECG	1.3	D.3-APMI	apical myocardial infarction
SCPECG	1.3	D.3-IMI	inferior myocardial infarction
SCPECG	1.3	D.3-ILMI	inferolateral myocardial infarction
SCPECG	1.3	D.3-IPMI	inferoposterior myocardial infarction
SCPECG	1.3	D.3-IPLMI	inferoposterolateral myocardial infarction
SCPECG	1.3	D.3-PMI	posterior myocardial infarction
SCPECG	1.3	D.3-BBB	unspecified bundle branch block
SCPECG	1.3	D.3-CLBBB	complete left bundle branch block
SCPECG	1.3	D.3-ILBBB	incomplete left bundle branch block
SCPECG	1.3	D.3-ALBBB	atypical left bundle branch block
SCPECG	1.3	D.3-CRBBB	complete right bundle branch block
SCPECG	1.3	D.3-IRBBB	incomplete right bundle branch block
SCPECG	1.3	D.3-IVCD	non-specific intraventricular conduction disturban
SCPECG	1.3	D.3-IVCD>	intraventricular conduction disturbance (QRS>120 ms)
SCPECG	1.3	D.3-IVCD<	minor intraventricular conduction disturbance (QRS<120ms)
SCPECG	1.3	D.3-WPW	Wolf-Parkinson-White syndrome
SCPECG	1.3	D.3-WPWA	Wolf-Parkinson type A
SCPECG	1.3	D.3-WPWB	Wolf-Parkinson type B
SCPECG	1.3	D.3-PREEX	pre-excitation
SCPECG	1.3	D.3-LAFB	left anterior fascicular block
SCPECG	1.3	D.3-LPFB	left posterior fascicular block
SCPECG	1.3	D.3-BIFAS	bifascicular block
SCPECG	1.3	D.3-TRFAS	trifascicular block
SCPECG	1.3	D.3-COPD	consistent with chronic obstructive pulmonary disease
SCPECG	1.3	D.3-PE	pulmonary emphysema
SCPECG	1.3	D.3-QWAVE	Q waves present
SCPECG	1.3	D.3-POORR	poor R-wave progression in precordial leads
SCPECG	1.3	D.3-ABRPR	abnormal R-wave progression
SCPECG	1.3	D.3-PROMR	prominent R waves in right precordial leads
SCPECG	1.3	D.3-DXTRO	dextrocardia
SCPECG	1.3	D.3-LVOLT	low QRS voltages in the frontal and horizontal leads
SCPECG	1.3	D.3-HVOLT	high QRS voltage
SCPECG	1.3	D.3-LVOLF	low voltage in frontal leads
SCPECG	1.3	D.3-LVOLH	low QRS voltages in the horizontal leads
SCPECG	1.3	D.3-HVOLF	high QRS voltages in the frontal leads
SCPECG	1.3	D.3-HVOLH	high QRS voltage in the horizontal leads
SCPECG	1.3	D.3-S1S23	S1 S2 S3 type QRS pattern

SCPECG	1.3	D.3-RSR1	rSr' type in V1 or V2
SCPECG	1.3	D.3-TRNZL	Transition zone in precordial leads displaced to left
SCPECG	1.3	D.3-TRNZR	Transition zone in precordial leads displaced to right
SCPECG	1.3	D.3-MYOPA	compatible with cardiomyopathy
SCPECG	1.3	D.3-MYOCA	compatible with myocarditis
SCPECG	1.3	D.3-CRIMA	criteria for
SCPECG	1.3	D.3-CRIMO	moderate criteria for
SCPECG	1.3	D.3-CRIMI	minimal criteria for
SCPECG	1.3	D.3-SR	sinus rhythm
SCPECG	1.3	D.3-NSR	normal sinus rhythm
SCPECG	1.3	D.3-SARRH	sinus arrhythmia
SCPECG	1.3	D.3-MSAR	marked sinus arrhythmia
SCPECG	1.3	D.3-SVARR	supraventricular arrhythmia
SCPECG	1.3	D.3-STACH	sinus tachycardia
SCPECG	1.3	D.3-ETACH	extreme tachycardia
SCPECG	1.3	D.3-SBRAD	sinus bradycardia
SCPECG	1.3	D.3-EBRAD	extreme bradycardia
SCPECG	1.3	D.3-JTACH	junctional tachycardia
SCPECG	1.3	D.3-SVTAC	supraventricular tachycardia
SCPECG	1.3	D.3-JBRAD	junctional bradycardia
SCPECG	1.3	D.3-SVBRA	supraventricular bradycardia
SCPECG	1.3	D.3-WQTAC	wide QRS tachycardia
SCPECG	1.3	D.3-NQTAC	narrow QRS tachycardia
SCPECG	1.3	D.3-TACHO	tachycardia, origin unknown or not specified
SCPECG	1.3	D.3-BRADO	bradycardia, origin unknown or not specified
SCPECG	1.3	D.3-ARRHY	arrhythmia, origin unknown
SCPECG	1.3	D.3-IRREG	irregular rhythm
SCPECG	1.3	D.3-REGRH	regular rhythm
SCPECG	1.3	D.3-JESCR	junctional escape rhythm
SCPECG	1.3	D.3-VESCR	ventricular escape rhythm
SCPECG	1.3	D.3-ACAR	accelerated atrial rhythm
SCPECG	1.3	D.3-ACVR	accelerated ventricular rhythm
SCPECG	1.3	D.3-ACJR	accelerated junctional rhythm
SCPECG	1.3	D.3-ARHYT	atrial rhythm
SCPECG	1.3	D.3-SVRHY	supraventricular rhythm
SCPECG	1.3	D.3-JRHYT	junctional rhythm
SCPECG	1.3	D.3-VRHYT	ventricular rhythm
SCPECG	1.3	D.3-UNRHY	undetermined rhythm
SCPECG	1.3	D.3-EAR	ectopic atrial rhythm

SCPECG	1.3	D.3-LAR	left atrial rhythm
SCPECG	1.3	D.3-MAR	multifocal atrial rhythm
SCPECG	1.3	D.3-NODRH	nodal rhythm
SCPECG	1.3	D.3-RAR	low right atrial rhythm
SCPECG	1.3	D.3-LGL	Lown-Ganong-Levine syndrome
SCPECG	1.3	D.3-SHTPR	Short PR-interval.
SCPECG	1.3	D.3-AFIB	atrial fibrillation
SCPECG	1.3	D.3-AFLT	atrial flutter
SCPECG	1.3	D.3-ATACH	atrial tachycardia
SCPECG	1.3	D.3-PSVT	paroxysmal supraventricular tachycardia
SCPECG	1.3	D.3-PAT	paroxysmal atrial tachycardia
SCPECG	1.3	D.3-MFAT	multifocal atrial tachycardia
SCPECG	1.3	D.3-RATAC	run of atrial tachycardia
SCPECG	1.3	D.3-RJTAC	run of junctional tachycardia
SCPECG	1.3	D.3-AVNRT	atrioventricular nodal re-entrant tachycardia
SCPECG	1.3	D.3-AVRT	atrioventricular reciprocating tachycardia
SCPECG	1.3	D.3-IDIOR	idioventricular rhythm
SCPECG	1.3	D.3-VFIB	ventricular fibrillation
SCPECG	1.3	D.3-VTACH	ventricular tachycardia
SCPECG	1.3	D.3-RVTAC	run of ventricular tachycardia
SCPECG	1.3	D.3-SVT	sustained ventricular tachycardia
SCPECG	1.3	D.3-NSVT	non-sustained ventricular tachycardia
SCPECG	1.3	D.3-TORSA	torsade des pointes ventricular tachycardia
SCPECG	1.3	D.3-MTACH	multifocal tachycardia
SCPECG	1.3	D.3-VFLT	ventricular flutter
SCPECG	1.3	D.3-ASYST	asystole
SCPECG	1.3	D.3-1AVB	first degree AV block
SCPECG	1.3	D.3-2AVB	second degree AV block
SCPECG	1.3	D.3-3AVB	third degree AV block
SCPECG	1.3	D.3-I2AVB	intermittent second degree AV block
SCPECG	1.3	D.3-A2AVB	alternating second degree AV block
SCPECG	1.3	D.3-AVDIS	AV-dissociation
SCPECG	1.3	D.3-WENCK	Wenckebach phenomenon
SCPECG	1.3	D.3-MOBI2	Mobitz type 2 second degree AV block
SCPECG	1.3	D.3-SAR	sinus arrest
SCPECG	1.3	D.3-SARA	sinus arrest with atrial escape
SCPECG	1.3	D.3-SARSV	sinus arrest with supraventricular escape
SCPECG	1.3	D.3-SARJ	sinus arrest with junctional escape
SCPECG	1.3	D.3-SARV	sinus arrest with ventricular escape
SCPECG	1.3	D.3-SABLK	sino-atrial block

SCPECG	1.3	D.3-SPAUS	sinus pause
SCPECG	1.3	D.3-WANDP	wandering pacemaker
SCPECG	1.3	D.3-LRR	long R-R interval measured
SCPECG	1.3	D.3-OCAP	occasional capture
SCPECG	1.3	D.3-PRC	premature complex(es)
SCPECG	1.3	D.3-APC	atrial premature complex
SCPECG	1.3	D.3-PAC	atrial premature complex
SCPECG	1.3	D.3-BPAC	BPAC blocked premature atrial contraction
SCPECG	1.3	D.3-MAPCS	MAPCS multiple atrial premature complexes
SCPECG	1.3	D.3-VPC	ventricular premature complex
SCPECG	1.3	D.3-PVC	ventricular premature complex
SCPECG	1.3	D.3-MVPCS	multiple premature ventricular complexes
SCPECG	1.3	D.3-RPVCS	run of ventricular premature complexes
SCPECG	1.3	D.3-RVPCS	run of ventricular premature complexes
SCPECG	1.3	D.3-RAPCS	run of atrial premature complexes
SCPECG	1.3	D.3-RJPCS	run of junctional premature complexes
SCPECG	1.3	D.3-VIC	ventricular interpolated complexes
SCPECG	1.3	D.3-MVICS	multiple ventricular interpolated complexes
SCPECG	1.3	D.3-MICS	multiple interpolated complexes
SCPECG	1.3	D.3-SVPC	supraventricular premature complex
SCPECG	1.3	D.3-SVPCS	(multiple) supraventricular premature complexes
SCPECG	1.3	D.3-SVIC	supraventricular interpolated complex(es)
SCPECG	1.3	D.3-ABER	aberrantly conducted complex(es)
SCPECG	1.3	D.3-ABPCS	aberrant premature complexes, origin unknown
SCPECG	1.3	D.3-ABSVC	aberrant complex, possibly supraventricular origin
SCPECG	1.3	D.3-ABSVS	aberrant complexes, possibly supraventricular origin
SCPECG	1.3	D.3-ABASH	aberrant supraventricular complexes, Ashman type
SCPECG	1.3	D.3-JPC	junctional premature complex(es)
SCPECG	1.3	D.3-MJPCS	multiple junctional premature complexes
SCPECG	1.3	D.3-PPVCS	paired ventricular premature complexes
SCPECG	1.3	D.3-PVPCS	paired ventricular premature complexes
SCPECG	1.3	D.3-PAPCS	paired atrial premature complexes
SCPECG	1.3	D.3-PJPCS	paired junctional premature complexes
SCPECG	1.3	D.3-OVPAC	occasional ventricular paced complexes
SCPECG	1.3	D.3-ONPAC	occasional non-paced complexes
SCPECG	1.3	D.3-VBIG	ventricular bigeminy
SCPECG	1.3	D.3-ABIG	atrial bigeminy
SCPECG	1.3	D.3-SVBIG	supraventricular bigeminy
SCPECG	1.3	D.3-BIGU	bigeminal pattern

SCPECG	1.3	D.3-FUSC	fusion complex(es)
SCPECG	1.3	D.3-CAPT	capture complex(es)
SCPECG	1.3	D.3-VEC	ventricular escape complex(es)
SCPECG	1.3	D.3-AEC	atrial escape complex(es)
SCPECG	1.3	D.3-SVEC	supraventricular escape complex(es)
SCPECG	1.3	D.3-JEC	junctional escape complex(es)
SCPECG	1.3	D.3-ESCUN	escape complex, origin unknown
SCPECG	1.3	D.3-VPARA	ventricular parasystole
SCPECG	1.3	D.3-APARA	atrial parasystole
SCPECG	1.3	D.3-VTRIG	ventricular trigeminy
SCPECG	1.3	D.3-ATRIG	atrial trigeminy
SCPECG	1.3	D.3-SVTRI	supraventricular trigeminy
SCPECG	1.3	D.3-TRIGU	trigeminal pattern
SCPECG	1.3	D.3-VQUAG	ventricular quadrigeminy
SCPECG	1.3	D.3-RECIP	reciprocal or re-entrant impulse
SCPECG	1.3	D.3-B2T1	(predominant) 2:1 block
SCPECG	1.3	D.3-B351	(predominant) 3:1 block
SCPECG	1.3	D.3-B4T1	(predominant) 4:1 block
SCPECG	1.3	D.3-B5T1	(predominant) 5:1 block
SCPECG	1.3	D.3-VARBL	variable block
SCPECG	1.3	D.3-EXIBL	exit block
SCPECG	1.3	D.3-ENTBL	entrance block
SCPECG	1.3	D.3-VABL	ventriculo-atrial block
SCPECG	1.3	D.3-BLOCK	unspecified delay or failure of impulse propagation
SCPECG	1.3	D.3-C2T1	(predominant) 2:1 conduction
SCPECG	1.3	D.3-C3T1	(predominant) 3:1 conduction
SCPECG	1.3	D.3-C4T1	(predominant) 4:1 conduction
SCPECG	1.3	D.3-C5T1	(predominant) 5:1 conduction
SCPECG	1.3	D.3-VARCO	variable conduction
SCPECG	1.3	D.3-SVR	slow ventricular response
SCPECG	1.3	D.3-IVR	irregular ventricular response
SCPECG	1.3	D.3-RVR	rapid ventricular response
SCPECG	1.3	D.3-WRV	wide rate variation
SCPECG	1.3	D.3-AAVCO	accelerated AV conduction
SCPECG	1.3	D.3-RETCO	retrograde conduction
SCPECG	1.3	D.3-ANTCO	anterograde conduction
SCPECG	1.3	D.3-ORTCO	orthograde conduction
SCPECG	1.3	D.3-ABBCO	aberrant conduction
SCPECG	1.3	D.3-CONCO	concealed conduction
SCPECG	1.3	D.3-AVREN	AV nodal re-entry

SCPECG	1.3	D.3-CONRE	concealed re-entry
SCPECG	1.3	D.3-RENTR	re-entry phenomenon
SCPECG	1.3	D.3-AECHO	return of impulse to its chamber of origin: the atrium
SCPECG	1.3	D.3-VECHO	return of impulse to its chamber of origin: the ventricle
SCPECG	1.3	D.3-FCOUP	fixed coupling interval
SCPECG	1.3	D.3-VCOUP	variable coupling interval
SCPECG	1.3	D.3-PACE	normal functioning artificial pacemaker
SCPECG	1.3	D.3-PACEA	artificial pacemaker rhythm with 100% capture
SCPECG	1.3	D.3-PACEP	artificial pacemaker rhythm with partial capture
SCPECG	1.3	D.3-PACEF	artificial pacemaker rhythm with underlying atrial fibrilation
SCPECG	1.3	D.3-PACED	demand pacemaker rhythm
SCPECG	1.3	D.3-PACEM	malfunctioning artificial pacemaker
SCPECG	1.3	D.3-EPAVS	electronic pacemaker AV sequential, normal capture
SCPECG	1.3	D.3-EPVC	electronic pacemaker, ventricular capture
SCPECG	1.3	D.3-EPDM	electronic pacemaker, demand mode
SCPECG	1.3	D.3-EPFC	electronic pacemaker, failure to capture
SCPECG	1.3	D.3-EPFS	electronic pacemaker, failure to sense
SCPECG	1.3	D.3-EPARV	bipolar electronic pacemaker at the apex of the right ventricle
SCPECG	1.3	D.3-EPU	unipolar electronic pacemaker
SCPECG	1.3	D.3-EPURV	unipolar electronic pacemaker at the apex of the right ventricle
SCPECG	1.3	D.3-PAA	electronic atrial pacing
SCPECG	1.3	D.3-PAD	dual chamber electronic pacing
SCPECG	1.3	D.3-PAVA	electronic ventricular pacing with atrial sensing
SCPECG	1.3	D.3-PADEM	demand pacing, based upon intrinsic complexes
SCPECG	1.3	D.3-OVPAC	occasional ventricular paced complexes
SCPECG	1.3	D.3-ONPAC	occasional non-paced complexes
SCPECG	1.3	D.3-PAVVI	VVI pacemaker
SCPECG	1.3	D.3-PAAAI	AAI pacemaker
SCPECG	1.3	D.3-PAVAT	VAT pacemaker
SCPECG	1.3	D.3-PAVDD	VDD pacemaker
SCPECG	1.3	D.3-PADVI	DVI pacemaker
SCPECG	1.3	D.3-PADDD	DDD pacemaker
SCPECG	1.3	D.3-ARATE	atrial rate
SCPECG	1.3	D.3-VRATE	ventricular rate
SCPECG	1.3	D.3-RATE	rate, not specified ventricular or atrial
SCPECG	1.3	D.3-RHY	rhythm

SCPECG	1.3	D.3-LAD	left axis deviation of QRS in frontal plane (< -30)
SCPECG	1.3	D.3-RAD	right axis deviation of QRS in frontal plane (> +90)
SCPECG	1.3	D.3-AXL	leftward axis
SCPECG	1.3	D.3-AXR	rightward axis
SCPECG	1.3	D.3-AXIND	QRS axis indeterminate
SCPECG	1.3	D.3-AXSUP	axis shifted superiorly
SCPECG	1.3	D.3-AXPOS	axis shifted posteriorly
SCPECG	1.3	D.3-AXVER	axis vertical in frontal plane
SCPECG	1.3	D.3-AXHOR	horizontal axis in frontal plane
SCPECG	1.3	D.3-TRSLT	transition in horizontal leads shifted leftward
SCPECG	1.3	D.3-TRSRT	transition in horizontal leads shifted rightward
SCPECG	1.3	D.3-CCWRT	counterclockwise rotation
SCPECG	1.3	D.3-CWRT	clockwise rotation
SCPECG	1.3	D.3-ISC	Ischemic
SCPECG	1.3	D.3-INJ	subendocardial injury
SCPECG	1.3	D.3-EPI	epicardial injury
SCPECG	1.3	D.3-STT	ST-T change
SCPECG	1.3	D.3-NST	non-specific ST changes
SCPECG	1.3	D.3-STE	non-specific ST elevation
SCPECG	1.3	D.3-STD	non-specific ST depression
SCPECG	1.3	D.3-RST	reciprocal ST-T changes
SCPECG	1.3	D.3-TAB	T-wave abnormality
SCPECG	1.3	D.3-NT	non-specific T-wave changes
SCPECG	1.3	D.3-NDT	non-diagnostic T abnormalities
SCPECG	1.3	D.3-TNOR	normal T-wave variations
SCPECG	1.3	D.3-DIG	digitalis-effect
SCPECG	1.3	D.3-HTVOL	high T-voltages
SCPECG	1.3	D.3-QUIN	ST-T changes due to quinidine-effect
SCPECG	1.3	D.3-PERIC	ST-T changes compatible with pericarditis
SCPECG	1.3	D.3-STVAG	ST-elevation V1-V3 possibly due to enhanced vagal tone
SCPECG	1.3	D.3-LNGQT	long QT-interval
SCPECG	1.3	D.3-SHTQT	short QT-interval
SCPECG	1.3	D.3-HIGHT	high amplitude T-waves
SCPECG	1.3	D.3-LOWT	low amplitude T-waves
SCPECG	1.3	D.3-INVT	inverted T-waves
SCPECG	1.3	D.3-HPOCA	consider hypocalcemia
SCPECG	1.3	D.3-HPOK	consider hypokalemia
SCPECG	1.3	D.3-HPRCA	consider hypercalcemia
SCPECG	1.3	D.3-HPRK	consider hyperkalemia

SCPECG	1.3	D.3-STDJ	junctional ST depression
SCPECG	1.3	D.3-REPOL	ST-T changes compatible with early repolarization
SCPECG	1.3	D.3-ANEUR	ST-T changes compatible with ventricular aneurysm
SCPECG	1.3	D.3-POSTO	post-operative changes
SCPECG	1.3	D.3-PULM	compatible with pulmonary embolism
SCPECG	1.3	D.3-ACET	related to pacemaker activity
SCPECG	1.3	D.3-NDOC	compatible with endocrine disease
SCPECG	1.3	D.3-METAB	possibly due to metabolic changes
SCPECG	1.3	D.3-IBP	compatible with hypertension
SCPECG	1.3	D.3-CONG	secondary to congenital heart disease
SCPECG	1.3	D.3-VALV	secondary to valvular heart disease
SCPECG	1.3	D.3-RESP	secondary to respiratory disease
SCPECG	1.3	D.3-JUV	juvenile T waves
SCPECG	1.3	D.3-CLIN	interpret with clinical data
SCPECG	1.3	D.3-MYOIN	suggests myocardial infarction, no location specified
SCPECG	1.3	D.3-ISDIG	compatible with ischemia / digitalis effect
SCPECG	1.3	D.3-STNOR	normal variant
SCPECG	1.3	D.3-STPAC	review ST-T analysis for the effects of pacing
SCPECG	1.3	D.3-STPVC	post-extrasystolic T-wave changes
SCPECG	1.3	D.3-LAO	left atrial overload
SCPECG	1.3	D.3-LAE	left atrial enlargement
SCPECG	1.3	D.3-RAO	right atrial overload
SCPECG	1.3	D.3-RAE	right atrial enlargement
SCPECG	1.3	D.3-BAO	bi-atrial overload
SCPECG	1.3	D.3-BAE	bi-atrial enlargement
SCPECG	1.3	D.3-IACD	intra-atrial conduction delay
SCPECG	1.3	D.3-HPVOL	high P-voltages
SCPECG	1.3	D.3-NSPEP	non-specific P wave abnormalities
SCPECG	1.3	D.3-ABPAX	abnormal P-axis
SCPECG	1.3	D.3-UNPAX	unusual P-axis
SCPECG	1.3	D.3-PED	pediatric interpretation
SCPECG	1.3	D.3-RVD	right ventricular dominance
SCPECG	1.3	D.3-ASD	changes compatible with atrial septal defect (ostium secundum)
SCPECG	1.3	D.3-ECD	compatible endocardial cushion defect (ASD ostium primum)
SCPECG	1.3	D.3-EBSTA	compatible with Ebstein's anomaly
SCPECG	1.3	D.3-TCA	compatible with tricuspid atresia
SCPECG	1.3	D.3-ACA	compatible with anomalous location of the coronary

SCPECG	1.3	D.3-HSCAL	all leads half standard calibration (i.e. 5 mm/mV)
SCPECG	1.3	D.3-HSPRE	precordial leads half standard calibration
SCPECG	1.3	D.3-HSLIM	limb leads half standard calibration
SCPECG	1.3	D.3-DSCAL	all leads double standard calibration (i.e. 20 mm/mV)
SCPECG	1.3	D.3-DSPRE	precordial leads double standard calibration
SCPECG	1.3	D.3-DSLIM	limb leads double standard calibration
SCPECG	1.3	D.3-NSCAL	non-standard calibration
SCPECG	1.3	D.3-ARMRE	suspect arm leads reversed
SCPECG	1.3	D.3-LMISP	lead misplacement
SCPECG	1.3	D.3-QCERR	poor data quality, interpretation may be adversely affected
SCPECG	1.3	D.3-AHERR	acquisition/hardware error
SCPECG	1.3	D.3-MEASE	possibly measurement error
SCPECG	1.3	D.3-NOISE	noisy recording
SCPECG	1.3	D.3-WANDR	baseline wander
SCPECG	1.3	D.3-FAULT	faulty lead
SCPECG	1.3	D.3-ARTEF	artifacts
SCPECG	1.3	D.3-SIMUL	input is from simulator or test pattern
SCPECG	1.3	D.3-PINFO	inconsistent or erroneous patient demographic data
SCPECG	1.3	D.3-INCAN	incomplete or no analysis (by the program)
SCPECG	1.3	D.3-NODAT	missing or no data
SCPECG	1.3	D.3-AVJR	AV-junctional rhythm

CID 3687 Electrophysiology Waveform Durations

Context ID 3687
Electrophysiology Waveform Durations
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	5.13.5-5	P Duration
SCPECG	1.3	5.13.5-7	PR Interval
SCPECG	1.3	5.13.5-9	QRS Duration
SCPECG	1.3	5.13.5-11	QT Interval
SCPECG	1.3	5.13.5-13	Q Duration
SCPECG	1.3	5.13.5-15	R Duration
SCPECG	1.3	5.13.5-17	S Duration
SCPECG	1.3	5.13.5-19	R' Duration

SCPECG	1.3	5.13.5-21	S' Duration
SCPECG	1.3	5.13.5-49	Isoelectric Segment duration at the onset of QRS
SCPECG	1.3	5.13.5-51	Isoelectric Segment duration at the end of QRS
SCPECG	1.3	5.13.5-53	Intrisicoid Deflection duration

CID 3688 Electrophysiology Waveform Voltages

Context ID 3688
Electrophysiology Waveform Voltages
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
SCPECG	1.3	5.13.5-23	Q Amplitude
SCPECG	1.3	5.13.5-25	R Amplitude
SCPECG	1.3	5.13.5-27	S Amplitude
SCPECG	1.3	5.13.5-29	R' Amplitude
SCPECG	1.3	5.13.5-31	S' Amplitude
SCPECG	1.3	5.13.5-33	J Point Amplitude
SCPECG	1.3	5.13.5-35	P(+) Amplitude
SCPECG	1.3	5.13.5-37	P(-) Amplitude
SCPECG	1.3	5.13.5-39	T(+) Amplitude
SCPECG	1.3	5.13.5-41	T(-) Amplitude
SCPECG	1.3	5.13.5-57	ST Amplitude at the J-Point plus 20 ms
SCPECG	1.3	5.13.5-59	ST Amplitude at the J-Point plus 60 ms
SCPECG	1.3	5.13.5-61	ST Amplitude at the J-Point plus 80 ms
SCPECG	1.3	5.13.5-63	Amplitude at the J-Point plus 1/16 average R-R
SCPECG	1.3	5.13.5-65	Amplitude at the J-Point plus 1/8 average R-R

CID 3700 Cath Diagnosis

Context ID 3700
Cath Diagnosis
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	D3-13000	Coronary artery disease
SRT	D3-15100	Acute myocardial infarction
SRT	F-37012	Atypical chest pain
SRT	D3-13020	Stable Angina

SRT	D3-12400	Atypical Angina, Variant Angina
SRT	D3-12700	Unstable Angina, Progressive Angina
SRT	D3-13014	Post-infarction angina
SRT	R-00368	Recurrent angina Post-PTCA
SRT	R-00367	Recurrent angina Post-DCA
SRT	R-00369	Recurrent angina Post-Rotational Atherectomy
SRT	R-00366	Recurrent angina Post-Stent
SRT	R-00365	Recurrent angina Post-CABG
SRT	D3-16010	Congestive heart failure
SRT	D2-61100	Pulmonary edema
SRT	D3-00200	cardiogenic shock
SRT	R-002CB	Acute ventricular septal rupture
SRT	D3-29010	Mitral valve disease
SRT	D3-29011	Mitral stenosis
SRT	D3-29012	Mitral regurgitation
SRT	D3-29096	Acute mitral regurgitation
SRT	D3-13021	Silent ischemia
SRT	R-00336	s/p MI positive stress for ischemia
SRT	D3-26000	Myocarditis
SRT	D3-28012	Subacute bacterial endocarditis
SRT	D3-2906A	Idiopathic hypertrophic subaortic stenosis
SRT	D3-40300	Pulmonary hypertension
SRT	D3-29040	Tricuspid valve disease
SRT	D3-29042	Tricuspid regurgitation
SRT	D3-29013	Mitral valve prolapse
SRT	D3-31700	Ventricular tachycardia
SRT	D3-31720	Ventricular fibrillation
SRT	D3-21000	Congestive cardiomyopathy
SRT	D3-02500	Hypertensive heart disease
SRT	D3-22100	Restrictive cardiomyopathy
SRT	D3-90000	Pericardial disease
SRT	D3-90100	Pericardial tamponade
SRT	D3-29020	Aortic valve disease
SRT	D3-29021	Aortic stenosis
SRT	D3-29025	Aortic insufficiency
SRT	D4-31220	Atrial septal defect
SRT	D3-80016	Aortic dissection
SRT	D3-29050	Pulmonic valve disease
SRT	D4-31159	Ventricular septal defect
SRT	D3-83300	Aortic aneurysm

SRT	R-10042	Arhythmia Evaluation
SRT	D3-31520	Atrial fibrillation
SRT	D4-31000	heart disease, congenital
SRT	D3-91030	Constrictive pericarditis

CID 3701 Cardiac Valves and Tracts

Context ID 3701
Cardiac Valves and Tracts
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	T-35300	Mitral Valve
SRT	T-35400	Aortic Valve
SRT	T-35100	Tricuspid valve
SRT	T-35200	Pulmonary valve
SRT	T-32650	Left ventricle outflow tract

CID 3703 Wall Motion

Context ID 3703
Wall Motion
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-00378	Not Evaluated
SRT	R-41198	Unknown
DCM	122288	Not visualized
SRT	R-00344	Normal wall motion
SRT	R-0030D	Hyperkinetic region
SRT	R-4041B	Hypokinesis
SRT	F-32056	Mild Hypokinesis
SRT	R-0032F	Moderate Hypokinesis
SRT	R-00370	Severe Hypokinesis
SRT	F-30004	Akinesis
SRT	F-32052	Dyskinesis

CID 3704 Myocardium Wall Morphology Findings

Context ID 3704
Myocardium Wall Morphology Findings
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122112	Normal Myocardium
SRT	D3-10510	Ventricular Aneurysm
DCM	122113	Scarred Myocardium
DCM	122114	Thinning Myocardium

CID 3705 Chamber Size

Context ID 3705
Chamber Size
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-00343	Normal size cardiac chamber
SRT	R-002C6	Abnormally small cardiac chamber
SRT	R-0032A	Mildly Enlarged cardiac chamber
SRT	R-00331	Moderately Enlarged cardiac chamber
SRT	R-00316	Markedly Enlarged cardiac chamber

CID 3706 Overall Contractility

Context ID 3706
Overall Contractility
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-00341	Normal wall contractility
SRT	R-00398	Hyperkinesis
SRT	R-4041B	Hypokinesis
SRT	F-30004	Akinesis

CID 3707 VSD Description

Context ID 3707
VSD Description
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	D4-31154	Membranous
SRT	R-0033B	Non-restrictive
SRT	D4-31166	Restrictive
SRT	R-40775	None

CID 3709 Aortic Root Description

Context ID 3709
Aortic Root Description
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-0033C	Normal Aortic Root
SRT	R-00301	Enlarged Aortic Root
SRT	R-002CD	Aneurysm of Aortic Root
SRT	R-002D1	Annular Abscess of Aortic Root
SRT	R-003A1	Post Stenotic Dilation
SRT	D3-83660	Ruptured Sinus of Valsalva

CID 3710 Coronary Dominance

Context ID 3710
Coronary Dominance
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	68-1	Left Coronary Dominance
NCDR	2.0b	68-2	Right Coronary Dominance
NCDR	2.0b	68-3	Mixed Coronary Dominance

CID 3711 Valvular Abnormalities

Context ID 3711
Valvular Abnormalities
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	D3-29001	Stenosis
SRT	F-32400	Regurgitation
SRT	R-0030B	Calcified Heart Valve
SRT	R-0030F	Immobile Heart Valve
SRT	R-00305	Heart Valve Flail
SRT	D3-28005	Valvular endocarditis

CID 3712 Vessel Descriptors

Context ID 3712
Vessel Descriptors
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-00389	Ulcerated
SRT	R-0036B	Restenotic
SRT	R-002E2	Bifurcation
SRT	R-002EF	Culprit
SRT	R-002CE	Aneurysmal
SRT	R-002FC	Diffuse Disease
SRT	R-00314	Luminal Irregularities
SRT	R-411C5	Muscle Bridge
SRT	R-10050	Stenotic
SRT	R-10051	Ectatic
SRT	G-A264	Calcified
SRT	M-35100	Thrombus
SRT	R-10048	Tortuous
SRT	R-10049	Stented

CID 3713 TIMI Flow Characteristics

Context ID 3713
TIMI Flow Characteristics
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning	NCDR Equivalent
SRT	R-0037E	0: No Perfusion	106-0, 107-0
SRT	R-0037F	1: Penetration without Perfusion	106-1, 107-1
SRT	R-00381	2: Partial Perfusion	106-2, 107-2
SRT	R-00382	3: Complete Perfusion	106-3, 107-3

CID 3714 Thrombus

Context ID 3714
Thrombus
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-0033A	No Thrombus
SRT	R-00356	Possible Thrombus
SRT	R-002F1	Definite Thrombus
SRT	R-00371	Severe Thrombus

CID 3715 Lesion Morphology

Context ID 3715
Lesion Morphology
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	G-A545	Smooth
SRT	G-A402	Irregular
SRT	R-00335	Multiple Irregularities

CID 3716 Severity

Context ID 3716
Severity
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-40775	None
SRT	R-404FA	Mild
SRT	R-00329	Mild to Moderate
SRT	G-A002	Moderate
SRT	R-00330	Moderate to Severe
SRT	G-A003	Severe

CID 3717 Myocardial Wall Segments

This 17-segment model of left ventricular myocardial wall segments uses the terminology specified in Manuel D. Cerqueira, et al., "Standardized Myocardial Segmentation and Nomenclature for Tomographic Imaging of the Heart", 2001

Context ID 3717
Myocardial Wall Segments
Type: Non-Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	T-32619	left ventricle basal anterior segment
SRT	R-10075	left ventricle basal anteroseptal segment
SRT	R-10076	left ventricle basal inferoseptal segment
SRT	T-32615	left ventricle basal inferior segment
SRT	R-10079	left ventricle basal inferolateral segment
SRT	R-1007A	left ventricle basal anterolateral segment
SRT	T-32617	left ventricle mid anterior segment
SRT	R-10077	left ventricle mid anteroseptal segment
SRT	R-10078	left ventricle mid inferoseptal segment
SRT	T-32616	left ventricle mid inferior segment
SRT	R-1007B	left ventricle mid inferolateral segment
SRT	R-1007C	left ventricle mid anterolateral segment
SRT	T-32613	left ventricle apical anterior segment
SRT	T-32614	left ventricle apical septal segment
SRT	T-32618	left ventricle apical inferior segment
SRT	T-3261C	left ventricle apical lateral segment

SRT	T-32602	apex of left ventricle

CID 3718 Myocardial Wall Segments in Projection

This context group specifies the left ventricular myocardial wall segments as seen in typical right anterior oblique (RAO) and left anterior oblique (LAO) angiographic projections.

Context ID 3718
Myocardial Wall Segments in Projection
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	T-32619	left ventricle basal anterior segment
SRT	T-32634	myocardium of anterolateral region
SRT	T-32636	myocardium of apex of heart
SRT	T-32632	myocardium of diaphragmatic region
SRT	T-32615	left ventricle basal inferior segment
SRT	T-32603	left ventricle basal lateral segment
SRT	T-32633	myocardium of posterolateral region
SRT	T-32637	myocardium of inferolateral region
SRT	T-32614	left ventricle apical septal segment
SRT	T-32601	left ventricular basal septal segment

CID 3719 Canadian Clinical Classification

Context ID 3719
Canadian Clinical Classification
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	50-0	Class 0
NCDR	2.0b	50-I	Class I
NCDR	2.0b	50-II	Class II
NCDR	2.0b	50-IIII	Class III
NCDR	2.0b	50-IV	Class IV

CID 3720 Cardiac History Dates

Context ID 3720
Cardiac History Dates
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	41	Date of Previous Percutaneous Coronary Intervention
NCDR	2.0b	43	Date of Previous Coronary Artery Bypass Graft
NCDR	2.0b	45	Date of Previous Valvular Surgery

CID 3721 Cath Patient History

Context ID 3721
Cath Patient History
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	40	previous precutaneous coronary intervention
NCDR	2.0b	42	previous cardiovascular surgery
NCDR	2.0b	44	previous valvular surgery
NCDR	2.0b	29	family history of coronary artery disease

CID 3722 Diabetic Therapy

Context ID 3722
Diabetic Therapy
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	31-1	Diet
NCDR	2.0b	31-2	Oral Agent Treatment
NCDR	2.0b	31-3	Insulin

CID 3723 MI Types

Context ID 3723
MI Types
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	94-1	Non ST Elevation Myocardial Infarction
NCDR	2.0b	94-2	ST Elevation Myocardial Infarction
NCDR	2.0b	94-0	No documented Myocardial Infarction

CID 3724 Smoking History

Context ID 3724
Smoking History
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	38-0	No History of Smoking
NCDR	2.0b	38-1	Current Smoker
NCDR	2.0b	38-2	Former Smoker

CID 3726 Indications for Coronary Intervention

Context ID 3726
Indications for Coronary Intervention
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning	NCDR Equivalent
DCM	122171	Coronary lesion >= 50% stenosis	
SRT	D3-00200	Cardiogenic Shock	123

CID 3727 Indications for Catheterization

Context ID 3727
Indications for Catheterization
Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	79	cardiogenic shock
NCDR	2.0b	80	valvular heart disease

NCDR	2.0b	81	Arrhythmia
NCDR	2.0b	82	ischemic heart disease
NCDR	2.0b	83	positive functional tests
NCDR	2.0b	84.1	heart disease - transplant
NCDR	2.0b	84.2	heart disease - congenital
NCDR	2.0b	84.3	heart disease - cardiomyopathy
NCDR	2.0b	84.4	heart disease of other etiology

CID 3728 Cath Findings

Context ID 3728
Cath Findings

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
SRT	R-0033F	Normal left heart hemodynamics
SRT	R-00342	Normal right heart hemodynamics
SRT	R-0033E	Normal left and right heart hemodynamics
SRT	R-00340	Normal left ventricular systolic function and wall motion
SRT	R-0033D	Normal coronary arteries
SRT	R-00328	Mild intimal coronary irregularities, no significant stenoses
SRT	R-00374	Single vessel coronary artery disease.
SRT	R-002FE	Double vessel coronary artery disease.
SRT	R-00386	Triple vessel coronary artery disease.
SRT	R-00334	Multi vessel coronary artery disease.
SRT	R-00313	Left main coronary artery disease
SRT	R-00372	Significant coronary bypass graft disease
SRT	D3-29021	Aortic stenosis
SRT	D3-29025	Aortic insufficiency
SRT	D3-29011	Mitral stenosis
SRT	D3-29012	Mitral regurgitation
SRT	R-002F3	Depression of left ventricular systolic function
SRT	R-002C8	Acute mitral regurgitation from chordal rupture
SRT	R-002C7	Acute mitral regurgitation from chordal dysfunction
SRT	R-002CA	Acute mitral regurgitation from papillary muscle rupture
SRT	R-002C9	Acute mitral regurgitation from papillary muscle dysfunction
SRT	D3-29013	Mitral valve prolapse

SRT	D3-2100	Congestive cardiomyopathy
SRT	D3-23000	Hypertrophic cardiomyopathy with obstruction
SRT	D3-20003	Hypertrophic cardiomyopathy without obstruction
SRT	D3-02500	Hypertensive heart disease
SRT	D3-22100	Restrictive cardiomyopathy
SRT	D3-90100	Pericardial tamponade
SRT	D3-91030	Constrictive pericarditis
SRT	D3-40300	Pulmonary hypertension
SRT	D4-31220	Atrial septal defect
SRT	D4-31159	Ventricular septal defect
SRT	R-002CB	Acute ventricular septal rupture
SRT	D4-31000	heart disease - congenital

CID 3729 Admission Status

Context ID 3729
Admission Status

Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	17-1	Referral / Elective
NCDR	2.0b	17-2	Emergency Department
NCDR	2.0b	17-3	Transfer
NCDR	2.0b	17-4	Other

CID 3730 Insurance Payor

Context ID 3730
Insurance Payor

Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	18-1	Government
NCDR	2.0b	18-2	Commercial
NCDR	2.0b	18-3	Health Maintenance Organization
NCDR	2.0b	18-4	None

CID 3733 Primary Cause of Death

Context ID 3733
Primary Cause of Death

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	25-1	Cardiac
NCDR	2.0b	25-2	Neurologic
NCDR	2.0b	25-3	Renal
NCDR	2.0b	25-4	Vascular
NCDR	2.0b	25-5	Infection
NCDR	2.0b	25-6	Pulmonary
NCDR	2.0b	25-7	Valvular
NCDR	2.0b	25-8	Other

CID 3735 Acute Coronary Syndrome Time Period

Context ID 3735
Acute Coronary Syndrome Time Period

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	51-1	<= 6 hours
NCDR	2.0b	51-2	between 6 hours and 24 hours
NCDR	2.0b	51-3	between 24 hours and 7 days

CID 3736 NYHA Classification

Context ID 3736
NYHA Classification

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	47-I	NYHA Class I
NCDR	2.0b	47-II	NYHA Class II
NCDR	2.0b	47-III	NYHA Class III
NCDR	2.0b	47-IV	NYHA Class IV

CID 3737 Non-Invasive Test - Ischemia

Context ID 3737
Non-Invasive Test - Ischemia

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	48-1	Not Done
NCDR	2.0b	48-2	Positive
NCDR	2.0b	48-3	Negative
NCDR	2.0b	48-4	Equivocal
NCDR	2.0b	48-5	Arrhythmia

CID 3738 Pre-Cath Angina Type

Context ID 3738
Pre-Cath Angina Type

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	49-I	Atypical Chest Pain
NCDR	2.0b	49-II	Stable Angina
NCDR	2.0b	49-IIIa	Acute Coronary Syndrome: Unstable Angina
NCDR	2.0b	49-IIIb	Acute Coronary Syndrome: Non ST-Elevation Myocardial Infarction
NCDR	2.0b	49-IIIc	Acute Coronary Syndrome: ST-Elevation Myocardial Infarction

CID 3739 Cath Procedure Type

Context ID 3739
Cath Procedure Type

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning	NCDR Equivalent
SRT	P1-31602	Catheterization of right heart	54-1
SRT	P1-31604	Catheterization of left heart	54-2
SRT	P1-3160A	Catheterization of both left and right heart with graft	
SRT	P1-3160B	Catheterization of both left and right heart	

		without graft	
DCM	122061	Percutaneous Coronary Intervention	54-3

CID 3740 Thrombolytic Administration

Context ID 3740
Thrombolytic Administration
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning	NCDR Equivalent
SRT	R-0037D	Contraindicated	57-1
SRT	R-0037C	Administered less than 3 hours before PCI	57-2
SRT	R-0037A	Administered between 3 and 6 hours before PCI	57-3
SRT	R-0037B	Administered between 6 hours and 7 days before PCI	57-4

CID 3741 Medication Administration, Lab Visit

Context ID 3741
Medication Administration, Lab Visit
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning	NCDR Equivalent
SRT	R-00321	Contraindicated	58-1
SRT	R-0031B	Administered before lab visit	58-2
SRT	R-0031C	Administered during lab visit	58-3
SRT	R-0031A	Administered after lab visit	58-4

CID 3742 Medication Administration, PCI

Context ID 3742
Medication Administration, PCI
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning	NCDR Equivalent
SRT	R-00320	Not Administered	
SRT	R-00321	Contraindicated	59-1
SRT	R-0031F	Administered Prior to Percutaneous	59-2

		Coronary Intervention	
SRT	R-0039A	Administered During Percutaneous Coronary Intervention	59-3
SRT	R-00399	Administered After Percutaneous Coronary Intervention	59-4

CID 3743 Clopidogrel/Ticlopidine Administration

Context ID 3743
Clopidogrel/Ticlopidine Administration

Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning	NCDR Equivalent
SRT	R-00320	Not Administered	60-1
SRT	R-00321	Contraindicated	60-2
SRT	R-0031E	Administered Less than 72 Hours before PCI	60-3
SRT	R-00399	Administered After Percutaneous Coronary Intervention	60-4

CID 3744 EF Testing Method

Context ID 3744
EF Testing Method

Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
SRT	P5-3003A	Cardiac ventriculography
SRT	P5-D3300	Radionuclide ventriculography
SRT	P5-B3081	Adult echocardiography

CID 3745 Calculation Method

Context ID 3745
Calculation Method

Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	121427	Estimated
DCM	121428	Calculated

CID 3746 Percutaneous Entry

Context ID 3746
Percutaneous Entry Site

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	74-1	Percutaneous entry made via femoral artery
NCDR	2.0b	74-2	Percutaneous entry made via brachial artery
NCDR	2.0b	74-3	Percutaneous entry made via radial artery
NCDR	2.0b	74-4	Percutaneous entry made via other artery
NCDR	2.0b	74-5	Percutaneous entry made via venous access

CID 3747 Percutaneous Closure

Context ID 3747
Percutaneous Closure

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	75-0	No closure device used at percutaneous entry
NCDR	2.0b	75-1	Percutaneous entry closed by suture
NCDR	2.0b	75-2	Percutaneous entry closed by sealant
NCDR	2.0b	75-3	Percutaneous entry closed by other mechanism

CID 3748 Angiographic EF Testing Method

Context ID 3748
Angiographic EF Testing Method

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Code Value	Code Meaning
DCM	122059	Single plane Angiography

DCM	122060	Bi-plane Angiography

CID 3749 PCI Procedure Result

Context ID 3749
PCI Procedure Result

Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	100-1	Successful
NCDR	2.0b	100-2	Partially successful
NCDR	2.0b	100-3	Unsuccessful

CID 3750 Previously Dilated Lesion

Context ID 3750
Previously Dilated Lesion

Type: Extensible Version: 20030327

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	108-0	not previously treated
NCDR	2.0b	108-1	balloon only
NCDR	2.0b	108-2	stent only
NCDR	2.0b	108-3	other/any combination

CID 3752 Guidewire Crossing

Context ID 3752
Guidewire Crossing
Type: Extensible Version: 20030327

Coding Scheme Designator	Code Value	Code Meaning
DCM	122301	Guidewire crossing lesion unsuccessful
DCM	122302	Guidewire crossing lesion successful

CID 3754 Vascular Complications

Context ID 3754
Vascular Complications

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	127	Bleeding
NCDR	2.0b	128	Occlusion
NCDR	2.0b	129	Loss of distal pulse
NCDR	2.0b	130	Dissection
NCDR	2.0b	131	Pseudoaneurysm
NCDR	2.0b	132	AV Fistula

CID 3755 Cath Complications

Context ID 3755
Cath Complications

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	123	cardiogenic shock
NCDR	2.0b	124	arrhythmia
NCDR	2.0b	125	Cerebrovascular Accident or Stroke
NCDR	2.0b	126	tamponade
NCDR	2.0b	133	contrast reaction
NCDR	2.0b	134	congestive heart failure
NCDR	2.0b	135	renal failure
NCDR	2.0b	136	Emergency Percutaneous Coronary Intervention
NCDR	2.0b	137	Unplanned Coronary Artery Bypass
SRT		D3-30800	Cardiac arrest

CID 3756 Cath Patient Risk Factors

Context ID 3756
Cath Patient Risk Factors

Type: Extensible **Version: 20030327**

Coding Scheme Designator	Coding Scheme Version	Code Value	Code Meaning
NCDR	2.0b	30	History of congestive heart failure
NCDR	2.0b	31	History of Diabetes
NCDR	2.0b	32	History of renal failure
NCDR	2.0b	33	History of chronic obstructive lung disease
NCDR	2.0b	34	History of cerebrovascular disease
NCDR	2.0b	35	History of peripheral vascular disease
NCDR	2.0b	37	History of Hypertension
NCDR	2.0b	39	History of hypercholesterolemia

Modify the following template definition in PS3.16 Annex C:

Annex C Acquisition Context Templates (Normative)

TID 3403 Catheterization Acquisition Context

TID 3403
Catheterization Acquisition Context

	VT	Concept Name	VM	Req Type	Condition	Value Set Constraint
1	CODE	**EV** (109057, DCM, "Catheterization Procedure Phase")	1	U		BCID (3250) **Catheterization Procedure Phase**
2	CODE	**EV** (109058, DCM, "Contrast Phase")	1	U		BCID (~~3250~~ **3600**) **Relative time**
3	CODE	**EV** (109059, DCM, "Physiological challenges")	1	U		BCID (3271) **Hemodynamic Physiological Challenges**
4	NUM	**EV** (109060, DCM, "Procedure Step Number")	1	U		UNITS=EV("{step}",UCUM, "step")
5	**TEXT**	**EV (121124, DCM, "Procedure Action ID")**	**1**	**U**		

Note: See TID 3100 in Annex A for description of Procedure Action ID used in Row 5.

Annex D DICOM Controlled Terminology Definitions (Normative)

Modify the following term definitions in PS3.16 Annex D:

109016	A wave **peak pressure**	The peak pressure of each heart beat ~~monitored~~ in the atrium caused by the atrial contraction
109017	A wave **pressure,** average	The average of several A wave pressure measurements
109020	Diastolic **pressure,** average	The average of several diastolic **blood pressure** measurements
109021	Diastolic **pressure** nadir	The lowest pressure value ~~on a hemodynamic waveform but~~ excluding any undershoot artifact.
109027	Mean **blood** pressure	The average **blood** pressure value, generally over 2 or more seconds
109028	Peak of thermal ~~CO~~ **cardiac output bolus**	The peak change in blood temperature during a thermal cardiac output measurement.
109031	Start of thermal ~~CO~~ **cardiac output bolus**	The first discernable blood temperature change following the injectate during a thermal cardiac output measurement
109032	Systolic **pressure,** average	The average of several systolic **blood pressure** measurements.
109033	Systolic peak **pressure**	The highest **systolic blood** pressure value ~~on a hemodynamic waveform but~~ excluding any overshoot artifact
109034	V wave **peak pressure**	The peak pressure of each heart beat ~~monitored~~ in the atrium caused by the filling of the atrium.
109035	V wave **pressure,** average	The average of several V wave pressure measurements
109073	V max **myocardial**	Maximum velocity of myocardial contractility

Add the following to PS3.16 Annex D:

121059	Presence Undetermined	Presence or absence of a property is undetermined
121105	Radiation Physicist	Radiation Physicist
121106	Comment	Comment
121109	Indications for Procedure	Indications for Procedure
121110	Patient Presentation	Patient condition at the beginning of a healthcare encounter
121111	Summary	Summary of a procedure, including most significant findings
121112	Source of measurement	Image or waveform used as source for measurement

121113	Complications	Complications from a procedure
121114	Performing Physician	Physician who performed a procedure
121115	Discharge Summary	Summary of patient condition upon Discharge from a healthcare facility
121116	Proximal Finding Site	Proximal Anatomic Location for a differential measurement (e.g., distance or pressure gradient); may be considered subtype of term (G-C0E3, SRT, “Finding Site”)
121117	Distal Finding Site	Distal Anatomic Location for a differential measurement (e.g., distance or pressure gradient); may be considered subtype of term (G-C0E3, SRT, “Finding Site”)
121118	Patient Characteristics	Patient Characteristics (findings)
121120	Cath Lab Procedure Log	Time-stamped record of events that occur during a catheterization procedure
121121	Room identification	Room identification
121122	Equipment identification	Equipment identification
121123	Patient Status or Event	A recorded Patient Status or an event involving a patient
121124	Procedure Action Item ID	Identification of a step, action, or phase of a procedure
121125	DateTime of Recording of Log Entry	DateTime of Recording of an Entry in an Event Log
121126	Performed Procedure Step SOP Instance UID	SOP Instance UID of a DICOM Modality Performed Procedure Step (MPPS) or General Purpose Performed Procedure Step (GPPPS)
121127	Performed Procedure Step SOP Class UID	SOP Class UID for a DICOM Modality Performed Procedure Step (MPPS) or General Purpose Performed Procedure Step (GPPPS) Service
121128	Procedure Action Duration	Duration of a step, action, or phase of a procedure
121130	Start Procedure Action Item	Beginning of a step, action, or phase of a procedure
121131	End Procedure Action Item	End of a step, action, or phase of a procedure
121132	Suspend Procedure Action Item	Suspension of a step, action, or phase of a procedure
121133	Resume Procedure Action Item	Resumption of a step, action, or phase of a procedure
121135	Observation Datetime Qualifier	Concept modifier for the DateTime of Recording of an Entry in an Event Log
121136	DateTime Unsynchronized	Recorded DateTime had its source in a system clock not synchronized to other recorded DateTimes
121137	DateTime Estimated	Recorded DateTime is estimated
121138	Image Acquired	Event of the acquisition of an image
121139	Modality	Type of data acquisition device
121140	Number of Frames	Number of Frames in a multi-frame image
121141	Image Type	Descriptor of an Image
121142	Acquisition Duration	Duration of the acquisition of an image or a waveform
121143	Waveform Acquired	Event of the acquisition of an image
121144	Document Title	Document Title
121145	Description of Material	Description of Material used in a procedure
121146	Quantity of Material	Quantity of Material used in a procedure

121147	Billing Code	Billing Code for materials used in a procedure
121148	Unit Serial Identifier	Unit or Device Serial Identifier
121149	Lot Identifier	Lot Identifier
121150	Device Code	Vendor or local coded value identifying a device
121151	Lesion Identifier	Identification of a Lesion observed during an imaging procedure
121152	Person administering drug/contrast	Person administering drug/contrast
121153	Lesion Risk	Assessment of the risk a coronary lesion presents to the health of a patient
121154	Intervention attempt identifier	Identifier for an attempted Intervention
121155	Deployment	Use of a device to deploy another device
121156	Percutaneous Entry Action	Action of a clinical professional at the site of percutaneous access to a patient's cardiovascular system
121157	Begin Circulatory Support	The action or event of beginning circulatory support for a patient
121158	End Circulatory Support	The action or event of ending circulatory support for a patient
121160	Oxygen Administration Rate	Rate of Oxygen Administration
121161	Begin Oxygen Administration	The action or event of beginning administration of oxygen to a patient
121162	End oxygen administration	The action or event of ending administration of oxygen to a patient
121163	By ventilator	Method of administration of oxygen to a patient by ventilator
121165	Patient Assessment Performed	The action or event of assessing the clinical status of a patient
121166	Begin Pacing	The action or event of beginning pacing support for a patient
121167	End Pacing	The action or event of ending pacing support for a patient
121168	Begin Ventilation	The action or event of beginning ventilation support for a patient
121169	End Ventilation	The action or event of ending ventilation support for a patient
121171	Tech Note	Procedural note originated by a technologist
121172	Nursing Note	Procedural note originated by a nurse
121173	Physician Note	Procedural note originated by a Physician
121174	Procedure Note	General procedural note
121401	Derivation	Method of deriving or calculating a measured value (e.g., mean, or maximum of set)
121402	Normality	Assessment of a measurement relative to a normal range of values; may be considered subtype of term (G-C0F2, SRT, "has interpretation")
121403	Level of Significance	Significance of a measurement
121404	Selection Status	Status of selection of a measurement for further processing or use
121405	Population description	Description of a population of measurements
121406	Reference Authority	Bibliographic or clinical reference for a Description of a population of measurements

121407	Normal Range description	Description of a normal range of values for a measurement concept
121408	Normal Range Authority	Bibliographic or clinical reference for a Description of a normal range of values
121410	User chosen value	Observation value selected by user for further processing or use, or as most representative
121411	Most recent value chosen	Observation value is the recently obtained, and has been selected for further processing or use
121412	Mean value chosen	Observation value is the mean of several measurements, and has been selected for further processing or use
121414	Standard deviation of population	Standard deviation of a measurement in a reference population
121415	Percentile Ranking of measurement	Percentile Ranking of an observation value with respect a reference population
121416	Z-Score of measurement	Z-score of an observation value with respect a reference population, expressed as the dimensionless quantity (x-m)/s, where (x-m) is the deviation of the observation value (x) from the population mean (m), and s is the standard deviation of the population.
121417	2 Sigma deviation of population	2 Sigma deviation of a measurement in a reference population
121420	Equation	Formula used to compute a derived measurement
121421	Equation Citation	Bibliographic reference to a formula used to compute a derived measurement; reference may be to a specific equation in a journal article
121422	Table of Values Citation	Bibliographic reference to a Table of Values used to look up a derived measurement
121423	Method Citation	Bibliographic reference to a method used to compute a derived measurement
121424	Table of Values	A Table of Values used to look up a derived measurement
121425	Index	Factor (divisor or multiplicand) for normalizing a measurement; e.g., body surface area used for normalizing hemodynamic measurements
121427	Estimated	Measurement obtained by observer estimation, rather than with a measurement tool or by calculation
121428	Calculated	Measurement obtained by calculation
122001	Patient called to procedure room	Patient called to procedure room
122002	Patient admitted to procedure room	Patient admitted to procedure room
122003	Patient given pre-procedure instruction	Patient given pre-procedure instruction
122004	Patient informed consent given	Patient informed consent given
122005	Patient advance directive given	Patient advance directive given
122006	Nil Per Os (NPO) status confirmed	Nil Per Os (NPO) status confirmed
122007	Patient assisted to table	Patient assisted to table
122008	Patient prepped and draped	Patient prepped and draped

122009	Patient connected to continuous monitoring	Patient connected to continuous monitoring
122010	Patient transferred to holding area	Patient transferred to holding area
122011	Patient transferred to surgery	Patient transferred to surgery
122012	Patient transferred to CCU	Patient transferred to CCU
122020	Patient disoriented	Patient disoriented
122021	Patient reports nausea	Patient reports nausea
122022	Patient reports discomfort	Patient reports discomfort
122023	Patient reports chest pain	Patient reports chest pain
122024	Patient reports no pain	Patient reports no pain
122025	Patient alert	Patient alert
122026	Patient restless	Patient restless
122027	Patient sedated	Patient sedated
122028	Patient asleep	Patient asleep
122029	Patient unresponsive	Patient unresponsive
122030	Patient has respiratory difficulty	Patient has respiratory difficulty
122031	Patient coughed	Patient coughed
122032	Patient disconnected from continuous monitoring	Patient disconnected from continuous monitoring
122033	Hemostasis achieved	Hemostasis achieved
122034	Hemostasis not achieved – oozing	Hemostasis not achieved – oozing
122035	Hemostasis not achieved – actively bleeding	Hemostasis not achieved – actively bleeding
122036	Patient given post-procedure instruction	Patient given post-procedure instruction
122037	Patient discharged	Patient discharged
122038	Patient pronounced dead	Patient pronounced dead
122039	Patient transferred to morgue	Patient transferred to morgue
122041	Personnel Arrived	Identified personnel or staff arrived in procedure room
122042	Personnel Departed	Identified personnel or staff departed procedure room
122043	Page Sent To	Page sent to identified personnel or staff
122044	Consultation With	Consultation with identified personnel or staff
122045	Office called	Office of identified personnel or staff was called
122046	Equipment failure	Equipment failure
122047	Equipment brought to procedure room	Equipment brought to procedure room
122048	Equipment ready	Equipment ready for procedure
122049	Equipment removed	Equipment removed from procedure room
122052	Bioptome	Device for obtaining biopsy sample
122053	Valvular Intervention	Valvular Intervention
122054	Aortic Intervention	Aortic Intervention
122055	Septal Defect Intervention	Septal Defect Intervention

122056	Vascular Intervention	Vascular Intervention
122057	Myocardial biopsy	Myocardial biopsy
122058	Arterial conduit angiography	Arterial conduit angiography
122059	Single plane Angiography	Single plane Angiography
122060	Bi-plane Angiography	Bi-plane Angiography
122061	Percutaneous Coronary Intervention	Percutaneous Coronary Intervention
122062	15-Lead ECG	15-Lead electrocardiography
122072	Pre-procedure log	Log of events occuring prior to the current procedure
122073	Current procedure evidence	Analysis or measurements for current procedure (purpose of reference to evidence document)
122075	Prior report for current patient	Prior report for current patient
122076	Consumable taken from inventory	Identifier of Consumable taken from inventory
122077	Consumable returned to inventory	Identifier of Consumable returned to inventory
122078	Remaining consumable disposed	Identifier of consumable whose remaining content has been disposed
122079	Consumable unusable	Identifier of Consumable determined to be unusable
122081	Drug start	Identifier of Drug whose administration has started
122082	Drug end	Identifier of Drug whose administration has ended
122083	Drug administered	Identifier of Drug administered as part of procedure
122084	Contrast start	Identifier of Contrast agent whose administration has started
122085	Contrast end	Identifier of Contrast agent whose administration has ended
122086	Contrast administered	Identifier of Contrast agent administered
122087	Infusate start	Identifier of Infusate whose administration has started
122088	Infusate end	Identifier of Infusate whose administration has ended
122089	Device crossed lesion	Action of a device traversing a vascular lesion
122090	Intervention Action	Action of a clinical professional performed on a patient for therapeutic purpose
122091	Volume administered	Volume of Drug, Contrast agent, or Infusate administered
122092	Undiluted dose administered	Undiluted dose of Drug, Contrast agent, or Infusate administered
122093	Concentration	Concentration of Drug, Contrast agent, or Infusate administered
122094	Rate of administration	Rate of Drug, Contrast agent, or Infusate administration
122095	Duration of administration	Duration of Drug, Contrast agent, or Infusate administration
122096	Volume unadministered or discarded	Volume of Drug, Contrast agent, or Infusate unadministered or discarded
122097	Catheter Curve	Numeric parameter of Curvature of Catheter
122098	Transmit Frequency	Transmit Frequency
122099	ST change from baseline	Measured change of patient electrocardiographic ST level relative to baseline measurement
122101	Aneurysm on cited vessel	Anatomic term modifier indicating aneurysm on cited vessel is the subject of the finding

122102	Graft to cited segment, proximal section	Anatomic term modifier indicating proximal section of graft to cited vessel is the subject of the finding
122103	Graft to cited segment, mid section	Anatomic term modifier indicating mid section of graft to cited vessel is the subject of the finding
122104	Graft to cited segment, distal section	Anatomic term modifier indicating distal section of graft to cited vessel is the subject of the finding
122105	DateTime of Intervention	DateTime of Intervention
122106	Duration of Intervention	Duration of Intervention
122107	Baseline Stenosis Measurement	Lesion stenosis measured prior to any interventional procedure
122108	Post-Intervention Stenosis Measurement	Lesion stenosis measured after an interventional procedure
122109	Baseline TIMI Flow	Assessment of perfusion across a coronary lesion measured prior to any interventional procedure
122110	Post-Intervention TIMI Flow	Assessment of perfusion across a coronary lesion measured after an interventional procedure
122111	Primary Intervention Device	Indication that device is the primary (first and/or most significant) device used for interventional therapy of a particular pathology (e.g., lesion)
122112	Normal Myocardium	Normal Myocardium
122113	Scarred Myocardium	Scarred Myocardium
122114	Thinning Myocardium	Thinning Myocardium
122120	Hemodynamics Report	Hemodynamics Report
122121	Atrial pressure measurements	Atrial pressure measurements, report section
122122	Ventricular pressure measurements	Ventricular pressure measurements, report section
122123	Gradient assessment	Gradient assessment, report section
122124	Blood velocity measurements	Blood velocity measurements, report section
122125	Blood lab measurements	Blood lab measurements, report section
122126	Derived Hemodynamic Measurements	Derived Hemodynamic Measurements, report section
122127	Clinical Context	Clinical Context, report section
122128	Patient Transferred From	Location from which the patient was transferred
122129	PCI during this procedure	Indication that the procedure includes a percutaneous coronary intervention
122130	Dose Area Product	Radiation dose times area of exposure
122131	Degree of Thrombus	Finding of probability and/or severity of thrombus
122132	Severity of Calcification	Severity of Calcification, property of lesion
122133	Lesion Morphology	Lesion Morphology; form and/or structural properties of lesion
122134	Vessel Morphology	Vessel Morphology; form and/or structural properties of vessel
122138	Circulatory Support	Technique (device or procedure) of support for patient circulatory system; hemodynamic support
122139	Reason for Exam	Reason for Exam

122140	Comparison with Prior Exam Done	Indication that the current exam data has been compared with prior exam data
122141	Electrode Placement	Electrocardiographic electrode placement technique
122142	Acquisition Device Type	Acquisition Device Type
122143	Acquisition Device ID	Acquisition Device ID
122144	Quantitative Analysis	Quantitative Analysis, report section
122145	Qualitative Analysis	Qualitative Analysis, report section
122146	Procedure DateTime	Procedure DateTime
122147	Clinical Interpretation	Clinical Interpretation, report section
122148	Lead ID	ECG Lead Identifier
122149	Beat Number	Beat Number; ordinal of cardiac cycle within an acquisition
122150	Compound Statement	Complex coded semantic unit, consisting of several coded components
122151	Trend	Trend (temporal progression) of a clinical condition, finding, or disease
122152	Statement	Coded semantic unit
122153	Statement Modifier	Coded modifier for a semantic unit
122154	Conjunctive Term	Conjunctive term between semantic units
122157	Probability	Probability
122158	ECG Global Measurements	ECG Global Measurements, report section
122159	ECG Lead Measurements	ECG Lead Measurements, report section
122160	Derived Area, Non-Valve	Derived cross-sectional area of a vessel or anatomic feature, other than a cardiac valve
122161	Pulmonary Flow	Rate of blood flow through Pulmonary artery
122162	Systemic Flow	Rate of blood flow through the aorta
122163	Discharge DateTime	DateTime of patient discharge from hospital admission
122164	Coronary Artery Bypass During This Admission	Indication that a Coronary Artery Bypass operation was performed during the current hospital admission
122165	Date of Death	Date of Death
122166	Death During This Admission	Indication that the patient died during the current hospital admission
122167	Death During Catheterization	Indication that the patient died during the current Catheterization procedure
122170	Type of Myocardial Infarction	Finding of type of Myocardial Infarction
122171	Coronary lesion >= 50% stenosis	Finding of Coronary lesion with greater than 50% stenosis
122172	Acute MI Present	Finding of Acute Myocardial Infarction Presence as indication for interventional procedure
122173	ST Elevation Onset Datetime	Datetime of first determination of elevated ECG ST segment, as indication of Myocardial Infarction
122175	Number of lesion interventions attempted	Number of lesion interventions attempted during current procedure
122176	Number of lesion interventions successful	Number of lesion interventions successful during current procedure, where the residual post intervention stenosis is less than or equal to 50% of the arterial luminal diameter,

		TIMI Flow is 3 and the minimal decrease in stenosis was 20%.
122177	Procedure Result	Overall success of interventional procedure
122178	Lesion Intervention Information	Lesion Intervention Information, report section
122179	Peri-procedural MI occurred	Indication that Myocardial Infarction occurred during current procedure
122180	CK-MB baseline	Creatine Kinase–MB value at baseline (start of procedure)
122181	CK-MB peak	Creatine Kinase–MB highest value measured during procedure
122182	R-R interval	Time interval between ECG R-wave peaks in subsequent cardiac cycles
122183	Blood temperature	Blood temperature
122185	Blood Oxygen content	Blood Oxygen content
122187	Blood Carbon dioxide saturation	Blood Carbon dioxide saturation
122188	Pulmonary Arterial Content (FCpa)	Pulmonary Arterial Content (FCpa)
122189	Pulmonary Venous Content (FCpv)	Pulmonary Venous Content (FCpv)
122190	Max dp/dt/P	Max dp/dt/P
122191	Ventricular End Diastolic pressure	Ventricular End Diastolic pressure
122192	Indicator appearance time	Elapsed time from injection of an indicator bolus until it is observed at another location
122193	Maximum pressure acceleration	Maximum pressure acceleration
122194	Ventricular Systolic blood pressure	Ventricular Systolic blood pressure
122195	Pulse Strength	Pulse Strength; palpable strength of systolic flow
122196	C wave pressure	The secondary peak pressure in the atrium during atrial contraction
122197	Gradient pressure, average	Gradient pressure, average
122198	Gradient pressure, peak	Gradient pressure, peak
122199	Pressure at dp/dt max	Pressure at dp/dt max
122201	Diastolic blood velocity, mean	Diastolic blood velocity, mean
122202	Diastolic blood velocity, peak	Diastolic blood velocity, peak
122203	Systolic blood velocity, mean	Systolic blood velocity, mean
122204	Systolic blood velocity, peak	Systolic blood velocity, peak
122205	Blood velocity, mean	Blood velocity, mean
122206	Blood velocity, minimum	Blood velocity, minimum
122207	Blood velocity, peak	Blood velocity, peak
122208	x-descent pressure	Venous or atrial pressure minimum during ventricular systole, after A-wave
122209	y-descent pressure	Venous or atrial pressure minimum when tricuspid valve opens during diastole, after V-wave
122210	z-point pressure	atrial pressure upon closure of tricuspid and mitral valves
122211	Left Ventricular ejection time	Left Ventricular ejection time
122212	Left Ventricular filling time	Left Ventricular filling time
122213	Right Ventricular ejection time	Right Ventricular ejection time

122214	Right Ventricular filling time	Right Ventricular filling time
122215	Total Pulmonary Resistance	Total Pulmonary Resistance
122216	Total Vascular Resistance	Total Vascular Resistance
122217	Coronary Flow reserve	Coronary Flow reserve
122218	Diastolic/Systolic velocity ratio	Diastolic/Systolic velocity ratio
122219	Hyperemic ratio	Hyperemic ratio
122220	Hemodynamic Resistance Index	Hemodynamic Resistance Index
122221	Thorax diameter, sagittal	Thorax diameter, sagittal
122222	Procedure Environmental Characteristics	Environmental characteristics in the procedure room
122223	Room oxygen concentration	Oxygen concentration in the procedure room
122224	Room temperature	Temperature in the procedure room
122225	Room Barometric pressure	Barometric pressure in the procedure room
122227	Left to Right Flow	Left to Right Flow
122228	Right to Left Flow	Right to Left Flow
122229	Arteriovenous difference	Arteriovenous oxygen content difference
122230	10 Year CHD Risk	Framingham Study 10 Year CHD Risk
122231	Comparative Average 10 Year CHD Risk	Framingham Study Comparative Average 10 Year CHD Risk
122232	Comparative Low 10 Year CHD Risk	Framingham Study Comparative Low 10 Year CHD Risk
122233	LDL Cholesterol Score Sheet for Men	Framingham Study LDL Cholesterol Score Sheet for Men
122234	LDL Cholesterol Score Sheet for Women	Framingham Study LDL Cholesterol Score Sheet for Women
122235	Total Cholesterol Score Sheet for Men	Framingham Study Total Cholesterol Score Sheet for Men
122236	Total Cholesterol Score Sheet for Women	Framingham Study Total Cholesterol Score Sheet for Women
122237	Corrected Sinus Node Recovery Time	Corrected Sinus Node Recovery Time
122238	Max volume normalized to 50mmHg pulse pressure	Max volume normalized to 50mmHg pulse pressure
122239	Oxygen Consumption	Oxygen Consumption
122240	BSA = 0.003207*WT^(0.7285-0.0188 log (WT))*HT^0.3	Body Surface Area computed from patient height and weight: BSA = 0.003207*WT[kg]^(0.7285-0.0188 log (WT[kg]))*HT[cm]^0.3
122241	BSA = 0.007184*WT^0.425*HT^0.725	Body Surface Area computed from patient height and weight: BSA = 0.007184*WT[kg]^0.425*HT[cm]^0.725 [Dubois and Dubois, Proc Soc Exp Bio NY, 1916]
122242	BSA = 0.0235*WT^0.51456*HT^0.42246	Body Surface Area computed from patient height and weight: BSA = 0.0235*WT[kg]^0.51456*HT[cm]^0.42246
122243	BSA = 0.024265*WT^0.5378*HT^0.3964	Body Surface Area computed from patient height and weight: BSA = 0.024265*WT[kg]^0.5378*HT[cm]^0.3964

122244	BSA = (HT * WT/36)^0.5	Body Surface Area computed from patient height and weight: BSA = (HT[m] * WT[kg]/36)^0.5
122247	VO2male = BSA (138.1 - 11.49 * loge(age) + 0.378*HRf)	Equation for estimated oxygen consumption: VO2male = BSA (138.1 - 11.49 * loge(age) + 0.378*HRf)
122248	VO2female = BSA (138.1 - 17.04 * loge(age) + 0.378*HRf)	Equation for estimated oxygen consumption: VO2female = BSA (138.1 - 17.04 * loge(age) + 0.378*HRf)
122249	VO2 = VeSTPD * 10 * (FIO2 - FE02)	Equation for estimated oxygen consumption: VO2 = VeSTPD * 10 * (FIO2 - FE02)
122250	VO2 = 152 * BSA	Equation for estimated oxygen consumption: VO2 = 152 * BSA
122251	VO2 = 175 * BSA	Equation for estimated oxygen consumption: VO2 = 175 * BSA
122252	VO2 = 176 * BSA	Equation for estimated oxygen consumption: VO2 = 176 * BSA
122253	Robertson & Reid table	Robertson & Reid Table for estimated oxygen consumption
122254	Fleisch table	Fleisch table for estimated oxygen consumption
122255	Boothby table	Boothby table for estimated oxygen consumption
122256	if (prem age< 3days) P50= 19.9	Estimate of Oxygen partial pressure at 50% saturation for premature infants less than 3 days old: P50= 19.9
122257	if (age < 1day) P50= 21.6	Estimate of Oxygen partial pressure at 50% saturation for infants less than 1 day old: P50= 21.6
122258	if (age < 30day) P50= 24.6	Estimate of Oxygen partial pressure at 50% saturation for infants less than 30 days old: P50= 24.6
122259	if (age < 18y) P50= 27.2	Estimate of Oxygen partial pressure at 50% saturation for patients less than 18 years old: P50= 27.2
122260	if (age < 40y) P50= 27.4	Estimate of Oxygen partial pressure at 50% saturation for patients less than 40 years old: P50= 27.4
122261	if (age > 60y) P50= 29.3	Estimate of Oxygen partial pressure at 50% saturation for patients more than 60 years old: P50= 29.3
122262	Area = Flow / 44.5 * sqrt(Gradient[mmHg])	Cardiac valve area computed from flow and pressure gradient: Area = Flow / 44.5 * sqrt(Gradient[mmHg]) [Gorlin and Gorlin, Am Heart J, 1951]
122263	MVA = Flow / 38.0 * sqrt(Gradient[mmHg])	Mitral valve area computed from flow and pressure gradient: Mitral valve Area = Flow / 38.0 * sqrt(Gradient[mmHg]) [Gorlin and Gorlin, Am Heart J, 1951]
122265	BMI = Wt/Ht^2	Body Mass Index computed from weight and height: BMI = Wt/Ht^2
122271	Skin Condition Warm	Skin Condition Warm
122272	Skin Condition Cool	Skin Condition Cool
122273	Skin Condition Cold	Skin Condition Cold
122274	Skin Condition Dry	Skin Condition Dry
122275	Skin Condition Clammy	Skin Condition Clammy
122276	Skin Condition Diaphoretic	Skin Condition Diaphoretic
122277	Skin Condition Flush	Skin Condition Flush
122278	Skin Condition Mottled	Skin Condition Mottled

122279	Skin Condition Pale	Skin Condition Pale
122281	Airway unobstructed	Airway unobstructed
122282	Airway partially obstructed	Airway partially obstructed
122283	Airway severely obstructed	Airway severely obstructed
122288	Not Visualized	Anatomy could not be visualized for the purpose of evaluation
122291	Quantitative Arteriography Report	Quantitative Arteriography Report
122292	Quantitative Ventriculography Report	Quantitative Ventriculography Report
122301	Guidewire crossing lesion unsuccessful	Guidewire crossing lesion unsuccessful
122302	Guidewire crossing lesion successful	Guidewire crossing lesion successful
122303	Angioplasty balloon inflated	Angioplasty balloon inflated
122304	Angioplasty balloon deflated	Angioplasty balloon deflated
122305	Device deployed	Device deployed
122306	Stent re-expanded	Stent re-expanded
122307	Object removed	Object removed
122308	Radiation applied	Radiation applied
122309	Radiation removed	Radiation removed
122310	Interventional device placement unsuccessful	Interventional device placement unsuccessful
122311	Interventional device placed	Interventional device placed
122312	Intervention performed	Intervention performed
122313	Interventional device withdrawn	Interventional device withdrawn
122319	Catheter Size	Catheter Size
122320	Injectate Temperature	Injectate Temperature
122321	Injectate Volume	Injectate Volume
122322	Calibration Factor	Calibration Factor