

DICOM Conformance Statement

Application Annex:

MR Applications on Advanced Visualization Workspace V16



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1. Overview

For information about Chapter 1 till Chapter 8, please refer 1937698 DICOM Conformance Statement - Advanced Visualization Workspace V16 – General

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3. Introduction

This DICOM Conformance Statement annex is applicable to the MR Applications on Advanced Visualization Workspace V16 hosting platform, later referred to as MR Applications. In general the MR Applications are used for viewing and analyzing MR Images.

The following analysis packages are offered by MR Applications (licensing might be applicable):

- MR Image Algebra
- MR Image Cumulation
- MR Diffusion
- MR T1 Perfusion
- MR Neuro Perfusion
- MR Permeability
- MR Cartilage Assessment
- MR Spectroscopy
- MR Cardiac Analysis
- MR Diffusion with Fiber Track
- MR Brain Function Analysis
- MR Neuro Quant Viewer*
- MR Longitudinal Brain Analysis (LOBI)
- MR ADA (Advanced Diffusion Analysis)
- MR Liver Health
- AV Cardiac MR
- AV Viewer
- AV Vascular
- Caas 4D Flow and Strain*
- Qflow
- Whole Heart

Note*: Caas 4D Flow and Strain, and MR Neuro Quant Viewer are 3rd party applications hosted in AVW platform. Refer to the respective vendor DCS for conformance.

3.1. Revision History

Table 3-1: Revision History

Revision	Date	Product Version(s)	Change
01	01-Dec-2025	V16	Initial release of Advanced Visualization Workspace V16
02	29-Jun-2026	V16	Updated for release candidate
03	08-Jul-2026	V16	Updated analysis packages

3.2. Audience

This document is intended for the audience listed below. It is assumed that the reader has a working knowledge of the DICOM Standard.

The document structure was designed for easier access to relevant information for different user groups:

- Clinical Users, who want to get an overview of the implemented interoperability features of the system can see Section 4 Implementation Model.
- Personnel involved in Sales can use the information in Section 1 to assess the compatibility between different systems involved in a sales situation.
- System Integrators can use information in Section 6 during system installation and also information from Section 5 Service and Interoperability Description for details regarding the implemented services.
- Field Service Engineers can use the details from Section 5 Service and Interoperability Description and from Section 7 Network and Media Communication Details for troubleshooting.
- Hospital IT staff focusing on security can use the details provided in Section 8 Security regarding implemented Security features.
- Research Personnel may be interested in using information provided in Appendix A Information Object Definitions (IODs) or Appendix B Structured Report Content Encoding to get detailed imaging and measurement information.

3.3. Remarks

The scope of this DICOM Conformance Statement is to facilitate integration between Advanced Visualization Workspace V16 and other DICOM products. The Conformance Statement should be read and understood in conjunction with the DICOM Standard. DICOM by itself does not guarantee interoperability.

- The Conformance Statement does, however, facilitate a first-level comparison for interoperability between different applications supporting compatible DICOM functionality.

- This Conformance Statement should not replace validation with other DICOM equipment to ensure proper exchange of intended information. In fact, it is the user's responsibility to perform the following validation activities:
 - The comparison of Conformance Statements from Advanced Visualization Workspace V16 and other DICOM conformant equipment is the first step towards assessing interconnectivity and interoperability between those systems.
 - Test procedures should be defined and executed to validate the required level of interoperability with specific DICOM conformant equipment, as established by the healthcare facility.

3.4. Terms and Definitions

The following list includes DICOM Terms, that are used throughout this Conformance Statement:

Table 3-2: Terms and Definitions

Abstract Syntax	The information agreed to be exchanged between applications, generally equivalent to a Service/Object Pair (SOP) Class. Examples: Verification SOP Class, Modality Worklist Information Model Find SOP Class, Computed Radiography Image Storage SOP Class.
Application Entity (AE)	A representation of the external behavior of an application process in terms of DICOM Network Services, Web Services and/or media exchange capabilities implemented in one or more roles. A single device may have multiple Application Entities.
Application Entity Title (AET)	The externally known name of an Application Entity, used to identify a DICOM application to other DICOM applications on the network.
Application Context	The specification of the type of communication used between Application Entities. Example: DICOM network protocol.
Association	A network communication channel set up between Application Entities.
Attribute	A unit of information in an Information Object Definition; a Data Element identified by a tag. The information may be a complex data structure (Sequence), itself composed of lower-level data elements. Examples: Patient ID (0010,0020), Accession Number (0008,0050), Photometric Interpretation (0028,0004), Procedure Code Sequence (0008,1032).
Data Element	A unit of information as defined by a single entry in the data dictionary. An encoded Information Object Definition (IOD) Attribute that is composed of, at a minimum, three fields: a Data Element Tag, a Value Length, and a Value Field. For some specific Transfer Syntaxes, a Data Element also contains a VR Field where the Value Representation of that Data Element is specified explicitly
Information Object Definition (IOD)	The specified set of Attributes that comprise a type of data object; does not represent a specific instance of the data object, but rather a class of similar data objects that have the same properties. Examples: MR Image IOD, CT

	Image IOD, Print Job IOD. The Attributes within an IOD may be specified as Mandatory (Type 1), Required but possibly unknown (Type 2), or Optional (Type 3), and there may be conditions associated with the use of an Attribute (Types 1C and 2C).
Media Application Profile	The specification of DICOM information objects and encoding exchanged on removable media (e.g., CDs).
Module	A set of Attributes within an Information Object Definition that are logically related to each other. Example: Patient Module includes Patient's Name, Patient ID, Patient's Birth Date, and Patient's Sex.
Negotiation	First phase of Association establishment that allows Application Entities to agree on the types of data to be exchanged and how that data will be encoded.
Origin Server	Refers to the program that can originate authoritative responses to HTTP requests for a given Target Resource. The term "server" refers to any implementation that receives a web service request message from a user agent.
Presentation Context	The set of DICOM Network Services used over an Association, as negotiated between Application Entities; includes Abstract Syntaxes and Transfer Syntaxes.
Private SOP Class	A SOP Class that is not defined in the DICOM Standard but is published in an implementation's Conformance Statement.
Protocol Data Unit (PDU)	A packet (piece) of a DICOM message sent across the network. Devices must specify the maximum size packet they can receive for DICOM messages.
Security Profile	A set of mechanisms, such as encryption, user authentication, or digital signatures, used by an Application Entity to ensure confidentiality, integrity, and/or availability of exchanged DICOM data.
Service Class Provider (SCP)	Role of an Application Entity that provides a DICOM network service; typically, a server that performs operations requested by another Application Entity (Service Class User). Examples: Picture Archiving and Communication System (image storage SCP, and image query/retrieve SCP), Radiology Information System (modality worklist SCP).
Service Class User (SCU)	Role of an Application Entity that uses a DICOM Network Service; typically, a client. Examples: imaging modality (image storage SCU, and modality worklist SCU), imaging workstation (image query/retrieve SCU).
Service/Object Pair Class (SOP Class)	The specification of the network or media transfer (service) of a particular type of data (object); the fundamental unit of a DICOM interoperability specification. Examples: Ultrasound Image Storage Service, Basic Grayscale Print Management.

Service/Object Pair Instance (SOP Instance)	An information object; a specific occurrence of information exchanged in a SOP Class. E.g., a specific X-ray image.
Specialized SOP Class	A SOP Class that is derived from the Standard that is specialized by additional type 1, 1C, 2, 2C, or 3 Attributes, by enumeration of specific permitted Values for Attributes, or by enumeration of specific permitted Templates. The additional Attributes may either be drawn from the Data Dictionary in PS3.6 or may be Private Attributes.
Standard SOP Class	A SOP Class defined in the Standard, and that is implemented and used without any modifications.
Standard Extended SOP Class	A SOP Class that is defined in the standard, and that is extended by additional type 3 Attributes. The additional Attributes may either be drawn from the DICOM Data Dictionary in PS3.6 or may be Private Attributes.
Tag	A 32-bit identifier for a Data Element, represented as a pair of four-digit hexadecimal numbers, the "group" and the "element". If the "group" number is odd, the tag is for a private (manufacturer-specific) data element. Examples: (0010,0020) [Patient ID], (07FE,0010) [Pixel Data], (0019,0210) [private data element].
Transfer Syntax	The encoding used for exchange of DICOM information objects and messages. Examples: JPEG compressed (images), Little Endian Explicit Value Representation.
TLS-Secured Port	TCP port on which an implementation accepts TLS connections to exchange DICOM information.
Unique Identifier (UID)	A globally unique "dotted decimal" string that identifies a specific object or a class of objects; an ISO-8824 Object Identifier. Examples: Study Instance UID, SOP Class UID, SOP Instance UID.
User Agent	A client in a network protocol used in communications within a client-server distributed computing system. In particular, the Hypertext Transfer Protocol (HTTP) identifies the client software originating the request, using a user-agent header, even when the client is not operated by a user.
Value Representation (VR)	The format type of an individual DICOM data element, such as text, an integer, a person's name, or a code. DICOM information objects can be transmitted with either explicit identification of the type of each data element (Explicit VR), or without explicit identification (Implicit VR) ; with Implicit VR, the receiving application must use a DICOM data dictionary to look up the format of each data element.

The following list includes product specific definitions used throughout this Conformance Statement

AVW	Advanced Visualization Workspace
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3.5. Abbreviations

Abbreviations that are used in this DICOM Conformance Statement are listed here.

Table 3-3: Abbreviations

AE	Application Entity
AET	Application Entity Title
CAD	Computer Aided Detection
CDA	Clinical Document Architecture
CID	Context Identifier
DCS	DICOM Conformance Statement
DHCP	Dynamic Host Configuration Protocol
DICOM	Digital Imaging and Communications in Medicine
ELE	Explicit VR Little Endian
FSC	File-Set Creator
FSU	File-Set Updater
FSR	File-Set Reader
IANA	Internet Assigned Numbers Authority
IHE	Integrating the Healthcare Enterprise
ILE	Implicit VR Little Endian
IOD	Information Object Definition
IPv4	Internet Protocol version 4
IPv6	Internet Protocol version 6
ISO	International Organization for Standardization
MPPS	Modality Performed Procedure Step
MWL	Modality Worklist
NEMA	National Electrical Manufacturers Association
NTP	Network Time Protocol
OID	Object Identifier
OS	Origin Server

PDU	Protocol Data Unit
PHI	Protected Health Information
PPS	Performed Procedure Step
QIDO-RS	Query based on ID for DICOM Objects by RESTful Services
RTV	Real Time Video
SCP	Service Class Provider
SCU	Service Class User
SDP	Service Description Protocol
SOP	Service-Object Pair
SPS	Scheduled Procedure Step
SR	Structured Reporting
STOW-RS	Store Over the Web by RESTful Services
TCP/IP	Transmission Control Protocol/Internet Protocol
TID	Template Identifier
UA	User Agent
UI	User Interface
UID	Unique Identifier
UL	Upper Layer
UPS	Unified Procedure Step
UPS-RS	Unified Procedure Step by RESTful Services
VR	Value Representation
WADO-RS	Web Access to DICOM Objects by RESTful Services
WADO-URI	Web Access to DICOM Objects by URI

3.6. References

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

4. Implementation Model

For information about this Section, please refer to 1937698 DICOM Conformance Statement - Advanced Visualization Workspace V16 - General

5. Service and Interoperability Description

For information about this Section, please refer to 1937698 DICOM Conformance Statement - Advanced Visualization Workspace V16 - General

6. Configuration

For information about this Section, please refer to 1937698 DICOM Conformance Statement - Advanced Visualization Workspace V16 - General

7. Network and Media Communication Details

For information about this Section, please refer to 1937698 DICOM Conformance Statement - Advanced Visualization Workspace V16 - General

8. Security

For information about this Section, please refer to 1937698 DICOM Conformance Statement - Advanced Visualization Workspace V16 - General

Annexes of MR applications

A Information Object Definitions (IODs)

This section provides the detailed content for all the SOP Instances natively created by MR applications.

Throughout the tables listed in Annex A the following codes are used for the “Source” and “Presence” columns.

In the “Source” column, the following Values can be used:

- **FIXED:** The Value is pre-defined and cannot be modified.
- **GENERATED:** The Value is generated by the system.
- **CONFIGURATION:** The Value is copied from the system configuration.
- **MWL:** The Value is copied from a Modality Worklist entry.
- **QUERY:** The Value is determined by performing a query of any of the supported Query/Retrieve Services.
- **USER:** The Value is entered by the user.
- **SCANNED:** The Value is read from a barcode scanner or similar device.
- **EMPTY:** The Attribute is sent with a zero-length Value.
- **SRC_INSTANCE:** The Value is copied from previously created/received SOP Instances.

The “Presence” columns reflect the usage of the Module, Functional Group Macro, Attributes, or Value in the Implementation and is not necessarily the same as defined in the DICOM Standard. For the “Presence” column the following Values can be used:

- **ALWAYS:** the module, functional group macro, Attributes or Value is always present.
- **CONDITIONAL:** the presence of the module, functional group macro, Attributes or Value is dependent on a condition. The condition must be listed in the "Conditions" column.
- **SRC_COPY:** The presence of the Attributes and Values depends on the availability of these in the source instances, which are used for copying this information.
- **EMPTY:** The Attribute is present but without a Value (zero length).

A.1 - Information shared across multiple IODs

A.1.1 - Common Modules

Common Table Patient Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Referenced Patient Sequence	(0008,1120)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Class UID	(0008,1150)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Instance UID	(0008,1155)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Patient's Name	(0010,0010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Patient ID	(0010,0020)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Patient's Birth Date	(0010,0030)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Patient's Birth Time	(0010,0032)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Patient's Sex	(0010,0040)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Other Patient IDs	(0010,1000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Other Patient Names	(0010,1001)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Ethnic Group	(0010,2160)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Patient Comments	(0010,4000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Issuer of Patient ID	(0010,0021)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Patient Identify Removed	(0012,0062)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
De-Identification Method	(0012,0063)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Common Table General Study Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
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Study Date	(0008,0020)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Study Time	(0008,0030)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Accession Number	(0008,0050)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Referring Physician's Name	(0008,0090)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Referring Physician Identification Sequence	(0008,0096)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Study Description	(0008,1030)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Procedure Code Sequence	(0008,1032)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Code Value	(0008,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Coding Scheme Designator	(0008,0102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Coding Scheme Version	(0008,0103)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Code Meaning	(0008,0104)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Mapping Resource	(0008,0105)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Context Group Version	(0008,0106)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Context Group Local Version	(0008,0107)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Context Group Extension Flag	(0008,010B)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Context Group Extension Creator UID	(0008,010D)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Context Identifier	(0008,010F)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Physician(s) of Record	(0008,1048)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Physician(s) of Record Identification Sequence	(0008,1049)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Name of Physician(s) Reading Study	(0008,1060)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Physician(s) Reading Study Identification Sequence	(0008,1062)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Referenced Study Sequence	(0008,1110)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Class UID	(0008,1150)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Instance UID	(0008,1155)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Study Instance UID	(0020,000D)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
Study ID	(0020,0010)	GENERATED SRC_INSTANCE	ALWAYS	CONDITIONAL			-
Requesting Service	(0032,1033)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Common Table Patient Study Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Admitting Diagnoses Description	(0008,1080)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Admitting Diagnoses Code Sequence	(0008,1084)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Patient's Age	(0010,1010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Patient's Size	(0010,1020)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Patient's Weight	(0010,1030)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Medical Alerts	(0010,2000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Allergies	(0010,2110)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Occupation	(0010,2180)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Additional Patient History	(0010,21B0)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Pregnancy Status	(0010,21C0)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Patient State	(0038,0500)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
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Common Table General Series Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Series Date	(0008,0021)	GENERATED	CONDITIONAL	ALWAYS			-
Series Time	(0008,0031)	GENERATED	CONDITIONAL	ALWAYS			-
Modality	(0008,0060)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Series Description	(0008,103E)	SRC_INSTANCE USER	CONDITIONAL	ALWAYS			-
Performing Physician's Name	(0008,1050)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Operators' Name	(0008,1070)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Referenced Performed Procedure Step Sequence	(0008,1111)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Class UID	(0008,1150)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Instance UID	(0008,1155)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Body Part Examined	(0018,0015)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Protocol Name	(0018,1030)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Patient Position	(0018,5100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Series Instance UID	(0020,000E)	GENERATED	ALWAYS	ALWAYS			-
Series Number	(0020,0011)	GENERATED	ALWAYS	ALWAYS			-
Laterality	(0020,0060)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Smallest Pixel Value in Series	(0028,0108)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Largest Pixel Value in Series	(0028,0109)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Request Attributes Sequence	(0040,0275)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Scheduled Procedure Step Description	(0040,0007)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Scheduled Protocol Code Sequence	(0040,0008)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Scheduled Procedure Step ID	(0040,0009)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Requested Procedure ID	(0040,1001)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Performed Procedure Step Start Date	(0040,0244)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Performed Procedure Step Start Time	(0040,0245)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Performed Procedure Step ID	(0040,0253)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Performed Procedure Step Description	(0040,0254)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Performed Protocol Code Sequence	(0040,0260)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Code Value	(0008,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Coding Scheme Designator	(0008,0102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Coding Scheme Version	(0008,0103)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Mapping Resource	(0008,0105)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Context Group Version	(0008,0106)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Context Group Local Version	(0008,0107)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Context Group Extension Flag	(0008,010B)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

>Context Group Extension Creator UID	(0008,010D)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Context Identifier	(0008,010F)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Comments on the Performed Procedure Step	(0040,0280)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Common Table General Equipment Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Manufacturer	(0008,0070)	FIXED	ALWAYS	ALWAYS	Philips		-
Institution Name	(0008,0080)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Institution Address	(0008,0081)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Station Name	(0008,1010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Institutional Department Name	(0008,1040)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Manufacturer's Model Name	(0008,1090)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Device Serial Number	(0018,1000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			System serial number.
Software Versions	(0018,1020)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Spatial Resolution	(0018,1050)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Date of Last Calibration	(0018,1200)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Time of Last Calibration	(0018,1201)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Pixel Padding Value	(0028,0120)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Common Table SC Equipment Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Modality	(0008,0060)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Conversion Type	(0008,0064)	FIXED	ALWAYS	ALWAYS	WSD		-
Secondary Capture Device ID	(0018,1010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Secondary Capture Device Manufacturer	(0018,1016)	FIXED	ALWAYS	ALWAYS	Philips		-
Secondary Capture Device Manufacturer's Model Name	(0018,1018)	FIXED	ALWAYS	ALWAYS	AVW		-
Secondary Capture Device Software Versions	(0018,1019)	FIXED	ALWAYS	ALWAYS	16.x		-

Common Table General Acquisition Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Acquisition Date	(0008,0022)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Acquisition DateTime	(0008,002A)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Acquisition Time	(0008,0032)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Acquisition Duration	(0018,9073)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Acquisition Number	(0020,0012)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Images in Acquisition	(0020,1002)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
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Common Table General Image Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Image Type	(0008,0008)	GENERATED	ALWAYS	ALWAYS			-
Content Date	(0008,0023)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Content Time	(0008,0033)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Instance Number	(0020,0013)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
Patient Orientation	(0020,0020)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Image Laterality	(0020,0062)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Image Comments	(0020,4000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Quality Control Image	(0028,0300)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Burned In Annotation	(0028,0301)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Lossy Image Compression	(0028,2110)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Lossy Image Compression Ratio	(0028,2112)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Icon Image Sequence	(0088,0200)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Samples per Pixel	(0028,0002)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Photometric Interpretation	(0028,0004)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Planar Configuration	(0028,0006)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Rows	(0028,0010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Columns	(0028,0011)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Pixel Aspect Ratio	(0028,0034)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Bits Allocated	(0028,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

>Bits Stored	(0028,0101)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>High Bit	(0028,0102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Pixel Representation	(0028,0103)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Smallest Image Pixel Value	(0028,0106)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Largest Image Pixel Value	(0028,0107)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Red Palette Color Lookup Table Descriptor	(0028,1101)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Green Palette Color Lookup Table Descriptor	(0028,1102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Blue Palette Color Lookup Table Descriptor	(0028,1103)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Red Palette Color Lookup Table Data	(0028,1201)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Green Palette Color Lookup Table Data	(0028,1202)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Blue Palette Color Lookup Table Data	(0028,1203)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Pixel Data	(7FE0,0010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Presentation LUT Shape	(2050,0020)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Common Table General Reference Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Referenced Image Sequence	(0008,1140)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Class UID	(0008,1150)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Instance UID	(0008,1155)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

>Purpose of Reference Code Sequence	(0040,A170)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Code Value	(0008,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Coding Scheme Designator	(0008,0102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Code Meaning	(0008,0104)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Context UID	(0008,0117)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Derivation Description	(0008,2111)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Source Image Sequence	(0008,2112)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Class UID	(0008,1150)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Instance UID	(0008,1155)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Spatial Locations Preserved	(0028,135A)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
> Purpose of Reference Code Sequence	(0040,A170)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Code Value	(0008,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Coding Scheme Designator	(0008,0102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Code Meaning	(0008,0104)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Context UID	(0008,0117)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Derivation Code Sequence	(0008,9215)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Code Value	(0008,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Coding Scheme Designator	(0008,0102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Code Meaning	(0008,0104)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Context UID	(0008,0117)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Common Table Contrast/Bolus Module

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Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Contrast/Bolus Agent	(0018,0010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contrast/Bolus Agent Sequence	(0018,0012)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contrast/Bolus Administration Route Sequence	(0018,0014)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Additional Drug Sequence	(0018,002A)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contrast/Bolus Route	(0018,1040)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contrast/Bolus Volume	(0018,1041)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contrast/Bolus Start Time	(0018,1042)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contrast/Bolus Stop Time	(0018,1043)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contrast/Bolus Total Dose	(0018,1044)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contrast Flow Rate	(0018,1046)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contrast Flow Duration	(0018,1047)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contrast/Bolus Ingredient	(0018,1048)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contrast/Bolus Ingredient Concentration	(0018,1049)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Common Table SOP Common Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Specific Character Set	(0008,0005)	GENERATED SRC_INSTANCE	CONDITIONAL	ALWAYS			-
Instance Creation Date	(0008,0012)	GENERATED	ALWAYS	ALWAYS			-
Instance Creation Time	(0008,0013)	GENERATED	ALWAYS	ALWAYS			-

Instance Creator UID	(0008,0014)	GENERATED	CONDITIONAL	ALWAYS			-
SOP Class UID	(0008,0016)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
SOP Instance UID	(0008,0018)	GENERATED	ALWAYS	ALWAYS			-
Timezone Offset From UTC	(0008,0201)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Contributing Equipment Sequence	(0018,A001)	GENERATED	CONDITIONAL	ALWAYS			-
>Manufacturer	(0008,0070)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Institution Name	(0008,0080)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Institution Address	(0008,0081)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Station Name	(0008,1010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Institutional Department Name	(0008,1040)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Manufacturer's Model Name	(0008,1090)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Device Serial Number	(0018,1000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Software Versions	(0018,1020)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Contribution DateTime	(0018,A002)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Contribution Description	(0018,A003)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Purpose of Reference Code Sequence	(0040,A170)	FIXED	ALWAYS	ALWAYS			-
>>Code Value	(0008,0100)	FIXED	ALWAYS	ALWAYS	109102		-
>>Coding Scheme Designator	(0008,0102)	FIXED	ALWAYS	ALWAYS	DCM		-
>>Code Meaning	(0008,0102)	FIXED	ALWAYS	ALWAYS	Processing Equipment		-
Instance Number	(0020,0013)	GENERATED	CONDITIONAL	ALWAYS			-

A.1.2 - Common Functional Group Macros - N/A

A.1.3 - Common Private Modules - N/A

A.1.4 - Coded Values - N/A

A.2 - MR Image Storage

Table IOD of Created MR Image Storage SOP Class Instances

IE	Module Name	Presence(Module)	Condition	Reference
Patient	Patient	ALWAYS		Patient Module
Study	General Study	ALWAYS		General Study Module
	Patient Study	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Patient Study Module
Series	General Series	ALWAYS		General Series Module
Frame of Reference	Frame of Reference	ALWAYS		Frame of Reference Module
Equipment	General Equipment	ALWAYS		General Equipment Module
Acquisition	General Acquisition	ALWAYS		General Acquisition Module
Image	General Image	ALWAYS		General Image Module
	General Reference	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	General Reference Module
	Image Plane	ALWAYS		Image Plane Module
	Image Pixel	ALWAYS		Image Pixel Module
	Contrast/Bolus	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Contrast/Bolus Module
	MR Image	ALWAYS		MR Image Module
	Overlay Plane	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Overlay Plane Module
	VOI LUT	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	VOI LUT Module
	SOP Common	ALWAYS		SOP Common Module

A.2.1 - IOD Specific Modules

Table Frame of Reference Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Frame of Reference UID	(0020,0052)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Position Reference Indicator	(0020,1040)	FIXED	ALWAYS	CONDITIONAL			-

Table Image Plane Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Slice Thickness	(0018,0050)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Spacing Between Slices	(0018,0088)	SRC_INSTANCE	SRC_COPY	SRC_COPY			
Image Position (Patient)	(0020,0032)	GENERATED	ALWAYS	ALWAYS			-
Image Orientation (Patient)	(0020,0037)	GENERATED	ALWAYS	ALWAYS			-
Slice Location	(0020,1041)	GENERATED	CONDITIONAL	ALWAYS			Value is distance between the image plane and the reference point (0, 0, and 0). Value can be negative depending on the position of the plane to the reference point.
Pixel Spacing	(0028,0030)	GENERATED	ALWAYS	ALWAYS			-

Table Image Pixel Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Samples per Pixel	(0028,0002)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Photometric Interpretation	(0028,0004)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Planar Configuration	(0028,0006)	GENERATED	CONDITIONAL	ALWAYS			-
Rows	(0028,0010)	GENERATED	ALWAYS	ALWAYS			Applied values: min: 64 - max: 2048
Columns	(0028,0011)	GENERATED	ALWAYS	ALWAYS			Applied values: min: 64 - max: 2048
Pixel Aspect Ratio	(0028,0034)	FIXED	CONDITIONAL	ALWAYS	1\1		-
Bits Stored	(0028,0101)	GENERATED	ALWAYS	ALWAYS			-
Bits Allocated	(0028,0100)	GENERATED	ALWAYS	ALWAYS			
High Bit	(0028,0102)	GENERATED	ALWAYS	ALWAYS			-
Pixel Representation	(0028,0103)	GENERATED	ALWAYS	ALWAYS			Applied value: 0
Red Palette Color Lookup Table Descriptor	(0028,1101)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Green Palette Color Lookup Table Descriptor	(0028,1102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Blue Palette Color Lookup Table Descriptor	(0028,1103)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Red Palette Color Lookup Table Data	(0028,1201)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Green Palette Color Lookup Table Data	(0028,1202)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Blue Palette Color Lookup Table Data	(0028,1203)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Pixel Data	(7FE0,0010)	GENERATED	CONDITIONAL	ALWAYS			-

Table MR Image Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Image Type	(0008,0008)	GENERATED	ALWAYS	ALWAYS			Applied values: {ORIGINAL, DERIVED}, {PRIMARY, SECONDARY}, {T2_STAR, R2, R2_STAR,T2, W, F,M, IP, OP, KTRANS, KEP, VE, VP, AUC, RELENH, MAXENH, MAXRELENH, T0,TTP , WASHIN, WASHOUT, BREVENH, AREACURV, RELCBF ,RELCBV,MTT, TTP, T0,DELAY, FIBER, ADC, EADC, M,FA,FAD, METABOLITE MAP, FMRI, D, D_STAR, PF, K, GOODNESS OF FIT},{T2_STAR, R2, R2_STAR,T2,

							W, F,M, IP, OP, KTRANS, KEP, VE, VP, AUC, RELENH, MAXENH, MAXRELENH, TO,TTP , WASHIN, WASHOUT, BREVENH, AREACURV, RELCBF ,RELCBV,MTT, TTP, TO,DELAY, FIBER, ADC, EADC, M,FA,FAD, METABOLITE MAP, FMRI, D, D_STAR, PF, K, GOODNESS OF FIT}{UNSPECIFIED}}
Scanning Sequence	(0018,0020)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Sequence Variant	(0018,0021)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Scan Options	(0018,0022)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
MR Acquisition Type	(0018,0023)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Repetition Time	(0018,0080)	GENERATED	CONDITIONAL	ALWAYS			-
Sequence Name	(0018,0024)	GENERATED	CONDITIONAL	ALWAYS			-
Echo Time	(0018,0081)	GENERATED	ALWAYS	CONDITIONAL			-
Number of Averages	(0018,0083)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Imaging Frequency	(0018,0084)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Imaged Nucleus	(0018,0085)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Echo Number(s)	(0018,0086)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Magnetic Field Strength	(0018,0087)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Spacing Between Slices	(0018,0088)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Number of Phase Encoding Steps	(0018,0089)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Echo Train Length	(0018,0091)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Percent Sampling	(0018,0093)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Percent Phase Field of View	(0018,0094)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Low R-R Value	(0018,1081)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
High R-R Value	(0018,1082)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Intervals Acquired	(0018,1083)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Intervals Rejected	(0018,1084)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Heart Rate	(0018,1088)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Reconstruction Diameter	(0018,1100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Receive Coil Name	(0018,1250)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Acquisition Matrix	(0018,1310)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
In-plane Phase Encoding Direction	(0018,1312)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Temporal Position Identifier	(0020,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Number of Temporal Positions	(0020,0105)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Samples per Pixel	(0028,0002)	SRC_INSTANCE	SRC_COPY	SRC_COPY			Always 1
Photometric Interpretation	(0028,0004)	SRC_INSTANCE	SRC_COPY	SRC_COPY	MONOCHROME 2		-
Bits Allocated	(0028,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Pixel Bandwidth	(0018,0095)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Trigger Time	(0018,1060)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Transmit Coil Name	(0018,1251)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Flip Angle	(0018,1314)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Bits Stored	(0028,0101)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
High Bit	(0028,0102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Overlay Plane Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Overlay Rows	(60xx,0010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Columns	(60xx,0011)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Description	(60xx,0022)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Type	(60xx,0040)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Subtype	(60xx,0045)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Origin	(60xx,0050)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Bits Allocated	(60xx,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Bit Position	(60xx,0102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
ROI Area	(60xx,1301)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
ROI Mean	(60xx,1302)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
ROI Standard Deviation	(60xx,1303)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Label	(60xx,1500)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Data	(60xx,3000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

A.2.2 - Functional Group Macros - N/A

A.2.3 - Private Modules - N/A

A.2.4 - Coded Values - N/A

A.3 - MR Spectroscopy Storage SOP Class

Table IOD of Created MR Spectroscopy Storage SOP Class Instances

IE	Module Name	Presence(Module)	Condition	Reference
Patient	Patient	ALWAYS		Patient Module
Study	General Study	ALWAYS		General Study Module
	Patient Study	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Patient Study Module
Series	General Series	ALWAYS		General Series Module
	MR Series	ALWAYS		MR Series Module
Frame of Reference	Frame of Reference	ALWAYS		Frame of Reference Module
Equipment	General Equipment	ALWAYS		General Equipment Module
	Enhanced General Equipment	ALWAYS		Enhanced General Equipment Module
MR Spectroscopy	Multi-frame Functional Groups	ALWAYS		Multi-frame Functional Groups Module
	Multi-frame Dimension	ALWAYS		Multi-frame Dimension Module
	Cardiac Synchronization	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Cardiac Synchronization Module
	Respiratory Synchronization	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Respiratory Synchronization Module
	Bulk Motion Synchronization	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Bulk Motion Synchronization Module
	Acquisition Context	ALWAYS		Acquisition Context Module
	MR Spectroscopy	ALWAYS		MR Spectroscopy Module

	MR Spectroscopy Pulse Sequence	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	MR Spectroscopy Pulse Sequence Module
	MR Spectroscopy Data	ALWAYS		MR Spectroscopy Data Module
	SOP Common	ALWAYS		SOP Common Module

A.3.1 - IOD Specific Modules

Table MR Series

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Modality	(0008,0060)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Referenced Performed Procedure Step Sequence	(0008,1111)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Frame of Reference

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Frame of Reference UID	(0020,0052)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Position Reference Indicator	(0020,1040)	FIXED	ALWAYS	CONDITIONAL			-

Table Enhanced General Equipment

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Manufacturer	(0008,0070)	SRC_INSTANCE	SRC_COPY	SRC_COPY	Philips		Philips
Manufacturer's Model Name	(0008,1090)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Device Serial Number	(0018,1000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			System serial number.

Software Versions	(0018,1020)	SRC_INSTANCE	SRC_COPY	SRC_COPY			
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Table Multi-frame Functional Groups

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Content Date	(0008,0023)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Content Time	(0008,0033)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Instance Number	(0020,0013)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Number of Frames	(0028,0008)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Shared Functional Groups Sequence	(5200,9229)	SRC_INSTANCE	SRC_COPY	SRC_COPY			Always present in combination with the Per-frame Functional Groups Sequence (5200,9230)
Per-frame Functional Groups Sequence	(5200,9230)	SRC_INSTANCE	SRC_COPY	SRC_COPY			Always present in combination with the Shared Functional Groups Sequence (5200,9229)

Table Multi-frame Dimension

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Dimension Organization Sequence	(0020,9221)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

>Dimension Organization UID	(0020,9164)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Dimension Index Sequence	(0020,9222)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Dimension Organization UID	(0020,9164)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Dimension Index Pointer	(0020,9165)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Functional Group Pointer	(0020,9167)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Dimension Index Private Creator	(0020,9213)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Functional Group Private Creator	(0020,9238)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Cardiac Synchronization

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Low R-R Value	(0018,1081)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
High R-R Value	(0018,1082)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Intervals Acquired	(0018,1083)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Intervals Rejected	(0018,1084)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Cardiac Synchronization Technique	(0018,9037)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Cardiac R-R Interval Specified	(0018,9070)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Cardiac Signal Source	(0018,9085)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Cardiac Beat Rejection Technique	(0018,9169)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Respiratory Synchronization

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Respiratory Motion Compensation Technique	(0018,9170)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Respiratory Signal Source	(0018,9171)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Respiratory Trigger Delay Threshold	(0020,9256)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Bulk Motion Synchronization

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Bulk Motion Compensation Technique	(0018,9172)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Acquisition Context

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Acquisition Context Sequence	(0040,0555)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table MR Spectroscopy

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Image Type	(0008,0008)	GENERATED	ALWAYS	ALWAYS	DERIVED, SECONDARY, SPECTROSCOPY, NONE		Applied value: DERIVED, SECONDARY, SPECTROSCOPY, NONE

Referenced Image Evidence Sequence	(0008,9092)	SRC_INSTANCE	SRC_COPY	SRC_COPY			
>Referenced Series Sequence	(0008,1115)	SRC_INSTANCE	SRC_COPY	SRC_COPY			
>>Referenced SOP Sequence	(0008,1199)	SRC_INSTANCE	SRC_COPY	SRC_COPY			
>>>Referenced SOP Class UID	(0008,1150)	SRC_INSTANCE	SRC_COPY	SRC_COPY			
>>>Referenced SOP Instance UID	(0008,1155)	SRC_INSTANCE	SRC_COPY	SRC_COPY			
>>Series Instance UID	(0020,000E)	SRC_INSTANCE	SRC_COPY	SRC_COPY			
>Study Instance UID	(0020,000D)	SRC_INSTANCE	SRC_COPY	SRC_COPY			
Spectral Width	(0018,9052)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Chemical Shift Reference	(0018,9053)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Volume Localization Technique	(0018,9054)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
De-coupling	(0018,9059)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
De-coupled Nucleus	(0018,9060)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
De-coupling Frequency	(0018,9061)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
De-coupling Method	(0018,9062)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
De-coupling Chemical Shift Reference	(0018,9063)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Time Domain Filtering	(0018,9065)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Number of Zero Fills	(0018,9066)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Baseline Correction	(0018,9067)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Transmitter Frequency	(0018,9098)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Frequency Correction	(0018,9101)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Volume Localization Sequence	(0018,9126)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Slab Thickness	(0018,9104)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Slab Orientation	(0018,9105)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Mid Slab Position	(0018,9106)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
First Order Phase Correction	(0018,9198)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Water Referenced Phase Correction	(0018,9199)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Acquisition DateTime	(0008,002A)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Source Image Evidence Sequence	(0008,9154)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced Series Sequence	(0008,1115)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Referenced SOP Sequence	(0008,1199)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>>Referenced SOP Class UID	(0008,1150)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>>Referenced SOP Instance UID	(0008,1155)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Series Instance UID	(0020,000E)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Study Instance UID	(0020,000D)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Magnetic Field Strength	(0018,0087)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Content Qualification	(0018,9004)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
k-space Filtering	(0018,9064)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Acquisition Duration	(0018,9073)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Resonant Nucleus	(0018,9100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Applicable Safety Standard Agency	(0018,9174)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Acquisition Number	(0020,0012)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Image Comments	(0020,4000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Volumetric Properties	(0008,9206)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Volume Based Calculation Technique	(0008,9207)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Complex Image Component	(0008,9208)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Acquisition Contrast	(0008,9209)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table MR Spectroscopy Pulse Sequence

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Pulse Sequence Name	(0018,9005)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Echo Pulse Sequence	(0018,9008)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Multiple Spin Echo	(0018,9011)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Multi-planar Excitation	(0018,9012)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Steady State Pulse Sequence	(0018,9017)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Echo Planar Pulse Sequence	(0018,9018)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Spectrally Selected Suppression	(0018,9025)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Geometry of k-Space Traversal	(0018,9032)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Segmented k-Space Traversal	(0018,9033)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Rectilinear Phase Encode Reordering	(0018,9034)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Number of k-Space Trajectories	(0018,9093)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

MR Spectroscopy Acquisition Type	(0018,9200)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
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Table MR Spectroscopy Data

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Rows	(0028,0010)	GENERATED	ALWAYS	ALWAYS			-
Columns	(0028,0011)	GENERATED	ALWAYS	ALWAYS			-
Data Point Rows	(0028,9001)	GENERATED	ALWAYS	ALWAYS			-
Data Point Columns	(0028,9002)	GENERATED	ALWAYS	ALWAYS			-
Signal Domain Columns	(0028,9003)	GENERATED	ALWAYS	ALWAYS			FREQUENCY
Data Representation	(0028,9108)	GENERATED	ALWAYS	ALWAYS			-
First Order Phase Correction Angle	(5600,0010)	GENERATED	CONDITIONAL	ALWAYS			-
Spectroscopy Data	(5600,0020)	GENERATED	ALWAYS	ALWAYS			-

A.3.2 - Functional Group Macros

Table MR Spectroscopy Functional Group Macro

Pixel Measures Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Pixel Measures Sequence	(0028,9110)	GENERATED	ALWAYS	ALWAYS			-
> Pixel Spacing	(0028,0030)	GENERATED	CONDITIONAL	ALWAYS			-
> Slice Thickness	(0018,0050)	GENERATED	CONDITIONAL	ALWAYS			-

Frame Content Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Frame Content Sequence	(0020,9111)	GENERATED	ALWAYS	ALWAYS			-
> Frame Reference DateTime	(0018,9151)	GENERATED	CONDITIONAL	ALWAYS			-
> Frame Acquisition DateTime	(0018,9074)	GENERATED	CONDITIONAL	ALWAYS			-
> Frame Acquisition Duration	(0018,9220)	GENERATED	CONDITIONAL	ALWAYS			-
> Dimension Index Values	(0020,9157)	GENERATED	CONDITIONAL	ALWAYS			-
> Temporal Position Index	(0020,9128)	GENERATED	CONDITIONAL	ALWAYS			-
> Stack ID	(0020,9056)	GENERATED	CONDITIONAL	ALWAYS			-
> In-Stack Position Number	(0020,9057)	GENERATED	CONDITIONAL	ALWAYS			-

Plane Position (Patient) Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Plane Position Sequence	(0020,9113)	GENERATED	ALWAYS	ALWAYS			-
> Image Position (Patient)	(0020,0032)	GENERATED	CONDITIONAL	ALWAYS			-

Plane Orientation (Patient) Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Plane Orientation Sequence	(0020,9116)	GENERATED	ALWAYS	ALWAYS			-
> Image Orientation (Patient)	(0020,0037)	GENERATED	CONDITIONAL	ALWAYS			-

Referenced Image Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Referenced Image Sequence	(0008,1140)	GENERATED	CONDITIONAL	ALWAYS			if scan was planned on another scan.
> Referenced SOP Class UID	(0008,1150)	GENERATED	CONDITIONAL	ALWAYS			-
> Referenced SOP Instance UID	(0008,1155)	GENERATED	CONDITIONAL	ALWAYS			-
> Referenced Frame Number	(0008,1160)	GENERATED	CONDITIONAL	ALWAYS			-
> Purpose of Reference Code Sequence	(0040,A170)	GENERATED	ALWAYS	ALWAYS			-
>> Code Value	(0008,0100)	GENERATED	ALWAYS	ALWAYS			-
>> Coding Scheme Designator	(0008,0102)	GENERATED	ALWAYS	ALWAYS			-
>> Code Meaning	(0008,0104)	GENERATED	ALWAYS	ALWAYS			-

Cardiac Synchronization Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Cardiac Synchronization Sequence	(0018,9118)	GENERATED	CONDITIONAL	ALWAYS			-
> Nominal Cardiac Trigger Delay Time	(0020,9153)	GENERATED	ALWAYS	ALWAYS			-
> R-R Interval Time Nominal	(0020,9251)	GENERATED	CONDITIONAL	ALWAYS			-

Frame Anatomy Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
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Frame Anatomy Sequence	(0020,9071)	GENERATED	CONDITIONAL	ALWAYS			-
> Frame Laterality	(0020,9072)	GENERATED	ALWAYS	ALWAYS			Value from examcard.
> Anatomic Region Sequence	(0008,2218)	GENERATED	ALWAYS	ALWAYS			-
>> Context UID	(0008,0117)	GENERATED	CONDITIONAL	ALWAYS			-

Respiratory Synchronization Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Respiratory Synchronization Sequence	(0020,9253)	GENERATED	CONDITIONAL	ALWAYS			-
> Respiratory Interval Time	(0020,9254)	GENERATED	ALWAYS	ALWAYS			-
> Nominal Respiratory Trigger Delay Time	(0020,9255)	GENERATED	ALWAYS	ALWAYS			-

MR Spectroscopy Frame Type Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
MR Spectroscopy Frame Type Sequence	(0018,9227)	GENERATED	ALWAYS	ALWAYS			-
> Frame Type	(0008,9007)	GENERATED	ALWAYS	ALWAYS			-
> Volumetric Properties	(0008,9206)	GENERATED	ALWAYS	ALWAYS			-
> Volume Based Calculation Technique	(0008,9207)	GENERATED	ALWAYS	ALWAYS			-
> Complex Image Component	(0008,9208)	GENERATED	ALWAYS	ALWAYS			-
> Acquisition Contrast	(0008,9209)	GENERATED	ALWAYS	ALWAYS			-

MR Timing and Related Parameters Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
MR Timing and Related Parameters Sequence	(0018,9112)	GENERATED	ALWAYS	ALWAYS			-
> Repetition Time	(0018,0080)	GENERATED	CONDITIONAL	ALWAYS			-
> Flip Angle	(0018,1314)	GENERATED	CONDITIONAL	ALWAYS			-
> Echo Train Length	(0018,0091)	GENERATED	CONDITIONAL	ALWAYS			-
> RF Echo Train Length	(0018,9240)	GENERATED	CONDITIONAL	ALWAYS			-
> Gradient Echo Train Length	(0018,9241)	GENERATED	CONDITIONAL	ALWAYS			-
> Specific Absorption Rate Sequence	(0018,9239)	GENERATED	CONDITIONAL	ALWAYS			-
>> Specific Absorption Rate Definition	(0018,9179)	GENERATED	ALWAYS	ALWAYS			-
>> Specific Absorption Rate Value	(0018,9181)	GENERATED	ALWAYS	ALWAYS			-
> Gradient Output Type	(0018,9180)	GENERATED	CONDITIONAL	ALWAYS			-
> Gradient Output	(0018,9182)	GENERATED	CONDITIONAL	ALWAYS			-
> Operating Mode Sequence	(0018,9176)	GENERATED	CONDITIONAL	ALWAYS			-
>> Operating Mode Type	(0018,9177)	GENERATED	ALWAYS	ALWAYS			-
>> Operating Mode	(0018,9178)	GENERATED	ALWAYS	ALWAYS			-

MR Spectroscopy FOV/Geometry Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
MR Spectroscopy FOV/Geometry Sequence	(0018,9103)	GENERATED	ALWAYS	ALWAYS			-

> Spectroscopy Acquisition Data Columns	(0018,9127)	GENERATED	CONDITIONAL	ALWAYS			-
> Spectroscopy Acquisition Phase Rows	(0018,9095)	GENERATED	CONDITIONAL	ALWAYS			-
> Spectroscopy Acquisition Phase Columns	(0018,9234)	GENERATED	CONDITIONAL	ALWAYS			-
> Spectroscopy Acquisition Out-of-plane Phase Steps	(0018,9159)	GENERATED	CONDITIONAL	ALWAYS			-
> Percent Sampling	(0018,0093)	GENERATED	CONDITIONAL	ALWAYS			-
> Percent Phase Field of View	(0018,0094)	GENERATED	CONDITIONAL	ALWAYS			-

MR Echo Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
MR Echo Sequence	(0018,9114)	GENERATED	ALWAYS	ALWAYS			-
> Effective Echo Time	(0018,9082)	GENERATED	CONDITIONAL	ALWAYS			-

MR Modifier Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
MR Modifier Sequence	(0018,9115)	GENERATED	ALWAYS	ALWAYS			-
> Inversion Recovery	(0018,9009)	GENERATED	CONDITIONAL	ALWAYS			-
> Inversion Times	(0018,9079)	GENERATED	CONDITIONAL	ALWAYS			-
> Flow Compensation	(0018,9010)	GENERATED	CONDITIONAL	ALWAYS			-
> Flow Compensation Direction	(0018,9183)	GENERATED	CONDITIONAL	ALWAYS			-
> Spoiling	(0018,9016)	GENERATED	CONDITIONAL	ALWAYS			-
> T2 Preparation	(0018,9021)	GENERATED	CONDITIONAL	ALWAYS			-

> Spectrally Selected Excitation	(0018,9026)	GENERATED	CONDITIONAL	ALWAYS			-
> Spatial Pre-saturation	(0018,9027)	GENERATED	CONDITIONAL	ALWAYS			-
> Partial Fourier	(0018,9081)	GENERATED	CONDITIONAL	ALWAYS			-
> Partial Fourier Direction	(0018,9036)	GENERATED	CONDITIONAL	ALWAYS			-
> Parallel Acquisition	(0018,9077)	GENERATED	CONDITIONAL	ALWAYS			-
> Parallel Acquisition Technique	(0018,9078)	GENERATED	CONDITIONAL	ALWAYS			-
> Parallel Reduction Factor In-plane	(0018,9069)	GENERATED	CONDITIONAL	ALWAYS			-
> Parallel Reduction Factor out-of-plane	(0018,9155)	GENERATED	CONDITIONAL	ALWAYS			-
> Parallel Reduction Factor Second In-plane	(0018,9168)	GENERATED	CONDITIONAL	ALWAYS			-

MR Receive Coil Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
MR Receive Coil Sequence	(0018,9042)	GENERATED	ALWAYS	ALWAYS			-
> Receive Coil Name	(0018,1250)	GENERATED	CONDITIONAL	ALWAYS			-
> Receive Coil Manufacturer Name	(0018,9041)	GENERATED	ALWAYS	EMPTY			-
> Receive Coil Type	(0018,9043)	GENERATED	CONDITIONAL	ALWAYS			-
> Quadrature Receive Coil	(0018,9044)	GENERATED	CONDITIONAL	ALWAYS			-
> Multi-Coil Definition Sequence	(0018,9045)	GENERATED	CONDITIONAL	ALWAYS			-
>> Multi-Coil Element Name	(0018,9047)	GENERATED	ALWAYS	ALWAYS			-
>> Multi-Coil Element Used	(0018,9048)	GENERATED	ALWAYS	ALWAYS			-

MR Transmit Coil Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
MR Transmit Coil Sequence	(0018,9049)	GENERATED	CONDITIONAL	ALWAYS			-
> Transmit Coil Name	(0018,1251)	GENERATED	ALWAYS	ALWAYS			-
> Transmit Coil Manufacturer Name	(0018,9050)	FIXED	ALWAYS	EMPTY			-
> Transmit Coil Type	(0018,9051)	GENERATED	CONDITIONAL	ALWAYS			-

MR Diffusion Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
MR Diffusion Sequence	(0018,9117)	GENERATED	CONDITIONAL	ALWAYS			-
> Diffusion b-value	(0018,9087)	GENERATED	CONDITIONAL	ALWAYS			-
> Diffusion Directionality	(0018,9075)	GENERATED	CONDITIONAL	ALWAYS			-
> Diffusion Gradient Direction Sequence	(0018,9076)	GENERATED	CONDITIONAL	ALWAYS			-
>> Diffusion Gradient Orientation	(0018,9089)	GENERATED	CONDITIONAL	ALWAYS			-
> Diffusion b-matrix Sequence	(0018,9601)	GENERATED	CONDITIONAL	ALWAYS			-
> Diffusion Anisotropy Type	(0018,9147)	GENERATED	CONDITIONAL	ALWAYS			Applied value: FRACTIONAL

MR Averages Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
MR Averages Sequence	(0018,9119)	GENERATED	ALWAYS	ALWAYS			-
> Number of Averages	(0018,0083)	GENERATED	CONDITIONAL	ALWAYS			-

MR Spatial Saturation Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
MR Spatial Saturation Sequence	(0018,9107)	GENERATED	CONDITIONAL	ALWAYS			if slab information is present
> Slab Thickness	(0018,9104)	GENERATED	ALWAYS	ALWAYS			-
> Slab Orientation	(0018,9105)	GENERATED	ALWAYS	ALWAYS			-
> Mid Slab Position	(0018,9106)	GENERATED	ALWAYS	ALWAYS			-

MR Velocity Encoding Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
MR Velocity Encoding Sequence	(0018,9197)	GENERATED	CONDITIONAL	ALWAYS			-
> Velocity Encoding Direction	(0018,9090)	GENERATED	CONDITIONAL	ALWAYS			-
> Velocity Encoding Minimum Value	(0018,9091)	GENERATED	CONDITIONAL	ALWAYS			Applied value: 0.0
> Velocity Encoding Maximum Value	(0018,9217)	GENERATED	CONDITIONAL	ALWAYS			-

A.3.3 - Private Modules - N/A

A.3.4 - Coded Values - N/A

A.4 - Secondary Capture Image Storage SOP Class

Table IOD of Created Secondary Capture Image Storage SOP Class Instances

IE	Module Name	Presence(Module)	Condition	Reference
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Patient	Patient	ALWAYS		Patient Module
Study	General Study	ALWAYS		General Study Module
	Patient Study	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Patient Study Module
Series	General Series	ALWAYS		General Series Module
Equipment	General Equipment	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	General Equipment Module
	SC Equipment	ALWAYS		SC Equipment Module
Acquisition	General Acquisition	ALWAYS		General Acquisition Module
Image	General Image	ALWAYS		General Image Module
	General Reference	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	General Reference Module
	Image Pixel	ALWAYS		Image Pixel Module
	SC Image	ALWAYS		SC Image Module
	Overlay Plane	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Overlay Plane Module
	Modality LUT	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Modality LUT Module
	VOI LUT	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	VOI LUT Module
	SOP Common	ALWAYS		SOP Common Module
	Common Instance Reference	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Common Instance Reference Module

A.4.1 - IOD Specific Modules

Table Image Pixel

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Samples per Pixel	(0028,0002)	GENERATED	ALWAYS	ALWAYS	1, 3		
Photometric Interpretation	(0028,0004)	GENERATED	ALWAYS	ALWAYS	MONOCHROME2, RGB		

Planar Configuration	(0028,0006)	GENERATED	CONDITIONAL	ALWAYS			-
Rows	(0028,0010)	GENERATED	ALWAYS	ALWAYS			-
Columns	(0028,0011)	GENERATED	ALWAYS	ALWAYS			-
Pixel Aspect Ratio	(0028,0034)	SRC_INSTANCE	SRC_COPY	SRC_COPY			
Bits Allocated	(0028,0100)	GENERATED	ALWAYS	ALWAYS			-
Bits Stored	(0028,0101)	GENERATED	ALWAYS	ALWAYS			-
High Bit	(0028,0102)	GENERATED	ALWAYS	ALWAYS			-
Pixel Representation	(0028,0103)	GENERATED	ALWAYS	ALWAYS			-
Pixel Data	(7FE0,0010)	GENERATED	CONDITIONAL	ALWAYS			-
Smallest Image Pixel Value	(0028,0106)	GENERATED	CONDITIONAL	ALWAYS			-
Largest Image Pixel Value	(0028,0107)	GENERATED	CONDITIONAL	ALWAYS			-

Table SC Image

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Date of Secondary Capture	(0018,1012)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Time of Secondary Capture	(0018,1014)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Pixel Spacing	(0028,0030)	GENERATED	CONDITIONAL	ALWAYS			

Table Overlay Plane

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Overlay Rows	(60xx,0010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Overlay Columns	(60xx,0011)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Description	(60xx,0022)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Type	(60xx,0040)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Subtype	(60xx,0045)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Origin	(60xx,0050)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Bits Allocated	(60xx,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Bit Position	(60xx,0102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
ROI Area	(60xx,1301)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
ROI Mean	(60xx,1302)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
ROI Standard Deviation	(60xx,1303)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Label	(60xx,1500)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Data	(60xx,3000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Modality LUT

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Rescale Intercept	(0028,1052)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Rescale Slope	(0028,1053)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Rescale Type	(0028,1054)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Modality LUT Sequence	(0028,3000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>LUT Descriptor	(0028,3002)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>LUT Explanation	(0028,3003)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Modality LUT Type	(0028,3004)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>LUT Data	(0028,3006)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table VOI LUT

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Window Center	(0028,1050)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Window Width	(0028,1051)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Window Center & Width Explanation	(0028,1055)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
VOI LUT Sequence	(0028,3010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Common Instance Reference

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Referenced Series Sequence	(0008,1115)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced Instance Sequence	(0008,114A)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Referenced SOP Class UID	(0008,1150)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Referenced SOP Class UID	(0008,1155)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Series Instance UID	(0020,000E)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

[A.4.2 - Functional Group Macros - N/A](#)

[A.4.3 - Private Modules - N/A](#)

[A.4.4 - Coded Values - N/A](#)

A.5 - Grayscale Softcopy Presentation State Storage SOP Class

Table IOD of Created Grayscale Softcopy Presentation State Storage SOP Class Instances

IE	Module Name	Presence(Module)	Condition	Reference
Patient	Patient	ALWAYS		Patient Module

Study	General Study	ALWAYS		General Study Module
	Patient Study	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Patient Study Module
Series	General Series	ALWAYS		General Series Module
	Presentation Series	ALWAYS		Presentation Series Module
Equipment	General Equipment	ALWAYS		General Equipment Module
Presentation State	Presentation State Identification	ALWAYS		Presentation State Identification Module
	Presentation State Relationship	ALWAYS		Presentation State Relationship Module
	Display Shutter	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Display Shutter Module
	Overlay Plane	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Overlay Plane Module
	Overlay Activation	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Overlay Activation Module
	Displayed Area	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Displayed Area Module
	Graphic Annotation	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Graphic Annotation Module
	Spatial Transformation	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Spatial Transformation Module
	Graphic Layer	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Graphic Layer Module
	Modality LUT	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Modality LUT Module
	Softcopy VOI LUT	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Softcopy VOI LUT Module
	Softcopy Presentation LUT	ALWAYS		Softcopy Presentation LUT Module

	SOP Common	ALWAYS		SOP Common Module
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A.5.1 - IOD Specific Modules

Table Presentation Series Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Modality	(0008,0060)	GENERATED	ALWAYS	ALWAYS			-

Table Presentation State Identification Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Presentation Creation Date	(0070,0082)	GENERATED	ALWAYS	ALWAYS			-
Presentation Creation Time	(0070,0083)	GENERATED	ALWAYS	ALWAYS			-
Instance Number	(0020,0013)	GENERATED	ALWAYS	ALWAYS			-
Content Label	(0070,0080)	GENERATED	ALWAYS	ALWAYS			Applied values: AS LAST SEEN
Content Description	(0070,0081)	GENERATED	ALWAYS	CONDITIONAL			-
Content Creator's Name	(0070,0084)	GENERATED	ALWAYS	CONDITIONAL			Same as Manufacturer's Model name.

Table Presentation State Relationship Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Referenced Series Sequence	(0008,1115)	GENERATED	ALWAYS	ALWAYS			-
>Referenced Image Sequence	(0008,1140)	GENERATED	ALWAYS	ALWAYS			-

>>Referenced SOP Class UID	(0008,1150)	GENERATED	ALWAYS	ALWAYS			-
>>Referenced SOP Instance UID	(0008,1155)	GENERATED	ALWAYS	ALWAYS			-
>Series Instance UID	(0020,000E)	GENERATED	ALWAYS	ALWAYS			-

Table Display Shutter Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Shutter Presentation Value	(0018,1622)	GENERATED	CONDITIONAL	ALWAYS			Applied value: 0

Table Overlay Plane Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Overlay Rows	(60xx,0010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Columns	(60xx,0011)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Description	(60xx,0022)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Type	(60xx,0040)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Subtype	(60xx,0045)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Origin	(60xx,0050)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Bits Allocated	(60xx,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Bit Position	(60xx,0102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
ROI Area	(60xx,1301)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
ROI Mean	(60xx,1302)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
ROI Standard Deviation	(60xx,1303)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Label	(60xx,1500)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Overlay Data	(60xx,3000)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Overlay Activation Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Overlay Activation Layer	(60xx,1001)	GENERATED	CONDITIONAL	ALWAYS			applied value: 1

Table Displayed Area Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Displayed Area Selection Sequence	(0070,005A)	USER	CONDITIONAL	ALWAYS			-
>Referenced Image Sequence	(0008,1140)	USER	CONDITIONAL	ALWAYS			-
>>Referenced SOP Class UID	(0008,1150)	USER	CONDITIONAL	ALWAYS			-
>>Referenced SOP Instance UID	(0008,1155)	USER	CONDITIONAL	ALWAYS			-
>Displayed Area Top Left Hand Corner	(0070,0052)	USER	CONDITIONAL	ALWAYS			-
>Displayed Area Bottom Right Hand Corner	(0070,0053)	USER	CONDITIONAL	ALWAYS			-
>Presentation Size Mode	(0070,0100)	USER	CONDITIONAL	ALWAYS	MAGNIFY, SCALE TO FIT		Applied values: MAGNIFY, SCALE TO FIT
>Presentation Pixel Spacing	(0070,0101)	USER	CONDITIONAL	ALWAYS			Applied values: (0.0, 0.0)
>Presentation Pixel Aspect Ratio	(0070,0102)	USER	CONDITIONAL	ALWAYS			-
>Presentation Pixel Magnification Ratio	(0070,0103)	USER	CONDITIONAL	ALWAYS			-

>	(2001,103F)	USER	CONDITIONAL	ALWAYS			-
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Table Graphic Annotation Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Graphic Annotation Sequence	(0070,0001)	USER	CONDITIONAL	ALWAYS		If graphic annotations are present	-
>Referenced Image Sequence	(0008,1140)	USER	ALWAYS	ALWAYS			-
>>Referenced SOP Class UID	(0008,1150)	USER	ALWAYS	ALWAYS			-
>>Referenced SOP Instance UID	(0008,1155)	USER	ALWAYS	ALWAYS			-
>Graphic Layer	(0070,0002)	USER	ALWAYS	ALWAYS			-
>Text Object Sequence	(0070,0008)	USER	CONDITIONAL	CONDITIONAL		If text is part of the user annotation	-
>>Anchor Point Annotation Units	(0070,0004)	USER	ALWAYS	ALWAYS			-
>>Unformatted Text Value	(0070,0006)	USER	ALWAYS	ALWAYS			-
>>Anchor Point	(0070,0014)	USER	ALWAYS	ALWAYS			-
>>Anchor Point Visibility	(0070,0015)	USER	ALWAYS	ALWAYS			-
>Graphic Object Sequence	(0070,0009)	USER	CONDITIONAL	CONDITIONAL		If user annotation contains graphic object	-
>>Graphic Annotation Units	(0070,0005)	USER	ALWAYS	ALWAYS			-
>>Graphic Dimensions	(0070,0020)	USER	ALWAYS	ALWAYS			-
>>Number of Graphic Points	(0070,0021)	USER	ALWAYS	ALWAYS			-

>>Graphic Data	(0070,0022)	USER	ALWAYS	ALWAYS			-
>>Graphic Type	(0070,0023)	USER	ALWAYS	ALWAYS			-
>>Graphic Filled	(0070,0024)	USER	ALWAYS	ALWAYS			-

Table Spatial Transformation Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Image Horizontal Flip	(0070,0041)	USER	CONDITIONAL	ALWAYS			-
Image Rotation	(0070,0042)	USER	CONDITIONAL	ALWAYS			-

Table Graphic Layer Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Graphic Layer Sequence	(0070,0060)	USER	CONDITIONAL	ALWAYS			-
>Graphic Layer	(0070,0002)	USER	CONDITIONAL	ALWAYS			-
>Graphic Layer Order	(0070,0062)	USER	CONDITIONAL	ALWAYS			-

Table Modality LUT Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Rescale Intercept	(0028,1052)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Rescale Slope	(0028,1053)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Rescale Type	(0028,1054)	SRC_INSTANCE	SRC_COPY	SRC_COPY			Applied value(s): cm/sec, milliradials, milliseconds(ms), mm^2/sec, liter/min,

							normalized, seconds, US, mm, 10 ⁻³ mm ² /s, 10 ⁻³ , 10 ⁻³ /min, Mm*s, mm ² ,s, s ⁻¹ .
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Table Softcopy VOI LUT Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Softcopy VOI LUT Sequence	(0028,3110)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced Image Sequence	(0008,1140)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Referenced SOP Class UID	(0008,1150)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>>Referenced SOP Instance UID	(0008,1155)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Window Center	(0028,1050)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Window Width	(0028,1051)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Graphic Annotation Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Graphic Annotation Sequence	0070,0001	GENERATED	ALWAYS	ALWAYS			.
>Referenced Image Sequence	0008,1140	GENERATED	CONDITIONAL	ALWAYS			-
>>Referenced SOP Class UID	0008,1150	GENERATED	ALWAYS	ALWAYS			-

>>Referenced SOP Instance UID	0008,1155	GENERATED	ALWAYS	ALWAYS			-
Graphic Layer	0070,0002	GENERATED	ALWAYS	ALWAYS			
>Graphic Object Sequence	0070,0009	GENERATED	CONDITIONAL	ALWAYS			
>>Graphic Annotation Units	0070,0005	GENERATED	ALWAYS	ALWAYS			
>>Graphic Dimensions	0070,0020	GENERATED	ALWAYS	ALWAYS			
>>Number of Graphic Points	0070,0021	GENERATED	ALWAYS	ALWAYS			
>>Graphic Data	0070,0022	GENERATED	ALWAYS	ALWAYS			
>>Graphic Type	0070,0023	GENERATED	ALWAYS	ALWAYS			
>>Graphic Filled	0070,0024	GENERATED	CONDITIONAL	ALWAYS			
>Referenced Image Sequence	0008,1140	GENERATED	CONDITIONAL	ALWAYS			
>>Referenced SOP Class UID	0008,1150	GENERATED	ALWAYS	ALWAYS			
>> Referenced SOP Instance UID	0008,1155	GENERATED	ALWAYS	ALWAYS			
>Graphic Layer	0070,0002	GENERATED	CONDITIONAL	ALWAYS			
>Text Object Sequence	0070,0008	GENERATED	CONDITIONAL	ALWAYS			
>>Anchor Point Annotation Units	0070,0004	GENERATED	CONDITIONAL	ALWAYS			
>>Unformatted Text Value	0070,0006	GENERATED	ALWAYS	ALWAYS			
>>Anchor Point	0070,0014	GENERATED	CONDITIONAL	ALWAYS			
>>Anchor Point Visibility	0070,0015	GENERATED	CONDITIONAL	ALWAYS			
>Graphic Object Sequence	0070,0009	GENERATED	CONDITIONAL	ALWAYS			
>>Graphic Annotation Units	0070,0005	GENERATED	ALWAYS	ALWAYS			
>>Graphic Dimensions	0070,0020	GENERATED	ALWAYS	ALWAYS			
>>Number of Graphic Points	0070,0021	GENERATED	ALWAYS	ALWAYS			
>>Graphic Data	0070,0022	GENERATED	ALWAYS	ALWAYS			

>>Graphic Type	0070,0023	GENERATED	ALWAYS	ALWAYS			
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Table Softcopy Presentation LUT Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Presentation LUT Sequence	(2050,0010)	SRC_INSTANCE	SRC_COPY	SRC_COPY			Present if Presentation LUT Shape not present
>LUT Descriptor	(0028,3002)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>LUT Data	(0028,3006)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Presentation LUT Shape	(2050,0020)	GENERATED	CONDITIONAL	ALWAYS			-

[A.5.2 - Functional Group Macros - N/A](#)

[A.5.3 - Private Modules - N/A](#)

[A.5.4 - Coded Values - N/A](#)

A.6 - Key Object Selection Document SOP Class

Table IOD of Created Key Object Selection Document SOP Class Instances

IE	Module Name	Presence(Module)	Condition	Reference
Patient	Patient	ALWAYS		Patient Module
Study	General Study	ALWAYS		General Study Module
	Patient Study	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Patient Study Module
Series	Key Object Document Series	ALWAYS		Key Object Document Series Module
Equipment	General Equipment	ALWAYS		General Equipment Module

SR Document	Key Object Document	ALWAYS		Key Object Document Module
	SR Document Content	ALWAYS		SR Document Content Module
	SOP Common	ALWAYS		SOP Common Module

A.6.1 - IOD Specific Modules

Table Key Object Document Series

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Series Instance UID	(0020,000E)	GENERATED	ALWAYS	ALWAYS			-
Modality	(0008,0060)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Series Number	(0020,0011)	GENERATED	ALWAYS	CONDITIONAL			-
Series Instance UID	(0020,000E)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Referenced Performed Procedure Step Sequence	(0008,1111)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Key Object Document

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Content Time	(0008,0033)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Content Date	(0008,0023)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Current Requested Procedure Evidence Sequence	(0040,A375)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Study Instance UID	(0020,000D)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Referenced Series Sequence	(0008,1115)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-

>>Series Instance UID	(0020,000E)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>>Referenced SOP Sequence	(0008,1199)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>>>Referenced SOP Class UID	(0008,1150)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>>>Referenced SOP Instance UID	(0008,1155)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-

Table SR Document Content

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Referenced SOP Sequence	(0008,1199)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Observation DateTime	(0040,A032)	GENERATED SRC_INSTANCE	CONDITIONAL	ALWAYS			-
Value Type	(0040,A040)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
Concept Name Code Sequence	(0040,A043)	GENERATED SRC_INSTANCE	CONDITIONAL	ALWAYS			-
>Code Value	(0008,0100)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Coding Scheme Designator	(0008,0102)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Code Meaning	(0008,0104)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
Continuity Of Content	(0040,A050)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
Temporal Range Type	(0040,A130)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-

Text Value	(0040,A160)	GENERATED SRC_INSTANCE	CONDITIONAL	ALWAYS			-
Concept Code Sequence	(0040,A168)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
Measured Value Sequence	(0040,A300)	GENERATED SRC_INSTANCE	ALWAYS	CONDITIONAL			-
Content Template Sequence	(0040,A504)	GENERATED SRC_INSTANCE	CONDITIONAL	ALWAYS			-
>Mapping Resource	(0008,0105)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Template Identifier	(0040,DB00)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Content Sequence	(0040,A730)	GENERATED SRC_INSTANCE	CONDITIONAL	ALWAYS			-
>Referenced SOP Sequence	(0008,1199)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>>Referenced SOP Class UID	(0008,1150)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>>Referenced SOP Instance UID	(0008,1155)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Relationship Type	(0040,A010)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Value Type	(0040,A040)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Concept Name Code Sequence	(0040,A043)	GENERATED SRC_INSTANCE	CONDITIONAL	ALWAYS			-
>>Code Value	(0008,0100)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-

>>Coding Scheme Designator	(0008,0102)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>>Code Meaning	(0008,0104)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Continuity Of Content	(0040,A050)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Temporal Range Type	(0040,A130)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Concept Code Sequence	(0040,A168)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Measured Value Sequence	(0040,A300)	GENERATED SRC_INSTANCE	ALWAYS	CONDITIONAL			-
>Graphic Data	(0070,0022)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Graphic Type	(0070,0023)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-
>Referenced Frame of Reference UID	(3006,0024)	GENERATED SRC_INSTANCE	ALWAYS	ALWAYS			-

A.6.2 - Functional Group Macros - N/A

A.6.3 - Private Modules - N/A

A.6.4 - Coded Values - N/A

A.7 - Encapsulated PDF Storage SOP Class

Table IOD of Created Encapsulated PDF Storage SOP Class Instances

IE	Module Name	Presence(Module)	Condition	Reference
Patient	Patient	ALWAYS		Patient Module

Study	General Study	ALWAYS		General Study Module
	Patient Study	CONDITIONAL	IF PRESENT IN THE SOURCE DATA	Patient Study Module
Series	Encapsulated Document Series	ALWAYS		Encapsulated Document Series Module
Equipment	General Equipment	ALWAYS		General Equipment Module
	SC Equipment	ALWAYS		SC Equipment Module
Encapsulated Document	Encapsulated Document	ALWAYS		Encapsulated Document Module
	SOP Common	ALWAYS		SOP Common Module

A.7.1 - IOD Specific Modules

Table Encapsulated Document Series

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Modality	(0008,0060)	GENERATED	ALWAYS	ALWAYS			-
Series Description	(0008,103E)	GENERATED	CONDITIONAL	ALWAYS	Reports		
Referenced Performed Procedure Step Sequence	(0008,1111)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Class UID	(0008,1150)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Referenced SOP Instance UID	(0008,1155)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Series Instance UID	(0020,000E)	GENERATED	ALWAYS	ALWAYS			-
Series Number	(0020,0011)	GENERATED	ALWAYS	ALWAYS			-
Performed Procedure Step Start Date	(0040,0244)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Performed Procedure Step Start Time	(0040,0245)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Performed Procedure Step ID	(0040,0253)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Performed Procedure Step Description	(0040,0254)	GENERATED	CONDITIONAL	ALWAYS			-
Performed Protocol Code Sequence	(0040,0260)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Code Value	(0008,0100)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Coding Scheme Designator	(0008,0102)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Code Meaning	(0008,0104)	GENERATED	CONDITIONAL	ALWAYS			-
>Context Group Local Version	(0008,0107)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
>Context Group Extension Flag	(0008,010B)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-
Comments on the Performed Procedure Step	(0040,0280)	SRC_INSTANCE	SRC_COPY	SRC_COPY			-

Table Encapsulated Document

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Content Date	(0008,0023)	GENERATED	ALWAYS	CONDITIONAL			-
Acquisition DateTime	(0008,002A)	GENERATED	ALWAYS	CONDITIONAL			-
Content Time	(0008,0033)	GENERATED	ALWAYS	CONDITIONAL			-
Instance Number	(0020,0013)	GENERATED	ALWAYS	ALWAYS	1		-
Burned In Annotation	(0028,0301)	GENERATED	ALWAYS	ALWAYS			-
Concept Name Code Sequence	(0040,A043)	GENERATED	ALWAYS	CONDITIONAL			-

Document Title	(0042,0010)	GENERATED	ALWAYS	CONDITIONAL			-
Encapsulated Document	(0042,0011)	GENERATED	ALWAYS	ALWAYS			-
MIME Type of Encapsulated Document	(0042,0012)	GENERATED	ALWAYS	ALWAYS	application/pdf		-
Source Instance Sequence	(0042,0013)	GENERATED	CONDITIONAL	ALWAYS			-
>Referenced SOP Class UID	(0008,1150)	GENERATED	ALWAYS	ALWAYS			-
>Referenced SOP Instance UID	(0008,1155)	GENERATED	ALWAYS	ALWAYS			-

A.7.2 - Functional Group Macros - N/A

A.7.3 - Private Modules - N/A

A.7.4 - Coded Values - N/A

B Structured Report Content Encoding

B.1 Key Object Selection SR (TID 2010)

Table B-1 shows the encoding of content of a DICOM Key Object Selection SR (TID 2010).

Table B-1: Key Object Selection SR (TID 2010)

NL	Rel with Parent	VT	Concept Name	Source	Presence of Content Item	Values	TID	Comments
		CONTAINER	DCID 7010 "Key Object Selection Document Title"	USER	ALWAYS	See table B-2	2010	-
>	CONTAINS	TEXT	(113012, DCM, "Key Object Description")	USER	ALWAYS		2010	-
>>	CONTAINS	IMAGE		GENERATED	ALWAYS		2010	-

B.1.1 Code sets

Table B-2: Key Object Selection SR – Document Title Codes

Coding Scheme Designator	Code Value	Code Meaning
DCM	113000	Of Interest
DCM	113004	For teaching
DCM	113003	For Surgery
DCM	113020	For Report
DCM	113008	For Collaboration

Coding Scheme Designator	Code Value	Code Meaning
DCM	113005	For Conference
DCM	113007	For Patient
DCM	113006	For Therapy
DCM	113002	For Referring Physician
DCM	113009	For Research

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