

**CT Applications
(Appendix to syngo® MULTIMODALITY
WORKPLACE 2007C VE25A)**



CT

DICOM Conformance Statement

1 Extensions/Specializations/Privatizations

1.1 Standard Extensions

1.1.1 Standard Extensions of all SOP Classes

1.1.1.1 ...

1.1.1.2 RGB color images

The Somaris/5 DICOM application extends the CT Image IOD by the use of RGB color image description with the unsigned integer 24 bit color image plane pixel format:

- samples per pixel (attribute 0028, 0002) = 3
- photometric interpretation (attribute 0028,0004) = “RGB”
- pixel representation (attribute 0028, 0103) = 0
- bits allocated (attribute 0028, 0100) = 8
- bits stored (attribute 0028,0101) = 8
- high bit (attribute 0028,0102) = 7
- planar configuration (attribute 0028,0006) = 0.

This format is used for Functional Imaging, i.e. images that meaningfully use all common CT Image attributes - however the pixel values do not represent a scaled Hounsfield value but a different value (depending on the type of image). Thus window related attributes must not be used to interpret the pixel values as scaled HU. The values used by Somaris/5 are:

- window center (attribute 0028, 1050) = 128
- window width (attribute 0028,1051) = 256
- rescale intercept (attribute 0028, 1050) = 0
- rescale slope (attribute 0028,1051) = 1

The following types of images may use this format:

Table 1: Somaris/5 Image Type (0008,0008) for objects created by Somaris/5

Image Type Description	IOD	0008,0008 Value 1	0008,0008 Value 2	0008,0008 Value 3	0008,0008 Value 4	0008,0008 Value 5	Somaris/5 Image Text
Averaged Image	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 AVE	none	AVE
Parameter Image (Patlak Blood Volume)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PKBV	PAR

Table 1: Somaris/5 Image Type (0008,0008) for objects **created** by Somaris/5

Parameter Image (Peak enhancement)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PKET	PAR
Parameter Image (Perfusion Blood Flow)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PBF	PAR
Parameter Image (Perfusion Blood Volume)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PBV	PAR
Parameter Image (Permeability)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PMB	PAR
Parameter Image (Time to Peak)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	TTP	PAR
Parameter Image (Time to Start)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	TTS	PAR
Parameter Image (Patlak Residual)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PKER	PAR
Parameter Image (Patlak RSquare)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PKR2	PAR
Parameter Image (Arterial Liver Perfusion)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	ALP	PAR
Parameter Image (Portal Venous Liver Perfusion)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PVP	PAR
Parameter Image (Hepatic Perfusion Index)	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	HPI	PAR
LungCARE send-to-Filming images	CT	DERIVED	SECONDARY	OTHER	CSA MIP THIN	LC VALID WINDO W	MIP
LungCARE send-to-Filming images	CT	DERIVED	SECONDARY	OTHER	CSA MPR THICK	LC VALID WINDO W	MPR
LungCARE send-to-Filming images	CT	DERIVED	SECONDARY	OTHER	CSA VRT THIN	LC VALID WINDO W	VRT
LungCARE send-to-Filming images	CT	DERIVED	SECONDARY	OTHER	CSA PRVT	LC VALID WINDO W	PVRT

Table 1: Somaris/5 Image Type (0008,0008) for objects **created** by Somaris/5

LungCARE send-to-Filming images	CT	DERIVED	SECONDARY	OTHER	CSA MPR	LC VALID WINDO W	MPR
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1.1.2 Specializations

1.1.2.1 Images created by Somaris/5

The following table lists the Somaris/5 image types and the corresponding combinations of the Image Type Attribute values.

Table 2: Somaris/5 Image Type (0008,0008) for objects **created** by Somaris/5

Image Type Description [known creating applications]	IOD	0008,0008 Value 1	0008,0008 Value 2	0008,0008 Value 3	0008,0008 Value 4	0008,0008 Value 5	Somaris/5 Image Text or Lists
Averaged Image [Average, DynEva, Perfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 AVE	none	AVE
Parameter Image (Arterial Liver Perfusion) [BodyPerfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	ALP	PAR
Parameter Image (Hepatic Perfusion Index) [BodyPerfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	HPI	PAR
Parameter Image (Portal Venous Liver Perfusion) [BodyPerfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PVP	PAR
Protocol Image, Time Density Curve Image [BodyPerfusion] ^a	SC	DERIVED	SECONDARY	OTHER	none	none	AC
Parameter Image (Patlak Blood Volume) [Perfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PKBV	PAR
Parameter Image (Patlak Residual) [Perfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PKER	PAR

Table 2: Somaris/5 Image Type (0008,0008) for objects **created** by Somaris/5

Parameter Image (Patlak RSquare) [Perfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PKR2	PAR
Parameter Image (Peak enhancement) [DynEva, Perfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PKET	PAR
Parameter Image (Perfusion Blood Flow) [Perfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PBF	PAR
Parameter Image (Perfusion Blood Volume) [Perfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PBV	PAR
Parameter Image (Permeability) [Perfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	PMB	PAR
Parameter Image (Time to Peak) [DynEva, Perfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	TTP	PAR
Parameter Image (Time to Start) [Perfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PAR	TTS	PAR
Report Image (not finished)	SC	DERIVED	SECONDARY	OTHER	CT_SOM5 REP	IN_WORK	REP
Report Image (finished)	SC	DERIVED	SECONDARY	OTHER	CT_SOM5 REP	FINISHED	REP
Subtracted Image	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 SUB	none	SUB
Osteo Evaluated Tomogram	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 OEVA	none	OEVA
Pulmo Evaluated Tomogram	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 PEVI	none	PEVI
Calcium Scoring Table [Calcium Scoring]	SC	DERIVED	SECONDARY	OTHER	CT_SOM5 TAB	none	TAB
Dental Filming Image	CT	DERIVED	SECONDARY	OTHER	CT_SOM5 DFLM	none	DFLM
Dental Panorama Rebuild Tomogram	CT	DERIVED	SECONDARY	OTHER	CT_SOM5 DPAN	none	DPAN

Table 2: Somaris/5 Image Type (0008,0008) for objects **created** by Somaris/5

Dental Paraxial Rebuild Tomogram	CT	DERIVED	SECONDARY	OTHER	CT_SOM5 DPAR	none	DPAR
Dental/Volume Maximum Intensity Projection Image [Dental, Volume, DynEva, Perfusion]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 MIP	none	MIP
Dental Panorama Reference Image [Dental, Volume]	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 MPR	none	MPR
Dental Paraxial Reference Image	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 MPR	none	MPR
Dental Reference Image	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 MPR	none	MPR
Dynamic Evaluation Averaged Baseline	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 DYB	none	DYB
Dynamic Evaluation Fused Multi-slice	CT	DERIVED	SECONDARY	AXIAL	CT_SOM5 DYF	none	DYF
Volume reformatted images (sagittal and coronal)	CT	DERIVED	SECONDARY	OTHER	CT_SOM5 MPR	none	MPR
Various result images [CalciumScoring, Colon, VesselView]	CT	DERIVED	SECONDARY	AXIAL	CSA MPR	none	MPR
Various result images [VesselView]	CT	DERIVED	SECONDARY	AXIAL	CSA MPR THICK	none	MPR
Various result images [VesselView]	CT	DERIVED	SECONDARY	AXIAL	CSA MIP	none	MIP
Various result images [CalciumScoring, VesselView]	CT	DERIVED	SECONDARY	AXIAL	CSA MIP THIN	none	MIP
Various result images [Colon]	SC	DERIVED	SECONDARY	OTHER	CSA PSSD	none	PSSD
Various result images [VesselView]	CT	DERIVED	SECONDARY	AXIAL	CSA VRT	none	VRT

Table 2: Somaris/5 Image Type (0008,0008) for objects **created** by Somaris/5

Various result images [Colon]	SC	DERIVED	SECONDARY	OTHER	CSA VRT	none	VRT
Various result images [VesselView]	CT	DERIVED	SECONDARY	AXIAL	CSA RIBBON	none	RIBB
InSpace book-mark [InSpace]	SC	DERIVED	SECONDARY	OTHER	CSA BOOKMARK	RT3D CONFIG	BOOK
InSpace result images [InSpace]	SC	DERIVED	SECONDARY	OTHER	CSA 3DPROJECTION	none	3DPR
LungCARE save images [LungCARE]	SC	DERIVED	SECONDARY	OTHER	MIP	LC VALID WINDOW	MIP
LungCARE save images [LungCARE]	SC	DERIVED	SECONDARY	OTHER	MPR	LC VALID WINDOW	MPR
LungCARE save images [LungCARE]	SC	DERIVED	SECONDARY	OTHER	VRT	LC VALID WINDOW	VRT
LungCARE save images [LungCARE]	SC	DERIVED	SECONDARY	OTHER	PVRT	LC VALID WINDOW	PVRT
LungCARE save images [LungCARE]	CT	DERIVED	SECONDARY	OTHER	MPR	LC VALID WINDOW	MPR
LungCARE save images [LungCARE]	CT	DERIVED	SECONDARY	OTHER	CT_SOM5 SPI	LC VALID WINDOW	SPI
LungCARE report images [LungCARE]	SC	DERIVED	SECONDARY	OTHER	MIP	LC VALID WINDOW	none
LungCARE report images [LungCARE]	SC	DERIVED	SECONDARY	OTHER	MPR	LC VALID WINDOW	none
LungCARE report images [LungCARE]	SC	DERIVED	SECONDARY	OTHER	VRT	LC VALID WINDOW	none

Table 2: Somaris/5 Image Type (0008,0008) for objects **created** by Somaris/5

LungCARE report images [LungCARE]	SC	DERIVED	SECONDARY	OTHER	PVRT	LC VALID WINDOW	none
Various Graphics [DynEva, Osteo, Pulmo, Volume, Perfusion, Argus, VesselView]	SC	DERIVED	SECONDARY	OTHER	CSA BLACK IMAGE	none	none

a. More detailed attribute information will be provided in a future version.

Note

Some applications will create Structured Reports. However, when running in specific (service configured) settings outside of the system they will appear as a SC image, labelled as Type 3 "OTHER" and Type 4 "CSA REPORT". This private extension is not published in detail here because the intended use is real DICOM SR.

1.1.2.2 Structured Reports created by Somaris/5

The following table lists the Somaris/5 image types and the corresponding combinations of the Image Type Attribute values.

Table 3: Somaris/5 Image Type (0008,0008) for objects **created** by Somaris/5

Image Type Description [known creating applications]	IOD	0008,0008 Value 1	0008,0008 Value 2	0008,0008 Value 3	0008,0008 Value 4	0008,0008 Value 5	Somaris/5 Image Text or Lists
LungCARE SR reports [LungCARE]	SR	ORIGINAL	PRIMARY	OTHER	CSA REPORT	none	none

In addition to LungCARE, Calcium Scoring and Circulation create Structured Reports.

The following is valid for Calcium Scoring created Structured Reports:

CaScoring creates structured reports generally following the templates defined in DICOM supplement 97 "CT/MR Cardiovascular Analysis Report" (Version: 0.11; Working Draft). Some changes of these templates that could not be considered may occur until document is released as final version.

The following is valid for Circulation created Structured Reports:

Circulation creates structured reports generally following the templates defined in DICOM supplement 97 "CT/MR Cardiovascular Analysis Report" (Version: 0.11; Working Draft). Some changes of these templates that could not be considered may occur until document is released as final version.

1.2 Privatizations

1.2.1 Private Elements for Storage SOP Classes

The following private attributes are defined for all Siemens *syngo* based applications.

1.2.2 Private SOP class CSA Non-Image

1.2.2.1 CT Extensions of the Non-Image Object

Somaris/5 uses the following defined term for Image Type (0008,0008):

- Value 1: ORIGINAL
- Value 2: PRIMARY
- Value 3: AXIAL, LOCALIZER, OTHER
- Value4: Somaris/5 specific enumeration
- Value5: Somaris/5 specific enumeration

The following table lists the Somaris/5 non-image types and the corresponding combinations of the Image Type Attribute values

Table 4: (Non-)Image Type (0008,0008) for private Somaris/5 Non-image Objects

Description	0008,0008 Value 1	0008,0008 Value 2	0008,0008 Value 3	0008,0008 Value 4	0008,0008 Value 5
CAD Results	DERIVED	SECONDARY	OTHER	CAD MARKS	none
Colonogra- phy Data	DERIVED	SECONDARY	OTHER	CT_SOM5 COL	none
Coronary Tree	DERIVED	SECONDARY	OTHER	CT_CIRCULATION	none

A Appendix

This appendix contains several attribute lists for images generated by specific applications. The subsequent fact must be kept in mind:

- Some text constants provided may be translated when using a non-English User Interface
- Private attributes are used; however, they are not listed in the tables below. Please refer to the general descriptions in main part of Conformance Statement.
- Tables for applications "Colon", "Circulation" are not included here. They will be provided in a future software version.

A.1 CT Standard Extended SOP Class

The Somaris/5 application will create functional images from special applications. Some of these will be encoded as CT Standard extended SOP Class. Please see the following tables for a selected overview of supplied Standard attributes.

A.1.1 Body Perfusion

Somaris/5 Perfusion will create CT result images.

This list of images will be referred to as PerfusionImageSet:

MIP, AVE, Flow, Blood Volume, Time To Start, Time To Peak, Permeability, Patlak Blood Volume, Patlak Residual, Patlak RSquare, Arterial Liver Perfusion, Portal Venous Liver Perfusion, Hepatic Perfusion Index

The following table provides information about image attributes created:

Table 5: Body Perfusion

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	merged according to the syngo rules

Table 5: Body Perfusion

Attribute Name	Tag	Value
Image Type	(0008,0008)	<ul style="list-style-type: none"> • Value 1: <ul style="list-style-type: none"> • DERIVED • Value 2: <ul style="list-style-type: none"> • SECONDARY • Value 3: <ul style="list-style-type: none"> • AXIAL • Value 4: <ul style="list-style-type: none"> • MIP: CT_SOM5 MIP (Maximum Intensity Projection) • AVE: CT_SOM5 AVE (Average) • Flow, Blood Volume, Time To Start, Time To Peak, Permeability, Patlak Blood Volume, Patlak Residual, Patlak RSquare, Arterial Liver Perfusion, Portal Venous Liver Perfusion, Hepatic Perfusion Index: CT_SOM5 PAR (PAR: Parameter) • Value 5: <ul style="list-style-type: none"> • MIP, AVE: none • Flow: PBF (PBF: Perfusion Blood Flow) • Blood Volume: PBV (PBV: Perfusion Blood Volume) • Time To Start: TTS (TTS: Time To Start) • Time To Peak: TTP (TTP: Time To Peak) • Permeability: PMB (P: Permeability) • Patlak Blood Volume: PKBV (PKBV: Patlak Blood Volume) • Patlak Residual: PKER (PKER: Patlak Residual) • Patlak RSquare: PKR2 (PKR2: Patlak RSquare) • Arterial Liver Perfusion: ALP • Portal Venous Liver Perfusion: PVP • Hepatic Perfusion Index: HPI
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.2
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<date of series creation>
Acquisition Date	(0008,0022)	from the first image in time that is used to create the computed image
Content Date	(0008,0023)	Date when the particular image is created. Supports the same sorting order as Image Number.
Acquisition Datetime	(0008,002A)	-

Table 5: Body Perfusion

Attribute Name	Tag	Value
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<time of series creation>
Acquisition Time	(0008,0032)	from the first image in time that is used to create the computed image
Content Time	(0008,0033)	Time when the particular image is created. Supports the same sorting order as Image Number.
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	value from the first image used to generate the computed image
Manufacturer	(0008,0070)	from the corresponding system configuration item
Institution Name	(0008,0080)	Perstring as defined for the corresponding system configuration item
Institution Address	(0008,0081)	-
Referring Physician's Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	-
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	For the series containing the results <ul style="list-style-type: none"> as gray scale images: string as defined in the corresponding configuration item as color images string as defined for the corresponding configuration item and the slice position value
Institutional Department Name	(0008,1040)	-
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians' Name	(0008,1050)	-
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator's Name	(0008,1070)	-
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer's Model Name	(0008,1090)	from the corresponding system configuration item
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-

Table 5: Body Perfusion

Attribute Name	Tag	Value
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	“Som5 Perfusion Resampled”
Source Image Sequence	(0008,2112)	references to the images used to generate the computed image
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	-
Patient’s Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient’s Birth Date	(0010,0030)	<as Original>
Patient’s Birth Time	(0010,0032)	<as Original>
Patient’s Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient’s Age	(0010,1010)	<as Original>
Patient’s Size	(0010,1020)	<as Original>
Patient’s Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient’s History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Contrast/Bolus Agent	(0018,0010)	value from the first image used to generate the computed image
Contrast/Bolus Agent Sequence	(0018,0012)	-
> Code Sequence Macro		-
Contrast/Bolus Administration Route Sequence	(0018,0012)	-
> Code Sequence Macro		-
>Additional Drug Sequence	(0018,002A)	-
>> Code Sequence Macro		-

Table 5: Body Perfusion

Attribute Name	Tag	Value
Body Part Examined	(0018,0015)	-
Slice Thickness	(0018,0050)	PerfusionImageSet (A.1.7): effective slice thickness from the first original image
Scan Options	(0018,0022)	value from the first image used to generate the computed image
KVP	(0018,0060)	PerfusionImageSet (A.1.7): value from the first image used to generate the computed image
Data Collection Diameter	(0018,0090)	value from the first image used to generate the computed image
Device Serial Number	(0018,1000)	-
Software Version(s)	(0018,1020)	from the corresponding system configuration item
Protocol Name	(0018,1030)	-
Contrast/Bolus Route	(0018,1040)	-
Contrast/Bolus Volume	(0018,1041)	-
Contrast/Bolus Start Time	(0018,1042)	-
Contrast/Bolus Stop Time	(0018,1043)	-
Contrast/Bolus Total Dose	(0018,1044)	-
Contrast Flow Rate(s)	(0018,1046)	-
Contrast Flow Duration(s)	(0018,1047)	-
Contrast/Bolus Ingredient	(0018,1048)	-
Contrast/Bolus Ingredient Concentration	(0018,1049)	-
Spatial Resolution	(0018,1050)	-
Reconstruction Diameter	(0018,1100)	value from the first image used to generate the computed image
Distance Source to Detector	(0018,1110)	value from the first image used to generate the computed image
Distance Source to Patient	(0018,1111)	value from the first image used to generate the computed image
Gantry/Detector Tilt	(0018,1120)	value from the first image used to generate the computed image
Table Height	(0018,1130)	value from the first image used to generate the computed image
Rotation Direction	(0018,1140)	value from the first image used to generate the computed image
Exposure Time	(0018,1150)	value from the first image used to generate the computed image
X-Ray Tube Current	(0018,1151)	value from the first image used to generate the computed image

Table 5: Body Perfusion

Attribute Name	Tag	Value
Exposure	(0018,1152)	value from the first image used to generate the computed image
Exposure in μ As	(0018,1153)	-
Filter Type	(0018,1160)	value from the first image used to generate the computed image
Generator Power	(0018,1170)	value from the first image used to generate the computed image
Focal Spot	(0018,1190)	value from the first image used to generate the computed image
Date of last Calibration	(0018,1200)	-
Time of last Calibration	(0018,1201)	-
Convolution Kernel	(0018,1210)	value from the first image used to generate the computed image
Patient Position	(0018,5100)	value from the first image used to generate the computed image
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	new Series Instance UID
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	largest Series Number in the Study + 1
Acquisition Number	(0020,0012)	value from the first image used to generate the computed image
Instance Number	(0020,0013)	In an empty result series image numbers start with one, are incremented by one, and are assigned to each image to store in the order of PerfusionImageSet (A.1.7). If there are already images in a result series image number counting is continued. If there are more instances of a certain image type they are sorted according to their slice positions (from smallest slice position value to greatest).
Patient Orientation	(0020,0020)	-
Image Position (Patient)	(0020,0032)	value from the first image used to generate the computed image ??
Image Orientation (Patient)	(0020,0037)	value from the first image used to generate the computed image
Frame of Reference UID	(0020,0052)	<as in first original image>
Laterality	(0020,0060)	value from the first image used to generate the computed image
Images in Acquisition	(0020,1002)	-
Position Reference Indicator	(0020,1040)	-
Slice Location	(0020,1041)	average of the values from the images used to generate the computed image

Table 5: Body Perfusion

Attribute Name	Tag	Value
Image Comments	(0020,4000)	string as defined for the corresponding configuration item
Samples per Pixel	(0028,0002)	For gray scale representation: value from the first image used to generate the computed image For color representation: according to the photometric representation
Photometric Interpretation	(0028,0004)	For gray scale representation: "MONOCHROME2" For color representation: "RGB"
Planar Configuration	(0028,0006)	For color representation: according to the photometric representation For gray scale representation: n. a
Rows	(0028,0010)	512
Columns	(0028,0011)	512
Pixel Spacing	(0028,0030)	value from the first image used to generate the computed image
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	<ul style="list-style-type: none"> For color representation: according to the photometric representation For gray scale representation: value from the first image used to generate the computed image
Bits Stored	(0028,0101)	<ul style="list-style-type: none"> For color representation: according to the photometric representation For gray scale representation: value from the first image used to generate the computed image
High Bit	(0028,0102)	<ul style="list-style-type: none"> For color representation: according to the photometric representation For gray scale representation: value from the first image used to generate the computed image
Pixel Representation	(0028,0103)	For all images: 0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0300)	-
Window Center	(0028,1050)	<ul style="list-style-type: none"> For color representation: 128 For gray scale representation: Window Center value at the point when the image is made persistent

Table 5: Body Perfusion

Attribute Name	Tag	Value
Window Width	(0028,1051)	<ul style="list-style-type: none"> For color representation: 256 For gray scale representation: Window Width value at the point when the image is made persistent
Rescale Intercept	(0028,1052)	value from the first image used to generate the computed image
Rescale Slope	(0028,1053)	value from the first image used to generate the computed image
Window Center & Width Explanation	(0028,1055)	-
Pixel Padding Value	(0028,1020)	-
Red Palette Color Lookup Table Descriptor	(0028,1101)	-
Green Palette Color Lookup Table Descriptor	(0028,1102)	-
Blue Palette Color Lookup Table Descriptor	(0028,1103)	-
Red Palette Color Lookup Table Data	(0028,1201)	-
Green Palette Color Lookup Table Data	(0028,1202)	-
Blue Palette Color Lookup Table Data	(0028,1203)	-
Lossy Image Compression	(0028,2110)	Set to "01" in all result images if there is a value of "01" in at least one of the images used to generate the results. Otherwise omitted.
Lossy Image Compression Ratio	(0028,2112)	-
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
(various private data)	(0029,xxxx)	the application ROI(s) as syngo object oriented graphics (MEDCOM OOG)
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	-
Performed Procedure Step Start Date	(0040,0244)	-
Performed Procedure Step Start Time	(0040,0245)	-
Performed Procedure Step Description	(0040,0254)	-
Performed Protocol Code Sequence	(0040,0260)	-
> Code Sequence Macro		-

Table 5: Body Perfusion

Attribute Name	Tag	Value
Comments on the Performed Procedure Step	(0040,0280)	-
Icon Image Sequence	(0088,0200)	-
> Image Pixel Module		
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	512
Overlay Columns	(60xx,0011)	512
Overlay Description	(60xx,0022)	-
Overlay Subtype	(60xx,0045)	-
Overlay Type	(60xx,0040)	G
Overlay Origin	(60xx,0060)	1/1
Overlay Bits Allocated	(60xx,0100)	1
Overlay Bit Position	(60xx,0102)	0
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	application ROI(s) as overlay pixel data
Pixel Data	(7FE0,0010)	values calculated as appropriate for the computed image

A.1.2 Calcium Scoring

Somaris/5 Calcium Scoring will create Overview (MPR) and MIP images. The following table provides information about image attributes created:

Table 6: Calcium Scoring

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	ISO_IR 100
Image Type	(0008,0008)	Type 1: "DERIVED" Type 2: "SECONDARY" Type 3: "AXIAL" or "OTHER" Type 4: "CSA MPR" or "CSA MIP" or "CSA MIP THIN"
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.2
SOP Instance UID	(0008,0018)	<new UID>

Table 6: Calcium Scoring

Attribute Name	Tag	Value
Study Date	(0008,0020)	<Date of first series>
Series Date	(0008,0021)	<Date of Creation>
Acquisition Date	(0008,0022)	<from Original>
Content Date	(0008,0023)	<from Original>
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<Time of Creation of Series Instance>
Acquisition Time	(0008,0032)	<Time of Exposure resulting in this image>
Content Time	(0008,0033)	<Time of Instance Creation>
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	“CT”
Manufacturer	(0008,0070)	“SIEMENS”
Institution Name	(0008,0080)	<from Original>
Institution Address	(0008,0081)	<from Original>
Referring Physician’s Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	Computer name
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	<original Series name + “CaScoring” or “MPR Collection” or “MIP Collection”>
Institutional Department Name	(0008,1040)	<from Configuration>
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians’ Name	(0008,1050)	-
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator’s Name	(0008,1070)	<from Registration UI>
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer’s Model Name	(0008,1090)	Somaris/5CaScoring
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
Referenced Patient Sequence	(0008,1120)	<as Original>

Table 6: Calcium Scoring

Attribute Name	Tag	Value
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	Reference to original image or empty
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	
Derivation Description	(0008,2111)	<from configuration>
Source Image Sequence	(0008,2112)	Reference to original image or empty
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Contrast/Bolus Agent	(0018,0010)	-
Contrast/Bolus Agent Sequence	(0018,0012)	-
> Code Sequence Macro		-
Contrast/Bolus Administration Route Sequence	(0018,0012)	-
> Code Sequence Macro		-
>Additional Drug Sequence	(0018,002A)	-
>> Code Sequence Macro		-
Body Part Examined	(0018,0015)	<from Original>
Slice Thickness	(0018,0050)	<from Original>

Table 6: Calcium Scoring

Attribute Name	Tag	Value
Scan Options	(0018,0022)	-
KVP	(0018,0060)	<from Original>
Data Collection Diameter	(0018,0090)	<from Original>
Device Serial Number	(0018,1000)	-
Software Version(s)	(0018,1020)	<from Configuration>
Protocol Name	(0018,1030)	<from Original>
Contrast/Bolus Route	(0018,1040)	-
Contrast/Bolus Volume	(0018,1041)	-
Contrast/Bolus Start Time	(0018,1042)	-
Contrast/Bolus Stop Time	(0018,1043)	-
Contrast/Bolus Total Dose	(0018,1044)	-
Contrast Flow Rate(s)	(0018,1046)	-
Contrast Flow Duration(s)	(0018,1047)	-
Contrast/Bolus Ingredient	(0018,1048)	-
Contrast/Bolus Ingredient Concentration	(0018,1049)	-
Spatial Resolution	(0018,1050)	-
Reconstruction Diameter	(0018,1100)	-
Distance Source to Detector	(0018,1110)	<from Original>
Distance Source to Patient	(0018,1111)	<from Original>
Gantry/Detector Tilt	(0018,1120)	<from Original>
Table Height	(0018,1130)	<from Original>
Rotation Direction	(0018,1140)	<from Original>
Exposure Time	(0018,1150)	<from Original>
X-Ray Tube Current	(0018,1151)	<from Original>
Exposure	(0018,1152)	<from Original>
Exposure in μ As	(0018,1153)	-
Filter Type	(0018,1160)	<from Original>
Generator Power	(0018,1170)	<from Original>
Focal Spot	(0018,1190)	<from Original>
Date of last Calibration	(0018,1200)	-
Time of last Calibration	(0018,1201)	-
Convolution Kernel	(0018,1210)	<from Original>
Patient Position	(0018,5100)	<from Original>
Study Instance UID	(0020,000D)	<as Original>

Table 6: Calcium Scoring

Attribute Name	Tag	Value
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<created by system>
Acquisition Number	(0020,0012)	<from Original>
Instance Number	(0020,0013)	<created by system>
Patient Orientation	(0020,0020)	-
Image Position (Patient)	(0020,0032)	<from Original>
Image Orientation (Patient)	(0020,0037)	<application generated data>
Frame of Reference UID	(0020,0052)	<new UID> (same within identical coordinate system)
Laterality	(0020,0060)	-
Images in Acquisition	(0020,1002)	-
Position Reference Indicator	(0020,1040)	-
Slice Location	(0020,1041)	Relative position of exposure expressed in terms of the patient table position (must not be used for calculations)
Image Comments	(0020,4000)	<from Original>
Private Creator	(0021,00xx)	-
Target	(0021,xx11)	-
Samples per Pixel	(0028,0002)	1
Photometric Interpretation	(0028,0004)	"MONOCHROME2"
Rows	(0028,0010)	512
Columns	(0028,0011)	512
Pixel Spacing	(0028,0030)	<calculated by system>
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	16
Bits Stored	(0028,0101)	12
High Bit	(0028,0102)	11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Pixel Padding Value	(0028,0120)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	-
Window Center	(0028,1050)	<from Original>

Table 6: Calcium Scoring

Attribute Name	Tag	Value
Window Width	(0028,1051)	<from Original>
Rescale Intercept	(0028,1052)	-1024 or -10240
Rescale Slope	(0028,1053)	1 or 10
Window Center & Width Explanation	(0028,1055)	“WINDOW1\WINDOW2”
Lossy Image Compression	(0028,2110)	<from Configuration>
Lossy Image Compression Ratio	(0028,2112)	<from Configuration>
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	-
Performed Procedure Step Start Date	(0040,0244)	-
Performed Procedure Step Start Time	(0040,0245)	-
Performed Procedure Step Description	(0040,0254)	-
Performed Protocol Code Sequence	(0040,0260)	-
> Code Sequence Macro		-
Comments on the Performed Procedure Step	(0040,0280)	-
Icon Image Sequence	(0088,0200)	-
> Image Pixel Module		
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	512
Overlay Columns	(60xx,0011)	512
Overlay Description	(60xx,0022)	Siemens MedCom Object Graphics
Overlay Subtype	(60xx,0045)	-
Overlay Type	(60xx,0040)	
Overlay Origin	(60xx,0050)	-
Overlay Bits Allocated	(60xx,0100)	1
Overlay Bit Position	(60xx,0102)	0

Table 6: Calcium Scoring

Attribute Name	Tag	Value
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	<filled by application>
Pixel Data	(7FE0,0010)	<filled by application>

A.1.3 Dental CT

Somaris/5 Dental CT will create Overview (MPR) and MIP as well as Paraxial (DPAR) and-Panorama (DPAN) images. The following table provides information about image attributes created:

Table 7: Dental CT

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	ISO_IR 100
Image Type	(0008,0008)	Overview= "DERIVED", "SECONDARY", "AXIAL", "CT_SOM5 MPR" MIP= "DERIVED", "SECONDARY", "AXIAL", "CT_SOM5 MIP" Paraxial Reformats = "DERIVED", "SECONDARY", "OTHER", "CT_SOM5 DPAR" Panorama Reformats = "DERIVED", "SECONDARY", "OTHER", "CT_SOM5 DPAN"
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.2
SOP Instance UID	(0008,0018)	yes
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	yes
Acquisition Date	(0008,0022)	yes
Content Date	(0008,0023)	yes
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	yes
Acquisition Time	(0008,0032)	yes
Content Time	(0008,0033)	yes
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	yes

Table 7: Dental CT

Attribute Name	Tag	Value
Manufacturer	(0008,0070)	yes
Institution Name	(0008,0080)	yes
Institution Address	(0008,0081)	-
Referring Physician's Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	yes
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	yes
Institutional Department Name	(0008,1040)	-
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians' Name	(0008,1050)	-
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator's Name	(0008,1070)	yes
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer's Model Name	(0008,1090)	yes
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	yes
Source Image Sequence	(0008,2112)	yes
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-

Table 7: Dental CT

Attribute Name	Tag	Value
Derivation Description	(0008,2111)	-
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Body Part Examined	(0018,0015)	-
Slice Thickness	(0018,0050)	yes
KVP	(0018,0060)	yes
Data Collection Diameter	(0018,0090)	yes
Device Serial Number	(0018,1000)	yes
Software Version(s)	(0018,1020)	-
Protocol Name	(0018,1030)	-
Spatial Resolution	(0018,1050)	-
Distance Source to Detector	(0018,1110)	yes
Distance Source to Patient	(0018,1111)	yes
Gantry/Detector Tilt	(0018,1120)	yes
Table Height	(0018,1130)	yes
Rotation Direction	(0018,1140)	yes
Exposure Time	(0018,1150)	yes
X-Ray Tube Current	(0018,1151)	yes
Exposure	(0018,1152)	yes
Exposure in μ As	(0018,1153)	-
Generator Power	(0018,1170)	yes
Focal Spot	(0018,1190)	yes

Table 7: Dental CT

Attribute Name	Tag	Value
Date of last Calibration	(0018,1200)	yes
Time of last Calibration	(0018,1201)	yes
Convolution Kernel	(0018,1210)	yes
Patient Position	(0018,5100)	yes
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	yes
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	yes
Acquisition Number	(0020,0012)	-
Instance Number	(0020,0013)	yes
Image Position (Patient)	(0020,0032)	yes
Image Orientation (Patient)	(0020,0037)	yes (Note: For Paraxial images the orientation of the first paraxial is used for the orientation of the CT image. A special image note will be created to hint at this fact.)
Laterality	(0020,0060)	-
Images in Acquisition	(0020,1002)	-
Slice Location	(0020,1041)	yes
Image Comments	(0020,4000)	yes
Samples per Pixel	(0028,0002)	yes
Photometric Interpretation	(0028,0004)	yes
Rows	(0028,0010)	yes
Columns	(0028,0011)	yes
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	yes
Bits Stored	(0028,0101)	yes
High Bit	(0028,0102)	yes
Pixel Representation	(0028,0103)	yes
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0300)	-
Window Center	(0028,1050)	yes
Window Width	(0028,1051)	yes

Table 7: Dental CT

Attribute Name	Tag	Value
Rescale Intercept	(0028,1052)	yes
Rescale Slope	(0028,1053)	yes
Window Center & Width Explanation	(0028,1055)	yes
Pixel Padding Value	(0028,1020)	-
Lossy Image Compression	(0028,2110)	-
Lossy Image Compression Ratio	(0028,2112)	-
Modality LUT Sequence	(0028,3000)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
>Modality LUT Type	(0028,3004)	-
> LUT Data	(0028,3006)	-
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	-
Performed Procedure Step Start Date	(0040,0244)	-
Performed Procedure Step Start Time	(0040,0245)	-
Performed Procedure Step Description	(0040,0254)	-
Performed Protocol Code Sequence	(0040,0260)	-
> Code Sequence Macro		-
Comments on the Performed Procedure Step	(0040,0280)	-
Icon Image Sequence	(0088,0200)	-
> Image Pixel Module		-
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	yes
Overlay Columns	(60xx,0011)	yes
Number of Frames in Overlay	(60xx,0015)	“1”

Table 7: Dental CT

Attribute Name	Tag	Value
Overlay Description	(60xx,0022)	"Siemens MedCom Object Graphics"
Overlay Subtype	(60xx,0045)	-
Overlay Type	(60xx,0040)	yes
Overlay Origin	(60xx,0050)	yes
Image Frame Origin	(60xx,0051)	yes
Overlay Bits Allocated	(60xx,0100)	yes
Overlay Bit Position	(60xx,0102)	yes
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	yes
Pixel Data	(7FE0,0010)	yes

A.1.4 DynEva

Somaris/5 DynEva application will create CT result images (see A.2 for SC result images). The following table provides information about image attributes created

Table 8: DynEva created CT images

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	"ISO_IR 100"
Image Type	(0008,0008)	"DERIVED", "SECONDARY", "AXIAL", "CT_SOM5 DYB" or "DERIVED", "SECONDARY", "AXIAL", "CT_SOM5 DYF"
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.2
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	(Date of Creation)
Acquisition Date	(0008,0022)	-
Content Date	(0008,0023)	(Date of Instance Creation)
Acquisition Datetime	(0008,002A)	set for fused images to the date of the 1st image
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	(Date of Creation)

Table 8: DynEva created CT images

Attribute Name	Tag	Value
Acquisition Time	(0008,0032)	set for fused images to the time of the 1st image
Content Time	(0008,0033)	(Time of Instance Creation)
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	“CT”
Manufacturer	(0008,0070)	“SIEMENS”
Institution Name	(0008,0080)	taken from local config
Institution Address	(0008,0081)	-
Referring Physician’s Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	hostname
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	“DynEva Curves”+<Evaluation Number>
Institutional Department Name	(0008,1040)	-
Physician(s) of Record	(0008,1048)	-
Performing Physicians’ Name	(0008,1050)	-
Name of Physician(s) Reading Study	(0008,1060)	-
Operator’s Name	(0008,1070)	-
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer’s Model Name	(0008,1090)	read from modality config
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	“Som5 DynEva Resampled”

Table 8: DynEva created CT images

Attribute Name	Tag	Value
Source Image Sequence	(0008,2112)	reference to fused input images
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Contrast/Bolus Agent	(0018,0010)	-
Contrast/Bolus Agent Sequence	(0018,0012)	-
> Code Sequence Macro		-
Contrast/Bolus Administration Route Sequence	(0018,0012)	-
> Code Sequence Macro		-
>Additional Drug Sequence	(0018,002A)	-
>> Code Sequence Macro		-
Body Part Examined	(0018,0015)	copied from original
Slice Thickness	(0018,0050)	copied from original
Scan Options	(0018,0022)	-
KVP	(0018,0060)	copied from original
Data Collection Diameter	(0018,0090)	copied from original
Device Serial Number	(0018,1000)	read from the local config
Software Version(s)	(0018,1020)	read from modality config
Protocol Name	(0018,1030)	copied from original image series
Contrast/Bolus Route	(0018,1040)	-

Table 8: DynEva created CT images

Attribute Name	Tag	Value
Contrast/Bolus Volume	(0018,1041)	-
Contrast/Bolus Start Time	(0018,1042)	-
Contrast/Bolus Stop Time	(0018,1043)	-
Contrast/Bolus Total Dose	(0018,1044)	-
Contrast Flow Rate(s)	(0018,1046)	-
Contrast Flow Duration(s)	(0018,1047)	-
Contrast/Bolus Ingredient	(0018,1048)	-
Contrast/Bolus Ingredient Concentration	(0018,1049)	-
Spatial Resolution	(0018,1050)	-
Reconstruction Diameter	(0018,1100)	copied from original mod image
Distance Source to Detector	(0018,1110)	copied from original mod image
Distance Source to Patient	(0018,1111)	copied from original mod image
Gantry/Detector Tilt	(0018,1120)	copied from original image
Table Height	(0018,1130)	copied from original image
Rotation Direction	(0018,1140)	copied from original image
Exposure Time	(0018,1150)	-
X-Ray Tube Current	(0018,1151)	-
Exposure	(0018,1152)	-
Exposure in μ As	(0018,1153)	-
Filter Type	(0018,1160)	-
Generator Power	(0018,1170)	-
Focal Spot	(0018,1190)	-
Date of last Calibration	(0018,1200)	-
Time of last Calibration	(0018,1201)	-
Convolution Kernel	(0018,1210)	-
Patient Position	(0018,5100)	copied from original image
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<max series number>+1
Acquisition Number	(0020,0012)	-
Instance Number	(0020,0013)	(unknown)
Patient Orientation	(0020,0020)	-
Image Position (Patient)	(0020,0032)	avg of min and max imageposition (z-axis)

Table 8: DynEva created CT images

Attribute Name	Tag	Value
Image Orientation (Patient)	(0020,0037)	copied from original
Frame of Reference UID	(0020,0052)	<new UID>
Laterality	(0020,0060)	-
Images in Acquisition	(0020,1002)	-
Position Reference Indicator	(0020,1040)	-
Slice Location	(0020,1041)	avg of 1st and last location
Image Comments	(0020,4000)	e.g.: "DynEva MIP", "DynEva Baseline", "DynEva Peak Enhancement", "DynEva Fused MultiSlice", "DynEva Time To Peak", "DynEva Average", "DynEva Absolute Enhancement Curves",
Samples per Pixel	(0028,0002)	1
Photometric Interpretation	(0028,0004)	"MONOCHROME2"
Rows	(0028,0010)	512
Columns	(0028,0011)	512
Pixel Spacing	(0028,0030)	<calculated by system>
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	16
Bits Stored	(0028,0101)	12
High Bit	(0028,0102)	11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Pixel Padding Value	(0028,0120)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	-
Window Center	(0028,1050)	(unknown)
Window Width	(0028,1051)	(unknown)
Rescale Intercept	(0028,1052)	-1024
Rescale Slope	(0028,1053)	1
Window Center & Width Explanation	(0028,1055)	"WINDOW1/WINDOW2"
Lossy Image Compression	(0028,2110)	-
Lossy Image Compression Ratio	(0028,2112)	-
VOI LUT Sequence	(0028,3010)	-

Table 8: DynEva created CT images

Attribute Name	Tag	Value
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
Request Attributes Sequence	(0040,0275)	-
> Requested Procedure ID	(0040,1001)	-
> Scheduled Procedure Step ID	(0040,0009)	-
> Scheduled Procedure Step Description	(0040,0007)	-
> Scheduled Protocol Code Sequence	(0040,0008)	-
>> Code Sequence Macro		-
Performed Procedure Step ID	(0040,0253)	-
Performed Procedure Step Start Date	(0040,0244)	-
Performed Procedure Step Start Time	(0040,0245)	-
Performed Procedure Step Description	(0040,0254)	-
Performed Protocol Code Sequence	(0040,0260)	-
> Code Sequence Macro		-
Comments on the Performed Procedure Step	(0040,0280)	-
Icon Image Sequence	(0088,0200)	-
> Image Pixel Module		-
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	512
Overlay Columns	(60xx,0011)	512
Overlay Description	(60xx,0022)	"Siemens MedCom Object Graphics"
Overlay Subtype	(60xx,0045)	-
Overlay Type	(60xx,0040)	G
Overlay Origin	(60xx,0050)	-
Overlay Bits Allocated	(60xx,0100)	1
Overlay Bit Position	(60xx,0102)	0
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	<created by the application>
Pixel Data	(7FE0,0010)	<created by system>

A.1.5 Evaluation (Average/Subtract/Filter)

Somaris/5 Evaluation applications will create CT result images. The following table provides information about image attributes created:

Table 9: Evaluation (Average/Subtract/Filter)

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	copy from first Series
Image Type	(0008,0008)	Value 1: DERIVED Value 2: SECONDARY Value 3: AXIAL Value 4: CT_SOM5 AVE or CT_SOM5 SUB or from original
Instance Creation Date	(0008,0012)	will be initialized with the actual date during creation time
Instance Creation Time	(0008,0013)	will be initialized with the actual date during creation time
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	from original
SOP Instance UID	(0008,0018)	
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	current date
Acquisition Date	(0008,0022)	if the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Content Date	(0008,0023)	-
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	current time
Acquisition Time	(0008,0032)	if the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Content Time	(0008,0033)	-
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	“CT”
Manufacturer	(0008,0070)	copy from first Series
Institution Name	(0008,0080)	copy from first Series
Institution Address	(0008,0081)	copy from first Series

Table 9: Evaluation (Average/Subtract/Filter)

Attribute Name	Tag	Value
Referring Physician's Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	copy from first Series
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	will be initialized with the Result Series Description, default value proposed by the application after defined conventions e.g. SUBTRACTION_...
Institutional Department Name	(0008,1040)	copy from first Series
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians' Name	(0008,1050)	names will be copied, if all entries are identical, if not it will not be set
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator's Name	(0008,1070)	will not be set
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer's Model Name	(0008,1090)	copy from first Series
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	-
Source Image Sequence	(0008,2112)	if the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
> Referenced SOP Class UID	(0008,1150)	if the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.

Table 9: Evaluation (Average/Subtract/Filter)

Attribute Name	Tag	Value
> Referenced SOP Instance UID	(0008,1155)	if the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
> Referenced Frame Number	(0008,1160)	if the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Contrast/Bolus Agent	(0018,0010)	(unknown)
Contrast/Bolus Agent Sequence	(0018,0012)	-
> Code Sequence Macro		-
Contrast/Bolus Administration Route Sequence	(0018,0012)	-
> Code Sequence Macro		-
>Additional Drug Sequence	(0018,002A)	-
>> Code Sequence Macro		-
Body Part Examined	(0018,0015)	copy from first Series, if identical in all participating series
Slice Thickness	(0018,0050)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Scan Options	(0018,0022)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.

Table 9: Evaluation (Average/Subtract/Filter)

Attribute Name	Tag	Value
KVP	(0018,0060)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Data Collection Diameter	(0018,0090)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Device Serial Number	(0018,1000)	copy from first Series
Software Version(s)	(0018,1020)	copy from first Series
Protocol Name	(0018,1030)	function name (SUBTRACTION, AVERAGE, ...)
Contrast/Bolus Route	(0018,1040)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical
Contrast/Bolus Volume	(0018,1041)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical
Contrast/Bolus Start Time	(0018,1042)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical
Contrast/Bolus Stop Time	(0018,1043)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical
Contrast/Bolus Total Dose	(0018,1044)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical
Contrast Flow Rate(s)	(0018,1046)	unknown
Contrast Flow Duration(s)	(0018,1047)	unknown
Contrast/Bolus Ingredient	(0018,1048)	unknown
Contrast/Bolus Ingredient Concentration	(0018,1049)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical
Spatial Resolution	(0018,1050)	copy from first Series
Reconstruction Diameter	(0018,1100)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Distance Source to Detector	(0018,1110)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Distance Source to Patient	(0018,1111)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Gantry/Detector Tilt	(0018,1120)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.

Table 9: Evaluation (Average/Subtract/Filter)

Attribute Name	Tag	Value
Table Height	(0018,1130)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Rotation Direction	(0018,1140)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Exposure Time	(0018,1150)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
X-Ray Tube Current	(0018,1151)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Exposure	(0018,1152)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Exposure in μ As	(0018,1153)	unknown
Filter Type	(0018,1160)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Generator Power	(0018,1170)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Focal Spot	(0018,1190)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Date of last Calibration	(0018,1200)	copy from first Series
Time of last Calibration	(0018,1201)	copy from first Series
Convolution Kernel	(0018,1210)	If the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
<i>Patient Position</i>	(0018,5100)	copy from first Series
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	new UID
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	max plus 1
Acquisition Number	(0020,0012)	if the entries in the input images are identical, the entry will be copied. The entry remains empty, if it is not identical.
Instance Number	(0020,0013)	unknown
Patient Orientation	(0020,0020)	will not be set
Image Position (Patient)	(0020,0032)	will not be set

Table 9: Evaluation (Average/Subtract/Filter)

Attribute Name	Tag	Value
Image Orientation (Patient)	(0020,0037)	will not be set
Frame of Reference UID	(0020,0052)	copy from first Series
Laterality	(0020,0060)	copy from first Series, if identical in all participating series (not filled by CT meas.)
Images in <i>Acquisition</i>	(0020,1002)	copy from first image
Position <i>Reference</i> Indicator	(0020,1040)	-
Slice Location	(0020,1041)	must be the same from all images, copy from there
Image Comments	(0020,4000)	this entry is corresponding to 4.1.2.3.1 Default Result Series Description without the added number (to be unique), e.g. Subtract_S45_I10_I45
Samples per Pixel	(0028,0002)	1
Photometric Interpretation	(0028,0004)	MONOCHROME2
Rows	(0028,0010)	will be set with the biggest value of the input images
Columns	(0028,0011)	will be set with the biggest value of the input images
Pixel Spacing	(0028,0030)	copy from first image
Pixel Aspect Ratio	(0028,0034)	will not be set
Bits Allocated	(0028,0100)	16
Bits Stored	(0028,0101)	12
High Bit	(0028,0102)	11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	smallest value of the pixel
Largest Image Pixel Value	(0028,0107)	biggest value of the pixel
Smallest Pixel Value in Series	(0028,0108)	unknown
Largest Pixel Value in Series	(0028,0109)	unknown
Pixel Padding Value	(0028,0120)	copy from first Series
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	- (may be set by subsequent applications)
Window Center	(0028,1050)	from first Image, if not set read from configuration
Window Width	(0028,1051)	from first Image, if not set read from configuration
Rescale Intercept	(0028,1052)	-1024
Rescale Slope	(0028,1053)	0
Window Center & Width Explanation	(0028,1055)	“WINDOW1\WINDOW2”
Lossy Image Compression	(0028,2110)	copy from first image
Lossy Image Compression Ratio	(0028,2112)	-

Table 9: Evaluation (Average/Subtract/Filter)

Attribute Name	Tag	Value
VOI LUT Sequence	(0028,3010)	unkown
> LUT Descriptor	(0028,3002)	unkown
> LUT Explanation	(0028,3003)	unkown
> LUT Data	(0028,3006)	unkown
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	unkown
Performed Procedure Step Start Date	(0040,0244)	unkown
Performed Procedure Step Start Time	(0040,0245)	unkown
Performed Procedure Step Description	(0040,0254)	unkown
Performed Protocol Code Sequence	(0040,0260)	unkown
> Code Sequence Macro		unkown
Comments on the Performed Procedure Step	(0040,0280)	unkown
Icon Image Sequence	(0088,0200)	unkown
> Image Pixel Module		
Presentation LUT Shape	(2050,0020)	-
Pixel Data	(7FE0,0010)	calculated by application

A.1.6 Lung Care Save Images

Somaris/5 Lung Care will create CT save images (for SC save images see A.2). The following table provides information about image attributes created:

Table 10: LungCARE - CT Save Images

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	<yes>
Image Type	(0008,0008)	“DERIVED\SECONDARY\OTHER\MPR\LC VALID WINDOW” or “DERIVED\SECONDARY\OTHER\CT_SOM5 SPI\LC VALID WINDOW”
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-

Table 10: LungCARE - CT Save Images

Attribute Name	Tag	Value
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.1.2.1
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<creation date>
Acquisition Date	(0008,0022)	<yes>
Content Date	(0008,0023)	<yes>
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<creation time>
Acquisition Time	(0008,0032)	<yes>
Content Time	(0008,0033)	<yes>
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	“CT”
Manufacturer	(0008,0070)	<yes>
Institution Name	(0008,0080)	<yes>
Institution Address	(0008,0081)	“.”
Referring Physician’s Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	-
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	e.g. “SCREENING #1_result_1_1_SPT” or “SCREENING #1_result_1_2_MPR”
Institutional Department Name	(0008,1040)	from Site Configuration
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians’ Name	(0008,1050)	-
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator’s Name	(0008,1070)	from Registration UI
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer’s Model Name	(0008,1090)	<yes>
Referenced Study Sequence	(0008,1110)	<yes>
> Referenced SOP Class UID	(0008,1150)	<yes>
> Referenced SOP Instance UID	(0008,1155)	<yes>

Table 10: LungCARE - CT Save Images

Attribute Name	Tag	Value
Referenced Study Component Sequence	(0008,1111)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	
Derivation Description	(0008,2111)	- (may be set by subsequent applications)
Source Image Sequence	(0008,2112)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	-
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Contrast/Bolus Agent	(0018,0010)	(unknown)
Contrast/Bolus Agent Sequence	(0018,0012)	-
> Code Sequence Macro		-
Contrast/Bolus Administration Route Sequence	(0018,0012)	-
> Code Sequence Macro		-

Table 10: LungCARE - CT Save Images

Attribute Name	Tag	Value
>Additional Drug Sequence	(0018,002A)	-
>> Code Sequence Macro		-
Body Part Examined	(0018,0015)	<yes>
Slice Thickness	(0018,0050)	<yes>
Scan Options	(0018,0022)	-
KVP	(0018,0060)	<yes>
Data Collection Diameter	(0018,0090)	-
Device Serial Number	(0018,1000)	<yes>
Software Version(s)	(0018,1020)	<yes>
Protocol Name	(0018,1030)	-
Contrast/Bolus Route	(0018,1040)	-
Contrast/Bolus Volume	(0018,1041)	-
Contrast/Bolus Start Time	(0018,1042)	-
Contrast/Bolus Stop Time	(0018,1043)	-
Contrast/Bolus Total Dose	(0018,1044)	-
Contrast Flow Rate(s)	(0018,1046)	-
Contrast Flow Duration(s)	(0018,1047)	-
Contrast/Bolus Ingredient	(0018,1048)	-
Contrast/Bolus Ingredient Concentration	(0018,1049)	-
Spatial Resolution	(0018,1050)	-
Reconstruction Diameter	(0018,1100)	-
Distance Source to Detector	(0018,1110)	-
Distance Source to Patient	(0018,1111)	-
Gantry/Detector Tilt	(0018,1120)	-
Table Height	(0018,1130)	-
Rotation Direction	(0018,1140)	-
Exposure Time	(0018,1150)	-
X-Ray Tube Current	(0018,1151)	-
Exposure	(0018,1152)	-
Exposure in μ As	(0018,1153)	-
Filter Type	(0018,1160)	-
Generator Power	(0018,1170)	-
Focal Spot	(0018,1190)	-
Date of last Calibration	(0018,1200)	<yes>

Table 10: LungCARE - CT Save Images

Attribute Name	Tag	Value
Time of last Calibration	(0018,1201)	<yes>
Convolution Kernel	(0018,1210)	<yes>
Patient Position	(0018,5100)	-
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<yes>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<yes>
Acquisition Number	(0020,0012)	-
Instance Number	(0020,0013)	<yes>
Patient Orientation	(0020,0020)	
Image Position (Patient)	(0020,0032)	<yes>
Image Orientation (Patient)	(0020,0037)	<yes>
Frame of Reference UID	(0020,0052)	<yes>
Laterality	(0020,0060)	
Images in Acquisition	(0020,1002)	-
Position Reference Indicator	(0020,1040)	-
Slice Location	(0020,1041)	<yes>
Image Comments	(0020,4000)	
Samples per Pixel	(0028,0002)	1
Photometric Interpretation	(0028,0004)	"MONOCHROME2"
Rows	(0028,0010)	512
Columns	(0028,0011)	512
Pixel Spacing	(0028,0030)	<yes>
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	16
Bits Stored	(0028,0101)	12
High Bit	(0028,0102)	11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0300)	-

Table 10: LungCARE - CT Save Images

Attribute Name	Tag	Value
Window Center	(0028,1050)	<yes>
Window Width	(0028,1051)	<yes>
Rescale Intercept	(0028,1052)	-1024
Rescale Slope	(0028,1053)	1
Window Center & Width Explanation	(0028,1055)	<yes>
Pixel Padding Value	(0028,1020)	-
Lossy Image Compression	(0028,2110)	- (may be set by subsequent applications)
Lossy Image Compression Ratio	(0028,2112)	- (may be set by subsequent applications)
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
(various private data)	(0029,xxxx)	
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	
Performed Procedure Step Start Date	(0040,0244)	
Performed Procedure Step Start Time	(0040,0245)	
Performed Procedure Step Description	(0040,0254)	
Performed Protocol Code Sequence	(0040,0260)	
> Code Sequence Macro		
Comments on the Performed Procedure Step	(0040,0280)	
Icon Image Sequence	(0088,0200)	
> Image Pixel Module		
Presentation LUT Shape	(2050,0020)	-
Pixel Data	(7FE0,0010)	<yes>

A.1.7 Neuro DSA

Somaris/5 Neuro DSA will create CT result images based on two series CTA and Plain, which are input to the application. There are two generated datasets Slim and Wide bone mask. Both datasets have exactly the same DICOM attributes as that of the original CTA images, except for

few changes. The following table provides information about the image attributes of the created datasets.

Note: <as Original> means that the value of this attribute is identical to the value of the same attribute in the image which was used to calculate the result image. .

Table 11: Neuro DSA

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	<as Original>
Image Type	(0008,0008)	"DERIVED", "SECONDARY", "AXIAL", "BSCTA"
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.2
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	New series creation date
Acquisition Date	(0008,0022)	<as Original>
Content Date	(0008,0023)	New content creation date
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	New series creation time
Acquisition Time	(0008,0032)	<as original>
Content Time	(0008,0033)	Time when the particular image is created.
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	<as Original>
Manufacturer	(0008,0070)	<as Original>
Institution Name	(0008,0080)	<as Original>
Institution Address	(0008,0081)	-
Referring Physician's Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	-
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		-

Table 11: Neuro DSA

Attribute Name	Tag	Value
Series Description	(0008,103E)	The generated datasets will be given the series description according to the following format: (NeuroDSA_<Result Type>_<Date>). Where: <Result Type> Equals Slim or Wide <Date> Refers to the date of the generation of the NeuroDSA data set. The format for date will be ddMMMYYYY, where dd is the date, MMM is the month name (3 letter) and YYYY is the year. The series name will have the suffix “_n” in case there are more than 1 dataset already saved on the same date (n is 2 for the second dataset being saved, 3 for the 3rd dataset and so on.)
Institutional Department Name	(0008,1040)	-
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians' Name	(0008,1050)	-
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator's Name	(0008,1070)	<as Original>
Admitting Diagnoses Description	(0008,1080)	-
Manufacturer's Model Name	(0008,1090)	<as Original>
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
Referenced Study Component Sequence	(0008,1111)	-
Referenced Patient Sequence	(0008,1120)	<as Original>
Referenced Image Sequence	(0008,1140)	<as Original>
> Referenced Frame Number	(0008,1160)	<as Original>
Derivation Description	(0008,2111)	-
Source Image Sequence	(0008,2112)	references to the images used to generate the computed image
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>

Table 11: Neuro DSA

Attribute Name	Tag	Value
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Contrast/Bolus Agent	(0018,0010)	<as Original>
Contrast/Bolus Agent Sequence	(0018,0012)	-
> Code Sequence Macro		-
Contrast/Bolus Administration Route Sequence	(0018,0012)	-
> Code Sequence Macro		-
>Additional Drug Sequence	(0018,002A)	-
>> Code Sequence Macro		-
Body Part Examined	(0018,0015)	-
Slice Thickness	(0018,0050)	Effective slice thickness of the calculated image
Scan Options	(0018,0022)	<as Original>
KVP	(0018,0060)	<as Original>
Data Collection Diameter	(0018,0090)	<as Original>
Device Serial Number	(0018,1000)	-
Software Version(s)	(0018,1020)	<as Original>
Protocol Name	(0018,1030)	<as Original>
Contrast/Bolus Route	(0018,1040)	-
Contrast/Bolus Volume	(0018,1041)	<as Original>
Contrast/Bolus Start Time	(0018,1042)	-
Contrast/Bolus Stop Time	(0018,1043)	-
Contrast/Bolus Total Dose	(0018,1044)	-
Contrast Flow Rate(s)	(0018,1046)	<as Original>
Contrast Flow Duration(s)	(0018,1047)	<as Original>
Contrast/Bolus Ingredient	(0018,1048)	-
Contrast/Bolus Ingredient Concentration	(0018,1049)	<as Original>

Table 11: Neuro DSA

Attribute Name	Tag	Value
Spatial Resolution	(0018,1050)	-
Reconstruction Diameter	(0018,1100)	<as Original>
Distance Source to Detector	(0018,1110)	<as Original>
Distance Source to Patient	(0018,1111)	<as Original>
Gantry/Detector Tilt	(0018,1120)	<as Original>
Table Height	(0018,1130)	<as Original>
Rotation Direction	(0018,1140)	<as Original>
Exposure Time	(0018,1150)	<as Original>
X-Ray Tube Current	(0018,1151)	<as Original>
Exposure	(0018,1152)	<as Original>
Filter Type	(0018,1160)	<as Original>
Generator Power	(0018,1170)	<as Original>
Focal Spot	(0018,1190)	<as Original>
Date of last Calibration	(0018,1200)	-
Time of last Calibration	(0018,1201)	-
Convolution Kernel	(0018,1210)	<as Original>
Patient Position	(0018,5100)	<as Original>
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	new Series Instance UID
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	New series number
Acquisition Number	(0020,0012)	<as Original>
Instance Number	(0020,0013)	The instance number given to the new image
Patient Orientation	(0020,0020)	-
Image Position (Patient)	(0020,0032)	<as Original>
Image Orientation (Patient)	(0020,0037)	<as Original>
Frame of Reference UID	(0020,0052)	<as Original>
Laterality	(0020,0060)	-
Images in Acquisition	(0020,1002)	-
Position Reference Indicator	(0020,1040)	<as Original>
Slice Location	(0020,1041)	<as Original>
Image Comments	(0020,4000)	<as Original>
Samples per Pixel	(0028,0002)	<as Original>
Photometric Interpretation	(0028,0004)	<as Original>

Table 11: Neuro DSA

Attribute Name	Tag	Value
Number of Frames	(0028,0008)	<as Original>
Rows	(0028,0010)	<as Original>
Columns	(0028,0011)	<as Original>
Pixel Spacing	(0028,0030)	<as Original>
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	<as Original>
Bits Stored	(0028,0101)	<as Original>
High Bit	(0028,0102)	<as Original>
Pixel Representation	(0028,0103)	<as Original>
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0300)	-
Window Center	(0028,1050)	<as Original>
Window Width	(0028,1051)	<as Original>
Rescale Intercept	(0028,1052)	<as Original>
Rescale Slope	(0028,1053)	<as Original>
Window Center & Width Explanation	(0028,1055)	<as Original>
Lossy Image Compression	(0028,2110)	<as Original>
Lossy Image Compression Ratio	(0028,2112)	<as Original>
Modality LUT Sequence	(0028,3000)	
> LUT Descriptor	(0028,3002)	
> LUT Explanation	(0028,3003)	
>Modality LUT Type	(0028,3004)	
> LUT Data	(0028,3006)	
VOI LUT Sequence	(0028,3010)	
> LUT Descriptor	(0028,3002)	
> LUT Explanation	(0028,3003)	
> LUT Data	(0028,3006)	
Request Attributes Sequence	(0040,0275)	
> Requested Procedure ID	(0040,1001)	
> Scheduled Procedure Step ID	(0040,0009)	

Table 11: Neuro DSA

Attribute Name	Tag	Value
> Scheduled Procedure Step Description	(0040,0007)	
> Scheduled Protocol Code Sequence	(0040,0008)	
>> Code Sequence Macro		
Performed Procedure Step ID	(0040,0253)	
Performed Procedure Step Start Date	(0040,0244)	
Performed Procedure Step Start Time	(0040,0245)	
Performed Procedure Step Description	(0040,0254)	
Performed Protocol Code Sequence	(0040,0260)	
> Code Sequence Macro		
Comments on the Performed Procedure Step	(0040,0280)	
Icon Image Sequence	(0088,0200)	
> Image Pixel Module		
Presentation LUT Shape	(2050,0020)	
Overlay Rows	(60xx,0010)	
Overlay Columns	(60xx,0011)	
Overlay Description	(60xx,0022)	
Overlay Subtype	(60xx,0045)	
Overlay Type	(60xx,0040)	
Overlay Origin	(60xx,0060)	
Overlay Bits Allocated	(60xx,0100)	
Overlay Bit Position	(60xx,0102)	
ROI Area	(60xx,1301)	
ROI Mean	(60xx,1302)	
ROI Standard Deviation	(60xx,1303)	
Overlay Label	(60xx,1500)	
Overlay Data	(60xx,3000)	
Pixel Data	(7FE0,0010)	<as Original>

A.1.8 Neuro Perfusion

Somaris/5 Perfusion will create CT result images.

This list of images will be referred to as NPerfusionImageSet:

MIP, AVE, Peak Enhancement, Time To Start, Time To Peak, Flow, Blood Volume, Permeability, Patlak Blood Volume, Patlak Residual, Patlak RSquare

The following table provides information about image attributes created:

Table 12: Neuro Perfusion

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	merged according to the syngo rules
Image Type	(0008,0008)	<ul style="list-style-type: none"> • Value 1: <ul style="list-style-type: none"> • NPerfusionImageSet (A.1.8): DERIVED • other: from the original images • Value 2: <ul style="list-style-type: none"> • NPerfusionImageSet (A.1.8): SECONDARY • other: from the original images • Value 3: <ul style="list-style-type: none"> • NPerfusionImageSet (A.1.8): AXIAL • other: from the original images • Value 4: <ul style="list-style-type: none"> • MIP: CT_SOM5 MIP (Maximum Intensity Projection) • AVE: CT_SOM5 AVE (Average) • Peak Enhancement, Time To Start, Time To Peak, Flow, Blood Volume, Permeability, Patlak Blood Volume, Patlak Residual, Patlak RSquare: CT_SOM5 PAR (PAR: Parameter) • other: from the original images • Value 5: <ul style="list-style-type: none"> • MIP, AVE: none • Peak Enhancement: PKET (PKET: Peak Enhancement) • Time To Start: TTS (TTS: Time To Start) • Time To Peak: TTP (TTP: Time To Peak) • Flow: PBF (PBF: Perfusion Blood Flow) • Blood Volume: PBV (PBV: Perfusion Blood Volume) • Permeability: PMB (P: Permeability) • Patlak Blood Volume: PKBV (PKBV: Patlak Blood Volume) • Patlak Residual: PKER (PKER: Patlak Residual) • Patlak RSquare: PKR2 (PKR2: Patlak RSquare) • other: from the original images
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.2
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<date of series creation>

Table 12: Neuro Perfusion

Attribute Name	Tag	Value
Acquisition Date	(0008,0022)	NPerfusionImageSet (A.1.8): from the first image in time that is used to create the computed image other: from the original images
Content Date	(0008,0023)	Date when the particular image is created. Supports the same sorting order as Image Number.
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<time of series creation>
Acquisition Time	(0008,0032)	NPerfusionImageSet (A.1.8): from the first image in time that is used to create the computed image other: from the original images
Content Time	(0008,0033)	Time when the particular image is created. Supports the same sorting order as Image Number.
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	value from the first image used to generate the computed image
Manufacturer	(0008,0070)	from the corresponding system configuration item
Institution Name	(0008,0080)	NPerfusionImageSet (A.1.8): string as defined for the corresponding system configuration item other: from the original images
Institution Address	(0008,0081)	-
Referring Physician's Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	-
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	For the series containing the results <ul style="list-style-type: none"> as gray scale images: string as defined in the corresponding configuration item as color images string as defined for the corresponding configuration item and the slice position value
Institutional Department Name	(0008,1040)	-
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians' Name	(0008,1050)	-
Name of Physician(s) Reading Study	(0008,1060)	<as Original>

Table 12: Neuro Perfusion

Attribute Name	Tag	Value
Operator's Name	(0008,1070)	-
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer's Model Name	(0008,1090)	from the corresponding system configuration item
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	"Som5 Perfusion Resampled"
Source Image Sequence	(0008,2112)	references to the images used to generate the computed image
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	-
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>

Table 12: Neuro Perfusion

Attribute Name	Tag	Value
Patient Comments	(0010,4000)	<as Original>
Contrast/Bolus Agent	(0018,0010)	value from the first image used to generate the computed image
Contrast/Bolus Agent Sequence	(0018,0012)	-
> Code Sequence Macro		-
Contrast/Bolus Administration Route Sequence	(0018,0012)	-
> Code Sequence Macro		-
>Additional Drug Sequence	(0018,002A)	-
>> Code Sequence Macro		-
Body Part Examined	(0018,0015)	-
Slice Thickness	(0018,0050)	NPerfusionImageSet (A.1.8): effective slice thickness from the first original image other: from the original images
Scan Options	(0018,0022)	value from the first image used to generate the computed image
KVP	(0018,0060)	NPerfusionImageSet (A.1.8): value from the first image used to generate the computed image other: from the original images
Data Collection Diameter	(0018,0090)	value from the first image used to generate the computed image
Device Serial Number	(0018,1000)	-
Software Version(s)	(0018,1020)	from the corresponding system configuration item
Protocol Name	(0018,1030)	-
Contrast/Bolus Route	(0018,1040)	-
Contrast/Bolus Volume	(0018,1041)	-
Contrast/Bolus Start Time	(0018,1042)	-
Contrast/Bolus Stop Time	(0018,1043)	-
Contrast/Bolus Total Dose	(0018,1044)	-
Contrast Flow Rate(s)	(0018,1046)	-
Contrast Flow Duration(s)	(0018,1047)	-
Contrast/Bolus Ingredient	(0018,1048)	-
Contrast/Bolus Ingredient Concentration	(0018,1049)	-
Spatial Resolution	(0018,1050)	-
Reconstruction Diameter	(0018,1100)	value from the first image used to generate the computed image

Table 12: Neuro Perfusion

Attribute Name	Tag	Value
Distance Source to Detector	(0018,1110)	value from the first image used to generate the computed image
Distance Source to Patient	(0018,1111)	value from the first image used to generate the computed image
Gantry/Detector Tilt	(0018,1120)	NPerfusionImageSet (A.1.8): value from the first image used to generate the computed image other: from the original images
Table Height	(0018,1130)	value from the first image used to generate the computed image
Rotation Direction	(0018,1140)	value from the first image used to generate the computed image
Exposure Time	(0018,1150)	baseline, NPerfusionImageSet (A.1.8): value from the first image used to generate the computed image other: from the original images
X-Ray Tube Current	(0018,1151)	NPerfusionImageSet (A.1.8): value from the first image used to generate the computed image other: from the original images
Exposure	(0018,1152)	NPerfusionImageSet (A.1.8): value from the first image used to generate the computed image other: from the original images
Exposure in μ As	(0018,1153)	-
Filter Type	(0018,1160)	value from the first image used to generate the computed image
Generator Power	(0018,1170)	value from the first image used to generate the computed image
Focal Spot	(0018,1190)	value from the first image used to generate the computed image
Date of last Calibration	(0018,1200)	-
Time of last Calibration	(0018,1201)	-
Convolution Kernel	(0018,1210)	NPerfusionImageSet (A.1.8): value from the first image used to generate the computed image other: from the original images
Patient Position	(0018,5100)	NPerfusionImageSet (A.1.8): value from the first image used to generate the computed image other: from the original images

Table 12: Neuro Perfusion

Attribute Name	Tag	Value
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	new Series Instance UID
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	largest Series Number in the Study + 1
Acquisition Number	(0020,0012)	NPerfusionImageSet (A.1.8): value from the first image used to generate the computed image other: from the original images
Instance Number	(0020,0013)	NPerfusionImageSet (A.1.8): none other: from the original images Note: an Image Number will be assigned during storing to database In an empty result series image numbers start with one, are incremented by one, and are assigned to each image to store in the order of NPerfusionImageSet (A.1.8). If there are already images in a result series image number counting is continued. If there are more instances of a certain image type they are sorted according to their slice positions (from smallest slice position value to greatest).
Patient Orientation	(0020,0020)	-
Image Position (Patient)	(0020,0032)	value from the first image used to generate the computed image ??
Image Orientation (Patient)	(0020,0037)	value from the first image used to generate the computed image
Frame of Reference UID	(0020,0052)	<as in first original image>
Laterality	(0020,0060)	value from the first image used to generate the computed image
Images in Acquisition	(0020,1002)	-
Position Reference Indicator	(0020,1040)	-
Slice Location	(0020,1041)	NPerfusionImageSet (A.1.8): average of the values from the images used to generate the computed image other: from the original images
Image Comments	(0020,4000)	NPerfusionImageSet (A.1.8): string as defined for the corresponding configuration item other: from the original images
Samples per Pixel	(0028,0002)	For gray scale representation: value from the first image used to generate the computed image For color representation: according to the photometric representation

Table 12: Neuro Perfusion

Attribute Name	Tag	Value
Photometric Interpretation	(0028,0004)	For gray scale representation: "MONOCHROME2" For color representation: "RGB"
Planar Configuration	(0028,0006)	For color representation: according to the photometric representation For gray scale representation: n. a
Rows	(0028,0010)	512
Columns	(0028,0011)	512
Pixel Spacing	(0028,0030)	value from the first image used to generate the computed image
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	<ul style="list-style-type: none"> For color representation: according to the photometric representation For gray scale representation: value from the first image used to generate the computed image
Bits Stored	(0028,0101)	<ul style="list-style-type: none"> For color representation: according to the photometric representation For gray scale representation: value from the first image used to generate the computed image
High Bit	(0028,0102)	<ul style="list-style-type: none"> For color representation: according to the photometric representation For gray scale representation: value from the first image used to generate the computed image
Pixel Representation	(0028,0103)	For all images: 0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0300)	-
Window Center	(0028,1050)	<ul style="list-style-type: none"> For color representation: 128 For gray scale representation: Window Center value at the point when the image is made persistent
Window Width	(0028,1051)	<ul style="list-style-type: none"> For color representation: 256 For gray scale representation: Window Width value at the point when the image is made persistent
Rescale Intercept	(0028,1052)	value from the first image used to generate the computed image
Rescale Slope	(0028,1053)	value from the first image used to generate the computed image

Table 12: Neuro Perfusion

Attribute Name	Tag	Value
Window Center & Width Explanation	(0028,1055)	-
Pixel Padding Value	(0028,1020)	-
Red Palette Color Lookup Table Descriptor	(0028,1101)	-
Green Palette Color Lookup Table Descriptor	(0028,1102)	-
Blue Palette Color Lookup Table Descriptor	(0028,1103)	-
Red Palette Color Lookup Table Data	(0028,1201)	-
Green Palette Color Lookup Table Data	(0028,1202)	-
Blue Palette Color Lookup Table Data	(0028,1203)	-
Lossy Image Compression	(0028,2110)	Set to "01" in all result images if there is a value of "01" in at least one of the images used to generate the results. Otherwise omitted.
Lossy Image Compression Ratio	(0028,2112)	-
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
(various private data)	(0029,xxxx)	the application ROI(s) as syngo object oriented graphics (MEDCOM OOG)
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	-
Performed Procedure Step Start Date	(0040,0244)	-
Performed Procedure Step Start Time	(0040,0245)	-
Performed Procedure Step Description	(0040,0254)	-
Performed Protocol Code Sequence	(0040,0260)	-
> Code Sequence Macro		-
Comments on the Performed Procedure Step	(0040,0280)	-
Icon Image Sequence	(0088,0200)	-
> Image Pixel Module		
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	512
Overlay Columns	(60xx,0011)	512

Table 12: Neuro Perfusion

Attribute Name	Tag	Value
Overlay Description	(60xx,0022)	-
Overlay Subtype	(60xx,0045)	-
Overlay Type	(60xx,0040)	G
Overlay Origin	(60xx,0060)	1/1
Overlay Bits Allocated	(60xx,0100)	1
Overlay Bit Position	(60xx,0102)	0
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	application ROI(s) as overlay pixel data
Pixel Data	(7FE0,0010)	values calculated as appropriate for the computed image

A.1.9 Osteo CT

Somaris/5 Osteo CT will create CT result images (for SC result images see A.2). The following table provides information about image attributes created:

Table 13: Osteo CT

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	ISO_IR 100
Image Type	(0008,0008)	"DERIVED", "SECONDARY", "AXIAL", "CT_SOM5 OEVA"
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.2
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<date of series creation>
Acquisition Date	(0008,0022)	-
Content Date	(0008,0023)	<date of content creation>
Acquisition Datetime	(0008,002A)	<from Original>
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<time of series creation>
Acquisition Time	(0008,0032)	<from Original>

Table 13: Osteo CT

Attribute Name	Tag	Value
Content Time	(0008,0033)	<time of content creation>
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	<from Original>
Manufacturer	(0008,0070)	<from Original>
Institution Name	(0008,0080)	<from Original>
Institution Address	(0008,0081)	-
Referring Physician's Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	<from Original>
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	<Contours + "Evaluation Number"> <Tables + "Evaluation Number"> <Summary + "Evaluation Number"> <(explicit)>
Institutional Department Name	(0008,1040)	-
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians' Name	(0008,1050)	-
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator's Name	(0008,1070)	-
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer's Model Name	(0008,1090)	<from Original>
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	

Table 13: Osteo CT

Attribute Name	Tag	Value
Source Image Sequence	(0008,2112)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Contrast/Bolus Agent	(0018,0010)	-
Contrast/Bolus Agent Sequence	(0018,0012)	-
> Code Sequence Macro		-
Contrast/Bolus Administration Route Sequence	(0018,0012)	-
> Code Sequence Macro		-
>Additional Drug Sequence	(0018,002A)	-
>> Code Sequence Macro		-
Body Part Examined	(0018,0015)	-
Slice Thickness	(0018,0050)	<from Original>
Scan Options	(0018,0022)	-
KVP	(0018,0060)	<from Original>
Data Collection Diameter	(0018,0090)	<from Original>
Device Serial Number	(0018,1000)	<from Original>
Software Version(s)	(0018,1020)	-
Protocol Name	(0018,1030)	-
Contrast/Bolus Route	(0018,1040)	-

Table 13: Osteo CT

Attribute Name	Tag	Value
Contrast/Bolus Volume	(0018,1041)	-
Contrast/Bolus Start Time	(0018,1042)	-
Contrast/Bolus Stop Time	(0018,1043)	-
Contrast/Bolus Total Dose	(0018,1044)	-
Contrast Flow Rate(s)	(0018,1046)	-
Contrast Flow Duration(s)	(0018,1047)	-
Contrast/Bolus Ingredient	(0018,1048)	-
Contrast/Bolus Ingredient Concentration	(0018,1049)	-
Spatial Resolution	(0018,1050)	-
Reconstruction Diameter	(0018,1100)	-
Distance Source to Detector	(0018,1110)	<from Original>
Distance Source to Patient	(0018,1111)	<from Original>
Gantry/Detector Tilt	(0018,1120)	<from Original>
Table Height	(0018,1130)	<from Original>
Rotation Direction	(0018,1140)	<from Original>
Exposure Time	(0018,1150)	<from Original>
X-Ray Tube Current	(0018,1151)	-
Exposure	(0018,1152)	<from Original>
Exposure in μ As	(0018,1153)	-
Filter Type	(0018,1160)	-
Generator Power	(0018,1170)	<from Original>
Focal Spot	(0018,1190)	<from Original>
Date of last Calibration	(0018,1200)	<from Original>
Time of last Calibration	(0018,1201)	<from Original>
Convolution Kernel	(0018,1210)	<from Original>
Patient Position	(0018,5100)	<from Original>
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<same series number for each examination>
Acquisition Number	(0020,0012)	<same series number for each examination>
Instance Number	(0020,0013)	<from Original>
Patient Orientation	(0020,0020)	-
Image Position (Patient)	(0020,0032)	<from Original>

Table 13: Osteo CT

Attribute Name	Tag	Value
Image Orientation (Patient)	(0020,0037)	<from Original>
Frame of Reference UID	(0020,0052)	<new UID>
Laterality	(0020,0060)	-
Images in Acquisition	(0020,1002)	-
Position Reference Indicator	(0020,1040)	-
Slice Location	(0020,1041)	<from Original>
Image Comments	(0020,4000)	<from Original>
Samples per Pixel	(0028,0002)	<from Original>
Photometric Interpretation	(0028,0004)	<from Original>
Rows	(0028,0010)	<from Original>
Columns	(0028,0011)	<from Original>
Pixel Spacing	(0028,0030)	<calculated by system>
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	16
Bits Stored	(0028,0101)	12
High Bit	(0028,0102)	11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Pixel Padding Value	(0028,0120)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	-
Window Center	(0028,1050)	<from UI and Configuration>
Window Width	(0028,1051)	<from UI and Configuration>
Rescale Intercept	(0028,1052)	<from Original>
Rescale Slope	(0028,1053)	<from Original>
Window Center & Width Explanation	(0028,1055)	“WINDOW1\WINDOW2”
Lossy Image Compression	(0028,2110)	-
Lossy Image Compression Ratio	(0028,2112)	-
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-

Table 13: Osteo CT

Attribute Name	Tag	Value
> LUT Data	(0028,3006)	-
(various private data)	(0029,xxxx)	
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	-
Performed Procedure Step Start Date	(0040,0244)	-
Performed Procedure Step Start Time	(0040,0245)	-
Performed Procedure Step Description	(0040,0254)	-
Performed Protocol Code Sequence	(0040,0260)	-
> Code Sequence Macro		-
Comments on the Performed Procedure Step	(0040,0280)	-
Icon Image Sequence	(0088,0200)	-
> Image Pixel Module		-
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	512
Overlay Columns	(60xx,0011)	512
Overlay Description	(60xx,0022)	-
Overlay Subtype	(60xx,0045)	Siemens MedCom Object Graphics
Overlay Type	(60xx,0040)	G
Overlay Origin	(60xx,0050)	-
Overlay Bits Allocated	(60xx,0100)	1
Overlay Bit Position	(60xx,0102)	0
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	<created by system>
Pixel Data	(7FE0,0010)	<as Original>

A.1.10 Pulmo CT

Somaris/5 Pulmo CT will create CT result images. The following table provides information about image attributes created:

Table 14: Pulmo CT

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	ISO_IR 100
Image Type	(0008,0008)	"DERIVED", "SECONDARY", "AXIAL", "CT_SOM5 PEVI"
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.2
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<yes>
Acquisition Date	(0008,0022)	<yes>
Content Date	(0008,0023)	<yes>
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<yes>
Acquisition Time	(0008,0032)	<yes>
Content Time	(0008,0033)	<yes>
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	CT
Manufacturer	(0008,0070)	SIEMENS
Institution Name	(0008,0080)	<yes>
Institution Address	(0008,0081)	-
Referring Physician's Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	<from Original>
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	"Colored Subranges" or "Colored Percentiles" or "Segment Images" or "Histograms" or "3D Prep"
Institutional Department Name	(0008,1040)	-

Table 14: Pulmo CT

Attribute Name	Tag	Value
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians' Name	(0008,1050)	-
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator's Name	(0008,1070)	-
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer's Model Name	(0008,1090)	<from Original>
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	-
Source Image Sequence	(0008,2112)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>

Table 14: Pulmo CT

Attribute Name	Tag	Value
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Contrast/Bolus Agent	(0018,0010)	-
Contrast/Bolus Agent Sequence	(0018,0012)	-
> Code Sequence Macro		-
Contrast/Bolus Administration Route Sequence	(0018,0012)	-
> Code Sequence Macro		-
>Additional Drug Sequence	(0018,002A)	-
>> Code Sequence Macro		-
Body Part Examined	(0018,0015)	-
Slice Thickness	(0018,0050)	<yes>
Scan Options	(0018,0022)	-
KVP	(0018,0060)	<yes>
Data Collection Diameter	(0018,0090)	<yes>
Device Serial Number	(0018,1000)	<yes>
Software Version(s)	(0018,1020)	-
Protocol Name	(0018,1030)	-
Contrast/Bolus Route	(0018,1040)	-
Contrast/Bolus Volume	(0018,1041)	-
Contrast/Bolus Start Time	(0018,1042)	-
Contrast/Bolus Stop Time	(0018,1043)	-
Contrast/Bolus Total Dose	(0018,1044)	-
Contrast Flow Rate(s)	(0018,1046)	-
Contrast Flow Duration(s)	(0018,1047)	-
Contrast/Bolus Ingredient	(0018,1048)	-
Contrast/Bolus Ingredient Concentration	(0018,1049)	-
Spatial Resolution	(0018,1050)	-
Reconstruction Diameter	(0018,1100)	-
Distance Source to Detector	(0018,1110)	<yes>
Distance Source to Patient	(0018,1111)	<yes>
Gantry/Detector Tilt	(0018,1120)	<yes>
Table Height	(0018,1130)	<yes>

Table 14: Pulmo CT

Attribute Name	Tag	Value
Rotation Direction	(0018,1140)	<yes>
Exposure Time	(0018,1150)	<yes>
X-Ray Tube Current	(0018,1151)	-
Exposure	(0018,1152)	<yes>
Exposure in μ As	(0018,1153)	-
Filter Type	(0018,1160)	<yes>
Generator Power	(0018,1170)	<yes>
Focal Spot	(0018,1190)	<yes>
Date of last Calibration	(0018,1200)	<yes>
Time of last Calibration	(0018,1201)	<yes>
Convolution Kernel	(0018,1210)	<yes>
Patient Position	(0018,5100)	<yes>
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<yes>
Acquisition Number	(0020,0012)	<yes>
Instance Number	(0020,0013)	<yes>
Patient Orientation	(0020,0020)	-
Image Position (Patient)	(0020,0032)	<yes>
Image Orientation (Patient)	(0020,0037)	<yes>
Frame of Reference UID	(0020,0052)	<yes>
Laterality	(0020,0060)	-
Images in Acquisition	(0020,1002)	-
Position Reference Indicator	(0020,1040)	-
Slice Location	(0020,1041)	<from Original>
Image Comments	(0020,4000)	<from Original>
Samples per Pixel	(0028,0002)	1
Photometric Interpretation	(0028,0004)	MONOCHROME2
Rows	(0028,0010)	512
Columns	(0028,0011)	512
Pixel Spacing	(0028,0030)	<calculated by system>
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	16

Table 14: Pulmo CT

Attribute Name	Tag	Value
Bits Stored	(0028,0101)	12
High Bit	(0028,0102)	11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Pixel Padding Value	(0028,0120)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	-
Window Center	(0028,1050)	<yes>
Window Width	(0028,1051)	<yes>
Rescale Intercept	(0028,1052)	<yes>
Rescale Slope	(0028,1053)	<yes>
Window Center & Width Explanation	(0028,1055)	<yes>
Lossy Image Compression	(0028,2110)	-
Lossy Image Compression Ratio	(0028,2112)	-
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	-
Performed Procedure Step Start Date	(0040,0244)	-
Performed Procedure Step Start Time	(0040,0245)	-
Performed Procedure Step Description	(0040,0254)	-
Performed Protocol Code Sequence	(0040,0260)	-
> Code Sequence Macro		-
Comments on the Performed Procedure Step	(0040,0280)	-

Table 14: Pulmo CT

Attribute Name	Tag	Value
Icon Image Sequence	(0088,0200)	-
> Image Pixel Module		-
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	<yes>
Overlay Columns	(60xx,0011)	<yes>
Overlay Description	(60xx,0022)	<yes>
Overlay Subtype	(60xx,0045)	<yes>
Overlay Type	(60xx,0040)	<yes>
Overlay Origin	(60xx,0050)	<yes>
Overlay Bits Allocated	(60xx,0100)	<yes>
Overlay Bit Position	(60xx,0102)	<yes>
ROI Area	(60xx,1301)	<yes>
ROI Mean	(60xx,1302)	<yes>
ROI Standard Deviation	(60xx,1303)	<yes>
Overlay Label	(60xx,1500)	<yes>
Overlay Data	(60xx,3000)	<yes>
Pixel Data	(7FE0,0010)	<yes>

A.1.11 Volume CT

Somaris/5 Volume application will create CT result images (for SC result images see A.2). The following table provides information about image attributes created:

Table 15: Volume CT, saved CT Images

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	<from original series or study>
Image Type	(0008,0008)	axial MIP or MinIP: "DERIVED", "SECONDARY", "AXIAL", "CT_SOM5 MIP"; axial MPR: "DERIVED", "SECONDARY", "AXIAL", "CT_SOM5 MPR"; coronal/sagittal MPR: "DERIVED", "SECONDARY", "OTHER", "CT_SOM5 MPR"
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.2
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>

Table 15: Volume CT, saved CT Images

Attribute Name	Tag	Value
Series Date	(0008,0021)	<date of series creation>
Acquisition Date	(0008,0022)	<from original image>
Content Date	(0008,0023)	<date of instance creation>
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<time of series creation>
Acquisition Time	(0008,0032)	<from original image>
Content Time	(0008,0033)	<time of instance creation>
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	“CT”
Manufacturer	(0008,0070)	<from original equipment>
Institution Name	(0008,0080)	<from original equipment>
Institution Address	(0008,0081)	<from original equipment>
Referring Physician’s Name	(0008,0090)	<from original study>
Station Name	(0008,1010)	<from original equipment>
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	“VolumeResult<i>” and “VolumeAxial<i>“, where <i> is an integer >= 1
Institutional Department Name	(0008,1040)	<from original equipment>
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians’ Name	(0008,1050)	<from original series>
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator’s Name	(0008,1070)	<from original series> + “meduser“
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer’s Model Name	(0008,1090)	<from original equipment>
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	<from original series>
> Referenced SOP Class UID	(0008,1150)	<from original series>
> Referenced SOP Instance UID	(0008,1155)	<from original series>
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>

Table 15: Volume CT, saved CT Images

Attribute Name	Tag	Value
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	"Som5 Volume Resampled"
Source Image Sequence	(0008,2112)	<Reference to an original image>
> Referenced SOP Class UID	(0008,1150)	<Reference to an original image>
> Referenced SOP Instance UID	(0008,1155)	<Reference to an original image>
> Referenced Frame Number	(0008,1160)	-
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Contrast/Bolus Agent	(0018,0010)	-
Contrast/Bolus Agent Sequence	(0018,0012)	-
> Code Sequence Macro		-
Contrast/Bolus Administration Route Sequence	(0018,0012)	-
> Code Sequence Macro		-
>Additional Drug Sequence	(0018,002A)	-
>> Code Sequence Macro		-
Body Part Examined	(0018,0015)	<from original series>
Slice Thickness	(0018,0050)	<from Volume configuration or UI>
Scan Options	(0018,0022)	<from original image>

Table 15: Volume CT, saved CT Images

Attribute Name	Tag	Value
KVP	(0018,0060)	<from original image>
Data Collection Diameter	(0018,0090)	<from original image>
Device Serial Number	(0018,1000)	<from original equipment>
Software Version(s)	(0018,1020)	<from original equipment>
Protocol Name	(0018,1030)	<from original series>
Contrast/Bolus Route	(0018,1040)	-
Contrast/Bolus Volume	(0018,1041)	-
Contrast/Bolus Start Time	(0018,1042)	-
Contrast/Bolus Stop Time	(0018,1043)	-
Contrast/Bolus Total Dose	(0018,1044)	-
Contrast Flow Rate(s)	(0018,1046)	-
Contrast Flow Duration(s)	(0018,1047)	-
Contrast/Bolus Ingredient	(0018,1048)	-
Contrast/Bolus Ingredient Concentration	(0018,1049)	-
Spatial Resolution	(0018,1050)	<from original equipment>
Reconstruction Diameter	(0018,1100)	<from original image>
Distance Source to Detector	(0018,1110)	<from original image>
Distance Source to Patient	(0018,1111)	<from original image>
Gantry/Detector Tilt	(0018,1120)	<from original image>
Table Height	(0018,1130)	<from original image>
Rotation Direction	(0018,1140)	<from original image>
Exposure Time	(0018,1150)	<from original image>
X-Ray Tube Current	(0018,1151)	<from original image>
Exposure	(0018,1152)	<from original image>
Exposure in μ As	(0018,1153)	-
Filter Type	(0018,1160)	<from original image>
Generator Power	(0018,1170)	<from original image>
Focal Spot	(0018,1190)	<from original image>
Date of last Calibration	(0018,1200)	<from original equipment>
Time of last Calibration	(0018,1201)	<from original equipment>
Convolution Kernel	(0018,1210)	<first value from original image>
Patient Position	(0018,5100)	<from original series>
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<new UID>

Table 15: Volume CT, saved CT Images

Attribute Name	Tag	Value
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<(highest available ID + 1)>
Acquisition Number	(0020,0012)	<from original image>
Instance Number	(0020,0013)	axial MIP/MPR: 1 coronal MPR: 2 sagittal MPR: 3 current axial image: 5
Patient Orientation	(0020,0020)	-
Image Position (Patient)	(0020,0032)	<calculated by application>
Image Orientation (Patient)	(0020,0037)	<calculated by application>
Frame of Reference UID	(0020,0052)	<from original series>
Laterality	(0020,0060)	<from original series>
Images in Acquisition	(0020,1002)	-
Position Reference Indicator	(0020,1040)	<from original series>
Slice Location	(0020,1041)	axial MIP/MPR: <calculated by application> coronal/sagittal MPR: -
Image Comments	(0020,4000)	<from original image, or null length if not available>
Samples per Pixel	(0028,0002)	<from original image>
Photometric Interpretation	(0028,0004)	<from original image>
Rows	(0028,0010)	<from original image>
Columns	(0028,0011)	<from original image>
Pixel Spacing	(0028,0030)	<from original image, or calculated by application>
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	<from original image>
Bits Stored	(0028,0101)	<from original image>
High Bit	(0028,0102)	<from original image>
Pixel Representation	(0028,0103)	<from original image>
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Pixel Padding Value	(0028,0120)	<from original equipment>
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	-
Window Center	(0028,1050)	<from current widow setting in UI>
Window Width	(0028,1051)	<from current widow setting in UI>

Table 15: Volume CT, saved CT Images

Attribute Name	Tag	Value
Rescale Intercept	(0028,1052)	<from original images>
Rescale Slope	(0028,1053)	<from original images>
Window Center & Width Explanation	(0028,1055)	“WINDOW1”
Lossy Image Compression	(0028,2110)	01 if original image was lossy compressed 00 otherwise
Lossy Image Compression Ratio	(0028,2112)	-
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
Requested Procedure Description	(0032,1060)	
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	<from original series>
Performed Procedure Step Start Date	(0040,0244)	<from original series>
Performed Procedure Step Start Time	(0040,0245)	<from original series>
Performed Procedure Step Description	(0040,0254)	<from original series>
Performed Protocol Code Sequence	(0040,0260)	<from original series>
> Code Sequence Macro		<from original series>
Comments on the Performed Procedure Step	(0040,0280)	<from original series>
Icon Image Sequence	(0088,0200)	(unknown) -
> Image Pixel Module		-
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	<image rows (normally 512)>
Overlay Columns	(60xx,0011)	<image columns (normally 512)>
Number of Frames in Overlay	(60xx,0015)	1
Overlay Description	(60xx,0022)	“Siemens MedCom Object Graphics“ or -
Overlay Type	(60xx,0040)	“G”
Overlay Subtype	(60xx,0045)	-
Origin	(60xx,0050)	“1”, “1”
Image Frame Origin	(60xx,0051)	“1”

Table 15: Volume CT, saved CT Images

Attribute Name	Tag	Value
Overlay Origin	(60xx,0060)	-
Overlay Bits Allocated	(60xx,0100)	1
Overlay Bit Position	(60xx,0102)	0
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	<binary data>
Pixel Data	(7FE0,0010)	<binary data>

A.2 SC Standard Extended SOP Class

The Somaris/5 application will create functional images from special applications. Those will be encoded as SC Standard extended SOP Class. Please see the following tables for a selected overview of supplied Standard and Private attributes.

A.2.1 Calcium Scoring

Somaris/5 Calcium Scoring will create Result Table images. The following table provides information about image attributes created:

Table 16: Calcium Scoring Result Table Image

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	"ISO_IR 100"
Image Type	(0008,0008)	"DERIVED", "SECONDARY", "OTHER", "CT_SOM5 TAB"
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.7
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<date of series creation>
Acquisition Date	(0008,0022)	<as Original>
Content Date	(0008,0023)	<date of instance creation>
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>

Table 16: Calcium Scoring Result Table Image

Attribute Name	Tag	Value
Series Time	(0008,0031)	<time of series creation>
Acquisition Time	(0008,0032)	<as Original>
Content Time	(0008,0033)	<time of instance creation>
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	“CT”
Conversion Type	(0008,0064)	“WSD”
Manufacturer	(0008,0070)	“SIEMENS”
Institution Name	(0008,0080)	<from original equipment>
Institution Address	(0008,0081)	<from station running CaScoring>
Referring Physician’s Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	<from station running CaScoring>
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	“CaScoring_Docu_<i>”, where <i> is an integer >= 1
Institutional Department Name	(0008,1040)	<from station running CaScoring>
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians’ Name	(0008,1050)	<from original series>
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator’s Name	(0008,1070)	<from original series> + “meduser”
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer’s Model Name	(0008,1090)	<from station running CaScoring>+”CaScoring” (here: “syngoMMWPCaScoring”)
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	<from original series>
> Referenced SOP Class UID	(0008,1150)	<from original series>
> Referenced SOP Instance UID	(0008,1155)	<from original series>
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-

Table 16: Calcium Scoring Result Table Image

Attribute Name	Tag	Value
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	“MEDCOM RESAMPLED“
Source Image Sequence	(0008,2112)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Private Creator	(0009,00xx)	-
Patient’s Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient’s Birth Date	(0010,0030)	<as Original>
Patient’s Birth Time	(0010,0032)	<as Original>
Patient’s Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient’s Age	(0010,1010)	<as Original>
Patient’s Size	(0010,1020)	<as Original>
Patient’s Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient’s History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Body Part Examined	(0018,0015)	<from original series>
Device Serial Number	(0018,1000)	<from original equipment>
Secondary Capture Device ID	(0018,1010)	<hostname where CaScoring created this image>
Date of Secondary Capture	(0018,1012)	<date of instance creation>
Time of Secondary Capture	(0018,1014)	<date of instance creation>
Secondary Capture Device Manufacturer	(0018,1016)	“SIEMENS”
Secondary Capture Device Manufacturer’s Model Name	(0018,1018)	<from station running CaScoring>+”CaScoring” (here: “syngoMMWPCaScoring“)
Secondary Capture Device Software Version	(0018,1019)	<from station running CaScoring>
Software Version(s)	(0018,1020)	<from station running CaScoring>
Video Image Format Acquired	(0018,1022)	-
Digital Image Format Acquired	(0018,1023)	-
Protocol Name	(0018,1030)	<from original series>
Spatial Resolution	(0018,1050)	<from original equipment>

Table 16: Calcium Scoring Result Table Image

Attribute Name	Tag	Value
Date of Last Calibration	(0018,1200)	<from original equipment>
Time of Last Calibration	(0018,1201)	<from original equipment>
Patient Position	(0018,5100)	<from original series>
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<(highest available ID + 1)>
Acquisition Number	(0020,0012)	-
Instance Number	(0020,0013)	“0”
Patient Orientation	(0020,0020)	“L”, “P”
Laterality	(0020,0060)	<from original series>
Images in Acquisition	(0020,1002)	-
Image Comments	(0020,4000)	-
Samples per Pixel	(0028,0002)	1
Photometric Interpretation	(0028,0004)	MONOCHROME2
Rows	(0028,0010)	512
Columns	(0028,0011)	512
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	16
Bits Stored	(0028,0101)	12
High Bit	(0028,0102)	11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	0
Largest Pixel Value in Series	(0028,0109)	4095
Pixel Padding Value	(0028,0120)	<from original equipment>
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	-
Window Center	(0028,1050)	200
Window Width	(0028,1051)	50
Rescale Intercept	(0028,1052)	-
Rescale Slope	(0028,1053)	-
Rescale Type	(0028,1054)	-

Table 16: Calcium Scoring Result Table Image

Attribute Name	Tag	Value
Window Center & Width Explanation	(0028,1055)	“WINDOW1“
Lossy Image Compression	(0028,2110)	-
Lossy Image Compression Ratio	(0028,2112)	-
Modality LUT Sequence	(0028,3000)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
>Modality LUT Type	(0028,3004)	-
> LUT Data	(0028,3006)	-
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
Requested Procedure Description	(0032,1060)	
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	<from original series>
Performed Procedure Step Start Date	(0040,0244)	<from original series>
Performed Procedure Step Start Time	(0040,0245)	<from original series>
Performed Procedure Step Description	(0040,0254)	<from original series>
Performed Protocol Code Sequence	(0040,0260)	<from original series>
> Code Sequence Macro		<from original series>
Comments on the Performed Procedure Step	(0040,0280)	<from original series>
Icon Image Sequence	(0088,0200)	(unknown) -
> Image Pixel Module		-
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	512
Overlay Columns	(60xx,0011)	512
Number of Frames in Overlay	(60xx,0015)	1
Overlay Description	(60xx,0022)	“Siemens MedCom Object Graphics“
Overlay Type	(60xx,0040)	“G”

Table 16: Calcium Scoring Result Table Image

Attribute Name	Tag	Value
Overlay Subtype	(60xx,0045)	-
Origin	(60xx,0050)	“1”, “1”
Image Frame Origin	(60xx,0051)	“1”
Overlay Origin	(60xx,0050)	-
Overlay Bits Allocated	(60xx,0100)	1
Overlay Bit Position	(60xx,0102)	0
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	<binary data>
Pixel Data	(7FE0,0010)	<binary data>

A.2.2 DynEva

Somaris/5 DynEva application will create SC result images (for CT result images see A.1). The following table provides information about image attributes created:

Table 17: DynEva created SC Images

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	ISO_IR 100
Image Type	(0008,0008)	"DERIVED", "SECONDARY", "OTHER", "CSA BLACK IMAGE"
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.7
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	date of series creation
Acquisition Date	(0008,0022)	-
Content Date	(0008,0023)	date of content creation
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	time of series creation
Acquisition Time	(0008,0032)	-

Table 17: DynEva created SC Images

Attribute Name	Tag	Value
Content Time	(0008,0033)	time of content creation
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	CT
Conversion Type	(0008,0064)	WSD
Manufacturer	(0008,0070)	Siemens
Institution Name	(0008,0080)	(taken from the local config)
Institution Address	(0008,0081)	-
Referring Physician's Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	name of computer
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	"DynEva Curves+<Examination Number>", "DynEva Parameters+<Examination Number>"
Institutional Department Name	(0008,1040)	-
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians' Name	(0008,1050)	from original
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator's Name	(0008,1070)	
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer's Model Name	(0008,1090)	from original
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	Som5 DynEva Resampled

Table 17: DynEva created SC Images

Attribute Name	Tag	Value
Source Image Sequence	(0008,2112)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Private Creator	(0009,00xx)	-
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Body Part Examined	(0018,0015)	(source unknown)
Device Serial Number	(0018,1000)	taken from the local config
Secondary Capture Device ID	(0018,1010)	-
Date of Secondary Capture	(0018,1012)	date of SC creation
Time of Secondary Capture	(0018,1014)	time of SC creation
Secondary Capture Device Manufacturer	(0018,1016)	-
Secondary Capture Device Manufacturer's Model Name	(0018,1018)	-
Secondary Capture Device Software Version	(0018,1019)	-
Software Version(s)	(0018,1020)	set to the current version (source unknown)
Video Image Format Acquired	(0018,1022)	-
Digital Image Format Acquired	(0018,1023)	-
Protocol Name	(0018,1030)	protocolname of the current series
Spatial Resolution	(0018,1050)	-
Patient Position	(0018,5100)	position of the patient
Study Instance UID	(0020,000D)	<as Original>

Table 17: DynEva created SC Images

Attribute Name	Tag	Value
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<highest series number + 1>
Acquisition Number	(0020,0012)	-
Instance Number	(0020,0013)	1 (source unknown)
Patient Orientation	(0020,0020)	created by application
Laterality	(0020,0060)	-
Images in Acquisition	(0020,1002)	-
Image Comments	(0020,4000)	-
Private Creator	(0021,00xx)	-
Target	(0021,xx11)	-
Samples per Pixel	(0028,0002)	1
Photometric Interpretation	(0028,0004)	MONOCHROME2
Rows	(0028,0010)	512
Columns	(0028,0011)	512
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	16
Bits Stored	(0028,0101)	12
High Bit	(0028,0102)	11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Pixel Padding Value	(0028,0120)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	-
Window Center	(0028,1050)	-
Window Width	(0028,1051)	-
Rescale Intercept	(0028,1052)	-
Rescale Slope	(0028,1053)	-
Rescale Type	(0028,1054)	-
Window Center & Width Explanation	(0028,1055)	“WINDOW1”
Lossy Image Compression	(0028,2110)	-

Table 17: DynEva created SC Images

Attribute Name	Tag	Value
Lossy Image Compression Ratio	(0028,2112)	-
Modality LUT Sequence	(0028,3000)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
>Modality LUT Type	(0028,3004)	-
> LUT Data	(0028,3006)	-
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
Pixel Padding Value	(0028,1020)	-
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	-
Performed Procedure Step Start Date	(0040,0244)	-
Performed Procedure Step Start Time	(0040,0245)	-
Performed Procedure Step Description	(0040,0254)	-
Performed Protocol Code Sequence	(0040,0260)	-
> Code Sequence Macro		-
Comments on the Performed Procedure Step	(0040,0280)	-
Icon Image Sequence	(0088,0200)	-
> Image Pixel Module		-
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	-
Overlay Columns	(60xx,0011)	-
Overlay Description	(60xx,0022)	-
Overlay Subtype	(60xx,0045)	-
Overlay Type	(60xx,0040)	-
Overlay Origin	(60xx,0050)	-
Overlay Bits Allocated	(60xx,0100)	-

Table 17: DynEva created SC Images

Attribute Name	Tag	Value
Overlay Bit Position	(60xx,0102)	-
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	-
Pixel Data	(7FE0,0010)	binary (524288 bytes)

A.2.3 InSpace

Somaris/5 InSpace application will create SC result images. The following table provides information about image attributes created:

Table 18: InSpace

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	from Original
Image Type	(0008,0008)	“DERIVED\SECONDARY\OTHER\CSA 3DPROJECTION” or “DERIVED\SECONDARY\OTHER\ CSA BOOKMARK\RT3D CONFIG”
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.7
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<yyyymmdd>
Acquisition Date	(0008,0022)	-
Content Date	(0008,0023)	<yyyymmdd>
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<hhmmss>
Acquisition Time	(0008,0032)	-
Content Time	(0008,0033)	<hhmmss>
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	CT or OT

Table 18: InSpace

Attribute Name	Tag	Value
Conversion Type	(0008,0064)	WSD
Manufacturer	(0008,0070)	"HipGraphics"
Institution Name	(0008,0080)	from Configuration
Institution Address	(0008,0081)	from Configuration
Referring Physician's Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	from WS Configuration
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	created
Institutional Department Name	(0008,1040)	from Original
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians' Name	(0008,1050)	(input only via "Correct")
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator's Name	(0008,1070)	-
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer's Model Name	(0008,1090)	from Original or InSpace
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	"MEDCOM RESAMPLED" or "INSPACE RECORD"
Source Image Sequence	(0008,2112)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-

Table 18: InSpace

Attribute Name	Tag	Value
> Referenced Frame Number	(0008,1160)	-
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Body Part Examined	(0018,0015)	-
Device Serial Number	(0018,1000)	from Configuration
Secondary Capture Device ID	(0018,1010)	from Configuration
Date of Secondary Capture	(0018,1012)	<yyyymmdd>
Time of Secondary Capture	(0018,1014)	<hhmmss>
Secondary Capture Device Manufacturer	(0018,1016)	"HipGraphics"
Secondary Capture Device Manufacturer's Model Name	(0018,1018)	"InSpace Postprocessing"
Secondary Capture Device Software Version	(0018,1019)	created
Software Version(s)	(0018,1020)	from WS Configuration
Video Image Format Acquired	(0018,1022)	-
Digital Image Format Acquired	(0018,1023)	-
Protocol Name	(0018,1030)	-
Spatial Resolution	(0018,1050)	-
Patient Position	(0018,5100)	-
Private Creator	(0019,00xx)	-
Feed per Rotation	(0019,xxB0)	-
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>

Table 18: InSpace

Attribute Name	Tag	Value
Series Number	(0020,0011)	from Original
Acquisition Number	(0020,0012)	-
Instance Number	(0020,0013)	from Original
Patient Orientation	(0020,0020)	
Laterality	(0020,0060)	-
Images in Acquisition	(0020,1002)	-
Image Comments	(0020,4000)	
Private Creator	(0021,00xx)	-
Target	(0021,xx11)	-
Samples per Pixel	(0028,0002)	3
Photometric Interpretation	(0028,0004)	RGB
Rows	(0028,0010)	
Columns	(0028,0011)	
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	8
Bits Stored	(0028,0101)	8
High Bit	(0028,0102)	7
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Pixel Padding Value	(0028,0120)	from Original
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	-
Window Center	(0028,1050)	-
Window Width	(0028,1051)	-
Rescale Intercept	(0028,1052)	-
Rescale Slope	(0028,1053)	-
Rescale Type	(0028,1054)	-
Window Center & Width Explanation	(0028,1055)	-
Red Palette Color Lookup Table Descriptor	(0028,1101)	-
Green Palette Color Lookup Table Descriptor	(0028,1102)	-
Blue Palette Color Lookup Table Descriptor	(0028,1103)	-

Table 18: InSpace

Attribute Name	Tag	Value
Red Palette Color Lookup Table Data	(0028,1201)	-
Green Palette Color Lookup Table Data	(0028,1202)	-
Blue Palette Color Lookup Table Data	(0028,1203)	-
Lossy Image Compression	(0028,2110)	-
Lossy Image Compression Ratio	(0028,2112)	-
Modality LUT Sequence	(0028,3000)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
>Modality LUT Type	(0028,3004)	-
> LUT Data	(0028,3006)	-
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
Private information	(0029,xxxx)	
Request Attributes Sequence	(0040,0275)	<as Original> (not for Bookmark images)
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	-
Performed Procedure Step Start Date	(0040,0244)	-
Performed Procedure Step Start Time	(0040,0245)	-
Performed Procedure Step Description	(0040,0254)	-
Performed Protocol Code Sequence	(0040,0260)	-
> Code Sequence Macro		
Comments on the Performed Procedure Step	(0040,0280)	-
Icon Image Sequence	(0088,0200)	-
> Image Pixel Module		
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	-
Overlay Columns	(60xx,0011)	-
Overlay Description	(60xx,0022)	-

Table 18: InSpace

Attribute Name	Tag	Value
Overlay Subtype	(60xx,0045)	-
Overlay Type	(60xx,0040)	-
Overlay Origin	(60xx,0050)	-
Overlay Bits Allocated	(60xx,0100)	-
Overlay Bit Position	(60xx,0102)	-
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	-
Pixel Data	(7FE0,0010)	

A.2.4 Lung Care Save Images

Somaris/5 Lung Care will create SC save images (for CT save images see A.1). They are not intended for viewing but for reporting purposes - and they can be stored/transferred via DICOM. The following table provides information about image attributes created:

Table 19: CT LungCARE - SC Save Images

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	<yes>
Image Type	(0008,0008)	“DERIVED\SECONDARY\OTHER\MPR\LC VALID WINDOW” or “DERIVED\SECONDARY\OTHER\MIP\LC VALID WINDOW” or “DERIVED\SECONDARY\OTHER\VRT\LC VALID WINDOW” or “DERIVED\SECONDARY\OTHER\PVRT\LC VALID WINDOW”
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.1.2.1
SOP Instance UID	(0008,0018)	<new Uid>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<creation date>

Table 19: CT LungCARE - SC Save Images

Attribute Name	Tag	Value
Acquisition Date	(0008,0022)	<yes>
Content Date	(0008,0023)	<yes>
Acquisition Datetime	(0008,002A)	
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<creation time>
Acquisition Time	(0008,0032)	<yes>
Content Time	(0008,0033)	<yes>
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	“SC”
Conversion Type	(0008,0064)	
Manufacturer	(0008,0070)	“Siemens Med CT”
Institution Name	(0008,0080)	<yes>
Institution Address	(0008,0081)	-
Referring Physician’s Name	(0008,0090)	
Station Name	(0008,1010)	-
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	“SCREENING #1_result_1_3_MPR” or “SCREENING #1_result_1_4_MIP” or “SCREENING #1_result_1_5_VRT”
Institutional Department Name	(0008,1040)	
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians’ Name	(0008,1050)	<yes>
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator’s Name	(0008,1070)	
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer’s Model Name	(0008,1090)	<yes>
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	

Table 19: CT LungCARE - SC Save Images

Attribute Name	Tag	Value
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	
Derivation Description	(0008,2111)	
Source Image Sequence	(0008,2112)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Body Part Examined	(0018,0015)	
Device Serial Number	(0018,1000)	
Secondary Capture Device ID	(0018,1010)	
Date of Secondary Capture	(0018,1012)	
Time of Secondary Capture	(0018,1014)	
Secondary Capture Device Manufacturer	(0018,1016)	
Secondary Capture Device Manufacturer's Model Name	(0018,1018)	
Secondary Capture Device Software Version	(0018,1019)	

Table 19: CT LungCARE - SC Save Images

Attribute Name	Tag	Value
Software Version(s)	(0018,1020)	<yes>
Video Image Format Acquired	(0018,1022)	
Digital Image Format Acquired	(0018,1023)	
Protocol Name	(0018,1030)	
Spatial Resolution	(0018,1050)	
Patient Position	(0018,5100)	
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<yes>
Acquisition Number	(0020,0012)	
Instance Number	(0020,0013)	
Patient Orientation	(0020,0020)	
Laterality	(0020,0060)	
Images in Acquisition	(0020,1002)	
Image Comments	(0020,4000)	
Samples per Pixel	(0028,0002)	3
Photometric Interpretation	(0028,0004)	"RGB"
Rows	(0028,0010)	512
Columns	(0028,0011)	512
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	16
Bits Stored	(0028,0101)	12
High Bit	(0028,0102)	11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Pixel Padding Value	(0028,0120)	
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	-
Window Center	(0028,1050)	-\50
Window Width	(0028,1051)	-\400

Table 19: CT LungCARE - SC Save Images

Attribute Name	Tag	Value
Rescale Intercept	(0028,1052)	-
Rescale Slope	(0028,1053)	-
Rescale Type	(0028,1054)	-
Window Center & Width Explanation	(0028,1055)	WINDOW1\WINDOW2
Lossy Image Compression	(0028,2110)	
Lossy Image Compression Ratio	(0028,2112)	
Modality LUT Sequence	(0028,3000)	
> LUT Descriptor	(0028,3002)	
> LUT Explanation	(0028,3003)	
>Modality LUT Type	(0028,3004)	
> LUT Data	(0028,3006)	
VOI LUT Sequence	(0028,3010)	
> LUT Descriptor	(0028,3002)	
> LUT Explanation	(0028,3003)	
> LUT Data	(0028,3006)	
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	
Performed Procedure Step Start Date	(0040,0244)	
Performed Procedure Step Start Time	(0040,0245)	
Performed Procedure Step Description	(0040,0254)	
Performed Protocol Code Sequence	(0040,0260)	
> Code Sequence Macro		
Comments on the Performed Procedure Step	(0040,0280)	
Icon Image Sequence	(0088,0200)	
> Image Pixel Module		
Presentation LUT Shape	(2050,0020)	
Overlay Rows	(60xx,0010)	
Overlay Columns	(60xx,0011)	
Overlay Description	(60xx,0022)	

Table 19: CT LungCARE - SC Save Images

Attribute Name	Tag	Value
Overlay Subtype	(60xx,0045)	
Overlay Type	(60xx,0040)	
Overlay Origin	(60xx,0060)	
Overlay Bits Allocated	(60xx,0100)	
Overlay Bit Position	(60xx,0102)	
ROI Area	(60xx,1301)	
ROI Mean	(60xx,1302)	
ROI Standard Deviation	(60xx,1303)	
Overlay Label	(60xx,1500)	
Overlay Data	(60xx,3000)	
Pixel Data	(7FE0,0010)	<yes>

A.2.5 Lung Care Report Images

Somaris/5 Lung Care will create SC report images. They are not intended for viewing but for reporting purposes - and they can be stored/transferred via DICOM. The following table provides information about image attributes created:

Table 20: CT LungCARE - Report Images

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	<yes>
Image Type	(0008,0008)	“DERIVED\SECONDARY\OTHER\MIP\LC VALID WINDOW” or “DERIVED\SECONDARY\OTHER\MPR\LC VALID WINDOW” or “DERIVED\SECONDARY\OTHER\VRT\LC VALID WINDOW” or “DERIVED\SECONDARY\OTHER\PVRT\LC VALID WINDOW”
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.1.2.1
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<creation date>
Acquisition Date	(0008,0022)	<yes>

Table 20: CT LungCARE - Report Images

Attribute Name	Tag	Value
Content Date	(0008,0023)	
Acquisition Datetime	(0008,002A)	
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<creation time>
Acquisition Time	(0008,0032)	<yes>
Content Time	(0008,0033)	
Accession Number	(0008,0050)	-
Modality	(0008,0060)	“SC”
Conversion Type	(0008,0064)	
Manufacturer	(0008,0070)	“Siemens Med SW”
Institution Name	(0008,0080)	<yes>
Institution Address	(0008,0081)	-
Referring Physician’s Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	-
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	e.g. “SCREENING #1_sr_1_image”
Institutional Department Name	(0008,1040)	
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians’ Name	(0008,1050)	<yes>
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator’s Name	(0008,1070)	
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer’s Model Name	(0008,1090)	<yes>
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>

Table 20: CT LungCARE - Report Images

Attribute Name	Tag	Value
Referenced Image Sequence	(0008,1140)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	
Derivation Description	(0008,2111)	
Source Image Sequence	(0008,2112)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Body Part Examined	(0018,0015)	<as Original>
Device Serial Number	(0018,1000)	
Secondary Capture Device ID	(0018,1010)	-
Date of Secondary Capture	(0018,1012)	-
Time of Secondary Capture	(0018,1014)	-
Secondary Capture Device Manufacturer	(0018,1016)	-
Secondary Capture Device Manufacturer's Model Name	(0018,1018)	<yes>
Secondary Capture Device Software Version	(0018,1019)	<yes>
Software Version(s)	(0018,1020)	<yes>
Video Image Format Acquired	(0018,1022)	-
Digital Image Format Acquired	(0018,1023)	-

Table 20: CT LungCARE - Report Images

Attribute Name	Tag	Value
Protocol Name	(0018,1030)	
Spatial Resolution	(0018,1050)	
Patient Position	(0018,5100)	-
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<yes>
Acquisition Number	(0020,0012)	
Instance Number	(0020,0013)	
Patient Orientation	(0020,0020)	
Laterality	(0020,0060)	
Images in Acquisition	(0020,1002)	
Image Comments	(0020,4000)	
Samples per Pixel	(0028,0002)	3 or 1
Photometric Interpretation	(0028,0004)	"RGB" or "MONOCHROME2"
Rows	(0028,0010)	484/512 or 512
Columns	(0028,0011)	484/512 or 512
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	8 or 16
Bits Stored	(0028,0101)	8 or 12
High Bit	(0028,0102)	7 or 11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0300)	-
Window Center	(0028,1050)	-/50 or 1200/50 or 1200/450
Window Width	(0028,1051)	-/400 or -400/400 or -400/30
Rescale Intercept	(0028,1052)	- or -1024
Rescale Slope	(0028,1053)	- or 1
Rescale Type	(0028,1054)	-
Window Center & Width Explanation	(0028,1055)	WINDOW1/WINDOW2

Table 20: CT LungCARE - Report Images

Attribute Name	Tag	Value
Pixel Padding Value	(0028,1020)	
Lossy Image Compression	(0028,2110)	
Lossy Image Compression Ratio	(0028,2112)	
Modality LUT Sequence	(0028,3000)	
> LUT Descriptor	(0028,3002)	
> LUT Explanation	(0028,3003)	
>Modality LUT Type	(0028,3004)	
> LUT Data	(0028,3006)	
VOI LUT Sequence	(0028,3010)	
> LUT Descriptor	(0028,3002)	
> LUT Explanation	(0028,3003)	
> LUT Data	(0028,3006)	
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	
Performed Procedure Step Start Date	(0040,0244)	
Performed Procedure Step Start Time	(0040,0245)	
Performed Procedure Step Description	(0040,0254)	
Performed Protocol Code Sequence	(0040,0260)	
> Code Sequence Macro		
Comments on the Performed Procedure Step	(0040,0280)	
Icon Image Sequence	(0088,0200)	
> Image Pixel Module		
Presentation LUT Shape	(2050,0020)	
Pixel Data	(7FE0,0010)	<yes>

A.2.6 Osteo

Somaris/5 Osteo will create SC result images (for CT result images see A.1). The following table provides information about image attributes created:

Table 21: Osteo - SC Image

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	ISO_IR 100
Image Type	(0008,0008)	"DERIVED", "SECONDARY", "OTHER", "CSA BLACK IMAGE"
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.7
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<Date of series creation>
Acquisition Date	(0008,0022)	-
Content Date	(0008,0023)	<Date of image creation>
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<Time of series creation>
Acquisition Time	(0008,0032)	-
Content Time	(0008,0033)	<Time of image creation>
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	CT
Conversion Type	(0008,0064)	WSD
Manufacturer	(0008,0070)	SIEMENS
Institution Name	(0008,0080)	-
Institution Address	(0008,0081)	-
Referring Physician's Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	-
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	< one of: Contours, Tables, Summary>
Institutional Department Name	(0008,1040)	-
Physician(s) of Record	(0008,1048)	<as Original>

Table 21: Osteo - SC Image

Attribute Name	Tag	Value
Performing Physicians' Name	(0008,1050)	-
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator's Name	(0008,1070)	-
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer's Model Name	(0008,1090)	-
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	-
Source Image Sequence	(0008,2112)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>

Table 21: Osteo - SC Image

Attribute Name	Tag	Value
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Body Part Examined	(0018,0015)	-
Device Serial Number	(0018,1000)	-
Secondary Capture Device ID	(0018,1010)	-
Date of Secondary Capture	(0018,1012)	<Date of instance creation>
Time of Secondary Capture	(0018,1014)	<Time of instance creation>
Secondary Capture Device Manufacturer	(0018,1016)	-
Secondary Capture Device Manufacturer's Model Name	(0018,1018)	-
Secondary Capture Device Software Version	(0018,1019)	-
Software Version(s)	(0018,1020)	-
Video Image Format Acquired	(0018,1022)	-
Digital Image Format Acquired	(0018,1023)	-
Protocol Name	(0018,1030)	-
Spatial Resolution	(0018,1050)	-
Patient Position	(0018,5100)	-
Private Creator	(0019,00xx)	-
Feed per Rotation	(0019,xxB0)	-
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<last existing series + 1>
Acquisition Number	(0020,0012)	-
Instance Number	(0020,0013)	-
Patient Orientation	(0020,0020)	-
Laterality	(0020,0060)	-
Images in Acquisition	(0020,1002)	-
Image Comments	(0020,4000)	-
Samples per Pixel	(0028,0002)	1
Photometric Interpretation	(0028,0004)	MONOCHROME2
Rows	(0028,0010)	512
Columns	(0028,0011)	512
Pixel Aspect Ratio	(0028,0034)	-

Table 21: Osteo - SC Image

Attribute Name	Tag	Value
Bits Allocated	(0028,0100)	16
Bits Stored	(0028,0101)	12
High Bit	(0028,0102)	11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Pixel Padding Value	(0028,0120)	-
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	-
Window Center	(0028,1050)	-
Window Width	(0028,1051)	-
Rescale Intercept	(0028,1052)	-
Rescale Slope	(0028,1053)	-
Rescale Type	(0028,1054)	-
Window Center & Width Explanation	(0028,1055)	-
Lossy Image Compression	(0028,2110)	-
Lossy Image Compression Ratio	(0028,2112)	-
Modality LUT Sequence	(0028,3000)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
>Modality LUT Type	(0028,3004)	-
> LUT Data	(0028,3006)	-
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>

Table 21: Osteo - SC Image

Attribute Name	Tag	Value
Performed Procedure Step ID	(0040,0253)	-
Performed Procedure Step Start Date	(0040,0244)	-
Performed Procedure Step Start Time	(0040,0245)	-
Performed Procedure Step Description	(0040,0254)	-
Performed Protocol Code Sequence	(0040,0260)	-
> Code Sequence Macro		-
Comments on the Performed Procedure Step	(0040,0280)	-
Icon Image Sequence	(0088,0200)	-
> Image Pixel Module		-
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	<yes>
Overlay Columns	(60xx,0011)	<yes>
Overlay Description	(60xx,0022)	-
Overlay Subtype	(60xx,0045)	<yes>
Overlay Type	(60xx,0040)	<yes>
Overlay Origin	(60xx,0050)	<yes>
Overlay Bits Allocated	(60xx,0100)	<yes>
Overlay Bit Position	(60xx,0102)	<yes>
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	<yes>
Pixel Data	(7FE0,0010)	<created by system>

A.2.7 Volume CT

Somaris/5 Volume application will create SC result images (for CT result images see A.1). The following table provides information about image attributes created:

Table 22: Volume CT, Result Image (CSA BLACK IMAGE)

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	“ISO_IR 100”
Image Type	(0008,0008)	“DERIVED”, “SECONDARY”, “OTHER”, “CSA BLACK IMAGE”

Table 22: Volume CT, Result Image (CSA BLACK IMAGE)

Attribute Name	Tag	Value
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.5.1.4.1.1.7
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<date of series creation>
Acquisition Date	(0008,0022)	-
Content Date	(0008,0023)	<date of instance creation>
Acquisition Datetime	(0008,002A)	-
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<time of series creation>
Acquisition Time	(0008,0032)	-
Content Time	(0008,0033)	<time of instance creation>
Accession Number	(0008,0050)	<as Original>
Modality	(0008,0060)	“CT”
Conversion Type	(0008,0064)	“WSD”
Manufacturer	(0008,0070)	<from original equipment>
Institution Name	(0008,0080)	<from original equipment>
Institution Address	(0008,0081)	<from original equipment>
Referring Physician’s Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	<from original equipment>
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	“VolumeResult<i>”, where <i> is an integer >= 1
Institutional Department Name	(0008,1040)	<from original equipment>
Physician(s) of Record	(0008,1048)	<as Original>
Performing Physicians’ Name	(0008,1050)	<from original series>
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator’s Name	(0008,1070)	<from original series> + “meduser“
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer’s Model Name	(0008,1090)	<from original equipment>
Referenced Study Sequence	(0008,1110)	<as Original>

Table 22: Volume CT, Result Image (CSA BLACK IMAGE)

Attribute Name	Tag	Value
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	<from original series>
> Referenced SOP Class UID	(0008,1150)	<from original series>
> Referenced SOP Instance UID	(0008,1155)	<from original series>
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Derivation Description	(0008,2111)	-
Source Image Sequence	(0008,2112)	-
> Referenced SOP Class UID	(0008,1150)	-
> Referenced SOP Instance UID	(0008,1155)	-
> Referenced Frame Number	(0008,1160)	-
Private Creator	(0009,00xx)	-
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Body Part Examined	(0018,0015)	<from original series>
Device Serial Number	(0018,1000)	<from original equipment>

Table 22: Volume CT, Result Image (CSA BLACK IMAGE)

Attribute Name	Tag	Value
Secondary Capture Device ID	(0018,1010)	-
Date of Secondary Capture	(0018,1012)	<date of instance creation> ?
Time of Secondary Capture	(0018,1014)	<date of instance creation> ?
Secondary Capture Device Manufacturer	(0018,1016)	-
Secondary Capture Device Manufacturer's Model Name	(0018,1018)	-
Secondary Capture Device Software Version	(0018,1019)	-
Software Version(s)	(0018,1020)	<from original equipment>
Video Image Format Acquired	(0018,1022)	-
Digital Image Format Acquired	(0018,1023)	-
Protocol Name	(0018,1030)	<from original series>
Spatial Resolution	(0018,1050)	<from original equipment>
Date of Last Calibration	(0018,1200)	<from original equipment>
Time of Last Calibration	(0018,1201)	<from original equipment>
Patient Position	(0018,5100)	<from original series>
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<(highest available ID + 1)>
Acquisition Number	(0020,0012)	-
Instance Number	(0020,0013)	4
Patient Orientation	(0020,0020)	(null length)
Laterality	(0020,0060)	<from original series>
Images in Acquisition	(0020,1002)	-
Image Comments	(0020,4000)	-
Samples per Pixel	(0028,0002)	1
Photometric Interpretation	(0028,0004)	MONOCHROME2
Rows	(0028,0010)	512
Columns	(0028,0011)	512
Pixel Aspect Ratio	(0028,0034)	-
Bits Allocated	(0028,0100)	16
Bits Stored	(0028,0101)	12
High Bit	(0028,0102)	11
Pixel Representation	(0028,0103)	0
Smallest Image Pixel Value	(0028,0106)	-

Table 22: Volume CT, Result Image (CSA BLACK IMAGE)

Attribute Name	Tag	Value
Largest Image Pixel Value	(0028,0107)	-
Smallest Pixel Value in Series	(0028,0108)	-
Largest Pixel Value in Series	(0028,0109)	-
Pixel Padding Value	(0028,0120)	<from original equipment>
Quality Control Image	(0028,0300)	-
Burned In Annotation	(0028,0301)	-
Window Center	(0028,1050)	-
Window Width	(0028,1051)	-
Rescale Intercept	(0028,1052)	-
Rescale Slope	(0028,1053)	-
Rescale Type	(0028,1054)	-
Window Center & Width Explanation	(0028,1055)	“WINDOW1“
Lossy Image Compression	(0028,2110)	-
Lossy Image Compression Ratio	(0028,2112)	-
Modality LUT Sequence	(0028,3000)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
>Modality LUT Type	(0028,3004)	-
> LUT Data	(0028,3006)	-
VOI LUT Sequence	(0028,3010)	-
> LUT Descriptor	(0028,3002)	-
> LUT Explanation	(0028,3003)	-
> LUT Data	(0028,3006)	-
Requested Procedure Description	(0032,1060)	
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	<from original series>
Performed Procedure Step Start Date	(0040,0244)	<from original series>
Performed Procedure Step Start Time	(0040,0245)	<from original series>
Performed Procedure Step Description	(0040,0254)	<from original series>

Table 22: Volume CT, Result Image (CSA BLACK IMAGE)

Attribute Name	Tag	Value
Performed Protocol Code Sequence	(0040,0260)	<from original series>
> Code Sequence Macro		<from original series>
Comments on the Performed Procedure Step	(0040,0280)	<from original series>
Icon Image Sequence	(0088,0200)	(unknown) -
> Image Pixel Module		-
Presentation LUT Shape	(2050,0020)	-
Overlay Rows	(60xx,0010)	512
Overlay Columns	(60xx,0011)	512
Number of Frames in Overlay	(60xx,0015)	1
Overlay Description	(60xx,0022)	“Siemens MedCom Object Graphics“
Overlay Type	(60xx,0040)	“G”
Overlay Subtype	(60xx,0045)	-
Origin	(60xx,0050)	“1”, “1”
Image Frame Origin	(60xx,0051)	“1”
Overlay Origin	(60xx,0050)	-
Overlay Bits Allocated	(60xx,0100)	1
Overlay Bit Position	(60xx,0102)	0
ROI Area	(60xx,1301)	-
ROI Mean	(60xx,1302)	-
ROI Standard Deviation	(60xx,1303)	-
Overlay Label	(60xx,1500)	-
Overlay Data	(60xx,3000)	<binary data>
Pixel Data	(7FE0,0010)	<binary data>

A.3 SR Document Standard Extended SOP Class

The Somaris/5 application will create reports from special applications. Those will be encoded as SR Document Standard extended SOP Class. Please see the following tables for a selected overview of supplied Standard and Private attributes.

A.3.1 Lung Care Structured Report

Somaris/5 Lung Care will create DICOM Structured Reports as result SR Documents. They are not intended for viewing but for reporting purposes - and they can be stored/transferred via DICOM. The following table provides information about image attributes created:

Table 23: CT LungCARE - Structured Report

Attribute Name	Tag	Value
Specific Character Set	(0008,0005)	<yes>
Image Type	(0008,0008)	“ORIGINAL\PRIMARY\OTHER\CSA REPORT”
Instance Creation Date	(0008,0012)	-
Instance Creation Time	(0008,0013)	-
Instance Creator UID	(0008,0014)	-
SOP Class UID	(0008,0016)	1.2.840.10008.1.2.1
SOP Instance UID	(0008,0018)	<new UID>
Study Date	(0008,0020)	<as Original>
Series Date	(0008,0021)	<creation date>
Acquisition Date	(0008,0022)	
Content Date	(0008,0023)	<yes>
Acquisition Datetime	(0008,002A)	
Study Time	(0008,0030)	<as Original>
Series Time	(0008,0031)	<creation time>
Acquisition Time	(0008,0032)	
Content Time	(0008,0033)	<yes>
Accession Number	(0008,0050)	-
Modality	(0008,0060)	“SR”
Conversion Type	(0008,0064)	
Manufacturer	(0008,0070)	“Siemens Med SW”
Institution Name	(0008,0080)	<yes>
Institution Address	(0008,0081)	-
Referring Physician’s Name	(0008,0090)	<as Original>
Station Name	(0008,1010)	-
Study Description	(0008,1030)	<as Original>
Procedure Code Sequence	(0008,1032)	<as Original>
> (Code Sequence Macro)		<as Original>
Series Description	(0008,103E)	e.g. “SCREENING #1_sr_1”
Institutional Department Name	(0008,1040)	
Physician(s) of Record	(0008,1048)	<as Original>

Table 23: CT LungCARE - Structured Report

Attribute Name	Tag	Value
Performing Physicians' Name	(0008,1050)	<yes>
Name of Physician(s) Reading Study	(0008,1060)	<as Original>
Operator's Name	(0008,1070)	
Admitting Diagnoses Description	(0008,1080)	<as Original>
Manufacturer's Model Name	(0008,1090)	<yes>
Referenced Study Sequence	(0008,1110)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Study Component Sequence	(0008,1111)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
Referenced Patient Sequence	(0008,1120)	<as Original>
> Referenced SOP Class UID	(0008,1150)	<as Original>
> Referenced SOP Instance UID	(0008,1155)	<as Original>
Referenced Image Sequence	(0008,1140)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	
Derivation Description	(0008,2111)	
Source Image Sequence	(0008,2112)	
> Referenced SOP Class UID	(0008,1150)	
> Referenced SOP Instance UID	(0008,1155)	
> Referenced Frame Number	(0008,1160)	
Patient's Name	(0010,0010)	<as Original>
Patient ID	(0010,0020)	<as Original>
Patient's Birth Date	(0010,0030)	<as Original>
Patient's Birth Time	(0010,0032)	<as Original>
Patient's Sex	(0010,0040)	<as Original>
Other Patient IDs	(0010,1000)	<as Original>
Other Patient Names	(0010,1001)	<as Original>
Patient's Age	(0010,1010)	<as Original>
Patient's Size	(0010,1020)	<as Original>
Patient's Weight	(0010,1030)	<as Original>
Ethnic Group	(0010,2160)	<as Original>

Table 23: CT LungCARE - Structured Report

Attribute Name	Tag	Value
Occupation	(0010,2180)	<as Original>
Additional Patient's History	(0010,21B0)	<as Original>
Patient Comments	(0010,4000)	<as Original>
Body Part Examined	(0018,0015)	<as Original>
Device Serial Number	(0018,1000)	
Secondary Capture Device ID	(0018,1010)	
Date of Secondary Capture	(0018,1012)	
Time of Secondary Capture	(0018,1014)	
Secondary Capture Device Manufacturer	(0018,1016)	
Secondary Capture Device Manufacturer's Model Name	(0018,1018)	
Secondary Capture Device Software Version	(0018,1019)	
Software Version(s)	(0018,1020)	<yes>
Video Image Format Acquired	(0018,1022)	
Digital Image Format Acquired	(0018,1023)	
Protocol Name	(0018,1030)	<as Original>
Spatial Resolution	(0018,1050)	
Patient Position	(0018,5100)	-
Study Instance UID	(0020,000D)	<as Original>
Series Instance UID	(0020,000E)	<new UID>
Study ID	(0020,0010)	<as Original>
Series Number	(0020,0011)	<yes>
Acquisition Number	(0020,0012)	
Instance Number	(0020,0013)	1
Patient Orientation	(0020,0020)	-
Laterality	(0020,0060)	
Images in Acquisition	(0020,1002)	
Image Comments	(0020,4000)	
Samples per Pixel	(0028,0002)	
Photometric Interpretation	(0028,0004)	
Rows	(0028,0010)	
Columns	(0028,0011)	
Pixel Aspect Ratio	(0028,0034)	
Bits Allocated	(0028,0100)	
Bits Stored	(0028,0101)	

Table 23: CT LungCARE - Structured Report

Attribute Name	Tag	Value
High Bit	(0028,0102)	
Pixel Representation	(0028,0103)	
Smallest Image Pixel Value	(0028,0106)	
Largest Image Pixel Value	(0028,0107)	
Smallest Pixel Value in Series	(0028,0108)	
Largest Pixel Value in Series	(0028,0109)	
Quality Control Image	(0028,0300)	
Burned In Annotation	(0028,0300)	
Window Center	(0028,1050)	
Window Width	(0028,1051)	
Rescale Intercept	(0028,1052)	
Rescale Slope	(0028,1053)	
Rescale Type	(0028,1054)	
Window Center & Width Explanation	(0028,1055)	
Pixel Padding Value	(0028,1020)	
Lossy Image Compression	(0028,2110)	
Lossy Image Compression Ratio	(0028,2112)	
Modality LUT Sequence	(0028,3000)	
> LUT Descriptor	(0028,3002)	
> LUT Explanation	(0028,3003)	
>Modality LUT Type	(0028,3004)	
> LUT Data	(0028,3006)	
VOI LUT Sequence	(0028,3010)	
> LUT Descriptor	(0028,3002)	
> LUT Explanation	(0028,3003)	
> LUT Data	(0028,3006)	
Request Attributes Sequence	(0040,0275)	<as Original>
> Requested Procedure ID	(0040,1001)	<as Original>
> Scheduled Procedure Step ID	(0040,0009)	<as Original>
> Scheduled Procedure Step Description	(0040,0007)	<as Original>
> Scheduled Protocol Code Sequence	(0040,0008)	<as Original>
>> Code Sequence Macro		<as Original>
Performed Procedure Step ID	(0040,0253)	
Performed Procedure Step Start Date	(0040,0244)	

Table 23: CT LungCARE - Structured Report

Attribute Name	Tag	Value
Performed Procedure Step Start Time	(0040,0245)	
Performed Procedure Step Description	(0040,0254)	
Performed Protocol Code Sequence	(0040,0260)	
> Code Sequence Macro		
Comments on the Performed Procedure Step	(0040,0280)	
Icon Image Sequence	(0088,0200)	
> Image Pixel Module		
Presentation LUT Shape	(2050,0020)	
Pixel Data	(7FE0,0010)	<yes>
Syngo Report Type		CT_LUNGCARE
SR Variant		<yes>
ModDicomFound_Uid		<yes>
Syngo Report Version		1.1