Conformance Statement for DICOM Anonymization

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Contents

1   Conformance Statement Overview

1.1   Purpose

This document outlines Uplink's conformance claims to the Basic Application Level Confidentiality Profile for patient de-identification for version 2024a of the DICOM standard.

2   Basic Application Level Confidentiality Profile

2.1   Profile and Options

Uplink implements the Basic Application Level Confidentiality Profile as well as certain options. By default, the *Clean Pixel Data* and *Retain Longitudinal Temporal Information with Modified Dates* options are used.

Table 1 summarizes the supported Basic Application Level Confidentiality Options.

Table 1: Profile Options

Option	Supported
Clean Pixel Data	Yes
Clean Recognizable Visual Features	No

Option	Supported
Clean Graphics	No
Clean Structured Content	No
Clean Descriptors	No
Retain Longitudinal Temporal Information with Full Dates	Yes
Retain Longitudinal Temporal Information with Modified Dates	Yes
Retain Patient Characteristics	No
Retain Device Identity	No
Retain Institution Identity	No
Retain UIDs	No
Retain Safe Private	No

2.2 Attributes Modified or Removed During Anonymization

During the de-identification process, each attribute in the dataset is anonymized according to its corresponding operation. See table 4 for the full list of attributes that are anonymized, and the corresponding operation that is applied. The following attributes may also be added to the dataset and contain metadata pertaining to the de-identification process:

```
Coding Scheme Identification Sequence (0008, 0110)
Patient Identify Removed (0012, 0062)
De-Identification Method (0012, 0063)
De-Identification Method Code Sequence (0012, 0064)
Contributing Equipment Sequence (0018, A001)
Burned In Annotation (0028, 0301)
Longitudinal Temporal Information Modified (0028, 0303)
```

2.2.1 De-Identification Operations and Replacement Values

All attributes listed in table 4 have a corresponding default operation that determines how to handle the given attribute if it appears in the DICOM data set to be anonymized. Table 2 shows all the possible operations and explains how they modify a DICOM attribute.

Table 2: De-identification operations

Operation	Detail
Dummy value	Replaces the attribute value with a dummy value.
Zero	Replaces the attribute value with a blank (zero-length) value.
Generate UID	Generates a random UID.
Clean	Replaces the attribute value with a value of similiar meaning (see details below).
Delete	Removes the attribute from the dataset.

The **Clean** operation is used as part of the *Retain Longitudinal Temporal Information with Modified Dates* option to ensure dates and time-related attributes are suitably anonymized. For the *DateTime (DT)* VR, only the year component is kept and all other components are discarded,

termed null components by the DICOM specification. For the *Time (TM)* VR, the attribute value is replaced by the dummy value `000000.0` - equivalent to the *Dummy value* operation. For the *Date (DA)* VR, the year is kept, and the month and day are randomly shifted. For both DT and DA VRs, if the year may be indicative of an age over 89, it is modified to form a single aggregate category of age 90 or older.

The **Dummy value** operation picks the replacement value based upon the attribute Value Representation (VR). Table 3 shows the replacement dummy values for each DICOM VR.

Table 3: Dummy replacement values for DICOM VRs

VR	Dummy value
AE	Anonymized
AS	000D
AT	− *Not Applicable*
CS	ANONYMIZED
DA	99990101
DS	0000
DT	99990101000000.000000
FL	0
FD	0
IS	0
LO	Anonymized
LT	Anonymized
OB	*2 NULL bytes*
OD	*8 NULL bytes*
OF	*4 NULL bytes*
OL	*4 NULL bytes*
OV	*8 NULL bytes*
OW	*2 NULL bytes*
PN	ANONYMOUS^ANONYMOUS
SH	Anonymized
SL	0
SQ	− *See note below on sequence elements*
SS	0
ST	Anonymized
SV	0
TM	000000.0
UC	Anonymized
UI	1.3.6.1.4.1.35190.2.9.0.0.0.0.0.0.0.1
UL	0
UR	urn:oid:1.3.6.1.4.1.35190.2.9.0.0.0.0.0.0.0.1/anonymized
US	0
UT	Anonymized
UV	0
UN	− *Zero-length value*

Note: The 5 sequence elements in the Basic Application Level Confidentiality Profile with a *Dummy value* operation, displayed below, are replaced with a static, semantically valid sequence.

```
Flow Identifier Sequence (0034, 0001)
Person Identification Code Sequence (0040, 1101)
Verifying Observer Sequence (0040, A073)
Content Sequence (0040, A730)
Graphic Annotation Sequence (0070, 0001)
```

2.3   Referential integrity of UIDs

During anonymization, the *Study Instance UID, Series Instance UID* and *SOP Instance UID* attributes are consistently replaced by the *Generate UID* operation within the scope of a study. Referential integrity of these UID attributes is thus maintained across instances (and series) of the same study, with the limitation that the software only stores these UID mappings for a maximum of 15 days.

For other UID attributes, referential integrity is maintained within the scope of a single instance. Note however that these other UID attributes would not stay consistent if this single instance is reprocessed multiple times.

Table 4: Basic Application Level Confidentiality Profile Attributes

Attribute Name	Tag	Operation
Accession Number	0008,0050	Dummy
Acquisition Comments	0018,4000	Delete
Acquisition Context Sequence	0040,0555	Delete
Acquisition Date	0008,0022	Clean
Acquisition DateTime	0008,002A	Clean
Acquisition Device Processing Description	0018,1400	Dummy
Acquisition Field Of View Label	0018,11BB	Dummy
Acquisition Protocol Description	0018,9424	Delete
Acquisition Time	0008,0032	Clean
Acquisition UID	0008,0017	Generate UID
Actual Human Performers Sequence	0040,4035	Delete
Additional Patient History	0010,21B0	Delete
Address (Trial)	0040,A353	Delete
Admission ID	0038,0010	Delete
Admitting Date	0038,0020	Clean
Admitting Diagnoses Code Sequence	0008,1084	Delete
Admitting Diagnoses Description	0008,1080	Delete
Admitting Time	0038,0021	Clean
Affected SOP Instance UID	0000,1000	Delete
Allergies	0010,2110	Delete

Attribute Name	Tag	Operation
Annotation Group Description	006A,0006	Delete
Annotation Group Label	006A,0005	Dummy
Annotation Group UID	006A,0003	Dummy
Approval Status DateTime	0044,0004	Clean
Arbitrary	4000,0010	Delete
Assertion DateTime	0044,0104	Clean
Assertion Expiration DateTime	0044,0105	Clean
Attribute Modification DateTime	0400,0562	Clean
Author Observer Sequence	0040,A078	Delete
Barcode Value	2200,0005	Dummy
Beam Description	300A,00C3	Delete
Beam Hold Transition DateTime	300C,0127	Clean
Bolus Description	300A,00DD	Delete
Branch of Service	0010,1081	Delete
Calibration Date	0014,407E	Clean
Calibration DateTime	0018,1203	Clean
Calibration Time	0014,407C	Clean
Camera Owner Name	0016,004D	Delete
Cassette ID	0018,1007	Delete
Certificate of Signer	0400,0115	Dummy
Certified Timestamp	0400,0310	Clean
Clinical Trial Coordinating Center Name	0012,0060	Dummy
Clinical Trial Protocol Ethics Committee Approval Number	0012,0082	Delete
Clinical Trial Protocol Ethics Committee Name	0012,0081	Dummy
Clinical Trial Protocol ID	0012,0020	Dummy
Clinical Trial Protocol Name	0012,0021	Dummy
Clinical Trial Series Description	0012,0072	Delete
Clinical Trial Series ID	0012,0071	Delete
Clinical Trial Site ID	0012,0030	Dummy
Clinical Trial Site Name	0012,0031	Dummy
Clinical Trial Sponsor Name	0012,0010	Dummy
Clinical Trial Subject ID	0012,0040	Dummy
Clinical Trial Subject Reading ID	0012,0042	Dummy
Clinical Trial Time Point Description	0012,0051	Delete
Clinical Trial Time Point ID	0012,0050	Dummy
Comments on Radiation Dose	0040,0310	Delete
Comments on the Performed Procedure Step	0040,0280	Delete
Compensator Description	300A,02EB	Delete
Concatenation UID	0020,9161	Generate UID
Conceptual Volume Combination Description	3010,000F	Dummy
Conceptual Volume Description	3010,0017	Dummy
Conceptual Volume UID	3010,0006	Generate UID
Confidentiality Constraint on Patient Data Description	0040,3001	Delete
Constituent Conceptual Volume UID	3010,0013	Generate UID
Consulting Physician Identification Sequence	0008,009D	Delete

Attribute Name	Tag	Operation
Consulting Physician's Name	0008,009C	Dummy
Container Component ID	0050,001B	Delete
Container Description	0040,051A	Delete
Container Identifier	0040,0512	Dummy
Content Creator's Identification Code Sequence	0070,0086	Delete
Content Creator's Name	0070,0084	Dummy
Content Date	0008,0023	Clean
Content Sequence	0040,A730	Dummy
Content Time	0008,0033	Clean
Context Group Local Version	0008,0107	Clean
Context Group Version	0008,0106	Clean
Contrast/Bolus Agent	0018,0010	Dummy
Contrast/Bolus Start Time	0018,1042	Clean
Contrast/Bolus Stop Time	0018,1043	Clean
Contribution DateTime	0018,A002	Clean
Contribution Description	0018,A003	Delete
Country of Residence	0010,2150	Delete
Creation Date	2100,0040	Clean
Creation Time	2100,0050	Clean
Current Observer (Trial)	0040,A307	Delete
Current Patient Location	0038,0300	Delete
Curve Data	50xx,xxxx	Delete
Curve Date	0008,0025	Clean
Curve Time	0008,0035	Clean
Custodial Organization Sequence	0040,A07C	Delete
Data Set Trailing Padding	FFFC,FFFC	Delete
Date	0040,A121	Clean
Date of Document or Verbal Transaction (Trial)	0040,A110	Clean
Date of Installation	0018,1205	Clean
Date of Last Calibration	0018,1200	Clean
Date of Last Detector Calibration	0018,700C	Clean
Date of Manufacture	0018,1204	Clean
Date of Secondary Capture	0018,1012	Clean
DateTime	0040,A120	Clean
DateTime of Last Calibration	0018,1202	Clean
Decay Correction DateTime	0018,9701	Clean
Decomposition Description	0018,937F	Delete
Derivation Description	0008,2111	Delete
Destination AE	2100,0140	Dummy
Detector ID	0018,700A	Dummy
Device Alternate Identifier	3010,001B	Dummy
Device Description	0050,0020	Delete
Device Label	3010,002D	Dummy
Device Serial Number	0018,1000	Dummy
Device Setting Description	0016,004B	Delete

Attribute Name	Tag	Operation
Device UID	0018,1002	Generate UID
Digital Signature DateTime	0400,0105	Clean
Digital Signature UID	0400,0100	Generate UID
Digital Signatures Sequence	FFFA,FFFA	Delete
Dimension Organization UID	0020,9164	Generate UID
Discharge Date	0038,0030	Clean
Discharge Diagnosis Description	0038,0040	Delete
Discharge Time	0038,0032	Clean
Displacement Reference Label	300A,079A	Delete
Distribution Address	4008,011A	Delete
Distribution Name	4008,0119	Delete
Dose Reference Description	300A,0016	Delete
Dose Reference UID	300A,0013	Generate UID
Dosimetric Objective UID	3010,006E	Generate UID
Effective DateTime	0068,6226	Clean
Encapsulated Document	0042,0011	Dummy
End Acquisition DateTime	0018,9517	Clean
Entity Description	3010,0037	Delete
Entity Label	3010,0035	Dummy
Entity Long Label	3010,0038	Dummy
Entity Name	3010,0036	Delete
Equipment Frame of Reference Description	300A,0676	Delete
Ethics Committee Approval Effectiveness End Date	0012,0087	Clean
Ethics Committee Approval Effectiveness Start Date	0012,0086	Clean
Ethnic Group	0010,2160	Delete
Exclusion Start DateTime	0018,9804	Clean
Expected Completion DateTime	0040,4011	Clean
Failed SOP Instance UID List	0008,0058	Generate UID
Fiducial UID	0070,031A	Generate UID
Filler Order Number / Imaging Service Request	0040,2017	Dummy
Filler Order Number / Imaging Service Request (Retired)	0040,2007	Dummy
Filter Lookup Table Description	003A,032B	Delete
Findings Group Recording Date (Trial)	0040,A023	Clean
Findings Group Recording Time (Trial)	0040,A024	Clean
First Treatment Date	3008,0054	Clean
Fixation Device Description	300A,0196	Delete
Flow Identifier	0034,0002	Dummy
Flow Identifier Sequence	0034,0001	Dummy
Fraction Group Description	300A,0072	Delete
Fractionation Notes	3010,007F	Dummy
Frame Acquisition DateTime	0018,9074	Clean
Frame Comments	0020,9158	Delete
Frame Origin Timestamp	0034,0007	Clean
Frame Reference DateTime	0018,9151	Clean
Frame of Reference UID	0020,0052	Generate UID

Attribute Name	Tag	Operation
Functional Sync Pulse	0018,9623	Clean
GPS Altitude	0016,0076	Delete
GPS Altitude Ref	0016,0075	Delete
GPS Area Information	0016,008C	Delete
GPS DOP	0016,007B	Delete
GPS Date Stamp	0016,008D	Clean
GPS Dest Bearing	0016,0088	Delete
GPS Dest Bearing Ref	0016,0087	Delete
GPS Dest Distance	0016,008A	Delete
GPS Dest Distance Ref	0016,0089	Delete
GPS Dest Latitude	0016,0084	Delete
GPS Dest Latitude Ref	0016,0083	Delete
GPS Dest Longitude	0016,0086	Delete
GPS Dest Longitude Ref	0016,0085	Delete
GPS Differential	0016,008E	Delete
GPS Img Direction	0016,0081	Delete
GPS Img Direction Ref	0016,0080	Delete
GPS Latitude	0016,0072	Delete
GPS Latitude Ref	0016,0071	Delete
GPS Longitude	0016,0074	Delete
GPS Longitude Ref	0016,0073	Delete
GPS Map Datum	0016,0082	Delete
GPS Measure Mode	0016,007A	Delete
GPS Processing Method	0016,008B	Delete
GPS Satellites	0016,0078	Delete
GPS Speed	0016,007D	Delete
GPS Speed Ref	0016,007C	Delete
GPS Status	0016,0079	Delete
GPS Time Stamp	0016,0077	Delete
GPS Track	0016,007F	Delete
GPS Track Ref	0016,007E	Delete
GPS Version ID	0016,0070	Delete
Gantry ID	0018,1008	Delete
Generator ID	0018,1005	Delete
Graphic Annotation Sequence	0070,0001	Dummy
HL7 Document Effective Time	0040,E004	Clean
Hanging Protocol Creation DateTime	0072,000A	Clean
Human Performer's Name	0040,4037	Delete
Human Performer's Organization	0040,4036	Delete
Icon Image Sequence (see Note 11)	0088,0200	Delete
Identifying Comments	0008,4000	Delete
Image Comments	0020,4000	Delete
Image Presentation Comments	0028,4000	Delete
Imaging Service Request Comments	0040,2400	Delete
Impedance Measurement DateTime	003A,0314	Clean

Attribute Name	Tag	Operation
Impressions	4008,0300	Delete
Information Issue DateTime	0068,6270	Clean
Instance Coercion DateTime	0008,0015	Clean
Instance Creation Date	0008,0012	Clean
Instance Creation Time	0008,0013	Clean
Instance Creator UID	0008,0014	Generate UID
Instance Origin Status	0400,0600	Delete
Institution Address	0008,0081	Delete
Institution Code Sequence	0008,0082	Delete
Institution Name	0008,0080	Dummy
Institutional Department Name	0008,1040	Delete
Institutional Department Type Code Sequence	0008,1041	Delete
Instruction Performed DateTime	0018,9919	Clean
Insurance Plan Identification	0010,1050	Delete
Intended Fraction Start Time	3010,0085	Clean
Intended Phase End Date	3010,004D	Clean
Intended Phase Start Date	3010,004C	Clean
Intended Recipients of Results Identification Sequence	0040,1011	Delete
Interlock DateTime	300A,0741	Clean
Interlock Description	300A,0742	Dummy
Interlock Origin Description	300A,0783	Dummy
Interpretation Approval Date	4008,0112	Clean
Interpretation Approval Time	4008,0113	Clean
Interpretation Approver Sequence	4008,0111	Delete
Interpretation Author	4008,010C	Delete
Interpretation Diagnosis Description	4008,0115	Delete
Interpretation ID	4008,0200	Delete
Interpretation ID Issuer	4008,0202	Delete
Interpretation Recorded Date	4008,0100	Clean
Interpretation Recorded Time	4008,0101	Clean
Interpretation Recorder	4008,0102	Delete
Interpretation Text	4008,010B	Delete
Interpretation Transcriber	4008,010A	Delete
Interpretation Transcription Date	4008,0108	Clean
Interpretation Transcription Time	4008,0109	Clean
Intervention Drug Start Time	0018,0035	Clean
Intervention Drug Stop Time	0018,0027	Clean
Irradiation Event UID	0008,3010	Generate UID
Issue Date of Imaging Service Request	0040,2004	Clean
Issue Time of Imaging Service Request	0040,2005	Clean
Issuer of Admission ID	0038,0011	Delete
Issuer of Admission ID Sequence	0038,0014	Delete
Issuer of Patient ID	0010,0021	Delete
Issuer of Service Episode ID	0038,0061	Delete
Issuer of Service Episode ID Sequence	0038,0064	Delete

Attribute Name	Tag	Operation
Issuer of the Container Identifier Sequence	0040,0513	Zero
Issuer of the Specimen Identifier Sequence	0040,0562	Zero
Label Text	2200,0002	Dummy
Large Palette Color Lookup Table UID	0028,1214	Generate UID
Last Menstrual Date	0010,21D0	Clean
Lens Make	0016,004F	Delete
Lens Model	0016,0050	Delete
Lens Serial Number	0016,0051	Delete
Lens Specification	0016,004E	Delete
Long Device Description	0050,0021	Delete
MAC	0400,0404	Delete
Maker Note	0016,002B	Delete
Manufacturer's Device Class UID	0018,100B	Generate UID
Manufacturer's Device Identifier	3010,0043	Dummy
Media Storage SOP Instance UID	0002,0003	Generate UID
Medical Alerts	0010,2000	Delete
Medical Record Locator	0010,1090	Delete
Military Rank	0010,1080	Delete
Modified Attributes Sequence	0400,0550	Delete
Modified Image Date	0020,3403	Clean
Modified Image Description	0020,3406	Delete
Modified Image Time	0020,3405	Clean
Modifying Device ID	0020,3401	Delete
Modifying Device Manufacturer (Retired)	0020,3404	Delete
Modifying System	0400,0563	Dummy
Most Recent Treatment Date	3008,0056	Clean
Multi-energy Acquisition Description	0018,937B	Delete
Multiplex Group UID	003A,0310	Generate UID
Name of Physician(s) Reading Study	0008,1060	Delete
Names of Intended Recipients of Results	0040,1010	Delete
Network ID	0008,1000	Delete
Nonconforming Data Element Value	0400,0552	Delete
Nonconforming Modified Attributes Sequence	0400,0551	Delete
Observation Date (Trial)	0040,A192	Clean
Observation DateTime	0040,A032	Clean
Observation Start DateTime	0040,A033	Clean
Observation Subject UID (Trial)	0040,A402	Generate UID
Observation Time (Trial)	0040,A193	Clean
Observation UID	0040,A171	Generate UID
Occupation	0010,2180	Delete
Operator Identification Sequence	0008,1072	Delete
Operators' Name	0008,1070	Dummy
Order Callback Phone Number	0040,2010	Delete
Order Callback Telecom Information	0040,2011	Delete
Order Entered By	0040,2008	Delete

Attribute Name	Tag	Operation
Order Enterer's Location	0040,2009	Delete
Original Attributes Sequence	0400,0561	Delete
Originator	2100,0070	Delete
Other Patient IDs	0010,1000	Delete
Other Patient IDs Sequence	0010,1002	Delete
Other Patient Names	0010,1001	Delete
Overlay Comments	60xx,4000	Delete
Overlay Data	60xx,3000	Delete
Overlay Date	0008,0024	Clean
Overlay Time	0008,0034	Clean
Override DateTime	300A,0760	Clean
Palette Color Lookup Table UID	0028,1199	Generate UID
Participant Sequence	0040,A07A	Delete
Participation DateTime	0040,A082	Clean
Patient Comments	0010,4000	Delete
Patient ID	0010,0020	Dummy
Patient Setup Photo Description	300A,0794	Delete
Patient Setup UID	300A,0650	Generate UID
Patient State	0038,0500	Delete
Patient Transport Arrangements	0040,1004	Delete
Patient Treatment Preparation Method Description	300A,0792	Delete
Patient Treatment Preparation Procedure Parameter Description	300A,078E	Delete
Patient's Address	0010,1040	Delete
Patient's Age	0010,1010	Delete
Patient's Birth Date	0010,0030	Dummy
Patient's Birth Name	0010,1005	Delete
Patient's Birth Time	0010,0032	Delete
Patient's Institution Residence	0038,0400	Delete
Patient's Insurance Plan Code Sequence	0010,0050	Delete
Patient's Mother's Birth Name	0010,1060	Delete
Patient's Name	0010,0010	Dummy
Patient's Primary Language Code Sequence	0010,0101	Delete
Patient's Primary Language Modifier Code Sequence	0010,0102	Delete
Patient's Religious Preference	0010,21F0	Delete
Patient's Sex	0010,0040	Dummy
Patient's Sex Neutered	0010,2203	Dummy
Patient's Size	0010,1020	Delete
Patient's Telecom Information	0010,2155	Delete
Patient's Telephone Numbers	0010,2154	Delete
Patient's Weight	0010,1030	Delete
Performed Location	0040,0243	Delete
Performed Procedure Step Description	0040,0254	Delete
Performed Procedure Step End Date	0040,0250	Clean
Performed Procedure Step End DateTime	0040,4051	Clean

Attribute Name	Tag	Operation
Performed Procedure Step End Time	0040,0251	Clean
Performed Procedure Step ID	0040,0253	Delete
Performed Procedure Step Start Date	0040,0244	Clean
Performed Procedure Step Start DateTime	0040,4050	Clean
Performed Procedure Step Start Time	0040,0245	Clean
Performed Station AE Title	0040,0241	Delete
Performed Station Geographic Location Code Sequence	0040,4030	Delete
Performed Station Name	0040,0242	Delete
Performed Station Name Code Sequence	0040,4028	Delete
Performing Physician Identification Sequence	0008,1052	Delete
Performing Physician's Name	0008,1050	Delete
Person Identification Code Sequence	0040,1101	Dummy
Person Name	0040,A123	Dummy
Person's Address	0040,1102	Delete
Person's Telecom Information	0040,1104	Delete
Person's Telephone Numbers	0040,1103	Delete
Physician Approving Interpretation	4008,0114	Delete
Physician(s) Reading Study Identification Sequence	0008,1062	Delete
Physician(s) of Record	0008,1048	Delete
Physician(s) of Record Identification Sequence	0008,1049	Delete
Placer Order Number / Imaging Service Request	0040,2016	Dummy
Plate ID	0018,1004	Delete
Position Acquisition Template Description	3002,0123	Delete
Position Acquisition Template Name	3002,0121	Delete
Pre-Medication	0040,0012	Delete
Pregnancy Status	0010,21C0	Delete
Prescription Description	300A,000E	Delete
Prescription Notes	3010,007B	Dummy
Prescription Notes Sequence	3010,0081	Zero
Presentation Creation Date	0070,0082	Clean
Presentation Creation Time	0070,0083	Clean
Presentation Display Collection UID	0070,1101	Generate UID
Presentation Sequence Collection UID	0070,1102	Generate UID
Prior Treatment Dose Description	3010,0061	Delete
Private Attributes	gggg,eeee	Delete
Procedure Step Cancellation DateTime	0040,4052	Clean
Product Expiration DateTime	0044,000B	Clean
Protocol Name	0018,1030	Dummy
Pyramid Description	0008,1088	Delete
Pyramid Label	0020,0027	Delete
Pyramid UID	0008,0019	Generate UID
ROI Creator Sequence	3006,004D	Delete
ROI DateTime	3006,002D	Clean
ROI Description	3006,0028	Delete
ROI Generation Description	3006,0038	Delete

Attribute Name	Tag	Operation
ROI Interpreter	3006,00A6	Dummy
ROI Interpreter Sequence	3006,004E	Delete
ROI Name	3006,0026	Dummy
ROI Observation DateTime	3006,002E	Clean
ROI Observation Description	3006,0088	Delete
ROI Observation Label	3006,0085	Delete
RT Accessory Device Slot ID	300A,0615	Dummy
RT Accessory Holder Slot ID	300A,0611	Dummy
RT Physician Intent Narrative	3010,005A	Dummy
RT Plan Date	300A,0006	Clean
RT Plan Description	300A,0004	Delete
RT Plan Label	300A,0002	Dummy
RT Plan Name	300A,0003	Delete
RT Plan Time	300A,0007	Clean
RT Prescription Label	3010,0054	Dummy
RT Tolerance Set Label	300A,062A	Dummy
RT Treatment Approach Label	3010,0056	Dummy
RT Treatment Phase UID	3010,003B	Generate UID
Radiation Dose Identification Label	300A,0619	Dummy
Radiation Dose In-Vivo Measurement Label	300A,0623	Dummy
Radiation Generation Mode Description	300A,067D	Dummy
Radiation Generation Mode Label	300A,067C	Dummy
Radiopharmaceutical Start DateTime	0018,1078	Clean
Radiopharmaceutical Start Time	0018,1072	Clean
Radiopharmaceutical Stop DateTime	0018,1079	Clean
Radiopharmaceutical Stop Time	0018,1073	Clean
Reason for Omission Description	300C,0113	Delete
Reason for Requested Procedure Code Sequence	0040,100A	Delete
Reason for Study	0032,1030	Delete
Reason for Superseding	3010,005C	Dummy
Reason for Visit	0032,1066	Delete
Reason for Visit Code Sequence	0032,1067	Delete
Reason for the Attribute Modification	0400,0565	Dummy
Reason for the Imaging Service Request	0040,2001	Delete
Reason for the Requested Procedure	0040,1002	Delete
Receiving AE	0074,1234	Delete
Recorded RT Control Point DateTime	300A,073A	Clean
Referenced Conceptual Volume UID	3010,000B	Generate UID
Referenced DateTime	0040,A13A	Clean
Referenced Digital Signature Sequence	0400,0402	Delete
Referenced Dose Reference UID	300A,0083	Generate UID
Referenced Dosimetric Objective UID	3010,006F	Generate UID
Referenced Fiducials UID	3010,0031	Generate UID
Referenced Frame of Reference UID	3006,0024	Generate UID

Attribute Name	Tag	Operation
Referenced General Purpose Scheduled Procedure Step Transaction UID	0040,4023	Generate UID
Referenced Image Sequence	0008,1140	Delete
Referenced Observation UID (Trial)	0040,A172	Generate UID
Referenced Patient Alias Sequence	0038,0004	Delete
Referenced Patient Photo Sequence	0010,1100	Delete
Referenced Patient Sequence	0008,1120	Delete
Referenced Performed Procedure Step Sequence	0008,1111	Delete
Referenced SOP Instance MAC Sequence	0400,0403	Delete
Referenced SOP Instance UID	0008,1155	Generate UID
Referenced SOP Instance UID in File	0004,1511	Generate UID
Referenced Study Sequence	0008,1110	Delete
Referenced Treatment Position Group UID	300A,0785	Generate UID
Referring Physician Identification Sequence	0008,0096	Delete
Referring Physician's Address	0008,0092	Delete
Referring Physician's Name	0008,0090	Dummy
Referring Physician's Telephone Numbers	0008,0094	Delete
Region of Residence	0010,2152	Delete
Related Frame of Reference UID	3006,00C2	Generate UID
Request Attributes Sequence	0040,0275	Delete
Requested Contrast Agent	0032,1070	Delete
Requested Procedure Comments	0040,1400	Delete
Requested Procedure Description	0032,1060	Dummy
Requested Procedure ID	0040,1001	Delete
Requested Procedure Location	0040,1005	Delete
Requested SOP Instance UID	0000,1001	Generate UID
Requested Series Description	0018,9937	Delete
Requesting AE	0074,1236	Delete
Requesting Physician	0032,1032	Delete
Requesting Service	0032,1033	Delete
Respiratory Motion Compensation Technique Description	0018,9185	Delete
Responsible Organization	0010,2299	Delete
Responsible Person	0010,2297	Delete
Results Comments	4008,4000	Delete
Results Distribution List Sequence	4008,0118	Delete
Results ID	4008,0040	Delete
Results ID Issuer	4008,0042	Delete
Retrieve AE Title	0008,0054	Delete
Review Date	300E,0004	Clean
Review Time	300E,0005	Clean
Reviewer Name	300E,0008	Dummy
SOP Authorization DateTime	0100,0420	Clean
SOP Instance UID	0008,0018	Generate UID
Safe Position Exit Date	3008,0162	Clean
Safe Position Exit Time	3008,0164	Clean

Attribute Name	Tag	Operation
Safe Position Return Date	3008,0166	Clean
Safe Position Return Time	3008,0168	Clean
Scheduled Admission Date	0038,001A	Clean
Scheduled Admission Time	0038,001B	Clean
Scheduled Discharge Date	0038,001C	Clean
Scheduled Discharge Time	0038,001D	Clean
Scheduled Human Performers Sequence	0040,4034	Delete
Scheduled Patient Institution Residence	0038,001E	Delete
Scheduled Performing Physician Identification Sequence	0040,000B	Delete
Scheduled Performing Physician's Name	0040,0006	Delete
Scheduled Procedure Step Description	0040,0007	Delete
Scheduled Procedure Step End Date	0040,0004	Clean
Scheduled Procedure Step End Time	0040,0005	Clean
Scheduled Procedure Step Expiration DateTime	0040,4008	Clean
Scheduled Procedure Step ID	0040,0009	Delete
Scheduled Procedure Step Location	0040,0011	Delete
Scheduled Procedure Step Modification DateTime	0040,4010	Clean
Scheduled Procedure Step Start Date	0040,0002	Clean
Scheduled Procedure Step Start DateTime	0040,4005	Clean
Scheduled Procedure Step Start Time	0040,0003	Clean
Scheduled Station AE Title	0040,0001	Delete
Scheduled Station Geographic Location Code Sequence	0040,4027	Delete
Scheduled Station Name	0040,0010	Delete
Scheduled Station Name Code Sequence	0040,4025	Delete
Scheduled Study Location	0032,1020	Delete
Scheduled Study Location AE Title	0032,1021	Delete
Scheduled Study Start Date	0032,1000	Clean
Scheduled Study Start Time	0032,1001	Clean
Scheduled Study Stop Date	0032,1010	Clean
Scheduled Study Stop Time	0032,1011	Clean
Selector AE Value	0072,005E	Dummy
Selector AS Value	0072,005F	Dummy
Selector DA Value	0072,0061	Clean
Selector DT Value	0072,0063	Clean
Selector LO Value	0072,0066	Dummy
Selector LT Value	0072,0068	Dummy
Selector OB Value	0072,0065	Dummy
Selector PN Value	0072,006A	Dummy
Selector SH Value	0072,006C	Dummy
Selector ST Value	0072,006E	Dummy
Selector TM Value	0072,006B	Clean
Selector UN Value	0072,006D	Dummy
Selector UR Value	0072,0071	Dummy
Selector UT Value	0072,0070	Dummy
Series Date	0008,0021	Clean

Attribute Name	Tag	Operation
Series Description	0008,103E	Delete
Series Instance UID	0020,000E	Generate UID
Series Time	0008,0031	Clean
Service Episode Description	0038,0062	Delete
Service Episode ID	0038,0060	Delete
Setup Technique Description	300A,01B2	Delete
Shielding Device Description	300A,01A6	Delete
Slide Identifier	0040,06FA	Delete
Smoking Status	0010,21A0	Delete
Source Conceptual Volume UID	3010,0015	Generate UID
Source End DateTime	0018,936A	Clean
Source Frame of Reference UID	0064,0003	Generate UID
Source Identifier	0034,0005	Dummy
Source Image Sequence	0008,2112	Delete
Source Manufacturer	300A,0216	Delete
Source Serial Number	3008,0105	Dummy
Source Start DateTime	0018,9369	Clean
Source Strength Reference Date	300A,022C	Clean
Source Strength Reference Time	300A,022E	Clean
Source of Previous Values	0400,0564	Dummy
Special Needs	0038,0050	Delete
Specimen Accession Number	0040,050A	Delete
Specimen Detailed Description	0040,0602	Delete
Specimen Identifier	0040,0551	Dummy
Specimen Preparation Sequence	0040,0610	Zero
Specimen Short Description	0040,0600	Delete
Specimen UID	0040,0554	Generate UID
Start Acquisition DateTime	0018,9516	Clean
Station AE Title	0008,0055	Delete
Station Name	0008,1010	Dummy
Storage Media File-set UID	0088,0140	Generate UID
Structure Set Date	3006,0008	Clean
Structure Set Description	3006,0006	Delete
Structure Set Label	3006,0002	Dummy
Structure Set Name	3006,0004	Delete
Structure Set Time	3006,0009	Clean
Study Arrival Date	0032,1040	Clean
Study Arrival Time	0032,1041	Clean
Study Comments	0032,4000	Delete
Study Completion Date	0032,1050	Clean
Study Completion Time	0032,1051	Clean
Study Date	0008,0020	Clean
Study Description	0008,1030	Delete
Study ID	0020,0010	Dummy
Study ID Issuer	0032,0012	Delete

Attribute Name	Tag	Operation
Study Instance UID	0020,000D	Generate UID
Study Read Date	0032,0034	Clean
Study Read Time	0032,0035	Clean
Study Time	0008,0030	Clean
Study Verified Date	0032,0032	Clean
Study Verified Time	0032,0033	Clean
Substance Administration DateTime	0044,0010	Clean
Synchronization Frame of Reference UID	0020,0200	Generate UID
Target UID	0018,2042	Generate UID
Telephone Number (Trial)	0040,A354	Delete
Template Extension Creator UID	0040,DB0D	Generate UID
Template Extension Organization UID	0040,DB0C	Generate UID
Template Local Version	0040,DB07	Clean
Template Version	0040,DB06	Clean
Text Comments	4000,4000	Delete
Text String	2030,0020	Delete
Time	0040,A122	Clean
Time of Document Creation or Verbal Transaction (Trial)	0040,A112	Clean
Time of Last Calibration	0018,1201	Clean
Time of Last Detector Calibration	0018,700E	Clean
Time of Secondary Capture	0018,1014	Clean
Timezone Offset From UTC	0008,0201	Clean
Topic Author	0088,0910	Delete
Topic Keywords	0088,0912	Delete
Topic Subject	0088,0906	Delete
Topic Title	0088,0904	Delete
Tracking UID	0062,0021	Generate UID
Transaction UID	0008,1195	Generate UID
Transducer Identification Sequence	0018,5011	Delete
Treatment Control Point Date	3008,0024	Clean
Treatment Control Point Time	3008,0025	Clean
Treatment Date	3008,0250	Clean
Treatment Machine Name	300A,00B2	Dummy
Treatment Position Group Label	300A,0608	Dummy
Treatment Position Group UID	300A,0609	Generate UID
Treatment Session UID	300A,0700	Generate UID
Treatment Site	3010,0077	Dummy
Treatment Sites	300A,000B	Delete
Treatment Technique Notes	3010,007A	Dummy
Treatment Time	3008,0251	Clean
Treatment Tolerance Violation DateTime	300A,0736	Clean
Treatment Tolerance Violation Description	300A,0734	Dummy
UDI Sequence	0018,100A	Delete
UID	0040,A124	Generate UID
Unique Device Identifier	0018,1009	Delete

Attribute Name	Tag	Operation
User Content Label	3010,0033	Dummy
User Content Long Label	3010,0034	Dummy
Verbal Source (Trial)	0040,A352	Delete
Verbal Source Identifier Code Sequence (Trial)	0040,A358	Delete
Verification DateTime	0040,A030	Clean
Verifying Observer Identification Code Sequence	0040,A088	Zero
Verifying Observer Name	0040,A075	Dummy
Verifying Observer Sequence	0040,A073	Dummy
Verifying Organization	0040,A027	Dummy
Visit Comments	0038,4000	Delete
Waveform Filter Description	003A,0329	Delete
X-Ray Detector ID	0018,9371	Dummy
X-Ray Detector Label	0018,9373	Delete
X-Ray Source ID	0018,9367	Dummy