



***iCAD, Inc.***

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PowerLook<sup>®</sup> AI Mammo Container 1.1 DICOM  
Conformance Statement, GE

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This software uses the DICOM software from the Fellow Oak Open-Source Project.  
(See <http://github.com/fo-dicom/fo-dicom>)

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## Table of Contents

<b>1</b>	<b>INTRODUCTION.....</b>	<b>4</b>
1.1	SCOPE AND FIELD OF APPLICATION.....	4
1.2	QUICK SUMMARY.....	4
1.3	ACRONYMS.....	6
1.4	RELATED DOCUMENTATION.....	6
1.5	CONSIDERATIONS.....	6
<b>2</b>	<b>IMPLEMENTATION MODEL.....</b>	<b>6</b>
2.1	APPLICATION DATA FLOW DIAGRAM.....	7
2.2	FUNCTIONAL DEFINITION OF APPLICATION ENTITIES.....	7
<b>3</b>	<b>AE SPECIFICATIONS.....</b>	<b>8</b>
3.1	SCP SERVICES.....	8
3.2	SCU SERVICES.....	8
3.3	ASSOCIATION ESTABLISHMENT POLICIES.....	8
<b>4</b>	<b>COMMUNICATION PROFILES.....</b>	<b>69</b>
4.1	OSI STACK.....	69
4.2	TCP/IP STACK.....	69
<b>5</b>	<b>EXTENSIONS/SPECIALIZATIONS/PRIVATIZATIONS.....</b>	<b>69</b>
<b>6</b>	<b>CONFIGURATION.....</b>	<b>69</b>
<b>7</b>	<b>SUPPORT FOR EXTENDED CHARACTER SETS.....</b>	<b>69</b>
<b>8</b>	<b>END OF DOCUMENT.....</b>	<b>69</b>

## 1 Introduction

### 1.1 Scope and Field of Application

The PowerLook AI Mammo (AIM) Container uses the DICOM 3.0 protocol standard to support the generated computer aided detection (CAD) and Density Assessment results. It is assumed that the reader is familiar with the terminology and concepts that are used in the DICOM 3.0 standard. Readers not familiar with DICOM 3.0 terminology should first read the appropriate parts of the DICOM standard itself, prior to reading this conformance statement. Although the use of this conformance statement in conjunction with the DICOM 3.0 standard is intended to facilitate communication with other DICOM systems, it is not sufficient to guarantee, by itself, the inter-operation of the connection.

The AIM Container resides within the GE Edison™ Health Link iScreening product. iScreening will facilitate all external DICOM communication between devices. iScreening will receive all digital mammographic images as a Service Class Provider (SCP), and then make the appropriate internal calls into the AIM Container to execute algorithms on the images to provide computer aided detection (CAD) and Density Assessment results. The AIM Container internally passes the generated DICOM output back to the iScreening system so that that it can be exported as a Service Class User (SCU) of the Storage Service Class. It is recommended that users that need to connect to the AIM Container also review the GE Edison™ Health Link DICOM Conformance Statement to help ensure a successful integration.

### 1.2 Quick Summary

The following table shows the SCU and SCP external support for the iScreening product. The AIM Container handles this information internally with a proprietary interface and iScreening performs all external DICOM communications.

SOP Class	SOP Class UID	SCU	SCP	Comments
Digital Mammography X-Ray – For Processing	1.2.840.10008.5.1.4.1.1.1.2.1	No	Yes	Receives 2D FFDM For Processing images for SecondLook Digital analysis
Digital Mammography X-Ray – For Presentation	1.2.840.10008.5.1.4.1.1.1.2	Yes	Yes	Receives 2D FFDM For Presentation images for ProFound AI 2D analysis.  Can generate an image with DICOM 6000 Overlay or CAD marks burnt in.  Sends Density Assessment or Index Card information.
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	Yes	N/A	Can generate an image with DICOM 6000 Overlay or CAD marks burnt in.  Sends Density Assessment or Index Card information.
Mammography CAD Structured Report (MSR)	1.2.840.10008.5.1.4.1.1.88.50	Yes	N/A	Preferred method for transmitting 2D or 3D CAD results
Grayscale Softcopy Presentation State (GSPS)	1.2.840.10008.5.1.4.1.1.11.1	Yes	N/A	Sends 2D or 3D CAD results in a GSPS file

**PowerLook AI Mammo Container 1.1 DICOM Conformance Statement, GE      Revision 0**

Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	Yes	Yes	Receives tomo images for ProFound AI 3D analysis.  Can generate an image with DICOM 6000 Overlay or CAD marks burnt in.  Sends Density Assessment or Index Card information.
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### **1.3 Acronyms**

The following acronyms and abbreviations are used in this document.

- AE                                      Application Entity
- AI                                        Artificial Intelligence
- BI-RADS                                Breast Imaging Reporting and Data System
- CAD                                      Computer Aided Detection
- DCS                                      DICOM Conformance Statement
- DICOM                                  Digital Imaging and Communications in Medicine
- GUI                                      Graphical User Interface
- IOD                                      Information Object Definition
- NEMA                                    National Electrical Manufacturers Association
- PDU                                      Protocol Data Unit
- RIS                                        Radiological Information System
- SCP                                      Service Class Provider
- SCU                                      Service Class User
- SOP                                      Service Object Pair
- SR                                        Structured Report
- TCP/IP                                  Transmission Control Protocol/Internet Protocol
- UID                                      Unique Identifier
- VR                                        Value Representation

Furthermore, all symbols, abbreviations, and definitions used herein are described in the Digital Imaging and Communications in Medicine (DICOM) standard, parts 1 through 22 (NEMA PS 3.1-22).

### **1.4 Related Documentation**

- NEMA PS3 / ISO 12052, Digital Imaging and Communications in Medicine (DICOM) Standard, National Electrical Manufacturers Association, Rosslyn, VA, USA (available free at <https://www.dicomstandard.org/>)

### **1.5 Considerations**

Users wanting to interconnect their devices with iScreening should adhere to the iScreening DICOM Conformance Statement. Users wanting to parse CAD output for display should review the DICOM CAD objects described within this document.

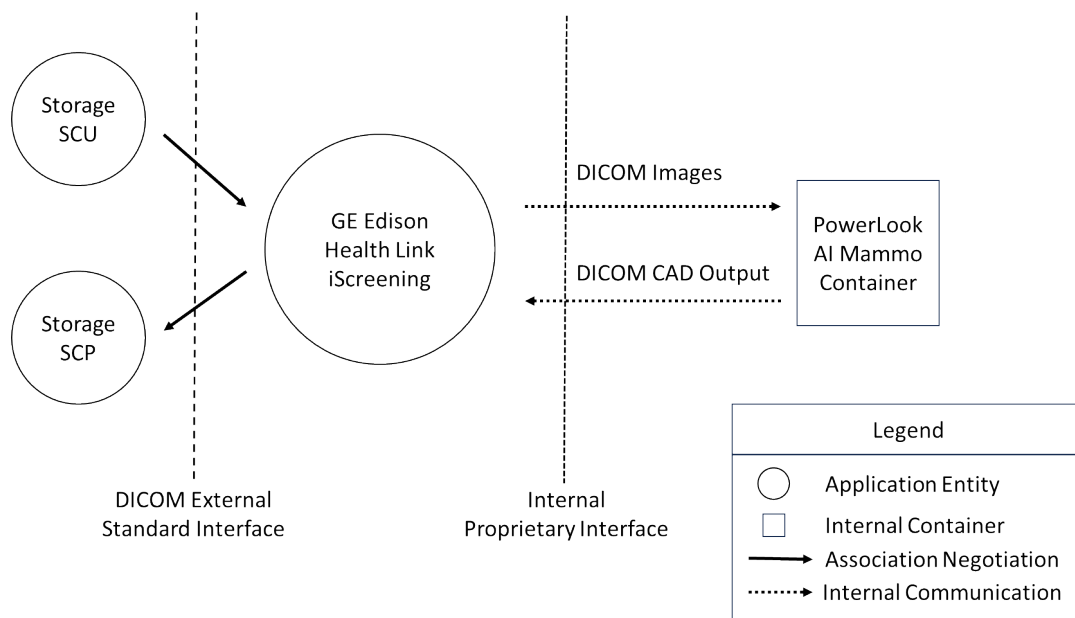
## **2 Implementation Model**

The AIM Container is a computer-aided detection (CAD) system for mammography designed to assist the radiologist in breast cancer detection. Using ProFound AI technology, the system detects potential calcification clusters and masses, literally providing the radiologist with a “second opinion”. It can also perform Breast Density Assessment processing, if licensed. GE Edison™ Health Link iScreening provides the external DICOM communication with devices to receive images for processing and to send the DICOM generated output from the AIM Container to configured users. iScreening can provide a GUI to the Field Service / Administrator to assist in simple configuration and diagnostics.

A client wishing to initiate CAD processing on a patient shall send the images to an iScreening system via DICOM. After each image is received, CAD processing will be initiated. Once the end of a case is determined, the AIM Container will complete any remaining image-based processing for the case and perform case-based processing. After the case-based processing is finished, if licensed, AIM Container can also perform Breast Density Assessment processing. Finally, the iScreening system will send the CAD results in a DICOM message to the designated recipient(s).

**2.1 Application Data Flow Diagram**

The GE Edison Health Link iScreening system acts as a single Application Entity based on the DICOM protocol standard. The system can act as a DICOM Storage Service Class Providers (SCP) by receiving DICOM Digital Mammography X-Ray Images and DICOM Breast Tomosynthesis objects. The DICOM images are passed internally to the AIM Container for processing. The iScreening system can also act as a DICOM Storage Service Class User (SCU) by internally obtaining the DICOM CAD output produced by the AIM Container and then initiating external DICOM associations to send CAD results in the form of a Mammography CAD Structured Report or a Grayscale Softcopy Presentation State (GSPS) object, where CAD findings can be placed onto the corresponding images by a supported review station. CAD results can also be embedded within the images by using either a Digital Mammography X-Ray “FOR PRESENTATION” image, a Breast Tomosynthesis image, or a Secondary Capture image using overlays or burning the CAD markers into the images. The Density Assessment results can be displayed using a Secondary Capture image. The data flow diagram can be seen in Figure 2-1.



**Figure 2-1 - Implementation Model**

**2.2 Functional Definition of Application Entities**

iScreening acts as a Service Class Provider (SCP) for the purpose of receiving DICOM Digital Mammography X-Ray images and DICOM Breast Tomosynthesis objects. The images are passed internally to the AIM Container and it processes the images and generates DICOM CAD results that are internally passed to iScreening which acts as a Service Class User (SCU) sending DICOM CAD results in the form of a Mammography CAD Structured Report or a Grayscale Softcopy Presentation State (GSPS) object, where CAD findings can be placed onto the corresponding images by a supported review station. CAD results can also be embedded within the images by using either a Digital Mammography X-Ray “FOR PRESENTATION” image, a Breast Tomosynthesis image, or a Secondary Capture image using overlays or burning the CAD markers into the images. The Density Assessment results can be displayed using a Secondary Capture image.

### 3 AE Specifications

#### 3.1 SCP Services

The following sections define the DICOM objects used by the AIM Container that are facilitated by iScreening as an SCP.

##### 3.1.1 SCP Application Entity

iScreening provides SCP standard conformance to the DICOM 3.0 SOP Classes that are defined in Table 1 and are used by AIM Container.

**Table 1 - SCP SOP Class Conformance**

SOP Class	SOP Class UID
Digital Mammography X-Ray – For Processing	1.2.840.10008.5.1.4.1.1.1.2.1
Digital Mammography X-Ray – For Presentation	1.2.840.10008.5.1.4.1.1.1.2
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3

#### 3.2 SCU Services

The following sections define the DICOM objects used by AIM Container that are facilitated by iScreening as an SCU.

##### 3.2.1 SCU Application Entity

iScreening provides SCU standard conformance to the DICOM 3.0 SOP Classes that are defined in Table 2 by sending the DICOM objects created by AIM Container.

**Table 2 - SCU SOP Class Conformance**

SOP Class	SOP Class UID
Mammography CAD Structured Report	1.2.840.10008.5.1.4.1.1.88.50
Grayscale Softcopy Presentation State (GSPS)	1.2.840.10008.5.1.4.1.1.11.1
Digital Mammography X-Ray – For Presentation	1.2.840.10008.5.1.4.1.1.1.2
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3
Secondary Capture	1.2.840.10008.5.1.4.1.1.7

#### 3.3 Association Establishment Policies

##### 3.3.1 General

This is not applicable for the AIM Container, as it is not an external interface. See the GE Edison Health Link iScreening DICOM Conformance Statement for specific PDU information.

##### 3.3.2 Number of Associations

This is not applicable for the AIM Container, as it is not an external interface. See the GE Edison Health Link iScreening DICOM Conformance Statement for specific DICOM Association information.

##### 3.3.3 Asynchronous Nature

This is not applicable for the AIM Container, as it is not an external interface. See the GE Edison Health Link iScreening DICOM Conformance Statement for specific DICOM Association information.



**3.3.4 Implementation Identifying Information**

This is not applicable for the AIM Container, as it is not an external interface. See the GE Edison Health Link iScreening DICOM Conformance Statement for specific DICOM Implementation Class UID and DICOM Implementation Version Name information. Note that the Implementation Class UID is derived from the DICOM Standard PS 3.5 -2023, Annex B & Annex C.

**3.3.5 Network Configuration**

See the GE Edison Health Link iScreening Service Manual for configuration of the Application Entity title, IP Address, and port number.

**3.3.6 Association Initiation by Real World Activity**

This is not applicable for the AIM Container, as it is not an external interface. See the GE Edison Health Link iScreening DICOM Conformance Statement for specific information regarding DICOM associations with remote devices.

**3.3.6.1 Receive Images from a Remote System**

**3.3.6.2 Associated Real World Activity – Receive**

The GE Edison Health Link iScreening system is responsible for any external DICOM communication. See its DICOM Conformance Statement for specific details regarding supported DICOM Transfer Syntaxes and DICOM SOP Classes.

**3.3.6.3 Presentation Context Table – Receive**

See the GE Edison Health Link iScreening DICOM Conformance Statement for specific DICOM Presentation Contexts that are supported. AIM Container supports the DICOM files listed in Table 3.

**Table 3 – Presentation Contexts for Receive from Remote Systems**

Abstract Syntax		Transfer Syntax	Role
SOP Class	SOP Class UID		
Digital Mammography X-Ray – For Processing	1.2.840.10008.5.1.4.1.1.1.2.1	See iScreening DCS	iScreening SCP
Digital Mammography X-Ray – For Presentation	1.2.840.10008.5.1.4.1.1.1.2	See iScreening DCS	iScreening SCP
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	See iScreening DCS	iScreening SCP

**3.3.6.4 SOP Specific Conformance – Receive**

See the GE Edison Health Link iScreening DICOM Conformance Statement for specific external DICOM SOP conformance information. The following sections describe the internal DICOM SOP conformance information for what DICOM images can be imported and processed by the AIM Container and were previously stated in Table 3.

**3.3.6.4.1 Digital Mammography X-Ray**

The Digital Mammography X-Ray Information Object Definition (IOD) modules are defined in Table 4.

**Table 4 – Digital Mammography X-Ray Image IOD Modules**

IE	Module	DICOM Reference	Document Reference	Usage
Patient	Patient	PS 3.3 –2023 C.7.1.1	Table 5	M
	Clinical Trial Subject	PS 3.3 –2023 C.7.1.3	Not used	U
Study	General Study	PS 3.3 – 2023 C.7.2.1	Table 6	M
	Patient Study	PS 3.3 – 2023 C.7.2.2	Not used	U
	Clinical Trial Study	PS 3.3 – 2023 C.7.2.3	Not used	U
Series	General Series	PS 3.3 – 2023 C.7.3.1	Table 7	M
	Clinical Trial Series	PS 3.3 – 2023 C.7.3.2	Not used	U
	DX Series	PS 3.3 – 2023 C.8.11.1	Table 8	M
	Mammography Series	PS 3.3 – 2023 C.8.11.6	Table 9	M
Frame of Reference	Frame of Reference	PS 3.3 – 2023 C.7.4.1	Not Used	C
Equipment	General Equipment	PS 3.3 – 2023 C.7.5.1	Table 10	M
Acquisition	General Acquisition	PS 3.3 – 2002 C.7.10.1	Table 11	M
Image	General Image	PS 3.3 – 2023 C.7.6.1	Table 12	M
	General Reference	PS 3.3 – 2023 C.12.4	Not used	U
	Image Pixel	PS 3.3 – 2023 C.7.6.3	Table 13	M
	Contrast/Bolus	PS 3.3 – 2023 C.7.6.4	Not used	U
	Display Shutter	PS 3.3 – 2023 C.7.6.11	Not used	U
	Device	PS 3.3 – 2023 C.7.6.12	Not used	U
	Intervention	PS 3.3 – 2023 C.7.6.13	Not used	U
	Specimen	PS 3.3 – 2023 C.7.6.22	Not used	U
	DX Anatomy Imaged	PS 3.3 – 2023 C.8.11.2	Table 14	M
	DX Image	PS 3.3 – 2023 C.8.11.3	Table 15	M
	DX Detector	PS 3.3 – 2023 C.8.11.4	Table 16	M
	X-Ray Collimator	PS 3.3 – 2023 C.8.7.3	Not used	U
	DX Positioning	PS 3.3 – 2023 C.8.11.5	Not used	U
	X-Ray Tomo Acquisition	PS 3.3 – 2023 C.8.7.7	Not used	U
	X-Ray Acquisition Dose	PS 3.3 – 2023 C.8.7.8	Not used	U
	X-Ray Generation	PS 3.3 – 2023 C.8.7.9	Not used	U
	X-Ray Filtration	PS 3.3 – 2023 C.8.7.10	Not used	U
	X-Ray Grid	PS 3.3 – 2023 C.8.7.11	Not used	U
	Mammography Image	PS 3.3 – 2023 C.8.11.7	Table 17	M
	Overlay Plane	PS 3.3 – 2023 C.9.2	Not used	U
VOI LUT	PS 3.3 – 2023 C.11.2	Not used	U	

	Image Histogram	PS 3.3 – 2023 C.11.5	Not used	U
	Acquisition Context	PS 3.3 – 2023 C.7.6.14	Table 20	M
	SOP Common	PS 3.3 – 2023 C.12.1	Table 21	M
	Common Instance Reference	PS 3.3 – 2023 C.12.2	Not used	U

**Table 5 – Patient Module Attributes – mandatory – ref. PS 3.3 – 2023 C.7.1.1**

Group and Element	VR	Type	Description	Value
(0010,0010)	PN	2	Patient’s Name	Patient’s full name obtained from the image header.
(0010,0020)	LO	2	Patient ID	Primary hospital identification number or code for the patient obtained from the image header.
(0010,0030)	DA	2	Patient’s Birth Date	Birth date of the patient obtained from the image header.
(0010,0040)	CS	2	Patient’s Sex	Sex of the named patient obtained from the image header. Enumerated Values: M = male F = female O = other
(0010,1010)	AS	3	Patient’s Age	Age of the patient obtained from the image header.
(0008,1120)	SQ	3	Referenced Patient Sequence	Not used
>(0008,1150)	UI	1C	Referenced SOP Class UID	Not used
>(0008,1155)	UI	1C	Referenced SOP Instance UID	Not used
(0010,0032)	TM	3	Patient Birth Time	Not used
(0010,1000)	LO	3	Other Patient ID	Other patient ID obtained from the image header. NOTE: This attribute has been retired, but is still supported by AIM Container
(0010,1001)	PN	3	Other Patient Names	Not used
(0010,2160)	SH	3	Ethnic Group	Not used
(0010,4000)	LT	3	Patient Comments	Not used

**Table 6 – General Study Module Attributes – Mandatory – ref. PS 3.3 – 2023 C.7.2.1**

Group and Element	VR	Type	Description	Value
(0020,000D)	UI	1	Study Instance UID	Unique identifier for the Study obtained from the image header.
(0008,0020)	DA	2	Study Date	The current date of the CAD processing
(0008,0030)	TM	2	Study Time	The current time of the CAD processing.
(0008,0090)	PN	2	Referring Physician’s Name	Name of the Patient’s referring physician
(0008,0096)	SQ	3	Referring Physician Identification Sequence	Not used
(0020,0010)	SH	2	Study ID	User or equipment generated Study identifier obtained from the image header.
(0008,0050)	SH	2	Accession Number	A RIS generated number, which identifies the order for the Study obtained from the image header.

(0008,1030)	LO	3	Study Description	Institution-generated description or classification of the Study (component) performed.
(0008,1048)	PN	3	Physicians Of Record	Not used
(0008,1049)	SQ	3	Physician(s) of Record Identification Sequence	Not used
(0008,1060)	PN	3	Name Of Physicians Reading Study	Not used
(0008,1062)	SQ	3	Physician(s) Reading Study Identification Sequence	Not used
(0008,1110)	SQ	3	Referenced Study Sequence	Not used
(0008,1032)	SQ	3	Procedure Code Sequence	Not used

**Table 7 – General Series Module Attributes– Mandatory – ref. PS 3.3 – 2023 C.7.3.1**

Group and Element	VR	Type	Description	Value
(0008,0060)	CS	1	Modality	MG
(0020,000E)	UI	1	Series Instance UID	Unique identifier of the Series.
(0020,0011)	IS	2	Series Number	A number that identifies this Series.
(0020,0060)	CS	2C	Laterality	Laterality of (paired) body part examined. Required if the body part examined is a paired structure and Image Laterality (0020,0062) is not sent. Enumerated Values: R = right L = left
(0008,0021)	DA	3	Series Date	Date the Series started.
(0008,0031)	TM	3	Series Time	Time the Series started.
(0008,1050)	PN	3	Performing Physician’s Name	Name of the physician(s) administering the Series.
(0008,1052)	SQ	3	Performing Physician Identification Sequence	Not used
(0018,1030)	LO	3	Protocol Name	Not used
(0008,103E)	LO	3	Series Description	Not used
(0008,1070)	PN	3	Operators’ Name	Name(s) of the operator(s) supporting the Series.
(0008,1072)	SQ	3	Operator Identification Sequence	Not used
(0008,1111)	SQ	3	Referenced Performed Procedure Step Sequence	Not used
(0018,0015)	CS	3	Body Part Examined	BREAST
(0018,5100)	CS	2C	Patient Position	Not used
(0028,0108)	US or SS	3	Smallest Pixel Value in Series	Not used
(0028,0109)	US or SS	3	Largest Pixel Value in Series	Not used
(0040,0275)	SQ	3	Request Attributes Sequence	Not used
(0040,0253)	SH	3	Performed Procedure Step ID	Not used
(0040,0244)	DA	3	Performed Procedure Step Start Date	Not used

(0040,0245)	TM	3	Performed Procedure Step Start Time	Not used
(0040,0254)	LO	3	Performed Procedure Step Description	Not used
(0040,0260)	SQ	3	Performed Protocol Code Sequence	Not used
(0040,0280)	ST	3	Comments on the Performed Procedure Step	Not used

**Table 8 – DX Series Module Attributes – mandatory – ref. PS 3.3 – 2023 C.8.11.1**

Group and Element	VR	Type	Description	Value
(0008,0060)	CS	1	Modality	MG
(0008,1111)	SQ	1C	Referenced Performed Procedure Step Sequence	Not used
(0008,0068)	CS	1	Presentation Intent Type	Identifies the intent of the images that are contained within this Series. Enumerated Values: FOR PRESENTATION FOR PROCESSING

**Table 9 – Mammography Series Module Attributes – mandatory – ref. PS 3.3 – 2023 C.8.11.6**

Group and Element	VR	Type	Description	Value
(0008,0060)	CS	1	Modality	MG
(0040,0275)	SQ	3	Request Attributes Sequence	Not used

**Table 10 – General Equipment Module Attributes – Mandatory – ref. PS 3.3 – 2023 C.7.5.1**

Group and Element	VR	Type	Description	Value
(0008,0070)	LO	2	Manufacturer	Manufacturer of the equipment that produced the composite instances.
(0008,0080)	LO	3	Institution Name	Institution name from processed image
(0008,0081)	ST	3	Institution Address	Institution address from received image
(0008,1010)	SH	3	Station Name	Not used
(0008,1040)	LO	3	Institutional Department Name	Not used
(0008,1090)	LO	3	Manufacturer’s Model Name	Manufacturer’s model name of the equipment that produced the composite instances.
(0018,1000)	LO	3	Device Serial Number	Used for licensing of the acquisition station
(0018,1020)	LO	3	Software Version	Not used
(0018,1050)	DS	3	Spatial Resolution	Not used
(0018,1200)	DA	3	Date of Last Calibration	Not used
(0018,1201)	TM	3	Time of Last Calibration	Not used
(0028,0120)	US	3	Pixel Padding Value	Not used

**Table 11 – General Acquisition Module Attributes – Mandatory – ref. PS 3.3 – 2023 C.7.10.1**

Group and Element	VR	Type	Description	Value
(0008,0017)	UI	3	Acquisition UID	Not used
(0020,0012)	IS	3	Acquisition Number	Not used
(0008,0022)	DA	3	Acquisition Date	The acquisition date from the processed image
(0008,0032)	TM	3	Acquisition Time	The acquisition time from the processed image
(0008,002A)	DT	3	Acquisition DateTime	Not used
(0018,9073)	FD	3	Acquisition Duration	Not used
(0020,1002)	IS	3	Images in Acquisition	Not used
(0008,3010)	UI	3	Irradiation Event UID	Not used

**Table 12 – General Image Module Attributes – mandatory – ref. PS 3.3 – 2023 C.7.6.1**

Group and Element	VR	Type	Description	Value
(0020,0013)	IS	2	Instance Number	A number that identifies this image.
(0020,0020)	CS	2C	Patient Orientation	Patient direction of the rows and columns of the image. Required if image does not require Image Orientation (Patient) (0020,0037) and Image Position (Patient) (0020,0032).
(0008,0023)	DA	2C	Content Date	The date the image pixel data creation started. Required if image is part of a series in which the images are temporally related.
(0008,0033)	TM	2C	Content Time	The time the image pixel data creation started. Required if image is part of a series in which the images are temporally related.
(0008,0008)	CS	3	Image Type	Not used
(0020,0012)	IS	3	Acquisition Number	Not used
(0008,0022)	DA	3	Acquisition Date	The date the acquisition of data that resulted in this image started.
(0008,0032)	TM	3	Acquisition Time	The time the acquisition of data that resulted in this image started
(0008,002A)	DT	3	Acquisition Datetime	Not used
(0008,1140)	SQ	3	Referenced Image Sequence	Not used
(0008,2111)	ST	3	Derivation Description	Not used
(0008,9215)	SQ	3	Derivation Code Sequence	Not used
(0008,2112)	SQ	3	Source Image Sequence	Required for DICOM 6000 Overlays
(0008,113A)	SQ	3	Referenced Waveform Sequence	Not used
(0020,1002)	IS	3	Images in Acquisition	Not used
(0020,4000)	LT	3	Image Comments	Not used
(0028,0300)	CS	3	Quality Control Image	Not used
(0028,0301)	CS	3	Burned In Annotation	Not used
(0028,2110)	CS	3	Lossy Image Compression	Not used
(0028,2112)	DS	3	Lossy Image Compression Ratio	Not used
(0088,0200)	SQ	3	Icon Image Sequence	Not used
(2050,0020)	CS	3	Presentation LUT Shape	Not used

**Table 13 – Image Pixel Module Attributes – mandatory – ref. PS 3.3 – 2023 C.7.6.3**

<b>Group and Element</b>	<b>VR</b>	<b>Type</b>	<b>Description</b>	<b>Value</b>
(0028,0002)	US	1	Samples per Pixel	Number of samples (planes) in this image.
(0028,0004)	CS	1	Photometric Interpretation	Specifies the intended interpretation of the pixel data: MONOCHROME2
(0028,0010)	US	1	Rows	Number of rows in the image.
(0028,0011)	US	1	Columns	Number of columns in the image.
(0028,0100)	US	1	Bits Allocated	Number of bits allocated for each pixel sample. Each sample shall have the same number of bits allocated.
(0028,0101)	US	1	Bits Stored	Number of bits stored for each pixel sample. Each sample shall have the same number of bits stored.
(0028,0102)	US	1	High Bit	Most significant bit for pixel sample data. Each sample shall have the same high bit.
(0028,0103)	US	1	Pixel Representation	Data representation of the pixel samples. Each sample shall have the same pixel representation. Enumerated Value: 0000H = unsigned integer.
(7FE0,0010)	OW or OB	1	Pixel Data	A data stream of the pixel samples that comprise the Image.
(0028,0006)	US	1C	Planar Configuration	Not used
(0028,0034)	IS	1C	Pixel Aspect Ratio	Not used
(0028,0106)	US or SS	3	Smallest Image Pixel Value	Not used
(0028,0107)	US or SS	3	Largest Image Pixel Value	Not used
(0028,1101)	US or SS	1C	Red Palette Color Lookup Table Descriptor	Not used
(0028,1102)	US or SS	1C	Green Palette Color Lookup Table Descriptor	Not used
(0028,1103)	US or SS	1C	Blue Palette Color Lookup Table Descriptor	Not used
(0028,1201)	OW	1C	Red Palette Color Lookup Table Data	Not used
(0028,1202)	OW	1C	Green Palette Color Lookup Table Data	Not used
(0028,1203)	OW	1C	Blue Palette Color Lookup Table Data	Not used

**Table 14 – DX Anatomy Imaged Module Attributes – mandatory – ref. PS 3.3 – 2023 C.8.11.2**

Group and Element	VR	Type	Description	Value
(0020,0062)	CS	1	Image Laterality	Laterality of (possibly paired) body part (as described in Anatomic Region Sequence (0008,2218)) examined. Enumerated Values: R = right L = left
(0008,2218)	SQ	2	Anatomic Region Sequence	Sequence that identifies the anatomic region of interest in this image (i.e. external anatomy, surface anatomy, or general region of the body). This anatomic region is placed on the table or bucky for examination.
>(0008,0100)	SH	1C	Code Value	T-04000
>(0008,0102)	SH	1C	Coding Scheme Designator	SNM3
>(0008,0104)	LO	1C	Code Meaning	BREAST
>(0008,2220)	SQ	3	Anatomic Region Modifier Sequence	Not used
(0008,2228)	SQ	3	Primary Anatomic Structure Sequence	Not used

**Table 15 – DX Image Module Attributes – mandatory – ref. PS 3.3 – 2023 C.8.11.3**

Group and Element	VR	Type	Description	Value
(0008,0008)	CS	1	Image Type	Image identification characteristics.
(0028,0002)	US	1	Samples per Pixel	Number of samples in this image. Shall have an Enumerated Value of 1.
(0028,0004)	CS	1	Photometric Interpretation	Specifies the intended interpretation of the pixel data: MONOCHROME2
(0028,0100)	US	1	Bits Allocated	Number of bits allocated for each pixel sample. Each sample shall have the same number of bits allocated.
(0028,0101)	US	1	Bits Stored	Number of bits stored for each pixel sample. Each sample shall have the same number of bits stored.
(0028,0102)	US	1	High Bit	Most significant bit for pixel sample data. Each sample shall have the same high bit.
(0028,0103)	US	1	Pixel Representation	Data representation of the pixel samples. Each sample shall have the same pixel representation. Enumerated Value: 0000H = unsigned integer.
(0028,1040)	CS	1	Pixel Intensity Relationship	The relationship between the Pixel sample values and the X-Ray beam intensity. Enumerated Values: LIN, LOG
(0028,1041)	SS	1	Pixel Intensity Relationship Sign	The sign of the relationship between the Pixel sample values stored in Pixel Data (7FE0,0010) and the X-Ray beam intensity.



				Enumerated Values; 1, -1
(0028,1052)	DS	1	Rescale Intercept	The value b in the relationship between stored values (SV) in Pixel Data (7FE0,0010) and the output units specified in Rescale Type (0028,1054). Output units = m*SV + b. Enumerated Value: 0
(0028,1053)	DS	1	Rescale Slope	m in the equation specified by Rescale Intercept (0028,1052). Enumerated Value: 1
(0028,1054)	LO	1	Rescale Type	Specifies the output units of Rescale Slope (0028,1053) and Rescale Intercept (0028,1052). Enumerated Value: US = Unspecified
(2050,0020)	CS	1	Presentation LUT Shape	Specifies an identity transformation for the Presentation LUT, other than to account for the value of Photometric Interpretation (0028,0004), such that the output of all grayscale transformations defined in the IOD containing this Module are defined to be P-Values. Enumerated Values:  IDENTITY – output is in P-Values – shall be used if Photometric Interpretation (0028,0004) is MONOCHROME2.  INVERSE – output after inversion is in Pvalues- shall be used if Photometric Interpretation (0028,0004) is MONOCHROME1.
(0028,2110)	CS	1	Lossy Image Compression	Specifies whether an Image has undergone lossy compression. Enumerated Value: 00 = Image has NOT been subjected to lossy compression.
(0028,2112)	DS	1	Lossy Image Compression Ratio	Not used
(0008,2111)	ST	3	Derivation Description	Not used
(0018,1400)	LO	3	Acquisition Device Processing Description	Not used
(0018,1401)	LO	3	Acquisition Device Processing Code	Not used
(0020,0020)	CS	1	Patient Orientation	Patient direction of the rows and columns of the image.
(0050,0004)	CS	3	Calibration Image	Not used
(0028,0301)	CS	1	Burned In Annotation	Indicates whether or not the image contains sufficient burned in annotation to identify the patient and date the image was acquired. Enumerated Value: NO
(0028,3010)	SQ	1C	VOI LUT Sequence	Not used
(0028,1050)	DS	1C	Window Center	Not used
(0028,1051)	DS	1C	Window Width	Not used

(0028,1055)	LO	3	Window Center & Width Explanation	Not used
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**Table 16 – DX Detector Module Attributes – mandatory – ref. PS 3.3 - 2023 C.8.11.4**

Group and Element	VR	Type	Description	Value
(0018,7004)	CS	2	Detector Type	The type of detector used to acquire this image. Defined Terms: SCINTILLATOR = Phosphor used
(0018,7005)	CS	3	Detector Configuration	Not used
(0018,7006)	LT	3	Detector Description	Not used
(0018,7008)	LT	3	Detector Mode	Not used
(0018,700A)	SH	3	Detector ID	The ID or serial number of the detector used to acquire this image.
(0018,700C)	DA	3	Date of Last Detector Calibration	Not used
(0018,700E)	TM	3	Time of Last Detector Calibration	Not used
(0018,7010)	IS	3	Exposures on Detector Since Last Calibration	Not used
(0018,7011)	IS	3	Exposures on Detector Since Manufactured	Not used
(0018,7012)	DS	3	Detector Time Since Last Exposure	Not used
(0018,7014)	DS	3	Detector Active Time	Not used
(0018,7016)	DS	3	Detector Activation Offset From Exposure	Not used
(0018,701A)	DS	3	Detector Binning	Not used
(0018,7000)	CS	3	Detector Conditions Nominal Flag	Not used
(0018,7001)	DS	3	Detector Temperature	Not used
(0018,6000)	DS	3	Sensitivity	Not used
(0018,1147)	CS	3	Field of View Shape	Not used
(0018,1149)	IS	3	Field of View Dimension(s)	Not used
(0018,7030)	DS	1C	Field of View Origin	Not used
(0018,7032)	DS	1C	Field of View Rotation	Not used
(0018,7034)	CS	1C	Field of View Horizontal Flip	Not used
(0018,1164)	DS	1	Imager Pixel Spacing	Physical distance measured at the front plane of the detector housing between the center of each image pixel specified by a numeric pair - row spacing value (delimiter) column spacing value in mm.
(0018,7020)	DS	3	Detector Element Physical Size	Not used
(0018,7022)	DS	3	Detector Element Spacing	Not used
(0018,7024)	CS	3	Detector Active Shape	Not used
(0018,7026)	DS	3	Detector Active Dimension(s)	Not used
(0018,7028)	DS	3	Detector Active Origin	Not used

**Table 17 – Mammography Image Module Attributes – mandatory – ref. PS 3.3 - 2023  
C.8.11.7**

Group and Element	VR	Type	Description	Value
(0018,1508)	CS	1	Positioner Type	MAMMOGRAPHIC
(0018,1510)	DS	3	Positioner Primary Angle	Not used
(0018,1511)	DS	3	Positioner Secondary Angle	Not used
(0020,0062)	CS	1	Image Laterality	Laterality of the region examined. Enumerated Values: R = right L = left B = both (e.g. cleavage)
(0040,0318)	CS	1	Organ Exposed	BREAST
(0028,1300)	CS	3	Implant Present	Whether or not an implant is present. Enumerated Values: YES NO
(0028,1350)	CS	3	Partial View	Indicates whether this image is a partial view, which is a subset of a single view of the breast. Enumerated Values: YES, NO
(0028,1351)	ST	3	Partial View Description	Not used
(0008,2218)	SQ	1	Anatomic Region Sequence	Sequence that identifies the anatomic region of interest in this image.
>(0008,0100)	SH	1C	Code Value	T-04000
>(0008,0102)	SH	1C	Coding Scheme Designator	SNM3
>(0008,0104)	LO	1C	Code Meaning	BREAST
(0054,0220)	SQ	1	View Code Sequence	Sequence that describes the projection of the anatomic region of interest on the image receptor.  Only a single Item shall be permitted in this sequence.
>(0008,0100)	SH	1C	Code Value	See Table 18
>(0008,0102)	SH	1C	Coding Scheme Designator	See Table 18
>(0008,0104)	LO	1C	Code Meaning	See Table 18
>(0054,0222)	SQ	2	View Modifier Code Sequence	View Modifier  Zero or more Items may be included in this Sequence.
>>(0008,0100)	SH	1C	Code Value	See Table 19
>>(0008,0102)	SH	1C	Coding Scheme Designator	See Table 19
>>(0008,0104)	LO	1C	Code Meaning	See Table 19

**Table 18 - View for Mammography – ref. PS 3.16 –2023 CID 4014**

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
SRT	R-10224	medio-lateral
SRT	R-10226	medio-lateral oblique
SRT	R-10228	latero-medial
SRT	R-10230	latero-medial oblique
SRT	R-10242	cranio-caudal
SRT	R-10244	caudo-cranial (from below)
SRT	R-102D0	superolateral to inferomedial oblique
SRT	R-102CF	exaggerated cranio-caudal
SNM3 / SRT	Y-X1770 / R-1024A	cranio-caudal exaggerated laterally
SNM3 / SRT	Y-X1771 / R-1024B	cranio-caudal exaggerated medially
SRT	G-8310	Tissue specimen from breast

Note: The “SCT” coding scheme designator and the corresponding “SCT” code values are not supported.

**Table 19 - View Modifier for Mammography – ref. PS 3.16 – 2023 CID 4015**

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
SNM3 / SRT	R-102D2	Cleavage
SNM3 / SRT	R-102D1	Axillary Tail
SNM3 / SRT	R-102D3	Rolled Lateral
SNM3 / SRT	R-102D4	Rolled Medial
SNM3 / SRT	R-102D5	Implant Displaced
SNM3 / SRT	R-102D6	Magnification
SNM3 / SRT	R-102D7	Spot Compression
SNM3 / SRT	R-102C2	Tangential
SRT	R-40AB3	Nipple in profile
SRT	P2-00161	Anterior compression
SRT	R-40ABE	Infra-mammary fold
SRT	R-40AB2	Axillary tissue

Note: The “SCT” coding scheme designator and the corresponding “SCT” code values are not supported.

**Table 20 – Acquisition Context Module Attributes – ref. PS 3.3 - 2023 C.7.6.14**

Group and Element	VR	Type	Description	Value
(0040,0555)	SQ	2	Acquisition Context Sequence	Zero items in this sequence
(0040,0556)	ST	3	Acquisition Context Description	Not used

**Table 21 - SOP Common Module Attributes – ref. PS 3.3 - 2023 C.12.1**

Group and Element	VR	Type	Description	Value
(0008,0016)	UI	1	SOP Class UID	“1.2.840.10008.5.1.4.1.1.1.2.1”, which represents FOR PROCESSING or “1.2.840.10008.5.1.4.1.1.1.2”, which represents FOR PRESENTATION

(0008,0018)	UI	1	SOP Instance UID	Uniquely identifies the SOP Instance.
(0008,0005)	CS	1C	Specific Character Set	ISO IR 100
(0008,0012)	DA	3	Instance Creation Date	Not used
(0008,0013)	TM	3	Instance Creation Time	Not used
(0008,0014)	UI	3	Instance Creator UID	Not used
(0008,0110)	SQ	3	Coding Scheme Identification Sequence	Not used
(0008,0201)	SH	3	Timezone Offset From UTC	Not used
(0018,A001)	SQ	3	Contributing Equipment Sequence	Not used
(0020,0013)	IS	3	Instance Number	A number that identifies this Composite object instance.
(0100,0410)	CS	3	SOP Instance Status	Not used
(0100,0420)	DT	3	SOP Authorization Date and Time	Not used
(0100,0424)	LT	3	SOP Authorization Comment	Not used
(0100,0426)	LO	3	Authorization Equipment Certification Number	Not used
(4FFE,0001)	SQ	3	MAC Parameters Sequence	Not used
(FFFA,FFFA)	SQ	1	Digital Signatures Sequence	Not used
(0400,0500)	SQ	1C	Encrypted Attributes Sequence	Not used

**3.3.6.4.2 Breast Tomosynthesis Image**

The Breast Tomosynthesis Image Object Definition (IOD) modules are defined in Table 22.

**Table 22 – Breast Tomosynthesis Image IOD Modules**

IE	Module	DICOM Reference	Document Reference	Usage
Patient	Patient	PS 3.3 –2023 C.7.1.1	Table 5	M
	Clinical Trial Subject	PS 3.3 –2023 C.7.1.3	Not used	U
Study	General Study	PS 3.3 – 2023 C.7.2.1	Table 6	M
	Patient Study	PS 3.3 – 2023 C.7.2.2	Not used	U
	Clinical Trial Study	PS 3.3 – 2023 C.7.2.3	Not used	U
Series	General Series	PS 3.3 – 2023 C.7.3.1	Table 7	M
	Clinical Trial Series	PS 3.3 – 2023 C.7.3.2	Not used	U
	Enhanced Mammography Series	PS 3.3 – 2023 C.8.11.10	Table 23	M
Frame of Reference	Frame of Reference	PS 3.3 – 2023 C.7.4.1	Not Used	M
	Synchronization	PS 3.3 – 2023 C.7.4.2	Not Used	C
Equipment	General Equipment	PS 3.3 – 2023 C.7.5.1	Table 10	M
	Enhanced General Equipment	PS 3.3 – 2023 C.7.5.2	Table 24	M
Image	Image Pixel	PS 3.3 – 2023 C.7.6.3	Table 13	M
	Enhanced Contrast/Bolus	PS 3.3 – 2023 C.7.6.4b	Not used	C
	Device	PS 3.3 – 2023 C.7.6.12	Not used	U
	Intervention	PS 3.3 – 2023 C.7.6.13	Not used	U
	Acquisition Context	PS 3.3 – 2023 C.7.6.14	Table 20	M
	Multi-frame Functional Groups	PS 3.3 – 2023 C.7.6.16	Table 25	M
	Multi-frame Dimension	PS 3.3 – 2023 C.7.6.17	Not used	U

Image – Equipment Coordinate Relationship	PS 3.3 – 2023 C.7.6.21	Not used	U
Specimen	PS 3.3 – 2023 C.7.6.22	Not used	U
X-Ray 3D Image	PS 3.3 – 2023 C.8.21.1	Table 26	M
Breast Tomosynthesis Contributing Sources	PS 3.3 – 2023 C.8.21.2.3	Table 27	U
Breast Tomosynthesis Acquisition	PS 3.3 – 2023 C.8.21.3.4	Table 28	U
X-Ray 3D Reconstruction	PS 3.3 – 2023 C.8.21.4	Not used	U
Breast View	PS 3.3 – 2023 C.8.21.6	Table 29	M
SOP Common	PS 3.3 – 2023 C.12.1	Table 21	M
Common Instance Reference	PS 3.3 – 2023 C.12.2	Not used	U
Frame Extraction	PS 3.3 – 2023 C.12.3	Not used	C

**Table 23 – Enhanced Mammography Series Module Attributes – mandatory – ref. PS 3.3 - 2023 C.8.11.10**

Group and Element	VR	Type	Description	Value
(0008,0060)	CS	1	Modality	MG
(0008,1111)	SQ	1C	Referenced Performed Procedure Step Sequence	Not used
(0040,0275)	SQ	3	Request Attributes Sequence	Not used

**Table 24 - Enhanced Equipment Module Attributes - Mandatory – ref. PS 3.3 - 2023 C.7.5.2**

Group and Element	VR	Type	Description	Value
(0008,0070)	LO	1	Manufacturer	Manufacturer of the equipment that produced the composite instances.
(0008,1090)	LO	1	Manufacturer's Model Name	Manufacturer’s model name of the equipment that produced the composite instances.
(0018,1000)	LO	1	Device Serial Number	Used for licensing of the acquisition station
(0018,1020)	LO	1	Software Versions	Not used

**Table 25 – Multi-Frame Functional Groups Module- Mandatory – ref. PS 3.3 - 2023 C.7.5.2**

Group and Element	VR	Type	Description	Value
(5200,9229)	SQ	1	Shared Functional Groups Sequence	Sequence that contains the Functional Group Macros that are shared for all frames in this SOP Instance and Concatenation.
>(0008,9124)	SQ	1	Derivation Image Sequence	See PS 3.3 – 2023 C.7.6.16.2.6 Derivation Image Macro

>(0020,9071)	SQ	1	Frame Anatomy Sequence	See PS 3.3 – 2023 C.7.6.16.2.8 Frame Anatomy Macro
>(0020,9116)	SQ	1	Plane Orientation Sequence	See PS 3.3 – 2023 C.7.6.16.2.4 Plane Orientation (Patient) Macro
>(0028,9132)	SQ	1	Frame VOI LUT Sequence	See PS 3.3 – 2023 C.7.6.16.2.10 Frame VOI LUT Macro
>(0028,9145)	SQ	1	Pixel Value Transformation Sequence	See PS 3.3 – 2023 C.7.6.16.2.9 Pixel Value Transformation Macro
(5200,9230)	SQ	1-N	Per-Frame Functional Group Sequence	Sequence that contains the Functional Group Sequence Attributes corresponding to each frame of the Multi-frame Image. The first Item corresponds with the first frame, and so on. One or more Items shall be included in this Sequence. The number of Items shall be the same as the number of frames in the Multi-frame image.
>(0018,9504)	SQ	1	X-Ray 3D Frame Type Sequence	See PS 3.3 – 2023 C.8.21.5.1 X-Ray 3D Frame Type Macro
>(0020,9113)	SQ	1	Plane Position Sequence	See PS 3.3 – 2023 C.7.6.16.2.3 Plane Position (Patient) Macro
>(0028,9110)	SQ	1	Pixel Measures Sequence	See PS 3.3 – 2023 C.7.6.16.2.1 Pixel Measures Macro
(0020,0013)	IS	1	Instance Number	A number that identifies this instance
(0008,0023)	DA	1	Content Date	The date the data creation was started
(0008,0033)	TM	1	Content Time	The time the data creation was started
(0028,0008)	IS	1	Number of Frames	Number of frames in a multi-frame image.
(0022,0028)	CS	3	Stereo Paris Present	Not used
(0020,9228)	UL	1C	Concatenation Frame Offset Number	Not used
(0028,6010)	US	3	Representative Frame Number	Not used
(0020,9161)	UI	1C	Concatenation UID	Not used
(0020,0242)	UI	1C	SOP Instance UID Concatenation Source	Not used
(0020,9162)	US	1C	In-concatenation Number	Not used
(0020,9163)	US	3	In-concatenation Total Number	Not used
(7FE0,0003)	UV	3	Encapsulated Pixel Data Value Total Length	Not used

**Table 26 – X-Ray 3D Image Module Attributes – mandatory – ref. PS 3.3 - 2023 C.8.21.1**

Group and Element	VR	Type	Description	Value
(0008,0008)	CS	1	Image Type	Image identification characteristics.
(0028,0100)	US	1	Bits Allocated	Number of bits allocated for each pixel sample. Each sample shall have the same number of bits allocated.
(0028,0101)	US	1	Bits Stored	Number of bits stored for each pixel sample. Each sample shall have the same number of bits stored.
(0028,0102)	US	1	High Bit	Most significant bit for pixel sample data. Each sample shall have the same high bit.
(0028,0002)	US	1	Samples per Pixel	Number of samples in this image. Shall have an Enumerated Value of 1.

(0028,0004)	CS	1	Photometric Interpretation	Specifies the intended interpretation of the pixel data: MONOCHROME2
(0018,9004)	CS	1	Content Qualification	Not used
(0028,0301)	CS	1	Burned In Annotation	Indicates whether or not the image contains sufficient burned in annotation to identify the patient and date the image was acquired. Enumerated Value: NO
(0028,0302)	CS	3	Recognizable Visual Features	Not used
(0028,2110)	CS	1	Lossy Image Compression	Specifies whether an Image has undergone lossy compression. Enumerated Value: 00 = Image has NOT been subjected to lossy compression.
(0028,2112)	DS	1	Lossy Image Compression Ratio	Not used
(0028,2114)	CS	1C	Lossy Image Compression Method	Not used
(0008,9092)	SQ	1C	Referenced Image Evidence Sequence	Not used
(0020,4000)	LT	3	Image Comments	Not used
(0028,0300)	CS	3	Quality Control Image	Not used
(0088,0200)	SQ	3	Icon Image Sequence	Not used
(2050,0020)	CS	1	Presentation LUT Shape	Specifies an identity transformation for the Presentation LUT, other than to account for the value of Photometric Interpretation (0028,0004), such that the output of all grayscale transformations defined in the IOD containing this Module are defined to be P-Values. Enumerated Values:  IDENTITY - output is in P-Values - shall be used if Photometric Interpretation (0028,0004) is MONOCHROME2.  INVERSE - output after inversion is in PValues- shall be used if Photometric Interpretation (0028,0004) is MONOCHROME1.
(0008,3011)	SQ	3	Source Irradiation Event Sequence	Not used

**Table 27 – Breast Tomosynthesis Contributing Sources Module Attributes – ref. PS 3.3 - 2023 C.8.21.2.**

Group and Element	VR	Type	Description	Value
(0018,9506)	SQ	1	Contributing Sources Sequence	A Sequence that describes characteristics of the sources that are used to create a derived SOP Instance.
>(0018,7004)	CS	1	Detector Type	Not used



>(0018,700A)	SH	1	Detector ID	The ID or serial number of the detector used to acquire this image. Used for licensing of the acquisition station.
>(0018,700C)	DA	1	Date of Last Detector Calibration	Not used
>(0018,700E)	TM	1	Time of Last Detector Calibration	Not used
>(0018,7022)	DS	1	Detector Element Spacing	Not used

**Table 28 – Breast Tomosynthesis Acquisition Module Attributes – ref. PS 3.3 - 2023  
C.8.21.3.4**

Group and Element	VR	Type	Description	Value
(0018,9507)	SQ	1	X-Ray 3D Acquisition Sequence	Each Item represents an acquisition context related to one or more reconstructions.
>(0018,1147)	CS	1	Field of View Shape	Not used
>(0018,9420)	CS	1	X-Ray Receptor Type	Not used
>(0018,1110)	DS	1	Distance Source to Detector	Distance in mm from source to detector center on the chest wall line
>(0018,1111)	DS	1	Distance Source to Patient	Distance in mm from source to the breast support side that is closest to the Imaging Subject, as measured along the X-Ray beam vector
>(0018,1114)	DS	1	Estimated Radiographic Magnification Factor	Not used
>(0018,1191)	CS	1	Anode Target Material	Not used
>(0018,11A0)	DS	1	Body Part Thickness	The average thickness in mm of the body part examined when compressed, if compression has been applied during exposure
>(0018,7060)	CS	1	Exposure Control Mode	Not used
>(0018,7062)	LT	1	Exposure Control Mode Description	Not used
>(0040,0314)	DS	1	Half Value Layer	Not used
>(0040,0316)	DS	3	Organ Dose	Not used
>(0040,8302)	DS	3	Entrance Dose in mGy	Not used
>(0040,8303)	CS	3	Entrance Dose Derivation	Not used
>(0018,1190)	DS	1	Focal Spot(s)	Not used
>(0018,701A)	DS	1C	Detector Binning	Number of active detectors used to generate a single pixel. Specified as number of row detectors per pixel then column.
>(0018,7001)	DS	1	Detector Temperature	Not used
>(0018,1160)	SH	1	Filter Type	Not used
>(0018,7050)	CS	1	Filter Material	Not used
>(0018,7052)	DS	3	Filter Thickness Minimum	Not used
>(0018,7054)	DS	3	Filter Thickness Maximum	Not used
>(0018,7056)	FL	3	Filter Beam Path Length Minimum	Not used
>(0018,7058)	FL	3	Filter Beam Path Length Maximum	Not used
>(0018,11A2)	DS	1	Compression Force	The compression force applied to the body part during exposure, measured in Newtons
>(0018,11A3)	DS	3	Compression Pressure	Not used

>(0018,11A5)	DS	3	Compression Contact Area	Not used
>(0018,11A4)	LO	1	Paddle Description	Not used
>(0018,9538)	SQ	1	Per Projection Acquisition Sequence	Not used

**Table 29 – Breast View Module Attributes – mandatory – ref. PS 3.3 - 2023 C.8.21.6**

Group and Element	VR	Type	Description	Value
(0008,008)		1	Image Type	Image identification characteristics
(0054,0220)	SQ	1	View Code Sequence	Sequence that describes the view of the patient anatomy in this image
>(0008,0100)	SH	1C	Code Value	See Table 18
>(0008,0102)	SH	1C	Coding Scheme Designator	See Table 18
>(0008,0104)	LO	1C	Code Meaning	See Table 18
>(0054,0222)	SQ	2	View Modifier Code Sequence	Sequence that provides modifiers for the view of the patient anatomy
>>(0008,0100)	SH	1C	Code Value	See Table 19
>>(0008,0102)	SH	1C	Coding Scheme Designator	See Table 19
>>(0008,0104)	LO	1C	Code Meaning	See Table 19
(0028,1300)		1C	Breast Implant Present	Whether or not the imaged breast contains a breast implant regardless of the visibility of a breast implant in the Pixel Data. Enumerated Values: YES NO
(0028,1350)		3	Partial View	Indicates whether this image is a partial view, that is a subset of a single view of the breast. Enumerated Values: YES NO
(0028,1352)	SQ	1C	Partial View Code Sequence	Not used

### 3.3.6.5 Output of CAD Results to a Remote System

The GE Edison Health Link iScreening system is responsible for any external DICOM communication. See its DICOM Conformance Statement for specific details regarding supported DICOM Transfer Syntaxes and DICOM SOP Classes. The following sections describe the DICOM SOP conformance information for what DICOM objects can be exported internally by AIM Container and can be sent externally by iScreening.

### 3.3.6.6 Associated Real World Activity – CAD Output

The GE Edison Health Link iScreening system is responsible for any external DICOM communication. See its DICOM Conformance Statement for specific details regarding supported DICOM Transfer Syntaxes and DICOM SOP Classes.

The AIM Container can internally generate a Mammography CAD SR, a GSPS file, a Digital Mammography X-Ray – For Presentation, a Breast Tomosynthesis object, or a Secondary Capture object to convey its findings and are sent externally by the iScreening system. The AIM Container will process each image to determine the existence of any suspicious regions and compute a Density Assessment. The CAD findings can be combined into a Mammography CAD Structured Report (SR), or a Grayscale Softcopy Presentation State (GSPS) object to have its CAD findings rendered on a review station. The

CAD findings can also be burnt into an image or provided as an overlay using a Digital Mammography X-Ray image, or a Breast Tomosynthesis, or a Secondary Capture (SC) image. The Density Assessment results are conveyed in a Secondary Capture object. These DICOM objects are described in the following sections.

**3.3.6.7 Presentation Context Table – CAD Output**

See the GE Edison Health Link iScreening DICOM Conformance Statement for specific DICOM Presentation Contexts that are supported. The AIM Container supports DICOM files listed in Table 30.

**Table 30 – Presentation Contexts for CAD Output to Remote Device**

Abstract Syntax		Transfer Syntax	Role
SOP Class	SOP Class UID		
Mammography CAD Structured Report	1.2.840.10008.5.1.4.1.1.88.50	See iScreening DCS	iScreening SCU
Grayscale Softcopy Presentation State (GSPS)	1.2.840.10008.5.1.4.1.1.11.1	See iScreening DCS	iScreening SCU
Digital Mammography X-Ray – For Presentation with overlay or burnt in CAD findings	1.2.840.10008.5.1.4.1.1.1.2	See iScreening DCS	iScreening SCU
Secondary Capture	1.2.840.10008.5.1.4.1.1.7	See iScreening DCS	iScreening SCU
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	See iScreening DCS	iScreening SCU

**3.3.6.8 SOP Specific Conformance – CAD Output**

The GE Edison Health Link iScreening system is responsible for any external DICOM communication. See its DICOM Conformance Statement for specific details regarding supported DICOM Transfer Syntaxes and DICOM SOP Classes. The AIM Container will produce output as DICOM objects internally that can be transmitted externally by iScreening. The AIM Container will process each image to determine the existence of any suspicious regions and compute a Density Assessment. The CAD findings can be combined into a Mammography CAD Structured Report (SR), or a Grayscale Softcopy Presentation State (GSPS) object to have its CAD findings rendered on a review station. The CAD findings can also be burnt into an image or provided as an overlay using a Digital Mammography X-Ray image, or a Breast Tomosynthesis, or a Secondary Capture (SC) image. The Density Assessment results are conveyed in a Secondary Capture object. These DICOM objects are described in detail in the following sections.

**3.3.6.8.1 Mammography CAD Structured Report**

Table 31 shows the DICOM information object definition (IOD) modules that are necessary to create the DICOM Mammography CAD Structured Report.

**Table 31 - Structured Report IOD Modules**

IE	Module	DICOM Reference	Document Reference	Usage
Patient	Patient Module	PS 3.3 – 2023 C.7.1.1	Table 32	M
Study	General Study	PS 3.3 – 2023 C.7.2.1	Table 33	M
	Patient Study	PS 3.3 – 2023 C.7.2.2	Table 34	U
Series	SR Document Series	PS 3.3 – 2023 C.17.1	Table 35	M
Equipment	General Equipment	PS 3.3 – 2023 C.7.5.1	Table 36	M
Document	SR Document General	PS 3.3 – 2023 C.17.2	Table 37	M
	SR Document Content	PS 3.3 – 2023 C.17.3	Table 39 for the Mammography CAD SR.	M
	SOP Common	PS 3.3 – 2023 C.12.1	Table 38	M

**Table 32 - Patient Module Attributes – mandatory – ref. PS 3.3 - 2023 C.7.1.1**

Group and Element	VR	Type	Description	Value
(0010,0010)	PN	2	Patient's Name	Patient's full name obtained from the image header.
(0010,0020)	LO	2	Patient ID	Primary hospital identification number or code for the patient obtained from the image header.
(0010,0030)	DA	2	Patient's Birth Date	Birth date of the patient obtained from the image header.
(0010,0040)	CS	2	Patient's Sex	Sex of the named patient obtained from the image header. Enumerated Values: M = male F = female O = other
(0010,1010)	AS	3	Patient's Age	Age of the patient obtained from the image header.
(0008,1120)	SQ	3	Referenced Patient Sequence	Not used
>(0008,1150)	UI	1C	Referenced SOP Class UID	Not used
>(0008,1155)	UI	1C	Referenced SOP Instance UID	Not used
(0010,0032)	TM	3	Patient Birth Time	Not used
(0010,1000)	LO	3	Other Patient ID	Other patient ID obtained from the image header
(0010,1001)	PN	3	Other Patient Names	Not used
(0010,2160)	SH	3	Ethnic Group	Not used
(0010,4000)	LT	3	Patient Comments	Not used

**Table 33 - General Study Module Attributes – Mandatory - ref. PS 3.3 - 2023 C.7.2.1**

Group and Element	VR	Type	Description	Value
(0020,000D)	UI	1	Study Instance UID	Unique identifier for the Study obtained from the image header.
(0008,0020)	DA	2	Study Date	The current date of the CAD processing

(0008,0030)	TM	2	Study Time	The current time of the CAD processing.
(0008,0090)	PN	2	Referring Physician's Name	Not used
(0020,0010)	SH	2	Study ID	User or equipment generated Study identifier obtained from the image header.
(0008,0050)	SH	2	Accession Number	A RIS generated number, which identifies the order for the Study obtained from the image header.
(0008,1030)	LO	3	Study Description	Institution-generated description or classification of the Study (component) performed.
(0008,1048)	PN	3	Physicians Of Record	Not used
(0008,1049)	SQ	3	Physician(s) of Record Identification Sequence	Not used
(0008,1060)	PN	3	Name Of Physicians Reading Study	Not used
(0008,1062)	SQ	3	Physician(s) Reading Study Identification Sequence	Not used
(0008,1110)	SQ	3	Referenced Study Sequence	Not used
(0008,1032)	SQ	3	Procedure Code Sequence	Not used

**Table 34 - Patient Study Module Attributes – Optional - ref. PS 3.3 - 2023 C.7.2.2**

Group and Element	VR.	Type	Description	Value
(0008,1080)	LO	3	Admitting Diagnosis Description	Not used
(0010,1010)	AS	3	Patient's Age	Age of patient
(0010,1020)	DS	3	Patient Size	Not used
(0010,1030)	DS	3	Patient Weight	Not used
(0010,2180)	SH	3	Occupation	Not used
(0010,21B0)	LT	3	Additional Patient History	Not used

**Table 35 - SR Document Series Module Attributes - Mandatory - ref. PS 3.3 - 2023 C.17.1**

Group and Element	VR	Type	Description	Value
(0008,0060)	CS	1	Modality Type	"SR"
(0020,000E)	UI	1	Series Instance UID	1.2.840.114191.8.W.X.Y.Z
(0020,0011)	IS	1	Series Number	Configurable, with default being "1"
(0008,1111)	SQ	2	Referenced Study Component Sequence	Not used

**Table 36 - General Equipment Module Attributes - Mandatory - ref. PS 3.3 - 2023 C.7.5.1**

Group and Element	VR	Type	Description	Value
(0008,0070)	LO	2	Manufacturer	"iCAD, Inc."
(0008,0080)	LO	3	Institution Name	Uses Institution Name (0008,0080) of image
(0008,0081)	ST	3	Institution Address	Uses Institution Address (0008,0081) of image
(0008,1010)	SH	3	Station Name Unit #	Not used
(0008,1040)	LO	3	Institutional Department Name	Not used
(0008,1090)	LO	3	Manufacturer's Model Name	ProFound AI 3D or ProFound AI 2D

(0018,1000)	LO	3	Device Serial Number	Can be used for licensing
(0018,1020)	LO	3	Software Versions	The Software Versions attribute is a multi-valued attribute, built as follows: Value1\Value2\Value3 Value1: If SecondLook Digital CAD: “7.2-Z”, where Z equals the operating point. L = Low Op Point M = Medium Op Point H = High Op Point If ProFound AI: “X.y.y-Z” for ProFound AI, where X is the major revision and y is the minor revision, and where Z equals the operating point. L = Low Op Point M = Medium Op Point H = High Op Point Value2: Algorithm build of the software Value3: AIM Container build information
(0018,1008)	LO	3	Gantry ID	Not used
(0018,1050)	DS	3	Spatial Resolution mm	Not used
(0018,1200)	DA	3	Date of Last Calibration	Not used
(0018,1201)	TM	3	Time of Last Calibration	Not used
(0028,0120)	US	3	Pixel Padding Value	Not used

**Table 37 - SR Document General Module Attributes – ref. PS 3.3 - 2023 C.17.2 – Table C.17-2**

Group and Element	VR	Type	Description	Value
(0020,0013)	SH	1	Instance Number	Configurable, with the default being “1”
(0040,A491)	CS	1	Completion Flag	"COMPLETE"
(0040,A492)	LO	3	Completion Flag Description	Not used
(0040,A493)	CS	1	Verification Flag	"UNVERIFIED"
(0008,0023)	DA	1	Content Date	The current date of the CAD processing.
(0008,0033)	TM	1C	Content Time	The current time of the CAD processing.
(0040,A073)	SQ	1	Verifying Observer Sequence	Not used
>(0040,A075)	PN	1	Verifying Observer Name	Not used
>(0040,A088)	SQ	2	Verifying Observer Identification Code Sequence	Not used
>(0040,A027)	LO	1	Verifying Organization	Not used
>(0040,A030)	DT	1	Verification DateTime	Not used
(0040,A360)	SQ	1C	Predecessor Documents Sequence	Not used

(0040,A525)	SQ	1C	Identical Documents Sequence	Not used
(0040,A370)	SQ	1C	Referenced Request Sequence	Not used
(0040,A372)	SQ	2	Performed Procedure Code Sequence	Not used
(0040,A375)	SQ	1C	Current Requested Procedure Evidence Sequence	A single sequence that contains the Study Instance UID, Series Instance UID, Referenced SOP Class UID, and Referenced SOP Instance UID for each image in the study. This sequence is described in the DICOM standard PS 3.3 – 2023 in Table C.17-3
>(0020,000D)	UI	1	Study Instance UID	Unique identifier for the Study obtained from the image header.
>(0008,1115)	SQ	1	Referenced Series Sequence	Sequence repeats for each image that exists in the study. The sequence contains the Attributes of one Series.
>>(0020,000E)	UI	1	Series Instance UID	Unique identifier of a Series obtained from the image header that is part of this Study containing the referenced Instances.
>>(0008,0054)	AE	3	Retrieve AE Title	Not used
>>(0068,0130)	SH	3	Storage Media File-Set ID	Not used
>>(0068,0140)	UI	3	Storage Media File-Set UID	Not used
>>(0008,1199)	SQ	1	Referenced SOP Sequence	References to Object Instance pairs that are part of the Study defined by Study Instance UID and the Series defined by Series Instance UID (0020,000E) and are obtained from the image header.
>>>(0008,1150)	UI	1	Referenced SOP Class UID	Uniquely identifies the referenced SOP Class that is obtained from the image header.
>>>(0008,1155)	UI	1	Referenced SOP Instance UID	Uniquely identifies the referenced SOP instance that is obtained from the image header.

**Table 38 - SOP Common Module Attributes – Mandatory – ref. PS 3.3 - 2023 C.12.1 – Table C.12-1**

Group and Element	VR	Type	Description	Value
(0008,0016)	UI	1	SOP Class UID	“1.2.840.10008.5.1.4.1.1.88.50”, which represents Mammography CAD Structured Report.
(0008,0018)	UI	1	SOP Instance UID	1.2.840.114191.8.W.X.Y.Z
(0008,0005)	CS	1C	Specific Character Set	ISO IR 100
(0008,0012)	DA	3	Instance Creation Date	Current date of the CAD processing.
(0008,0013)	TM	3	Instance Creation Time	Current time of the CAD processing.
(0008,0014)	UI	3	Instance Creator UID	Not used
(0008,0110)	SQ	3	Coding Scheme Identification Sequence	Not used
(0008,0201)	SH	3	Timezone Offset From UTC	Not used

**PowerLook AI Mammo Container 1.1 DICOM Conformance Statement, GE Revision 0**

(0018,A001)	SQ	3	Contributing Equipment Sequence	Not used
(0020,0013)	IS	3	Instance Number	Configurable, with default being "1"
(0100,0410)	CS	3	SOP Instance Status	Not used
(0100,0420)	DT	3	SOP Authorization Date and Time	Not used
(0100,0424)	LT	3	SOP Authorization Comment	Not used
(0100,0426)	LO	3	Authorization Equipment Certification Number	Not used
(4FFE,0001)	SQ	3	MAC Parameters Sequence	Not used
(FFFA,FFFA)	SQ	3	Digital Signatures Sequence	Not used



### **3.3.6.8.1.1 Storage of CAD Results – Mammography CAD Structured Report**

The AIM Container will process each image to determine the existence of any suspicious regions. The results of this processing will be combined into a single DICOM Mammography CAD Structured Reporting message that will be sent to the remote system (that is if the remote device was configured to receive this output). Table 31 defines the DICOM modules that are used to create the Mammography CAD Structured Report. The Mammography CAD Structured Report uses the following additional tables to create the report: Table 32, Table 33, Table 34, Table 35, Table 36, Table 37, and Table 38. Table 39 defines the Mammography CAD Structured Report’s Document Content Module, which utilizes the Mammography CAD SR templates.

A high-level overview of the structure of the DICOM Mammography CAD Structured Report is shown in Figure 3-1. This figure shows that there are five nodes that exist from the root node: the Language of Content Item and Descendants, the Image Library, the Mammography CAD Overall Impressions / Recommendations, the Summary of Detections, and the Summary of Analyses.

The Language of Content Item and Descendants (see Table 40) indicates that the language of the report is English and the country of the language is the United States. The Image Library (see Table 41) contains an entry for each image in the study. It contains the SOP Class UID and Instance UID and any of the following values if they are included in the image header:

- Image Laterality
- Image View
- Image View Modifier
- Patient Orientation Row
- Patient Orientation Column
- Study Date
- Study Time
- Content Date
- Content Time
- Horizontal Imager Pixel Spacing
- Vertical Imager Pixel Spacing
- Slice Thickness
- Frame of Reference UID
- Image Position (Patient) X
- Image Position (Patient) Y
- Image Position (Patient) Z
- Image Orientation (Patient) Row X
- Image Orientation (Patient) Row Y
- Image Orientation (Patient) Row Z
- Image Orientation (Patient) Column X
- Image Orientation (Patient) Column Y
- Image Orientation (Patient) Column Z

The node position of each image is significant, for it’s the node position, not the Instance UID, which is used for reference by each CAD detection.

The Mammography CAD Overall Impressions / Recommendations node (see Table 42) contains an overall status summary of the CAD processing. The status values will be either:

- “All algorithms succeeded; without findings”
- “All algorithms succeeded; with findings”
- “Not all algorithms succeeded; without findings”

- “Not all algorithms succeeded; with findings”
- “No algorithms succeeded; without findings”

The Mammography CAD Overall Impressions / Recommendations node will exist for each image. It will contain information in regards to Rendering Intent for the processed image as well as any Single Image Findings. Potential Single Image Findings are:

- Mammography Breast Density (see Table 43 and Figure 3-3)
- Calcification Cluster (see Table 44 and Figure 3-4)

A Mammography Breast Density Single Image Finding shall consist of:

- Rendering Intent
- Algorithm Name
- Algorithm Version
- Algorithm Parameters
- Certainty of Finding
- A Center Point of the density
- An Outline of the density (detailed POLYLINE)

A Calcification Cluster Single Image Finding shall consist of:

- Rendering Intent
- Algorithm Name
- Algorithm Version
- Algorithm Parameters
- Certainty of Finding
- A Center Point of the cluster
- An Outline of the cluster (detailed POLYLINE)

In the Mammography CAD SR, all Type 1 attributes shall be present with a valid value (not zero length), and all Type 2 attributes shall be present. The following Type 2 and Type 3 attributes shall be present with a nonzero length value:

- (0008,0020) Study Date
- (0008,0023) Content Date
- (0008,0030) Study Time: may be zero length, if not present or zero length in the corresponding images
- (0008,0033) Content Time
- (0008,0070) Manufacturer
- (0008,1010) Station Name
- (0008,1090) Manufacturer’s Model Name
- (0010,0010) Patient’s Name
- (0010,0020) Patient ID: may be zero length, if not present or zero length in the corresponding images
- (0018,1020) Software Versions (configurable to include the CAD version, CAD Build, and AIM Container Build)

The following Type 3 attributes may be present with a nonzero length value:

- (0008,0080) Institution Name
- (0008,0081) Institution Address

For the Mammography CAD SR, the Content Sequence (0040,A730) shall follow the rules of TID 4000 Mammography CAD Document Root Template, as defined in DICOM PS 3.16-2023. All Mandatory content items shall be present.

Local CAD Processing is capable of performing “Mammography breast density” and “Calcification Cluster” detection. The following templates are supported:

- TID 4000 Mammography CAD Document Root
- TID 4001 Mammography CAD Overall Impression/Recommendation
- TID 4002 Mammography CAD Impression / Recommendation Body
- TID 4003 Mammography CAD Individual Impression/Recommendation
- TID 4006 Mammography CAD Single Image Finding
- TID 4010 Mammography CAD Calcification Cluster
- TID 4011 Mammography CAD Density
- TID 4015 CAD Detections Performed
- TID 4016 CAD Analyses Performed
- TID 4017 CAD Detection Performed
- TID 4018 CAD Analysis Performed
- TID 4019 CAD Algorithm Identification
- TID 4020 CAD Image Library Entry
- TID 4021 Mammography CAD Geometry
- TID 4023 CAD Operating Points

Content items that require “Rendering Intent” as a child content item shall have the value “Presentation Required.”

The following User Optional content items may be present if the features are enabled in the System Configuration table:

- TID 4002 Mammography CAD Impression / Recommendation Body, Row 5, (DCM, 111033, “Impression Description”) for “Case Score”
- TID 4002 Mammography CAD Impression / Recommendation Body, Row 10, (DCM, 111013, “Certainty of impression”) for Case Score
- TID 4006 Mammography CAD Single Image Finding, Row 5 (111012, DCM, “Certainty of Finding”)
- TID 4006 Mammography CAD Single Image Finding, Row 4, Include TID 4108 “Tracking Identifier” using Row 1 as (112039, DCM, “Tracking Identifier”)
- TID 4021 Mammography CAD Geometry Template, Row 3 (111041, DCM, “Outline”), for (F-01796, SRT, “Mammography breast density”) or (129793001, SCT, “Mammography breast density”)
- TID 4019 CAD Algorithm Identification, Row 3, Algorithm Parameters
- TID 4023 CAD Operating Points, Row 1, (111072, DCM, “Maximum CAD Operating Point”)
- TID 4023 CAD Operating Points, Row 2, (111092, DCM, “Recommended CAD Operating Point”)
- TID 4023 CAD Operating Points, Row 3, (111093, DCM, “CAD Operating Point Table”)
- TID 4023 CAD Operating Points, Row 7, (111081, DCM, “CAD Operating Point Description”)

The following standard extended attribute for Mammography CAD SR can optionally be added and populated with a configurable string, default “iCAD CAD”.

- (0008,103E) Series Description

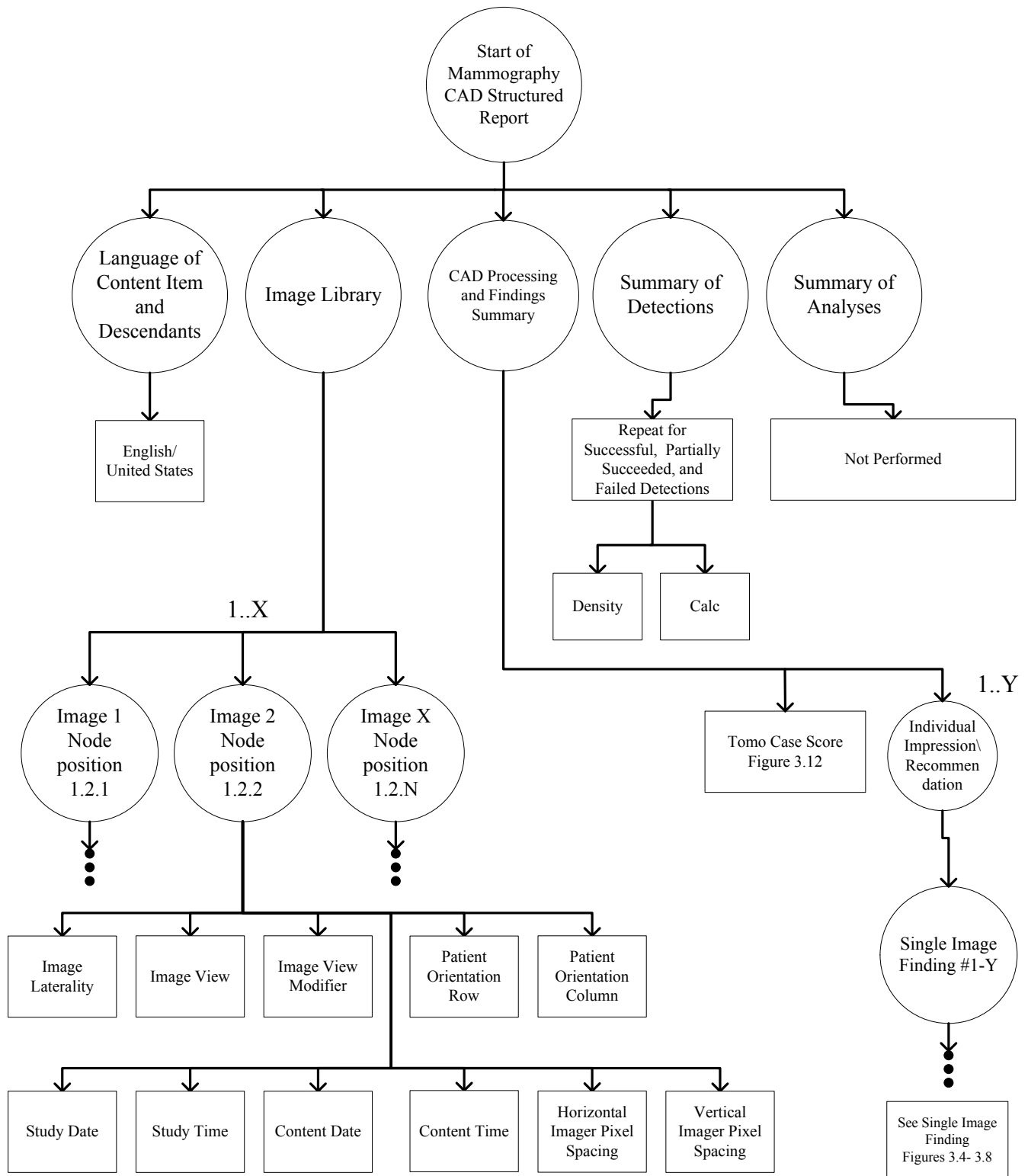


Figure 3-1 - Mammography CAD Structured Report Overview

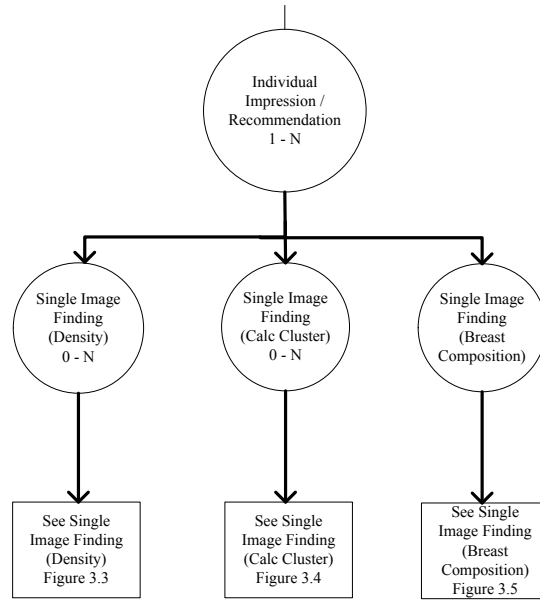


Figure 3-2 - Mammography CAD Structured Report Findings

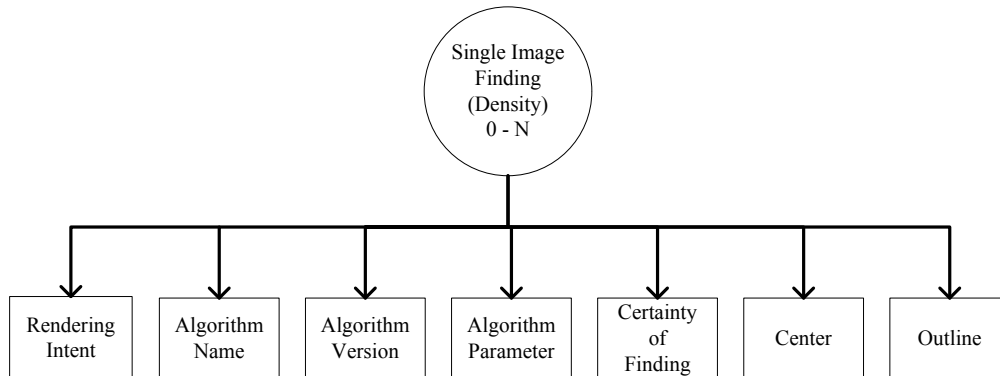
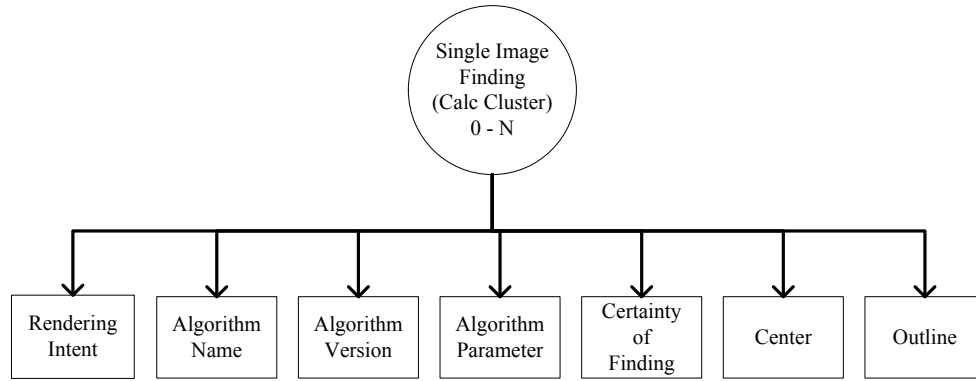
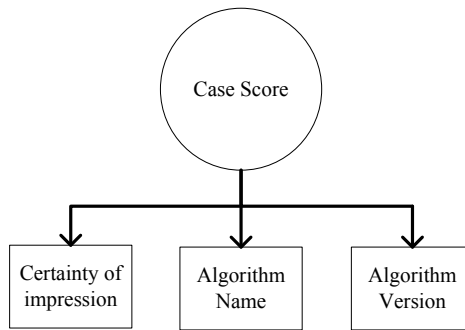


Figure 3-3 - Single Image Finding Density



**Figure 3-4 - Single Image Finding Calc Cluster**



**Figure 3-5 - Tomo Case Score**

**Table 39 - SR Document Content – Ref. PS 3.3 - 2023 C.17-3 – Table C.17.4**

Group and Element	VR	Description	Value
(0040,A040)	CS	Value Type	“CONTAINER”
(0040,A043)	SQ	Concept-name Code Sequence	1
>(0008,0100)	SH	Code Value	111036
>(0008,0102)	SH	Coding Scheme Designator	DCM
>(0008,0104)	LO	Code Meaning	“Mammography CAD Report”
(0040,A050)	CS	Continuity of Content	“SEPARATE”
(0040,A504)	SQ	Content Template Sequence	1
>(0008,0105)	CS	Mapping Resource	“DCMR”
>(0040,DB00)	CS	Template Identifier	“4000”
(0040,A730)	SQ	Content Sequence	Include sequence for “Language of Content Item and Descendants”. See Table 40 and DICOM TID 1204.
(0040,A730)	SQ	Content Sequence	Include “Image Library” container. See Table 41 and DICOM TID 4020.
(0040,A730)	SQ	Content Sequence	Include “Mammography CAD Overall Impression / Recommendation” container. See Table 42 and DICOM TID 4001.
(0040,A730)	SQ	Content Sequence	Include “Summary of Detections”. See Table 45 and DICOM TID 4015.
(0040,A730)	SQ	Content Sequence	Include “Summary of Analyses”. See Table 46 and DICOM TID 4016.

**Table 40 - Language of Content Item and Descendants (TID 4000, TID 1204)**

Group and Element	VR	Description	Value
>(0040,A010)	CS	Relationship Type	“HAS CONCEPT MOD”
>(0040,A040)	CS	Value Type	“CODE”
>(0040,A043)	SQ	Concept Name Code Sequence	1
>>(0008,0100)	SH	Code Value	“121049”
>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>(0008,0104)	LO	Code Meaning	“Language of Content Item and Descendants”
>(0040,A168)	SQ	Concept Code Sequence	1
>>(0008,0100)	SH	Code Value	“en”
>>(0008,0102)	SH	Code Scheme Designator	“RFC3066”
>>(0008,0104)	LO	Code Meaning	“English”
>(0040,A730)	SQ	Content Sequence	1
>>(0040,A010)	CS	Relationship Type	“HAS CONCEPT MOD”
>>(0040,A040)	CS	Value Type	“CODE”
>>(0040,A043)	SQ	Concept Name Code Sequence	1
>>>(0008,0100)	SH	Code Value	“121046”
>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>(0008,0104)	LO	Code Meaning	“Country of Language”
>>(0040,A168)	SQ	Concept Code Sequence	1
>>>(0008,0100)	SH	Code Value	“US”
>>>(0008,0102)	SH	Code Scheme Designator	“ISO3166 1”
>>>(0008,0104)	LO	Code Meaning	“UNITED STATES”

**Table 41 - Image Library Container (TID 4000, TID 4020)**

Group and Element	VR	Description	Value
>(0040,A010)	CS	Relationship Type	“CONTAINS”
>(0040,A040)	CS	Value Type	“CONTAINER”
>(0040,A168)	SQ	Concept Code Sequence	1
>>(0008,0100)	SH	Code Value	“111028”
>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>(0008,0104)	LO	Code Meaning	“Image Library”
>(0040,A050)	CS	Continuity Of Content	“SEPARATE”
>(0040,A730)	SQ	Content Sequence	“Mammography CAD Image Library Entry”. Repeat this sequence for each image in the study and also for every unique frame that contains a finding in a BTO object.
>>(0008,1199)	SQ	Referenced SOP Sequence	1
>>>(0008,1150)	UI	Referenced SOP Class UID	The SOP Class UID of the image being processed.
>>>(0008,1155)	UI	Referenced SOP Instance UID	The SOP Instance UID of the image being processed.
>>>(0008,1160)	IS	Referenced Frame Number	Frame number in the BTO object that contains the finding
>>(0040,A010)	CS	Relationship Type	“CONTAINS”
>>(0040,A040)	CS	Value Type	“IMAGE”
>>(0040,A730)	SQ	Content Sequence	The “Image Laterality” content sequence shall be present only if tag (0020,0062) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“CODE”

>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111027”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image Laterality”
>>>(0040,A168)	SQ	Concept Code Sequence	From Context ID 6023 in the DICOM Standard
>>>>(0008,0100)	SH	Code Value	“T-04030” (Left breast), “T-04020” (Right breast), “T-04080” (Both breasts)
>>>>(0008,0102)	SH	Code Scheme Designator	“SNM3”
>>>>(0008,0104)	LO	Code Meaning	“Left breast”, “Right breast”, or “Both breasts”
>>(0040,A730)	SQ	Content Sequence	The “Image View” content sequence shall be present only if tag (0054,0220) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“CODE”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111031”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image View”
>>>(0040,A168)	SQ	Concept Code Sequence	From Context ID 4014 in the DICOM Standard
>>>>(0008,0100)	SH	Code Value	“R-10224” (medio-lateral), “R-10266” (medio-lateral oblique), “R-10228” (latero-medial), “R-10230” (latero-medial oblique), “R-10242” (cranio-caudal), “R-10244” (cranio-caudal from below), “R-102D0” (superolateral to inferomedial oblique), “R-102CF” (exaggerated cranio-caudal), “Y-X1770”/”R-1024A” (cranio-caudal exaggerated laterally), “Y-X1771”/”R-1024B” (cranio-caudal exaggerated medially), or “G-8310” (tissue specimen from breast)
>>>>(0008,0102)	SH	Code Scheme Designator	“SRT” or “SNM3”
>>>>(0008,0104)	LO	Code Meaning	“medio-lateral”, “medio-lateral oblique”, “latero-medial”, “latero-medial oblique”, “cranio-caudal”, “cranio-caudal from below”, “superolateral to inferomedial oblique”, “exaggerated cranio-caudal”, “cranio-caudal exaggerated laterally”, “cranio-caudal exaggerated medially”, or “tissue specimen from breast”
>>(0040,A730)	SQ	Content Sequence	The “Image View Modifier” content sequence shall be present only if tag (0054,0222) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS CONCEPT MOD”
>>>(0040,A040)	CS	Value Type	“CODE”



>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111032”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image View Modifier”
>>>(0040,A168)	SQ	Concept Code Sequence	From Context ID 4015 in the DICOM Standard
>>>>(0008,0100)	SH	Code Value	“R-102D2” (Cleavage), “R102D1” (Axillary Tail), “R-102D3” (Rolled lateral), “R-102D4” (Rolled Medial), “R-102D5” (Implant Displaced), “P2-00161” (Anterior compression) “R-40ABE” (Infra-mammary fold)
>>>>(0008,0102)	SH	Code Scheme Designator	“SRT” or “SNM3”
>>>>(0008,0104)	LO	Code Meaning	Cleavage, Axillary Tail, Rolled lateral, Rolled Medial, Implant Displaced, Anterior compression, Infra-mammary fold
>>(0040,A730)	SQ	Content Sequence	The “Patient Orientation Row” content sequence shall be present only if tag (0020,0020) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“TEXT”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111044”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Patient Orientation Row”
>>>(0040,A160)	UT	Text Value	First value from tag (0020,0020) in image.
>>(0040,A730)	SQ	Content Sequence	The “Patient Orientation Column” content sequence shall be present only if tag (0020,0020) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“TEXT”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111043”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Patient Orientation Column”
>>>(0040,A160)	UT	Text Value	Second value from tag (0020,0020) in image.
>>(0040,A730)	SQ	Content Sequence	The “Study Date” content sequence shall be present only if tag (0008,0020) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“DATE”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111060”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Study Date”
>>>(0040,A121)	DA	Date	Value from tag (0008,0020) in image.

>>(0040,A730)	SQ	Content Sequence	The “Study Time” sequence shall be present only if tag (0008,0030) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“TIME”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111061”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Study Time”
>>>(0040,A122)	TM	Time	Value from tag (0008,0030) in image.
>>(0040,A730)	SQ	Content Sequence	The “Content Date” sequence shall be present only if tag (0008,0023) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“DATE”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111018”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Content Date”
>>>(0040,A121)	DA	Date	Value from tag (0008,0023) in image.
>>(0040,A730)	SQ	Content Sequence	The “Content Time” sequence shall be present only if tag (0008,0023) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“TIME”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111019”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Content Time”
>>>(0040,A122)	TM	Time	Value from tag (0008,0033) in image.
>>(0040,A730)	SQ	Content Sequence	The “Horizontal Imager Pixel Spacing” sequence shall be present only if tag (0018,1164) or (0028,0030) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111026”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Horizontal Imager Pixel Spacing”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“um”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>(0008,0103)	SH	Coding Scheme Version	1.4
>>>>>(0008,0104)	LO	Code Meaning	“micrometer”
>>>>>(0040,A30A)	DS	Numeric Value	First value from tag (0018,1164) or (0028,0030) in image.
>>(0040,A730)	SQ	Content Sequence	The “Vertical Imager Pixel Spacing” sequence shall be present only if tag (0018,1164) or (0028,0030) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”

>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111066”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Vertical Imager Pixel Spacing”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“um”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>(0008,0103)	SH	Coding Scheme Version	1.4
>>>>>(0008,0104)	LO	Code Meaning	“micrometer”
>>>>(0040,A30A)	DS	Numeric Value	Second value from tag (0018,1164) or (0028,0030) in image.
>>(0040,A730)	SQ	Content Sequence	The “Slice Thickness” sequence shall be present only if tag (0018,0050) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“112225”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Slice Thickness”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“um”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>(0008,0103)	SH	Coding Scheme Version	1.4
>>>>>(0008,0104)	LO	Code Meaning	“micrometer”
>>>>(0040,A30A)	DS	Numeric Value	Slice Thickness value from tag (0018,0050) in image. OR (5200,9229) Shared Functional Groups Sequence >(0028,9110) Pixel Measures Sequence >>(0018,0050) Slice Thickness OR (5200,9230) Per-Frame Functional Groups Sequence >(0028,9110) Pixel Measures Sequence >>(0018,0050) Slice Thickness
>>(0040,A730)	SQ	Content Sequence	The “Frame of Reference UID” sequence shall be present only if tag (0020,0052) is present in the image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“UIDREF”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“112227”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Frame of Reference UID”
>>>(0040,A124)	UI	UID	Frame of Reference UID value from tag (0020,0052) in the BTO image
>>(0040,A730)	SQ	Content Sequence	The “Image Position (Patient) X” sequence shall be present only if the first value of tag (0020,0032) is present in the BTO image.

			Will only be populated for each unique image reference and will not be populated for every unique frame that contains a finding in a BTO object.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“110901”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image Position (Patient) X”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“mm”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>(0008,0104)	LO	Code Meaning	“millimeter”
>>>>(0040,A30A)	DS	Numeric Value	First value of Image Position (Patient) from tag (0020,0032) for the referenced image or frame.
>>(0040,A730)	SQ	Content Sequence	The “Image Position (Patient) Y” sequence shall be present only if the second value of tag (0020,0032) is present in the BTO image. Will only be populated for each unique image reference and will not be populated for every unique frame that contains a finding in a BTO object.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“110902”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image Position (Patient) Y”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“mm”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>(0008,0104)	LO	Code Meaning	“millimeter”
>>>>(0040,A30A)	DS	Numeric Value	Second value of Image Position (Patient) from tag (0020,0032) for the referenced image or frame.
>>(0040,A730)	SQ	Content Sequence	The “Image Position (Patient) Z” sequence shall be present only if the third value of tag (0020,0032) is present in the BTO image. Will only be populated for each unique image reference and will not be populated for every unique frame that contains a finding in a BTO object.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“110903”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image Position (Patient) Z”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1

>>>>>(0008,0100)	SH	Code Value	“mm”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>(0008,0104)	LO	Code Meaning	“millimeter”
>>>>(0040,A30A)	DS	Numeric Value	Third value of Image Position (Patient) from tag (0020,0032) for the referenced image or frame.
>>(0040,A730)	SQ	Content Sequence	The “Image Orientation (Patient) Row X” sequence shall be present only if the first value of tag (0020,0037) is present in the BTO image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“110904”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image Orientation (Patient) Row X”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“{-1:1}”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>(0008,0104)	LO	Code Meaning	“{-1:1}”
>>>>(0040,A30A)	DS	Numeric Value	First value of Image Orientation Patient from tag (0020,0037) in image.
>>(0040,A730)	SQ	Content Sequence	The “Image Orientation (Patient) Row Y” sequence shall be present only if the second value of tag (0020,0037) is present in the BTO image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“110905”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image Orientation (Patient) Row Y”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“{-1:1}”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>(0008,0104)	LO	Code Meaning	“{-1:1}”
>>>>(0040,A30A)	DS	Numeric Value	Second value of Image Orientation Patient from tag (0020,0037) in image.
>>(0040,A730)	SQ	Content Sequence	The “Image Orientation (Patient) Row Z” sequence shall be present only if the third value of tag (0020,0037) is present in the BTO image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“110906”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image Orientation (Patient) Row Z”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“{-1:1}”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”

>>>>>(0008,0104)	LO	Code Meaning	“{-1:1}”
>>>>(0040,A30A)	DS	Numeric Value	Third value of Image Orientation Patient from tag (0020,0037) in image.
>>(0040,A730)	SQ	Content Sequence	The “Image Orientation (Patient) Column X” sequence shall be present only if the fourth value of tag (0020,0037) is present in the BTO image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“110907”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image Orientation (Patient) Column X”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“{-1:1}”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>(0008,0104)	LO	Code Meaning	“{-1:1}”
>>>>(0040,A30A)	DS	Numeric Value	Fourth value of Image Orientation Patient from tag (0020,0037) in image.
>>(0040,A730)	SQ	Content Sequence	The “Image Orientation (Patient) Column Y” sequence shall be present only if the fifth value of tag (0020,0037) is present in the BTO image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“110908”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image Orientation (Patient) Column Y”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“{-1:1}”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>(0008,0104)	LO	Code Meaning	“{-1:1}”
>>>>(0040,A30A)	DS	Numeric Value	Fifth value of Image Orientation Patient from tag (0020,0037) in image.
>>(0040,A730)	SQ	Content Sequence	The “Image Orientation (Patient) Column Z” sequence shall be present only if the sixth value of tag (0020,0037) is present in the BTO image.
>>>(0040,A010)	CS	Relationship Type	“HAS ACQ CONTEXT”
>>>(0040,A040)	CS	Value Type	“NUM”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“110909”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Image Orientation (Patient) Column Z”
>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>(0040,08EA)	SQ	Measured Units Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“{-1:1}”
>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>(0008,0104)	LO	Code Meaning	“{-1:1}”
>>>>(0040,A30A)	DS	Numeric Value	Sixth value of Image Orientation Patient from tag (0020,0037) in image.

**Table 42 - Mammography CAD Overall Impression / Recommendation (TID 4000, TID 4001)**

Group and Element	VR	Description	Value
>(0040,A010)	CS	Relationship Type	“CONTAINS”
>(0040,A040)	CS	Value Type	“CODE”
>(0040,A043)	SQ	Concept-name Code Sequence	1
>>(0008,0100)	SH	Code Value	“111017”
>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>(0008,0104)	LO	Code Meaning	“CAD Processing and Findings Summary”
>(0040,A168)	SQ	Concept Code Sequence	From Context ID 4015 in the DICOM Standard
>>(0008,0100)	SH	Code Value	“111241” (All algorithms succeeded; without findings), “111242” (All algorithms succeeded; with findings), “111243” (Not all algorithms succeeded; without findings), “111244” (Not all algorithms succeeded; with findings), or “111245” (no algorithms succeeded; without findings). Note: This can be configured such that calc and density findings are considered the only findings.
>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>(0008,0104)	LO	Code Meaning	All algorithms succeeded; without findings, All algorithms succeeded; with findings, Not all algorithms succeeded; without findings, Not all algorithms succeeded; with findings. or No algorithms succeeded; without findings.
>(0040,A730)	SQ	Content Sequence	Repeat for number of successful images processed in study.
>>(0040,A010)	CS	Relationship Type	“INFERRED FROM”
>>(0040,A040)	CS	Value Type	“CONTAINER”
>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>(0008,0100)	SH	Code Value	“111034”
>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>(0008,0104)	LO	Code Meaning	“Individual Impression/Recommendation”
>>(0040,A050)	CS	Continuity of Content	“SEPARATE”
>>(0040,A730)	SQ	Content Sequence	Repeat for Rendering Intent and number of single image findings.
>>>(0040,A010)	CS	Relationship Type	“HAS CONCEPT MOD”
>>>(0040,A040)	CS	Value Type	“CODE”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111056”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Rendering Intent”
>>>(0040,A168)	SQ	Concept Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111150” or “111151” or “111152”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”

>>>>(0008,0104)	LO	Code Meaning	“Presentation Required: Rendering device is expected to present” or “Presentation Optional: Rendering device may present” or “Not for Presentation: Rendering device expected not to present”
>>>(0040,A010)	CS	Relationship Type	“CONTAINS”
>>>(0040,A040)	CS	Value Type	“CODE”
>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111059” or “111015”
>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Single Image Finding”
>>>(0040,A168)	SQ	Concept Code Sequence	From Context ID 6014
>>>>(0008,0100)	SH	Code Value	“F-01796” or “129793001” (Mammography breast density), “F-01775” or “129769006” (Calcification Cluster) or “F-01710”
>>>>(0008,0102)	SH	Code Scheme Designator	“SRT” or “SCT”
>>>>(0008,0103)	SH	Code Scheme Version	“1.1” only if (0008,0104) is “Mammography breast density” or “Calcification Cluster”
>>>>(0008,0104)	LO	Code Meaning	“Mammography breast density”, “Calcification Cluster”
Use Table 43 if next container is “Mammography breast density”  Use Table 44 if next container is “Calcification Cluster”			

**Table 43 – Mammography Breast Density Single Image Finding (TID 4006, TID 4019, TID 4021, TID 4011, TID 1400)**

Group and Element	VR	Description	Value
>>>(0040,A730)	SQ	Content Sequence	Repeat for: Rendering Intent, Algorithm Name, Algorithm Version, Algorithm Parameters, Certainty of Finding, Center, Outline
>>>>(0040,A010)	CS	Relationship Type	“HAS CONCEPT MOD”
>>>>(0040,A040)	CS	Value Type	“CODE”
>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111056”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Rendering Intent”
>>>>>(0040,A168)	SQ	Concept Code Sequence	1



>>>>>(0008,0100)	SH	Code Value	“111150” or “111151” or “111152”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Presentation Required: Rendering device is expected to present”
>>>>(0040,A730)	SQ	Content Sequence	1
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“TEXT”
>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111001”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Algorithm Name”
>>>>(0040,A160)	UT	Text Value	“ProFound AI 3D”, “ProFound AI 2D”, or “iCAD PowerLook”
>>>>(0040,A730)	SQ	Content Sequence	1
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“TEXT”
>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111003”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Algorithm Version”
>>>>>(0040,A160)	UT	Text Value	If SecondLook Digital CAD: “7.2-Z”, where Z equals the operating point. L = Low Op Point M = Medium Op Point H = High Op Point  If ProFound AI:  “X.y.y-Z” for ProFound AI, where X is the major revision and y is the minor revision, and where Z equals the operating point. L = Low Op Point M = Medium Op Point H = High Op Point
>>>>(0040,A730)	SQ	Content Sequence	Sequence exists if the Certainty of Finding feature is enabled.
>>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>>(0040,A040)	CS	Value Type	“NUM”
>>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>>(0008,0100)	SH	Code Value	“111012”
>>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>>(0008,0104)	LO	Code Meaning	“Certainty of Finding”
>>>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>>>(0040,08EA)	SQ	Measurement Units Code Sequence	1
>>>>>>>(0008,0100)	SH	Code Value	“%”
>>>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>>>(0008,0103)	SH	Code Scheme Version	“1.4”
>>>>>>>(0008,0104)	LO	Code Meaning	“Percent”
>>>>>>(0040,A30A)	DS	Numeric Value	Certainty of Finding percentage value of detection
>>>>(0040,A730)	SQ	Content Sequence	1

>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“SCOORD”
>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111010”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Center”
>>>>(0040,A730)	SQ	Content Sequence	1
>>>>>(0040,A010)	CS	Relationship Type	“SELECTED FROM”
>>>>>(0040,DB73)	UL	Referenced Content Item Identifier	Reference to image, based on node position (x, y, z) in the image library.
>>>>(0070,0022)	FL	Graphic Data	The coordinates (Column, Row) of the center point of the detection.
>>>>(0070,0023)	CS	Graphic Type	“POINT”
>>>>(0040,A730)	SQ	Content Sequence	1
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“SCOORD”
>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111041”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Outline”
>>>>(0040,A730)	SQ	Content Sequence	1
>>>>>(0040,A010)	CS	Relationship Type	“SELECTED FROM”
>>>>>(0040,DB73)	UL	Referenced Content Item Identifier	Reference to image, based on node position (x, y, z) in the image library.
>>>>(0070,0022)	FL	Graphic Data	The coordinates that define the outline of the detection. If Graphic Type (0070,0023) is “ELLIPSE” then there shall exist four pixel (column, row) pairs, the first two points specifying the endpoints of the major axis and the second two points specifying the endpoints of the minor axis. If Graphic Type (0070,0023) is “POLYLINE”, then a list of points (column, row pairs) will be given where straight lines are to be drawn from each point and the first and last vertices are equal to enclose the detection.
>>>>(0070,0023)	CS	Graphic Type	“ELLIPSE” if showing standard marker for density. “POLYLINE” if showing detailed contour of density.

**Table 44 – Calcification Cluster Single Image Finding (TID 4006, TID 4019, TID 4021, TID 4010, TID 1400)**

Group and Element	VR	Description	Value
>>>(0040,A730)	SQ	Content Sequence	Repeat for: Rendering Intent, Algorithm Name, Algorithm Version, Algorithm Parameters, Certainty of Finding, Center,

			Outline,
>>>>(0040,A010)	CS	Relationship Type	“HAS CONCEPT MOD”
>>>>(0040,A040)	CS	Value Type	“CODE”
>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111056”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Rendering Intent”
>>>>(0040,A168)	SQ	Concept Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111150” or “111151”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Presentation Required: Rendering device is expected to present”
>>>(0040,A730)	SQ	Content Sequence	1
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“TEXT”
>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111001”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Algorithm Name”
>>>>(0040,A160)	UT	Text Value	“ProFound AI 3D”, “ProFound AI 2D”, or “iCAD PowerLook”
>>>(0040,A730)	SQ	Content Sequence	1
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“TEXT”
>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111003”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Algorithm Version”
>>>>(0040,A160)	UT	Text Value	If SecondLook Digital CAD: “7.2-Z”, where Z equals the operating point. L = Low Op Point M = Medium Op Point H = High Op Point  If ProFound AI:  “X.y.y-Z” for ProFound AI, where X is the major revision and y is the minor revision, and where Z equals the operating point. L = Low Op Point M = Medium Op Point H = High Op Point
>>>(0040,A730)	SQ	Content Sequence	Sequence exists only if the certainty of finding feature is enabled.
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“NUM”
>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111012”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Certainty of Finding”

>>>>(0040,A300)	SQ	Measured Value Sequence	1
>>>>>(0040,08EA)	SQ	Measurement Units Code Sequence	1
>>>>>>(0008,0100)	SH	Code Value	“%”
>>>>>>(0008,0102)	SH	Code Scheme Designator	“UCUM”
>>>>>>(0008,0103)	SH	Code Scheme Version	“1.4”
>>>>>>(0008,0104)	LO	Code Meaning	“Percent”
>>>>>(0040,A30A)	DS	Numeric Value	Certainty of Finding percentage value of detection
>>>(0040,A730)	SQ	Content Sequence	1
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“SCoord”
>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111010”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Center”
>>>>(0040,A730)	SQ	Content Sequence	1
>>>>>(0040,A010)	CS	Relationship Type	“SELECTED FROM”
>>>>>(0040,DB73)	UL	Referenced Content Item Identifier	Reference to image, based on node position (x, y, z) in the image library.
>>>>(0070,0022)	FL	Graphic Data	The coordinates (Column, Row) of the center point of the detection.
>>>>(0070,0023)	CS	Graphic Type	“POINT”
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“SCoord”
>>>>(0040,A043)	SQ	Concept-name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111041”
>>>>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Outline”
>>>>(0040,A730)	SQ	Content Sequence	1
>>>>>(0040,A010)	CS	Relationship Type	“SELECTED FROM”
>>>>>(0040,DB73)	UL	Referenced Content Item Identifier	Reference to image based on node position in the image library.
>>>>(0070,0022)	FL	Graphic Data	The coordinates that define the outline of the calcification cluster. This will contain a list of points (column, row pairs) where straight lines are to be drawn from each point and the first and last vertices are equal to enclose the detection.
>>>>(0070,0023)	CS	Graphic Type	“POLYLINE”

Table 45 - Summary of Detections (TID 4000, TID 4015, TID 4017, TID 4019, TID 4023)

Group and Element	VR	Description	Value
>(0040,A010)	CS	Relationship Type	“CONTAINS”
>(0040,A040)	CS	Value Type	“CODE”
>(0040,A043)	SQ	Concept-name Code Sequence	1
>>(0008,0100)	SH	Code Value	“111064”
>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>(0008,0104)	LO	Code Meaning	“Summary of Detections”
>(0040,A168)	SQ	Concept Code Sequence	1
>>(0008,0100)	SH	Code Value	“111222” if successful. “111223” if partially succeeded. “111224” if failed.
>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>(0008,0104)	LO	Code Meaning	“Succeeded”, “Partially Succeeded”, or “Failed”
>(0040,A730)	SQ	Content Sequence	Can have a container sequence for successful detections and another container for failed detections
>>(0040,A010)	CS	Relationship Type	“INFERRED FROM”
>>(0040,A040)	CS	Value Type	“CONTAINER”
>>(0040,A043)	SQ	Concept Name Code Sequence	1
>>>(0008,0100)	SH	Code Value	“111063” for successful detections. “111025” for failed detections
>>>(0008,0102)	SH	Coding Scheme Designator	“DCM”
>>>(0008,0104)	LO	Code Meaning	“Successful Detections” or “Failed Detections”
>>(0040,A050)	CS	Continuity of Content	“SEPARATE”
>>(0040,A730)	SQ	Content Sequence	Two sequences shall exist, one for densities and one for calcifications.
>>>(0040,A010)	CS	Relationship Type	“CONTAINS”
>>>(0040,A040)	CS	Value Type	“CODE”
>>>(0040,A043)	SQ	Concept Name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111022”
>>>>(0008,0102)	SH	Coding Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Detection Performed”
>>>(0040,A168)	SQ	Concept Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“F-01796” or “129793001”
>>>>(0008,0102)	SH	Coding Scheme Designator	“SRT” or “SCT”
>>>>(0008,0102)	SH	Coding Scheme Version	“1.1”
>>>>(0008,0104)	LO	Code Meaning	“Mammography breast density”
>>>(0040,A730)	SQ	Content Sequence	1
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“TEXT”
>>>>(0040,A043)	SQ	Concept Name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111001”
>>>>>(0008,0102)	SH	Coding Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Algorithm Name”
>>>>>(0040,A160)	UT	Text Value	“ProFound AI 3D”, “ProFound AI 2D”, or “iCAD PowerLook”
>>>(0040,A730)	SQ	Content Sequence	1
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“TEXT”
>>>>(0040,A043)	SQ	Concept Name Code Sequence	1

>>>>>(0008,0100)	SH	Code Value	“111003”
>>>>>(0008,0102)	SH	Coding Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Algorithm Version”
>>>>(0040,A160)	UT	Text Value	If SecondLook Digital CAD: “7.2-Z” where Z equals the operating point. L = Low Op Point M = Medium Op Point H = High Op Point  If ProFound AI:  “X.y.y.y-Z” for ProFound AI, where X is the major revision and y is the minor revision, and where Z equals the operating point. L = Low Op Point M = Medium Op Point H = High Op Point
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,DB73)	UL	Referenced Content Item Identifier	X\Y\Z, which represents the reference node position of the image processed.
>>(0040,A730)	SQ	Content Sequence	1
>>>(0040,A010)	CS	Relationship Type	“CONTAINS”
>>>(0040,A040)	CS	Value Type	“CODE”
>>>(0040,A043)	SQ	Concept Name Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“111022”
>>>>(0008,0102)	SH	Coding Scheme Designator	“DCM”
>>>>(0008,0104)	LO	Code Meaning	“Detection Performed”
>>>(0040,A168)	SQ	Concept Code Sequence	1
>>>>(0008,0100)	SH	Code Value	“F-01775” or “129769006”
>>>>(0008,0102)	SH	Coding Scheme Designator	“SRT” or “SCT”
>>>>(0008,0103)	SH	Coding Scheme Version	“1.1”
>>>>(0008,0104)	LO	Code Meaning	“Calcification Cluster”
>>>(0040,A730)	SQ	Content Sequence	1
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“TEXT”
>>>>(0040,A043)	SQ	Concept Name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111001”
>>>>>(0008,0102)	SH	Coding Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Algorithm Name”
>>>>(0040,A160)	UT	Text Value	“iCAD PowerLook”, “ProFound AI 3D”, or “ProFound AI 2D”
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,A040)	CS	Value Type	“TEXT”
>>>>(0040,A043)	SQ	Concept Name Code Sequence	1
>>>>>(0008,0100)	SH	Code Value	“111003”
>>>>>(0008,0102)	SH	Coding Scheme Designator	“DCM”
>>>>>(0008,0104)	LO	Code Meaning	“Algorithm Version”
>>>>(0040,A160)	UT	Text Value	If SecondLook Digital CAD: “7.2-Z”, where Z equals the operating point.

			<p>L = Low Op Point  M = Medium Op Point  H = High Op Point</p> <p>If ProFound AI:</p> <p>“X.y.y-Z” for ProFound AI, where X is the major revision and y is the minor revision, and where Z equals the operating point.  L = Low Op Point  M = Medium Op Point  H = High Op Point</p>
>>>(0040,A730)	SQ	Content Sequence	Repeat this sequence for the number of images that were processed successfully or that failed based on its container.
>>>>(0040,A010)	CS	Relationship Type	“HAS PROPERTIES”
>>>>(0040,DB73)	UL	Referenced Content Item Identifier	X\Y\Z, which represents the reference node position of the image processed.

**Table 46 - Summary of Analyses (TID 4000, TID 4016)**

<b>Group and Element</b>	<b>VR</b>	<b>Description</b>	<b>Value</b>
>(0040,A010)	CS	Relationship Type	“CONTAINS”
>(0040,A040)	CS	Value Type	“CODE”
>(0040,A043)	SQ	Concept-name Code Sequence	1
>>(0008,0100)	SH	Code Value	“111065”
>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>(0008,0104)	LO	Code Meaning	“Summary of Analyses”
>(0040,A168)	SQ	Concept Code Sequence	1
>>(0008,0100)	SH	Code Value	“111225” not attempted.
>>(0008,0102)	SH	Code Scheme Designator	“DCM”
>>(0008,0104)	LO	Code Meaning	“Not Attempted”

**3.3.6.8.2 Grayscale Softcopy Presentation State (GSPS)**

**3.3.6.8.2.1 Storage of CAD Results – Grayscale Softcopy Presentation State (GSPS)**

The AIM Container will process each image to determine the existence of any suspicious regions. A single grayscale softcopy presentation state object is created per case. The presentation state gives locations of the suspicious findings where ellipses are used to identify densities and rectangles are used to identify calcification clusters.

**Table 47 – Grayscale Softcopy Presentation State (GSPS) IOD Modules**

<b>IE</b>	<b>Module</b>	<b>DICOM Reference</b>	<b>Document Reference</b>	<b>Usage</b>
Patient	Patient	PS 3.3 – 2023 C.7.1.1	Table 48	M
Study	General Study	PS 3.3 – 2023 C.7.2.1	Table 49	M
Series	General Series	PS 3.3 – 2023 C.7.3.1	Table 50	M
	Presentation Series	PS 3.3 – 2023 C.11.9	Table 51	M
Equipment	General Equipment	PS 3.3 – 2023 C.7.5.1		U
			Table 52	
Presentation State	Presentation State	PS 3.3 – 2023 C.11.10	Table 54	M
	Displayed Area	PS 3.3 – 2023 C.10.4	Table 55	M
	Graphic Annotation	PS 3.3 – 2023 C.10.5	Table 56	C
	Graphic Layer	PS 3.3 – 2023 C.10.7	Table 57	C
	Softcopy Presentation LUT	PS 3.3 – 2023 C.11.6	Table 58	M
	SOP Common	PS 3.3 – 2023 C.12.1	Table 59	M



**Table 48 - Patient Module Attributes – ref. PS 3.3 - 2023 C.7.1.1**

Group and Element	VR	Type	Description	Value
(0010,0010)	PN	2	Patient's Name	Patient's full name obtained from the image header.
(0010,0020)	LO	2	Patient ID	Primary hospital identification number or code for the patient obtained from the image header.
(0010,0030)	DA	2	Patient's Birth Date	Birth date of the patient obtained from the image header.
(0010,0040)	CS	2	Patient's Sex	Sex of the named patient obtained from the image header. Enumerated Values: M = male F = female O = other
(0010,1010)	AS	3	Patient's Age	Age of the patient obtained from the image header.

**Table 49 – General Study Attributes – ref. PS 3.3 - 2023 C.7.2.1**

Group and Element	VR	Type	Description	Value
(0020,000D)	UI	1	Study Instance UID	Unique identifier for the study.
(0008,0020)	DA	2	Study Date	Date the CAD output was created.
(0008,0030)	TM	2	Study Time	Time the CAD output was created.
(0008,0090)	PN	2	Referring Physician's Name	Name of the patient's referring physician.
(0020,0010)	SH	2	Study ID	User or equipment generated study ID obtained from image header.
(0008,0050)	SH	2	Accession Number	A number that identifies the order for the study obtained from the image header.
(0008,1030)	LO	3	Study Description	Configurable study description string and also configurable to append breast composition or percent glandular tissue values.

**Table 50 – General Series Attributes – ref. PS 3.3 - 2023 C.7.3.1**

Group and Element	VR	Type	Description	Value
(0008,0060)	CS	1	Modality	“PR” for GSPS Configurable for PDF, default “OT” Configurable for SC, default “MG”
(0020,000E)	UI	1	Series Instance UID	Unique identifier for the series.
(0020,0011)	IS	2	Series Number	A configurable number that identifies the series, with the default being “1”
(0020,0060)	CS	2C	Laterality	Laterality of body part examined (GSPS only): ”R” = right “L” = left
(0008,103E)	LO	3	Series Description	Configurable series description string and also configurable to append breast

				composition or percent glandular tissue values.
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**Table 51 – Presentation Series Attributes – ref. PS 3.3 - 2023 C.11.9**

Group and Element	VR	Type	Description	Value
(0008,0060)	CS	1	Modality	“PR”

**Table 52 – General Equipment Attributes – ref. PS 3.3 - 2023 C.7.5.1**

Group and Element	VR	Type	Description	Value
(0008,0070)	LO	2	Manufacturer	Configurable string defaulted to “iCAD, Inc.”
(0018,1020)	LO	3	Software Versions	Version of CAD. “X.y.y-Z” for ProFound AI, where X is the major revision and y is the minor revision, and where Z equals the operating point. L = Low Op Point M = Medium Op Point H = High Op Point
(0008,0080)	LO	3	Institution Name	Uses Institution Name (0008,0080) of image
(0008,0081)	ST	3	Institution Address	Uses Institution Address (0008,0081) of image
(0008,1010)	SH	3	Station Name	Configurable station name string or configurable to use the station name of the received images.
(0008,1090)	LO	3	Manufacturers Model Name	Version of CAD. Can be configurable to add manufacturer name to the front of the string

**Table 53 – Secondary Capture Image Equipment Module Attributes – Mandatory - ref. PS 3.3 - 2023 C.8.6.1**

Group and Element	VR	Type	Description	Value
(0008,0064)	CS	1	Conversion Type	WSD
(0008,0060)	CS	3	Modality	MG
(0018,1010)	LO	3	Secondary Capture Device ID	User defined identification of the device that converted the image. Default iCAD CAD
(0018,1016)	LO	3	Secondary Capture Device Manufacturer	iCAD, Inc.
(0018,1018)	LO	3	Secondary Capture Device Manufacturer’s Model Name	Density Assessment
(0018,1019)	LO	3	Secondary Capture Device Software Version	Manufacturer’s designation of software version of the Secondary Capture Device.
(0018,1022)	SH	3	Video Image Format Acquired	Not used
(0018,1023)	LO	3	Digital Image Format Acquired	Not used

**Table 54 – Presentation State Attributes – ref. PS 3.3 - 2023 C.11.10**

Group and Element	VR	Type	Description	Value
(0020,0013)	1	IS	Instance Number	A number that identifies this presentation (SOP Instance) obtained from the image header.
(0070,0080)	1	VS	Presentation Label	A label that is used to identify this presentation. Combination of laterality and view.
(0070,0081)	2	LO	Presentation Description	ProFound AI 3D or ProFound AI 2D
(0070,0082)	1	DA	Presentation Creation Date	Date on which this presentation was created.
(0070,0083)	1	TM	Presentation Creation Time	Time at which this presentation was created.
(0070,0084)	2	PN	Presentation Creator’s Name	ProFound AI 3D or ProFound AI 2D
(0008,1115)	1	SQ	Referenced Series Sequence	Sequence of Repeating Items where each Item includes the Attributes of one or more Series.
>(0020,000E)	1C	UI	Series Instance UID	Unique identifier of a Series that is part of this Study.
>(0008,1140)	1C	SQ	Referenced Image Sequence	Sequence of Repeating Items where each Item provides reference to a selected set of Image SOP Class/SOP Instance pairs that are part of this Study and the Series defined by Series Instance UID (0020,000E).
>>(0008,1150)	1C	UI	Referenced SOP Class UID	Uniquely identifies the referenced SOP Class.
>>(0008,1155)	1C	UI	Referenced SOP Instance UID	Uniquely identifies the referenced SOP Instance.
>>(0008,1160)	1C	IS	Referenced Frame Number	For ProFound AI – 3D, this will contain a frame reference for every slice that contains a detection that needs to be drawn. This will not exist for ProFound AI – 2D.

**Table 55 – Displayed Area Attributes – ref. PS 3.3 - 2023 C.10.4**

Group and Element	VR	Type	Description	Value
(0070,005A)	SQ	1	Displayed Area Selection Sequence	A sequence of Items each of which describes the displayed area selection for a group of images or frames.
>(0008,1140)	SQ	1C	Referenced Image Sequence	Sequence of Repeating Items where each Item provides reference to a selected set of Image SOP Class/SOP Instance pairs that are defined in the Presentation State Module.
>>(0008,1150)	UI	1C	Referenced SOP Class UID	Uniquely identifies the referenced SOP Class.
>>(0008,1155)	UI	1C	Referenced SOP Instance UID	Uniquely identifies the referenced SOP Instance.
>(0070,0052)	SL	1	Displayed Area Top Left Hand Corner	The top left pixel in the referenced image to be displayed, given as column\row. Column is the horizontal offset (X) and row is the vertical offset (Y) relative to the origin of the pixel data before spatial transformation, which is “1\1”.

>(0070,0053)	SL	1	Displayed Area Bottom Right Hand Corner	The bottom right pixel in the referenced image to be displayed, given as column\row. Column is the horizontal offset (X) and row is the vertical offset (Y) relative to the origin of the pixel data before spatial transformation, which is "1\1".
>(0070,0100)	CS	1	Presentation Size Mode	Manner of selection of display size: "SCALE TO FIT"
>(0070,0101)	DS	1C	Presentation Pixel Spacing	Physical distance between the center of each pixel in the referenced image, specified by a numeric pair – adjacent row spacing adjacent column spacing in mm obtained from image header.

**Table 56 – Graphic Annotation Attributes – ref. PS 3.3 - 2023 C.10.5**

Group and Element	VR	Type	Description	Value
(0070,0001)	SQ	1	Graphic Annotation Sequence	A sequence of Items of which represents a group of annotations composed of graphics and text.
>(0008,1140)	SQ	1C	Referenced Image Sequence	Sequence of Repeating Items where each Item provides reference to a selected set of Image SOP Class/SOP Instance pairs that are defined in the Presentation State Module.
>>(0008,1150)	UI	1C	Referenced SOP Class UID	Uniquely identifies the referenced SOP Class.
>>(0008,1155)	UI	1C	Referenced SOP Instance UID	Uniquely identifies the referenced SOP Instance.
>(0070,0002)	CS	1	Graphic Layer	The layer defined in the Graphic Layer Module in which the graphics or text is to be rendered. "LAYER_#", where # represents a new frame that needs annotations.
>(0070,0008)	SQ	1C	Text Object Sequence	Sequence that describes a text annotation.
>>(0070,0003)	CS	1C	Bounding Box Annotation Units	Units of measure for the axes of the text bounding box. "PIXEL"
>>(0070,0006)	ST	1	Unformatted Text Value	A string of text containing the software version and the number of calcification clusters and densities found.
>>(0070,0010)	FL	1C	Bounding Box Top Left Hand Corner	Location of the Top Left Hand Corner (TLHC) of the bounding box in which Unformatted Text Value (0070,0006) is to be displayed, in Bounding Box Annotation Units (0070,0003), given as column\row. Column is the horizontal offset and row is the vertical offset. This is configurable through the GUI.
>>(0070,0011)	FL	1C	Bounding Box Bottom Right Hand Corner	Location of the Bottom Right Hand Corner (BRHC) of the bounding box in which Unformatted Text Value (0070,0006) is to be displayed, in Bounding Box Annotation Units (0070,0003), given as column\row. Column is the horizontal offset and row is the vertical offset. This is configurable through the GUI.
>>(0070,0012)	CS	1C	Bounding Box Text Horizontal Justification	Location of the text relative to the vertical edges of the bounding box: "CENTER", "LEFT", or "RIGHT"
>(0070,0009)	SQ	1C	Graphic Object Sequence	Sequence that describes a graphic annotation.
>>(0070,0005)	CS	1	Graphic Annotation Units	Units of measure for the axes of the graphic annotation: "PIXEL"
>>(0070,0020)	US	1	Graphic Dimensions	"2"
>>(0070,0021)	US	1	Number of Graphic Points	Number of data points in this graphic.

>>(0070,0022)	FL	1	Graphic Data	Coordinates that specify this graphic annotation.
>>(0070,0023)	CS	1	Graphic Type	The shape of graphic that is to be drawn. "POLYLINE
>>(0070,0024)	CS	1C	Graphic Filled	Whether or not the closed graphics element is displayed as filled or as an outline. "N" = No

**Table 57 – Graphic Layer Attributes – ref. PS 3.3 - 2023 C.10.7**

Group and Element	VR	Type	Description	Value
(0070,0060)	SQ	1	Graphic Layer Sequence	A sequence of Items each of which represents a single layer in which graphics are rendered.
>(0070,0002)	CS	1	Graphic Layer	A string which identifies the layer. "LAYER_#", where # represents a new frame that needs annotations.
>(0070,0062)	IS	1	Graphic Layer Order	An integer indicating the order in which it is recommended that the layer be rendered, if the display is capable of distinguishing. Lower numbered layers are to be rendered first. Configurable to all be "1" or to increment per detected frame.
>(0070,0066)	US	3	Graphic Layer Recommended Display Grayscale Value	A default single gray unsigned value in which it is recommended that the layer be rendered on a monochrome display. The units are specified in P-Values from minimum of 0000H (black) up to a maximum of FFFFH (white). "32767"

**Table 58 – Softcopy Presentation LUT Attributes – ref. PS 3.3 - 2023 C.11.6**

Group and Element	VR	Type	Description	Value
(2050,0020)	CS	1C	Presentation LUT Shape	Specifies predefined Presentation LUT transformation. "IDENTITY" – no further transformation necessary, input values are P-Values.

**Table 59 – SOP Common Attributes – ref. PS 3.3 - 2023 C.12.1**

Group and Element	VR	Type	Description	Value
(0008,0016)	UI	1	SOP Class UID	Uniquely identifies the SOP Class:
(0008,0018)	UI	1	SOP Instance UID	Uniquely identifies the SOP instance.

**3.3.6.8.3 Digital Mammography X-Ray**

**3.3.6.8.3.1 Storage of CAD Results – Digital Mammography X-Ray – For Presentation with CAD overlay**

The AIM Container can execute the SecondLook Digital algorithm for the processing of 2D FFDM images and place the CAD findings into the overlay module of the Digital Mammography X-Ray – For Presentation image or it can burn the CAD findings directly into the “For Presentation” image. For this to occur, the AIM Container must receive both the Digital Mammography X-Ray – For Processing and the Digital Mammography X-Ray – For Presentation images for the patient case. The AIM Container will perform its algorithms on the Digital Mammography X-Ray – For Processing images and then populate the overlay module of the Digital Mammography X-Ray – For Presentation image or burn the CAD markers into the image, where ellipses are used to identify densities and rectangles are used to identify calcification clusters. The Digital Mammography X-Ray – For Presentation image is produced internally by the AIM Container and iScreening is responsible for exporting this image to configured remote devices. This object contains information identical to how it was received, except a new SOP Instance UID is created for the updated image and the overlay plane module had been applied as described in Table 60. The AIM Container can also generate a Digital Mammography X-Ray – For Presentation image, or a Breast Tomosynthesis image, or a Secondary Capture image to provide a single “best slice” image that contains all the ProFound AI 3D findings that can be used as an overview of the processed tomosynthesis image. These images shall be populated using the required attributes from the tomosynthesis image. For ProFound AI 2D processing, the findings can exist in the Digital Mammography X-Ray – For Presentation image with the results either burnt into the pixel data or populated as an overlay plane module. ProFound AI 2D or ProFound AI 3D output populating the CAD findings as overlays shall be populated as described in Table 60.

**Table 60 – Digital Mammography X-Ray – For Presentation – Overlay Plane Module – ref. PS 3.3 - 2023 C.12.1**

Group and Element	VR	Type	Description	Value
(6000,0010)	US	1	Overlay Rows	Number of rows in the overlay
(6000,0011)	US	1	Overlay Columns	Number of columns in the overlay
(6000,0022)	CS	1	Overlay Type	“G” = Graphics
(6000,0050)	SS	1	Overlay Origin	Location of first overlay point with respect to pixels in the image, given as row\column. The upper left pixel of the image has the coordinate “1\1”.
(6000,0100)	US	1	Overlay Bits Allocated	The number of bits allocated in the overlay: ”1”
(6000,0102)	US	1	Overlay Bit Position	Bit in which overlay is stored: ”0”
(6000,3000)	OW	1C	Overlay Data	Overlay pixel data.
(6000,0022)	LO	3	Overlay Description	User defined comments about the overlay: ”iCAD, Inc.”
(6000,0045)	LO	3	Overlay Subtype	Defined term which identifies the intended purpose of the Overlay Type: ”AUTOMATED”
(6000,1500)	LO	3	Overlay Label	A user defined text string which may be used to label or name this overlay: ”PowerLook”

### 3.3.6.8.4 Secondary Capture

#### 3.3.6.8.4.1 Storage of CAD Results – Secondary Capture

The AIM Container can not only process each image to determine the existence of any suspicious regions, but it can also compute a breast composition value as defined by BI-RADS and compute a percentage of fibroglandular tissue. These values can be populated in the Mammography CAD SR, however, if a vendor does not support the parsing of the SR for these values, a Secondary Capture object can be configured to be created per case. The ProFound AI Index can be populated in the Secondary Capture object which can contain the CAD Case Score and the breast composition value. The PowerLook Density Assessment Secondary Capture object private tags are in Table 72. The ProFound AI Indexcard Secondary Capture object private tags are in Table 72 and Table 73.

**Table 61 – Secondary Capture IOD Modules**

IE	Module	DICOM Reference	Document Reference	Usage
Patient	Patient	PS 3.3 – 2023 C.7.1.1	Table 48	M
Study	General Study	PS 3.3 – 2023 C.7.2.1	Table 49	M
Series	General Series	PS 3.3 – 2023 C.7.3.1	Table 50	M
	DX Series- standard extended	PS 3.3 – 2023 C.8.11.1	Table 66	U
Equipment	General Equipment	PS 3.3 – 2023 C.7.5.1	Table 52	U
	SC Equipment	PS 3.3 – 2023 C.8.6.1	Table 53	M
Image	General Image	PS 3.3 – 2023 C.7.6.1	Table 63	M
	Image Pixel	PS 3.3 – 2023 C.7.6.3	Table 64	M
	SC Image	PS 3.3 – 2023 C.8.6.2	Table 65	M
	Modality LUT	PS 3.3 – 2023 C.11.1	Table 70	U
	VOI LUT	PS 3.3 – 2023 C.11.2	Table 71	U
	SOP Common	PS 3.3 – 2023 C.12.1	Table 59	M
	DX Image - standard extended	PS 3.3 – 2023 C.8.11.3	Table 67	U
	DX Detector- standard extended	PS 3.3 – 2023 C.8.11.4	Table 68	U
Mammography Image- standard extended	PS 3.3 – 2023 C.8.11.7	Table 69	U	

**Table 62 - General Equipment Module Attributes - Mandatory – ref. PS 3.3 - 2023 C.7.5.1**

Group and Element	VR	Type	Description	Value
(0008,0070)	LO	2	Manufacturer	“iCAD, Inc.”
(0008,1090)	LO	3	Manufacturer’s Model Name	”iCAD PowerLook AI Mammo”
(0018,1020)	LO	3	Software Version	Version of CAD. “X.y.y-Z” for ProFound AI, where X is the major revision and y is the minor revision, and where Z equals the operating point. L = Low Op Point M = Medium Op Point H = High Op Point



(0028,0120)	US	3	Pixel Padding Value	Single pixel value or one limit (inclusive) of a range of pixel values used in an image to pad to rectangular format or to signal background that may be suppressed. This field is only populated in Secondary Capture objects that are used for the overview image of the CAD findings
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**Table 63 – General Image Module Attributes – mandatory – ref. PS 3.3 - 2023 C.7.6.1**

Group and Element	VR	Type	Description	Value
(0020,0013)	IS	2	Instance Number	Configurable, with default being “1”
(0020,0020)	CS	2C	Patient Orientation	Null
(0008,0023)	DA	2C	Content Date	The date the Secondary Capture object was created.
(0008,0033)	TM	2C	Content Time	The time the Secondary Capture object was created.
(0008,0008)	CS	3	Image Type	“Derived/Secondary”, configurable
(0028,0301)	CS	3	Burned In Annotation	“YES” if CAD findings are burnt into the image
(0020,0062)	CS	3	Image Laterality	The laterality of the image being processed or an optional forced value to assist with hanging protocol of Density SC or Index Card SC..

**Table 64 – Image Pixel Module Attributes – mandatory – ref. PS 3.3 - 2023 C.7.6.3**

Group and Element	VR	Type	Description	Value
(0028,0002)	US	1	Samples per Pixel	Number of samples (planes) in this image. Value is set to “1”.
(0028,0004)	CS	1	Photometric Interpretation	Specifies the intended interpretation of the pixel data. Configurable with the default value being “MONOCHROME2”.
(0028,0010)	US	1	Rows	Configurable to either the number of rows in the image or a fixed value.
(0028,0011)	US	1	Columns	Configurable to either the number of columns in the image or a fixed value.
(0028,0100)	US	1	Bits Allocated	Number of bits allocated for each pixel sample. Default value is set to “8”, configurable for “16”
(0028,0101)	US	1	Bits Stored	Number of bits stored for each pixel sample. Default value is set to “12”, configurable for “8”
(0028,0102)	US	1	High Bit	Most significant bit for pixel sample data. Default value is set to “11”, configurable for “7”.
(0028,0103)	US	1	Pixel Representation	Data representation of the pixel samples. Each sample shall have the same pixel representation. Enumerated Value:

				0000H = unsigned integer.
(0028,0121)		1C	Pixel Padding Range Limit	Pixel value that represents one limit (inclusive) of a range of padding values used together with Pixel Padding Value (0028,0120) as defined in the General Equipment Module and populated from the processed image. This field is only populated in Secondary Capture objects that are used for the overview image of the CAD findings
(7FE0,0010)	OW or OB	1	Pixel Data	A data stream of the pixel samples that comprise the Image.

**Table 65 – SC Image Module Attributes – mandatory – ref. PS 3.3 - 2023 C.8.6.2**

Group and Element	VR	Type	Description	Value
(0018,1012)	DA	3	Date of Secondary Capture	Date the Secondary Capture object was created
(0018,1014)	TM	3	Time of Secondary Capture	Time the Secondary Capture object was created

**Table 66 – DX Series Module Attributes – optional – ref. PS 3.3 - 2023 C.8.11.1**

NOTE: These fields are only populated in Secondary Capture objects that are used for the overview image of the CAD findings

Group and Element	VR	Type	Description	Value
(0008,0068)	CS	1	Presentation Intent Type	Identifies the intent of the images that are contained within this Series: “FOR PRESENTATION”

**Table 67 – DX Image Module – optional – ref. PS 3.3 - 2023 C.8.11.3**

NOTE: These fields are only populated in Secondary Capture objects that are used for the overview image of the CAD findings

Group and Element	VR	Type	Description	Value
(0028,1040)	CS	1	Pixel Intensity Relationship	The relationship between the Pixel sample values and the X-Ray beam intensity from the processed image.
(0028,1041)	SS		Pixel Intensity Relationship Sign	The sign of the relationship between the Pixel sample values stored in Pixel Data (7FE0,0010) and the X-Ray beam intensity from the processed image
(2050,0020)	CS	1	Presentation LUT Shape	Specifies an identity transformation for the Presentation LUT, other than to account for the value of Photometric Interpretation (0028,0004), such that the output of all grayscale transformations defined in the IOD containing this Module are defined to be P-Values from the processed image.

(0028,2110)	CS	1	Lossy Image Compression	Specifies whether an Image has undergone lossy compression (at a point in its lifetime) from the processed image.
(0028,1055)	LO	3	Window Center & Width Explanation	Free form explanation of the meaning of the Window Center and Width. Multiple values correspond to multiple Window Center and Width values from the processed image.

**Table 68 – DX Detector Module Attributes – optional – ref. PS 3.3 - 2023 C.8.11.4**

NOTE: These fields are only populated in Secondary Capture objects that are used for the overview image of the CAD findings

Group and Element	VR	Type	Description	Value
(0018,1164)	DS	1	Imager Pixel Spacing	The imager pixel spacing value from the processed image.

**Table 69 – Mammography Image Module – optional – ref. PS 3.3 - 2023 C.8.11.7**

NOTE: These fields are only populated in Secondary Capture objects that are used for the overview image of the CAD findings

Group and Element	VR	Type	Description	Value
(0008,2218)	SQ	2	Anatomic Region Sequence	Sequence that identifies the anatomic region of interest in this Instance
>(0008,0100)	SH	1C	Code Value	The identifier of the Coded Entry: “T-04000”
>(0008,0102)	SH	1C	Coding Scheme Designator	The identifier of the coding scheme in which the Coded Entry is defined: “SNM3”
>(0008,0104)	LO	1	Code Meaning	Text that conveys the meaning of the Coded Entry: “Breast”

**Table 70 – Modality LUT Module Attributes – mandatory – ref. PS 3.3 - 2023 C.11.1**

Group and Element	VR	Type	Description	Value
(0028,1052)	DS	1C	Rescale Intercept	Value is set to “0”.
(0028,1053)	DS	1C	Rescale Slope	Value is set to “1”
(0028,1054)	LO	1C	Rescale Type	Value is set to “US”

**Table 71 – VOI LUT Module Attributes – mandatory – ref. PS 3.3 - 2023 C.11.2**

Group and Element	VR	Type	Description	Value
(0028,1050)	DS	1C	Window Center	Configurable value with default set to “2047” for 12-bit output, “186” for 8-bit
(0028,1051)	DS	1C	Window Width	Configurable value with default set to “4095”, “147” for 8-bit

**Table 72 – PowerLook Density Assessment Private Attributes**

Group and Element	VR	Type	Description	Value
(2239, 0011)	LO	1	PowerLook Density Assessment private block	“ICAD_DA_11”
(2239,1102)	LO	1	PowerLook Density Assessment version and build	PowerLook Density Assessment version and build (VM 2)
(2239,1103)	LO	1	PowerLook Density Assessment Name	“Density Assessment”
(2239,1104)	SH	1	Value of Density Assessment in BI-RADS 4	“1”, “2”, “3”, “4”
(2239,1105)	SH	1	Value of Density Assessment in BI-RADS 5	“a”, “b”, “c”, “d”
(2239,1106)	DS	1	PowerLook Density Assessment score	Density Assessment score
(2239,1107)	SH	1C	PowerLook Density Assessment plus or minus indicator	“+”, “-“
(2239,1108)	DS	1C	Left breast tissue density	Range 0-100%
(2239,1109)	DS	1C	Left breast area	Value in square centimeters
(2239,110A)	DS	1C	Left breast tissue area	Value in square centimeters
(2239,110B)	DS	1C	Right breast tissue density	Range 0-100%
(2239,110C)	DS	1C	Right breast area	Value in square centimeters
(2239,110D)	DS	1C	Right breast tissue area	Value in square centimeters

**Table 73 – ProFound AI Case Score Private Attributes**

Group and Element	VR	Type	Description	Value
(2239,0010)	LO	1	ProFound AI private block	“ICAD_PFAI_10”
(2239,1002)	LO	1	ProFound AI version and build	ProFound AI version and build (VM 2)
(2239,1003)	LO	1	ProFound AI Case Score Name	“Case Score”
(2239,1004)	DS	1	ProFound AI Case Score Value	Value of Case Score, range 0-100%

## **4    Communication Profiles**

This is not applicable for the AIM Container, as it is not an external interface. See the GE Edison Health Link iScreening DICOM Conformance Statement for specific information regarding communication profiles.

### **4.1    OSI Stack**

This is not applicable for AIM Container, as it is not an external interface. See the GE Edison Health Link iScreening DICOM Conformance Statement for specific information regarding the OSI stack.

### **4.2    TCP/IP Stack**

This is not applicable for the AIM Container, as it is not an external interface. See the GE Edison Health Link iScreening DICOM Conformance Statement for specific information regarding the TCP/IP stack.

#### **4.2.1    Physical Media Support**

This is not applicable for the AIM Container, as it is not an external interface. See the GE Edison Health Link iScreening DICOM Conformance Statement for specific information regarding physical media support.

## **5    Extensions/Specializations/Privatizations**

The AIM Container uses private groups in Secondary Capture as specified in PowerLook Density Assessment Table 72 and ProFound AI Case Score Table 73. When the AIM Container exports a Secondary Capture image that is used as a CAD overview of the ProFound AI processing, the images are Standard Extended Secondary Capture Image Storage SOP Class objects (see Section 3.3.6.8.4 for a complete description).

## **6    Configuration**

This is not applicable for AIM Container, as it is not an external interface. See the GE Edison Health Link iScreening DICOM Conformance Statement for specific information regarding configuration of DICOM application entity and DICOM listen port information.

## **7    Support for Extended Character Sets**

The AIM Container supports the ISO-IR 100 Latin-1 supplementary character set and includes this value for the Specific Character Set Attribute (0008, 0005).

## **8    End of Document**