

DICOM Conformance Statement

Application Annex:

NM Applications on Philips IntelliSpace Portal
V6.0



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1. Introduction

This DICOM Conformance Statement annex is applicable to the NM Applications on Philips IntelliSpace Portal V6.0 hosting platform, later referred to as NM Applications. In general the NM Applications are used for viewing and analyzing the images from NM modality.

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

- AutoSPECT Pro
- NM Whole Body
- NM Cardiac
- NM Endocrine
- NM Esophagus
- NM Gastro Intestinal
- NM Renal
- NM Hepatobiliary
- NM VIEWER
- NM Lung
- Hybrid Calibration
- NM NU-1 NEMATools
- NM QCTools
- Automatic Registration
- JETPack
- AutoQuant 2012
- Corridor 4DM Analysis
- EC toolbox
- NEURO-Q
- QBS 2012

1.1. Revision History

The revision history below provides dates and differences among individual document versions.

Table 1: Revision History

Document Version	Date of Issue	Status	Description
00	27-July-2012	Authorized	Final version for 5.0
01	13-August-2013	Authorized	Updated for version 6.0

1.2. Terminology

DICOM	Digital Imaging and Communications in Medicine
IOD	Information Object Definition
UID	Unique Identifier
VR	Value Representation

2. Data Specifications

2.1. Supported IOD's

This section specifies each IOD accepted and / or created by NM Applications.

ACCEPTED	The applicable IOD is accepted for storage in the repository of the hosting platform and supported for import in NM Applications for viewing and analysis.
CREATED	The NM Applications supports generation of derived data by using the applicable IOD and are able to store this data in the repository of the hosting platform.

Table 2: Supported IOD's

IOD		Support	
Name	UID	ACCEPTED	CREATED
Encapsulated PDF Storage	1.2.840.10008.5.1.4.1.1.104.1	No	Yes
Positron Emission Tomography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.128	Yes	Yes
CT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.2	Yes	No
Nuclear Medicine Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.20	Yes	Yes
MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4	Yes	Yes
RT Structure Set Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.3	Yes	Yes
Spatial Registration Storage	1.2.840.10008.5.1.4.1.1.66.1	Yes	Yes
Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7	Yes	Yes
Multi-Frame Grayscale Byte Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.2	Yes	Yes
Multi-frame True Color Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.4	Yes	Yes

Note: All the NM applications are compliant with data from other vendors for import and display (multi-vendor compliant).

2.1.1. Acceptance Criteria

This section specifies the acceptance criteria applied by NM Applications to which a dataset should adhere before it can be imported into the application. This can be criteria on the highest level (e.g. data from a certain manufacturer or system model) or certain DICOM attributes mandatory to be present into the dataset holding a specific value. In case one or more Philips private attributes are required, then a list of supported Philips system models will be mentioned.

Table 3: Accepted system models

Manufacturer	Modality	System Model Name(s)
Not applicable	Not applicable	Not applicable

Table 4: Accepted transfer syntaxes per IOD

IOD		Transfer Syntax	
Name	UID	Name	UID
Positron Emission Tomography Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.128	CT-private-ELE	1.3.46.670589.33.1.4.1
		Explicit VR Little Endian	1.2.840.10008.1.2.1
		Implicit VR Little Endian	1.2.840.10008.1.2
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70
CT Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.2	CT-private-ELE	1.3.46.670589.33.1.4.1

		Explicit VR Little Endian	1.2.840.10008.1.2.1
		Implicit VR Little Endian	1.2.840.10008.1.2
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70
Nuclear Medicine Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.20	Explicit VR Little Endian	1.2.840.10008.1.2.1
		Implicit VR Little Endian	1.2.840.10008.1.2
MR Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.4	CT-private-ELE	1.3.46.670589.33.1.4.1
		Explicit VR Little Endian	1.2.840.10008.1.2.1
		Implicit VR Little Endian	1.2.840.10008.1.2
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70
RT Structure Set Storage SOP Class	1.2.840.10008.5.1.4.1.1.481.3	Explicit VR Little Endian	1.2.840.10008.1.2.1
		Implicit VR Little Endian	1.2.840.10008.1.2
Spatial Registration Storage	1.2.840.10008.5.1.4.1.1.66.1	Explicit VR Little Endian	1.2.840.10008.1.2.1
		Implicit VR Little Endian	1.2.840.10008.1.2
Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7	CT-private-ELE	1.3.46.670589.33.1.4.1
		Explicit VR Little Endian	1.2.840.10008.1.2.1
		Implicit VR Little Endian	1.2.840.10008.1.2
		JPEG Lossless, Non-Hierarchical, FOP (Process 14)	1.2.840.10008.1.2.4.70
Multi-Frame Grayscale Byte Secondary Capture Image Storage SOP Class	1.2.840.10008.5.1.4.1.1.7.2	Explicit VR Little Endian	1.2.840.10008.1.2.1
		Implicit VR Little Endian	1.2.840.10008.1.2
Multi-frame True Color Secondary Capture Image Storage	1.2.840.10008.5.1.4.1.1.7.4	Explicit VR Little Endian	1.2.840.10008.1.2.1
		Implicit VR Little Endian	1.2.840.10008.1.2

2.1.2. Contents of Created IOD's

This section specifies in detail the attribute contents of created data objects. Attributes are grouped together by its corresponding module as specified by DICOM standard. Philips private attributes are excluded for specification.

Abbreviations used in the Module table for the column "Presence of Value" are:

ALWAYS	The attribute is always present with a value
EMPTY	The attribute is always present without any value (attribute sent zero length)
VNAP	The attribute is always present and its Value is Not Always Present (attribute sent zero length if no value is present)
ANAP	The attribute is present under specified condition – if present then it will always have a value
ANAPCV	The attribute is present under specified condition – if present then its Value is Not Always Present (attribute sent zero length if condition applies and no value is present)
ANAEV	The attribute is present under specified condition – if present then it will not have any value

The abbreviations used in the Module table for the column "Source" are:

AUTO	The attribute value is generated automatically
CONFIG	The attribute value source is a configurable parameter
COPY	The attribute value source is another SOP instance
FIXED	The attribute value is hard-coded in the application
IMPLICIT	The attribute value source is a user-implicit setting
MPPS	The attribute value is the same as that use for Modality Performed Procedure Step
COPY	The attribute value source is a Modality Worklist
USER	The attribute value source is explicit user input

2.1.2.1. Encapsulated PDF Storage

Table 5: IOD of Created Encapsulated PDF Storage Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	General Study Module	ALWAYS
Series	Encapsulated Document Series Module	ALWAYS
Equipment	General Equipment Module	ALWAYS
Equipment	SC Equipment Module	ALWAYS
Encapsulated Document	Encapsulated Document Module	ALWAYS
Encapsulated Document	SOP Common Module	ALWAYS

Table 6: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Referenced Patient Sequence	0008,1120	SQ		ANAPCV	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	COPY	-
Patient's Birth Date	0010,0030	DA		VNAP	COPY, USER	-
Patient's Birth Time	0010,0032	TM		ANAPCV	COPY, USER	-
Patient's Sex	0010,0040	CS		VNAP	COPY, USER	-
Other Patient IDs	0010,1000	LO		ANAPCV	COPY, USER	-
Other Patient Names	0010,1001	PN		ANAPCV	COPY, USER	-
Ethnic Group	0010,2160	SH		ANAPCV	COPY	-
Patient Comments	0010,4000	LT		ANAPCV	COPY	-
Issuer of Patient ID	0010,0021	LO		ANAPCV	COPY	-

Table 7: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		VNAP	COPY	-
Study Time	0008,0030	TM		VNAP	COPY	-
Accession Number	0008,0050	SH		VNAP	COPY, USER	-
Referring Physician's Name	0008,0090	PN		VNAP	COPY, USER	-
Referring Physician Identification Sequence	0008,0096	SQ		ANAPCV	COPY	-
Study Description	0008,1030	LO		ANAPCV	COPY, USER	-
Procedure Code Sequence	0008,1032	SQ		ANAPCV	COPY	-
Physician(s) of Record	0008,1048	PN		ANAPCV	COPY	-
Physician(s) of Record Identification Sequence	0008,1049	SQ		ANAP	COPY	-
Name of Physician(s) Reading Study	0008,1060	PN		ANAPCV	COPY	-

Physician(s) Reading Study Identification Sequence	0008,1062	SQ		ANAPCV	COPY	-
Referenced Study Sequence	0008,1110	SQ		ANAPCV	COPY	-
Study Instance UID	0020,000D	UI		ALWAYS	AUTO, COPY	-
Study ID	0020,0010	SH		VNAP	AUTO, COPY	-

Table 8: Encapsulated Document Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Modality	0008,0060	CS		ALWAYS	AUTO	-
Series Description	0008,103E	LO	Reports	ANAPCV	AUTO	Reports
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		ALWAYS	AUTO	-
Performed Procedure Step Start Date	0040,0244	DA		ANAPCV	COPY	-
Performed Procedure Step Start Time	0040,0245	TM		ANAPCV	COPY	-
Performed Procedure Step ID	0040,0253	SH		ANAPCV	COPY	-
Performed Procedure Step Description	0040,0254	LO		ANAPCV	AUTO	-
Performed Protocol Code Sequence	0040,0260	SQ		ANAPCV	COPY	-
>Code Value	0008,0100	SH		ANAPCV	COPY	-
>Coding Scheme Designator	0008,0102	SH		ANAPCV	COPY	-
>Code Meaning	0008,0104	LO		ANAPCV	AUTO	-
>Context Group Local Version	0008,0107	DT		ANAPCV	COPY	-
>Context Group Extension Flag	0008,010B	CS		ANAPCV	COPY	-

Table 9: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips Medical Systems	VNAP	COPY	Philips Medical Systems
Institution Name	0008,0080	LO		ANAPCV	COPY, USER	-
Institution Address	0008,0081	ST		ANAPCV	COPY, USER	-
Station Name	0008,1010	SH		ANAPCV	COPY	-
Institutional Department Name	0008,1040	LO		ANAPCV	COPY	-
Manufacturer's Model Name	0008,1090	LO	Philips Portal	ANAPCV	COPY	Philips Portal
Device Serial Number	0018,1000	LO		ANAPCV	COPY	-
Software Version(s)	0018,1020	LO	6.0	ANAPCV	COPY	6.0
Spatial Resolution	0018,1050	DS		ANAPCV	COPY	-
Date of Last Calibration	0018,1200	DA		ANAPCV	COPY	-
Time of Last Calibration	0018,1201	TM		ANAPCV	COPY	-
Pixel Padding Value	0028,0120	US/SS		ANAP	COPY	-

Table 10: SC Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Modality	0008,0060	CS		ANAPCV	AUTO	-
Conversion Type	0008,0064	CS	WSD	ALWAYS	AUTO	-

Secondary Capture Device Manufacturer	0018,1016	LO	Philips Medical Systems	ANAPCV	AUTO	Philips Medical Systems
Secondary Capture Device Manufacturer's Model Name	0018,1018	LO	Philips Portal	ANAPCV	AUTO	Philips Portal
Secondary Capture Device Software Version(s)	0018,1019	LO		ANAPCV	AUTO	-

Table 11: Encapsulated Document Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Content Date	0008,0023	DA		VNAP	AUTO	-
Acquisition Datetime	0008,002A	DT		VNAP	AUTO	-
Content Time	0008,0033	TM		VNAP	AUTO	-
Instance Number	0020,0013	IS	1	ALWAYS	AUTO	-
Burned In Annotation	0028,0301	CS	YES	ALWAYS	AUTO	-
Concept Name Code Sequence	0040,A043	SQ		VNAP	AUTO	-
Document Title	0042,0010	ST		VNAP	AUTO	-
Encapsulated Document	0042,0011	OB		ALWAYS	AUTO	-
MIME Type of Encapsulated Document	0042,0012	LO	application/pdf	ALWAYS	AUTO	-
Source Instance Sequence	0042,0013	SQ		ANAP	AUTO	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	AUTO	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	AUTO	-

Table 12: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Specific Character Set	0008,0005	CS		ANAP	AUTO, COPY	-
Instance Creation Date	0008,0012	DA		ANAPCV	AUTO	-
Instance Creation Time	0008,0013	TM		ANAPCV	AUTO	-
Instance Creator UID	0008,0014	UI		ANAPCV	AUTO	-
SOP Class UID	0008,0016	UI		ALWAYS	COPY	-
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-
Timezone Offset From UTC	0008,0201	SH		ANAPCV	COPY	-
Contributing Equipment Sequence	0018,A001	SQ		ANAPCV	AUTO	-
>Manufacturer	0008,0070	LO	Philips Medical Systems	ALWAYS	FIXED	Philips Medical Systems
>Institution Address	0008,0081	ST	Philips Portal	ANAPCV	FIXED	Philips Portal
>Station Name	0008,1010	SH	Philips Portal	ANAPCV	CONFIG	Philips Portal
>Institutional Department Name	0008,1040	LO	Philips Portal	ANAPCV	FIXED	Philips Portal
>Software Version(s)	0018,1020	LO	6.0	ANAPCV	FIXED	6.0
>Device Serial Number	0018,1000	LO	IntelliSpace Portal	ANAPCV	FIXED	IntelliSpace Portal
>Institution Name	0008,0080	LO	Philips Portal	ANAPCV	FIXED	Philips Portal
>Manufacturer's Model Name	0008,1090	LO	IntelliSpace Portal	ANAPCV	FIXED	IntelliSpace Portal
>Purpose of Reference Code Sequence	0040,A170	SQ		ALWAYS	FIXED	-
>>Code Value	0008,0100	SH	109102	ALWAYS	FIXED	109102
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	FIXED	DCM
>>Code Meaning	0008,0104	LO	Processing Equipment	ALWAYS	FIXED	Processing Equipment

2.1.2.2. Positron Emission Tomography Image Storage SOP Class

Table 13: IOD of Created Positron Emission Tomography Image Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	General Study Module	ALWAYS
Study	Patient Study Module	CONDITIONAL
Series	General Series Module	ALWAYS
Series	PET Series Module	ALWAYS
Frame of Reference	Frame of Reference Module	ALWAYS
Equipment	General Equipment Module	ALWAYS
Image	General Image Module	ALWAYS
Image	Image Plane Module	ALWAYS
Image	Image Pixel Module	ALWAYS
Image	NM/PET Patient Orientation Module	ALWAYS
Image	PET Isotope Module	ALWAYS
Image	PET Multi-Gated Acquisition Module	CONDITIONAL
Image	PET Image Module	ALWAYS
Image	Overlay Plane Module	CONDITIONAL
Image	VOI LUT Module	CONDITIONAL
Image	SOP Common Module	ALWAYS
	Extended Dicom and Private attributes	CONDITIONAL

Table 14: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Referenced Patient Sequence	0008,1120	SQ		ANAPCV	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	COPY	-
Patient's Birth Date	0010,0030	DA		VNAP	COPY, USER	-
Patient's Birth Time	0010,0032	TM		ANAPCV	COPY, USER	-
Patient's Sex	0010,0040	CS		VNAP	COPY, USER	-
Other Patient IDs	0010,1000	LO		ANAPCV	COPY, USER	-
Other Patient Names	0010,1001	PN		ANAPCV	COPY, USER	-
Ethnic Group	0010,2160	SH		ANAPCV	COPY	-
Patient Comments	0010,4000	LT		ANAPCV	COPY	-
Issuer of Patient ID	0010,0021	LO		ANAPCV	COPY, USER	-

Table 15: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		VNAP	COPY	-
Study Time	0008,0030	TM		VNAP	COPY	-
Accession Number	0008,0050	SH		VNAP	COPY, USER	-

Referring Physician's Name	0008,0090	PN		VNAP	COPY, USER	-
Referring Physician Identification Sequence	0008,0096	SQ		ANAPCV	COPY	-
Study Description	0008,1030	LO		ANAPCV	COPY, USER	-
Procedure Code Sequence	0008,1032	SQ		ANAPCV	COPY	-
Physician(s) of Record	0008,1048	PN		ANAPCV	COPY	-
Physician(s) of Record Identification Sequence	0008,1049	SQ		ANAPCV	COPY	-
Name of Physician(s) Reading Study	0008,1060	PN		ANAPCV	COPY	-
Physician(s) Reading Study Identification Sequence	0008,1062	SQ		ANAPCV	COPY	-
Referenced Study Sequence	0008,1110	SQ		ANAPCV	COPY	-
Study Instance UID	0020,000D	UI		ALWAYS	AUTO, COPY	-
Study ID	0020,0010	SH		VNAP	AUTO, COPY	-

Table 16: Patient Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Admitting Diagnoses Description	0008,1080	LO		ANAPCV	COPY	-
Admitting Diagnoses Code Sequence	0008,1084	SQ		ANAPCV	COPY	-
Patient's Age	0010,1010	AS		ANAPCV	COPY, USER	-
Patient's Size	0010,1020	DS		ANAPCV	COPY, USER	-
Patient's Weight	0010,1030	DS		ANAPCV	COPY, USER	-
Occupation	0010,2180	SH		ANAPCV	COPY	-
Additional Patient History	0010,21B0	LT		ANAPCV	COPY	-

Table 17: General Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Modality	0008,0060	CS		ALWAYS	COPY	-
Series Description	0008,103E	LO		ANAPCV	COPY, USER	-
Performing Physician's Name	0008,1050	PN		ANAPCV	COPY	-
Operators' Name	0008,1070	PN		ANAPCV	COPY, USER	-
Operator Identification Sequence	0008,1072	SQ		ANAPCV	COPY	-
Referenced Performed Procedure Step Sequence	0008,1111	SQ		ANAPCV	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-
Body Part Examined	0018,0015	CS		ANAPCV	COPY	-
Protocol Name	0018,1030	LO		ANAPCV	COPY	-
Patient Position	0018,5100	CS		ANAPCV	COPY	-
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-

Series Number	0020,0011	IS		VNAP	AUTO	-
Laterality	0020,0060	CS		ANAPCV	COPY	-
Smallest Pixel Value in Series	0028,0108	US/SS		ANAPCV	AUTO	-
Largest Pixel Value in Series	0028,0109	US/SS		ANAPCV	AUTO	-
Request Attributes Sequence	0040,0275	SQ		ANAPCV	COPY	-
Performed Procedure Step Start Date	0040,0244	DA		ANAPCV	COPY	-
Performed Procedure Step Start Time	0040,0245	TM		ANAPCV	COPY	-
Performed Procedure Step Description	0040,0254	LO		ANAPCV	COPY	-
Performed Protocol Code Sequence	0040,0260	SQ		ANAPCV	COPY	-
Comments on the Performed Procedure Step	0040,0280	ST		ANAPCV	COPY	-

Table 18: PET Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Series Date	0008,0021	DA		ALWAYS	AUTO	-
Series Time	0008,0031	TM		ALWAYS	AUTO	-
Series Type	0054,1000	CS		ALWAYS	AUTO	-
Acquisition Start Condition	0018,0073	CS		ANAPCV	COPY	-
Acquisition Start Condition Data	0018,0074	IS		ANAPCV	COPY	-
Acquisition Termination Condition	0018,0071	CS		ANAPCV	COPY	-
Acquisition Termination Condition Data	0018,0075	IS		ANAPCV	COPY	-
Attenuation Correction Method	0054,1101	LO		ANAPEV	COPY	-
Axial Mash	0054,1201	IS		ANAPEV	COPY	-
Coincidence Window Width	0054,1210	DS		ANAPEV	COPY	-
Collimator Type	0018,1181	CS		VNAP	COPY	-
Corrected Image	0028,0051	CS		VNAP	COPY	-
Counts Source	0054,1002	CS		ALWAYS	COPY	-
Decay Correction	0054,1102	CS		ALWAYS	COPY	-
Field of View Dimension(s)	0018,1149	IS		ANAPEV	COPY	-
Field of View Shape	0018,1147	CS		ANAPEV	COPY	-
Gantry/Detector Tilt	0018,1120	DS		ANAPEV	COPY	-
Number of Slices	0054,0081	US		ALWAYS	COPY	-
Number of Time Slices	0054,0101	US		ANAP	COPY	-

Randoms Correction Method	0054,1100	CS		ANAPEV	COPY	-
Reconstruction Method	0054,1103	LO		ANAPEV	COPY	-
Scatter Correction Method	0054,1105	LO		ANAPEV	COPY	-
Transverse Mash	0054,1202	IS		ANAPEV	COPY	-
Type of Detector Motion	0054,0202	CS		ANAPEV	COPY	-
Units	0054,1001	CS		ALWAYS	COPY	-
Energy Window Range Sequence	0054,0013	SQ		ANAPCV	COPY	-
>Energy Window Lower Limit	0054,0014	DS		VNAP	COPY	-
>Energy Window Upper Limit	0054,0015	DS		VNAP	COPY	-
Axial Acceptance	0054,1200	DS		ANAPEV	COPY	-
Reprojection Method	0054,1004	CS		ANAPCV	COPY	-
Number of R R Intervals	0054,0061	US		ANAP	COPY	-
Reconstruction Diameter	0018,1100	DS		ANAPEV	COPY	-
Convolution Kernel	0018,1210	SH		ANAPEV	COPY	-
Detector lines of Response used	0054,1104	LO		ANAPEV	COPY	-
Gantry/Detector Slew	0018,1121	DS		ANAPEV	COPY	-
Collimator/grid Name	0018,1180	SH		ANAPEV	COPY	-
Detector Element Size	0054,1203	DS		ANAPEV	COPY	-
Secondary Counts Type	0054,1220	CS		ANAPEV	COPY	-

Table 19: Frame of Reference Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Frame of Reference UID	0020,0052	UI		ALWAYS	AUTO	-
Position Reference Indicator	0020,1040	LO		VNAP	AUTO	-

Table 20: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips Medical Systems	VNAP	AUTO	Philips Medical Systems
Institution Name	0008,0080	LO		ANAPCV	AUTO, COPY, USER	-

Institution Address	0008,0081	ST		ANAPCV	AUTO, COPY, USER	-
Institutional Department Name	0008,1040	LO		ANAPCV	AUTO, COPY	-
Manufacturer's Model Name	0008,1090	LO	Philips Portal	VNAP	AUTO, COPY	Philips Portal
Software Version (s)	0018,1020	LO	6.0	ANAPCV	COPY	6.0
Station Name	0008,1010	SH		ANAPCV	COPY	-
Spatial Resolution	0018,1050	DS		ANAPCV	COPY	-
Date of Last Calibration	0018,1200	DA		ANAPCV	COPY	-
Time of Last Calibration	0018,1201	TM		ANAPCV	COPY	-
Pixel Padding Value	0028,0120	US/SS		ANAPCV	COPY	-

Table 21: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Acquisition Date	0008,0022	DA		ANAPCV	COPY	-
Content Date	0008,0023	DA		ANAPCV	COPY	-
Acquisition Datetime	0008,002A	DT		ANAPCV	COPY	-
Acquisition Time	0008,0032	TM		ANAPCV	COPY	-
Content Time	0008,0033	TM		ANAPCV	COPY	-
Referenced Image Sequence	0008,1140	SQ		ANAPCV	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-
Derivation Description	0008,2111	ST		ANAPCV	COPY	-
Source Image Sequence	0008,2112	SQ		ANAPCV	COPY	-
Derivation Code Sequence	0008,9215	SQ		ANAPCV	COPY	-
Instance Number	0020,0013	IS		VNAP	AUTO, COPY	-
Patient Orientation	0020,0020	CS		ANAPCV	COPY	-
Images in Acquisition	0020,1002	IS		ANAPCV	COPY	-
Quality Control Image	0028,0300	CS		ANAPCV	COPY	-
Burned In Annotation	0028,0301	CS		ANAPCV	COPY	-
Lossy Image Compression	0028,2110	CS		ANAPCV	COPY	-
Lossy Image Compression Ratio	0028,2112	DS		ANAPCV	COPY	-
Icon Image Sequence	0088,0200	SQ		ANAPCV	COPY	-
>Samples per Pixel	0028,0002	US		ALWAYS	COPY	-
>Photometric Interpretation	0028,0004	CS		ALWAYS	COPY	-
>Planar Configuration	0028,0006	US		ANAP	COPY	-
>Rows	0028,0010	US		ALWAYS	COPY	-
>Columns	0028,0011	US		ALWAYS	COPY	-
>Pixel Aspect Ratio	0028,0034	IS		ANAP	COPY	-
>Bits Allocated	0028,0100	US		ALWAYS	COPY	-
>Bits Stored	0028,0101	US		ALWAYS	COPY	-
>High Bit	0028,0102	US		ALWAYS	COPY	-
>Pixel Representation	0028,0103	US		ALWAYS	COPY	-
>Smallest Image Pixel Value	0028,0106	US/SS		ANAPCV	COPY	-
>Largest Image Pixel Value	0028,0107	US/SS		ANAPCV	COPY	-
>Red Palette Color Lookup Table Descriptor	0028,1101	US/SS		ANAP	COPY	-

>Green Palette Color Lookup Table Descriptor	0028,1102	US/SS		ANAP	COPY	-
>Blue Palette Color Lookup Table Descriptor	0028,1103	US/SS		ANAP	COPY	-
>Red Palette Color Lookup Table Data	0028,1201	OW		ANAP	COPY	-
>Green Palette Color Lookup Table Data	0028,1202	OW		ANAP	COPY	-
>Blue Palette Color Lookup Table Data	0028,1203	OW		ANAP	COPY	-
>Pixel Data	7FE0,0010	OW/OB		ANAP	COPY	-
Presentation LUT Shape	2050,0020	CS		ANAPCV	COPY	-

Table 22: Image Plane Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Slice Thickness	0018,0050	DS		VNAP	AUTO	-
Image Position (Patient)	0020,0032	DS		ALWAYS	AUTO	-
Image Orientation (Patient)	0020,0037	DS		ALWAYS	AUTO	-
Pixel Spacing	0028,0030	DS		ALWAYS	AUTO	-
Slice Location	0020,1041	DS		ANAPCV	COPY	-

Table 23: Image Pixel Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Planar Configuration	0028,0006	US		ANAP	COPY	-
Rows	0028,0010	US		ALWAYS	AUTO, COPY	-
Columns	0028,0011	US		ALWAYS	AUTO, COPY	-
Pixel Aspect Ratio	0028,0034	IS		ANAP	COPY	-
Pixel Representation	0028,0103	US		ALWAYS	AUTO, COPY	-
Smallest Image Pixel Value	0028,0106	US/SS		ANAPCV	COPY	-
Largest Image Pixel Value	0028,0107	US/SS		ANAPCV	COPY	-
Red Palette Color Lookup Table Descriptor	0028,1101	US/SS		ANAP	COPY	-
Green Palette Color Lookup Table Descriptor	0028,1102	US/SS		ANAP	COPY	-
Blue Palette Color Lookup Table Descriptor	0028,1103	US/SS		ANAP	COPY	-
Red Palette Color Lookup Table Data	0028,1201	OW		ANAP	COPY	-
Green Palette Color Lookup Table Data	0028,1202	OW		ANAP	COPY	-
Blue Palette Color Lookup Table Data	0028,1203	OW		ANAP	COPY	-
Pixel Data	7FE0,0010	OW/OB		ALWAYS	AUTO, COPY	-

Table 24: NM/PET Patient Orientation Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient Gantry Relationship Code Sequence	0054,0414	SQ		VNAP	COPY	-
>Code Meaning	0008,0104	LO		ALWAYS	COPY	-
>Code Value	0008,0100	SH		ALWAYS	COPY	-
>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
Patient Orientation Code Sequence	0054,0410	SQ		VNAP	COPY	-
>Patient Orientation Modifier Code Sequence	0054,0412	SQ		ALWAYS	COPY	-
>>Code Meaning	0008,0104	LO		ALWAYS	COPY	-
>>Code Value	0008,0100	SH		ALWAYS	COPY	-
>>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>Code Meaning	0008,0104	LO		ALWAYS	COPY	-
>Code Value	0008,0100	SH		ALWAYS	COPY	-
>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-

Table 25: PET Isotope Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Radiopharmaceutical Information Sequence	0054,0016	SQ		VNAP	COPY	-
>Radionuclide Half Life	0018,1075	DS		ANAPEV	COPY	-
>Radionuclide Positron Fraction	0018,1076	DS		ANAPEV	COPY	-
>Radionuclide Total Dose	0018,1074	DS		ANAPEV	COPY	-
>Radiopharmaceutical	0018,0031	LO		ANAPEV	COPY	-
>Radiopharmaceutical Start Time	0018,1072	TM		ANAPEV	COPY	-
>Radiopharmaceutical Volume	0018,1071	DS		ANAPEV	COPY	-
>Radionuclide Code Sequence	0054,0300	SQ		ANAPEV	COPY	-
>>Code Meaning	0008,0104	LO		ALWAYS	COPY	-
>>Code Value	0008,0100	SH		ALWAYS	COPY	-

>>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>Radiopharmaceutical Code Sequence	0054,0304	SQ		ANAPEV	COPY	-
>>Code Meaning	0008,0104	LO		VNAP	COPY	-
>>Code Value	0008,0100	SH		VNAP	COPY	-
>>Coding Scheme Designator	0008,0102	SH		VNAP	COPY	-
Interventional Drug Information Sequence	0018,0026	SQ		ANAPEV	COPY	-

Table 26: PET Multi-Gated Acquisition Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Beat Rejection Flag	0018,1080	CS		VNAP	COPY	-
Trigger Source or Type	0018,1061	LO		ANAPCV	COPY	-
PVC Rejection	0018,1085	LO		ANAPCV	COPY	-
Skip Beats	0018,1086	IS		ANAPCV	COPY	-
Heart Rate	0018,1088	IS		ANAPCV	COPY	-
Cardiac Framing Type	0018,1064	LO		ANAPCV	COPY	-

Table 27: PET Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Type	0008,0008	CS	Value 1: DERIVED, SECONDARY	ALWAYS	AUTO	-
Samples per Pixel	0028,0002	US		ALWAYS	AUTO	-
Photometric Interpretation	0028,0004	CS		ALWAYS	AUTO	-
Bits Allocated	0028,0100	US		ALWAYS	AUTO	-
Bits Stored	0028,0101	US		ALWAYS	AUTO	-
High Bit	0028,0102	US		ALWAYS	AUTO	-
Rescale Intercept	0028,1052	DS		ALWAYS	AUTO	-
Rescale Slope	0028,1053	DS		ALWAYS	AUTO	-
Acquisition Date	0008,0022	DA		VNAP	COPY	-
Acquisition Time	0008,0032	TM		VNAP	COPY	-
Actual Frame Duration	0018,1242	IS		VNAP	COPY	-
Decay Factor	0054,1321	DS		ANAP	COPY	-
Dose Calibration Factor	0054,1322	DS		ANAPEV	COPY	-
Frame Reference Time	0054,1300	DS		ALWAYS	COPY	-
Trigger Time	0018,1060	DS		ANAP	COPY	-
Frame Time	0018,1063	DS		ANAP	COPY	-
Low R R Value	0018,1081	IS		ANAP	COPY	-
High R R Value	0018,1082	IS		ANAP	COPY	-
Lossy Image Compression	0028,2110	CS		ANAP	COPY	-
Image Index	0054,1330	US		ALWAYS	COPY	-
Nominal Interval	0018,1062	IS		ANAPEV	COPY	-
Intervals Acquired	0018,1083	IS		ANAPEV	COPY	-
Intervals Rejected	0018,1084	IS		ANAPEV	COPY	-
Primary (Prompts) Counts Accumulated	0054,1310	IS		ANAPEV	COPY	-

Secondary Counts Accumulated	0054,1311	IS		ANAEV	COPY	-
Slice Sensitivity Factor	0054,1320	DS		ANAEV	COPY	-
Scatter Fraction Factor	0054,1323	DS		ANAEV	COPY	-
Dead Time Factor	0054,1324	DS		ANAEV	COPY	-
View Code Sequence	0054,0220	SQ		ANAEV	COPY	-
Slice Progression Direction	0054,0500	CS		ANAEV	COPY	-
Anatomic Region Sequence	0008,2218	SQ		ANAEV	COPY	-

Table 28: Overlay Plane Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Overlay Rows	6000,0010	US		ALWAYS	AUTO	-
Overlay Columns	6000,0011	US		ALWAYS	AUTO	-
Overlay Description	6000,0022	LO		ANAPCV	AUTO	-
Overlay Type	6000,0040	CS		ALWAYS	AUTO	-
Overlay Subtype	6000,0045	LO		ANAPCV	AUTO	-
Overlay Origin	6000,0050	SS		ALWAYS	AUTO	-
Overlay Bits Allocated	6000,0100	US		ALWAYS	AUTO	-
Overlay Bit Position	6000,0102	US		ALWAYS	AUTO	-
ROI Area	6000,1301	IS		ANAPCV	AUTO	-
ROI Mean	6000,1302	DS		ANAPCV	AUTO	-
ROI Standard Deviation	6000,1303	DS		ANAPCV	AUTO	-
Overlay Label	6000,1500	LO		ANAPCV	AUTO	-
Overlay Data	6000,3000	OW/OB		ANAP	AUTO	-

Table 29: VOI LUT Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Window Center	0028,1050	DS		ALWAYS	AUTO	-
Window Width	0028,1051	DS		ANAP	AUTO	-
Window Center & Width Explanation	0028,1055	LO		ANAPCV	AUTO	-
VOI LUT Sequence	0028,3010	SQ		ANAPCV	AUTO	-

Table 30: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Instance Creation Date	0008,0012	DA		VNAP	AUTO, COPY	-
Instance Creation Time	0008,0013	TM		VNAP	AUTO, COPY	-
Instance Creator UID	0008,0014	UI		ANAPCV	AUTO, COPY	-
Specific Character Set	0008,0005	CS		ANAP	AUTO, COPY	-
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.128	ALWAYS	AUTO, COPY	-
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-
Timezone Offset From UTC	0008,0201	SH		ANAPCV	COPY	-
Contributing Equipment Sequence	0018,A001	SQ		ANAP	AUTO	-
>Manufacturer	0008,0070	LO	Philips Medical Systems	ANAP	FIXED	Philips Medical Systems

>Institution Address	0008,0081	ST	Philips Portal	ANAP	FIXED	Philips Portal
>Station Name	0008,1010	SH	Philips Portal	ANAP	CONFIG	Philips Portal
>Institutional Department Name	0008,1040	LO	Philips Portal	ANAP	FIXED	Philips Portal
>Software Version(s)	0018,1020	LO	6.0	ANAP	FIXED	6.0
>Device Serial Number	0018,1000	LO	IntelliSpace Portal	ANAP	FIXED	IntelliSpace Portal
>Institution Name	0008,0080	LO	Philips Portal	ANAP	FIXED	Philips Portal
>Manufacturer's Model Name	0008,1090	LO	IntelliSpace Portal	ANAP	FIXED	IntelliSpace Portal
>Purpose of Reference Code Sequence	0040,A170	SQ		ANAP	FIXED	-
>>Code Value	0008,0100	SH	109102	ANAP	FIXED	109102
>>Coding Scheme Designator	0008,0102	SH	DCM	ANAP	FIXED	DCM
>>Code Meaning	0008,0104	LO	Processing Equipment	ANAP	FIXED	Processing Equipment

Table 31: Extended DICOM and private attributes for Positron Emission Tomography Image Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Frame Number	2001,107C	IS		ANAPCV	AUTO	-
Slice Index	2001,10DE	DS		ANAPCV	AUTO	-
Referenced Overlay Sequence	0008,1130	SQ		ANAPEV	COPY	-
Reference Curve Sequence	0008,1145	SQ		ANAPEV	COPY	-
Primary Anatomic Structure Sequence	0008,2228	SQ		ANAPEV	COPY	-
Curve Dimensions	50xx,0005	US		ANAPCV	AUTO	-
Number of Points	50xx,0010	US		ANAPCV	AUTO	-
Type of Data	50xx,0020	CS		ANAPCV	AUTO	-
Data Value Representation	50xx,0103	US		ANAPCV	AUTO	-
Curve Data	50xx,3000	OB/OW		ANAPCV	AUTO	-
Curve Description	50xx,0022	LO		ANAPCV	AUTO	-
Axis Units	50xx,0030	SH		ANAPCV	AUTO	-
Axis Labels	50xx,0040	SH		ANAPCV	AUTO	-
Minimum Coordinate Value	50xx,0104	US		ANAPCV	AUTO	-
Maximum Coordinate Value	50xx,0105	US		ANAPCV	AUTO	-
Curve Range	50xx,0106	SH		ANAPCV	AUTO	-
Curve Data Descriptor	50xx,0110	US		ANAP	AUTO	-
Coordinate Start Value	50xx,0112	US		ANAP	AUTO	-
Coordinate Step Value	50xx,0114	US		ANAP	AUTO	-
Curve Label	50xx,2500	LO		ANAPCV	AUTO	-
Curve Referenced Overlay Sequence	50xx,2600	SQ		ANAPCV	AUTO	-
>Referenced SOP Class UID	0008,1150	UI		ANAP	AUTO	-
>Referenced SOP Instance UID	0008,1155	UI		ANAP	AUTO	-
>Referenced Overlay Group	50xx,2610	US		ANAP	AUTO	-

2.1.2.3. Nuclear Medicine Image Storage SOP Class

Table 32: IOD of Created Nuclear Medicine Image Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	General Study Module	ALWAYS
Study	Patient Study Module	ALWAYS
Series	General Series Module	ALWAYS

Series	NM/PET Patient Orientation Module	ALWAYS
Frame of Reference	Frame of Reference Module	CONDITIONAL
Equipment	General Equipment Module	ALWAYS
Image	General Image Module	ALWAYS
Image	Image Pixel Module	ALWAYS
Image	Multi-Frame Module	ALWAYS
Image	Acquisition Context Module	
Image	NM Image Pixel Module	ALWAYS
Image	NM Multi-frame Module	ALWAYS
Image	NM Image Module	ALWAYS
Image	NM Isotope Module	ALWAYS
Image	NM Detector Module	ALWAYS
Image	NM Tomo Acquisition Module	CONDITIONAL
Image	NM Multi-gated Acquisition Module	CONDITIONAL
Image	NM Phase Module	CONDITIONAL
Image	NM Reconstruction Module	CONDITIONAL
Image	SOP Common Module	ALWAYS
Image	Extended Dicom and Private attributes	CONDITIONAL

Table 33: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	COPY	-
Patient's Birth Date	0010,0030	DA		VNAP	COPY	-
Patient's Birth Time	0010,0032	TM		ANAP	COPY	-
Patient's Sex	0010,0040	CS		VNAP	COPY	-
Other Patient IDs	0010,1000	LO		ANAP	COPY	-
Ethnic Group	0010,2160	SH		ANAP	COPY	-
Patient Comments	0010,4000	LT		ANAP	COPY	-

Table 34: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		ALWAYS	COPY	-
Study Time	0008,0030	TM		ALWAYS	COPY	-
Accession Number	0008,0050	SH		VNAP	COPY	-
Referring Physician's Name	0008,0090	PN		VNAP	COPY	-
Study Description	0008,1030	LO		ANAP	COPY	-
Procedure Code Sequence	0008,1032	SQ		ANAP	COPY	-
>Code Value	0008,0100	SH		ALWAYS	COPY	-
>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>Code Meaning	0008,0104	LO		ALWAYS	COPY	-
Referenced Study Sequence	0008,1110	SQ		ANAP	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-
Study Instance UID	0020,000D	UI		ALWAYS	COPY	-
Study ID	0020,0010	SH		VNAP	COPY	-

Table 35: Patient Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Age	0010,1010	AS		VNAP	COPY	-
Patient's Size	0010,1020	DS		ANAP	COPY	-
Patient's Weight	0010,1030	DS		ANAP	COPY	-
Additional Patient History	0010,21B0	LT		ANAP	COPY	-

Table 36: General Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Series Date	0008,0021	DA		ALWAYS	AUTO	-
Series Time	0008,0031	TM		ALWAYS	AUTO	-
Modality	0008,0060	CS	NM	ALWAYS	FIXED	-
Series Description	0008,103E	LO		ANAP	AUTO	-
Performing Physician's Name	0008,1050	PN		ANAP	COPY	-
Referenced Performed Procedure Step Sequence	0008,1111	SQ		ANAP	COPY	-
>Referenced SOP Class UID	0008,1150	UI	1.2.840.10008.5.1.4.1.1.20	ANAP	FIXED	-
>Referenced SOP Instance UID	0008,1155	UI		ANAP	COPY	-
Body Part Examined	0018,0015	CS		ANAP	COPY	-
Protocol Name	0018,1030	LO		ANAP	COPY	-
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		VNAP	AUTO	-
Smallest Pixel Value in Series	0028,0108	US/SS		ANAP	AUTO	-
Largest Pixel Value in Series	0028,0109	US/SS		ANAP	AUTO	-
Request Attributes Sequence	0040,0275	SQ		ANAP	COPY	-
>Scheduled Procedure Step Description	0040,0007	LO		ANAP	COPY	-
>Scheduled Protocol Code Sequence	0040,0008	SQ		ANAP	COPY	-
>>Code Value	0008,0100	SH		ALWAYS	COPY	-
>>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>>Code Meaning	0008,0104	LO		ALWAYS	COPY	-
>Scheduled Procedure Step ID	0040,0009	SH		ANAP	COPY	-
>Requested Procedure ID	0040,1001	SH		ANAP	COPY	-
Performed Procedure Step Start Date	0040,0244	DA		ANAP	COPY	-
Performed Procedure Step Start Time	0040,0245	TM		ANAP	COPY	-
Performed Procedure Step ID	0040,0253	SH		ANAP	COPY	-
Performed Procedure Step Description	0040,0254	LO		ANAP	COPY	-
Performed Protocol Code Sequence	0040,0260	SQ		ALWAYS	COPY	-
>Code Value	0008,0100	SH		ALWAYS	COPY	-
>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>Code Meaning	0008,0104	LO		ANAP	COPY	-

Table 37: NM/PET Patient Orientation Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient Orientation Code Sequence	0054,0410	SQ		ANAP	COPY	-
>Patient Orientation Modifier Code Sequence	0054,0412	SQ		ANAP	COPY	-
>>Code Value	0008,0100	SH		ALWAYS	COPY	-
>>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>>Code Meaning	0008,0104	LO		ALWAYS	COPY	-
>Code Value	0008,0100	SH		ALWAYS	COPY	-
>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>Code Meaning	0008,0104	LO		ALWAYS	COPY	-
Patient Gantry Relationship Code Sequence	0054,0414	SQ		ANAP	COPY	-
>Code Value	0008,0100	SH		ALWAYS	COPY	-
>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>Code Meaning	0008,0104	LO		ALWAYS	COPY	-

Table 38: Frame of Reference Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Frame of Reference UID	0020,0052	UI		ANAP	COPY	-
Position Reference Indicator	0020,1040	LO		ANAP	COPY	-

Table 39: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips Medical Systems	ANAP	COPY	Philips Medical Systems
Institution Name	0008,0080	LO		ANAP	COPY	-
Station Name	0008,1010	SH		ANAP	COPY	-
Manufacturer's Model Name	0008,1090	LO	Philips Portal	ANAP	FIXED	Philips Portal
Device Serial Number	0018,1000	LO		ANAP	COPY	-
Software Version(s)	0018,1020	LO	6.0	ANAP	FIXED	6.0
Spatial Resolution	0018,1050	DS		ANAP	COPY	-

Table 40: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Acquisition Date	0008,0022	DA		ALWAYS	COPY	-
Content Date	0008,0023	DA		ALWAYS	AUTO	-
Acquisition Time	0008,0032	TM		ALWAYS	COPY	-
Content Time	0008,0033	TM		ANAPCV	AUTO	-
Acquisition Number	0020,0012	IS		ANAP	COPY	-
Instance Number	0020,0013	IS		VNAP	AUTO	-
Images in Acquisition	0020,1002	IS	0	ALWAYS	FIXED	0
Quality Control Image	0028,0300	CS		VNAP	IMPLICIT	-

Table 41: Image Pixel Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Rows	0028,0010	US		ALWAYS	USER	-
Columns	0028,0011	US		ALWAYS	USER	-

Pixel Representation	0028,0103	US	0	ALWAYS	FIXED	0
Smallest Image Pixel Value	0028,0106	US/SS		ALWAYS	AUTO	-
Largest Image Pixel Value	0028,0107	US/SS		ALWAYS	AUTO	-
Pixel Data	7FE0,0010	OW/OB		ALWAYS	AUTO	-

Table 42: Multi-Frame Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Number of Frames	0028,0008	IS		ALWAYS	IMPLICIT	-

Table 43: Acquisition Context Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Acquisition Context Sequence	0040,0555	SQ		ANAP	COPY	-
>Value Type	0040,A040	CS	CODE	ALWAYS	FIXED	-
>Concept Name Code Sequence	0040,A043	SQ		ALWAYS	COPY	-
>>Code Value	0008,0100	SH	109055	ALWAYS	FIXED	-
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	FIXED	-
>>Code Meaning	0008,0104	LO	Patient State	ALWAYS	FIXED	-
>Concept Code Sequence	0040,A168	SQ		ALWAYS	COPY	-
>>Code Value	0008,0100	SH		ALWAYS	COPY	-
>>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>>Code Meaning	0008,0104	LO		ALWAYS	COPY	-

Table 44: NM Image Pixel Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Samples per Pixel	0028,0002	US	1	ALWAYS	FIXED	-
Photometric Interpretation	0028,0004	CS	MONOCHROME2	ALWAYS	FIXED	-
Pixel Spacing	0028,0030	DS		ALWAYS	IMPLICIT	-
Bits Allocated	0028,0100	US	16	ALWAYS	FIXED	-
Bits Stored	0028,0101	US	16	ALWAYS	FIXED	-
High Bit	0028,0102	US	15	ALWAYS	FIXED	-

Table 45: NM Multi-frame Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Frame Increment Pointer	0028,0009	AT		ALWAYS	AUTO	-
Energy Window Vector	0054,0010	US		ANAP	AUTO	-
Number of Energy Windows	0054,0011	US		ALWAYS	COPY	-
Detector Vector	0054,0020	US		ANAP	AUTO	-
Number of Detectors	0054,0021	US		ALWAYS	COPY	-
Phase Vector	0054,0030	US		ANAP	AUTO	-
Number of Phases	0054,0031	US		ANAP	USER, IMPLICIT	-
Rotation Vector	0054,0050	US		ANAP	AUTO	-
Number of Rotations	0054,0051	US		ANAP	COPY	-
R-R Interval Vector	0054,0060	US		ANAP	AUTO	-
Number of R-R Intervals	0054,0061	US		ANAP	COPY	-
Time Slot Vector	0054,0070	US		ANAP	AUTO	-
Number of Time Slots	0054,0071	US		ANAP	COPY	-
Slice Vector	0054,0080	US		ANAP	AUTO	-

Number of Slices	0054,0081	US		ANAP	AUTO	-
Angular View Vector	0054,0090	US		ANAP	AUTO	-
Time Slice Vector	0054,0100	US		ANAP	AUTO	-

Table 46: NM Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Type	0008,0008	CS		ALWAYS	IMPLICIT	-
Counts Accumulated	0018,0070	IS		VNAP	AUTO	-
Acquisition Termination Condition	0018,0071	CS		VNAP	COPY	-
Trigger Source or Type	0018,1061	LO		ANAPCV	COPY	-
Table Height	0018,1130	DS		ANAP	COPY	-
Table Traverse	0018,1131	DS		ANAP	COPY	-
Actual Frame Duration	0018,1242	IS		ANAP	COPY	-
Count Rate	0018,1243	IS		ANAP	COPY	-
Scan Velocity	0018,1300	DS		ANAP	COPY	-
Whole Body Technique	0018,1301	CS		ANAP	IMPLICIT	-
Scan Length	0018,1302	IS		ANAP	COPY	-
Corrected Image	0028,0051	CS		ANAP	IMPLICIT	-

Table 47: NM Isotope Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Energy Window Information Sequence	0054,0012	SQ		ALWAYS	COPY	-
>Energy Window Range Sequence	0054,0013	SQ		ALWAYS	COPY	-
>>Energy Window Lower Limit	0054,0014	DS		ALWAYS	COPY	-
>>Energy Window Upper Limit	0054,0015	DS		ALWAYS	COPY	-
>Energy Window Name	0054,0018	SH		ALWAYS	COPY	-
Radiopharmaceutical Information Sequence	0054,0016	SQ		ALWAYS	COPY	-
>Radiopharmaceutical	0018,0031	LO		ANAP	COPY	-
>Radiopharmaceutical Volume	0018,1071	DS	0.0	ANAP	FIXED	-
>Radiopharmaceutical Start Time	0018,1072	TM		ANAP	COPY	-
>Radiopharmaceutical Stop Time	0018,1073	TM		EMPTY	FIXED	-
>Radionuclide Total Dose	0018,1074	DS		ANAP	COPY	-
>Radionuclide Code Sequence	0054,0300	SQ		ALWAYS	COPY	-
>>Code Value	0008,0100	SH		ALWAYS	COPY	-
>>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>>Code Meaning	0008,0104	LO		ALWAYS	COPY	-
>Radiopharmaceutical Code Sequence	0054,0304	SQ		ANAP	COPY	-
>>Code Value	0008,0100	SH		ALWAYS	COPY	-
>>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>>Code Meaning	0008,0104	LO		ALWAYS	COPY	-

Table 48: NM Detector Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Detector Information Sequence	0054,0022	SQ		ALWAYS	IMPLICIT	-
>Gantry/Detector Tilt	0018,1120	DS		ANAP	COPY	-
>Radial Position	0018,1142	DS		ANAP	COPY	-
>Center of Rotation Offset	0018,1145	DS	0.0	ALWAYS	FIXED	-
>Field of View Shape	0018,1147	CS	RECTANGLE	ALWAYS	FIXED	-
>Field of View Dimension(s)	0018,1149	IS		ANAP	COPY	-
>Collimator/grid Name	0018,1180	SH		ALWAYS	COPY	-
>Collimator Type	0018,1181	CS		ALWAYS	COPY	-
>Focal Distance	0018,1182	IS	0	ALWAYS	FIXED	-
>X Focus Center	0018,1183	DS	0.0	ALWAYS	FIXED	-
>Y Focus Center	0018,1184	DS	0.0	ALWAYS	FIXED	-
>Image Position (Patient)	0020,0032	DS		VNAP	IMPLICIT	-
>Image Orientation (Patient)	0020,0037	DS		VNAP	IMPLICIT	-
>Zoom Factor	0028,0031	DS		ANAP	COPY	-
>Zoom Center	0028,0032	DS	0.0	ALWAYS	FIXED	-
>Start Angle	0054,0200	DS		ANAP	COPY	-
>View Code Sequence	0054,0220	SQ		ANAP	IMPLICIT	-
>>View Modifier Code Sequence	0054,0222	SQ		ANAP	COPY	-
>>>Code Value	0008,0100	SH		ALWAYS	COPY	-
>>>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>>>Code Meaning	0008,0104	LO		ALWAYS	COPY	-
>>Code Value	0008,0100	SH		ALWAYS	IMPLICIT	-
>>Coding Scheme Designator	0008,0102	SH		ALWAYS	IMPLICIT	-
>>Code Meaning	0008,0104	LO		ALWAYS	IMPLICIT	-

Table 49: NM Tomo Acquisition Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Rotation Information Sequence	0054,0052	SQ		ANAP	COPY	-
>Distance Source to Detector	0018,1110	DS		ANAP	COPY	-
>Table Height	0018,1130	DS		ALWAYS	COPY	-
>Table Traverse	0018,1131	DS		ALWAYS	COPY	-
>Rotation Direction	0018,1140	CS		ALWAYS	COPY	-
>Radial Position	0018,1142	DS		ALWAYS	COPY	-
>Scan Arc	0018,1143	DS		ALWAYS	COPY	-
>Angular Step	0018,1144	DS		ALWAYS	COPY	-
>Actual Frame Duration	0018,1242	IS		ALWAYS	COPY	-
>Number of Frames in Rotation	0054,0053	US		ALWAYS	COPY	-
>Start Angle	0054,0200	DS		ALWAYS	COPY	-

Table 50: NM Multi-gated Acquisition Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Beat Rejection Flag	0018,1080	CS		ANAP	COPY	-
PVC Rejection	0018,1085	LO		ANAP	COPY	-
Skip Beats	0018,1086	IS		ANAP	COPY	-
Heart Rate	0018,1088	IS		ANAP	COPY	-
Gated Information Sequence	0054,0062	SQ		ANAP	IMPLICIT	-

>Trigger Time	0018,1060	DS	0.0	ALWAYS	FIXED	-
>Data Information Sequence	0054,0063	SQ		ALWAYS	IMPLICIT	-
>>Nominal Interval	0018,1062	IS		ANAP	AUTO	-
>>Frame Time	0018,1063	DS		ALWAYS	USER, IMPLICIT	-
>>Low R-R Value	0018,1081	IS		ANAP	AUTO	-
>>High R-R Value	0018,1082	IS		ANAP	AUTO	-
>>Intervals Acquired	0018,1083	IS		ALWAYS	AUTO	-
>>Intervals Rejected	0018,1084	IS		ANAP	AUTO	-
>>Time Slot Information Sequence	0054,0072	SQ		ALWAYS	IMPLICIT	-
>>>Time Slot Time	0054,0073	DS		ALWAYS	IMPLICIT	-

Table 51: NM Phase Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Phase Information Sequence	0054,0032	SQ		ANAP	IMPLICIT	-
>Actual Frame Duration	0018,1242	IS		ALWAYS	USER, AUTO	-
>Number of Frames in Phase	0054,0033	US		ALWAYS	USER	-
>Phase Delay	0054,0036	IS	0	ALWAYS	FIXED	-
>Pause Between Frames	0054,0038	IS	0	ALWAYS	FIXED	-
>Number of Triggers in Phase	0054,0211	US	0	ALWAYS	FIXED	-

Table 52: NM Reconstruction Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Slice Thickness	0018,0050	DS		ANAP	CONFIG, IMPLICIT	-
Spacing Between Slices	0018,0088	DS		ANAP	AUTO	-
Convolution Kernel	0018,1210	SH		ANAP	IMPLICIT	-
Slice Progression Direction	0054,0500	CS		ANAP	AUTO	-

Table 53: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Specific Character Set	0008,0005	CS	ISO_IR 100	ALWAYS	FIXED	ISO_IR 100
Instance Creation Date	0008,0012	DA		ALWAYS	AUTO	-
Instance Creation Time	0008,0013	TM		ALWAYS	AUTO	-
Instance Creator UID	0008,0014	UI		ALWAYS	CONFIG	-
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.20	ALWAYS	FIXED	1.2.840.10008.5.1.4.1.1.20
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-

Table 54: Extended DICOM and private attributes for Nuclear Medicine Image Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Medical Alerts	0010,2000	LO		ANAP	COPY	-
Contrast Allergies	0010,2110	LO		ANAP	COPY	-
Pregnancy Status	0010,21C0	US		ANAP	COPY	-
Special Needs	0038,0050	LO		ANAP	COPY	-
Patient State	0038,0500	LO		ANAP	COPY	-
Real World Value Mapping Sequence	0040,9096	SQ		ANAPCV	AUTO	-

> Real World First Value Mapped	0040,9216	US		ANAPCV	AUTO	-
> Real World Last Value Mapped	0040,9211	US		ANAPCV	AUTO	-
> Real World Value Intercept	0040,9224	FD	0	ANAPCV	FIXED	-
> Real World Value Slope	0040,9225	FD		ANAPCV	AUTO	-

2.1.2.4. MR Image Storage SOP Class

Table 55: IOD of Created MR Image Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	General Study Module	ALWAYS
Study	Patient Study Module	CONDITIONAL
Series	General Series Module	ALWAYS
Frame of Reference	Frame of Reference Module	ALWAYS
Equipment	General Equipment Module	ALWAYS
Image	General Image Module	ALWAYS
Image	Image Plane Module	ALWAYS
Image	Image Pixel Module	ALWAYS
Image	MR Image Module	ALWAYS
Image	Overlay Plane Module	CONDITIONAL
Image	VOI LUT Module	CONDITIONAL
Image	SOP Common Module	ALWAYS
Image	Contrast/Bolus Module	CONDITIONAL
Image	Extended Dicom and Private attributes	CONDITIONAL

Table 56: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Referenced Patient Sequence	0008,1120	SQ		ANAPCV	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	COPY	-
Patient's Birth Date	0010,0030	DA		VNAP	COPY, USER	-
Patient's Birth Time	0010,0032	TM		ANAPCV	COPY, USER	-
Patient's Sex	0010,0040	CS		VNAP	COPY, USER	-
Other Patient IDs	0010,1000	LO		ANAPCV	COPY, USER	-
Other Patient Names	0010,1001	PN		ANAPCV	COPY, USER	-
Ethnic Group	0010,2160	SH		ANAPCV	COPY	-
Patient Comments	0010,4000	LT		ANAPCV	COPY	-
Issuer of Patient ID	0010,0021	LO		ANAPCV	COPY, USER	-

Table 57: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		VNAP	COPY	-
Study Time	0008,0030	TM		VNAP	COPY	-
Accession Number	0008,0050	SH		VNAP	COPY, USER	-
Referring Physician's Name	0008,0090	PN		VNAP	COPY, USER	-
Referring Physician Identification Sequence	0008,0096	SQ		ANAPCV	COPY	-
Study Description	0008,1030	LO		ANAPCV	COPY, USER	-
Procedure Code Sequence	0008,1032	SQ		ANAPCV	COPY	-
Physician(s) of Record	0008,1048	PN		ANAPCV	COPY	-
Physician(s) of Record Identification Sequence	0008,1049	SQ		ANAPCV	COPY	-
Name of Physician(s) Reading Study	0008,1060	PN		ANAPCV	COPY	-
Physician(s) Reading Study Identification Sequence	0008,1062	SQ		ANAPCV	COPY	-
Referenced Study Sequence	0008,1110	SQ		ANAPCV	COPY	-
Study Instance UID	0020,000D	UI		ALWAYS	AUTO	-
Study ID	0020,0010	SH		VNAP	AUTO	-

Table 58: Patient Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Admitting Diagnoses Description	0008,1080	LO		ANAPCV	COPY	-
Admitting Diagnoses Code Sequence	0008,1084	SQ		ANAPCV	COPY	-
Patient's Age	0010,1010	AS		ANAPCV	COPY, USER	-
Patient's Size	0010,1020	DS		ANAPCV	COPY, USER	-
Patient's Weight	0010,1030	DS		ANAPCV	COPY, USER	-
Occupation	0010,2180	SH		ANAPCV	COPY	-
Additional Patient History	0010,21B0	LT		ANAPCV	COPY	-

Table 59: General Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Series Date	0008,0021	DA		ANAPCV	AUTO	-
Series Time	0008,0031	TM		ANAPCV	AUTO	-
Modality	0008,0060	CS		ALWAYS	COPY	-
Series Description	0008,103E	LO		ANAPCV	COPY, USER	-
Performing Physician's Name	0008,1050	PN		ANAPCV	COPY	-
Operators' Name	0008,1070	PN		ANAPCV	COPY, USER	-
Operator Identification Sequence	0008,1072	SQ		ANAPCV	COPY	-

Referenced Performed Procedure Step Sequence	0008,1111	SQ		ANAPCV	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-
Body Part Examined	0018,0015	CS		ANAPCV	COPY	-
Protocol Name	0018,1030	LO		ANAPCV	COPY	-
Patient Position	0018,5100	CS		ANAPCV	COPY	-
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		VNAP	AUTO	-
Laterality	0020,0060	CS		ANAPCV	COPY	-
Smallest Pixel Value in Series	0028,0108	US /SS		ANAPCV	COPY	-
Largest Pixel Value in Series	0028,0109	US /SS		ANAPCV	COPY	-
Request Attributes Sequence	0040,0275	SQ		ANAPCV	COPY	-
Performed Procedure Step Start Date	0040,0244	DA		ANAPCV	COPY	-
Performed Procedure Step Start Time	0040,0245	TM		ANAPCV	COPY	-
Performed Procedure Step Description	0040,0254	LO		ANAPCV	COPY	-
Performed Protocol Code Sequence	0040,0260	SQ		ANAPCV	COPY	-
Comments on the Performed Procedure Step	0040,0280	ST		ANAPCV	COPY	-

Table 60: Frame of Reference Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Frame of Reference UID	0020,0052	UI		ALWAYS	COPY	-
Position Reference Indicator	0020,1040	LO		VNAP	COPY	-

Table 61: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips Medical Systems	VNAP	COPY	Philips Medical Systems
Institution Name	0008,0080	LO		ANAPCV	COPY, USER	-
Institution Address	0008,0081	ST		ANAPCV	COPY, USER	-
Station Name	0008,1010	SH		ANAPCV	COPY	-
Institutional Department Name	0008,1040	LO		ANAPCV	COPY	-
Manufacturer's Model Name	0008,1090	LO	Philips Portal	ANAPCV	COPY	Philips Portal
Device Serial Number	0018,1000	LO		ANAPCV	COPY	-
Software Version(s)	0018,1020	LO	6.0	ANAPCV	COPY	6.0
Spatial Resolution	0018,1050	DS		ANAPCV	COPY	-
Date of Last Calibration	0018,1200	DA		ANAPCV	COPY	-
Time of Last Calibration	0018,1201	TM		ANAPCV	COPY	-
Pixel Padding Value	0028,0120	US /SS		ANAP	COPY	-

Table 62: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Acquisition Date	0008,0022	DA		ANAPCV	COPY	-
Content Date	0008,0023	DA		ANAPCV	COPY	-
Acquisition Datetime	0008,002A	DT		ANAPCV	COPY	-
Acquisition Time	0008,0032	TM		ANAPCV	COPY	-
Content Time	0008,0033	TM		ANAPCV	COPY	-
Referenced Image Sequence	0008,1140	SQ		ANAPCV	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-
Derivation Description	0008,2111	ST		ANAPCV	COPY	-
Source Image Sequence	0008,2112	SQ		ANAPCV	COPY	-
Derivation Code Sequence	0008,9215	SQ		ANAPCV	COPY	-
Instance Number	0020,0013	IS		VNAP	AUTO, COPY	-
Patient Orientation	0020,0020	CS		ANAPCV	COPY	-
Images in Acquisition	0020,1002	IS		ANAPCV	COPY	-
Quality Control Image	0028,0300	CS		ANAPCV	COPY	-
Burned In Annotation	0028,0301	CS		ANAPCV	COPY	-
Lossy Image Compression	0028,2110	CS		ANAPCV	COPY	-
Lossy Image Compression Ratio	0028,2112	DS		ANAPCV	COPY	-
Icon Image Sequence	0088,0200	SQ		ANAPCV	COPY	-
>Samples per Pixel	0028,0002	US		ALWAYS	COPY	-
>Photometric Interpretation	0028,0004	CS		ALWAYS	COPY	-
>Planar Configuration	0028,0006	US		ANAP	COPY	-
>Rows	0028,0010	US		ALWAYS	COPY	-
>Columns	0028,0011	US		ALWAYS	COPY	-
>Pixel Aspect Ratio	0028,0034	IS		ANAP	COPY	-
>Bits Allocated	0028,0100	US		ALWAYS	COPY	-
>Bits Stored	0028,0101	US		ALWAYS	COPY	-
>High Bit	0028,0102	US		ALWAYS	COPY	-
>Pixel Representation	0028,0103	US		ALWAYS	COPY	-
>Smallest Image Pixel Value	0028,0106	US /SS		ANAPCV	COPY	-
>Largest Image Pixel Value	0028,0107	US /SS		ANAPCV	COPY	-
>Red Palette Color Lookup Table Descriptor	0028,1101	US /SS		ANAP	COPY	-
>Green Palette Color Lookup Table Descriptor	0028,1102	US /SS		ANAP	COPY	-
>Blue Palette Color Lookup Table Descriptor	0028,1103	US /SS		ANAP	COPY	-
>Red Palette Color Lookup Table Data	0028,1201	O W		ANAP	COPY	-
>Green Palette Color Lookup Table Data	0028,1202	O W		ANAP	COPY	-
>Blue Palette Color Lookup Table Data	0028,1203	O W		ANAP	COPY	-
>Pixel Data	7FE0,0010	O W/ OB		ANAP	COPY	-

Presentation LUT Shape	2050,0020	CS		ANAPCV	COPY	-
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Table 63: Image Plane Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Slice Thickness	0018,0050	DS		VNAP	COPY	-
Image Position (Patient)	0020,0032	DS		ALWAYS	COPY	-
Image Orientation (Patient)	0020,0037	DS		ALWAYS	COPY	-
Slice Location	0020,1041	DS		ANAPCV	COPY	-
Pixel Spacing	0028,0030	DS		ALWAYS	COPY	-

Table 64: Image Pixel Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Planar Configuration	0028,0006	US		ANAP	COPY	-
Rows	0028,0010	US		ALWAYS	AUTO, COPY	-
Columns	0028,0011	US		ALWAYS	AUTO, COPY	-
Pixel Aspect Ratio	0028,0034	IS		ANAP	COPY	-
Bits Stored	0028,0101	US		ALWAYS	COPY	-
High Bit	0028,0102	US		ALWAYS	COPY	-
Pixel Representation	0028,0103	US		ALWAYS	COPY	-
Smallest Image Pixel Value	0028,0106	US/SS		ANAPCV	COPY	-
Largest Image Pixel Value	0028,0107	US/SS		ANAPCV	COPY	-
Red Palette Color Lookup Table Descriptor	0028,1101	US/SS		ANAP	COPY	-
Green Palette Color Lookup Table Descriptor	0028,1102	US/SS		ANAP	COPY	-
Blue Palette Color Lookup Table Descriptor	0028,1103	US/SS		ANAP	COPY	-
Red Palette Color Lookup Table Data	0028,1201	OW		ANAP	COPY	-
Green Palette Color Lookup Table Data	0028,1202	OW		ANAP	COPY	-
Blue Palette Color Lookup Table Data	0028,1203	OW		ANAP	COPY	-
Pixel Data	7FE0,0010	OW/OB		ANAP	COPY	-

Table 65: MR Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Image Type	0008,0008	CS		ALWAYS	AUTO	-
Scanning Sequence	0018,0020	CS		ALWAYS	COPY	-
Sequence Variant	0018,0021	CS		ALWAYS	COPY	-
Scan Options	0018,0022	CS		VNAP	COPY	-
MR Acquisition Type	0018,0023	CS		VNAP	COPY	-
Sequence Name	0018,0024	SH		ANAPCV	COPY	-
Angio Flag	0018,0025	CS		ANAPCV	COPY	-
Repetition Time	0018,0080	DS		ANAPCV	COPY	-
Echo Time	0018,0081	DS		VNAP	COPY	-
Inversion Time	0018,0082	DS		ANAPCV	COPY	-
Number of Averages	0018,0083	DS		ANAPCV	COPY	-
Imaging Frequency	0018,0084	DS		ANAPCV	COPY	-

Imaged Nucleus	0018,0085	SH		ANAPCV	COPY	-
Echo Number(s)	0018,0086	IS		ANAPCV	COPY	-
Magnetic Field Strength	0018,0087	DS		ANAPCV	COPY	-
Spacing Between Slices	0018,0088	DS		ANAPCV	COPY	-
Number of Phase Encoding Steps	0018,0089	IS		ANAPCV	COPY	-
Echo Train Length	0018,0091	IS		VNAP	COPY	-
Percent Sampling	0018,0093	DS		ANAPCV	COPY	-
Percent Phase Field of View	0018,0094	DS		ANAPCV	COPY	-
Pixel Bandwidth	0018,0095	DS		ANAPCV	COPY	-
Trigger Time	0018,1060	DS		ANAPCV	COPY	-
Nominal Interval	0018,1062	IS		ANAPCV	COPY	-
Beat Rejection Flag	0018,1080	CS		ANAPCV	COPY	-
Low R-R Value	0018,1081	IS		ANAPCV	COPY	-
High R-R Value	0018,1082	IS		ANAPCV	COPY	-
Intervals Acquired	0018,1083	IS		ANAPCV	COPY	-
Intervals Rejected	0018,1084	IS		ANAPCV	COPY	-
PVC Rejection	0018,1085	LO		ANAPCV	COPY	-
Skip Beats	0018,1086	IS		ANAPCV	COPY	-
Heart Rate	0018,1088	IS		ANAPCV	COPY	-
Cardiac Number of Images	0018,1090	IS		ANAPCV	COPY	-
Trigger Window	0018,1094	IS		ANAPCV	COPY	-
Reconstruction Diameter	0018,1100	DS		ANAPCV	COPY	-
Receive Coil Name	0018,1250	SH		ANAPCV	COPY	-
Transmit Coil Name	0018,1251	SH		ANAPCV	COPY	-
Acquisition Matrix	0018,1310	US		ANAPCV	COPY	-
In-plane Phase Encoding Direction	0018,1312	CS		ANAPCV	COPY	-
Flip Angle	0018,1314	DS		ANAPCV	COPY	-
SAR	0018,1316	DS		ANAPCV	COPY	-
dB/dt	0018,1318	DS		ANAPCV	COPY	-
Temporal Position Identifier	0020,0100	IS		ANAPCV	COPY	-
Number of Temporal Positions	0020,0105	IS		ANAPCV	COPY	-
Temporal Resolution	0020,0110	DS		ANAPCV	COPY	-
Samples per Pixel	0028,0002	US		ALWAYS	COPY	-
Photometric Interpretation	0028,0004	CS	MONOCHROME2	ALWAYS	COPY	-
Bits Allocated	0028,0100	US		ALWAYS	COPY	-

Table 66: Overlay Plane Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Overlay Rows	6000,0010	US		ALWAYS	AUTO	-
Overlay Columns	6000,0011	US		ALWAYS	AUTO	-
Overlay Description	6000,0022	LO		ANAPCV	AUTO	-
Overlay Type	6000,0040	CS		ALWAYS	AUTO	-
Overlay Subtype	6000,0045	LO		ANAPCV	AUTO	-
Overlay Origin	6000,0050	SS		ALWAYS	AUTO	-
Overlay Bits Allocated	6000,0100	US		ALWAYS	AUTO	-
Overlay Bit Position	6000,0102	US		ALWAYS	AUTO	-
ROI Area	6000,1301	IS		ANAPCV	AUTO	-
ROI Mean	6000,1302	DS		ANAPCV	AUTO	-
ROI Standard Deviation	6000,1303	DS		ANAPCV	AUTO	-

Overlay Label	6000,1500	LO		ANAPCV	AUTO	-
Overlay Data	6000,3000	OW/ OB		ALWAYS	AUTO	-

Table 67: VOI LUT Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Window Center	0028,1050	DS		ANAP	AUTO	-
Window Width	0028,1051	DS		ANAP	AUTO	-
Window Center & Width Explanation	0028,1055	LO		ANAPCV	AUTO	-

Table 68: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Specific Character Set	0008,0005	CS		ANAP	AUTO, COPY	-
Instance Creation Date	0008,0012	DA		ANAPCV	AUTO	-
Instance Creation Time	0008,0013	TM		ANAPCV	AUTO	-
Instance Creator UID	0008,0014	UI		ANAPCV	AUTO	-
SOP Class UID	0008,0016	UI		ALWAYS	COPY	-
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-
Timezone Offset From UTC	0008,0201	SH		ANAPCV	COPY	-
Contributing Equipment Sequence	0018,A001	SQ		ANAPCV	AUTO	-
>Manufacturer	0008,0070	LO	Philips Medical Systems	ALWAYS	FIXED	Philips Medical Systems
>Institution Address	0008,0081	ST	Philips Portal	ANAPCV	FIXED	Philips Portal
>Station Name	0008,1010	SH	Philips Portal	ANAPCV	CONFIG	Philips Portal
>Institutional Department Name	0008,1040	LO	Philips Portal	ANAPCV	FIXED	Philips Portal
>Software Version(s)	0018,1020	LO	6.0	ANAPCV	FIXED	6.0
>Device Serial Number	0018,1000	LO	IntelliSpace Portal	ANAPCV	FIXED	IntelliSpace Portal
>Institution Name	0008,0080	LO	Philips Portal	ANAPCV	FIXED	Philips Portal
>Manufacturer's Model Name	0008,1090	LO	IntelliSpace Portal	ANAPCV	FIXED	IntelliSpace Portal
>Purpose of Reference Code Sequence	0040,A170	SQ		ALWAYS	FIXED	-
>>Code Value	0008,0100	SH	109102	ALWAYS	FIXED	109102
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	FIXED	DCM
>>Code Meaning	0008,0104	LO	Processing Equipment	ALWAYS	FIXED	Processing Equipment

Table 69: Contrast/Bolus Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Contrast/Bolus Agent	0018,0010	LO		VNAP	COPY	-
Contrast/Bolus Agent Sequence	0018,0012	SQ		ANAPCV	COPY	-
Contrast/Bolus Administration Route Sequence	0018,0014	SQ		ANAPCV	COPY	-
>Additional Drug Sequence	0018,002A	SQ		ANAP	COPY	-
Contrast/Bolus Route	0018,1040	LO		ANAPCV	COPY	-
Contrast/Bolus Volume	0018,1041	DS		ANAPCV	COPY	-
Contrast/Bolus Start Time	0018,1042	TM		ANAPCV	COPY	-
Contrast/Bolus Stop Time	0018,1043	TM		ANAPCV	COPY	-
Contrast/Bolus Total Dose	0018,1044	DS		ANAPCV	COPY	-
Contrast Flow Rate	0018,1046	DS		ANAPCV	COPY	-

Contrast Flow Duration	0018,1047	DS		ANAPCV	COPY	-
Contrast/Bolus Ingredient	0018,1048	CS		ANAPCV	COPY	-
Contrast/Bolus Ingredient Concentration	0018,1049	DS		ANAPCV	COPY	-

Table 70: Extended DICOM and private attributes for MR Image Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Rescale Intercept	0028,1052	DS		ANAPCV	COPY	-
Rescale Slope	0028,1053	DS		ANAPCV	COPY	-
Curve Dimensions	50xx,0005	US		ANAPCV	AUTO	-
Number of Points	50xx,0010	US		ANAPCV	AUTO	-
Type of Data	50xx,0020	CS		ANAPCV	AUTO	-
Data Value Representation	50xx,0103	US		ANAPCV	AUTO	-
Curve Data	50xx,3000	OB/OW		ANAPCV	AUTO	-
Curve Description	50xx,0022	LO		ANAPCV	AUTO	-
Axis Units	50xx,0030	SH		ANAPCV	AUTO	-
Axis Labels	50xx,0040	SH		ANAPCV	AUTO	-
Minimum Coordinate Value	50xx,0104	US		ANAPCV	AUTO	-
Maximum Coordinate Value	50xx,0105	US		ANAPCV	AUTO	-
Curve Range	50xx,0106	SH		ANAPCV	AUTO	-
Curve Data Descriptor	50xx,0110	US		ANAP	AUTO	-
Coordinate Start Value	50xx,0112	US		ANAP	AUTO	-
Coordinate Step Value	50xx,0114	US		ANAP	AUTO	-
Curve Label	50xx,2500	LO		ANAPCV	AUTO	-
Referenced Overlay Sequence	50xx,2600	SQ		ANAPCV	AUTO	-
>Referenced SOP Class UID	0008,1150	UI		ANAP	AUTO	-
>Referenced SOP Instance UID	0008,1155	UI		ANAP	AUTO	-
>Referenced Overlay Group	50xx,2610	US		ANAP	AUTO	-

2.1.2.5. RT Structure Set Storage SOP Class

Table 71: IOD of Created RT Structure Set Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	General Study Module	ALWAYS
Study	Patient Study Module	CONDITIONAL
Series	RT Series Module	ALWAYS
Equipment	General Equipment Module	ALWAYS
Structure Set	Structure Set Module	ALWAYS
Structure Set	ROI Contour Module	ALWAYS
Structure Set	RT ROI Observations Module	ALWAYS
Structure Set	SOP Common Module	ALWAYS
	Extended Dicom and Private attributes	CONDITIONAL

Table 72: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Referenced Patient Sequence	0008,1120	SQ		ANAPCV	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-

Patient's Name	0010,0010	PN		ALWAYS	COPY	-
Patient ID	0010,0020	LO		ALWAYS	COPY	-
Patient's Birth Date	0010,0030	DA		VNAP	COPY, USER	-
Patient's Birth Time	0010,0032	TM		ANAPCV	COPY, USER	-
Patient's Sex	0010,0040	CS		VNAP	COPY, USER	-
Other Patient IDs	0010,1000	LO		ANAPCV	COPY, USER	-
Other Patient Names	0010,1001	PN		ANAPCV	COPY, USER	-
Ethnic Group	0010,2160	SH		ANAPCV	COPY	-
Patient Comments	0010,4000	LT		ANAPCV	COPY	-
Issuer of Patient ID	0010,0021	LO		ANAPCV	COPY, USER	-

Table 73: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Date	0008,0020	DA		VNAP	COPY	-
Study Time	0008,0030	TM		VNAP	COPY	-
Accession Number	0008,0050	SH		VNAP	COPY, USER	-
Referring Physician's Name	0008,0090	PN		VNAP	COPY, USER	-
Referring Physician Identification Sequence	0008,0096	SQ		ANAPCV	COPY	-
Study Description	0008,1030	LO		ANAPCV	COPY, USER	-
Procedure Code Sequence	0008,1032	SQ		ANAPCV	COPY	-
Physician(s) of Record	0008,1048	PN		ANAPCV	COPY	-
Physician(s) of Record Identification Sequence	0008,1049	SQ		ANAPCV	COPY	-
Name of Physician(s) Reading Study	0008,1060	PN		ANAPCV	COPY	-
Physician(s) Reading Study Identification Sequence	0008,1062	SQ		ANAPCV	COPY	-
Referenced Study Sequence	0008,1110	SQ		ANAPCV	COPY	-
Study Instance UID	0020,000D	UI		ALWAYS	AUTO	-
Study ID	0020,0010	SH		VNAP	AUTO	-

Table 74: Patient Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Admitting Diagnoses Description	0008,1080	LO		ANAPCV	COPY	-
Admitting Diagnoses Code Sequence	0008,1084	SQ		ANAPCV	COPY	-
Patient's Age	0010,1010	AS		ANAPCV	COPY, USER	-
Patient's Size	0010,1020	DS		ANAPCV	COPY, USER	-
Patient's Weight	0010,1030	DS		ANAPCV	COPY, USER	-

Occupation	0010,2180	SH		ANAPCV	COPY	-
Additional Patient History	0010,21B0	LT		ANAPCV	COPY	-

Table 75: RT Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Modality	0008,0060	CS		ALWAYS	AUTO	-
Series Description	0008,103E	LO		ANAEV	AUTO/USER	-
Series Description Code Sequence	0008,103F	SQ		ANAPCV	AUTO	-
Referenced Performed Procedure Step Sequence	0008,1111	SQ		ANAEV	COPY	-
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		VNAP	AUTO	-
Request Attributes Sequence	0040,0275	SQ		ANAEV	COPY	-
Performed Procedure Step Start Date	0040,0244	DA		ANAEV	COPY	-
Performed Procedure Step Start Time	0040,0245	TM		ANAEV	COPY	-
Performed Procedure Step ID	0040,0253	SH		ANAEV	COPY	-
Performed Procedure Step Description	0040,0254	LO		ANAEV	COPY	-
Performed Protocol Code Sequence	0040,0260	SQ		ANAEV	COPY	-
Comments on the Performed Procedure Step	0040,0280	ST		ANAEV	COPY	-

Table 76: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips Medical Systems	VNAP	COPY	Philips Medical Systems
Institution Name	0008,0080	LO		ANAPCV	COPY, USER	-
Institution Address	0008,0081	ST		ANAPCV	COPY, USER	-
Station Name	0008,1010	SH		ANAPCV	COPY	-
Institutional Department Name	0008,1040	LO		ANAPCV	COPY	-
Manufacturer's Model Name	0008,1090	LO	Philips Portal	ALWAYS	COPY	Philips Portal
Device Serial Number	0018,1000	LO		ANAPCV	COPY	-
Software Version(s)	0018,1020	LO	6.0	ANAPCV	COPY	6.0
Spatial Resolution	0018,1050	DS		ANAPCV	COPY	-
Date of Last Calibration	0018,1200	DA		ANAPCV	COPY	-
Time of Last Calibration	0018,1201	TM		ANAPCV	COPY	-
Pixel Padding Value	0028,0120	US/SS		ANAPCV	COPY	-

Table 77: Structure Set Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Instance Number	0020,0013	IS		ANAEV	AUTO	-
Structure Set Label	3006,0002	SH		ALWAYS	AUTO/USER	-

Structure Set Name	3006,0004	LO		ANAPEV	AUTO/ USER	-
Structure Set Description	3006,0006	ST		ANAPEV	AUTO/ USER	-
Structure Set Date	3006,0008	DA		VNAP	AUTO	-
Structure Set Time	3006,0009	TM		VNAP	AUTO	-
Referenced Frame of Reference Sequence	3006,0010	SQ		ANAPEV	AUTO	-
>Frame of Reference UID	0020,0052	UI		ALWAYS	AUTO	-
>RT Referenced Study Sequence	3006,0012	SQ		ANAPEV	AUTO	-
>>RT Referenced Series Sequence	3006,0014	SQ		ALWAYS	AUTO	-
>>>Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
>>>Contour Image Sequence	3006,0016	SQ		ALWAYS	AUTO	-
>>>>Referenced Frame Number	0008,1160	IS		ANAP	AUTO	-
>>>>Referenced Segment Number	0062,000B	US		ANAP	AUTO	-
>>>>Referenced SOP Class UID	0008,1150	UI		ALWAYS	AUTO	-
>>>>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	AUTO	-
>>Referenced SOP Class UID	0008,1150	UI		ALWAYS	AUTO	-
>>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	AUTO	-
>Frame of Reference Relationship Sequence	3006,00C0	SQ		ANAPEV	AUTO	-
Structure Set ROI Sequence	3006,0020	SQ		ANAPEV	AUTO	-
>Derivation Code Sequence	0008,9215	SQ		ANAPEV	AUTO	-
>ROI Number	3006,0022	IS		ALWAYS	AUTO	-
>Referenced Frame of Reference UID	3006,0024	UI		ALWAYS	AUTO	-
>ROI Name	3006,0026	LO		VNAP	AUTO	-
>ROI Description	3006,0028	ST		ANAPEV	AUTO	-
>ROI Volume	3006,002C	DS		ANAPEV	AUTO	-
>ROI Generation Algorithm	3006,0036	CS		VNAP	AUTO	-
>ROI Generation Description	3006,0038	LO		ANAPEV	AUTO	-

Table 78: ROI Contour Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
ROI Contour Sequence	3006,0039	SQ		ALWAYS	AUTO	-
>ROI Display Color	3006,002A	IS		ANAPEV	AUTO	-
>Contour Sequence	3006,0040	SQ		ANAPEV	AUTO	-
>>Contour Image Sequence	3006,0016	SQ		ANAPEV	AUTO	-
>>>Referenced Frame Number	0008,1160	IS		ANAP	AUTO	-
>>>Referenced Segment Number	0062,000B	US		ANAP	AUTO	-
>>>Referenced SOP Class UID	0008,1150	UI		ALWAYS	AUTO	-
>>>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	AUTO	-
>>Contour Geometric Type	3006,0042	CS		ALWAYS	AUTO	-
>>Contour Slab Thickness	3006,0044	DS		ANAPEV	AUTO	-

>>Contour Offset Vector	3006,0045	DS		ANAPEV	AUTO	-
>>Number of Contour Points	3006,0046	IS		ALWAYS	AUTO	-
>>Contour Number	3006,0048	IS		ANAPEV	AUTO	-
>>Attached Contours	3006,0049	IS		ANAPEV	AUTO	-
>>Contour Data	3006,0050	DS		ALWAYS	AUTO	-
>Referenced ROI Number	3006,0084	IS		ALWAYS	AUTO	-

Table 79: RT ROI Observations Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
RT ROI Observations Sequence	3006,0080	SQ		ALWAYS	AUTO	-
>RT Related ROI Sequence	3006,0030	SQ		ANAPCV	AUTO	-
>> Referenced ROI Number	3006,0084	IS		ALWAYS	AUTO	-
>>RT ROI Relationship	3006,0033	IS		ANAPEV	AUTO	-
>Observation Number	3006,0082	IS		ALWAYS	AUTO	-
>Referenced ROI Number	3006,0084	IS		ALWAYS	AUTO	-
>ROI Observation Label	3006,0085	SH		ANAPEV	AUTO	-
>RT ROI Identification Code Sequence	3006,0086	SQ		ANAPEV	AUTO	-
>ROI Observation Description	3006,0088	ST		ANAPEV	AUTO	-
>Related RT ROI Observations Sequence	3006,00A0	SQ		ANAPEV	AUTO	-
>> Observation Number	3006,0082			ALWAYS	AUTO	-
>RT ROI Interpreted Type	3006,00A4	CS		VNAP	AUTO	-
>ROI Interpreter	3006,00A6	PN		VNAP	AUTO	-
>Material ID	300A,00E1	SH		ANAPEV	AUTO	-
>ROI Physical Properties Sequence	3006,00B0	SQ		ANAPEV	AUTO	-
>>ROI Physical Property	3006,00B2	CS		ALWAYS	AUTO	-
>>ROI Elemental Composition Sequence	3006,00B6	SQ		ANAP	AUTO	-
>>>ROI Elemental Composition Atomic Number	3006,00B7	US		ALWAYS	AUTO	-
>>>ROI Elemental Composition Atomic Mass Fraction	3006,00B8	FL		ALWAYS	AUTO	-
>>ROI Physical Property Value	3006,00B4	DS		ALWAYS	AUTO	-

Table 80: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Specific Character Set	0008,0005	CS		ANAP	AUTO, COPY	-
Instance Creation Date	0008,0012	DA		ANAPCV	AUTO	-
Instance Creation Time	0008,0013	TM		ANAPCV	AUTO	-
Instance Creator UID	0008,0014	UI		ANAPCV	AUTO	-
SOP Class UID	0008,0016	UI		ALWAYS	COPY	-
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-
Timezone Offset From UTC	0008,0201	SH		ANAPCV	COPY	-
Contributing Equipment Sequence	0018,A001	SQ		ANAPCV	AUTO	-
>Manufacturer	0008,0070	LO	Philips Medical Systems	ALWAYS	FIXED	Philips Medical Systems
>Institution Address	0008,0081	ST	Philips Portal	ANAP	FIXED	Philips Portal

>Station Name	0008,1010	SH	Philips Portal	ANAP	CONFIG	Philips Portal
>Institutional Department Name	0008,1040	LO	Philips Portal	ANAP	FIXED	Philips Portal
>Software Version(s)	0018,1020	LO	6.0	ANAP	FIXED	6.0
>Device Serial Number	0018,1000	LO	IntelliSpace Portal	ANAP	FIXED	IntelliSpace Portal
>Institution Name	0008,0080	LO	Philips Portal	ANAP	FIXED	Philips Portal
>Manufacturer's Model Name	0008,1090	LO	IntelliSpace Portal	ANAP	FIXED	IntelliSpace Portal
>Purpose of Reference Code Sequence	0040,A170	SQ		ALWAYS	FIXED	-
>>Code Value	0008,0100	SH	109102	ALWAYS	FIXED	109102
>>Coding Scheme Designator	0008,0102	SH	DCM	ALWAYS	FIXED	DCM
>>Code Meaning	0008,0104	LO	Processing Equipment	ALWAYS	FIXED	Processing Equipment

Table 81: Extended DICOM and private attributes for RT Structure Set Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Series Date	0008,0021	DA		ANAPCV	AUTO	-
Series Time	0008,0031	TM		ANAPCV	AUTO	-
Modalities in Study	0008,0061	CS		ANAPEV	AUTO	-
Patient Orientation	0020,0020	CS		ANAPEV	AUTO	-
Secondary Capture Device ID	0018,1010	LO		ANAP	AUTO	-
Secondary Capture Device Manufacturer	0018,1016	LO	Philips Medical Systems	ALWAYS	FIXED	-
Secondary Capture Device Manufacturer's Model name	0018,1018	LO	Philips Portal	ANAP	FIXED	Philips Portal
Secondary Capture Device Software Version(s)	0018,1019	LO	1.0	ANAP	FIXED	-

2.1.2.6. Spatial Registration Storage SOP Class

Table 82: IOD of Created Spatial Registration Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	General Study Module	ALWAYS
Series	General Series Module	ALWAYS
Series	Spatial Registration Series Module	ALWAYS
Frame of Reference	Frame of Reference Module	ALWAYS
Spatial Registration	Spatial Registration Module	ALWAYS
Image	SOP Common Module	ALWAYS

Table 83: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Ethnic Group	0010,2160	SH		ANAP	AUTO	-
Patient Comments	0010,4000	LT		ANAP	AUTO	-
Patient ID	0010,0020	LO		ANAP	AUTO	-
Patient's Birth Date	0010,0030	DA		ANAP	AUTO	-
Patient's Name	0010,0010	PN		ANAP	AUTO	-
Patient's Sex	0010,0040	CS		ANAP	AUTO	-

Table 84: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Accession Number	0008,0050	SH		ANAP	COPY	-

Name of Physician(s) Reading Study	0008,1060	PN		ANAP	COPY	-
Referring Physician's Name	0008,0090	PN		ANAP	COPY	-
Study Date	0008,0020	DA		ANAP	COPY	-
Study Description	0008,1030	LO		ANAP	COPY	-
Study ID	0020,0010	SH		ANAP	COPY	-
Study Instance UID	0020,000D	UI		ANAP	COPY	-
Study Time	0008,0030	TM		ANAP	COPY	-
Referenced Study Sequence	0008,1110	SQ		ANAP	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ANAP	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ANAP	COPY	-

Table 85: General Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Series Date	0008,0021	DA		ALWAYS	AUTO	-
Series Description	0008,103E	LO		ALWAYS	AUTO	-
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		ALWAYS	AUTO	-
Series Time	0008,0031	TM		ALWAYS	AUTO	-
Referenced Performed Procedure Step Sequence	0008,1111	SQ		ANAP	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ANAP	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ANAP	COPY	-
Request Attributes Sequence	0040,0275	SQ		ANAP	COPY	-
>Requested Procedure ID	0040,1001	SH		ANAP	COPY	-
>Scheduled Procedure Step Description	0040,0007	LO		ANAP	COPY	-
>Scheduled Procedure Step ID	0040,0009	SH		ANAP	COPY	-
>Scheduled Protocol Code Sequence	0040,0008	SQ		ANAP	COPY	-
>>Code Meaning	0008,0104	LO		ANAP	COPY	-
>>Code Value	0008,0100	SH		ANAP	COPY	-
>>Coding Scheme Designator	0008,0102	SH		ANAP	COPY	-
Performed Procedure Step ID	0040,0253	SH		ANAP	COPY	-

Table 86: Spatial Registration Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Modality	0008,0060	CS		ALWAYS	AUTO	-

Table 87: Frame of Reference Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Frame of Reference UID	0020,0052	UI		ALWAYS	AUTO	-
Position Reference Indicator	0020,1040	LO		VNAP	AUTO	-

Table 88: Spatial Registration Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Content Date	0008,0023	DA		ALWAYS	AUTO	-
Content Time	0008,0033	TM		ALWAYS	AUTO	-
Registration Sequence	0070,0308	SQ		ALWAYS	AUTO	-

>Frame of Reference UID	0020,0052	UI		ANAP	AUTO	-
>Matrix Registration Sequence	0070,0309	SQ		ALWAYS	AUTO	-
>>Matrix Sequence	0070,030A	SQ		ALWAYS	AUTO	-
>>>Frame of Reference Transformation Matrix	3006,00C6	DS		ALWAYS	AUTO	-
>>>Frame of Reference Transformation Matrix Type	0070,030C	CS		ALWAYS	AUTO	-
>>Registration Type Code Sequence	0070,030D	SQ		ALWAYS	AUTO	-
>>>Code Value	0008,0100	SH		ALWAYS	AUTO	-
Content Creator's Name	0070,0084	PN		VNAP	AUTO	-
Content Description	0070,0081	LO		VNAP	AUTO	-
Content Label	0070,0080	CS		ALWAYS	AUTO	-
Instance Number	0020,0013	IS		ALWAYS	AUTO	-

Table 89: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Instance Number	0020,0013	IS		ALWAYS	AUTO	-
SOP Class UID	0008,0016	UI		ALWAYS	AUTO	-
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-

2.1.2.7. Secondary Capture Image Storage SOP Class

Table 90: IOD of Created Secondary Capture Image Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	General Study Module	ALWAYS
Study	Patient Study Module	CONDITIONAL
Series	General Series Module	ALWAYS
Equipment	General Equipment Module	ALWAYS
Equipment	SC Equipment Module	ALWAYS
Image	General Image Module	ALWAYS
Image	Image Pixel Module	ALWAYS
Image	SC Image Module	ALWAYS
Image	VOI LUT Module	CONDITIONAL
Image	SOP Common Module	ALWAYS
	Extended Dicom and Private attributes	CONDITIONAL

Table 91: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	COPY	-
Patient's Birth Date	0010,0030	DA		VNAP	COPY	-
Patient's Birth Time	0010,0032	TM		ANAP	COPY	-
Patient's Sex	0010,0040	CS		VNAP	COPY	-
Other Patient Ids	0010,1000	LO		ANAP	COPY	-
Ethnic Group	0010,2160	SH		ANAP	COPY	-
Patient Comments	0010,4000	LT		ANAP	COPY	-

Table 92: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Instance UID	0020,000D	UI		ALWAYS	COPY	-
Study Date	0008,0020	DA		ALWAYS	COPY	-
Study Time	0008,0030	TM		ALWAYS	COPY	-
Referring Physician's Name	0008,0090	PN		VNAP	COPY	-
Study ID	0020,0010	SH		VNAP	COPY	-
Accession Number	0008,0050	SH		VNAP	COPY	-
Study Description	0008,1030	LO		ANAP	COPY	-
Name of Physician(s) Reading Study	0008,1060	PN		ANAP	COPY	-
Referenced Study Sequence	0008,1110	SQ		ANAP	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-
Procedure Code Sequence	0008,1032	SQ		ANAP	COPY	-
>Code Value	0008,0100	SH		ALWAYS	COPY	-
>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>Code Meaning	0008,0104	LO		ALWAYS	COPY	-

Table 93: Patient Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Size	0010,1020	DS		ANAPCV	COPY, USER	-
Patient's Weight	0010,1030	DS		ANAPCV	COPY, USER	-

Table 94: General Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Modality	0008,0060	CS		ALWAYS	COPY	-
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		VNAP	AUTO	-
Series Date	0008,0021	DA		ALWAYS	AUTO	-
Series Time	0008,0031	TM		ALWAYS	AUTO	-
Series Description	0008,103E	LO		ANAP	USER	-
Referenced Performed Procedure Step Sequence	0008,1111	SQ		ANAP	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ANAP	FIXED	-
>Referenced SOP Instance UID	0008,1155	UI		ANAP	COPY	-
Patient Position	0018,5100	CS		ANAPCV	COPY	-
Request Attributes Sequence	0040,0275	SQ		ALWAYS	COPY	-
>Requested Procedure ID	0040,1001	SH		ANAP	COPY	-
>Scheduled Procedure Step ID	0040,0009	SH		ANAP	COPY	-
>Scheduled Procedure Step Description	0040,0007	LO		ANAP	COPY	-
>Scheduled Protocol Code Sequence	0040,0008	SQ		ANAP	COPY	-
>>Code Value	0008,0100	SH		ALWAYS	COPY	-
>>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>>Code Meaning	0008,0104	LO		ALWAYS	COPY	-

Performed Procedure Step ID	0040,0253	SH		ANAP	COPY	-
Performed Procedure Step Start Date	0040,0244	DA		ANAP	COPY	-
Performed Procedure Step Start Time	0040,0245	TM		ANAP	COPY	-
Performed Procedure Step Description	0040,0254	LO		ANAP	COPY	-
Performed Protocol Code Sequence	0040,0260	SQ		ANAP	COPY	-
>Code Value	0008,0100	SH		ALWAYS	COPY	-
>Coding Scheme Designator	0008,0102	SH		ALWAYS	COPY	-
>Code Meaning	0008,0104	LO		ALWAYS	COPY	-

Table 95: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips Medical Systems	VNAP	COPY	Philips Medical Systems
Institution Name	0008,0080	LO		VNAP	COPY	-
Institution Address	0008,0081	ST		VNAP	COPY	-
Station Name	0008,1010	SH		ANAP	COPY	-
Institutional Department Name	0008,1040	LO		ANAP	COPY	-
Manufacturer's Model Name	0008,1090	LO	Philips Portal	ANAP	FIXED	Philips Portal
Device Serial Number	0018,1000	LO		ANAP	COPY	-
Software Version(s)	0018,1020	LO	6.0	ANAP	FIXED	6.0

Table 96: SC Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Conversion Type	0008,0064	CS	WSD	ALWAYS	FIXED	-
Secondary Capture Device ID	0018,1010	LO		ANAP	AUTO	-
Secondary Capture Device Manufacturer	0018,1016	LO	Philips Medical Systems	ALWAYS	FIXED	-
Secondary Capture Device Manufacturer's Model name	0018,1018	LO	Philips Portal	ANAP	FIXED	-
Secondary Capture Device Software Version(s)	0018,1019	LO	1.0	ANAP	FIXED	-

Table 97: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Instance Number	0020,0013	IS		VNAP	AUTO	-
Image Type	0008,0008	CS	DERIVED SECONDARY/ DERIVED SECONDARY PHILIPS_BOOKMARK	ALWAYS	FIXED	-
Content Date	0008,0023	DA		ANAPCV	COPY	-
Content Time	0008,0033	TM		ANAPCV	COPY	-
Patient Orientation	0020,0020	CS		EMPTY	FIXED	-
Image comments	0020,4000	LT		VNAP	USER	-
Burned In Annotation	0028,0301	CS		ANAPCV	COPY	-
Lossy Image Compression	0028,2110	CS		ANAPCV	COPY	-
Presentation LUT shape	2050,0020	CS	IDENTITY	ANAP	FIXED	Present only for MONOCHROME 2 Images

Table 98: Image Pixel Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Samples per Pixel	0028,0002	US	1/3	ALWAYS	FIXED	"1" for MONOCHROME 2 images and value = "3" for RGB images.
Photometric Interpretation	0028,0004	CS	MONOCHROME 2/ RGB	ALWAYS	USER	-
Rows	0028,0010	US		ALWAYS	USER	-
Columns	0028,0011	US		ALWAYS	USER	-
Bits Allocated	0028,0100	US	8	ALWAYS	FIXED	-
Bits Stored	0028,0101	US	8	ALWAYS	FIXED	-
High Bit	0028,0102	US	7	ALWAYS	FIXED	-
Pixel Representation	0028,0103	US	0	ALWAYS	FIXED	-
Pixel Data	7FE0,0010	OW		ALWAYS	AUTO	-
Planar Configuration	0028,0006	US	0	ANAP	FIXED	Only for RGB images.
Pixel Aspect Ratio	0028,0034	IS		ALWAYS	AUTO	-
Smallest Image Pixel Value	0028,0106	US		ALWAYS	AUTO	-
Largest Image Pixel Value	0028,0107	US		ALWAYS	AUTO	-

Table 99: SC Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Date of Secondary Capture	0018,1012	DA		ALWAYS	AUTO	-
Time of Secondary Capture	0018,1014	TM		ALWAYS	AUTO	-

Table 100: VOI LUT Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Window Center	0028,1050	DS		ANAP	AUTO	Only for MONOCHROME 2 images
Window Width	0028,1051	DS		ANAP	AUTO	Only for MONOCHROME 2 images

Table 101: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.7	ALWAYS	FIXED	-
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-
Specific Character Set	0008,0005	CS	ISO_IR 100	ALWAYS	FIXED	-
Instance Creation Date	0008,0012	DA		ALWAYS	AUTO	-
Instance Creation Time	0008,0013	TM		ALWAYS	AUTO	-

Table 102: Extended DICOM and private attributes for Secondary Capture Image Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Medical Alerts	0010,2000	LO		ANAP	COPY	-
Private Creator	1001,0010	LO	Philips Imaging DD 124	ALWAYS	AUTO, COPY	-
Contrast Allergies	0010,2110	LO		ANAP	COPY	-
Pregnancy Status	0010,21C0	US		ANAP	COPY	-
Special Needs	0038,0050	LO		ANAP	COPY	-
Patient State	0038,0500	LO		ANAP	COPY	-
IMPLEMENTOR_ID	0041,0010	LO		ANAP	COPY	-

REPORT_TYPE	0041,1010	CS		ANAP	COPY	-
Unknown Private Creator	00e1,0010	LO		ANAP	COPY	-
Unknown	00e1,1080	OB		ANAP	COPY	-
Private Creator (ELSCINT1)	00e1,0011	LO		ANAP	COPY	-
Unknown	00e1,111D	IS		ANAP	COPY	-
Unknown	00e1,1140	SH		ANAP	COPY	-
Unknown	00e1,110e	LT		ANAP	COPY	-
Unknown	00e1,110f	LO		ANAP	COPY	-
Private Creator (ELSCINT1)	07A1,0010	LO		ANAP	COPY	-
Unknown	07A1,100A	OB		ANAP	COPY	-
Unknown	07A1,1010	LO		ANAP	COPY	-
Unknown	07A1,1011	LO		ANAP	COPY	-
Private Creator (Philips Imaging DD 001)	2001,0010	LO		ANAP	COPY	-
Unknown (ELSEWHERE)	2001, 1063	CS		ANAP	COPY	-
Private Creator (PHILIPS NM-Private)	7051,0010	LO		ANAP	COPY	-
NM Bookmark version	7051,1034	LT		ANAP	COPY	Version of the bookmark created

2.1.2.8. Multi-Frame Grayscale Byte Secondary Capture Image Storage SOP Class

Table 103: IOD of Created Multi-Frame Grayscale Byte Secondary Capture Image Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	Patient Study Module	CONDITIONAL
Study	General Study Module	ALWAYS
Series	General Series Module	ALWAYS
Equipment	General Equipment Module	CONDITIONAL
Equipment	SC Equipment Module	ALWAYS
Image	General Image Module	ALWAYS
Image	SC Image Module	CONDITIONAL
Image	Multi-Frame Module	ALWAYS
Image	SC Multi-Frame Module	ALWAYS
Image	Cine Module	CONDITIONAL
Image	Image Pixel Module	ALWAYS
Image	SOP Common Module	ALWAYS
	Extended Dicom and Private attributes	CONDITIONAL

Table 104: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	COPY	-
Patient's Birth Date	0010,0030	DA		VNAP	COPY	-
Patient's Birth Time	0010,0032	TM		VNAP	COPY	-
Patient's Sex	0010,0040	CS		VNAP	COPY	-
Other Patient Ids	0010,1000	LO		ANAP	COPY	-
Ethnic Group	0010,2160	SH		ANAP	COPY	-
Patient Comments	0010,4000	LT		ANAP	COPY	-

Table 105: Patient Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patients Size	0010,0020	LO		VNAP	COPY	-
Patients Weight	0010,0030	DA		VNAP	COPY	-

Table 106: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Instance UID	0020,000D	UI		ALWAYS	COPY	-
Study Date	0008,0020	DA		ALWAYS	COPY	-
Study Time	0008,0030	TM		ALWAYS	COPY	-
Referring Physician's Name	0008,0090	PN		VNAP	COPY	-
Study ID	0020,0010	SH		VNAP	COPY	-
Accession Number	0008,0050	SH		VNAP	COPY	-
Study Description	0008,1030	LO		ANAP	COPY	-
Name of Physician(s) Reading Study	0008,1060	PN		ANAP	COPY	-
Referenced Study Sequence	0008,1110	SQ		ANAP	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-
Procedure Code Sequence	0008,1032	SQ		ANAP	COPY	-
>Code Value	0008,0100	SH		ANAP	COPY	-
>Coding Scheme Designator	0008,0102	SH		ANAP	COPY	-
>Code Meaning	0008,0104	LO		ANAP	COPY	-

Table 107: General Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Modality	0008,0060	CS		ALWAYS	COPY	-
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		VNAP	AUTO	-
Series Date	0008,0021	DA		ALWAYS	AUTO	-
Series Time	0008,0031	TM		ALWAYS	AUTO	-
Series Description	0008,103E	LO		ANAP	USER	-
Referenced Performed Procedure Step Sequence	0008,1111	SQ		ANAP	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ALWAYS	FIXED	-
>Referenced SOP Instance UID	0008,1155	UI		ALWAYS	COPY	-
Patient Position	0018,5100	CS		ANAPCV	COPY	-
Request Attributes Sequence	0040,0275	SQ		ALWAYS	COPY	-
>Requested Procedure ID	0040,1001	SH		ANAP	COPY	-
>Scheduled Procedure Step ID	0040,0009	SH		ANAP	COPY	-
>Scheduled Procedure Step Description	0040,0007	LO		ANAP	COPY	-
>Scheduled Protocol Code Sequence	0040,0008	SQ		ANAP	COPY	-
>>Code Value	0008,0100	SH		ANAP	COPY	-
>>Coding Scheme Designator	0008,0102	SH		ANAP	COPY	-
>>Code Meaning	0008,0104	LO		ANAP	COPY	-
Performed Procedure Step ID	0040,0253	SH		ANAP	COPY	-

Performed Procedure Step Start Date	0040,0244	DA		ANAP	COPY	-
Performed Procedure Step Start Time	0040,0245	TM		ANAP	COPY	-
Performed Procedure Step Description	0040,0254	LO		ANAP	COPY	-
Performed Protocol Code Sequence	0040,0260	SQ		ANAP	COPY	-
>Code Value	0008,0100	SH		ANAP	COPY	-
>Coding Scheme Designator	0008,0102	SH		ANAP	COPY	-
>Code Meaning	0008,0104	LO		ANAP	COPY	-

Table 108: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips Medical Systems	VNAP	COPY	Philips Medical Systems
Institution Name	0008,0080	LO		ANAPCV	COPY	-
Institution Address	0008,0081	ST		ANAPCV	COPY	-
Station Name	0008,1010	SH		ANAPCV	COPY	-
Institutional Department Name	0008,1040	LO		ANAPCV	COPY	-
Manufacturer's Model Name	0008,1090	LO	Philips Portal	ANAPCV	FIXED	Philips Portal
Device Serial Number	0018,1000	LO		ANAPCV	COPY	-
Software Version(s)	0018,1020	LO	6.0	ANAPCV	FIXED	6.0

Table 109: SC Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Conversion Type	0008,0064	CS	WSD	ALWAYS	FIXED	-
Secondary Capture Device ID	0018,1010	LO		ANAP	AUTO	-
Secondary Capture Device Manufacturer	0018,1016	LO	Philips Medical Systems	ALWAYS	FIXED	-
Secondary Capture Device Manufacturer's Model name	0018,1018	LO	Philips Portal	ANAP	FIXED	Philips Portal
Secondary Capture Device Software Version(s)	0018,1019	LO	1.0	ANAP	FIXED	-

Table 110: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Instance Number	0020,0013	IS		VNAP	AUTO	-
Image Type	0008,0008	CS	DERIVED\SECONDARY	ALWAYS	FIXED	-
Patient Orientation	0020,0020			EMPTY	FIXED	-
Image comments	0020,4000			ANAPCV	COPY	-

Table 111: SC Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Date of Secondary Capture	0018,1012	DA		ANAPCV	AUTO	-
Time of Secondary Capture	0018,0014	TM		ANAPCV	AUTO	-

Table 112: Multi-Frame Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Number of Frames	0028,0008	IS		ALWAYS	IMPLICIT	-

Frame Increment Pointer	0028,0009	AT		ALWAYS	AUTO	-
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Table 113: SC Multi-Frame Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Burned In Annotation	0028,0301	CS		ALWAYS	AUTO	-
Presentation LUT shape	2050,0020	CS	IDENTITY	ANAP	FIXED	Present only for MONOCHROME 2 Images

Table 114: Cine Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Preferred Playback Sequencing	0018,1244	US	0	ALWAYS	FIXED	-
Frame Time	0018,1063	DS		ALWAYS	AUTO	-
Cine Rate	0018,0040	IS		ALWAYS	AUTO	-

Table 115: Image Pixel Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Samples per Pixel	0028,0002	US	1	ALWAYS	FIXED	-
Photometric Interpretation	0028,0004	CS	MONOCHROME 2	ALWAYS	USER	-
Rows	0028,0010	US		ALWAYS	USER	-
Columns	0028,0011	US		ALWAYS	USER	-
Bits Allocated	0028,0100	US	8	ALWAYS	FIXED	-
Bits Stored	0028,0101	US	8	ALWAYS	FIXED	-
High Bit	0028,0102	US	7	ALWAYS	FIXED	-
Pixel Representation	0028,0103	US	0	ALWAYS	FIXED	-
Pixel Data	7FE0,0010	OW		ALWAYS	AUTO	-
Pixel Aspect Ratio	0028,0034	IS		ALWAYS	AUTO	-
Smallest Image Pixel Value	0028,0106	US		ALWAYS	AUTO	-
Largest Image Pixel Value	0028,0107	US		ALWAYS	AUTO	-

Table 116: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.7.2	ALWAYS	FIXED	1.2.840.10008.5.1.4.1.1.7.2
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	-
Specific Character Set	0008,0005	CS	ISO_IR 100	ALWAYS	FIXED	ISO_IR 100
Instance Creation Date	0008,0012	DA		ANAPCV	AUTO	-
Instance Creation Time	0008,0013	TM		ANAPCV	AUTO	-

Table 117: Extended DICOM and private attributes for Secondary Capture Image Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Medical Alerts	0010,2000	LO		ANAP	COPY	-
Contrast Allergies	0010,2110	LO		ANAP	COPY	-
Pregnancy Status	0010,21C0	US		ANAP	COPY	-
Special Needs	0038,0050	LO		ANAP	COPY	-
Patient State	0038,0500	LO		ANAP	COPY	-
Window Center	0028,1050	DS		ANAP	AUTO	Only for MONOCHROME 2 images
Window Width	0028,1051	DS		ANAP	AUTO	Only for MONOCHROME 2 images

Private Creator	1001,0010	LO		ANAPCV	AUTO	-
Private Creator	1001,0011	LO		ANAPCV	AUTO	-
Unknown Tag & Data	1001,1018	CS		ANAPCV	AUTO	-
Unknown Tag & Data	1001,1103	LO		ANAPCV	AUTO	-
Private Creator	2001,0010	LO		ANAPCV	AUTO	-
Examination Source	2001,1063	CS		ANAPCV	AUTO	-
Unknown Tag & Data	2001,10F3	CS		ANAPCV	AUTO	-
Private Creator	2005,0010	LO		ANAPCV	AUTO	-
Unknown Tag & Data	2005,103A	LT		ANAPCV	AUTO	-

2.1.2.9. Multi-Frame True Color Secondary Capture Image Storage SOP Class

Table 118: IOD of Created Multi-Frame True Color Secondary Capture Image Storage SOP Class Instances

Information Entity	Module	Presence Of Module
Patient	Patient Module	ALWAYS
Study	General Study Module	ALWAYS
Series	General Series Module	ALWAYS
Equipment	General Equipment Module	CONDITIONAL
Equipment	SC Equipment Module	ALWAYS
Image	General Image Module	ALWAYS
Image	SC Multi-Frame Module	ALWAYS
Image	Cine Module	CONDITIONAL
Image	Multi-Frame Module	ALWAYS
Image	Image Pixel Module	ALWAYS
Image	SOP Common Module	ALWAYS
	Extended Dicom and Private attributes	CONDITIONAL

Table 119: Patient Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Patient's Name	0010,0010	PN		VNAP	COPY	-
Patient ID	0010,0020	LO		VNAP	COPY	-
Patient's Birth Date	0010,0030	DA		VNAP	COPY	-
Patient's Birth Time	0010,0032	TM		ANAP	COPY	-
Patient's Sex	0010,0040	CS		VNAP	COPY	-
Other Patient Ids	0010,1000	LO		ANAP	COPY	-
Ethnic Group	0010,2160	SH		ANAP	COPY	-
Patient Comments	0010,4000	LT		ANAP	COPY	-

Table 120: General Study Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Study Instance UID	0020,000D	UI		ALWAYS	COPY	-
Study Date	0008,0020	DA		ALWAYS	COPY	-
Study Time	0008,0030	TM		ALWAYS	COPY	-
Referring Physician's Name	0008,0090	PN		VNAP	COPY	-
Study ID	0020,0010	SH		VNAP	COPY	-
Accession Number	0008,0050	SH		VNAP	COPY	-
Study Description	0008,1030	LO		ANAP	COPY	-
Name of Physician(s) Reading Study	0008,1060	PN		ANAP	COPY	-
Referenced Study Sequence	0008,1110	SQ		ANAP	COPY	-

>Referenced SOP Class UID	0008,1150	UI		ANAP	COPY	-
>Referenced SOP Instance UID	0008,1155	UI		ANAP	COPY	-
Procedure Code Sequence	0008,1032	SQ		ANAP	COPY	-
>Code Value	0008,0100	SH		ANAP	COPY	-
>Coding Scheme Designator	0008,0102	SH		ANAP	COPY	-
>Code Meaning	0008,0104	LO		ANAP	COPY	-

Table 121: General Series Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Modality	0008,0060	CS		ALWAYS	COPY	-
Series Instance UID	0020,000E	UI		ALWAYS	AUTO	-
Series Number	0020,0011	IS		VNAP	AUTO	-
Series Date	0008,0021	DA		ALWAYS	AUTO	-
Series Time	0008,0031	TM		ALWAYS	AUTO	-
Series Description	0008,103E	LO		ANAP	USER	-
Referenced Performed Procedure Step Sequence	0008,1111	SQ		ANAP	COPY	-
>Referenced SOP Class UID	0008,1150	UI		ANAP	FIXED	-
>Referenced SOP Instance UID	0008,1155	UI		ANAP	COPY	-
Patient Position	0018,5100	CS		ANAPCV	COPY	-
Request Attributes Sequence	0040,0275	SQ		ALWAYS	COPY	-
>Requested Procedure ID	0040,1001	SH		ANAP	COPY	-
>Scheduled Procedure Step ID	0040,0009	SH		ANAP	COPY	-
>Scheduled Procedure Step Description	0040,0007	LO		ANAP	COPY	-
>Scheduled Protocol Code Sequence	0040,0008	SQ		ANAP	COPY	-
>>Code Value	0008,0100	SH		ANAP	COPY	-
>>Coding Scheme Designator	0008,0102	SH		ANAP	COPY	-
>>Code Meaning	0008,0104	LO		ANAP	COPY	-
Performed Procedure Step ID	0040,0253	SH		ANAP	COPY	-
Performed Procedure Step Start Date	0040,0244	DA		ANAP	COPY	-
Performed Procedure Step Start Time	0040,0245	TM		ANAP	COPY	-
Performed Procedure Step Description	0040,0254	LO		ANAP	COPY	-
Performed Protocol Code Sequence	0040,0260	SQ		ANAP	COPY	-
>Code Value	0008,0100	SH		ANAP	COPY	-
>Coding Scheme Designator	0008,0102	SH		ANAP	COPY	-
>Code Meaning	0008,0104	LO		ANAP	COPY	-

Table 122: General Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Manufacturer	0008,0070	LO	Philips Medical Systems	VNAP	COPY	Philips Medical Systems
Station Name	0008,1010	SH		ANAP	COPY	-
Institutional Department Name	0008,1040	LO		ANAP	COPY	-
Manufacturer's Model Name	0008,1090	LO	Philips Portal	ANAP	FIXED	Philips Portal
Device Serial Number	0018,1000	LO		ANAP	COPY	-
Software Version(s)	0018,1020	LO	6.0	ANAP	FIXED	6.0

Table 123: SC Equipment Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Conversion Type	0008,0064	CS	WSD	ALWAYS	FIXED	-
Secondary Capture Device ID	0018,1010	LO		ANAP	AUTO	-
Secondary Capture Device Manufacturer	0018,1016	LO	Philips Medical Systems	ALWAYS	FIXED	-
Secondary Capture Device Manufacturer's Model name	0018,1018	LO	Philips Portal	ANAP	FIXED	Philips Portal
Secondary Capture Device Software Version(s)	0018,1019	LO	1.0	ANAP	FIXED	-

Table 124: General Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Instance Number	0020,0013	IS		VNAP	AUTO	-
Image Type	0008,0008	CS	DERIVED SECONDARY	ALWAYS	FIXED	-
Patient Orientation	0020,0020			EMPTY	FIXED	-
Image comments	0020,4000					-

Table 125: SC Multi-Frame Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Burned In Annotation	0028,0301	CS		ALWAYS	AUTO	-
Presentation LUT shape	2050,0020	CS	IDENTITY	ANAP	FIXED	Present only for MONOCHROME 2 Images

Table 126: Cine Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Preferred Playback Sequencing	0018,1244	US	0	ALWAYS	FIXED	-
Frame Time	0018,1063	DS		ALWAYS	AUTO	-
Cine Rate	0018,0040	IS		ALWAYS	AUTO	-

Table 127: Multi-Frame Image Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Number of Frames	0028,0008	IS		ALWAYS	IMPLICIT	-
Frame Increment Pointer	0028,0009	AT		ALWAYS	AUTO	-

Table 128: Image Pixel Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Samples per Pixel	0028,0002	US	1/3	ALWAYS	FIXED	"1" for MONOCHROME 2 images and value = "3" for RGB images
Photometric Interpretation	0028,0004	CS	MONOCHROME 2/ RGB	ALWAYS	USER	-
Rows	0028,0010	US		ALWAYS	USER	-
Columns	0028,0011	US		ALWAYS	USER	-
Bits Allocated	0028,0100	US	8	ALWAYS	FIXED	-
Bits Stored	0028,0101	US	8	ALWAYS	FIXED	-
High Bit	0028,0102	US	7	ALWAYS	FIXED	-
Pixel Representation	0028,0103	US	0	ALWAYS	FIXED	-
Pixel Data	7FE0,0010	OW		ALWAYS	AUTO	-

Planar Configuration	0028,0006	US	0	ANAP	FIXED	Only for RGB images
Pixel Aspect Ratio	0028,0034	IS		ALWAYS	AUTO	-
Smallest Image Pixel Value	0028,0106	US		ALWAYS	AUTO	-
Largest Image Pixel Value	0028,0107	US		ALWAYS	AUTO	-

Table 129: SOP Common Module

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
SOP Class UID	0008,0016	UI	1.2.840.10008.5.1.4.1.1.7.4	ALWAYS	FIXED	
SOP Instance UID	0008,0018	UI		ALWAYS	AUTO	
Specific Character Set	0008,0005	CS	ISO_IR 100	ALWAYS	FIXED	
Instance Creation Date	0008,0012	DA		ALWAYS	AUTO	
Instance Creation Time	0008,0013	TM		ALWAYS	AUTO	

Table 130: Extended DICOM and private attributes for Secondary Capture Image Storage SOP Class Instances

Attribute Name	Tag	VR	Value	Presence of Value	Source	Comment
Medical Alerts	0010,2000	LO		ANAP	COPY	-
Contrast Allergies	0010,2110	LO		ANAP	COPY	-
Pregnancy Status	0010,21C0	US		ANAP	COPY	-
Special Needs	0038,0050	LO		ANAP	COPY	-
Patient State	0038,0500	LO		ANAP	COPY	-
Window Center	0028,1050	DS		ANAP	AUTO	Only for MONOCHROME 2 images
Window Width	0028,1051	DS		ANAP	AUTO	Only for MONOCHROME 2 images