V8 Ultrasound System

DICOM Conformance Statement

Revision 1.0

System Version 1.00.00

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SAMSUNG MEDISON

0 COVER PAGE

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1 CONFORMANCE STATEMENT OVERVIEW

V8 implements the necessary DICOM services to download worklists from information systems, save acquired US images and Structured Reports to a network storage device, CD or DVD, print to a networked hardcopy device and inform the information system about the work actually done.

Table 1-1 provides an overview of the network services supported by V8.

Table 1-1
NETWORK SERVICES

SOP Classes	User of Service (SCU)	Provider of Service (SCP)
Transfer		
Ultrasound Image Storage	Yes	No
Ultrasound Multi-frame Image Storage	Yes	No
Comprehensive SR	Yes	No
Workflow Management		
Modality Worklist	Yes	No
Storage Commitment Push Model	Yes	No
Modality Performed Procedure Step	Yes	No
Print Management		
Basic Grayscale Print Management	Yes	No
Basic Color Print Management	Yes	No
Query/Retrieve		
Study Root Information Model FIND	Yes	No
Study Root Information Model MOVE	Yes	No

Provide Storage SCP only Q/R service running.

Table 1-2 provides an overview of the Media Storage Application Profiles supported by V8.

Table 1-2
MEDIA SERVICES

Media Storage Application Profile	Write Files (FSC or FSU)	Read Files (FSR)
Compact Disk - Recordable		
STD-US-SC-MF-CDR	Yes	No
DVD		
STD-US-SC-MF-DVD	Yes	No

2 TABLE OF CONTENTS

3 INTRODUCTION

3.1 REVISION HISTORY

Document Version	System Version	Date of Issue	Author	Description
1.00	1.00	Jul 18 2021	SAMSUNG MEDISON CO., LTD.	Final Text for System 1.0

3.2 AUDIENCE

This document is intended for hospital staff, health system integrators, software designers or implementers. It is assumed that the reader has a working understanding of DICOM.

3.3 REMARKS

DICOM, by itself, does not guarantee interoperability. However, the Conformance Statement facilitates a first-level validation for interoperability between different applications supporting the same DICOM functionality.

This Conformance Statement is not intended to replace validation with other DICOM equipment to ensure proper exchange of information intended.

The scope of this Conformance Statement is to facilitate communication with SAMSUNG MEDISON CO., LTD and other vendor's Medical equipment. The Conformance Statement should be read and understood in conjunction with the DICOM Standard [DICOM]. However, it is not guaranteed to ensure by itself the desired interoperability and a successful interconnectivity.

The user should be aware of the following important issues:

- The comparison of different conformance statements is the first step towards assessing interconnectivity between SAMSUNG MEDISON CO., LTD and non – SAMSUNG MEDISON CO., LTD equipment.

- Test procedures should be defined to validate the desired level of connectivity.

- The DICOM Standard will evolve to meet the users' future requirements. SAMSUNG MEDISON CO., LTD is

activity involved in developing the standard further and therefore reserves the right to make changes to its products or to discontinue their delivery.

3.4 DEFINITIONS, TERMS AND ABBREVIATIONS

Definitions, terms and abbreviations used in this document are defined within the different parts of the DICOM Standard.

Abbreviations and terms are as follows:

AE	DICOM Application Entity
AET	Application Entity Title
ASCE	Association Control Service Element
CD-R	Compact Disk Recordable
FSC	File-Set Creator
FSU	File-Set Updater
FSR	File-Set Reader
IOD	(DICOM) Information Object Definition
ISO	International Standard Organization
MPPS	Modality Performed Procedure Step
MSPS	Modality Scheduled Procedure Step
Q/R	Query and Retrieve
R	Required Key Attribute
O	Optional Key Attribute
PDU	DICOM Protocol Data Unit
SCU	DICOM Service Class User (DICOM client)
SCP	DICOM Service Class Provider (DICOM server)
SOP	DICOM Service-Object Pair
U	Unique Key Attribute

3.5 REFERENCES

[DICOM] Digital Imaging and Communications in Medicine (DICOM), NEMA PS 3.1–3.20, 2011

4 NETWORKING

4.1 IMPLEMENTATION MODEL

4.1.1 Application Data Flow

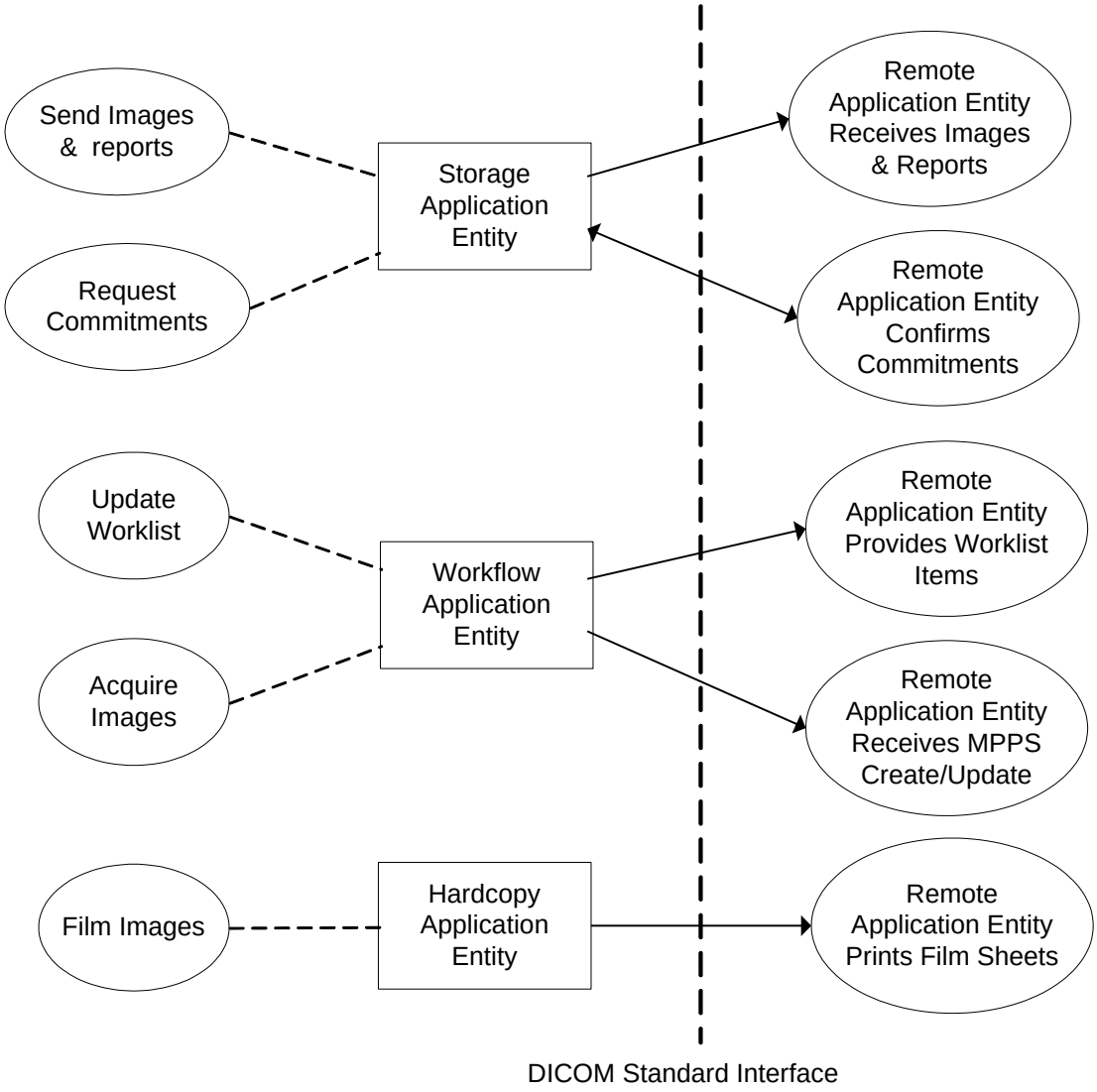

Figure 4.1-1
APPLICATION DATA FLOW DIAGRAM

- The Storage Application Entity sends images, Structured Reports and requests Storage Commitment to a remote AE. It is associated with the local real-world activities “Send Images & Reports” and “Request Commitments”. Methods to send SOP Instances(images and Structured Reports) depend on user

configuration, “Send on end exam”, “Send after acquisition” or “Send manually”. “Send manually” mode is performed upon user request for each study or for specific images selected. “Send on end exam” mode starts to send SOP Instances at End Exam for each study. “Send after acquisition” mode starts when the first SOP Instance is acquired for each study and SOP Instances are transferred immediately after acquisition.

If the remote AE is configured as an archive device, the Storage AE will request Storage Commitment and if a commitment is successfully obtained, it will record this information in the local database and displayed it in the Exam List.

- The Workflow Application Entity receives Worklist information from and sends MPPS information to a remote AE. It is associated with the local real-world activities “Update Worklist” and “Acquire Images”. When the “Update Worklist” local real-world activity is performed, the Workflow Application Entity queries a remote AE for worklist items and provides the set of worklist items matching the query request. “Update Worklist” is performed as a result of an operator request or can be performed automatically at specific time intervals. When the “Acquire Images” local real-world activity is performed, the Workflow Application Entity creates and updates Modality Performed Procedure Step instances managed by a remote AE. Acquisition of images will result in automated creation of an MPPS Instance. Completion of the MPPS is performed at End Exam for each study.

- The Hardcopy Application Entity prints images on a remote AE (Printer). It is associated with the local real-world activity “Film Images”. Methods to film Images depend on user configuration and are equal to the Sending images’ of the Storage Application Entity.

4.1.2 Functional Definition of AE’s

4.1.2.1 Functional Definition of Storage Application Entity

The existence of a send-job with associated network destination will activate the Storage AE. An association request is sent to the destination AEs and upon successful negotiation of a Presentation Context, the image or Structured Report transfer is started. If the association cannot be opened, the related send-job is set to an error state and can be restarted by the user via DICOM Spooler interface or automatically. An automatic retry (retry interval, retry count) can be configured using the Setup/DICOM Menu.

4.1.2.2 Functional Definition of Workflow Application Entity

Worklist Update attempts to download a Worklist from a remote node. If the Workflow AE establishes an

association to a remote AE, it will transfer all matching worklist items via the open Association. By default, Worklist Update use “US” for Modality, current date for Scheduled Procedure Step Start Date and blank (displayed "Any") for Scheduled Station AE-Title as query parameters. The results will be displayed in a separate list, which will be cleared with the next Worklist Update.

The Workflow AE performs the creation of an MPPS Instance automatically whenever the first SOP Instance is acquired for each study. The MPPS “Complete” or “Discontinued" states can only be set by “End Exam” for each study.

4.1.2.3 Functional Definition of Hardcopy Application Entity

The existence of a print-job will activate the Hardcopy AE. An association is established with the printers and the printer’s status determined. If the printer is operating normally, the film sheets described within the print-job will be printed. If the printer is not operating normally, the print-job will set to an error state and can be restarted by the user via DICOM Spooler manager interface or automatically. An automatic retry (retry interval, retry count) can be configured using the Setup/DICOM Menu.

4.1.2.4 Functional Definition of the Q/R Application Entity

The Query function is activated through the user interface when the user selects a Q/R AE to query (from a pre-configured list), then initiates a query. Queries are performed per the study or series. Retrieval is activated through the user interface when the user selects a series for retrieval. A connection to the Q/R AE is established to initiate and monitor the retrieval and the STORAGE-SCP AE receives the retrieved instances.

4.1.2.5 Functional Definition of the Q/R Application Entity

The STORAGE-SCP AE waits for another application to connect from the presentation address configured for its AE Title. When another application connects, the STORAGE-SCP AE expects it to be a DICOM application. The STORAGE-SCP AE will accept associations with presentation contexts for SOP Classes of the Storage Device. Any images received in such Presentation Contexts will be stored in the system. Provide Storage SCP only Q/R service running.

4.1.3 Sequencing of Real-World Activities

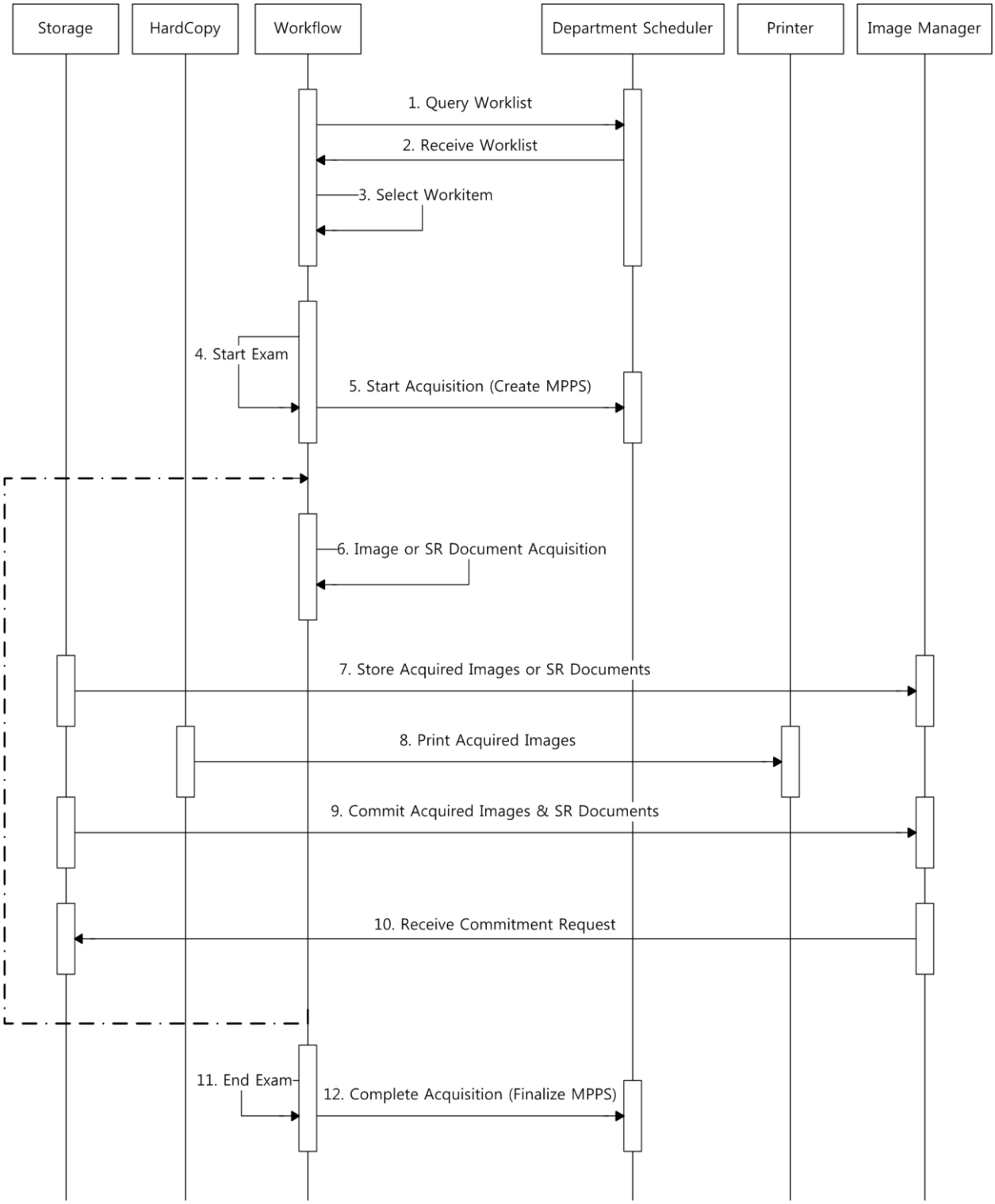

Figure 4.1-2

SEQUENCING CONTRAINTS – SEND AFTER ACQUISITION

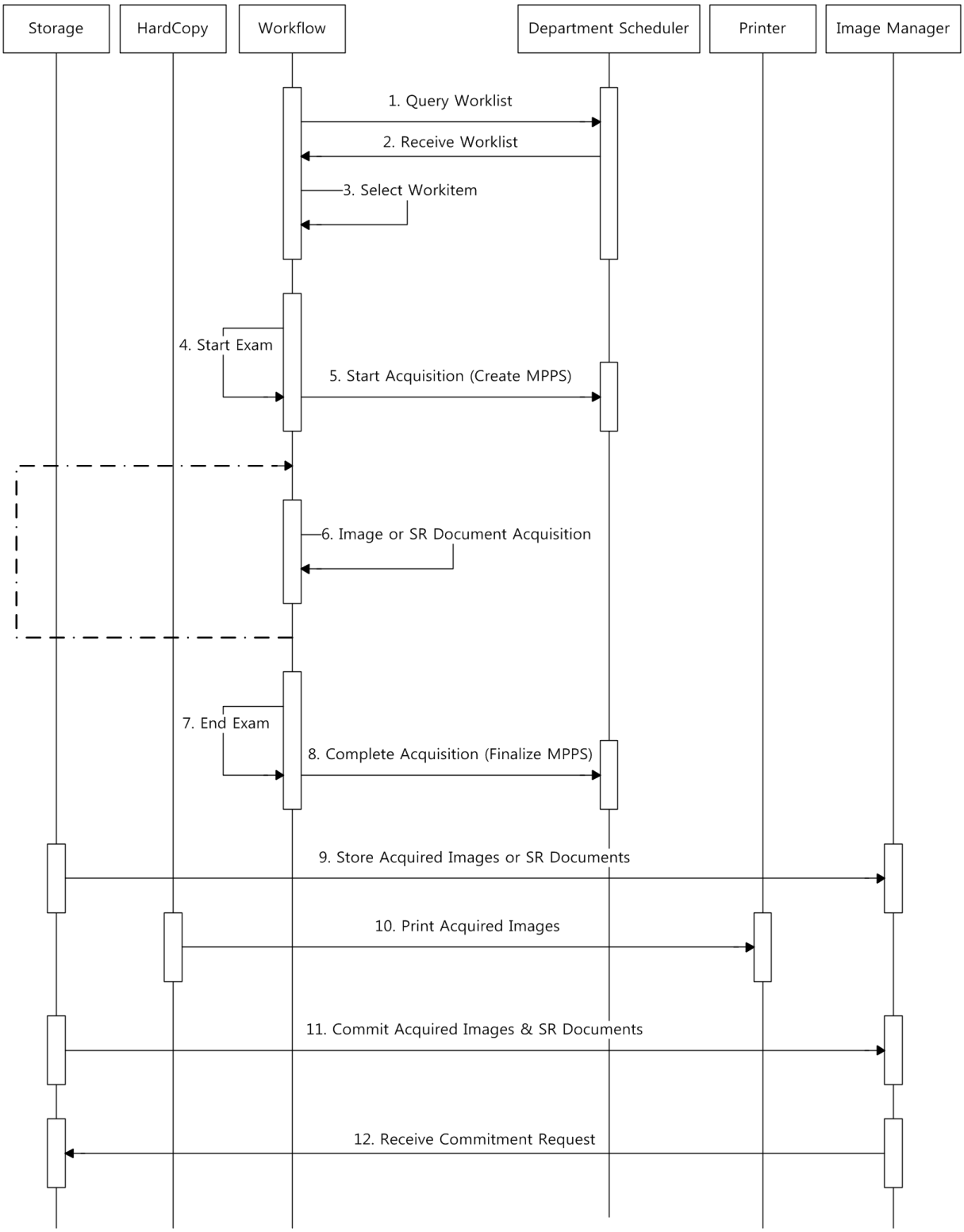

Figure 4.1-3

SEQUENCING CONSTRAINTS – SEND ON END EXAM

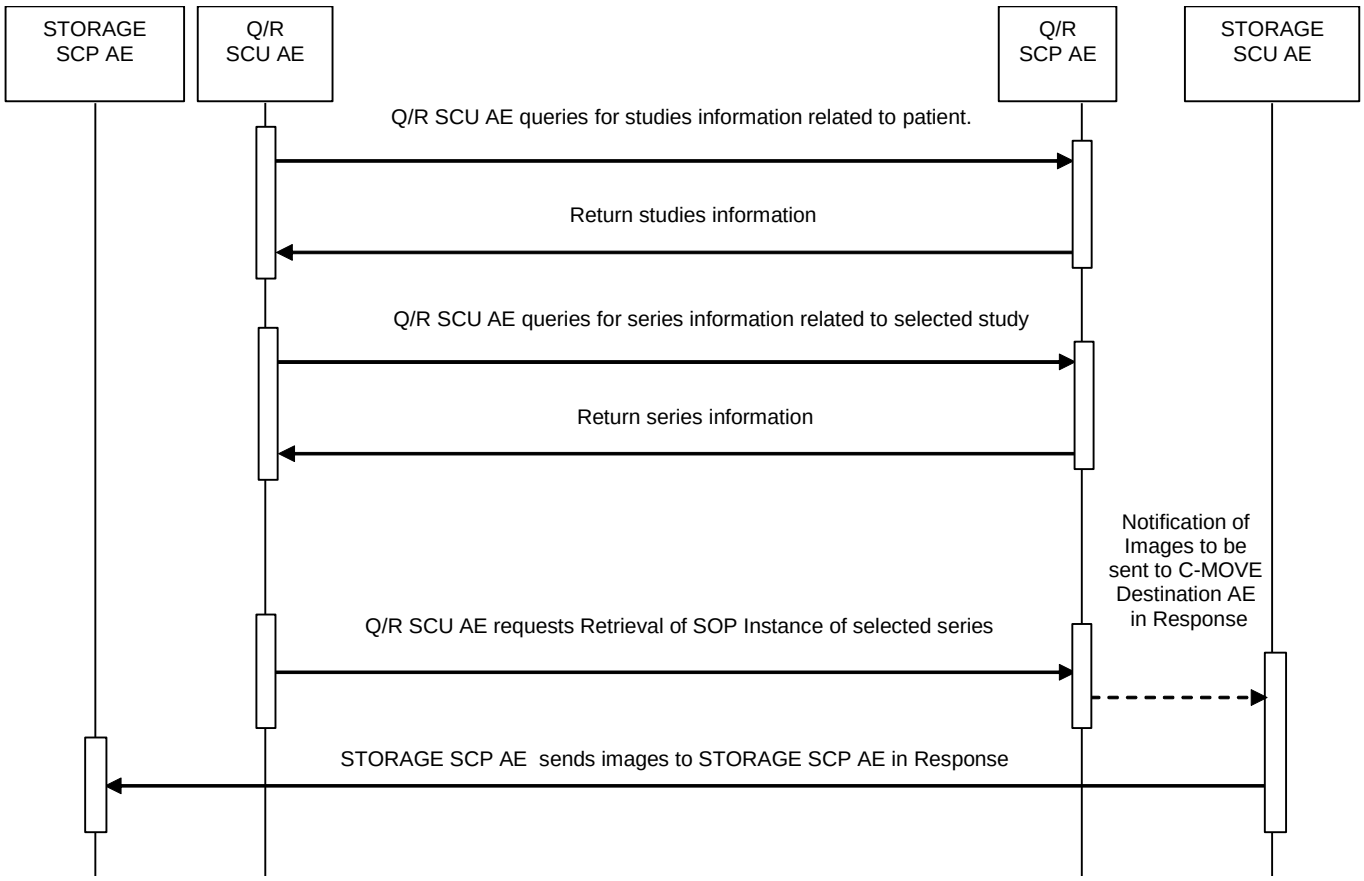

Figure 4.1-4
SEQUENCING CONSTRAINTS – QUERY AND RETRIEVE

Under normal scheduled workflow conditions, the sequencing constraints are illustrated in Figure 4.1-2, Figure 4.1-3 and Figure 4.1-4

Other workflow situations (e.g. unscheduled procedure steps) will have other sequencing constraints. Printing could equally take place after the images acquired have been stored. Printing could be omitted completely if no printer is connected or hardcopies are not required.

4.2 AE SPECIFICATIONS

4.2.1 Storage Application Entity Specification

4.2.1.1 SOP Classes

V8 provides Standard Conformance to the following SOP Classes:

Table 4.2-1

SOP CLASSES FOR AE STORAGE

SOP Classes	SOP Class UID	SCU	SCP
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1	Yes	No
Ultrasound Multi-frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1	Yes	No
Comprehensive Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.33	Yes	No
Storage Commitment Push Model	1.2.840.10008.1.20.1	Yes	No
Verification	1.2.840.10008.1.1	Yes	Yes

4.2.1.2 Association Policies

4.2.1.2.1 General

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

Table 4.2-2

DICOM APPLICATION CONTEXT FOR AE STORAGE

Application Context Name	1.2.840.10008.3.1.1.1

4.2.1.2.2 Number of Associations

V8 can initiate one or more Associations at a time for each destination to which a transfer request is being processed in the active job queue list.

Table 4.2-3

NUMBER OF ASSOCIATIONS INITIATED FOR AE STORAGE

Maximum number of simultaneous Associations	Unlimited

V8 accepts Associations to receive N-EVENT_REPORT notifications for the Storage Commitment Push Model SOP

Class.

Table 4.2-4

NUMBER OF ASSOCIATIONS ACCEPTED FOR AE STORAGE

Maximum number of simultaneous Associations	Unlimited

4.2.1.2.3 Asynchronous Nature

V8 does not support asynchronous communications (multiple outstanding transactions over a single Association).

Table 4.2-5

ASYNCHRONOUS NATURE AS A SCU FOR AE STORAGE

Maximum number of outstanding asynchronous transactions	1

4.2.1.2.4 Implementation Identifying Information

The implementation information for this Application Entity is:

Table 4.2-6

DICOM IMPLEMENTATION CLASS AND VERSION FOR AE STORAGE

Implementation Class UID	1.2.410.200001.101.11.801
Implementation Version Name	V8

4.2.1.3 Association Initiation Policy

4.2.1.3.1 Activity – Send Images and Structured Reports and Requests Commitment

4.2.1.3.1.1 Description and Sequencing of Activities

A user can select exams or images and request them to be sent to some destination. Each request is forwarded to the job queue and processed individually. When the “Send on end exam” or “Send after acquisition” option is active, Stored images and reports will be forwarded to the network job queue for a pre-configured auto-send target destination automatically. For “Send on end exam” and “Send manually” configuration, the system opens an association, sends all images in the study, and closes the association. If “Send after acquisition” is selected, the system handles the association with the Storage SCP Server using the following method.

a. Open an Association when the image is acquired.

b. If an error occurs while sending an SOP Instance to the server because there is no longer an open association (server timed-out), attempt to re-establish the association.

c. When one image is sended, close the open association after SOP Instances remained in that study are sent.

If the remote AE is configured as an archive device, the Storage AE will, after all images and reports have been sent, transmit Storage Commitment request (N-ACTION) over a separate Association. The Storage AE can only receive an N-EVENT-REPORT request in a subsequent association initiated by the SCP.

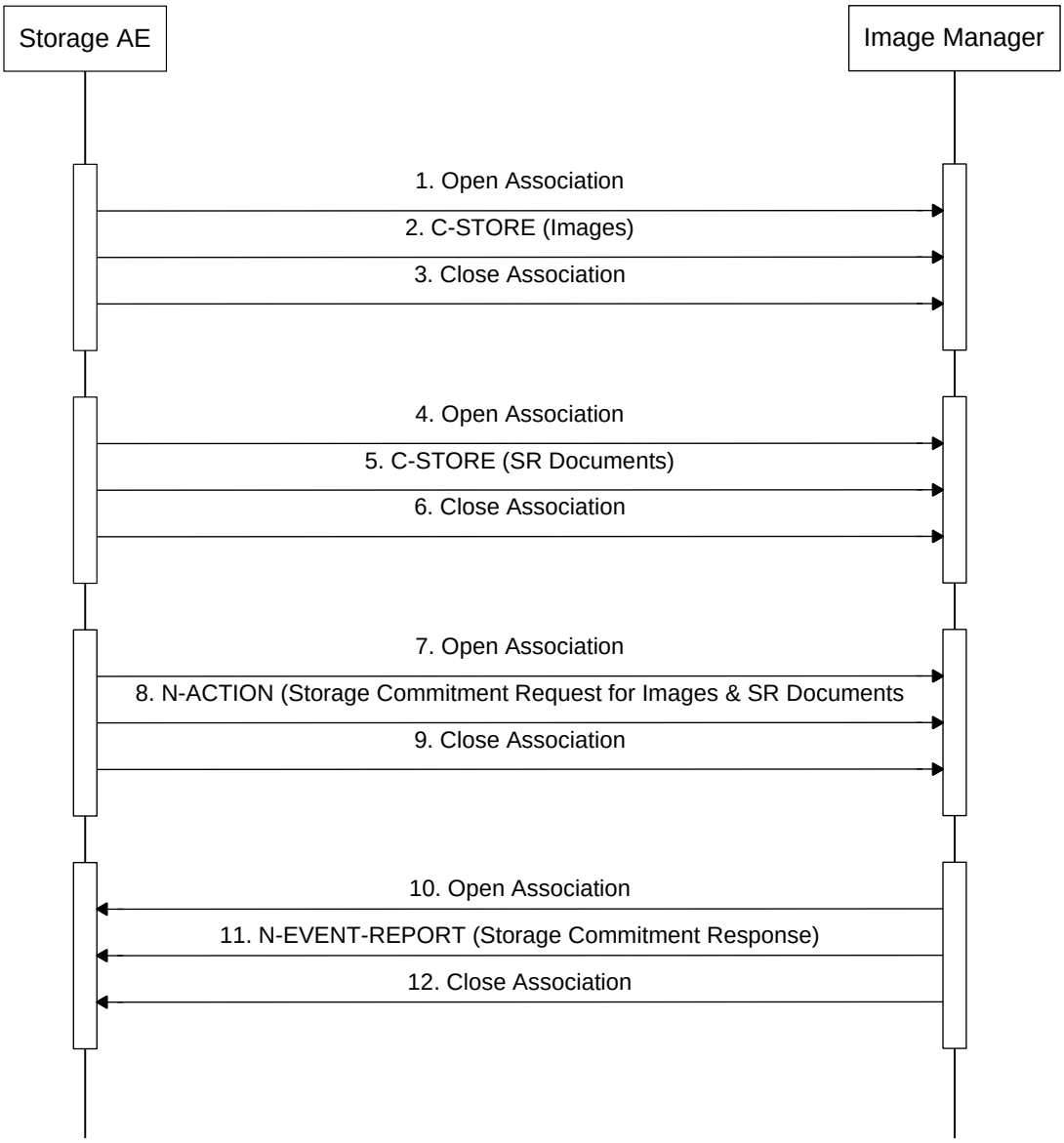

Figure 4.2-1

SEQUENCING OF ACTIVITY - SEND IMAGES AND SR DOCUMENTS

A possible sequence of interactions between the Storage AE and an Image Manager (e.g. a storage or archive device supporting the Storage and Storage Commitment SOP Classes as an SCP) is illustrated in the figure above.

NOTE: The N-EVENT-REPORT must be sent over a separate association initiated by the Image Manager. (See Section 4.2.1.4)

4.2.1.3.1.2 Proposed Presentation Contexts

V8 is capable of proposing the Presentation Contexts shown in the following table.

Table 4.2-7
PROPOSED PRESENTATION CONTEXTS FOR ACTIVITY SEND IMAGES

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1	Implicit VR Little Endian JPEG Lossy Baseline JPEG Lossless	1.2.840.10008.1.2 1.2.840.10008.1.2.4.50 1.2.840.10008.1.2.4.70	SCU	None
Ultrasound Multi-frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1	Implicit VR Little Endian JPEG Lossy Baseline JPEG Lossless	1.2.840.10008.1.2 1.2.840.10008.1.2.4.50 1.2.840.10008.1.2.4.70	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
Storage Commitment Push Model	1.2.840.10008.1.20.1	Implicit VR Little Endian Explicit VR Little Endian	1.2.840.10008.1.2 1.2.840.10008.1.2.1	SCU	None
Verification	1.2.840.10008.1.1	Implicit VR Little Endian Explicit VR Little Endian	1.2.840.10008.1.2 1.2.840.10008.1.2.1	SCU /SCP	None

Presentation Contexts for Ultrasound Image Storage and Ultrasound Multi-frame Image Storage will be proposed for the “STORAGE” device configured in Setup/Connectivity/DICOM.

A Presentation Context for Comprehensive Structured Report Storage will be proposed for the “STORAGE SR” device configured in Setup/ Connectivity/DICOM.

A Presentation Context for Storage Commitment Push Model will be proposed for the “SC” device configured in Setup/ Connectivity/DICOM.

A Presentation Context for Verification will be proposed when a user press the “Verify” button for a configured device.

4.2.1.3.1.3 SOP Specific Conformance Image & Comprehensive Structured Report Storage SOP Classes

All Image & Structured Report Storage SOP Classes supported by the Storage AE exhibit the same behavior, except where stated, and are described together in this section.

Table 4.2-8
STORAGE C-STORE RESPONSE STATUS HANDLING BEHAVIOR

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The SCP has successfully stored the SOP Instance. If all SOP Instances succeed, the job is marked as complete.
Refused	Out of Resources	A700-A7FF	The association is aborted using A-ABORT and the send job is marked as failed. The status is logged.
Error	Data Set does not match SOP Class	A900-A9FF	Same as "Refused" above.
Error	Cannot Understand	C000-CFFF	Same as "Refused" above.
Warning	Coercion of Data Elements	B000	Image transmission is considered successful.
Warning	Data Set does not match SOP Class	B007	Same as "Warning" above.
Warning	Elements Discards	B006	Same as "Warning" above.
*	*	Any other status code.	Same as "Refused" above.

The Behavior of Storage AE during communication failure is summarized in the Table below:

Table 4.2-9
STORAGE 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.

A failed send job can be restarted by user interaction. The system can be configured to automatically resend failed jobs if a transient status code is received. The delay between resending failed jobs and the number of retries is also configurable.

4.2.1.3.1.4 SOP Specific Conformance for Storage Commitment SOP Class

4.2.1.3.1.4.1 Storage Commitment Operations (N-ACTION)

The Storage AE will request storage commitment for the configured device for instances of the Ultrasound Image, Ultrasound Multi-frame Image and Structured Report Storage SOP Classes.

The Storage AE will consider Storage Commitment failed if no N-EVENT-REPORT is received for a Transaction UID within a configurable time period after receiving a successful N-ACTION response (duration of applicability for a Transaction UID).

The Storage AE does not send the optional Storage Media FileSet ID & UID Attributes or the Referenced Study Component Sequence Attribute in the N-ACTION

The Behavior of Storage AE when encountering status codes in an N-ACTION response is summarized in the Table below:

Table 4.2-10
STORAGE COMMITMENT N-ACTION RESPONSE STATUS HANDLING BEHAVIOR

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The request for storage comment is considered successfully sent. The system waits for the association of the N-Event-Report.
*	*	Any other status code.	The Association is aborted using A-Abort and the request for storage comment is marked as failed

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

Table 4.2-11
STORAGE COMMITMENT COMMUNICATION FAILURE BEHAVIOR

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

	failed.

4.2.1.3.1.4.2 Storage Commitment Notification (N-EVENT-REPORT)

The Storage AE is capable of receiving an N-EVENT-REPORT notification if it has successfully negotiated a Presentation Context for the Storage Commitment Push Model.

Upon receipt of an N-EVENT-REPORT the timer associated with the Transaction UID will be cancelled.

The behavior of Storage AE when receiving Event Types within the N-EVENT-REPORT is summarized in the Table below.

Table 4.2-12
STORAGE COMMITMENT N-EVENT-REPORT BEHAVIOR

Event Type Name	Event Type ID	Behavior
Storage Commitment Request Successful	1	The commit status is set to “Y” for each exam in the exam list. Auto deletion for committed exam is not supported.
Storage Commitment Request Complete – Failures Exists	2	The commit status is set to “N” for each exam in the exam list. The Referenced SOP Instances under Failed SOP Sequence (0008, 1198) are logged. A send job that failed storage commitment will not be automatically restarted but can be restarted by user interaction.

The reasons for returning specific status codes in an N-EVENT-REPORT response are summarized in the Table below.

Table 4.2-13
STORAGE COMMITMENT N-EVENT-REPORT RESPONSE STATUS REASONS

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The Storage commitment result has been successfully received.
Failure	Unrecognized Operation	0211H	The Transaction UID in the N_EVENT_REPORT request is not (was never issued within an N_ACTION request)

Failure	No Such Event Type	0113H	An invalid Event Type ID was supplied in the N_EVENT_REPORT request
Failure	Processing Failure	0110H	An internal error occurred during processing of the N_EVENT_REPORT

4.2.1.3.1.5 SOP Specific Conformance for Verification

The Behavior when encountering status codes in a C-ECHO response is summarized in the Table below:

Table 4.2-14

VERIFICATION C-ECHO RESPONSE STATUS HANDLING BEHAVIOR

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	Verification Status is set to 'Success'
*	*	Any other status code	Verification Status is set to 'Failed'

The Behavior of Storage AE during communication failure is summarized in the Table below:

Table 4.2-15

VERIFICATION COMMUNICATION FAILURE BEHAVIOR

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

4.2.1.4 Association Acceptance Policy

4.2.1.4.1 Activity – Receive Storage Commitment Response

4.2.1.4.1.1 Description and Sequence of Activities

The Storage AE will accept associations in order to receive responses to a Storage Commitment Request.

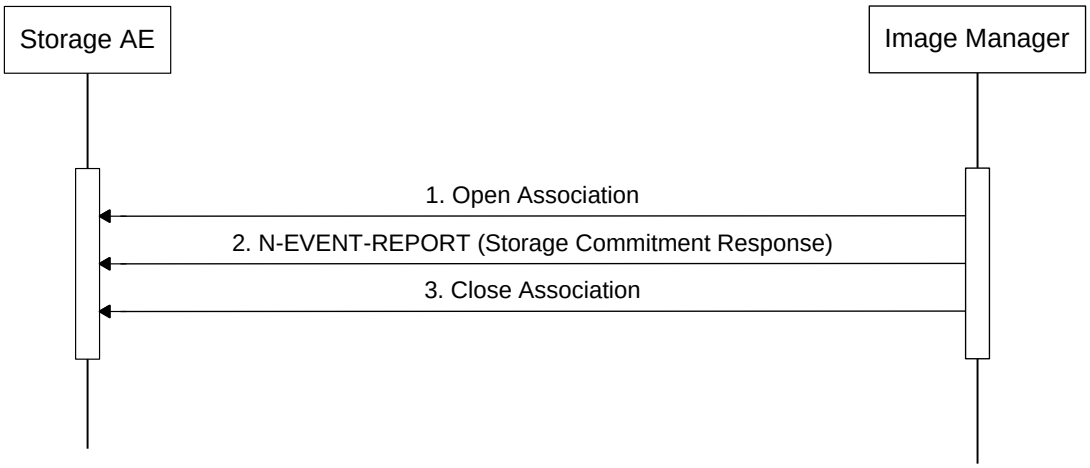

Figure 4.2-2
SEQUENCING OF ACTIVITY - RECEIVE STORAGE COMMITMENT RESPONSE

A possible sequence of interactions between the Storage AE and an Image Manager (e.g. a storage or archive device supporting Storage Commitment SOP Classes as an SCP) is illustrated in the Figure above:

1. The Image Manager opens a new association with the Storage AE.

2. The Image Manager sends an N-EVENT-REPORT request notifying the Storage AE of the status of a previous Storage Commitment Request. The Storage AE replies with an N-EVENT-REPORT response confirming receipt.

3. The Image Manager closes the association with the Storage AE.

4.2.1.4.1.2 Accepted Presentation Contexts

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

Table 4.2-16
ACCEPTABLE PRESENTATION CONTEXTS FOR ACTIVITY
RECEIVE STORAGE COMMITMENT RESPONSE

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Ext.
Name	UID	Name List	UID List		Neg.

Storage Commitment Push Model	1.2.840.10008.1.20.1	Implicit VR Little Endian Explicit VR Little Endian	1.2.840.10008.1.2 1.2.840.10008.1.2.1	SCU	None
Verification	1.2.840.10008.1.1	Implicit VR Little Endian Explicit VR Little Endian	1.2.840.10008.1.2 1.2.840.10008.1.2.1	SCP	None

4.2.1.4.1.3 SOP Specific Conformance for Storage Commitment SOP Class

4.2.1.4.1.3.1 Storage Commitment Notifications (N-EVENT-REPORT)

Upon receipt of an N-EVENT-REPORT the timer associated with the Transaction UID will be cancelled.

The behavior of Storage AE when receiving Event Types within the N-EVENT_REPORT is summarized in Table 4.2-12.

The reasons for returning specific status codes in an N-EVENT-REPORT response are summarized in Table 4.2-13.

4.2.1.4.1.4 SOP Specific Conformance for Verification SOP Class

The Storage AE provides standard conformance to the Verification SOP Class as an SCP. If the C-ECHO request was successfully received, a 0000 (Success) status code will be returned in the C-ECHO response.

4.2.2 Workflow Application Entity Specification

4.2.2.1 SOP Classes

V8 provides Standard Conformance to the following SOP Classes:

Table 4.2-17
SOP CLASSES FOR AE WORKFLOW

SOP Classes	SOP Class UID	SCU	SCP
Modality Worklist Information Model – FIND	1.2.840.10008.5.1.4.31	Yes	No
Modality Performed Procedure Step	1.2.840.10008.3.1.2.3.3	Yes	No

4.2.2.2 Association Establishment Policy

4.2.2.2.1 General

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

Table 4.2-18

DICOM APPLICATION CONTEXT FOR AE WORKFLOW

Application Context Name	1.2.840.10008.3.1.1.1

4.2.2.2.2 Number of Associations

V8 initiates one Association at a time for a Worklist request.

Table 4.2-19

NUMBER OF ASSOCIATIONS INITIATED FOR AE WORKFLOW

Maximum number of simultaneous Associations	1

4.2.2.2.3 Asynchronous Nature

V8 does not support asynchronous communications (multiple outstanding transactions over a single Association)

Table 4.2-20

ASYNCHRONOUS NATURE AS A SCU FOR AE WORKFLOW

Maximum number of outstanding asynchronous transactions	1

4.2.2.2.4 Implementation Identifying Information

The implementation information for this Application Entity is:

Table 4.2-21

DICOM IMPLEMENTATION CLASS AND VERSION FOR AE WORKFLOW

Implementation Class UID	1.2.410.200001.101.11.801
Implementation Version Name	V8

4.2.2.3 Association Initiation Policy

4.2.2.3.1 Activity – Worklist Update

4.2.2.3.1.1 Description and Sequencing of Activities

The request for a Worklist Update is initiated by user interaction.

The interactive Worklist Query will display a dialog for entering data as search criteria. When the Query is started on your request, only the data from the dialog will be inserted as matching keys into the query.

With automated worklist queries the V8 always requests all items for a Scheduled Procedure Step Start Date (actual date), Modality (US) and Scheduled Station AE Title.

Upon initiation of the request, the V8 will build an Identifier for the C-FIND request, will initiate an Association to send the request and will wait for Worklist responses. After retrieval of all responses, V8 will access the local database to add patient demographic data. The results will be displayed in a separate list, which will be cleared with the next worklist update.

V8 will initiate an Association in order to issue a C-FIND request according to the Modality Worklist Information Model.

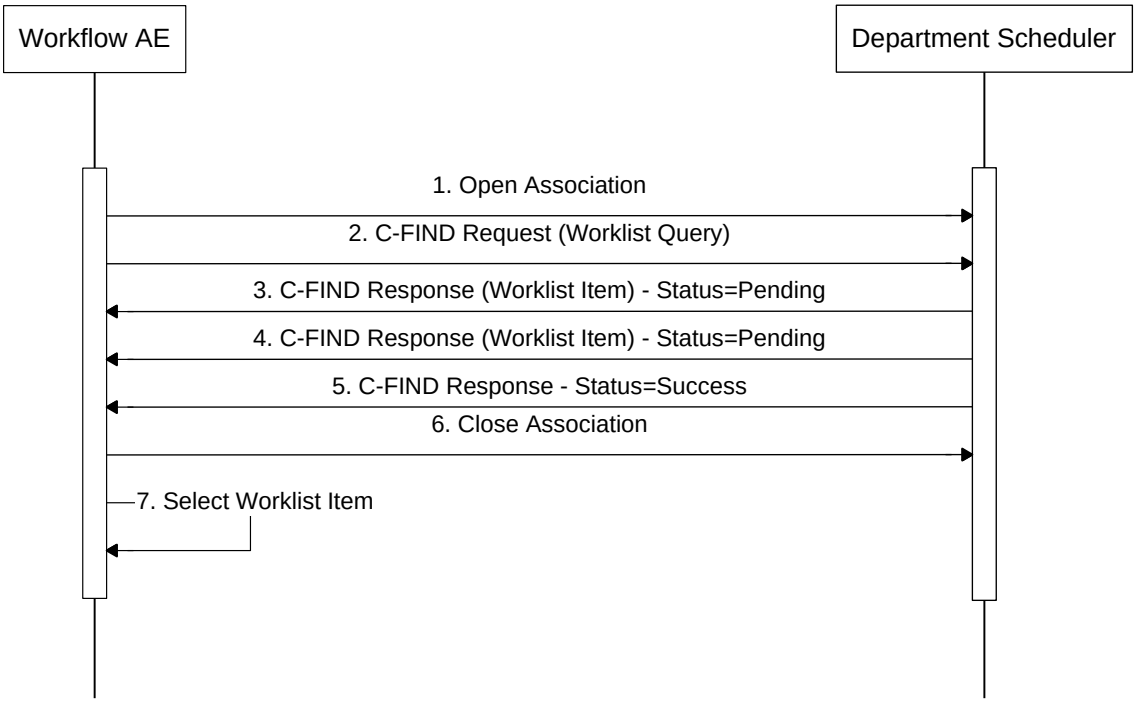

Figure 4.2-3
SEQUENCING OF ACTIVITY - WORKLIST UPDATE

A possible sequence of interactions between the Workflow AE and a Departmental Scheduler (e.g. a device such as a RIS or HIS which supports the Modality Worklist SOP Class as an SCP) is illustrated in the figure above:

4.2.2.3.1.2 Proposed Presentation Contexts

V8 will propose Presentation Contexts as shown in the following table:

Table 4.2-22
PROPOSED PRESENTATION CONTEXTS FOR ACTIVITY WORKLIST UPDATE

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Modality Worklist Information Model - FIND	1.2.840.10008. 5.1.4.31	Implicit VR Little Endian Explicit VR Little Endian	1.2.840.10008.1.2 1.2.840.10008. 1.2.1	SCU	None

4.2.2.3.1.3 SOP Specific Conformance for Modality Worklist

The behavior of V8 when encountering status codes in a Modality Worklist C-FIND response is summarized in the Table below. If any other SCP response status than “Success” or “Pending” is received by V8, a message ”Query failed” will appear on the user interface.

Table 4.2-23

MODALITY WORKLIST C-FIND RESPONSE STATUS HANDLING BEHAVIOR

Service Status	Further Meaning	Error Code	Behavior
Success	Matching is complete	0000	The SCP has Completed the operation successfully.
Pending	Matches are continuing	FF00	Continue.
Pending	Matches are continuing - Warning that one or more Optional Keys were not supported	FF01	Continue.
*	*	Any other status code.	The Association is aborted using A-Abort and the Worklist is marked as failed

The behavior of V8 during communication failure is summarized in the Table below.

Table 4.2-24

MODALITY WORKLIST COMMUNICATION FAILURE BEHAVIOR

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

Acquired images will always use the Study Instance UID specified for the Scheduled Procedure Step (if available). If an acquisition is unscheduled, a Study Instance UID will be generated locally.

The Table below provides a description of the V8 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 filter out possible duplicate entries.

Table 4.2-25
WORKLIST REQUEST IDENTIFIER

Module Name Attribute Name	Tag	VR	M	R	Q	D	IOD
Scheduled Procedure Step							
Scheduled Procedure Step Sequence	0040,0100	SQ		x			
> Scheduled Station AET	0040,0001	AE	(S)	x	x		
> Scheduled Procedure Step Start Date	0040,0002	DA	S,R	x	x	x	
> Scheduled Procedure Step Start Time	0040,0003	TM		x			
> Modality	0008,0060	CS	S	x	x		
> Scheduled Performing Physician's Name	0040,0006	PN		x		x	
> Scheduled Procedure Step Description	0040,0007	LO		x		x	x
> Scheduled Station Name	0040,0010	SH	S	x	x		
> Scheduled Procedure Step Location	0040,0011	SH		x			
> Requested Contrast Agent	0032,1070	LO		x			
> Scheduled Protocol Code Sequence	0040,0008	SQ		x			x
> Scheduled Procedure Step ID	0040,0009	SH		x			x
Requested Procedure							
Requested Procedure ID	0040,1001	SH	S	x	x		x
Requested Procedure Description	0032,1060	LO		x			
Study Instance UID	0020,000D	UI		x			x
Requested Procedure Comments	0040,1400	LT		x			
Referenced Study Sequence	0008,1110	SQ		x			
Requested Procedure Code Sequence	0032,1064	SQ		x			
Names of Intended Recipients of Results	0040,1010	PN		x			
Imaging Service Request							
Accession Number	0008,0050	SH	S	x	x	x	x
Requesting Physician	0032,1032	PN		x			
Referring Physician's Name	0008,0090	PN		x		x	x
Visit Status							
Current Patient Location	0038,0300	LO		x			
Patient Identification							

Patient’s Name	0010.0010	PN	S	x	x	x	x
Patient ID	0010,0020	LO	S	x	x	x	x
Other Patient IDs	0010,1000	LO		x			
Patient Demographic							
Patient's Birth Date	0010,0030	DA		x		x	x
Patient's Sex	0010,0040	CS		x		x	x
Patient’s Size	0010,1020	DS		x		x	x
Patient's Weight	0010,1030	DS		x		x	x
Ethnic Group	0010,2160	SH		x			
Patient Comments	0010,4000	LT		x			
Patient Medical							
Medical Alerts	0010,2000	LO		x			
Additional Patient History	0010,21B0	LT		x		x	
Pregnancy Status	0010,21C0	US		x			
Last Menstrual Date	0010,21D0	DA		x		x	x

The above table should read as follows:

Module Name: The Name of the associated module for supported worklist attributes.

Attribute Name: Attributes supported to build an V8 Worklist Request Identifier.

Tag: DICOM tag for this attribute.

VR: DICOM VR for this attribute.

M: Matching keys for (automatic) Worklist Update. An “S” indicates that V8 supplies an attribute value for Single Value Matching or additional specific tags indicated by “(S)”; an “R” will indicate Range Matching.

R: Return keys. An ”X” will indicate that V8 will supply this attribute as Return Key with zero length for Universal Matching.

Q: Interactive Query Key. An “X” will indicate that V8 will supply this attribute as matching key, if entered in the Setup Dialog.

D: Displayed keys. An “X” indicates that this worklist attribute is displayed to the user during a patient registration dialog.

IOD: An “X” indicates that this Worklist attribute is included into all Object Instances created during performance of the related Procedure Step.

4.2.2.3.2 Activity – Acquire Images

4.2.2.3.2.1 Description and Sequencing of Activities

An Association to the configured MPPS SCP system is established immediately after the first SOP Instance is acquired to send the MPPS N-Create message.

The “End Exam” button causes a message box in which a user can select “COMPLETED” or “DISCONTINUED” as a MPPS final state. An exam for which an MPPS instance is sent with a state of “COMPLETED” or “DISCONTINUED” can no longer be updated.

The V8 will support creation of “unscheduled cases” by allowing MPPS Instances to be communicated for locally registered Patients.

The V8 supports a 1-to-N relationship between Scheduled and Performed Procedure Steps.

V8 will initiate an Association to issue an:

- N-CREATE request according to the CREATE Modality Performed Procedure Step SOP Instance operation, or an:

- N-SET request to update the contents and state of the MPPS according to the SET Modality Performed Procedure Step Information operation.

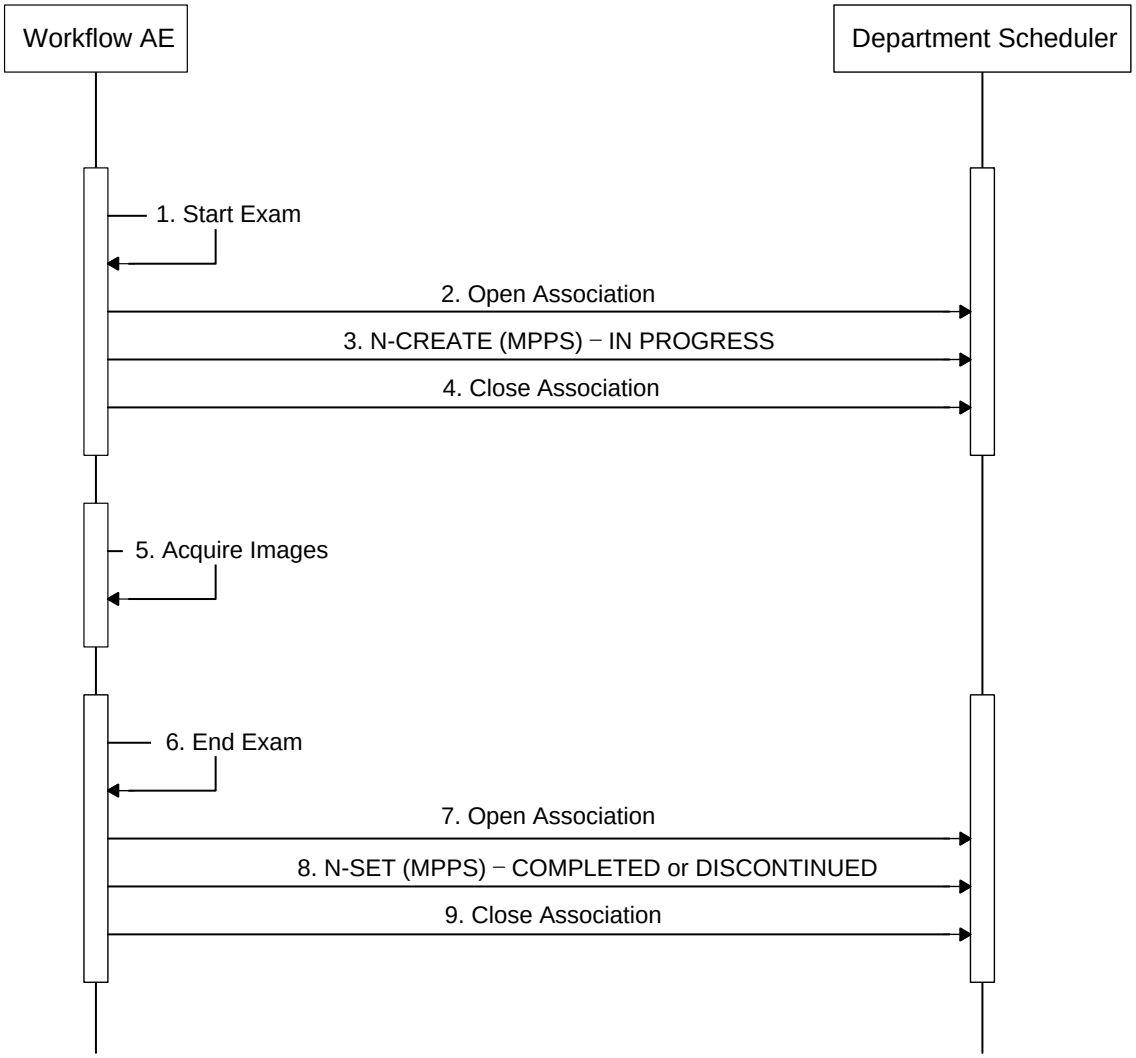

Figure 4.2-4
SEQUENCING OF ACTIVITY - ACQUIRE IMAGES

A possible sequence of interactions between the Workflow AE and a Departmental Scheduler (e.g. a device such as a RIS or HIS which supports the MPPS SOP Class as an SCP) is illustrated in the figure above:

4.2.2.3.2.2 Proposed Presentation Contexts

V8 will propose Presentation Contexts as shown in the following table:

Table 4.2-26

PROPOSED PRESENTATION CONTEXTS FOR REAL-WORLD ACTIVITY ACQUIRE IMAGES

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Modality Performed Procedure Step	1.2.840.10008. 3.1.2.3.3	Implicit VR Little Endian Explicit VR Little Endian	1.2.840.10008.1.2 1.2.840.10008. 1.2.1	SCU	None

4.2.2.3.2.3 SOP Specific Conformance for MPPS

The behavior of V8 when encountering status codes in an MPPS N-CREATE or N-SET response is summarized in the Table below. If any other SCP response status than “Success” or “Warning” is received by V8, a message “MPPS failed” will appear on the user interface.

Table 4.2-27

MPPS N-CREATE / N-SET RESPONSE STATUS HANDLING BEHAVIOR

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The SCP has Completed the operation successfully.
Warning	Attribute Value Out of Range	0116H	The MPPS Operation is considered successful.
*	*	Any other status code.	The Association is aborted using A-Abort and the MPPS is marked as failed

The behavior of V8 during communication failure is summarized in the table below:

Table 4.2-28

MPPS COMMUNICATION FAILURE BEHAVIOR

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

Table 4.2-29 provides a description of the MPPS N-CREATE and N-SET request identifiers send by V8. Empty cells in the N-CREATE and N-SET columns indicate that the attribute is not sent.

Table 4.2-29

MPPS N-CREATE / N-SET REQUEST IDENTIFIER

Attribute Name	Tag	VR	N-CREATE	N-SET
Specific Character Set	0008,0005	CS	Ref. Section 6 SUPPORT OF CHARACTER SETS	
Performed Procedure Step Relationship				
Scheduled Step Attribute Sequence	0040,0270	SQ		
> Study Instance UID	0020,000D	UI	From MWL or generated by device	
> Referenced Study Sequence	0008,1110	SQ	From MWL	
>> Referenced SOP Class UID	0008.1150	UI	From MWL	
>> Referenced SOP Instance UID	0008,1155	UI	From MWL	
> Accession Number	0008,0050	SH	From MWL or user input	
> Requested Procedure ID	0040,1001	SH	From MWL	
> Requested Procedure Description	0032,1060	LO	From MWL	
> Scheduled Procedure Step ID	0040,0009	SH	From MWL	
> Scheduled Procedure Step Description	0040,0007	LO	From MWL	
> Scheduled Protocol Code Sequence	0040,0008	SQ	From MWL	
>> Code Value	0008,0100	SH	From MWL	
>> Coding Scheme Designator	0008,0102	SH	From MWL	
>> Coding Scheme Version	0008,0103	SH	From MWL	
>> Code Meaning	0008,0104	LO	From MWL	
Patient's Name	0010,0010	PN	From MWL or user input	
Patient ID	0010,0020	LO	From MWL or user input	
Patient's Birth Date	0010,0030	DA	From MWL or user input	
Patient's Sex	0010,0040	CS	From MWL or user input	

Referenced Patient Sequence	0008,1120	SQ	Zero length	
> Referenced SOP Class UID	0008,1150	UI	Zero length	
> Referenced Instance UID	0008,1155	UI	Zero length	
Performed Procedure Step Information				
Series Number	0020, 0011	IS	Generated by device	
Performed Procedure Step ID	0040,0253	SH	Generated by device (Study Date + Study Time)	
Performed Station AE Title	0040,0241	AE	From Modality Setup	
Performed Station Name	0040,0242	SH	From Modality Setup	
Performed Location	0040,0243	SH	Zero length	
Performed Procedure Step Start Date	0040,0244	DA	Actual Start Date	
Performed Procedure Step Start Time	0040,0245	TM	Actual Start Time	
Performed Procedure Step Status	0040,0252	CS	"IN PROGRESS"	"COMPLETED" or “DISCONTINUED”
Performed Procedure Step Description	0040,0254	LO	From MWL or user input (Same as Study Description)	From MWL or user input (Same as Study Description)
Performed Procedure Type Description	0040,0255	LO	Zero length	Zero length
Procedure Code Sequence	0008,1032	SQ	From MWL	From MWL
> Code Value	0008,0100	SH	From MWL	From MWL
> Coding Scheme Designator	0008,0102	SH	From MWL	From MWL
> Coding Scheme Version	0008,0103	SH	From MWL	From MWL
> Code Meaning	0008,0104	LO	From MWL	From MWL
Performed Procedure Step End Date	0040,0250	DA	Zero length	Actual End Date
Performed Procedure Step End Time	0040,0251	TM	Zero length	Actual End Time
Performed Procedure Step Discontinuation Reason Code Sequence	0040,0281	SQ		Used when Performed Procedure Step Status is “DISCONTINUED”

> Code Value	0008,0100	SH		From User Select
> Coding Scheme Designator	0008,0102	SH		From User Select
> Coding Scheme Version	0008,0103	SH		
> Code Meaning	0008,0104	LO		From user select
Image Acquisition Results				
Modality	0008,0060	CS	"US"	
Study ID	0020,0010	SH	Requested Procedure ID or Generated by device (Study Date + Study Time)	
Performed Protocol Code Sequence	0040,0260	SQ	Zero length or Scheduled Protocol Code Sequence	
Performed Series Sequence	0040,0340	SQ	Zero length	One or more items
> Performing Physician's Name	0008,1050	PN		From MWL or user input
> Protocol Name	0018,1030	LO		"FreeForm"
> Operator's Name	0008,1070	PN		From user input
> Series Instance UID	0020,000E	UI		Generated by device
> Series Description	0008,103E	LO		Zero length
> Retrieve AE Title	0008,0054	AE		Zero length
> Referenced Image Sequence	0008,1140	SQ		From Modality
>> Referenced SOP Class UID	0008,1150	UI		From Modality
>> Referenced SOP Instance UID	0008,1155	UI		From Modality
> Referenced Non-Image Composite SOP Instance Sequence	0040,0220	SQ		From Modality
>> Referenced SOP Class UID	0008,1150	UI		From Modality
>> Referenced SOP Instance UID	0008,1155	UI		From Modality

4.2.2.4 Association Acceptance Policy

The Workflow Application Entity does not accept Associations.

4.2.3 Hardcopy Application Entity Specification

4.2.3.1 SOP Classes

V8 provides Standard Conformance to the following SOP Classes:

Table 4.2-30

SOP CLASSES FOR AE HARDCOPY

SOP Classes	SOP Class UID	SCU	SCP
Basic Grayscale Print Management Meta	1.2.840.10008.5.1.1.9	Yes	No
Basic Color Print Management Meta	1.2.840.10008.5.1.1.18	Yes	No

4.2.3.2 Association Policies

4.2.3.2.1 General

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

Table 4.2-31

DICOM APPLICATION CONTEXT FOR AE HARDCOPY

Application Context Name	1.2.840.10008.3.1.1.1

4.2.3.2.2 Number of Association

V8 can initiate one or more Associations at a time for each destination to which a transfer request is being processed in the active job queue list.

Table 4.2-32

NUMBER OF ASSOCIATIONS INITIATED FOR AE HARDCOPY

Maximum number of simultaneous Associations	Unlimited (number of configured hardcopy devices)

4.2.3.2.3 Asynchronous Nature

V8 does not support asynchronous communications (multiple outstanding transactions over a single Association)

Table 4.2-33

ASYNCHRONOUS NATURE AS A SCU FOR AE HARDCOPY

Maximum number of outstanding asynchronous transactions	1

4.2.3.2.4 Implementation Identifying Information

The implementation information for this Application Entity is:

Table 4.2-34

DICOM IMPLEMENTATION CLASS AND VERSION FOR AE HARDCOPY

Implementation Class UID	1.2.410.200001.101.11.801
Implementation Version Name	V8

4.2.3.3 Association Initiation Policy

4.2.3.3.1 Activity – Film Images

4.2.3.3.1.1 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 copies. Each print-job is forwarded to the job queue and processed individually.

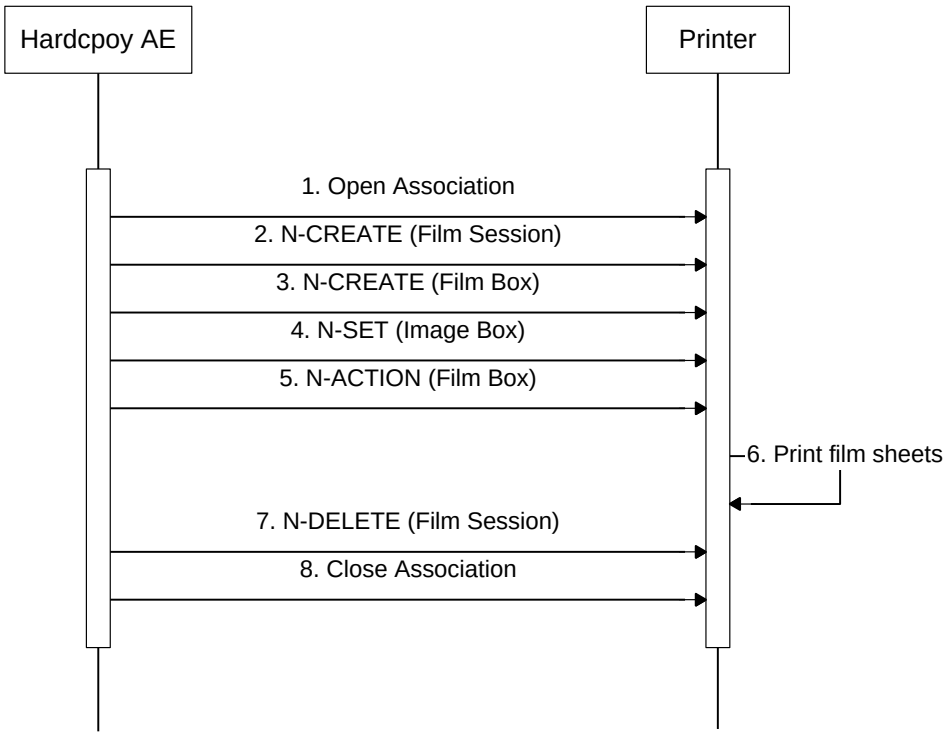

Figure 4.2-5
SEQUENCING OF ACTIVITY - FILM IMAGES

A typical sequence of DIMSE messages sent over an association between Hardcopy AE and a Printer is illustrated in the Figure above:

Association Initiation Policies for “Send on end exam”, “Send after acquisition” and “Send manually” Mode are equal to the Sending images’ of the Storage Application Entity. (See 4.2.1.3.1.1)

Status of the print-job is reported through the job control interface. One or more job can be active at a time for each separate hardcopy device. If any response from the remote Application contains a status other than Success or Warning, the Association is aborted and the related job is switched to a failed state. It can be restarted any time by user interaction or, if configured, by automated retry.

4.2.3.3.1.2 Proposed Presentation Contexts

V8 is capable of proposing the Presentation Contexts shown in the Table below:

Table 4.2-35

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

4.2.3.3.1.3 Common SOP Specific Conformance for all Print SOP Classes

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

Table 4.2-36

HARDCOPY 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.

4.2.3.3.1.4 SOP Specific Conformance for the Film Session SOP Class

Hardcopy AE supports the following DIMSE operations for the Film Session SOP Class:

- N-CREATE
- N-DELETE

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

4.2.3.3.1.4.1 Film Session SOP Class Operations (N-CREATE)

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

Table 4.2-37

FILM SESSION SOP CLASS N-CREATE REQUEST ATTRIBUTES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Number of Copies	2000,0010	IS	1..99	ALWAYS	USER
Print Priority	2000,0020	CS	HIGH, MED or LOW	ALWAYS	USER
Medium Type	2000,0030	CS	PAPER, CLEAR FILM, BLUE FILM, MAMMO CLEAR FILM or MAMMO BLUE FILM	ALWAYS	USER
Film Destination	2000,0040	CS	MAGAZINE or PROCESSOR	ALWAYS	USER

The Behavior of Hardcopy AE when encountering status codes in an N-CREATE response is summarized in the table below:

Table 4.2-38

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	Attribute Value Out of Range	0116H	System continues operations.
Warning	Attribute List Error	0107H	Same as above
*	*	Any other status code.	The Association is aborted using A-Abort and the print-job is marked as failed

4.2.3.3.1.4.2 Film Session SOP Class Operations (N-DELETE)

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

Table 4.2-39

PRINTER SOP CLASS N-DELETE RESONSE STATUS HANDLING BEHAVIOR

Service Status	Further Meaning	Error Code	

Success	Success	0000	The SCP has Completed the operation successfully.
*	*	Any other status code.	The Association is aborted using A-Abort and the print-job is marked as failed

4.2.3.3.1.5 SOP Specific Conformance for the Film Box SOP Class

Hardcopy AE supports the following DIMSE operations for the Film Box SOP Class:

- N-CREATE
- N-ACTION

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

4.2.3.3.1.5.1 Film Box SOP Class Operations (N-CREATE)

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

Table 4.2-40
FILM BOX SOP CLASS N-CREATE REQUEST ATTRIBUTES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Image Display Format	2010,0010	ST	Enumerated values used (user configurable): STANDARD\X,Y, where X and Y can take values from 1 to 5. .	ALWAYS	USER
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	USER
Film Size ID	2010,0050	CS	8INX10IN, 8_5INX11IN, 10INX12IN, 10INX14IN, 11INX14IN, 11INX17IN, 14INX14IN, 14INX17IN, 24CMX24CM, 24CMX30CM, A4, A3	ALWAYS	USER
Magnification Type	2010,0060	CS	REPLICATE, BILINEAR, CUBIC, NONE	ALWAYS	USER
Max Density	2010,0130	US	0 ~ 65535	ANAP	USER
Configuration Information	2010,0150	ST	Values are defined in Print Conformance Statement	ANAP	USER
Smoothing Type	2010,0080	CS	Values are defined in Print Conformance Statement	ANAP	USER
Border Density	2010,0100	CS	BLACK or WHITE	ALWAYS	USER
Empty Image Density	2010,0110	CS	BLACK or WHITE	ALWAYS	USER
Min Density	2010,0120	US	0 ~ 65535	ANAP	USER

The behavior of Hardcopy AE when encountering status codes in an N-CREATE responses is summarized in the table below:

Table 4.2-41

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	Attribute Value Out of Range	0116H	System continues operations.
Warning	Attribute List Error	0107H	Same as above

Warning	Requested Min Density or Max Density outside of printer's operating range	B605H	Same as above
*	*	Any other status code.	The Association is aborted using A-Abort and the print-job is marked as failed

4.2.3.3.1.5.2 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 behavior of Hardcopy AE when encountering status codes in an N-ACTION responses is summarized in the table below:

Table 4.2-42
FILM BOX CLASS N-ACTION RESPONSE STATUS HANDLING BEHAVIOR

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The SCP has Completed the operation successfully.
*	*	Any other status code.	The Association is aborted using A-Abort and the print-job is marked as failed

4.2.3.3.1.6 SOP Specific Conformance for the Film Box SOP Class

Hardcopy 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.

4.2.3.3.1.6.1 Image Box SOP Class Operations (N-SET)

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

Table 4.2-43

BASIC GRAYSCALE IMAGE BOX SOP CLASS N-SET REQUEST ATTRIBUTES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Image Position	2020,0010	US	1 .. N (N = Row * Column of Film Box)	ALWAYS	AUTO
Basic Grayscale Image Sequence	2020,0110	SQ		ALWAYS	AUTO
> Samples Per Pixel	0028,0002	US	1	ALWAYS	AUTO
> Photometric Interpretation	0028,0004	CS	MONOCHROME2	ALWAYS	AUTO
> Rows	0028,0010	US	Number of Row Pixels of Image	ALWAYS	AUTO
> Columns	0028,0011	US	Number of Column Pixels of Image	ALWAYS	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 Image	ALWAYS	AUTO

Table 4.2-44

BASIC COLOR IMAGE BOX SOP CLASS N-SET REQUEST ATTRIBUTES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Image Position	2020,0010	US	1 .. N (N = Row * Column of Film Box)	ALWAYS	AUTO
> Samples Per Pixel	0028,0002	US	3	ALWAYS	AUTO
> Photometric Interpretation	0028,0004	CS	RGB	ALWAYS	AUTO
> Planar Configuration	0028,0006	US	1	ALWAYS	AUTO
> Rows	0028,0010	US	Number of Row Pixels of Image	ALWAYS	AUTO
> Columns	0028,0011	US	Number of Column Pixels of	ALWAYS	AUTO

			Image		
> 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 Image	ALWAYS	AUTO

The behavior of Hardcopy AE when encountering status codes in an N-SET response is summarized in the table below:

Table 4.2-45

IMAGE BOX SOP CLASS N-SET RESPONSE STATUS HANDLING BEHAVIOR

Service Status	Further Meaning	Error Code	Behavior
Success	Success	0000	The SCP has Completed the operation successfully.
*	*	Any other status code.	The Association is aborted using A-Abort and the print-job is marked as failed

4.2.3.4 Association Acceptance Policy

The Hardcopy Application Entity does not accept Associations.

4.2.4 Q/R Application Entity Specification

4.2.4.1 SOP Classes

V8 provides Standard Conformance to the following SOP Classes:

Table 4.2-46

SOP CLASSES FOR AE Q/R

SOP Classes	SOP Class UID	SCU	SCP
Study Root Information Model- FIND	1.2.840.10008.5.1.4.1.2.2.1	Yes	No
Study Root Information Model- MOVE	1.2.840.10008.5.1.4.1.2.2.2	Yes	No

4.2.4.2 Association Establishment Policy

4.2.4.2.1 General

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

Table 4.2-47

DICOM APPLICATION CONTEXT FOR AE Q/R

Application Context Name	1.2.840.10008.3.1.1.1

4.2.4.2.2 Number of Associations

V8 initiates one Association at a time for a Q/R request.

Table 4.2-48

NUMBER OF ASSOCIATIONS INITIATED FOR AE Q/R

Maximum number of simultaneous Associations	1

4.2.4.2.3 Asynchronous Nature

V8 does not support asynchronous communications (multiple outstanding transactions over a single Association)

Table 4.2-49

ASYNCHRONOUS NATURE AS A SCU FOR AE Q/R

Maximum number of outstanding asynchronous transactions	1

4.2.4.2.4 Implementation Identifying Information

The implementation information for this Application Entity is:

Table 4.2-50

DICOM IMPLEMENTATION CLASS AND VERSION FOR AE Q/R

Implementation Class UID	1.2.410.200001.101.11.801
Implementation Version Name	V8

4.2.4.3 Association Initiation Policy

4.2.4.3.1 Activity – Query study or series

4.2.4.3.1.1 Description and Sequencing of Activities

The Query attempts to initiate a new association when the user selects Query from the user interface.

When the Query is requested, the data from the user interface will be inserted as matching keys into the query form. When the request is initiated, the V8 will build an identifier for the C-FIND request, and it will initiate an association to send the request and will wait for Query responses. The results will be diaplayed in a study or series list.

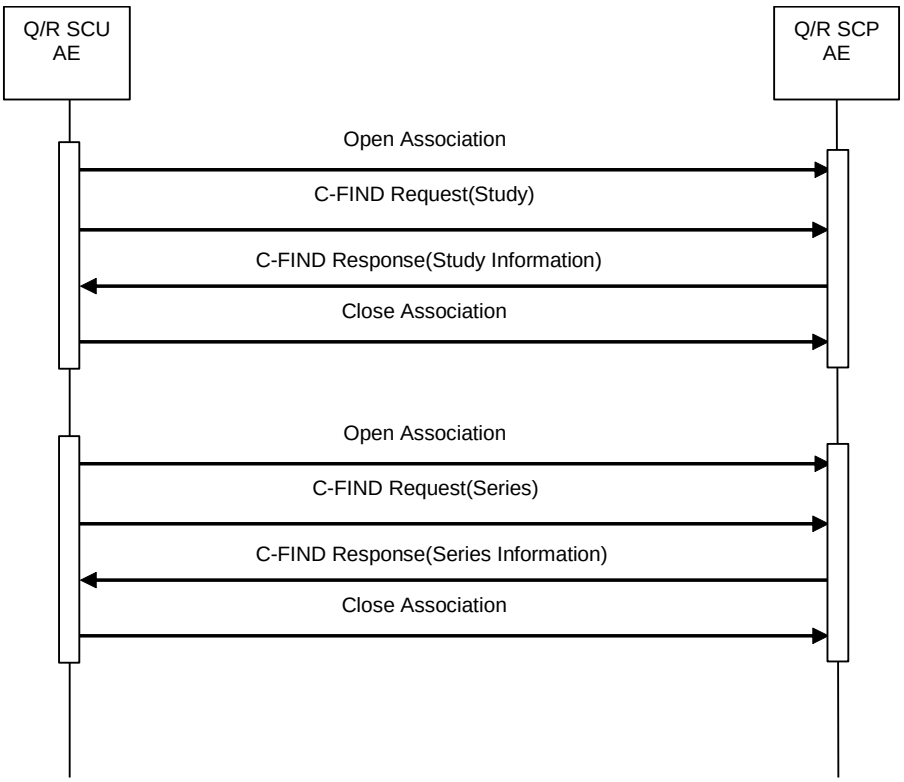

Figure 4.2-6

SEQUENCING OF ACTIVITY - HANDLING QUERY STUDY OR SERIES

4.2.4.3.1.2 Proposed Presentation Contexts

V8 will propose Presentation Contexts as shown in the following table:

Table 4.2-51

PROPOSED PRESENTATION CONTEXTS

FOR REAL-WORLD ACTIVITY QUERY STUDY OR SERIES

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
Study Root 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

4.2.4.3.1.3 SOP Specific Conformance for Query SOP Classes

The behavior of the V8 when encountering status codes in the Query C-FIND response is summarized in the table below. If any SCP response status other than “Successful” or “Pending” is received by V8, the message ”Query failed” will appear in the user interface.

Table 4.2-52

QUERY C-FIND RESPONSE STATUS HANDLING BEHAVIOR

Service Status	Further Meaning	Error Code	Behavior
Successful	Matching is complete	0000	The SCP has completed the operation successfully.
Pending	Matches are continuing	FF00	The query is still ongoing.
Pending	Matches are continuing - Warning that one or more Optional Keys were not supported	FF01	The query is still ongoing.
*	*	Any other status code.	The association is aborted using A-Abort and the Query is marked as failed.

The behavior of the V8 during communication failure is summarized in the table below:

Table 4.2-53

QUERY COMMUNICATION FAILURE BEHAVIOR

Exception	Behavior
Time Out	The association is aborted using A-ABORT and the query is marked as failed.
Association aborted by the SCP or network layers	The study or series query is marked as failed.

The system actually performs a number of C-FIND requests at multiple levels in the DICOM object hierarchy to get the data it requires to display studies or series. Table 4.2-54 provides a description of the query request identifiers.

Table 4.2-54

QUERY REQUEST IDENTIFIER FOR FIND-SCU

Attribute Name	Tag	VR	M	R	Q	D
STUDY Level						
Query/Retrieve Level	0008,0052	CS	S	x	x	
Patient’s ID	0010,0020	LO	S	x	x	x
Patient’s Name	0010,0010	PN	S	x	x	x
Patient Birth Date	0010,0030	DA		x		
Patient Sex	0010,0040	CS		x		
Patient Age	0010,1010	AS		x		
Patient Comments	0010,4000	LT		x		
Retrieve AE Title	0008,0054	AE		x		
Study Description	0008,1030	LO		x		x
Modalities In Study	0008,0061	CS		x		x
Study Date	0008,0020	DA	S,R	x	x	x
Study Time	0008,0030	TM		x		
Accession Number	0008,0050	SH		x	x	x
Study Instance UID	0020,000D	UI		x		
Study ID	0020,0010	SH		x		
Referring Physician's Name	0008,0090	PN		x		
Performing Physician’s Name	0008,1050	PN		x		
Number of Study Related Series	0020,1206	IS		x		x
SERIES Level		CS	S	x	x	

Query/Retrieve Level	0008,0052					
Series Number	0020,0011	IS		x		x
Series Description	0008,103E	LO		x		x
Modality	0008,0060	CS		x		x
Series Date	0008,0021	DA		x		x
Series Time	0008,0031	TM		x		
Manufacturer	0008,0070	LO		x		
Operators Name	0008,1070	PN		x		
Manufacturer Model Name	0008,1090	LO		x		
Body Part Examined	0018,0015	CS		x		
StudyID	0020,1110	SH		x		
Performed Procedure Step Start Date	0040,0244	DA		x		
Series Instance UID	0020,000E	UI		x		
Study Instance UID	0020,000D	UI	S		x	
Number of Series Related Instances	0020,1209	IS		x		x

The table above should read as follows:

Attribute Name: Supported attributes that can build an V8 Query Request Identifier.

Tag: DICOM tag for this attribute.

VR: DICOM VR for this attribute.

M: Matching keys for (automatic) Query. An “S” indicates that the V8 can supply an attribute value for Single Value Matching or additional specific tags indicated by “(S)”; an “R” indicates Range Matching.

R: Return keys. An ”X” indicates that the V8 will supply this attribute as the Return Key with zero length for Universal Matching.

Q: Interactive Query Key. An “X” indicates that the V8 will supply this attribute as a matching key, if entered in the Setup Dialog.

D: Displayed keys. An “X” indicates that this Query attribute is displayed to the user during a patient registration dialog.

4.2.4.3.2 Activity – Retrieve series

4.2.4.3.2.1 Description and Sequencing of Activities

The retrieval function attempts to initiate a new association when the user selects Retrieve in the user interface.A single attempt will be made to retrieve the entity (series) from the selected Q/R AE. If retrieval fails, for whatever reason, no reattempt will be performed.

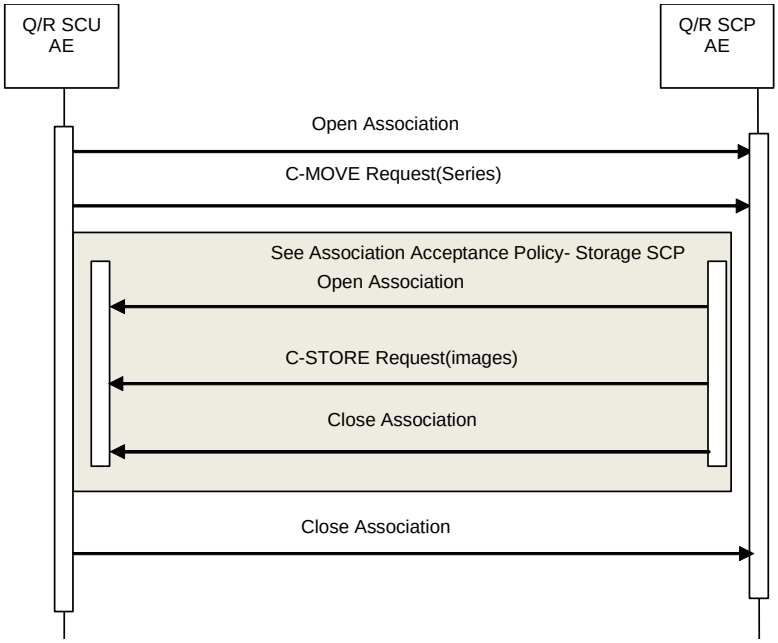

Figure 4.2-7
SEQUENCING OF ACTIVITY – HANDLING RETRIEVE SERIES

4.2.4.3.2.2 Proposed Presentation Contexts

V8 will propose Presentation Contexts as shown in the following table:

Table 4.2-55
PROPOSED PRESENTATION CONTEXTS FOR ACTIVITY RETRIEVE SERIES

Presentation Context Table					
Abstract Syntax		Transfer Syntax		Role	Ext. Neg.
Name	UID	Name List	UID List		
Study Root Information Model- MOVE	1.2.840.10008.5.1.4.1.2.2.2	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

4.2.4.3.2.3 SOP Specific Conformance for Retrieval SOP Classes

The behavior of the V8 when encountering status codes in Retrieve C-MOVE response is summarized in the table below. If any SCP response status other than “Successful” or “Pending” is received by the V8, a “failed” message will appear on the user interface.

Table 4.2-56

RETRIEVE C-MOVE RESPONSE STATUS HANDLING BEHAVIOR

Service Status	Further Meaning	Error Code	Behavior
Successful	Sub-operations complete – no failures detected	0000	All the Composite SOP Instances have been successfully sent to the C-MOVE Destination AE.
Pending	Sub-operations are still ongoing	FF00	A response with this status code is sent every time a Composite SOP Instance has been successfully sent to the C-MOVE Destination AE.
*	*	Any other status code.	The association is aborted using A-Abort and the retrieval is marked as failed

The behavior of the V8 during communication failure is summarized in the table below.

Table 4.2-57

RETRIEVE COMMUNICATION FAILURE BEHAVIOR

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

Table 4.2-58

RETREIVE REQUEST IDENTIFIER FOR MOVE-SCU

Attribute Name	Tag	VR	M	R	Q	D
Query/Retrieve Level	0008,0052	CS	S		x	
Study Instance UID	0020,000D	UI	S		x	
Series Instance UID	0020,000E	UI	S		x	

4.2.4.1 Association Acceptance Policy

The Q/R Application Entity does not accept associations.

4.2.5 STORAGE-SCP Application Entity Specification

4.2.5.1 SOP Classes

The V8 provides Standard Conformance to the following SOP Classes. Provide Storage SCP only Q/R service running.

Table 4.2-59

SOP CLASSES FOR AE STORAGE-SCP

SOP Classes	SOP Class UID	SCU	SCP
Verification	1.2.840.10008.1.1	Yes	Yes
US Image Storage	1.2.840.10008.5.1.4.1.1.6.1	No	Yes
US Multi-frame Storage	1.2.840.10008.5.1.4.1.1.3.1	No	Yes
CT Image Storage	1.2.840.10008.5.1.4.1.1.2	No	Yes
MR Image Storage	1.2.840.10008.5.1.4.1.1.4	No	Yes
MG present Image Storage	1.2.840.10008.5.1.4.1.1.1.2	No	Yes
MG Process Image Storage	1.2.840.10008.5.1.4.1.1.1.2.1	No	Yes
DX present Image Storage	1.2.840.10008.5.1.4.1.1.1.1	No	Yes
DX process Image Storage	1.2.840.10008.5.1.4.1.1.1.1.1	No	Yes
Standard PET Image Storage	1.2.840.10008.5.1.4.1.1.128	No	Yes
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	No	Yes

4.2.5.1 Association Establishment Policy

4.2.5.1.1 General

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

Table 4.2-60

DICOM APPLICATION CONTEXT FOR AE STORAGE-SCP

Application Context Name	1.2.840.10008.3.1.1.1

4.2.5.1.2 Number of Associations

The STORAGE-SCP AE can support multiple simultaneous associations requested by AEs. Each time the STORAGE-SCP AE receives an association request, a child process will be spawned to process the storage.

Table 4.2-61

NUMBER OF ASSOCIATIONS INITIATED FOR AE STORAGE-SCP

Maximum number of simultaneous Associations	Unlimited

4.2.5.1.3 Implementation Identifying Information

The implementation information for this Application Entity is:

Table 4.2-62

DICOM IMPLEMENTATION CLASS AND VERSION FOR AE STORAGE-SCP

Implementation Class UID	1.2.410.200001.101.11.801
Implementation Version Name	V8

4.2.5.2 Association Initiation Policy

The STORAGE-SCP Application Entity does not initiate associations.

4.2.5.3 Association Acceptance Policy

4.2.5.3.1 Activity – Receive Images

4.2.5.3.1.1 Description and Sequencing of Activities

The STORAGE-SCP AE accepts associations only if they have valid Presentation Contexts. The STORAGE-SCP AE does not have a limit on the number of associations used to send images to it. Images belonging to more than one series can be sent over a single or multiple associations. Images belonging to a single Series can also be sent via different associations.

4.2.5.3.1.2 Proposed Presentation Contexts

The V8 will propose Presentation Contexts as shown in the following table:

Table 4.2-63

PROPOSED PRESENTATION CONTEXTS FOR ACTIVITY RECEIVE IMAGES

Presentation Context Table					
Abstract Syntax		**Transfer Syntax**		**Role**	**Ext. Neg.**
Name	**UID**	**Name List**	**UID List**		
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
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		JPEG Baseline(Process 1)	1.2.840.10008.1.2.4.50	SCP	None
US Multi-frame 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
		Explicit VR Big Endian	1.2.840.10008.1.2.2	SCP	None
		JPEG Baseline(Process 1)	1.2.840.10008.1.2.4.50	SCP	None
CT Image Storage	1.2.840.10008.5.1.4.1.1.2	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
		JPEG Baseline(Process 1)	1.2.840.10008.1.2.4.50	SCP	None
MR Image Storage	1.2.840.10008.5.1.4.1.1.4	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
		JPEG Baseline(Process 1)	1.2.840.10008.1.2.4.50	SCP	None
MG present Image Storage	1.2.840.10008.5.1.4.1.1.1.2	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
		JPEG Baseline(Process 1)	1.2.840.10008.1.2.4.50	SCP	None
MG Process Image Storage	1.2.840.10008.5.1.4.1.1.1.2.1	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
		JPEG Baseline(Process 1)	1.2.840.10008.1.2.4.50	SCP	None
DX present Image Storage	1.2.840.10008.5.1.4.1.1.1.1	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

		JPEG Baseline(Process 1)	1.2.840.10008.1.2.4.50	SCP	None
DX process Image Storage	1.2.840.10008.5.1.4.1.1.1.1	Implicit VR Little Endian Explicit VR Little Endian Explicit VR Big Endian JPEG Baseline(Process 1)	1.2.840.10008.1.2 1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2.4.50	SCP SCP SCP SCP	None None None None
Standard PET Image Storage	1.2.840.10008.5.1.4.1.1.128	Implicit VR Little Endian Explicit VR Little Endian Explicit VR Big Endian JPEG Baseline(Process 1)	1.2.840.10008.1.2 1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2.4.50	SCP SCP SCP SCP	None None None None
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	Implicit VR Little Endian Explicit VR Little Endian Explicit VR Big Endian JPEG Baseline(Process 1)	1.2.840.10008.1.2 1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2.4.50	SCP SCP SCP SCP	None None None None

4.2.5.3.1.3 SOP Specific Conformance for Storage SOP Classes

The behavior response of the V8 when encountering status codes in C-STORE is summarized in the table below. If any SCP response status other than “Successful” is received by the V8 it is marked as failed.

Table 4.2-64
C-STORE RESPONSE STATUS HANDLING BEHAVIOR

Service Status	Further Meaning	Error Code	Behavior
Successful	Successfully stored the SOP instance.	0000	The SCP has successfully stored the SOP Instance. If all SOP Instances succeed, the job is marked as complete.
*	*	Any other status code.	The association is aborted using A-Abort and the request to receive the image is marked as failed.

4.3 NETWORK INTERFACE

4.3.1 Physical Network Interface

V8 supports a single network interface. One of the following physical network interfaces will be available depending on hardware options installed:

Table 4.3-1
SUPPORTED PHYSICAL NETWORK INTERFACES

Ethernet 100baseT
Ethernet 10baseT

4.3.2 Additional Protocols

This product may be configured to get the local configuration via the DHCP. However it does not conforms to other System Management Profiles as DNS nor LDAP.

4.3.3 IPv4 and IPv6 Support

This product supports IPv4 connections only.

4.4 CONFIGURATION

4.4.1 AE Title/Presentation Address Mapping

4.4.1.1 Local AE Titles

All local applications use the AE Titles and TCP/IP Ports configured via the Setup/Connectivity/DICOM Menu. All local DICOM services use the same AE Title. The system listens for Verification requests and Commitment reports on the configured Port.

4.4.1.2 Remote AE Title/Presentation Address Mapping

The AE Title, host names and port numbers of remote applications are configured using the V8 Setup/ Connectivity/DICOM Menu.

4.4.1.2.1 Storage

The Add button on the V8 Setup/Connectivity/DICOM Menu must be used to set the AE Titles, port-numbers, IP addresses and capabilities for the remote Image Storage SCPs. Multiple remote Image Storage SCPs can be defined.

The Add button on the V8 Setup/ Connectivity/DICOM Menu must be used to set the AE Titles, port-numbers, IP addresses and capabilities for the remote Structured Report Storage SCP. Only a single remote Structured Report Storage SCP can be defined.

The Add button on the V8 Setup/Connectivity/DICOM Menu must be used to set the AE Titles, port-numbers, IP addresses and capabilities for the remote Storage Commitment SCP. Only a single remote Storage Commitment SCP can be defined and only one Image Storage SCP can be assigned for Storage Commitment.

4.4.1.2.2 Workflow

The Add button on the V8 Setup/Connectivity/DICOM Menu must be used to set the AE Titles, port-numbers, IP addresses and capabilities for the remote Modality Worklist SCP. Only a single remote Modality Worklist SCP can be defined.

The Add button on the V8 Setup/Connectivity/DICOM Menu must be used to set the AE Titles, port-numbers, IP addresses and capabilities for the remote MPPS SCP. Only a single remote MPPS SCP can be defined.

4.4.1.2.3 Hardcopy

The Add button on the V8 Setup/Connectivity/DICOM Menu must be used to set the AE Titles, port-numbers, IP addresses and capabilities for the remote Print SCPs. Multiple remote Print SCPs can be defined.

4.4.2 Parameters

A number of parameters related to acquisition and general operation can be configured using the Setup/Connectivity/DICOM Menu. The Table below only shows those configuration parameters relevant to DICOM communications. See the V8 Manual for details on general configuration capabilities.

Table 4.4-1

CONFIGURATION PARAMETERS TABLE

Parameter	Configurable (Yes/No)	Default Value
Local System Parameters		
AE Title (Local System AE Title)	Yes	“MEDISON”
Station Name	Yes	“Set Station Name”
Port No. (Local Port Number)	Yes	1005
SR Format	Yes	General Report
Store SR at End of Exam	Yes	UnChecked
Service Common Parameters		
Alias	Yes	Blank
AE Title	Yes	Blank
Host	Yes	Blank
Port No.	Yes	104
Retry Interval	Yes	30 Sec.
Connect Timeout	Yes	30 Sec.
Retry Interval	Yes	30 Sec
Maximum Retires	Yes	1
Packet Size	Yes	16000
Storage Parameters		
Transfer Mode	Yes	“Send on end exam”
Include 3D Volume	Yes	Unchecked
Include Multi Frame	Yes	Checked
Convert to Grayscale	Yes	"No Conversion"
Single Frame Compression	Yes	JPEG Baseline / Low
Multi Frame Compression	Yes	JPEG Baseline / Low
Multi Frame Frame Rate	Yes	Full (30)
Multi Frame Frame Image Size	Yes	Original

Include Pixel Spacing	Yes	Unchecked
Window Center (VOI LUT)	Yes	128
Window Width (VOI LUT)	Yes	256
Storage SR Paramater		
Trasfer Mode	Yes	“Send on end exam”
Performed Procedure Step Parameters		
Always complete exams	Yes	Checked
Storage Commitment Parameters		
Associated Storage Server	Yes	None
Worklist Modality Parameters		
Modality	Yes	"US"
Exam Description	Yes	“Requested Procedure Decription”
Print Parameters		
Transfer Mode	Yes	“Send on end exam”
Color	Yes	“Grayscale”
Medium Type	Yes	“BLUE FILM”
Image Display Format	Yes	Row:2, Col:3
Film Size	Yes	8 IN X 10 IN
Orientation	Yes	“PORTRAIT”
Destination	Yes	“MAGAZINE”
Magnification	Yes	“NONE”
Smoothing Type	Yes	Blank
Border Density	Yes	“BLACK”
Empty Density	Yes	“WHITE”
Priority	Yes	“HIGH”
Min Density	Yes	0
Max Density	Yes	0
Copies	Yes	1
Configuration Info	Yes	Blank

5 MEDIA INTERCHANGE

5.1 IMPLEMENTATION MODEL

5.1.1 Application Data Flow

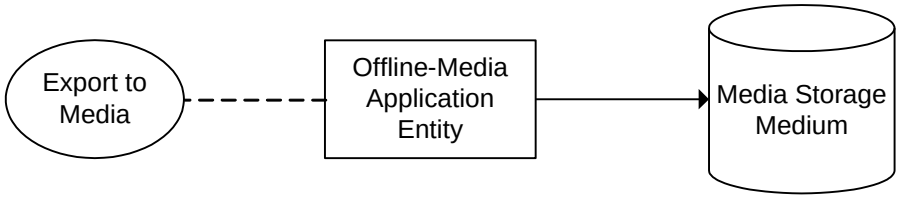

Figure 5.1-1
APPLICATION DATA FLOW DIAGRAM FOR MEDIA STORAGE

- The Offline-Media Application Entity exports images and Structured Report to a Media Storage medium. It is associated with the local real-world activity “Export to Media”, “Export to Media” is performed upon user request for selected studies.

5.1.2 Functional Definition of AEs

5.1.2.1 Functional Definition of Offline-Media Application Entity

Activation of the “Export to Media” menu entry will pass the currently selected studies to the Offline-Media Application Entity. The SOP Instances associated with the selection will be collected into one or more export jobs. The contents of each export job will be written to a single media.

5.1.3 Sequencing of Real-World Activities

At least one study must exist and be selected before the Offline-Media Application Entity can be invoked. The operator can insert a new media at any time before or after invocation of the Offline-Media Application Entity. If no media is available the export job can be cancelled immediately.

5.1.4 File Meta Information Options

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

Table 5.1-1

DICOM IMPLEMENTATION CLASS AND VERSION FOR MEDIA STORAGE

Implementation Class UID	1.2.410.200001.101.11.801
Implementation Version Name	V8

5.2 AE SPECIFICATIONS

5.2.1 Offline-Media Application Entity Specification

The Offline-Media Application Entity provides standard conformance to the Media Storage Service Class. The Application Profiles and roles are listed below:

Table 5.2-1

APPLICATION PROFILES, ACTIVITIES AND ROLES FOR OFFLINE-MEDIA

Application Profiles Supported	Real World Activity	Role
STD-US-SC-MF-CDR	Export To Media	FSC, FSU
STD-US-SC-MF-DVD	Export To Media	FSC, FSU

5.2.1.1 File Meta Information for the Application Entity

The File-Set Identifier included in the File Meta Header is “MED_FSU”.

5.2.1.2 Real-World Activities

5.2.1.2.1 Activity – Export to Media

The Offline-Media Application Entity acts as an FSC and FSU when requested to export SOP Instances from the local database to a media.

If the contents of the current selection do not fit on a single media, a separation into multiple export jobs which can be adapted by the user will be suggested.

The user will be prompted to insert a media for each export job. The contents of the export job will be written together with a corresponding DICOMDIR to a media. Writing in multi-session mode is supported.

5.2.1.2.1.1 Media Storage Application Profiles

The Offline-Media Application Entity supports the STD-US-SC-MF-CDR and STD-US-SC-MF-DVD Application Profile.

5.2.1.2.1.1.1 Options

The Media Application Entity supports the SOP Classes and Transfer Syntaxes listed in the table below:

Table 5.2-2
IODS, SOP CLASSES AND TRANSFER SYNTAXES FOR OFFLINE MEDIA

Information Object Definition	SOP Class UID	Transfer Syntax	Transfer Syntax UID
Media Storage Directory Storage	1.2.840.10008.1.3.10	Explicit VR Little Endian	1.2.840.10008.1.2.1
US Image Storage	1.2.840.10008.5.1.4.1.1.6.1	Explicit VR Little Endian	1.2.840.10008.1.2.1
US Multiframe Image Storage	1.2.840.10008.5.1.4.1.1.3.1	JPEG Baseline Lossy Compression	1.2.840.10008.1.2.4.50
Comprehensive Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.33	Explicit VR Little Endian	1.2.840.10008.1.2.1

6 SUPPORT OF CHARACTER SETS

All V8 DICOM applications support the

ISO_IR 100 : Latin Alphabet No. 1

Supplementary set of ISO 8859

ISO 646

7 SECURITY

7.1 GENERAL

It is assumed that V8 is used within a secured environment. It is assumed that a secured environment includes as minimum:

a. Firewall or router protections to ensure that only approved external hosts have network access to V8.

b. Firewall or router protections to ensure that V8 has only network access to approved external hosts and services.

c. Any communication with external hosts and services outside the locally secured environment use appropriately secure network channels (e.g. such as a Virtual Private Network (VPN).

Other network security procedures such as automated intrusion detection may be appropriate in some environments. Additional security features may be established by the local security policy and are beyond the scope of this conformance statement.

7.2 SECURE TRANSPORT CONNECTION PROFILES

This system supports the basic TLS Secure Transport Connection Profile and AES TLS Secure Transport Connection Profile. It supports the TLS 1.2 protocol and additional cipher suites for enhanced interoperability and security. Cipher Suites satisfied FIPS 140-2.

Table 7.2-1

SUPPORTED PROFILE AND CIPER SUITES

Supported TLS Feature	Mechanism
Entity Authentication	RSA based certificates
Exchange of Master Secrets	RSA
Data Integrity	SHA
Privacy (Cipher Suites)	TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 (0xc030) TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 (0xc028) TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA (0xc014) TLS_DHE_RSA_WITH_AES_256_GCM_SHA384 (0x009f)

	TLS_DHE_RSA_WITH_AES_256_CBC_SHA256 (0x006b) TLS_DHE_RSA_WITH_AES_256_CBC_SHA (0x0039) TLS_RSA_WITH_AES_256_GCM_SHA384 (0x009d) TLS_RSA_WITH_AES_256_CBC_SHA256 (0x003d) TLS_RSA_WITH_AES_256_CBC_SHA (0x0035) TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f) TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 (0xc027) TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA (0xc013) TLS_DHE_RSA_WITH_AES_128_GCM_SHA256 (0x009e) TLS_DHE_RSA_WITH_AES_128_CBC_SHA256 (0x0067) TLS_DHE_RSA_WITH_AES_128_CBC_SHA (0x0033) TLS_RSA_WITH_AES_128_GCM_SHA256 (0x009c) TLS_RSA_WITH_AES_128_CBC_SHA256 (0x003c) TLS_RSA_WITH_AES_128_CBC_SHA (0x002f) TLS_ECDHE_RSA_WITH_3DES_EDE_CBC_SHA (0xc012) TLS_DHE_RSA_WITH_3DES_EDE_CBC_SHA (0x0016) TLS_RSA_WITH_3DES_EDE_CBC_SHA (0x000a)

Certificates can be imported to the Trusted Certificate Authority for verifying incoming certificates.
The certificate for this system can be imported va media or created within the device. In case of importing, a private key is required along with the certificate. If the private key has a passphrase, then it must be entered as well.
In case of creating the device, self-signed certificate is generated and can be downloaded to media.

The following types of certificates are supported for import.

Base 64 Text: PEM format (.pem, .crt)

ASN.1 Binary: BER, DER, CER formats (.der, .cer, .crt)

8 ANNEXES

8.1 IOD CONTENTS

8.1.1 Created SOP Instances

Table 8.1-1 specifies the attributes of an Ultrasound Image transmitted by the V8 storage applications.

8.1-3 specifies the attributes of a Comprehensive Structured Reports transmitted by the V8 storage applications.

The following tables use a number of abbreviations. The abbreviations used in the “Presence of…” column are:

VNAP	Value Not Always Present (attribute sends zero length if no value is present)
ANAP	Attribute Not Always Present
ALWAYS	Always Present
EMPTY	Attribute is sent without a value

The abbreviations used in the “Source” column:

MWL	the attribute value source Modality Worklist
USER	the attribute value source is from User input
AUTO	the attribute value is generated automatically
MPPS	the attribute value is the same as the Modality Performed Procedure Step service
CONFIG	the attribute value source is a configurable parameter

NOTE: All dates and times are encoded in the local configured calendar and time. Date, Time and Time zones are configured using the Setup Menu.

8.1.1.1 US or US Multiframe Image IOD

Table 8.1-1

IOD OF CREATED US OR US MULTIFRAME SOP INSTANCES

IE	Module	Reference	Presence of Module
Patient	Patient	Table 8.1-4	ALWAYS
Study	General Study	Table 8.1-5	ALWAYS

	Patient Study	Table 8.1-6	ALWAYS
Series	General Series	Table 8.1-7	ALWAYS
Equipment	General Equipment	Table 8.1-8	ALWAYS
Image	General Image	Table 8.1-9	ALWAYS
	Image Pixel	Table 8.1-10	ALWAYS
	Cine	Table 8.1-11	Only if US Multiframe
	Multi-Frame	Table 8.1-12	Only if US Multiframe
	US Region Calibration	Table 8.1-13	ANAP
	US Image	Table 8.1-14	ALWAYS
	VOI LUT	Table 8.1-15	ALWAYS
	SOP Common	Table 8.1-17	ALWAYS

8.1.1.1.1 Additional Module

Table 8.1-2

ADDITIONAL MODULES

Module	Reference	Presence of Module
Image Plane	Table 8.1-16	ANAP

8.1.1.2 Comprehensive Structured Report IOD

Table 8.1-3

IOD OF CREATED COMPREHENSIVE STRUCTURED REPORT SOP INSTANCES

IE	Module	Reference	Presence of Module
Patient	Patient	Table 8.1-4	ALWAYS
Study	General Study	Table 8.1-5	ALWAYS
	Patient Study	Table 8.1-6	ALWAYS
Series	SR Document Series	Table 8.1-18	ALWAYS
Equipment	General Equipment	Table 8.1-8	ALWAYS
Document	SR Document General	Table 8.1-19	ALWAYS
	SR Document Content	Table 8.1-20	ALWAYS
	SOP Common	Table 8.1-21	ALWAYS

8.1.1.3 Common Modules

Table 8.1-4

PATIENT MODULE OF CREATED SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Patient's Name	0010,0010	PN	From MWL or User Input. Values supplied via Modality Worklist will be entered as received. Values supplied via user input will contain first 3 components (Last^First^Middle). Maximum 64 characters.	VNAP	MWL/USER
Patient ID	0010,0020	LO	From MWL, user input or generated by device. Maximum 64 characters.	ALWAYS	MWL/USER/AUTO
Patient's Birth Date	0010,0030	DA	From MWL or user input	VNAP	MWL/USER
Patient's Sex	0010,0040	CS	From MWL or user input	VNAP	MWL/USER

Table 8.1-5

GENERAL STUDY MODULE OF CREATED SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Study Instance UID	0020,000D	UI	From MWL or generated by device	ALWAYS	MWL/AUTO
Study Date	0008,0020	DA	<yyyymmdd>	ALWAYS	AUTO
Study Time	0008,0030	TM	<hhmmss>	ALWAYS	AUTO
Referring Physician's Name	0008,0090	PN	From MWL or user input	VNAP	MWL/USER

Study ID	0020,0010	SH	From Requested Procedure UID or System generate : Study Date + Study Time <yyyymmddhhmmss>	ALWAYS	AUTO
Accession Number	0008,0050	SH	From MWL or user input	VNAP	MWL/USER
Study Description	0008,1030	LO	From MWL (Scheduled procedure step description, Requested procedure description) or user input	ANAP	MWL/USER
Referenced Study Sequence	0008,1110	SQ	From MWL	ANAP	MWL
> Referenced SOP Class UID	0008,1150	UI	From MWL	ANAP	MWL
> Referenced SOP Instance UID	0008,1155	UI	From MWL	ANAP	MWL
Procedure Code Sequence	0008,1032	SQ	From MWL	ANAP	MWL

Table 8.1-6

PATIENT STUDY MODULE OF CREATED SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Patient's Size	0010,1020	DS	From MWL or user input	ANAP	MWL/USER
Patient's Weight	0010,1030	DS	From MWL or user input	ANAP	MWL/USER

Table 8.1-7

GENERAL SERIES MODULE OF CREATED SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source

Modality	0008,0060	CS	US	ALWAYS	AUTO
Series Instance UID	0020,000E	UI	Generated by device	ALWAYS	AUTO
Series Number	0020,0011	IS	Generated by device, increments from "1" in each study	ALWAYS	AUTO
Series Date	0008,0021	DA	<yyyymmdd>	ALWAYS	AUTO
Series Time	0008,0031	TM	<hhmmss>	ALWAYS	AUTO
Performing Physician's Name	0008,1050	PN	From MWL or user input	ANAP	MWL/USER
Operators' Name	0008,1070	PN	From user input	ANAP	USER
Referenced Performed Procedure Step Sequence	0008,1111	SQ	Identifies the MPPS SOP Instance to which this image is related	ALWAYS	MPPS
> Referenced SOP Class UID	0008,1150	UI	MPPS SOP Class UID "1.2.840.10008.3.1.2.3.3"	ALWAYS	MPPS
> Referenced SOP Instance UID	0008,1155	UI	MPPS SOP Instance UID	ALWAYS	MPPS
Body Part Examined	0018,0015	CS	From user input	ANAP	USER
Request Attributes Sequence	0040,0275	SQ	Zero or 1 item will be present	ANAP	AUTO
> Requested Procedure ID	0040,1001	SH	From MWL	ANAP	MWL
> Scheduled Procedure Step ID	0040,0009	SH	From MWL	ANAP	MWL
> Scheduled Procedure Step Description	0040,0007	LO	From MWL	ANAP	MWL
> Scheduled	0040.0008	SQ	From MWL	ANAP	MWL

Protocol Code Sequence					
Performed Procedure Step ID	0040,0253	SH	Same as MPPS	ALWAYS	MPPS
Performed Procedure Step Start Date	0040,0244	DA	Same as Study Date	ALWAYS	AUTO
Performed Procedure Step Start Time	0040,0245	TM	Same as Study Time	ALWAYS	AUTO
Performed Procedure Step Description	0040,0254	LO	Same as Study Description	ANAP	MWL/USER

Table 8.1-8

GENERAL EQUIPMENT MODULE OF CREATED SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Manufacturer	0008,0070	LO	SAMSUNG MEDISON CO., LTD, Ltd.	ALWAYS	AUTO
Institution Name	0008,0080	LO	From user input	ANAP	CONFIG
Station Name	0008,1010	SH	From user input	ANAP	CONFIG
Manufacturer's Model Name	0008,1090	LO	V8	ALWAYS	AUTO
Device Serial Number	0018,1000	LO	Generated by device	ALWAYS	AUTO
Software Versions	0018,1020	LO	Generated by device	ALWAYS	AUTO

8.1.1.4 US or US Multiframe Image Module

Table 8.1-9

GENERAL IMAGE MODULE OF CREATED US OR US MULTIFRAME SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence	Source

				of Value	
Instance Number	0020,0013	IS	Generated by device, increments from "1" in each series	ALWAYS	AUTO
Patient Orientation	0020,0020	CS	NULL		
Content Date	0008,0023	DA	<yyyymmdd>	ALWAYS	AUTO
Content Time	0008,0033	TM	<hhmmss>	ALWAYS	AUTO
Image Type	0008,0008	CS	"ORIGINAL" and "PRIMARY"	ALWAYS	AUTO
Acquisition Date	0008,0022	DA	<yyyymmdd>	ALWAYS	AUTO
Acquisition Time	0008,0032	TM	<hhmmss>	ALWAYS	AUTO
Acquisition DateTime	0008,002A	DT	<yyyymmddhhmmss>	ALWAYS	AUTO
Ultrasound Color Data Present	0028,0014	US	Color data not present = "00" Color data is present = "01"	ALWAYS	AUTO
Lossy Image Compression	0028,2110	CS	US = "00" (uncompressed) or “01” (lossy compressed) US-MF = "01" (lossy compressed)	ALWAYS	AUTO
Lossy Image Compression Ratio	0028,2112	DS	Used if (0028, 2110) = "01", Calculated by device	ANAP	AUTO
Lossy Image Compression Method	0028,2114	CS	"ISO_10918_1", used if (0028,2110) = "01"	ANAP	AUTO

Table 8.1-10

IMAGE PIXEL MODULE OF CREATED US OR US MULTIFRAME SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Samples per Pixel	0028,0002	US	"3" for RGB or YBR_FULL_422 “1” for MONOCHROME2	ALWAYS	AUTO
Photometric Interpretation	0028,0004	CS	Uncompressed = "RGB" or “MONOCHROME2” Compressed = “YBR_FULL_422”	ALWAYS	AUTO

Rows	0028,0010	US	US = "924", US-MF = CONFIG (Default 924)	ALWAYS	AUTO
Columns	0028,0011	US	US = "1232", US-MF = CONFIG (Default 1232)	ALWAYS	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	OW or OB	Generated by device	ALWAYS	AUTO
Planar Configuration	0028,0006	US	"0"	ALWAYS	AUTO
Private Creator	7FE1,0010	LO	“MEDISON_US”	ANAP	AUTO
3D Volume	7FE1,1002	OB	3D Volume Data	ANAP	AUTO

Table 8.1-11

CINE MODULE OF CREATED US MULTIFRAME SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Frame Time	0018,1063	DS	Milliseconds	ANAP	AUTO
Cine Rate	0018,0040	IS	Frames per second	ANAP	AUTO

Table 8.1-12

MULTI-FRAME MODULE OF CREATED US MULTIFRAME SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Number of Frames	0028,0008	IS	Numbers of Frames	ANAP	AUTO
Frame Increment Pointer	0028,0009	AT	"1577059" : (0018, 1063)	ANAP	AUTO

Table 8.1-13

US REGION CALIBRATION MODULE OF CREATED US OR US MULTIFRAME SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Sequence of Ultrasound Regions	0018,6011	SQ	Generated by device. A sequence is present for each region in the system display.	ANAP	AUTO
> Region Location Min x0	0018,6018	UL	Left position of region	ALWAYS	AUTO
> Region Location Min y0	0018,601A	UL	Top position of region	ALWAYS	AUTO
> Region Location Max x1	0018,601C	UL	Right position of region	ALWAYS	AUTO
> Region Location Max y1	0018,601E	UL	Bottom position of region	ALWAYS	AUTO
> Physical Units X Direction	0018,6024	US	2D Image : 0003H = cm M-Mode : 0004H = seconds Doppler : 0004H = seconds	ALWAYS	AUTO
> Physical Units Y Direction	0018,6026	US	2D Image : 0003H = cm M-Mode : 0003H = cm Doppler : 0005H = hertz or 0007H = cm/sec	ALWAYS	AUTO
> Physical Delta X	0018,602C	FD	The physical value per pixel increment	ALWAYS	AUTO
> Physical Delta Y	0018,602E	FD	The physical value per pixel increment	ALWAYS	AUTO
> Region Spatial Format	0018,6012	US	2D Tissue : 0001H M-Mode Tissue or flow : 0002H Spectral (CW or PW Doppler) : 0003H	ALWAYS	AUTO
> Region Data Type	0018,6014	US	Tissue : 0001H Color Flow : 0002H PW Spectral Doppler : 0003H CW Spectral Doppler : 0004H	ALWAYS	AUTO

> Region Flags	0018,6016	UL	See DICOM PS 3.3 C.8.5.5.1.3	ALWAYS	AUTO

Table 8.1-14

US IMAGE MODULE OF CREATED US OR US MULTIFRAME SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Samples Per Pixel	0028,0002	US	"3" for RGB or YBR_FULL_422 “1” for MONOCHROME2	ALWAYS	AUTO
Photometric Interpretation	0028,0004	CS	Uncompressed = "RGB" or “MONOCHROME2” Compressed = “YBR_FULL_422”	ALWAYS	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
Planar Configuration	0028,0006	US	"0"	ALWAYS	AUTO
Pixel Representation	0028,0103	US	"0"	ALWAYS	AUTO
Image Type	0008,0008	CS	"ORIGINAL" and "PRIMARY"	ALWAYS	AUTO
Lossy Image Compression	0028,2110	CS	US = "00" (uncompressed) or “01” (lossy compressed) US-MF = "01" (lossy compressed)	ALWAYS	AUTO

Table 8.1-15

VOI LUT MODULE OF CREATED US OR US MULTIFRAME SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Window Center	0028,1050	DS	default : "128"	ALWAYS	CONFIG
Window Width	0028,1051	DS	default : "256"	ALWAYS	CONFIG

Table 8.1-16

IMAGE PLANE MODULE OF CREATED US OR US MULTIFRAME SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Pixel Spacing	0028,0030	DS	In case that All following conditions are satisfied, This attribute is inserted. 1. User shall select the option activating Pixel Spacing at the DICOM Setup. 2. Image shall have regions consisting of only tissue and color 3. For all regions, Units for X and Y direction shall be “cm” 4. For all regions, Delta X of US Region calibration module shall have the same value. 5. For all regions, Delta Y of US Region calibration module shall have the same value.	ANAP	AUTO

Table 8.1-17

SOP COMMON MODULE OF CREATED US OR US MULTIFRAME SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
SOP Class UID	0008,0016	UI	US = "1.2.840.10008.5.1.4.1.1.6.1" US-MF = "1.2.840.10008.5.1.4.1.1.3.1"	ALWAYS	AUTO
SOP Instance UID	0008,0018	UI	Generated by device	ALWAYS	AUTO
Specific Character Set	0008,0005	CS	Ref. Section 6 SUPPORT OF CHARACTER SETS	ALWAYS	AUTO

8.1.1.5 Comprehensive Structured Report Modules

Table 8.1-18

SR DOCUMENT SERIES MODULE OF CREATED COMPREHENSIVE SR SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Modality	0008,0060	CS	SR	ALWAYS	AUTO
Series Instance UID	0020,000E	UI	Generated by device	ALWAYS	AUTO
Series Number	0020,0011	IS	"2"	ALWAYS	AUTO
Referenced Performed Procedure Step Sequence	0008,1111	SQ	Identifies the MPPS SOP Instance to which this image is related	ALWAYS	MPPS
> Referenced SOP Class UID	0008,1150	UI	MPPS SOP Class UID "1.2.840.10008.3.1.2.3.3"	ALWAYS	MPPS
> Referenced SOP Instance UID	0008,1155	UI	MPPS SOP Instance UID	ALWAYS	MPPS

Table 8.1-19

SR DOCUMENT GENERAL MODULE OF CREATED COMPREHENSIVE SR SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Instance Number	0020,0013	IS	Generated by device, increments from "1" in each series	ALWAYS	AUTO
Completion Flag	0040,A491	CS	"PARTIAL"	ALWAYS	AUTO
Verification Flag	0040,A493	CS	"UNVERIFIED"	ALWAYS	AUTO
Content Date	0008,0023	DA	<yyyymmdd>	ALWAYS	AUTO
Content Time	0008,0033	TM	<hhmmss>	ALWAYS	AUTO
Referenced Request Sequence	0040,A370	SQ	1 item will be present	ANAP	AUTO
> Study Instance UID	0020,000D	UI	From MWL or generated by device	ANAP	MWL/AUTO
> Referenced Study Sequence	0008,1110	SQ	From MWL	ANAP	MWL

>> Referenced SOP Class UID	0008,1150	UI	From MWL	ANAP	MWL
>> Referenced SOP Instance UID	0008,1155	UI	From MWL	ANAP	MWL
> Accession Number	0008,0050	SH	From MWL or user input	VNAP	MWL/USER
> Placer Order Number/Imaging Service Request	0040,2016	LO	NULL	VNAP	AUTO
> Filler Order Number/Imaging Service Request	0040,2017	LO	NULL	VNAP	AUTO
> Requested Procedure ID	0040,1001	SH	From MWL	VNAP	MWL
> Requested Procedure Description	0032,1060	LO	From MWL	VNAP	MWL
> Requested Procedure Code Sequence	0032,1064	SQ	From MWL	VNAP	MWL
Performed Procedure Code Sequence	0040,A372	SQ	NULL	VNAP	AUTO

Table 8.1-20

SR DOCUMENT CONTENT MODULE OF CREATED COMPREHENSIVE SR SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
Value Type	0040,A040	CS	"CONTAINER"	ALWAYS	AUTO
Concept Name Code Sequence	0040,A043	SQ	1 item will be present	ALWAYS	AUTO
> Include 'Code Sequence Macro'			"EV(125000, DCM, "OB-GYN Ultrasound Procedure Report") for OB-GYN	ALWAYS	AUTO

Include 'Container Macro'				ALWAYS	AUTO
Content Sequence	0040,A730	SQ	One or more items may be included in this sequence	ALWAYS	AUTO
> Relationship Type	0040,A010	CS	Ref. Section 9 STRUCTURED REPORT TEMPLATES	ALWAYS	AUTO
> Include Document Relationship Macro			Ref. Section 9 STRUCTURED REPORT TEMPLATES	ALWAYS	AUTO
> Include Document Content Macro			Ref. Section 9 STRUCTURED REPORT TEMPLATES	ALWAYS	AUTO

Table 8.1-21

SOP COMMON MODULE OF CREATED COMPREHENSIVE SR SOP INSTANCES

Attribute Name	Tag	VR	Value	Presence of Value	Source
SOP Class UID	0008,0016	UI	"1.2.840.10008.5.1.4.1.1.88.33"	ALWAYS	AUTO
SOP Instance UID	0008,0018	UI	Generated by device	ALWAYS	AUTO
Specific Character Set	0008,0005	CS	Ref. Section 6 SUPPORT OF CHARACTER SETS	ALWAYS	AUTO

8.1.2 Used Fields in received IOD by application

The V8 storage application does not receive SOP Instances. The usage of attributes received via Modality Worklist is described in section 4.2.2.3.1.3.

8.1.3 Attribute mapping

The relationships between attributes received via Modality Worklist, stored in acquired images and communicated via MPPS are summarized in the Table below. The format and conversions used in Table are the same as the corresponding table in IHE Technical Framework.

Table 8.1-22

ATTRIBUTE MAPPING BETWEEN MODALITY WORKLIST, IMAGE AND MPPS

Modality Worklist	Image IOD	MPPS IOD
Patient's Name	Patient's Name	Patient's Name
Patient ID	Patient ID	Patient ID
Patient's Birth Date	Patient's Birth Date	Patient's Birth Date
Patient's Sex	Patient's Sex	Patient's Sex
Patient's Size	Patient's Size	____
Patient's Weight	Patient's Weight	____
Referring Physician's Name	Referring Physician's Name	____
Scheduled Performing Physician's Name	Performing Physician's Name	Performing Physician's Name
	____	Scheduled Step Attributes Sequence
Study Instance UID	Study Instance UID	> Study Instance UID
Referenced Study Sequence	Referenced Study Sequence	> Referenced Study Sequence
Accession Number	Accession Number	> Accession Number
	Request Attributes Sequence	____
Requested Procedure ID	> Requested Procedure ID	> Requested Procedure ID
Requested Procedure Description	____	> Requested Procedure Description
Scheduled Procedure Step ID	> Scheduled Procedure Step ID	> Scheduled Procedure Step ID
Scheduled Procedure Step Description	> Scheduled Procedure Step Description	> Scheduled Procedure Step Description
Scheduled Protocol Code Sequence	> Scheduled Protocol Code Sequence	> Scheduled Protocol Code Sequence
Requested Procedure ID	Study ID	Study ID
____	Performed Procedure Step ID	Performed Procedure Step ID
____	Performed Procedure Step Start Date	Performed Procedure Step Start Date
____	Performed Procedure Step Start Time	Performed Procedure Step Start Time
____	Performed Procedure Step Description	Performed Procedure Step Description
____	____	Performed Series Sequence
Requested Procedure Code Sequence	Procedure Code Sequence	Procedure Code Sequence

____	Referenced Performed Procedure Step Sequence	____
____	> Referenced SOP Class UID	SOP Class UID
____	> Referenced SOP Instance UID	SOP Instance UID

8.1.4 Coerced/Modified Fields

The Modality Worklist AE will truncate attribute values received in the response to a Modality Worklist Query if the value length is longer than the maximum length permitted by the attribute's VR.

8.2 DATA DICTIONARY OF PRIVATE ATTRIBUTES

The Private Attributes added to create SOP Instances are listed in the Table below. V8 reserves blocks of private attributes in groups 7FE1. Further details on usage of these private attributes are contained in Section 8.1

Table 8.2-1
DATA DICTIONALY OF PRIVATE ATTRIBUTES

Tag	Attribute Name	VR	VM
(7FE1, 0010)	Private Creator	LO	1
(7FE1, 1002)	3D Volume	OB	1

8.3 CODED TERMINOLOGY AND TEMPLATES

The Workflow AE is capable of supporting arbitrary coding schemes for Procedure and Protocol Codes. The contents of Requested Procedure Code Sequence (0032, 1064) and Scheduled Protocol Code Sequence (0040, 0008) supplied in Worklist Items will be mapped to Image IOD and MPPS attributes as described in Section 8.1.3

8.4 STANDARD EXTENDED / SPECIALIZED / PRIVATE SOP CLASSES

No Specialized or Private SOP Classes are supported.

8.4.1 US OR US MULTIFRAME IMAGE STORAGE SOP CLASS

The US or US Multiframe Image Storage SOP Classes are extended to create a Standard Extended SOP Class by addition of standard and private attributes to the created SOP Instances as documented in section 8.1

3D Volume Data is transferred to the configured Storage Server, if "Send 3D Volume" option is enabled in the Setup Dialog.

8.5 PRIVATE TRANSFER SYNTAXES

No Private Transfer Syntaxes are supported.

9 STRUCTURED REPORT TEMPLATES

This Section uses the following forms for describing Structured Report Templates used in V8.

	Rel with Parent	VT	Concept Name	Presence of Value	Comments
1					
2					

	NL	REL	VT	Concept Name	Unit / CODE Value	Ref TID	Ref CID	Comments or Label
A-1								
A-2								

Rel with Parent	Relationship
VT	Value Type
Concept Name	Any constraints on Concept Name are specified in this filed as defined or enumerated coded entries, or as baseline or defined context groups.
Presence of Value	Ref. Section 8.1.1
Comments	Description about Reference section or used values.
Label	Name which is indicated in the system
NL	The nesting level of Content Items is denoted by “>” symbols
REL	Relationship
Unit/Code, Value	Applied unit, enumerated coded entries, or the reference of Context Group.
Ref TID	Referenced Template ID Number
Ref CID	Referenced Context ID Number. The left side of “/” shows a CID value applied in “Concept Name” column and the right side shows a CID value applied in “Unit/Code, Value” column. (e.g. 228/12012)

9.1 OB-GYN REPORT TEMPLATES

9.1.1 OB-GYN Ultrasound Procedure Report (TID 5000)

Table 9.1-1

OB-GYN ULTRASOUND PROCEDURE REPORT TEMPLATE

	Rel with Parent	VT	Concept Name	Presence of Value	Comments
1		CONTAINER	EV (125000, DCM, "OB-GYN Ultrasound Procedure Report")	ALWAYS	
2	HAS CONCEPT MOD	INCLUDE	DTID (1204) Language of Content Item and Descendants		
3	HAS OBS CONTEXT	INCLUDE	DTID (1001) Observation Context	ALWAYS	Ref. Section 9.1.1.1
4	CONTAINS	INCLUDE	DTID (5001) Patient Characteristics	ANAP	Ref. Section 9.1.1.2
5	CONTAINS	CONTAINER	DT (111028, DCM, "Image Library")		
6	CONTAINS	IMAGE	No Purpose of reference		
7	CONTAINS	INCLUDE	DTID (5002) OB-GYN Procedure Summary Section	ANAP	Ref. Section 9.1.1.3
8	CONTAINS	INCLUDE	DTID (5004) Fetal Biometry Ratio Section	ANAP	Ref. Section 9.1.1.4
9	CONTAINS	INCLUDE	DTID (5005) Fetal Biometry Section	ANAP	Ref. Section 9.1.1.5
10	CONTAINS	INCLUDE	DTID (5006) Fetal Long Bones Section	ANAP	Ref. Section 9.1.1.6
11	CONTAINS	INCLUDE	DTID (5007) Fetal Cranium Section	ANAP	Ref. Section 9.1.1.7
12	CONTAINS	INCLUDE	DTID (5011) Early Gestation Section	ANAP	Ref. Section 9.1.1.8
13	CONTAINS	INCLUDE	DTID (5009) Fetal Biophysical Profile Section	ANAP	Ref. Section 9.1.1.9
14	CONTAINS	INCLUDE	DTID (5010) Amniotic Sac Section	ANAP	Ref. Section 9.1.1.10
15	CONTAINS	INCLUDE	DTID (5015) Pelvis and Uterus Section	ANAP	Ref. Section 9.1.1.11
16	CONTAINS	INCLUDE	DTID (5012) Ovary Section	ANAP	Ref. Section 9.1.1.12
17	CONTAINS	INCLUDE	DTID (5013) Follicles Section	ANAP	Ref. Section 9.1.1.13
18	CONTAINS	INCLUDE	DTID (5013) Follicles Section	ANAP	Ref. Section 9.1.1.14
19	CONTAINS	INCLUDE	DTID (5025) OB-GYN Fetal Vascular Measurement Group	ANAP	Ref. Section 9.1.1.15
20	CONTAINS	INCLUDE	DTID (5025) OB-GYN Fetal Vascular Measurement Group	ANAP	Ref. Section 9.1.1.16
21	CONTAINS	INCLUDE	DTID (5026) OB-GYN Pelvic Vascular	ANAP	Ref. Section 9.1.1.17

			Measurement Group		
22	CONTAINS	INCLUDE	DTID (5025) OB-GYN Fetal Vascular Measurement Group	ANAP	Ref. Section 9.1.1.18

9.1.1.1 Observation ConText (TID 1001)

Table 9.1-2

OBSERVATION CONTEXT IN OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label
A-1	HAS OBS CONTEXT	CODE	(121005, DCM, “Observer Type”)	(121006, DCM, “Person“)	
A-2	HAS OBS CONTEXT	PNAME	(121008, DCM, “Person Observer Name”)		Ref. Physician
A-3	HAS OBS CONTEXT	CODE	(121024, DCM, “Subject Class”)	(121025 ,DCM,"Patient”)	
A-4	HAS OBS CONTEXT	PNAME	(121029,DCM, “Subject Name”)		Last Name,First Name
A-5	HAS OBS CONTEXT	DATE	(121031,DCM, “Subject Birth Date”)		BirthDate
A-6	HAS OBS CONTEXT	CODE	(121032,DCM, “Subject Sex”)	(M, DCM, “Male”) (F, DCM, “Female”) (U, DCM, “Unknown sex”)	M F O
A-7	HAS OBS CONTEXT	NUM	(121033,DCM, “Subject Age”)	(mo, UCUM, “month”)	Not Used

9.1.1.2 Patient Characteristics (TID 5001)

Table 9.1-3

PATIENT CHARACTERISTICS IN OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label
A-8	CONTAINS	CONTAINTER	(121118,DCM “Patient Characteristics”)		
A-8-1	CONTAINS	TEXT	(121106,DCM, “Comment”)		Description
A-8-2	CONTAINS	NUM	(8302-2, LN, “Patient Height”)	(cm, UCUM, “centimeter”) (mm, UCUM, “millimeter”)	Height

A-8-3	CONTAINS	NUM	(29463-7, LN, “Patient Weight”)	(kg, UCUM, “kilograms”)	Weight
A-8-4	CONTAINS	NUM	(11996-6, LN “Gravida”)	(1, UCUM, “no units”)	Gravida
A-8-5	CONTAINS	NUM	(11977-6, LN, “Para”)	(1, UCUM, “no units”)	Para
A-8-6	CONTAINS	NUM	(11612-9, LN, “Aborta”)	(1, UCUM, “no units”)	Aborta
A-8-7	CONTAINS	NUM	(33065-4, LN, “Ectopic Pregnancies”)	(1, UCUM, “no units”)	Ectopic

9.1.1.3 OB-GYN Summary Section (TID 5002)

Table 9.1-4

OB-GYN Procedure Summary Section

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
A-9	CONTAINS	CONTAINER	(121111, DCM, “Summary”)			
A-9-1	CONTAINS	DATE	Context ID 12003 Extended OB-GYN Dates	yyyymmdd	Estab. Due Date	Table 9.1-20
A-9-2	CONTAINS	NUM	(11878-6, LN, “Number of Fetuses”)	(1, UCUM, “no units”)		
A-9-3	CONTAINS	TEXT	(121106, DCM, “Comment”)		Comment	
A-9-4	CONTAINS	CONTAINER	(125008, DCM, “Fetus Summary”)			.
A-9-4-1	HAS OBS CONTEXT	TEXT	(11951-1, LN, “Fetus ID”)			
A-9-4-2	CONTAINS	NUM	(11878-6, LN, “Number of Fetuses”)		Gestations	
A-9-4-3	CONTAINS	NUM	(18185-9, LN, “Gestational Age”)		GA	
			(11885-1, LN, “Gestational Age by LMP”)		GA(LMP)	
A-9-4-4	CONTAINS	NUM	(11727-5, LN, “Estimated Weight”)	(kg, UCUM, “kg”)	EFW	

A-9-4-4-1	INFERRED FROM	CODE	(121420, DCM, “Equation”) (121424, DCM, “Table of Values”)	(Context ID 12014) OB Fetal Body Weight Equations and Tables		Ref. Table 9.1-38
A-9-4-5	CONTAINS	NUM	(11767-1, LN, “EFW percentile rank”)	(%, UCUM, "Percent")	Pctl.(EFW)	
A-9-4-5-1	INFERRED FROM	CODE	(121420, DCM, “Equation”) (121424, DCM, “Table of Values”)	(Context ID 12016) Estimated Fetal Weight Percentile Equations and Tables		Ref.Table 9.1-40
A-9-4-6	CONTAINS	NUM	(11948-7, LN, “Fetal Heart Rate”)	(bpm, UCUM "bpm")	FHR	

9.1.1.4 OB-GYN Fetal Biometry Ratio Section (TID 5004)

Table 9.1-5

Fetal Biometry Ratio Section in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Comments
A-10	CONTAINS	CONTAINER	(125001, DCM, “Fetal Biometry Ratios”)		
A-10-1	HAS OBS CONTEXT	TEXT	(11951-1, LN, “Fetus ID”)		
A-10-2	CONTAINS	NUM	(12004, CID, “Fetal Biometry Ratios”)	(1, UCUM, “no units”)	Ref. Table 9.1-21

9.1.1.5 OB-GYN Fetal Biometry Section (TID 5005)

Table 9.1-6

Fetal Biometry Section in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Comments
A-11	CONTAINS	CONTAINER	(125002, DCM, “Fetal Biometry”)		
A-11-1	HAS OBS CONTEXT	TEXT	(11951-1, LN, “Fetus ID”)		
A-11-2	CONTAINS	CONTAINER	(125005, DCM, “Biometry Group”)		
A-11-2-1	CONTAINS	NUM	Context ID 12005 Extended Fetal Biometry Measurements	(cm, UCUM, “centimeter”) (mm, UCUM, "millimeter") (cm2, UCUM, “Square centimeter”)	Ref. Table 9.1-22
A-11-2-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation	
A-11-2-2	CONTAINS	NUM	(18185-9, LN, “Gestational Age”)	(d, UCUM, “days”)	
A-11-2-2-1	INFERRED FROM	CODE	(121420 , DCM, “Equation”) (121424, DCM, “Table of Values”)	(ContextID 12013) Gestational Age Equations and Tables	Ref. Table 9.1-38
A-11-2-3	CONTAINS	NUM	(125012, DCM, “Growth Percentile Rank”) (125013, DCM, “Growth Z-score”)	(percentile, UCUM, "percentile")	

A-11-2-3-1	INFERRED FROM	CODE	(121420, DCM, “Equation”) (121424, DCM, “Table of Values”)	(ContextID 12015) Fetal Growth Equations and Tables	Ref. Table 9.1-39

9.1.1.6 OB-GYN Fetal Long Bones Section (TID 5006)

Table 9.1-7

Fetal Long Bones Sections in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Comments
A-12	CONTAINS	CONTAINER	(125003, DCM, “Fetal Long Bones”)		
A-12-1	HAS OBS CONTEXT	TEXT	(11951-1, LN,“FetusID”)		Will be present if more than one fetus.
A-12-2	CONTAINS	CONTAINER	(125005, DCM, “Biometry Group”)		
A-12-2-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation	
A-12-2-1	CONTAINS	NUM	Context ID 12006 Extended Fetal Long Bones Biometry Measurements	(cm, UCUM, “centimeter”)	Ref. Table 9.1-23
A-12-2-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation	
A-12-2-1-2	HAS CONCEPT MOD	CODE	(G-C0E3, SRT, “Finding Site”)	(ContextID 7304) Implant Target Anatomy	Ref. Table 9.1-34
A-12-2-1-2-1	HAS CONCEPT MOD	CODE	(G-C171, SRT, “Laterality”)	(G-A100, SRT, “Right”) (G-A101, SRT, “Left”)	

A-12-2-2	CONTAINS	NUM	(18185-9, LN, “Gestational Age”)	(d, UCUM, “day”)	
A-12-2-2-1	INFERRED FROM	CODE	(121420, DCM, “Equation”) (121424, DCM, “Table of Values”)	(ContextID 12013) Gestational Age Equations and Tables	Ref. Table 9.1-37
A-12-2-3	CONTAINS	NUM	(125012, DCM, “Growth Percentile Rank”)	(percentile, UCUM, "percentile")	
A-12-2-3-1	INFERRED FROM	CODE	(121420, DCM, “Equation”) (121424, DCM, “Table of Values”)	(ContextID 12015) Fetal Growth Equations and Tables	Ref. Table 9.1-39

9.1.1.7 OB-GYN Fetal Cranium Section (TID 5007)

Table 9.1-8

Fetal Cranium Sections in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Comments
A-13	CONTAINS	CONTAINER	(125004, DCM, “Fetal Cranium”)		
A-13-1	HAS OBS CONTEXT	TEXT	(11951-1, LN, “FetusID”)		Will be present if more than one fetus.
A-13-2	CONTAINS	CONTAINER	(125005, DCM, “Biometry Group”)		
A-13-2-1	CONTAINS	NUM	Context ID 12007 Extended Fetal Cranium	(cm, UCUM, “centimeter”) (mm, UCUM, "millimeter") (cm2, UCUM, “Square centimeter”)	Ref. Table 9.1-24
A-13-2-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation	
A-13-2-1-2	HAS	CODE	(G-C0E3, SRT, “Finding Site”)	(ContextID 12022)	Table 9.1-35

	CONCEPT MOD			Fetal Cranium Anatomic Sites	
A-13-2-1-2-1	HAS CONCEPT MOD	CODE	(G-C171, SRT, “Laterality”)	(G-A100, SRT, “Right”) (G-A101, SRT, “Left”)	
A-13-2-2	CONTAINS	NUM	(18185-9, LN, “Gestational Age”)	(d, UCUM, “day”)	
A-13-2-2-1	INFERRED FROM	CODE	(121420, DCM, “Equation”) (121424, DCM, “Table of Values”)	(ContextID 12013) Gestational Age Equations and Tables	Ref. Table 9.1-36
A-13-2-3	CONTAINS	NUM	(125012, DCM, “Growth Percentile Rank”)	(percentile, UCUM, "percentile")	
A-13-2-3-1	INFERRED FROM	CODE	(121420, DCM, “Equation”) (121424, DCM, “Table of Values”)	(ContextID 12015) Fetal Growth Equations and Tables	Ref. Table 9.1-39

9.1.1.8 OB-GYN Early Gestation Section (TID 5011)

Table 9.1-9

Early Gestation Section in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
A-14	CONTAINS	CONTAINER	(125009, DCM, “Early Gestation”)			
A-14-1	HAS OBS CONTEXT	TEXT	(11951-1, LN, “Fetus ID”)			
A-14-2	CONTAINS	CONTAINER	(125005, DCM, “Biometry Group”)			

A-14-2-1	CONTAINS	NUM	Context ID 12009 Extended Early Gestation Biometry Measurements	(cm, UCUM, “centimeter”) (mm, UCUM, "millimeter") (cm2, UCUM, “Square centimeter”)		Ref. Table 9.1-26
A-14-2-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		
A-14-2-2	CONTAINS	NUM	(18185-9, LN Gestational Age	(d, UCUM, “day”)		
A-14-2-2-1	INFERRED FROM	CODE	(121420, DCM, “Equation”) (121424, DCM, “Table of Values”)	(ContextID 12013)Gestational Age Equations and Tables		Ref. Table 9.1-36
A-14-2-3	CONTAINS	NUM	(125012, DCM, “Growth Percentile Rank”)	(percentile, UCUM, "percentile")		
A-14-2-3-1	INFERRED FROM	CODE	(121420, DCM, “Equation”) (121424, DCM, “Table of Values”)	(ContextID 12015)Fetal Growth Equations and Tables		Ref. Table 9.1-39

9.1.1.9 OB-GYN Fetal Biophysical Profile Section (TID 5009)

Table 9.1-10

Fetal Biophysical Profile Section in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
A-15	CONTAINS	CONTAINER	(125006, DCM, “Biophysical Profile”)			
A-15-1	HAS OBS CONTEXT	TEXT	(11951-1, LN, “Fetus ID”)			

A-15-2	CONTAINS	NUM	(11631-9, LN, "Gross Body Movement")	({0:2}, UCUM, "range 0:2")	Fetal Movements	value as entered in the Report.
			(11632-7, LN, "Fetal Breathing")		Fetal Breathing Movements	
			(11635-0, LN, "Fetal Tone")		Fetal Tone	
			(11635-5, LN, "Fetal Heart Reactivity")		Nonstress Test	
			(11630-1, LN, "Amniotic Fluid Volume")		Amniotic Fluid Volume	
			(11634-3, LN, "Biophysical Profile Sum Score")	(1, UCUM, "no units")	Total	Automatically calculates the sum of the scores.

9.1.1.10 OB-GYN Amniotic Sac Section (TID 5010)

Table 9.1-11

Amniotic Sac Section in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
A-16	CONTAINS	CONTAINER	(121070, DCM, “Findings”)		AFI	
A-16-1	HAS CONCEPT MOD	CODE	(G-C0E3, SRT, “Finding Site”)	(T-F1300, SRT, ”Amniotic Sac”)		
A-16-2	CONTAINS	NUM	(11627-7, LN, “Amniotic Fluid Index”)	(cm, UCUM, “centimeter”)	AFI	
			Context ID 12008 Extended OB-GYN Amniotic Sac			Ref. Table 9.1-25

			(99004-01, MDSN, “MVP”)		Max Vertical Pocket	
A-16-2-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		

9.1.1.11 OB-GYN Pelvis and Uterus Section (TID 5015)

Table 9.1-12

Pelvis and Uterus Section in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
A-17	CONTAINS	CONTAINER	(125011, DCM, “Pelvis and Uterus”)			
A-17-1	CONTAINS	CONTAINER	(T-83000, SRT, “Uterus”)			
A-17-1-1	CONTAINS	NUM	(11865-3, LN, “Uterus Width”)	(cm, UCUM, “centimeter”)	Uterus W	
			(11842-2, LN, “Uterus Length”)		Uterus L	
			(11859-6, LN, “Uterus Height”)		Uterus H	
A-17-1-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		
A-17-1-2	CONTAINS	NUM	(33192-6, LN, “Uterus Volume”)	(cm3, UCUM, "Cubic centimeter")	Uterus Vol.	
A-17-2	CONTAINS	NUM	Context ID 12011 Extended Ultrasound Pelvis and Uterus	(cm, UCUM, “centimeter”) (mm, UCUM, "millimeter")		Ref. Table 9.1-27
A-17-2-1	HAS	CODE	(121401, DCM,	Common CID-		

	CONCEPT MOD		“Derivation”)	Derivation		
A-17-3	CONTAINS	NUM	Cervix Volume	(ml, UCUM, "milliliter")	Cervix Vol.	

9.1.1.12 OB-GYN Ovary Section (TID 5010)

Table 9.1-13

Ovary in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
A-18	CONTAINS	CONTAINER	(121070, DCM, “Findings”)			
A-18-1	HAS CONCEPT MOD	CODE	(G-C0E3, SRT, “Finding Site”)	(T-87000, SRT, ”Ovary”)		
A-18-2	CONTAINS	CONTAINER	(T-87000, SRT, “Ovary”)			
A-18-2-1	CONTAINS	NUM	(11829-9, LN, “Left Ovary Width”)	(cm, UCUM, “centimeter”)	Lt. Ovary Width	
			(11840-6, LN, “Left Ovary Length”)		Lt. Ovary Length	
			(11857-0, LN, “Left Ovary Height”)		Lt. Ovary Height	
			(99005-29, MDSN, “Left Ovary Area”)		Lt. Ovary Area	
A-18-2-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		
A-18-2-2	CONTAINS	NUM	(12164-0, LN, “Left Ovary Volume”)	(cm3, UCUM, "Cubic centimeter")	Lt. Ovary Volume	

A-18-3	CONTAINS	CONTAINER	(T-87000, SRT, “Ovary”)		Right Ovary	
A-18-3-1	CONTAINS	NUM	(11830-7, LN, “Right Ovary Width”)	(cm, UCUM, “centimeter”) (mm, UCUM, “millimeter”)	Rt. Ovary W	
			(11841-4, LN, “Right Ovary Length”)		Rt. Ovary L	
			(11858-8, LN, “Right Ovary Height”)		Rt. Ovary H	
			(99005-28, MDSN, “Right Ovary Area”)	(cm2, UCUM, ”Square centimeter”)	Rt. Ovary Area	
A-18-3-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		
A-18-3-2	CONTAINS	NUM	(12165-7, LN, “Right Ovary Volume”)	(cm3, UCUM, "Cubic centimeter")	Rt. Ovary Volume	

9.1.1.13 OB-GYN Follicles Section (TID 5013)

Table 9.1-14

Follicle Section in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
A-19	CONTAINS	CONTAINER	(121070, DCM, “Findings”)			
A-19-1	HAS CONCEPT MOD	CODE	(G-C0E3, SRT, “Finding Site”)	(T-87600, SRT, “Ovarian Follicle”)		
A-19-2	HAS CONCEPT MOD	CODE	(G-C171, SRT, “Laterality”)	(G-A100, SRT, “Right”) (G-A101, SRT, “Left”)		
A-19-3	CONTAINS	CONTAINER	(125007, DCM, “Measurement			

			Group”)			
A-19-3-1	HAS OBS CONTEXT	TEXT	(12510, DCM, “Identifier”)		"1", "2" …	
A-19-3-2	CONTAINS	NUM	(GD705, SRT, “Volume”)	(ml, UCUM, "milliliter")	Vol.	
A-19-3-3	CONTAINS	NUM	(11793-7, LN, “Follicle Diameter”)	(cm, UCUM, “centimeter”) (mm, UCUM, "millimeter")	"1", "2" …	
A-19-3-3-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		

9.1.1.14 OB-GYN Cyst Section (TID 5013)

Table 9.1-15

Cyst Section in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
A-20	CONTAINS	CONTAINER	(121070, DCM, “Findings”)			
A-20-1	HAS CONCEPT MOD	CODE	(G-C0E3, SRT, “Finding Site”)	(99009-01 , MDSN, ″Cyst”)		
A-20-2	HAS CONCEPT MOD	CODE	(G-C171, SRT, “Laterality”)	(G-A100, SRT, “Right”) (G-A101, SRT, “Left”)		
A-20-3	CONTAINS	CONTAINER	(99009-01 , MDSN, ″Cyst”)			
A-20-3-1	CONTAINS	NUM	(99005-26, MSDN, “Cyst Width”)	(cm, UCUM, “centimeter”) (mm, UCUM, "millimeter")	Ovary Width	
			(99005-24, MSDN, “Cyst Length”)		Cyst Length	
			(99005-25, MSDN, “Cyst Height”)		Ovary Height	
A-20-3-	HAS	CODE	(121401, DCM,	Common CID-		

1-1	CONCEPT MOD		“Derivation”)	Derivation		
A-20-3-2	CONTAINS	NUM	(99005-27, MSDN, “Cyst Volume”)	(ml, UCUM, "milliliter")	Ovary Volume	

9.1.1.15 OB-GYN Fetal Vascular Measurement Group (TID 5025)

Table 9.1-16

OB-GYN Fetal Vascular Measurement Group in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
A-21	CONTAINS	CONTAINER	(121070, DCM, “Findings”)			
A-21-1	HAS CONCEPT MOD	CODE	(G-C0E3, SRT, “Finding Site”)	(T-F6800, SRT, “Embryonic Vascular Structure”)		
A-21-2	CONTAINS	CONTAINER	Context ID 12141 Extended Fetal Vasculature Anatomical Location			Ref. Table 9.1-28
A-21-2-1	HAS OBS CONTEXT	TEXT	(11951-1, LN, “Fetus ID”)			
A-21-2-2	HAS CONCEPT MOD	CODE	(G-C171, SRT, “Laterality”)	(G-A100, SRT, “Right”) (G-A101, SRT, “Left”) (G-A102, SRT, “Unilateral”)		
A-21-2-3	CONTAINS	NUM	Context ID 12119 Vascular Ultrasound Property			Ref. Table 9.1-30
A-21-2-3-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		

9.1.1.16 OB-GYN Pelvic Vascular Measurement Group (TID 5026)

Table 9.1-17

OB-GYN Pelvic Vascular Measurement Group in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
A-22	CONTAINS	CONTAINER	(121070, DCM, “Findings”)			
A-22-1	HAS CONCEPT MOD	CODE	(G-C0E3, SRT, “Finding Site”)	(T-D6007, SRT, “Pelvic Vascular Structure”)		
A-22-2	CONTAINS	CONTAINER	Context ID 12140 Extended Pelvic Vasculature Anatomical Location			Ref. Table 9.1-29
A-22-2-1	HAS CONCEPT MOD	CODE	(G-C171, SRT, “Laterality”)	(SRT, G-A100, "Right") (SRT, G-A101, "Left") (SRT, G-A103, "Unilateral")		
A-22-2-2	HAS CONCEPT MOD	TEXT	(112050, DCM, “Anatomic Identifier”)		"1", "2" …	
A-22-2-3	CONTAINS	NUM	Context ID 12119 Vascular Ultrasound Property			Ref. Table 9.1-30
A-22-2-3-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		

9.1.1.17 OB-GYN Mass and Flow Section (TID SM99005)

Table 9.1-18

Mass and Flow Section in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
A-23	CONTAINS	CONTAINER	(121070, DCM, “Findings”)			
A-23-1	HAS CONCEPT	CODE	Context ID 99100 Gynecology Finding Site			**Ref Tabl**

	MOD					**e 9.1-36**
A-23-2	HAS CONCEPT MOD	CODE	(G-C171, SRT, “Laterality”)	(G-A100, SRT, “Right”) (G-A101, SRT, “Left”) (G-A102, SRT, “Unilateral”)		
A-23-3	CONTAINS	CONTAINER	Context ID 99103 Gynecology Mass and Flow			Ref Table 9.1-36
A-23-3-1	HAS OBS CONTEXT	TEXT	(12510, DCM, “Identifier”)		"1", "2" …	
A-23-3-2	CONTAINS	NUM	(11840-6, LN, "Length")	(cm, UCUM, “centimeter”) (mm, UCUM, “millimeter”)		
	CONTAINS	NUM	(11857-0, LN, "Height")			
	CONTAINS	NUM	(11829-9, LN, "Width")			
A-23-3-2-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		
A-23-3-3	CONTAINS	NUM	(G-D705, SRT, “Volume”)	(ml, UCUM, “milliliter”)	Vol.	
A-23-3-4	CONTAINS	NUM	Context ID 12119 Vascular Ultrasound Property			Ref. Table 9.1-30
A-23-3-4-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		

9.1.1.18 OB-GYN User Creation Group Section (TID SM99010)

Table 9.1-19

User Creation Group Section in OB-GYN SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments

A-24	CONTAINS	CONTAINER	(99900-Creation ID, MDSN, “User Creation Group Name”)			*Creation ID: Randomly generated 7-digit unique ID
A-24-1	HAS OBS CONTEXT	TEXT	(11951-1, LN, “Fetus ID”)		"1", "2" …	Will be present if the creation group has fetus
	HAS CONCEPT MOD	CODE	(G-C171, SRT, “Laterality”)	(G-A100, SRT, “Right”) (G-A101, SRT, “Left”) (G-A102, SRT, “Unilateral”)		Will be present if the creation group has laterality option
A-24-2	CONTAINS	CONTAINER	(99900-Creation ID, MDSN, “User Creation Item Name”)			
A-24-2-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		

9.1.2 DCMR Context Groups used in V8

9.1.2.1 Standard Extended Context Groups in OB-GYN SR

Table 9.1-20

Context ID 12003 Extended OB-GYN Dates

CSD	CV	CM	Label
LN	11778-8	EDD	Estab.DueDate
LN	11779-6	EDD from LMP	EDD(LMP)
LN	11781-2	EDD from average ultrasound age	EDD(AUA)
LN	11955-2	LMP	LMP
LN	11976-8	Ovulation date	Exp.Ovul.

Table 9.1-21

Context ID 12004 Extended Fetal Biometry Ratios Measurements

CSD	CV	CM	Laterality	Label
LN	11947-9	HC/AC	N/A	HC/AC
LN	11871-1	FL/AC	N/A	FL/AC
LN	11872-9	FL/BPD	N/A	FL/BPD
LN	11823-2	Cephalic Index	N/A	CI(BPD/OFD)
LN	11873-7	FL/HC	N/A	FL/HC
MDSN	99000-01	FL/FOOT	N/A	FL/FOOT
MDSN	99000-02	ThC/AC	N/A	ThC/AC
MDSN	99000-04	Right Anterior Horn Lateral ventricular to Hemispheric Width Ratio	Right	Rt. Va/Hem
MDSN	99000-05	Leftt Anterior Horn Lateral ventricular to Hemispheric Width Ratio	Left	Lt. Va/Hem
MDSN	99000-08	Anterior Horn Lateral ventricular to Hemispheric Width Ratio	N/A	Va/Hem
MDSN	99000-06	Right Posterior Horn Lateral ventricular to Hemispheric Width Ratio	Right	Rt. Vp/Hem

MDSN	99000-07	Left Posterior Horn Lateral ventricular to Hemispheric Width Ratio	Left	Lt. Vp/Hem
MDSN	99000-09	Posterior Horn Lateral ventricular to Hemispheric Width Ratio	N/A	Vp/Hem

Table 9.1-22

Context ID 12005 Extended Fetal Biometry Measurements

CSD	CV	CM	Label
LN	11820-8	Biparietal Diameter	BPD
LN	11851-3	Occipital-Frontal Diameter	OFD
LN	11984-2	Head Circumference	HC
LN	11818-2	Anterior-Posterior Abdominal Diameter	APD
LN	11862-0	Tranverse Abdominal Diameter	TAD
LN	11979-2	Abdominal Circumference	AC
LN	11963-6	Femur Length	FL
MDSN	99000-10	Right Femur Length	Rt. FL
MDSN	99000-11	Left Femur Length	Lt. FL
LN	11819-0	Anterior-Posterior Trunk Diameter	APTD
LN	11864-6	Transverse Thoracic Diameter	TTD
LN	11988-3	Thoracic Circumference	ThC
MDSN	99001-20	AVol	AVol
MDSN	99001-21	TVol	TVol
LN	11965-1	Foot length	Foot
MDSN	99001-18	Kidney length	Renal L
LN	11834-9	Left Kidney length	Lt. Renal L
LN	11825-7	Left Kidney width	Lt. Renal AP
MDSN	99001-19	Kidney width	Renal AP
LN	11836-4	Right Kidney length	Rt. Renal L
LN	11827-3	Right Kidney width	Rt. Renal AP
LN	33068-8	Thoracic Area	ThA
MDSN	99001-01	Middle Abdominal Diameter	MAD
MDSN	99005-13	Right Pelvis	Rt. Pelvis
MDSN	99005-14	Left Pelvis	Lt. Pelvis

MDSN	99005-01	Pelvis	Pelvis
MDSN	99001-02	Fetal Trunk Area	FTA
MDSN	99001-03	APTDxTTD	APTDxTTD
MDSN	99001-04	Ear Length	Ear
MDSN	99001-05	Middle Phalanx	MP
MDSN	99001-06	Thoracic Anteriorposterior Diameter	ThD ap
MDSN	99001-07	Thoracic Transverse Diameter	ThD trans
MDSN	99001-08	Heart Anteriorposterior Diameter	HrtD ap
MDSN	99001-09	Heart Transverse Diameter	HrtD trans
MDSN	99001-11	Cardio-Thoracic Area Ratio by Distance	CTAR(D)
MDSN	99001-12	Heart Area	HrtA
MDSN	99001-13	Cardio-Thoracic Area Ratio by Area	CTAR(A)
MDSN	99001-23	Cardio-Thoracic Area Ratio by Circumference	CTAR(C)

Table 9.1-23

Context ID 12006 Extended Fetal Long Bones Biometry Measurements

CSD	CV	CM	Laterality	Label
LN	11966-9	Humerus length	N/A, Right, Left	HUM
LN	11969-3	Ulna length	N/A, Right, Left	ULNA
LN	11968-5	Tibia length	N/A, Right, Left	TIB
LN	11967-7	Radius length	N/A, Right, Left	RAD
LN	11964-4	Fibula length	N/A, Right, Left	FIB
LN	11962-8	Clavicle length	N/A, Right, Left	CLAV
MDSN	99002-01	Vertebral	N/A	Vertebral

Table 9.1-24

Context ID 12007 Extended Fetal Cranium

CSD	CV	CM	Laterality	Label
LN	11863-8	Trans Cerebellar Diameter	N/A	CEREB
LN	11860-4	Cisterna Magna length	N/A	CM
LN	12146-7	Nuchal Fold thickness	N/A	NF
LN	33069-6	Nuchal Translucency	N/A	NT
LN	11629-3	Outer Orbital Diameter	N/A	OOD
LN	33070-4	Inner Orbital Diameter	N/A	IOD

LN	33197-5	Anterior Horn Lateral ventricular width	N/A, Right, Left	Va
LN	33196-7	Posterior Horn Lateral ventricular width	N/A, Right, Left	Vp
LN	12171-5	Lateral Ventricle width	N/A, Right, Left	Ventricle
LN	12170-7	Width of Hemisphere	N/A, Right, Left	HEM
MDSN	99004-02	Frontomaxillary facial angle	N/A	FMF angle
MDSN	99004-03	Corpus callosum length	N/A	CC length
MDSN	99004-04	Corpus callosum width	N/A	CC width
MDSN	99004-05	Corpus callosum thickness	N/A	CC thickness

Table 9.1-25

Context ID 12008 Extended OB-GYN Amniotic Sac

CSD	CV	CM	Label
LN	11624-4	First Quadrant Diameter	Q1
LN	11626-9	Second Quadrant Diameter	Q2
LN	11625-1	Third Quadrant Diameter	Q3
LN	11623-6	Fourth Quadrant Diameter	Q4
SRT	M-02550	Diameter	Max Vertical Pocket
MDSN	99004-01	MVP	MVP

Table 9.1-26

Context ID 12009 Extended Early Gestation Biometry Measurements

CSD	CV	CM	Label
LN	11850-5	Gestational Sac Diameter	GS
LN	11957-8	Crown Rump Length	CRL
LN	11816-6	Yolk Sac length	YS
LN	33071-2	Spine Length	SL

Table 9.1-27

Context ID 12011 Extended Ultrasound Pelvis and Uterus

CSD	CV	CM	Label
LN	11961-0	Cervix Length	
LN	12145-9	Endometrium Thickness	
MDSN	99005-02	Cervix Height	Cervix H

MDSN	99005-03	Cervix Width	Cervix W
MDSN	99005-04	Cervix Volume	Cervix Vol.

Table 9.1-28

Context ID 12141 Extended Fetal Vasculature Anatomical Location

CSD	CV	CM	Label
SRT	T-42000	Aorta	Fetal Aorta
SRT	T-D0765	Descending Aorta	Dsc Aorta (in Fetal Heart)
SRT	T-45600	Middle Cerebral Artery	Mid Cereb A
SRT	T-44000	Pulmonary Artery	MPA (in Fetal Heart)
SNM3	T-45010	Carotid artery	Lt. Fetal Carotid Rt. Fetal Carotid
MDSN	99008-02	Ductus Venosus	Ductus Venosus
MDSN	99008-03	Renal Artery	Lt. Renal A Rt. Renal A
SRT	T-48710	Inferior vena cava	IVC (in Fetal Heart)
MDSN	99008-07	Ductus Atriosus	Duct A
MDSN	99008-09	Ascending Aorta	Asc Aorta

Table 9.1-29

Context ID 12140 Extended Pelvic Vasculature Anatomical Location

CSD	CV	CM	Label
SRT	T-F1810	Umbilical Artery	Umbilical A
SRT	T-F1820	Umbilical Vein	Umbilical V
SRT	T-46980	Ovarian Artery	Lt. Ovarian A Rt. Ovarian A
SRT	T-46820	Uterine Artery	Lt. Uterine A (in OB or Gynecology) Rt. Uterine A (in OB or Gynecology)
SRT	T-F1412	Vitelline Artery of Placenta	Placenta A
MDSN	99007-01	Perisystic Flow	Perisystic Flow
MDSN	99007-02	Endometrial Flow	Endometrial Flow

Table 9.1-30

Context ID 12119 Vascular Ultrasound Property

CSD	CV	CM	Label

INCLUDE	CID 12120 Extended Blood Velocity Measurements
INCLUDE	CID 12121 Vascular Indices and Ratios
INCLUDE	CID 12122 Other Vascular Properties

Table 9.1-31

Context ID 12120 Extended Blood Velocity Measurement

CSD	CV	CM	Label
LN	11653-3	End Diastolic Velocity	ED
LN	11726-7	Peak Systolic Velocity	PS
LN	11665-7	Minimum Diastolic Velocity	MD
LN	20352-1	Time averaged mean velocity	TAmean
LN	11692-1	Time averaged peak velocity	TAmax
MDSN	99008-04	Systolic Peak Velocity	Duct. V S Vmax
MDSN	99008-05	Diastolic Peak Velocity	Duct. V D Vmax
MDSN	99008-06	Atrial Peak Velocity	Duct. V A Vmax

Table 9.1-32

Context ID 12121 Vascular Indices and Ratios

CSD	CV	CM	Label
LN	20167-3	Acceleration Index	Acc
SRT	R-101BA	Lumen Area Stenosis	%StA
SRT	R-101BB	Lumen Diameter Stenosis	%StD
LN	12008-9	Pulsatility Index	PI
LN	12023-8	Resistivity Index	RI
LN	12144-2	Systolic to Diastolic Velocity Ratio	S/D

Table 9.1-33

Context ID 12122 Other Vascular Properties

CSD	CV	CM	Label
LN	20168-1	Acceleration Time	AccT
LN	20217-6	Deceleration Time	DecT
MDSN	99200-07	Deceleration	Dec
SRT	G-0364	Vessel lumen diameter	Dout
SRT	R-1025C	Vessel Intimal Diameter	Din

SRT	R-1025D	Vessel Intimal Cross-Sectional Area	Ain
SRT	G-0365	Vessel outside diameter	Vesl. Dist.
SRT	G-0366	Vessel lumen cross-sectional area	Aout
LN	33878-0	Volume flow	Vol. Flow
LN	20247-3	Peak Gradient	PGmax
LN	20256-4	Mean Gradient	PGmean

Table 9.1-34

Context ID 7304 Implant Target Anatomy

CSD	CV	CM	Label
SRT	T-12410	Humerus	HUM
SRT	T-12420	Radius	RAD
SRT	T-12430	Ulna	ULNA
SRT	T-12440	Tibia	TIB
SRT	T-12450	Fibula	FIB
SRT	T-12310	Clavicle	CLAV

Table 9.1-35

Context ID 12022 Fetal Cranium Anatomic Sites

CSD	CV	CM	Label
SRT	T-A1700	Anterior Horn Lateral Ventricle	Va
SRT	T-A1710	Posterior Horn Lateral Ventricle	Vp
SRT	T-A010F	Cerebral hemisphere	Hem

Table 9.1-36

Context ID 99100 Gynecology Finding Site

CSD	CV	CM	HERA W10 Label
SRT	M-03000	Mass	Mass
MDSN	99009-04	Endometrial Polyp	Endo. Polyp
MDSN	99009-05	Ovarian Mass	Ovarian Mass
MDSN	99009-08	Ectopic Pregnancy	Ectopic Pregnancy
MDSN	99009-09	Uterine Fibroid	Uterine Fibroid
MDSN	99009-10	Cervix	Cervix Flow

Table 9.1-37

Context ID 99103 Gynecology Mass and Flow

CSD	CV	CM	HERA W10 Label
SRT	M-03000	Mass	Mass
MDSN	**99007-03**	Endometrial Polyp Flow	Endo. Polyp
MDSN	99007-04	Ovarian Mass Flow	Ovarian Mass
MDSN	99007-07	Ectopic Flow	Ectopic Flow
MDSN	99007-08	Uterine Fibroid Flow	Uterine Fibroid
MDSN	99007-09	Cervical Flow	Cervix Flow

9.1.2.2 Gestational Age Equations and Tables (Context Group 12013)

Table 9.1-37

Gestational Age Equations and Tables

Coding Scheme Designator	Code Value	Code Meaning
LN	11889-3	AC, Campbell 1975
LN	11892-7	AC, Hadlock 1984
LN	33076-1	AC, Shinozuka 1996
LN	11902-4	BPD, Hadlock 1984
LN	33538-0	BPD, Hansmann 1986
LN	11905-7	BPD, Jeanty 1984
LN	11906-5	BPD, Kurtz 1980
LN	33082-9	BPD, Osaka 1989
LN	11907-3	BPD, Sabbagha 1978
LN	33084-5	BPD, Shinozuka 1996
LN	33086-0	BPD-oi, Chitty 1997
LN	33087-8	BPD-oo, Chitty 1997
LN	33088-6	Clavical length,Yarkoni 1985
LN	11910-7	CRL, Hadlock 1992
LN	33540-6	CRL, Hansmann 1986
LN	11913-1	CRL, Nelson 1981
LN	33093-6	CRL, Osaka 1989
LN	33094-4	CRL, Rempen 1991
LN	11914-9	CRL, Robinson 1975

LN	33095-1	CRL, Shinozuka 1996
LN	33098-5	FL, Chitty 1997
LN	11920-6	FL, Hadlock 1984
LN	33541-4	FL, Hansmann 1986
LN	11922-2	FL, Hohler 1982
LN	11923-0	FL, Jeanty 1984
LN	33101-7	FL, Osaka 1989
LN	33102-5	FL, Shinozuka 1996
LN	11928-9	GS, Hellman 1969
LN	33107-4	GS, Nyberg 1992
LN	33108-2	GS, Tokyo 1986
LN	33110-8	HC measured, Chitty 1997
LN	33111-6	HC derived, Chitty 1997
LN	11932-1	HC, Hadlock 1984
LN	33543-0	HC, Hansmann 1986
LN	11936-2	Humerus, Jeanty 1984
LN	33117-3	Humerus Length, Osaka 1989
LN	33120-7	OFD, Hansmann 1986
LN	11941-2	Tibia, Jeanty 1984
LN	11944-6	Ulna, Jeanty 1984
LN	11929-7	GS, Rempen 1991
LN	33083-7	BPD, Rempen 1991

9.1.2.3 OB Fetal Body Weight Equations and Tables (Context ID 12014)

Table 9.1-38

OB Fetal Body Weight Equations and Tables

Coding Scheme Designator	Code Value	Code Meaning
LN	11756-4	EFW by AC, Campbell 1975
LN	11738-2	EFW by AC, BPD, Hadlock 1984
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	33139-7	EFW by BPD, TTD, Hansmann 1986
LN	11739-0	EFW by AC and BPD, Shepard 1982
LN	33140-5	EFW by BPD, FTA, FL, Osaka 1990

9.1.2.4 Fetal Growth Equations and Tables (Context ID 12015)

Table 9.1-39

Fetal Growth Equations and Tables

Coding Scheme Designator	Code Value	Code Meaning
LN	33145-4	AC by GA, ASUM 2000
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	33149-6	AC by GA, Shinozuka 1996
LN	33151-2	BPD by GA, ASUM 2000
LN	33198-3	BPD by GA, Hadlock 1984
LN	33556-2	BPD outer-inner by GA, Chitty 1994
LN	33152-0	BPD outer-outer by GA, Chitty 1994
LN	33156-1	BPD by GA, Shinozuka 1996
LN	33161-1	CRL by GA, Shinozuka 1996
LN	33164-5	Fibula by GA, Jeanty 1983
LN	33165-2	FL by GA, ASUM 2000
LN	33166-0	FL by GA, Hadlock 1984
LN	33167-8	FL by GA, Chitty 1994
LN	33170-2	FL by GA, Shinozuka 1996
LN	33172-8	HC by GA, ASUM 2000
LN	33173-6	HC by GA, Hadlock 1984
LN	33174-4	HC derived by GA, Chitty 1994
LN	33177-7	Humerus Length by GA, ASUM 2000
LN	33178-5	OFD by GA, ASUM 2000
LN	33180-1	Radius by GA, Jeanty 1983
LN	33181-9	TCD by GA Goldstein 1987
LN	33155-3	BPD by GA, Rempen 1991

LN	33171-0	GS by GA, Rempen 1991

9.1.2.5 Estimated Fetal Weight Percentile Equations and Tables (Context ID 12016)

Table 9.1-40

Estimated Fetal Weight Percentile Equations and Tables

Coding Scheme Designator	Code Value	Code Meaning
LN	33183-5	FWP by GA, Hadlock 1991
LN	33184-3	FWP by GA, Williams, 1982
LN	33189-2	FWP by GA, Brenner 1976

9.2 VASCULAR ULTRASOUND REPORT TEMPLATES

9.2.1 Vascular Ultrasound Report (TID 5100)

Table 9.2-1
VASCULAR ULTRASOUND REPORT TEMPLATE

	Rel with Parent	VT	Concept Name	Comments	Label
1		CONTAINER	(125100, DCM, “Vascular Ultrasound Procedure Report”)		
2	HAS OBS CONTEXT	INCLUDE	DTID (1001) Observation Context		
3	CONTAINS	INCLUDE	DTID (5101) Vascular Patient Characteristics		
4	CONTAINS	INCLUDE	DTID (5102) Vascular Procedure Summary Section		
5	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-40501, SRT, ”Blood Vessel of Head”)	TCD (Unilateral)
				$SectionLaterality = EV (G-A103, SRT, ”Unilateral”)	
				$Anatomy = DCID (12106) Intracranial Cerebral Vessels (unilateral)	
6	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-40501, SRT, ”Blood Vessel of Head”)	TCD
				$SectionLaterality = EV (G-A100, SRT, ”Right”)	
				$Anatomy = DCID (12105) Intracranial Cerebral Vessels	
7	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-40501, SRT, ”Blood Vessel of Head”)	TCD
				$SectionLaterality = EV (G-A101, SRT, ”Left”)	
				$Anatomy = DCID (12105)	

				Intracranial Cerebral Vessels	
8	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-40501, SRT, ”Blood Vessel of Head”)	TCD
				$Anatomy = DCID (12105) Intracranial Cerebral Vessels	
9	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-45005, SRT, ”Artery of neck”)	Carotid
				$SectionLaterality = EV (G-A101, SRT, ”Left”)	
				$Anatomy = DCID (12104) Extracranial Arteries	
				$AnatomyRatio = DCID (12123) Carotid Ratios	
10	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-45005, SRT, ”Artery of neck”)	Carotid
				$SectionLaterality = EV (G-A100, SRT, ”Right”)	
				$Anatomy = DCID (12104) Extracranial Arteries	
				$AnatomyRatio = DCID (12123) Carotid Ratios	
11	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-47040, SRT, ”Artery of Lower Extremity”)	LE Artery
				$SectionLaterality = EV (G-A101, SRT, ”Left”)	
				$Anatomy = DCID (12109) Lower Extremity Arteries	
12	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-47040, SRT, ”Artery of Lower Extremity”)	LE Artery
				$SectionLaterality = EV (G-A100, SRT, ”Right”)	
				$Anatomy = DCID (12109) Lower Extremity Arteries	
13	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-49403, SRT, ”Vein of Lower Extremity”)	LE Vein

				$SectionLaterality = EV (G-A101, SRT, ”Left”)	
				$Anatomy = DCID (12110) Lower Extremity Veins	
14	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-49403, SRT, ”Vein of Lower Extremity”)	LE Vein
				$SectionLaterality = EV (G-A100, SRT, ”Right”)	
				$Anatomy = DCID (12110) Lower Extremity Veins	
15	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-47020, SRT, ”Artery Of Upper Extremity”)	UE Artery
				$SectionLaterality = EV (G-A101, SRT, ”Left”)	
				$Anatomy = DCID (12107) Upper Extremity Arteries	
16	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-47020, SRT, ”Artery Of Upper Extremity”)	UE Artery
				$SectionLaterality = EV (G-A100, SRT, ”Right”)	
				$Anatomy = DCID (12107) Upper Extremity Arteries	
17	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-49103, SRT, ”Vein Of Upper Extremity”)	UE Vein
				$SectionLaterality = EV (G-A101, SRT, ”Left”)	
				$Anatomy = DCID (12108) Upper Extremity Veins	
18	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-49103, SRT, ”Vein Of Upper Extremity”)	UE Vein
				$SectionLaterality = EV (G-A100, SRT, ”Right”)	
				$Anatomy = DCID (12108) Upper Extremity Veins	
19	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-71019, SRT, ”Vascular Structure Of Kidney”)	Abdomen Renal

				$SectionLaterality = EV (G-A100, SRT, ”Right”)	
				$Anatomy = DCID (12115) Renal Vessels	
				$AnatomyRatio = DCID (12124) Renal Ratios	
20	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-71019, SRT, ”Vascular Structure Of Kidney”)	Abdomen Renal
				$SectionLaterality = EV (G-A101, SRT, ”Left”)	
				$Anatomy = DCID (12115) Renal Vessels	
				$AnatomyRatio = DCID (12124) Renal Ratios	
21	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-46002, SRT, ”Artery of Abdomen”)	Abdomen Artery (Unilateral)
				$SectionLaterality = EV (G-A103, SRT, ”Unilateral”)	
				$Anatomy = DCID (12112) Abdominal Arteries (unilateral)	
22	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-46002, SRT, ”Artery of Abdomen”)	Abdomen Artery
				$SectionLaterality = EV (G-A100, SRT, ”Right”)	
				$Anatomy = DCID (12111) Abdominal Arteries (lateral)	
23	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-46002, SRT, ”Artery of Abdomen”)	Abdomen Artery
				$SectionLaterality = EV (G-A101, SRT, ”Left”)	
				$Anatomy = DCID (12111) Abdominal Arteries (lateral)	
25	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-487A0, SRT, ”Vein of Abdomen”)	Abdomen Vein (Unilateral)
				$SectionLaterality = EV (G-A103, SRT, ”Unilateral”)	

				$Anatomy = DCID (12114) Abdominal Veins (unilateral)	
26	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionLaterality = EV (G-A100, SRT, ”Right”)	Abdomen Vein
				$Anatomy = DCID (12113) Abdominal Veins (lateral)	
				$SectionScope = DT (T-487A0, SRT, ”Vein of Abdomen”)	
27	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionLaterality = EV (G-A100, SRT, ”Right”)	Abdomen Vein
				$Anatomy = DCID (12108) Upper Extremity Veins	
28	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-487A0, SRT, ”Vein of Abdomen”)	Abdomen Vein
				$Anatomy = DCID (12113) Abdominal Veins (lateral)	
29	CONTAINS	INCLUDE	DTID (5103) Vascular Ultrasound Section	$SectionScope = DT (T-D4000, SRT,”Abdomen”)	Abdomen (B- MODE)
				$Anatomy = DCID (6204) Anatomic Non-Colon Findings	

9.2.1.1 Observation ConText (TID 1001)

Table 9.2-2

OBSERVATION CONTEXT IN VASCULAR SR

	REL	VT	Concept Name	Unit / CODE Value	Label
B-1	HAS OBS CONTEXT	CODE	(121005, DCM, “Observer Type”)	(121006, DCM, “Person“)	
B-2	HAS OBS CONTEXT	PNAME	(121008, DCM, “Person Observer Name”)		Ref. Physician
B-3	HAS OBS CONTEXT	CODE	(121024, DCM, “Subject Class”)	(121025 ,DCM,"Patient”)	
B-4	HAS OBS CONTEXT	PNAME	(121029, DCM, “Subject Name”)		Last Name, First Name
B-5	HAS OBS CONTEXT	DATE	(121031, DCM, “Subject Birth	DCID (7456) Units of	

			Date”)	Measure for Age	
B-6	HAS OBS CONTEXT	CODE	(121032, DCM, “Subject Sex”)	(M, DCM, “Male”) (F, DCM, “Female”) (U, DCM, “Unknown sex”)	Gender
B-7	HAS OBS CONTEXT	NUM	(121033, DCM, “Subject Age”)	(mo, UCUM, “month”)	Not Used

9.2.1.2 Vascular Patient Characteristics (TID 5101)

Table 9.2-3

VASCULAR PATIENT CHARACTERISTICS IN VASCULAR SR

	REL	VT	Concept Name	Unit / CODE Value	Label
B-8	CONTAINS	CONTAINTER	(121118,DCM “Patient Characteristics”)		
B-8-1	CONTAINS	NUM	(121033, DCM, “Subject Age”)	Units = DCID (7456) Units of Measure for Age	
B-8-2	CONTAINS	CODE	(121032, DCM, “Subject Sex”)	DCID (7455) Sex	
B-8-3	CONTAINS	NUM	(8867-4, LN, “Heart Rate”)		
B-8-4	CONTAINS	NUM	(F-008EC, SRT, “Systolic Blood Pressure”)		Left Systole, Right Systole
B-8-5	CONTAINS	NUM	(F-008ED, SRT, “Diastolic Blood Pressure”)		Left Diastole, Right Diastole

9.2.1.3 Vascular Procedure Summary Section (TID 5102)

Table 9.2-4

VASCULAR PROCEDURE SUMMARY SECTION IN VASCULAR SR

	REL	VT	Concept Name	Unit / CODE Value	Label
B-9	CONTAINS	CONTAINTER	(121111,DCM “Summary”)		
B-9-1	CONTAINS	TEXT	DCID (12101) Vascular Summary		

9.2.1.4 Vascular Ultrasound Section (TID 5103)

Table 9.2-5

VASCULAR ULTRASOUND SECTION IN VASCULAR SR

	REL	VT	Concept Name	Unit / CODE Value	Label
B-10		CONTAINTER	DT (121070, DCM, “Findings”)		
B-10-1	HAS CONCEPT MOD	CODE	EV (G-C0E3, SRT, “Finding Site”)	$SectionScope	
B-10-2	HAS CONCEPT MOD	CODE	EV (G-C171, SRT, “Laterality”)	$SectionLaterality	
	CONTAINS	INCLUDE	DTID (5104) Vascular Measurement Group	$AnatomyGroup = $Anatomy	
B-10-3	CONTAINS	CONTAINER	$AnatomyGroup		
B-10-3-1	HAS CONCEPT MOD	CODE	EV (G-A1F8, SRT, “Topographical Modifier”)	DCID (12116) Vessel Segment Modifiers	
B-10-3-2	HAS CONCEPT MOD	CODE	EV (125101, DCM, “Vessel Branch”)	DCID (12117) Vessel Branch Modifiers	
	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = DCID (12119) Vascular Ultrasound Property $Derivation = DCID (3627) Measurement Type	
B-10-3-3		NUM	$Measurement	Units = $Units	
B-10-3-3-1	HAS CONCEPT MOD	CODE	EV (121401, DCM, “Derivation”)	$Derivation	
	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $AnatomyRatio	
B-10-4		NUM	$Measurement	Units = $Units	
B-10-4-1	HAS CONCEPT MOD	CODE	EV (R-4089A, SRT, “Cardiac Cycle Point")	DCID (12233) Cardiac Phase	
	CONTAINS	INCLUDE	DTID (SM99110) Vascular User	CONTAINS	INCLUDE

			Creation Group Section		
B-10-4	CONTAINS	CONTAINER	EV (99900-Creation ID, MDSN, “User Creation Group Name”)	*Creation ID: Randomly generated 7-digit unique ID	
B-10-4-1	HAS CONCEPT MOD	CODE	EV (G-A1F8, SRT, “Topographical Modifier”)	DCID (12116) Vessel Segment Modifiers	
B-10-4-2	CONTAINS	NUM	EV (99900-Creation ID, MDSN, “User Creation Item Name”)		
B-10-4-2-1	HAS CONCEPT MOD	CODE	EV (121401, DCM, “Derivation”)	$Derivation	

9.2.2 Vascular Measurement and Calculation used in Vascular SR

Table 9.2-6
Carotid

Label	DICOM SR Concept Name (CDS CV CM)	Laterality	Topographical Modifier	Item Configuration
Subclavian A	SRT\T-46100\Subclavian Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 1 Ref. Table 9.2 16
CCA	SRT\T-45100\Common Carotid Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 2 Ref. Table 9.2 17
Bulb	SRT\T-45170\Carotid Bulb	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 2 Ref. Table 9.2 17
ICA	SRT\T-45300\Internal Carotid Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 2 Ref. Table 9.2 17

ECA	SRT\T-45200\External Carotid Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 2 Ref. Table 9.2 17
Vertebral A	SRT\T-45700\Vertebral Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 1 Ref. Table 9.2 16

Table 9.2-7
LE Artery

Label	DICOM SR Concept Name (CDS CV CM)	Laterality	Topographical Modifier	Item Configuration
CIA	SRT\T-46710\Common Iliac Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 1 Ref. Table 9.2 16
IIA	SRT\T-46740\Internal Iliac Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
EIA	SRT\T-46910\External Iliac Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
CFA	SRT\T-47400\Common Femoral Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
SFA	SRT\T-47403\Superficial Femoral Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
DFA	SRT\T-47440\Profunda Femoris Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal	

			SRT\G-A119\Distal	
Popliteal A	SRT\T-47500\Popliteal Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
ATA	SRT\T-47700\Anterior Tibial Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
PTA	SRT\T-47600\Posterior Tibial Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Peroneal A	SRT\T-47630\Peroneal Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
DPA	SRT\T-47741\Dorsalis Pedis Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
MPA	SRT\T-47690\Plantar Arterial Arch	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
LPA	SRT\T-47690\Plantar Arterial Arch	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Metatarsal A	MDSN\99201-1\Metatarsal Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Digital A	MDSN\99201-2\Digitgal Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal	

			SRT\G-A119\Distal	

Table 9.2-8

LE Vein

Label	DICOM SR Concept Name (CDS CV CM)	Laterality	Topographical Modifier	Item Configuration
CIV	SRT\T-48920\Common Iliac Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 3 Ref. Table 9.2 18
IIV	SRT\T-48940\Internal iliac vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
EIV	SRT\T-48930\External Iliac Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
CFV	SRT\G-035B\Common Femoral Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
PFV	SRT\T-49660\Profunda Femoris Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
SFV	SRT\G-035A\Superficial Femoral Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
GSV	SRT\T-49530\Great Saphenous Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Popliteal V	SRT\T-49640\Popliteal Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-	

			longitudinal SRT\G-A119\Distal	
LSV	SRT\T-49550\Lesser Saphenous Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
ATV	SRT\T-49630\Anterior Tibial Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
PTV	SRT\T-49620\Posterior Tibial Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Peroneal V	SRT\T-49650\Peroneal Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
MPV	MDSN\99203-01\Medial Plantar Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
LPV	MDSN\99203-02\Lateral Plantar Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Metatarsal V	MDSN\99203-03\Metatarsal Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Digital V	MDSN\99203-04\Digital Vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	

Table 9.2-9

UE Artery

Label	DICOM SR Concept Name (CDS CV CM)	Laterality	Topographical Modifier	Item Configuration
Subclavian A	SRT\T-46100\Subclavian Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 1 Ref. Table 9.2 16
Axillary A	SRT\T-47100\Axillary Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Brachial A	SRT\T-47160\Brachial Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Radial A	SRT\T-47300\Radial Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Ulnar A	SRT\T-47200\Ulnar Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
SPA	SRT\T-47240\Superficial Palmar Arch	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	

Table 9.2-10

UE Vein

Label	DICOM SR Concept Name (CDS CV CM)	Laterality	Topographical Modifier	Item Configuration
Internal Jugular V	SRT\T-48170\Internal Jugular vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 3 Ref. Table 9.2 18

Innominate V	SRT\T-48620\Innominate vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Subclavian V	SRT\T-48330\Subclavian vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Axillary V	SRT\T-49110\Axillary vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Brachial V	SRT\T-49350\Brachial vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Cephalic V	SRT\T-49240\Cephalic vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Basilic V	SRT\T-48052\Basilic vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Radial V	SRT\T-49340\Radial vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Ulnar V	SRT\T-49330\Ulnar vein	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	

Table 9.2-11

TCD

Label	DICOM SR Concept Name (CDS	Laterality	Topographical Modifier	Item

	CV CM)			Configuration
Basilar A	SRT\T-45800\Basilar Artery	SRT\ G-A103\Unilateral	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
ACA	SRT\T-45540\Anterior Cerebral Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
MCA	SRT\T-45600\Middle Cerebral Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
PCA (P1)	SRT\R-10253\Posterior Cerebral Artery P1 Segment	SRT\G-A100\Right SRT\G-A101\Left		
PCA (P2)	SRT\R-10255\Posterior Cerebral Artery P2 Segment	SRT\G-A100\Right SRT\G-A101\Left		Calculation Items Table 1 Ref. Table 9.2 16
ACommA	SRT\T-45530\Anterior communicating artery	SRT\G-A100\Right SRT\G-A101\Left		
PCommA	SRT\T-45520\Posterior communicating artery	SRT\G-A100\Right SRT\G-A101\Left		
ExtICA	MDSN\99201-6\Exterior intracranial carotid artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
TICA	SRT\R-102BD\Terminal internal carotid artery	SRT\G-A100\Right SRT\G-A101\Left		
Siphon	SRT\T-45308\Carotid Siphon	SRT\G-A100\Right SRT\G-A101\Left		
Ophthalmic A.	SRT\T-45400\Ophthalmic Artery	SRT\G-A100\Right SRT\G-A101\Left		
Vertebral A.	SRT\T-45700\Vertebral artery	SRT\G-A100\Right SRT\G-A101\Left		
Vertebral 4	MDSN\99201-7\Vertebral 4	SRT\G-A100\Right SRT\G-A101\Left		

Table 9.2-12

Abdomen Artery

Label	DICOM SR Concept Name (CDS CV CM)	Laterality	Topographical Modifier	Item Configuration
Aorta	SRT\T-42000\Aorta	SRT\ G-A103\Unilateral	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 1 Ref. Table 9.2 16
SMA	SRT\T-46510\Superior Mesenteric Artery	SRT\ G-A103\Unilateral	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
IMA	SRT\T-46520\Inferior Mesenteric Artery	SRT\ G-A103\Unilateral		
Renal Aortic Ratio	LN\33869-9\Renal Artery/Aorta velocity ratio	SRT\ G-A103\Unilateral		
Hepatic A	SRT \T-46420\Hepatic artery	SRT\G-A100\Right SRT\G-A101\Left		
Common Iliac A	SRT\T-46710\Common Iliac Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
External Iliac A	SRT\T-46910\External Iliac Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Internal Iliac A	SRT\T-46740\Internal Iliac Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	

Table 9.2-13

Abdomen Vein

Label	DICOM SR Concept Name (CDS CV CM)	Laterality	Topographical Modifier	Item Configuration
Hepatic V	SRT\T-48720\Hepatic Vein	SRT\G-A100\Right		Calculation

		SRT\G-A101\Left		Items Table 3 Ref. Table 9.2 18
IVC	SRT\T-48710\Inferior Vena Cava	SRT\ G-A103\Unilateral	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Portal V	SRT\T-48810\Portal Vein	SRT\ G-A103\Unilateral	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
SMV	SRT\T-48840\Superior Mesenteric Vein	SRT\ G-A103\Unilateral		
IMV	SRT\T-48910\Inferior Mesenteric Vein	SRT\ G-A103\Unilateral		
Splenic V	SRT\T-48890\Splenic Vein	SRT\ G-A103\Unilateral		

Table 9.2-14

Abdomen Renal

Label	DICOM SR Concept Name (CDS CV CM)	Laterality	Topographical Modifier	Item Configuration
Renal A	SRT\T-46600\Renal Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	Calculation Items Table 1 Ref. Table 9.2 16
Upper Renal A	SRT\T-46600\Renal Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Lower Renal A	SRT\T-46600\Renal Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Arcuate Renal A	SRT\T-4668A\Arcuate Artery of the Kidney	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	

Lobular Renal A	SRT\T-4667D\Interlobar Artery of Kidney	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Arcuate A	MDSN\99201-3\Arcuate Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
Segmental A	SRT\T-46659\Segmental Artery	SRT\G-A100\Right SRT\G-A101\Left	SRT\G-A118\Proximal SRT\G-A188\Mid-longitudinal SRT\G-A119\Distal	
RenalVein	SRT\T-48740\Renal Vein	SRT\G-A100\Right SRT\G-A101\Left		

Table 9.2-15

Abdomen (2D)

Label	DICOM SR Concept Name (CDS CV CM)	Laterality	Topographical Modifier
Liver	(T-62000, SRT, "Liver")	SRT\ G-A103\Unilateral	
Spleen	(T-C3000, SRT, "Spleen")	SRT\ G-A103\Unilateral	
Gall bladder	(T-63000, SRT, "Gall bladder")	SRT\ G-A103\Unilateral	
Pancreas	(T-65000, SRT, "Pancreas")	SRT\ G-A103\Unilateral	
Pancreas Head	(99016-2, MDSN, "Pancreas Head")		
Pancreas Body	(99016-3, MDSN, "Pancreas Body")		
Pancreas Tail	(99016-4, MDSN, "Pancreas Tail")		
Bowel	(99016-6, MDSN, "Bowel")		
Kidney	(T-71000, SRT, "Kidney")	SRT\G-A100\Right SRT\G-A101\Left	
Kidney Vol.	99016-19, MDSN, "Kidney Volume")		
Kidney L	(99016-20 MDSN, "Kidney Length")		
Kidney W	(99016-21 MDSN, "Kidney Width")		
Kidney H	(99016-22 MDSN, "Kidney Height")		

Table 9.2-116

Calculation Items Table 1

Label	DICOM SR Concept Name (CDS CV CM)
PS	LN\11726-7\Peak Systolic Velocity
ED	LN\11653-3\End Diastolic Velocity
TAmax	LN\11692-1\Time averaged peak velocity
TAmean	LN\20352-1\Time averaged mean velocity
PGmax	LN\20247-3\Peak Gradient
PGmean	LN\20256-4\Mean Gradient
PS/ED	LN\12144-2\Systolic to Diastolic Velocity Ratio
ED/PS	MDSN\99200-01\Diastolic to Systolic Velocity Ratio
RI	LN\12023-8\Resistivity Index
PI	LN\12008-9\Pulsatility Index
Aout	SRT\G-0366\Vessel lumen cross-sectional area
Ain	SRT\R-1025D\Vessel Intimal Cross-Sectional Area
%StA	SRT\R-101BA\Lumen Area Stenosis
Dout	SRT\G-0364\Vessel lumen diameter
Din	SRT\R-1025C\Vessel Intimal Diameter
%StD	SRT\R-101BB\Lumen Diameter Stenosis
Vesl. Area	MDSN\99200-02\Vessel Area
Vol. Flow(A)	LN\33878-0\Volume flow
Vesl. Dist	SRT\G-0365\Vessel outside diameter
Vol. Flow(D)	LN\33878-0\Volume flow

Table 9.2-17

Calculation Items Table 2

Label	DICOM SR Concept Name (CDS CV CM)
PS	LN\11726-7\Peak Systolic Velocity
ED	LN\11653-3\End Diastolic Velocity
TAmax	LN\11692-1\Time averaged peak velocity
TAmean	LN\20352-1\Time averaged mean velocity
PGmax	LN\20247-3\Peak Gradient
PGmean	LN\20256-4\Mean Gradient
PS/ED	LN\12144-2\Systolic to Diastolic Velocity Ratio

ED/PS	MDSN\99200-01\Diastolic to Systolic Velocity Ratio
RI	LN\12023-8\Resistivity Index
PI	LN\12008-9\Pulsatility Index
Aout	SRT\G-0366\Vessel lumen cross-sectional area
Ain	SRT\R-1025D\Vessel Intimal Cross-Sectional Area
%StA	SRT\R-101BA\Lumen Area Stenosis
Dout	SRT\G-0364\Vessel lumen diameter
Din	SRT\R-1025C\Vessel Intimal Diameter
%StD	SRT\R-101BB\Lumen Diameter Stenosis
Vesl. Area	MDSN\99200-02\Vessel Area
Vol. Flow(A)	LN\33878-0\Volume flow
Vesl. Dist	SRT\G-0365\Vessel outside diameter
Vol. Flow(D)	LN\33878-0\Volume flow
IMT	MDSN\99200-05\Intima-media thickness

Table 9.2-18

Calculation Items Table 3

Label	DICOM SR Concept Name (CDS CV CM)
Vmax	MDSN\99200-03\Max Velocity
Dur T	MDSN\99200-04\Duration Time
Vesl. Dist	SRT\G-0365\Vessel outside diameter
Vesl. Area	MDSN\99200-02\Vessel Area

9.3 ADULT ECHOCARDIOGRAPHY PROCUDURE REPORT TEMPLATES

9.3.1 Adult Echocardiography Procedure Report (TID 5200)

Table 9.3-1

Adult Echocardiography Ultrasound Procedure Report Tempalte

No	Rel With Parent	VT	Concept Name	Comments
1		CONTAINER	EV (125200, DCM, “Adult Echocardiography Procedure Report”)	
2	HAS	INCLUDE	DTID (1204) Language of	

	CONCEPT MOD		Content Item and Descendants	
3	HAS OBS CONTEXT	INCLUDE	DTID (1001) Observation Context	
4	CONTAINS	INCLUDE	DTID (5201) Echocardiography Patient Characteristics	
5	CONTAINS	CONTAINER	(111028, DCM, “Image Library”)	
6	CONTAINS	IMAGE	No purpose of reference	
7	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-32600, SRT, “Left Ventricle”)
				$MeasType = DCID (12200) Echocardiography Left Ventricle
8	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-32500, SRT, “Right Ventricle”)
				$MeasType = DCID (12204) Echocardiography Right Ventricle
9	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-32300, SRT, “Left Atrium”)
				$MeasType = DCID (12205) Echocardiography Left Atrium
10	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-32200, SRT, “Right Atrium”)
				$MeasType = DCID (12206) Echocardiography Right Atrium
11	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-35400, SRT, “Aortic Valve”)
				$MeasType = DCID (12211) Echocardiography Aortic Valve
12	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-35300, SRT, “Mitral Valve”)
				$MeasType = DCID (12207) Echocardiography Mitral Valve
13	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-35200, SRT, “Pulmonic Valve”)
				$MeasType = DCID (12209) Echocardiography Pulmonic Valve
14	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-35100, SRT, “Tricuspid Valve”)
				$MeasType = DCID (12208) Echocardiography Tricuspid Valve
15	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-42000, SRT, “Aorta”)

				$MeasType= DCID (12212) Echocardiography Aorta
16	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-44000, SRT, “Pulmonary artery”)
				$MeasType DCID (12210) = Echocardiography Pulmonary Artery
17	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-48600, SRT, “Vena Cava”
				$MeasType = DCID (12215) Echocardiography Vena Cavae
18	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (T-48581, SRT, “Pulmonary Venous Structure”
				$MeasType = DCID (12214) Echocardiography Pulmonary Veins
19	CONTAINS	INCLUDE	DTID (5202) Echo Section	$SectionSubject = EV (P5-30031, SRT, “Cardiac Shunt Study”)
				$MeasType = DCID (12217) Echocardiography Cardiac Shunt
20	CONTAINS	INCLUDE	DTID (SM99210) Adult Echo User Creation Group Section	Ref. Section 9.3.1.1

9.3.1.1 Adult Echo User Creation Group Section (TID SM99210)

Table 9.3-2

User Creation Group Section in Adult Echo SR

	REL	VT	Concept Name	Unit / CODE Value	Label	Comments
C-20	CONTAINS	CONTAINER	(99900-Creation ID, MDSN, “User Creation Group Name”)			*Creation ID: Randomly generated 7-digit unique ID
C-20-1	CONTAINS	NUM	(99900-Creation ID, MDSN, “User Creation Item Name”)			
C-20-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		

9.3.2 Cardiac Measurement and Calculation used in Adult Echocardiography SR

- Label – Label of measurement or calculation used in Cardiac Calc. package for the Ultrasound System
- FSite – Finding Site
- Concept – (CV, CSD, “Concept Name”)
- Modifier – Additional codes and Modifiers used

Table 9.3-3
Cardiac Measurement and Calculation

Label	FSite	Concept	Modifiers
LVIDd	Left Ventricle	(29436-3, LN, “Left Ventricle Internal End Diastolic Dimension”)	Image Mode = 2D mode
LVIDs	Left Ventricle	(29438-9, LN, “Left Ventricle Internal Systolic Dimension”)	
Frac Short	Left Ventricle	(18051-3, LN, “Left Ventricular Fractional Shortening”)	
IVSd	Left Ventricle	(18154-5, LN, “Interventricular Septum Diastolic Thickness”)	
IVSs	Left Ventricle	(18158-6, LN, “Interventricular Septum Systolic Thickness”)	
IVS% Thickening	Left Ventricle	(18054-7, LN, “Interventricular Septum % Thickening”)	
LVPWd	Left Ventricle	(18152-9, LN, “Left Ventricle Posterior Wall Diastolic Thickness”)	
LVPWs	Left Ventricle	(18156-0, LN, “Left Ventricle Posterior Wall Systolic Thickness”)	
LVPW% Thickening	Left Ventricle	(18053-9, LN, “Left Ventricle Posterior Wall % Thickening”)	
IVSd/LVPWd	Left Ventricle	(18155-2, LN, “Interventricular Septum to Posterior Wall Thickness Ratio”)	Image Mode = 2D mode Cardiac Cycle Point = Diastole
IVSs/LVPWs	Left Ventricle	(18155-2, LN, “Interventricular Septum to Posterior Wall Thickness Ratio”)	Image Mode = 2D mode Cardiac Cycle Point = Systole
Vol.d(Teichholz)	Left Ventricle	(18026-5, LN, “Left Ventricular End Diastolic	Image Mode = 2D mode

		Volume”)	Measurement Method = Teichholz
Vol.d(Cubed)	Left Ventricle	(18026-5, LN, “Left Ventricular End Diastolic Volume”)	Image Mode = 2D mode Measurement Method = Cube Method
Vol.d(Bullet)	Left Ventricle	(18026-5, LN, “Left Ventricular End Diastolic Volume”)	Image Mode = 2D mode Measurement Method = Bullet Method
Vol.s(Teichholz)	Left Ventricle	(18148-7, LN, “Left Ventricular End Systolic Volume”)	Image Mode = 2D mode Measurement Method = Teichholz
Vol.s(Cubed)	Left Ventricle	(18148-7, LN, “Left Ventricular End Systolic Volume”)	Image Mode = 2D mode Measurement Method = Cube Method
Vol.s(Bullet)	Left Ventricle	(18148-7, LN, “Left Ventricular End Systolic Volume”)	Image Mode = 2D mode Measurement Method = Bullet Method
EF	Left Ventricle	(18043-0, LN, “Left Ventricular Ejection Fraction”)	Image Mode = 2D mode
SV	Left Ventricle	(F-32120, SRT, “Stroke Volume”)	Image Mode = 2D mode
SI	Left Ventricle	(F-00078, SRT, "Stroke Index")	Image Mode = 2D mode"
CO	Left Ventricle	(F-32100, SRT, “Cardiac Output”)	Image Mode = 2D mode
CI	Left Ventricle	(F-32110, SRT, “Cardiac Index”)	Image Mode = 2D mode
Mass	Left Ventricle	(18087-7, LN, “Left Ventricle Mass”)	Image Mode = 2D mode
RVIDd	Right Ventricle	(20304-2, LN, “Right Ventricular Internal Diastolic Dimension”)	Image Mode = 2D mode
RVIDs	Right Ventricle	(20305-9, LN, "Right Ventricular Internal Systolic Dimension")	Image Mode = 2D mode
RVAWd	Right Ventricle	(18153-7, LN, “Right Ventricle Anterior Wall Diastolic Thickness”)	Image Mode = 2D mode
RVAWs	Right Ventricle	(18157-8, LN, “Right Ventricular Anterior Wall Systolic Thickness”)	Image Mode = 2D mode
TAPSE	Right Ventricle	(99105-16, MDSN, Tricuspid Annular Plane Systolic Excursion)	Image Mode = M mode
LVIDd	Left Ventricle	(29436-3, LN, “Left Ventricle Internal End Diastolic Dimension”)	Image Mode = M mode
LVIDs	Left Ventricle	(29438-9, LN, “Left Ventricle Internal Systolic Dimension”)	Image Mode = M mode
Frac Short	Left Ventricle	(18051-3, LN, “Left Ventricular Fractional Shortening”)	Image Mode = M mode
IVSd	Left Ventricle	(18154-5, LN, “Interventricular Septum	Image Mode = M mode

		Diastolic Thickness”)	
IVSs	Left Ventricle	(18158-6, LN, “Interventricular Septum Systolic Thickness”)	Image Mode = M mode
IVS% Thickening	Left Ventricle	(18054-7, LN, “Interventricular Septum % Thickening”)	Image Mode = M mode
LVPWd	Left Ventricle	(18152-9, LN, “Left Ventricle Posterior Wall Diastolic Thickness”)	Image Mode = M mode
LVPWs	Left Ventricle	(18156-0, LN, “Left Ventricle Posterior Wall Systolic Thickness”)	Image Mode = M mode
MAPSE	Left Ventricle	(99104-10, MDSN, “Mitral Annular Plane Systolic Excursion”)	Image Mode = M mode
LVPW% Thickening	Left Ventricle	(18053-9, LN, “Left Ventricle Posterior Wall % Thickening”)	Image Mode = M mode
IVSd/LVPWd IVSs/LVPWs	Left Ventricle	(18155-2, LN, “Interventricular Septum to Posterior Wall Thickness Ratio”)	Image Mode = M mode
Vol.d(Teichholz)	Left Ventricle	(18026-5, LN, “Left Ventricular End Diastolic Volume”)	Image Mode = M mode Measurement Method = Teichholz
Vol.d(Cubed)	Left Ventricle	(18026-5, LN, “Left Ventricular End Diastolic Volume”)	Image Mode = M mode Measurement Method = Teichholz
Vol.s(Teichholz)	Left Ventricle	(18148-7, LN, “Left Ventricular End Systolic Volume”)	Image Mode = M mode
Vol.s(Cubed)	Left Ventricle	(18148-7, LN, “Left Ventricular End Systolic Volume”)	Image Mode = M mode
EF	Left Ventricle	(18043-0, LN, “Left Ventricular Ejection Fraction”)	Image Mode = M mode
SV	Left Ventricle	(F-32120, SRT, “Stroke Volume”)	Image Mode = M mode
SI	Left Ventricle	(F-00078, SRT, "Stroke Index")	Image Mode = M mode
CO	Left Ventricle	(F-32100, SRT, “Cardiac Output”)	Image Mode = M mode
CI	Left Ventricle	(F-32110, SRT, “Cardiac Index”)	Image Mode = M mode
Mass	Left Ventricle	(18087-7, LN, “Left Ventricle Mass”)	Image Mode = M mode
RVIDd	Left Ventricle	(20304-2, LN, “Right Ventricular Internal Diastolic Dimension”)	Image Mode = M mode
RVIDs	Left Ventricle	(20305-9, LN, "Right Ventricular Internal Systolic Dimension")	Image Mode = M mode
RVAWd	Left Ventricle	(18153-7, LN, “Right Ventricle Anterior Wall	Image Mode = M mode

		Diastolic Thickness”)	
RVAWs	Left Ventricle	(18157-8, LN, “Right Ventricular Anterior Wall Systolic Thickness”)	Image Mode = M mode
A4C d Length	Left Ventricle	(29436-3, LN, “Left Ventricle Internal End Diastolic Dimension”)	Image Mode = 2D mode Image View = Apical Four Chamber Measurement Method = Method Of Disks, Single Plane
A2C d Length	Left Ventricle		Image Mode = 2D mode Image View = Apical Two Chamber Measurement Method = Method of Disks, Single Plane
A4C s Length	Left Ventricle	(29438-9, LN, “Left Ventricle Internal Systolic Dimension”)	Image Mode = 2D mode Image View = Apical Four Chamber Measurement Method = Method Of Disks, Single Plane
A2C s Length	Left Ventricle		Image Mode = 2D mode Image View = Apical Two Chamber Measurement Method = Method of Disks, Single Plane
A4C d Area	Left Ventricle	(G-0375, SRT, "Left Ventricular Diastolic Area")	Image Mode = 2D mode Image View = Apical Four Chamber Measurement Method = Method Of Disks, Single Plane
A2C d Area	Left Ventricle		Image Mode = 2D mode Image View = Apical Two Chamber Measurement Method = Method of Disks, Single Plane
LVAd SAX MV	Left Ventricle		Image Mode = 2D mode Image View = Parasternal short axis Measurement Method = \Bullet Method
A4C s Area	Left Ventricle	(G-0374, SRT, "Left Ventricular Systolic Area")	Image Mode = 2D mode Image View = Apical Four Chamber Measurement Method = Method Of Disks, Single Plane
A2C s Area	Left Ventricle		Image Mode = 2D mode Image View = Apical Two Chamber

			Measurement Method = Method of Disks, Single Plane
LVAs SAX MV	Left Ventricle		Image Mode = 2D mode Image View = Parasternal short axis Measurement Method = Bullet Method
A4C Vol.d	Left Ventricle	(18026-5, LN, “Left Ventricular End Diastolic Volume”)	Image Mode = 2D mode Image View = Apical Four Chamber Measurement Method = Method Of Disks, Single Plane
A2C Vol.d	Left Ventricle		Image Mode = 2D mode Image View = Apical Two Chamber Measurement Method = Method of Disks, Single Plane
BP Vol.d	Left Ventricle		Image Mode = 2D mode Measurement Method = Method of Disks, Biplane
A4C Vol.s	Left Ventricle	(18148-7, LN, “Left Ventricular End Systolic Volume”)	Image Mode = 2D mode Image View = Apical Four Chamber Measurement Method = Method Of Disks, Single Plane
A2C Vol.s	Left Ventricle		Image Mode = 2D mode Image View = Apical Two Chamber Measurement Method = Method of Disks, Single Plane
BP Vol.s	Left Ventricle		Image Mode = 2D mode Measurement Method = Method of Disks, Biplane
A4C EF	Left Ventricle	(18043-0, LN, “Left Ventricular Ejection Fraction”)	Image Mode = 2D mode Image View = Apical Four Chamber Measurement Method = Method Of Disks, Single Plane
A2C EF	Left Ventricle		Image Mode = 2D mode Image View = Apical Two Chamber Measurement Method = Method of Disks, Single Plane

BP EF	Left Ventricle		Image Mode = 2D mode Measurement Method = Method of Disks, Biplane
EF(Bullet)	Left Ventricle		Image Mode = 2D mode Measurement Method = Bullet Method
A4C SV	Left Ventricle	(F-32120, SRT, “Stroke Volume”)	Image Mode = 2D mode Image View = Apical Four Chamber Measurement Method = Method Of Disks, Single Plane
A2C SV	Left Ventricle		Image Mode = 2D mode Image View = Apical Two Chamber Measurement Method = Method Of Disks, Single Plane
BP SV	Left Ventricle		Image Mode = 2D mode Measurement Method = Method of Disks, Biplane
SV (Bullet)	Left Ventricle		Image Mode = 2D mode Measurement Method = Bullet Method
A4C SI	Left Ventricle	(F-00078, SRT, "Stroke Index")	Image Mode = 2D mode Image View = Apical Four Chamber Measurement Method = Method Of Disks, Single Plane
A2C SI	Left Ventricle		Image Mode = 2D mode Image View = Apical Two Chamber Measurement Method = Method Of Disks, Single Plane
BP SI	Left Ventricle		Image Mode = 2D mode Measurement Method = Method of Disks, Biplane
A4C CO	Left Ventricle	(F-32100, SRT, “Cardiac Output”)	Image Mode = 2D mode Image View = Apical Four Chamber Measurement Method = Method Of Disks, Single Plane
A2C CO	Left Ventricle		Image Mode = 2D mode Image View = Apical Two Chamber Measurement Method = Method Of

			Disks, Single Plane
BP CO	Left Ventricle		Image Mode = 2D mode Measurement Method = Method of Disks, Biplane
CO (Bullet)	Left Ventricle		Image Mode = 2D mode Measurement Method = Bullet Method
A4C CI	Left Ventricle	(F-32110, SRT, “Cardiac Index”)	Image Mode = 2D mode Image View = Apical Four Chamber Measurement Method = Method Of Disks, Single Plane
A2C CI	Left Ventricle		Image Mode = 2D mode Image View = Apical Two Chamber Measurement Method = Method Of Disks, Single Plane
BP CI	Left Ventricle		Image Mode = 2D mode Measurement Method = Method of Disks, Biplane
CI (Bullet)	Left Ventricle		Image Mode = 2D mode Measurement Method = Bullet Method
Vol.d	Left Ventricle	(18026-5, LN, “Left Ventricular End Diastolic Volume”)	Image Mode = 2D mode Measurement Method = Area-Length Single Plane
Vol.s	Left Ventricle	(18148-7, LN, “Left Ventricular End Systolic Volume”)	Image Mode = 2D mode Measurement Method = Area-Length Single Plane
EF	Left Ventricle	(18043-0, LN, “Left Ventricular Ejection Fraction”)	Image Mode = 2D mode Measurement Method = Area-Length Single Plane
SV	Left Ventricle	(F-32120, SRT, “Stroke Volume”)	Image Mode = 2D mode Measurement Method = Area-Length Single Plane
SI	Left Ventricle	(F-00078, SRT, "Stroke Index")	Image Mode = 2D mode Measurement Method = Area-Length Single Plane
SI (Bullet)	Left Ventricle	(F-00078, SRT, "Stroke Index")	Image Mode = 2D mode

			Measurement Method = Bullet Method
CO	Left Ventricle	(F-32100, SRT, “Cardiac Output”)	Image Mode = 2D mode Measurement Method = Area-Length Single Plane Image Mode = 2D mode
CI	Left Ventricle	(F-32110, SRT, “Cardiac Index”)	Measurement Method = Area-Length Single Plane
LVAd sax	Left Ventricle	(G-0375, SRT, "Left Ventricular Diastolic Area")	Image Mode = 2D mode Image View = Parasternal short axis
LVAs sax	Left Ventricle	(G-0374, SRT, "Left Ventricular Systolic Area")	Image Mode = 2D mode Image View = Parasternal short axis
LVLd apical	Left Ventricle	(18077-8, LN, "Left Ventricle diastolic major axis")	Image Mode = 2D mode
LVLd apical (Bullet)	Left Ventricle	(18077-8, LN, "Left Ventricle diastolic major axis")	Image Mode = 2D mode Measurement Method = Bullet Method
LVLs apical	Left Ventricle	(18076-0, LN, "Left Ventricle systolic major axis")	Image Mode = 2D mode
LVLs apical (Bullet)	Left Ventricle	(18076-0, LN, "Left Ventricle systolic major axis")	Image Mode = 2D mode Measurement Method = Bullet Method
Vol.d	Left Ventricle	(18026-5, LN, “Left Ventricular End Diastolic Volume”)	Image Mode = 2D mode
Vol.s	Left Ventricle	(18148-7, LN, “Left Ventricular End Systolic Volume”)	Image Mode = 2D mode
EF	Left Ventricle	(18043-0, LN, “Left Ventricular Ejection Fraction”)	Image Mode = 2D mode
SV	Left Ventricle	(F-32120, SRT, “Stroke Volume”)	Image Mode = 2D mode
SI	Left Ventricle	(F-00078, SRT, "Stroke Index")	Image Mode = 2D mode
CO	Left Ventricle	(F-32100, SRT, “Cardiac Output”)	Image Mode = 2D mode
CI	Left Ventricle	(F-32110, SRT, “Cardiac Index”)	Image Mode = 2D mode
Frac. Short	Left Ventricle	(18051-3, LN, “Left Ventricular Fractional Shortening”)	Image Mode = 2D mode
Frac. Area Change	Left Ventricle	(G-0376, SRT, “Left Ventricular Fractional Area Change”)	Image Mode = 2D mode
LVAd sax epi	Left Ventricle	(G-0379, SRT, “Left Ventricle Epicardial Diastolic Area, psax pap view”)	Image Mode = 2D mode

LVLd apical	Left Ventricle	(18077-8, LN, "Left Ventricle diastolic major axis")	Image Mode = 2D mode
LV Mass	Left Ventricle	(18087-7, LN, “Left Ventricle Mass”)	Image Mode = 2D mode
RVIDd	Right Ventricle	(20304-2, LN, “Right Ventricular Internal Diastolic Dimension”)	Image Mode = 2D mode
RVIDs	Right Ventricle	(20305-9, LN, "Right Ventricular Internal Systolic Dimension")	Image Mode = 2D mode
RVAWd	Right Ventricle	(18153-7, LN, “Right Ventricle Anterior Wall Diastolic Thickness”)	Image Mode = 2D mode
RVAWs	Right Ventricle	(18157-8, LN, “Right Ventricular Anterior Wall Systolic Thickness”)	Image Mode = 2D mode
MPA Diam	Right Ventricle	(18020-8, LN, “Main Pulmonary Artery Diameter”)	
RPA Diam	Right Ventricle	(18021-6, LN, “Right Pulmonary Artery Diameter”)	
LPA Diam	Right Ventricle	(18019-0, LN, “Left Pulmonary Artery Diameter”)	
RVIDd	Right Ventricle	(20304-2, LN, “Right Ventricular Internal Diastolic Dimension”)	Image Mode = M mode
RVIDs	Right Ventricle	(20305-9, LN, "Right Ventricular Internal Systolic Dimension")	Image Mode = M mode
RVAWd	Right Ventricle	(18153-7, LN, “Right Ventricle Anterior Wall Diastolic Thickness”)	Image Mode = M mode
RVAWs	Right Ventricle	(18157-8, LN, “Right Ventricular Anterior Wall Systolic Thickness”)	Image Mode = M mode
LA Diam	Left Atrium	(29469-4, LN, “Left Atrium Antero-posterior Systolic Dimension”)	Image Mode = 2D mode
LA Area	Left Atrium	(17977-0, LN, “Left Atrium Systolic Area”)	Image Mode = 2D mode
LA Vol.	Left Atrium	(G-0383, SRT, “Left Atrium Systolic Volume”)	Image Mode = 2D mode
Ao Root	Aorta	(18015-8, LN, Aortic Root Diameter)	Image Mode = 2D mode
LA Diam.	Left Atrium	(29469-4, LN, “Left Atrium Antero-posterior Systolic Dimension”)	Image Mode = 2D mode
LA/Ao	Left Atrium	(17985-3, LN, “Left Atrium to Aortic Root Ratio”)	Image Mode = 2D mode
LVOT Diam	Left Ventricular	(G-038F, SRT, “Cardiovascular Orifice	

	Outflow Tract	Diameter”)	
Asc Ao	Aorta	(18012-5, LN, “Ascending Aortic Diameter”)	
Desc Ao	Aorta	(18013-3, LN, “Descending Aortic Diameter”)	
Ao Arch	Aorta	(18011-7, LN, “Aortic Arch Diameter”)	
Ao Isth Diam	Aorta	(18014-1, LN, “Aortic Isthmus Diameter”)	
Ao Root	Aorta	(18015-8, LN, “Aortic Root Diameter”)	Image Mode = M mode
AV Cusp Sep	AV	(17996-0, LN, “Aortic Valve Cusp Separation”)	Image Mode = M mode
LA Diam.	Left Atrium	(29469-4, LN, “Left Atrium Antero-posterior Systolic Dimension”)	Image Mode = M mode
LA/Ao	Left Atrium	(17985-3, LN, “Left Atrium to Aortic Root Ratio”)	Image Mode = M mode
RAP	Right Atrium	(G-0380, SRT, “Right Ventricular Peak Systolic Pressure”)	
RAAs	Right Atrium	(17988-7, LN, “Right Atrium Systolic Area”)	
IVC Diam Ins.	Right Atrium	(18006-7, LN, “Inferior Vena Cava Diameter”)	Respiratory Cycle Point = During Inspiration
IVC Diam Exp.	Right Atrium	(18006-7, LN, “Inferior Vena Cava Diameter”)	Respiratory Cycle Point = During Expiration
IVC % Change	Right Atrium	(18050-5, LN, “Inferior Vena Cava % Collapse”)	
LVOT Diam	Left Ventricular Outflow Tract	(G-038F, SRT, “Cardiovascular Orifice Diameter”)	Image Mode = 2D mode
LVOT Area	Left Ventricular Outflow Tract	(G-038E, SRT, “Cardiovascular Orifice Area”)	Image Mode = 2D mode
Vmax	Left Ventricular Outflow Tract	(11726-7, LN, “Peak Velocity”)	
Pgmax	Left Ventricular Outflow Tract	(20247-3, LN, “Peak Gradient”)	
Vmean	Left Ventricular Outflow Tract	(20352-1, LN, “Mean Velocity”)	
Pgmean	Left Ventricular Outflow Tract	(20256-4, LN, “Mean Gradient”)	
VTI	Left Ventricular Outflow Tract	(20354-7, LN, “Velocity Time Integral”)	

AccT	Left Ventricular Outflow Tract	(20168-1, LN, “Acceleration Time”)	
SV	Left Ventricular Outflow Tract	(F-32120, SRT, “Stroke Volume”)	
CO	Left Ventricular Outflow Tract	(F-32100, SRT, “Cardiac Output”)	
RVOT Diam	Right Ventricular Outflow Tract	(G-038F, SRT, "Cardiovascular Orifice Diameter")	
RVOT Area	Right Ventricular Outflow Tract	(G-038E, SRT, “Cardiovascular Orifice Area”)	
PVA(Vmax)	Right Ventricular Outflow Tract	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Continuity Equation by Peak Velocity
TVA(Vmax)	Right Ventricular Outflow Tract	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Continuity Equation by Peak Velocity
Vmax	Right Ventricular Outflow Tract	(11726-7, LN, “Peak Velocity”)	
Vmean	Right Ventricular Outflow Tract	(20352-1, LN, “Mean Velocity“)	
Pgmax	Right Ventricular Outflow Tract	(20247-3, LN, “Peak Gradient”)	
Pgmean	Right Ventricular Outflow Tract	(20256-4, LN, “Mean Gradient”)	
VTI	Right Ventricular Outflow Tract	(20354-7, LN, “Velocity Time Integral”)	
SV	Right Ventricular Outflow Tract	(F-32120, SRT, “Stroke Volume”)	

CO	Right Ventricular Outflow Tract	(F-32100, SRT, “Cardiac Output”)	
AV Cusp	Aortic Valve	(17996-0, LN, "Aortic Valve Cusp Separation")	Image Mode = 2D mode
AV Diam	Aortic Valve	(G-038F, SRT, "Cardiovascular Orifice Diameter”)	Image Mode = 2D mode
AVA Planimetry	Aortic Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Image Mode = 2D mode Measurement Method = Planimetry
AVA(Vmax)	Aortic Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Continuity Equation by Peak Velocity
AVA(VTI)	Aortic Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Continuity Equation by Velocity Time Integral
AV Vmax	Aortic Valve	(11726-7, LN, “Peak Velocity”)	
AV Vmean	Aortic Valve	(20352-1, LN, “Mean Velocity“)	
AV PGmax	Aortic Valve	(20247-3, LN, “Peak Gradient”)	
AV PGmean	Aortic Valve	(20256-4, LN, “Mean Gradient”)	
AV PHT	Aortic Valve	(20280-4, LN, “Pressure Half-Time”)	
AV VTI	Aortic Valve	(20354-7, LN, “Velocity Time Integral”)	
AV AccT	Aortic Valve	(20168-1, LN, “Acceleration Time”)	
AV DecT	Aortic Valve	(20217-6, LN, "Deceleration Time")	
AV Dec	Aortic Valve	(20216-8, LN, "Deceleration Slope"	
AV EjectT	Aortic Valve	(18041-4, LN, Aortic Valve Ejection Time)	
AV AccT/ET	Aortic Valve	(G-0382, SRT, “Ratio of Aortic Valve Acceleration Time to Ejection Time”)	
AR VC Diam	Aortic Valve	(G-038F, SRT, “Cardiovascular Orifice Diameter”)	Image Mode = 2D mode Flow Direction = Regurgitant Flow
AR Vmax	Aortic Valve	(11726-7, LN, “Peak Velocity”)	
AR Vmean	Aortic Valve	(20352-1, LN, “Mean Velocity“)	
AR PGmax	Aortic Valve	(20247-3, LN, “Peak Gradient”)	
AR PGmean	Aortic Valve	(20256-4, LN, “Mean Gradient”)	
AR PHT	Aortic Valve	(20280-4, LN, “Pressure Half-Time”)	
AR VTI	Aortic Valve	(20354-7, LN, “Velocity Time Integral”)	
AR AccT	Aortic Valve	(20168-1, LN, “Acceleration Time”)	
AR DecT	Aortic Valve	(20217-6, LN, "Deceleration Time")	

AR Dec	Aortic Valve	(20216-8, LN, "Deceleration Slope"	
AR PISA Rad.	Aortic Valve	(G-038F, SRT, "Cardiovascular Orifice Diameter”)	Image Mode = 2D mode Measurement Method = Proximal Isovelocity Surface Area
AR Flow Rate	Aortic Valve	(34141-2, LN, "Peak Instantaneous Flow Rate")	
AR ERO	Aortic Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Proximal Isovelocity Surface Area
AR Volume	Aortic Valve	(33878-0, LN, “Volume Flow”)	Measurement Method = Proximal Isovelocity Surface Area
AR Fraction	Aortic Valve	(G-0390-4, SRT, “Regurgitant Fraction”)	
AV IVRT	Aortic Valve	(18071-1, LN, “Left Ventricular Isovolumic Relaxation Time”)	
AV IVCT	Aortic Valve	(G-037E, SRT, “Left Ventricular Isovolumic Contraction Time”)	
Tei Index	Aortic Valve	(G-037F, SRT, “Left Ventricular Index of Myocardial Performance”)	
E-F Slope	Mitral Valve	(18040-6, LN, “Mitral Valve E-F Slope by M-Mode”)	
EPSS	Mitral Valve	(18036-4, LN, “Mitral Valve EPSS, E wave”)	
MV Ann Diam	Mitral Valve	(G-038F, SRT, “Cardiovascular Orifice Diameter”)	Image Mode = 2D mode Finding Site = Mitral Annulus Flow Direction = Antegrade Flow
Diam1	Mitral Valve	(G-038F, SRT, “Cardiovascular Orifice Diameter”)	Image Mode = 2D mode
Diam2	Mitral Valve	(G-038F, SRT, “Cardiovascular Orifice Diameter”)	Image Mode = 2D mode
MVA Planimetry	Mitral Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Planimetry
MVArea	Mitral Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Image Mode = 2D mode
MVA(Vmax)	Mitral Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Continuity Equation by Peak Velocity
MVA(PHT)	Mitral Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Flow Direction = Antegrade Flow Measurement Method = Area by PHT
MVA(VTI)	Mitral Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Continuity Equation by Velocity Time Integral

MV Peak A	Mitral Valve	(17978-8, LN, “Mitral Valve A-Wave Peak Velocity”)	
MV Peak E	Mitral Valve	(18037-2, LN, “Mitral Valve E-Wave Peak Velocity”)	
MV E/A	Mitral Valve	(18038-0, LN, “Mitral Valve E to A Ratio”)	
MV Vmax	Mitral Valve	(11726-7, LN, “Peak Velocity”)	Flow Direction = Antegrade Flow
MV Vmean	Mitral Valve	(20352-1, LN, “Mean Velocity”)	Flow Direction = Antegrade Flow
MV PGmax	Mitral Valve	(18057-0, LN, “Mitral Valve Diastolic Peak Instantaneous Gradient”)	Flow Direction = Antegrade Flow
MV PGmean	Mitral Valve	(20256-4, LN, “Mean Gradient”)	Flow Direction = Antegrade Flow
MV PHT	Mitral Valve	(20280-4, LN, “Pressure Half-Time”)	Flow Direction = Antegrade Flow
MV VTI	Mitral Valve	(20354-7, LN, “Velocity Time Integral”)	Flow Direction = Antegrade Flow
MV AccT	Mitral Valve	(20168-1, LN, “Acceleration Time”)	Flow Direction = Antegrade Flow
MV DecT	Mitral Valve	(20217-6, LN, "Deceleration Time")	Flow Direction = Antegrade Flow
MV Dec	Mitral Valve	(20216-8, LN, "Deceleration Slope"	Flow Direction = Antegrade Flow
MV AccT/DecT	Mitral Valve	(G-0386, SRT, “Mitral Valve AT/DT Ratio”)	
MV A Dur	Mitral Valve	(G-0385, SRT, "Mitral Valve A-Wave Duration")	
SV	Mitral Valve	(F-32120, SRT, “Stroke Volume”)	
CO	Mitral Valve	(F-32100, SRT, “Cardiac Output”)	
MV IVRT	Mitral Valve	(18071-1, LN, “Left Ventricular Isovolumic Relaxation Time”)	
MV IVCT	Mitral Valve	(G-037E, SRT, “Left Ventricular Isovolumic Contraction Time”)	
Tei Index	Mitral Valve	(G-037F, SRT, "Left Ventricular Index of Myocardial Performance ")	
MR Vmax	Mitral Valve	(11726-7, LN, “Peak Velocity”)	Flow Direction = Regurgitant Flow
MR Vmean	Mitral Valve	(20352-1, LN, “Mean Velocity”)	Flow Direction = Regurgitant Flow
MR PGmax	Mitral Valve	(20247-3, LN, “Peak Gradient”)	Flow Direction = Regurgitant Flow
MR PGmean	Mitral Valve	(20256-4, LN, Mean Gradient”)	Flow Direction = Regurgitant Flow
MR VTI	Mitral Valve	(20354-7, LN, “Velocity Time Integral”)	Flow Direction = Regurgitant Flow
MR dp/dt	Mitral Valve	(18035-6, LN, “Mitral Regurgitation dP/dt derived from Mitral Regurgitation velocity”)	
MR PISA Rad.	Mitral Valve	(G-038F, SRT, "Cardiovascular Orifice Diameter”)	Image Mode = 2D mode Measurement Method = Proximal

			Isovelocity Surface Area
MR Flow Rate	Mitral Valve	(34141-2, LN, "Peak Instantaneous Flow Rate")	
MR ERO	Mitral Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Proximal Isovelocity Surface Area
MR Volume	Mitral Valve	(33878-0, LN, “Volume Flow”)	Measurement Method = Proximal Isovelocity Surface Area
MR Fraction	Mitral Valve	(G-0390, SRT, “Regurgitant Fraction”)	
TV Ann Diam	Tricuspid Valve	(G-038F, SRT, “Cardiovascular Orifice Diameter”)	Image Mode = 2D mode
TV Diam1	Tricuspid Valve	(G-038F, SRT, “Cardiovascular Orifice Diameter”)	Image Mode = 2D mode
TV Diam2	Tricuspid Valve	(G-038F, SRT, “Cardiovascular Orifice Diameter”)	Image Mode = 2D mode
TVA Planimetry	Tricuspid Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Image Mode = 2D mode Measurement Method = Planimetry
TV Area	Tricuspid Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Image Mode = 2D mode
TVA(VTI)	Tricuspid Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Continuity Equation by Velocity Time Integral
TV Vmax	Tricuspid Valve	(11726-7, LN, “Peak Velocity”)	Flow Direction = Antegrade Flow
TV Peak E	Tricuspid Valve	(18031-5, LN, “Tricuspid Valve E Wave Peak Velocity”)	Flow Direction = Antegrade Flow
TV Peak A	Tricuspid Valve	(18030-7, LN, “Tricuspid Valve A Wave Peak Velocity”)	Flow Direction = Antegrade Flow
TV E/A	Tricuspid Valve	(18039-8, LN, “Tricuspid Valve E to A Ratio”)	Flow Direction = Antegrade Flow
TV Vmean	Tricuspid Valve	(20352-1, LN, “Mean Velocity”)	Flow Direction = Antegrade Flow
TV PGmax	Tricuspid Valve	(20247-3, LN, “Peak Gradient”)	Flow Direction = Antegrade Flow
TV PGmean	Tricuspid Valve	(20256-4, LN, “Mean Gradient”)	Flow Direction = Antegrade Flow
TV PHT	Tricuspid Valve	(20280-4, LN, “Pressure Half-Time”)	Flow Direction = Antegrade Flow
TV VTI	Tricuspid Valve	(20354-7, LN, “Velocity Time Integral”)	Flow Direction = Antegrade Flow
TV AccT	Tricuspid Valve	(20168-1, LN, “Acceleration Time”)	Flow Direction = Antegrade Flow
TV DecT	Tricuspid Valve	(20217-6, LN, "Deceleration Time")	Flow Direction = Antegrade Flow
TV Dec	Tricuspid Valve	(20216-8, LN, "Deceleration Slope"	Flow Direction = Antegrade Flow
TV SV	Tricuspid Valve	(F-32120, SRT, “Stroke Volume”)	

TV CO	Tricuspid Valve	(F-32100, SRT, “Cardiac Output”)	
Q to TV Open	Tricuspid Valve	(20296-0, LN, “Time from Q wave to Tricuspid Valve Opens”)	
TR Vmax	Tricuspid Valve	(11726-7, LN, “Peak Velocity”)	Flow Direction = Regurgitant Flow
TR PGmax	Tricuspid Valve	(20247-3, LN, “Peak Gradient”)	Flow Direction = Regurgitant Flow
TR Vmean	Tricuspid Valve	(20352-1, LN, “Mean Velocity”)	Flow Direction = Regurgitant Flow
TR PGmean	Tricuspid Valve	(20256-4, LN, “Mean Gradient”)	Flow Direction = Regurgitant Flow
TR VTI	Tricuspid Valve	(20354-7, LN, “Velocity Time Integral”)	Flow Direction = Regurgitant Flow
RV Systolic Pressure	Tricuspid Valve	(G-0380, SRT, "Right Ventricular Peak Systolic Pressure")	
TR dp/dt	Tricuspid Valve	(18034-9, LN, "Tricuspid Regurgitation dP/dt")	
TR PISA Rad.	Tricuspid Valve	(G-038F, SRT, "Cardiovascular Orifice Diameter”)	Image Mode = 2D mode Measurement Method = Proximal Isovelocity Surface Area
TR Flow Rate	Tricuspid Valve	(34141-2, LN, "Peak Instantaneous Flow Rate")	
TR ERO	Tricuspid Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Proximal Isovelocity Surface Area
TR Volume	Tricuspid Valve	(33878-0, LN, “Volume Flow”)	Measurement Method = Proximal Isovelocity Surface Area
TR Fraction	Tricuspid Valve	(G-0390, SRT, “Regurgitant Fraction”)	
PV Ann Diam	Pulmonic Valve	(G-038F, SRT, “Cardiovascular Orifice Diameter”)	
PV Area	Pulmonic Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	
PVA Planimetry	Pulmonic Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Planimetry
PV Vmax	Pulmonic Valve	(11726-7, LN, “Peak Velocity”)	Flow Direction = Antegrade Flow
PV Vmean	Pulmonic Valve	(20352-1, LN, "Mean Velocity")	Flow Direction = Antegrade Flow
PV Pgmax	Pulmonic Valve	(20247-3, LN, “Peak Gradient”)	Flow Direction = Antegrade Flow
PV Pgmean	Pulmonic Valve	(20256-4, LN, “Mean Gradient”)	Flow Direction = Antegrade Flow
PV PHT	Pulmonic Valve	(20280-4, LN, "Pressure Half-Time")	Flow Direction = Antegrade Flow
PV VTI	Pulmonic Valve	(20354-7, LN, “Velocity Time Integral”)	Flow Direction = Antegrade Flow
PVA(VTI)	Pulmonic Valve	(G-038E, SRT, “Cardiovascular Orifice Area”)	Measurement Method = Continuity Equation by Velocity Time Integral
PV AccT	Pulmonic Valve	(20168-1, LN, “Acceleration Time”)	Flow Direction = Antegrade Flow

PV DecT	Pulmonic Valve	(20217-6, LN, "Deceleration Time")	Flow Direction = Antegrade Flow
PV Dec	Pulmonic Valve	(20216-8, LN, "Deceleration Slope"	Flow Direction = Antegrade Flow
PV ET	Pulmonic Valve	(18042-2, LN, "Pulmonic Valve Ejection Time")	
PV AccT/ET	Pulmonic Valve	(G-0388, SRT, "Ratio of Pulmonic Valve Acceleration Time to Ejection Time")	
Q to PV Close	Pulmonic Valve	(20295-2, LN, "Time from Q wave to Pulmonic Valve Closes")	
PR VC Diam	Pulmonic Valve		Image Mode = 2D mode Flow Direction = Regurgitant Flow
PR Vmax	Pulmonic Valve	(11726-7, LN, “Peak Velocity”)	Flow Direction = Regurgitant Flow
MPA Vmax	Pulmonic Valve	(G-038A, SRT, “Main Pulmonary Artery Velocity”)	
PR Vmean	Pulmonic Valve	(20352-1, LN, "Mean Velocity")	Flow Direction = Regurgitant Flow
PR Pgmax	Pulmonic Valve	(20247-3, LN, “Peak Gradient”)	Flow Direction = Regurgitant Flow
PR Pgmean	Pulmonic Valve	(20256-4, LN, “Mean Gradient”)	Flow Direction = Regurgitant Flow
PV PHT	Pulmonic Valve	(20280-4, LN, "Pressure Half-Time")	Flow Direction = Regurgitant Flow
PR AccT	Pulmonic Valve	(20168-1, LN, “Acceleration Time”)	Flow Direction = Regurgitant Flow
PR DecT	Pulmonic Valve	(20217-6, LN, "Deceleration Time")	Flow Direction = Regurgitant Flow
PR Dec	Pulmonic Valve	(20216-8, LN, "Deceleration Slope"	Flow Direction = Regurgitant Flow
Tei Index	Left Ventricle	(G-037F, SRT, “Left Ventricular Index of Myocardial Performance”)	
MV IVRT	Left Ventricle	(18071-1, LN, “Left Ventricular Isovolumic Relaxation Time”)	
MV IVCT	Left Ventricle	(G-037E, SRT, “Left Ventricular Isovolumic Contraction Time”)	
Sys Vel.	Pulmonary Venous Structure	(29450-4, LN, “Pulmonary Vein Systolic Peak Velocity”)	
Dias Vel.	Pulmonary Venous Structure	(29451-2, LN, “Pulmonary Vein Diastolic Peak Velocity”)	
Sys/Dias	Pulmonary Venous Structure	(29452-0, LN, “Pulmonary Vein Systolic to Diastolic Ratio”)	

A. Rev Vel.	Pulmonary Venous Structure	(29453-8, LN, “Pulmonary Vein Atrial Contraction Reversal Peak Velocity”)	
A. Rev Dur.	Pulmonary Venous Structure	(G-038B, SRT, “Pulmonary Vein A-Wave Duration”)	
Sys Vel.	Hepatic Vein	(29471-0, LN, “Hepatic Vein Systolic Peak Velocity”)	
Dias Vel.	Hepatic Vein	(29472-8, LN, “Hepatic Vein Diastolic Peak Velocity”)	
Sys/Dias	Hepatic Vein	(29473-6, LN, “Hepatic Vein Systolic to Diastolic Ratio”)	
A. Rev Vel.	Hepatic Vein	(29474-4, LN, “Hepatic Vein Atrial Contraction Reversal Peak Velocity”)	
Peak E'	Left Ventricle	(G-037A, SRT, “Left Ventricular Peak Early Diastolic Tissue Velocity”)	
MV E/E'	Left Ventricle	(G-037B, SRT, “Ratio of MV Peak Velocity to LV Peak Tissue Velocity E-Wave”)	
Peak A'	Left Ventricle	(G-037C, SRT, “LV Peak Diastolic Tissue Velocity During Atrial Systole”)	
Peak S	Left Ventricle	(G-037D, SRT, “Left Ventricular Peak Systolic Tissue Velocity”)	
LVOT Diam(S)	Left Ventricular Outflow Tract	(G-038F, SRT, “Cardiovascular Orifice Diameter”)	Image Mode = 2D mode
RVOT Diam(P)	Left Ventricular Outflow Tract	(G-038F, SRT, "Cardiovascular Orifice Diameter")	Image Mode = 2D mode
Sys. VTI(S)	Left Ventricular Outflow Tract	(20354-7, LN, “Velocity Time Integral”)	
Pulm. VTI(P)	Left Ventricular Outflow Tract	(20354-7, LN, “Velocity Time Integral”)	
Sys. SV(S)	Left Ventricular Outflow Tract	(F-32120, SRT, “Stroke Volume”)	
Sys. SI(S)	Left Ventricular Outflow Tract	(F-00078, SRT, "Stroke Index")	
Sys. CO(S)	Left Ventricular Outflow Tract	(F-32100, SRT, “Cardiac Output”)	

Pulm. SV(P)	Left Ventricular Outflow Tract	(F-32120, SRT, “Stroke Volume”)	
Pulm. SI(P)	Left Ventricular Outflow Tract	(F-00078, SRT, "Stroke Index")	
Pulm. CO(P)	Left Ventricular Outflow Tract	(F-32100, SRT, “Cardiac Output”)	

9.4 UROLOGY STRUCTURED REPORT TEMPLATE

9.4.1 Urology Ultrasound Report Templates (TID SM99400)

Table 9.4-1
Urology Ultrasound Report Procedure Templates

No	Rel With Parent	VT	Concept Name	Comments	V8 Label
1		CONTAINER	EV (99400, MDSN, “Urology Ultrasound Report”)		
2	HAS OBS CONTEXT	INCLUDE	DTID (1001) Observation Context		
3	CONTAINS	INCLUDE	DTID (5001) Patient Characteristics		
4	CONTAINS	INCLUDE	DTID (5016) LWH Volume Group	$GroupName = EV (99017-0, MDSN, ” WG Prostate Volume”)	WG Prostate Vol.
5	CONTAINS	INCLUDE	DTID (5016) LWH Volume Group	$GroupName = EV (99017-1, MDSN, ” T-Zone Volume”)	T-Zone Vol.
6	CONTAINS	INCLUDE	DTID (5016) LWH Volume Group	$GroupName = EV (99017-2, MDSN, ” Bladder Volume”)	Bladder Vol.
7	CONTAINS	INCLUDE	DTID (SM99401) Residual Volume Group	$GroupName = EV (99017-3, MDSN, ” Residual Volume”)	Residual Vol.
8	CONTAINS	INCLUDE	DTID (5016) LWH Volume Group	$GroupName = EV (99017-6, MDSN, ” Right Renal Volume”)	Rt. Renal Vol.
9	CONTAINS	INCLUDE	DTID (5016) LWH Volume Group	$GroupName = EV (99017-7, MDSN, ” Left Renal Volume”)	Lt. Renal Vol.
10	CONTAINS	INCLUDE	DTID (SM99402) PSA Measurement Group	$GroupName = EV (99017-9, MDSN, “Prostate Specific Antigen”)	PSA
11	CONTAINS	INCLUDE	DTID (5104) Vascular Measurement Group	$AnatomyGroup = EV (99017-8,MDSN, “General Urology Measurement"	General
12	CONTAINS	INCLUDE	DTID (SM99410) Urology User Creation Group Section	Ref. Section 9.4.1.7	

9.4.1.1 Observation Context (TID 1001)

Table 9.4-2

OBSERVATION CONTEXT IN UROLOGY SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
D-1	HAS OBS CONTEXT	CODE	(121005, DCM, “Observer Type”)	(121006, DCM, “Person“)	
D-2	HAS OBS CONTEXT	PNAME	(121008, DCM, “Person Observer Name”)		Ref. Physician
D-3	HAS OBS CONTEXT	CODE	(121024, DCM, “Subject Class”)	(121025 ,DCM,"Patient”)	
D-4	HAS OBS CONTEXT	PNAME	(121029,DCM, “Subject Name”)		Last Name, First Name
D-5	HAS OBS CONTEXT	DATE	(121031,DCM, “Subject Birth Date”)		BirthDate
D-6	HAS OBS CONTEXT	CODE	(121032,DCM, “Subject Sex”)	(M, DCM, “Male”) (F, DCM, “Female”) (U, DCM, “Unknown sex”)	Gender

9.4.1.2 Patient Characteristics (TID 5001)

Table 9.4-3

PATIENT CHARACTERISTICS IN UROLOGY SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
D-7	CONTAINS	CONTAINTER	(121118,DCM “Patient Characteristics”)		
D-7-1	CONTAINS	NUM	(8302-2, LN, “Patient Height”)	(cm, UCUM, “centimeter”) (mm, UCUM, “millimeter”)	Height
D-7-2	CONTAINS	NUM	(29463-7, LN, “Patient Weight”)	(kg, UCUM, “kilograms”)	Weight

9.4.1.3 LHW Volume Group (TID 5016)

Table 9.4-4

LHW VOLUME GROUP IN UROLOGY SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
D-8		CONTAINER	$GroupName		
D-8-1	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Volume	Vol.
D-8-2	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Length $Derivation = DCID (3627) Measurement Type	L
D-8-3	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Width $Derivation = DCID (3627) Measurement Type	W
D-8-4	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Height $Derivation = DCID (3627) Measurement Type	H

9.4.1.4 Residual Volume Group (TID SM99401)

Table 9.4-5
Residual Volume Group in UROLOGY SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
D-9		CONTAINER	$GroupName		
D-9-1	CONTAINS	INCLUDE	DTID (5016) LWH Volume Group	$GroupName = EV (99017-4, MDSN, “Pre Void Volume”)	Pre
D-9-2	CONTAINS	INCLUDE	DTID (5016) LWH Volume Group	$GroupName = EV (99017-5, MDSN, “Post Void Volume”)	Post
D-9-3	CONTAINS	INCLUDE	DTID (5016) LWH Volume Group	$GroupName = EV (99017-12, MDSN, “Void Volume”)	Void

9.4.1.5 PSA Measurement Group (TID SM99402)

Table 9.4-6
PSA Measurement Group in UROLOGY SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
D-10		CONTAINER	$GroupName		
D-10-1	CONTAINS	NUM	(99017-10, MDSN, “Predicted PSA by WG”)		PREDPSA

D-10-2	CONTAINS	NUM	(99017-11, MDSN, “Predicted PSA by T-Zone”)		TZPSA

9.4.1.6 Vascular Measurement Group (TID 5104)

Table 9.4-7
Vascular Measurement Group in UROLOGY SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
D-11		CONTAINER	$AnatomyGroup	$AnatomyGroup=MDSN\99017-8\General Urology Measurement	General
D-11-1	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = DCID (12119) Vascular Ultrasound Property	
				$Derivation = DCID (3627) Measurement Type	

9.4.1.7 Urology User Creation Group Section (TID SM99410)

Table 9.4-8
User Creation Group in UROLOGY SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label	Comments
D-12	CONTAINS	CONTAINER	(99900-Creation ID, MDSN, “User Creation Group Name”)			*Creation ID: Randomly generated 7-digit unique ID
D-12-1	CONTAINS	NUM	(99900-Creation ID, MDSN, “User Creation Item Name”)			
D-12-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		

9.4.2 Urology Measurement and Calculation used in Urology SR

Table 9.4-9
Urology Measurement and Calculation Items

V8 Label	DICOM SR Concept Name (CSD\CV\CM)
WG Prostate L	SRT\G-A22A\Length
WG Prostate H	DCM\121207\Height
WG Prostate W	SRT\G-A220\Width
Vol.	SRT\G-D705\Volume
T-Zone L	SRT\G-A22A\Length
T-Zone H	DCM\121207\Height
T-Zone W	SRT\G-A220\Width
Vol.	SRT\G-D705\Volume
Bladder L	SRT\G-A22A\Length
Bladder H	DCM\121207\Height
Bladder W	SRT\G-A220\Width
Vol.	SRT\G-D705\Volume
Pre L	SRT\G-A22A\Length
Pre H	DCM\121207\Height
Pre W	SRT\G-A220\Width
Pre Vol.	SRT\G-D705\Volume
Post L	SRT\G-A22A\Length
Post H	DCM\121207\Height
Post W	SRT\G-A220\Width
Post Vol.	SRT\G-D705\Volume
Void Vol.	SRT\G-D705\Volume
Rt. Renal L	SRT\G-A22A\Length
Rt. Renal H	DCM\121207\Height
Rt. Renal W	SRT\G-A220\Width
Vol.	SRT\G-D705\Volume
Rt. Renal Pelvis	MDSN\99005-13\Right Pelvis
Lt. Renal L	SRT\G-A22A\Length
Lt. Renal H	DCM\121207\Height
Lt. Renal W	SRT\G-A220\Width
Vol.	SRT\G-D705\Volume
Lt. Renal Pelvis	MDSN\99005-14\Left Pelvis
PSA	MDSN\99017-9\Prostate Specific Antigen
PREDPSA	MDSN\99017-10\Predicted PSA by WG
TZPSA	MDSN\99017-11\Predicted PSA by T-Zone

General	MDSN\99017-8\General Urology Measurement
PSV	LN\11726-7\Peak Systolic Velocity
EDV	LN\11653-3\End Diastolic Velocity
TAPV	LN\11692-1\Time averaged peak velocity
TAMV	LN\20352-1\Time averaged mean velocity
PGmax	LN\20247-3\Peak Gradient
PGmean	LN\20256-4\Mean Gradient
S/D	LN\12144-2\Systolic to Diastolic Velocity Ratio
D/S	MDSN\99200-01\Diastolic to Systolic Velocity Ratio
RI	LN\12023-8\Resistivity Index
PI	LN\12008-9\Pulsatility Index
%StA	SRT\R-101BA\Lumen Area Stenosis
%StA Outer Area	SRT\G-0366\Vessel lumen cross-sectional area
%StA Inner Area	SRT\R-1025D\Vessel Intimal Cross-Sectional Area
%StD	SRT\R-101BB\Lumen Diameter Stenosis
%StD Outer Dist.	SRT\G-0364\Vessel lumen diameter
%StD Inner Dist.	SRT\R-1025C\Vessel Intimal Diameter
Vesl. Area	MDSN\99200-02\Vessel Area
Vol. Flow(A)	SRT\G-0365\Vessel outside diameter
Vesl. Dist	LN\33878-0\Volume flow
Vol. Flow(D)	LN\33878-0\Volume flow

9.5 SMALL PARTS STRUCTURED REPORT TEMPLATE

9.5.1 SmallParts Ultrasound Report Templates (TID SM99500)

Table 9.5-1
SmallParts Ultrasound Report Procedure Templates

No	Rel With Parent	VT	Concept Name	Comments	V8 Label
1		CONTAINER	EV (SM99500, MDSN, “SmallParts Ultrasound Report”)		
2	HAS OBS CONTEXT	INCLUDE	DTID (1001) Observation Context		
3	CONTAINS	INCLUDE	DTID (5001) Patient Characteristics		
4	CONTAINS	INCLUDE	DTID (SM99501) Small Parts Measurement Group		
8	CONTAINS	INCLUDE	DTID (SM99501) Small Parts Measurement Group		
9	CONTAINS	INCLUDE	DTID (SM99501) Small Parts Measurement Group		

9.5.1.1 Observation Context (TID 1001)

Table 9.5-2
OBSERVATION CONTEXT IN UROLOGY SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
E-1	HAS OBS CONTEXT	CODE	(121005, DCM, “Observer Type”)	(121006, DCM, “Person“)	
E-2	HAS OBS CONTEXT	PNAME	(121008, DCM, “Person Observer Name”)		Ref. Physician
E-3	HAS OBS CONTEXT	CODE	(121024, DCM, “Subject Class”)	(121025 ,DCM,"Patient”)	
E-4	HAS OBS CONTEXT	PNAME	(121029,DCM, “Subject Name”)		Last Name, First Name
E-5	HAS OBS CONTEXT	DATE	(121031,DCM, “Subject Birth Date”)		BirthDate

E-6	HAS OBS CONTEXT	CODE	(121032,DCM, “Subject Sex”)	(M, DCM, “Male”) (F, DCM, “Female”) (U, DCM, “Unknown sex”)	Gender

9.5.1.2 Patient Characteristics (TID 5001)

Table 9.5-3

PATIENT CHARACTERISTICS IN SMALL PARTS SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
E-7	CONTAINS	CONTAINTER	(121118,DCM “Patient Characteristics”)		
E-7-1	CONTAINS	NUM	(8302-2, LN, “Patient Height”)	(cm, UCUM, “centimeter”) (mm, UCUM, “millimeter”)	Height
E-7-2	CONTAINS	NUM	(29463-7, LN, “Patient Weight”)	(kg, UCUM, “kilograms”)	Weight

9.5.1.3 Small Parts Measruement Group (TID SM99501)

Table 9.5-4

Small Parts Measruement Group in SMALL PARTS SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
E-8		CONTAINER	(121070, DCM, “Findings”)		
E-8-1	HAS CONCEPT MOD	CODE	(G-C0E3, SRT, “Finding Site”)	(T-B6000, SRT, “Thyroid”) (T-94000, SRT, “Testis”) (G-A139, SRT, “Superficial”)	
E-8-2	HAS CONCEPT MOD	CODE	(G-C171, SRT, “Laterality”)	(G-A100, SRT, “Right”) (G-A101, SRT, “Left”) (G-A103, SRT, “Unilateral”)	
E-8-3	CONTAINS	INCLUDE	DTID (SM99102) Mass Measurement Group		Mass
E-8-4	CONTAINS	INCLUDE	DTID (5016) LWH Volume Group	$GroupName = EV (99100-6, MDSN, “Thyroid Volume”) $GroupName = EV (99100-15, MDSN, “Lobe”)	Vol.

				$GroupName = EV (99100-9, MDSN, “Testis Volume”)	
				$GroupName = EV (99100-11, MDSN, “Superficial Volume”)	
E-8-5	CONTAINS	INCLUDE	DTID (5104) Vascular Measurement Group	$AnatomyGroup = EV (99100-7, MDSN, “Thyroid Flow”)	Flow
				$AnatomyGroup = EV(99100-10, MDSN, “Testis Flow”)	
				$AnatomyGroup = EV (99100-12, MDSN, “Superficial Flow”)	
E-8-6	CONTAINS	CONTAINER	(99100-16, MDSN, “Isthmus”)		Isthmus
E-8-6-1	CONTAINS	NUM	(99100-16, MDSN, “Isthmus”)		
E-8-7	CONTAINS	INCLUDE	DTID (SM99510) Small Parts User Creation Group Section	Ref. Section 9.5.1.7	

9.5.1.4 Mass Measruement Group (TID SM99102)

Table 9.5-5
Mass Measruement Group in SMALL PARTS SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
E-8-2	CONTAINS	CONTAINTER	(M-03000, SRT, “Mass”)		
E-8-2-1	HAS OBS CONTEXT	TEXT	(12510, DCM, “Identifier”)		"1", "2" … “5”
E-8-2-2	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Volume	Vol.
E-8-2-3	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Length	L
				$Derivation = DCID (3627) Measurement Type	
E-8-2-4	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Depth	D
				$Derivation = DCID (3627) Measurement Type	
E-8-2-5	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement =$Width	W
				$Derivation = DCID (3627) Measurement Type	

9.5.1.5 LHW Volume Group (TID 5016)

Table 9.5-6

LHW VOLUME GROUP IN SMALL PARTS SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
E-8-3		CONTAINER	$GroupName		
E-8-3-1	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Volume	Vol.
E-8-3-2	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Length	L
				$Derivation = DCID (3627) Measurement Type	
E-8-3-3	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Width	W
				$Derivation = DCID (3627) Measurement Type	
E-8-3-4	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Height	H
				$Derivation = DCID (3627) Measurement Type	

9.5.1.6 Vascular Measurement Group (TID 5104)

Table 9.5-7

Vascular Measurement Group in SMALL PARTS SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
E-8-4		CONTAINER	$AnatomyGroup		Flow
E-8-4-1	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = DCID (12119) Vascular Ultrasound Property	
				$Derivation = DCID (3627) Measurement Type	

9.5.1.7 Small Parts User Creation Group Section (TID SM99510)

Table 9.5-8

User Creation Group in SMALL PARTS SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label	Comments
E-8-7	CONTAINS	CONTAINER	(99900-Creation ID, MDSN, “User Creation Group Name”)			*Creation ID: Randomly generated 7-digit unique ID
E-8-7-1	CONTAINS	NUM	(99900-Creation ID, MDSN, “User Creation Item Name”)			
E-8-7-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		

9.5.2 SmallParts Measurement and Calculation used in Small Parts SR

9.5.2.1 Thyroid Measurement and Calculation used in Small Parts SR

Table 9.5-9
Thyroid Measurement and Calculation Items

V8 Label	DICOM SR Concept Name (CDS CV CM)
Thyroid	SRT\T-B6000\Thyroid
Mass1	SRT\M-03000\Mass
Mass1 L	SRT\G-A22A\Length
Mass1 D	DCM\G-D785\Depth
Mass1 W	SRT\G-A220\Width
Mass1 Vol.	SRT\G-D705\Volume
Mass2	SRT\M-03000\Mass
Mass2 L	SRT\G-A22A\Length
Mass2 D	DCM\G-D785\Depth
Mass2 W	SRT\G-A220\Width
Mass2 Vol.	SRT\G-D705\Volume
Mass3	SRT\M-03000\Mass
Mass3 L	SRT\G-A22A\Length
Mass3 D	DCM\G-D785\Depth
Mass3 W	SRT\G-A220\Width
Mass3 Vol.	SRT\G-D705\Volume
Mass4	SRT\M-03000\Mass

Mass4 L	SRT\G-A22A\Length
Mass4 D	DCM\G-D785\Depth
Mass4 W	SRT\G-A220\Width
Mass4 Vol.	SRT\G-D705\Volume
Mass5	SRT\M-03000\Mass
Mass5 L	SRT\G-A22A\Length
Mass5 D	DCM\G-D785\Depth
Mass5 W	SRT\G-A220\Width
Mass5 Vol.	SRT\G-D705\Volume
Thyroid Vol.	MDSN\99100-6\Thyroid Volume
Thyroid L	SRT\G-A22A\Length
Thyroid H	DCM\121207\Height
Thyroid W	SRT\G-A220\Width
Thyroid Flow	MDSN\99100-7\Thyroid Flow
PSV	LN\11726-7\Peak Systolic Velocity
EDV	LN\11653-3\End Diastolic Velocity
TAPV	LN\11692-1\Time averaged peak velocity
TAMV	LN\20352-1\Time averaged mean velocity
PGmax	LN\20247-3\Peak Gradient
PGmean	LN\20256-4\Mean Gradient
S/D	LN\12144-2\Systolic to Diastolic Velocity Ratio
D/S	MDSN\99200-01\Diastolic to Systolic Velocity Ratio
RI	LN\12023-8\Resistivity Index
PI	LN\12008-9\Pulsatility Index
%StA	SRT\R-101BA\Lumen Area Stenosis
%StA Outer Area	SRT\G-0366\Vessel lumen cross-sectional area
%StA Inner Area	SRT\R-1025D\Vessel Intimal Cross-Sectional Area
%StD	SRT\R-101BB\Lumen Diameter Stenosis
%StD Outer Dist.	SRT\G-0364\Vessel lumen diameter
%StD Inner Dist.	SRT\R-1025C\Vessel Intimal Diameter
Vesl. Area	MDSN\99200-02\Vessel Area
Vol. Flow(A)	SRT\G-0365\Vessel outside diameter
Vesl. Dist	LN\33878-0\Volume flow
Vol. Flow(D)	LN\33878-0\Volume flow

9.5.2.2 Testis Measurement and Calculation used in Small Parts SR

Table 9.5-9
Testis Measurement and Calculation Items

V8 Label	DICOM SR Concept Name (CDS CV CM)
Testis	SRT\T-94000\Testis
Mass1	SRT\M-03000\Mass
Mass1 L	SRT\G-A22A\Length
Mass1 D	DCM\G-D785\Depth
Mass1 W	SRT\G-A220\Width
Mass1 Vol.	SRT\G-D705\Volume
Mass2	SRT\M-03000\Mass
Mass2 L	SRT\G-A22A\Length
Mass2 D	DCM\G-D785\Depth
Mass2 W	SRT\G-A220\Width
Mass2 Vol.	SRT\G-D705\Volume
Mass3	SRT\M-03000\Mass
Mass3 L	SRT\G-A22A\Length
Mass3 D	DCM\G-D785\Depth
Mass3 W	SRT\G-A220\Width
Mass3 Vol.	SRT\G-D705\Volume
Mass4	SRT\M-03000\Mass
Mass4 L	SRT\G-A22A\Length
Mass4 D	DCM\G-D785\Depth
Mass4 W	SRT\G-A220\Width
Mass4 Vol.	SRT\G-D705\Volume
Mass5	SRT\M-03000\Mass
Mass5 L	SRT\G-A22A\Length
Mass5 D	DCM\G-D785\Depth
Mass5 W	SRT\G-A220\Width
Mass5 Vol.	SRT\G-D705\Volume
Testis Vol.	MDSN\99100-9\Testis Volume
Testis L	SRT\G-A22A\Length
Testis H	DCM\121207\Height

Testis W	SRT\G-A220\Width
Testis Flow	MDSN\99100-10\Testis Flow
PSV	LN\11726-7\Peak Systolic Velocity
EDV	LN\11653-3\End Diastolic Velocity
TAPV	LN\11692-1\Time averaged peak velocity
TAMV	LN\20352-1\Time averaged mean velocity
PGmax	LN\20247-3\Peak Gradient
PGmean	LN\20256-4\Mean Gradient
S/D	LN\12144-2\Systolic to Diastolic Velocity Ratio
D/S	MDSN\99200-01\Diastolic to Systolic Velocity Ratio
RI	LN\12023-8\Resistivity Index
PI	LN\12008-9\Pulsatility Index
%StA	SRT\R-101BA\Lumen Area Stenosis
%StA Outer Area	SRT\G-0366\Vessel lumen cross-sectional area
%StA Inner Area	SRT\R-1025D\Vessel Intimal Cross-Sectional Area
%StD	SRT\R-101BB\Lumen Diameter Stenosis
%StD Outer Dist.	SRT\G-0364\Vessel lumen diameter
%StD Inner Dist.	SRT\R-1025C\Vessel Intimal Diameter
Vesl. Area	MDSN\99200-02\Vessel Area
Vol. Flow(A)	SRT\G-0365\Vessel outside diameter
Vesl. Dist	LN\33878-0\Volume flow
Vol. Flow(D)	LN\33878-0\Volume flow

9.5.2.3 Superficial Measurement and Calculation used in Small Parts SR

Table 9.5-10

Superficial Measurement and Calculation Items

V8 Label	DICOM SR Concept Name (CDS CV CM)
Superficial	SRT\G-A139\Superficial
Mass1	SRT\M-03000\Mass
Mass1 L	SRT\G-A22A\Length
Mass1 D	DCM\G-D785\Depth
Mass1 W	SRT\G-A220\Width
Mass1 Vol.	SRT\G-D705\Volume

Mass2	SRT\M-03000\Mass
Mass2 L	SRT\G-A22A\Length
Mass2 D	DCM\G-D785\Depth
Mass2 W	SRT\G-A220\Width
Mass2 Vol.	SRT\G-D705\Volume
Mass3	SRT\M-03000\Mass
Mass3 L	SRT\G-A22A\Length
Mass3 D	DCM\G-D785\Depth
Mass3 W	SRT\G-A220\Width
Mass3 Vol.	SRT\G-D705\Volume
Mass4	SRT\M-03000\Mass
Mass4 L	SRT\G-A22A\Length
Mass4 D	DCM\G-D785\Depth
Mass4 W	SRT\G-A220\Width
Mass4 Vol.	SRT\G-D705\Volume
Mass5	SRT\M-03000\Mass
Mass5 L	SRT\G-A22A\Length
Mass5 D	DCM\G-D785\Depth
Mass5 W	SRT\G-A220\Width
Mass5 Vol.	SRT\G-D705\Volume
Superficial Vol.	MDSN\99100-11\Superficial Volume
Superficial L	SRT\G-A22A\Length
Superficial H	DCM\121207\Height
Superficial W	SRT\G-A220\Width
Superficial Flow	MDSN\99100-12\Superficial Flow
PSV	LN\11726-7\Peak Systolic Velocity
EDV	LN\11653-3\End Diastolic Velocity
TAPV	LN\11692-1\Time averaged peak velocity
TAMV	LN\20352-1\Time averaged mean velocity
PGmax	LN\20247-3\Peak Gradient
PGmean	LN\20256-4\Mean Gradient
S/D	LN\12144-2\Systolic to Diastolic Velocity Ratio
D/S	MDSN\99200-01\Diastolic to Systolic Velocity Ratio
RI	LN\12023-8\Resistivity Index
PI	LN\12008-9\Pulsatility Index

%StA	SRT\R-101BA\Lumen Area Stenosis
%StA Outer Area	SRT\G-0366\Vessel lumen cross-sectional area
%StA Inner Area	SRT\R-1025D\Vessel Intimal Cross-Sectional Area
%StD	SRT\R-101BB\Lumen Diameter Stenosis
%StD Outer Dist.	SRT\G-0364\Vessel lumen diameter
%StD Inner Dist.	SRT\R-1025C\Vessel Intimal Diameter
Vesl. Area	MDSN\99200-02\Vessel Area
Vol. Flow(A)	SRT\G-0365\Vessel outside diameter
Vesl. Dist	LN\33878-0\Volume flow
Vol. Flow(D)	LN\33878-0\Volume flow

9.6 BREAST IMAGING STRUCTURED REPORT TEMPLATE

9.6.1 Breast Imaging Report (TID 4200)

Table 9.6-1
Breast Imaging Report

No	Rel With Parent	VT	Concept Name	Comments	V8 Label
1		CONTAINER	(111400, DCM, ”Breast Imaging Report”)		
2	HAS CONCEPT MOD	INCLUDE	DTID (1204) Language of Content Item and Descendants		
3	CONTAINS	INCLUDE	DTID (4202) Breast Imaging Report Narrative		
4	CONTAINS	INCLUDE	DTID (4208) Breast Imaging Report Supplementary Data		

9.6.1.1 Language of Content Item and Descendants (TID 1204)

Table 9.6-2
Breast Imaging Procedure Reported

No	REL	VT	Concept Name	Unit / CODE Value	V8 Label
F-1	HAS CONCEPT MOD	CODE	(121049,DCM,”Language of Content Item and Descendants”)	(en, RFC3066, “English”)	

9.6.1.2 Breast Imaging Report Narrative (TID 4202)

Table 9.6-3
Breast Imaging Report Report Narrative

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
F-2	CONTAINS	CONTAINER	(111412, DCM, “Narrative Summary”)		

F-2-1	CONTAINS	CONTAINER	(121058, DCM, ”Procedure reported”)		
F-2-1-1	HAS OBS CONTEXT	INCLUDE	DTID (1002) Observer Context		
F-2-1-7	CONTAINS	TEXT	(121058, DCM, ”Procedure reported”)	“Ultrasonography of breast”	

9.6.1.3 Observer Context (TID 1002)

Table 9.6-4

OBSERVER CONTEXT IN BREAST SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
F-2-1-1	HAS OBS CONTEXT	CODE	(121005, DCM, “Observer Type”)	(121006, DCM, “Person“)	
F-2-1-2	HAS OBS CONTEXT	PNAME	(121008, DCM, “Person Observer Name”)		Ref. Physician
F-2-1-3	HAS OBS CONTEXT	CODE	(121024, DCM, “Subject Class”)	(121025 ,DCM,"Patient”)	
F-2-1-4	HAS OBS CONTEXT	PNAME	(121029,DCM, “Subject Name”)		LastName, FirstName
F-2-1-5	HAS OBS CONTEXT	DATE	(121031,DCM, “Subject Birth Date”)		BirthDate
F-2-1-6	HAS OBS CONTEXT	CODE	(121032,DCM, “Subject Sex”)	(M, DCM, “Male”) (F, DCM, “Female”) (U, DCM, “Unknown sex”)	Gender

9.6.1.4 Breast Imaging Report Supplementary Data (TID 4208)

Table 9.6-5

Breast Imaging Report Supplementary Data

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
F-3	CONTAINS	CONTAINER	(111414, DCM, “Supplementary Data”)		

F-3-1	CONTAINS	INCLUDE	DTID (4206) Breast Imaging Report Finding Section		

9.6.1.5 Breast Imaging Report Finding Section (TID 4206)

Table 9.6-6
Breast Imaging Report Finding Section

	REL	VT	Concept Name	Unit / CODE Value	V8 Label	Comments
F-3-1	CONTAINS	CONTAINER	(121070, DCM, “Findings”)			
F-3-1-1	CONTAINS	INCLUDE	DTID (4201) Breast Imaging Procedure Reported			
F-3-1-2	CONTAINS	CODE	(121071, DCM, “Finding”)	(111099, DCM, “Selected region”)	Seed Point, Seed Ellipse	
				(M-03000, SRT, ”Mass”)	Mass	
F-3-1-2-1	HAS OBS CONTEXT	TEXT	(125010, DCM, “Identifier”)		‘1’,’2’,’3’,,,	
F-3-1-2-2	HAS PROPERTIES	INCLUDE	DTID (4203) Breast Imaging Assessment			Ref. Table 9.6-8
F-3-1-2-3	HAS PROPERTIES	INCLUDE	DTID (1400) Linear Measurement			Ref. Table 9.6-9
F-3-1-2-4	HAS PROPERTIES	INCLUDE	DTID (1401) Area Measurement			Ref. Table 9.6-10
F-3-1-2-5	HAS PROPERTIES	INCLUDE	DTID (1402) Volume Measurement		Vol.	Ref. Table 9.6-11
F-3-1-2-6	HAS PROPERTIES	NUM	(99180-1, MDSN, “Angle”)		Angle	
F-3-1-2-7	HAS PROPERTIES	CODE	(M-020F9, SRT, “Shape”)	DCID (6004) Mammography	Shape	Ref. Table 9.6-15

				Characteristics of Shape		
F-3-1-2-8	HAS PROPERTIES	CODE	(111037, DCM, “Margins”)	DCID (6006) Mammography Characteristics of Margin	Margin	Ref. Table 9.6-16
F-3-1-2-9	HAS PROPERTIES	CODE	(111009, DCM, “Calcification Type”)	DCID (6010) Mammography Calcification Types	Calcifications	Ref. Table 9.6-17
F-3-1-2-10	HAS PROPERTIES	CODE	(G-C189, SRT, “Associated Finding”)	DCID (6056) Associated Findings for Breast	Special Case	Ref. Table 9.6-18
F-3-1-2-11	HAS PROPERTIES	CODE	(111354, DCM, “Orientation”)	DCID (6152) Orientation	Orientation	Ref. Table 9.6-19
F-3-1-2-12	HAS PROPERTIES	CODE	(111357, DCM, “Lesion boundary”)	DCID (6153) Lesion boundary	Lesion boundar	Ref. Table 9.6-20
F-3-1-2-13	HAS PROPERTIES	CODE	(111360, DCM, “Echo pattern”)	DCID (6154) Echo pattern	Echo pattern	Ref. Table 9.6-21
F-3-1-2-14	HAS PROPERTIES	CODE	(111366, DCM, “Posterior acoustic features”)	DCID (6155) Posterior acoustic features	Posterior Feature	Ref. Table 9.6-22
F-3-1-2-15	HAS PROPERTIES	CODE	(111371, DCM, “Identifiable effect on surrounding tissues”)	DCID (6015) Single Image Finding from BI-RADS®	Surrounding Tissue	Ref. Table 9.6-23
F-3-1-2-16	HAS PROPERTIES	CODE	(111372, DCM, “Vascularity”)	DCID (6157) Vascularity	Vascularity	Ref. Table 9.6-24
F-3-1-2-17	HAS PROPERTIES	CODE	(99600-01, MDSN, “Vascular Abnormalities”)	DCID (6157) Vascularity	Vascular Abnormalities	Ref. Table 9.6-24
F-3-1-2-18	HAS PROPERTIES	CODE	(99600-02, MDSN, “Elasticity Assessment”)	DCID (99601) Elasticity Assessment	Elasticity Assessment	Ref. Table 9.6-25

F-3-1-3	CONTAINS	INCLUDE	DTID (SM99610) Breast User Creation Group Section			Ref. Table 9.6-12

9.6.1.6 Breast Imaging Procedure Reported (TID 4201)

Table 9.6-7

Breast Imaging Procedure Reported

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
F-3-1-1	CONTAINS	CODE	(121058, DCM, ”Procedure reported”)	(P5-B8500, SRT, “Ultrasonography of breast”)	
F-3-1-1-1	HAS CONCEPT MOD	CODE	(G-C171, SRT, ”Laterality”)	(T-04030, SRT, "Left breast") (T-04020, SRT, "Right breast")	Lt, Rt

9.6.1.7 Breast Imaging Assessment (TID 4203)

Table 9.6-8

Breast Imaging Assessment

	REL	VT	Concept Name	Unit / CODE Value	Comments
F-3-1-2-2	HAS OBS CONTEXT	CODE	(111005, DCM, “Assessment Category”)	DCID (6027) Mammography Assessment	Ref. Table 9.6-14

9.6.1.8 Linear Measurement Template (TID 1400)

Table 9.6-9

Linear Measurement

	REL	VT	Concept Name	Unit / CODE Value	Comments
F-3-1-2-3	CONTAINS	NUM	Context ID 7470 Linear Measurements	Units = DCID (7460) Units of Linear Measurement	Ref. Table 9.6-13

9.6.1.9 Area Measurement Template (TID 1401)

Table 9.6-10
Area Measurement

	REL	VT	Concept Name	Unit / CODE Value	Comments
F-3-1-2-4	CONTAINS	NUM	(G-A166, SRT, “Area”)	Units = DCID (7461) Units of Area Measurement	

9.6.1.10 Volume Measurement Template (TID 1402)

Table 9.6-11
Volume Measurement

	REL	VT	Concept Name	Unit / CODE Value	Comments
F-3-1-2-5	CONTAINS	NUM	(G-D705, SRT, “Volume”)	Units = DCID (7462) Units of Volume Measurement	

9.6.1.11 Breast User Creation Group Section (TID SM99610)

Table 9.6-12
User Creation Group in Breast SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label	Comments
F-3-1-3	CONTAINS	CONTAINER	(99900-Creation ID, MDSN, “User Creation Group Name”)			*Creation ID: Randomly generated 7-digit unique ID
F-3-1-3-1	CONTAINS	NUM	(99900-Creation ID, MDSN, “User Creation Item Name”)			
F-3-1-3-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		

9.6.2 Standard Extended Context Groups in Breast SR

Table 9.6-13

Context ID 7470 Linear Measurements

CSD	CV	CM	V8 Label
SRT	G-A22A	Length	Length, L
DCM	121206	Distance	Distance
SRT	G-A220	Width	Width, W
SRT	G-D785	Depth	Depth, D
DCM	121207	Height	Height, H

Table 9.6-14

Context ID 6027 Mammography Assessment

CSD	CV	CM	V8 Label
BI	II.AC.a	0 - Need additional imaging evaluation	Unknown
BI	II.AC.b.1	1-Negative	Negative
BI	II.AC.b.2	2-Benign Finding	Benign
BI	II.AC.b.3	3-Probably Benign Finding-short interval follow-up	Probably benign Possibly Benign
BI	II.AC.b.4	4-Suspicious abnormality, biopsy should be considered	Possibly Malignant
BI	MA.II.A.5.4A	4A-Low suspicion	Low suspicion of Malignancy
BI	MA.II.A.5.4B	4B-Intermediate suspicion	Intermediate suspicion of malignancy
BI	MA.II.A.5.4C	4C-Moderate suspicion	Moderate concern, but not classic for malignancy
BI	II.AC.b.5	5-Highly suggestive of malignancy, take appropriate action	Highly suggestive of malignancy
BI	MA.II.A.5.6	6-Known biopsy proven malignancy	Known biopsy-proven malignancy

Table 9.6-15

Context ID 6004 Mammography Characteristics of Shape

CSD	CV	CM	V8 Label

SRT	M-02100	Round shape	Round
SRT	M-02120	Ovoid shape (Oval)	Oval
SRT	G-A402	Irregular	Irregular

Table 9.6-16

Context ID 6006 Mammography Characteristics of Margin

CSD	CV	CM	V8 Label
SRT	F-01741	Circumscribed lesion	Circumscribed
SRT	F-01742	Microlobulated lesion	Microlobulated
SRT	F-01744	Indistinct lesion	Indistinct
SRT	F-01745	Spiculated lesion	Spiculated
DCM	111343	Angular margins	Angular

Table 9.6-17

Context ID 6010 Mammography Calcification Types

CSD	CV	CM	V8 Label
SRT	R-41198	Unknown	Unknown
DCM	111345	Macrocalcifications	Macrocalcifications
DCM	111347	Calcifications outside of a mass	Micro. Out Of Mass Outside of a mass
DCM	111346	Calcifications within a mass	Macro. In Mass In a mass
MDSN	99018-12	Intraductal	Intraductal

Table 9.6-18

Context ID 6056 Associated Findings for Breast

CSD	CV	CM	V8 Label
SRT	R-41198	Unknown	Unknown
DCM	111129	Clustered microcysts	Clustered Microcysts
DCM	111130	Complicated cyst	Complicated Cysts
SRT	D7-90382	Sebaceous cyst of skin of breast	Mass in or on skin
SRT	M-30400	Foreign body	Foreign Body
SRT	T-C4351	Intra-mammary lymph node	Intrama. Lymph Nodes
SRT	T-C4710	Axillary lymph node	Axillary Lymph Node
MDSN	99018-24	Foreign Body+Implants	Foreign Body+Implants

MDSN	99018-21	Simple Cyst	Simple Cyst
MDSN	99018-22	Post-surg. Fluid Coll.	Post-surg. Fluid Coll.
MDSN	99018-23	Fat Necrosis	Fat Necrosis

Table 9.6-19

Context ID DCID 6152 Orientation

CSD	CV	CM	V8 Label
DCM	111355	Parallel	Parallel
DCM	111356	Not parallel	Not parallel

Table 9.6-20

Context ID 6153 Lesion boundary

CSD	CV	CM	V8 Label
DCM	111358	Abrupt interface	Abrupt Interface
DCM	111359	Echogenic halo	Echogenic Halo

Table 9.6-21

Context ID 6154 Echo Pattern

CSD	CV	CM	V8 Label
DCM	111361	Anechoic	Anechoic
DCM	111362	Hyperechoic	Hyperechoic
DCM	111363	Complex	Complex Echogenicity Complex Cystic And Solid
DCM	111364	Hypoechoic	Hypoechoic
DCM	111365	Isoechoic	Isoechoic
MDSN	99018-13	Heterogeneous	Heterogeneous

Table 9.6-22

Context ID 6155 Posterior acoustic features

CSD	CV	CM	V8 Label
DCM	111367	No posterior acoustic features	No Posterior Findings No Posterior Features
DCM	111368	Posterior enhancement	Enhancement
DCM	111369	Posterior shadowing	Shadowing
DCM	111370	Combined osterior enhancement and shadowing	Combined Pattern

Table 9.6-23

Context ID 6015 Single Image Finding from BI-RADS®

CSD	CV	CM	V8 Label
SRT	R-41198	Unknown	Unknown
MDSN	99018-11	Duct Changes	Duct Changes
DCM	111111	Cooper's ligament changes	Cooper Ligament Chg.
SRT	M-36300	Edema	Edema
SRT	F-01795	Architectural distortion of breast	Architectural Changes
SRT	F-0179A	Skin thickening of breast	Skin Thickening
SRT	F-01799	Skin retraction of breast	Skin Retraction

Table 9.6-24

Context ID 6157 Vascularity

CSD	CV	CM	V8 Label
DCM	111373	Vascularity not present	None Absent
DCM	111374	Vascularity not assessed	Unknown
DCM	111375	Vascularity present in lesion	In Lesion
DCM	111376	Vascularity present immediately adjacent to lesion	Adjacent To Lesion
DCM	111377	Diffusely increased vascularity in surrounding tissue	Diffuse Vascularity
MDSN	99018-14	Internal Vascularity	Internal Vascularity
MDSN	99018-15	Vessels In Rim	Vessels In Rim
MDSN	99018-16	AVMs	AVMs
MDSN	99018-17	Mondor Disease	Mondor Disease

Table 9.6-25

Context ID 99601 Elasticity Assessment

CSD	CV	CM	V8 Label
MDSN	99018-18	Soft	Soft
MDSN	99018-19	Intermediate	Intermediate
MDSN	99018-20	Hard	Hard

9.7 THYROID IMAGING STRUCTURED REPORT TEMPLATE

9.7.1 Thyroid Imaging Report (TID SM99700)

Table 9.7-1

Thyroid Imaging Report

No	Rel With Parent	VT	Concept Name	Comments	V8 Label
1		CONTAINER	(99700, MDSN, ” Soft Tissue Neck and Head Imaging Report”)		
2	HAS CONCEPT MOD	CODE	(121049,DCM,”Language of Content Item and Descendants”)	(en, RFC3066, “English”)	
3	HAS OBS CONTEXT	INCLUDE	DTID (1002) Observer Context		
4	CONTAINS	INCLUDE	DTID (SM99701) Thyroid Imaging Finding Section		

9.7.1.1 Observer Context (TID 1002)

Table 9.7-2

OBSERVER CONTEXT IN THYROID SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
G-3	HAS OBS CONTEXT	CODE	(121005, DCM, “Observer Type”)	(121006, DCM, “Person“)	
G-4	HAS OBS CONTEXT	PNAME	(121008, DCM, “Person Observer Name”)		Ref. Physician
G-5	HAS OBS CONTEXT	CODE	(121024, DCM, “Subject Class”)	(121025 ,DCM,"Patient”)	
G-6	HAS OBS CONTEXT	PNAME	(121029,DCM, “Subject Name”)		LastName, FirstName
G-7	HAS OBS CONTEXT	DATE	(121031,DCM, “Subject Birth Date”)		BirthDate
G-8	HAS OBS CONTEXT	CODE	(121032,DCM, “Subject Sex”)	(M, DCM, “Male”) (F, DCM, “Female”) (U, DCM, “Unknown sex”)	Gender

9.7.1.2 Thyroid Imaging Finding Section (TID SM99701)

Table 9.7-3

Thyroid Imaging Report Finding Section

	REL	VT	Concept Name	Unit / CODE Value	V8 Label	Comments
G-9	CONTAINS	CONTAINER	(121070, DCM, “Findings”)			
G-9-1	HAS CONCEPT MOD	CODE	(G-C0E3, SRT, “Finding Site”)	EV (T-D1600, SRT, “Neck”)		
G-9-2	HAS CONCEPT MOD	CODE	(G-0373, SRT, “Image Mode”)	EV (G-03A2, SRT, “2D mode”)		
G-9-3	CONTAINS	TEXT	(121106, DCM, “Comment”)			
G-9-4	CONTAINS	CONTAINER	(T-B6000, SRT, “Thyroid”)			
G-9-4-1	HAS OBS CONTEXT	TEXT	(125010, DCM, “Identifier”)		‘1’,’2’,’3’,,,	
G-9-4-2	HAS PROPERTIES	INCLUDE	DTID (1400) Linear Measurement			Ref. Table 9.6-9
G-9-4-3	HAS PROPERTIES	INCLUDE	DTID (1401) Area Measurement			Ref. Table 9.6-10
G-9-4-4	HAS PROPERTIES	CODE	(M-020F9, SRT, “Shape”)	DCID (99701) Thyroid Shape	Shape	Ref. Standard Extended Context Groups in Thyroid SR Table 9.7-4
G-9-4-5	HAS PROPERTIES	CODE	(111037, DCM, “Margins”)	DCID (99702) Thyroid Margin	Margin	Ref. Table 9.7-5
G-9-4-6	HAS PROPERTIES	CODE	(111009, DCM, “Calcification Type”)	DCID (99703) Thyroid Calcification Type	Calcifications	Ref. Table 9.7-6

G-9-4-7	HAS PROPERTIES	CODE	(111354, DCM, “Orientation”)	DCID (6152) Orientation	Orientation	Ref. Table 9.6-19
G-9-4-8	HAS PROPERTIES	CODE	(99700-05, MDSN, “Taller than Wide”)	DCID (99706) Taller than Wide	Taller than Wide	Ref. Table 9.7-9
G-9-4-9	HAS PROPERTIES	CODE	(99700-01, MDSN, “Composition”)	DCID (99704) Thyroid Composition	Composition	Ref. Table 9.7-7
G-9-4-10	HAS PROPERTIES	CODE	(99700-06, MDSN, “Nodule Composition”)	DCID (99707) Nodule Composition	Nodule Composition	Ref. Table 9.7-10
G-9-4-11	HAS PROPERTIES	CODE	(99700-02, MDSN, “Echogenicity”)	DCID (99705) Thyroid Echogenicity	Echogenicity	Ref. Table 9.7-8
G-9-4-12	HAS PROPERTIES	CODE	(99700-03, MDSN, “Spongiform”)	(99019-14, MDSN, “Appearance”) (99019-15, MDSN, “Nonappearance”)	Spongiform	
G-9-4-13	HAS PROPERTIES	CODE	(99700-04, MDSN, “Central Vascularity”)	(99018-19, MDSN, “Unselected”) (99019-14, MDSN, “Appearance”) (99019-15, MDSN, “Nonappearance”)	Central Vascularity	
G-9-4-14	HAS PROPERTIES	CODE	(99700-07, MDSN, “Colour flow”)	DCID (99708) Colour flow	Colour flow	Ref. Table 9.7-11
G-9-4-15	HAS PROPERTIES	CODE	(110830, DCM, “Elasticity”)	DCID (99601) Elasticity Assessment	Elasticity	Ref. Table 9.6-25
G-9-4-16	HAS PROPERTIES	CODE	(99700-08, MDSN, “Cystic Component”)	DCID (99709) Cystic Component	Cystic Component	Ref. Table 9.7-12
G-9-4-17	HAS PROPERTIES	CODE	(99700-09, MDSN, “Halo”)	DCID (99710) Halo	Halo	Ref. Table 9.7-13
G-9-4-18	HAS PROPERTIES	CODE	(99700-10, MDSN, “Extent”)	DCID (99711) Extent	Extent	Ref. Table 9.7-14
G-9-4-19	HAS PROPERTIES	CODE	(99700-11, MDSN, “Lymphadenopathy”)	DCID (99712) Lymphadenopathy	Lymphadenopathy	Ref. Table 9.7-15

9.7.2 Standard Extended Context Groups in Thyroid SR

Table 9.7-4

Context ID 99701 Thyroid Shape

CSD	CV	CM	V8 Label
SRT	G-A402	Irregular	Irregular
MDSN	99019-01	Ovoid to round	Ovoid to round

Table 9.7-5

Context ID 99702 Thyroid Margin

CSD	CV	CM	V8 Label
MDSN	99019-02	Well-defined smooth	Well-defined smooth
MDSN	99019-03	Microlobulated/Spiculated	Microlobulated/Spiculated
MDSN	99019-04	Ill-defined	Ill-defined
MDSN	99019-20	Well defined	Well defined
MDSN	99019-21	Irregular/Lobulated/Spiculated	Irregular/Lobulated/Spiculated
MDSN	99019-22	Irregular/Lobulated	Irregular/Lobulated
SRT	F-01745	Spiculated lesion	Spiculated lesion

Table 9.7-6

Context ID 99703 Thyroid Calcification Type

CSD	CV	CM	V8 Label
MDSN	99019-05	Calcifications	Calcifications
DCM	111345	Macrocalcifications	Macrocalcifications Macro-calcification
MDSN	99019-07	Microcalcifications	Microcalcifications Micro-calcification
MDSN	99019-06	No calcifications	No calcifications
MDSN	99019-23	Rim/Egg shell	Rim/Egg shell

Table 9.7-7

Context ID 99704 Thyroid Composition

CSD	CV	CM	V8 Label
MDSN	99019-19	Solid	Solid

MDSN	99019-08	Partially cystic	Partially cystic
MDSN	99019-09	Predominantly Solid	Predominantly Solid
MDSN	99019-10	Predominantly cystic	Predominantly cystic
MDSN	99019-11	Cystic	Cystic

Table 9.7-8

Context ID 99705 Thyroid Echogenicity

CSD	CV	CM	V8 Label
MDSN	99019-12	Hyper/Isoechoic	Hyper/Isoechoic
DCM	111364	Hypoechoic	Hypoechoic Hypo-echoic
MDSN	99019-13	Marked Hypoechoic	Marked Hypoechoic Markedly hypo-echoic
DCM	111362	Hyperechoic	Hyper-echoic
DCM	111365	Isoechoic	Iso-echoic

Table 9.7-9

Context ID 99706 Taller than Wide

CSD	CV	CM	V8 Label
MDSN	99019-27	AP > TR	AP > TR
MDSN	99019-28	AP <= TR	AP <= TR

Table 9.7-10

Context ID 99707 Nodule Composition

CSD	CV	CM	V8 Label
MDSN	99019-19	Solid	Solid
MDSN	99019-08	Partially cystic	Partially cystic
MDSN	99019-24	Mixed solid/cystic	Mixed solid/cystic
MDSN	99019-25	Micro-cystic/spongiform	Micro-cystic/spongiform
MDSN	99019-11	Cystic	Cystic

Table 9.7-11

Context ID 99708 Colour flow

CSD	CV	CM	V8 Label
MDSN	99018-19	Unselected	Unselected

MDSN	99019-29	Central	Central
MDSN	99019-30	Peripheral	Peripheral
MDSN	99019-31	Mixed	Mixed
MDSN	99019-32	None	None

Table 9.7-12

Context ID 99709 Cystic Component

CSD	CV	CM	V8 Label
MDSN	99018-19	Unselected	Unselected
MDSN	99019-33	Ring down sign - colloid	Ring down sign - colloid
MDSN	99019-34	No Ring down sign	No Ring down sign

Table 9.7-13

Context ID 99710 Halo

CSD	CV	CM	V8 Label
MDSN	99018-19	Unselected	Unselected
SRT	R-4089B	Absent	Absent
MDSN	99019-35	Interrupted	Interrupted
MDSN	99019-36	Regular/continuous	Regular/continuous

Table 9.7-14

Context ID 99711 Extent

CSD	CV	CM	V8 Label
MDSN	99018-19	Unselected	Unselected
MDSN	99019-37	Retrosternal extension/tracheal deviation	Retrosternal extension/tracheal deviation
MDSN	99019-32	None	None

Table 9.7-15

Context ID 99712 Lymphadenopathy

CSD	CV	CM	V8 Label
MDSN	99018-19	Unselected	Unselected
MDSN	99019-39	Suspected malignancy	Suspected malignancy
MDSN	99019-32	None	None

9.8 FETAL ECHO STRUCTURED REPORT TEMPLATE

9.8.1 FetalEcho Ultrasound Report (TID 5220)

Table 9.8-1
FetalEcho Ultrasound Report

No	Rel With Parent	VT	Concept Name	Comments	V8 Label
1		CONTAINER	(125196, DCM, “Fetal Cardiac Ultrasound Report”)		
2	HAS CONCEPT MOD	CODE	(121049,DCM,”Language of Content Item and Descendants”)	(en, RFC3066, “English”)	
3	HAS OBS CONTEXT	INCLUDE	DTID (1001) Observer Context		
4	CONTAINS	INCLUDE	DTID (3602) Cardiovascular Patient Characteristics		
5	CONTAINS	INCLUDE	DTID (5228) Cardiac Ultrasound Fetal Measurement Section		
6	CONTAINS	INCLUDE	DTID (SM99010) OB-GYN User Creation Group Section		Ref. Section 9.1.1.18

9.8.1.1 Observation Context (TID 1001)

Table 9.8-2
OBSERVATION CONTEXT IN FETAL ECHO SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
H-1	HAS OBS CONTEXT	CODE	(121005, DCM, “Observer Type”)	(121006, DCM, “Person“)	
H-2	HAS OBS CONTEXT	PNAME	(121008, DCM, “Person Observer Name”)		Ref. Physician
H-3	HAS OBS CONTEXT	CODE	(121024, DCM, “Subject Class”)	(121025 ,DCM,"Patient”)	
H-4	HAS OBS CONTEXT	PNAME	(121029,DCM, “Subject Name”)		Last Name, First Name
H-5	HAS OBS CONTEXT	DATE	(121031,DCM, “Subject Birth Date”)		BirthDate

9.8.1.2 Cardiovascular Patient Characteristics (TID 3602)

Table 9.8-3
Patient Characteristics in FetalEcho SR

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
H-6	CONTAINS	CONTAINER	(121118, DCM, “Patient Characteristics”)		
H-6-1	CONTAINS	NUM	(121033, DCM, "Subject Age”)	Units = DCID (7456) Units of Measure for Age	Description
H-6-2	CONTAINS	CODE	(121032, DCM, "Subject Sex”)	DCID (7455) Sex	
H-6-3	CONTAINS	NUM	(8302-2, LN, “Patient Height”)	(cm, UCUM, “centimeter”)	Height
H-6-4	CONTAINS	NUM	(29463-7, LN, “Patient Weight”)	(kg, UCUM, “kilograms”)	Weight
H-6-5	CONTAINS	NUM	(8867-4, LN, “Heart Rate”)		HR

9.8.1.3 Cardiac Ultrasound Fetal Measurement Section (TID 5228)

Table 9.8-4
Cardiac Ultrasound Fetal Measurement Section

	REL	VT	Concept Name	Unit / CODE Value	V8 Label	Comment
H-7	CONTAINS	CONTAINER	(125016, DCM, “Fetal Measurements”)			
H-7-1	HAS OBS CONTEXT	TEXT	(11951-1, LN, “Fetus ID”)			
H-7-2	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = DCID (12279) Cardiac Ultrasound Fetal General Measurements		Ref. Table 9.8-6
H-7-3	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-F6845, SRT, "Ductus arteriosus") $Measurement = DCID (12218) Echocardiography Congenital	Duct Art	Ref. Table 9.8-7
H-7-4	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-F680F, SRT, "Ductus venosus") $Measurement = DCID (12218) Echocardiography	Ductus Venosus	

				Congenital		
H-7-5	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-48710, SRT, "Inferior Vena cava") $Measurement = DCID (12264) Cardiac Ultrasound Venous Return Systemic Measurements	IVC	Ref. Table 9.8-8
H-7-6	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-32600, SRT, "Left Ventricle") $Measurement = DCID (12259) Cardiac Ultrasound Ventricles Measurements	LV	Ref. Table 9.8-9
H-7-7	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-32500, SRT, "Right Ventricle") $Measurement = DCID (12259) Cardiac Ultrasound Ventricles Measurements	RV	
H-7-8	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-32300, SRT, "Left Atrium") $Measurement = DCID (12265) Cardiac Ultrasound Atria and Atrial Septum Measurements	LA	Ref. Table 9.8-10
H-7-9	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-32200, SRT, "Right Atrium") $Measurement = DCID (12265) Cardiac Ultrasound Atria and Atrial Septum Measurements	RA	
H-7-10	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-35300, SRT, "Mitral Valve") $Measurement = DCID (12268) Cardiac Ultrasound Atrioventricular Valves Measurements	MV	Ref. Table 9.8-11

H-7-11	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-35100, SRT, "Tricuspid Valve") $Measurement = DCID (12268) Cardiac Ultrasound Atrioventricular Valves Measurements	TV	
H-7-12	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-35400, SRT, "Aortic Valve") $Measurement = DCID (12271) Cardiac Ultrasound Outflow Tracts Measurements	AV	Ref. Table 9.8-12
H-7-13	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-35200, SRT, "Pulmonic Valve") $Measurement = DCID (12271) Cardiac Ultrasound Outflow Tracts Measurements	PV	
H-7-14	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-44000, SRT, "Pulmonary Artery") $Measurement = DCID (12260) Cardiac Ultrasound Pulmonary Artery	PA	Ref. Table 9.8-13
H-7-15	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (42000, SRT, "Aorta") $Measurement = DCID (12274) Cardiac Ultrasound Aorta Measurements	Aorta	Ref. Table 9.8-14
H-7-16	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-42100, SRT, "Ascending aorta") $Measurement = DCID (12274) Cardiac Ultrasound Aorta Measurements	Asc. Aorta	
H-7-18	CONTAINS	INCLUDE	DTID (5222) Pediatric, Fetal and Congenital Cardiac Ultrasound Section”	$SectionSubject = (T-D0765, SRT, "Descending Aorta") $Measurement = DCID	Dsc. Aorta	

				(12274) Cardiac Ultrasound Aorta Measurements		

9.8.1.4 Pediatric, Fetal and Congenital Cardiac Ultrasound Section (TID 5222)

Table 9.8-5

Pediatric, Fetal and Congenital Cardiac Ultrasound Section

	REL	VT	Concept Name	Unit / CODE Value	V8 Label
1	CONTAINS	CONTAINER	(121070, DCM, “Findings")		
1-1	HAS CONCEPT MOD	CODE	(G-C0E3, SRT, “Finding Site”)	$SectionSubject	
1-2	CONTAINS	CONTAINER	(125007, DCM, “Measurement Group”)		
1-3	CONTAINS	INCLUDE	DTID (300) Measurement	$Measurement = $Measurement $Derivation = DCID (3627) Measurement Type $Method = DCID (12227) Echocardiography Measurement Method	
1-3-1	HAS ACQ CONTEXT	CODE	(G-0373, SRT, “Image Mode”)	(G-03A2, SRT, “2D mode”) (G-0394, SRT, “M mode”)	
1-3-2	HAS ACQ CONTEXT	CODE	(111031, DCM, “Image View")	(G-A19B, SRT, “Apical two chamber”) (G-A19C, SRT, “Apical four chamber”)	

9.8.2 Standard Extended Context Groups in FetalEcho SR

Table 9.8-6

Context ID 12279 Cardiac Ultrasound Fetal General Measurements

CSD	CV	CM	V8 Label
LN	11948-7	Fetal Heart Rate	Fetal HR
MDSN	99116-08	PR Interval	PR Interval
MDSN	99001-06	Anterior-Posterior Thoracic Diameter	ThD ap
LN	11864-6	Transverse Thoracic Diameter	ThD trans

MDSN	99001-08	Anterior-Posterior Cardiac Diameter	HrtD ap
MDSN	99001-09	Transverse Cardiac Diameter	HrtD trans
MDSN	99001-11	Cardiothoracic Diameter Ratio	CTAR(D)
LN	33068-8	Thoracic Area	ThA
LN	59075-2	Cardiac Cross-sectional Area, transverse by US	HrtA
LN	59076-0	Cardiothoracic Area Ratio	CTAR(A)
LN	11988-3	Thoracic Circumference	ThC
LN	59073-7	Cardiac Circumference, transverse by US	HrtC
LN	59074-5	Cardiothoracic Circumference Ratio	CTAR(C)
LN	11988-3	Thoracic Circumference	ThC
LN	59073-7	Cardiac Circumference, transverse by US	HrtC
LN	59074-5	Cardiothoracic Circumference Ratio	HrtC/ThC
MDSN	99001-12	Cardiac Axis	Cardiac Axis
LN	11726-7	Peak Systolic Velocity	PLI S Vmax
MDSN	99008-05	Peak Diastolic Velocity	PLI D Vmax
LN	11665-7	Minimum Diastolic Velocity	PLI A Vmax
MDSN	99200-09	Preload Index	PLI

Table 9.8-7

Context ID 12218 Echocardiography Congenital

CSD	CV	CM	V8 Label
LN	11726-7	Peak Systolic Velocity	PSV
LN	11653-3	End Diastolic Velocity	EDV
LN	20247-3	Peak Gradient	PGmax
LN	11692-1	Time averaged peak velocity	Vmean
LN	12144-2	Systolic to Diastolic Velocity Ratio	S/D
MDSN	99200-01	Diastolic to Systolic Velocity Ratio	D/S
LN	12023-8	Resistivity Index	RI
LN	12008-9	Pulsatility Index	PI
MDSN	99001-13	Ductus arteriosus diameter	Duct Art
LN	11726-7	Peak Systolic Velocity	S
MDSN	99008-05	Peak Diastolic Velocity	D
LN	11665-7	Minimum Diastolic Velocity	a
LN	11692-1	Time averaged peak velocity	Vmean
LN	20352-1	Time Averaged Mean Velocity	TAMV

LN	20256-4	Mean Gradient	PGmean
LN	20247-3	Peak Gradient	PGmax
LN	12144-2	Systolic to Diastolic Velocity Ratio	S/D
MDSN	99200-01	Diastolic to Systolic Velocity Ratio	D/S
MDSN	99200-00	Systolic to Atrial Velocity Ratio	S/a
LN	12023-8	Resistivity Index	RI
LN	12008-9	Pulsatility Index	PI
MDSN	99200-09	Preload Index	PLI
MDSN	99200-10	Peak velocity index for veins	PVIV

Table 9.8-8

Context ID 12264 Cardiac Ultrasound Venous Return Systemic Measurements

CSD	CV	CM	V8 Label
LN	11726-7	Peak Systolic Velocity	S
MDSN	99008-05	Peak Diastolic Velocity	D
LN	11665-7	Minimum Diastolic Velocity	a
LN	11692-1	Time averaged peak velocity	Vmean
LN	20256-4	Mean Gradient	PGmean
LN	20247-3	Peak Gradient	PGmax
LN	12144-2	Systolic to Diastolic Velocity Ratio	S/D
MDSN	99200-01	Diastolic to Systolic Velocity Ratio	D/S
MDSN	99200-00	Systolic to Atrial Velocity Ratio	S/a
LN	12023-8	Resistivity Index	RI
LN	12008-9	Pulsatility Index	PI
MDSN	99200-09	Preload Index	PLI
MDSN	99200-10	Peak velocity index for veins	PVIV
LN	18006-7	Inferior Vena Cava Diameter	IVC

Table 9.8-9

Context ID 12259 Cardiac Ultrasound Ventricles Measurements

CSD	CV	CM	Modifier	V8 Label
LN	29436-3	Left Ventricle Internal End Diastolic Dimension	ImgMode=SRT\G-03A2\2D mode ImgView=SRT\G-A19B\Apical two chamber	LVLd A2C
SRT	G-0375	Left Ventricular Diastolic Area		LVAd A2C
LN	18026-5	Left Ventricular End Diastolic Volume		LVEDV A2C

LN	29438-9	Left Ventricle Internal Systolic Dimension		LVLs A2C
SRT	G-0374	Left Ventricular Systolic Area		LVAs A2C
LN	18148-7	Left Ventricular End Systolic Volume		LVESV A2C
SRT	F-32120	Stroke Volume		LV SV A2C
SRT	F-32100	Cardiac Output		LV CO A2C
LN	18043-0	Left Ventricular Ejection Fraction		LV EF A2C
LN	29436-3	Left Ventricle Internal End Diastolic Dimension	ImgMode=SRT\G-03A2\2D mode ImgView=SRT\G-A19C\Apical four chamber	LVLd A4C
SRT	G-0375	Left Ventricular Diastolic Area		LVAd A4C
LN	18026-5	Left Ventricular End Diastolic Volume		LVEDV A4C
LN	29438-9	Left Ventricle Internal Systolic Dimension		LVLs A4C
SRT	G-0374	Left Ventricular Systolic Area		LVAs A4C
LN	18148-7	Left Ventricular End Systolic Volume		LVESV A4C
SRT	F-32120	Stroke Volume		LV SV A4C
SRT	F-32100	Cardiac Output		LV CO A4C
LN	18043-0	Left Ventricular Ejection Fraction		LV EF A4C
LN	18026-5	Left Ventricular End Diastolic Volume	Measurement Method=DCM\125207\Method of Disks, Biplane ImgMode=SRT\G-03A2\2D mode	LVEDV BP
LN	18148-7	Left Ventricular End Systolic Volume		LVESV BP
SRT	F-32120	Stroke Volume		LV SV BP
SRT	F-32100	Cardiac Output		LV CO BP
LN	18043-0	Left Ventricular Ejection Fraction		LV EF BP
MDSN	99104-13	Left Ventricular Diameter	ImgMode=SRT\G-03A2\2D mode	LV Diam
MDSN	99104-14	Left Ventricular Length		LV Length
LN	18054-7	Interventricular Septum % Thickening		IVS
LN	29436-3	Left Ventricle Internal End Diastolic Dimension		LVIDd
LN	29438-9	Left Ventricle Internal Systolic Dimension		LVIDs
LN	18053-9	Left Ventricle Posterior Wall % Thickening		LVPW
MDSN	99104-11	Left Ventricular Inlet		LV Inlet
MDSN	99104-12	Left Ventricular Area		LV Area
MDSN	99104-09	Relative Wall Thickness		RWT
LN	18026-5	Left Ventricular End Diastolic Volume		LV Vol. d
LN	18148-7	Left Ventricular End Systolic Volume		LV Vol. s
SRT	F-32120	Stroke Volume		SV
SRT	F-32100	Cardiac Output		CO

LN	18043-0	Left Ventricular Ejection Fraction		EF
LN	18154-5	Interventricular Septum Diastolic Thickness	ImgMode=SRT\G-0394\M mode	IVSd
LN	29436-3	Left Ventricle Internal End Diastolic Dimension		LVIDd
LN	18152-9	Left Ventricle Posterior Wall Diastolic Thickness		LVPWd
MDSN	99104-09	Relative Wall Thickness		RWT
LN	18158-6	Interventricular Septum Systolic Thickness		IVSs
LN	29438-9	Left Ventricle Internal Systolic Dimension		LVIDs
LN	18156-0	Left Ventricle Posterior Wall Systolic Thickness		LVPWs
LN	18026-5	Left Ventricular End Diastolic Volume		LV EDV
LN	18148-7	Left Ventricular End Systolic Volume		LV ESV
LN	18051-3	Left Ventricular Fractional Shortening		FS
SRT	F-32120	Stroke Volume		SV
SRT	F-32100	Cardiac Output		CO
LN	18043-0	Left Ventricular Ejection Fraction		EF
LN	18087-7	Left Ventricle Mass		LV Mass
SRT	G-037E	Left Ventricular Isovolumic Contraction Time		IVCT
DCM	122211	Left Ventricular ejection time		ET
LN	18071-1	Left Ventricular Isovolumic Relaxation Time		IVRT
MDSN	99104-04	Left Ventricle Total Systolic Time		MCO
LN	59099-2	Myocardial Performance Index (Tei)		Tei Index
SRT	G-038F	Cardiovascular Orifice Diameter	FSite=SRT\T-32650\Left Ventricle Outflow Tract	LVOT Diam
SRT	G-038E	Cardiovascular Orifice Area		LVOT Area
LN	11726-7	Peak Velocity		LVOT Vmax
LN	20247-3	Peak Gradient		LVOT PGmax
LN	20352-1	Mean Velocity		LVOT Vmean
LN	20256-4	Mean Gradient		LVOT PGmean
LN	20354-7	Velocity Time Integral		LVOT VTI

SRT	F-32120	Stroke Volume		LVOT SV
SRT	F-32100	Cardiac Output		LVOT CO
SRT	G-038F	Cardiovascular Orifice Diameter	FSite=SRT\T-32550\Right Ventricle Outflow Tract	RVOT Diam
SRT	G-038E	Cardiovascular Orifice Area		RVOT Area
LN	11726-7	Peak Velocity		RVOT Vmax
LN	20247-3	Peak Gradient		RVOT PGmax
LN	20352-1	Mean Velocity		RVOT Vmean
LN	20256-4	Mean Gradient		RVOT PGmean
LN	20354-7	Velocity Time Integral		RVOT VTI
SRT	F-32120	Stroke Volume		RVOT SV
SRT	F-32100	Cardiac Output		RVOT CO
MDSN	99105-17	Right Ventricular Diameter	ImgMode=SRT\G-03A2\2D mode	RV Diam
MDSN	99105-18	Right Ventricular Length		RV Length
MDSN	99105-19	Right Ventricular Inlet		RV Inlet
MDSN	99105-20	Right Ventricular Area		RV Area
MDSN	99105-21	Right Ventricular Wall		RV Wall
LN	20304-2	Right Ventricular Internal Diastolic Dimension	ImgMode=SRT\G-0394\M mode	RVDd

Table 9.8-10

Context ID 12265 Cardiac Ultrasound Atria and Atrial Septum Measurements

CSD	CV	CM	V8 Label
MDSN	99106-06	Left Atrium Diameter	LA Diam
MDSN	99107-06	Right Atrium Diameter	RA Diam

Table 9.8-11

Context ID 12268 Cardiac Ultrasound Atrioventricular Valves Measurements

CSD	CV	CM	V8 Label
LN	18037-2	Mitral Valve E-Wave Peak Velocity	E
LN	17978-8	Mitral Valve A-Wave Peak Velocity	A
LN	18038-0	Mitral Valve E to A Ratio	E/A
LN	80062-3	Mitral regurgitation Vmax	MR Vmax

MDSN	99114-14	Mitral Valve Diameter	Mitral Valve
LN	18031-5	Tricuspid Valve E Wave Peak Velocity	E
LN	18030-7	Tricuspid Valve A Wave Peak Velocity	A
LN	18039-8	Tricuspid Valve E to A Ratio	E/A
LN	79921-3	Tricuspid regurgitation Vmax	TR Vmax
MDSN	99115-14	Tricuspid Valve Diameter	Tricuspid Valve

Table 9.8-12

Context ID 12271 Cardiac Ultrasound Outflow Tracts Measurements

CSD	CV	CM	V8 Label
MDSN	99108-11	Aortic Valve Diameter	Aortic Valve
MDSN	99116-07	Pulmonary Valve Diameter	Pulmonary Valve

Table 9.8-13

Context ID 12260 Cardiac Ultrasound Pulmonary Artery

CSD	CV	CM	V8 Label
LN	11726-7	Peak Systolic Velocity	PSV
LN	11653-3	End Diastolic Velocity	EDV
LN	20247-3	Peak Gradient	PGmax
LN	11692-1	Time averaged peak velocity	Vmean
LN	12144-2	Systolic to Diastolic Velocity Ratio	S/D
MDSN	99200-01	Diastolic to Systolic Velocity Ratio	D/S
LN	12023-8	Resistivity Index	RI
LN	12008-9	Pulsatility Index	PI
LN	18020-8	Main Pulmonary Artery Diameter	MPA Diam
MDSN	99117-01	Pulmonary Artery Diameter	PA Diam
LN	18021-6	Right Pulmonary Artery Diameter	RPA
LN	18019-0	Left Pulmonary Artery Diameter	LPA

Table 9.8-14

Context ID 12274 Cardiac Ultrasound Aorta Measurements

CSD	CV	CM	Finding Site	V8 Label
LN	11726-7	Peak Systolic Velocity		PSV
LN	11653-3	End Diastolic Velocity		EDV
LN	20247-3	Peak Gradient		PGmax

LN	11692-1	Time averaged peak velocity		Vmean
LN	12144-2	Systolic to Diastolic Velocity Ratio		S/D
MDSN	99200-01	Diastolic to Systolic Velocity Ratio		D/S
LN	12023-8	Resistivity Index		RI
LN	12008-9	Pulsatility Index		PI
LN	18012-5	Ascending Aortic Diameter		Asc. Aorta
LN	18013-3	Descending Aortic Diameter		Desc. Aorta
SRT	T-42310	Aortic Isthmus		Ao Isthmus
LN	11726-7	Peak Systolic Velocity	SRT\T-42304\Transverse Aortic Arch	Transverse Aortic Arch - PSV

9.9 PEDIATRIC STRUCTURED REPORT TEMPLATE

9.9.1 Pediatric Ultrasound Report (TID SM99800)

Table 9.9-1
Pediatric Ultrasound Report

No	Rel With Parent	VT	Concept Name	Unit / CODE Value	V8 Label
1		CONTAINER	(99800, MDSN, “Pediatric Ultrasound Report”)		
2	HAS OBS CONTEXT	INCLUDE	DTID (1001) Observer Context		
3	CONTAINS	CONTAINER	(121118, DCM, “Patient Characteristics”)		
3-1	CONTAINS	NUM	(8302-2, LN, “Patient Height”)		
3-2	CONTAINS	NUM	(29463-7, LN, “Patient Weight”)		
3-3	CONTAINS	NUM	(8867-4, LN, “Heart Rate”)		HR
3-4	CONTAINS	NUM	(8277-6, LN, “Body Surface Area”)		BSA
3-4-1	INFERRED FROM	CODE	(8278-4, LN, “Body Surface Area Formula”)	(122241, DCM, “BSA = 0.007184*WT^0.425 *HT^0.725”)	
4	CONTAINS	CONTAINER	(99800-01, MDSN, “Right Hip”) (99800-02, MDSN, “Left Hip”) (99800-03, MDSN, “Coverage of femoral head”)		Rt. Hip Lt. Hip Coverage of femoral head
4-1	CONTAINS	NUM	DCID (99800) Pediatric Hip Ultrasound Measurements	Ref.Table 9.9-3	
5	CONTAINS	INCLUDE	DTID (SM99810) Pediatric User Creation Group Section	Ref.Table 9.9-3	

9.9.1.1 Pediatric User Creation Group Section (TID SM99810)

Table 9.9-2
User Creation Group in PEDIATRIC SR

	REL	VT	Concept Name	Unit / CODE	V8	Comments

				Value	Label	
5	CONTAINS	CONTAINER	(99900-Creation ID, MDSN, “User Creation Group Name”)			*Creation ID: Randomly generated 7-digit unique ID
5-1	CONTAINS	NUM	(99900-Creation ID, MDSN, “User Creation Item Name”)			
5-1-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation		

9.9.2 Standard Extended Context Groups in Pediatric SR

Table 9.9-3

Context ID 99800 Pediatric Hip Ultrasound Measurements

CSD	CV	CM	V8 Label
MDSN	99800-04	Alpha Angle	Alpha
MDSN	99800-05	Beta Angle	Beta
MDSN	99800-13	Hip Type	Hip Type
MDSN	99800-06	Hip Angle	Hip Angle
MDSN	99800-07	Right Small Diameter	Rt. d
MDSN	99800-08	Right Large Diameter	Rt. D
MDSN	99800-09	Right Coverage	Rt. Coverage
MDSN	99800-10	Left Small Diameter	Lt. d
MDSN	99800-11	Left Large Diameter	Lt. D
MDSN	99800-12	Left Coverage	Lt. Coverage

9.10 MUSCULOSKELETAL STRUCTRUED REPORT TEMPLATE

9.10.1 Musculoskeletal Ultrasound Report (TID SM99900)

Table 9.10-1

Musculoskeletal Ultrasound Report

No	Rel With Parent	VT	Concept Name	Comments	V8 Label

1		CONTAINER	(99900, MDSN, “Musculoskeletal Ultrasound Report”)		
2	HAS OBS CONTEXT	INCLUDE	DTID (1001) Observer Context		
3	CONTAINS	CONTAINER	(121118, DCM, “Patient Characteristics”)		
3-1	CONTAINS	NUM	(8302-2, LN, “Patient Height”)		
3-2	CONTAINS	NUM	(29463-7, LN, “Patient Weight”)		
3-3	CONTAINS	NUM	(8867-4, LN, “Heart Rate”)		HR
3-4	CONTAINS	NUM	(8277-6, LN, “Body Surface Area”)		BSA
3-4-1	INFERRED FROM	CODE	(8278-4, LN, “Body Surface Area Formula”)	(122241, DCM, “BSA = 0.007184*WT^0.425*HT^0.725”)	
4	CONTAINS	CONTAINER	(121070, DCM, “Findings”)		
4-1	HAS CONCEPT MOD	CODE	(G-C0E3, SRT, “Finding Site”)	(99900-01, MDSN, “Shoulder”)	
				(99900-02, MDSN, “Wrist”)	
				(99900-03, MDSN, “Knee”)	
				(99900-04, MDSN, “Ankle”)	
4-2	HAS CONCEPT MOD	CODE	(G-C171, SRT, “Laterality”)	(G-A100, SRT, “Right”) (G-A101, SRT, “Left”) (G-A102, SRT, “Unilateral”)	
4-3	CONTAINS	CONTAINER	(125007, DCM, “Measurement Group”)		
4-3-1	HAS OBS CONTEXT	TEXT	(125010, DCM, “Identifier”)	1~10	
4-3-2	CONTAINS	NUM	(121206, DCM, “Distance”)		
4-3-2-1	HAS CONCEPT MOD	CODE	(121401, DCM, “Derivation”)	Common CID-Derivation	

END OF DOCUMENT