

DICOM Conformance Statement for In Vivo Imaging Middleware and VirtualPACS

INTRODUCTION

This is an abbreviated DICOM conformance statement for the IVI Middleware and VirtualPACS. It specifies the compliance of the DICOM Data Service and the VirtualPACS for querying, and supporting data transfer using the DICOM standard. The transactions that make use of the DICOM standard occur at the DICOM interface of the DICOM Data Service and the virtualized server interface of the VirtualPACS.

SUPPORTED TRANSFER SYNTAXES

The supported transfer syntaxes for transferring DICOM data are:

Uncompressed Transfer Syntax	SOP Class UID
1.2.840.10008.1.2	Implicit VR – Little Endian
1.2.840.10008.1.2.1	Explicit VR – Little Endian
1.2.840.10008.1.2.1.99	Deflated Explicit VR – Little Endian
1.2.840.10008.1.2.2	Explicit VR – Big Endian

SUPPORTED PHOTOMETRIC INTERPRETATION PIXEL FORMATS

The supported transfer syntaxes for transferring DICOM data are:

Pixel Format	Description
MONOCHROME1	Gray scale
MONOCHROME2	Gray scale
MIXED	Color and monochrome
PALETTE COLOR	Pseudo color image description
RGB	True color image description

QUERY / RETRIEVE

The supported SOP classes for user (server interface of the VirtualPACS) and provider (DICOM interface of DICOM Data Service)

SOP Class Name	SOP Class UID
Patient Root Q/R Information Model — FIND	1.2.840.10008.5.1.4.1.2.1.1
Patient Root Q/R Information Model — MOVE	1.2.840.10008.5.1.4.1.2.1.2
Patient Root Q/R Information Model — GET	1.2.840.10008.5.1.4.1.2.1.3

SOP Class Name	SOP Class UID
Study Root Q/R Information Model — FIND	1.2.840.10008.5.1.4.1.2.2.1
Study Root Q/R Information Model — MOVE	1.2.840.10008.5.1.4.1.2.2.2
Study Root Q/R Information Model — GET	1.2.840.10008.5.1.4.1.2.2.3
Patient Study only Q/R Information Model — GET	1.2.840.10008.5.1.4.1.2.3.1
Patient Study only Q/R Information Model — MOVE	1.2.840.10008.5.1.4.1.2.3.2
Patient Study only Q/R Information Model — GET	1.2.840.10008.5.1.4.1.2.3.3

SUPPORTED ATTRIBUTES FOR DICOM Q/R

The DICOM attributes that can be used to query a DICOM database are listed below.

Key	Tag Id
ImageType	0x0008,0x0008
SOPClassUID	0x0008,0x0016
SOPInstanceUID	0x0008,0x0018
StudyDate	0x0008,0x0020
SeriesDate	0x0008,0x0021
AcquisitionDate	0x0008,0x0022
ContentDate	0x0008,0x0023
AcquisitionDateTime	0x0008,0x002A
StudyTime	0x0008,0x0030
AcquisitionTime	0x0008,0x0032
ContentTime	0x0008,0x0033
Modality	0x0008,0x0060
Manufacturer	0x0008,0x0070
InstitutionName	0x0008,0x0080
StudyDescription	0x0008,0x1030
SeriesDescription	0x0008,0x103E
AdmittingDiagnosesDescription	0x0008,0x1080
AdmittingDiagnosesCodeSequence	0x0008,0x1084
ManufacturerModelName	0x0008,0x1090
AnatomicRegionSequence	0x0008,0x2218
PatientName	0x0010,0x0010
PatientID	0x0010,0x0020
PatientBirthDate	0x0010,0x0030
PatientSex	0x0010,0x0040
PatientAge	0x0010,0x1010
PatientSize	0x0010,0x1020
PatientWeight	0x0010,0x1030
EthnicGroup	0x0010,0x2160
Occupation	0x0010,0x2180

AdditionalPatientHistory	0x0010,0x21B0
ClinicalTrialSponsorName	0x0012,0x0010
ClinicalTrialProtocolID	0x0012,0x0020
ClinicalTrialProtocolName	0x0012,0x0021
ClinicalTrialSiteID	0x0012,0x0030
ClinicalTrialSiteName	0x0012,0x0031
ClinicalTrialSubjectID	0x0012,0x0040
ClinicalTrialSubjectReadingID	0x0012,0x0042
ClinicalTrialTimePointID	0x0012,0x0050
ClinicalTrialTimePointDescription	0x0012,0x0051
ClinicalTrialCoordinatingCenterName	0x0012,0x0060
ContrastBolusAgent	0x0018,0x0010
BodyPartExamined	0x0018,0x0015
ScanOptions	0x0018,0x0022
SliceThickness	0x0018,0x0050
KVP	0x0018,0x0060
DataCollectionDiameter	0x0018,0x0090
SoftwareVersion	0x0018,0x1020
ProtocolName	0x0018,0x1030
ContrastBolusRoute	0x0018,0x1040
ReconstructionDiameter	0x0018,0x1100
DistanceSourceToDetector	0x0018,0x1110
DistanceSourceToPatient	0x0018,0x1111
GantryDetectorTilt	0x0018,0x1120
ExposureTime	0x0018,0x1150
XrayTubeCurrent	0x0018,0x1151
Exposure	0x0018,0x1152
ExposureInuAs	0x0018,0x1153
FocalSpot	0x0018,0x1190
ConvolutionKernel	0x0018,0x1210
PatientPosition	0x0018,0x5100
RevolutionTime	0x0018,0x9305
SingleCollimationWidth	0x0018,0x9306
TotalCollimationWidth	0x0018,0x9307
TableSpeed	0x0018,0x9309
TableFeedPerRotation	0x0018,0x9310
SpiralPitchFactor	0x0018,0x9311
StudyInstanceUID	0x0020,0x000D
SeriesInstanceUID	0x0020,0x000E
StudyID	0x0020,0x0010
SeriesNumber	0x0020,0x0011
AcquisitionNumber	0x0020,0x0012
InstanceNumber	0x0020,0x0013
ImagePositionPatient	0x0020,0x0032
ImageOrientationPatient	0x0020,0x0037
FrameOfReferenceUID	0x0020,0x0052
Laterality	0x0020,0x0060

ImageLaterality	0x0020,0x0062
SynchronizationFrameOfReferenceUID	0x0020,0x0200
SliceLocation	0x0020,0x1041
ImageComments	0x0020,0x4000
Rows	0x0028,0x0010
Columns	0x0028,0x0011
PixelSpacing	0x0028,0x0030
LossyImageCompression	0x0028,0x2110
StorageMediaFileSetUID	0x0088,0x0140