DICOM CONFORMANCE STATEMENT

FOR

DC-MV/DC-80A/

DC-80A EXP/DC-80A PRO/DC-81/DC-82/DC-90S/ DC-90T/DC-90

NOVA/DC-95S/DC-95T/ DC-95

NOVA/DC-88S/DC-88T/DC-88

NOVA/DC-MS/DC-8X/DC-8Q/DC-90/DC-90Q/ DC-90 EXP/DC-90 PRO/ DC-95/ DC-95 EXP/ DC-95 PRO/DC-88/ DC-88 EXP/ DC-88 PRO

DIAGNOSTIC ULTRASOUND SYSTEM

1 Conformance Statement Overview

This document describes the conformance to the ACR-NEMA DICOM 3.0 Standard by the ultrasound system of DC80A Series. We specify ultrasound system generally refer to the products above in this document. The ultrasound system implements the necessary DICOM services to download worklists from an information system, save acquired Ultrasound (US) images and associated Structured Reports to a network storage device and/or removable media, print to a networked hardcopy device, query and retrieve the US images from a networked storage system, and inform the information system about the works actually done. Table 1 provides an overview of the supported network services, Table 2 lists the supported Media Storage Application Profiles, and Table 3 lists the supported Structured Report Templates.

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actively involved in the development of the DICOM standard,. Therefore, Mindray reserves the right to make changes to its products or to discontinue its delivery.

The Ultrasound System follows the IHE SWF, PDI, ED Profiles.

3.4 Terms and Definitions

- **Abstract Syntax** the information agreed to be exchanged between applications, generally equivalent to a Service/Object Pair (SOP) Class. Examples: Verification SOP Class, Modality Worklist Information Model Find SOP Class, Computed Radiography Image Storage SOP Class.
- **Application Context** the specification of the type of communication used between *Application Entities*. Example: DICOM network protocol.
- **Application Entity (AE)** an end point of a DICOM information exchange, including the DICOM network or media interface software; i.e., the software that sends or receives DICOM information objects or messages. A single device may have multiple Application Entities.
- **Application Entity Title** the externally known name of an *Application Entity*, used to identify a DICOM application to other DICOM applications on the network. The Called AE Title defines the intended receiver of an Association. Nevertheless, the Calling AE Title defines the requestor of an Association.
- **Application Profile** - A Media Storage Application Profile defines a selection of choices at the various layers of the DICOM Media Storage Model which are applicable to a specific need or context in which the media interchange is intended to be performed.
- **Association** a network communication channel set up between *Application Entities*.
- **Association Establishment** - an Association Establishment is the first phase of communication between two DICOM Application Entities. The AEs use the Association Establishment to negotiate how data will be encoded and the type of data to be exchanged.
- **Attribute** a unit of information in an object definition; a data element identified by a *tag*. The information may be a complex data structure (Sequence), itself composed of lower level data elements. Examples: Patient ID (0010,0020), Accession Number (0008,0050), Photometric Interpretation (0028,0004), Procedure Code Sequence (0008,1032).
- **DICOM File Format** - the DICOM File Format provides a means to encapsulate in a File the Data Set representing a SOP Instance related to a DICOM Information Object.
- **DICOM Message Service Element (DIMSE)** a DIMSE defines the services and protocols utilized by an Application Entity to exchange messages.
- **File** - a File is an ordered string of zero or more bytes, where the first byte is at the

beginning of the file and the last byte is at the end of the File. Files are identified by an unique File ID and may by written, read, or deleted.

- **File Meta Information** - the File Meta Information includes identifying information on the encapsulated Data Set. It is a mandatory header at the beginning of every DICOM File.
- **Information Object Definition (IOD)** - the specified set of *Attributes* that comprise a type of data object; does not represent a specific instance of the data object, but rather a class of similar data objects that have the same properties. The *Attributes* may be specified as Mandatory (Type 1), Required but possibly unknown (Type 2), or Optional (Type 3), and there may be conditions associated with the use of an Attribute (Types 1C and 2C). Examples: Print Job IOD.
- **Joint Photographic Experts Group (JPEG)** a set of standardized image compression techniques, available for use by DICOM applications.
- **Module** a set of *Attributes* within an *Information Object Definition* that are logically related to each other. Example: Patient Module includes Patient Name, Patient ID, Patient Birth Date, and Patient Sex.
- **Negotiation** first phase of *Association* establishment that allows *Application Entities* to agree on the types of data to be exchanged and how that data will be encoded.
- **Physical Media** - a piece of material with recording capabilities for streams of bits. Characteristics of a Physical Media include form factor, mechanical characteristics, recording properties and rules for recording and organizing bit streams in accessible structures.
- **Presentation Context** the set of DICOM network services used over an *Association*, as negotiated between *Application Entities*; includes *Abstract Syntaxes* and *Transfer Syntaxes*.
- **Protocol Data Unit (PDU)** a packet (piece) of a DICOM message sent across the network. Devices must specify the maximum size packet they can receive for DICOM messages.
- **Security Profile** a set of mechanisms, such as encryption, user authentication, or digital signatures, used by an *Application Entity* to ensure confidentiality, integrity, and/or availability of exchanged DICOM data
- **Service Class Provider (SCP)** role of an *Application Entity* that provides a DICOM network service; typically, a server that performs operations requested by another *Application Entity* (*Service Class User*). Examples: Picture Archiving and Communication System (image storage SCP, and image query/retrieve SCP), Radiology Information System (modality worklist SCP).
- **Service Class User (SCU)** role of an *Application Entity* that uses a DICOM network service; typically, a client. Examples: imaging modality (image storage SCU, and modality worklist SCU), imaging workstation (image query/retrieve SCU)
- **Service/Object Pair (SOP) Class** the specification of the network or media transfer (service) of a particular type of data (object); the fundamental unit of DICOM

interoperability specification. Examples: Ultrasound Image Storage Service, Basic Grayscale Print Management.

- **Service/Object Pair (SOP) Instance** an information object; a specific occurrence of information exchanged in a *SOP Class*. Examples: a specific x-ray image.
- **Tag** a 32-bit identifier for a data element, represented as a pair of four digit

  the tag is for a private (manufacturer-specific) data element. Examples: (0010,0020) [Patient ID], (07FE,0010) [Pixel Data], (0019,0210) [private data element]
- **Transfer Syntax** the encoding used for exchange of DICOM information objects and messages. Examples: *JPEG* compressed (images), little endian explicit value representation.
- **Unique Identifier (UID)**
  specific object or a class of objects; an ISO-8824 Object Identifier. Examples: Study Instance UID, SOP Class UID, SOP Instance UID.
- **Value Representation (VR)** the format type of an individual DICOM data element,

  can be transmitted with either explicit identification of the type of each data element (Explicit VR), or without explicit identification (Implicit VR); with Implicit VR, the receiving application must use a DICOM data dictionary to look up the format of each data element.

3.5 Acronyms, Abbreviations, and Symbols

The following acronyms and abbreviations are used in this document.

ACR	American College of Radiology
AE	Application Entity
CDR	Compact Disk Recordable
DICOM	Digital Imaging and Communications in Medicine
DIMSE	DICOM Message Service Element
DIMSE-C	DICOM Message Service Element-Composite
FSC	File-Set Creator
FSR	File-Set Reader
FSU	File-Set Updater
HIS	Hospital Information System
IHE	Integrating the Healthcare Enterprise
IOD	Information Object Definition
ISO	International Standard Organization
JPEG	Joint Photographic Experts Group
MODALITY	Ultrasound System
MPPS	Modality Performed Procedure Step

- Storage AE (as SCU and SCP)
- Storage Commitment AE SCU
- Print AE (as SCU)
- Worklist AE (as SCU)
- MPPS AE (as SCU)
- Query/Retrieve AE (as SCU)

4.1.2 Functional Definitions of AE's

4.1.2.1 Verification AE

The ultrasound system supports the Verification service as a SCU and SCP.

As a SCU, verification is activated when the verify button is selected on the dicom service configuration page where the verification results will also be showed to the user.

As a SCP, verification AE waits in the background for connections, will accept associations with Presentation Contexts for SOP Class of the Verification Service Class, and will respond successfully to echo requests.

4.1.2.2 Storage AE

As a SCU, the Storage AE originates associations for the transfer of DICOM Ultrasound single frame images, multi-frame images, secondary capture images, comprehensive structured reports ,and Encapsulated PDFs to remote AE (selected from a pre-configured list)..

The system supports automatic and manual storage.

The operations for automatic storage service are described below:

- Operation 1

ending/printing

Step 2: End Exam, the ended exam (maybe include images, SRs, PDFs) would automatically send to the default storage service SCPs which are set to be default in the DICOM service preset dialog.

- Operation 2

Step 1: Open the system preset dialog and switch to the "key config" tab page.

Step 2: Set the shortcut key which means sending image to the default DICOM storage SCPs.

Step 3: During the examining, the user can press the Send key to send image to default DICOM storage service SCPs.

The operations for manual storage service are described below:

- Operation 1

Step 1: Select the images from thumbnail menu in main UI.

SCPs.

Step 3: Send the images to the DICOM Storage service SCPs.

- Operation 2

Step 1: Select exams in the iStation Dialog.

Step 2: Pr Exam and select DICOM Storage service SCPs.

Step 3: Send the selected exams (maybe include images, SRs, PDFs) to the DICOM Storage service SCPs.

- Operation 3

Step 1: Select thumbnail in the iStation Dialog.

Step 2: SCPs.

Step 3: Send the image to the DICOM Storage service SCPs.

- Operation 4

Step 1: Open the review dialog and select the images.

Step 2: P

Step 3: Send the images to the DICOM Storage service SCPs.

The SR only could be sent in the circumstance as below:

- The exam type is obstetric, gynecology, cardiac, vascular or breast.
- The SR Key for the exam type must be installed in option preset UI.
- Exam is the unit to send.
- The status of the exam is "End", "Paused" or "Cancelled". SR would not be sent when an active exam is selected.
- The DICOM storage service SCPs should be set as "Attach SR when Store Images" or "Only Store SR".

The Encapsulated PDF only could be sent in the circumstance as below:

- Exam is the unit to send.
- The status of the exam is "End", "Paused" or "Cancelled". Encapsulated PDF would not be sent when an active exam is selected.
- The "Encapsulated PDF" should be enabled in DICOM storage service preset.

3D/4D images could send as pre-configuration form:

Table 4
3D/4D Transfer Option

3D/4D Option	SOP Class	SOP Class UID
Normal	US Image Storage	1.2.840.10008.5.1.4.1.1.6.1
	US Multiframe Image Storage	1.2.840.10008.5.1.4.1.1.3.1
Volume	Enhanced US Volume Storage	1.2.840.10008.5.1.4.1.1.6.2
Rawdata	Raw Data Storage	1.2.840.10008.5.1.4.1.1.66

Transfer with Rawdata form is mainly used for MINDRAY 4DViewer to get the raw data of the image and review it.OtherStorage SCP received the image could not review it because the image information is coded in private form..

In the event that the ed in p 60 0 1 294.69BT/F1 9 Tfs3e 6e 1 343.39 639.s3aET 0 0 6(n)4(p 6w)5(e25(i)-4(t

select Search Key. If no matches are found, a dialogue will be presented to the user to indicate so. The user can also change query rules for another query, or for further filter in local database to locate the patients quickly.

As a MovET.

Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1	No	Yes[1]
MR Image Storage	1.2.840.10008.5.1.4.1.1.4	No	Yes[1]
Enhanced MR Image Storage	1.2.840.10008.5.1.4.1.1.4.1	No	Yes[1]
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	Yes	Yes[1]
Comprehensive Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.33	Yes	Yes[1]
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	Yes	Yes[1]
Enhanced US Volume Storage	1.2.840.10008.5.1.4.1.1.6.2	Yes	No
Raw Data Storage	1.2.840.10008.5.1.4.1.1.66	Yes	Yes
Storage Commitment Push Model	1.2.840.10008.1.20.1	Yes	No
Basic Grayscale Print Management Meta	1.2.840.10008.5.1.1.9	Yes	No
Basic Color Print Management Meta SOP Class	1.2.840.10008.5.1.1.18	Yes	No
Basic Film Session SOP Class	1.2.840.10008.5.1.1.1	Yes	No
Basic Film Box SOP Class	1.2.840.10008.5.1.1.2	Yes	No
Basic Grayscale Image Box SOP Class	1.2.840.10008.5.1.1.4	Yes	No
Printer SOP Class	1.2.840.10008.5.1.1.16	Yes	No
Print Job SOP Class	1.2.840.10008.5.1.1.14	Yes	No
Modality Worklist Information Model Find	1.2.840.10008.5.1.4.31	Yes	No
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3	Yes	No
Study Root Query/Retrieve Information Model - Find	1.2.840.10008.5.1.4.1.2.2.1	Yes	No
Study Root Query/Retrieve Information Model - Move	1.2.840.10008.5.1.4.1.2.2.2	Yes	No

Note 1 Yes only used in Query/Retrieve, otherwise No.

4.2.1.2 Association Establishment Policies

4.2.1.2.1General

The DICOM standard application context name for DICOM 3.0 is always proposed:

Table 6

DICOM Application Context for Modality AE

Application Context Name	1.2.840.10008.3.1.1.1

The PDU size is configurable with a minimum size of 16,384 and a maximum size of 65,536. The default PDU size is 32,768.

4.2.1.2.2Number of Associations

The system initiates one Association at a time for each destination to which a transfer request is being processed in the active job queue list. Since Storage and Print tasks are executed within a same thread, when they are selected simultaneously, only one job will be active at a time, the other(s) remain pending until the active job is successful or failed.

Table 7

Number of Associations as an Association Initiator

Maximum number of simultaneous associations	1

4.3.1.1.1.1 Proposed Presentation Contexts

The Verification AE (as SCU) supports the following Presentation Contexts for Verification.

Table 10

Presentation Contexts for Verification

PROPOSED PRESENTATION CONTEXTS					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name**	**UID**		
Verification	1.2.840.10008.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None

4.3.1.1.1.2 SOP Specific Conformance

It summarizes the behavior of Ultrasound System when receiving status codes in a C-ECHO response.

Table 11

Verification C-Echo Response Status Handling Behavior

Service Status	Further Meaning	Error Code

PROPOSED PRESENTATION CONTEXTS					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name**	**UID**		
US Image Storage	1.2.840.10008.5.1.4.1.1.6.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70	SCU	None
		RLE Lossless	1.2.840.10008.1.2.5	SCU	None
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90	SCU	None
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91	SCU	None
US Multiframe Image Storage	1.2.840.10008.5.1.4.1.1.3.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70	SCU	None
		RLE Lossless	1.2.840.10008.1.2.5	SCU	None
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90	SCU	None
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91	SCU	None

		MPEG2 Main Profile @ Main Level	1.2.840.10008.1.2.4.100	SCU	None
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70	SCU	None
		RLE Lossless	1.2.840.10008.1.2.5	SCU	None
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90	SCU	None
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91	SCU	None
Comprehensive Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.33	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70	SCU	None
		RLE Lossless	1.2.840.10008.1.2.5	SCU	None
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90	SCU	None
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91	SCU	None
Encapsulated	1.2.840.100	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None

PDF Storage	08.5.1.4.1.1.104.1	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70	SCU	None
		RLE Lossless	1.2.840.10008.1.2.5	SCU	None
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90	SCU	None
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91	SCU	None
Enhanced US Volume Storage	1.2.840.10008.5.1.4.1.1.6.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70	SCU	None
		RLE Lossless	1.2.840.10008.1.2.5	SCU	None
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90	SCU	None
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91	SCU	None
Raw Data Storage	1.2.840.10008.5.1.4.1.1.66	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCU	None

Explicit VR Big Endian

Warning	Coercion of Data Elements	B000	Image transmission is considered successful but the status meaning is logged.
	Data Set does not match SOP Class	B007	Image transmission is considered successful but the status meaning is logged.
	Elements Discarded	B006	Image transmission is considered successful but the status meaning is logged.
	Any other status code.	xxxx	The Association is aborted using A-ABORT and the send job is marked as failed. The status code is logged and the job failure is reported to the user via task management.

The behavior during communication failure is summarized in the Table below:

Table 14

Storage Communication Failure Behavior

Exception	Behavior
Timeout	The Association is aborted using A-ABORT and the send job is marked as failed. The reason is logged and the job failure is reported to the user via task management.
Association aborted by the SCP or network layers	The send job is marked as failed. The reason is logged and the job failure is reported to the user via task management.

The following tables provide the list of attributes requested in the Storage.

Table 15

US Image IOD

IE	Module
Patient	Patient
Study	General Study
	Patient Study
Series	General Series
Equipment	General Equipment
Image	General Image
	Image Pixel
	US Region Calibration
	US Image
	VOI LUT
	SOP Common

Table 16

US Multi-Frame Image IOD

IE	Module
Patient	Patient
Study	General Study
	Patient Study
Series	General Series
Equipment	General Equipment
Image	General Image
	Image Pixel
	Cine
	Multi-frame
	US Region Calibration
	US Image
	VOI LUT
	SOP Common

Table 17

SC Image IOD

IE	Module
Patient	Patient
Study	General Study
	Patient Study
Series	General Series
Equipment	General Equipment
	SC Equipment
Image	General Image
	Image Pixel
	SC Image
	VOI LUT
	SOP Common

Table 18

Encapsulated PDF IOD

	Multi-frame Dimension
	Acquisition Context
	Enhanced US Image
	SOP Common

Table 21

Patient Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0010,0010)	PN	2	Patient's Name	MWL/USER
(0010,0020)	LO	2	Patient ID	MWL/USER
(0010,0030)	DA	2	Patient's Birth Date	MWL/USER, default is set to zero length
(0010,0040)	CS	2	Patient's Sex	MWL/USER, default is set to zero length
[redacted]				
(0010,2160)	SH	3	Ethnic Group	MWL
(0010,4000)	LT	3	Patient Comments	MWL/USER

Table 22

General Study Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0008,0020)	DA	2	Study Date	AUTO
(0008,0030)	TM	2	Study Time	AUTO

Table 25

Encapsulated Document Series Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0008,0060)	CS	1	Modality	US
(0020,000E)	UI	1	Series Instance UID	AUTO
(0020,0011)	IS	1	Series Number	AUTO
(0008,103E)	LO	3	Series Description	MWL/USER
(0040,0275)	SQ	3	Request Attributes Sequence	MWL
(0040,1001)	SH	1C	>Requested Procedure ID	MWL

Table 26

Enhanced US Series Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0008,0060)	CS	1	Modality	US
(0008,1111)	SQ	1C	Referenced Performed Procedure Step Sequence	MPPS
(0040,0260)	SQ	1C	Performed Protocol Code Sequence	MWL

Table 27

Frame of Reference Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0020,0052)	UI	1	Frame of Reference UID	AUTO
(0020,1040)	LO	2	Position Reference Indicator	Set to zero length

Table 28

Ultrasound Frame of Reffrence Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0020,9312)	UI	1	Volume Frame of Reference UID	AUTO
(0020,9307)	CS	1	Ultrasound Acquisition Geometry	APEX
(0020,9308)	FD	1C	Apex Position	Position of the apex (or phase center) of the acquisition geometry, encoded as xA, yA, and zA in mm units in the Volume

				Frame of Reference.
(0020,9309)	FD	1	Volume to Transducer Mapping Matrix	A 4x4 homogeneous transformation matrix that maps the Volume Frame of Reference coordinate system (XV, YV, ZV) to the Transducer Frame of Reference coordinate system (XX,YX, ZX).

Table 29

Synchronization Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0020,0200)	UI	1	Synchronization Frame of Reference UID	1.2.840.10008.15.1.1
(0018,106A)	CS	1	Synchronization Trigger	EXTERNAL：System is synchronized to the international standard UTC. NO TRIGGER：System is not synchronized.
(0018,1800)	CS	1	Acquisition Time Synchronized	Y：Time Synchronized service is enabled. N：Time Synchronized service is not enabled.
(0018,1802)	CS	3	Time Distribution Protocol	SNTP：Time Synchronized service is enabled. Set to zero length: Time Synchronized service is not enabled.

Table 30

General Equipment Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0008,0070)	LO	2	Manufacturer	MINDRAY
(0008,0080)	LO	3	Institution Name	CONFIG
(0008,1010)	SH	3	Station Name	AUTO-Set to computer name

(0008,1040)	LO	3	Institutional Department Name	CONFIG
(0008,1090)	LO	3	Manufacturer's Model Name	DC-80A
(0018,1000)	LO	3	Device Serial Number	The Ethernet card Mac Address
(0018,1020)	LO	3	Software Version(s)	AUTO

Table 31

SC Equipment Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0008,0060)	CS	3	Modality	US
(0008,0064)	CS	1	Conversion Type	WSD
(0018,1010)	LO	3	Secondary Capture Device ID	DC-80A
(0018,1016)	LO	3	Secondary Capture Device Manufacturer	MINDRAY
(0018,1018)	LO	3	Secondary Capture Device Manufacturer's Model Name	DC-80A
(0018,1019)	LO	3	Secondary Capture Device Software Version(s)	AUTO

Table 32

Enhanced General Equipment Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0008,0070)	LO	1	Manufacturer	MINDRAY
(0008,1090)	LO	1	Model Name	DC-80A
(0018,1000)	LO	1	Device Serial Number	The Ethernet card Mac Address
(0018,1020)	LO	3	Software Versions	AUTO

Table 33

General Image Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0008,0023)	DA	2C	Content Date	AUTO
(0008,0033)	TM	2C	Content Time	AUTO
(0008,2111)	ST	3	Derivation Description	CONFIG, default is set to zero length
(0020,0013)	IS	2	Instance Number	AUTO
(0020,0020)	CS	2C	Patient Orientation	Set to zero length
(0020,4000)	LT	3	Image Comments	Set to zero length
(0028,0301)	CS	3	Burned In Annotation	YES
(0028,2114)	CS	3	Lossy Image Compression Method	ISO_13818_2 if the transfer syntax is MPEG2 MP@ML,otherwise this element is not.used

Table 34

US Image Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0008,0008)	CS	2	Image Type	ORIGINAL/PRIMARY
(0018,5010)	LO	3	Transducer Data	USER
(0018,5020)	LO	3	Processing Function	USER
(0028,0002)	US	1	Samples per Pixel	1 or 3
(0028,0004)	CS	1	Photometric Interpretation	RGB，for color images; MONOCHROME2，if the image is grayscale; YBR_FULL_422，if the image is sent using JPEG Lossy RGB，if the image is sent using JPEG Lossless. YBR_FULL，if the image is sent using RLE Lossless. YBR_ICT，if the image is sent using JPEG 2000 Image Compression.

				YBR_RCT ,if the image is sent using JPEG 2000 Image Compression (Lossless Only) YBR_ PARTIAL_420 ,if the multi-frame image(contains dopper audio) is sent using MPEG2 MP@ML
(0028,0006)	US	1C	Planar Configuration	1, if the image is sent using RLE Lossless 0 otherwise.
(0028,0009)	AT	1C	Frame Increment Pointer	Frame Time
(0028,0014)	US	3	Ultrasound Color Data Present	0 or 1
(0028,0100)	US	1	Bits Allocated	0x0008
(0028,0101)	US	1	Bits Stored	0x0008
(0028,0102)	US	1	High Bit	0x0007
(0028,0103)	US	1	Pixel Representation	0x0000
(0028,2110)	CS	1C	Lossy Image Compression	Not used if image is uncompressed or sent using JPEG Lossless, RLE Lossless, JPEG 2000 Image Compression (Lossless Only) S when the image is sent using JPEGLossy, JPEG 2000 Image Compression or MPEG2 MP@ML

Table 35

SC Image Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0018,1012)	DA	3	Date of Secondary Capture	AUTO
(0018,1014)	TM	3	Time of Secondary Capture	AUTO

Table 36

Image Pixel Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0028,0010)	US	1	Rows	CONFIG
(0028,0011)	US	1	Columns	CONFIG
(0028,0034)	IS	1c	Pixel Aspect Ratio	/
(7FE0,0010)	OW	1	Pixel Data	

Table 37

Image Pixel Module for MPEG2 MP@ML

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0028,0010)	US	1	Rows	CONFIG
(0028,0011)	US	1	Columns	CONFIG
(0028,0034)	IS	1c	Pixel Aspect Ratio	/
(7FE0,0010)	OW	1	Pixel Data	

Table 38

VOI LUT Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0028,1050)	DS	1C	Window Center	AUTO
(0028,1051)	DS	1C	Window Width	AUTO

Table 39

SOP Common Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0008,0005)	CS	1C	Specific Character Set	AUTO
(0008,0012)	DA	3	Instance Creation Date	AUTO
(0008,0013)	TM	3	Instance Creation Time	AUTO
(0008,0016)	UI	1C	SOP Class UID	AUTO
(0008,0018)	UI	1C	SOP Instance UID	AUTO

Table 40

US Region Calibration Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0018,6011)	SQ	1	Sequence of Ultrasound Regions	
>(0018,6012)	US	1	Region Spatial Format	Set by the system
>(0018,6014)	US	1	Region Data Type	Set by the system
>(0018,6016)	UL	1	Region Flags	Set by the system
>(0018,6018)	UL	1	Region Location Min X0	Set by the system
>(0018,6020)	UL	1	Reference Pixel x0	Set by the system
>(0018,6022)	UL	1	ef*225.53 572.62 0.7	

(0018,0040)	IS	3	Cine Rate	CONFIG If the Transfer Syntax is MPEG2 MP@ML, the enumerated values: -30 -25
(0018,0072)	DS	3	Effective Duration	Set by the system
(0018,1063)	DS	1C	Frame Time	Set by the system
(0018,1065)	DS	1C	Frame Time Vector	Set by the system
(0018,1066)	DS	3	Frame Delay	Set by the system
(0018,1242)	IS	3	Actual Frame Duration	Set by the system
(0018,1244)	US	3	Preferred Playback Sequencing	Set by the system
(003A,0300)	SQ	2C	Multiplexed Audio Channels Description Code Sequence	Used if the Transfer Syntax is MPEG2 MP@ML,otherwise not.
(003A,0208)	SQ	1	>Channel Source Sequence	Doppler audio
(0008,0100)	SH	1	>>Code Value	109113
(0008,0102)	SH	1	>>Coding Scheme Designator	DCM
(0008,0104)	LO	1	>>Code Meaning	Doppler audio
(003A,0301)	IS	1	>Channel Identification Code	1
(003A,0302)	CS	1	>Channel Mode	– MONO = 1 signal – STEREO = 2 simultaneously acquired (left and right) signals

Table 42

Multi-Frame Module Used for US Multi-Frame Images Only

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0028,0008)	IS	1	Number of Frames	AUTO
(0028,0009)	AT	1	Frame Increment Pointer	0018 1063 = Frame Time

Table 43

SC Equipment Module Used for Second Capture Images Only

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0008,0060)	CS	3	Modality	US
(0008,0064)	CS	1	Conversion Type	WSD
(0018,1010)	LO	3	Secondary Capture Device ID	DC-80A
(0018,1016)	LO	3	Secondary Capture Device Manufacturer	MINDRAY
(0018,1018)	LO	3	Secondary Capture Device Manufacturer's Model Name	DC-80A
(0018,1019)	LO	3	Secondary Capture Device Software Version(s)	AUTO

Table 44

SC Image Module Used for Second Capture Images Only

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0018,1012)	DA	3	Date of Secondary Capture	AUTO
(0018,1014)	TM	3	Time of Secondary Capture	AUTO

Table 45

Encapsulated Document Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0020,0013)	IS	1	Instance Number	AUTO
(0008,0023)	DA	2	Content Date	AUTO
(0008,0033)	TM	2	Content Time	AUTO
(0008,002A)	DT	2	Acquisition	AUTO

			DateTime	
(0028,0301)	CS	1	Burned In Annotation	YES
(0042,0010)	ST	2	Document Title	The Title of the Document
(0040,A043)	SQ	2	Concept Name Code Sequence	Set to zero length
(0040,A493)	CS	3	Verification Flag	AUTO. UNVERIFIED = Not attested by a legally accountable person. VERIFIED = Attested to (signed) by a Verifying Observer or Legal Authenticator named in the document, who is accountable for its content.
(0042,0012)	LO	1	MIME Type of Encapsulated Document	
(0042,0011)	OB	1	Encapsulated Document	The PDF Document

Table 46

Acquisition Context Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0040,0555)	SQ	2	Acquisition Context Sequence	Set to zero length

Table 47

Raw Data Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0020,0013)	SQ	2	Instance Number	Set to zero length
(0008,0023)	0	1	Content Date	AUTO
(0008,0033)		1	Content Time	AUTO
(0008,9123)		1	Creator-Version UID	AUTO

(5001,0010

			Technique	

(5200,9230)

(0008,0023)	DA	1	Content Date	AUTO
(0008,0033)	TM	1	Content Time	AUTO
(0028,0008)	IS	1	Number of Frames	AUTO

Table 49

Multi-frame Dimension Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0020,9221)	SQ	1	Dimension Organization Sequence	
(0020,9164)	UI	1	>Dimension Organization UID	AUTO
(0020,9222)	SQ	1	Dimension Index Sequence	Including 3 items.
(0020,9165)	AT	1	>Dimension Index Pointer	Item1: 0x0020930d Item2: 0x00209301 Item3: 0x00189808
(0020,9167)	AT	1C	>Functional Group Pointer	Item1: 0x00209310 Item2: 0x0020930e Item3: 0x00189807
(0020,9164)	UI	1C	>Dimension Organization UID	Item1, Item2, Item3: AUTO
(0020,9421)	LO	3	>Dimension Description Label	Item1: Time Item2: Image position(Z) Item3: Data type

Table 50

Enhanced US Image Module

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0008,0008)	CS	1	Image Type	“ORIGINAL/PRIMARY”
(0028,0002)	US	1	Samples Per Pixel	1

(0028,0004)	CS	1	Photometric Interpretation	MONOCHROME2
(0028,0100)	US	1	Bits Allocated	8
(0028,0101)	US	1	Bits Stored	8
(0028,0102)	US	1	High Bit	7
(0028,0103)	US	1	Pixel Representation	0
(0020,9311)	CS	1	Dimension Organization Type	3D or 3D_TEMPORAL :
(0008,002A)	DT	1	Acquisition Datetime	AUTO
(0018,9073)	FD	1	Acquisition Duration	Set by the system
(0028,0030)	DS	1	Pixel Spacing	Set by the system
(0018,980C)	CS	1C	Position Measuring Device Used	FREEHAND
(2050,0020)	CS	1	Presentation LUT Shape	IDENTITY
(0028,1052)	DS	1	Rescale Intercept	0
(0028,1053)	DS	1		

			Designator	
>(0008,0103)	SH	1	Coding Scheme Version	20090409
>(0008,0104)	LO	1	Code Meaning	Sector ultrasound transducer geometry
(0018,980E)	SQ	1	Transducer Beam Steering Code Sequence	

AUTO automatically generated by the MODALITY system

CONFIG - the attribute value source is a configurable parameter

4.3.1.1.3 Activity – Request Storage Commitment

4.3.1.1.3.1 Description and Sequencing of Activities

A possible sequence of interactions between the Storage Commitment AE and a remote AE is illustrated in the Figure 3

Sequencing of Activity Send Storage Request.

4.3.1.1.3.2 Proposed Presentation Contexts

The Storage Commitment AE is capable of proposing the Presentation Contexts shown in the table below:

Table 51

Proposed Presentation Contexts for Activity Request Storage Commitment

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Storage Commitment Push Model	1.2.840.10008.1.20.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None

The Storage Commitment AE will only accept the SCU role within a Presentation Context for the Storage Commitment Push Model SOP Class.

4.3.1.1.3.3 SOP Specific Conformance

4.3.1.1.3.3.1 Storage Commitment Operations (N-ACTION)

The Storage Commitment AE will request storage commitment for the configured device.

The behavior of Storage Commitment AE when receiving N-Action response status codes is summarized in the table below:

Table 52

Storage Commitment N-ACTION Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The request for storage commitment is considered successfully sent. The ultrasound system waits for the N-EVENT-REPORT in background.
*	*	Any other status code.	The request for storage commitment is failed.

The behavior of Storage Commitment AE during communication failure is summarized in the table below:

Table 53

Storage Commitment Communication Failure Behavior

Exception	Behavior
Timeout	The Association is aborted using A-ABORT and the send job is marked as failed.
Association aborted by the SCP or network layers	The send job is marked as failed.

Storage Commitment AE will request storage commitment using the following tags

NOTE: Storage Commitment may only be automatically requested upon successful completion of an end exam storage task,

Table 54

Storage Commitment N-Actiont Request Attributes

Action Type Name	Event Type ID	Attribute	Tag
Storage Commitment Request	1	Transaction UID	(0008,1195)
		Referenced SOP Sequence	(0008,1199)
		>Referenced SOP Class UID	(0008,1150)
		>Referenced SOP Instance UID	(0008,1155)
		Instance Creation Date	(0008,0012)
		Instance Creation Time	(0008,0013)

4.3.1.1.3.3.2 Storage Commitment Notifications (N-EVENT-REPORT)

Storage Commitment AE is capable of receiving an N-EVENT-REPORT on a different association than the one on which the N-ACTION operation was performed.The behavior of Storage Commitment AE when receiving Event Types within the N-EVENT-REPORT is summarized in the table below.

Table 55

Storage Commitment N-Event-Report Behavior

Event Type ID	Behavior
1	The storage Commitment request is considered successful and the storage commitment column of iStation Column is marked with a tick.
2	The storage Commitment request is considered Failed.

The reasons for returning specific status codes in a N-EVENT-REPORT response are summarized in the table below:

Table 56

Storage Commitment N-EVENT-REPORT Response Status Reasons

Service Status	Further Meaning	Error Code	Reasons
Success	Success	0000	The notification event has been successfully received.
Failure	Processing Failure	0110H	An internal error occurred during processing of the N-EVENT-REPORT.

Tags supported for an N-Event-Report message.

Table 57

Storage Commitment N-Event-Report Message Contents

EVENT TYPE NAME	EVENT TYPE ID	ATTRIBUTE	TAG	REQUIREMENT TYPE SCP
Storage Commitment Request Successful	1	Transaction UID	(0008,1195)	1
		Referenced SOP Sequence	(0008,1199)	1
		>Referenced SOP Class UID	(0008,1150)	1
		>Referenced SOP Instance UID	(0008,1155)	1
Storage Commitment Request Complete Failures Exist	2	Transaction UID	(0008,1195)	1
		Referenced SOP Sequence	(0008,1199)	1
		>Referenced SOP Class UID	(0008,1150)	1
		>Referenced SOP Instance UID	(0008,1155)	1
		Failed SOP Sequence	(0008,1198)	1
		>Referenced SOP Class UID	(0008,1150)	1
		>Referenced SOP Instance UID	(0008,1155)	1
		>Failure Reason	(0008,1197)	1

4.3.1.1.4 Activity – Film Images

4.3.1.1.4.1 Description and Sequencing of Activities

A user composes images onto film sheets and requests them to be sent to a specific hardcopy device. The user can select the desired film format and number of es TJEfilm formatcifr5 T5.6 re11

1. Print AE opens an association with the Printer.
2. N-GET on the Printer SOP Class is used to obtain current printer status information.
3. N-CREATE on the Film Session SOP Class creates a Film Session.
4. N-CREATE on the Film Box SOP Class creates a Film Box linked to the Film Session. A single Image Box will be created as the result of this operation (Print AE default uses the format STANDARD\1.1, but user can change it on Preset UI).
5. N-SET on the Image Box SOP Class transfers the contents of the film sheet to the printer.
6. N-ACTION on the Film Box SOP Class instructs the printer to print the Film Box.
7. The Printer prints the requested number of film sheets.
8. The Printer asynchronously reports its status via N-EVENT-REPORT notification (Printer SOP Class). The Printer can send this message at any time. Print AE does not require the N-EVENT-REPORT to be sent. Print AE is capable of receiving an N-EVENT-REPORT notification at any time during an association.
9. N-DELETE on the Film Box SOP Class deletes the complete Film box SOP Instance hierarchy.
10. N-DELETE on the Film Session SOP Class deletes the complete Film Session SOP Instance hierarchy.
11. Print AE closes the association with the Printer.

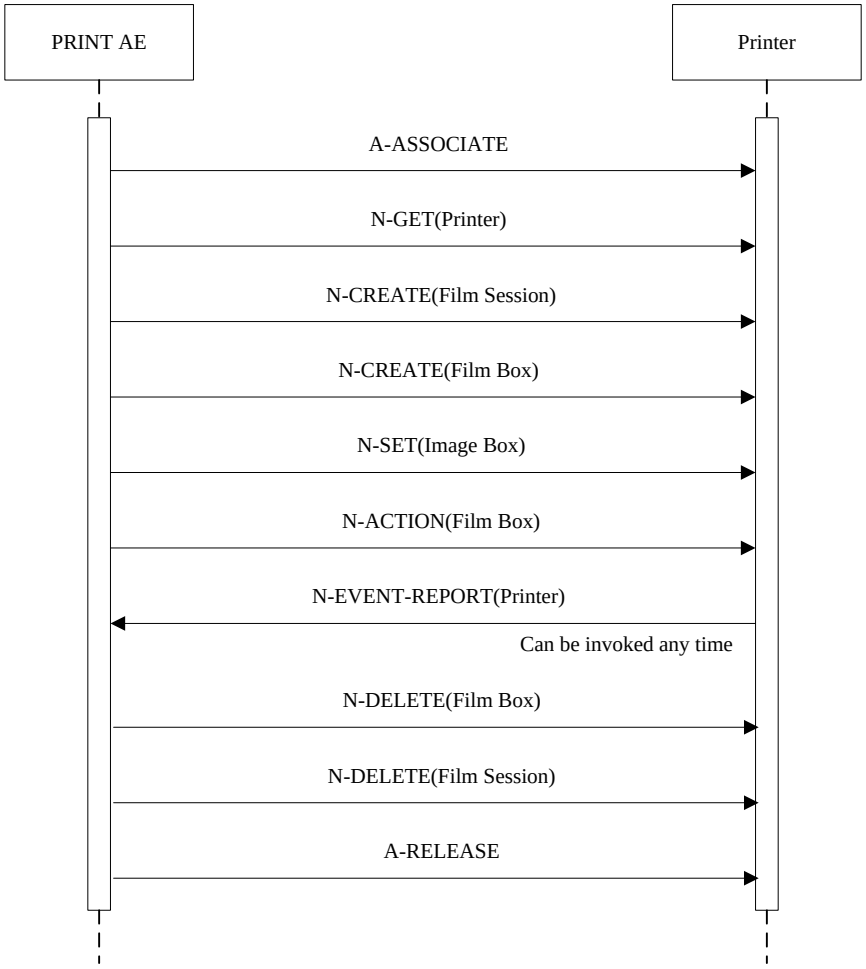

Figure 4
Sequencing of Activity Film Images

4.3.1.1.4.2 Proposed Presentation Contexts

Print AE is capable of proposing the Presentation Contexts shown in the Table below:

Table 58
Proposed Presentation Contexts for Activity Film Images

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Basic Grayscale Print Management Meta	1.2.840.10008.5.1.1.9	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None

Basic Color Print Management Meta	1.2.840.10008.5.1.1.18	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None

4.3.1.1.4.3 Common SOP Specific Conformance for all Print SOP Classes

The general behavior of Print AE during communication failure is summarized in the Table below. This behavior is common for all SOP Classes supported by Print AE.

Table 59
Print AE Communication Failure Behavior

Exception	Behavior
Timeout	The association is aborted using A-ABORT and the print-job is marked as failed.
Association aborted by the SCP or network layers	The print-job is marked as failed. The reason is logged and the job failure is reported to the user.

Recommended abbreviations to be used for the tables are:

VNAP Value Not Always Present (attribute sent zero length if no value 1 0 0 1al2 reW* nBT/F3 10.

Print AE uses the Printer SOP Class N-GET operation to obtain information about the current printer status. The attributes excepted via N-GET are listed in the Table below:

Table 60
Printer SOP Class N-GET Request Attribute Identifier List

Attribute Name	Tag
Printer Status	(2110,0010)
Printer Status Info	(2110,0020)
Printer Name	(2110,0030)
Manufacturer	(0008,0070)
Manufacturer Model Name	(0008,1090)
Device Serial Number	(0018,1000)
Software Version(s)	(0018,1020)
Date of Last Calibration	(0018,1200)
Time of Last Calibration	(0018,1201)

The behavior of Print AE when encountering status codes in a N-GET response is summarized in the Table below:

Table 61
Printer SOP Class N-GET Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The request to get printer status information was success.
Warning	any warning	xxxx	The print-job continues to be printed.
Failure	any failure	xxxx	The Association is aborted using A-ABORT and the print-job is marked as failed. The sta

CVCNBTBT1 0 0 1 174.14Og/La4/L8.09 47[o)-131(obt)15(a)11(i)-4(n66/La00/L8.09 47[REP 0 0ORT) re(nte)3(r SO)17(P)9(C)-3 07

		Info (2110, 0020) is logged and reported to the user via the job-control application.
Failure	3	The print-job is marked as failed. The contents of Printer Status Info (2110, 0020) is logged and reported to the user via the job-control application.
*	*	An invalid Event Type ID will cause a status code of 0113H to be returned in a N-EVENT-REPORT response.

The reasons for returning specific status codes in a N-EVENT-REPORT response are

Type					
Film Destination	(2000,0040)	CS	MAGAZINE PROCESSOR	ALWAYS	CONFIG

The behavior of Print AE when encountering status codes in a N-CREATE response is summarized in the Table below:

Table 65

Film Session SOP Class N-CREATE Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The SCP has completed the operation successfully.
Warning	Memory allocation not supported	B600	The N-CREATE operation is considered successful.
Warning	any warning	xxxx	The N-CREATE operation is considered successful.
Failure	any failure	xxxx	The Association is aborted using A-ABORT and the print-job is marked as failed. The status meaning is logged and reported to the user.

N-ACTION

N-DELETE

Details of the supported attributes and status handling behavior are described in the following subsections.

4.3.1.1.4.6.1 Film Box SOP Class Operations (N-CREATE)

The attributes supplied in an N-CREATE Request are listed in the Table below:

Table 67
Film Box SOP Class N-CREATE Request Attributes

Attribute Name	Tag	VR	Value	Presence of Value	Source
Image Display Format	(2010,0010)	CS	PORTRAIT: STANDARD\1,1 STANDARD\1,2 STANDARD\1,3 STANDARD\2,1 STANDARD\2,2 STANDARD\2,3 STANDARD\2,4 STANDARD\3,3 STANDARD\3,4 STANDARD\3,5 STANDARD\3,6 STANDARD\4,4 STANDARD\4,5 STANDARD\4,6 STANDARD\4,7 STANDARD\4,8 STANDARD\5,5 STANDARD\5,6 STANDARD\5,7 STANDARD\5,8 STANDARD\6,6 STANDARD\6,7 STANDARD\6,8 STANDARD\6,9 STANDARD\6,10 STANDARD\7,7	ALWAYS	CONFIG

			STANDARD\7,8 STANDARD\7,9 STANDARD\7,10 STANDARD\8,8 STANDARD\8,9 STANDARD\8,10 LANDSCAPE: STANDARD\1,1 STANDARD\2,1 STANDARD\3,1 STANDARD\1,2 STANDARD\2,2 STANDARD\3,2 STANDARD\4,2 STANDARD\3,3 STANDARD\4,3 STANDARD\5,3 STANDARD\6,3 STANDARD\4,4 STANDARD\5,4 STANDARD\6,4 STANDARD\7,4 STANDARD\8,4 STANDARD\5,5 STANDARD\6,5 STANDARD\7,5 STANDARD\8,5 STANDARD\6,6 STANDARD\7,6 STANDARD\8,6 STANDARD\9,6 STANDARD\10,6 STANDARD\7,7 STANDARD\8,7 STANDARD\9,7 STANDARD\10,7		

			STANDARD\8,8 STANDARD\9,8 STANDARD\10,8		
Referenced Film Session Sequence	(2010,0500)	SQ		ALWAYS	AUTO
>Referenced SOP Class UID	(0008,1150)	UI	1.2.840.10008.5.1.1.1	ALWAYS	AUTO
>Referenced SOP Instance UID	(0008,1155)	UI	From created Film Session SOP Instance	ALWAYS	AUTO
Film Orientation	(2010,0040)	CS	PORTRAIT or LANDSCAPE	ALWAYS	CONFIG
Film Size ID	(2010,0050)	CS	8INX10IN 8_5INX11IN 10INX12IN 10INX14IN 11INX14IN 11INX17IN 14INX14IN 14INX17IN 24CMX24CM 24CMX30CM A4 A3	ALWAYS	CONFIG
Magnification Type	(2010,0060)	CS	REPLICATE, BILINEAR, CUBIC or NONE	ALWAYS	CONFIG
Max Density	(2010,0130)	US	0 .. 65535	ANAP	CONFIG
Min Density	(2010,0120)	US	0 .. 65535	ANAP	CONFIG
Trim	(2010,0140)	CS	YES or No	ALWAYS	CONFIG
Configuration Information	(2010,0150)	ST	User defined text	ANAP	USER

The behavior of Print AE when encountering status codes in a N-CREATE response is summarized in the Table below:

Table 68

Film Box SOP Class N-CREATE Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The SCP has completed the operation successfully.
Warning	Requested Min Density or Max range	B605H	The N-CREATE operation is considered successful.
Warning	Any other warning	xxxx	The N-CREATE operation is considered successful.
Failure	There is an existing Film Box that has not been printed and N-ACTION at the Film Session level is not supported. A new Film Box will not be created when a previous Film Box has not been printed.	C616H	C The association is aborted using A-ABORT and the print-job is marked as failed. The status meaning is logged and the job failure is reported to the user.
Failure	Any failure	xxxx	The Association is aborted using A-ABORT and the print-job is marked as failed. The status meaning is logged and reported to the user.

4.3.1.1.4.6.2 Film Box SOP Class Operations (N-ACTION)

An N-ACTION Request is issued to instruct the Print SCP to print the contents of the Film Box. The Action Reply argument in an N-ACTION response is not evaluated.

The behavior of Print AE when encountering status codes in a N-ACTION response is summarized in the Table below:

Table 69

Film Box SOP Class N-ACTION Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The SCP has completed the operation successfully. The film has been accepted for printing.
Warning	Film Box SOP Instance hierarchy does not contain Image Box SOP Instances (empty page)	B603H	The N-ACTION operation is considered successful.
Warning	Image size is larger than Image Box size. The image has been	B604H	The N-ACTION operation is considered successful.

	demagnified.		
Warning	Image size is larger than Image Box size. The image has been cropped to fit.	B609H	The N-ACTION operation is considered successful.
Warning	Image size or Combined Print Image Size is larger than Image Box size. The image or combined Print Image has been decimated to fit.	B60AH	The N-ACTION operation is considered successful.
Warning	Any other warning	xxxx	The N-ACTION operation is considered successful.
Failure	Unable to create Print Job SOP Instance; print queue is full.	C602	The Association is aborted using A-ABORT and the print-job is marked as failed. The status meaning is logged and reported to the user.
Failure	Image size is larger than Image Box size.	C603	The Association is aborted using A-ABORT and the print-job is marked as failed. The status meaning is logged and reported to the user.
Failure	Combined Print Image Size is larger than Image Box size.	C613	The Association is aborted using A-ABORT and the print-job is marked as failed. The status meaning is logged and reported to the user.
Failure	Any other failure	xxxx	The Association is aborted using A-ABORT and the print-job is marked as failed. The status meaning is logged and reported to the user.

4.3.1.1.4.6.3 Film Session SOP Class Operations (N-DELETE)

The behavior of Print AE when encountering status codes in a N-DELETE response is summarized in the Table below:

Table 70

Printer SOP Class N-DELETE Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The SCP has completed the operation successfully.
Warning	Any warning	xxxx	The N-DELETE operation is considered successful.
Failure	Any other failure	xxxx	The Association is aborted using A-ABORT and the print-job is marked as failed. The status meaning is logged and reported to the user.

4.3.1.1.4.7 SOP Specific Conformance for the Image Box SOP Class

Print AE supports the following DIMSE operations for the Image Box SOP Class:

N-SET

Details of the supported attributes and status handling behavior are described in the following subsections.

4.3.1.1.4.7.1 Image Box SOP Class Operations (N-SET)

The attributes supplied in an N-SET Request are listed in the Table below:

Table 71
Image Box SOP Class N-SET Request Attributes

Attribute Name	Tag	VR	Value	Presence of Value	Source
Image Position	(2020,0010)	US	[1, num_image1]	ALWAYS	AUTO
Basic Grayscale Image Sequence	(2020,0111)	SQ		If the service is configured as MONOCHROME2	AUTO
>Samples Per Pixel	(0028,0002)	US	1	ALWAYS	AUTO
>Photometric Interpretation	(0028,0004)	CS	MONOCHROME2	ALWAYS	CONFIG
>Rows	(0028,0010)	US	Depends on film size	ALWAYS	AUTO
>Columns	(0028,0011)	US	Depends on film size	ALWAYS	AUTO
Pixel Aspect Ratio	(0028,0034)	IS	Set to zero length	VNAP	AUTO
>Bits Allocated	(0028,0100)	US	8	ALWAYS	AUTO
>Bits Stored	(0028,0101)	US	8	ALWAYS	AUTO
>High Bit	(0028,0102)	US	7	ALWAYS	AUTO
>Pixel Representation	(0028,0103)	US	0	ALWAYS	AUTO

>Pixel Data	(7FE0,0010)	OB	Pixels of rendered film sheet	ALWAYS	AUTO
Basic Color Image Sequence	(2020,0111)	SQ		If the service is configured as RGB	AUTO
>Samples Per Pixel	(0028,0002)	US	3	ALWAYS	AUTO
>Photometric Interpretation	(0028,0004)	CS	RGB	ALWAYS	CONFIG
>Planar Configuration	(0028,0006)	US	1	ALWAYS	AUTO
>Rows	(0028,0010)	US	Depends on film size	ALWAYS	AUTO
>Columns	(0028,0011)	US	Depends on film size	ALWAYS	AUTO
Pixel Aspect Ratio	(0028,0034)	IS	Set to zero length	VNAP	AUTO
>Bits Allocated	(0028,0100)	US	8	ALWAYS	AUTO
>Bits Stored	(0028,0101)	US	8	ALWAYS	AUTO
>High Bit	(0028,0102)	US	7	ALWAYS	AUTO
>Pixel Representation	(0028,0103)	US	0	ALWAYS	AUTO
>Pixel Data	(7FE0,0010)	OB	Pixels of rendered film sheet	ALWAYS	AUTO

Note 1 If the attribute of Image Display Format is (STANDARD\m, n), num_image is m*n.

The behavior of Print AE when encountering status codes in a N-SET response is summarized in the Table below:

Table 72

Image Box SOP Class N-SET Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	Image print is successful, The status code is logged and the task success is reported to the user via task management.
Warning	Image size is larger than Image Box size. The image has been demagnified.	B604H	The N-SET operation is considered successful.
Warning	Requested Min Density or Max	B605H	The N-SET operation is considered

4.3.1.1.5 Activity – Send Find Request

4.3.1.1.5.1 Description and Sequencing of Activities

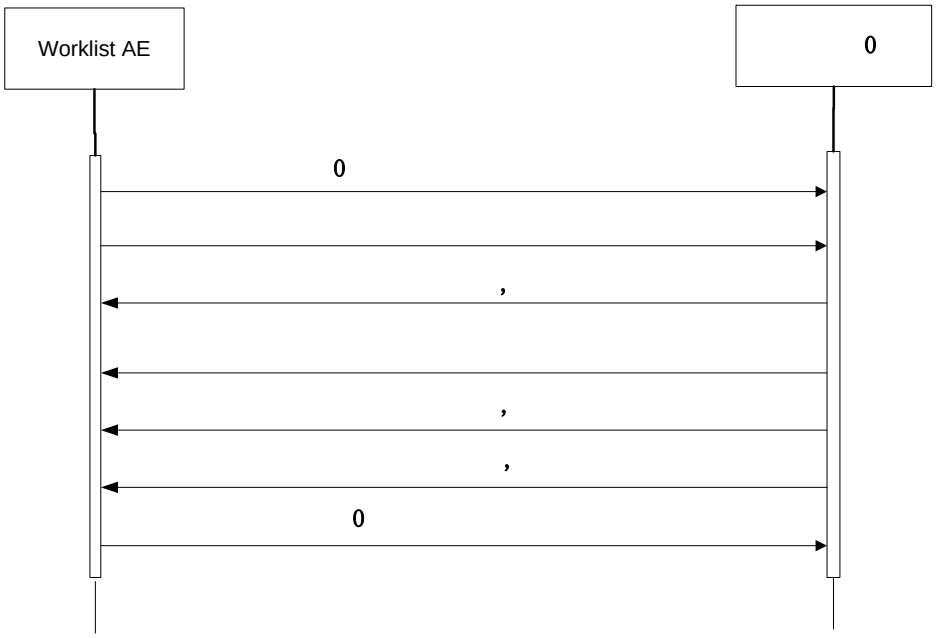

Figure 5

Sequencing of Activity Send FIND Request

A possible sequence of interactions between the Worklist AE and a remote AE (e.g. a system such as a RIS or HIS; or a PACS) is illustrated in the Figure below:

1. The Worklist AE opens an association with the remote AE
2. The Worklist AE sends a C-FIND request to the remote AE containing the Query attributes.
3. The remote AE returns a C-FIND response containing the requested attributes of the first matching Item.
4. The remote AE returns another C-FIND response containing the requested attributes of the second matching Item. And then another one.
5. When the remote AE returns all the C-FIND responses with status Success indicating that no further matching Items exist.
6. The C-Find AE closes the association with the remote AE.

4.3.1.1.5.2 Proposed Presentation Contexts

Table 73

Proposed Presentation Contexts for Worklist AE

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name	UID		
Modality Worklist Information Model Find	1.2.840.10008.5.1.4.31	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None

Worklist AE will propose Presentation Contexts for the SOP Classes listed above. For these SOP Class, Worklist AE will propose multiple Presentation Contexts, one for each of the supported Transfer Syntaxes.

If Worklist AE is offered a choice of Transfer Syntaxes in the accepted Presentation Contexts, it will apply the first encountered to use for the C-FIND operation.

4.3.1.1.5.3 SOP Specific Conformance

Table 74
C_FIND Response Status Handling Behavior

Service Status	Further Meaning	Error Code	Behavior (as SCU)
Refused	Out of resources	A700	The association is aborted using A-ABORT and a notify message is displayed: Some errors happen when query worklist server.
Failed	Identifier Does Not Match SOP Class	A900	
Failed	Unable to process	Cxxx	
Cancel	Matching terminated due to Cancel request	FE00	/
Success	Matching is complete - No final Identifier is supplied.	0000	Patient lists show on the UI
Pending	Matches are continuing - Current Match is supplied and any Optional Keys were supported in the same manner as Required Keys.	FF00	The worklist item contained in the Identifier is collected for later display or further processing.
Pending	Matches are continuing - Warning that one or more Optional Keys were not supported for existence for this Identifier.	FF01	The worklist item contained in the Identifier is collected for later display or further

			processing.
*	The Association is aborted using A-ABORT and the query is marked as failed. The status meaning is logged and reported to the user if an interactive query. Any additional error information in the Response will be logged.	Any other status code.	The association is aborted using A-ABORT and a notify message is displayed: Some errors happen when query worklist server.

Worklist AE provides Standard Conformance to the Storage Service Class.

Worklist AE will behave as described in the Table 74 in response to the status returned in the C-FIND response command message.

The behavior of Ultrasound System during communication failure is summarized in the Table below.

Table 75

COMMUNICATION FAILURE BEHAVIOR FOR WORKLIST AE

Exception	Behavior
Timeout	The Association is aborted using A-ABORT and the query marked as failed. The reason is logged and reported to the user if an interactive query.
Association aborted by the SCP or network layers	The query is marked as failed. The reason is logged and reported to the user if an interactive query

The Table below provides a description of the Ultrasound system Worklist Request Identifier and specifies the attributes that are copied into the images. Unexpected attributes returned in a C-FIND response are ignored.

Requested return attributes not supported by the SCP are set to have no value. Non-matching responses returned by the SCP due to unsupported optional matching keys are ignored. No attempt is made to filtbrowseer out possible duplicate entries.

Table 76

Worklist Request Identifier

ATTRIBUTE	VR	ATTRIBUTE NAME	MATCHING KEYS	RETURN KEYS
Module: Patient Identification Module (M)				
(0010,0010)	PN	Patient's Name	configurable	X (DI)
(0010,0020)	LO	Patient ID	configurable	X(DI)
(0010,1000)	LO	Other Patient IDs		X (DI)
Module: Patient Demographic Module (M)				
(0010,0030)	DA	Patient's Birth Date		X(DI)
(0010,0032)	TM	Patient's Birth Time		X(DI)

(0010,0040)	CS	Patient's Sex		X(DI)
(0010,1020)	DS	Patient's Size		

>(0040,0001)	AE	Scheduled Station AE Title	configurable	X (DI)
>(0040,0002)	DA	Scheduled Procedure Step Start Date	configurable and the default is set to	X(DI)
>(0040,0003)	TM	Scheduled Procedure Step Start Time		X (DI)
>(0040,0004)	DA	Scheduled Procedure Step End Date		X (DI)
>(0040,0005)	TM	Scheduled Procedure Step End Time		X (DI)
>(0040,0006)	PN	Scheduled Performing Physician's Name		X (DI)
>(0040,0007)	LO	Scheduled Procedure Step Description		X(DI)
>(0040,0008)	SQ	Scheduled Protocol Code Sequence		X (DI)
> >(0008,0100)	SH	Code Value		X (DI)
> >(0008,0102)	SH	Coding Scheme Designator		X (DI)
> >(0008,0103)	SH	Coding Scheme Version		X (DI)
> >(0008,0104)	LO	Code Meaning		X (DI)
>(0040,0009)	SH	Scheduled Procedure Step ID		X (DI)
>(0040,0010)	SH	Scheduled Station Name		X (DI)
>(0040,0011)	SH	Scheduled Procedure Step Location		X (DI)
>(0040,0012)	LO	Pre-Medication		X (DI)
> (0040,0020)	CS	Scheduled Procedure Step Status		X (DI)
> (0040,0400)	LT	Comments on the Scheduled Procedure Step		X (DI)
Module: Requested Procedure Module (M)				
(0008,1110)	SQ	Referenced Study		X (DI)

		Sequence		
> (0008,1150)	UI	Referenced SOP Class UID		X (DI)
> (0008,1155)	UI	Referenced SOP Instance UID		X (DI)
(0020,000D)	UI	Study Instance UID		X (DI)
(0032,1060)	LO	Requested Procedure Description		X (DI)
(0032,1064)	SQ	Requested Procedure Code Sequence		X (DI)
> (0008,0100)	SH	Code Value		X (DI)
> (0008,0102)	SH	Coding Scheme Designator		X (DI)
>(0008,0103)	SH	Coding Scheme Version		X (DI)
>(0008,0104)	LO	Code Meaning		X (DI)
(0040,1001)	SH	Requested Procedure ID	configurable	X (DI)
(0040,1003)	SH	Requested Procedure Priority		X (DI)
(0040,1004)	LO	Patient Transport Arrangements		X (DI)
(0040,1400)	LT	Requested Procedure Comments		X (DI)
Module: Imaging Service Request Module (M)				
(0008,0050)	SH	Accession Number	configurable	X (DI)
(0008,0090)	PN	Referring Physician's Name		X (DI)
(0032,1032)	PN	Requesting Physician		X (DI)
(0032,1033)	LO	Requesting Service		X (DI)
(0040,2400)	LT			

Note: The Cancel and End Exam commands are mutually exclusive. They are both represented here for illustration purposes only. Actual workflow uses one or the other for a given exam.

For each exam step transfer, an attempt will be made to transmit it to the selected remote AE. If it fails, it will automatically retry specific times if configured on Preset UI..

4.3.1.1.6.2 Proposed Presentation Contexts

Table 77
Proposed Presentation Contexts for MPPS AE

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1		

			the Response identifying the attributes out of range will be logged (i.e. Elements in the Modification List/Attribute List)
*	*	Any other status code.	The Association is aborted using A-ABORT and the MPPS is marked as failed. The status meaning is logged.

The behavior of MPPS AE during communication failure is summarized in the Table below:

Table 79

MPPS COMMUNICATION FAILURE BEHAVIOR

Exception	Behavior
Timeout	The Association is aborted using A-ABORT and MPPS marked as failed. The reason is logged.
Association aborted by the SCP or network layers	The MPPS is marked as failed. The reason is logged.

Table below provides a description of the MPPS N-CREATE and N-SET request identifiers sent by ultrasound system. Empty cells in the N-CREATE and N-SET columns indicate

Table 80

MPPS N-CREATE / N-SET Request Identifier

Attribute Name	Tag	Req. Type N-CREATE	Req. Type N-SET
Module: Performed Procedure Step Relationship Module (M)			
Referenced Patient Sequence	(0008,1120)	2 (Default is set to null)	Not allowed
	(0010,0010)	2	Not allowed
Patient ID	(0010,0020)	2	Not allowed
	(0010,0030)	2	Not allowed
	(0010,0040)	2	Not allowed
Scheduled Step Attribute Sequence	(0040,0270)	1	Not allowed
>Accession Number	(0008,0050)	2	Not allowed
>Referenced Study Sequence	(0008,1110)	2	Not allowed
>Study Instance UID	(0020,000D)	1	Not allowed

>Requested Procedure Description	(0032,1060)	2	Not allowed
>Scheduled Procedure Step Description	(0040,0007)	2	Not allowed
>Scheduled Protocol Code Sequence	(0040,0008)	2	Not allowed
>Scheduled Procedure Step ID	(0040,0009)	2	Not allowed
>Requested Procedure ID	(0040,1001)	2	Not allowed
Module: Image Acquisition Results Module (M)			
Modality	(0008,0060)	1	Not allowed
Study ID	(0020,0010)	2	Not allowed
Performed Protocol Code Sequence	(0040,0260)	2 (Default is set to null)	3
Performed Series Sequence	(0040,0340)	2	3
>Retrieve AE Title	(0008,0054)	2 (Default is set to null)	2
>Series Description	(0008,103E)	2 (Default is set to null)	2
	(0008,1050)	2	2
	(0008,1070)	2	2
>Referenced Image Sequence	(0008,1140)	2	2
>Protocol Name	(0018,1030)	1	1
>Series Instance UID	(0020,000E)	1	1
>Referenced Non-Image Composite SOP Instance Sequence	(0040,0220)	2 (Default is set to null)	2
Module: Billing And Material Management Code Module (M)			
Billing Procedure Step Sequence	(0040,0320)	3	3
Film Consumption Sequence	(0040,0321)	3	3
Billing Supplies and Devices Sequence	(0040,0324)	3	3
Module: Performed Procedure Step Information Module (M)			
Procedure Code Sequence	(0008,1032)	2 (Default is set to null)	3
Performed Station AE Title	(0040,0241)	1	Not allowed
Performed Station Name	(0040,0242)	2 (Default is set to null)	Not allowed
Performed Location	(0040,0243)	2 (Default is set to null)	Not allowed
Performed Procedure Step Start	(0040,0244)	1	Not allowed

Date			
Performed Procedure Step Start Time	(0040,0245)	1	Not allowed
Performed Procedure Step End Date	(0040,0250)	2 (Default is set to null)	3
Performed Procedure Step End Time	(0040,0251)	2	3
Performed Procedure Step Status	(0040,0252)	1	3
Performed Procedure Step ID	(0040,0253)	1	Not allowed
Performed Procedure Step Description	(0040,0254)	2 (Default is set to null)	3
Performed Procedure Type Description	(0040,0255)	2 (Default is set to null)	3
Performed Procedure Step Discontinuation Reason Code Sequence	(0040,0281)	3	3
Module: SOP Common Module (M)			
Specific Character Set	(0008,0005)	1C (Required if an extended or replacement character set is used)	Not allowed

4.3.1.1.7 Activity – Query/Retrieve from Remote AE

4.3.1.1.7.1 Description and Sequencing of Activities for SCU

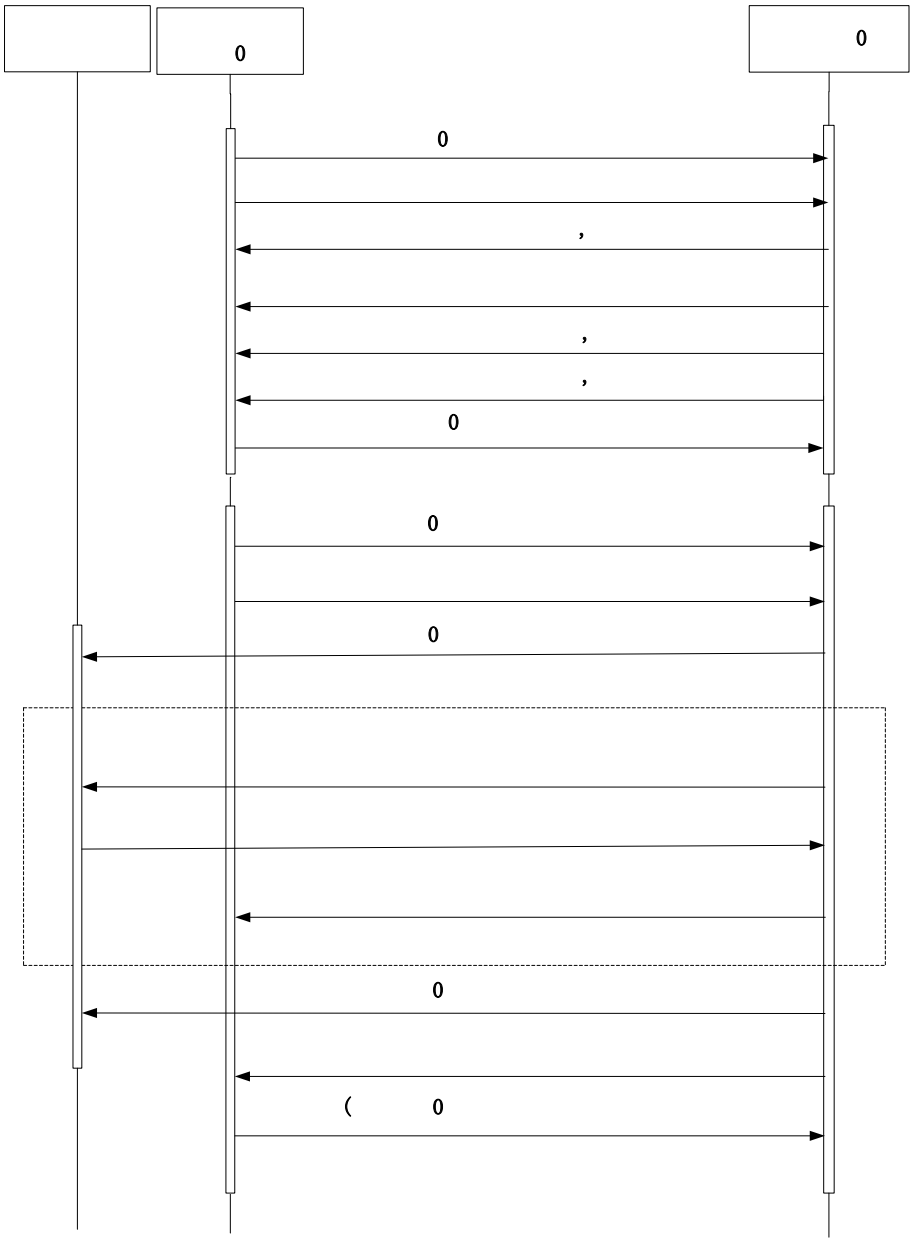

Figure 7

Sequencing of Activity Query/Retrieve progress

The associated Real-World activity is a C-Find request initiated by the user. The user specifies some attributes the system should use to query its database. If the query user successfully establishes an association to the remote AE, it will send a C-Find request (according to the

4.3.1.1.7.2 Proposed Presentation Contexts

Table 81
Proposed Presentation Contexts for Query/Retrieve AE

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Extended Negotiation**
Name	**UID**	**Name**	**UID**		
Study Root Query/Retrieve Information Model - Find	1.2.840.10008.5.1.4.1.2.2.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None
Study Root Query/Retrieve Information Model - Move	1.2.840.10008.5.1.4.1.2.2.2	Implicit VR Little Endian	1.2.840.10008.1.2	SCU	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCU	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCU	None

4.3.1.1.7.3 SOP Specific Conformance

The ultrasound system provides Standard Conformance to the DICOM Query/Retrieve Class.

4.3.1.1.7.3.1 Response Status

Query/Retrieve AE will behave as described in the Table below in response to the status returned in the C-Find response command message.

Table 82
C-Find Response Status Handling Behavior

Service Status	Meaning	Protocol Codes	Related Fields	Behavior (as SCU)
Refused	Refused Out of Resources	A700	(0000,0902)	The association is aborted using A-ABORT and a notify message is displayed: The remote server error.
Failed	Identifier does not match SOP Class	A900	(0000,0901) (0000,0902)	
	Unable to process	CXXX	(0000,0901) (0000,0902)	
Canceling	Matching terminated due to Cancel request	FE00	None	
Success	Matching is complete - No	0000	None	Patient lists show on

	final Identifier is supplied			the UI
Pending	Matches are continuing - Current Match is supplied and any Optional Keys were supported in the same manner as Required Keys	FF00	Identifier	/
	Matches are continuing - Warning that one or more Optional Keys were not supported for existence and/or matching for this identifier	FF01	Identifier	/

The ultrasound system supports the following query levels:

Study

The Query/Retrieve AE interprets following status codes

Table 83

C-Move Response Status Handling Behavior

Service Status	Meaning	Protocol Codes	Related Fields	Behavior (as SCU)
Refused	Refused Out of Resources	A700	(0000,0902)	The association is aborted using A-ABORT and a notify message is displayed: The remote server error.
Failed	Identifier does not match SOP Class	A900	(0000,0901) (0000,0902)	
	Unable to process	CXXX	(0000,0901) (0000,0902)	
Canceling	Matching terminated due to Cancel request	FE00	None	
Success	Matching is complete - No final Identifier is supplied	0000	None	Image retrieve is successful, Patient lists show on the UI
Pending	Matches are continuing - Current Match is supplied and any Optional Keys were supported in the same manner as Required Keys	FF00	Identifier	/
	Matches are continuing - Warning that one or more Optional Keys were not supported for existence and/or matching for this identifier	FF01	Identifier	/

4.3.1.1.7.3.2 Study Root Query/Retrieve Attributes

4.3.1.1.7.3.3 Supported Matching

Following are the types of matching that can be request by the implementation:

- Single Value matching
- Universal Matching
- Wild Card Matching
- Range of date, Range of Time

The user can filter the downloaded C-FIND result, to view a limited set of the result.

4.3.1.1.7.3.4 Study Level

This section defines the keys at the Study Level of the Study Root Query/Retrieve Information Model that are supported by this implementation.

Table 84
STUDY LEVEL ATTRIBUTES

MODULE: STUDY ROOT INFORMATION MODEL (M)					
Attribute	**VR**	**Type**	**Attribute Name**	**Value**	**Matching keys**
Module: Study Root Information Model (M)					
(0008,0020)	DA	R	Study Date		DA(SK)
(0008,0030)	TM	R	Study Time		N
(0010,0010)	PN	R	Patient's Name		*(SK)
(0010,0020)	LO	R	Patient ID		S(SK)
(0008,0050)	SH	R	Accession Number		*(SK)
(0010,0030)	DA	O	Patient's Birth Date		S(SK)
(0010,0040)	CS	O	Patient's Sex		S(SK)
(0020,0010)	SH	R	Study ID		S(SK)
(0020,000D)	UI	U	Study Instance UID		N
(0008,0061)	CS	O	Modalities in Study	US	N
(0008,0090)	PN	O	Referring Physician's Name		N
(0008,1030)	LO	O	Study Description		N
(0008,1032)	SQ	O	Procedure Code Sequence		N
(0008,1060)	PN	O	Name of Physician(s) Reading Study		N
(0008,1080)	LO	O	Admitting Diagnoses Description		N
(0008,1110)	SQ	O	Referenced Study Sequence		N
(0008,1120)	SQ	O	Referenced Patient Sequence		N
(0010,0021)	LO	O	Issuer of Patient ID		N
(0010,0032)	TM	O	Patient's Birth Time		N
(0010,1000)	LO	O	Other Patient IDs		N
(0010,1001)	PN	O	Other Patient Names		N
(0010,1010)	AS	O	Patient's Age		N
(0010,1020)	DS	O	Patient's Size		N
(0010,1030)	DS	O	Patient's Weight		N

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE	MATCHINGKEYS
Module: Study Root Information Model (M)					
(0020,000D)	UI	U	Study Instance UID		S
(0020,000E)	UI	U	Series Instance UID		S
(0008,0018)	UI	U	SOP Instance UID		N
(0020,0013)	IS	R	Instance Number		N
Module: Additional Attributes Module (O)					
(0008,0016)	UI	O	SOP Class UID		N
(0008,001A)	UI	O	Related General SOP Class UID		N
(0008,3001)	SQ	O	Alternate Representation Sequence		N
>(0008,1150)	UI	O	Referenced SOP Class UID		N
>(0008,1155)	UI	O	Referenced SOP Instance UID		N
>(0020,000E)	UI	O	Series Instance UID		N
>(0040,A170)	SQ	O	Purpose of Reference Code Sequence		N
>>(0008,0100)	SH	O	Code Value		N
>>(0008,0102)	SH	O	Coding Scheme Designator		N
>>(0008,0103)	SH	O	Coding Scheme Version		N
>>(0008,0104)	LO	O	Code Meaning		N
(0040,A043)	SQ	O	Concept Name Code Sequence		N
>(0008,0100)	SH	O	Code Value		N
>(0008,0102)	SH	O	Coding Scheme Designator		N
>(0008,0103)	SH	O	Coding Scheme Version		N
>(0008,0104)	LO	O	Code Meaning		N
(0040,A504)	SQ	O	Content Template Sequence		N
>(0008,0105)	CS	O	Mapping Resource		N
>(0040,DB00)	CS	O	Template Identifier		N

4.3.1.2 Association Acceptance Policy

4.3.1.2.1 Activity – Receive Echo Request

4.3.1.2.1.1 Description and Sequencing of Activities

The Verification AE (as SCP) accepts associations only if they have valid Presentation Contexts. If Verification AE (as SCP) receives an echo (C-ECHO) request then the response will be sent over the same association used to send the C-ECHO-RQ.

Figure 8
Sequencing of Activity Receive Echo Request

4.3.1.2.1.2 Accepted Presentation Contexts

It will accept Presentation Contexts as shown in the following table:

Table 87
Proposed Presentation Contexts for Activity Verification

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Extended Negotiation
Name	UID	Name	UID		
Verification	1.2.840.10008.1.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCP	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None

4.3.1.2.1.3 SOP Specific Conformance

The Application conforms to the definition of a Verification SCP in accordance with the DICOM Standard.

4.3.1.2.2 Activity – Receive Storage

4.3.1.2.2.1 Description and Sequencing of Activities

The system could act as Storage SCP in Query/Retrieve, otherwise couldn't. A possible sequence of interactions between the Storage AE (as SCP) and a remote AE is illustrated in the Figure 7.

4.3.1.2.2.2 Accepted Presentation Contexts

The Storage AE (as SCP) will accept Presentation Contexts as shown in the Table below.

Table 88
Proposed Presentation Contexts for Storage

PROPOSED PRESENTATION CONTEXTS					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name**	**UID**		
US Image Storage	1.2.840.10008.5.1.4.1.1.6.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCP	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCP	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70	SCP	None
		RLE Lossless	1.2.840.10008.1.2.5	SCP	None
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90	SCP	None
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91	SCP	None
US Multiframe Image Storage	1.2.840.10008.5.1.4.1.1.3.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCP	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCP	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70	SCP	None
		RLE Lossless	1.2.840.10008.1.2.5	SCP	None
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90	SCP	None
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91	SCP	None
Secondary	1.2.840.100	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None

Capture Image Storage	08.5.1.4.1.1.7	Explicit VR Little Endian	1.2.840.10008.1.2.1	SCP	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCP	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70	SCP	None
		RLE Lossless	1.2.840.10008.1.2.5	SCP	None
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90	SCP	None
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91	SCP	None
Comprehensive Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.33	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCP	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCP	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70	SCP	None
		RLE Lossless	1.2.840.10008.1.2.5	SCP	None
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90	SCP	None
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91	SCP	None
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	Implicit VR Little Endian	1.2.840.10008.1.2	SCP	None
		Explicit VR Little Endian	1.2.840.10008.1.2.1	SCP	None
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50	SCP	None
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection	1.2.840.10008.1.2.4.70	SCP	None

		Value 1])			
		RLE Lossless	1.2.840.10008.1.2.5	SCP	None

4.5 Configuration

The Configuration Utility allows the service engineer to set and maintain configuration parameters of local and remote DICOM application entities.

4.5.1 AE Title/Presentation Address Mapping

This mapping (including IP and port numbers) is defined during the system Network Configuration procedure.

4.5.2 Configurable Parameters

Localhost DICOM Service Property(Including SCU and SCP):

- AE Title
- Port
- PDU

Server Setting:

- Device
- IP address

Storage:

- Device, Service name, AE Title and Port.
- Timeout.
- Maximum retries. (default value is 3)
- Interval Time (In this version, this parameter is not usable.)
- Compression Mode, Compression Ratio.
- Color Mode (Color, Mixed, or Gray).
- Cine Zoom Mode (original, 640*480, 800*600 or 1024*768)
- Allow Multiframe(Enable or not)
- Max Framerate(options(25, 30, 35, full), or other inputed valid value)
- 3D/4D(Normal, Rawdata or Volume)
- SR Storage Option(Attach SR When Store Images， Only Store SR，and Not Store SR")
- Encapsulated PDF(Enable or not)
- Doppler Audio(None or MPEG_MP@ML)
- Storage Mode(Parallel file or Parallel frame)

- Default Service Status (Y/N)

Print:

- Device, Service name, AE Title and Port .
- Timeout.
- Maximum retries. (default value is 3)
- Interval Time (In this version, this parameter is not usable.)
- Media Type: PAPER, CLEAR FILM, or BLUE FILM
- Film Size:
  - 8INX10IN
  - 8_5INX11IN
  - 10INX12IN
  - 10INX14IN
  - 11INX14IN
  - 11INX17IN
  - 14INX14IN
  - 14INX17IN
  - 24CMX24CM
  - 24CMX30CM
  - A4
  - A3
- Copies:1-100
- Max Density: 0-65535
- Min Density:0-65535
- Settings: RGB or MONOCHROME2
- Display Format:
  - ✧ PORTRAIT:
    - STANDARD\1,1
    - STANDARD\1,2
    - STANDARD\1,3
    - STANDARD\2,1
    - STANDARD\2,2
    - STANDARD\2,3
    - STANDARD\2,4
    - STANDARD\3,3
    - STANDARD\3,4
    - STANDARD\3,5

STANDARD\3,6
STANDARD\4,4
STANDARD\4,5
STANDARD\4,6
STANDARD\4,7
STANDARD\4,8
STANDARD\5,5
STANDARD\5,6
STANDARD\5,7
STANDARD\5,8
STANDARD\6,6
STANDARD\6,7
STANDARD\6,8
STANDARD\6,9
STANDARD\6,10
STANDARD\7,7
STANDARD\7,8
STANDARD\7,9
STANDARD\7,10
STANDARD\8,8
STANDARD\8,9
STANDARD\8,10

✧ LANDSCAPE:

STANDARD\1,1
STANDARD\1,1
STANDARD\2,1
STANDARD\3,1
STANDARD\1,2
STANDARD\2,2
STANDARD\3,2
STANDARD\4,2
STANDARD\3,3
STANDARD\4,3
STANDARD\5,3
STANDARD\6,3
STANDARD\4,4
STANDARD\5,4

STANDARD\6,4
STANDARD\7,4
STANDARD\8,4
STANDARD\5,5
STANDARD\6,5
STANDARD\7,5
STANDARD\8, 5
STANDARD\6,6
STANDARD\7,6
STANDARD\8,6
STANDARD\9,6
STANDARD\10,6
STANDARD\7,7
STANDARD\8,7
STANDARD\9,7
STANDARD\10,7
STANDARD\8,8
STANDARD\9,8
STANDARD\10,8

- Destination: MAGAZINE or PROCESSOR
- Film Orientation: LANDSCAPE or PORTRAIT
- Priority: HIGH, MED, or LOW
- Configuration Info
- Magnification Type: NONE, CUBIC, REPLICATE, or BILINEAR
- Trim: Yes/Not
- Default Status (Y/N)

WORKLIST:

- Device, Service name, AE Title and Port .
- Timeout.
- Maximum retries, Interval Time (In this version, these two parameters are not usable.)
- Default Status (Y/N)

MPPS:

- Device, Service name, AE Title and Port.
- Timeout,
- Maximum retries (default value is 3)

- Interval Time (In this version, this parameter is not usable.)
- Default Status (Y/N)

Storage Commitment:

- Device, Service name, AE Title and Port.
- Timeout.
- Maximum retries, Interval Time (In this version, these two parameters are not usable.)
-

5.1.4 File Meta Information Options

The implementation information written to the File Meta Header in each file is:

Table 90
DICOM Implementation Class and Version for Media Storage

Implementation Class UID	1.2.156.112536.1.2143.0.1.0.1
Implementation Version Name	MINDRAY_V1.0

5.2 AE Specifications

5.2.1 Media Application Entity Specification

The Media Application Entity provides standard conformance to the Media Storage Service Class. The Application Profiles and roles are listed below: The available physical media is CD-R, CD-RW, DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM, and USB devices.

Table 91
Application Profiles, Activities and Roles

Application Profiles Supported	Real World Activity	Role
STD-GEN-USB-JPEG STD-US-SC-SF&MF-CDR STD-US-SC-SF&MF-DVD STD-US-SC-SF&MF-DVD-RAM	Export Exam	FSC/FSU[1]
	Read Exam	FSR
	Import Exam	FSR

Note: 1 functionality requires DVD+RW, DVD-RW, or USB

5.2.1.1 File Meta Information for the Application Entity

The File Meta Header does not include the Source Application Entity Title.

5.2.1.2 Real-World Activities

5.2.1.2.1 Activity-FSC-Export exams

When system user exports exams, images, SR, or Encapsulated PDF to a media upon which no DICOM data resides, it creates a DICOM file set and writes this DICOM File Set to this media.

The Media Application Entity acts as an FSC using the interchange option when requested to export SOP Instances from the local database to media upon which no DICOM data resides.

		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91
Ultrasound Multi-frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1	Explicit VR Little Endian	1.2.840.10008.1.2.1
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70
		RLE Lossless	1.2.840.10008.1.2.5
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	Explicit VR Little Endian	1.2.840.10008.1.2.1
		JPEG Lossy, Baseline Sequential with Huffman Coding (Process 1)	1.2.840.10008.1.2.4.50
		JPEG Lossless, Non-Hierarchical, First-Order Prediction (Process 14 [Selection Value 1])	1.2.840.10008.1.2.4.70
		RLE Lossless	1.2.840.10008.1.2.5
		JPEG 2000 Image Compression (Lossless Only)	1.2.840.10008.1.2.4.90
		JPEG 2000 Image Compression	1.2.840.10008.1.2.4.91

Comprehensive SR Storage	1.2.840.10008.5.1.4.1.1.88.33	Explicit VR Little Endian	1.2.840.10008.1.2.1
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	Explicit VR Little Endian	1.2.840.10008.1.2.1
Enhanced US Volume Storage	1.2.840.10008.5.1.4.1.1.6.2	Explicit VR Little Endian	1.2.840.10008.1.2.1
Raw Data Storage	1.2.840.10008.5.1.4.1.1.66	Explicit VR Little Endian	1.2.840.10008.1.2.1

5.3 Media Storage Application Profile

See Table 91 for supported Application Profiles.

5.3.1 DICOMDIR Attributes

The DICOMDIR file will contain the following attributes.

Table 93

Common Directory Information Module Attributes

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0004,1130)	CS	2	File-set ID	AUTO
(0004,1200)	UL	1	Offset of the First Directory Record of the Root Directory Entity	AUTO
(0004,1202)	UL	1	Offset of the Last Directory Record of the Root Directory Entity	AUTO
(0004,1212)	US	1	File-set Consistency Flag	0xFFFF
(0004,1220)	SQ	2	Directory Record Sequence	
>(0004,1400)	UL	1	Offset of the Next Directory Record	AUTO
>(0004,1410)	US	1	Record In-use Flag	0xFFFF
>(0004,1420)	UL	1	Offset of Referenced Lower-Level Directory Entity	AUTO
>(0004,1142)	CS	2	Specific Character Set of File-set Descriptor File	ISO_IR 100

Table 94

Patient Directory Record

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0004,1430)	CS	1	Directory Record Type	PATIENT
(0010,0020)	LO	1	Patient ID	MWL/USER
(0010,0010)	PN	2	Patient's Name	MWL/USER
(0010,0030)	DA	3	Patient's Birth Date	MWL/USER
(0010,0040)	CS	3	Patient's Sex	MWL/USER
(0010,1000)	LO	3	Other Patient IDs	MWL/USER

Table 95

Study Directory Record

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0004,1430)	CS	1	Directory Record Type	STUDY
(0008,0020)	DA	1	Study Date	AUTO
(0008,0030)	TM	1	Study Time	AUTO
(0020,0010)	SH	1	Study ID	MWL/AUTO
(0020,000D)	UI	1C	Study Instance UID	AUTO
(0008,0050)	SH	2	Accession Number	MWL/USER
(0008,1030)	LO	2	Study Description	If it is a scheduled exam, the value is mapped from Scheduled Procedure Step Description; If not, USER
(0008,0090)	PN		Referring Physician's Name	MWL/USER

Table 96

Series Directory Record

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0004,1430)	CS	1	Directory Record Type	SERIES

(0008,0021)	DA	3	Series Date	AUTO
(0008,0031)	TM	3	Series Time	AUTO
(0008,103e)	LO		Series Description	If it is a scheduled exam, the value is mapped from Scheduled Procedure Step Description; If not, same as the value of Study Description
(0008,1050)	PN		Performing Physician's Name	MWL/USER

Table 97

Image Directory Record

ATTRIBUTE	VR	TYPE	ATTRIBUTE NAME	VALUE(S) AND COMMENTS
(0004,1430)	CS	1	Directory Record Type	IMAGE
(0004,1500)	CS	1C	Referenced File ID	AUTO
(0004,1510)	UI	1C	Referenced SOP Class UID in File	AUTO
(0004,1511)	UI	1C	Referenced SOP Instance UID in File	AUTO
(0004,1512)	UI	1C		

6 SUPPORT OF CHARACTER SETS

In addition to the default character repertoire, the Defined Terms for Specific Character Set in Table 98 are supported:

Table 98
Supported Specific Character Set Defined Terms

Character Set Description	Defined Term	System Language
ISO 8859-1	ISO_IR 100	English, French, German, Italian, Portuguese, Spanish, Finnish, Danish, Icelandic, Norwegian, Swedish
ISO 8859-5	ISO_IR 144	Russian
ISO-8859-2	ISO_IR 101	Polish, Czech, Serbian
Chinese	GB18030	Chinese

If the system language is configured for one of above languages, the corresponding Character Set will be used automatically. Whether or not characters are displayed correctly depends on the operating system. For example, if the system is configured for Polish, the characters of Polish could display correctly.

7 SECURITY

7.1 Security Profiles

DC-80A supports secure DICOM communication in conformance with the Basic TLS Secure Transport Connection Profile and the AES TLS Secure Transport Connection Profile.At default configuration,the TLS option is deactivated.

Basic TLS Secure Transport Connection Profile and the AES TLS Secure Transport Connection Profile are supported using Transport Layer Security Version 1.2 protocol wa.62 Tm[(t)5(i)6(on)4(t)-11

8 ANNEXES

8.1 IOD contents

8.1.1 Created SOP Instances

None.

8.1.2 Usage of attributes from received IOD's

No SOP Class specific fields are required.

The local database makes use of the conventional identification attributes to distinguish patients, studies, series and instances. In particular, if two patients have the same value for Patient ID, and Patient s Sex, they will be treated as the same in the browser and the local database.

8.1.3 Attribute Mapping

Not applicable.

8.1.4 Coerced/Modified fields

No coercion is performed.

8.2 Data Dictionary of private attributes

No private attributes are defined.

8.3 Coded terminology and templates

The value for Code Meaning will be displayed for all code sequences. No local lexicon is provided to look up alternative code meanings.

8.4 Grayscale Image Consistency

Modality does not support the Grayscale Standard Display Function.

8.5 Standard extended/specialized/private sop Classes

None.

8.6 Private Transfer Syntaxes

None.

A. Appendix : OB GYN structured reporting template

A.2. TID 1008 Subject Context, Fetus

NO	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			PNAME	EV (121036,DCM,			
2			UIDREF	EV (121028,DCM,			

3

6	>>	CONTAINS	IMAGE	No purpose of reference			
7	>	CONTAINS	INCLUDE	DTID (5002) OB-GYN Procedure Summary Section			
8	>	CONTAINS	INCLUDE	DTID (5004) Fetal Biometry Ratio Section			
9	>	CONTAINS	INCLUDE	DTID (5005) Fetal Biometry Section			
10	>	CONTAINS	INCLUDE	DTID (5006) Long Bones Section			
11	>	CONTAINS	INCLUDE	DTID (5007) Fetal Cranium Section			
12	>	CONTAINS	INCLUDE	DTID (5009) Fetal Biophysical Profile Section			
13	>	CONTAINS	INCLUDE	DTID (5011) Early Gestation Section			
14	>	CONTAINS	INCLUDE	DTID (5010) Amniotic Sac Section			
15	>	CONTAINS	INCLUDE	DTID (5015) Pelvis and Uterus Section			
16	>	CONTAINS	INCLUDE	DTID (5012) Ovaries Section			
17	>	CONTAINS	INCLUDE	DTID (5013) Follicles Section			$Laterality = EV (G- $Number = EV (11879- of follicles in left
18	>	CONTAINS	INCLUDE	DTID (5013) Follicles Section			$Laterality = EV (G- $Number = EV (11880- of follicles in right

19	>	CONTAINS	INCLUDE	DTID (5013_1) Follicles Section			$Laterality = EV (G-$Number = EV (11879- Number of smart follicles in left ovary
20	>	CONTAINS	INCLUDE	DTID (5013_1) Follicles Section			$Laterality = EV (G- Right $Number = EV (11879- Number of smart follicles in right ovary
21	>	CONTAINS	CONTAINER	EV (121070,			
22	>>	HAS CONCEPT MOD	CODE	EV (G-C0E3,			EV (T-F6800, SRT,
23	>>	CONTAINS	INCLUDE	DTID (5025) OB-GYN Fetal Vascular Measurement Group			$AnatomyGroup = DCID (12141) Fetal Vasculature
24	>	CONTAINS	CONTAINER	EV (121070,			
25	>>	HAS CONCEPT MOD	CODE	EV (G-C0E3,			EV (T-D6007, SRT,
26	>>	CONTAINS	INCLUDE	DTID (5026) OB-GYN Pelvic Vascular Measurement Group			$AnatomyGroup = DCID (12140) Pelvic Vasculature Anatomical Location
27	>	CONTAINS	INCLUDE	DTID (SELFTMP-1)			
28	>	CONTAINS	TEXT	(20121120,MRUS, self-defined-Measurementfile)			
29	>	CONTAINS	INCLUDE	DTID (Pelvic floor Section)			

A.4. TID (SELFTMP-1) Fetal Cardiac Measurement Group

This is a private template referenced by TID (5000).

NO	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	EV(T0001,MRUS,Fetel Cardiac)			
2	>	HAS OBS CONTEXT	INCLUDE	DTID (1008) Subject Context, Fetus			
3	>						

2	>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT,			EV (M99900,MRUS, Pelvic floor)
3	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-01, Depth)
4	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-02,)
5	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-03,)
6	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (C99901-01, MRUS,)
7	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (C99901-02, MRUS,)
8	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (C99901-03, MRUS, (Dicu)
9	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-04,)
10	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (C99901-04, MRUS, Thickness)
11	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-05, Neck Symphyseal)

12	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-06, Neck Symphyseal Distance (Valsava)
13	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (C99901-05, MRUS,)
14	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-07, MRUS,)
15	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-08, MRUS, (Valsava)
16	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-09,)
17	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-10, Tilt Angle (Valsava)
18	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (C99901-06, MRUS,)
19	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-11, MRUS, Angle)
20	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-12, MRUS, (Valsava)

21	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-13, MRUS,)
22	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-14, MRUS, (Valsava)
23	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-15, MRUS, Bladder Post Wall - Symphysis Publis
24	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-16, MRUS, Post Wall - Symphysis Publis
25	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-17, MRUS, Cervix - Symphysis Publis Distance
26	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-18, MRUS, Cervix - Symphysis Publis
27	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-19, MRUS, Rectal Ampulla - Symphysis Publis

28	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-20, MRUS, Ampulla - Symphysis Publis
29	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-21, hral)
30	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-22,)
31	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-23,)
32	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-24,)
33	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-25, Angle (Valsava)
34	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-26, Angle)
35	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (C99901-07, MRUS,)
36	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (C99901-08, MRUS,)

37

44	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-34, Hiatus Circumference)
45	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-35, Hiatus Area (Valsava)
46	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-36, Hiatus Circumference (Valsava)
47	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-37, Hiatus Area)
48	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-38, Hiatus Circumference (Contract)
49	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-39, Ani Thickness)
50	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-40, Ani Thickness (Valsava)

51	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-41, Ani Thickness)
52	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-42,)
53	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-43, Ani Angle (Valsava)
54	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-44, Ani Angle)
55	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-48,)
56	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-49,)
57	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-50, MR)
58	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-51,)
59	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-52,)

60	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-53,)
61	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-54,)
62	>	CONTAINS	INCLUDE	EV (M99901, MRUS Levator Urethra Gap			$AnatomyGroup = EV (M99901, MRUS Levator Urethra Gap $SectionLaterality = DCID (244) Laterality
63	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-45, Urethra Gap)
64	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-46, Urethra Gap (Valsava)
65	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-47, Urethra Gap)
66	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-55, Neck Symphyseal)
67	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-56, Bladder Descent1)

68	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-57, MRUS,)
69	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-58, MRUS,)
70	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-59, MRUS, al)
71	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-60,)
72	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-61, Neck Symphyseal Distance1 (Valsava)
73	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-62, Bladder Descent1 (Valsava)
74	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-63, MRUS, Angle1 (Valsava)
75	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-64, MRUS, Pubovesical Angle1 (Valsava)

76	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-65, MRUS, Angle1 (Valsava)
77	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-66, Tilt Angle1 (Valsava)
78	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-67, Neck Symphyseal)
79	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-68, Bladder Descent2)
80	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-69, MRUS,)
81	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-70, MRUS,)
82	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-71, MRUS,)
83	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-72, MR)

84	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-73, Neck Symphyseal Distance2 (Valsava)
85	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-74, imal Bladder Descent2 (Valsava)
86	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-75, MRUS, Angle2 (Valsava)
87	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-76, MRUS, Pubovesical Angle2 (Valsava)
88	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-77, MRUS, Angle2 (Valsava)
89	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-78, Tilt Angle2 (Valsava)
90	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-79, Neck Symphyseal)
91	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-80, Bladder Descent3)

92	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-81, MRUS,)
93	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-82, MRUS,)
94	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-83, MRUS,)
95	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-84,)
96	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-85, Neck Symphyseal Distance3 (Valsava)
97	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-86, Bladder Descent3 (Valsava)
98	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-87, MRUS, Angle3 (Valsava)
99	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M99901-88, MRUS, Pubovesical Angle3 (Valsava)

109 > CONTAINS INCL [redacted] $ [redacted] t =

4	>	HAS OBS CONTEXT	CODE	EV (121010,DCM, Role in the			(121093, DCM, "Sonographer")
5	>	HAS OBS CONTEXT	CODE	EV (121024, DCM,			(121025, DCM,
6	>	HAS OBS CONTEXT	PNAME	EV (121029,DCM,			Name (0010,0010) in Patient Module
7	>	HAS OBS CONTEXT	DATE	EV (121031,DCM,			Birth Date (0010,0030) in Patient Module
8	>	HAS OBS CONTEXT	CODE	EV (121032,DCM, "Subj			value equivalent to (0010,0040) in Patient Module
9	>	HAS OBS CONTEXT	NUM	EV (121033,DCM,			Age (0010,1010) in Patient Study Module

A.8. TID (5001) OB-GYN Patient Characteristics

NO	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	EV (121118, DCM,			
2	>	CONTAINS	TEXT	EV (121106, DCM,			
3	>	CONTAINS	NUM	EV (8302-2, LN,			
4	>	CONTAINS	NUM	EV (29463-7, LN,			
5	>	CONTAINS	NUM	EV (11996-6, LN,			from info
6	>	CONTAINS	NUM	EV (11977-6, LN,			from info
7	>	CONTAINS	NUM	EV (11612-9, LN,			from info

8	>	CONTAINS	NUM	EV (33065-4, LN,			from info(Ectopic)

A.9. TID (5002) OB-GYN Procedure Summary

NO	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	DT (121111, DCM,			
2	>	CONTAINS	DATE	11778-8, LN, "EDD"			from info
3	>	CONTAINS	DATE	(11779-6, LN, "EDD from LMP")			from info
4	>	CONTAINS	DATE	(11781-2, LN, "EDD from average ultrasound age")			
5	>	CONTAINS	DATE	11780-4, LN, "EDD from ovulation date"			from info
6	>	CONTAINS	DATE	(11955-2, LN, "LMP"			from info
7	>	CONTAINS	DATE	33066-2, LN, "Estimated LMP by EDD"			from info
8	>	CONTAINS	DATE	11976-8, LN, "Ovulation date"			from info
9	>	CONTAINS	DATE	(I12003-01, MRUS, "IVF")			from info
10	>	CONTAINS	DATE	(C12003-01, MRUS, "EDD from IVF")			from info
11	>	CONTAINS	DATE	(I12003-02, MRUS, "PRV")			from info
12	>	CONTAINS	DATE	(C12003-02, MRUS, "EDD from PRV")			from info
13	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (11886-9, LN, "Gestational Age by ovulation date")
14	>	CONTAINS	TEXT	EV (121106, DCM, Comment)			from info
15	>	CONTAINS	TEXT	(I12101-01, MRUS, "Primary Indications")			from info

18	>	CONTAINS	TEXT	(I12101-04, MRUS, "CPT4 Description")			from info
19	>	CONTAINS	TEXT	(I12101-06,MRUS, "follicle-stimulating hormone")			
20	>	CONTAINS	TEXT	(I12101-07,MRUS, "luteinizing hormone")			
21	>	CONTAINS	TEXT	(I12101-08,MRUS, "estradiol")			
22	>	CONTAINS	TEXT	(I12101-09,MRUS, "Serum prolactin")			
23	>	CONTAINS	TEXT	(I12101-10,MRUS, "progesterone")			
24	>	CONTAINS	TEXT	(I12101-11,MRUS, "testosterone")			
25	>	CONTAINS	TEXT	(I12101-12,MRUS, "progesterone")			
26	>	CONTAINS	TEXT	(I12101-14,MRUS, "human menopausal gonadotropin")			
27	>	CONTAINS	TEXT	(I12101-13,MRUS, "clomiphene citrate")			
28	>	CONTAINS	TEXT	(I12101-15,MRUS, "Others drug")			
29	>	CONTAINS	NUM	(8302-2, LN, "Patient Height")			from info
30	>	CONTAINS	NUM	(29463-7, LN, "Patient Weight")			from info
31	>	CONTAINS	TEXT	EV (121106, DCM, Comment)			report interface Comments
32	>	CONTAINS	TEXT	(I12101-05, MRUS, "Prompt")			report interface Prompt
33	>	CONTAINS	TEXT	(121071, DCM, "Findings")			report interface Findings
34	>>		INCLUDE	DTID (320) Image or Spatial Coordinates			
35	>	CONTAINS	NUM	(I12101-16,MRUS,Vaginal Delivery)			from info
36	>	CONTAINS	NUM	(I12101-17,MRUS,Assisted Vaginal Delivery)			from info

37	>	CONTAINS	NUM	(I12101-18,MRUS,Caesarean Section)			from info
38	>	CONTAINS	INCLUDE	FINDING_7			
39	>	CONTAINS	INCLUDE	BTID (5003) OB-GYN Fetus Summary			

A.10. TID (5003) OB-GYN Fetus Summary

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	DT (125008, DCM,			
2	>	HAS OBS CONTEXT	TEXT	EV (11951-1,LN,"Fetus			
3	>	HAS OBS CONTEXT	NUM	EV (11878-6,LN, "Number of			
4	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (18185-9, LN, "Gestational Age")
5	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (11888-5, LN, " Composite Ultrasound Age")
6	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (11885-1, LN, "Gestational Age
7	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (11727-5, LN, "Estimated
8	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (11767-1, LN, "EFW percentile rank")
9	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (11948-7, LN, " Fetal Heart Rate")

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
10	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (C12019-01, MRUS, "Gestational Age by IVF")
11	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (I12019-01, MRUS, "GA of Previous Exam")
12	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (C12019-02, MRUS, "Gestational Age by PRV")
13	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (C12019-03, MRUS, "Gestational Age by EDD")
14	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (C12019-4, MRUS, "Gestational Age by EFW")
15	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (TJETQq4 Tf1 0 0 1 423.6

NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition

A.12. TID (FINDING_2) Fetus Limbs

This is a private template referenced by TID (5003).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	(FG4031-03,MRUS,"Fetus Limbs")			
2	>	CONTAINS	TEXT	(FG4031-04,MRUS,"Upper Extremities")			
3	>	CONTAINS	TEXT	(FG4031-05,MRUS,"Lower Extremities")			

A.13. TID (FINDING_3) Fetal Cardiology

This is a private template referenced by TID (5003).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	(FG4031-06,MRUS,"Fetal Cardiology")			
2	>	CONTAINS	TEXT	(FG12239-01,MRUS,"Cardiac Activity")			
3	>	CONTAINS	TEXT	(FG4031-07,MRUS,"4C HEART")			
4	>	CONTAINS	TEXT	(T-42000,SNM3,"Aorta")			
5	>	CONTAINS	TEXT	(T-44000,SNM3,Pulmonary Artery)			
6	>	CONTAINS	TEXT	(FG3010-02,MRUS,Ascending Aorta)			
7	>	CONTAINS	TEXT	(FG3010-01,MRUS,"ARCH")			
8	>	CONTAINS	TEXT	(FG3010-03,MRUS," Decrease ARCH ")			
9	>	CONTAINS	TEXT	(T-32650,SRT,Left Ventricular Outflow Tract)			
10	>	CONTAINS	TEXT	(T-32550,SRT,Right Ventricle Outflow Tract)			

A.14. TID (FINDING_4) Fetal Brain

This is a private template referenced by TID (5003).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	(FG4030-01,MRUS,"Fetal Brain")			

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1		CONTAINS	CONTAINER	(FG12019-03,MRUS,"Fetal Environment")			
2	>	CONTAINS	TEXT	(FG12011-01,MRUS,"Placental Location")			
3	>	CONTAINS	TEXT	(FG12011-02,MRUS,"Amniotic Fluid")			
4	>	CONTAINS	TEXT	(FG12011-03,MRUS,"Placental Grade")			

A.17. TID (FINDING_7) Maternal Description

This is a private template referenced by TID (5003).

A.18. TID (5004)Fetal Biometry Ratio Section

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	DT (125001, DCM,			
2	>	HAS OBS CONTEXT	INCLUDE	EV (11951-1, LN,			
3	>	HAS OBS CONTEXT	NUM	EV (11878-6,LN,			
4	>	CONTAINS	NUM	11947-9, LN, "HC/AC"			
5	>	CONTAINS	NUM	11871-1, LN, "FL/AC"			
6	>	CONTAINS	NUM	11872-9, LN, "FL/BPD"			
7	>	CONTAINS	NUM	(11823-2, LN, "Cephalic Index")			
8	>	CONTAINS	NUM	(11873-7, LN, "FL/HC")			
9	>	CONTAINS	NUM	(C12004-01, MRUS, HrtC/TC)			
10	>	CONTAINS	NUM	(C12004-02, MRUS, "TCD/AC")			
11	>	CONTAINS	NUM	(C12004-03, MRUS, LVW/HW)			

12

3	>	HAS OBS CONTEXT	NUM	EV (11878-6,LN,			
4	>	CONTAINS	INCLUDE	DTID (5008) Fetal Biometry Group			$BiometryType = MemberOf {DCID (12005) Fetal Biometry Measurements}

A.20. TID (5006) Fetal Long Bones Section

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	DT (125003,			
2	>	HAS OBS CONTEXT	TEXT	EV (11951-1,LN,			
3	>	HAS OBS CONTEXT	NUM	EV (11878-6,LN, "Number of			
4	>	CONTAINS	INCLUDE	DTID (5008) Fetal Biometry Group			$BiometryType = MemberOf {DCID (12006) Fetal Long Bones Biometry Measurements}

A.21. TID (5007) Fetal Cranium Section

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	DT (125004,			

2

A.23. TID (5009) Fetal Biophysical Profile Section

	NL	Relation with Parent	Value Type	Concept Name	Used in Modality	Condition	Value Set Constraint
1			CONTAINER	DT (125006,			
2	>	HAS OBS CONTEXT	INCLUDE	EV (11951-1,LN,			
3	>	HAS OBS CONTEXT	NUM	EV (11878-6,LN, "Number of			
4	>	CONTAINS	NUM	EV (11631-9, LN,			Units = DT
5	>>	HAS PROPERTIES	TEXT	(121106, DCM,			
6	>	CONTAINS	NUM	EV (11632-7, LN,			Units = DT
7	>>	HAS PROPERTIES	TEXT	(121106, DCM,			
8	>	CONTAINS	NUM	EV (11635-0, LN,			Units = DT (
9	>>	HAS PROPERTIES	TEXT	(121106, DCM,			
10	>	CONTAINS	NUM	EV (11635-5, LN,			Units = DT
11	>>	HAS PROPERTIES	TEXT	(121106, DCM,			
12	>	CONTAINS	NUM	EV (11630-1, LN,			Units = DT

13	>>	HAS PROPERTIES	TEXT	(121106, DCM,			
14	>	CONTAINS	NUM	DT (11634-3, LN,			
15	>>	HAS PROPERTIES	TEXT	(121106, DCM,			

A.24. TID (5010) Amniotic Sac Section

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	DT (121070, DCM,			
2	>	HAS CONCEPT MOD	CODE	EV (G-C0E3, Site			DT (T-F1300,
3	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = DT (11627-7, LN,
4	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (11624-4, LN,
5	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (11626-9, LN, Second Quadrant
6	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (11625-1, LN,
7	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (11623-6, LN, "Fourth Quadrant

8	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (M12008-01,MRUS, "Amniotic Fluid")

A.25. TID (5011) Early Gestation Section

	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	DT (125009,			
2	>	HAS OBS CONTEXT	TEXT	EV (11951-1,LN,			
3	>	HAS OBS CONTEXT	NUM	EV (11878-6,LN, "Number of			
4	>	CONTAINS	INCLUDE	DTID (5008) Fetal Biometry Group			$BiometryType= Member of {DCID (12009) Early Gestation Biometry Measurements}

A.26. TID (5012) Ovaries Section

/F3 8.04 Tf4521 0-953.02 473.71 Tm0 eW* nJET 225.29D

	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	DT (121070, DCM,			
2	>	HAS CONCEPT MOD	CODE	EV (G.82 Tm0			

3	>	CONTAINS	INCLUDE	EV (T-87000,			$Measurement = EV (T-87000,
4	> >	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (11829-
5	> >	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (11840-
6	> >	CONTAINS	INCLUDE	DTID (300) Measurement			

							Ovarian Cyst1 Length
15	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (T-87000-2, MRUS, Ovarian Cyst1 Width
16	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (T-87000-3, MRUS Ovarian Cyst1 Height
17	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (T-87000-4, MRUS Ovarian Cyst2 Length
18	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (T-87000-5, MRUS Ovarian Cyst2 Width
19	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (T-87000-6, MRUS Ovarian Cyst2 Height
20	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (T-87000-7, MRUS Ovarian Cyst3 Length
21	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (T-87000-8, MRUS Ovarian Cyst3 Width
22	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (T-87000-9, MRUS Ovarian Cyst3 Height

A.27. TID (5013) Follicles Section

	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	DT (121070, DCM,			
2	>	HAS CONCEPT MOD	CODE	EV (G-C0E3,			DT (T-87600, SRT,

3 > HAS

CONCEPT

MOD

A.30. TID (5014_1) Smart Follicle Measurement Group

	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	EV (125007, DCM,			
2	>	HAS OBS CONTEXT	TEXT	EV (12510, DCM,			Unique among all groups of same laterality
3	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (G-D705_1, SRT,
4	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M11793-05, MRUS, Smart Follicle d1
5	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M11793-06, LN, Smart Follicle d2
6	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M11793-07, MRUS, Smart Follicle d3
7	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV (M11793-04, LN, Smart Follicle MeanDiam

A.31. TID (5015) Pelvis And Uterus Section

	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	DT (125011,			

2	>	CONTAINS	CONTAINER	$GroupName			$GroupName = EV (T-
3	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = $Width $Width = EV (11865-)
4	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = $Length $Length = EV (11842-2,
5	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = $Height $Height = EV (11859-6,
6	>>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = $Volume $Volume = EV (33192-6,
7	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV(LN,11961-0,Cervix Length)
8	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = EV(LN,12145-9,Endometrium Thickness)
9	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (MRUS,M12011-01,Cervix Height)
10	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (MRUS,M12011-02,Cervix Width)
11	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (MRUS,C12011-03,Uterus Body)
12	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (MRUS,C12011-04,UT_L/CX_L)
13	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (MRUS,M12011-03,Matrix Kindney Length)
14	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (M12011-04,MRUS,Fibroid1 Length)
15	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (M12011-05,MRUS,Fibroid1

							Width)

1 >

6

29	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (M12011-19,MRUS,Lesion3 Length)
30	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (M12011-20,MRUS,Lesion3 2 Width)
31	>	CONTAINS	INCLUDE	DTID (300) Measurement			$Measurement = (M12011-21,MRUS,Lesion3 Height)

A.32. TID (5025) OB-GYN Fetus Vascular Ultrasound Measurement Group

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	$AnatomyGroup			
2	>	HAS OBS CONTEXT	TEXT	EV (11951-1,LN,			
3	>	HAS OBS CONTEXT	NUM	EV (11878-6,LN, "Number of			
4	>	HAS CONCEPT MOD	CODE	EV (G-			DCID (244) Laterality
5	>	CONTAINS	INCLUDE	DTID (300) Measurement	√		$MeasType = DCID (12119) Vascular Ultrasound Property $Derivation = DCID (3627) Measurement Type

A.33. TID (5026) OB-GYN Pelvic Vascular Ultrasound Measurement Group

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINE	$AnatomyGroup			

			R				
2	>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT,			DCID (244) Laterality
3	>	HAS CONCEPT MOD	TEXT	(112050, DCM,			
4	>	CONTAINS	INCLUDE	DTID (300) Measurement	√		$MeasType = DCID (12119) Vascular Ultrasound Property $Derivation = DCID (3627) Measurement Type

A.34. CID (228) Equation or Table

CSD	CV	Code Meaning
DCM	121420	Equation
DCM	121421	Equation Citation
DCM	121424	Table of Values
DCM	121422	Table of Values Citation
DCM	121423	Method Citation

A.35. CID (244) Laterality

CSD	CV	Code Meaning
SRT	G-A100	Right
SRT	G-A101	Left
SRT	G-A102	Right and left
SRT	G-A103	Unilateral

A.36. CID (3627) Measurement Type

CSD	CV	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
SRT	R-10260	Estimated
SRT	R-41D2D	Calculated
SRT	R-41D41	Measured

A.37. CID (12005) Fetal Biometry Measurements

CSD	CV	Code Meaning
LN	11979-2	Abdominal Circumference
LN	11818-2	Anterior-Posterior Abdominal Diameter
LN	11819-0	Anterior-Posterior Trunk Diameter
LN	11820-8	Biparietal Diameter
LN	11860-4	Cisterna Magna
LN	11963-6	Femur Length
LN	11965-1	Foot length
LN	11984-2	Head Circumference
LN	11851-3	Occipital-Frontal Diameter
LN	11988-3	Thoracic Circumference
LN	33068-8	Thoracic Area
LN	11862-0	Tranverse Abdominal Diameter
LN	11863-8	Trans Cerebellar Diameter

MRUS	M12009-02	Gestational Sac Diameter2
MRUS	M12009-03	Gestational Sac Diameter3

A.41. CID (12013) Gestational Age Equations and Tables

CSD	CV	Code Meaning
LN	11885-1	Gestational Age by LMP
LN	11892-7	AC, Hadlock 1984
LN	11893-5	AC, Jeanty 1984
LN	33148-8	AC by GA, Merz 1988
LN	11902-4	BPD, Hadlock 1984
LN	11903-2	BPD, Hansmann 1985
LN	11905-7	BPD, Jeanty 1984
LN	33082-9	BPD, Osaka 1989
LN	33083-7	BPD, Rempen 1991
LN	11906-5	BPD, Kurtz 1980
LN	33088-6	Clavical length,Yarkoni 1985
LN	33091-0	CRL, Daya 1993
LN	11910-7	CRL, Hadlock 1992
LN	11911-5	CRL, Hansmann 1985
LN	11917-2	CRL, Jeanty 1984
LN	11913-1	CRL, Nelson 1981
LN	33094-4	CRL, Rempen 1991
LN	11914-9	CRL, Robinson 1975
LN	33138-9	Fetal Trunk Cross-Sectional Area, Osaka 1989
LN	11920-6	FL, Hadlock 1984
LN	11922-2	FL, Hohler 1982

CSD	CV	Code Meaning
LN	11944-6	Ulna, Jeanty 1984
LN	11941-2	Tibia, Jeanty 1984
LN	33110-8	,HC measured, Chitty 1997
LN	33146-2	AC by GA,Hadlock 1984
MRUS	F12013-01	AC, ASUM 2001
MRUS	F12013-02	AC,Nicolaides 1994
MRUS	F12013-03	BPD, ASUM 2001
MRUS	F12013-04	BPD, Merz 1991
MRUS	F12013-05	BPD, Tokyo 1989
MRUS	F12013-06	BPD-oo, Chitty 1994
MRUS	F12013-07	CRL, ASUM 2001
MRUS	F12013-08	CRL, Tokyo 1989
MRUS	F12013-23	EFW, Tokyo 1989
MRUS	F12013-09	FL, ASUM 2001
MRUS	F12013-10	FL, Chitty 1997
MRUS	F12013-11	FL, Merz 1991
MRUS	F12013-12	FL, Tokyo 1989
MRUS	F12013-13	FL,Warda,1985
MRUS	F12013-14	GS, Tokyo 1986
MRUS	F12013-15	HC, ASUM 2001
MRUS	F12013-16	HC derived, Chitty 1994
MRUS	F12013-17	HC,Nicolaides 1994
MRUS	F12013-18	Humerus Length, ASUM 2001
MRUS	F12013-19	OFD, ASUM 2001
MRUS	F12013-20	OFD,Nicolaides 1994
MRUS	F12013-21	OOD, Jeanty 1984
MRUS	F12013-22	TCD,Nicolaides 1994
MRUS	F12013-24	THD,Hansmann 1985
MRUS	F12013-25	GS, Hansmann 1985
MRUS	F12013-26	FL, Hansmann 1995
MRUS	F12013-43	EFW, Hadlock 1991
MRUS	F12013-44	Mean Sac Diameter Daya 1991
MRUS	F12013-45	GS,China 1997
MRUS	F12013-46	CRL,China 1997
MRUS	F12013-47	BPD,China 1997

CSD	CV	Code Meaning
MRUS	F12013-48	BPD,Nicolaides 1994
MRUS	F12013-49	FL,China 1997
MRUS	F12013-50	FL,Nicolaides 1994
MRUS	F12013-51	FL,Osaka 1989
MRUS	F12013-52	AC,Hansmann1986
MRUS	F12013-53	AC,CFEF Crequat2000
MRUS	F12013-54	AC,Chitty plotted 1994
MRUS	F12013-55	CRL,Robinson hp BMUS 1975
MRUS	F12015-22	FL,Osaka 1989
MRUS	F12013-56	MSD, Hellman 1969
MRUS	F12013-57	OFD, Jeanty 1984
MRUS	F12013-58	RAD, Jeanty 1984
MRUS	F12013-59	FIB, Jeanty 1984
MRUS	F12013-57	BPD, CFEF Crequat 2000
MRUS	F12013-58	FL, CFEF Crequat 2000
MRUS	F12013-59	HC, CFEF Crequat 2000
MRUS	F12013-60	TAD, CFEF Crequat 2000
LN	11926-3	Foot Length by GA Mercer 1987
MRUS	F12013-61	CRL Verburg 2008
MRUS	F12013-62	BPD Verburg 2008

A.42. CID (12014) Fetal Body Weight

CSD	CV	Code Meaning
LN	11739-0	EFW by AC and BPD, Shepard 1982
LN	11756-4	EFW by AC, Campbell 1975
MRUS	F12014-07	EFW by BPD, APTD, TTD, FL, Tokyo 1987
LN	11735-8	EFW by AC, BPD, FL, Hadlock 1985
LN	11732-5	EFW by AC, BPD, FL, HC, Hadlock 1985
LN	11751-5	EFW by AC, FL, Hadlock 1985
LN	11746-5	EFW by AC, FL, HC, Hadlock 1985
LN	11738-2	EFW by AC, BPD, Hadlock 1984
LN	11884-4	Average Ultrasound Age
MRUS	F12013-27	CUA by BPD, Hadlock 1984

CSD	CV	Code Meaning
MRUS	F12013-28	CUA by AC, Hadlock 1984
MRUS	F12013-29	CUA by HC, Hadlock 1984
MRUS	F12013-30	CUA by FL, Hadlock 1984
MRUS	F12013-31	CUA by BPD, HC, Hadlock 1984
MRUS	F12013-32	CUA by BPD, AC, Hadlock 1984
MRUS	F12013-33	CUA by BPD, FL, Hadlock 1984
MRUS	F12013-34	CUA by HC, AC, Hadlock 1984
MRUS	F12013-35	CUA by HC, FL, Hadlock 1984
MRUS	F12013-36	CUA by AC, FL, Hadlock 1984
MRUS	F12013-37	CUA by BPD, HC, AC, Hadlock 1984
MRUS	F12013-38	CUA by BPD, HC, FL, Hadlock 1984
MRUS	F12013-39	CUA by BPD, AC, FL, Hadlock 1984
MRUS	F12013-40	CUA by HC, AC, FL, Hadlock 1984
MRUS	F12013-41	CUA by BPD, HC, AC, FL, Hadlock 1984
MRUS	F12014-01	EFW by AC,BPD,Merz 1991
MRUS	F12014-02	EFW by AC,Merz 1991
MRUS	F12014-03	EFW by BPD, TTD, Hansmann 1995
MRUS	F12014-04	EFW by BPD, FTA, FL, Osaka 1983
MRUS	F12014-05	EFW by AC,HC,FL,Schild 2004
MRUS	F12014-06	EFW by BPD,FL,MAD,Persson 1996
MRUS	F12014-08	EFW CFEF 2014

A.43. CID (12015) Fetal Growth Equations and Tables

CSD	CV	Code Meaning
LN	33146-2	AC by GA, Hadlock 1984
LN	33147-0	AC(measured) by GA, Chitty 1994
LN	33546-3	AC (derived) by GA, Chitty 1994
LN	33198-3	BPD by GA, Hadlock 1984
LN	33152-0	outer-outer by GA, Chitty 1994
LN	33155-3	BPD by GA, Rempen 1991
LN	33160-3	CRL by GA, Rempen1991
LN	33166-0	FL by GA, Hadlock 1984
LN	33167-8	FL by GA, Chitty 1994
LN	33171-0	GS by GA, Rempen 1991

CSD	CV	Code Meaning
LN	33173-6	HC by GA, Hadlock 1984
LN	33174-4	HC derived by GA, Chitty 1994
LN	33181-9	TCD by GA Goldstein 1987
LN	33097-7	Fibula, Jeanty 1983
LN	33126-4	Radius, Jeanty 1983
MRUS	F12015-01	AC by GA, ASUM 2001
MRUS	F12015-02	AC by GA, Merz 1991
MRUS	F12015-03	AC, Jeanty 1984
MRUS	F12015-04	APAD,Merz 1991
MRUS	F12015-05	BPD by GA, ASUM 2001
MRUS	F12015-06	BPD, Hansmann 1985
MRUS	F12015-07	BPD by GA, Merz 1988
MRUS	F12015-08	BPD,Kurtz,1980
MRUS	F12015-09	BPD,Sabbagha 1978
MRUS	F12015-10	BPD, Tokyo 1989
MRUS	F12015-12	Clavical length,Yarkoni 1985
MRUS	F12015-13	CRL by GA ASUM 2001
MRUS	F12015-14	CRL, Hansmann 1985
MRUS	F12015-15	CRL, Robinson 1975
MRUS	F12015-16	CRL, Tokyo 1989
MRUS	F12015-17	EFW by GA, Hadlock 1984
MRUS	F12015-18	FL by GA, ASUM 2001
MRUS	F12015-19	FL, Hansmann 1995
MRUS	F12015-20	FL by GA, Merz 1991
MRUS	F12015-21	FL, O'Brien,1981
MRUS	F12015-22	FL, Osaka 1989
MRUS	F12015-23	FL, Tokyo, 1989
MRUS	F12015-24	FL,Warda,1985
MRUS	F12015-25	FIB,Merz,1991
MRUS	F12015-26	FTA, Osaka 1989
MRUS	F12015-27	HC by GA, ASUM 2001
MRUS	F12015-28	HC, Hansmann 1985
MRUS	F12015-29	HC by GA, Merz 1991
MRUS	F12015-30	Humerus Length by GA, ASUM 2001
MRUS	F12015-31	OFD by GA, ASUM 2001

CSD	CV	Code Meaning
MRUS	F12015-32	OFD, Hansmann 1985
MRUS	F12015-33	OFD,Merz 1991
MRUS	F12015-34	OFD,Nicolaides 1994
MRUS	F12015-35	RAD,Merz 1991
MRUS	F12015-36	TAD,Merz 1991
MRUS	F12015-37	TCD,Hill 1990
MRUS	F12015-38	THD, Hansmann 1985
MRUS	F12015-39	Tibia,Merz 1991
MRUS	F12015-40	Ulna,Merz 1991
MRUS	F12015-41	EFW by GA, Hansmann 1995
MRUS	F12015-42	FL, Jeanty 1984
MRUS	F12015-43	HC, Jeanty 1984
MRUS	F12015-44	OFD, Jeanty 1984
MRUS	F12015-45	HUM, Jeanty 1984
MRUS	F12015-46	ULNA, Jeanty 1984
MRUS	F12015-47	TIBIA, Jeanty 1984
MRUS	F12015-48	BPD, CFEF Crequat 2000
MRUS	F12015-49	HC, CFEF Crequat 2000
MRUS	F12015-50	FL, CFEF Crequat 2000
MRUS	F12015-51	TAD, CFEF Crequat 2000
MRUS	F12015-52	OOD, Jeanty 1984
MRUS	F12015-53	AC, CFEF Crequat 2000
MRUS	F12012-54	AC,Nicolaides 1994
MRUS	F12012-55	HC,Nicolaides 1994
MRUS	F12015-67	IT CHINA 2012
MRUS	F12015-68	IT Saulo 2016
MRUS	F12015-69	NBL Bunduki V 2003
MRUS	F12015-70	NBL Sonek JD 2003
MRUS	F12015-71	AC Verburg 2008

MRUS

CSD	CV	Code Meaning
MRUS	F12015-78	BPD,CFEF Crequat 2006
MRUS	F12015-79	FL,CFEF Crequat 2006
MRUS	F12015-80	HC,CFEF Crequat 2006
MRUS	F12015-81	HC c ,CFEF Crequat 2006
MRUS	F12015-82	EFW CFEF 2014

A.44. CID (12119) Vascular Ultrasound Property

CSD	CV	Code Meaning
INCLUDE CID 12120 Blood Velocity Measurements		
INCLUDE CID 12121 Vascular Indices and Ratios		
INCLUDE CID 12122 Other Vascular Properties		

A.45. CID (12120) Blood Velocity Measurements

CSD	CV	Code Meaning
LN	11653-3	End Diastolic Velocity
LN	11665-7	Minimum Diastolic Velocity
LN	11726-7	Peak Systolic Velocity
LN	11726-7	Peak Velocity
LN	20352-1	Time averaged mean velocity
LN	11692-1	Time averaged peak velocity

A.46. CID (12121) Vascular Indices and Ratios

CSD	CV	Code Meaning
LN	12008-9	Pulsatility Index
LN	12023-8	Resistivity Index
LN	12144-2	Systolic to Diastolic Velocity Ratio
MRUS	M12119-04	Diastolic to Systolic Velocity Ratio
MRUS	C12121-1	Systolic to Atrial Contraction Velocity Ratio
MRUS	M12120-1	Peak Early Diastolic Velocity
MRUS	C12121-2	Peak velocity index for the vein
MRUS	M12119-11	Reflux time
MRUS	M12119-17	inner diameter
STR	G-D785	Depth

A.47. CID (12122) Other Vascular Properties

CSD	CV	Code Meaning
LN	20168-1	Acceleration Time
LN	20217-6	Deceleration Time
SRT	R-1025C	Vessel Intimal Diameter
LN	20247-3	Peak Gradient
LN	20256-4	Mean Gradient
LN	20354-7	Velocity Time Integral
LN	11948-7	Fetal Heart Rate
LN	8867-4	Heart rate
MRUS	M12119-02	Angle
MRUS	M12119-01	Mean Velocity Mean Pressure Gradient
MRUS	M12119-06	Vol Flow(TAMAX&VAS_AREA)
MRUS	M12119-07	Vol Flow(TAMEAN&VAS_AREA)
SRT	G-0366	Vessel lumen cross-sectional area
MRUS	M12119-10	pseudoaneurysm Neck
MRUS	M12119-09	pseudoaneurysm Width
MRUS	M12119-08	pseudoaneurysm Height
MRUS	M12119-07	pseudoaneurysm Lengh
MRUS	M12119-28	Splenic V Diam
MRUS	M12119-29	Splenic A Diam
MRUS	C12119-1	Aorta Sten D
MRUS	C12119-2	Aorta Sten A
MRUS	M12119-30	Aneurysm Length
MRUS	M12119-31	Aneurysm Hight
MRUS	M12119-32	Aneurysm Width

A.48. CID (12140) Pelvic Vasculature Anatomical Location

CSD	CV	Code Meaning
SRT	T-46980	Ovarian Artery
SRT	T-46820	Uterine Artery

A.49. CID (12141) Fetal Vasculature Anatomical Location

CSD	CV	Code Meaning

SRT	T-42000	Aorta
SRT	T-D0765	Descending Aorta
SRT	T-42100	Ascending Aorta
SRT	T-32650	Left Ventricular Outflow Tract
	T-32550	Right Ventricle Outflow Tract
SRT	T-45600	Middle Cerebral Artery
MRUS	V12141-01	Ductus Venosus
SRT	T-F1810	Umbilical Artery
SRT	T-F1820	Umbilical Vein
SRT	T-F1412	Vitelline Artery of Placenta

A.50. CID (SELFCID-1) Fetal Z-Score

CSD	CV	Code Meaning
LN	18015-8	Aortic Root Diameter
LN	18012-5	Ascending Aortic Diameter
LN	18013-3	Descending Aortic Diameter
LN	18019-0	Left Pulmonary Artery Diameter
LN	18021-6	Right Pulmonary Artery Diameter
LN	18020-8	Main Pulmonary Artery Diameter
LN	18154-5	Interventricular Septum Diastolic Thickness
LN	18158-6	Interventricular Septum Systolic Thickness
MRUS	M18015-8	Aortic Root Diameter(Z Score)
MRUS	M18020-8	Main Pulmonary Artery Diameter(Z Score)
MRUS	C12201-06	Left Ventricular Diameter/Right Ventricular Diameter
MRUS	C12201-07	Left Ventricular Diameter/Right Ventricular Diameter(Z Score)
MRUS	C12205-03	Left Atrium Diameter / Right Atrium Diameter
MRUS	C12205-04	Left Atrium Diameter / Aorta Diameter
MRUS	C12205-05	Left Atrium Diameter / Aorta Diameter(Z Score)
MRUS	C12212-01	Aorta Diameter/Main Pulmonary Artery Diameter
MRUS	C12212-03	Aorta Diameter/Main Pulmonary Artery Diameter(Z Score)
MRUS	M12201-01	Left ventricular short-axis diameter at end diastole
MRUS	M12201-08	Left ventricular short-axis diameter at end diastole(Z Score)
MRUS	M12201-02	Left ventricular short-axis diameter at end systole
MRUS	M12201-03	Left ventricular Diameter
MRUS	M12201-09	Left ventricular Diameter(Z Score)

MODALITY Label	***DICOM Mapping***
TCD/AC	C12004-02,MRUS,TCD/AC
LVW/HW	C12004-03,MRUS,LVW/HW
CIHC	C12004-04, MRUS,Cephalic Index by HC
AC	11979-2,LN,Abdominal Circumference
BPD	11820-8,LN,Biparietal Diameter
FL	11963-6,LN,Femur Length
HC	11984-2,LN,Head Circumference
OFD	11851-3,LN,Occipital-Frontal Diameter
APAD	11818-2,LN,Anterior-Posterior Abdominal Diameter
TC	11988-3,LN,Thoracic Circumference
TAD	11862-0,LN,Tranverse Abdominal Diameter
TTD	11864-6,LN,Transverse Thoracic Diameter
APTD	11819-0,LN,Anterior-Posterior Trunk Diameter
FTA	33068-8,LN,Thoracic Area
TCD	11863-8,LN,Trans Cerebellar Diameter
Foot	11965-1,LN,Foot length
Cist Magna	11860-4,LN,Cisterna Magna
AXT	33191-8,LN,APAD * TAD
F-kidney	M12005-05, MRUS, Fetal Kidney length
NBL	M12005-06 MRUS Nose Bone Length
THD	M12005-01,MRUS,Thoracic Diameter
HrtC	M12005-02,MRUS,Heart Circumference
HUM	11966-9,LN,Humerus length
RAD	11967-7,LN,Radius length
Ulna	11969-3,LN,Ulna length
Tibia	11968-5,LN,Tibia length
FIB	11964-4,LN,Fibula length
CLAV	11962-8,LN,Clavicle length
LVW	12171-5,LN,Lateral Ventrical width
NF	12146-7,LN,Nuchal Fold thickness

MODALITY Label	*DICOM Mapping*
HW	12170-7,LN,Width of Hemisphere
Ear	M12007-01,MRUS,Ear Length
MP	M12007-02,MRUS,Middle Phalanx Length
Orbit	M12007-03,MRUS,Orbit
OFD(HC)	M12007-04,MRUS,OFDHC
HC(c)	C12007-01,MRUS,HCc
IT	M12007-05,MRUS,intracranial translucency
AF1	11624-4,LN,First Quadrant Diameter
AF2	11626-9,LN,Second Quadrant Diameter
AF3	11625-1,LN,Third Quadrant Diameter
AF4	11623-6,LN,Fourth Quadrant Diameter
AF	M12008-01,MRUS,Amniotic Fluid
CRL	11957-8,LN,Crown Rump Length
GS	11850-5,LN,Gestational Sac Diameter
Vertebrae	33071-2,LN,Spine Length
YS	11816-6,LN,Yolk Sac length
NT	33069-6,LN,Nuchal Translucency
Mean Sac Diam	C12009-01,MRUS,Mean Gestational Sac Diameter
Cervix L	11961-0,LN,Cervix Length
Cervix L	11961-0,LN,Cervix Length
Endo	12145-9,LN,Endometrium Thickness
Cervix H	M12011-01,MRUS,Cervix Height
Cervix W	M12011-02,MRUS,Cervix Width
Uterus Body	C12011-03,MRUS,Uterus Body
UT-L/CX-L	C12011-04,MRUS,UT_L/CX_L
Mat Kidney	M12011-03,MRUS,Matrix Kindney Length
Fibroid1 d1	M12011-04,MRUS,Fibroid1 Length
Fibroid1 d2	M12011-05,MRUS,Fibroid1 Width

M12011 192 89 0QTJETQ* »RT/F2 8 04 Tf1 96 02$M12011 USoid1 Width

MODALITY Label	***DICOM Mapping***
Fibroid3 d3	M12011-12,MRUS,Fibroid3 Height
Lesion1 d1	M12011-13,MRUS,Lesion1 Length
Lesion1 d2	M12011-14,MRUS,Lesion1 Width
Lesion1 d3	M12011-15,MRUS,Lesion1 Height
Lesion2 d1	M12011-16,MRUS,Lesion2 Length
Lesion2 d2	M12011-17,MRUS,Lesion2 Width
Lesion2 d3	M12011-18,MRUS,Lesion2 Height
Lesion3 d1	M12011-19,MRUS,Lesion3 Length
Lesion3 d2	M12011-20,MRUS,Lesion3 Width
Lesion3 d3	M12011-21,MRUS,Lesion3 Height
AFI	11627-7,LN,Amniotic Fluid Index
Ovary W	11829-9, LN, Left Ovary Width;11830-7, LN, Right Ovary Width
Ovary L	11840-6, LN, Left Ovary Length;11841-4, LN, Right Ovary Length
Ovary H	11857-0, LN, Left Ovary Height;11858-8, LN, Right Ovary Height
Ovary Vol	12164-0, LN, Left Ovary Volume;12165-7, LN, Right Ovary Volume
Ovarian Cyst1 d1	T-87000-1,MRUS,Ovarian Cyst1 Length
Ovarian Cyst1 d2	T-87000-2,MRUS,Ovarian Cyst1 Width
Ovarian Cyst1 d3	T-87000-3,MRUS,Ovarian Cyst1 Height
Ovarian Cyst2 d1	T-87000-4,MRUS,Ovarian Cyst2 Length
Ovarian Cyst2 d2	T-87000-5,MRUS,Ovarian Cyst2 Width
Ovarian Cyst2 d3	T-87000-6,MRUS,Ovarian Cyst2 Height
Ovarian Cyst3 d1	T-87000-7,MRUS,Ovarian Cyst3 Length
Ovarian Cyst3 d2	T-87000-8,MRUS,Ovarian Cyst3 Width
Ovarian Cyst3 d3	T-87000-9,MRUS,Ovarian Cyst3 Height
Follicle d1	M11793-02, MRUS, Follicle d1
UT W	11865-3,LN,Uterus Width
UT L	11842-2,LN,Uterus Length
UT H	11859-6,LN,Uterus Height
UT Vol	33192-6,LN,Uterus Volume
Follicle d2	M11793-01,MRUS,Follicle d2
Follicle1 d3	M11794-01,MRUS,Follicle d3
Follicle Vol	G-D705,SRT,Volume
Follicle MD	11793-7,LN,Follicle MeanDiam

MODALITY Label	***DICOM Mapping***
Smart Follicle > Follicle d1	M11793-05, MRUS, Smart Follicle d1
Smart Follicle > Follicle d2	M11793-06,MRUS, Smart Follicle d2
Smart Follicle > Follicle1 d3	M11793-06,MRUS, Smart Follicle d3
Smart Follicle >Follicle Vol	G-D705_1,SRT,Volume
Smart Follicle ->Follicle MD	11793-7,LN,Smart Follicle MeanDiam
EFW1	11727-5,LN,Estimated Weight
EFW2	11727-5,LN,Estimated Weight
CP	11767-1,LN EFW percentile rank
UP	11767-1,LN EFW percentile rank
CP	11767-1,LN EFW percentile rank
UP	11767-1,LN EFW percentile rank
EFW(Campbell)	11727-5,LN,Estimated Weight
EFW(Hadlock1)	11727-5,LN,Estimated Weight
EFW(Hadlock2)	11727-5,LN,Estimated Weight
EFW(Hadlock3)	11727-5,LN,Estimated Weight
EFW(Hadlock4)	11727-5,LN,Estimated Weight
EFW(Hansmann)	11727-5,LN,Estimated Weight
EFW(Merz1)	11727-5,LN,Estimated Weight
EFW(Merz2)	11727-5,LN,Estimated Weight
EFW(Osaka)	11727-5,LN,Estimated Weight
EFW(Shepard)	11727-5,LN,Estimated Weight
EFW(Tokyo)	11727-5,LN,Estimated Weight
PL Thickness	M12011-01,MRUS,Placental Thickness
HrtA	M12005-03,MRUS,Heart Area
Facial angle	M12005-04,MRUS,Facial angle
Sac Diam1	M12009-01,MRUS,Gestational Sac Diameter1
Sac Diam2	M12009-02,MRUS,Gestational Sac Diameter2
Sac Diam3	M12009-03,MRUS,Gestational Sac Diameter3

A.51.2. Vasculature Anatomic Location

MODALITY Vasculature Anatomic Location	*DICOM Mapping*
Ovarian A	T-46980, SRT, Ovarian Artery
Ut A	T-46820, SRT, Uterine Artery
Fetal Ao	T-42000, SRT, Aorta
Desc Aorta	T-D0765, SRT, Descending Aorta
Asc Aorta	T-42100,SRT,Ascending Aorta
RVOT	T-32550,SRT,Right ventricle outflow tract
LVOT	T-32650,SRT,Left ventricle outflow tract
MCA	T-45600, SRT, Middle Cerebral Artery
Duct Veno	V12141-01, MRUS, Ductus Veno
Umb A	T-F1810, SRT, Umbilical Artery
Umb V	T-F1820, SRT, Umbilical Vein
Placenta A	T-F1412, SRT, Vitelline Artery of Placenta

A.51.3. OB-GYN Vascular Measurements

MODALITY Label	*DICOM Mapping*
<Vasculature Anatomic Location> ED	11653-3, LN, End Diastolic Velocity
<Vasculature Anatomic Location> MD	11665-7 , LN, Minimum Diastolic Velocity
<Vasculature Anatomic Location> PS	11726-7, LN, Peak Systolic Velocity
<Vasculature Anatomic Location> TAMEAN	20352-1, LN, Time averaged mean velocity
<Vasculature Anatomic Location> TAMAX	11692-1, LN, Time averaged peak velocity
<Vasculature Anatomic Location> PV	11726-7, LN, Peak Velocity
<Vasculature Anatomic Location> PI	12008-9, LN, Pulsatility Index
<Vasculature Anatomic Location> RI	12023-8, LN, Resistivity Index
<Vasculature Anatomic Location> S/D	12144-2, LN, Systolic to Diastolic Velocity Ratio
<Vasculature Anatomic Location> D/S	M12119-04, MRUS, Diastolic to SystolicVelocity Ratio
<Vasculature Anatomic Location> AT	20168-1, LN, Acceleration Time
<Vasculature Anatomic Location> DT	20217-6, LN, Deceleration Time
<Vasculature Anatomic Location> PPG	20247-3, LN, Peak Gradient
<Vasculature Anatomic Location> MPG	20256-4, LN, Mean Gradient
<Vasculature Anatomic Location> MMPG	M12119-01, MRUS, Mean Velocity Mean Pressure Gradient
<Vasculature Anatomic Location> VTI	M12119-02, MRUS,Velocity-Time Integral
<Vasculature Anatomic Location> HR	11948-7, LN, Fetal Heart Rate
<Vasculature Anatomic Location>	M12119-03, MRUS, Angle
<Vasculature Anatomic Location> VD	R-1025C, SRT, Vessel Intimal Diameter
<Vasculature Anatomic Location> VolFlow	M12119-06, MRUS, Vol Flow(TAMAX&VAS_AREA)

RVOT	T-32550,SRT,Right Ventricle Outflow Tract
Lateral Ventricles	FG4030-02,MRUS,Lateral Ventricles
Cisterna Magna	11860-4,LN,Cisterna Magna
Cerebellum	T-A600A,SNM3,Cerebellum
CSP	FG4030-03,MRUS,CSP
Cervical Spine	T-11501,SNM3,Cervical Spine
Thoracic Spine	T-11502,SNM3,Thoracic Spine
Lumbar Spine	T-11503,SNM3,Lumbar Spine
Sacral Spine	FG4031-,MRUS,Sacral Spine
Placental Location	FG12011-01,MRUS,Placental Location
Amniotic Fluid	FG12011-02,MRUS,Amniotic Fluid
Placental Grade	FG12011-03,MRUS,Placental Grade
Adnexa	FG12011-03,MRUS,Adnexa
Ovaries	T-87000,SRT,Ovary
Kidney	T-71000,SRT,Kidney
Cervix	T-83200,SRT,Cervix

A.51.6. Pelvic Floor Measurements

BL Depth	M99901-01,MRUS,Bladder Length
BL Height	M99901-02,MRUS,Bladder Height
BL Width	M99901-03,MRUS,Bladder Width
DWT	M99901-04,MRUS,Detrusor Wall Thickness
BSD(R)	M99901-05,MRUS,Bladder Neck-Symphyseal Distance (Rest)
BSD(S)	M99901-06,MRUS,Bladder Neck-Symphyseal Distance (Stress)
RVA(R)	M99901-07,MRUS,Retrovesical Angle (Rest)
RVA(S)	M99901-08,MRUS,Retrovesical Angle (Stress)
UTA(R)	M99901-09,MRUS,Urethral Tilt Angle (Rest)
UTA(S)	M99901-10,MRUS,Urethral Tilt Angle (Stress)
PVA(R)	M99901-11,MRUS,Pubovesical Angle (Rest)
PVA(S)	M99901-12,MRUS,Pubovesical Angle (Stress)
PUA(R)	M99901-13,MRUS,Pubourethral Angle (Rest)
PUA(S)	M99901-14,MRUS,Pubourethral Angle (Stress)
BL Desc. Max(R)	M99901-15,MRUS,Maximal Bladder Descent (Rest)
BL Desc. Max(S)	M99901-16,MRUS,Maximal Bladder Descent (Stress)
UT Desc. Max(R)	M99901-17,MRUS,Maximal Uterus Descent (Rest)
UT Desc. Max(S)	M99901-18,MRUS,Maximal Uterus Descent (Stress)
R Amp. Desc. Max(R)	M99901-19,MRUS,Maximal Rectal Ampulla Descent (Rest)
R Amp. Desc. Max(S)	M99901-20,MRUS,Maximal Rectal Ampulla Descent (Stress)
URA	M99901-21,MRUS,Urethral Rotation Angle
Rectocele Depth	M99901-22,MRUS,Rectocele Depth

Intus. Depth	M99901-23,MRUS,Intus. Depth
ARA(R)	M99901-24,MRUS,Anorectal Angle (Rest)
ARA(S)	M99901-25,MRUS,Anorectal Angle (Stress)
ARA(C)	M99901-26,MRUS,Anorectal Angle (Contraction)
LH AP Diam(R)	M99901-27,MRUS,Levator Hiatal Anteroposterior Diameter (Rest)
LH AP Diam(S)	M99901-28,MRUS,Levator Hiatus Anteroposterior Diameter (Stress)
LH AP Diam(C)	M99901-29,MRUS,Levator Hiatus Anteroposterior Diameter (Contraction)
LH Lateral Diam(R)	M99901-30,MRUS,Levator Hiatus Lateral Diameter (Rest)
LH Lateral Diam(S)	M99901-31,MRUS,Levator Hiatus Lateral Diameter (Stress)
LH Lateral Diam(C)	M99901-32,MRUS,Levator Hiatus Lateral Diameter (Contraction)
LH Angle(R)	M99901-33,MRUS,Levator Hiatus Area (Rest)
LH Circ(R)	M99901-34,MRUS,Levator Hiatus Circumference (Rest)
LH Angle(S)	M99901-35,MRUS,Levator Hiatus Area (Stress)
LH Circ(S)	M99901-36,MRUS,Levator Hiatus Circumference (Stress)
LH Angle(C)	M99901-37,MRUS,Levator Hiatus Area (Contraction)
LH Circ(C)	M99901-38,MRUS,Levator Hiatus Circumference (Contraction)
LA Thickness (R)	M99901-39,MRUS,Levator Ani Thickness (Rest)
LA Thickness (S)	M99901-40,MRUS,Levator Ani Thickness (Stress)
LA Thickness (C)	M99901-41,MRUS,Levator Ani Thickness (Contraction)
LA Angle(R)	M99901-42,MRUS,Levator Ani Angle (Rest)
LA Angle(S)	M99901-43,MRUS,Levator Ani Angle (Stress)
LA Angle(C)	M99901-44,MRUS,Levator Ani Angle (Contraction)
ResUr (Dietz)	C99901-01,MRUS,Residual Urine (Dietz)
ResUr (Haylen)	C99901-02,MRUS,Residual Urine (Haylen)
ResUr (Dicuio)	C99901-03,MRUS,Residual Urine (Dicuio)

BL Desc. Max(R) (Ref Coord C1)	M99901-56,MRUS,Maximal Bladder Descent1 (Rest)
PUA(R) (Ref Coord C1)	M99901-57,MRUS,Pubourethral Angle1 (Rest)
PVA(R) (Ref Coord C1)	M99901-58,MRUS,Pubovesical Angle1 (Rest)
RVA(R) (Ref Coord C1)	M99901-59,MRUS,Retrovesical Angle1 (Rest)
UTA(R) (Ref Coord C1)	M99901-60,MRUS,Urethral Tilt Angle1 (Rest)
BSD(S) (Ref Coord C1)	M99901-61,MRUS,Bladder Neck-Symphyseal Distance1 (Stress)
BL Desc. Max(S) (Ref Coord C1)	M99901-62,MRUS,Maximal Bladder Descent1 (Stress)
PUA(S) (Ref Coord C1)	M99901-63,MRUS,Pubourethral Angle1 (Stress)

LUG1(C)	M99901-93,MRUS,Levator Urethra Gap1 (Contraction)
LUG2(R)	M99901-94,MRUS,Levator Urethra Gap2 (Rest)
LUG2(Va)	M99901-

B. Appendix : Cardiac structured reporting template

This appendix lists the DICOM Structured Report (SR) mappings used in the Cardiac Structured Reports of ultrasound system SR files.

The mappings are organized in a manner similar to the DICOM SR Templates as described in PS 3.16 of the DICOM Standard. The Cardiac Report mappings follow the DICOM SR Template TID 5200: Cardiac Ultrasound Procedure Report, except where noted.

All private code values use the Coding Scheme Designator "MRUS".

B.1. TID (5200) Echocardiography Procedure Report

This template forms the top of a content tree that allows an ultrasound system to describe the results of an adult echocardiography imaging procedure.

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	EV (125200, DCM,			
2	>	HAS CONCEPT MOD	INCLUDE	DTID (1204) Language of Content Item and Descendants			
3	>	HAS OBS CONTEXT	INCLUDE	DTID (1001) Observation Context			
4	>	CONTAINS	INCLUDE	DTID (5201) Echocardiography Patient Characteristics			
5	>	CONTAINS	CONTAINER				
6	>>	CONTAINS	IMAGE	No purpose of reference			
7	>	CONTAINS	INCLUDE	DTID(SELFTEM-2)Echo Procedure Summary Section			
8	>	CONTAINS	INCLUDE	DTID (5202) Echo Section			$SectionSubject = EV (T- $MeasType = DCID (12200) Echocardiography Left

							Ventricle
9	>	CONTAINS	INCLUDE	DTID	(5202)	Echo Section	

15	>	CONTAINS	INCLUDE	DTID (5202) Echo Section			$SectionSubject = EV (T-35100, SRT, $MeasType = DCID (12208) Echocardiography Tricuspid Valve
16	>	CONTAINS	INCLUDE	DTID (5202) Echo Section			$SectionSubject = EV (T-42000, SRT, $MeasType= DCID (12212) Echocardiography Aorta
17	>	CONTAINS	INCLUDE	DTID (5202) Echo Section			$SectionSubject = EV (T-44000, SRT, $MeasType DCID (12210) = Echocardiography Pulmonary Artery
18	>	CONTAINS	INCLUDE	DTID (5202) Echo Section			$SectionSubject = EV (T- $MeasType = DCID (12215) Echocardiography Vena Cavae
19	>	CONTAINS	INCLUDE	DTID (5202) Echo Section			$SectionSubject = EV (T-48581, SRT, lmonary Venous $MeasType = DCID (12214) Echocardiography Pulmonary Veins
20	>	CONTAINS	INCLUDE	DTID (5202) Echo Section			$SectionSubject = EV (P5-30031, SRT, DCID (12217) Echocardiography Cardiac Shunt

21	>	CONTAINS	INCLUDE	DTID (5202) Echo Section			$SectionSubject = EV (D4-30000, SRT, of Cardiovascular = DCID (12218) Echocardiography Congenital
22	>	CONTAINS	INCLUDE	DTID (5204) Wall Motion Analysis			
23	>	CONTAINS	INCLUDE	DTID (5202) Echo Section			

1	>	HAS OBS CONTEXT	CODE	EV (121005,DCM,			(121006,DCM,
2	>	HAS OBS CONTEXT	PNAME	EV (121008,DCM,			Operator from Info
3	>	HAS OBS CONTEXT	TEXT	EV (121009,DCM,			Institution Name (0008,0080) of the General Equipment Module
4	>	HAS OBS CONTEXT	CODE	EV (121010,DCM, Role in the			(121093, DCM, "Sonographer")
5	>	HAS OBS CONTEXT	CODE	EV (121024, DCM,			(121025, DCM,
6	>	HAS OBS CONTEXT	PNAME	EV (121029,DCM,			(0010,0010) in Patient Module
7	>	HAS OBS CONTEXT	DATE	EV (121031,DCM, "Subject Bir			Date (0010,0030) in Patient Module
8	>	HAS OBS CONTEXT	CODE	EV (121032,DCM,			value equivalent to (0010,0040) in Patient Module
9	>	HAS OBS CONTEXT	NUM	EV (121033,DCM,			(0010,1010) in Patient Study Module

B.3. TID (5201) Echocardiography Patient Characteristics

	NL	Rel with Parent	VT	Concept Name	Used in Modality	Value Set Constraint	Comments
1			CONTAINER	EV (121118, DCM,			

							Info
4	>	CONTAINS	NUM	EV (8867-R			from Info
5	>	CONTAINS	NUM	EV (F-008EC, SRT,			from Info

6

							Comment
8	>	CONTAINS	TEXT	(I12101-05,MRUS,"Prompt")			from report interface Comment
9	>	CONTAINS	TEXT	(121071,DCM,"Findings")			from report interface Comment

B.6. TID (5203) Echo Measurement

	NL	Relation with Parent	Value Type	Concept Name	Used in MODALITY	Value Set Constraint	Comment
1			INCLUDE	DTID (300) Measurement		$Measurement = $Measurement $Method = $Method $TargetSite = BCID (12236) Echo Anatomic Sites $TargetSiteMod = BCID (12237) Echocardiography Anatomic Site Modifiers	
2	>	HAS CONCEPT MOD	CODE	EV(G-C036,SRT,"Measurement Method")		This row is used only if the measurement or calculation this template is invoked with mandates it. Otherwise this row is not used. The values are taken from the BCID 12227	
3	>	HAS CONCEPT MOD	CODE	EV (G-		BCID (12221) Flow Direction	
4	>	HAS CONCEPT MOD	CODE	EV (R-		DCID (12234) Respiration State	
5	>	HAS CONCEPT MOD	CODE	EV (R-		DCID (12233) Respiration State	
6	>	HAS ACQ CONTEXT	CODE	EV (G-		DCID (12224) Ultrasound Image Modes	

MRUS	M12201-06	Left ventricular mean circumference Fractional Shortening
MRUS	C12201-02	Relative Wall Thickness
LN	29436-3	Left Ventricle Internal End Diastolic Dimension
LN	29438-9	Left Ventricle Internal Systolic Dimension
LN	18154-5	Interventricular Septum Diastolic Thickness
LN	18152-9	Left Ventricle Posterior Wall Diastolic Thickness

B.9. CID (12202) Left Ventricle Volume

CSD	CV	Code Meaning
LN	18026-5	Left Ventricular End Diastolic Volume
LN	18148-7	Left Ventricular End Systolic Volume
LN	18043-0	Left Ventricular Ejection Fraction
MRUS	C12202-01	Left Ventricular EDV index
MRUS	C12202-02	Left Ventricular ESV index

B.10. CID (12203) Left Ventricle Other

CSD	CV	Code Meaning
LN	18087-7	Left Ventricle Mass
LN	18071-1	Left Ventricular Isovolumic Relaxation Time
SRT	G-037E	Left Ventricular Isovolumic Contraction Time
SRT	G-037F	Left Ventricular Index of Myocardial Performance

CSD	CV	Code Meaning
SRT	G-0380	Right Ventricular Peak Systolic Pressure
LN	18153-7	Right Ventricular Anterior Wall Diastolic Thickness
LN	18157-8	Right Ventricular Anterior Wall Systolic Thickness
MRUS	M12204-01	Right ventricular Major
MRUS	M12204-02	Right ventricular Minor
MRUS	M12204-03	Right ventricular Area at end-diastole
MRUS	M12204-04	Right ventricular Area at end-systole
MRUS	M12204-05	Right Ventricle Pre-Ejection Period
MRUS	M12204-06	Right Ventricle Ejection Time
MRUS	C12204-01	Right Ventricle Pre-Ejection Period to Ejection Time Ratio
MRUS	C12204-02	Right Ventricle Acceleration Time to Ejection Time Ratio
MRUS	C12204-03	Right Ventricular Fractional Area Change
LN	20304-2	Right Ventricular Internal Diastolic Dimension
LN	20305-9	Right Ventricular Internal Systolic Dimension
MRUS	M12204-03	Right ventricular Area at end-diastole
MRUS	M12204-04	Right ventricular Area at end-systole
MRUS	M12204-07	Right ventricular end-diastolic basal diameter
MRUS	M12204-08	Right ventricular end-diastolic midcavity diameter

B.12. CID (12205) Echocardiography Left Atrium

CSD	CV	Code Meaning
INCLUDE CID 12220 Echocardiography Common Measurements		
LN	29469-4	Left Atrium Antero-posterior Systolic Dimension
LN	17985-3	Left Atrium to Aortic Root Ratio
LN	17977-0	Left Atrium Systolic Area
SRT	G-0383	Left Atrium Systolic Volume
MRUS	M12205-01	Left atrium Major
MRUS	M12205-02	Left atrium Minor
MRUS	C12205-01	Aortic Root to Left Atrium Ratio
MRUS	C12205-02	Left Atrium Volume index
LN	29469-4	Left Atrium Antero-posterior Systolic Dimension
LN	17977-0	Left Atrium Systolic Area
MRUS	M12205-03	LA LL Diam

B.13. CID (12206) Echocardiography Right Atrium

CSD	CV	Code Meaning
INCLUDE CID 12220 Echocardiography Common Measurements		
LN	18070-3	Right Atrium Systolic Area
MRUS	M12206-01	Right atrium Major
MRUS	M12206-02	Right atrium Minor
MRUS	M12206-03	Right atrium Volume
MRUS	M12206-04	Right atrium Volume index
LN	17988-7	Right Atrium Systolic Area
MRUS	M12206-04	RA AP Diam
MRUS	M12206-05	RA LL Diam

B.14. CID (12207) Echocardiography Mitral Valve kA MCID 2 90.5046.57 575

CSD	CV	Code Meaning
SRT	F-32120	

CSD	CV	Code Meaning
MRUS	M12207-06	Mitral Valve E-wave Pressure Gradient
MRUS	M12207-07	Mitral Valve A-wave Pressure Gradient
MRUS	M12207-08	E wave Velocity Time Integral
MRUS	M12207-9	A wave Velocity Time Integral
MRUS	M12207-10	Mitral Valve E-Wave Duration
MRUS	M12207-11	Systolic Velocity of the Mitral Annulus(medial)
MRUS	M12207-12	Early diastolic velocity of the mitral annulus(medial)
MRUS	M12207-13	Late diastolic velocity of the mitral annulus(medial)
MRUS	M12207-14	Early diastolic velocity to Late diastolic velocity Ratio
MRUS	M12207-15	Acceleration Time of Early diastolic velocity
MRUS	M12207-16	Acceleration Rate of Early diastolic velocity
MRUS	M12207-17	Deceleration Time of Early diastolic velocity
MRUS	M12207-18	Deceleration Rate of Early diastolic velocity
MRUS	M12207-19	Systolic Velocity of the Mitral Annulus(lateral)
MRUS	M12207-20	Early diastolic velocity of the mitral annulus(lateral)
MRUS	M12207-21	Late diastolic velocity of the mitral annulus(lateral)
MRUS	M12207-22	Early diastolic velocity to Late diastolic velocity Ratio
MRUS	M12207-23	Acceleration Time of Early diastolic velocity
MRUS	M12207-24	Acceleration Rate of Early diastolic velocity
MRUS	M12207-25	Deceleration Time of Early diastolic velocity
MRUS	M12207-26	Deceleration Rate of Early diastolic velocity
MRUS	M12207-27	Mitral Stenosis Radius
MRUS	M12207-28	Mitral Stenosis Aliasing Velocity
MRUS	M12207-29	Mitral Stenosis Maximum Velocity
MRUS	M12207-30	Mitral Stenosis Area
MRUS	M12207-31	Mitral Stenosis Area
MRUS	M12207-32	Mitral Stenosis Maximum Pressure Gradient
MRUS	M12207-33	Mitral Valve A-C Slope
MRUS	M12207-34	A Wave Amplitude to C Wave Amplitude Ratio
MRUS	M12207-35	MV E/Ea medial
MRUS	M12207-36	MV E/Ea lateral
MRUS	M12207-37	MV E/Ea medial lateral
MRUS	M12207-38	Mitral Valve A-C Interval
MRUS	M12207-39	Mitral Annular Plane Systolic Excursion
MRUS	M12207-40	Tau(BAI)

B.15. CID (12208) Echocardiography Tricuspid Valve

CSD	CV	Code Meaning
INCLUDE CID 12220 Echocardiography Common Measurements		
INCLUDE CID 12222 Orifice Flow Properties		
LN	18031-5	Tricuspid Valve E Wave Peak Velocity
LN	18030-7	Tricuspid Valve A Wave Peak Velocity
LN	18039-8	Tricuspid Valve E to A Ratio
LN	20296-0	Time from Q wave to Tricuspid Valve Opens
SRT	G-0389	Tricuspid Valve Closure to Opening Time
MRUS	M12208-01	Tricuspid Valve E-Wave Duration
MRUS	M12208-02	Tricuspid Valve E Wave Pressure Gradient
MRUS	M12208-03	Tricuspid Valve A Wave Pressure Gradient
MRUS	M12208-04	Tricuspid Annular Plane Systolic Excursion

B.16. CID (12209) Echocardiography Pulmonic Valve

INCLUDE CID 12220 Echocardiography Common Measurements
INCLUDE CID 12222 Orifice Flow Properties

B.17. CID (12210) Echocardiography Pulmonary Artery

CSD	CV	Code Meaning
INCLUDE CID 12220 Echocardiography Common Measurements		
LN	18020-8	Main Pulmonary Artery Diameter
LN	18021-6	Right Pulmonary Artery Diameter
LN	18019-0	Left Pulmonary Artery Diameter
SRT	G-038A	Main Pulmonary Artery Peak Velocity
MRUS	M12210-01	Posterior ductal Diameter
MRUS	C12210-01	Pulmonary Artery End Diastolic Pressure
LN	18020-8	Main Pulmonary Artery Diameter
LN	18021-6	Right Pulmonary Artery Diameter
LN	18019-0	Left Pulmonary Artery Diameter

B.18. CID (12211) Echocardiography Aortic Valve

CSD	CV	Code Meaning
INCLUDE CID 12220 Echocardiography Common Measurements		
INCLUDE CID 12222 Orifice Flow Properties		
LN	17996-0	Aortic Valve Cusp Separation
SRT	G-0382	Ratio of Aortic Valve Acceleration Time to Ejection Time

B.19. CID (12212) Echocardiography Aorta

CSD	CV	Code Meaning
INCLUDE CID 12220 Echocardiography Common Measurements		
LN	18015-8	Aortic Root Diameter
LN	18011-7	Aortic Arch Diameter
LN	18012-5	Ascending Aortic Diameter
LN	18014-1	Aortic Isthmus Diameter
LN	18013-3	Descending Aortic Diameter
MRUS	M12212-01	Aortic Sinotubular junction Diameter
MRUS	M12212-02	Aortic Sinus Diameter
MRUS	M12212-03	Ductus Artery Diameter
MRUS	M12212-04	Previous Ductal Diameter
MRUS	M12212-05	Left Coronary Artery Diameter
MRUS	M12212-06	Right Coronary Artery Diameter
MRUS	C12212-02	Aortic Sinotubular junction Diameter/Aorta Root Diameter
LN	18014-1	Aortic Isthmus Diameter
MRUS	M12212-01	Aortic Sinotubular junction Diameter
MRUS	M12212-02	Aortic Sinus Diameter
MRUS	M12212-07	Ao Arch IA-LCA
MRUS	M12212-08	Ao Arch LCA-LSA
MRUS	M12212-09	Ao Arch After LSA
MRUS	M12212-	Thoracic Ao Diam

B.20. CID (12214) Echocardiography Pulmonary Veins

CSD	CV	Code Meaning
INCLUDE CID 12220 Echocardiography Common Measurements		
SRT	G-038B	Pulmonary Vein A-Wave Duration

CSD	CV	Code Meaning
SRT	G-038D	Pulmonary Vein D-Wave Velocity Time Integral/
SRT	G-038C	Pulmonary Vein S-Wave Velocity Time Integral
MRUS	M12214-01	Pulmonary Vein S wave flow Velocity
MRUS	M12214-02	Pulmonary Vein D-wave flow Velocity
MRUS	M12214-03	Pulmonary Vein A-wave flow Velocity
MRUS	M12214-04	Pulmonary Vein Deceleration Time
MRUS	M12214-05	Pulmonary Vein Ratio of S-Wave velocity to D-wave velocity
MRUS	M12214-06	Pulmonary Vein Systolic fraction

B.21. CID (12215) Echocardiography Vena Cavae

CSD	CV	Code Meaning
INCLUDE CID 12220 Echocardiography Common Measurements		
LN	18006-7	Inferior Vena Cava Diameter
MRUS	M12215-01	Superior Vena Cava Diameter
MRUS	C12215-03	Collapsible index of inferior vena cava
MRUS	C12215-04	Distensibility index of inferior vena cava
MRUS	C12215-05	Collapsible index of superior vena cava
MRUS	C12215-06	Distensibility index of superior vena cava
MRUS	M12215-04	Inferior Vena Cava Depth
MRUS	M12215-05	Superior Vena Cava Depth
LN	18006-7	Inferior Vena Cava Diameter

B.22. CID (12216) Echocardiography Hepatic Veins

CSD	CV	Code Meaning
INCLUDE CID 12220 Echocardiography Common Measurements		
LN	29471-0	Hepatic Vein Systolic Peak Velocity
LN	29472-8	Hepatic Vein Diastolic Peak Velocity
LN	29473-6	Hepatic Vein Systolic to Diastolic Ratio
LN	29474-4	Hepatic Vein Atrial Contraction Reversal Peak Velocity
MRUS	29473-0	Hepatic Vein Systolic Pressure Gradient
MRUS	29473-1	Hepatic Vein Diastolic Pressure

CSD	CV	Code Meaning
		Gradient

B.23. CID (12217) Echocardiography Cardiac Shunt

CSD	CV	Code Meaning
INCLUDE CID 12220 Echocardiography Common Measurements		

CSD	CV	Code Meaning
SRT	R-42047	Antegrade Flow
SRT	R-42E61	Regurgitant Flow

B.27. CID (12222) Orifice Flow Properties

CSD	CV	Code Meaning
SRT	G-038E	Cardiovascular Orifice Area
SRT	G-038F	Cardiovascular Orifice Diameter
SRT	G-0390	Regurgitant Fraction
LN	11726-7	Peak Velocity
LN	20352-1	Mean Velocity
LN	20247-3	Peak Gradient
LN	20256-4	Mean Gradient
LN	20354-7	Velocity Time Integral
LN	20168-1	Acceleration Time
LN	11653-3	End Diastolic Velocity
LN	20280-4	Pressure Half-Time
LN	20217-6	Deceleration Time
LN	33878-0	Volume Flow
LN	34141-2	Peak Instantaneous Flow Rate
LN	20216-8	Deceleration Slope
MRUS	M12222-05	Aliasing Velocity
MRUS	M12222-04	Time
MRUS	M12222-02	Acceleration Slope
MRUS	M12222-06	Flow Radius
MRUS	M12222-01	Angle
MRUS	M12222-08	Presure Gradient at end-Diastole
MRUS	M12222-07	Acceleration Time/Deceleration Time
SRT	G-038F	Cardiovascular Orifice Diameter

B.28. CID (12224) Ultrasound Image Modes

CSD	CV	Code Meaning
SRT	G-03A2	2D mode
SRT	G-0394	M mode

CSD	CV	Code Meaning
SRT	R-409E2	Doppler Color Flow
SRT	G-0394	M mode
SRT	R-409E4	Doppler Pulsed
SRT	R-409E3	Doppler Continuous Wave
DCM	125230	Power Doppler
DCM	125231	3D mode
MRUS	IM12224-01	Tissue Doppler Imaging

B.29. CID (12226) Echocardiography Image View

CSD	CV	Code Meaning
SRT	G-A19B	Apical two chamber
SRT	G-A19C	Apical four chamber
SRT	G-0395	Apical long axis
SRT	G-0396	Parasternal long axis
SRT	G-0397	Parasternal short axis
SRT	G-0398	Parasternal short axis at the aortic valve level
SRT	G-0399	Parasternal short axis at the level of the mitral chords
SRT	G-039A	Parasternal short axis at the Mitral Valve level
SRT	G-039B	Parasternal short axis at the Papillary Muscle level
SRT	G-039C	Right Ventricular Inflow Tract View
SRT	G-039D	Right Ventricular Outflow Tract View
SRT	G-039E	Subcostal long axis
SRT	G-039F	Subcostal short axis
SRT	G-03A0	Suprasternal long axis
SRT	G-03A1	Suprasternal short axis

B.30. CID (12227) Echocardiography Measurement Method

INCLUDE CID 12228 Echocardiography Volume Methods
INCLUDE CID 12229 Echocardiography Area Methods
INCLUDE CID 12231 Volume Flow Methods
INCLUDE CID 12232 Myocardium Mass Methods

B.31. CID (12228) Volume Methods

CSD	CV	Code Meaning
DCM	125204	Area-Length Biplane
DCM	125205	Area-Length Single Plane
DCM	125211	Biplane Ellipse
DCM	125226	Single Plane Ellipse
DCM	125206	Cube Method
DCM	125207	Method of Disks, Biplane
DCM	125208	Method of Disks, Single Plane
DCM	125209	Teichholz
MRUS	VM12228-01	Bullet
MRUS	VM12228-02	Method of Disks,Simpson
MRUS	VM12228-03	Gibson

B.32. CID (12229) Area Methods

B.35. CID (12232) Myocardium Mass Methods

CSD	CV	Code Meaning
DCM	125221	Left Ventricle Mass by M-mode
DCM	125222	Left Ventricle Mass by Truncated Ellipse

B.36. CID (12233) Cardiac Phase

CSD	CV	Code Meaning
SRT	F-32020	Systole
SRT	F-32010	Diastole
SRT	F-32011	End Diastole
DCM	109070	End Systole

B.37. CID (12234) Respiration Phase

CSD	CV	Code Meaning
SRT	F-20010	During Inspiration
SRT	F-20020	During Expiration

B.38. CID (12239) Cardiac Output Properties

CSD	CV	Code Meaning
SRT	F-32120	Stroke Volume
SRT	F-32100	Cardiac Output
SRT	F-32110	Cardiac Index
SRT	F-00078	Stroke Index
SRT	F-04FD8	RV Stroke Volume
SRT	F-04FE5	RV Stroke Index
SRT	F-04FA5	RV Cardiac Output
SRT	F-04F84	RV Cardiac Index

B.39. CID (12240) Left Ventricle Area

CSD	CV	Code Meaning
SRT	G-0374	Left Ventricular Systolic Area
SRT	G-0375	Left Ventricular Diastolic Area

SRT	G-0379	Left Ventricle Epicardial Diastolic Area, psax pap view
MRUS	M12240-01	Left Ventricle Endocardiac Diastolic Area, psax pap view
SRT	G-0376	Left Ventricular Fractional Area Change
SRT	G-0374	Left Ventricular Systolic Area
SRT	G-0375	Left Ventricular Diastolic Area

B.40. CID (90000) Pericardial disease

CSD	CV	Code Meaning
MRUS	C90000-01	Pericard Effusion at end-diastole
MRUS	C90000-02	Pericard Effusion at end-systole

B.41. Mapping between Modality measurements and DICOM Concepts.

B.41.1. Left Ventricle Measurements

MODALITY Label	*DICOM Mapping*	*Optional Modifiers*
LVOT HR	8867-4,LN,Heart rate	
LVIDd(2D)	29436-3,LN,Left Ventricle Internal End Diastolic Dimension	ImageMode = G-03A2,SRT,2D mode;
LVIDd Cube(2D)	29436-3,LN,Left Ventricle Internal End Diastolic Dimension	ImageMode = G-03A2,SRT,2D mode; Method =125206,DCM,Cube Method
LVIDd Teich(2D)	29436-3,LN,Left Ventricle Internal End Diastolic Dimension	ImageMode = G-03A2,SRT,2D mode; Method =125209,DCM,Teichholz
LVIDd Gibson(2D)	29436-3,LN,Left Ventricle Internal End Diastolic Dimension	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-03,MRUS,Gibson
LVIDd Gibson(M)	29436-3,LN,Left Ventricle Internal End Diastolic Dimension	ImageMode = G-0394,SRT,M Mode; Method =VM12228-03,MRUS,Gibson
LVIDd Cube(M)	29436-3,LN,Left Ventricle Internal End Diastolic Dimension	ImageMode = G-0394,SRT,M Mode; Method =125206,DCM,Cube Method
LVIDd Teich(M)	29436-3,LN,Left Ventricle Internal End Diastolic Dimension	ImageMode = G-0394,SRT,M Mode; Method =125209,DCM,Teichholz
LVIDd LV Mass(Cube)(2D)	29436-3,LN,Left Ventricle Internal End Diastolic Dimension	ImageMode = G-03A2,SRT,2D mode;

IVSd(LV Mass Cube-2D)	18154-5,LN,Interventricular Septum Diastolic Thickness	ImageMode = G-03A2,SRT,2D mode;
IVSd(LV Mass Cube-M)	18154-5,LN,Interventricular Septum Diastolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =125221,DCM,Left Ventricle Mass by M-mode
IVSd(M)	18154-5,LN,Interventricular Septum Diastolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =
IVSd Teich(2D)	18154-5,LN,Interventricular Septum Diastolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =125209,DCM,Teichholz
IVSd Teich(M)	18154-5,LN,Interventricular Septum Diastolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =125209,DCM,Teichholz
IVSd Cube(2D)	18154-5,LN,Interventricular Septum Diastolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =125206,DCM,Cube Method
IVSd Cube(M)	18154-5,LN,Interventricular Septum Diastolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =125206,DCM,Cube Method
IVSd Gibson(2D)	18154-5,LN,Interventricular Septum Diastolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-03,MRUS,Gibson
IVSd Gibson(M)	18154-5,LN,Interventricular Septum Diastolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =VM12228-03,MRUS,Gibson
IVSd/LVPWd(2D)	18155-2,LN,Interventricular Septum to Posterior Wall Thickness Ratio	CardiacCyclePoint =F-32011,SRT,End Diastole; ImageMode = G-03A2,SRT,2D mode;
IVSs/LVPWs(2D)	18155-2,LN,Interventricular Septum to Posterior Wall Thickness Ratio	CardiacCyclePoint =109070,SRT,End Systole; ImageMode = G-03A2,SRT,2D mode;
IVSd/LVPWd(M)	18155-2,LN,Interventricular Septum to Posterior Wall Thickness Ratio	CardiacCyclePoint =F-32011,SRT,End Diastole; ImageMode = G-0394,SRT,M Mode;
IVSs/LVPWs(M)	18155-2,LN,Interventricular Septum to Posterior Wall Thickness Ratio	CardiacCyclePoint =109070,SRT,End Systole; ImageMode = G-0394,SRT,M Mode;
IVS%(2D)	18054-7,LN,Interventricular Septum % Thickening	ImageMode = G-03A2,SRT,2D mode;
IVS%(M)	18054-7,LN,Interventricular Septum % Thickening	ImageMode = G-0394,SRT,M Mode;
IVSs(2D)	18158-6,LN,Interventricular Septum Systolic Thickness	ImageMode = G-03A2,SRT,2D mode;
IVSs(M)	18158-6,LN,Interventricular Septum Systolic Thickness	ImageMode = G-0394,SRT,M Mode;
IVSs Teich(2D)	18158-6,LN,Interventricular Septum Systolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =125209,DCM,Teichholz
IVSs Teich(M)	18158-6,LN,Interventricular Septum Systolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =125209,DCM,Teichholz

IVSs Cube(2D)	18158-6,LN,Interventricular Septum Systolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =125206,DCM,Cube Method
IVSs Cube(M)	18158-6,LN,Interventricular Septum Systolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =125206,DCM,Cube Method
IVSs Gibson(2D)	18158-6,LN,Interventricular Septum Systolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-03,MRUS,Gibson
IVSs Gibson(M)	18158-6,LN,Interventricular Septum Systolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =VM12228-03,MRUS,Gibson
LVPW%(2D)	18053-9,LN,Left Ventricle Posterior Wall % Thickening	ImageMode = G-03A2,SRT,2D mode;
LVPW%(M)	18053-9,LN,Left Ventricle Posterior Wall % Thickening	ImageMode = G-0394,SRT,M Mode;
LVLd apical	18077-8,LN,Left Ventricle diastolic major axis	ImageMode = G-03A2,SRT,2D mode;
LVLd(A2C)	18077-8,LN,Left Ventricle diastolic major axis	ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19B,SRT,Apical two chamber; Method =125208,DCM,Method of Disks, Single Plane
LVLd(A4C)	18077-8,LN,Left Ventricle diastolic major axis	ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125208,DCM,Method of Disks, Single Plane
LVLd2i	18077-8,LN,Left Ventricle diastolic major axis	ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19B,SRT,Apical two chamber; Method =125207,DCM,Method of Disks, Biplane
LVLd4i	18077-8,LN,Left Ventricle diastolic major axis	ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125207,DCM,Method of Disks, Biplane
LVLs apical	18076-0,LN,Left Ventricle systolic major axis	ImageMode = G-03A2,SRT,2D mode;
LVLs(A2C)	18076-0,LN,Left Ventricle systolic major axis	ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19B,SRT,Apical two chamber; Method =125226,DCM,Single Plane Ellipse
LVLs(A4C)	18076-0,LN,Left Ventricle systolic major axis	ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125226,DCM,Single Plane Ellipse

LVLs2i	18076-0,LN,Left Ventricle systolic major axis	ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19B,SRT,Apical two chamber; Method =125207,DCM,Method of Disks, Biplane
LVLs4i	18076-0,LN,Left Ventricle systolic major axis	ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125207,DCM,Method of Disks, Biplane
LVPWs(2D)	18156-0,LN,Left Ventricle Posterior Wall Systolic Thickness	ImageMode = G-03A2,SRT,2D mode;
LVPWs(M)	18156-0,LN,Left Ventricle Posterior Wall Systolic Thickness	ImageMode = G-0394,SRT,M Mode;
LVPWs Cube(2D)	18156-0,LN,Left Ventricle Posterior Wall Systolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =125206,DCM,Cube Method
LVPWs Cube(M)	18156-0,LN,Left Ventricle Posterior Wall Systolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =125206,DCM,Cube Method
LVPWs Teich(2D)	18156-0,LN,Left Ventricle Posterior Wall Systolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =125209,DCM,Teichholz
LVPWs Teich(M)	18156-0,LN,Left Ventricle Posterior Wall Systolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =125209,DCM,Teichholz
LVPWs Gibson(2D)	18156-0,LN,Left Ventricle Posterior Wall Systolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-03,MRUS,Gibson
LVPWs Gibson(M)	18156-0,LN,Left Ventricle Posterior Wall Systolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =VM12228-03,MRUS,Gibson
LVPWd(2D)	18152-9,LN,Left Ventricle Posterior Wall Diastolic Thickness	ImageMode = G-03A2,SRT,2D mode;
LVPWd(LV Mass-2D)	18152-9,LN,Left Ventricle Posterior Wall Diastolic Thickness	ImageMode = G-03A2,SRT,2D mode;
LVPWd(LV Mass-M)	18152-9,LN,Left Ventricle Posterior Wall Diastolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =125221,DCM,Left Ventricle Mass by M-mode
LVPWd(M)	18152-9,LN,Left Ventricle Posterior Wall Diastolic Thickness	ImageMode = G-0394,SRT,M Mode;
LVPWd Cube(2D)	18152-9,LN,Left Ventricle Posterior Wall Diastolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =125206,DCM,Cube Method
LVPWd Cube(M)	18152-9,LN,Left Ventricle Posterior Wall Diastolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =125206,DCM,Cube Method
LVPWd Teich(2D)	18152-9,LN,Left Ventricle Posterior Wall Diastolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =125209,DCM,Teichholz

LVPWd Teich(M)	18152-9,LN,Left Ventricle Posterior Wall Diastolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =125209,DCM,Teichholz
LVPWd Gibson(2D)	18152-9,LN,Left Ventricle Posterior Wall Diastolic Thickness	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-03,MRUS,Gibson
LVPWd Gibson(M)	18152-9,LN,Left Ventricle Posterior Wall Diastolic Thickness	ImageMode = G-0394,SRT,M Mode; Method =VM12228-03,MRUS,Gibson
LV Major	M12201-01,MRUS,Left ventricular Major	ImageMode = G-03A2,SRT,2D mode;
LV Minor	M12201-02,MRUS,Left ventricular Minor	ImageMode = G-03A2,SRT,2D mode;
MVCF(Cube-M)	C12201-01,MRUS,Mean Velocity of Circumferential Fiber Shortening	ImageMode = G-0394,SRT,M Mode; Method =125206,DCM,Cube Method
MVCF(Teich-M)	C12201-01,MRUS,Mean Velocity of Circumferential Fiber Shortening	ImageMode = G-0394,SRT,M Mode; Method =125209,DCM,Teichholz
MVCF(Gibson-M)	C12201-01,MRUS,Mean Velocity of Circumferential Fiber Shortening	ImageMode = G-0394,SRT,M Mode; Method =VM12228-03,MRUS,Gibson
MVCF(Cube-2D)	C12201-01,MRUS,Mean Velocity of Circumferential Fiber Shortening	ImageMode = G-03A2,SRT,2D mode; Method =125206,DCM,Cube Method
MVCF(Teich-2D)	C12201-01,MRUS,Mean Velocity of Circumferential Fiber Shortening	ImageMode = G-03A2,SRT,2D mode; Method =125209,DCM,Teichholz
MVCF(Gibson-2D)	C12201-01,MRUS,Mean Velocity of Circumferential Fiber Shortening	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-03,MRUS,Gibson
RWT(2D)	C12201-02,MRUS ,Relative Wall Thickness	ImageMode = G-03A2,SRT,2D mode;
RWT(M)	C12201-02,MRUS ,Relative Wall Thickness	ImageMode = G-0394,SRT,M Mode;
a	M12201-03,MRUS,A Distance	ImageMode = G-03A2,SRT,2D mode;
d	M12201-04,MRUS,B Distance	ImageMode = G-03A2,SRT,2D mode;

rd4i	M12222-06,MRUS,Flow Radius	CardiacCyclePoint =F-32011,SRT,End Diastole; ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125207,DCM,Method of Disks, Biplane
rs2i	M12222-06,MRUS,Flow Radius	CardiacCyclePoint =109070,SRT,End Systole; ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19B,SRT,Apical two chamber; Method =125207,DCM,Method of Disks, Biplane
rs4i	M12222-06,MRUS,Flow Radius	CardiacCyclePoint =109070,SRT,End Systole; ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125207,DCM,Method of Disks, Biplane
LV Area(s)	G-0374,SRT,Left Ventricular Systolic Area	ImageMode = G-03A2,SRT,2D mode;
LVAs apical(SP Ellipse)	G-0374,SRT,Left Ventricular Systolic Area	ImageMode = G-03A2,SRT,2D mode; ImageView = G-0395,SRT,Apical long axis;
LVAs sax MV	G-0374,SRT,Left Ventricular Systolic Area	ImageMode =G-03A2,SRT,2D mode; ImageView = G-039A,SRT,Parasternal short axis at the Mitral Valve level;
LVAs sax PM	G-0374,SRT,Left Ventricular Systolic Area	ImageMode =G-03A2,SRT,2D mode; ImageView = G-039B,SRT,Parasternal short axis at the Papillary Muscle level;
LVAs(A2C)	G-0374,SRT,Left Ventricular Systolic Area	ImageMode =G-03A2,SRT,2D mode; ImageView = G-A19B,SRT,Apical two chamber; Method =125208,DCM,Method of Disks, Single Plane
LVAs(A4C)	G-0374,SRT,Left Ventricular Systolic Area	ImageMode =G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125208,DCM,Method of Disks, Single Plane
LV Area(d)	G-0375,SRT,Left Ventricular Diastolic Area	ImageMode =G-03A2,SRT,2D mode;
FAC	G-0376, SRT ,Left Ventricular Fractional Area Change	ImageMode =G-03A2,SRT,2D mode;
LVAd apical	G-0375,SRT,Left Ventricular Diastolic Area	ImageMode =G-03A2,SRT,2D mode; ImageView = G-0395,SRT,Apical long axis;
LVAd sax MV	G-0375,SRT,Left Ventricular Diastolic Area	ImageMode =G-03A2,SRT,2D mode; ImageView = G-039A,SRT,Parasternal short axis at the Mitral Valve level;

LVAd sax PM	G-0375,SRT,Left Ventricular Diastolic Area	ImageMode =G-03A2,SRT,2D mode; ImageView = G-039B,SRT,Parasternal short axis at the Papillary Muscle level;
LVAd(A2C)	G-0375,SRT,Left Ventricular Diastolic Area	ImageMode =G-03A2,SRT,2D mode; ImageView = G-A19B,SRT,Apical two chamber; Method =125208,DCM,Method of Disks, Single Plane
LVAd(A4C)	G-0375,SRT,Left Ventricular Diastolic Area	ImageMode =G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125208,DCM,Method of Disks, Single Plane
LVAd sax Epi(LV Mass T-E)	G-0379,SRT,Left Ventricle Epicardial Diastolic Area, psax pap view	ImageMode =G-03A2,SRT,2D mode; ImageView = G-039B,SRT,Parasternal short axis at the Papillary Muscle level; Method =125222,DCM,Left Ventricle Mass by Truncated Ellipse
LVAd sax Epi(LV Mass A-L)	G-0379,SRT,Left Ventricle Epicardial Diastolic Area, psax pap view	ImageMode =G-03A2,SRT,2D mode; ImageView = G-039B,SRT,Parasternal short axis at the Papillary Muscle level; Method =125205,DCM,Area-Length Single Plane
LVAd sax Endo(LV Mass T-E)	M12240-01,MRUS,Left Ventricle Endocardiac Diastolic Area, psax pap view	ImageMode =G-03A2,SRT,2D mode; ImageView = G-039B,SRT,Parasternal short axis at the Papillary Muscle level; Method =125222,DCM,Left Ventricle Mass by Truncated Ellipse
LVAd sax Endo(LV Mass A-L)	M12240-01,MRUS,Left Ventricle Endocardiac Diastolic Area, psax pap view	ImageMode =G-03A2,SRT,2D mode; ImageView = G-039B,SRT,Parasternal short axis at the Papillary Muscle level; Method =125205,DCM,Area-Length Single Plane
EDV(SP Ellipse)	18026-5,LN,Left Ventricular End Diastolic Volume	ImageMode =G-03A2,SRT,2D mode; Method =125226,DCM,Single Plane Ellipse
EDV(BP Ellipse)	18026-5,LN,Left Ventricular End Diastolic Volume	ImageMode =G-03A2,SRT,2D mode; Method =125211,DCM,Biplane Ellipse
EDV(Bullet)	18026-5,LN,Left Ventricular End Diastolic Volume	ImageMode =G-03A2,SRT,2D mode; Method =VM12228-01,MRUS,Bullet
EDV(Mod.Simpson)	18026-5,LN,Left Ventricular End Diastolic Volume	ImageMode =G-03A2,SRT,2D mode; Method =VM12228-02,MRUS,Method of Disks,Simpson

EDV(A2C)	18026-

EF(Teich-2D)	18043-0,LN,Left Ventricular Ejection Fraction	ImageMode =G-03A2,SRT,2D mode; Method =125209,DCM,Teichholz
EF(Gibson-2D)	18043-0,LN,Left Ventricular Ejection Fraction	ImageMode =G-03A2,SRT,2D mode; Method =VM12228-03,MRUS,Gibson
EF(A4C)	18043-0,LN,Left Ventricular Ejection Fraction	ImageMode =G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125208,DCM,Method of Disks, Single Plane
LVOT Area	G-038E,SRT,Cardiovascular Orifice Area	ImageMode =G-03A2,SRT,2D mode;
LVOT Diam(2D)	G-038F,SRT,Cardiovascular Orifice Diameter	ImageMode =G-03A2,SRT,2D mode;
LVOT Diam(M)	G-038F,SRT,Cardiovascular Orifice Diameter	ImageMode =G-0394,SRT,M Mode;
LVOT Diam(MVA VTI)	G-038F,SRT,Cardiovascular Orifice Diameter	ImageMode =G-03A2,SRT,2D mode;
LVOT Diam(AVA VTI)	G-038F,SRT,Cardiovascular Orifice Diameter	ImageMode =G-03A2,SRT,2D mode;
LVOT Diam(AVA Vmax)	G-038F,SRT,Cardiovascular Orifice Diameter	ImageMode =G-03A2,SRT,2D mode;
LVOT Vmax	11726-7,LN,Peak Velocity	
LVOT Vmax(LVOT VTI)	11726-7,LN,Peak Velocity	
LVOT Vmean	20352-1,LN,Mean Velocity	
LVOT PGmax	20247-3,LN,Peak Gradient	
LVOT PGmax(LVOT VTI)	20247-3,LN,Peak Gradient	
LVOT PGmean	20256-4,LN,Mean Gradient	
LVOT VTI	20354-7,LN,Velocity Time Integral	
LVOT VTI(MVA VTI)	20354-7,LN,Velocity Time Integral	
LVOT VTI(AVA VTI)	20354-7,LN,Velocity Time Integral	
LVOT AccT	20168-1,LN,Acceleration Time	
LVOT	M12222-01,MRUS, Angle	
LVOT Acc Slope	M12222-02,MRUS, Acceleration Slope	
LV Mass(Cube-M)	18087-7,LN,Left Ventricle Mass	ImageMode =G-0394,SRT,M Mode; Method =125221,DCM,Left Ventricle Mass by M-mode

LV Mass(T-E)	18087-7,LN,Left Ventricle Mass	ImageMode =G-03A2,SRT,2D mode; Method =125222,DCM,Left Ventricle Mass by Truncated Ellipse
LV Mass(A-L)	18087-7,LN,Left Ventricle Mass	ImageMode =G-03A2,SRT,2D mode; Method =125205,DCM,Area-Length Single Plane
LV Mass(Cube-2D)	18087-7,LN,Left Ventricle Mass	ImageMode =G-03A2,SRT,2D mode;
IVRT	18071-1,LN,Left Ventricular Isovolumic Relaxation Time	
IVCT	G-037E,SRT,Left Ventricular Isovolumic Contraction Time	
LVIMP(M)	G-037F,SRT,Left Ventricular Index of Myocardial Performance	ImageMode =G-0394,SRT,M Mode;
LVIMP(Doppler)	G-037F,SRT,Left Ventricular Index of Myocardial Performance	
LVPEP(M)	M12203-01,MRUS,Left Ventricle Pre-Ejection Period	ImageMode =G-0394,SRT,M Mode;
LVPEP(Doppler)	M12203-01,MRUS,Left Ventricle Pre-Ejection Period	
LVET(M)	M12203-02,MRUS,Left Ventricle Ejection Time	ImageMode =G-0394,SRT,M Mode;
LVET(Doppler)	M12203-02,MRUS,Left Ventricle Ejection Time	
LVET LVIMP(M)	M12203-02,MRUS,Left Ventricle Ejection Time	ImageMode =G-0394,SRT,M Mode;
LVET LVIMP(Doppler)	M12203-02,MRUS,Left Ventricle Ejection Time	
LV Mass-I(Cube-M)	C12203-01,MRUS,Left ventricular Mass Weight Index	ImageMode =G-0394,SRT,M Mode; Method =125221,DCM,Left Ventricle Mass by M-mode
LV Mass-I(T-E)	C12203-01,MRUS,Left ventricular Mass Weight Index	ImageMode =G-03A2,SRT,2D mode; Method =125222,DCM,Left Ventricle Mass by Truncated Ellipse
LV Mass-I(A-L)	C12203-01,MRUS,Left ventricular Mass Weight Index	ImageMode =G-03A2,SRT,2D mode; Method =125205,DCM,Area-Length Single Plane
LV Mass-I(Cube-2D)	C12203-01,MRUS,Left ventricular Mass Weight Index	ImageMode =G-03A2,SRT,2D mode;
LVPEP/ET(M)	C12203-02,MRUS,Left Ventricle Pre-Ejection Period to Ejection Time Ratio	ImageMode =G-0394,SRT,M Mode;

LVPEP/ET(Doppler)	C12203-02,MRUS,Left Ventricle Pre-Ejection Period to Ejection Time Ratio	
LVOT SV	F-32120,SRT,Stroke Volume	
SV(SP Ellipse)	F-32120,SRT,Stroke Volume	ImageMode =G-03A2,SRT,2D mode; Method =125226,DCM,Single Plane Ellipse
SV(BP Ellipse)	F-32120,SRT,Stroke Volume	ImageMode =G-03A2,SRT,2D mode; Method =125211,DCM,Biplane Ellipse
SV(Bullet)	F-32120,SRT,Stroke Volume	ImageMode =G-03A2,SRT,2D mode; Method =VM12228-01,MRUS,Bullet
SV(Mod.Simpson)	F-32120,SRT,Stroke Volume	ImageMode =G-03A2,SRT,2D mode; Method =VM12228-02,MRUS,Method of Disks,Simpson
SV(A2C)	F-32120,SRT,Stroke Volume	ImageMode = G-03A2,SRT,2D mode; Method =125208,DCM,Method of Disks, Single Plane
SV(BP)	F-32120,SRT,Stroke Volume	ImageMode = G-03A2,SRT,2D mode; Method =125207,DCM,Method of Disks, Biplane
SV(Cube-M)	F-32120,SRT,Stroke Volume	ImageMode = G-0394,SRT,M Mode; Method =125206,DCM,Cube Method
SV(Teich-M)	F-32120,SRT,Stroke Volume	ImageMode = G-0394,SRT,M Mode; Method =125209,DCM,Teichholz
SV(Gibson-M)	F-32120,SRT,Stroke Volume	ImageMode = G-0394,SRT,M Mode; Method =VM12228-03,MRUS,Gibson
SV(Cube-2D)	F-32120,SRT,Stroke Volume	ImageMode = G-03A2,SRT,2D mode; Method =125206,DCM,Cube Method

SV(Teich-2D)

CO(Bullet)	F-32100,SRT,Cardiac Output	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-01,MRUS,Bullet
CO(Mod.Simpson)	F-32100,SRT,Cardiac Output	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-02,MRUS,Method of Disks,Simpson
CO(A2C)	F-32100,SRT,Cardiac Output	ImageMode = G-03A2,SRT,2D mode; Method =125208,DCM,Method of Disks, Single Plane
CO(BP)	F-32100,SRT,Cardiac Output	ImageMode = G-03A2,SRT,2D mode; Method =125207,DCM,Method of Disks, Biplane
CO(Cube-M)	F-32100,SRT,Cardiac Output	ImageMode = G-0394,SRT,M Mode; Method =125206,DCM,Cube Method
CO(Teich-M)	F-32100,SRT,Cardiac Output	ImageMode = G-0394,SRT,M Mode; Method =125209,DCM,Teichholz
CO(Gibson-M)	F-32100,SRT,Cardiac Output	ImageMode = G-0394,SRT,M Mode; Method =VM12228-03,MRUS,Gibson
CO(Cube-2D)	F-32100,SRT,Cardiac Output	ImageMode = G-03A2,SRT,2D mode; Method =125206,DCM,Cube Method
CO(Teich-2D)	F-32100,SRT,Cardiac Output	ImageMode = G-03A2,SRT,2D mode; Method =125209,DCM,Teichholz
CO(Gibson-2D)	F-32100,SRT,Cardiac Output	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-03,MRUS,Gibson
CO(A4C)	F-32100,SRT,Cardiac Output	ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125208,DCM,Method of Disks, Single Plane
LVOT CI	F-32110,SRT,Cardiac Index	
CI(SP Ellipse)	F-32110,SRT,Cardiac Index	ImageMode = G-03A2,SRT,2D mode; Method =125226,DCM,Single Plane Ellipse
CI(BP Ellipse)	F-32110,SRT,Cardiac Index	ImageMode = G-03A2,SRT,2D mode; Method =125211,DCM,Biplane Ellipse
CI(Bullet)	F-32110,SRT,Cardiac Index	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-01,MRUS,Bullet
CI(Mod.Simpson)	F-32110,SRT,Cardiac Index	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-02,MRUS,Method of Disks,Simpson
CI(A2C)	F-32110,SRT,Cardiac Index	ImageMode = G-03A2,SRT,2D mode; Method =125208,DCM,Method of Disks, Single Plane

CI(BP)	F-32110,SRT,Cardiac Index	ImageMode = G-03A2,SRT,2D mode; Method =125207,DCM,Method of Disks, Biplane
CI(Cube-M)	F-32110,SRT,Cardiac Index	ImageMode = G-0394,SRT,M Mode; Method =125206,DCM,Cube Method
CI(Teich-M)	F-32110,SRT,Cardiac Index	ImageMode = G-0394,SRT,M Mode; Method =125209,DCM,Teichholz
CI(Gibson-M)	F-32110,SRT,Cardiac Index	ImageMode = G-0394,SRT,M Mode; Method =VM12228-03,MRUS,Gibson
CI(Cube-2D)	F-32110,SRT,Cardiac Index	ImageMode = G-03A2,SRT,2D mode; Method =125206,DCM,Cube Method
CI(Teich-2D)	F-32110,SRT,Cardiac Index	ImageMode = G-03A2,SRT,2D mode; Method =125209,DCM,Teichholz
CI(Gibson-2D)	F-32110,SRT,Cardiac Index	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-03,MRUS,Gibson
CI(A4C)	F-32110,SRT,Cardiac Index	ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125208,DCM,Method of Disks, Single Plane
LVOT SI	F-00078,SRT,Stroke Index	
SI(SP Ellipse)	F-00078,SRT,Stroke Index	ImageMode = G-03A2,SRT,2D mode; Method =125226,DCM,Single Plane Ellipse
SI(BP Ellipse)	F-00078,SRT,Stroke Index	ImageMode = G-03A2,SRT,2D mode; Method =125211,DCM,Biplane Ellipse
SI(Bullet)	F-00078,SRT,Stroke Index	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-01,MRUS,Bullet
SI(Mod.Simpson)	F-00078,SRT,Stroke Index	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-02,MRUS,Method of Disks,Simpson
SI(A2C)	F-00078,SRT,Stroke Index	ImageMode = G-03A2,SRT,2D mode; Method =125208,DCM,Method of Disks, Single Plane
SI(BP)	F-00078,SRT,Stroke Index	ImageMode = G-03A2,SRT,2D mode; Method =125207,DCM,Method of Disks, Biplane
SI(Cube-M)	F-00078,SRT,Stroke Index	ImageMode = G-0394,SRT,M Mode; Method =125206,DCM,Cube Method
SI(Teich-M)	F-00078,SRT,Stroke Index	ImageMode = G-0394,SRT,M Mode; Method =125209,DCM,Teichholz

SI(Gibson-M)	F-00078,SRT,Stroke Index	ImageMode = G-0394,SRT,M Mode; Method =VM12228-03,MRUS,Gibson
SI(Cube-2D)	F-00078,SRT,Stroke Index	ImageMode = G-03A2,SRT,2D mode; Method =125206,DCM,Cube Method
SI(Teich-2D)	F-00078,SRT,Stroke Index	ImageMode = G-03A2,SRT,2D mode; Method =125209,DCM,Teichholz
SI(Gibson-2D)	F-00078,SRT,Stroke Index	ImageMode = G-03A2,SRT,2D mode; Method =VM12228-03,MRUS,Gibson
SI(A4C)	F-00078,SRT,Stroke Index	G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method =125208,DCM,Method of Disks, Single Plane

B.41.2. Right Ventricle Measurements

MODALITY Label	*DICOM Mapping*	*Optional Modifiers*
RVDd(2D)	20304-2,LN,Right Ventricular Internal Diastolic Dimension	ImageMode = G-03A2,SRT,2D mode;
RVDd(M)	20304-2,LN,Right Ventricular Internal Diastolic Dimension	ImageMode = G-0394,SRT,M Mode;
RVDs(2D)	20305-9,LN,Right Ventricular Internal Systolic Dimension	ImageMode = G-03A2,SRT,2D mode;
RVDs(M)	20305-9,LN,Right Ventricular Internal Systolic Dimension	ImageMode = G-0394,SRT,M Mode;
RVIMP	G-0381,SRT,Right Ventricular Index of Myocardial Performance	
RVSP	G-0380,SRT,Right Ventricular Peak Systolic Pressure	
RVAWd(2D)	18153-7,LN,Right Ventricular Anterior Wall Diastolic Thickness	ImageMode = G-03A2,SRT,2D mode;
RVAWd(M)	18153-7,LN,Right Ventricular Anterior Wall Diastolic Thickness	ImageMode = G-0394,SRT,M Mode;
RVAWs(2D)	18157-8,LN,Right Ventricular Anterior Wall Systolic Thickness	ImageMode = G-03A2,SRT,2D mode;
RVAWs(M)	18157-8,LN,Right Ventricular Anterior Wall Systolic Thickness	ImageMode = G-0394,SRT,M Mode;
RV Major	M12204-01,MRUS,Right ventricular Major	ImageMode = G-03A2,SRT,2D mode;
RV Minor	M12204-02,MRUS,Right ventricular Minor	ImageMode = G-03A2,SRT,2D mode;

RV Area(s)	M12204-04,MRUS,Right ventricular Area at end-systole	ImageMode = G-03A2,SRT,2D mode;
RV FAC	C12204-03,MRUS ,Right Ventricular Fractional Area Change	ImageMode = G-03A2,SRT,2D mode;
RVPEP(M)	M12204-05,MRUS,Right Ventricle Pre-Ejection Period	ImageMode = G-0394,SRT,M Mode;
RVPEP(Doppler)	M12204-05,MRUS,Right Ventricle Pre-Ejection Period	
RVET(M)	M12204-06,MRUS,Right Ventricle Ejection Time	ImageMode = G-0394,SRT,M Mode;
RVET(RVIMP)	M12204-06,MRUS,Right Ventricle Ejection Time	
RVET(Doppler)	M12204-06,MRUS,Right Ventricle Ejection Time	
RVPEP/ET(M)	C12204-01,MRUS,Right Ventricle Pre-Ejection Period to Ejection Time Ratio	ImageMode = G-0394,SRT,M Mode;
RVPEP/ET(Doppler)	C12204-01,MRUS,Right Ventricle Pre-Ejection Period to Ejection Time Ratio	
RVOT HR	8867-4,LN,Heart rate	
RVOT Diam(2D)	G-038F,SRT,Cardiovascular Orifice Diameter	ImageMode = G-03A2,SRT,2D mode;
RVOT Diam(M)	G-038F,SRT,Cardiovascular Orifice Diameter	ImageMode = G-0394,SRT,M Mode;
RVOT Vmax	11726-7,LN,Peak Velocity	
RVOT Vmax(RVOT VTI)	11726-7,LN,Peak Velocity	
RVOT Vmean	20352-1,LN,Mean Velocity	
RVOT PGmax	20247-3,LN,Peak Gradient	
RVOT PGmax(RVOT VTI)	20247-3,LN,Peak Gradient	
RVOT PGmean	20256-4,LN,Mean Gradient	
RVOT VTI	20354-7,LN,Velocity Time Integral	
RVOT	M12222-01,MRUS,Angle	

B.41.3. Left Atrium Measurements

MODALITY Label	***DICOM Mapping***	***Optional Modifiers***
LA Diam(2D)	29469-4,LN,Left Atrium Antero-posterior Systolic Dimension	ImageMode = G-03A2,SRT,2D mode;
LA Diam(M)	29469-4,LN,Left Atrium Antero-posterior Systolic Dimension	ImageMode = G-0394,SRT,M Mode;

RAP	18070-3,LN,Right Atrium Systolic Pressure	
RA Area	17988-7,LN,Right Atrium Systolic Area	ImageMode = G-03A2,SRT,2D mode;
RA Major	M12206-01,MRUS,Right atrium Major	ImageMode = G-03A2,SRT,2D mode;
RA Minor	M12206-02,MRUS,Right atrium Minor	ImageMode = G-03A2,SRT,2D mode;
RA Vol(A4C)	M12206-03,MRUS,Right atrium Volume	ImageMode = G-03A2,SRT,2D mode; ImageView = G-A19C,SRT,Apical four chamber; Method = 125208,DCM,Method of Disks, Single Plane

B.41.5. Aortic Valve Measurements

MODALITY Label	***DICOM Mapping***	***Optional Modifiers***
ACS(2D)	17996-0,LN,Aortic Valve Cusp Separation	ImageMode = G-03A2,SRT,2D mode;
ACS(M)	17996-0,LN,Aortic Valve Cusp Separation	ImageMode = G-0394,SRT,M Mode;
AV AccT/ET	G-0382,SRT,Ratio of Aortic Valve Acceleration Time to Ejection Time	
AV HR	8867-4,LN,Heart rate	
AR Flow	33878-0,LN,Volume Flow	Flow Direction =R-42E61,SRT,Regurgitant Flow; Method =125216,DCM,Proximal Isovelocity Surface Area
AR Flow Rate	34141-2,LN,Peak Instantaneous Flow Rate	Flow Direction =R-42E61,SRT,Regurgitant Flow; ImageMode = R-409E2, SRT, Doppler Color Flow; Method =125216,DCM,Proximal Isovelocity Surface Area
AVA	G-038E,SRT,Cardiovascular Orifice Area	Flow Direction =R-42047,SRT,Antegrade Flow; ImageMode = G-03A2,SRT,2D mode; Method =125220,DCM,Planimetry
AVA(VTI)	G-038E,SRT,Cardiovascular Orifice Area	Flow Direction =R-42047,SRT,Antegrade Flow; Method =125215,DCM,Continuity Equation by Velocity Time Integral
AV Diam(2D)	G-038F,SRT,Cardiovascular Orifice Diameter	ImageMode = G-03A2,SRT,2D mode;
AV Diam(Qp/Qs)	G-038F,SRT,Cardiovascular Orifice Diameter	ImageMode = G-03A2,SRT,2D mode;
AR Fraction	G-0390,SRT,Regurgitant Fraction	Flow Direction =R-42E61,SRT,Regurgitant Flow; Method =125216,DCM,Proximal Isovelocity Surface Area

AR Ved	11653-3,LN,End Diastolic Velocity	Flow Direction = R-42E61,SRT,Regurgitant Flow
AV Vmax	11726-7,LN,Peak Velocity	Flow Direction = R-42047,SRT,Antegrade Flow;
AR Vmax	11726-7,LN,Peak Velocity	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AR Vmax(AR VTI)	11726-7,LN,Peak Velocity	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AR Vmax(AR PHT)	11726-7,LN,Peak Velocity	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AR Vmax(PISA AR)	11726-7,LN,Peak Velocity	Flow Direction = R-42E61,SRT,Regurgitant Flow; Method =125216,DCM,Proximal Isovelocity Surface Area
AV Vmax(AV VTI)	11726-7,LN,Peak Velocity	Flow Direction = R-42047,SRT,Antegrade Flow;
AV Vmean	20352-1,LN,Mean Velocity	Flow Direction = R-42047,SRT,Antegrade Flow;
AR Vmean	20352-1,LN,Mean Velocity	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AV PGmax	20247-3,LN,Peak Gradient	Flow Direction = R-42047,SRT,Antegrade Flow;
AR PGmax	20247-3,LN,Peak Gradient	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AV PGmax(AV VTI)	20247-3,LN,Peak Gradient	Flow Direction = R-42047,SRT,Antegrade Flow;
AR PGmax(AR VTI)	20247-3,LN,Peak Gradient	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AR PGmax(AR PHT)	20247-3,LN,Peak Gradient	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AV PGmean	20256-4,LN,Mean Gradient	Flow Direction = R-42047,SRT,Antegrade Flow;
AR PGmean	20256-4,LN,Mean Gradient	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AV VTI	20354-7,LN,Velocity Time Integral	Flow Direction = R-42047,SRT,Antegrade Flow;
AR VTI	20354-7,LN,Velocity Time Integral	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AV VTI(Qp/Qs)	20354-7,LN,Velocity Time Integral	Flow Direction = R-42047,SRT,Antegrade Flow;
AR VTI(PISA AR)	20354-7,LN,Velocity Time Integral	Flow Direction = R-42E61,SRT,Regurgitant Flow; Method =125216,DCM,Proximal Isovelocity Surface Area
AV VTI(AVA VTI)	20354-7,LN,Velocity Time Integral	Flow Direction = R-42047,SRT,Antegrade Flow;
AR PHT	20280-4,LN,Pressure Half-Time	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AV AccT	20168-1,LN,Acceleration Time	Flow Direction = R-42047,SRT,Antegrade Flow;
AV DecT	20217-6,LN,Deceleration Time	Flow Direction = R-42047,SRT,Antegrade Flow;
AR DcT	20217-6,LN,Deceleration Time	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AR DecT	20217-6,LN,Deceleration Time	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AV Dec Slope	20216-8,LN,Deceleration Slope	Flow Direction = R-42047,SRT,Antegrade Flow;
AR Dec Slope	20216-8,LN,Deceleration Slope	Flow Direction = R-42E61,SRT,Regurgitant Flow;
AV Acc Slope	M12222-02,MRUS,Acceleration Slope	Flow Direction = R-42047,SRT,Antegrade Flow;

AR Rad	M12222-06,MRUS,Flow Radius	Flow Direction = R-42E61,SRT,Regurgitant Flow; ImageMode = R-409E2, SRT, Doppler Color Flow;

AR Als.Vel

Dta(medial)	M12207-17,MRUS,Deceleration Time of Early diastolic velocity	ImageMode = IM12224-01,MRUS,Tissue Doppler Imaging;
Dra(medial)	M12207-18,MRUS,Deceleration Rate of Early diastolic velocity	ImageMode = IM12224-01,MRUS,Tissue Doppler Imaging;
Sa(lateral)	M12207-19,MRUS,Systolic Velocity of the Mitral Annulus(lateral)	ImageMode = IM12224-

	M12207-30,MRUS,Mitral Stenosis Area	Method = 125216,DCM,Proximal Isovelocity Surface Area
	C12207-01,MRUS,Mitral Stenosis Maximum Pressure Gradient	
MV HR	8867-4,LN,Heart rate	
MR Flow	33878-0,LN,Volume Flow	Flow Direction =R-42E61,SRT,Regurgitant Flow;

MV Vmax(MV PHT)	11726-7,LN,Peak Velocity	Flow Direction =R-42047,SRT, Antegrade Flow;
MV Vmax(MV VTI)	11726-7,LN,Peak Velocity	Flow Direction =R-42047,SRT, Antegrade Flow;
MR Vmax(MR VTI)	11726-7,LN,Peak Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
MR Vmax(PISA MR)	11726-7,LN,Peak Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow; Method = 125216,DCM,Proximal Isovelocity Surface Area
MV Vmean	20352-1,LN,Mean Velocity	Flow Direction =R-42047,SRT, Antegrade Flow;
MR Vmean	20352-1,LN,Mean Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
MV Pgmax	20247-3,LN,Peak Gradient	Flow Direction =R-42047,SRT, Antegrade Flow;
MR Pgmax	20247-3,LN,Peak Gradient	Flow Direction =R-42E61,SRT,Regurgitant Flow;
MV Pgmean	20256-4,LN,Mean Gradient	Flow Direction =R-42047,SRT, Antegrade Flow;
MR Pgmean	20256-4,LN,Mean Gradient	Flow Direction =R-42E61,SRT,Regurgitant Flow;
MV VTI	20354-7,LN,Velocity Time Integral	Flow Direction =R-42047,SRT, Antegrade Flow;
MR VTI	20354-7,LN,Velocity Time Integral	Flow Direction =R-42E61,SRT,Regurgitant Flow;
MV VTI(MVA VTI)	20354-7,LN,Velocity Time Integral	Flow Direction =R-42047,SRT, Antegrade Flow;
MR VTI(PISA MR)	20354-7,LN,Velocity Time Integral	Flow Direction =R-42E61,SRT,Regurgitant Flow; Method = 125216,DCM,Proximal Isovelocity Surface Area
MV PHT	20280-4,LN,Pressure Half-Time	Flow Direction =R-42047,SRT, Antegrade Flow;
MV AccT	20168-1,LN,Acceleration Time	Flow Direction =R-42047,SRT, Antegrade Flow;
MV DecT	20217-6,LN,Deceleration Time	Flow Direction =R-42047,SRT, Antegrade Flow;
MV Dec Slope	20216-8,LN,Deceleration Slope	Flow Direction =R-42047,SRT, Antegrade Flow;

MV Acc Slope	M12222-02,MRUS,Acceleration Slope	Flow Direction =R-42047,SRT, Antegrade Flow;
dt	M12222-04,MRUS,Time	Flow Direction =R-42E61,SRT,Regurgitant Flow;
MR Rad	M12222-06,MRUS,Flow Radius	Flow Direction =R-42E61,SRT,Regurgitant Flow; ImageMode = R-409E2, SRT, Doppler Color Flow;
MR Als.Vel	M12222-05,MRUS,Aliasing Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow; ImageMode = R-409E2, SRT, Doppler Color Flow;
MV	M12222-01,MRUS,Angle	Flow Direction =R-42047,SRT,Antegrade Flow;
MR	M12222-01,MRUS,Angle	Flow Direction =R-42E61,SRT,Regurgitant Flow;
MV SV	F-32120,SRT,Stroke Volume	
MV CO	F-32100,SRT,Cardiac Output	
MV CI	F-32110,SRT,Cardiac Index	
MV SI	F-00078,SRT,Stroke Index	
MV E/Ea medial)	M12207-35,MRUS,MV E/Ea medial	ImageMode = IM12224-01,MRUS,Tissue Doppler Imaging;
MV E/Ea lateral)	M12207-36,MRUS,MV E/Ea lateral	ImageMode = IM12224-01,MRUS,Tissue Doppler Imaging;
MV E/Ea	M12207-37,MRUS,MV E/Ea medial lateral	ImageMode = IM12224-01,MRUS,Tissue Doppler Imaging;
PISA	M12222-09,MRUS, Effective Regurgitant Orifice Area	
MAPSE	M12207-39, MRUS, Mitral Annular Plane Systolic Excursion	Image Mode = G-0394,SRT,M Mode

PV HR	8867-4,LN,Heart rate	
PR Flow	33878-0,LN,Volume Flow	Flow Direction =R-42E61,SRT,Regurgitant Flow; Method = 125216,DCM,Proximal Isovelocity Surface Area
PR Flow Rate	34141-2,LN,Peak Instantaneous Flow Rate	Flow Direction =R-42E61,SRT,Regurgitant Flow; ImageMode = R-409E2, SRT, Doppler Color Flow; Method = 125216,DCM,Proximal Isovelocity Surface Area
PV Diam	G-038F,SRT,Cardiovascular Orifice Diameter	Flow Direction =R-42047,SRT,Antegrade Flow; ImageMode = G-03A2,SRT,2D mode;
PV Diam(Qp/Qs)	G-038F,SRT,Cardiovascular Orifice Diameter	Flow Direction =R-42047,SRT,Antegrade Flow; ImageMode = G-03A2,SRT,2D mode;
PR Fraction	G-0390,SRT,Regurgitant Fraction	Flow Direction =R-42E61,SRT,Regurgitant Flow; Method = 125216,DCM,Proximal Isovelocity Surface Area
PR Ved	11653-3,LN,End Diastolic Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PR Ved(PAEDP)	11653-3,LN,End Diastolic Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PV Vmax	11726-7,LN,Peak Velocity	Flow Direction =R-42047,SRT, Antegrade Flow;
PR Vmax	11726-7,LN,Peak Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PV Vmax(PV VTI)	11726-7,LN,Peak Velocity	Flow Direction =R-42047,SRT, Antegrade Flow;
PR Vmax(PR VTI)	11726-7,LN,Peak Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PR Vmax(PR PHT)	11726-7,LN,Peak Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PR Vmax(PISA PR)	11726-7,LN,Peak Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PV Vmean	20352-1,LN,Mean Velocity	Flow Direction =R-42047,SRT, Antegrade Flow;
PR Vmean	20352-1,LN,Mean Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PV PGmax	20247-3,LN,Peak Gradient	Flow Direction =R-42047,SRT,Antegrade Flow;
PR PGmax	20247-3,LN,Peak Gradient	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PV PGmax(PV VTI)	20247-3,LN,Peak Gradient	Flow Direction =R-42047,SRT, Antegrade Flow;
PR PGmax(PR VTI)	20247-3,LN,Peak Gradient	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PR PGmax(PR PHT)	20247-3,LN,Peak Gradient	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PV PGmean	20256-4,LN,Mean Gradient	Flow Direction =R-42047,SRT,Antegrade Flow;
PR PGmean	20256-4,LN,Mean Gradient	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PV VTI	20354-7,LN,Velocity Time Integral	Flow Direction =R-42047,SRT,Antegrade Flow;
PR VTI	20354-7,LN,Velocity Time Integral	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PV VTI(Qp/Qs)	20354-7,LN,Velocity Time Integral	Flow Direction =R-42047,SRT,Antegrade Flow;
PR VTI(PISA PR)	20354-7,LN,Velocity Time Integral	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PR PHT	20280-4,LN,Pressure Half-Time	Flow Direction =R-42E61,SRT,Regurgitant Flow;

PV AccT	20168-1,LN,Acceleration Time	Flow Direction =R-42047,SRT,Antegrade Flow;
PR DecT	20217-6,LN,Deceleration Time	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PR Dec Slope	20216-8,LN,Deceleration Slope	Flow Direction =R-42E61,SRT,Regurgitant Flow;
PV Acc Slope	M12222-02,MRUS,Acceleration Slope	Flow Direction =R-42047,SRT,Antegrade Flow;
PR Rad	M12222-06,MRUS,Flow Radius	Flow Direction =R-42E61,SRT,Regurgitant Flow; ImageMode = R-409E2, SRT, Doppler Color Flow;

TR	M12222-01,MRUS,Angle	Flow Direction =R-42E61,SRT,Regurgitant Flow;
TV HR	8867-4,LN,Heart rate	
TR Flow	33878-0,LN,Volume Flow	Flow Direction =R-42E61,SRT,Regurgitant Flow; Method = 125216,DCM,Proximal Isovelocity Surface Area
TR Flow Rate	34141-2,LN,Peak Instantaneous Flow Rate	Flow Direction =R-42E61,SRT,Regurgitant Flow; ImageMode = R-409E2, SRT, Doppler Color Flow; Method = 125216,DCM,Proximal Isovelocity Surface Area
TVA	G-038E,SRT,Cardiovascular Orifice Area	Flow Direction =R-42047,SRT, Antegrade Flow; ImageMode = G-03A2,SRT,2D mode; Method = 125220,DCM,Planimetry
TVA(PHT)	G-038E,SRT,Cardiovascular Orifice Area	Flow Direction =R-42047,SRT, Antegrade Flow; Method = 125210,DCM,Area by Pressure Half-Time
TV Diam	G-038F,SRT,Cardiovascular Orifice Diameter	Flow Direction =R-42047,SRT, Antegrade Flow; ImageMode = G-03A2,SRT,2D mode;
TR Fraction	G-0390,SRT,Regurgitant Fraction	Flow Direction =R-42E61,SRT,Regurgitant Flow; Method = 125216,DCM,Proximal Isovelocity Surface Area
TV Vmax	11726-7,LN,Peak Velocity	Flow Direction =R-42047,SRT, Antegrade Flow;
TR Vmax	11726-7,LN,Peak Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
TV Vmax(TV PHT)	11726-7,LN,Peak Velocity	Flow Direction =R-42047,SRT, Antegrade Flow;
TV Vmax(TV VTI)	11726-7,LN,Peak Velocity	Flow Direction =R-42047,SRT, Antegrade Flow;
TR Vmax(TR VTI)	11726-7,LN,Peak Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
TR Vmax(PISA TR)	11726-7,LN,Peak Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow; Method = 125216,DCM,Proximal Isovelocity Surface Area
TR Vmax(RVSP)	11726-7,LN,Peak Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
TV Vmean	20352-1,LN,Mean Velocity	Flow Direction =R-42047,SRT, Antegrade Flow;
TR Vmean	20352-1,LN,Mean Velocity	Flow Direction =R-42E61,SRT,Regurgitant Flow;
TV PGmax(TV PHT)	20247-3,LN,Peak Gradient	Flow Direction =R-42047,SRT, Antegrade Flow;
TV PGmax(TV VTI)	20247-3,LN,Peak Gradient	Flow Direction =R-42047,SRT, Antegrade Flow;
TV PGmax	20247-3,LN,Peak Gradient	Flow Direction =R-42047,SRT, Antegrade Flow;
TR PGmax	20247-3,LN,Peak Gradient	Flow Direction =R-42E61,SRT,Regurgitant Flow;
TR PGmax(TR VTI)	20247-3,LN,Peak Gradient	Flow Direction =R-42E61,SRT,Regurgitant Flow;
TR PGmax(RVSP)	20247-3,LN,Peak Gradient	Flow Direction =R-42E61,SRT,Regurgitant Flow;
TV PGmean	20256-4,LN,Mean Gradient	Flow Direction =R-42047,SRT, Antegrade Flow;
TR PGmean	20256-4,LN,Mean Gradient	Flow Direction =R-42E61,SRT,Regurgitant Flow;

Ao Diam(M)	18015-8,LN,Aortic Root Diameter	ImageMode = G-0394,SRT,M Mode;
Ao Diam(LA/Ao-2D)	18015-8,LN,Aortic Root Diameter	ImageMode = G-03A2,SRT,2D mode;
Ao Diam(LA/Ao-M)	18015-8,LN,Aortic Root Diameter	ImageMode = G-0394,SRT,M Mode;
Ao Arch Diam(2D)	18011-7,LN,Aortic Arch Diameter	ImageMode = G-03A2,SRT,2D mode;
Ao Arch Diam(M)	18011-7,LN,Aortic Arch Diameter	ImageMode = G-0394,SRT,M Mode;
Ao Asc Diam(2D)	18012-5,LN,Ascending Aortic Diameter	ImageMode = G-03A2,SRT,2D mode;
Ao Asc Diam(M)	18012-5,LN,Ascending Aortic Diameter	ImageMode = G-0394,SRT,M Mode;
Ao Isthmus(2D)	18014-1,LN,Aortic Isthmus Diameter	ImageMode = G-03A2,SRT,2D mode;
Ao Isthmus(M)	18014-1,LN,Aortic Isthmus Diameter	ImageMode = G-0394,SRT,M Mode;
Ao Desc Diam(2D)	18013-3,LN,Descending Aortic Diameter	ImageMode = G-03A2,SRT,2D mode;
Ao Desc Diam(M)	18013-3,LN,Descending Aortic Diameter	ImageMode = G-0394,SRT,M Mode;
Ao st junct(2D)	M12212-01,MRUS,Aortic Sinotubular junction Diameter	ImageMode = G-03A2,SRT,2D mode;
Ao st junct(M)	M12212-01,MRUS,Aortic Sinotubular junction Diameter	ImageMode = G-0394,SRT,M Mode;
Ao Sinus Diam(2D)	M12212-02,MRUS,Aortic Sinus Diameter	ImageMode = G-03A2,SRT,2D mode;
Ao Sinus Diam(M)	M12212-02,MRUS,Aortic Sinus Diameter	ImageMode = G-0394,SRT,M Mode;
Duct Art Diam	M12212-03,MRUS,Ductus Artery Diameter	ImageMode = G-03A2,SRT,2D mode;
Pre Ductal	M12212-04,MRUS,Previous Ductal Diameter	ImageMode = G-03A2,SRT,2D mode;
LCA	M12212-05,MRUS,Left Coronary Artery Diameter	ImageMode = G-03A2,SRT,2D mode;
RCA	M12212-06,MRUS,Right Coronary Artery Diameter	ImageMode = G-03A2,SRT,2D mode;
AAo Vmax	11726-7,LN,Peak Velocity	
DAo Vmax	11726-7,LN,Peak Velocity	
AAo PGmax	20247-3,LN,Peak Gradient	
DAo PGmax	20247-3,LN,Peak Gradient	

B.41.10. Pulmonary Artery Measurements

MODALITY Label	***DICOM Mapping***	***Optional Modifiers***
MPA Diam(2D)	18020-8,LN,Main Pulmonary Artery Diameter	ImageMode =G-03A2,SRT,2D mode;
MPA Diam(M)	18020-8,LN,Main Pulmonary Artery Diameter	ImageMode =G-0394,SRT,M Mode;
RPA Diam(2D)	18021-6,LN,Right Pulmonary Artery Diameter	ImageMode =G-03A2,SRT,2D mode;
RPA Diam(M)	18021-6,LN,Right Pulmonary Artery Diameter	ImageMode =G-0394,SRT,M Mode;
LPA Diam(2D)	18019-0,LN,Left Pulmonary Artery Diameter	ImageMode =G-03A2,SRT,2D mode;
LPA Diam(M)	18019-0,LN,Left Pulmonary Artery Diameter	ImageMode =G-0394,SRT,M Mode;
MPA Vmax	G-038A,SRT,Main Pulmonary Artery Peak Velocity	

Post Ductal	M12210-01,MRUS,Posterior ductal Diameter	ImageMode =G-03A2,SRT,2D mode;
PAEDP	C12210-01,MRUS,Pulmonary Artery End Diastolic Pressure	
LPA Vmax	11726-7,LN,Peak Velocity	
RPA Vmax	11726-7,LN,Peak Velocity	
MPA PGmax	20247-3,LN,Peak Gradient	
LPA PGmax	20247-3,LN,Peak Gradient	
RPA PGmax	20247-3,LN,Peak Gradient	

B.41.11. Vena Cava Measurements

MODALITY Label	***DICOM Mapping***	***Optional Modifiers***
IVC Diam(Insp)	18006-7,LN,Inferior Vena Cava Diameter	RespiratoryCyclePoint=F-20010,SRT, Inspiration; ImageMode =G-03A2,SRT,2D mode;
IVC Diam(Expir)	18006-7,LN,Inferior Vena Cava Diameter	RespiratoryCyclePoint=F-20020,SRT, Expiration; ImageMode =G-03A2,SRT,2D mode;
SVC Diam(Insp)	M12215-01,MRUS,Superior Vena Cava Diameter	RespiratoryCyclePoint=F-20010,SRT, Inspiration; ImageMode =G-03A2,SRT,2D mode;
SVC Diam(Expir)	M12215-01,MRUS,Superior Vena Cava Diameter	RespiratoryCyclePoint=F-20020,SRT, Expiration; ImageMode =G-03A2,SRT,2D mode;
IVC Vel(Insp)	M12215-02,MRUS,Inferior Vena Cava Velocity	RespiratoryCyclePoint=F-20010,SRT, Inspiration;
IVC Vel(Expir)	M12215-02,MRUS,Inferior Vena Cava Velocity	RespiratoryCyclePoint=F-20020,SRT, Expiration;
SVC Vel(Insp)	M12215-03,MRUS,Superior Vena Cava Velocity	RespiratoryCyclePoint=F-20010,SRT, Inspiration;

SVC Expiration PG	C12215-02,MRUS,Superior Vena Cava Pressure Gradient	RespiratoryCyclePoint=F-20020,SRT, Expiration;
IVC-CI	C12215-03,MRUS ,Collapsible index of inferior vena cava	ImageMode =G-03A2,SRT,2D mode;
IVC-DI	C12215-04,MRUS ,Distensibility index of inferior vena cava	ImageMode =G-03A2,SRT,2D mode;
SVC-CI	C12215-05, MRUS,Collapsible index of superior vena cava	ImageMode =G-03A2,SRT,2D mode;
SVC-DI	C12215-06,MRUS ,Distensibility index of superior vena cava	ImageMode =G-03A2,SRT,2D mode;
IVC Depth(Insp)	M12215-04,MRUS,Inferior Vena Cava Depth	RespiratoryCyclePoint=F-20010,SRT, Inspiration; ImageMode =G-03A2,SRT,2D mode;
IVC Depth(Expir)	M12215-04,MRUS,Inferior Vena Cava Depth	RespiratoryCyclePoint=F-20020,SRT, Expiration; ImageMode =G-03A2,SRT,2D mode;
SVC Depth(Insp)	M12215-05,MRUS,Superior Vena Cava Depth	RespiratoryCyclePoint=F-20010,SRT, Inspiration; ImageMode =G-03A2,SRT,2D mode;
SVC Depth(Expir)	M12215-05,MRUS,Superior Vena Cava Depth	RespiratoryCyclePoint=F-20020,SRT, Expiration; ImageMode =G-03A2,SRT,2D mode;

B.41.12. Pulmonary Venous Structure Measurements

MODALITY Label	***DICOM Mapping***	***Optional Modifiers***
PVein A Dur	G-038B,SRT,Pulmonary Vein A-Wave Duration	
PVein D VTI	G-038D,SRT,Pulmonary Vein D-Wave Velocity Time Integral	
PVein S VTI	G-038C,SRT,Pulmonary Vein S-Wave Velocity Time Integral	
PVein S Vel	M12214-01,MRUS,Pulmonary Vein S wave flow Velocity	
PVein D Vel	M12214-02,MRUS,Pulmonary Vein D-wave flow Velocity	
PVein A Vel	M12214-03,MRUS,Pulmonary Vein A-wave flow Velocity	
PVein DecT	M12214-04,MRUS,Pulmonary Vein Deceleration Time	
PVein S/D	M12214-05,MRUS,Pulmonary Vein Ratio of S-Wave velocity to D-wave velocity	
PVein SF	M12214-06,MRUS,Pulmonary Vein Systolic fraction	

B.41.13. Cardiac Shunt Study Measurements

MODALITY Label	*DICOM Mapping*	*Optional Modifiers*
Qp/Qs	29462-9,LN,Pulmonary-to-Systemic Shunt Flow Ratio	
Qp-Qs	M12217-01,MRUS,Pulmonary-sub-Systemic Shunt Flow Difference	
PV HR(Qp/Qs)	8867-4,LN,Heart rate	
AV HR(Qp/Qs)	8867-4,LN,Heart rate	
PV SV(Qp/Qs)	F-32120,SRT,Stroke Volume	
PV CO(Qp/Qs)	F-32100,SRT,Cardiac Output	
AV SV(Qp/Qs)	F-32120,SRT,Stroke Volume	
AV CO(Qp/Qs)	F-32100,SRT,Cardiac Output	

B.41.14. Congenital Anomaly of Cardiovascular System Measurements

MODALITY Label	*DICOM Mapping*	*Optional Modifiers*
PDA Diam	M12218-01,MRUS,Patent Ductus Arteriosus Diameter	ImageMode =G-03A2,SRT,2D mode;
PFO Diam	M12218-02,MRUS,Patent Foramen Ovale Diameter	ImageMode =G-03A2,SRT,2D mode;
PDA Vel(d)	M12218-03,MRUS,Patent Ductus Arteriosus Diastolic Velocity	
PDA Vel(s)	M12218-04,MRUS,Patent Ductus Arteriosus Systolic Velocity	
Coarc Pre-Duct	M12218-05,MRUS,Coarctation of Pre-Ductu	

VSD PGmax	20247-3,LN,Peak Gradient	
ASD PGmax	20247-3,LN,Peak Gradient	

B.41.15. Pericardial Disease Measurements

MODALITY Label	*DICOM Mapping*	*Optional Modifiers*
PEd(2D)	C90000-01,MRUS,Pericard Effusion at end-diastole	ImageMode =G-03A2,SRT,2D mode;
PEd(M)	C90000-01,MRUS,Pericard Effusion at end-diastole	ImageMode =G-0394,SRT,M Mode;
PEs(2D)	C90000-02,MRUS,Pericard Effusion at end-systole	ImageMode =G-03A2,SRT,2D mode;
PEs(M)	C90000-02,MRUS,Pericard Effusion at end-systole	ImageMode =G-0394,SRT,M Mode;

B.41.16. Heart Rate Measurements

MODALITY Label	*DICOM Mapping*	*Optional Modifiers*
HR	8867-4 LN Heart rate	Image Mode = G-0394,SRT,M Mode
HRSP.Ellipse	8867-4 LN Heart rate	Method =125226,DCM,Single Plane Ellipse
HRBP.Ellipse	8867-4 LN Heart rate	Method=125211,DCM,Biplane Ellipse
HRBullet	8867-4 LN Heart rate	Method =VM12228-01,MRUS,Bullet
HRMod.Simp	8867-4 LN Heart rate	Method= VM12228-02,MRUS,Method of Disks,Simpson
HRSimp.SP	8867-4 LN Heart rate	Method= 125208,DCM,Method of Disks, Single Plane
HRSimp.SP.A4C	8867-4 LN Heart rate	Method= 125208,DCM,Method of Disks, Single Plane
HRSimp.BP	8867-4 LN	

C. Appendix : Vascular structured reporting template

This appendix lists the DICOM Structured Report (SR) mappings used in the

Vascular Structured Reports of ultrasound system SR files.

The mappings are organized in a manner similar to the DICOM SR Templates as described in PS 3.16 of the DICOM Standard. The Vascular Report mappings follow the DICOM SR Template TID 5100: Vascular Ultrasound Procedure Report, except where noted.

All private code values use the Coding Scheme Designator "MRUS".

C.1. TID (5100) Vascular Ultrasoud Report

This is the template for the root the content tree for the vascular ultrasound procedure report.

N	Rel with Parent	VT	Concept Name

9	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12105) Intracranial Cerebral Vessels	
10	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12105) Intracranial Cerebral Vessels	
11	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G-A103, $Anatomy = DCID (12106) Intracranial Cerebral Vessels (unilateral)	
12	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12104) Extracranial Arteries $AnatomyRatio = DCID (12123) Carotid Ratios	

16	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12110) Lower Extremity Veins	
17	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12110) Lower Extremity Veins	
18	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12107) Upper Extremity Arteries	
19	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12107) Upper Extremity Arteries	

20	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (SELFCID-2) Upper Extremity Arteries(unilateral)	
21	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12108) Upper Extremity Veins	
22	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12108) Upper Extremity Veins	
23	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- ery $SectionLaterality = EV (G- $Anatomy = DCID (12111) Abdominal Arteries (lateral)	

24	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12111) Abdominal Arteries (lateral)	
25	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G-A103, $Anatomy = DCID (12112) Abdominal Arteries (unilateral)	
26	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12113) Abdominal Veins (lateral)	
27	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G- $Anatomy = DCID (12113) Abdominal Veins (lateral)	

28	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T- $SectionLaterality = EV (G-A103, $Anatomy = DCID (12114) Abdominal Veins (unilateral)	
29	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T-71019, $SectionLaterality = EV (G- $Anatomy = DCID (12115) Renal Vessels	
30	>	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section		$SectionScope = DT (T-71019, $SectionLaterality = EV (G- $Anatomy = DCID (12115) Renal Vessels	
31	>	CONTAINS	INCLUDE	DTID (5105) Ultrasound Graft Section			
32	>	CONTAINS	TEXT	(20121120,MRUS, self-defined-Measurementfile)			

C.2. TID (1001) Observation Context

This template specifies attributes of observation context that may be defined, extended or replaced at any location in the SR tree.

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	Comment
	>	HAS OBS	CODE	EV (121005,DCM,		(121006,DCM,	

1		CONTEXT					
2	>	HAS OBS CONTEXT	PNAME	EV (121008,DCM,		Operator from Info	
3	>	HAS OBS CONTEXT	TEXT	EV (121009,DCM, Organizati		Institution Name	

3	>	CONTAINS	CODE	EV (121032, DCM,		DCID (7455) Sex	
4	>	CONTAINS	NUM	EV (F-008EC, SRT,			
5	>	CONTAINS	NUM	EV (F-008ED, SRT, "Diastolic Blood Pressure")			
6	>	CONTAINS	NUM	EV (8302-2, LN, Patient Height			
7	>	CONTAINS	NUM	EV (29463-7, LN, "Patient Weight")			
8	>	CONTAINS	NUM	EV (8277-6, LN, Body Surface Area			
9	> >	INFERRED FROM	CODE	EV (8278-4, LN, "Body Surface Area Formula")			

7	>	CONTAINS	TEXT	EV (121106, DCM, "Comment")			From report interface Comment
8	>	CONTAINS	TEXT	(I12101-05,MRUS,"Prompt")			From report interface Prompt
9	>	CONTAINS	TEXT	(121071,DCM,"Findings")			From report interface Findings
10	>	CONTAINS	CONTAINER	(T-45100, SNM3, Common carotid artery)			
11	>>	CONTAINS	CONTAINER	(FG3495-01, MRUS, Plaque Description)			
12	>>>	CONTAINS	TEXT	(G-A100,SNM3,Right)			
13	>>>	CONTAINS	TEXT	(G-A101,SNM3,Left)			
14	>>	CONTAINS	CONTAINER	(FG3495-02, MRUS, Plaque Area)			
15	>>>	CONTAINS	TEXT	(G-A100,SNM3,Right)			
16	>>>	CONTAINS	TEXT	(G-A101,SNM3,Left)			
17	>	CONTAINS	CONTAINER	(T-45160,SRT,Carotid Bifurcation)			
18	>>	CONTAINS	CONTAINER	(FG3495-01, MRUS, Plaque Description)			
19	>>>	CONTAINS	TEXT	(G-A100,SNM3,Right)			
20	>>>	CONTAINS	TEXT	(G-A101,SNM3,Left)			
21	>>	CONTAINS	CONTAINER	(FG3495-02, MRUS, Plaque Area)			
22	>>>	CONTAINS	TEXT	(G-A100,SNM3,Right)			
23	>>>	CONTAINS	TEXT	(G-A101,SNM3,Left)			
24	>	CONTAINS	CONTAINER	(T-45300, SRT, Internal Carotid Artery)			ICA
25	>>	CONTAINS	CONTAINER	(FG3495-01, MRUS, Plaque Description)			
26	>>>	CONTAINS	TEXT	(G-A100,SNM3,Right)			
27	>>>	CONTAINS	TEXT	(G-A101,SNM3,Left)			
28	>>	CONTAINS	CONTAINER	(FG3495-02, MRUS, Plaque Area)			

29	>>>	CONTAINS	TEXT	(G-A100,SNM3,Right)			
30	>>>	CONTAINS	TEXT	(G-A101,SNM3,Left)			
31	>	CONTAINS	CONTAINER	(T-45200,SRT,External Carotid Artery)			ECA
32	>>	CONTAINS	CONTAINER	(FG3495-01, MRUS, Plaque Description)			
33	>>>	CONTAINS	TEXT	(G-A100,SNM3,Right)			
34	>>>	CONTAINS	TEXT	(G-A101,SNM3,Left)			
35	>>	CONTAINS	CONTAINER	(FG3495-02, MRUS, Plaque Area)			
36	>>>	CONTAINS	TEXT	(G-A100,SNM3,Right)			
37	>>>	CONTAINS	TEXT	(G-A101,SNM3,Left)			
38	>	CONTAINS	CONTAINER	(T-45700 ,SRT ,Vertebral Artery)			
39	>>	CONTAINS	TEXT	(G-A100,SNM3,Right)			
40	>>	CONTAINS	TEXT	(G-A101,SNM3,Left)			
41	>	CONTAINS	CONTAINER	(T-46100,SRT,Subclavian Artery)			
42	>>	CONTAINS	TEXT	(G-A100,SNM3,Right)			
43	>>	CONTAINS	TEXT	(G-A101,SNM3,Left)			
44	>	CONTAINS	TEXT	(T-46010,SRT,Brachiocephalic trunk)			

C.5. TID (5103) Vascular Ultrasound Section

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	Comment
1			CONTAINER	DT (121070, DCM,			

4	>	CONTAINS	INCLUDE	DTID (5104) Vascular Measurement Group	

1			CONTAINER	$AnatomyGroup			
2	>	HAS CONCEPT MOD	CODE	EV (G-A1F8, SRT,		DCID (12116) Vessel Segment Modifiers	
3	>	CONTAINS	INCLUDE	DTID (300) Measurement		$Measurement = DCID (12119) Vascular Ultrasound Property $Derivation = DCID (3627) Measurement Type	
4	>>	HAS CONCEPT MOD	CODE	EV (R-4089A,		DCID (12233) Cardiac Phase	
5	>>	HAS CONCEPT MOD	CODE	EV (R-41FFC, period related to		DT (G-A491, SRT, "Post-prandial")	

C.8. CID (12104) Extracranial Arteries

CSD	CV	Code Meaning
SRT	T-45170	Carotid Bulb
SRT	T-45100	Common Carotid Artery
SRT	T-45200	External Carotid Artery
SRT	T-45300	Internal Carotid Artery
SRT	T-46100	Subclavian Artery
SRT	T-45700	Vertebral Artery

C.9. CID (12105) Intracranial Cerebral Vessels

CSD	CV	Code Meaning
SRT	T-45540	Anterior Cerebral Artery
SRT	T-45600	Middle Cerebral Artery
SRT	T-45900	Posterior Cerebral Artery
SRT	T-45320	Posterior Communicating Artery

C.10. CID (12106) Intracranial Cerebral Vessels (unilateral)

CSD	CV	Code Meaning
SRT	T-45800	Basilar Artery
SRT	T-45530	Anterior Communicating Artery
MRUS	V12106-01	Basilar Vein

C.11. CID (12107) Upper Extremity Arteries

CSD	CV	Code Meaning
SRT	T-47100	Axillary Artery
SRT	T-47160	Brachial Artery
SRT	T-47300	Radial Artery
SRT	T-46100	Subclavian Artery
SRT	T-	

CSD	CV	Code Meaning
SRT	T-47741	Dorsalis Pedis Artery
SRT	T-46910	External Iliac Artery
SRT	T-46740	Internal Iliac Artery
SRT	T-47630	Peroneal Artery
SRT	T-47500	Popliteal Artery
SRT	T-47600	Posterior Tibial Artery
SRT	T-47440	Profunda Femoris Artery
SRT	T-47403	Superficial Femoral Artery
MRUS	V12109-01	TP Trunk Artery

C.15. CID (12110) Lower Extremity Veins

CSD	CV	Code Meaning
SRT	T-49630	Anterior Tibial Vein
SRT	G-035B	Common Femoral Vein
SRT	T-48920	Common Iliac Vein
SRT	T-48930	External Iliac Vein
SRT	T-4942D	Gastrocnemius vein
SRT	T-49530	Great Saphenous Vein
SRT	T-49550	Lesser Saphenous Vein
SRT	T-49650	Peroneal Vein
SRT	T-49640	Popliteal Vein
SRT	T-49620	Posterior Tibial Vein
SRT	T-49660	Profunda Femoris Vein
SRT	G-036B	Soleal vein
SRT	G-035A	Superficial Femoral Vein
SRT	T-48940	Internal iliac vein
SRT	T-49410	Femoral vein
MRUS	V12110-01	TP Trunk Vein

C.16. CID (12112) Abdominal Arteries (unilateral)

CSD	CV	Code Meaning
SRT	T-42000	Aorta
SRT	T-46400	Celiac Axis

CSD	CV	Code Meaning
SRT	T-46421	Common Hepatic Artery
SRT	T-46422	Proper Hepatic Artery
SRT	T-46460	Splenic Artery
SRT	T-46510	Superior Mesenteric Artery
SRT	T-46520	Inferior Mesenteric Artery

C.17. CID (12114) Abdominal Veins (unilateral)

CSD	CV	Code Meaning
SRT	T-48720	Hepatic Vein
SRT	T-48726	Middle Hepatic Vein
SRT	T-48810	Portal Vein
SRT	T-48710	Inferior Vena Cava
SRT	T-48890	Splenic Vein
SRT	T-48840	Superior Mesenteric Vein
MRUS	V12114-01	Main Portal Vein
SRT	T-48910	Inferior Mesenteric Vein

C.18. CID (12115) Renal Vessels

CSD	CV	Code Meaning
SRT	T-46600	Renal Artery

CV

ainn-US

C.20. Mapping between Modality measurements and DICOM Concepts.

C.20.1. Vascular Measurements

MODALITY Label	*DICOM Mapping*	*Contain Content*
<Vasculature Anatomic Location> ED	11653-3, LN, End Diastolic Velocity	
<Vasculature Anatomic Location> MD	11665-7 , LN, Minimum Diastolic Velocity	
<Vasculature Anatomic Location> PS	11726-7, LN, Peak Systolic Velocity	
<Vasculature Anatomic Location> TAMEAN	20352-1, LN, Time averaged mean velocity	
<Vasculature Anatomic Location> TAMAX	11692-1, LN, Time averaged peak velocity	
<Vasculature Anatomic Location> PV	11726-7, LN, Peak Velocity	
<Vasculature Anatomic Location> PI	12008-9, LN, Pulsatility Index	
<Vasculature Anatomic Location> RI	12023-8, LN, Resistivity Index	
<Vasculature Anatomic Location> S/D	12144-2, LN, Systolic to Diastolic Velocity Ratio	
<Vasculature Anatomic Location> D/S	M12119-04, MRUS, Diastolic to SystolicVelocity Ratio	
<Vasculature Anatomic Location> AT	20168-1, LN, Acceleration Time	
<Vasculature Anatomic Location> DT	20217-6, LN, Deceleration Time	
<Vasculature Anatomic Location> PPG	20247-3, LN, Peak Gradient	
<Vasculature Anatomic Location> MPG	20256-4, LN, Mean Gradient	
<Vasculature Anatomic Location> MMPG	M12119-01, MRUS, Mean Velocity Mean Pressure Gradient	
<Vasculature Anatomic Location> VTI	M12119-02, MRUS,Velocity-Time Integral	
<Vasculature Anatomic Location> HR	8867-4, LN, Heart Rate	
<Vasculature Anatomic Location>	M12119-03, MRUS, Angle	
<Vasculature Anatomic Location> VD	R-1025C, SRT, Vessel Intimal Diameter	
<Vasculature Anatomic Location> VolFlow	M12119-06, MRUS, Vol Flow(TAMAX)	
<Vasculature Anatomic Location> VolFlow.TAMEAN	M12119-07, MRUS,Vol Flow(TAMEAN)	

MODALITY Label	*DICOM Mapping*	*Contain Content*
<Vasculature Anatomic Location> inner diameter	M12119-17,MRUS,inner diameter	Cephalic V Depth Basilic V Depth Axill. V Depth Brachial V Depth Ulnar V Depth Radial V Depth

C.20.2. Extracranial Arteries

MODALITY Label	*DICOM Mapping*
Bulb	T-45170,SRT,Carotid Bulb
CCA	T-45100,SRT,Common Carotid Artery
ECA	T-45200,SRT,External Carotid Artery
ICA	T-45300,SRT,Internal Carotid Artery
Subclav A	T-46100,SRT,Subclavian Artery
Vert A	T-45700,SRT,Vertebral Artery

C.20.3. Intracranial Cerebral Vessels

MODALITY Label	*DICOM Mapping*
ACA	T-45540,SRT,Anterior Cerebral Artery
MCA	T-45600,SRT,Middle Cerebral Artery
PCA	T-45900,SRT,Posterior Cerebral Artery
PComA	T-45320,SRT,Posterior Communicating Artery

C.20.4. Intracranial Cerebral Vessels (unilateral)

MODALITY Label	*DICOM Mapping*
BA	T-45800,SRT,Basilar Artery
AComA	T-45530,SRT,Anterior Communicating Artery
Ba V	V12106-01,MRUS,Basilar Vein

C.20.5. Upper Extremity Arteries

MODALITY Label	*DICOM Mapping*
Axill A	T-47100,SRT,Axillary Artery
Brachial	T-47160, SRT, Brachial Artery
Radial A	T-47300,SRT,Radial Artery
Subclav	T-46100, SRT, Subclavian Artery
Ulnar A	T-47200,SRT ,Ulnar Artery

C.20.6. Upper Extremity Arteries(unilateral)

MODALITY Label	*DICOM Mapping*
Innom A	T-46010, SRT, Innominate Artery

C.20.7. Upper Extremity Veins

MODALITY Label	*DICOM Mapping*
Axill V	T-49110,SRT ,Axillary vein
Basilic V	T-48052,SRT,Basilic vein
Brachial V	T-49350,SRT,Brachial vein
Cephalic V	T-49240,SRT,Cephalic vein
Radial V	T-49340,SRT,Radial vein
Subclav V	T-48330,SRT,Subclavian vein
Ulnar V	T-49330,SRT,Ulnar vein

C.20.8. Lower Extremity Arteries

MODALITY Label	*DICOM Mapping*
C.Iliac A	T-46710,SRT,Common Iliac Artery
A.Tib A	T-47700,SRT ,Anterior Tibial Artery
CFA	T-47400,SRT ,Common Femoral Artery
Dors.Ped A	T-47741,SRT,Dorsalis Pedis Artery
Ex.Iliac A	T-46910,SRT ,External Iliac Artery
IIA	T-46740,SRT ,Internal Iliac Artery
Peroneal A	T-47630,SRT ,Peroneal Artery
Pop A	T-47500,SRT ,Popliteal Artery
P.Tib A	T-47600,SRT ,Posterior Tibial Artery
PFA	T-47440,SRT ,Profunda Femoris Artery
SFA	T-47403 ,SRT ,Superficial Femoral Artery
TP Trunk A	V12109-01,MRUS,TP Trunk Artery

C.20.9. Lower Extremity Veins

MODALITY Label	*DICOM Mapping*
A.Tib V	T-49630,SRT,Anterior Tibial Vein
CFV	G-035B,SRT,Common Femoral Vein
C.Iliac V	T-48920,SRT,Common Iliac Vein
Ex.Iliac V	T-48930,SRT,External Iliac Vein
Sural V	T-4942D,SRT,Gastrocnemius vein
Saph V	T-49530,SRT,Great Saphenous Vein
SSV	T-49550,SRT,Lesser Saphenous Vein

Peroneal V	T-49650,SRT,Peroneal Vein
Pop V	T-49640,SRT,Popliteal Vein
P.Tib V	T-49620,SRT,Posterior Tibial Vein
PFV	T-49660,SRT,Profunda Femoris Vein
Soleal V	G-036B,SRT,Soleal vein
SFV	G-035A,SRT,Superficial Femoral Vein
IIV	T-48940,SRT,Internal iliac vein
Femoral V	T-49410,SRT,Femoral vein
TP Trunk V	V12110-01,MRUS,TP Trunk Vein

C.20.10. Abdominal Arteries (unilateral)

MODALITY Label	***DICOM Mapping***
Abdominal Aorta	T-42000,SRT,Aorta
Celiac Axis	T-46400,SRT,Celiac Axis
C Hepatic A	T-46421,SRT,Common Hepatic Artery
Hepatic A	T-46422,SRT,Proper Hepatic Artery
Splenic A	T-46460,SRT,Splenic Artery
SMA	T-46510,SRT,Superior Mesenteric Artery
IMA	T-46520,SRT,Inferior Mesenteric Artery

C.20.11. Abdominal Veins (unilateral)

MODALITY Label	***DICOM Mapping***
Hepatic V	T-48720,SRT,Hepatic Vein
Left Hepatic V	T-48727,SRT,Left Hepatic Vein
Right Hepatic V	T-48725,SRT,Right Hepatic Vein
M Hepatic V	T-48726,SRT,Middle Hepatic Vein
Portal V	T-48810,SRT,Portal Vein
IVC	T-48710,SRT,Inferior Vena Cava
Splenic V	T-48890,SRT,Splenic Vein
SMV	T-48840,SRT,Superior Mesenteric Vein
M Portal V	V12114-01,MRUS,Main Portal Vein
IMV	T-48910,SRT,Inferior Mesenteric Vein

C.20.12. Renal Vessels

MODALITY Label	***DICOM Mapping***

Ren A Org	T-46600,SRT,Renal Artery
Renal A	T-46600,SRT,Renal Artery
Renal V	T-48740,SRT,Renal Vein
Segment A	T-46659, SRT, Segmental Artery
Arcuate A	T-4668A, SRT, Arcuate Artery of the Kidney
Interlobar A	T-4667D, SRT, Interlobar Artery of Kidney
M Renal A	V12115-01, MRUS, Main Renal Artery

D. Appendix : Breast Imaging structured reporting template

This appendix lists the DICOM Structured Report (SR) mappings used in the Breast Structured Reports of ultrasound system SR files.

The mappings are organized in a manner similar to the DICOM SR Templates as described in PS 3.16 of the DICOM Standard. The Breast Report mappings follow the DICOM SR Template TID 4200: Breast Imaging Report, except where noted.

All private code values use the Coding Scheme Designator "MRUS".

D.1. TID 1400 Linear Measurement Template

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			NUM		√		UNITS = DCID(7460)
2	>	INFERRED FROM	SCOORD	EV (121055,DCM,			
3	>>	R-SELECTED FROM	IMAGE				
4	>>	SELECTED FROM	IMAGE				
5	>	INFERRED FROM	SCOORD	EV (121230, DCM,			
6	>>	R-SELECTED FROM	IMAGE				
7	>>	SELECTED FROM	IMAGE				

D.2. TID (4200) BREAST IMAGING REPORT

This is the template for the root the content tree for the breast ultrasound procedure report.

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
		MOD		Descendants			
3	>	CONTAINS	INCLUDE	DTID (4202) Breast Imaging Report Narrative			
4	>	CONTAINS	CONTAINER				
5	>>	CONTAINS	IMAGE	No purpose of reference			
6	>	CONTAINS	INCLUDE	DTID (SELFTMP-3) BREAST IMAGING SUMMAY			
7	>	CONTAINS	INCLUDE	DTID (4208) Breast Imaging Report Supplementary Data			
8	>	CONTAINS	TEXT	(20121120,MRUS, self-defined-measurementfile)			

D.3. TID (4201) BREAST IMAGING PROCEDURE REPORTED

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CODE	EV (121058,			DCID (6050) Breast Procedure Reported
2	>	HAS CONCEPT MOD	CODE	EV (111464,)			DCID (6058) Procedure Modifiers for Breast
[redacted]	3	[redacted]	HAS CONCEPT MOD	CODE	EV (G-C171,			DCID (6022) Side

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
8	>	HAS PROPERTIES	DATE	EV (111060,			

D.4. TID (4202) BREAST IMAGING REPORT NARRATIVE

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	EV (111412, DCM,			
2	>	CONTAINS	CONTAINER	BCID (6052) Breast Imaging Report Section Title			
3	>>	HAS OBS CONTEXT	INCLUDE	DTID (1002) Observer Context			
4	>>	CONTAINS	TEXT	BCID (6053) Breast Imaging Report Elements			DCM 121058 Procedure reported
5	>>>	INFERRED FROM	INCLUDE	DTID (350) References to Supporting Evidence			

D.5. TID (SELFTMP-3) BREAST IMAGING SUMMAY

This is a private template referenced by TID(4200).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	EV (121111, DCM, "Summary")			
2	>	CONTAINS	TEXT	EV (121106, DCM, "Comment")			
3	>	CONTAINS	TEXT	EV (I12101-			
4	>	CONTAINS	TEXT	EV (I12101-Second			
5	>	CONTAINS	TEXT	EV (I12101-03			
6	>	CONTAINS	TEXT	EV (I12101-04			
7	>	CONTAINS	NUM	EV (8302-2, LN, Patient Height			

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
				Procedure Reported			
3	>	CONTAINS	CODE				DCID (230) Yes-No
4	>	CONTAINS	CODE				DCID (230) Yes-No
5	>	CONTAINS	INCLUDE	DTID (4205) Breast Composition Section			
6	>	CONTAINS	INCLUDE	DTID (4206) Breast Imaging Report Finding Section			
7	>	CONTAINS	INCLUDE	DTID (4204) Breast Imaging Report Intervention Section			
8	>	CONTAINS	CONTAINER				
9	>>	CONTAINS	INCLUDE	DTID (4203) Breast Imaging Assessment			

D.8. TID (SELFTMP-4) BREAST MASS FINDING

This is a private template referenced by TID(4206).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CODE	EV (121071			
2	>	HAS OBS CONTEXT	TEXT	EV (M-03000, SRT Mass			
3	>>	HAS PROPERTIES	INCLUDE	DTID (SELFTMP-5) BREAST IMAGING MASS MEASUREMENT			
4	>>	HAS PROPERTIES	INCLUDE	DTID (SELFTMP-6) BREAST IMAGING MASS MEASUREMENT ANALYSIS			

D.9. TID (SELFTMP-5) BREAST MASS MEASUREMENT

This is a private template referenced by TID (SELFTMP-4).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	EV (125007 Measurement Group			
2	>	CONTAINS	INCLUDE	DTID (1400) Linear Measurement Template			"$Measurement = G-A22A, SRT, ""Length"";$Laterality = $Laterality;$Section = 6019"
3	>	CONTAINS	INCLUDE	DTID (1400) Linear Measurement Template			"$Measurement = G-A220, SRT, ""Width"";$Laterality = $Laterality;$Section = 6019"
4	>	CONTAINS	INCLUDE	DTID (1400) Linear Measurement Template			"$Measurement = 121207, DCM, ""Height"";$Laterality = $Laterality;$Section = 6019"
5	>	CONTAINS	INCLUDE	DTID (1400) Linear Measurement Template			"$Measurement = 121242, DCM, ""Distance from nipple"";$Laterality = $Laterality;$Section = 6019"
6	>	CONTAINS	INCLUDE	DTID (1400) Linear Measurement Template			"$Measurement = 121243, DCM, ""Distance from skin"";$Laterality = $Laterality;$Section = 6019"

D.10. TID (SELFTMP-6) BREAST MASS ANALYSIS

This is a private template referenced by TID (SELFTMP-4).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1	>	CONTAINS	TEXT	EV (M-020F9, SRT			
2	>	CONTAINS	TEXT	EV (T6006-1, MRUS			
3	>	CONTAINS	TEXT	EV (T6006-			
4	>	CONTAINS	TEXT	EV (T6006-3,			
5	>	CONTAINS	TEXT	EV (T6006-4			
6	>	CONTAINS	TEXT	EV (T6006-5			
7	>	CONTAINS	TEXT	EV (T6006-14,			
8	>	CONTAINS	TEXT	EV (T6006-7,			

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
9	>	CONTAINS	TEXT	EV (T6006-8			

E. Appendix : Abdomen Imaging structured reporting template

This appendix lists the DICOM Structured Report (SR) mappings used in the Abdomen Structured Reports of ultrasound system SR files.

The mappings are organized in a manner similar to the DICOM SR Templates as described in PS 3.16 of the DICOM Standard. The Abdomen Report mappings follow the self DICOM SR Template TID 0100: Abdomen Ultrasound Procedure Report, except where noted.

All private code values use the Coding Scheme Designator "MRUS".

E.1. TID (0100) Abdomen Ultrasoud Report

This is the template for the root the content tree for the Abdomen ultrasound procedure report.

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
1			CONTAINER	EV (MR0100-01, MRUS, Abdomen Ultrasound Procedure Report)			
2	>	HAS CONCEPT MOD	INCLUDE	DTID (1001) Observation Context			

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
							G-A103, SRT,Unilateral
9	>	CONTAINS	INCLUDE	DTID (0105) Abdomen Ultrasound Section			$SectionScope=T-65000,SRT,Pancreas; $SectionLaterality = G-A103, SRT,Unilateral
10	>	CONTAINS	INCLUDE	DTID (0106) Abdomen Ultrasound Section			$SectionScope=T-C3000,SRT,Spleen;$SectionLaterality = G-A103, SRT,Unilateral
11	>	CONTAINS	INCLUDE	DTID (0107) Abdomen Ultrasound Section			$SectionScope=T-71000,SRT,Kidney;$SectionLaterality = G-A101, SRT,Left
12	>	CONTAINS	INCLUDE	DTID (0107) Abdomen Ultrasound Section			$SectionScope=T-71000,SRT,Kidney;$SectionLaterality = G-A100, SRT,Right
13	>	CONTAINS	INCLUDE	DTID (0108) Abdomen Ultrasound Section			$SectionScope=T-73000,SRT,Ureter;$SectionLaterality = G-A101, SRT,Left
14	>	CONTAINS	INCLUDE	DTID (0108) Abdomen Ultrasound			$SectionScope=T-73000,S

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Condition	Value Set Constraint
				Section			RT,Ureter;$SectionLaterality = G-A100, SRT,Right
15	>	CONTAINS	INCLUDE	DTID (0109) Abdomen Ultrasound Section			$SectionScope=T-47040,SRT,Bladder;$SectionLaterality = G-A103, SRT,Unilateral
16	>	CONTAINS	INCLUDE	DTID (SELFTMP_5103_9) Vascular Ultrasound Section			$SectionScope=T-71019,SRT,Vascular Structure Of Kidney;$SectionLaterality = G-A101, SRT,Left;$AnatomyRatio = 12124
17	>	CONTAINS	INCLUDE	DTID (SELFTMP_5103_9) Vascular Ultrasound Section			$SectionScope=T-71019,SRT,Vascular Structure Of Kidney;$SectionLaterality = G-A100, SRT,Right;$AnatomyRatio = 12124
18	>	CONTAINS	INCLUDE	DTID (SELFTMP_5103_7) Vascular Ultrasound Section			$,S of

8	>	CONTAINS		0			

E.3. TID (0102) Abdomen Procedure Summary Section

This is a private template referenced by TID(0100).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	COMMENT
1			CONTAINER	DT (121111, DCM,			
2	>	CONTAINS	TEXT	EV (121106, DCM, "Comment")			from Info comment
3	>	CONTAINS	TEXT	(I12101-01,MRUS,"Primary Indications")			from Info
4	>	CONTAINS	TEXT	(I12101-02,MRUS,"Secondary Indications")			from Info
5	>	CONTAINS	TEXT	(I12101-03,MRUS,"CPT4 Code")			from Info
6	>	CONTAINS	TEXT	(I12101-04,MRUS,"CPT4 Description")			from Info
7	>	CONTAINS	TEXT	EV (121106, DCM, "Comment")			From report comment

E.4. TID (0103) Abdomen Ultrasound Section

This is a private template referenced by TID(0100).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	Comment
1			CONTAINER	DT (121070, DCM,			
2	>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT,		$SectionScope	
3	>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT,		$SectionLaterality	

E.7. TID (0106) Abdomen Ultrasound Section

This is a private template referenced by TID(0100).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	Comment
1			CONTAINER	DT (121070, DCM,			
2	>	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT,		$SectionScope	
3	>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT,		$SectionLaterality	
4	>	CONTAINS	INCLUDE	DTID (300) Measurement		$Measurement = DCID(3000)	

E.8. TID (0107) Abdomen Ultrasound Section

This is a private template referenced by TID(0100).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	Comment
1			CONTAINER	DT (121070, DCM,			
2	>	HAS CONCEPT MOD	CODE	EV (G-C0E3,		$SectionScope	
3	>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT,		$SectionLaterality	
4	>	CONTAINS	INCLUDE	DTID (300) Measurement		$Measurement = DCID(71000); $Laterality=$SectionLaterality	

E.9. TID (0108) Abdomen Ultrasound Section

This is a private template referenced by TID(0100).

E.11.TID (SELFTMP_5103_7) Vascular Ultrasound Section

This is a private template referenced by TID(0100).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	Comment
1			CONTAINER	DT (121070, DCM,			
2	>	HAS CONCEPT MOD	CODE	EV (G-C0E3, S		$SectionScope	
3	>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT,		$SectionLaterality	
4	>	CONTAINS	INCLUDE	DTID (5104) Vascular Measurement Group		$AnatomyGroup = $Anatomy= DCID (12112) Abdominal Arteries (unilateral); $Modifier =DCID(12116)	
5	>	CONTAINS	INCLUDE	EV (T-46002,		$Measurement = EV (T-); $Modifier = DCID(12116)	
6	>>	CONTAINS	INCLUDE	DTID (300) Measurement		$Measurement = EV (C12119-2, MRUS, Aorta Sten A);	
7	>>	CONTAINS	INCLUDE	DTID (300) Measurement		$Measurement = EV (C12119-1, MRUS, Aorta Sten D);	
8	>>	CONTAINS	INCLUDE	DTID (300) Measurement		$Measurement = EV (M12119-14, MRUS, Aneurysm Length);	
9	>>	CONTAINS	INCLUDE	DTID (300) Measurement		$Measurement = EV (M12119-15, MRUS, Aneurysm Height);	

10	>>	CONTAINS	INCLUDE	DTID	(300)
				Measurement	

				DCM,			
2	>	HAS CONCEPT MOD	CODE	EV (G-C0E3,		$SectionScope	
3	>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT,		$SectionLaterality	
4	>	CONTAINS	INCLUDE	DTID (5104) Vascular Measurement Group		$AnatomyGroup = $Anatomy= DCID (12114) Abdominal Arteries (unilateral); $Modifier =DCID(12116)	
5	>	CONTAINS	INCLUDE	DTID (5104) Vascular Measurement Group		$AnatomyGroup = $Anatomy= EV (T-48727,SRT, Left Hepatic Vein);	
6	>	CONTAINS	INCLUDE	DTID (5104) Vascular Measurement Group		$AnatomyGroup = $Anatomy= EV (T-48725,SRT, Right Hepatic Vein);	
7	>	CONTAINS	INCLUDE	DTID (300) Measurement		$Measurement = EV (M12119-12, MRUS, Splenic V Diam);	
8	>	CONTAINS	INCLUDE	DTID (300) Measurement		$Measurement = EV (M12119-22, MRUS, Portal V Diam);	

E.13.TID (SELFTMP_5103_9) Vascular Ultrasound Section

This is a private template referenced by TID(0100).

	NL	**Rel with Parent**	**VT**	**Concept Name**	**Used in MODALITY**	**Value Set Constraint**	**Comment**
1			CONTAINER	DT (121070, DCM,			
2	>	HAS CONCEPT	CODE	EV (G-C0E3, SRT,		$SectionScope	

		MOD					
3	>	HAS CONCEPT MOD	CODE	EV (G-C171, SRT,		$SectionLaterality	
4	>	CONTAINS	INCLUDE	DTID (5104) Vascular Measurement Group		$AnatomyGroup = $Anatomy= DCID (12115) Abdominal Arteries (unilateral); $Modifier =DCID(12116)	
5	>	CONTAINS	INCLUDE	DTID (5104) Vascular Measurement Group		$AnatomyGroup = $Anatomy= EV (T-46600,SRT, Renal Artery); $Modifier = (G-036A,SRT, Origin of vessel)	
6	>	CONTAINS	INCLUDE	DTID (300) Measurement		$Measurement = EV (C12119-3, MRUS, Renal Aortic Ratio); $Laterality=$SectionLaterality	

E.14.TID (SELFTMP_5103_10) Vascular Ultrasound Section

This is a private template referenced by TID(0100).

	NL	Rel with Parent	VT	Concept Name	Used in MODALITY	Value Set Constraint	Comment

1

						Aortic Ratio); $Laterality=$SectionLaterality	

E.15.Mapping between Modality measurements and DICOM Concepts.

E.15.1. Abdomen Measurements

MODALITY Label	*DICOM Mapping*
Liver	MT-62000-01 MRUS Liver Diamete
Hepatic Lesion1 d1	MT-62000-02 MRUS Hepatic Lesion1 d1
Hepatic Lesion1 d2	MT-62000-03 MRUS Hepatic Lesion1 d2
Hepatic Lesion1 d3	MT-62000-04 MRUS Hepatic Lesion1 d3
Hepatic Lesion2 d1	MT-62000-05 MRUS Hepatic Lesion2 d1
Hepatic Lesion2 d2	MT-62000-06 MRUS Hepatic Lesion2 d2
Hepatic Lesion2 d3	MT-62000-07 MRUS Hepatic Lesion2 d3
Hepatic Lesion3 d1	MT-62000-08 MRUS Hepatic Lesion3 d1
Hepatic Lesion3 d2	MT-62000-09 MRUS Hepatic Lesion3 d2
Hepatic Lesion3 d3	MT-62000-10 MRUS Hepatic Lesion3 d3
Hepatic Cyst1 d1	MT-62000-11 MRUS Hepatic Cyst1 d1
Hepatic Cyst1 d2	MT-62000-12 MRUS Hepatic Cyst1 d2
Hepatic Cyst1 d3	MT-62000-13 MRUS Hepatic Cyst1 d3
Hepatic Cyst2 d1	MT-62000-14 MRUS Hepatic Cyst2 d1
Hepatic Cyst2 d2	MT-62000-15 MRUS Hepatic Cyst2 d2
Hepatic Cyst2 d3	MT-62000-16 MRUS Hepatic Cyst2 d3
Hepatic Cyst3 d1	MT-62000-17 MRUS Hepatic Cyst3 d1
Hepatic Cyst3 d2	MT-62000-18 MRUS Hepatic Cyst3 d2
Hepatic Cyst3 d3	MT-62000-19 MRUS Hepatic Cyst3 d3
CHD	MT-62000-20 MRUS Common Hepatic Duct
GB H	MT-63000-01 MRUS Gall Bladder Height
GB L	MT-63000-02 MRUS Gall Bladder Length
GB wall th	MT-63000-03 MRUS Gall Bladder Wall Thickness
CBD	MT-63000-04 MRUS Common Bile Duct
Panc duct	T-65010 SRT Pancreatic duct
Panc head	MT-65010-01 MRUS,Pancreatic Head

Panc body	MT-65010-02 MRUS,Pancreatic Body
Panc tail	

Pre-BL L	MT-74000-02,MRUS,Previous-Bladder Length
Pre-BL W	MT-74000-03,MRUS,Previous-Bladder Width
Pre-BL Vol	CT-74000-01,MRUS,Previous-Bladder Volume
Post-BL H	MT-74000-04,MRUS,Posterior-Bladder Height

CA/Ao	**C12120-2,MRUS,Celiac Axis Peak Systolic Velocity/Abdominal Aorta Peak Systolic Velocity**

E.15.3. Abdominal Veins

MODALITY Label	***DICOM Mapping***
Hepatic V	T-48720,SRT,Hepatic Vein
Left Hepatic V	T-48727,SRT,Left Hepatic Vein
Right Hepatic V	T-48725,SRT,Right Hepatic Vein
M Hepatic V	T-48726,SRT,Middle Hepatic Vein
Portal V	T-48810,SRT,Portal Vein
IVC	T-48710,SRT,Inferior Vena Cava
Splenic V	T-48890,SRT,Splenic Vein
SMV	T-48840,SRT,Superior Mesenteric Vein
M Portal V	V12114-01,MRUS,Main Portal Vein
IMV	T-48910,SRT,Inferior Mesenteric Vein
Splenic V Diam	M12119-12,MRUS,Splenic V Diam
Portal V Diam	M12119-22,MRUS,Portal V Diam

E.15.4. Renal Vessels

MODALITY Label	***DICOM Mapping***
Ren A Org	T-46600,SRT,Renal Artery
Renal A	T-46600,SRT,Renal Artery
Renal V	T-48740,SRT,Renal Vein
Segment A	T-46659, SRT, Segmental Artery
Arcuate A	T-4668A, SRT, Arcuate Artery of the Kidney
Interlobar A	T-4667D, SRT, Interlobar Artery of Kidney
M Renal A	V12115-01, MRUS, Main Renal Artery
RAR	C12119-3,MRUS,Renal Aortic Ratio