

SIEMENS

**syngo[®] MULTIMODALITY WORKPLACE 2008A
VE26A**

Annex:

**Application specific information about generated DICOM IODs
Somaris/5 VB29A based for Leonardo**

IKM

DICOM Conformance Statement

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1 Extensions/Specializations/Privatizations

1.1 Standard Extensions

1.1.1 Standard Extensions of all SOP Classes

1.1.1.1 n.a.

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 |
|---------------------------------|----|---------|-----------|-------|---------|---------------------------|-----|

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 Perfu- sion 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 reformat- ed 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 Venuous 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 Venuous 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 Residu-al) • 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. |
| Patient Position | (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 Acquisition | (0020,1002) | copy from first image |
| Position Reference 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) | <p>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 ddMMYYYY, 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.)</p> |
| 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 num- ber counting is continued. If there are more instances of a certain image type they are sorted according to their slice positions (from small- est slice position value to greatest). |
| Patient Orientation | (0020,0020) | - |
| Image Position (Patient) | (0020,0032) | value from the first image used to generate the com- puted image ?? |
| Image Orientation (Patient) | (0020,0037) | value from the first image used to generate the com- puted image |
| Frame of Reference UID | (0020,0052) | <as in first original image> |
| Laterality | (0020,0060) | value from the first image used to generate the com- puted 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 gen- erate the computed image other: from the original images |
| Image Comments | (0020,4000) | NPerfusionImageSet (A.1.8): string as defined for the corresponding configura- tion 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 |