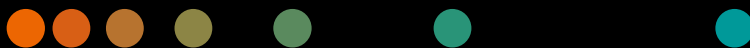
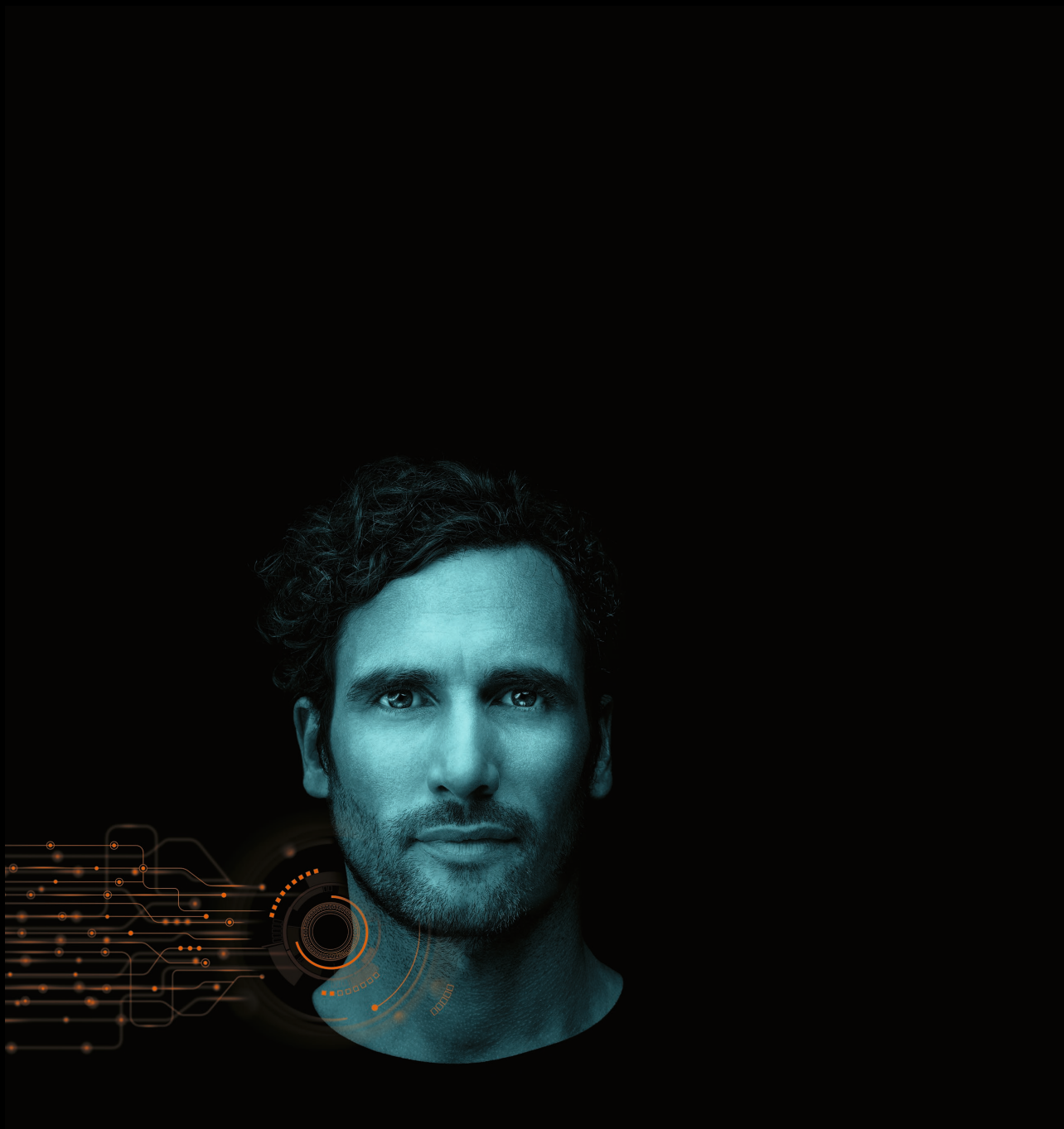


DICOM Conformance Statement

Syngo Carbon Space VA35A



DICOM Conformance Statement Overview

Table 1: Network Services

SOP Classes	SOP Class UID	User of Service (SCU)		Provider of Service (SCP)	
		Create	Send	Store	Display
SOP Classes supported by Syngo Carbon Space					
Computed Radiography Image Storage	1.2.840.10008.5.1.4.1.1.1	No	No	No	Yes
Digital X-Ray Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.1.1	No	No	No	Yes
Digital Mammography X-Ray Image Storage – For Presentation	1.2.840.10008.5.1.4.1.1.1.2	No	No	No	Yes
Digital Intra-Oral X-Ray Image - for Presentation - IMAGE	1.2.840.10008.5.1.4.1.1.1.3	No	No	No	Yes
CT Image Storage	1.2.840.10008.5.1.4.1.1.2	Yes	No	No	Yes
Enhanced CT Image Storage	1.2.840.10008.5.1.4.1.1.2.1	No	No	No	Yes
Ultrasound Multi-frame Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.3	No	No	No	Yes
Ultrasound Multi-frame Image Storage	1.2.840.10008.5.1.4.1.1.3.1	No	No	No	Yes
MR Image Storage	1.2.840.10008.5.1.4.1.1.4	Yes	No	No	Yes
Enhanced MR Image Storage	1.2.840.10008.5.1.4.1.1.4.1	Yes	No	No	Yes
MR Spectroscopy Storage	1.2.840.10008.5.1.4.1.1.4.2	No	No	No	Yes
Enhanced MR Color Image Storage	1.2.840.10008.5.1.4.1.1.4.3	Yes	No	No	Yes
Ultrasound Image Storage	1.2.840.10008.5.1.4.1.1.6.1	No	No	No	Yes
Enhanced US Volume Storage	1.2.840.10008.5.1.4.1.1.6.2	No	No	No	Yes
Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7	Yes	No	No	Yes
Multi-frame Single Bit Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.1	No	No	No	Yes
Multi-frame Grayscale Byte Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.2	No	No	No	Yes
Multi-frame Grayscale Word Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.3	No	No	No	Yes
Multi-frame True Color Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.4	No	No	No	Yes
12-lead ECG Waveform Storage	1.2.840.10008.5.1.4.1.1.9.1.1	No	No	No	Yes
General ECG Waveform Storage	1.2.840.10008.5.1.4.1.1.9.1.2	No	No	No	Yes
Grayscale Softcopy Presentation State Storage	1.2.840.10008.5.1.4.1.1.11.1	Yes	No	No	Yes
Color Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.2	Yes	No	No	Yes

Pseudo-Color Softcopy Presentation State Storage SOP Class	1.2.840.10008.5.1.4.1.1.11.3	Yes	No	No	Yes
X-Ray Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.12.1	No	No	No	Yes
Enhanced XA Image Storage	1.2.840.10008.5.1.4.1.1.12.1.1	No	No	No	Yes
X-Ray Radiofluoroscopic Image Storage	1.2.840.10008.5.1.4.1.1.12.2	No	No	No	Yes
X-Ray 3D Angiographic Image Storage	1.2.840.10008.5.1.4.1.1.13.1.1	No	No	No	Yes
Breast Tomosynthesis Image Storage	1.2.840.10008.5.1.4.1.1.13.1.3	No	No	No	Yes
Intravascular Optical Coherence Tomography Image Storage - For Presentation	1.2.840.10008.5.1.4.1.1.14.1	No	No	No	Yes
Intravascular Optical Coherence Tomography Image Storage - For Processing	1.2.840.10008.5.1.4.1.1.14.2	No	No	No	Yes
Nuclear Medicine Image Storage	1.2.840.10008.5.1.4.1.1.20	No	No	No	Yes
Raw Data Storage	1.2.840.10008.5.1.4.1.1.66	Yes	No	No	No
Segmentation Storage	1.2.840.10008.5.1.4.1.1.66.4	Yes	No	No	Yes
Real World Value Mapping Storage	1.2.840.10008.5.1.4.1.1.67	Yes	No	No	Yes
VL Image Storage (Retired)	1.2.840.10008.5.1.4.1.1.77.1	No	No	No	Yes
VL Endoscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.1	No	No	No	Yes
Video Endoscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.1.1	No	No	No	Yes
VL Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.2	No	No	No	Yes
Video Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.2.1	No	No	No	Yes
VL Slide-Coordinates Microscopic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.3	No	No	No	Yes
VL Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4	No	No	No	Yes
Video Photographic Image Storage	1.2.840.10008.5.1.4.1.1.77.1.4.1	No	No	No	Yes
Ophthalmic Photography 8 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.1	No	No	No	Yes
Ophthalmic Photography 16 Bit Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.2	No	No	No	Yes
Ophthalmic Tomography Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.4	No	No	No	Yes
Wide Field Ophthalmic Photography Stereographic Projection Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.5	No	No	No	Yes
Wide Field Ophthalmic Photography 3D Coordinates Image Storage	1.2.840.10008.5.1.4.1.1.77.1.5.6	No	No	No	Yes
VL Whole Slide Microscopy Image Storage	1.2.840.10008.5.1.4.1.1.77.1.6	No	No	No	Yes

Basic Text SR Storage	1.2.840.10008.5.1.4.1.1.88.11	Yes	No	No	No
Comprehensive SR Storage	1.2.840.10008.5.1.4.1.1.88.33	No	No	No	Yes
Encapsulated PDF Storage SOP Class	1.2.840.10008.5.1.4.1.1.104.1	No	No	No	Yes
Positron Emission Tomography Image Storage	1.2.840.10008.5.1.4.1.1.128	No	No	No	Yes
RT Image Storage	1.2.840.10008.5.1.4.1.1.481.1	No	No	No	Yes
RT Dose Storage	1.2.840.10008.5.1.4.1.1.481.2	No	No	No	Yes

Table 2: Implementation Identifying Information

Name	Value
Implementation Class UID	1.2.276.0.7230010.3.0.3.6.1
Implementation Version Name	OFFIS_DCMTK_361

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1 Introduction

1.1 Revision History

Version	Date	Change
R1.0	18-07-2024	Release for Syngo Carbon Space VA35A.

1.2 Audience

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

1.3 Remarks

The scope of this DICOM Conformance Statement is to facilitate integration between **Syngo Carbon Space** and other DICOM products. The Conformance Statement should be read and understood in conjunction with the DICOM Standard [1]. 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 is not supposed to replace validation with other DICOM equipment to ensure proper exchange of intended information. In fact, the user should be aware of the following important issues:

- The comparison of conformance statements is the first step towards assessing interconnectivity and interoperability between **Syngo Carbon Space** and other DICOM conformant equipment.
- Test procedures should be defined and executed to validate the required level of interoperability with specific compatible DICOM equipment, as established by the healthcare facility. Siemens Healthineers reserves the right to modify the design and specifications contained herein without prior notice. Please contact your local Siemens Healthineers representative for the most recent product information.

1.4 Definitions, Terms and Abbreviations

Definitions, terms, and abbreviations used in this document are defined within the different parts of the DICOM standard. Additional Abbreviations and terms are as follows:

AE	DICOM Application Entity
AET	Application Entity Title
ASCII	American Standard Code for Information Interchange
DCS	DICOM Conformance Statement
DICOM	Digital Imaging and Communications in Medicine
GSDF	Grayscale Standard Display Function
IOD	DICOM Information Object Definition
ISO	International Standard Organization
n. a.	not applicable
NEMA	National Electrical Manufacturers Association
O	Optional Key Attribute
PDU	DICOM Protocol Data Unit
R	Required Key Attribute
SCU	DICOM Service Class User (DICOM client)

SCP	DICOM Service Class Provider (DICOM Server)
SOP	DICOM Service-Object Pair
SR	Structured Report
TID	Template ID
U	Unique Key Attribute
UID	Unique Identifier
UTF-8	Unicode Transformation Format-8
VR	Value Representation

1.5 References

- [1] 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/>)
- [2] (ITH) DICOM Conformance Statement *Syngo Carbon IDM* VA32C
- [3] *Syngo Carbon IDM* Online Help VA32C

2 Networking

2.1 Implementation Model

The Syngo Carbon Core Solution is a combinatorial medical device built out of a combination of two devices, *Syngo Carbon IDM* and *Syngo Carbon Space*. The scope of this DCS is *Syngo Carbon Space*, several DICOM services are realized via an integration with *Syngo Carbon IDM*.

Furthermore, *Syngo Carbon Space* AE supports printing of the DICOM images on a remote DICOM printer via *Syngo Carbon IDM*. Please refer [DICOM Conformance Statement Syngo Carbon IDM](#) for supported Printing SOP classes.

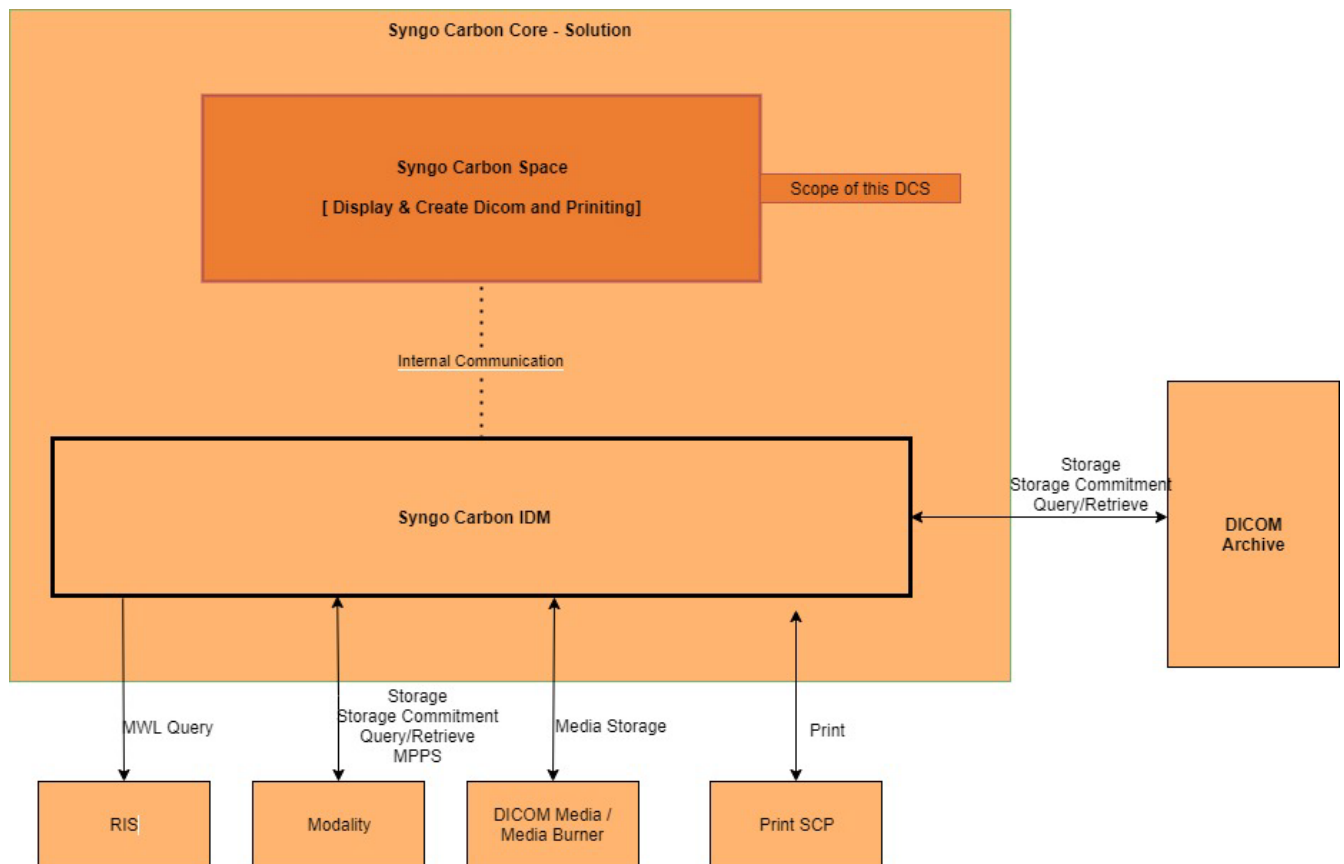


Figure 1: Scope of Syngo Carbon Space DICOM Conformance Statement

2.1.1 Application Data Flow

Below figure provides the functional overview of the Syngo Carbon Space AE.

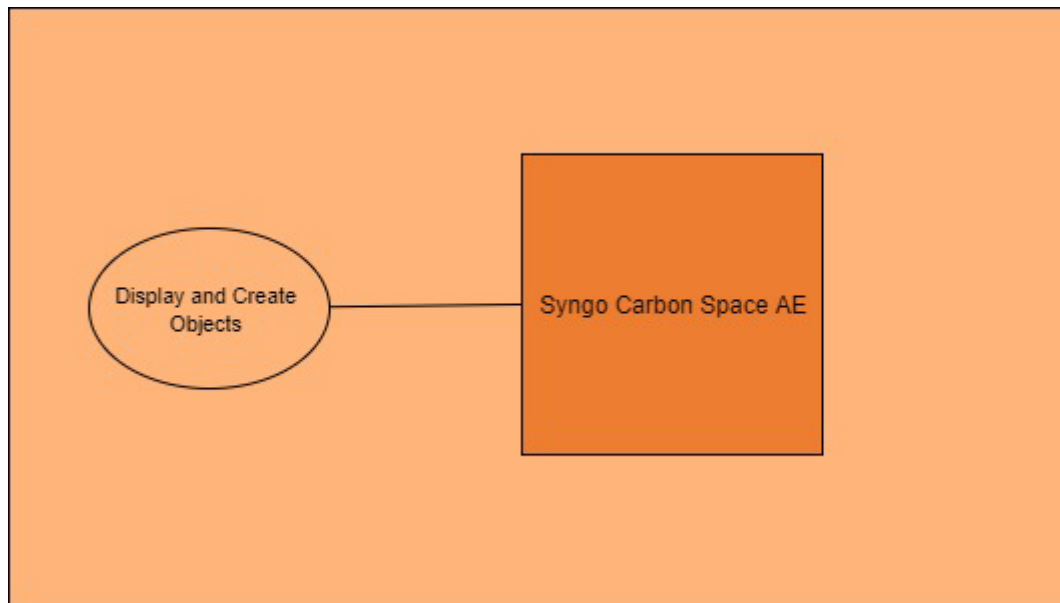


Figure 2: Functional overview of Syngo Carbon Space AE

2.1.2 Functional Definitions of Application Entities

2.1.2.1 Functional Definitions of Syngo Carbon Space AE

The syngo Carbon Space AE is integrated into the Syngo Carbon Core Solution. It supports displaying DICOM instances received via the syngo Carbon IDM, and creation of new DICOM Instances, which in turn will be made available via the syngo Carbon IDM. Details for the Display and Create DICOM objects activity can be found as below:

- In the overview to indicate objects that can be displayed
- In Annex 6 for details on the IOD contents created by the Syngo Carbon Space AE

2.1.3 Sequencing of Real-World Activities

Not Applicable.

2.2 AE Specifications

This section outlines the specifications for each of the Application Entities that are part of the Syngo Carbon Space.

2.2.1 Syngo Carbon Space AE Specification

2.2.1.1 SOP Classes

The Syngo Carbon Space AE creates and display data stored in *Syngo Carbon IDM* mentioned in [Table 1: Network Services](#)

2.2.1.2 Association Policies

Not Applicable

2.2.1.3 Association Initiation Policy

Not Applicable

2.3 Network Interfaces

2.3.1 Physical Network Interface

The network communication is independent from the physical medium over which TCP/IP executes; it inherits this from the Windows OS/Linux OS upon which it executes.

All DICOM communication (except Studies Service Retrieve Transaction) through Syngo Carbon Space is handled by *Syngo Carbon IDM*. Syngo Carbon IDM supports configuring the DICOM communication to use secure channel (TLS) between *Syngo Carbon IDM* and configured remote nodes. Detailed instructions how to set up secure DICOM communication are available in the [Syngo Carbon IDM Online Help](#).

2.3.2 IPv4 and IPv6 Support

Currently only IPv4 networks are supported (no support for IPv6).

2.3.3 Configuration

The configuration of Syngo Carbon IDM AE is available in [syngo.share core Online Help](#).

3 Media Exchange

Not Applicable.

4 Transformation of DICOM to CDA

Not Applicable

5 Support of Extended Character Sets

The Syngo Carbon Space DICOM application supports the following character sets as defined in the four tables below:

Table 3: Single-Byte Character Sets without Code Extension

Character Set Description	Defined Term	ISO registration number	Character Set
Default repertoire	None	ISO_IR 6	ISO 646
Latin alphabet No. 1	ISO_IR 100	ISO_IR 100	Supplementary set
		ISO_IR 6	ISO 646
Latin alphabet No. 2	ISO_IR 101	ISO_IR 101	Supplementary set
		ISO_IR 6	ISO 646
Latin alphabet No. 3	ISO_IR 109	ISO_IR 109	Supplementary set
		ISO_IR 6	ISO 646
Latin alphabet No. 4	ISO_IR 110	ISO_IR 110	Supplementary set
		ISO_IR 6	ISO 646
Cyrillic	ISO_IR 144	ISO_IR 144	Supplementary set
		ISO_IR 6	ISO 646
Arabic	ISO_IR 127	ISO_IR 127	Supplementary set
		ISO_IR 6	ISO 646
Greek	ISO_IR 126	ISO_IR 126	Supplementary set
		ISO_IR 6	ISO 646
Hebrew	ISO_IR 138	ISO_IR 138	Supplementary set
		ISO_IR 6	ISO 646
Latin alphabet No. 5	ISO_IR 148	ISO_IR 148	Supplementary set
		ISO_IR 6	ISO 646
Japanese	ISO_IR 13	ISO_IR 13	JIS X 0201: Katakana
		ISO_IR 14	JIS X 0201: Romaji
Thai	ISO_IR166	ISO_IR166	TIS 620-2553 (1990)
		ISO_IR 6	ISO 646

Table 4: Single-Byte Characters Sets with Code Extension

Character Set Description	Defined Term	Standard for Code Extension	ESC sequence	ISO registration number	Character Set
Default repertoire	ISO 2022 IR 6	ISO 2022	ESC 02/08 04/02	ISO-IR 6	ISO 646
Latin alphabet No.1	ISO 2022 IR 100	ISO 2022	ESC 02/13 04/01	ISO-IR 100	Supplementary set
		ISO 2022	ESC 02/08 04/02	ISO-IR 6	ISO 646
Latin alphabet No.2	ISO 2022 IR 101	ISO 2022	ESC 02/13 04/02	ISO-IR 101	Supplementary set
		ISO 2022	ESC 02/08 04/02	ISO-IR 6	ISO 646

Latin alphabet No.3	ISO 2022 IR 109	ISO 2022	ESC 02/13 04/03	ISO-IR 109	Supplementary set
		ISO 2022	ESC 02/08 04/02	ISO-IR 6	ISO 646
Latin alphabet No.4	ISO 2022 IR 110	ISO 2022	ESC 02/13 04/04	ISO-IR 110	Supplementary set
		ISO 2022	ESC 02/08 04/02	ISO-IR 6	ISO 646

Multi-Byte Character Sets without Code Extension is mentioned in Table 11: Multi-Byte Character Sets without Code

Extension

Table 5: Multi-Byte Character Sets without Code Extension

Character Set Description	Defined Term	ISO registration number	Character Set
Unicode	ISO_IR 192	ISO 10646	Unicode in UTF-8
Chinese	GB18030	GB18030	GB 18030-2000 (China Association for Standardization)

Table 6: Multi-Byte Character Sets with Code Extension

Character Set Description	Defined Term	Standard for Code Extension	ESC sequence	ISO registration number	Character Set
Japanese	ISO 2022 IR 87	ISO 2022	ESC 02/04 04/02	ISO-IR 87	JIS X 0208: Japanese kanji, hiragana, katakana
Japanese	ISO 2022 IR 159	ISO 2022	ESC 02/04 02/08 04/04	ISO-IR 159	JIS X 0212: Supplementary Kanji set
Korean	ISO 2022 IR 149	ISO 2022	ESC 02/04 02/09 04/03	ISO-IR 149	KS X 1001: Hangul and Hanja

All Special Character Sets (SCS) listed above are supported for incoming Data. When creating new Instances, the system will use the default SCS (or SCS List) configured on the machine.

6 Security

6.1 Security Profiles

6.1.1 Time Synchronization Profiles

Time Synchronization Profiles: The Syngo Carbon Space acts as an NTP Client in the Maintain Time Transaction.

6.2 Association Level Security

It is possible to configure whether the SCP will only answer to known AETs or to any AET. Please refer [Syngo Carbon IDM Dicom Conformance Statement](#) for more details.

- User must login with own username and password
- For configuration and Maintenance, Service Technician must login with a service key and separate password.
- To protect the Studies Service Retrieve Transaction interface from unauthorized access special attention is paid to security aspects. Only requests over HTTPS are accepted by the Syngo Carbon Space AE. On top, requests are required to contain valid authorization information by means of URL signatures (HMAC).

7 Annexes

7.1 IOD Content

This section provides the detailed content for all the SOP Instances natively created by Syngo Carbon Space, e.g. images created by evidence documents created on a review workstation (e.g., all SOP Classes that are marked in the “Created” column in Table-1).

Throughout the tables listed in this section, 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.
- AUTO: The Value is generated by the system.
- USER: The Value is entered by the user.
- EMPTY: The Attribute is sent without 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 Syngo Carbon Space 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.
- EMPTY: The Attribute is present but without a Value (zero length).
- 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.

7.1.1 IODs Created

7.1.1.1 Information shared across multiple IODs

7.1.1.1.1 Common Modules

All SOP Instances generated by the system use the common modules listed in Table 7 to Table 20 or a subset of them, as defined in the IOD specific subsections below.

Table 7: Patient Identification Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Patient’s Name	(0010,0010)	SRC_INSTANCE, USER	ALWAYS	ALWAYS			
Patient ID	(0010,0020)	SRC_INSTANCE, USER	ALWAYS	ALWAYS			
Issuer of Patient ID	(0010,0021)	SRC_INSTANCE	ALWAYS	CONDITIONAL		In case of derived objects depending on the availability in the source.	
Patient’s Birth Date	(0010,0030)	SRC_INSTANCE, USER	ALWAYS	ALWAYS			
Patient’s Sex	(0010,0040)	SRC_INSTANCE, USER	ALWAYS	ALWAYS			
Patient’s Birth Time	(0010,0032)	SRC_INSTANCE	CONDITIONAL	CONDITIONAL		Depending on the availability of the data in the source.	
Referenced Patient Sequence	(0008,1120)	SRC_INSTANCE	CONDITIONAL	CONDITIONAL			
>Include SOP Instance Reference Macro Attributes Table:21							
Other Patient IDs	(0010,1000)	SRC_INSTANCE, USER	CONDITIONAL	CONDITIONAL		Depending on the availability of the data in the source.	
Other Patient Names	(0010,1001)	SRC_INSTANCE, USER	CONDITIONAL	CONDITIONAL			

Table 8: General Study Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Study Instance UID	(0018,000D)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Study Date	(0008,0020)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS	Current date		
Study Time	(0008,0030)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS	Current time		
Referring Physician's Name	(0008,0090)	SRC_INSTANCE	ALWAYS	CONDITIONAL		Depending on the availability of the data in the source.	
Study ID	(0020,0010)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Accession Number	(0008,0050)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			Provided in most cases in the source. And just generated when no source is present.

Study Description	(0008,1030)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Referenced Study Sequence	(0008,1110)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
>Include SOP Instance Reference Macro Attributes Table:21							
Procedure Code Sequence	(0008,1032)	SRC_INSTANCE, AUTO	ALWAYS	CONDITIONAL			
>Include Code Sequence Macro Attributes Table:23							
Requesting Service	(0032,1033)	SRC_INSTANCE, AUTO	ALWAYS	CONDITIONAL			

Table 9: Patient Study Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Admitting Diagnoses Description	(0008,1080)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Patient's Age	(0010,1010)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Patient's Size	(0010,1020)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Patient's Weight	(0010,1030)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Medical Alerts	(0010,2000)	SRC_INSTANCE	ALWAYS	CONDITIONAL		Depending on the availability of the data in the source.	
Allergies	(0010,2110)	SRC_INSTANCE	ALWAYS	CONDITIONAL			
Smoking Status	(0010,21A0)	SRC_INSTANCE	ALWAYS	CONDITIONAL			
Additional Patient History	(0010,21B0)	SRC_INSTANCE	ALWAYS	CONDITIONAL			
Pregnancy Status	(0010,21C0)	SRC_INSTANCE	ALWAYS	CONDITIONAL			
Last Menstrual Date	(0010,21D0)	SRC_INSTANCE	ALWAYS	CONDITIONAL			
Occupation	(0010,2180)	SRC_INSTANCE	ALWAYS	CONDITIONAL			
Admission ID	(0038,0010)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			

Table 10: General Series Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Modality	(0008,0060)	FIXED	ALWAYS	ALWAYS			
Series Instance UID	(0020,000E)	AUTO	ALWAYS	ALWAYS			
Series Number	(0020,0011)	AUTO	ALWAYS	ALWAYS			
Laterality	(0020,0060)	EMPTY	ALWAYS	CONDITIONAL		only available if the body part examined is a paired structure	
Series Date	(0008,0021)	AUTO	ALWAYS	ALWAYS			
Series Time	(0008,0031)	AUTO	ALWAYS	ALWAYS			
Performing Physician's Name	(0008,1050)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Protocol Name	(0018,1030)	USER, AUTO	ALWAYS	ALWAYS			
Series Description	(0008,103E)	USER, AUTO	ALWAYS	ALWAYS			
Operators' Name	(0008,1070)	USER, AUTO	ALWAYS	ALWAYS			

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Referenced Performed Procedure Step Sequence	(0008,1111)	COPIED	ALWAYS	ALWAYS			
>Include Table:21 : SOP Instance Reference Macro Attributes							
Body Part Examined	(0018,0015)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Patient Position	(0018,5100)	AUTO	ALWAYS	ALWAYS			
Request Attributes Sequence	(0040,0275)	SRC_INSTANCE	ALWAYS	ALWAYS			
>Include Table 25 : Request Attributes Macro Attributes							
Performed Procedure Step ID	(0040,0253)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Performed Procedure Step Start Date	(0040,0244)	AUTO	ALWAYS	ALWAYS			
Performed Procedure Step Start Time	(0040,0245)	AUTO	ALWAYS	ALWAYS			
Performed procedure step Description	(0040,0254)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Performed Protocol Code Sequence	(0040,0260)	AUTO	ALWAYS	ALWAYS			
>Include Code Sequence Macro Attributes (see Table:23)							

Table 11: General Reference Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Referenced Image Sequence	(0008,1140)	AUTO	CONDITIONAL	CONDITINAL		Reference to LOCALISER / not present for LOCALISER	
Include Table:21 : SOP Instance Reference Macro Attributes							
Derivation Description	(0008,2111)	AUTO	ALWAYS	ALWAYS			
Source Image Sequence	(0008,2112)	AUTO	ALWAYS	CONDITIONAL		If derived from single image	
Include Table:21 : SOP Instance Reference Macro Attributes							

Table 12: General Acquisition Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Acquisition Number	(0020,0012)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Acquisition Date	(0008,0022)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Acquisition Time	(0008,0032)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Acquisition DateTime	(0008,002A)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Irradiation Event UID	(0008,3010)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			

Table 13: 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, AUTO	ALWAYS	ALWAYS			
Position Reference Indicator	(0020,1040)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			

Table 14: General Equipment Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Manufacturer	(0008,0070)	FIXED	ALWAYS	ALWAYS			Depends on the Equipment
Institution Name	(0008,0080)	SRC_INSTANCE	ALWAYS	ALWAYS			
Institution Address	(0008,0081)	SRC_INSTANCE	ALWAYS	ALWAYS			
Station Name	(0008,1010)	SRC_INSTANCE	ALWAYS	ALWAYS			
Institutional Department Name	(0008,1040)	SRC_INSTANCE	ALWAYS	ALWAYS			
Manufacturer's Model Name	(0008,1090)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Device Serial Number	(0018,1000)	AUTO	ALWAYS	ALWAYS			
Software Versions	(0018,1020)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Gantry ID	(0018,1008)	SRC_INSTANCE	ALWAYS	ALWAYS			
Spatial Resolution	(0018,1050)	SRC_INSTANCE	ALWAYS	ALWAYS			
Date of Last Calibration	(0018,1200)	SRC_INSTANCE	ALWAYS	ALWAYS			
Time of Last Calibration	(0018,1201)	SRC_INSTANCE	ALWAYS	ALWAYS			

Table 15: Image Plane Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Pixel Spacing	(0028,0030)	SRC_INSTANCE	ALWAYS	ALWAYS			
Image Orientation (Patient)	(0020,0037)	SRC_INSTANCE	ALWAYS	ALWAYS			
Image Position (Patient)	(0020,0032)	SRC_INSTANCE	ALWAYS	ALWAYS			
Slice Thickness	(0018,0050)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Slice Location	(0020,1041)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			

Table 16: General Image Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Instance Number	(0020,0013)	AUTO	ALWAYS	ALWAYS	0 for reference images		
Content Date	(0008,0023)	AUTO	ALWAYS	ALWAYS			
Content Time	(0008,0033)	AUTO	ALWAYS	ALWAYS			
Image Type	(0008,0008)	AUTO	ALWAYS	ALWAYS			
Image Comments	(0020,4000)	AUTO, USER	ALWAYS	ALWAYS			
Burned In Annotation	(0028,0301)	FIXED	ALWAYS	ALWAYS	NO		
Lossy Image Compression	(0028,2110)	AUTO	ALWAYS	ALWAYS	00		
Irradiation Event UID	(0008,3010)	AUTO	ALWAYS	ALWAYS			
Real World Value Mapping Sequence	(0040,9096)	AUTO	ALWAYS	ALWAYS			

Table 17: Image Pixel Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Rows	(0028,0010)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Columns	(0028,0011)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Pixel Representation	(0028,0103)	FIXED	ALWAYS	ALWAYS	0000H		
Pixel Data	(7FE0,0010)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Smallest Image Pixel Value	(0028,0106)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			
Largest Image Pixel Value	(0028,0107)	SRC_INSTANCE, AUTO	ALWAYS	ALWAYS			

Table 18: VOILUT Module

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

Table 19: Contrast/Bolus Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Contrast / Bolus Agent	(0018,0010)	SRC_INSTANCE	ALWAYS	ALWAYS			NOTE: The type of used Contrast medium or UNDEFINED if no Contrast medium specified
Contrast / Bolus Volume	(0018,1041)	SRC_INSTANCE	ALWAYS	ALWAYS			
Contrast / Bolus Start Time	(0018,1042)	SRC_INSTANCE	ALWAYS	ALWAYS			
Contrast / Bolus Stop Time	(0018,1043)	SRC_INSTANCE	ALWAYS	ALWAYS			
Contrast / Bolus Total Dose	(0018,1044)	SRC_INSTANCE	ALWAYS	ALWAYS			
Contrast Flow Rate	(0018,1046)	SRC_INSTANCE	ALWAYS	ALWAYS			
Contrast Flow Duration	(0018,1047)	SRC_INSTANCE	ALWAYS	ALWAYS			
Contrast / Bolus Ingredient	(0018,1048)	SRC_INSTANCE	ALWAYS	ALWAYS	IODINE GADOLINIUM CARBON DIOXIDE BARIUM		
Contrast/Bolus Ingredient Concentration	(0018,1049)	SRC_INSTANCE	ALWAYS	ALWAYS			Note: [mg] of active ingredient per [mL] of (diluted) agent

Table 20: SOP Common Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
SOP Class UID	(0008,0016)	FIXED	ALWAYS	ALWAYS			
SOP Instance UID	(0008,0018)	AUTO	ALWAYS	ALWAYS			
Specific Character Set	(0008,0005)	SRC_INSTANCE	ALWAYS	CONDITIONAL		Required if an expanded or replacement character set is used.	
X Timezone Offset From UTC	(0008,0201)	SRC_INSTANCE	ALWAYS	ALWAYS			

7.1.1.1.2 Common Macros

The tables below list the Macros that can either be used as part of the Common Modules and IOD specific modules.

Table 21: SOP Instance Reference Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Referenced SOP Class UID	(0008,1150)	AUTO	ALWAYS	ALWAYS			
Referenced SOP Instance UID	(0008,1155)	AUTO	ALWAYS	ALWAYS			

Table 22: Content Identification Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Instance Number	(0020,0013)	AUTO	ALWAYS	ALWAYS			
Content Description	(0070,0081)	USER	ALWAYS	ALWAYS			
Content Creator's Name	(0070,0084)	CONFIG	ALWAYS	ALWAYS			

Table 23: Code Sequence Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Code Value	(0008,0100)	AUTO	ALWAYS	ALWAYS			
Coding Scheme Designator	(0008,0102)	AUTO	ALWAYS	ALWAYS			
Coding Scheme Version	(0008,0103)	AUTO	ALWAYS	ALWAYS			
Code Meaning	(0008,0104)	AUTO	ALWAYS	ALWAYS			

Note: Enhanced Encoding Mode is not supported.

Table 24: Hierarchical Series Reference Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Series Instance UID	(0020,000E)	AUTO	ALWAYS	ALWAYS			
Referenced SOP Sequence	(0008,1199)	AUTO	ALWAYS	ALWAYS			
>Include SOP Instance Reference Macro Attributes (see Table 21)							

Table 25: Request Attributes Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Accession Number	(0008,0050)	AUTO	ALWAYS	ALWAYS			
Study Instance UID	(0020,000D)	AUTO	ALWAYS	ALWAYS			
Requested Procedure Description	(0032,1060)	USER	ALWAYS	ALWAYS			
Requested Procedure Code Sequence	(0032,1064)	AUTO	ALWAYS	ALWAYS			
>Include Code Sequence Macro Attributes (see Table 23)					No Baseline CID is defined.		

7.1.1.2 Basic Text SR IOD

Table 26: IOD of created Basic Text SR SOP Class Instances

IE	Module	Reference	Presence of Module
Patient	Patient Identification Module	Table 7	CONDITIONAL: Attributes of this module are not present in case of emergency case.
Study	General Study Module	Table 8	ALWAYS
Series	SR Document Series Module	Table 27	ALWAYS
Equipment	General Equipment Module	Table 14	ALWAYS
SR Document	SR Document General Module	Table 28	ALWAYS
	SR Document Content Module	Table 29	ALWAYS

IE	Module	Reference	Presence of Module
	SOP Common Module	Table 20	ALWAYS

Table 27: SR Document Series Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Modality	(0008,0060)	FIXED	ALWAYS	ALWAYS	SR		
Series Instances UID	(0020,000E)	AUTO	ALWAYS	ALWAYS			
Series Number	(0020,0011)	AUTO	ALWAYS	ALWAYS			

Table 28: SR Document General Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Instance Number	(0020,0013)	AUTO	ALWAYS	ALWAYS			
Completion Flag	(0040,A491)	AUTO	ALWAYS	ALWAYS	PARTIAL COMPLETE		
Verification Flag	(0040,A493)	AUTO	ALWAYS	ALWAYS	UNVERIFIED VERIFIED		
Content Date	(0008,0023)	AUTO	ALWAYS	ALWAYS			
Content Time	(0008,0033)	AUTO	ALWAYS	ALWAYS			
Verifying Observer Sequence	(0040,A073)	AUTO	ALWAYS	CONDITIONAL		Required if Verification Flag (0040,A493) is VERIFIED	
>Verifying Observer Name	(0040,A075)	AUTO	ALWAYS	ALWAYS			
>Verifying Organization	(0040,A027)	AUTO	ALWAYS	ALWAYS			
>Verification DateTime	(0040,A030)	AUTO	ALWAYS	ALWAYS			
Predecessor Documents Sequence	(0040,A360)	AUTO	CONDITIONAL	ALWAYS		Required if this document includes content from other documents	
>Include Hierarchical Series Reference Macro Attributes (see Table 24)							
Identical Document Sequence	(0040,A525)	AUTO	CONDITIONAL	ALWAYS		Required if this document is stored with different SOP Instance UIDs in one or more other Studies	
>Include Hierarchical Series Reference Macro Attributes (see Table 24)							
Referenced Request Sequence	(0040, A370)	AUTO	CONDITIONAL	ALWAYS		Required if this Document fulfills at least one Requested Procedure. May be present otherwise	
>Include Request Macro Attributes (see Table 25)							
Current Requested Procedure	(0040,A375)	AUTO	CONDITIONAL	ALWAYS		Required if the creator is aware of Composite Objects acquired in order to satisfy the	

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Evidence Sequence						Requested Procedure(s) for which the SR Document is or if Instances are referenced in the content tree. May be present otherwise.	
>Include Hierarchical Series Reference Macro Attributes (see Table 24)							
Pertinent Other Evidence Sequence	(0040,A385)	AUTO	CONDITIONAL	ALWAYS		Required if pertinent evidence from other Requested Procedures needs to be recorded.	
>Include Hierarchical Series Reference Macro Attributes (see Table 24)							
Referenced Instance Sequence	(0008,114A)	AUTO	CONDITIONAL	ALWAYS		Required if the identity of a CDA Document equivalent to the current SOP Instance is known at the time of creation of this SOP Instance. May be present otherwise	
>Include SOP Instance Reference Macro Attributes (see Table 21)							
>Purpose of Reference Code Sequence	(0040, A170)	AUTO	ALWAYS	ALWAYS			
>>Include Code Sequence Macro Attributes (see Table 23)							

Table 29: SR Document Content Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Value Type	(0040, A040)	FIXED	ALWAYS	ALWAYS	TEXT		"TEXT" in case of Text SR
Concept Name Code Sequence	(0040, A043)	AUTO	ALWAYS	ALWAYS			This is the Root Content Item
>Code Value	(0008,0100)	AUTO	ALWAYS	ALWAYS	The identifier of the Coded Entry.		
>Coding Scheme Designator	(0008,0102)	FIXED	ALWAYS	ALWAYS	LN		
>Code Meaning	(0008,0104)	FIXED	ALWAYS	ALWAYS	Diagnostic Imaging Report		
Continuity Of Content	(0040, A050)	FIXED	ALWAYS	ALWAYS	SEPARATE		

7.1.1.3 Segmentation Storage IOD

Table 30: IOD of created Segmentation Storage SOP Class Instances

IE	Module	Reference	Presence of Module
Patient	Patient Identification Module	Table 7	ALWAYS
Study	General Study Module	Table 8	ALWAYS

IE	Module	Reference	Presence of Module
	Patient Study Module	Table 9	CONDITIONAL: Attributes of this module are not present in case of emergency case.
Series	General Series Module	Table 10	ALWAYS
	Segmentation Series Module	Table 34	ALWAYS
Frame of Reference	Frame of Reference Module	Table 13	ALWAYS
Equipment	General Equipment Module	Table 14	ALWAYS
	Enhanced General Equipment Module	Table 33	ALWAYS
Segmentation	General Image Module	Table 16	ALWAYS
	Image Pixel Module	Table 17	ALWAYS
	Segmentation Image Module	Table 36	ALWAYS
	Multi-frame Functional Groups Module	Table 31	ALWAYS
	Multi-frame Dimension Module	Table 32	ALWAYS
	SOP Common Module	Table 20	ALWAYS

Table 31: Multi-frame Functional Groups Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Per-frame Functional Groups Sequence	(5200,9230)	AUTO	ALWAYS	ALWAYS			
>Include one or more Functional Group Macros that are shared by all frames. The selected Functional Group Macros shall not be present in the Per-frame Functional Groups Sequence (5200,9230).							
Instance Number	(0020,0013)	AUTO	ALWAYS	ALWAYS			
Content Date	(0008,0023)	AUTO	ALWAYS	ALWAYS			
Content Time	(0008,0033)	AUTO	ALWAYS	ALWAYS			
Number of Frames	(0028,0008)	AUTO	ALWAYS	ALWAYS			

Table 32: Multi-frame Dimension Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Dimension Organization Sequence	(0020,9221)	AUTO	ALWAYS	ALWAYS			
>Dimension Organization UID	(0020,9164)	AUTO	ALWAYS	ALWAYS			
Dimension Index Sequence	(0020,9222)	AUTO	ALWAYS	ALWAYS			
>Dimension Index Pointer	(0020,9165)	AUTO	ALWAYS	ALWAYS			
>Dimension Index Private Creator	(0020,9213)	AUTO	CONDITIONAL	ALWAYS		Required if the Dimension Index Pointer (0020,9165) value is the Data	

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
						Element Tag of a Private Attribute.	
>Functional Group Pointer	(0020,9167)	AUTO	CONDITIONAL	ALWAYS		Required if the value of Dimension Index Pointer (0020,9165) is the Data Element Tag of an Attribute that is contained within a Functional Group Sequence.	
>Functional Group Private Creator	(0020,9238)	AUTO	CONDITIONAL	ALWAYS		Required if the Functional Group Pointer (0020,9167) value is the Data Element Tag of a Private Attribute.	
>Dimension Organization UID	(0020,9164)	AUTO	ALWAYS	ALWAYS			

Table 33: Enhanced General Equipment Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Manufacturer	(0008,0070)	FIXED	ALWAYS	ALWAYS			
Manufacturer's Model Name	(0008,1090)	FIXED	ALWAYS	ALWAYS			
Device Serial Number	(0018,1000)	FIXED	ALWAYS	ALWAYS			
Software Versions	(0018,1020)	FIXED	ALWAYS	ALWAYS			

Table 34: Segmentation Series Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Modality	(0008,0060)	FIXED	ALWAYS	ALWAYS	SEG		
Series Number	(0020,0011)	GENERATED	ALWAYS	ALWAYS			In case of derived objects depending on the availability in the source.
Referenced Performed Procedure Step Sequence	(0008,1111)	AUTO	ALWAYS	ALWAYS			In case of derived objects depending on the availability in the source.
>Include SOP Instance Reference Macro Attributes (see Table 47)							
Segmentation Property Category Code Sequence	(0062,0003)	AUTO	ALWAYS	ALWAYS			
Segment Property Type Code SQ	(0062,000F)	AUTO	ALWAYS	ALWAYS			

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Segment Algorithm Name	(0062,0009)	AUTO	ALWAYS	ALWAYS			

Table 35: Segment Description Macro Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Segmentation Property Category Code Sequence	(0062,0003)	AUTO	ALWAYS	ALWAYS			
Segment Label	(0062,0005)	AUTO	ALWAYS	ALWAYS			
Segment Description	(0062,0006)	AUTO	ALWAYS	ALWAYS			
Segment Algorithm Type	(0062,0008)	AUTO	ALWAYS	ALWAYS	AUTOMATIC = calculated segment SEMIAUTOMATIC = calculated segment with user assistance MANUAL = user-entered segment		
Segment Algorithm Name	(0062,0009)	AUTO	ALWAYS	ALWAYS			
Segment Property Type Code SQ	(0062,000F)	AUTO	ALWAYS	ALWAYS			

Table 36: Segmentation Image Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Image Type	(0008,0008)	FIXED	ALWAYS	ALWAYS	DERIVED / PRIMARY		
Include Content Identification Macro Attributes (see Table 48)							
Samples Per Pixel	(0028,0002)	FIXED	ALWAYS	ALWAYS	1		
Photometric Interpretation	(0028,0004)	FIXED	ALWAYS	ALWAYS	MONOCHROME2		
Pixel Representation	(0028,0103)	FIXED	ALWAYS	ALWAYS	0		
Bits Allocated	(0028,0100)	AUTO	ALWAYS	ALWAYS			
Bits Stored	(0028,0101)	AUTO	ALWAYS	ALWAYS			
High Bit	(0028,0102)	AUTO	ALWAYS	ALWAYS			
Lossy Image Compression	(0028,2110)	AUTO	ALWAYS	ALWAYS			
Lossy Image Compression Ratio	(0028,2112)	AUTO	ALWAYS	ALWAYS			
Lossy Image Compression Method	(0028,2114)	AUTO	ALWAYS	ALWAYS			
Segmentation Type	(0062,0001)	AUTO	ALWAYS	ALWAYS	BINARY FRACTIONAL		

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Segment Sequence	(0062,0002)	AUTO	ALWAYS	ALWAYS			
>Include Table 56 : Segment Description Macro Attributes							

7.1.1.4 Raw Data Storage IOD

Table 37: IOD of created Raw Data SOP Class Instances

IE	Module	Reference	Presence of Module
Patient	Patient Identification Module	Table 7	ALWAYS
Study	General Study Module	Table 8	ALWAYS
	Patient Study Module	Table 9	CONDITIONAL: Attributes of this module are not present in case of emergency case.
Series	General Series Module	Table 10	ALWAYS
Frame of Reference	Frame of Reference Module	Table 13	ALWAYS
Equipment	General Equipment Module	Table 14	ALWAYS
Raw Data	Acquisition Context Module	Table 48	ALWAYS
	Raw Data Module	Table 38	ALWAYS
	SOP Common Module	Table 20	ALWAYS

Table 38: Raw Data Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Instance Number	(0020,0013)	AUTO	ALWAYS	ALWAYS			
Content Date	(0008,0023)	AUTO	ALWAYS	ALWAYS			
Content Time	(0008,0033)	AUTO	ALWAYS	ALWAYS			
Creator-Version UID	(0008,9123)	AUTO	ALWAYS	ALWAYS			

7.1.1.5 CT Image Storage IOD

Table 39: IOD of created CT Image Storage SOP Class Instances

IE	Module	Reference	Presence of Module
Patient	Patient Identification Module	Table 7	ALWAYS
Study	General Study Module	Table 8	ALWAYS
	Patient Study Module	Table 9	CONDITIONAL: Attributes of this module are not present in case of emergency case.
Series	General Series Module	Table 10	ALWAYS
Frame of Reference	Frame of Reference Module	Table 13	ALWAYS
Equipment	General Equipment Module	Table 14	ALWAYS
Acquisition	General Acquisition Module	Table 12	ALWAYS
Image	General Image Module	Table 16	ALWAYS
	General Reference Module	Table 11	CONDITIONAL (If reference data is available)
	Image Plane Module	Table 15	ALWAYS

IE	Module	Reference	Presence of Module
	Image Pixel Module	Table 17	ALWAYS
	Contrast/Bolus Module	Table 19	CONDITIONAL (If contrast media was used in this image.)
	VOI LUT Module	Table 18	ALWAYS
	CT Image Module	Table 40	ALWAYS
	SOP Common Module	Table 20	ALWAYS

Table 40: CT Image Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Samples per Pixel	(0028,0002)	AUTO	ALWAYS	ALWAYS			
Photometric Interpretation	(0028,0004)	AUTO	ALWAYS	ALWAYS			
Bits Allocated	(0028,0100)	AUTO	ALWAYS	ALWAYS			
Bits Stored	(0028,0101)	AUTO	ALWAYS	ALWAYS			
High Bit	(0028,0102)	AUTO	ALWAYS	ALWAYS			
Rescale Intercept	(0028,1052)	AUTO	ALWAYS	ALWAYS			
Rescale Slope	(0028,1053)	AUTO	ALWAYS	ALWAYS			
Rescale Type	(0028,1054)	AUTO	CONDITIONAL	ALWAYS		Required if the Rescale Type is not HU (Hounsfield Units), or Multi-energy CT Acquisition (0018,9361) is YES. May be present otherwise.	

7.1.1.6 MR Image Storage IOD

Table 41: IOD of created MR Image Storage SOP Class Instances

IE	Module	Reference	Presence of Module
Patient	Patient Identification Module	Table 7	ALWAYS
Study	General Study Module	Table 8	ALWAYS
	Patient Study Module	Table 9	CONDITIONAL: Attributes of this module are not present in case of emergency case.
Series	General Series Module	Table 10	ALWAYS
Frame of Reference	Frame of Reference Module	Table 13	ALWAYS
Equipment	General Equipment Module	Table 14	ALWAYS
Image	General Image Module	Table 16	ALWAYS
	General Reference Module	Table 11	CONDITIONAL, if references are available
	Image Pixel Module	Table 17	ALWAYS
	VOI LUT Module	Table 18	ALWAYS

IE	Module	Reference	Presence of Module
	MR Image Module	Table 42	ALWAYS
	SOP Common Module	Table 20	ALWAYS

Table 42: MR Image Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Samples per Pixel	(0028,0002)	AUTO	ALWAYS	ALWAYS			
Photometric Interpretation	(0028,0004)	AUTO	ALWAYS	ALWAYS			
Bits Allocated	(0028,0100)	AUTO	ALWAYS	ALWAYS			
Bits Stored	(0028,0101)	AUTO	ALWAYS	ALWAYS			
High Bit	(0028,0102)	AUTO	ALWAYS	ALWAYS			
Scanning Sequence	(0018,0020)	AUTO	ALWAYS	ALWAYS			
Sequence Variant	(0018,0021)	AUTO	ALWAYS	ALWAYS			

7.1.1.7 Secondary Capture Image Storage IOD

Table 43: IOD of created Secondary Capture Image Storage SOP Class Instances

IE	Module	Reference	Presence of Module
Patient	Patient Identification Module	Table 7	ALWAYS
Study	General Study Module	Table 8	ALWAYS
	Patient Study Module	Table 9	CONDITIONAL: Attributes of this module are not present in case of emergency case.
Series	General Series Module	Table 10	ALWAYS
General Reference	General Reference Module	Table 11	ALWAYS
Frame of Reference	Frame of Reference Module	Table 13	ALWAYS
Equipment	General Equipment Module	Table 14	ALWAYS
Image	General Image Module	Table 16	ALWAYS
	Image Pixel Module	Table 17	ALWAYS
	VOI LUT Module	Table 18	ALWAYS
	SOP Common Module	Table 20	ALWAYS
	Siemens Syngo Parked Views Module	Table 44	ALWAYS

7.1.1.7.1 Secondary Capture Image Storage IOD Private Modules

Table 44: Siemens Syngo Parked Views Module

Attribute Name	Tag	VR	V M	Value	Contains PHI	Presence	Conditions	Exceptions	Description
Parked Views Name	(0033, SIEMENS SYNGO PARKED VIEWS, 00)	LO	1		SAFE	VALUE_ ALWAYS			Name of the created parked view
Parked Views Description	(0033, SIEMENS SYNGO PARKED VIEWS, 01)	LO	1		SAFE	VALUE_ ALWAYS			Description of the created parked view
Parked Views State Version	(0033, SIEMENS SYNGO PARKED VIEWS, 02)	SH	1		SAFE	VALUE_ ALWAYS			Version of the parked view state format e.g "1.0"
Parked Views Presentation States DataSets	(0033, SIEMENS SYNGO PARKED VIEWS, 03)	SQ	1		SAFE	VALUE_ ALWAYS			Sequence containing presentation state for each presentation
Parked Views Application Name	(0033, SIEMENS SYNGO PARKED VIEWS, 04)	LO	1		SAFE	VALUE_ ALWAYS			Name of the application in which parked view was created
Parked Views Application Version	(0033, SIEMENS SYNGO PARKED VIEWS, 05)	LO	1		SAFE	VALUE_ ALWAYS			Version of the application in which parked view was created
Parked Views Application States	(0033, SIEMENS SYNGO PARKED VIEWS, 06)	SQ	1		SAFE	VALUE_ ALWAYS			Sequence containing serialized state of the runtime components
Parked Views Layout State	(0033, SIEMENS SYNGO PARKED VIEWS, 07)	UT	1		SAFE	VALUE_ ALWAYS			Serialized state of the layout
Parked Views Application State Identifier	(0033, SIEMENS SYNGO PARKED VIEWS, 51)	LO	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 52) is present		Identifier of the application component
Parked Views Application State	(0033, SIEMENS SYNGO PARKED VIEWS, 52)	OB	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 51) is present		Serialized state of the application component
Parked Views Presentation State Identifier	(0033, SIEMENS SYNGO PARKED VIEWS, 71)	LO	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 72), (0033, SIEMENS SYNGO PARKED VIEWS, 73), (0033, SIEMENS SYNGO PARKED VIEWS, 74), (0033, SIEMENS SYNGO PARKED VIEWS, 75) are all present		Identifier of the presentation state

Attribute Name	Tag	VR	V M	Value	Contains PHI	Presence	Conditions	Exceptions	Description
Parked Views Presentation State	(0033, SIEMENS SYNGO PARKED VIEWS, 72)	SQ	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 71), (0033, SIEMENS SYNGO PARKED VIEWS, 73), (0033, SIEMENS SYNGO PARKED VIEWS, 74), (0033, SIEMENS SYNGO PARKED VIEWS, 75) are all present		Sequence contains DICOM presentation state object
Parked Views Offset	(0033, SIEMENS SYNGO PARKED VIEWS, 73)	IS	1		NO	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 71), (0033, SIEMENS SYNGO PARKED VIEWS, 72), (0033, SIEMENS SYNGO PARKED VIEWS, 74), (0033, SIEMENS SYNGO PARKED VIEWS, 75) are all present		Offset used for the ordering of the presentations within the layout
Parked Views Data	(0033, SIEMENS SYNGO PARKED VIEWS, 74)	SQ	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 71), (0033, SIEMENS SYNGO PARKED VIEWS, 72), (0033, SIEMENS SYNGO PARKED VIEWS, 73), (0033, SIEMENS SYNGO PARKED VIEWS, 75) are all present		Sequence containing identification of the displayed data
Parked Views Visualization Data	(0033, SIEMENS SYNGO PARKED VIEWS, 75)	UT	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 71), (0033, SIEMENS SYNGO PARKED VIEWS, 72), (0033, SIEMENS SYNGO PARKED VIEWS, 73), (0033, SIEMENS SYNGO PARKED VIEWS, 74) are all present		Visualization properties not stored in presentation state
Parked Views Overlay Index	(0033, SIEMENS SYNGO PARKED VIEWS, 90)	IS	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 91) and (0033, SIEMENS SYNGO PARKED		Determine whether data are base or overlay

Attribute Name	Tag	VR	V M	Value	Contains PHI	Presence	Conditions	Exceptions	Description
							VIEWS, 92) are present		
Parked Views Study Uid	(0033, SIEMENS SYNGO PARKED VIEWS, 91)	UI	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 90) and (0033, SIEMENS SYNGO PARKED VIEWS, 92) are present		Study UID of the displayed study
Parked Views Series Uid	(0033, SIEMENS SYNGO PARKED VIEWS, 92)	UI	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 90) and (0033, SIEMENS SYNGO PARKED VIEWS, 91) are present		Series UID of the displayed series
Parked Views Instance Uid	(0033, SIEMENS SYNGO PARKED VIEWS, 93)	UI	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 95) and (0033, SIEMENS SYNGO PARKED VIEWS, 96) are not present		Instance UID of the displayed instance
Parked Views Frame Number	(0033, SIEMENS SYNGO PARKED VIEWS, 94)	IS	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 93) is present and (0033, SIEMENS SYNGO PARKED VIEWS, 95), (0033, SIEMENS SYNGO PARKED VIEWS, 6) are not present		Frame Number
Parked Views Volume Source Frames Hash Code	(0033, SIEMENS SYNGO PARKED VIEWS, 95)	LT	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 96) is present and (0033, SIEMENS SYNGO PARKED VIEWS, 93), (0033, SIEMENS SYNGO PARKED VIEWS, 94) are not present		Hash Code of the volume
Parked Views Volume Representation	(0033, SIEMENS SYNGO PARKED VIEWS, 95)	LT	1		SAFE	VALUE_ CONDITIONAL	(0033, SIEMENS SYNGO PARKED VIEWS, 95) is present and (0033, SIEMENS SYNGO PARKED VIEWS, 93), (0033, SIEMENS SYNGO PARKED VIEWS, 94) are not present		Volume representation

7.1.1.8 Enhanced MR Image Storage IOD

In the objects created the tag (0008,0008) Image Type will be of the value "SECONDARY/DERIVED" and may be extended by application specific values.

Table 45: IOD of created Enhanced MR Image Storage SOP Class Instances

IE	Module Name	Presence (Module)	Condition	Reference
Patient	Patient Identification Module	ALWAYS		Table 7
Study	General Study Module	ALWAYS		Table 8
	Patient Study Module	ALWAYS	In case of derived objects depending on the availability in the source.	Table 9
Series	General Series Module	ALWAYS		Table 10
Frame Of Reference	Frame of Reference Module	ALWAYS		Table 13
Equipment	General Equipment Module	ALWAYS		Table 14
	Enhanced General Equipment Module	ALWAYS		Table 33
Image	General Image Module	ALWAYS		Table 16
	Image Pixel Module	ALWAYS		Table 17
	Contrast / Bolus Module	CONDITIONAL	Required if contrast media was used in this image	Table 19
	Multi-frame Functional Groups Module	ALWAYS		Table 46
	Multi-frame Dimension Module	ALWAYS		Table 47
	Acquisition Context Module	ALWAYS		Table 48
	Enhanced MR Image Module	ALWAYS		Table 49
	SOP Common Module	ALWAYS		Table 20

Table 46: Multi-frame Functional Groups Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Shared Functional Groups Sequence	(5200,9229)	AUTO	ALWAYS	ALWAYS			
Per-Frame Functional Groups Sequence	(5200,9230)	AUTO	ALWAYS	ALWAYS			
>Include one or more Functional Group Macros.							
Instance Number	(0020,0013)	AUTO	ALWAYS	ALWAYS			
Content Date	(0008,0023)	AUTO	ALWAYS	ALWAYS			
Content Time	(0008,0033)	AUTO	ALWAYS	ALWAYS			
Number of Frames	(0028,0008)	AUTO	ALWAYS	ALWAYS			

Table 47: Multi-frame Dimension Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Dimension Organization Sequence	(0020,9221)	AUTO	ALWAYS	ALWAYS			

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
>Dimension Organization UID	(0020,9164)	AUTO	ALWAYS	ALWAYS			
Dimension Index Sequence	(0020,9222)	AUTO	CONDITIONAL	ALWAYS		Required if Dimension Organization Type (0020,9311) is absent or not TILED_FULL. May be present otherwise.	
>Dimension Index Pointer	(0020,9165)	AUTO	ALWAYS	ALWAYS			
>Dimension Index Private Creator	(0020,9213)	AUTO	CONDITIONAL	ALWAYS		Required if the Dimension Index Pointer (0020,9165) value is the Data Element Tag of a Private Attribute.	
>Dimension Organization UID	(0020,9164)	AUTO	ALWAYS	ALWAYS			

Table 48: Acquisition Context Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Acquisition Context Sequence	(0040,0555)	AUTO	ALWAYS	ALWAYS			
>Value Type	(0040,A040)	FIXED	ALWAYS	ALWAYS	CODE		
Concept Name Code Sequence	(0040, A043)	AUTO	ALWAYS	ALWAYS			
>Code Value	(0008,0100)	AUTO	ALWAYS	ALWAYS			
>Coding Scheme Designator	(0008,0102)	AUTO	ALWAYS	ALWAYS			
>Code Meaning	(0008,0104)	AUTO	ALWAYS	ALWAYS			
>Code Scheme Version	(0008,0103)	FIXED	ALWAYS	ALWAYS	1.0		
Concept Code Sequence	(0040, A043)	AUTO	ALWAYS	ALWAYS			
>Code Value	(0008,0100)	AUTO	ALWAYS	ALWAYS			
>Coding Scheme Designator	(0008,0102)	FIXED	ALWAYS	ALWAYS			
>Code Meaning	(0008,0104)	FIXED	ALWAYS	ALWAYS			
>Code Scheme Version	(0008,0103)	FIXED	ALWAYS	ALWAYS	1.0		

Table 49: Enhanced MR Image Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Samples per Pixel	(0028,0002)	AUTO	ALWAYS	ALWAYS			
Photometric Interpretation	(0028,0004)	AUTO	ALWAYS	ALWAYS			

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Bits Allocated	(0028,0100)	AUTO	ALWAYS	ALWAYS			
Bits Stored	(0028,0101)	AUTO	ALWAYS	ALWAYS			
High Bit	(0028,0102)	AUTO	ALWAYS	ALWAYS			
Pixel Representation	(0028,0103)	AUTO	ALWAYS	ALWAYS			

7.1.1.9 Grayscale Softcopy Presentation State Storage IOD

Table 50: IOD of Grayscale Softcopy Presentation State Instances

IE	Module	Reference	Presence of Module
Patient	Patient Identification Module	Table 7	ALWAYS
Study	General Study Module	Table 8	ALWAYS
	Patient Study Module	Table 9	CONDITIONAL: Attributes of this module are not present in case of emergency case.
Series	General Series Module	Table 10	ALWAYS
	Presentation Series Module	Table 52	ALWAYS
Equipment	General Equipment Module	Table 14	ALWAYS
Presentation State	Presentation State Identification Module	Table 53	ALWAYS
	Presentation State Relationship Module	Table 54	ALWAYS
	Displayed Area Module	Table 51	ALWAYS
	SOP Common Module	Table 20	ALWAYS
	Presentation State Shutter Module	Table 55	ALWAYS
	Softcopy Presentation LUT Module	Table 56	ALWAYS
	ASPECTS Result Information Module	Table 57	CONDITIONAL: CT ASPECTS is generating presentation states as results, then this module will be present

Table 51: Display Area Module Attributes

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Displayed Area Selection Sequence	(0070,005A)	AUTO	ALWAYS	ALWAYS			
>Referenced Image Sequence	(0008,1140)	AUTO	ALWAYS	ALWAYS			
Include Image SOP Instance Reference Macro Attributes (Table:41)							
>Displayed Area Top Left Hand Corner	(0070,0052)	AUTO	ALWAYS	ALWAYS			
>Displayed Area Bottom Right Hand Corner	(0070,0053)	AUTO	ALWAYS	ALWAYS			
>Presentation Size Mode	(0070,0100)	AUTO	ALWAYS	ALWAYS	SCALE TO FIT TRUE SIZE MAGNIFY		
>Presentation Pixel Spacing	(0070,0101)	AUTO	ALWAYS	ALWAYS			
>Presentation Pixel Aspect Ratio	(0070,0102)	AUTO	ALWAYS	ALWAYS			

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
>Presentation Pixel Magnification Ratio	(0070,0103)	AUTO	ALWAYS	ALWAYS			

Table 52: Presentation Series Module

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

Table 53: Presentation State Identification Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Presentation Creation Date	(0070,0082)	AUTO	ALWAYS	ALWAYS	The current date		
Presentation Creation Time	(0070,0083)	AUTO	ALWAYS	ALWAYS	The current time		
Include Content Identification Macro Attributes (see Table 47)							

Table 54: Presentation State Relationship Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Referenced Series Sequence	(0008,1115)	AUTO	ALWAYS	ALWAYS			
>Series Instance UID	(0020,000E)	AUTO	ALWAYS	ALWAYS			Unique identifier of a Series that is part of the Study defined by the Study Instance UID (0020,000D) in the enclosing Data Set.
Referenced Image Sequence	(0008,1140)	AUTO	ALWAYS	ALWAYS			
Include Image SOP Instance Reference Macro Attributes (Table:46)							

Table 55: Presentation State Shutter Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Shutter Presentation Value	(0018,1622)	AUTO	CONDITIONAL	ALWAYS		Required if the Display Shutter Module or Bitmap Display Shutter Module is present.	
Shutter Presentation Color CIE Lab Value	(0018,1624)	AUTO	CONDITIONAL	ALWAYS		Required if the Display Shutter Module or Bitmap Display Shutter Module is present and the SOP Class is other than Grayscale Softcopy Presentation State Storage.	

Table 56: Softcopy Presentation LUT Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Presentation LUT Sequence	(2050,0010)	AUTO	CONDITIONAL	ALWAYS		Required if Presentation LUT Shape (2050,0020) is absent.	
>LUT Descriptor	(0028,3002)	AUTO	ALWAYS	ALWAYS			
>LUT Data	(0028,3006)	AUTO	ALWAYS	ALWAYS			
Presentation LUT Shape	(2050,0020)	AUTO	CONDITIONAL	ALWAYS		Required if Presentation LUT Sequence (2050,0010) is absent.	

Table 57: Private Module ASPECT result Information

Attribute Name	Tag	VR	VM	Identifiable Information	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
SIEMENS CT EXAM APP SHARED	(0019,00xx)	LO	1			ALWAYS	ALWAYS			
CT ASPECTS Region Information	(0019, SIEMENS CT EXAM APP SHARED, 07)	OB	1			CONDITIONAL	ALWAYS			CT ASPECTS is generating presentation states as results, then this tag will be present

7.1.1.10 Color Softcopy Presentation State Storage IOD

Table 58: IOD of Color Softcopy Presentation State Instances

IE	Module	Reference	Presence of Module
Patient	Patient Identification Module	Table 7	ALWAYS
Study	General Study Module	Table 8	ALWAYS
	Patient Study Module	Table 9	CONDITIONAL: Attributes of this module are not present in case of emergency case.
Series	General Series Module	Table 10	ALWAYS
	Presentation Series Module	Table 52	ALWAYS
Equipment	General Equipment Module	Table 14	ALWAYS
Presentation State	Presentation State Identification Module	Table 53	ALWAYS
	Presentation State Relationship Module	Table 54	ALWAYS
	Displayed Area Module	Table 51	ALWAYS
	SOP Common Module	Table 20	ALWAYS
	Presentation State Shutter Module	Table 55	ALWAYS
	ICC Profile Module	Table 59	ALWAYS

IE	Module	Reference	Presence of Module
	ASPECTS Result Information Module	Table 57	CONDITIONAL: CT ASPECTS is generating presentation states as results, then this module will be present

Table 59: ICC Profile Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
ICC Profile	(0028,2000)	AUTO	ALWAYS	ALWAYS			

7.1.1.11 Pseudo-Color Softcopy Presentation State Storage IOD

Table 60: IOD of Pseudo-Color Softcopy Presentation State Instances

IE	Module	Reference	Presence of Module
Patient	Patient Identification Module	Table 7	ALWAYS
Study	General Study Module	Table 8	ALWAYS
	Patient Study Module	Table 9	CONDITIONAL: Attributes of this module are not present in case of emergency case.
Series	General Series Module	Table 10	ALWAYS
	Presentation Series Module	Table 52	ALWAYS
Equipment	General Equipment Module	Table 14	ALWAYS
Presentation State	Presentation State Identification Module	Table 53	ALWAYS
	Presentation State Relationship Module	Table 54	ALWAYS
	Displayed Area Module	Table 51	ALWAYS
	Presentation State Shutter Module	Table 20	ALWAYS
	ICC Profile Module	Table 55	ALWAYS
	Palette Color Lookup Table	Table 61	ALWAYS
	SOP Common Module	Table 20	ALWAYS

Table 61: Palette Color Lookup Table

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Red Palette Color Lookup Table Descriptor	(0028,1101)	AUTO	ALWAYS	ALWAYS			
Green Palette Color Lookup Table Descriptor	(0028,1102)	AUTO	ALWAYS	ALWAYS			
Blue Palette Color Lookup Table Descriptor	(0028,1103)	AUTO	ALWAYS	ALWAYS			
Red Palette Color Lookup Table Data	(0028,1201)	AUTO	CONDITIONAL	ALWAYS		Required if segmented data is NOT used in an	

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
						Image IOD or Color Palette IOD, or if the IOD is a Presentation State IOD.	
Green Palette Color Lookup Table Data	(0028,1202)	AUTO	CONDITIONAL	ALWAYS		Required if segmented data is NOT used in an Image IOD or Color Palette IOD, or if the IOD is a Presentation State IOD.	
Blue Palette Color Lookup Table Data	(0028,1203)	AUTO	CONDITIONAL	ALWAYS		Required if segmented data is NOT used in an Image IOD or Color Palette IOD, or if the IOD is a Presentation State IOD.	
Segmented Red Palette Color Lookup Table Data	(0028,1221)	AUTO	CONDITIONAL	ALWAYS		Required if segmented data is used in an Image IOD or Color Palette IOD; shall not be present in a Presentation State IOD.	
Segmented Green Palette Color Lookup Table Data	(0028,1222)	AUTO	CONDITIONAL	ALWAYS		Required if segmented data is used in an Image IOD or Color Palette IOD; shall not be present in a Presentation State IOD	
Segmented Blue Palette Color Lookup Table Data	(0028,1223)	AUTO	CONDITIONAL	ALWAYS		Data. Required if segmented data is used in an Image IOD or Color Palette IOD; shall not be present in a Presentation State IOD	

7.1.1.12 Real World Value Mapping Storage IOD

Table 62: IOD of Real World Value Mapping

IE	Module	Reference	Presence of Module
Patient	Patient Identification Module	Table 7	ALWAYS
Study	General Study Module	Table 8	ALWAYS
Series	General Series Module	Table 10	ALWAYS
	Real World Value Mapping Series Module	Table 63	ALWAYS
Equipment	General Equipment Module	Table 14	ALWAYS

IE	Module	Reference	Presence of Module
Real World Value Mapping	Real World Value Mapping Module	Table 64	ALWAYS
	Common Instance Reference Module	Table 65	ALWAYS
	SOP Common Module	Table 20	ALWAYS

Table 63: Real World Value Mapping Series Module

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

Table 64: Real World Value Mapping Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Content Date	(0008,0023)	AUTO	ALWAYS	ALWAYS			
Content Time	(0008,0033)	AUTO	ALWAYS	ALWAYS			
Instance Number	(0020,0013)	AUTO	ALWAYS	ALWAYS			
Private Creator	(0029,0010)	FIXED	ALWAYS	ALWAYS	SIEMENS SYNGO RWVM		
RWVM Version	(0029,SIEMENS SYNGO RWVM,50)	AUTO	ALWAYS	ALWAYS	1.0		
Private Creator	(0031,0010)	AUTO	ALWAYS	ALWAYS	SIEMENS SYNGO WORKFLOW		
WF Internal Patient UID	(0031,SIEMENS SYNGO WORKFLOW,10)	COPIED	SRC_INSTANCE	ALWAYS			
Referenced Image Real World Value Mapping Sequence	(0040,9094)	AUTO	ALWAYS	ALWAYS			
>Referenced Image Sequence	(0008,1140)	AUTO	ALWAYS	ALWAYS			
>>Referenced SOP Class UID	(0008,1150)	AUTO	ALWAYS	ALWAYS			
>>Referenced SOP Instance UID	(0008,1155)	AUTO	ALWAYS	ALWAYS			
>Real World Value Mapping Sequence	(0040,9096)	AUTO	ALWAYS	ALWAYS			
>>LUT Explanation	(0028,3003)	AUTO	ALWAYS	ALWAYS	Same as Code Value (0008,0100) from Measurement Units Code Sequence (0040,08EA)		
>>Measurement Units Code Sequence	(0040,08EA)	AUTO	ALWAYS	ALWAYS			

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
>>>Code Value	(0008,0100)	AUTO	ALWAYS	ALWAYS	Either of "SUV-bw" or "Bq/ml" or "Gy"		
>>>Coding Scheme Designator	(0008,0102)	AUTO	ALWAYS	ALWAYS	UCUM		
>>>Code Meaning	(0008,0104)	AUTO	ALWAYS	ALWAYS			
>>LUT Label	(0040,9210)	AUTO	ALWAYS	ALWAYS	Same as Code Value (0008,0100) from Measurement Units Code Sequence (0040,08EA)		
>>Real World Value Last Value Mapped	(0040,9211)	FIXED	ALWAYS	ALWAYS	FIXED in case of Dose as "65535", for others "32767"		
>>Real World Value First Value Mapped	(0040,9216)	FIXED	ALWAYS	ALWAYS	FIXED in case of Dose as "0" for others "-32768"		
>>Real World Value Intercept	(0040,9224)	FIXED	ALWAYS	ALWAYS	0.0		
>>Real World Value Slope	(0040,9225)	FIXED	ALWAYS	ALWAYS	1		
Presentation Label	(0070,0080)	FIXED	ALWAYS	ALWAYS	L1 in case of RT Dose SOP class, otherwise Mappings		
Presentation Description	(0070,0081)	FIXED	ALWAYS	ALWAYS	Empty		
Presentation Creator's Name	(0070,0084)	AUTO	ALWAYS	ALWAYS			

Table 65: Common Instance Reference Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Referenced Series Sequence	(0008,1115)	AUTO	ALWAYS	ALWAYS			
>Referenced Instance Sequence	(0008,114A)	AUTO	ALWAYS	ALWAYS			
>>Referenced SOP Class UID	(0008,1150)	AUTO	ALWAYS	ALWAYS			
>>Referenced SOP Instance UID	(0008,1155)	AUTO	ALWAYS	ALWAYS			

7.1.1.13 Enhanced MR Color Image IOD

In the objects created the tag (0008,0008) Image Type will be of the value "SECONDARY/DERIVED" and may be extended by application specific values.

Table 66: IOD of created Enhanced MR Color Image Storage SOP Class Instances

IE	Module Name	Presence (Module)	Condition	Reference
Patient	Patient Identification Module	ALWAYS		Table 7
Study	General Study Module	ALWAYS		Table 8
	Patient Study Module	ALWAYS	In case of derived objects depending on the availability in the source.	Table 9
Series	General Series Module	ALWAYS		Table 10
Frame Of Reference	Frame of Reference Module	ALWAYS		Table 13
Equipment	General Equipment Module	ALWAYS		Table 14
	Enhanced General Equipment Module	ALWAYS		Table 33
Image	General Image Module	ALWAYS		Table 16
	Image Pixel Module	ALWAYS		Table 17
	Contrast / Bolus Module	CONDITIONAL	Required if contrast media was used in this image	Table 19
	Multi-frame Functional Groups Module	ALWAYS		Table 46
	Multi-frame Dimension Module	ALWAYS		Table 47
	Acquisition Context Module	ALWAYS		Table 48
	Enhanced MR Image Module	ALWAYS		Table 49
	ICC Profile Module	ALWAYS		Table 59
	Common Instance Reference Module	ALWAYS		Table 65
	Cardiac Synchronization Module	CONDITIONAL	In case of cardiac triggering	Table 67
	Respiratory Synchronization Module	CONDITIONAL	in case of respiratory triggering	Table 68
	Bulk Motion Synchronization Module	CONDITIONAL	in case of bulk motion triggering	Table 69
	SOP Common Module	ALWAYS		Table 20

Table 67: Cardiac Synchronization Module

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

Table 68: Respiratory Synchronization Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Respiratory Motion Compensation Technique	(0018,9170)	SRC_INSTANCE	ALWAYS	ALWAYS			

Table 69: Bulk Motion Synchronization Module

Attribute Name	Tag	Source	Presence of Attribute	Presence of Value	Value	Conditions	Comments
Bulk Motion Compensation Technique	(0018,9172)	SRC_INSTANCE	ALWAYS	ALWAYS			
Bulk Motion Signal Source	(0018,9173)	SRC_INSTANCE	ALWAYS	ALWAYS			

7.2 Data Dictionary of Private Attributes

[Table 13: Private Data Element Dictionary](#) lists all private attributes created by Syngo Carbon Space which may be included in the generated instances. These private attributes may be deprecated or replaced with standard attributes in the future.

Table 70: Private Data Element Dictionary

DICOM Tag	Name	VR	VM
(0029,SIEMENS CSA HEADER,08)	Modality Image Header Type	CS	1
(0029,SIEMENS CSA HEADER,09)	Modality Image Header Version	LO	1
(0029,SIEMENS CSA HEADER,10)	Modality Image Header Info	OB	1
(0029,SIEMENS CSA HEADER,18)	Modality Series Header Type	CS	1
(0029,SIEMENS CSA HEADER,19)	Modality Series Header Version	LO	1
(0029,SIEMENS CSA HEADER,20)	Modality Series Header Info	OB	1
(0029,SIEMENS CSA NON-IMAGE,08)	Modality Data Header Type	CS	1
(0029,SIEMENS CSA NON-IMAGE,09)	Modality Data Header Version	LO	1
(0029,SIEMENS CSA NON-IMAGE,10)	Modality Data Header Info	OB	1
(7FE1,SIEMENS CSA NON-IMAGE,10)	Modality Data	OB	1
(0029,SIEMENS MEDCOM HEADER,40)	Application Header Sequence	SQ	1
(0029,SIEMENS MEDCOM HEADER,41)	Application Header Type	CS	1
(0029,SIEMENS MEDCOM HEADER,42)	Application Header ID	LO	1
(0029,SIEMENS MEDCOM HEADER,43)	Application Header Version	LO	1
(0029,SIEMENS MEDCOM HEADER,44)	Application Header Info	OB	1
(0029,SIEMENS MEDCOM HEADER,70)	Siemens Link Sequence	SQ	1-n
(0029,SIEMENS MEDCOM HEADER,71)	Referenced Tag	AT	1
(0029,SIEMENS MEDCOM HEADER,72)	Referenced Tag Type	CS	1
(0029,SIEMENS MEDCOM HEADER,73)	Referenced Value Length	UL	1
(0029,SIEMENS MEDCOM HEADER,74)	Referenced Object Device Type	CS	1
(0029,SIEMENS MEDCOM HEADER,75)	Referenced Object Device Location	OB	1
(0029,SIEMENS MEDCOM HEADER,76)	Referenced Object ID	OB	1
(0029,SIEMENS MEDCOM HEADER,77)	Referenced Object Offset	UL	1

(0029,SIEMENS MEDCOM HEADER2,60)	Series Work Flow Status	LO	1
(0029,SIEMENS SYNGO 3D FUSION MATRIX,08)	Object Series Instance UID	UI	1
(0029,SIEMENS SYNGO 3D FUSION MATRIX,09)	Model Series Instance UID	UI	1
(0029,SIEMENS SYNGO 3D FUSION MATRIX,10)	Matrix Referenced Series Instance UID	UI	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,00)	Presentation Name	ST	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,01)	Presentation Type	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,02)	Advanced Presentation Sequence	SQ	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,03)	Time Point Sequence	SQ	1-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,04)	Base Image Sequence	SQ	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,05)	Overlay Image Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,06)	Registration Instance Sequence	SQ	0-1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,07)	Real World Value Mapping Instance Sequence	SQ	0-1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,08)	Measurement Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,09)	Measurement UID	UI	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,10)	Segmentation Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,11)	Segmentation UID	SH	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,12)	Navigation Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,13)	Navigation Name	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,14)	Auto Navigation Direction	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,15)	Auto Navigation Frame Rate	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,16)	Auto Navigation Mode	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,17)	Auto Navigation Realtime Speed	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,18)	Auto Navigation Strategy	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,19)	Auto Navigation Realtime Flag	SH	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,20)	Index Navigation Current Index	IS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,21)	Index Auto Navigation Skipping Degree	IS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,22)	Volume Navigation Minimum Pixel Spacing	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,23)	Volume Navigation Scroll Unit	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,24)	Volume Navigation Step Size	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,25)	Volume Navigation Jump Size	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,26)	Referenced Registration Number	IS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,27)	Real World Value Mapping UID	SH	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,28)	Channel Alpha Value	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,30)	Measurement Application Name	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,31)	Measurement Data Sequence	SQ	1-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,32)	Measurement Type	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,33)	Measurement Frame of Reference UID	UI	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,34)	Measurement Uid	UI	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,35)	Measurement Application Number	IS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,36)	Measurement Application Number Prefix Text	ST	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,37)	Measurement Graphic Is Visible Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,38)	Referenced Syngo Uid	UI	4
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,39)	Clinical Finding Uid	UI	1

(0029,SIEMENS SYNGO ADVANCED PRESENTATION,3A)	Measurement Evaluation String Value	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,3B)	Measurement Evaluation Integer Value	IS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,3C)	Measurement Evaluation Decimal Value	FL	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,3D)	Measurement Line Show Center Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,3E)	Measurement Angle Show ArrowTip Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,3F)	Camera Home Settings Sequence	SQ	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,40)	Camera Zoom	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,41)	Camera Position	DS	3
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,42)	Camera Orientation	DS	4
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,43)	Camera Far Clip Plane	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,44)	Camera Near Clip Plane	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,46)	Camera ViewPort Size	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,47)	Camera Aspect Ratio	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,48)	Camera Projection Type	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,49)	Camera Field of View	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,4A)	Camera Image Plane Distance	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,4B)	Camera Image Maximum Height	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,4C)	Camera Image Minimum Height	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,4D)	ParallelShift Interval MM	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,4E)	Measurement ArrowTip Size	FL	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,4F)	Measurement ArrowTip Size ScalingFactor	FL	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,50)	Renderer Vertex Is Characteristic Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,51)	Renderer Thickness Usage Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,52)	Renderer Threshold	DS	2
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,53)	Renderer Material	DS	4-8
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,54)	Renderer DirectionalLight Color	DS	4
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,55)	Renderer DirectionalLight Direction	DS	3
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,56)	Renderer DirectionalLight TwoSide Usage Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,57)	Renderer PWL TransferFunction Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,58)	Renderer PWL Vertex Index	IS	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,59)	Renderer PWL Vertex Color	DS	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,5A)	Renderer Is Camera Required Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,5B)	Renderer Do Depth Test Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,5C)	Renderer DirectionalLight Usage Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,5D)	Renderer Thickness Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,5E)	Renderer Slice Spacing Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,5F)	Renderer Sampling Distance	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,60)	Renderer Initial Sampling Distance	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,61)	Segmentation Display Data Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,62)	Segmentation Display Data UID	ST	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,63)	Segmentation Display Parameter Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,64)	Segmentation Display Parameter Type	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,65)	Segmentation Display Visibility	LO	1

(0029,SIEMENS SYNGO ADVANCED PRESENTATION,66)	Segmentation Display Color	DS	4
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,67)	Segmentation Display Is Selected Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,68)	Segmentation Additional Information Blob	OB	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,69)	Hash Code Value	ST	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,6A)	Segmentation Version Identifier	LO	1-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,6B)	Segmentation Lock Mode	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,70)	Segmentation Volume Size	DS	3
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,7A)	Segmentation Volume StorageDataType	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,7B)	Segmentation Volume Model Matrix	FL	16
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,7C)	Segmentation Display Is Applied Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,7D)	Display Representation Instance Identifier	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,71)	Registration Referenced Frames	UI	1-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,72)	Registration Referenced Registrations	UI	1-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,73)	Registration Creation Algorithm Name	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,74)	ECG Graphic Type	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,75)	Hidden Pixel Spacing	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,76)	Renderer Edge Enhancement Param	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,77)	Renderer Gradient Modulated Opacity Param	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,78)	Renderer Volume Smoothing Param	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,7E)	Fused Presentation LUT Shape	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,7F)	Overlay Graphic VisibleFlag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,80)	Camera Rotation Axis	DS	3
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,81)	Overlay Hidden Display Attributes	SL	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,82)	Presentation State Group Identifier	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,83)	Temporary Smallest Image Pixel Value	US	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,84)	Camera Rotation Center	DS	3
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,85)	Camera Rotation Center Usage Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,86)	Camera Parallel Epiped	DS	12
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,87)	Camera Max Zoom In Factor	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,88)	Camera Min Zoom In Factor	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,89)	Temporary Largest Image Pixel Value	US	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,8A)	Camera Rotation Axis Usage Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,8B)	Measurement Surface Normal	DS	3
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,8C)	Measurement Ellipsoid Model Matrix	FL	16
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,8D)	Measurement Evaluation DataRole ID	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,8E)	Measurement Algorithm Type	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,91)	Measurement Evaluation DataRole Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,93)	Measurement Evaluation Sequence	SQ	1-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,94)	Measurement Evaluation Value	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,95)	Measurement Evaluation ID	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,96)	Measurement Data Points	FL	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,97)	Measurement Data Angles	FL	0-n

(0029,SIEMENS SYNGO ADVANCED PRESENTATION,98)	Measurement Data Slice	FD	9
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,99)	Measurement Data Slice Thickness	FL	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,9A)	Measurement Referenced Frames Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,9B)	Measurement Evaluation Longest Distance	DS	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,9C)	Measurement Evaluation Centroid	DS	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,9D)	Measurement Data Bounding Box	FL	6
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,9E)	Measurement Text	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,9F)	Measurement Diameter	IS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,A0)	Image Rotation Fractional	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,A1)	Preset Name	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,A2)	Fusion LUT Sequence	SQ	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,A3)	Fusion LUT Is Active Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,A4)	Scale To Fit Type	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,A5)	Syngo UID	UI	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,A6)	Presentation Version Identifier	UI	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,A7)	Presentation Module Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,A8)	Presentation Module Type	ST	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,A9)	Presentation State Sequence	SQ	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,AA)	LUT Inverted Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,AB)	Softcopy Voi Lut Viewing Index	IS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,AC)	Displayed Area Bottom Right Hand Corner Fractional	FD	2
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,AD)	Displayed Area Top Left Hand Corner Fractional	FD	2
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,AE)	Measurement Alpha	FL	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,AF)	Measurement Bitmap	OB	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,B0)	Current Frame Number	US	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,B1)	ImageText View Name	ST	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,B2)	ImageText View Content Sequence	SQ	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,B3)	ImageText Line Names	LO	1-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,B4)	ImageText Line Values	LO	1-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,B5)	Measurement Evaluation Text Position Sequence	SQ	1-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,B6)	Measurement Link Evaluation Text Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,B7)	Measurement Evaluation Text Position Vector	DS	3
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,B8)	ImageText Alpha Blending Line Value	OB	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,B9)	ImageText Visibility	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,BA)	ImageText Reduced	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,BB)	ImageText Minimal	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,BC)	ImageText ViewID	ST	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,BD)	Unlinked Image Text View Name	ST	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,C1)	Task Data Sequence	SQ	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,C2)	Task Data Type	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,C3)	Task Data Version	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,C4)	Task Data Description	ST	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,C5)	Task Data	OB	1

(0029,SIEMENS SYNGO ADVANCED PRESENTATION,C6)	Task Data Size	IS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,C7)	True Size Type	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,C8)	Image Graphics Visibility	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,C9)	Clip Plane Sequence	SQ	1-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,CA)	Clip Plane Center	DS	3
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,CB)	Clip Plane Normal	DS	3
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,CC)	Clip Plane Scale	DS	2
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,CD)	Clip Plane Use Thickness Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,CE)	Clip Plane Thickness	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,CF)	Image Sequence	SQ	1-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,D0)	Clip Plane Enable Clip	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,D1)	Clip Plane Handle Ratio	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,D2)	Clip Plane Bounding Points	DS	24
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,D3)	Clip Plane Motion Matrix	DS	16
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,D4)	Clip Plane Shift Velocity	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,D5)	Clip Plane Enabled Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,D6)	Clip Plane Rotate Velocity	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,D7)	Clip Plane Show Graphics Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,E0)	Crop Box Size	DS	3
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,E1)	Crop Box Enabled Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,E2)	Crop Box Absolute Origin	DS	3
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,E3)	Crop Box Show Graphics Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,E4)	Renderer Filter Settings Sequence	SQ	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,E5)	Renderer Energy Conversion Lut	OF	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,E6)	Apply Fusion	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,E7)	RepresentationId	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,EE)	Advanced Display Representation Sequence	SQ	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,EF)	Measurement Visibility In View	ST	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,F0)	Measurement Label Text	ST	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,F1)	Curved Camera Coordinates	DS	0-n
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,F2)	Curved Camera Point Of Interest	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,F3)	Curved Camera Point Of Interest Usage Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,F4)	Curved Camera Thickness	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,F5)	Curved Camera Extrusion Length	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,F6)	Curved Camera Rotation Axis Mode	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,F7)	Curved Camera Roll Rotation Axis	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,F8)	Curved Camera View Port Height	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,F9)	Curved Camera Cut Direction	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,FA)	Curved Camera Pan Vector	DS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,FB)	Clinical Finding ID	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,FC)	Measurement Is Circle Flag	CS	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,FD)	Measurement Application TypeID	LO	1
(0029,SIEMENS SYNGO ADVANCED PRESENTATION,FE)	Measurement Default Evaluation Text Visibility	CS	1

(0029,SIEMENS SYNGO ADVANCED PRESENTATION,FF)	Measurement Font Height	SL	1
(002B,SIEMENS SYNGO ADVANCED PRESENTATION,00)	Measurement Min Threshold Value	SL	1
(002B,SIEMENS SYNGO ADVANCED PRESENTATION,01)	Measurement Max Threshold Value	SL	1
(0029,SIEMENS SYNGO ALPHA CAD,10)	Automatic Landmarking and Parsing of Human Anatomy Version	CS	1
(0029,SIEMENS SYNGO ALPHA CAD,12)	Automatic Landmarking and Parsing of Human Anatomy Body Regions	SQ	1
(7FDF,SIEMENS SYNGO DATA PADDING,FC)	Pixel Data Leading Padding	OB	1
(0027,SIEMENS SYNGO ENHANCED IDATASET API,01)	Business Unit Code	CS	1
(0027,SIEMENS SYNGO ENHANCED IDATASET API,02)	Application Type	LO	1
(0027,SIEMENS SYNGO ENHANCED IDATASET API,03)	Application Attributes Sequence	SQ	1
(0029,SIEMENS SYNGO FRAME SET,10)	Image Frame Sequence	SQ	1-n
(0029,SIEMENS SYNGO FRAME SET,12)	Type of Progression	CS	1
(0029,SIEMENS SYNGO FRAME SET,14)	Representation Level	IS	1
(0029,SIEMENS SYNGO FRAME SET,16)	Representation Information Sequence	SQ	1-n
(0029,SIEMENS SYNGO FRAME SET,18)	Number of Representations	IS	1
(0029,SIEMENS SYNGO FRAME SET,20)	Representation Pixel Offset	IS	1
(0029,SIEMENS SYNGO FUNCTION ASSIGNMENT,01)	Data Reference	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,20)	Object Insertion Date	DA	1
(0009,SIEMENS SYNGO INDEX SERVICE,30)	Instance Object States	SQ	1
(0009,SIEMENS SYNGO INDEX SERVICE,31)	Series Object States	SQ	1
(0009,SIEMENS SYNGO INDEX SERVICE,40)	Last Access Time	DT	1
(0009,SIEMENS SYNGO INDEX SERVICE,41)	Delete Protected Status	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,42)	Received from Archive Status	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,43)	Archive Status	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,44)	Location	AE	1
(0009,SIEMENS SYNGO INDEX SERVICE,45)	Logical Deleted Status	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,46)	Insert Time	DT	1
(0009,SIEMENS SYNGO INDEX SERVICE,47)	Visible Instances on Series Level	IS	1
(0009,SIEMENS SYNGO INDEX SERVICE,48)	Series Archived	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,49)	Visible Instances on Study Level	IS	1
(0009,SIEMENS SYNGO INDEX SERVICE,4A)	Series Completed	IS	1
(0009,SIEMENS SYNGO INDEX SERVICE,4B)	Delete Protection Time	DT	1
(0009,SIEMENS SYNGO INDEX SERVICE,4C)	Delete Protection User	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,4D)	Study Marked Time	DT	1
(0009,SIEMENS SYNGO INDEX SERVICE,4E)	Study Marked User	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,4F)	Series Delete Protected	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,50)	Hidden Instance	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,51)	Frame Number	UL	1-n
(0009,SIEMENS SYNGO INDEX SERVICE,60)	Data Handling Status	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,61)	Result Status	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,62)	Clinical Result Attribute	US	1
(0009,SIEMENS SYNGO INDEX SERVICE,63)	Instance Origin	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,64)	DM file relative location for store	LT	1

(0009,SIEMENS SYNGO INDEX SERVICE,70)	Header Offset	UL	1
(0009,SIEMENS SYNGO INDEX SERVICE,71)	Study Archived	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,72)	Study Exported	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,73)	Series Exported	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,74)	Instance Exported	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,75)	Study Corrected	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,76)	Study Marked	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,77)	Review	SL	1
(0009,SIEMENS SYNGO INDEX SERVICE,78)	Isotope Module Level	SL	1
(0009,SIEMENS SYNGO INDEX SERVICE,79)	Radionuclide Total Dose on Series level	DS	1
(0009,SIEMENS SYNGO INDEX SERVICE,7A)	Radionuclide Total Dose on Instance level	DS	1
(0009,SIEMENS SYNGO INDEX SERVICE,7B)	Series Radiopharmaceutical Information Sequence	SQ	1
(0009,SIEMENS SYNGO INDEX SERVICE,7C)	Instance Radiopharmaceutical Information Sequence	SQ	1
(0009,SIEMENS SYNGO INDEX SERVICE,80)	Workflow Attribute Sequence	SQ	1-n
(0009,SIEMENS SYNGO INDEX SERVICE,81)	Patient's Name Attribute Sequence	SQ	1
(0009,SIEMENS SYNGO INDEX SERVICE,82)	Other Patient Names Attribute Sequence	SQ	1-n
(0009,SIEMENS SYNGO INDEX SERVICE,83)	Name of Physician(s) Reading Study Attribute Sequence	SQ	1-n
(0009,SIEMENS SYNGO INDEX SERVICE,84)	Requesting Physician Attribute Sequence	SQ	1
(0009,SIEMENS SYNGO INDEX SERVICE,85)	Referring Physician's Name Attribute Sequence	SQ	1
(0009,SIEMENS SYNGO INDEX SERVICE,86)	Performing Physician's Name Attribute Sequence	SQ	1-n
(0009,SIEMENS SYNGO INDEX SERVICE,87)	Family Name	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,88)	Given Name	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,89)	Middle Name	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,8A)	Prefix	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,8B)	Suffix	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,8C)	Degree	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,8D)	Ideographic Family Name	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,8E)	Ideographic Given Name	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,8F)	Ideographic Middle Name	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,90)	Ideographic Prefix	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,91)	Ideographic Suffix	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,92)	Ideographic Degree	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,93)	Phonetic Family Name	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,94)	Phonetic Given Name	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,95)	Phonetic Middle Name	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,96)	Phonetic Prefix	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,97)	Phonetic Suffix	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,98)	Phonetic Degree	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,99)	Study Printed	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,9A)	Series Printed	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,9B)	Instance Printed	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,9C)	User Specified Worklist	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,9D)	User Specified Worklist Study Registration Time	DT	1

(0009,SIEMENS SYNGO INDEX SERVICE,9E)	User Specified Worklist Study Registration User	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,9F)	User Specified Worklist Sequence	SQ	1-n
(0009,SIEMENS SYNGO INDEX SERVICE,A0)	Sender System Device Name	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,A1)	Instance Repetition Time	DS	1
(0009,SIEMENS SYNGO INDEX SERVICE,A2)	Instance Effective Echo Time	FD	1
(0009,SIEMENS SYNGO INDEX SERVICE,A3)	Instance Inversion Times	FD	1-n
(0009,SIEMENS SYNGO INDEX SERVICE,A4)	Instance Nominal Cardiac Trigger Delay Time	FD	1
(0009,SIEMENS SYNGO INDEX SERVICE,A5)	Instance Diffusion b-value	FD	1
(0009,SIEMENS SYNGO INDEX SERVICE,A6)	Instance Creator Entity	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,A7)	Data Source	AE	1
(0009,SIEMENS SYNGO INDEX SERVICE,A8)	Study Availability	SL	1
(0009,SIEMENS SYNGO INDEX SERVICE,AC)	Detector View Code Sequence	SQ	1
(0009,SIEMENS SYNGO INDEX SERVICE,AD)	Detector Information Code Value	SH	1-2
(0009,SIEMENS SYNGO INDEX SERVICE,AE)	Detector Information Code Meaning	LO	1-2
(0009,SIEMENS SYNGO INDEX SERVICE,AF)	Detector Information Coding Scheme Designator	SH	1-2
(0009,SIEMENS SYNGO INDEX SERVICE,B0)	Relevant Body Part Examined	CS	1
(0009,SIEMENS SYNGO INDEX SERVICE,B1)	Relevant Protocol Name	LO	1
(0009,SIEMENS SYNGO INDEX SERVICE,B2)	Relevant Modality	CS	1
(0009,SIEMENS SYNGO INSTANCE MANIFEST,00)	Temporary Original Header Sequence	SQ	1
(0009,SIEMENS SYNGO INSTANCE MANIFEST,10)	syngo Index Source AE Title	AE	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,02)	Hanging Protocol Excellence Rank	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,06)	Data Sharing Flag	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,08)	Bagging Operations Sequence	SQ	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,10)	Synchronization Type	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,12)	Custom Filter Type	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,14)	Custom Sorter Type	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,20)	Selector DT Value	DT	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,22)	Selector DA Value	DA	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,24)	Selector TM Value	TM	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,26)	Selector UI Value	UI	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,30)	Custom Property Sequence	SQ	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,32)	Custom Property Type	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,34)	Custom Property Name	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,36)	Custom Property Value	LT	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,38)	Layout Property Sequence	SQ	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,40)	Synchronization Sequence	SQ	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,60)	Viewport Definitions Sequence	SQ	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,62)	Protocol Type	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,70)	Display Protocol Name	SH	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,72)	Display Protocol Description	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,74)	Display Protocol Level	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,76)	Display Protocol Creator	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,78)	Display Protocol Creation Datetime	DT	1

(0073,SIEMENS SYNGO LAYOUT PROTOCOL,7A)	Referenced Data Protocol	UI	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,7B)	Original Display Protocol	UI	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,7C)	Display Protocol Excellence Rank	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,7E)	Layout Sequence	SQ	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,80)	Layout Number	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,82)	Layout Description	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,84)	Segment Sequence	SQ	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,86)	Segment Number	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,88)	Segment Description	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,8A)	Segment Type	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,8C)	Tile Horizontal Dimension	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,8E)	Tile Vertical Dimension	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,90)	Fill Order	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,92)	Segment Small Scroll Type	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,94)	Segment Small Scroll Amount	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,96)	Segment Large Scroll Type	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,98)	Segment Large Scroll Amount	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,9A)	Segment Overlap Priority	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,9C)	Data Role View Sequence	SQ	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,9E)	Data Role View Number	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,A2)	Referenced Data Role	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,A4)	Sharing Enabled	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,A8)	Referenced Data Role Views	US	2-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,B0)	Data Protocol Name	SH	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,B2)	Data Protocol Description	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,B4)	Data Protocol Level	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,B6)	Data Protocol Creator	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,B8)	Data Protocol Creation Datetime	DT	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,BA)	Data Protocol Excellence Rank	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,BC)	Data Protocol Definition Sequence	SQ	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,BE)	Data Role Sequence	SQ	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,C0)	Data Role Number	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,C2)	Data Role Name	SH	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,C4)	IsSystem	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,C6)	Selector Operations Sequence	SQ	0-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,C8)	Selector Usage Flag	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,CA)	Select by Attribute Presence	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,CC)	Select by Category	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,CE)	Select by Operator	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,D0)	Custom Selector Type	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,D2)	Selector Operator	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,D4)	Reformatting Required	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,D6)	Registration Data Sequence	SQ	1-n

(0073,SIEMENS SYNGO LAYOUT PROTOCOL,D8)	Reference Data Role Number	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,DA)	Model Data Sequence	SQ	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,DC)	Model Data Role Number	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,DE)	Fusion Display Sequence	SQ	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,E0)	Transparency	FD	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,E2)	Time Point	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,E4)	First Time Point Token	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,E6)	Last Time Point Token	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,E8)	Intermediate Time Point Token	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,EA)	Data Processor Sequence	SQ	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,EC)	Data Processor Type	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,EE)	Template Data Role Sequence	SQ	1-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,F0)	View Sequence	SQ	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,F4)	View Type	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,F6)	Custom Bagging Type	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,F8)	Referenced Display Segment Number	US	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,FA)	Data Role Type	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,46)	Internal Flag	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,FC)	Unassigned Flag	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,FE)	Initial Display Scroll Position	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,04)	Template Data Role ID	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,16)	Reference Template Data Role ID	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,18)	Model Template Data Role ID	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,28)	Referenced Template Data Role	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,42)	Presentation Creator Type	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,44)	Cine Navigation Type	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,48)	Semantic Naming Strategy	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,50)	Parameter String	LO	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,52)	Sorting Order	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,54)	syngo Template Type	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,56)	Sorter Type	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,58)	Data Display Protocol Version	SH	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,64)	TemplateSelectorSequence	SQ	0-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,66)	DefaultTemplate	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,68)	IsPreferred	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,6A)	TimepointInitialValueSequence	SQ	0-n
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,6C)	TimepointVariable	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,5A)	TimepointValue	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,5B)	SharingGroupSequence	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,5C)	TemplateSelectorOperator	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,5D)	SharingType	CS	1
(0073,SIEMENS SYNGO LAYOUT PROTOCOL,FF)	VRT Preset	LO	1
(0029,SIEMENS SYNGO MODULES,51)	Incomplete Frame	CS	1

(0029,SIEMENS SYNGO MODULES,52)	Presentation UserData	UT	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,00)	syngo Graphic Object Sequence	SQ	1-n
(0071,SIEMENS SYNGO OBJECT GRAPHICS,01)	Fill Style Version	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,02)	Fill Background Color	FL	4
(0071,SIEMENS SYNGO OBJECT GRAPHICS,03)	Fill Foreground Color	FL	4
(0071,SIEMENS SYNGO OBJECT GRAPHICS,04)	Siemens Fill Mode	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,05)	Siemens Fill Pattern	OB	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,06)	Line Style Version	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,07)	Line Background Color	FL	4
(0071,SIEMENS SYNGO OBJECT GRAPHICS,08)	Line Foreground Color	FL	4
(0071,SIEMENS SYNGO OBJECT GRAPHICS,09)	Line Type	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,10)	Siemens Line Thickness	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,11)	Line Shadow X Offset	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,12)	Line Shadow Y Offset	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,13)	Siemens Shadow Style	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,14)	Shadow Color	FL	4
(0071,SIEMENS SYNGO OBJECT GRAPHICS,15)	Stipple Pattern	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,16)	Line Anti Aliasing	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,17)	Line-Z-Blend Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,18)	Text Style Version	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,19)	Text Color	FL	4
(0071,SIEMENS SYNGO OBJECT GRAPHICS,1A)	Connection Line Width Selected	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,1B)	Connection Line Stipple Pattern	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,1C)	Connection Line Width	FL	4
(0071,SIEMENS SYNGO OBJECT GRAPHICS,20)	Text Horizontal Align	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,21)	Text Vertical Align	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,22)	Text Shadow X Offset	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,23)	Text Shadow Y Offset	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,24)	Text Shadow Style	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,25)	Text Shadow Color	FL	4
(0071,SIEMENS SYNGO OBJECT GRAPHICS,26)	Text Log Font	CS	1-n
(0071,SIEMENS SYNGO OBJECT GRAPHICS,27)	Text-Z-Blend Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,28)	syngo Graphic Bit Mask	OB	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,29)	Visibility Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,30)	syngo Graphic Sensitivity	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,31)	syngo Graphic Pick Mode Type	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,32)	syngo Graphic Layer	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,33)	syngo Graphic Object Version	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,34)	syngo Graphic Coordinate System	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,35)	syngo Graphic Custom Attributes	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,36)	syngo Graphic Custom Attributes Key	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,37)	syngo Graphic Custom Attributes Value	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,38)	syngo Graphic View Name	CS	1

(0071,SIEMENS SYNGO OBJECT GRAPHICS,39)	syngo Graphic Data	DS	3
(0071,SIEMENS SYNGO OBJECT GRAPHICS,40)	syngo Graphic Type	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,41)	Number of syngo Graphic Points	US	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,42)	Axis Main Tick Length	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,43)	Axis Detail Tick Length	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,44)	Axis Main Tick Spacing	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,45)	Axis Detail Tick Spacing	DS	1-n
(0071,SIEMENS SYNGO OBJECT GRAPHICS,46)	Axis Main Tick Count	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,47)	Axis Detail Tick Count	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,48)	Axis Tick Behavior	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,49)	Axis Tick Alignment	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,50)	Axis Step	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,51)	Axis Step Index	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,52)	Axis Text Format	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,53)	Axis Show Center Text Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,54)	Axis Show Tick Text Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,55)	Bitmap X Orientation	DS	3
(0071,SIEMENS SYNGO OBJECT GRAPHICS,56)	Bitmap Y Orientation	DS	3
(0071,SIEMENS SYNGO OBJECT GRAPHICS,57)	syngo Graphic Blob	OB	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,58)	syngo Graphic Interpolation	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,59)	syngo Graphic Angle	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,60)	syngo Graphic Size	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,61)	Cut Line Side	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,62)	syngo Graphic Tip Length	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,63)	Cut Line Arrow Length	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,64)	Line Gap Length	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,65)	syngo Graphic Circle Radius	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,66)	Line Distance Move	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,67)	Line Marker Length	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,68)	syngo Graphic Center	DS	3
(0071,SIEMENS SYNGO OBJECT GRAPHICS,69)	Range Center Area Top Left	DS	3
(0071,SIEMENS SYNGO OBJECT GRAPHICS,70)	Range Center Area Bottom Right	DS	3
(0071,SIEMENS SYNGO OBJECT GRAPHICS,71)	Range Tilt	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,72)	Range Minimum Tilt	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,73)	Range Maximum Tilt	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,74)	syngo Graphic Width	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,75)	Range Minimum Width	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,76)	Range Maximum Width	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,77)	syngo Graphic Height	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,78)	Range Feed	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,79)	Range Direction	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,80)	Range Show Scans	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,81)	Range Minimum Scan Distance	DS	1

(0071,SIEMENS SYNGO OBJECT GRAPHICS,82)	Range Orthogonal Height	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,83)	syngo Graphic Position	DS	3
(0071,SIEMENS SYNGO OBJECT GRAPHICS,84)	syngo Graphic Closed Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,85)	Range Line Tip Mode	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,86)	syngo Graphic List Count	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,87)	Axis Flip Text Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,88)	Curve Diagram Type	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,89)	syngo Graphic Start Angle	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,90)	syngo Graphic End Angle	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,91)	Live Wire Smoothness	IS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,92)	Live Wire Spline Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,93)	Ellipse Circle Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,94)	syngo Graphic Square Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,95)	Curve Section Start Index	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,96)	Curve Section End Index	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,97)	Marker Alpha	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,98)	Table Row Count	IS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,99)	Table Column Count	IS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,9A)	Table Row Height	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,9B)	Table Column Width	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,9C)	Rectangle Selection Segment Offset	IS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,9D)	syngo Graphic Text	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,A0)	Axis Tick Spacing Coordinate System	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,A1)	Axis Diagram Grid Type	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,A2)	Polar Plot Circle Count	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,A3)	Polar Plot Lines-per-Circle	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,A4)	Polar Plot Compartment Count	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,A5)	Polar Plot Radius Weight	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,A6)	Circle Segment Outer Radius	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,A7)	Circle Segment Clockwise Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,A8)	Axis Diagram Auto Resize Flag	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,A9)	Axis Diagram Step Start	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,B0)	Group Root	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,B1)	Group Name	ST	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,B2)	syngo Graphic Annotation Sequence	SQ	1-n
(0071,SIEMENS SYNGO OBJECT GRAPHICS,B3)	Text Minimum Height	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,B4)	Text Font Scaling Factor	DS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,B5)	Text Maximum Extensions	SL	2
(0071,SIEMENS SYNGO OBJECT GRAPHICS,B6)	Text Segment Size	CS	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,B7)	Graphic Object Reference Label	SL	1
(0071,SIEMENS SYNGO OBJECT GRAPHICS,C4)	Show Grid	CS	1
(0029,SIEMENS SYNGO PRINT SERVICE,10)	Sheet Number	IS	1
(0071,SIEMENS SYNGO REGISTRATION,20)	Registered Image Sequence	SQ	1

(0071,SIEMENS SYNGO REGISTRATION,21)	Registration Is Validated Flag	CS	1
(0071,SIEMENS SYNGO REGISTRATION,22)	Deformable Registration Inverse Grid Sequence	SQ	1
(0029,SIEMENS SYNGO RWVM,50)	RWVM Version	LO	1
(0029,SIEMENS SYNGO SEGMENTATION,10)	Segmentation Inverted	CS	1
(0029,SIEMENS SYNGO SEGMENTATION,11)	Segmentation Uneditable by User	CS	1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,12)	Surface Mesh Private Data	SQ	0-1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,13)	Surface Mesh Private Data Task name	CS	1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,14)	Surface Mesh Private Data Version Number	LO	1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,15)	Surface Mesh ImagePlane Sequence	SQ	0-N
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,16)	ImagePlane Sequence Identifier	LO	1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,17)	ImagePlane Sequence Identification Code Sequence	SQ	0-1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,18)	ImagePlane Sequence Identification Code Value	SH	1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,19)	ImagePlane Sequence Identification Coding Scheme Designator	SH	1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,20)	ImagePlane Sequence Identification Code Meaning	LO	1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,21)	Surface Mesh ImagePlane	SQ	1-N
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,22)	ImagePlane	FL	9
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,23)	ImagePlane Type	CS	0-1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,24)	ImagePlane Description	LO	0-1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,25)	Surface Mesh Point List Sequence	SQ	0-N
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,26)	Point List Identifier	LO	1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,27)	Point List Identification Code Sequence	SQ	0-1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,28)	Point List Identification Code Value	SH	1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,29)	Point List Identification Coding Scheme Designator	SH	1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,30)	Point List Identification Code Meaning	LO	1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,31)	Point List Description	LO	0-1
(0029,SIEMENS SYNGO SEGMENTATION DICOM MESH PRIVATEDATA,32)	Point List	FL	1-N
(0031,SIEMENS SYNGO SOP CLASS PACKING,10)	SOP Class Packing Sequence	SQ	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,20)	Packing Version	CS	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,21)	Packing Originator	CS	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,30)	Original SOP Class UID	UI	1

(0031,SIEMENS SYNGO SOP CLASS PACKING,31)	Original Study Instance UID	UI	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,32)	Original Series Instance UID	UI	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,33)	Original SOP Instance UID	UI	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,34)	Original Transfer Syntax UID	UI	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,40)	Attributes to Set to zero-length	AT	1-n
(0031,SIEMENS SYNGO SOP CLASS PACKING,41)	Attributes to Remove	AT	1-n
(0031,SIEMENS SYNGO SOP CLASS PACKING,50)	Original Rows	US	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,51)	Original Columns	US	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,58)	Original Image Type	CS	2-n
(0031,SIEMENS SYNGO SOP CLASS PACKING,60)	Original Modality	CS	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,70)	Sequence of original stream chunks	SQ	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,71)	Start tag of a stream chunk	AT	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,72)	End tag of a stream chunk	AT	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,73)	Stream chunk is a PAYLOAD	CS	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,80)	Stream chunk	OB	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,10)	SOP Class Packing Sequence	SQ	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,20)	Packing Version	CS	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,21)	Packing Originator	CS	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,30)	Original SOP Class UID	UI	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,31)	Original Study Instance UID	UI	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,32)	Original Series Instance UID	UI	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,33)	Original SOP Instance UID	UI	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,34)	Original Transfer Syntax UID	UI	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,40)	Attributes to Set to zero-length	AT	1-n
(0031,SIEMENS SYNGO SOP CLASS PACKING,41)	Attributes to Remove	AT	1-n
(0031,SIEMENS SYNGO SOP CLASS PACKING,50)	Original Rows	US	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,51)	Original Columns	US	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,58)	Original Image Type	CS	2-n
(0031,SIEMENS SYNGO SOP CLASS PACKING,60)	Original Modality	CS	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,70)	Sequence of original stream chunks	SQ	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,71)	Start tag of a stream chunk	AT	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,72)	End tag of a stream chunk	AT	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,73)	Stream chunk is a PAYLOAD	CS	1
(0031,SIEMENS SYNGO SOP CLASS PACKING,80)	Stream chunk	OB	1
(0029,SIEMENS SYNGO TIME POINT SERVICE,01)	Time Point ID	LO	1
(0029,SIEMENS SYNGO TIME POINT SERVICE,02)	Time Point Information	LO	1
(0029,SIEMENS SYNGO TIME POINT SERVICE,50)	Studies in Time Point Sequence	SQ	1
(7FD1,SIEMENS SYNGO ULTRA-SOUND TOYON DATA STREAMING,01)	Padding	OB	1
(7FD1,SIEMENS SYNGO ULTRA-SOUND TOYON DATA STREAMING,09)	Version ID	OB	1
(7FD1,SIEMENS SYNGO ULTRA-SOUND TOYON DATA STREAMING,10)	Payload	LO	1

(7FD1,SIEMENS SYNGO ULTRA-SOUND TOYON DATA STREAMING,11)	After Payload	LO	1
(0029,SIEMENS SYNGO VOLUME,12)	Slices	US	1
(0029,SIEMENS SYNGO VOLUME,18)	Volume Level	IS	1
(0029,SIEMENS SYNGO VOLUME,30)	Voxel Spacing	DS	3
(0029,SIEMENS SYNGO VOLUME,32)	Volume Position (Patient)	DS	3
(0029,SIEMENS SYNGO VOLUME,37)	Volume Orientation (Patient)	DS	9
(0029,SIEMENS SYNGO VOLUME,40)	Resampling Flag	CS	1
(0029,SIEMENS SYNGO VOLUME,42)	Normalization Flag	CS	1
(0029,SIEMENS SYNGO VOLUME,44)	SubVolume Sequence	SQ	1-n
(0029,SIEMENS SYNGO VOLUME,46)	Histogram Number Of Bins UL	UL	1
(0029,SIEMENS SYNGO VOLUME,47)	Volume Histogram Data	OB	1
(0029,SIEMENS SYNGO VOLUME,48)	Volume Histogram BinBase	SL	1
(0029,SIEMENS SYNGO VOLUME,50)	Volume Version	LO	1
(0029,SIEMENS SYNGO VOLUME,60)	Total Frame Count Of Referenced Instance	IS	0-1

Interpretation of the DICOM Tags from the above table:

(gggg, pp,ee) -> (gggg, ppee)

gggg - odd group number

pp - private creator identification code

ee - private element

7.3 Standard Extended/Specialized/Private SOP Classes

7.3.1 Standard Extensions of Raw Data Storage SOP Class

The Raw Data Storage SOP class 1.2.840.10008.5.1.4.1.1.66 is extended by the following attributes.

DICOM Attribute Name	Tag	VR
Series Instance UID	(0020,000E)	UI

7.3.2 Standard Extensions of Secondary Capture Image SOP Class

The Secondary Capture Image SOP class 1.2.840.10008.5.1.4.1.1.7 is extended by the following attributes.

Table 71: Extension to Image Plane Module

DICOM Attribute Name	Tag	VR
Image Position (Patient)	(0020,0032)	DS
Image Orientation (Patient)	(0020,0037)	DS
Slice Thickness	(0018,0050)	DS

7.3.3 Standard Extensions of Basic Text SR SOP Class

The Basic Text SR SOP class 1.2.840.10008.5.1.4.1.1.88.11 is extended by the following attributes.

Table 72: Extension to General Series Module

DICOM Attribute Name	Tag	VR
Body Part Examined	(0018,0015)	CS

Laterality	(0020,0060)	CS
Request Attributes SQ	(0040,0275)	SQ

Table 73: Extension to General Image Module

DICOM Attribute Name	Tag	VR
Patient Orientation	(0020,0020)	CS

Table 74: Extension to General Equipment Module

DICOM Attribute Name	Tag	VR
Pixel Padding Value	(0028,0120)	US or SS

Table 75: Extension to Patient Module

DICOM Attribute Name	Tag	VR
Other Patient IDs	(0010,1000)	LO

7.3.4 Standard Extensions of Segmentation Storage SOP Class

The Segmentation Storage SOP class 1.2.840.10008.5.1.4.1.1.66.4 is extended by the following attributes.

Table 76: Extension to Segmentation Image Module

DICOM Attribute Name	Tag	VR
Segment Sequence	(0062,0002)	SQ
>Segmented Property Category Code Sequence	(0062,0003)	SQ
>Segmented Property Type Code SQ	(0062,000F)	SQ
>Segment Algorithm Name	(0062,0009)	LO

Table 77: Extension to General Equipment Module

DICOM Attribute Name	Tag	VR
Pixel Padding Value	(0028,0120)	US or SS

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