GE Medical Systems
Kretz Ultrasound

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DICOM
Conformance Statement

KTD106062
Revision 6

VOLUSON® Voluson i/e 8.x.x
CE 0123

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Contents

1 Introduction

1.1 Overview

This DICOM Conformance Statement is divided into Sections as described below:

Section 1 (Introduction), which describes the overall structure, intent, and references for this Conformance Statement

Section 2 (Network Conformance Statement), which specifies the Voluson i/e equipment compliance to the DICOM requirements for the implementation of Networking features.

Section 3 (Ultrasound Information Object Implementation), which specifies the Voluson i/e compliance to DICOM requirements for the implementation of an Ultrasound Medicine Information Object.

Section 4 (Ultrasound Multi-Frame Information Object Implementation), which specifies the Voluson i/e compliance to DICOM requirements for the implementation of an Ultrasound Multi-Frame Information.

Section 5 (SC Information Object Implementation), which specifies the Voluson i/e compliance to DICOM requirements for the implementation of a Secondary Capture Information Object.

Section 6 (SR Information Object Implementation), which specifies the Voluson i/e compliance to DICOM requirements for the implementation of a Comprehensive Structured Reporting Information Object.

Section 7 (Modality Worklist Information Model), which specifies the Voluson i/e equipment compliance to DICOM requirements for the implementation of the Modality Worklist service.

Section 8 (Modality Performed Procedure Step SOP Class Definition), which specifies the Voluson i/e compliance to DICOM requirements for the implementation of Modality Performed Procedure Step Service.

Section 9 (Storage Commitment Push Model SOP Class Definition), which specifies the Voluson i/e compliance to DICOM requirements for the implementation of the Storage Commitment Push Model Service.

Section 10 (Basic Print Meta SOP Class Information Object Implementation), which specifies the Voluson i/e compliance to DICOM requirements for the implementation of Basic Print Meta SOP Classes (Gray and Color).

1.2 Overall DICOM Conformance Statement Document Structure

The Documentation Structure of the GE Healthcare Conformance Statements and their relationship with the DICOM Conformance Statements is shown below.

This document specifies the DICOM implementation. It is entitled:

Voluson i/e Version 8.x.x Conformance Statement Part Number KTD106062

This DICOM Conformance Statement documents the DICOM Conformance Statement and Technical Specification required to inter-operate with the Voluson i/e network interface. Introductory information, which is applicable to all GE Healthcare Conformance Statements, is described in the document:

Introduction to the Integrated DICOM/Network v3.0 (ID/Net v3.0) Conformance Statement Direction: 2118780.

This Introduction familiarizes the reader with DICOM terminology and general concepts. It should be read prior to reading the individual products' GE Healthcare Conformance Statements.

The Voluson i/e Conformance Statement, contained in this document, also specifies the Lower Layer communications, which it supports (e.g. TCP/IP). However, the Technical Specifications are defined in the DICOM Part 8 standard.

For more information including Network Architecture and basic DICOM concepts, please refer to the Introduction.

For more information regarding DICOM, copies of the Standard may be obtained on the Internet at http://medical.nema.org. Comments on the standard may be addressed to:

DICOM Secretariat NEMA 1300 N. 17th Street, Suite 1847 Rosslyn, VA 22209 USA

1.3 Intended Audience

The reader of this document is concerned with software design and/or system integration issues. It is assumed that the reader of this document is familiar with the DICOM Standards and with the terminology and concepts, which are used in those Standards. If readers are unfamiliar with DICOM terminology they should first refer to the document listed below, then read the DICOM Standard itself, prior to reading this DICOM Conformance Statement document.

> Introduction to the Integrated DICOM/Network v3.0 (ID/Net v3.0) Conformance Statement Direction: 2118780

1.4 Scope and Field of Application

It is the intent of this document, in conjunction with the Introduction to the Integrated DICOM/Network v3.0 (ID/Net v3.0) Conformance Statement, Direction: 2118780, to provide an unambiguous specification for GE Healthcare implementations. This specification, called a Conformance Statement, includes a DICOM Conformance Statement and is necessary to ensure proper processing and interpretation of GE Healthcare medical data exchanged using DICOM. The Voluson i/e Conformance Statements are available to the public.

Included in this DICOM Conformance Statement are the Module Definitions, which define all data elements, used by the Voluson i/e implementation. If the user encounters unspecified private data elements while parsing a Voluson i/e Data Set, the user is well advised to ignore those data elements (per the DICOM standard). Unspecified private data element information is subject to change without notice. If, however, the device is acting as a "full fidelity storage device", it should retain and re-transmit all of the private data elements which are sent by the Voluson i/e.

1.5 Important Remarks

The use of these DICOM Conformance Statements, in conjunction with the DICOM Standards, is intended to facilitate communication with the Voluson i/e equipment. However, **by itself, it is not sufficient to ensure that inter-operation will be successful**. The **user (or user's agent)** needs to proceed with caution and address at least four issues:

Integration - The integration of any device into an overall system of interconnected devices goes beyond the scope of standards (DICOM), and of this introduction and associated DICOM Conformance Statements when interoperability with non-GE equipment is desired. The responsibility to analyze the applications requirements and to design a solution that integrates GE imaging equipment with non-GE systems is the user's responsibility and should not be underestimated. The user is strongly advised to ensure that such an integration analysis is correctly performed.

Validation - Testing the complete range of possible interactions between any GE device and non-GE devices, before the connection is declared operational, should not be overlooked. Therefore, the user should ensure that any non-GE provider accepts full responsibility for all validation required for their connection with GE devices. This includes the accuracy of the image data once it has crossed the interface between the GE imaging equipment and the non-GE device and the stability of the image data for the intended applications.

Such a validation is required before any clinical use (diagnosis and/or treatment) is performed. It applies when images acquired on GE imaging equipment are processed/displayed on a non-GE device, as well as when images acquired on non-GE equipment is processed/displayed on a GE console or workstation.

Future Evolution - GE understands that the DICOM Standard will evolve to meet the user's growing requirements. GE is actively involved in the development of the DICOM Standard. DICOM will incorporate new features and technologies and GE may follow the evolution of the Standard. The GE Healthcare protocol is based on DICOM as specified in each DICOM Conformance Statement. Evolution of the Standard may require changes to devices, which have implemented DICOM. In addition, GE reserves the right to discontinue or make changes to the support of communications features (on its products) reflected on by these DICOM Conformance Statements. The user should ensure that any non-GE provider, which connects with GE devices, also plans for the future evolution of the DICOM Standard. Failure to do so will likely result in the loss of function and/or connectivity as the DICOM Standard changes and GE Products are enhanced to support these changes.

Interaction - It is the sole responsibility of the non-GE provider to ensure that communication with the interfaced equipment does not cause degradation of GE imaging equipment performance and/or function.

2 Network Conformance Statement

2.1 Introduction

This section of the DICOM Conformance Statement specifies the compliance to DICOM conformance requirements for the relevant Networking features for the Voluson i/e. Note that the format of this section strictly follows the format defined in DICOM Standard PS 3.2 (Conformance). Please refer to that part of the standard while reading this section. Voluson i/e is an Ultrasound scanner running on a commercial computer. It allows for the following DICOM functionality:

- Sending and receiving Echo messages to and from DICOM Verification SCP and client.
- Exporting DICOM images and SR documents to a DICOM SCP.
- Querying and retrieving DICOM Modality Worklist from a Worklist SCP.
- Sending start and end of examination to a DICOM Modality Performed Procedure Step SCP.
- Sending storage commitment requests to and receiving replies from a DICOM Storage Commitment SCP.
- Printing images to a DICOM Printer.

2.2 Implementation Model

2.2.1 Application Data Flow Diagram

The Basic and Specific Application models for this device are shown in Figure 1.

There are five local real-world activities that occur in Voluson i/e - **Image Send, Verify, Query Worklist, Start/End Exam and Print Image.**

- **Image Send** spools images or SR documents into a send queue. The queue manager then initiates a connection with the DICOM SCP and transmits the images and SR documents to the DICOM SCP. If Storage Commitment is configured, a commitment request will be sent for the images and SR documents.
- **Verify** initiates a connection with the DICOM SCP, posts a Verification request and closes the connection. It also responds to incoming Verification requests.
- **Query Worklist** initiates a connection with the DICOM SCP, performs a query and retrieves the matching entries to the product.
- **Start/End exam**: If Modality Performed Procedure Step is configured N-CREATE and N-SET messages will be sent for the exam.
- **Print Image** will send images to a DICOM Print SCP. It uses the same spooling mechanism as Image Send.

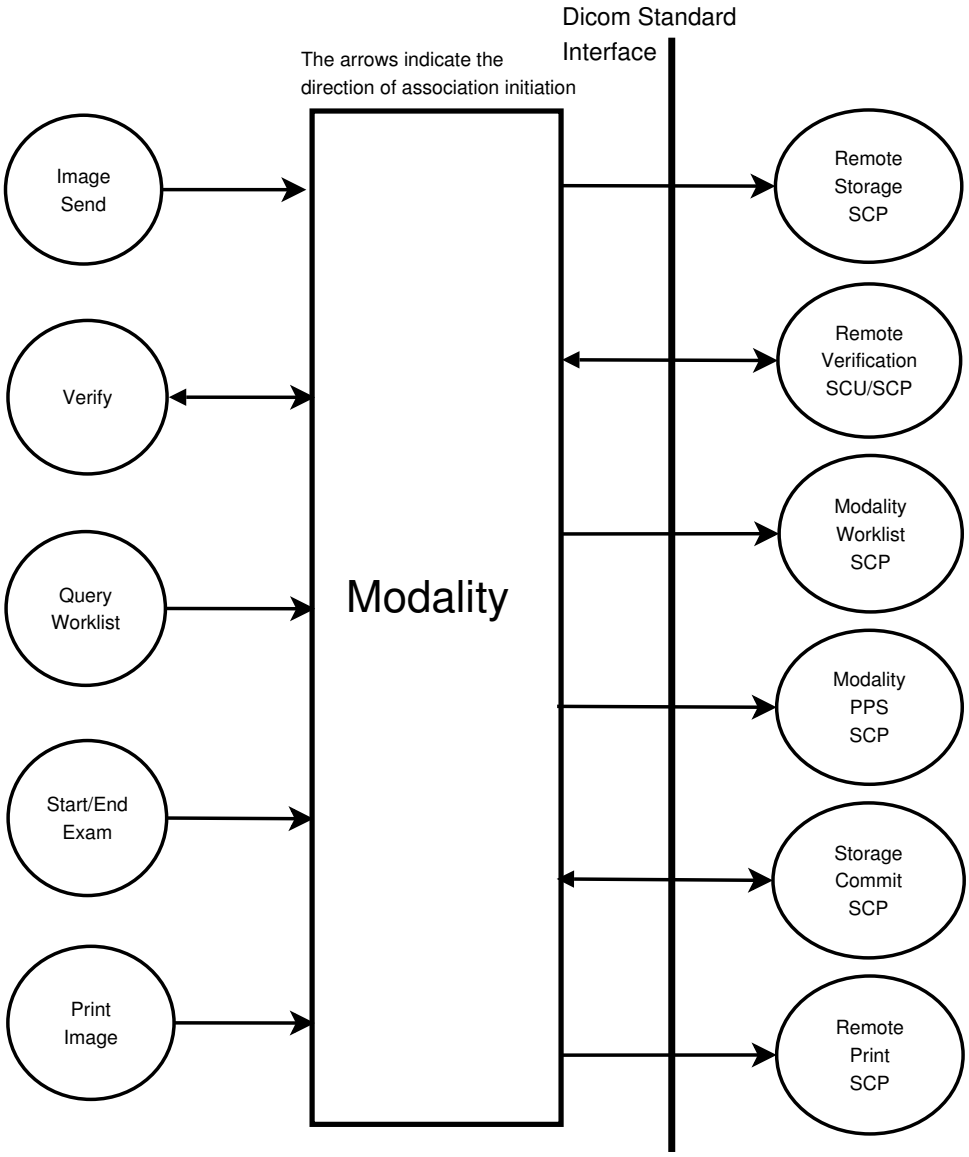

Figure 1: Application Data Flow Diagram

2.2.2 Functional Definition of AE's

Application Entity Voluson i/e supports the following functions:

- Initiates a DICOM association to send images and SR documents.
- Transmits DICOM images and SR documents to the DICOM Storage SCP.
- Initiates a DICOM verification to assist in network diagnostics.
- Responds to DICOM verification requests from other devices.
- Initiates a DICOM worklist query to receive worklist information.
- Initiates a DICOM association to notify start of examination.
- Initiates a DICOM association to notify end of examination.
- Initiates a DICOM association to request storage commitment of images and SR documents.
- Responds to replies from DICOM Storage SCPs, for storage commitment requests of images and SR documents sent by Voluson i/e.
- Initiates a DICOM association to print images.

2.2.3 Sequencing of Real-World Activities

Not applicable.

2.3 AE Specifications

2.3.1 Voluson i/e AE Specification

This Application Entity provides Standard Conformance to the following DICOM SOP Classes as an SCU:

Table 2.3–1: **SCU SOP Classes**

SOP Class Name	**SOP Class UID**
Ultrasound Multi-Frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7
Verification SOP Class	1.2.840.10008.1.1
Modality Worklist Ingormation Model - FIND	1.2.840.10008.5.1.4.31
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1
Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9
Basic Color Print Management Meta SOP Class	1.2.840.10008.5.1.1.18
Comprehensive Structured Report Storage	1.2.840.10008.5.1.4.1.1.88.33

This Application Entity provides Standard Conformance to the following DICOM SOP Classes as an SCP:

Table 2.3–2: **SCP SOP Classes**

SOP Class Name	SOP Class UID
Verification SOP Class	1.2.840.10008.1.1

2.3.1.1 Association Establishment Policies

2.3.1.1.1 General

The DICOM Application Context Name (ACN), which is always proposed, is:

Table 2.3–3: **Application Context Name**

Name	UID
Application Context Name	1.2.840.10008.3.1.1.1

The Maximum Length PDU negotiation is included in all association establishment requests. The maximum length PDU for an association initiated by the equipment is:

Table 2.3–4: **PDU Size**

Name	Length
Maximum PDU Size Offered	28872 bytes

The SOP Class Extended Negotiation is not supported.

The user information Items sent by this product are:

- Maximum PDU Length
- Implementation UID Implementation
- Version Name

2.3.1.1.2 Number of Associations

The Voluson i/e AE will initiate multiple DICOM associations.

2.3.1.1.3 Asynchronous Nature

Asynchronous mode is not supported. All operations will be performed synchronously.

2.3.1.1.4 Implementation Identifying Information

The Implementation UID for this DICOM Implementation is:

"1.2.276.0.26.20010718.240

The Implementation Version Name for this DICOM Implementation is:

"KRETZDICOM_240"

Note: The Implementation Version Name may change in the future without modification of this document.

2.3.1.2 Association Initiation Policy

The Voluson i/e AE attempts to establish a new association with a remote device due to the following Real-World Activities:

- Image Send initiated by the operator for images and SR documents and sending requests for Storage Commitment.
- Verification, which verifies application level communication between peer DICOM AE's for service purposes.
- Worklist initiated by the operator for receiving worklist information.
- Start/End Exam sending messages to Modality Performed Procedure Step.
- Print initiated by the operator for a specific image or group of images.

2.3.1.2.1 Real-World Activity A ('Image Send' Operation)

2.3.1.2.1.1 Associated Real-World Activity

Upon a request by the operator (manual or automatic), images or SR documents will be sent to a DICOM Storage SCP.

2.3.1.2.1.2 Proposed Presentation Context Tables

The Proposed Presentation Context Table depends on compression according to the following tables:

Table 2.3–5: **Presentaion Context Table - Proposed (No Compression)**

Abstract Syntax Name	**Abstract Syntax UID**	**Transfer Syntax Name**	**Transfer Syntax UID**	**Role**	**Ext. Neg.**
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.
Ultrasound Multi-Frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.

Table 2.3–6: **Presentaion Context Table - Proposed (JPEG Compression)**

Abstract Syntax Name	**Abstract Syntax UID**	**Transfer Syntax Name**	**Transfer Syntax UID**	**Role**	**Ext. Neg.**
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	JPEG Baseline JPEG Lossless Non-Hier. (Process 14)	1.2.840.10008.1.2.4.50 1.2.840.10008.1.2.4.70	SCU	None.
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1	JPEG Baseline JPEG Lossless Non-Hier. (Process 14)	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	JPEG Baseline JPEG Lossless Non-Hier. (Process 14)	1.2.840.10008.1.2.4.50 1.2.840.10008.1.2.4.70	SCU	None.

Table 2.3–7: **Presentaion Context Table - Proposed**

Abstract Syntax Name	Abstract Syntax UID	Transfer Syntax Name	Transfer Syntax UID	Role	Ext. Neg.
Comprehensive Structured Report	1.2.840.10008.5.1.4.1.1.88.33	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.

2.3.1.2.1.2.1 SOP Specific DICOM Conformance Statement for all Storage SOP Classes

The Voluson i/e also sends a Storage Commitment Request, with the following proposed presentation context. The result from the SCP is expected on another association for the Storage Commitment result.

Table 2.3–8: **Presentaion Context Table - Proposed - Storage Commitment**

Abstract Syntax Name	Abstract Syntax UID	Transfer Syntax Name	Transfer Syntax UID	Role	Ext. Neg.
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.

For this SOP class, all status codes with status Refused or Error are treated as failures and terminate the association and operation. On a failure, the request will be put in a holding queue for the user to manually retry the request. All status codes with status Warning or Success are treated as successes.

2.3.1.2.2 Real-World Activity B ('Verify' Operation)

2.3.1.2.2.1 Associated Real-World Activity

The user may initiate a DICOM Verification Request in the Config screen. Associations will be released upon the receipt of each C-ECHO confirmation. In the event that the SCP does not respond for some reason, the operation will time out and the Voluson i/e will close the association.

2.3.1.2.2.2 Proposed Presentation Context Table

Table 2.3–9: **Presentaion Context Table - Proposed**

Abstract Syntax Name	Abstract Syntax UID	Transfer Syntax Name	Transfer Syntax UID	Role	Ext. Neg.
Verification SOP Class	1.2.840.10008.1.1	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.

2.3.1.2.3 Real-World Activity C ('Query Worklist' Operation)

2.3.1.2.3.1 Associated Real-World Activity

The user may initiate a DICOM Worklist Query in Search screen, which will send a C-FIND-RQ to the Worklist SCP.

Associations will be released upon the receipt of C-FIND-RSP confirmation.

2.3.1.2.3.2 Proposed Presentation Context Table

Table 2.3–10: **Presentaion Context Table - Proposed**

Abstract Syntax Name	Abstract Syntax UID	Transfer Syntax Name	Transfer Syntax UID	Role	Ext. Neg.
Modality Worklist Information Model - FIND	1.2.840.10008.5.1.4.31	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.

2.3.1.2.3.2.1 SOP Specific DICOM Conformance Statement for Worklist SOP Classes

The Voluson i/e includes matching keys in the Modality Worklist queries as described in Section 7.5. All status codes with status Refused or Error are treated as failures and terminate the association and operation. On a failure, the user will be informed

2.3.1.2.4 Real-World Activity D ('Start/End Exam' Operation)

2.3.1.2.4.1 Associated Real-World Activity

The Modality Performed Procedure Step messages are sent when the exam is started by the user after a worklist entry has been selected or patient data have been entered on the patient data entry screen. At this time the N-CREATE message is sent.

The N-SET will be sent when 'End Exam' is being pressed. The status is set to COMPLETED by default, however the operator may chose to manually set the status to DISCONTINUED and select the discontinuation reason from a predefined list.

2.3.1.2.4.2 Proposed Presentation Context Table

Table 2.3–11: **Presentaion Context Table - Proposed**

Abstract Syntax Name	Abstract Syntax UID	Transfer Syntax Name	Transfer Syntax UID	Role	Ext. Neg.
Modality Performed Procedure Step SOP Class	1.2.840.10008.3.1.2.3.3	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.

2.3.1.2.4.2.1 SOP Specific DICOM Conformance Statement for Modality Performed Procedure Step SOP Class

The Voluson i/e includes Attributes in the Modality Performed Procedure Step N-CREATE as described in Section 8.2.1.

The Voluson i/e includes Attributes in the Modality Performed Procedure Step N-SET as described in Section 8.2.1.

The mapping from Worklist attributes is described in Section 7.5.

Voluson i/e sends N-SET after the exam is ended. The N-SET will include all acquired images SOP Instance UIDs and the status of COMPLETED or DISCONTINUED.

For this SOP class, all status codes with status Refused or Error are treated as failures and terminate the association and operation. All status codes with status Warning or Success are treated as successes.

2.3.1.2.5 Real-World Activity E ('Image Print' Operation)

2.3.1.2.5.1 Associated Real-World Activity

Upon a request by the operator, print jobs will be sent to a DICOM Print SCP. The jobs are entered into a send queue and processed by the spool manager. If an error occurs during the transmission the operation may be retried manually. The number of automatic etries is configurable.

2.3.1.2.5.2 Proposed Presentation Context Table

Table 2.3–12: **Presentaion Context Table - Proposed**

Abstract Syntax Name	Abstract Syntax UID	Transfer Syntax Name	Transfer Syntax UID	Role	Ext. Neg.
Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.
Basic Color Print Management Meta SOP Class	1.2.840.10008.5.1.1.18	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.

2.3.1.2.5.2.1 SOP Specific DICOM Conformance Statement for Print Management SOP Classes

The Voluson i/e treats all status codes with status Refused or Error as failures and the spool manager retries the operation. After the configurable number of retries has been exceeded the spooler's job status is set to FAILED and the print job may be retried manually.

2.3.1.3 Association Acceptance Policy

The Voluson i/e AE accepts an association when it receives a Verification Request from another network device or a Storage Commitment result from a Storage Commitment SCP.

2.3.1.3.1 Real-World Activity A('Echo' Operation)

2.3.1.3.1.1 Associated Real-World Activity

An incoming Verification Request will cause the AE to accept the association and respond with a Verification Response.

2.3.1.3.1.2 Accepted Presentation Context Table

Table 2.3–13: **Presentaion Context Table - Accepted**

Abstract Syntax Name	Abstract Syntax UID	Transfer Syntax Name	Transfer Syntax UID	Role	Ext. Neg.
Verification SOP Class	1.2.840.10008.1.1	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.

2.3.1.3.1.2.1 SOP Specific DICOM Conformance Statement for Verify SOP Class

The AE provides standard conformance to the Verification SOP Class as an SCP. The port number used is configured in Config screen, default is 104.

2.3.1.3.1.3 Presentation Context Acceptance Criterion

No criterion.

2.3.1.3.1.4 Transfer Syntax Selection Policies

The selected transfer syntax is based on the proposed transfer syntax list. The priority order is Explicit VR Little Endian, Explicit VR Big Endian and Implicit VR Little Endian.

2.3.1.3.2 Real-World Activity B('End Exam' Operation)

2.3.1.3.2.1 Associated Real-World Activity

Voluson i/e will only listen for an N-EVENT-REPORT (Storage Commitment Result) from a Storage Commitment SCP in a new association.

2.3.1.3.2.2 Accepted Presentation Context Table

Table 2.3–14: **Presentaion Context Table - Accepted - Storage Commitment**

Abstract Syntax Name	Abstract Syntax UID	Transfer Syntax Name	Transfer Syntax UID	Role	Ext. Neg.
Storage Commitment Push Model SOP Class	1.2.840.10008.1.20.1	Explicit VR Little Endian Explicit VR Big Endian Implicit VR Little Endian	1.2.840.10008.1.2.1 1.2.840.10008.1.2.2 1.2.840.10008.1.2	SCU	None.

2.3.1.3.2.2.1 SOP Specific DICOM Conformance Statement for the Storage Commitment Push Model SOP Class SCU

The Voluson i/e will only accept the SCU role (which must be proposed via SCP/SCU Role Selection Negotiation) within a Presentation Context for the Storage Commitment Push Model SOP Class. The result from the SCP is expected on another association for the Storage Commitment result.

The Voluson i/e behavior after receiving an N-EVENT-REPORT (Storage Commitment Result) is described in Section 7.5.

For this SOP class, all status codes with status Refused or Error are treated as failures and terminate the association and operation. All status codes with status Warning or Success are treated as successes.

2.4 Communication Profiles

2.4.1 Supported Communication Stacks (PS 3.8, PS 3.9)

DICOM Upper Layer (PS 3.8) is supported using TCP/IP.

2.4.2 TCP/IP Stack

The TCP/IP stack is inherited from the product's operating system. Please refer to product documentation for more information.

2.4.2.1 API

Not applicable to this product.

2.5 Extensions / Specialisations / Privatizations

the product will send ultrasound raw volume data information in private data elements designated by the private tag 7FE1,00xx VR OB, VM 1.

2.6 Configuration

2.6.1 AE Title/Presentation Address Mapping

The Local AE title is configurable through the Config screen, see below.

2.6.2 Configurable Parameters

Network:

- Local IP address
- Local IP netmask
- Local routing table information

Local:

- Local AE Title
- Local TCP Port Number

Verification:

- The AE Title, IP Address and Port number of the SCP.

Modality Worklist:

- The AE Title, IP Address and Port number of the SCP.

Modality Performed Procedure Step:

- The AE Title, IP Address and Port number of the SCP.

Storage Commitment:

- The AE Title, IP Address and Port number of the SCP.
- Max retries, Retry interval.

Print:

- The AE Title, IP Address and Port number of the SCP.
- Max retries, Retry interval.
- Configuration for each print job in setup dialog.

2.7 Support of Extended Character Sets

Voluson i/e will support the ISO_IR 100 (ISO 8859-1:1987 Latin character set.

2.8 Codes and Controlled Terminology

The product uses the fixed (non-configurable, non-extensible) coded terminology in SR Document attributes, as described in Section 6 SR Information Object Implementation.

2.9 Security Profiles

The product does not conform to any defined DICOM Security Profiles. It is assumed that the product is used within a secured environment.

It is assumed that a secured environment includes at a minimum:

- Firewall or router protections to ensure that only approved external hosts have network access to the product.
- Firewall or router protections to ensure that the product only has network access to approved external hosts and services.
- Any communications with external hosts and services outside the locally secured environment use appropriate secure network channels (such as a Virtual Private Network(VPN))

3 Ultrasound (US) Information Object Implementation

3.1 Introduction

This section specifies the use of the DICOM US Image IOD to represent the information included in US images produced by this implementation. Corresponding attributes are conveyed using the module construct. The contents of this section are:

- IOD Implementation
- IOD Module Table
- IOD Module Definitions

3.2 US IOD Implementation

This section defines the implementation of US image information object.

3.3 US Entity-Relationship Model

3.3.1 Entity Description

Please refer to DICOM Standard Part 3 (Information Object Definitions) for a description of each of the entities contained within the US Information Object.

3.3.2 Voluson i/e Mapping of DICOM Entities

Table 3.3–1: **Mapping of DICOM Entities to Equipment Entities**

DICOM	Equipment
Patient	Patient
Study	Exam
Series	Exam
Image	Image
Curve	not used

3.4 IOD Module Table

Within an entity of the DICOM US IOD, attributes are grouped into related set of attributes. A set of related attributes is termed a module. A module facilitates the understanding of the semantics concerning the attributes and how the attributes are related with each other. A module grouping does not infer any encoding of information into data sets.

The table below identifies the defined modules within the entities, which comprise the DICOM US IOD. Modules are identified by Module Name.

See DICOM Part 3 for a complete definition of the entities, modules, and attributes.

Only the single frame US Image IOD is described here.

Table 3.4–1: **US Image IOD Modules**

Entity Name	Module Name	Reference
Patient	Patient	3.5.1.1
Study	General Study	3.5.2.1
Study	Patient Study	3.5.2.2
Series	General Series	3.5.3.1
Frame of Reference	Frame of Reference	Not used
Frame of Reference	US Frame of Reference	Not used
Equipment	General Equipment	3.5.4.1
Image	General Image	3.5.5.1
Image	Image Pixel	3.5.5.2
Image	Contrast / Bolus	Not used
Image	Palette Color Lookup Table	not used
Image	US Region Calibration	3.5.7.1
Image	US Image	3.5.7.2
Image	Overlay Plane	Not used
Image	VOI LUT	Not used
Image	SOP Common	3.5.6.1
Curve		Not used

3.5 Information Module Definitions

Please refer to DICOM Standard Part 3 (Information Object Definitions) for a description of each of the entities and modules contained within the US Information Object.

The following modules are included to convey Enumerated Values, Defined Terms, and Optional Attributes supported. Type 1 & Type 2 Attributes are also included for completeness and to define what values they may take and where these values are obtained. It should be noted that they are the same ones as defined in the DICOM Standard Part 3 (Information Object Definitions).

3.5.1 Common Patient Entity Modules

3.5.1.1 Patient Module

Table 3.5–1: **Patient Module Attributes**

Attribute Name	Tag	Type	Attribute Description
Patient's Name	0010, 0010	2	Patient name with ^ delimiters
Patient ID	0010, 0020	2	64 char max
Birth Date	0010, 0030	2	Used
Patient Sex	0010, 0040	2	Used
Referenced Patient SQ		3	Not used
Patient's Birth Time		3	Not used
Other Patient ID		3	Not used
Other Patient Names		3	Not used
Ethnic Group		3	Not used
Patient Comments		3	Not used

3.5.2 Common Study Entity Modules

3.5.2.1 General Study Module

Table 3.5–2: **General Study Module Attributes**

Attribute Name	Tag	Type	Attribute Description
Study Instance UID	0020,000D	1	Uniquely generated by the equipment. Taken from worklist if it is there.
Study Date	0008,0020	2	Set to exam date.
Study Time	0008,0030	2	Set to exam time.
Referring Physicians Name	0008,0090	2	May be entered from user interface. Taken from the worklist if present.
Study ID	0020,0010	2	Taken for the worklist if present. (from Requested Procedure ID)
Accession Number	0008,0050	2	May be entered from user interface. Taken from the worklist if present.
Study Description	0008,1030	3	Taken for the worklist if present. (from Requested Procedure ID)
Name of Reading Physician(s)	0008,1060	3	May be entered from user interface.
Referenced Study Sequence	0008,1110	3	Taken from the worklist if present.
>Referenced SOP Class UID	0008,1150	3	Taken from the worklist if present.
>Referenced SOP Instance UID	0008,1155	3	Taken from the worklist if present.

3.5.2.2 Patient Study Module

No attributes from this module are used.

3.5.3 Common Series Entity Modules

3.5.3.1 General Series Module

Table 3.5–3: **General Series Module Attributes**

Attribute Name	Tag	Type	Attribute Description
Modality	0008,0060	1	Defined Term "US" used.
Series Instance UID	0020,000E	1	Uniquely generated by the equipment.
Series Number	0020,0011	2	Internal number which is incremented for each new series.
Laterality	0020,0060	2C	Not used
Series Date	0008,0021	3	Set to series date.
Series Time	0008,0031	3	Set to series time.
Performing Physician's Name	0008,1050	3	May be entered from user interface. Taken from worklist if present. (from Scheduled Performing Physician's Name)
Series Description	0008,103E	3	Not used
Operator's Name	0008,1070	3	May be entered from user interface.
Referenced Performed Procedure Step Sequence	0008,1111	3	Used if Modality Performed Procedure Step is enabled.

Table 3.5–3: **General Series Module Attributes (continued)**

Attribute Name	Tag	Type	Attribute Description
>Referenced SOP Class UID	0008,1150	3	Used if Modality Performed Procedure Step is enabled.
>Referenced SOP Instance UID	0008,1155	3	Used if Modality Performed Procedure Step is enabled.
Body Part Examined	0018,0015	3	Not used
Patient Position	0018,5100	2C	Not used
Smallest Pixel Value in Series	0028,0108	3	Not used
Largest Pixel Value in Series	0028,0109	3	Not used
Request Attribute Sequence	0040,0275	3	Used if Modality Worklist and/or Modality Performed Procedure Step is enabled.
>Requested Procedure ID	0028,1001	1C	Taken from worklist if present.
>Scheduled Procedure Step ID	0040,0009	1C	Taken from worklist if present.
>Scheduled Procedure Step Description	0040,0007	3	Taken from worklist if present.
>Scheduled Protocol Code SQ	0040,0008	3	Taken from worklist if present.
>Include "Code SQ Macro"			
Performed Procedure Step ID	0040,0253	3	Used if Modality Performed Procedure Step is enabled.
Performed Procedure Step Start Date	0040,0244	3	Used if Modality Performed Procedure Step is enabled.
Performed Procedure Step Time	0040,0245	3	Used if Modality Performed Procedure Step is enabled.
Performed Procedure Step Description	0040,0254	3	Used if Modality Performed Procedure Step is enabled.
Performed Protocol Code SQ	0040,0260	3	Taken from worklist if present. (from Scheduled Protocol Code Sequence)
>Include "Code SQ Macro"			

3.5.4 Common Equipment Entity Modules

3.5.4.1 General Equipment Module

Table 3.5–4: **General Equipment Module Attributes**

Attribute Name	Tag	Type	Attribute Description
Manufacturer	0008,0070	2	Used
Institution Name	0008,0080	3	Used
Institution Address	0008,0081	3	Not used
Station Name	0008,1010	3	Used
Institutional Department Name	0008,1040	3	Not used
Manufacturer's Model Name	0008,1090	3	Used
Device Serial Number	0018,1000	3	Used
Software Version	0018,1020	3	Used
Spatial Resolution	0018,1050	3	Not used
Date of Last Calibration	0018,1200	3	Not used
Time of Last Calibration	0018,1201	3	Not used
Pixel Padding Value	0028,0120	3	Not used

3.5.5 Common Image Entity Modules

3.5.5.1 General Image Module

Table 3.5–5: **General Image Module Attributes**

Attribute Name	Tag	Type	Attribute Description
Image Number	0020,0013	2	Image number in exam
Patient Orientation	0020,0020	2C	Zero length
Acquisition Date	0008,0022	3	Not used
Acquisition Time	0008.0032	3	Not used
Image Type	0008,0008	3	Used
Acquisition Number		3	Not used
Content Date	0008,0023	2C	Used
Content Time	0008,0033	2C	Used
Referenced Image Sequence		3	Not used
Derivation Description	0028,2111	3	Not used
Source Image Sequence		3	Not used
Images in Acquisition		3	Not used
Image Comments	0020,4000	3	Used
Lossy Image Compression	0028,2110	3	set to "01" if compressed

3.5.5.2 Image Pixel Module

Table 3.5–6: **Image Pixel Module Elements**

Attribute Name	Tag	Type	Attribute Description
Samples Per Pixel	0028,0002	1	RGB: 3 YBR_FULL_422: 3 MONOCHROME2: 1
Photometric Interpretation	0028,0004	1	Defined Values used: "MONOCHROME2", "RGB", "YBR_FULL_422"
Rows	0028,0010	1	Expert Models: configurable perDICOM destination (800x600 or 640x480) Pro Models: SC Images: configurable perDICOM destination,US Images: always 640x480
Columns	0028,0011	1	Expert Models: configurable perDICOM destination (800x600 or 640x480) Pro Models :SC Images: configurable perDICOM destination,US Images: always 640x480
Bits Allocated	0028,0100	1	Always 0008H
Bits Stored	0028,0101	1	Always 0008H
High Bit	0028,0102	1	Always 0007H
Pixel Representation	0028,0103	1	Defined Value "0" (Unsigned int)
Pixel Data	7FE0,0010	1	Pixel Data of Image
Planar Configuration	0028,0006	1C	Used unless MONOCHROME2

Table 3.5–6: **Image Pixel Module Elements (continued)**

Attribute Name	Tag	Type	Attribute Description
Aspect Ratio	0028,0034	1C	"1" if MONOCHROME2, else "0"
Smallest Image Pixel Value	0028,0106	3	Not used
Largest Image Pixel Value	0028,0107	3	Not used

3.5.5.3 Contrast/Bolus Module

This module is not being used.

3.5.5.4 Palette Color Lookup Module

This module is not being used.

3.5.5.5 VOI LUT Module

Table 3.5–7: **VOI LUT Module Attributes**

Attribute Name	Tag	Type	Attribute Description
VOI LUT Sequence	0028,3010	3	Not used
>LUT Descriptor	0028,3002	3	Not used
> LUT Explanation	0028,3003	3	Not used
>LUT Data	0028,3006	3	Not used
Window Center	0028,1050	3	Set to 127 if MONOCHROME2
Window Width	0028,1051	3	Set to 256 if MONOCHROME2
Device Serial Number	0018,1000	3	"0"
Window Center and Width Explanation	0028,1055	3	Not used

3.5.6 General Modules

The SOP Common Module is mandatory for all DICOM IODs.

3.5.6.1 SOP Common Module

Table 3.5–8: **SOP Common Module Attributes**

Attribute Name	Tag	Type	Attribute Description
SOP Class UID	0008, 0016	1	Set to: "1.2.840.10008.5.1.4.1.1.3.1", "1.2.840.10008.5.1.4.1.1.6.1" or "1.2.840.10008.5.1.4.1.1.7"
SOP Instance UID	0008, 0018	1	Uniquely generated by the equipment
Specific Character Set	0008,0005	1C	Set to "ISO_IR 100"

Table 3.5–8: **SOP Common Module Attributes (continued)**

Attribute Name	Tag	Type	Attribute Description
Instance Creation Date	0008,0012	3	Not used
Instance Creation Time	0008,0013	3	Not used
Instance Creator ID	0008,0014	3	Not used
Instance Number	0020,0013	3	Not used

3.5.7 General Modules

This Section describes US Series, Equipment, and Image Modules. These Modules contain attributes that are specific to US Image IOD.

3.5.7.1 US Region Calibration Module

The US Region Calibration Module is used to describe multiple regions.

Table 3.5–9: **US Region Calibration Module elements**

Attribute Name	Tag	Type	Attribute Description
Sequence of Ultrasound Regions	0018,6011	1	Used
>Region Spatial Format	0018,6012	1	1,2,3
>Region Data Type	0018,6014	1	1
>Region Flags	0018,6016	1	0
>Region Location MinX0	0018,6018	1	0..799
>Region Location MinY0	0018,601a	1	0..599
>Region Location Max X1	0018,601c	1	0..799
>Region Location Max Y1	0018,601e	1	0..599
>Reference Pixel X0	0018,6020	3	0
>Reference Pixel Y0	0018,6022	3	0..xxx
>Physical Units X Direction	0018,6024	1	3,4
>Physical Units Y Direction	0018,6026	1	3,4
>Reference Pixel Physical Value X	0018,6028	3	doppler images only
>Reference Pixel Physical Value Y	0018,602a	3	doppler images only
>Physical Delta X	0018,602c	1	Used
>Physical Delta Y	0018,602e	1	Used

3.5.7.2 US Image Module

This section specifies the attributes that describe ultrasound images.

Table 3.5–10: **US Image Module Elements**

Attribute Name	Tag	Type	Attribute Description
Samples Per Pixel	0028,0002	1	Value set to: "MONOCHROME2", "YBR_FULL_422" or "RGB"
Photometric Interpretation	0028, 0004	1	RGB: 3 YBR_FULL_422: 3 MONOCHROME2: 1"
Bits Allocated	0028,0100	1	Always 0008H
Bits Stored	0028,0101	1	Always 0008H
High Bit	0028,0102	1	Always 0007H
Planar Configuration	0028, 0006	1C	Used unless MONOCHROME2
Pixel Representation	0028, 0103	1	Unsigned int
Frame Increment Pointer	0028,0009	1C	Not used
Image Type	0008,0008	2	Used
Lossy Image Compression	0028,2110	1C	for lossy compressed image
Ultrasound color data present	0028,0014	3	Not used
Referenced Overlay Sequence	0008,1130	3	Not used
>Referenced SOP Class UID	0008,1150	1C	Not used
>Referenced SOP Instance UID	0008,1150	1C	Not used
Referenced Curve Sequence	0008,1155	3	Not used
>Referenced SOP Class UID	0008,1150	1C	Not used
>Referenced SOP Instance UID	0008,1150	1C	Not used
Number of Event Timers	0008,2129	3	Not used
Event Elapsed Times	0008,2130	3	Not used
Event Timer Name	0008,2132	3	Not used
Anatomic Region Sequence	0008,2218	3	Not used
>Include 'Code Sequence Macro'			
>Anatomic Region Modifier Sequence	0008,2220	3	Not used
>>Include 'Code Sequence Macro'			
Primary Anatomic Structure Sequence	0008,2228	3	Not used
>Include 'Code Sequence Macro'			
>>Include 'Code Sequence Macro'			
>Primary Anatomic Structure Modifier Sequence	0008,2230	3	Not used
Transducer Position Sequence	0008,2240	3	Not used
>Include 'Code Sequence Macro'			
>Transducer Position ModifierSequence	0008,2242	3	Not used
>>Include 'Code Sequence Macro'			
Transducer Orientation Sequence	0008,2244	3	Not used
>Include 'Code Sequence Macro'			
>Transducer Orientation Sequence	0008,2246	3	Not used
>>Include 'Code Sequence Macro'			
Trigger Time	0018,1060	3	Not used

Table 3.5–10: **US Image Module Elements (continued)**

Attribute Name	Tag	Type	Attribute Description
Nominal Interval	0018,1062	3	Not used
Beat Rejection Flag	0018,1080	3	Not used
Low R-R Value	0018,1081	3	Not used
High R-R Value	0018,1082	3	Not used
Heart Rate	0018,1088	3	Not used
Output Power	0018,5000	3	Not used
Transducer Data	0018,5010	3	Not used
Transducer Type	0018,6031	3	Not used
Focus Depth	0018,5012	3	Not used
Preprocessing Function	0018,5020	3	Not used
Mechanical Index	0018,5022	3	Not used
Bone Thermal Index	0018,5024	3	Not used
Cranial Thermal Index	0018,5026	3	Not used
Soft Tissue Thermal Index	0018,5027	3	Not used
Soft Tissue-focus Thermal Index	0018,5028	3	Not used
Soft Tissue-surface Thermal Index	0018,5029	3	Not used
Depth of Scan Field	0018,5050	3	Not used
Image Transformation Matrix	0018,5210	3	Not used
Image Translation Vector	0018,5212	3	Not used
Overlay Subtype	60xx,0045	3	Not used

4 Ultrasound Multi-Frame (US-MF) Information Object Implementation

4.1 Introduction

This section specifies the use of the DICOM US Multi-frame Image IOD to represent the information included in US images produced by this implementation. Corresponding attributes are conveyed using the module construct. The contents of this section are:

- IOD Implementation
- IOD Module Table
- IOD Module Definitions

4.2 US MF IOD Implementation

This section defines the implementation of US Multi-Frame image information object.

4.3 US Entity-Relationship Model

4.3.1 Entity Description

Please refer to DICOM Standard Part 3 (Information Object Definitions) for a description of each of the entities contained within the US Multi-Frame Information Object.

4.3.2 Voluson i/e Mapping of DICOM Entities

Table 4.3–1: **Mapping of DICOM Entities to Equipment Entities**

DICOM	Equipment
Patient	Patient
Study	Exam
Series	Exam
Image	Image
Curve	not used

4.4 IOD Module Table

Within an entity of the DICOM US Multi-Frame IOD, attributes are grouped into related set of attributes. A set of related attributes is termed a module. A module facilitates the understanding of the semantics concerning the attributes and how the attributes are related with each other. A module grouping does not infer any encoding of information into data sets.

The table below identifies the defined modules within the entities, which comprise the DICOM US Multi-Frame IOD. Modules are identified by Module Name.

See DICOM Part 3 for a complete definition of the entities, modules, and attributes.

Table 4.4–1: **US Multi-Frame Image IOD Modules**

Entity Name	Module Name	Reference
Patient	Patient	3.5.1.1
Study	General Study	3.5.2.1
Study	Patient Study	3.5.2.2
Series	General Series	3.5.3.1
Frame of Reference	Frame of Reference	Not used
Frame of Reference	US Frame of Reference	Not used
Equipment	General Equipment	3.5.4.1
Image	General Image	3.5.5.1
Image	Image Pixel	3.5.5.2
Image	Contrast / Bolus	Not used
Image	Cine	4.5.1.1
Image	Multi-Frame	4.5.1.2
Image	Palette Color Lookup Table	not used
Image	US Region Calibration	3.5.7.1
Image	US Image	3.5.7.2
Image	Overlay Plane	Not used
Image	VOI LUT	Not used
Image	SOP Common	3.5.6.1
Curve		Not used

4.5 Information Module Definitions

Please refer to DICOM Standard Part 3 (Information Object Definitions) for a description of each of the entities and modules contained within the US Multi-Frame Information Object.

The following modules are included to convey Enumerated Values, Defined Terms, and Optional Attributes supported. Type 1 & Type 2 Attributes are also included for completeness and to define what values they may take and where these values are obtained. It should be noted that they are the same ones as defined in the DICOM Standard Part 3 (Information Object Definitions).

4.5.1 Common Image Modules

4.5.1.1 Cine Module

Table 4.5–1: **Cine Module Elements**

Attribute Name	Tag	Type	Attribute Description
Frame Time	0018,1063	1C	Set to interframe time
Frame Time Vector	0018,1065	1C	Not Used
Start Trim	0008,2142	3	Not used
Stop Trim	0008,2143	3	Not used
Recommended Display Frame Rate	0008,2144	3	Not used
Cine Rate	0018,0040	3	Not used
Frame Delay	0018,1066	3	Not used

Table 4.5–1: **Cine Module Elements (continued)**

Attribute Name	Tag	Type	Attribute Description
Effective Duration	0018,1072	3	Not used
Actual Frame Duration	0018,1242	3	Not used
Preferred Playback Sequencing	0018,1244	3	Not used

4.5.1.2 Multi-Frame Module

Table 4.5–2: **Multi Frame Module Elements**

Attribute Name	Tag	Type	Attribute Description
Number of Frames	0028,0008	1	Set to number of frames in image.
Frame Increment Pointer	0028,0009	1	Set o Frame Time (0018,0063)

5 SC Information Object Implementation

5.1 Introduction

This section specifies the use of the DICOM SC Image IOD to represent the information included in SC images produced by this implementation. Corresponding attributes are conveyed using the module construct. The contents of this section are:

- IOD Implementation
- IOD Module Table
- IOD Module Definitions

5.2 SC IOD Implementation

This section defines the implementation of SC image information object.

5.3 SC Entity-Relationship Model

5.3.1 Entity Description

Please refer to DICOM Standard Part 3 (Information Object Definitions) for a description of each of the entities contained within the SC Information Object.

5.3.2 Voluson i/e Mapping of DICOM Entities

Table 5.3–1: **Mapping of DICOM Entities to Equipment Entities**

DICOM	Equipment
Patient	Patient
Study	Exam
Series	Exam
Image	Image
Curve	not used

5.4 IOD Module Table

Within an entity of the DICOM SC IOD, attributes are grouped into related set of attributes. A set of related attributes is termed a module. A module facilitates the understanding of the semantics concerning the attributes and how the attributes are related with each other. A module grouping does not infer any encoding of information into data sets.

The table below identifies the defined modules within the entities, which comprise the DICOM SC IOD. Modules are identified by Module Name.

See DICOM Part 3 for a complete definition of the entities, modules, and attributes.

Table 5.4–1: **SC Image IOD Modules**

Entity Name	Module Name	Reference
Patient	Patient	3.5.1.1
Study	General Study	3.5.2.1
Study	Patient Study	3.5.2.2
Series	General Series	3.5.3.1
Equipment	General Equipment	3.5.4.1
Equipment	SC Equipment	5.5.1.1
Image	General Image	3.5.5.1
Image	Image Pixel	3.5.5.2
Image	SC Image	5.5.1.2
Image	Overlay Plane	Not used
Image	Modality LUT	Not used
Image	VOI LUT	3.5.5.5
Image	SOP Common	3.5.6.1

5.5 Information Module Definitions

Please refer to DICOM Standard Part 3 (Information Object Definitions) for a description of each of the entities and modules contained within the SC Information Object.

The following modules are included to convey Enumerated Values, Defined Terms, and Optional Attributes supported. Type 1 & Type 2 Attributes are also included for completeness and to define what values they may take and where these values are obtained. It should be noted that they are the same ones as defined in the DICOM Standard Part 3 (Information Object Definitions).

5.5.1 SC Modules

5.5.1.1 SC Equipment Module

This Module describes equipment used to convert images into a DICOM format.

Table 5.5–1: **Secondary Capture Equipment Module Elements**

Attribute Name	Tag	Type	Attribute Description
Conversion Type	0008,0064	1	Set to: WSD
Modality	0008,0060	3	Defined Term "US" used
Secondary Capture Device ID	0018,1010	3	Not used
Secondary Capture Device Manufacturer	0008,1016	3	Not used
Secondary Capture Device Manufacturer's Model Name	0008,1018	3	Not used
Secondary Capture Device Software Version	0018,1019	3	Not used
Video Image Format Acquired	0018,1022	3	Not used
Digital Image Format Acquired	0018,1023	3	Not used

5.5.1.2 SC Image Module

The table in this Section contains IOD attributes that describe SC images.

Table 5.5–2: **Secondary Capture Image Module Elements**

Attribute Name	Tag	Type	Attribute Description
Date of Secondary Capture	0018,1012	3	Not used
Time of Secondary Capture	0018,1014	3	Not used

6 SR Information Object Implementation

6.1 Introduction

This section specifies the use of the DICOM Comprehensive SR IOD to represent the information included in SC images produced by this implementation. Corresponding attributes are conveyed using the module construct. The contents of this section are:

- IOD Implementation
- IOD Module Table
- IOD Module Definitions

6.2 Comprehensive SR IOD Implementation

This section defines the implementation of Comprehensive SR information object.

6.3 Comprehensive SR Entity-Relationship Model

6.3.1 Entity Description

Please refer to DICOM Standard Part 3 (Information Object Definitions) for a description of each of the entities contained within the Comprehensive SR Information Object.

6.3.2 Voluson i/e Mapping of DICOM Entities

Table 6.3–1: **Mapping of DICOM Entities to Equipment Entities**

DICOM	Equipment
Patient	Patient
Study	Exam
Series	Exam
SR Document	Results

6.4 IOD Module Table

Within an entity of the DICOM Comprehensive SR IOD, attributes are grouped into related set of attributes. A set of related attributes is termed a module. A module facilitates the understanding of the semantics concerning the attributes and how the attributes are related with each other. A module grouping does not infer any encoding of information into data sets.

The table below identifies the defined modules within the entities, which comprise the DICOM Comprehensive SR IOD. Modules are identified by Module Name.

See DICOM Part 3 for a complete definition of the entities, modules, and attributes.

Table 6.4–1: **SR IOD Modules**

Entity Name	Module Name	Reference
Patient	Patient	3.5.1.1
Patient	Specimen Identification	Not used
Study	General Study	3.5.2.1
Study	Patient Study	3.5.2.2
Series	SR Document Series	6.5.1
Equipment	General Equipment	3.5.4.1
Document	SR Document General	6.5.2
Document	SR Document Content	6.5.3
Document	SOP Common	3.5.6.1

6.5 Information Module Definitions

Please refer to DICOM Standard Part 3 (Information Object Definitions) for a description of each of the entities and modules contained within the Comprehensive SR Information Object.

The following modules are included to convey Enumerated Values, Defined Terms, and Optional Attributes supported. Type 1 & Type 2 Attributes are also included for completeness and to define what values they may take and where these values are obtained. It should be noted that they are the same ones as defined in the DICOM Standard Part 3 (Information Object Definitions).

6.5.1 SR Document Series Module

Table 6.5–1: **SR Document Series Module Attributes**

Attribute Name	Tag	Type	Attribute Description
Modality	0008,0060	1	Defined Term "SR" used.
Series Instance UID	0020,000E	1	Uniquely generated by the equipment.
Series Number	0020,0011	2	Internal number which is incremented for each new series.
Referenced Performed Procedure Step Sequence	0008,1111	3	Used if Modality Performed Procedure Step is enabled.
>Referenced SOP Class UID	0008,1150	3	Used if Modality Performed Procedure Step is enabled.
>Referenced SOP Instance UID	0008,1155	3	Used if Modality Performed Procedure Step is enabled.

6.5.2 SR Document General Module

Table 6.5–2: **SR Document General Module Attributes**

Attribute Name	Tag	Type	Attribute Description
Instance Number	0020,0013	1	Internal number which is incremented for each new SR document

Table 6.5–2: **SR Document General Module Attributes (continued)**

Attribute Name	Tag	Type	Attribute Description
Completion Flag	0040,A491	1	Define Term "PARTIAL" used
Completion Flag Description	0040,A492	3	Not used
Verification Flag	0040,A493	1	Define Term "UNVERIFIED" used
Content Date	0008,0023	1	Used
Content Time	0008.0032	1	Used
Verifying Observer Sequence	0040,A073	1C	Not used
>Verifying Observer Name	0040,A075	1	
>Verifying Observer Identification Code Sequence	0040,A088	2	
>>Include 'Code Sequence Maco'			
>Verifying Organization	0040,A027	1	
>Verifying DateTime	0040,A030	1	
Predecessor Documents Sequence	0040,A360	1C	Not used
>Include 'SOP Instance Reference Macro'			
Identical Documents Sequence	0040,A525	1C	Not used
>Include 'SOP Instance Reference Macro'			
Referenced Request Sequence	0040,A370	1C	Filled if the exam is based on a Worklist entry
>Study Instance UID	0020,000D	1	Taken from Study Instance UID in General Study Module
>Referenced Study Sequence	0008,1110	2	Taken from Worklist if MPPS is being used
>>Referenced SOP Class UID	0008,1150	1	Not used
>>Referenced SOP Instance UID	0008,1155	1	Not used
>Accession Number	0008,0050	2	Taken from Study Instance UID in General Study Module
>Placer Order Number/Imaging Service Request	0040,2016	2	Not used
>Filler Order Number/Imaging Service Reques2	0040,2017		Not used
>Requested Procdure ID	0040,1001	2	Taken from Worklist if present
>Requested Procdure Description	0032,1060	2	Taken from Worklist if present
>Requested Procdure Code Sequence	0032,1064	2	Taken from Worklist if present
>Include 'Code Sequence Macro'			
Current Requested Procedure Evidence Sequence	0040,A375	1C	Not used
>Study Instance UID	0020,000D	1	
>Referenced Series Sequenece	0008,1115	1	
>>Series Instance UID	0020,000E	1	
>>Retrieve AE Titls	0008,0054	3	
>>Storage Media File-Set ID	0088,0130	3	
>>Storage Media File-Set UID	0088,0140	3	
>>Referenced SOP Sequence	0008,1199	1	
>>>References SOP Class UID	0008,1150	1	
>>>References SOP Instance UID	0008,1155	1	
Pertinent Other Evidence Sequence	0040,A385	1C	

Table 6.5–2: **SR Document General Module Attributes (continued)**

Attribute Name	Tag	Type	Attribute Description
>Include 'SOP Instance Reference Macro'			

6.5.3 SR Document Content Module

Table 6.5–3: **SR Document Content Module Attributes**

Attribute Name	Tag	Type	Attribute Description
Observation DateTime	0040,A032	1C	Not used
Content Template Sequence	0040,A504	1C	Not used
>Include "Template Identification Macro'			
Value Type	0040,A040	1	CONTAINER
Continuity of Content	0040,A050	1C	SEPARATE
Concept Name Code Sequence	0040,A043	1C	
>Include "Code SequenceMacro'			
Concept Value Attribute(s)			Not used for CONTAINER
Content Sequence	0040,A730	1C	See Template "OB–GYN Ultrasound Procedure Report" (TID 5000)
>Relationship Type	0040,A010	1	See Template "OB–GYN Ultrasound Procedure Report" (TID 5000)
>Referenced Content Item Identifier	0040,DB73	1C	Not used
>SR Document Content Module			See Template "OB–GYN Ultrasound Procedure Report" (TID 5000)

6.5.3.1 SR Document Content Descriptions

6.5.3.1.1 Content Template

The equipment supports the following root Templates for SR SOP Instances created, processed, or displayed by the equipment.

Table 6.5–4: **SR Root Templates**

SOP Class	Template ID	Template Name	Use
Comprehensive SR	5000	"OB–GYN Ultrasound Procedure Report"	Create

6.6 Standard Extended and Private Context Groups

All needed context items which are not defined in the DICOM Standard are privately defined and listed in Appendix A.

6.7 Standard Extended and Private Templates

All needed Templates which are not defined in the DICOM Standard are privately defined and listed in Appendix B.

7 Modality Worklist Information Model Definition

7.1 Introduction

This section specifies the use of the DICOM Modality Worklist Information Model used to organize data and against which a Modality Worklist Query will be performed. The contents of this section are:

- Information Model Description
- Information Model Entity-Relationship Model
- Information Model Module Table
- Information Model Keys

7.2 Modality Worklist Information Model Description

This section defines the implementation of the Modality Worklist Information Model.

7.3 Modality Worklist Information Model Entity-Relationship Model

7.3.1 Entity Description

Please refer to DICOM Standard Part 3 (Information Object Definitions) for a description of each of the entities contained within the Modality Worklist Information Model .

7.3.1.1 Scheduled Procedure Step

Schedule Procedure Step is implemented in a basic form to allow the user to retrieve a subset of attributes.

7.3.1.2 Requested Procedure Entity Description

Requested Procedure is implemented in a basic form to allow the user to retrieve a subset of attributes.

7.3.1.3 Imaging Servie Request Entity Description

Imaging Servie Request is implemented in a basic form to allow the user to retrieve a subset of attributes.

7.3.1.4 Visit Entity Description

Visit Entity is implemented in a basic form to allow the user to retrieve a subset of attributes.

7.3.1.5 Patient Entity Description

Patient Entity is implemented in a basic form to allow the user to retrieve a subset of attributes.

7.3.2 Voluson i/e Mapping of DICOM Entities

Table 7.3–1: **Mapping of DICOM Entities to Equipment Entities**

DICOM	Equipment
Scheduled Procedure Step	Not Applicable
Requested Procedure	Exam
Imaging Service Request	Exam
Visit	Not Applicable
Patient	Patient

7.4 Information Model Module Table

Within an entity of the DICOM Comprehensive SR IOD, attributes are grouped into related set of attributes. A set of related attributes is termed a module. A module facilitates the understanding of the semantics concerning the attributes and how the attributes are related with each other. A module grouping does not infer any encoding of information into data sets.

The table below identifies the defined modules within the entities, which comprise the DICOM Comprehensive SR IOD. Modules are identified by Module Name.

See DICOM Part 3 for a complete definition of the entities, modules, and attributes.

Table 7.4–1: **Modality Worklist Information Model Modules**

Entity Name	Module Name	Reference
Scheduled Procedure Step	SOP Common	7.5.2.1
Scheduled Procedure Step	Scheduled Procedure Step	7.5.2.2
Requested Procedure	Requested Procedure	7.5.3.1
Imaging Service Request	Imaging Service Request	7.5.4.1
Visit	Visit Identification	7.5.5.1
Visit	Visit Status	7.5.5.2
Visit	Visit Relationship	7.5.5.3
Visit	Visit Admission	Not used
Patient	Patient Relationship	Not used
Patient	Patient Identification	7.5.6.1
Patient	Patient Demographic	7.5.6.2
Patient	Patient Medical	7.5.6.3

7.5 Information Model Keys

Please refer to DICOM Standard PS 3.3. (Information Object Definitions) and PS 3.4 (Service Class Specifications) for a descripti on of each of the Entities contained within the Modality Worklist Information Model.

The following Module descriptions are included to specify what data elements are supported and what type of matching can be applied. It should be noted that they are the same ones as defined in the DICOM Standard PS 3.4 (Service Class Specifications).

The term Instance is used for Images and Reports in examinations, that are based on Worklist entries.

7.5.1 Supported Matching

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

- Single Value Matching.
- Wild Card Matching.
- Range of date.

Fields with "Filtering is supported" in the Matching column can be controlled from the Search screen. All non-required matching fields can be configured in the Configuration screen to be either enabled, enabled with a constant value or disabled. The constant value will be used as entered by the user. Returned values, particularly those not mapped into the images or MPPSs, are viewable by the user by using the "DICOM Properties" button in the user interface.

7.5.2 Scheduled Procedure Step Entity

7.5.2.1 SOP Common Module

Table 7.5–1: **SOP Common Module Attributes**

Attribute Name	**Tag**	**Expected Matching Key Type**	**Expected Returned Key Type**	**Mapped into Instance/ MPPS**	**Matching**
Specific Character Set	0008,0005	O	1C	Yes/Yes	not supported

7.5.2.2 Scheduled Procedure Step Module

Table 7.5–2: **Scheduled Procedure Step Module Attributes**

Attribute Name	Tag	Expected Matching Key Type	Expected Returned Key Type	Mapped into Instance/ MPPS	Matching
Scheduled Procedure Step Sequence	0040,0100	R	1	No/No	Matching supported
>Scheduled Staion AE Title	0040,0001	R	1	No/No	Matching supported
>Scheduled Procedure Step Start Date	0040,0002	R	1	No/No	Matching supported Filtering supported
>Scheduled Procedure Step Start Time	0040,0003	R	1	No/No	Matching supported
>Modality	0008,0060	R	1	Yes/Yes (but always "US")	Matching supported Filtering supported
>Scheduled Performing Physician's Name	0040,0006	R	2	Yes/Yes	Matching supported
>Scheduled Procedure Step Description	0040,0007	O	1C	Yes/Yes	Matching supported
>Scheduled Station Name	0040,0010	O	2	No/No	Matching supported
>Scheduled Procedure Step Location	0040,0010	O	2	No/No	Matching supported
>Scheduled Procedure Step ID	0040,0009	O	1	Yes/Yes	Matching supported
>Scheduled Protocol Code Sequence	0040,0008	O	1C	Yes/Yes	Matching supported

7.5.3 Requested Procedure Entity

7.5.3.1 Requested Procedure Module

Table 7.5–3: **Requested Procedure Module Attributes**

Attribute Name	Tag	Expected Matching Key Type	Expected Returned Key Type	Mapped into Instance/ MPPS	Matching
Requested Procedure ID	0040,1001	O	1	Yes/Yes	Matching supported
Requested Procedure Description	0032,1060	O	1C	Yes/Yes	Matching supported
Requested Procedure Code Sequence	0032,1064	O	1C	No/Yes	Matching supported
Requested Procedure Comments	0040,1400	I	3	No/No	Matching supported
Study Instance UID	0020,000D	O	1	Yes/Yes	Matching supported
Referenced Study Sequence	0008,1110	O	1C	Yes/Yes	Matching supported
>Referenced SOP Class UID	0008,1150	O	1C	Yes/Yes	Matching supported
>Referenced SOP Instance UID	0008,1155	O	1C	Yes/Yes	Matching supported
>Names of Intended Recipients of Results	0040,1010	O	3	No/No	Matching supported

7.5.4 Imaging Service Request Entity

7.5.4.1 Imaging Service Request Module

Table 7.5–4: **Imaging Service Request Module Attributes**

Attribute Name	Tag	Expected Matching Key Type	Expected Returned Key Type	Mapped into Instance/ MPPS	Matching
Accession Number	0008,1050	O	2	Yes/Yes	Matching supported Filtering supported

Table 7.5–4: **Imaging Service Request Module Attributes (continued)**

Attribute Name	Tag	Expected Matching Key Type	Expected Returned Key Type	Mapped into Instance/ MPPS	Matching
Referring Physician's Name	0008,0090	O	2	Yes/No	Matching supported
Requesting Physician	0032,1032	O	2	No/No	Matching supported
Requesting Service	0032,1033	O	3	No/No	Matching supported
Imaging Service Request Comments	0040,2400	O	3	No/No	Matching supported

7.5.5 Visit Entity

7.5.5.1 Visit Identification

Table 7.5–5: **Visit Identification Module Attributes**

Attribute Name	Tag	Expected Matching Key Type	Expected Returned Key Type	Mapped into Instance/ MPPS	Matching
Admission ID	0038,0010	O	2	No/No	Matching supported

7.5.5.2 Visit Status

Table 7.5–6: **Visit Status Module Attributes**

Attribute Name	Tag	Expected Matching Key Type	Expected Returned Key Type	Mapped into Instance/ MPPS	Matching
Current Patient Location	0038,0300	O	2	No/No	Matching supported

7.5.5.3 Visit Relationship

Table 7.5–7: **Visit Relationship Module Attributes**

Attribute Name	Tag	Expected Matching Key Type	Expected Returned Key Type	Mapped into Instance/ MPPS	Matching
Referenced Patient Sequence	0008,1120	O	2	Yes/Yes	Matching supported
>Referenced SOP Class UID	0008,1150	O	2	Yes/Yes	Matching supported
>Referenced SOP Instance UID	0008,1155	O	2	Yes/Yes	Matching supported

7.5.6 Patient Entity

7.5.6.1 Patient Identification

Table 7.5–8: **Patient Identification Module Attributes**

Attribute Name	Tag	Expected Matching Key Type	Expected Returned Key Type	Mapped into Instance/ MPPS	Matching
Patient's Name	0010,0010	R	1	Yes/Yes	Matching supported Filtering supported
Patient ID	0010,0020	R	1	Yes/Yes	Matching supported Filtering supported
Other Patient Ids	0010,1000	O	3	No/No	Not supported

7.5.6.2 Patient Demograaphic

Table 7.5–9: **Patient Demographic Module Attributes**

Attribute Name	Tag	Expected Matching Key Type	Expected Returned Key Type	Mapped into Instance/ MPPS	Matching
Patient's Birth Date	0010,0030	O	2	No/No	Matching supported
Patient's Birth Time	0010,0032	O	2	No/No	Not supported
Patient's Sex	0010,0040	O	2	Yes/Yes	Matching supported
Patient's Size	0010,1020	O	3	No/No	Not supported

Table 7.5–9: **Patient Demographic Module Attributes (continued)**

Attribute Name	Tag	Expected Matching Key Type	Expected Returned Key Type	Mapped into Instance/ MPPS	Matching
Patient's Weight	0010,1030	O	2	Yes/Yes	Matching supported
Ethnic Group	0010,2160	O	3	No/No	Not supported
Patient Comments	0010,4000	O	3	No/No	Not supported

7.5.6.3 Patient Medical

Table 7.5–10: **Patient Medical Module Attributes**

Attribute Name	Tag	Expected Matching Key Type	Expected Returned Key Type	Mapped into Instance/ MPPS	Matching
Additional Patient History	0010,21B0	O	3	No/No	Not supported
Contrast Allergies	0010,2210	O	2	No/No	Not supported
Medical Alerts	0010,2000	O	2	No/No	Not supported
Pregnancy Status	0010,21C0	O	2	No/No	Not supported

8 Modality Performed Procedure Step SOP Class Definition

8.1 Introduction

This section of the DICOM Conformance Statement specifies the Modality Performed Procedure Step SOP Class, the optional attributes and service elements supported, the valid range of values for mandatory and optional attributes, and the status code behavior.

8.2 Modality Performed Procedure Step SOP Class Definition

In this section, supported means that tag is sent with value if entered by user or from worklist.

8.2.1 IOD Description

This is the description of the DICOM tags to be sent for Modality Performed Procedure Step SOP class.

The following tables describe the Modality Performed Procedure Step Sop Class N-CREATE, N-SET and Final State Attributes

Table 8.2–1: **PerformedProcedure Step Relationship**

Attribute Name	**Tag**	**Req.Type N-CREATE**	**Req, Type N-SET**
Scheduled Step Attribute Sequence	0040,0270	1	Not allowed
>Study Instance UID	0020,000D	1	Not allowed
>Referenced Study Sequence	0008,1110	2, supported	Not allowed
>>Referenced SOP Class UID	0008,1150	1C, supported	Not allowed
>>Referenced SOP Instance UID	0008,1155	1C,supported	Not allowed
>Accession Number	0008,0050	2, supported	Not allowed
>Placer Order Number/ Imaging Service Request	0040,2016	3, not supported	Not allowed
>Filler Order Number/ Imaging Service Request	0040,2017	3, not supported	Not allowed
>Requested Procedure ID	0040,1001	2, supported	Not allowed
>Requested Procedure Description	0032,1060	2, supported	Not allowed
>Scheduled Procedure Step ID	0040,0009	2, supported	Not allowed
>Scheduled Procedure Step Description	0040,0007	2, supported	
Scheduled Protocol Code Sequence	0040,0008	2, supported	
>>Include 'Code Sequence Macro'			
Patient's Name	0010,0010	2, supported	Not allowed
Patient ID	0010,0020	2, supported	Not allowed
Patient's Birth Date	0010,0032	2, supported	Not allowed
Patient's Sex	0010,0040	2, supported	Not allowed
>Referenced Patient Sequence	0008,1120	2, supported	Not allowed
>>Referenced SOP Class UID	0008,1150	1C, supported	Not allowed
>>Referenced SOP Instance UID	0008,1155	1C, supported	Not allowed

Table 8.2–2: **PerformedProcedure Step Information**

Attribute Name	**Tag**	**Req.Type N-CREATE**	**Req, Type N-SET**
Performed Procedure Step ID	0040,0253	1	Not allowed
Performed Station AE Title	0040,0241	1	Not allowed
Performed Station Name	0040,0242	2, supported	Not allowed
Performed Location	0040,0243	2, supported	Not allowed
Performed Procedure Step Start Date	0040,0244	1	Not allowed
Performed Procedure Step Start Time	0040,0245	1	Not allowed
Performed Procedure Status	0040,0252	1	3, supported
Performed Procedure Step Description	0040,0254	2, supported	3, supported
Performed Procedure Type Description	0040,0254	2, always empty	3, always empty
Procedure Code Sequence	0008,1032	2, supported	3, supported
>Include 'Code Sequence Macro'			
Performed Procedure Step End Date	0040,0250	2, always empty	3, supported
Performed Procedure Step End Time	0040,0251	2, always empty	3, supported

Table 8.2–3: **Image Acquisition Results**

Attribute Name	**Tag**	**Req.Type N-CREATE**	**Req, Type N-SET**
Modality	0008,0060	1	Not allowed
Study ID	0020,0010	2, supported	Not allowed
Performed Protocol Code Sequence	0040,0260	2, supported	3, supported
>Include 'Code Sequence Macro'			
Performed Series Sequence	0040,0340	2, always empty	3, supported
>Performing Physician's Name	0008,1050	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>Protocol Name	0018,1030	1C (Required if SQ Item is present)	1C (Required if SQ Item is present)
>Operator's Name	0008,1070	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>Series Instance UID	0020,000E	2C (Required if SQ Item is present)	1C (Required if SQ Item is present)
>Series Description	0008,103E	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>Retrieving AE Title	0008,0054	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>Referenced Image Sequence	0008,1140	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>>Referenced SOP Class UID	0008,1150	1C (Required if SQ Item is present)	1C (Required if SQ Item is present)
>>Referenced SOP Instance UID	0008,1155	1C (Required if SQ Item is present)	1C (Required if SQ Item is present)

Table 8.2–3: **Image Acquisition Results (continued)**

Attribute Name	Tag	Req.Type N-CREATE	Req, Type N-SET
>Referenced Non-Image Composite SOP Sequence	0040,0220	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>>Referenced SOP Class UID	0008,1150	1C (Required if SQ Item is present)	1C (Required if SQ Item is present)
>>Referenced SOP Instance UID	0008,1155	1C (Required if SQ Item is present)	1C (Required if SQ Item is present)
>Referenced Frame Number	0008,1150	3, not supported	3, not supported

8.2.2 Operations

8.2.2.1 Action Information

Covered under IOD Description in Section 8.2.1.

8.2.2.2 Service Class User Behavior

The equipment sends N-CREATE when the exam is being started by pressing "Start Exam".

The equipment sends N-SET after the exam is ended. The N-SET will include all acquired images' UIDs and the status of COMPLETED or DISCONTINUED.

8.2.2.3 Status Codes

No Service Class specific status values are defined for the N-ACTION Service. See PS 3.7 for general response status codes.

9 Storage Commitment Push Model SOP Class Definition

9.1 Introduction

This section of the DICOM Conformance Statement specifies the Storage Commitment Push Model SOP Class, the optional attributes and service elements supported, the valid range of values for mandatory and optional attributes, and the status code behavior.

9.2 Storage Commitment Push Model SOP Class Definition

9.2.1 IOD Description

9.2.1.1 Storage Commitment Module

Table 9.2–1: **Image Acquisition Results**

Attribute Name	**Tag**	**Req.Type N-CREATE**	**Req, Type N-SET**
Modality	0008,0060	1	Not allowed
Study ID	0020,0010	2, supported	Not allowed
Performed Protocol Code Sequence	0040,0260	2, supported	3, supported
>Include 'Code Sequence Macro'			
Performed Series Sequence	0040,0340	2, always empty	3, supported
>Performing Physician's Name	0008,1050	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>Protocol Name	0018,1030	1C (Required if SQ Item is present)	1C (Required if SQ Item is present)
>Operator's Name	0008,1070	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>Series Instance UID	0020,000E	2C (Required if SQ Item is present)	1C (Required if SQ Item is present)
>Series Description	0008,103E	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>Retrieving AE Title	0008,0054	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>Referenced Image Sequence	0008,1140	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>>Referenced SOP Class UID	0008,1150	1C (Required if SQ Item is present)	1C (Required if SQ Item is present)
>>Referenced SOP Instance UID	0008,1155	1C (Required if SQ Item is present)	1C (Required if SQ Item is present)
>Referenced Non-Image Composite SOP Sequence	0040,0220	2C (Required if SQ Item is present)	2C (Required if SQ Item is present)
>>Referenced SOP Class UID	0008,1150	1C (Required if SQ Item is present)	1C (Required if SQ Item is present)
>>Referenced SOP Instance UID	0008,1155	1C (Required if SQ Item is present)	1C (Required if SQ Item is present)
>Referenced Frame Number	0008,1150	3, not supported	3, not supported

9.2.2 DIMSE Service Group

Table 9.2–2: **DIMSE Service Group**

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

9.2.3 Operations

9.2.3.1 Action Information

Covered under IOD Description in Table 9.2.1.

9.2.3.2 Service Class User Behavior

The equipment sends the N-ACTION primitive (Storage Commitment Request) after successful exam save to a DICOM Storage SCP.

The equipment may request Storage Commitment for the following SOP Class UIDs:

Table 9.2–3: **SOP Class Table**

Name	UID
Ultrasound Multi-Frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7
Comprehensive SR	1.2.840.10008.5.1.4.1.1.88.33

The association for the N-ACTION is disconnected after processing the response. Thus, the N-EVENT-REPORT must be sent on a separate association.

The Referenced Study Component Sequence Attribute is not supported.

The Transaction UID is valid until the request is confirmed, manually retried or manually deleted.

The optional Storage Media File-Set ID and UID Attributes in the N-ACTION are not supported.

On receipt of an unsuccessful N-ACTION Response Status Code from the SCP, the request will remain in the queue for the user to manually retry the request.

9.2.3.3 Status Codes

No Service Class specific status values are defined for the N-ACTION Service. See PS 3.7 for general response status codes.

9.2.4 Notifications

The equipment will only listen for an N-EVENT-REPORT from the SCP in a new association on the listen port for Verification and Storage Commitment.

9.2.4.1 Event Information

Table 9.2–4: **Storage Commitment Result - Event Infomation**

Event Type Name	Event Type ID	Attribute	Tag	Requirement Type SCU/SCP
Storage Commitment Request Successful	1	Transaction UID	0008,1195	-/1
		Retrieve AE Titls	0008,0054	Not used
		Storage Media File-Set ID	0008,0130	Not used
		Storage Media File-Set UID	0008,0140	Not used
		Referenced SOP Sequence	0008,1199	-/1
		>Referenced SOP Class UID	0008,1150	-/1
		>Referenced SOP Instance UID	0008,1155	-/1
		>Retrieve AE Title	0008,0054	Not used
		>Storage Media File-Set ID	0008,0130	Not used
		>Storage Media File-Set UID	0008,0140	Not used
Storage Commitment Request Complete - Failures Exist	2	Transaction UID	0008,1195	-/1
		Retrieve AE Titls	0008,0054	Not used
		Storage Media File-Set ID	0008,0130	Not used
		Storage Media File-Set UID	0008,0140	Not used
		Referenced SOP Sequence	0008,1199	-/1C
		>Referenced SOP Class UID	0008,1150	-/1
		>Referenced SOP Instance UID	0008,1155	-/1
		>Retrieve AE Title	0008,0054	Not used
		>Storage Media File-Set ID	0008,0130	Not used
		>Storage Media File-Set UID	0008,0140	Not used
		Failed SOP Sequence	0008,1198	-/1
		>Referenced SOP Class UID	0008,1150	-/1
		>Referenced SOP Instance UID	0008,1155	-/1
		>Failure Reason	0008,1197	-/1

9.2.4.2 Service Class User Behavior

If a successful answer is received, the request will be removed without warning.

If a non-successful answer is received, the request will be left in the queue.

If no answer is received, the request will remain in the queue for manual retry or manual deletion.

9.2.4.3 Status Codes

No Service Class specific status values are defined for the N-EVENT-REPORT Service. See PS 3.7 for general response status code.

10 Print Management SOP Class Definition

10.1 Introduction

This section of the DICOM Conformance Statement specifies the supported Print Management SOP and Meta SOP Classes, the optional a ttributes and service elements supported, the valid range of values for mandatory and optional attributes, and the status code be havior.

- 10.2 - Basic Print Management Meta SOP Classes
- 10.3 - Print Management SOP Class Definitions
- 10.4 - Print Management IODs
- 10.5.1 - IOD Module Definition

10.2 Basic Print Management Meta SOP Classes

The Basic Print Management Meta SOP Classes correspond with the minimum functionality that an implementation of the Print Management Service Class shall support. The equipment supports the Basic Grayscale Print Management Meta SOP Class and the Basic Color Print Management Meta SOP Class. These are defined in Table 10.2–1 and 10.2–2.

10.2.1 Basic Grayscale Print Management Meta SOP Classes

The Basic Grayscale Print Management Meta SOP Class is defined by the following set of supported SOP Classes.

Table 10.2–1: **Basic Grayscale Print Management Meta SOP Class**

SOP Class Name	Usage SCU	Reference
Basic Film Session SOP Class	M	see 10.3.1
Basic Film Box SOP Class	M	see 10.3.2
Basic Graysacle Image Box SOP Class	M	see 10.3.3.1
Printer SOP Class	M	see 10.3.4

10.2.2 Basic Color Print Management Meta SOP Classes

The Basic Color Print Management Meta SOP Class is defined by the following set of supported SOP Classes.

Table 10.2–2: **Basic Color Print Management Meta SOP Class**

SOP Class Name	Usage SCU	Reference
Basic Film Session SOP Class	M	see 10.3.1
Basic Film Box SOP Class	M	see 10.3.2
Basic Color Image Box SOP Class	M	see 10.3.3.2
Printer SOP Class	M	see 10.3.4

10.3 Print Management SOP Class Definitions

10.3.1 Basic Film Session SOP Class

The Basic Color Print Management Meta SOP Class is defined by the following set of supported SOP Classes

Table 10.3–1: **DIMSE Service Group**

DIMSE Service Element	Usage SCU	Reference
N-Create	M	see 10.3.1.1.1
N-Set	U	see 10.3.1.1.2
N-Delete	U	see 10.3.1.1.3
N-Action	U	see 10.3.1.1.4

10.3.1.1 DIMSE Service Group

10.3.1.1.1 N-CREATE

The N-CREATE DIMSE Service is used by equipment to request that the SCP create a Film Session SOP Instance.

10.3.1.1.2 N-SET

Not used in this implementation.

10.3.1.1.3 N-DELETE

Not used in this implementation.

10.3.1.1.4 N-ACTION

Not used in this implementation.

10.3.2 Basic Film Box SOP Class

The Basic Film Box IOD is an abstraction of the presentation of one film of the film session. The DIMSE services that are applicable to the IOD are shown in the following Table.

Table 10.3–2: **DIMSE Service Group**

DIMSE Service Element	Usage SCU	Reference
N-Create	M	see 10.3.2.1.1
N-Action	M	see 10.3.2.1.1.1
N-Set	U	see 10.3.2.1.2
N-Delete	U	see 10.3.2.1.3

10.3.2.1 DIMSE Service Group

10.3.2.1.1 N-CREATE

The N-CREATE DIMSE Service is used by equipment to request that the SCP create a Film Box SOP Instance. Table 10.4–2 defines the Basic Film Box Presentation Module attributes used in this request.

10.3.2.1.1.1 N-ACTION

The N-ACTION DIMSE Service is used by the equipment to request the SCP (printer) to print the number of copies configured by the user to a film of the film session.

10.3.2.1.2 N-SET

Not used in this implementation.

10.3.2.1.3 N-DELETE

The N-DELETE DIMSE Service is used by the equipment to request the SCP (printer) to delete the complete Film Box. The root Film Box Instance UID is sent to the SCP to accomplish this.

10.3.3 Image Box SOP Class

10.3.3.1 Basic Grayscale Image Box SOP Class

The Basic Grayscale Image Box IOD is an abstraction of the presentation of an image and image related data in the image area of a film. The DIMSE services that are applicable to the IOD are shown in Table 10.3–3.

Table 10.3–3: **DIMSE Service Group**

DIMSE Service Element	Usage SCU	Reference
N-Set	M	see 10.3.3.1.1

10.3.3.1.1 DIMSE Service Group (N-SET)

The N-SET DIMSE Service is used by the equipment to update the Basic Grayscale Image Box SOP Instance. Table 10.5.1.2.5 defines the Basic Image Box Presentation Module attributes used.

10.3.3.2 Basic Color Image Box SOP Class

The Basic Color Image Box IOD is an abstraction of the presentation of an image and image related data in the image area of a film. The DIMSE services that are applicable to the IOD are shown in Table 10.3–4.

Table 10.3–4: **DIMSE Service Group**

DIMSE Service Element	Usage SCU	Reference
N-SET	M	see 10.3.3.2.1

10.3.3.2.1 DIMSE Service Group (N-SET)

The N-SET DIMSE Service is used by the equipment to update the Basic Color Image Box SOP Instance. Table 10.5.1.2.5 defines the Basic Image Box Presentation Module attributes used.

10.3.4 Printer SOP Class

The Printer IOD is an abstraction of the hard copy printer and is the basic Information Entity to monitor the status of the printer. The DIMSE services that are applicable to the IOD are shown in Table 10.3–5.

10.3.4.1 DIMSE Service Group

Table 10.3–5: **DIMSE Service Group**

DIMSE Service Element	Usage SCU	Reference
N-Event-Report	M	see 10.3.4.1.1
N-Get	U	see 10.3.4.1.2

10.3.4.1.1 N-EVENT_REPORT

The equipment ignores any N-EVENT_REPOR initiated by the SCP (Printer).

10.3.4.1.2 N-GET

Used by the equipment to request the SCP to get a Printer SOP Instance. Table 10.5–7 defines the Printer Module attributes.

10.4 Print Management IODs

10.4.1 Print Management IODs

Within an entity of a DICOM Print Management, attributes are grouped into a related set of attributes. A set of related attributes is termed a module. A module facilitates the understanding of the semantics concerning the attributes and how the attributes are related with each other. A module grouping does not infer any encoding of information into datasets.

Table 10.4–1, Table 10.4–2, Table 10.4–3 and Table 10.4–4 identify the defined modules within the entities which comprise the DICOM Print Management Service IODs. Modules are identified by Module Name. See DICOM for a complete definition of the entities, modules and attributes.

10.4.1.1 Film Session IOD Module

Table 10.4–1: **Film Session IOD Modules**

Module Name	Reference	Module Description
SOP Common Module	see 10.5.1.1.1	Contains SOP Common information
Basic Film Session Presentation Module	see 10.5–2	Contains Film Session presentation information
Basic Film Session Relationship Module	see 10.5.1.2.2	References to related SOPs

10.4.1.2 Basic Film Box IOD Module Table

Table 10.4–2: **Basic Film Box IOD Modules**

Module Name	Reference
SOP Common Module	see 10.5.1.1.1
Basic Film Box Presentation Module	see 10.5.1.2.3
Basic Film Box Relationship Module	see 10.5.1.2.4

10.4.1.3 Basic Image Box IOD Module Table

Table 10.4–3: **Basic Image Box IOD Modules**

Module Name	Reference
SOP Common Module	see 10.5.1.1.1
Image Box Pixel Presentation Module	see 10.5.1.2.5

10.4.1.4 Printer IOD Module Table

Table 10.4–4: **Printer IOD Modules**

Module Name	Reference
SOP Common Module	see 10.5.1.1.1
Printer Module	see 10.5.1.2.6

10.5 Information Module Definitions

10.5.1 Information Module Definitions

Please refer to DICOM Standard Part 3 (Information Object Definitions) for a description of each of the entities and modules that comprise the Print Management. The following modules are included to convey Enumerated Values, Defined Terms, and Optional Attributes supported.

10.5.1.1 General Modules

10.5.1.1.1 SOP Common Module

This section defines the attributes that are required for proper functioning and identification of the associated SOP Instances. They do not specify any semantics about the Real-World Object represented by the IOD.

Table 10.5–1: **SOP Common Module Attributes**

Attribute Name	Tag	Type	Attribute Description
SOP Class ID	(0008,0016)	1	Varies with Module Instance and DIMSE Service being used. 1.2.840.100011.5.1.1.1 (Film Session) 1.2.840.100011.5.1.1.2 (Film Box) 1.2.840.100011.5.1.1.4 (Image Box)
SOP Instance UID	(0008,0018)	1	Provided by SCP(printer).
Specific Character Set	(0008,0005)	1C	Not used as expanded or replacement character sets not used.
Instance Creation Date	(0008,0012)	3	Not used.
Instance Creation Time	(0008,0013)	3	Not used.
Instance Creator UID	(0008,0014)	3	Not used.

10.5.1.2 Print Management Modules

For all user configurable tags with no default, no value will be sent if the tag is not configured.

10.5.1.2.1 Basic Film Session Presentation Module

This section defines the attributes that are common for all films of a film session. The attributes described in table 10.5–2 apply when the N-CREATE DIMSE service is used.

Table 10.5–2: **Basic Film Session Presentation Module Attributes**

Attribute Name	Tag	Usage (SCU)	Attribute Description
Number of Copies	(2000,0010)	U	Defined Terms used (user configurable): 1 to 99.
Print Priority	(2000,0020)	U	Defined Terms used (user configurable): HIGH, MED, LOW.
Medium Type	(2000,0030)	U	Defined Terms used (user configurable): PAPER, BLUE FILM, CLEAR FILM.
Film Destination	(2000,0040)	U	Defined Terms used (user configurable): MAGAZINE, PROCESSOR.
Film Session Label	(2000,0050)	U	Not used.
Memory Allocation	(2000,0060)	U	Not used.

10.5.1.2.2 Basic Film Session Relationship Module

Table 10.5–3: **Basic Film Session Relationship Module Attributes**

Attribute Name	Tag	Usage (SCU)	Attribute Description
Referenced Film Box Sequence	(2000,0050)	U	Not used.
>Referenced SOP Class UID	(0008,1150)	U	
>Referenced SOP Instance UID	(0008,1155)	U	

10.5.1.2.3 Basic Film Box Presentation Module

The attributes described in Table 10.5–4 apply when the N-CREATE DIMSE service is used.

Table 10.5–4: **Basic Film Box Presentation Module Attributes**

Attribute Name	Tag	Usage (SCU)	Attribute Description
Image Display Format	(2010,0010)	M	Standard\1,1 Standard\1,2 Standard\2,2 Standard\2,3 Standard\3,3 Standard\3,4 Standard\3,5 Standard\4,4 Standard\4,5 Standard\4,6
Annotation Display Format ID	(2010,0030)	U	Not used.
Film Orientation	(2010,0040)	U	Defined Terms used (user configurable): PORTRAIT, LANDSCAPE
Film Size ID	(2000,0050)	U	Defined Terms used (user configurable): 8INX10IN, 10INX12IN, 10INX14IN, 11INX14IN, 14INX14IN, 14INX17IN, 24CMX24CM, 24CMX30CM
Magnification Type	(2010,0060)	U	Defined Terms used (user configurable): REPLICATEW,BILINEAR, CUBIC, NONE
Smoothing Type	(2010,0080)	U	Not used.
Border Density	(2010,0100)	U	Defined Terms used (user configurable): BLACK, WHITE
Empty Image Density	(2010,0110)	U	Defined Terms used (user configurable): BLACK, WHITE
Min Density	(2010,0120)	U	Limited by printer
Max Density	(2010,0130)	U	Limited by printer
Trim	(2010,0140)	U	Not used.
Configuration Information	(2010,0150)	U	User configurable

10.5.1.2.4 Basic Film Box Relationship Module

This section defines the attributes that describe the common parameters, which apply for all images on a given sheet of film.

Table 10.5–5: **Basic Film Box Relationship Module Attributes**

Attribute Name	Tag	Usage (SCU)	Attribute Description
Referenced Film Session Sequence	(2010,0500)	M	Used
>Referenced SOP Class UID	(0008,1150)	M	Film Session SOP Class UID
>Referenced SOP Instance UID	(0008,1155)	M	Referenced Film Session SOP
Referenced Image Box Sequence	(2010,0510)	U	Not used.
>Referenced SOP Class UID	(0008,1150)	U	
>Referenced SOP Instance UID	(0008,1150)	U	
Referenced Basic Annotation Sequence	(2010,0520)	U	Not used.
>Referenced SOP Class UID	(0008,1150)	U	
>Referenced SOP Instance UID	(0008,1150)	U	

10.5.1.2.5 Image Box Pixel Presentation Module

The attributes described in Table 10.5–6 apply when the DIMSE Service N-SET is used.

Table 10.5–6: **Image Box Pixel Presentation Module Attributes**

Attribute Name	Tag	Usage (SCU)	Attribute Description
Image Position	(2020,0010)	M	1-n
Polarity	(2020,0020)	U	Not used
Requested Image Size	(2020,0030)	U	Not used
Basic Grayscale Image Sequence	(2020,0110)	M	
>Samples Per Pixel	(0028,0002)	M	Value = '1'
>Photometric Interpretation	(0028,0004)	M	MONOCHROM2, 0 = Black, 255 = White
>Rows	(0028,0010)	M	600 pixels
>Columns	(0028,0011)	M	800 pixels
>Pixel Aspect Ratio	(0028,0034)	MC	Not used
>Bits Allocated	(0028,0100)	M	Value always = 0008H
>Bits Stored	(0028,0101)	M	Value always = 0008H
>High Bit	(0028,0102)	M	Value always = 0007H
>Pixel Representation	(0028,0103)	M	Defined Value '0' - unsigned integer
>Pixel Data	(7FE0,0010)	M	Gray pixel data
Basic Color Image Sequence	(2020,0111)	M	
>Samples Per Pixel	(0028,0002)	M	Value = '3'
>Photometric Interpretation	(0028,0004)	M	RGB
>Rows	(0028,0010)	M	600 pixels
>Columns	(0028,0011)	M	800 pixels
>Pixel Aspect Ratio	(0028,0034)	MC	Not used
>Bits Allocated	(0028,0100)	M	Value always = 0008H
>Bits Stored	(0028,0101)	M	Value always = 0008H
>High Bit	(0028,0102)	M	Value always = 0007H
>Pixel Representation	(0028,0103)	M	Defined Value '0' - unsigned integer
>Pixel Data	(7FE0,0010)	M	Color pixel planes data

Table 10.5–6: **Image Box Pixel Presentation Module Attributes (continued)**

Attribute Name	Tag	Usage (SCU)	Attribute Description
Planar Configuration	(0028,0006)	M	0001H, Planar. Red plane first, then green, and blue

10.5.1.2.6 Printer Module

This section defines the attributes that are used to monitor the status of the printer. The attributes described in Table 10.5–7 apply when the DIMSE Service N-GET is used.

Table 10.5–7: **Printer Module Attributes**

Attribute Name	Tag	Usage (SCU)	Attribute Description
Printer Status	(2110,0010)	U	Defined Values: NORMAL, WARNING, FAILURE. WARNING and FAILURE are reported to user.
Printer Status Info	(2110,0020)	U	Reported to user.
Printer Name	(2110,0030)	U	Ignored
Manufacturer	(0008,0070)	U	Ignored
Manufacturer Model Name	(0008,1090)	U	Not used
Device Serial Number	(0018,1000)	U	Not used
Software Versions	(0018,1020)	U	Not used
Date Last Calibration	(0018,1200)	U	Not used
Last Calibration	(0018,1201)	U	Not used

A Standard Extended and Private Context Groups

Table A.0–8: **Context ID 4 Anatomic Region**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
SNM3		T-04000	Breast, NOS
SNM3		T-04002	Upper inner quadrant of breast, NOS
SNM3		T-04003	Lower inner quadrant of breast, NOS
SNM3		T-04004	Upper outer quadrant of breast, NOS
SNM3		T-04005	Lower outer quadrant of breast, NOS
SNM3		T-11218	Suprasternal notch
SNM3		T-15200	Fontanel of skull, NOS
SNM3		T-15460	Wrist joint, NOS
SNM3		T-15750	Ankle joint, NOS
SNM3		T-21000	Nose, NOS
SNM3		T-23000	Nasopharynx, NOS
SNM3		T-24100	Larynx, NOS
SNM3		T-25000	Trachea, NOS
SNM3		T-26000	Bronchus, NOS
SNM3		T-28000	Lung, NOS
SNM3		T-32000	Heart, NOS
SNM3		T-32100	Atrium, NOS
SNM3		T-32400	Ventricle, NOS
SNM3		T-51000	Mouth, NOS
SNM3		T-53000	Tongue, NOS
SNM3		T-55000	Pharynx, NOS
SNM3		T-55300	Hypopharynx, NOS
SNM3		T-56000	Esophagus, NOS
SNM3		T-57000	Stomach, NOS
SNM3		T-58200	Duodenum, NOS
SNM3		T-58400	Jejunum, NOS
SNM3		T-58600	Ileum, NOS
SNM3		T-59300	Colon, NOS
SNM3		T-59600	Rectum, NOS
SNM3		T-60610	Bile duct, NOS
SNM3		T-62000	Liver, NOS
SNM3		T-63000	Gallbladder, NOS
SNM3		T-65000	Pancreas, NOS
SNM3		T-65010	Pancreatic duct, NOS
SNM3		T-71000	Kidney, NOS
SNM3		T-72000	Renal pelvis, NOS
SNM3		T-72100	Calyx, NOS
SNM3		T-73000	Ureter, NOS
SNM3		T-74000	Bladder, NOS
SNM3		T-75000	Urethra, NOS
SNM3		T-81000	Vulva, NOS
SNM3		T-82000	Vagina, NOS
SNM3		T-83000	Uterus, NOS
SNM3		T-87000	Ovary, NOS
SNM3		T-91000	Penis, NOS
SNM3		T-94000	Testis, NOS
SNM3		T-98000	Scrotum, NOS

Table A.0–8: **Context ID 4 Anatomic Region (continued)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
SNM3		T-A0100	Brain, NOS
SNM3		T-A7010	Spinal cord, NOS
SNM3		T-AA110	Sclera, NOS
SNM3		T-AA200	Cornea, NOS
SNM3		T-AA810	Eyelid, NOS
SNM3		T-AB000	Ear, NOS
SNM3		T-AB200	External auditory canal, NOS
SNM3		T-B3000	Adrenal gland, NOS
SNM3		T-B6000	Thyroid, NOS
SNM3		T-B7000	Parathyroid, NOS
SNM3		T-C3000	Spleen, NOS
SNM3		T-D1100	Head, NOS
SNM3		T-D1160	Scalp, NOS
SNM3		T-D1200	Face, NOS
SNM3		T-D1206	Buccal region of face
SNM3		T-D1206	Cheek, NOS
SNM3		T-D1212	Hypoglossal
SNM3		T-D1600	Neck, NOS
SNM3		T-D1603	Submandibular area
SNM3		T-D1620	Supraclavicular region of neck
SNM3		T-D2100	Back, NOS
SNM3		T-D2220	Shoulder, NOS
SNM3		T-D2310	Flank, NOS
SNM3		T-D2500	Hip, NOS
SNM3		T-D2600	Buttock, NOS
SNM3		T-D2600	Gluteal region
SNM3		T-D2700	Perineum, NOS
SNM3		T-D3000	Thorax, NOS
SNM3		T-D3300	Mediastinum, NOS
SNM3		T-D4000	Abdomen, NOS
SNM3		T-D4110	Right upper quadrant of abdomen
SNM3		T-D4120	Right lower quadrant of abdomen
SNM3		T-D4130	Left upper quadrant of abdomen
SNM3		T-D4140	Left lower quadrant of abdomen
SNM3		T-D4200	Epigastric region
SNM3		T-D4240	Hypogastric region
SNM3		T-D4240	Suprapubic region
SNM3		T-D4450	Omental bursa
SNM3		T-D4450	Omentum, NOS
SNM3		T-D4450	Retroperitoneum, NOS
SNM3		T-D4450	Pelvis, NOS
SNM3		T-D6500	Broad ligament, NOS
SNM3		T-D8100	Axilla, NOS
SNM3		T-D8200	Arm, NOS
SNM3		T-D8300	Elbow, NOS
SNM3		T-D8700	Hand, NOS
SNM3		T-D9100	Thigh, NOS
SNM3		T-D9200	Knee, NOS
SNM3		T-D9310	Popliteal fossa
SNM3		T-D9400	Leg, NOS

Table A.0–8: **Context ID 4 Anatomic Region (continued)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
SNM3		T-D9700	Foot, NOS
SNM3		A-04140	Vascular graft
SNM3		G-A15A	Intra-articular
SNM3		T-21300	Endo-nasal
SNM3		T-23050	Endo-nasopharyngeal
SNM3		T-32000	Endo-cardiac
SNM3		T-40000	Endo-vascular
SNM3		T-41000	Endo-arterial
SNM3		T-48000	Endo-venous
SNM3		T-56000	Endo-esophageal
SNM3		T-56000	Intra-esophageal
SNM3		T-59600	Endo-rectal
SNM3		T-71000	Endo-renal
SNM3		T-73000	Endo-ureteric
SNM3		T-74250	Endo-vesical
SNM3		T-75000	Endo-urethral
SNM3		T-82000	Endo-vaginal
SNM3		T-D14000	Intracranial
SNM3		T-D3000	Intra-thoracic
SNM3		T-D3136	Parasternal
SNM3		T-D3213	Subxiphoid
SNM3		T-D4010	Intra-abdominal
SNM3		T-D4210	Subcostal
SNM3		T-D6221	Intra-pelvic
SNM3		T-D4212	Right hypochondriac region
SNM3		T-D4211	Left hypochondriac region
SNM3		T-D2300	Lumbar region
SNM3		T-D2342	Right lumbar region
SNM3		T-D2340	Left lumbar region
SNM3		T-D7000	Inguinal region
SNM3		T-D7010	Right inguinal region
SNM3		T-D7020	Left inguinal region
SNM3		T-D4230	Umbilical region

Table A.0–9: **Context ID 220 Measurement Range Concepts**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
INCLUDE CID 226 Population Statistical Descriptors			
INCLUDE CID 227 Sample Statistical Descriptors			

Table A.0–10: **Context ID 221 Measurement Range Concepts**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
INCLUDE CID 226 Population Statistical Descriptors			
INCLUDE CID 227 Sample Statistical Descriptors			

Table A.0–11: **Context ID 223 Normal Range Values**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
SRT		R-0038B	Normal Range Upper Limit
SRT		R-10041	Normal Range Lower Limit

Table A.0–12: **Context ID 225 Measurement Uncertainty Concepts**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
SRT		R-00363	+/- , range of measurement uncertainty
SRT		R-00364	+ , range of upper measurement uncertainty
SRT		R-00362	- , range of lower measurement uncertainty

Table A.0–13: **Context ID 226 Population Statistical Descriptors**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
SRT		R-00337	95th Percentile Value of population
SRT		R-00338	90th Percentile Value of population
SRT		R-00346	1 Sigma Upper Value of population
SRT		R-00387	2 Sigma Upper Value of population
SRT		R-00317	Mean Value of population
SRT		R-00319	Median Value of population
SRT		R-00377	10th Percentile Value of population
SRT		R-00397	5th Percentile Value of population
SRT		R-00347	1 Sigma Lower Value of population
SRT		R-00388	2 Sigma Lower Value of population
DCM		121414	Standard deviation of population
DCM		121417	2 Sigma deviation of population

Table A.0–14: **Context ID 227 Sample Statistical Descriptors**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
DCM		121415	Percentile Ranking of measurement
DCM		121416	Z-Score of measurement

Table A.0–15: **Context ID 228 Equation or Table**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
DCM		121420	Equation
DCM		121421	Equation Citation
DCM		121424	Table of Values
DCM		121422	Table of Values Citation
DCM		121423	Method Citation

Table A.0–16: **Context ID 244 Laterality**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
SRT		G-A100	Right
SRT		G-A101	Left
SRT		G-A102	Right and left
SRT		G-A103	Unilateral

Table A.0–17: **Context ID 270 Observer Type**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
DCM		121006	Person
DCM		121007	Device

Table A.0–18: **Context ID 271 Observation Subject Class**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
DCM		121025	Patient
DCM		121026	Fetus

Table A.0–18: **Context ID 271 Observation Subject Class (continued)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
DCM		121027	Specimen

Table A.0–19: **Context ID 3627 Measurement Type**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
SRT		G-A437	Maximum
SRT		R-404FB	Minimum
SRT		R-00317	Mean
GEK		99006-0	last

Table A.0–20: **Context ID 3627 Measurement Type**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
SRT		R-002E1	Best value
SRT		R-00317	Mean
SRT		R-00319	Median
SRT		R-0032E	Mode
SRT		R-00355	Point source measurement
SRT		R-00353	Peak to peak
SRT		R-41D27	Visual estimation
DCM		121427	Estimated
DCM		121428	Calculated

Table A.0–21: **Context ID 3745 Calculation Method**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
DCM		121427	Estimated
DCM		121428	Calculated

Table A.0–22: **Context ID 6140 Calculation Methods**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
DCM		121427	Estimated
DCM		112187	Unspecified method of calculation
DCM		112055	Agatston scoring method

Table A.0–23: **Context ID 7452 Organizational Roles**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
DCM		121081	Physician
DCM		121082	Nurse
DCM		121083	Technologist
DCM		121084	Radiographer
DCM		121085	Intern
DCM		121086	Resident
DCM		121087	Registrar
DCM		121088	Fellow
DCM		121089	Attending [Consultant]
DCM		121090	Scrub nurse
DCM		121091	Surgeon
DCM		121092	Sonologist
DCM		121093	Sonographer
DCM		121105	Radiation Physicist

Table A.0–24: **Context ID 7453 Performing Roles**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
DCM		121094	Performing
DCM		121095	Referring
DCM		121096	Requesting
DCM		121097	Recording
DCM		121098	Verifying
DCM		121099	Assisting
DCM		121100	Circulating
DCM		121101	Standby

Table A.0–25: **Context ID 7454 Species**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
SNM3		L-85B00	homo sapiens

Table A.0–26: **Context ID 7455 Sex**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
DCM		M	Male
DCM		F	Female
DCM		U	Unknown sex
DCM		MP	Male Pseudohermaphrodite
DCM		FP	Female Pseudohermaphrodite
DCM		H	Hermaphrodite
DCM		MC	Male changed to Female
DCM		FC	Female changed to Male
DCM		121104	Ambiguous sex
DCM		121102	Other sex
DCM		121103	Undetermined sex

Table A.0–27: **Context ID 7456 Units of Measure for Age**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)

Table A.0–28: **Context ID 12003 OB-GYN DATES**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
LN		11778-8	EDD
LN		11779-6	EDD from LMP
LN		11781-2	EDD from average ultrasound age
LN		11780-4	EDD from ovulation date
LN		11955-2	LMP
LN		33066-2	Estimated LMP by EDD
LN		11976-8	Ovulation date
LN		33067-0	Conception Date
GEK		99001-0	Conception Date by GA
GEK		99001-1	Conception Date from EDD
GEK		99002-0	Day of Cycle
GEK		99002-1	Day of Stimulation

Table A.0–28: **Context ID 12003 OB-GYN DATES (continued)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
GEK		99003-0	EDD by GA
GEK		99003-1	EDD from Conception Date
GEK		99004-0	Expected Ovulation
GEK		99005-0	Gestational Age
GEK		99005-1	Gestational Age by Conception Date
GEK		99005-2	Gestational Age by EDD
GEK		99005-3	Gestational Age by LMP
GEK		99005-4	Gestational Age by EFW
GEK		99007-0	EDD from composite ultrasound age

Table A.0–29: **Context ID 12004 Fetal Biometry Ratios**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
LN		11947-9	HC/AC
LN		11871-1	FL/AC
LN		11872-9	FL/BPD
LN		11823-2	Cephalic Index
LN		11873-7	FL/HC
GEK		99401-0	Va/HEM
GEK		99402-0	Vp/HEM
GEK		99403-0	CC/TC

Table A.0–30: **Context ID 12005 Fetal Long Bones Measurement**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
LN		11979-2	Abdominal Circumference
LN		11818-2	Anterior-Posterior Abdominal Diameter
LN		11819-0	Anterior-Posterior Trunk Diameter
LN		11820-8	Biparietal Diameter
LN		11824-0	BPD area corrected
LN		11860-4	Cisterna Magna
LN		11963-6	Femur Length
LN		11965-1	Foot length
LN		11984-2	Head Circumference
LN		11851-3	Occipital-Frontal Diameter
LN		11988-3	Thoracic Circumference
LN		33068-8	Thoracic Area
LN		11862-0	Tranverse Abdominal Diameter
LN		11863-8	Trans Cerebellar Diameter
LN		11864-6	Transverse Thoracic Diameter
LN		11853-9	Left Kidney thickness

Table A.0–30: **Context ID 12005 Fetal Long Bones Measurement (continued)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
LN		11834-9	Left Kidney length
LN		11825-7	Left Kidney width
LN		11855-4	Right Kidney thickness
LN		11836-4	Right Kidney length
LN		11827-3	Right Kidney width
SRT		GD705	Volume
LN		33191-8	APAD * TAD
GEK		99502-0	Abdominal Diameter
GEK		99503-0	Binocular Distance
99VP		990202-1	EAR
GEK		99505-0	Fetal Trunk Area
GEK		99506-0	Min Abdominal Diameter
GEK		99507-0	AxT (APTD * TTD)
GEK		99508-0	nasal bone length
GEK		99010-0	Cardiac Circumference
GEK		99008-0	Cavum Septum Pellucidum
LN		11792-7	Follicle Diameter
GEK		99706-0	Fibroid Diameter

Table A.0–31: **Context ID 12006 Fetal Long Bones Measurement**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
LN		11966-9	Humerus length
LN		11967-7	Radius length
LN		11969-3	Ulna length
LN		11968-5	Tibia length
LN		11964-4	Fibula length
LN		11962-8	Clavicle length

Table A.0–32: **Context ID 12007 Fetal Cranium**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)

Table A.0–33: **Context ID 12008 OB-GYN Amniotic Sac**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
LN		11624-4	First Quadrant Diameter
LN		11626-9	Second Quadrant Diameter
LN		11625-1	Third Quadrant Diameter
LN		11623-6	Fourth Quadrant Diameter
SRT		M-02550	Diameter
LN		11627-7	Amniotic Fluid Index

Table A.0–34: **Context ID 12009 Early Gestation Biometry Measurements**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
LN		11957-8	Crown Rump Length
LN		11850-5	Gestational Sac Diameter
LN		33071-2	Spine Length
LN		11816-6	Yolk Sac length
LN		33069-6	Nuchal Translucency

Table A.0–35: **Context ID 12011 Ultrasound Pelvis and Uterus**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
LN		11961-0	Cervix Length
LN		12145-9	Endometrium Thickness
LN		11842-2	Uterus Length
LN		11865-3	Uterus Width
LN		11859-6	Uterus Height
LN		33192-6	Uterus Volume
LN		11840-6	Left Ovary Length
LN		11829-9	Left Ovary Width
LN		11857-0	Left Ovary Height
LN		12164-0	Left Ovary Volume
LN		11841-4	Right Ovary Length
LN		11830-7	Right Ovary Width
LN		11858-8	Right Ovary Height
LN		12165-7	Right Ovary Volume

Table A.0–36: **Context ID 12013 Gestational Age Equations and Tables**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
LN		11885-1	Gestational Age by LMP
LN		11884-4	Average Ultrasound Age
LN		11889-3	AC, Campbell 1975
LN		33537-2	AC, Jeanty 1982
LN		33077-9	Abdominal Diameter, Lessoway 1998
LN		11901-6	BPDa, Hadlock 1982
LN		33086-0	BPD-oi, Chitty 1997
LN		33087-8	BPD-oo, Chitty 1997
LN		11918-0	Fibula, Merz 1987
GEK		99300-0	AD, Marsal
LN		33072-0	AC, ASUM 2000
LN		11892-7	AC, Hadlock 1984
LN		33073-8	AC, Hansmann1985
LN		11893-5	AC, Jeanty 1984
LN		33075-3	AC, Mertz 1988
LN		33076-1	AC, Shinozuka 1996
GEK		99301-0	AC, Tokyo
GEK		99301-1	AC, JSUM 2001
GEK		99301-2	AC, Kurmanavicius
GEK		99301-3	AC, Chitty
GEK		99301-4	AC, Nicolaides
GEK		99301-5	AC, Hobbins
GEK		99301-6	AC, CFEF
GEK		99301-7	AC, Lessoway
GEK		99302-0	APAD, Merz
GEK		99303-0	APTD, Hansmann
LN		33078-7	AxT, Shinozuka 1996
GEK		99323-0	AxT, Tokyo
GEK		99304-0	BOD, Jeanty
LN		33079-5	BPD, ASUM 1989
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		33081-1	BPD, Merz 1988
LN		33082-9	BPD, Osaka 1989
LN		33083-7	BPD, Rempen 1991
LN		11907-3	BPD, Sabbagha 1978
LN		33084-5	BPD, Shinozuka 1996
LN		33085-2	BPD, Tokyo 1986
GEK		99305-0	BPD, JSUM 2001
GEK		99305-1	BPD, Kurmanavicius
GEK		99305-2	BPD, Chitty
GEK		99305-3	BPD, Nicolaides
GEK		99305-4	BPD, Hobbins
GEK		99305-5	BPD, Campbell
GEK		99305-6	BPD, CFEF
GEK		99305-7	BPD, Johnsen
GEK		99305-8	BPD, Marsal
GEK		99305-9	BPD, ASUM-Old

Table A.0–36: **Context ID 12013 Gestational Age Equations and Tables (continued)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
GEK		99305-9	BPD, Chitty_OI
GEK		99305-10	BPD, Lessoway
GEK		99306-0	Cerebellum, Hill
GEK		99306-1	Cerebellum, Chitty
GEK		99306-2	Cerebellum, Goldstein
GEK		99306-3	Cerebellum, Nicolaides
GEK		99306-4	Cerebellum, Hobbins
LN		33089-4	CRL, ASUM 1991
LN		33090-2	CRL, ASUM 2000
LN		33091-0	CRL, Daya 1993
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		33096-9	CRL, Tokyo 1986
GEK		99309-0	CRL, JSUM 2001
GEK		99309-1	CRL, Marsal
LN		33088-6	Clavical length,Yarkoni 1985
LN		33098-5	FL, Chitty 1997
LN		11920-6	FL, Hadlock 1984
LN		11921-4	FL, Hansmann 1985
LN		11922-2	FL, Hohler 1982
GEK		99310-0	FL, Jeanty
GEK		99310-1	FL, Merz
GEK		99310-2	FL, Tokyo
GEK		99310-3	FL, Warda
GEK		99310-4	FL, JSUM 2001
GEK		99310-5	FL, Shinozuka 1996
GEK		99310-6	FL, Osaka
GEK		99310-7	FL, Kurmanavicius
GEK		99310-8	FL, ASUM 2000
GEK		99310-9	FL, Nicolaides
GEK		99310-10	FL, Hobbins
GEK		99310-11	FL, ASUMOLD
GEK		99310-12	FL, CFEF
GEK		99310-13	FL, Marsal
GEK		99310-14	FL, OBRIEN
GEK		99310-15	FL, Lessoway
GEK		99311-0	FTA, Osaka
LN		33097-7	Fibula, Jeanty 1983
GEK		99312-0	GS, Rempen
GEK		99312-1	GS, Hansmann
GEK		99312-2	GS, Hollaender
GEK		99312-3	GS, Hellman
GEK		99312-4	GS, Tokyo
GEK		99313-0	HC, Hadlock
GEK		99313-1	HC, Hansmann

Table A.0–36: **Context ID 12013 Gestational Age Equations and Tables (continued)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
GEK		99313-2	HC, Merz
GEK		99313-3	HC, Jeanty
GEK		99313-4	HC, Kurmanavicius
GEK		99313-5	HC, ASUM
GEK		99313-6	HC, Chitty
GEK		99313-7	HC, Nicolaides
GEK		99313-8	HC, CFEF
GEK		99313-9	HC, JOHNSEN
GEK		99313-10	HC, Lessoway
GEK		99314-0	HL, Jeanty
GEK		99314-1	HL, Osaka
GEK		99314-2	HL, ASUM
GEK		99314-3	HL, Hobbins
GEK		99314-4	HL, Merz
GEK		99315-0	LV, Tokyo
LN		33118-1	Length of Vertebra, Tokyo 1986
GEK		99316-0	OFD, Hansmann
GEK		99316-1	OFD, Jeanty
GEK		99316-2	OFD, Kurmanavicius
GEK		99316-3	OFD, ASUM
GEK		99316-4	OFD, Chitty
GEK		99316-5	OFD, Nicolaides
GEK		99316-6	OFD, Merz
GEK		99317-0	RAD, Jeanty
GEK		99317-1	RAD, Merz
GEK		99318-0	TAD, Merz
GEK		99318-1	TAD, CFEF
GEK		99319-0	TIB, Merz
GEK		99319-1	TIB, Jeanty
GEK		99320-0	TTD, Hansmann
GEK		99321-0	ULNA, Jeanty
GEK		99321-1	ULNA, Merz
GEK		99322-0	MAD, Eik-Nes
GEK		99322-1	MAD, Kurmanavicius
GEK		99323-0	EFW, Hadlock
GEK		99323-1	EFW, Tokyo
GEK		99323-2	EFW, JSUM (2001)
GEK		99323-3	EFW, Shinozuka
GEK		99323-4	EFW, Osaka
GEK		99324-0	HC/AC, Campbell 1977
GEK		99324-1	FL/HC, Hadlock 1984
GEK		99324-2	HSVa/HEM, Hansmann
GEK		99324-3	HSVa/HEM, Nicolaides
GEK		99324-4	HSVp/HEM, Nicolaides

Table A.0–37: **Context ID 12014 OB Fetal Body Weight Equations and Tables**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)

Table A.0–38: **Context ID 12015 Fetal Growth Equations and Tables**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
LN		33546-3	AC (derived) by GA, Chitty 1994
LN		33556-2	BPD outer-inner by GA, Chitty 1994
LN		33152-0	BPD outer-outer by GA, Chitty 1994
LN		33157-9	Cephalic Index by GA, Chitty 1994
LN		33158-7	Cephalic Index by GA, Hadlock 1981
LN		33163-7	EFW by GA, Hansmann 1986
LN		33181-9	TCD by GA Goldstein 1987
GEK		99200-0	AD, Marsal
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		33148-8	AC by GA, Merz 1988
LN		33149-6	AC by GA, Shinozuka 1996
GEK		99201-0	AC by GA, Hansmann
GEK		99201-1	AC by GA, Tokyo
GEK		99201-2	AC by GA, JSUM 2001
GEK		99201-3	AC by GA, Jeanty
GEK		99201-4	AC by GA, Kurmanavicius
GEK		99201-5	AC by GA, Nicolaides
GEK		99201-6	AC by GA, CFEF
GEK		99201-7	AC by GA, Lessoway
GEK		99202-0	APAD by GA, Merz
GEK		99203-0	APTD by GA, Hansmann
GEK		99204-0	BOD by GA, Jeanty
LN		33151-2	BPD by GA, ASUM 2000
LN		33198-3	BPD by GA, Hadlock 1984
LN		33154-6	BPD by GA, Merz 1988
LN		33156-1	BPD by GA, Shinozuka 1996
LN		33153-8	BPD by GA, Jeanty 1982
LN		33155-3	BPD by GA, Rempen 1991
GEK		99205-0	BPD by GA, Hansmann
GEK		99205-1	BPD by GA, Sabbagha
GEK		99205-2	BPD by GA, Tokyo
GEK		99205-3	BPD by GA, JSUM 2001
GEK		99205-4	BPD by GA, Osaka
GEK		99205-5	BPD by GA, Kurmanavicius
GEK		99205-6	BPD by GA, Chitty
GEK		99205-7	BPD by GA, Nicolaides
GEK		99205-8	BPD by GA, Campbell
GEK		99205-9	BPD by GA, CFEF
GEK		99205-10	BPD by GA, Marsal

Table A.0–38: **Context ID 12015 Fetal Growth Equations and Tables (continued)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
GEK		99205-11	BPD by GA, Chitty_OI
GEK		99205-12	BPD by GA, Lessoway
GEK		99206-0	Cerebellum by GA, Hill
GEK		99206-1	Cerebellum by GA, Goldstein
GEK		99206-2	Cerebellum by GA, Nicolaides
GEK		99207-0	Clavicle by GA, Yarkoni
GEK		99208-0	CM by GA, Nicolaides
LN		33159-5	CRL by GA ASUM 2000
LN		33161-1	CRL by GA, Shinozuka 1996
LN		33160-3	CRL by GA, Rempen1991
GEK		99209-0	CRL by GA, Hansmann
GEK		99209-1	CRL by GA, Hadlock
GEK		99209-2	CRL by GA, Robinson
GEK		99209-3	CRL by GA, Tokyo
GEK		99209-4	CRL by GA, JSUM 2001
GEK		99209-5	CRL by GA, Osaka
GEK		99209-6	CRL by GA, Marsal
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		33168-6	FL by GA, Jeanty 1982
LN		33169-4	FL by GA, Merz 1988
LN		33170-2	FL by GA, Shinozuka 1996
GEK		99210-0	FL by GA, Hansmann
GEK		99210-1	FL by GA, Tokyo
GEK		99210-2	FL by GA, Warda
GEK		99210-3	FL by GA, JSUM 2001
GEK		99210-4	FL by GA, Osaka
GEK		99210-5	FL by GA, Kurmanavicius
GEK		99210-6	FL by GA, Nicolaides
GEK		99210-7	FL by GA, CFEF
GEK		99210-8	FL by GA, Marsal
GEK		99210-9	FL by GA, OBRIEN
GEK		99210-10	FL by GA, Lessoway
GEK		99210-11	FL by GA, ASUMOLD
GEK		99211-0	FTA by GA, Osaka
LN		33171-0	GS by GA, Rempen 1991
GEK		99212-0	GS by GA, Hollaender
GEK		99212-1	GS by GA, Hellman
GEK		99212-2	GS by GA, Tokyo
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		33175-1	HC by GA, Jeanty 1982
LN		33176-9	HC by GA, Merz 1988
GEK		99213-0	HC by GA, Hansmann
GEK		99213-1	HC by GA, Kurmanavicius
GEK		99213-2	HC by GA, Nicolaides
GEK		99213-3	HC by GA, CFEF

Table A.0–38: **Context ID 12015 Fetal Growth Equations and Tables (continued)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
GEK		99213-4	HC by GA, Lessoway
LN		33177-7	Humerus Length by GA, ASUM 2000
GEK		99214-0	HL by GA, Jeanty
GEK		99214-1	HL by GA, Osaka
GEK		99214-2	HL by GA, Merz
GEK		99215-0	LV by GA, Tokyo
GEK		99225-0	Length of Vertebra by GA, Tokyo
LN		33178-5	OFD by GA, ASUM 2000
LN		33179-3	OFD by GA, Chitty 1994
GEK		99216-0	OFD by GA, Hansmann
GEK		99216-1	OFD by GA, Jeanty
GEK		99216-2	OFD by GA, Kurmanavicius
GEK		99216-3	OFD by GA, Nicolaides
GEK		99216-4	OFD by GA, Merz
LN		33180-1	Radius by GA, Jeanty 1983
GEK		99217-0	RAD by GA, Merz
GEK		99218-0	TAD by GA Merz
GEK		99218-1	TAD by GA CFEF
GEK		99219-0	TIB by GA Jeanty
GEK		99219-1	TIB by GA Merz
GEK		99220-0	TTD by GA Hansmann
GEK		99221-0	ULNA by GA Jeanty
GEK		99221-1	ULNA by GA Merz
GEK		99222-0	MAD by GA Eik-Nes
GEK		99222-1	MAD by GA Kurmanavicius
LN		33150-4	AxT by GA, Shinozuka 1996
GEK		99223-0	AxT by GA, Tokyo
GEK		99224-0	NBL by GA, Sonek
GEK		99224-1	NBL by GA, Bunduki

Table A.0–39: **Context ID 12017 Growth Distribution Rank**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0102)
DCM		125012	Growth Percentile Rank
DCM		125013	Growth Z-score

Table A.0–40: **Context ID 12018 OB-GYN SUMMARY**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
LN		11878-6	Number of Fetuses
LN		11886-9	Gestational Age by ovulation date

Table A.0–41: **Context ID 12019 OB-GYN FETUS SUMMARY**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
LN		18185-9	Gestational Age
LN		11888-5	Composite Ultrasound Age
LN		11885-1	Gestational Age by LMP
LN		11727-5	Estimated Weight
LN		11767-1	EFW percentile rank
LN		11948-7	Fetal Heart Rate
LN		11884-4	Average Ultrasound Age
LN		11781-2	EDD from average ultrasound age
GEK		99900-1	EDD from composite ultrasound age

Table A.0–42: **Context ID 12111 Abdominal Arteries (lateral)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
SRT		T-46640	Accessory Renal Artery
SRT		T-46410	Gastric Artery
SRT		T-46421	Common Hepatic Artery
SRT		T-46980	Ovarian Artery
SRT		T-46970	Testicular Artery
SRT		T-88810	Umbilical Artery
SRT		T-46820	Uterine Artery
SNM3		T-F1810	Umbilical artery

Table A.0–43: **Context ID 12119 Vascular Ultrasound Property**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
INCLUDE CID 12120 Blood Velocity Measurements			
INCLUDE CID 12121 Vascular Indices and Ratios			
INCLUDE CID 12122 Other Vascular Properties			

Table A.0–44: **Context ID 12120 Blood Velocity Measurements**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
LN		11653-3	End Diastolic Velocity

Table A.0–44: **Context ID 12120 Blood Velocity Measurements (continued)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
LN		11665-7	Minimum Diastolic Velocity
LN		11726-7	Peak Systolic Velocity
LN		20352-1	Time averaged mean velocity
LN		11692-1	Time averaged peak velocity

Table A.0–45: **Context ID 12121 Vascular Indices and Ratios**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
LN		20167-3	Acceleration Index
SRT		G-0371	% Area Reduction
SRT		G-0372	% Diameter Reduction
LN		12008-9	Pulsatility Index
LN		12023-8	Resistivity Index
LN		12144-2	Systolic to Diastolic Velocity Ratio
LN		33867-3	Velocity ratio
GEK		99500-0	Pressure Gradient mean
GEK		99013-0	Peak velocity index for veins
GEK		99013-1	Preload Index

Table A.0–46: **Context ID 12122 Other Vascular Properties**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
LN		20168-1	Acceleration Time
LN		20217-6	Deceleration Time
SRT		G-0364	Vessel lumen diameter
SRT		G-0365	Vessel outside diameter
LN		20354-7	Velocity Time Integral
LN		8867-4	Heart Rate
GEK		99501-0	Cycle Time
GEK		99012-0	Peak Diastolic Velocity
SNM3		M-02550	Diameter
LN		20352-1	Mean Velocity
GEK		99010-0	Venous Flow

Table A.0–47: **Context ID 12140 Pelvic Vasculature Anatomical Location**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
SRT		T-F1810	Umbilical Artery
SRT		T-F1820	Umbilical Vein
SRT		T-46980	Ovarian Artery
SRT		T-48780	Ovarian Vein
SRT		T-46820	Uterine Artery
SRT		T-49010	Uterine Vein
SRT		T-F1412	Vitelline Artery of Placenta
SRT		T-F1413	Vitelline Vein of Placenta
SRT		T-46710	Common Iliac Artery
99VP		VP-0001	Ductus venosus vein
SRT		T-40003	Entire Vessel
SNM3	3.4	T-45010	Carotid Artery
99VP		VP-0004	Ductus venosus artery

Table A.0–48: **Context ID 12141 Fetal Vasculature Anatomical Location**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
SRT		T-42000	Aorta
SRT		T-D0765	Descending Aorta
SRT		T-45600	Middle Cerebral Artery
SRT		T-48581	Pulmonary Vein
SRT		T-44000	Pulmonary Artery

Table A.0–49: **Context ID 99101 OB-M-Generic**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
GEK		99601-0	M-Distance
GEK		99602-0	M-Time
GEK		99603-0	M-Velocity
GEK		99604-0	Stenosis % Dist
GEK		99605-0	Heart Rate

Table A.0–50: **Context ID 99102 OB-GYN Amniotic Sac OLD**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
LN		11627-7	Amniotic Fluid Index

Table A.0–50: **Context ID 99102 OB-GYN Amniotic Sac OLD (continued)**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
GEK		99009-0	AMNIOTIC FLUID INDEX LEN q1
GEK		99009-1	AMNIOTIC FLUID INDEX LEN q2
GEK		99009-2	AMNIOTIC FLUID INDEX LEN q3
GEK		99009-3	AMNIOTIC FLUID INDEX LEN q4
GEK		99009-4	AMNIOTIC FLUID INDEX.SUM ;four quadrant index

Table A.0–51: **Context ID 99103 SonoVCADLabor**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
GEK		99016-0	SonoVCADLabor
GEK		99016-1	Aquisition Time
GEK		99016-2	Head Direction
GEK		99016-3	Midline Angle
GEK		99016-4	Head Progression
GEK		99016-5	Head Progression Angle
GEK		99016-6	Head Station
GEK		99016-7	Head Rotation
GEK		99016-8	Occiput Position
GEK		99016-9	Cervix Dilatation

Table A.0–52: **Context ID 99103 Follicle SonoAVC**

Coding Scheme Designator (0008,0102)	Coding Scheme Version (0008,0103)	Code Value (0008,0100)	Code Meaning (0008,0104)
GEK		99015-0	Follicle Diameter d
GEK		99015-1	Follicle Diameter dx
GEK		99015-2	Follicle Diameter dy
GEK		99015-3	Follicle Diameter dz
GEK		99015-4	Follicle Diameter dmean
GEK		99015-5	Volume
GEK		99015-6	RGB-Red
GEK		99015-7	RGB-Green
GEK		99015-8	RGB-Blue
GEK		99015-9	Ovarian Follicle SonoAVC

B Standard Extended and Private Templates

Table B.0–53: **TID 300 Measurement**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			NUM				$Measurement	1	M		Units = $Units
2	>	HAS CONCEPT MOD	CODE				$ModType	1-n	U		$ModValue
3	>	HAS CONCEPT MOD	CODE	SRT	G-C036		Measurement Method	1	MC		$Method
4	>	HAS CONCEPT MOD	CODE	SRT	121401		Derivation	1	U		$Derivation
5	>	HAS CONCEPT MOD	CODE	SRT	G-C0E3		Finding Site	1-n	U		$TargetSite
6	>>	HAS CONCEPT MOD	CODE	SRT	G-C171		Laterality	1-n	U		DCID (244) Laterality
7	>>	HAS CONCEPT MOD	CODE	SRT	G-A1F8		Topographical modifier	1	U		$TargetSiteMod
8	>	HAS PROPERTIES	INCLUDE	DTID	310		Measurement Properties	1	U		$RefAuthority = $RefAuthority $RangeAuthority = $RangeAuthority
9	>	INFERRED FROM	NUM					1-n	U		
10	>	R-INFERRED FROM	NUM					1-n	U		
11	>	INFERRED FROM	INCLUDE	DTID	315		Equation or Table	1	UC	XOR Row 12	$Equation = $Equation
12	>	INFERRED FROM	TEXT	DCID	228		Equation or Table	1	UC	XOR Row 11	
13	>		INCLUDE	DTID	320		Image or Spatial Coordinates	1-n	U		$Purpose = $ImagePurpose
14	>		INCLUDE	DTID	321		Waveform or Temporal Coordinates	1-n	U		$Purpose = $WavePurpose
15	>		INCLUDE	DTID	1000		Quotation	1	U		

Table B.0–54: **TID 310 Measurement**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CODE	EV	121402	DCM	Normality	1	U		DCID (222) Normality Codes
2			INCLUDE	DTID	311		Measurement Statistical Properties	1	U		$RefAuthority = $RefAuthority
3			INCLUDE	DTID	312		Normal Range Properties	1	U		$RangeAuthority = $RangeAuthority

Table B.0–54: **TID 310 Measurement (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
4			CODE	EV	121403	DCM	Level of Significance	1	U		DCID (220) Level of Significance
5			NUM	DCID	225		Measurement Uncertainty Concepts	1-n	U		
6			CODE	EV	121404	DCM	Selection Status	1	U		DCID (244) Laterality

Table B.0–55: **TID 311 Measurement Statistical Properties**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			NUM	DCID	221		Measurement Range Concepts	1	M		
2			TEXT	EV	121405	DCM	Population description	1	U		
3			TEXT	EV	121406	DCM	Reference Authority	1	UC	XOR row 3	
4			CODE	EV	121406	DCM	Reference Authority	1	UC	XOR row 4	$RefAuthority

Table B.0–56: **TID 312 Normal Range Properties**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			NUM	DCID	223		Normal Range Values	1-n	M		
2			TEXT	EV	121407	DCM	Procedure Context	1	U		
3			TEXT	EV	121408	DCM	Subject Context	1	UC	XOR row 4	
4			CODE	EV	121408	DCM	Normal Range Authority	1	UC	XOR row 3	

Table B.0–57: **TID 315 Equation or Table**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CODE	DCID	228		Equation or Table	1-n	M		$Equation
2	>	HAS PROPERTIES	NUM					1	U		
3	>	R-HAS PROPERTIES	NUM					1	U		

Table B.0–58: **TID 320 Image or Spatial Coordinates**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1		INFERRED FROM	IMAGE				$Purpose	1	MC	XOR Rows 2,3	
2		R-INFERRED FROM	IMAGE				$Purpose	1	MC	XOR Rows 1,3	
3		INFERRED FROM	SCOORD				$Purpose	1	MC	XOR Rows 1,2	
4	>	SELECTED FROM	IMAGE					1	MC	XOR Rows 5	
5	>	R-SELECTED FROM	IMAGE					1	MC	XOR Rows 4	

Table B.0–59: **TID 321 Waveform or Temporal Coordinates**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1		INFERRED FROM	WAVE-FORM				$Purpose	1	MC	XOR Rows 2,3	
2		R-INFERRED FROM	WAVE-FORM				$Purpose	1	MC	XOR Rows 1,3	
3		INFERRED FROM	TCOORD				$Purpose	1	MC	XOR Rows 1,2	
4	>	SELECTED FROM	WAVE-FORM					1	MC	XOR Rows 5	
5	>	R-SELECTED FROM	WAVE-FORM					1	MC	XOR Rows 4	

Table B.0–60: **TID 1000 QUOTATION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1		HAS OBS CONTEXT	CODE	EV	121001	DCM	Quotation Mode	1	M		EV (121003, DCM, "Document") EV (121004, DCM, "Verbal")
2		HAS OBS CONTEXT	COMPO-SITE	EV	121002	DCM	Quoted Source	1	MC	Required if quoted material source is a DICOM composite object	
3		HAS OBS CONTEXT	INCLUDE	DTID	1001		Observation Context	1	M		

Table B.0–61: **TID 1001 OBSERVATION CONTEXT**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1		HAS OBS CONTEXT	INCLUDE	DTID	1002		Observer Context	1-n	MC	Required if all aspects of observer context are not inherited.	
2		HAS OBS CONTEXT	INCLUDE	DTID	1005	DCM	Procedure Context	1-n	MC	Required if all aspects of observer context are not inherited.	
3		HAS OBS CONTEXT	INCLUDE	DTID	1006	DCM	Subject Context	1-n	MC	Required if all aspects of observer context are not inherited.	

Table B.0–62: **TID 1002 OBSERVER CONTEXT**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1		HAS OBS CONTEXT	CODE	EV	121005	DCM	Observer Type	1	MC	IF Observer type is device	DCID (270) Observer Type Defaults to (121006,DCM, "Person")
2		HAS OBS CONTEXT	INCLUDE	DTID	1003		Person Observer identifying attributes	1	MC	IFF Row 1 value = (121006,DCM, "Person") or Row 1 is absent	
3		HAS OBS CONTEXT	INCLUDE	DTID	1004		Device observer identifying attributes	1	MC	IFF Row 1 value = (121007,DCM, "Device")	

Table B.0–63: **TID 1003 PERSON OBSERVER IDENTIFYING ATTRIBUTES**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			PNAME	EV	121008	DCM	Person Observer Name	1	M		
2			TEXT	EV	121009	DCM	Person Observer's Organization Name	1	U		Defaults to Institution Name (0008,0080) of the General Equipment Module

Table B.0–63: **TID 1003 PERSON OBSERVER IDENTIFYING ATTRIBUTES (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
3			CODE	EV	121010	DCM	Person Observer's Role in the Organization	1	U		BCID(7452) Organizational Roles
4			CODE	EV	121011	DCM	Person Observer's Role in this Procedure	1	U		BCID(7453) Performing Roles

Table B.0–64: **TID 1004 DEVICE OBSERVER IDENTIFYING ATTRIBUTES**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			UIDREF	EV	121012	DCM	Device Observer UID	1	M		
2			TEXT	EV	121013	DCM	Device Observer Name	1	U		Defaults to value of Station Name (0008,1010) in General Equipment Module
3			TEXT	EV	121014	DCM	Device Observer Manufacturer	1	U		Defaults to value of Manufacturer (0008,0070) in General Equipment Module
4			TEXT	EV	121015	DCM	Device Observer Model Name	1	U		Defaults to value of Manufacturer's Model Name (0008,1090) in General Equipment Module
5			TEXT	EV	121016	DCM	Device Observer Serial Number	1	U		Defaults to value of Device Serial Number (0018,1000) in General Equipment Module
6			TEXT	EV	121017	DCM	Device Observer Physical Location during observation	1	U		

Table B.0–65: **TID 1005 PROCEDURE CONTEXT**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			UIDREF	EV	121018	DCM	Procedure Study Instance UID	1	M		Defaults to Study Instance UID (0020,000D) of General Study Module

Table B.0–65: **TID 1005 PROCEDURE CONTEXT (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
2			TEXT	EV	121019	DCM	Procedure Study Component UID	1	U		Defaults to Referenced SOP Instance UID (0008,1155) in Referenced Performed Procedure Step Sequence (0008,1111) of General Series Module
3			TEXT	EV	121020	DCM	Device Observer Manufacturer	1	U		Defaults to (0040,2016)
4			TEXT	EV	121021	DCM	Device Observer Model Name	1	U		Defaults to (0040,2017)
5			TEXT	EV	121022	DCM	Device Observer Serial Number	1	U		Defaults to (0008,0050)
6			TEXT	EV	121023	DCM	Device Observer Physical Location during observation	1	U		Defaults to Procedure Code Sequence (0008,1032) of General Study Module

Table B.0–66: **TID 1006 SUBJECT CONTEXT**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CODE	EV	121024	DCM	Procedure Study Instance UID	1	M	IF subject is not the Patient	DCID (271) Observation Subject Class Defaults to (121025, DCM, Patient")
2			INCLUDE	DTID	1007		Subject Context, Patient	1	UC	IFF Row 1 value = (121025,DCM, "Patient") or Row 1 is absent	May be used for human or animal patients
3			INCLUDE	DTID	1008		Subject Context, Fetus	1	UC	IFF Row 1 value = (121026,DCM, "Fetus")	May be used for human or animal fetuses
4			INCLUDE	DTID	1009		Subject Context, Specimen	1	UC	IFF Row 1 value = (121027, DCM, "Specimen")	

Table B.0–67: **TID 1007 SUBJECT CONTEXT, PATIENT**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			UIDREF	EV	121028	DCM	Subject UID	1	U		E.g. SOP Instance UID of Detached Patient Instance
2			PNAME	EV	121029	DCM	Subject Name	1	MC	Required if not inherited.	Defaults to value of Patient's Name (0010,0010) in Patient Module
3			CODE	EV	121030	DCM	Subject ID	1	MC	Required if not inherited.	Defaults to value of Patient ID (0010,0020) in Patient Module
4			DATE	EV	121031	DCM	Subject Birth Date	1	U		Defaults to value of Patient's Birth Date (0010,0030) in Patient Module
5			CODE	EV	121032	DCM	Subject Sex		U		Defaults to value equivalent to Patient's Sex (0010,0040) in Patient Module DCID (7455) Sex
6			NUM	EV	121033	DCM	Subject Age		U		Defaults to value ofPatient's Age (0010,1010) in Patient Study Module Units DCID (7456) Units of Measure for Age
7			CODE	EV	121034	DCM	Subject Species		MC		DCID (7454) Species to define various animals or plants, e.g. veterinary or research. Defaults to (L-85B00, SNM3,"homo sapiens").

Table B.0–68: **TID 1008 SUBJECT CONTEXT, FETUS**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			PNAME	EV	121036	DCM	Mother of fetus	1	U		Defaults to an observation subject that is a patient prior to replacing the Observation Subject Class with Fetus.
2			UIDREF	EV	121028	DCM	Subject UID	1	U		For longitudinal tracking of individual fetuses

Table B.0–68: **TID 1008 SUBJECT CONTEXT, FETUS (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
3			TEXT	EV	121030	DCM	Subject ID	1	MC	IF row 4 is absent	For longitudinal tracking of individual fetuses (human readable value e.g. "A" or "1")
4			TEXT	EV	11951-1	LN	Fetus ID	1	MC	IF row 3 is absent	For separation of multiple fetuses during this procedure e.g. fetus '1' of '2' ...not for longitudinal comparisons.; ie. the *m* of fetus *m* of *n*
5			NUM	EV	11878-6	LN	Number of Fetuses	1	U		i.e. the "n" of fetus "m" of "n" Units EV (1,UCUM,"no units")

Table B.0–69: **TID 1009 SUBJECT CONTEXT, SPECIMEN**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			UIDREF	EV	121039	DCM	Specimen UID	1	U		
2			TEXT	EV	121040	DCM	Specimen Accession Number	1	U		Defaults to value of Specimen Accession Number (0040,050A) in Specimen Identification Module
3			INCLUDE	DTID	1007		patient subject context	1	UC	IFF the source of the specimen is a human or animal patient	
4			TEXT	EV	121041	DCM	Specimen Identifier	1	U		Defaults to value of Specimen Identifier (0040,0551) if a single item of Specimen Sequence (0040,0550) is present in Specimen Identification Module

Table B.0–69: **TID 1009 SUBJECT CONTEXT, SPECIMEN (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
5			CODE	EV	121042	DCM	Specimen Type	1	U		Defaults to value of Specimen Type Code Sequence (0040,059A) if a single item of Specimen Sequence (0040,0550) is present in Specimen Identification Module
6			TEXT	EV	121043	DCM	Slide Identifier	1	U		Defaults to value of Slide Identifier (0040,06FA) if a single item of Specimen Sequence (0040,0550) is present in Specimen Identification Module
7			UIDREF	EV	121044	DCM	Slide UID	1	U		

Table B.0–70: **TID 5000 OB-GYN Ultrasound Procedure Report**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	EV	125000	DCM	OB-GYN Ultrasound Procedure Report	1	M		
2	>	HAS CONCEPT MOD	INCLUDE		1204	DTID	Language of Content Item and Descendants	1	U	not used	
3	>	HAS OBS CONTEXT	INCLUDE		1001	DTID	Observation Context	1	U		
4	>	CONTAINS	INCLUDE		5001	DTID	Patient Char-acteristics	1	U		
5	>	CONTAINS	CON-TAINER	DT	111028	DCM	Image Library	1	U	not used	
6	>>	CONTAINS	IMAGE				No purpose of Reference	1-n	M	not used	
7	>	CONTAINS	INCLUDE		5002	DTID	OB-GYN Procedure Summary Section	1	U		
8	>	CONTAINS	INCLUDE		5004	DTID	Fetal Biometry Ratio Section	1-n	U	12004	
9	>	CONTAINS	INCLUDE		5005	DTID	Fetal Biometry Section	1-n	U	12005	
10	>	CONTAINS	INCLUDE		5006	DTID	Long Bones Section	1-n	U	12006	

Table B.0–70: **TID 5000 OB-GYN Ultrasound Procedure Report (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
11	>	CONTAINS	INCLUDE		5007	DTID	Fetal Cranium Section	1-n	U	12007	
12	>	CONTAINS	INCLUDE		99004	DTID	Fetal Anatomy	1-n	U		
13	>	CONTAINS	INCLUDE		5009	DTID	Fetal Biophysical Profile Section	1-n	U		
14	>	CONTAINS	INCLUDE		5011	DTID	Early Gestation Section	1-n	U	12009	
15	>	CONTAINS	INCLUDE		5010	DTID	Amniotic Sac Section	1-n	U	12008	
16	>	CONTAINS	INCLUDE		99005	DTID	Amniotic Sac Section old	1-n	U	99102	
17	>	CONTAINS	INCLUDE		99006	DTID	SonoVCAD-Labor	1-n	U	99103	
18	>	CONTAINS	INCLUDE		5015	DTID	Pelvis and Uterus Section	1	U		
19	>	CONTAINS	INCLUDE		5012	DTID	Ovaries Section	1	U		
20	>	CONTAINS	INCLUDE		5013	DTID	Follicles Section	1	U		$Laterality = EV (G-A101, SRT, "Left") $Number = EV (11879-4, LN, "Number of follicles in left ovary")
21	>	CONTAINS	INCLUDE		5013	DTID	Follicles Section	1	U		$Laterality = EV (G-A100, SRT, "Right") $Number = EV (11880-2, LN, "Number of follicles in right ovary")
22	>	CONTAINS	INCLUDE		99008	DTID	Follicles SonoAVC Section	1	U		$Laterality = EV (G-A101, SRT, "Left") $Number = EV (11879-4, LN, "Number of follicles in left ovary")
23	>	CONTAINS	INCLUDE		99008	DTID	Follicles SonoAVC Section	1	U		$Laterality = EV (G-A100, SRT, "Right") $Number = EV (11880-2, LN, "Number of follicles in right ovary")
24	>	CONTAINS	INCLUDE	EV	121070	DCM	Findings	1-n	U	not used	
25	>	HAS CONCEPT MOD	CODE	EV	G-C0E3	SRT	Finding Site	1	M	not used	EV (T-F6800, SRT, "Embryonic Vascular Structure")
26	>	CONTAINS	INCLUDE		5025	DTID	OB-GYN Fetal Vascular Measurement Group	1	M		$AnatomyGroup = DCID (12141) Fetal Vasculature
27	>	CONTAINS	INCLUDE	EV	121070	DCM	Findings	1-n	U	not used	

Table B.0–70: **TID 5000 OB-GYN Ultrasound Procedure Report (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
28	>	HAS CONCEPT MOD	CODE	EV	G-C0E3	SRT	Finding Site	1	M		EV (T-D6007, SRT, "Pelvic Vascular Structure")
29	>	CONTAINS	INCLUDE		5026	DTID	OB-GYN Pelvic Vascular Measurement Group	1	M		$AnatomyGroup = DCID (12140) Pelvic Vasculature Anatomical Location
30	>	CONTAINS	INCLUDE		99002	DTID	Fibroid Section	1	U		$Laterality = EV (G-A101, SRT, "Left") $Number = EV (99703-0, GEK, "Number of fibroids in left ovary")
31	>	CONTAINS	INCLUDE		99002	DTID	Fibroid Section	1	U		$Laterality = EV (G-A100, SRT, "Right") $Number = EV (99704-0, GEK, "Number of fibroids in right ovary")

Table B.0–71: **TID 5001 OB-GYN PATIENT CHARACTERISTICS**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	EV	121118	DCM	"Patient Characteris-tics"	1	M		
2	>	CONTAINS	TEXT	EV	121106	DCM	"Comment"	1	U		
3	>	CONTAINS	NUM	EV	8302-2	LN	"Patient Height"	1	U		
4	>	CONTAINS	NUM	EV	29463-7	LN	"Patient Weight"	1	U		
5	>	CONTAINS	NUM	EV	11996-6	LN	"Gravida"	1	U		
6	>	CONTAINS	NUM	EV	11977-6	LN	"Para"	1	U		
7	>	CONTAINS	NUM	EV	11612-9	LN	"Aborta"	1	U		
8	>	CONTAINS	NUM	EV	33065-4	LN	"Ectopic Pregnancies"	1	U		

Table B.0–72: **TID 5002 OB-GYN PROCEDURE SUMMARY SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	121111	DCM	Summary	1	M		
2	>	CONTAINS	DATE	DCID	12003		OB-GYN Dates	1-n	U		

Table B.0–72: **TID 5002 OB-GYN PROCEDURE SUMMARY SECTION (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
3	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	U		$Measurement = BCID (12018) OB-GYN Summary
4	>	CONTAINS	TEXT	EV	121106	DCM	Comment	1-n	U		
5	>>		INCLUDE	DTID	320		Image or Spatial Coordinates	1-n	U		
6	>	CONTAINS	INCLUDE	DTID	5003		OB-GYN Fetus Summary	1-n	UC	No more than 1 inclusion per fetus	

Table B.0–73: **TID 5003 OB-GYN PROCEDURE FETUS SUMMARY**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	125008	DCM	Fetus Summary	1	M		
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	
3	>	CONTAINS	TEXT	EV	121106		Comment	1-n	U		
4	>>		INCLUDE	DTID	320	DCM	Image or Spatial Coordinates	1	U		
5	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	U		$Measurement = DCID (12019) OB-GYN Fetus Summary, (12003) OB-GYN DATES, $Equation = DCID (12012) OB Equations and Tables

Table B.0–74: **TID 5004 FETAL BIOMETRY RATIO SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	125001	DCM	Fetus Biometry Ratios	1	M		

Table B.0–74: **TID 5004 FETAL BIOMETRY RATIO SECTION (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	
3	>	CONTAINS	NUM	DCID	12004		Fetal Biometry Ratios	1-n	M		
4	>>	R-INFERRED FROM	NUM					2	U		
5	>	HAS PROPERTIES	INCLUDE	DTID	312		Normal Range Properties	1	U		

Table B.0–75: **TID 5005 FETAL BIOMETRY SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	125002	DCM	Fetus Biometry	1	M		
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	
3	>	CONTAINS	NUM	DTID	5008		Fetal Biometry Group	1-n	M		$BiometryType = MemberOf DCID (12005) Fetal Biometry Measurements

Table B.0–76: **TID 5006 FETAL LONG BONES SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	125003	DCM	Fetal Long Bones	1	M		
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	

Table B.0–76: **TID 5006 FETAL LONG BONES SECTION (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
3	>	CONTAINS	INCLUDE	DTID	5008		Fetal Biometry Group	1-n	M		$BiometryType = MemberOf DCID (12006) Fetal Long Bones Biometry Measurements

Table B.0–77: **TID 5007 FETAL CRANIUM SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	125004	DCM	Fetal Cranium	1	M		
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	
3	>	CONTAINS	INCLUDE	DTID	5008		Fetal Biometry Group	1-n	M		$BiometryType = MemberOf DCID (12007) Fetal Cranium

Table B.0–78: **TID 5008 FETAL BIOMETRY GROUP**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	125005	DCM	BiometryGroup	1	M		
2	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	MC	At least one of 2 and 3 shall be present	$Measurement = $BiometryType $Derivation = DCID (3627) Measurement Type
3	>	CONTAINS	NUM	EV	18185-9		Gestational Age	1	MC	At least one of 2 and 3 shall be present	Units= EV(d,UCUM,days)
4	>>	INFERRED FROM	CODE	DCID	228		Equation or Table	1	U		DCID (12013) Gestational Age Equations and Tables
5	>>	INFERRED FROM	NUM		121414	DCM	Standard deviation of Population	1	U		
6	>>>	HAS PROP-ERTIES	CODE		121402	DCM	Normality	1	UC	If row 5	(SRT, R-002C4, Abnormally High), (SRT, R-002C5, Abnormally Low), (SRT, G-A460, Normal)

Table B.0–78: **TID 5008 FETAL BIOMETRY GROUP (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
7	>>	R-INFERRED FROM	NUM					1-n	U		
8	>>	HAS PROPERTIES	NUM	DCID	226		Population Statistical Descriptors	1-n	U		
9	>	CONTAINS	NUM	DCID	12017		Growth Distribution Rank	1	U		
10	>>	INFERRED FROM	CODE	DCID	228		Equation or Table	1	U		DCID (12015) Fetal Growth Equations and Tables

Table B.0–79: **TID 5009 FETAL BIOPHYSICAL PROFILE SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	125006	DCM	Biophysical Profile	1	M		
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	
3	>	CONTAINS	NUM	EV	11631-9	LN	Gross Body Movement	1	MC	At least one of row 3-7 shall be present	Units = DT (”0:2”, UCUM, ”range 0:2”)
4	>	CONTAINS	NUM	EV	11632-7	LN	Fetal Breathing	1	MC	At least one of row 3-7 shall be present	Units = DT (”0:2”, UCUM, ”range 0:2”)
5	>	CONTAINS	NUM	EV	11635-0	LN	Fetal Tone	1	MC	At least one of row 3-7 shall be present	Units = DT (”0:2”, UCUM, ”range 0:2”)
6	>	CONTAINS	NUM	EV	11635-5	LN	Fetal Heart Reactivity	1	MC	At least one of row 3-7 shall be present	Units = DT (”0:2”, UCUM, ”range 0:2”)
7	>	CONTAINS	NUM	EV	11630-1	LN	Amniotic Fluid Volume	1	MC	At least one of row 3-7 shall be present	Units = DT (”0:2”, UCUM, ”range 0:2”)
8	>	CONTAINS	NUM	DT	11634-3	LN	Biophysical Profile Sum Score	1	U		

Table B.0–80: **TID 5010 AMNIOTIC SAC SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	125070	DCM	Findings	1	M		
2	>	HAS OBS CONTEXT	CODE	EV	G-C0E3	SRT	Finding Site	1	M		DT (T-F1300, SRT, "Amniotic Sac")
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	
4	>	CONTAINS	INCLUDE	DTID	300		Measurement	1	M		$Measurement = DT (11627-7, LN, "Amniotic Fluid Index")
5	>	CONTAINS	INCLUDE	DTID	300		Measurement	4	U		$Measurement = DCID (12008) OB-GYN Amniotic Sac

Table B.0–81: **TID 5011 EARLY GESTATION SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	125009	DCM	Early Gestation	1	M		
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	
3	>	CONTAINS	INCLUDE	DTID	5008		Fetal Biometry Group	1-n	M		$BiometryType= Member of DCID (12009) Early Gestation Biometry Measurements

Table B.0–82: **TID 5012 OVARIES SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	121070	DCM	Findings	1	M		
2	>	HAS CONCEPT MOD	CODE	EV	G-C0E3	SRT	Finding Site	1	M		DT (T-87000, SRT, "Ovary")

Table B.0–82: **TID 5012 OVARIES SECTION (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
3	>	CONTAINS	INCLUDE	DTID	5016		LWH Volume Group	1	U		$GroupName = EV (T-87000, SRT, "Ovary") $Width =EV (11829-9,LN, "Left Ovary Width") $Length =EV (11840-6, LN, "Left Ovary Length") $Height =EV (11857-0 , LN," Left Ovary Height") $Volume=EV (12164-0, LN, "Left Ovary Volume")
4	>	CONTAINS	INCLUDE	DTID	5016		LWH Volume Group	1	U		$GroupName = EV (T-87000, SRT, "Ovary") $Width = EV (11830-7, LN, "Right Ovary Width") $Length = EV (11841-4, LN, "Right Ovary Length") $Height = EV (11858-8, LN, "Right Ovary Height") $Volume= EV (12165-7, LN, "Right Ovary Volume")

Table B.0–83: **TID 5013 FOLLICLES SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	121070	DCM	Findings	1	M		
2	>	HAS CONCEPT MOD	CODE	EV	G-C0E3	SRT	Finding Site	1	M		DT (T-87600, SRT, "Ovarian Follicle")
3	>	HAS CONCEPT MOD	CODE	EV	G-C171	SRT	Laterality	1	U		$Laterality
4	>	CONTAINS	NUM				$Number	1	U		
5	>	CONTAINS	INCLUDE	DTID	5014		Follicle Measurement Group	1-n	U		

Table B.0–84: **TID 5014 FOLLICLE MEASUREMENT GROUP**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	EV	125007	DCM	Measurement Group	1	M		
2	>	HAS OBS CONTEXT	TEXT	EV	12510	DCM	Identifier	1	U		Unique among all groups of same laterality
3	>	CONTAINS	INCLUDE	DTID	300		Measurement	1	U		$Measurement = EV (GD705, SRT, "Volume")
4	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	U		$Measurement = EV (11793-7, LN, "Follicle Diameter") $Derivation = DCID (3627) Measurement Type

Table B.0–85: **TID 5015 PELVIS AND UTERUS SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	125011	DCM	Pelvis and Uterus	1	M		
2	>	CONTAINS	INCLUDE	DTID	5016		LWH Volume Group	1	U		$GroupName = EV (T-83000, SRT, "Uterus") $Width = EV (11865-3,LN," Uterus Width") $Length = EV (11842-2, LN," Uterus Length") $Height = EV (11859-6, LN," Uterus Height") $Volume = EV (33192-6, LN, "Uterus Volume")
3	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	U		$Measurement = DCID (12011) Ultrasound Pelvis and Uterus $Derivation = DCID (3627) Measurement Type

Table B.0–86: **TID 5016 LWH VOLUME GROUP**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER				$GroupName	1	M		
2	>	CONTAINS	INCLUDE	DTID	300		Measurement	1	MC	At least one of row 2,3,4,5 shall be present	$Measurement = $Volume (DCID 12011)
3	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	MC	At least one of row 2,3,4,5 shall be present	$Measurement = $Length (DCID 12011) $Derivation = DCID (3627) Measurement Type
4	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	MC	At least one of row 2,3,4,5 shall be present	$Measurement = $Width (DCID 12011) $Derivation = DCID (3627) Measurement Type
5	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	MC	At least one of row 2,3,4,5 shall be present	$Measurement = $Height (DCID 12011) $Derivation = DCID (3627) Measurement Type

Table B.0–87: **TID 5025 OB-GYN FETAL VASCULAR ULTRASOUND MEASUREMENT GROUP**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER				$AnatomyGroup	1	M		
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	
3	>	HAS OBS CONTEXT	CODE	EV	G-C171	SRT	Laterality	1	MC	IFF anatomy has laterality	DCID (244) Laterality

Table B.0–87: **TID 5025 OB-GYN FETAL VASCULAR ULTRASOUND MEASUREMENT GROUP (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
4	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	M		$MeasType = DCID (12119) Vascular Ultrasound Property $Derivation = DCID (3627) Measurement Type

Table B.0–88: **TID 5026 OB-GYN PELVIC VASCULAR ULTRASOUND MEASUREMENT GROUP**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER				$AnatomyGroup	1	M		
2	>	HAS OBS CONTEXT	INCLUDE	EV	G-C171	SRT	Laterality	1	MC	IFF anatomy has laterality	DCID (244) Laterality
3	>	HAS OBS CONTEXT	TEXT		112050	DCM	Anatomic Identifier	1	U		
4	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	M		$MeasType = DCID (12119) Vascular Ultrasound Property $Derivation = DCID (3627) Measurement Type

Table B.0–89: **TID 99000 Fetus Doppler Measurements**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	99000	DCM	Fetal Doppler	1	M		
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus ID	1	MC	If this template is invoked more than once to describe more than one fetus	

Table B.0–89: **TID 99000 Fetus Doppler Measurements (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
3	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1-n	M		$FindingSite = EV(T-45510, SNM3 "Cerebral artery") $Laterality= EV(G-A101, SRT, "Right") $TargetSiteMod = EV(G-A109, SNM3, "Medial") $MeasType = MemberOf DCID(9900)
4	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-45510, SNM3 "Cerebral artery") $Laterality=EV(G-A100, SRT, "Left") $TargetSiteMod = EV(G-A109, SNM3, "Medial") $MeasType = MemberOf DCID(9900)
5	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-45510, SNM3 "Cerebral artery") $Laterality= EV(G-A101, SRT, "Right") $TargetSiteMod = EV(G-A113, SNM3, "Internal") $MeasType = MemberOf DCID(9900)
6	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-45510, SNM3 "Cerebral artery") $Laterality=EV(G-A100, SRT, "Left") $TargetSiteMod = EV(G-A113, SNM3, "Internal") $MeasType = MemberOf DCID(9900)
7	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-46420, SNM3, "Hepatic Artery") $MeasType = MemberOf DCID(9900)

Table B.0–89: **TID 99000 Fetus Doppler Measurements (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
8	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-48720, SNM3, "Hepatic Vein") $MeasType = MemberOf DCID(9901)
9	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-48710, SNM3, "Inferior Vena Cava") $MeasType = MemberOf DCID(9901)
10	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-46600, SNM3, "Renal artery") $Laterality = EV(G-A100, SRT, "Left") $MeasType = MemberOf DCID(9900)
11	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-46600, SNM3, "Renal artery") $Laterality = EV(G-A101, SRT, "Right") $MeasType = MemberOf DCID(9900)
12	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-46460, SNM3, "Splenic artery") $MeasType = MemberOf DCID(9900)
13	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-42070, SNM3, "Thoracic aorta") $MeasType = MemberOf DCID(9900)
14	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-F1810, SNM3, "Umbilical artery") $MeasType = MemberOf DCID(12111)
15	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-48817, SNM3, "Umbilical vein") $MeasType = MemberOf DCID(9902)

Table B.0–89: **TID 99000 Fetus Doppler Measurements (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
16	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(VP-0001, 99VP, "Ductus venosus vein") $MeasType = MemberOf DCID(9901)
17	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$TargetSite = EV(T-45010, SNM3, "Carotid artery") $Laterality = EV(G-A100, SRT, "Left") $MeasType = MemberOf DCID(12140)
18	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$TargetSite = EV(T-45010, SNM3, "Carotid artery") $Laterality = EV(G-A100, SRT, "Right") $MeasType = MemberOf DCID(12140)
19	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$TargetSite = EV(T-F1412, SRT, "Vitelline Artery of Placenta") $MeasType = MemberOf DCID(12140)
20	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-F1810, SNM3, "Umbilical artery") $Laterality = EV(G-A100, SRT, "Left") $MeasType = MemberOf DCID(12111)
21	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-F1810, SNM3, "Umbilical artery") $Laterality = EV(G-A100, SRT, "Right") $MeasType = MemberOf DCID(12111)

Table B.0–89: **TID 99000 Fetus Doppler Measurements (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
22	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-45600, SRT, "Middle Cerebral Artery") $Laterality = EV(G-A100, SRT, "Left") $MeasType = MemberOf DCID(12141)
23	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-45600, SRT, "Middle Cerebral Artery") $Laterality = EV(G-A100, SRT, "Right") $MeasType = MemberOf DCID(12141)
24	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$FindingSite = EV(T-42000, SRT, "Aorta") $MeasType = MemberOf DCID(12141)

Table B.0–90: **TID 99001 Maternal Doppler Measurements**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	99001	DCM	Maternal Doppler Measurements	1	M		
2	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$TargetSite = EV(VP-0002, 99VP, "Uterine artery") $Laterality = EV(G-A100, SRT, "Left") $MeasType = MemberOf DCID(12111)
3	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$TargetSite = EV(VP-0002, 99VP, "Uterine artery") $Laterality = EV(G-A101, SRT, "Right") $MeasType = MemberOf DCID(12111)

Table B.0–90: **TID 99001 Maternal Doppler Measurements (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
4	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$TargetSite = EV(VP-0003, 99VP, "Ovarian artery") $Laterality = EV(G-A100, SRT, "Left") $MeasType = MemberOf DCID(12111)
5	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$TargetSite = EV(VP-0003, 99VP, "Ovarian artery") $Laterality = EV(G-A101, SRT, "Right") $MeasType = MemberOf DCID(12111)
6	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$TargetSite = EV(VP-0001, 99VP, "Ductus Venosus") $MeasType = MemberOf DCID(12140)
7	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$TargetSite = EV(T-40003, SRT, "Entire Vessel") $MeasType = MemberOf DCID(12140)
8	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$TargetSite = EV(T-45010, SNM3, "Carotid artery") $Laterality = EV(G-A100, SRT, "Left") $MeasType = MemberOf DCID(12111)
9	>	CONTAINS	INCLUDE	DTID	99100		Doppler Group	1	M		$TargetSite = EV(T-45010, SNM3, "Carotid artery") $Laterality = EV(G-A100, SRT, "Left") $MeasType = MemberOf DCID(12111)

Table B.0–91: **TID 99002 FIBROID SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	121070	DCM	Findings	1	M		
2	>	HAS CONCEPT MOD	CODE	EV	G-C0E3	SRT	Finding Site	1	M		DT (99508-0, GEK, "Ovarian Fibroid")
3	>	HAS CONCEPT MOD	CODE	EV	G-C171	SRT	Laterality	1	U		$Laterality
4	>	CONTAINS	NUM				$Number	1	U	"The number of fibroids"	$Measurement = EV (99509-0, GEK, "Fibroid Diameter") $Derivation = DCID (3627) Measurement Type
5	>	CONTAINS	INCLUDE	DTID	99003		Fibroid Measurement Group	1-n	U		

Table B.0–92: **TID 99003 FIBROID MEASUREMENT GROUP**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	EV	125007	DCM	Measurement Group	1	M		
2	>	HAS OBS CONTEXT	TEXT	EV	12510	DCM	Identifier	1	U		Unique among all groups of same laterality
3	>	CONTAINS	INCLUDE	DTID	300		Measurement	1	U		$Measurement = EV (GD705, SRT, "Volume")
4	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	U		$Measurement = EV (99509-0, GEK, "Fibroid Diameter") $Derivation = DCID (3627) Measurement Type

Table B.0–93: **TID 99004 Fetal Anatomy**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	99801-0	GEK	Fetal Anatomy	1	M		

Table B.0–93: **TID 99004 Fetal Anatomy (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	
3	>	CONTAINS	NUM	EV	99801-1	GEK	Abd Cord Insert	1	MC		OB_FA_AbdWall
4	>	CONTAINS	NUM	EV	99801-2	GEK	Stomach	1	MC		OB_FA_Stomach
5	>	CONTAINS	NUM	EV	99801-3	GEK	Right Kidney	1	MC		OB_FA_RKidney
6	>	CONTAINS	NUM	EV	99801-4	GEK	Upper Extremities	1	MC		OB_FA_UpExtr
7	>	CONTAINS	NUM	EV	99801-5	GEK	Spine	1	MC		OB_FA_Spine
8	>	CONTAINS	NUM	EV	99801-6	GEK	Left Kidney	1	MC		OB_FA_LKidney
9	>	CONTAINS	NUM	EV	99801-7	GEK	Bladder	1	MC		OB_FA_Bladder
10	>	CONTAINS	NUM	EV	99801-8	GEK	Lower Extremities	1	MC		OB_FA_LowExtr
11	>	CONTAINS	NUM	EV	99801-9	GEK	Diaphragm	1	MC		OB_FA_Diaphragm
12	>	CONTAINS	NUM	EV	99801-10	GEK	Lateral Ventricles	1	MC		OB_FB_LatVent
13	>	CONTAINS	NUM	EV	99801-11	GEK	Cerebellum	1	MC		OB_FB_Cereb
14	>	CONTAINS	NUM	EV	99801-12	GEK	Cist Magna	1	MC		OB_FB_CistMagna
15	>	CONTAINS	NUM	EV	99801-13	GEK	4 Chamber	1	MC		OB_FH_4Chamber
16	>	CONTAINS	NUM	EV	99801-14	GEK	Left Outflow Tract	1	MC		OB_FH_LOT
17	>	CONTAINS	NUM	EV	99801-15	GEK	Right Outflow Tract	1	MC		OB_FH_ROT
18	>	CONTAINS	NUM	EV	99801-16	GEK	3 Vessel	1	MC		OB_FH_3Vessel
19	>	CONTAINS	NUM	EV	99801-17	GEK	Aortic Arch	1	MC		OB_FH_AoArch
20	>	CONTAINS	NUM	EV	99801-18	GEK	Cardiac Rhythm	1	MC		OB_FH_CardRh
21	>	CONTAINS	NUM	EV	99801-19	GEK	Ductal Arch	1	MC		OB_FH_DuctArch
22	>	CONTAINS	NUM	EV	99801-20	GEK	Fetal Position	1	MC		OB_FD_FetPos
23	>	CONTAINS	NUM	EV	99801-21	GEK	Fetal Spine	1	MC		OB_FD_FetSpine
24	>	CONTAINS	NUM	EV	99801-22	GEK	Placenta Grade	1	MC		OB_FD_PlacGrade
25	>	CONTAINS	NUM	EV	99801-23	GEK	Cord Insertion	1	MC		OB_FD_CordIns
26	>	CONTAINS	NUM	EV	99801-24	GEK	Face	1	MC		OB_FD_Face
27	>	CONTAINS	NUM	EV	99801-25	GEK	Fetal Head	1	MC		OB_FD_FetHead
28	>	CONTAINS	NUM	EV	99801-26	GEK	Placenta Location	1	MC		OB_FD_PlacLoc
29	>	CONTAINS	NUM	EV	99801-27	GEK	3 V Cord	1	MC		OB_FD_3VCord

Table B.0–93: **TID 99004 Fetal Anatomy (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
30	>	CONTAINS	NUM	EV	99801-28	GEK	Amniotic Fluid	1	MC		OB_FD_AmnFluid

Table B.0–94: **TID 99005 AMNIOTIC SAC SECTION OLD**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	DT	125070	DCM	Findings	1	M		
2	>	HAS OBS CONTEXT	CODE	EV	G-C0E3	SRT	Finding Site	1	M		DT (T-F1300, SRT, "Amniotic Sac")
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	
4	>	CONTAINS	INCLUDE	DTID	300		Measurement	1	M		$Measurement = DT (11627-7, LN, "Amniotic Fluid Index")
5	>	CONTAINS	INCLUDE	DTID	300		Measurement	4	U		$Measurement = DCID (99102) OB-GYN Amniotic Sac Old

Table B.0–95: **TID 99006 SonoVCADLabor SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CONTAINER	DT	125070	DCM	Findings	1	M		
2	>	HAS OBS CONTEXT	CODE	EV	G-C0E3	SRT	Finding Site	1	M		DT (99016-0, GEK, "SonoVCAD-Labor")
2	>	HAS OBS CONTEXT	INCLUDE	DTID	1008		Subject Context, Fetus	1	MC	IF this template is invoked more than once to describe more than one fetus	

Table B.0–95: **TID 99006 SonoVCADLabor SECTION (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
5	>	CONTAINS	INCLUDE	DTID	99007		Measurement Group	1-n	U		$Measurement = DT (99009-4, GEK, "SonoVCADLabor Measurement Group")

Table B.0–96: **TID 99007 SonoVCADLabor MEASUREMENT GROUP**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	EV	125007	DCM	Measurement Group	1	M		
2	>	HAS OBS CONTEXT	TEXT	EV	12510	DCM	Identifier	1	U		Unique among all groups of same laterality
3	>	CONTAINS	INCLUDE	DTID	300		Measurement	1	U		$Measurement = DCID (99103) SonoVCADLabor

Table B.0–97: **TID 99008 FOLLICLES SonoAVC SECTION**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DT	121070	DCM	Findings	1	M		
2	>	HAS CONCEPT MOD	CODE	EV	G-C0E3	SRT	Finding Site	1	M		DT (99015-9, GEK, "Ovarian Follicle SonoAVC")
3	>	HAS CONCEPT MOD	CODE	EV	G-C171	SRT	Laterality	1	U		$Laterality
4	>	CONTAINS	NUM				$Number	1	U		
5	>	CONTAINS	INCLUDE	DTID	99009		Follicle SonoAVC Measurement Group	1-n	U		

Table B.0–98: **TID 99009 FOLLICLE SonoAVC MEASUREMENT GROUP**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	EV	125007	DCM	Measurement Group	1	M		
2	>	HAS OBS CONTEXT	TEXT	EV	12510	DCM	Identifier	1	U		Unique among all groups of same laterality

Table B.0–98: **TID 99009 FOLLICLE SonoAVC MEASUREMENT GROUP (continued)**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
4	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	U		$Measurement = DCID (99104")

Table B.0–99: **TID 99100 Doppler Group**

	NL	Rel with Parent	VT	Concept Name				VM	Req Type	Condition	Value Set Constraint
1			CON-TAINER	DTID	99100		Doppler Group	1-n	M		
2	>	CONTAINS	INCLUDE	DTID	300		Measurement	1-n	M		$Measurement = $MeasType