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Digital Imaging and Communications in Medicine (DICOM)

Supplement 217: Neurophysiology Waveforms

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Status: July 6th, 2020, Final Text

Developed pursuant to DICOM Work Item 2018-09-D

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Scope and Field of Application

145 This Supplement introduces some SOP Classes for storage of neurophysiology waveforms by adding the related neurophysiology IODs and the necessary neurophysiology waveform context groups.

This Supplement

- 150 ○ Adds a SOP Class to store routine electroencephalography (EEG) data recording the electrical activity of the brain collected on the skull surface using electrode positions of the international 10/10 or 10/20 localization scheme.
- Adds a SOP Class to store electromyography (EMG) data recording the electrical activity of skeletal muscles.
- Adds a SOP Class to store electrooculography (EOG) data collected near the eyes recording eye movement.
- 155 ○ Adds a SOP class to store electroencephalography (EEG) data acquired during a polysomnography (PSG) study.
- Adds a SOP class to store respiratory data recorded using more than a single channel.
- Adds a SOP class to store information about a patient's position continuously.
- 160 ○ Adds a Context Group comprising the EEG lead identifiers according the international 10/10 and 10/20 localization scheme.
- Adds a Context Group with standardized terms for annotations related to EEG.
- Adds Context Groups comprising the electrode positions used in EMG.
- Adds a Context Group with standardized terms for annotations related to EMG.
- Adds a Context Group comprising the EOG lead identifiers.
- 165 ○ Adds a Context Group with standardized terms for annotations related to EOG.
- Adds a Context Group with Pattern Events
- Adds a Context Group with Device-related and Environment-related Events
- Adds a Context Group with Neurophysiologic Stimulation Modes
- Adds a Context Group with Neurological Monitoring Measurements
- 170 ○ Adds a Context Group with channel sources to record the patient's position
- Amends CID 3005 Respiration Waveform

Changes to NEMA Standards Publications PS 3.2

Digital Imaging and Communications in Medicine (DICOM)

Part 2: Conformance

175

Add the new SOP Classes to Table A.1-2. UID Values

Table A.1-2. UID Values

UID Value	UID Name	Category
....		
<u>1.2.840.10008.5.1.4.1.1.9.7.1</u>	<u>Routine Scalp Electroencephalogram Waveform Storage SOP Class</u>	<u>Transfer</u>
<u>1.2.840.10008.5.1.4.1.1.9.7.2</u>	<u>Electromyogram Waveform Storage SOP Class</u>	<u>Transfer</u>
<u>1.2.840.10008.5.1.4.1.1.9.7.3</u>	<u>Electrooculogram Waveform Storage SOP Class</u>	<u>Transfer</u>
<u>1.2.840.10008.5.1.4.1.1.9.7.4</u>	<u>Sleep Electroencephalogram Waveform Storage SOP Class</u>	<u>Transfer</u>
<u>1.2.840.10008.5.1.4.1.1.9.6.2</u>	<u>Multi-channel Respiratory Waveform Storage SOP Class</u>	<u>Transfer</u>
<u>1.2.840.10008.5.1.4.1.1.9.8.1</u>	<u>Body Position Waveform Storage SOP Class</u>	<u>Transfer</u>
...		

180

IODs Modules	Basic Voice Audio	12 Lead ECG	General ECG WF	Ambul ECG WF	Hemo WF	Basic Cardiac EP WF	Arterial Pulse WF	Resp WF	General Audio WF	Scalp EEG WF	EMG WF	EOG WF	Sleep EEG WF	Multi Resp WF	Body Posn WF
Waveform Identification	M	M	M	M	M	M	M	M	M	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>
Waveform	M	M	M	M	M	M	M	M	M	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>
Waveform Annotation	U	C	C	C	C	C	C	C	C	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>	<u>C</u>
Acquisition Context	M	M	M	U	M	M	M	M	M	<u>M</u>	<u>U</u>	<u>U</u>	<u>U</u>	<u>U</u>	<u>U</u>
SOP Common	M	M	M	M	M	M	M	M	M	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>	<u>M</u>

Add the synchronization Module to the Video Photographic Image IOD in PS3.3 Table XX:

190

Table A.1-1c. Composite Information Object Modules Overview - More Images

IODs Modules	VL EN	VL MC	VL SL	VL WS	VL PH	Vid VL EN	Vid VL MC	Vid VL PH	IVOCT	Seg
Synchronization								<u>U</u>	M	

Add the synchronization Module to the Video Photographic Image IOD in PS3.3 Section A.32.7:

195

Table A.32.7-1. Video Photographic Image IOD Modules

IE	Module	Reference	Usage
Patient	Patient	C.7.1.1	M
	Clinical Trial Subject	C.7.1.3	U
Study	General Study	C.7.2.1	M

	Patient Study	C.7.2.2	U
	Clinical Trial Study	C.7.2.3	U
Series	General Series	C.7.3.1	M
	Clinical Trial Series	C.7.3.2	U
<u>Frame of Reference</u>	<u>Synchronization</u>	<u>C.7.4.2</u>	<u>U</u>
Equipment	General Equipment	C.7.5.1	M
Image	General Image	C.7.6.1	M
	General Reference	C.12.4	U
	Cine	C.7.6.5	M
	Multi-frame	C.7.6.6	M
	Image Pixel	C.7.6.3	M
	Acquisition Context	C.7.6.14	M
	Device	C.7.6.12	M
	Specimen	C.7.6.22	C- Required if the Imaging Subject is a Specimen
	VL Image	C.8.12.1	M
	ICC Profile	C.11.15	U
	SOP Common	C.12.1	M
	Common Instance Reference	C.12.2	U
	Frame Extraction	C.12.3	C – Required if the SOP Instance was created in response to a Frame-Level Retrieve Request

Add the following new content to PS3.3 Section A.34:

Add A.34.12 Routine Scalp Electroencephalogram IOD

A.34.12 Routine Scalp Electroencephalogram IOD

200 A.34.12.1 Routine Scalp Electroencephalogram IOD Description

The Routine Scalp Electroencephalogram (EEG) IOD is the specification of digitized electrical signals from the patient's encephalon collected on the skull surface, which has been acquired by an EEG modality or by an EEG acquisition function within an imaging modality or a neurophysiology recording device.

205 Note:

This type of object could cover these clinical scenarios:

- Routine EEG
- EEG-Video-Monitoring – scalp EEG

as these have similar physical properties and use the same electrode location scheme.

210

A.34.12.2 Routine Scalp Electroencephalogram IOD Entity-Relationship Model

The E-R Model in Section A.34.1 applies to the Routine Electroencephalogram IOD.

A.34.12.3 Routine Scalp Electroencephalogram IOD Module Table

Table A.34.12-1: Routine Scalp Electroencephalogram IOD Modules

IE	Module	Reference	Usage
Patient	Patient	C.7.1.1	M
	Clinical Trial Subject	C.7.1.3	U
Study	General Study	C.7.2.1	M
	Patient Study	C.7.2.2	U
	Clinical Trial Study	C.7.2.3	U
Series	General Series	C.7.3.1	M
	Clinical Trial Series	C.7.3.2	U
Frame of Reference	Synchronization	C.7.4.2	U
Equipment	General Equipment	C.7.5.1	M
	Enhanced General Equipment	C.7.5.2	M
Waveform	Waveform Identification	C.10.8	M
	Waveform	C.10.9	M
	Acquisition Context	C.7.6.14	M
	Waveform Annotation	C.10.10	U
	SOP Common	C.12.1	M

215

A.34.12.4 Routine Scalp Electroencephalogram IOD Constraints

A.34.12.4.1 Modality

The value of Modality (0008,0060) shall be EEG.

A.34.12.4.2 Waveform Sequence

220

The number of Waveform Sequence (5400,0100) Items shall be 1.

Note:

In case of recording interruptions, the recording will be encoded as separate instances.

A.34.12.4.3 Number of Waveform Channels

225 The value of Number of Waveform Channels (003A,0005) in each Waveform Sequence Item shall be between 1 and 64, inclusive.

A.34.12.4.4 Sampling Frequency

The value of Sampling Frequency (003A,001A) in each Waveform Sequence Item is not constrained.

A.34.12.4.5 Channel Source and Channel Source Modifiers

230 The Defined CID for the Channel Source Sequence (003A,0208) in each Channel Definition Sequence Item shall be CID 3030 “EEG Leads”.

The Channel Source Modifiers Sequence (003A,0209) in each Channel Definition Sequence (003A,0200) Item shall be used to specify additional qualifiers of the semantics of the waveform source, including anatomic location, if not encoded by the Channel Source Code Value.

235 EEG recordings not using a common reference electrode shall contain the location of the reference electrode for the given channel in the Channel Source Modifiers Sequence (003A,0209) as follows:

- First Item: “Differential signal” (CID 3240)
- Second Item: Location of the reference lead (CID 3030 “EEG Leads”)

240 EEG recordings using a common reference electrode shall be coded in the same way, but use the same reference lead in every Channel Source Modifier.

Note:

CID 3030 “EEG Leads” is extensible. Terms from other Context Groups or elsewhere may be used in the Channel Source Sequence as well as in the Channel Source Modifier Sequence to identify channels not contained in CID 3030 “EEG Leads”. Such terms are expected to be described in the Conformance Statement.

245

A.34.12.4.6 Waveform Sample Interpretation

The value of Waveform Sample Interpretation (5400,1006) in each Waveform Sequence Item shall be SS or SL.

A.34.12.4.7 Waveform Annotation Module

250 Defined CIDs for the Concept Name Code Sequence (0040,A043) in the Waveform Annotation Sequence (0040,B020) are CID 3035 “EEG Annotations”, CID 3038 “Pattern Events”, CID 3039 “Device-related and Environment-related Events”, and CID 3040 “EEG Annotations – Neurological Monitoring Measurements”.

Note:

255 Annotations can be stored either in the Waveform Annotation Module of the waveform to which they apply, or in a separate Structured Report object. The Waveform Annotation Module is only intended for annotations made at the time of acquisition.

260 ***Add the following new content to PS3.3 Section A.34:***

Add A.34.13 Electromyogram IOD**A.34.13 Electromyogram IOD****A.34.13.1 Electromyogram IOD Description**

265 The Electromyogram (EMG) IOD is the specification of digitized electrical signals evoked by the patient's muscle movements, which has been acquired by an EMG modality or by an EMG acquisition function within a neurophysiology recording device or a polysomnography modality.

A.34.13.2 Electromyogram IOD Entity-Relationship Model

This IOD uses the E-R Model in Section A.1.2, with only the Waveform IE below the Series IE.

A.34.13.3 Electromyogram IOD Module Table

270

Table A.34.13-1: Electromyogram IOD Modules

IE	Module	Reference	Usage
Patient	Patient	C.7.1.1	M
	Clinical Trial Subject	C.7.1.3	U
Study	General Study	C.7.2.1	M
	Patient Study	C.7.2.2	U
	Clinical Trial Study	C.7.2.3	U
Series	General Series	C.7.3.1	M
	Clinical Trial Series	C.7.3.2	U
Frame of Reference	Synchronization	C.7.4.2	U
Equipment	General Equipment	C.7.5.1	M
	Enhanced General Equipment	C.7.5.2	M
Waveform	Waveform Identification	C.10.8	M
	Waveform	C.10.9	M
	Acquisition Context	C.7.6.14	U
	Waveform Annotation	C.10.10	C - Required if annotation is present
	SOP Common	C.12.1	M

A.34.13.4 Electromyogram IOD Constraints**A.34.13.4.1 Modality**

The value of Modality (0008,0060) shall be EMG.

275

A.34.13.4.2 Waveform Sequence

The number of Waveform Sequence (5400,0100) Items is not constrained.

A.34.13.4.3 Number of Waveform Channels

The value of Number of Waveform Channels (003A,0005) in each Waveform Sequence Item shall be between 1 and 64, inclusive.

280 **A.34.13.4.4 Sampling Frequency**

The value of Sampling Frequency (003A,001A) in each Waveform Sequence Item is not constrained.

A.34.13.4.5 Channel Source and Channel Source Modifiers

285 The Defined CID for the Channel Source Sequence (003A,0208) in each Channel Definition Sequence Item shall be CID 3031 "Lead locations near or in muscles" or CID 3032 "Lead locations near peripheral nerves".

The Channel Source Modifiers Sequence (003A,0209) in each Channel Definition Sequence (003A,0200) Item shall be used to specify additional qualifiers of the semantics of the waveform source, including anatomic location, if not encoded by the Channel Source Code Value.

290 EMG recordings not using a common reference electrode shall contain the location of the reference electrode for the given channel in the Channel Source Modifiers Sequence (003A,0209) as follows:

- First Item: "Differential signal" (CID 3240)
- Second Item: Location of the reference lead (CID 3031 "Lead Locations near muscles", CID 3032 "Lead locations near peripheral nerves")

295 EMG recordings using a common reference electrode shall be coded in the same way, but contain the same reference lead in every Channel Source Modifier.

Note:

300 CID 3031 "Lead locations near or in muscles" and CID 3032 "Lead locations near peripheral nerves" are extensible. Terms from other Context Groups or elsewhere may be used in the Channel Source Sequence as well as in the Channel Source Modifier Sequence to identify channels not contained in these two Context Groups. Such terms are expected to be described in the Conformance Statement.

A.34.13.4.6 Waveform Sample Interpretation

The value of Waveform Sample Interpretation (5400,1006) in each Waveform Sequence (0054,0100) Item shall be SS or SL.

305 **A.34.13.4.7 Waveform Annotation Module**

Defined CIDs for the Concept Name Code Sequence (0040,A043) in the Waveform Annotation Sequence (0040,B020) are CID 3036 "EMG Annotations" and CID 3039 "Device-related and Environment-related Events".

Note:

310 Annotations can be stored either in the Waveform Annotation Module of the waveform to which they apply, or in a separate Structured Report object. The Waveform Annotation Module is only intended for annotations made at the time of acquisition.

Add the following new content to PS3.3 Section A.34:

315

Add A.34.14 Electrooculogram IOD

A.34.14 Electrooculogram IOD

A.34.14.1 Electrooculogram IOD Description

320

The Electrooculogram (EOG) IOD is the specification of digitized electrical signals evoked by the patient's eye movements collected on the face, which has been acquired by an EOG modality or by an EOG acquisition function within a neurophysiology recording device or a polysomnography modality.

A.34.14.2 Electrooculogram IOD Entity-Relationship Model

This IOD uses the E-R Model in Section A.1.2, with only the Waveform IE below the Series IE.

A.34.14.3 Electrooculogram IOD Module Table

325

Table A.34.14-1: Electrooculogram IOD Modules

IE	Module	Reference	Usage
Patient	Patient	C.7.1.1	M
	Clinical Trial Subject	C.7.1.3	U
Study	General Study	C.7.2.1	M
	Patient Study	C.7.2.2	U
	Clinical Trial Study	C.7.2.3	U
Series	General Series	C.7.3.1	M
	Clinical Trial Series	C.7.3.2	U
Frame of Reference	Synchronization	C.7.4.2	U
Equipment	General Equipment	C.7.5.1	M
	Enhanced General Equipment	C.7.5.2	M
Waveform	Waveform Identification	C.10.8	M
	Waveform	C.10.9	M
	Acquisition Context	C.7.6.14	U
	Waveform Annotation	C.10.10	C - Required if annotation is present
	SOP Common	C.12.1	M

A.34.14.4 Electrooculogram IOD Constraints

A.34.14.4.1 Modality

The value of Modality (0008,0060) shall be EOG.

330 A.34.14.4.2 Waveform Sequence

The number of Waveform Sequence (5400,0100) Items is not constrained.

A.34.14.4.3 Number of Waveform Channels

335 The value of Number of Waveform Channels (003A,0005) in each Waveform Sequence Item shall be 2 or 4.

A.34.14.4.4 Sampling Frequency

The value of Sampling Frequency (003A,001A) in each Waveform Sequence Item is not constrained.

A.34.14.4.5 Channel Source and Channel Source Modifiers

340 The Defined CID for the Channel Source Sequence (003A,0208) in each Channel Definition Sequence Item shall be CID 3033 "EOG Leads".

The Channel Source Modifiers Sequence (003A,0209) in each Channel Definition Sequence (003A,0200) Item shall be used to specify additional qualifiers of the semantics of the waveform source, including anatomic location, if not encoded by the Channel Source Code Value.

345 EOG recordings not using a common reference electrode shall contain the location of the reference electrode for the given channel in the Channel Source Modifiers Sequence (003A,0209) as follows:

- First Item: "Differential signal" (CID 3240)
- Second Item: Location of the reference lead (CID 3033 "EOG Leads")

EOG recordings using a common reference electrode shall be coded in the same way, but contain the same reference lead in every Channel Source Modifier.

350 Note:

CID 3033 "EOG Leads" is extensible. Terms from other Context Groups or elsewhere may be used in the Channel Source Sequence as well as in the Channel Source Modifier Sequence to identify channels not contained in CID 3033 "EOG Leads". Such terms are expected to be described in the Conformance Statement.

355 A.34.14.4.6 Waveform Sample Interpretation

The value of Waveform Sample Interpretation (5400,1006) in each Waveform Sequence (0054,0100) Item shall be SS or SL.

A.34.14.4.7 Waveform Annotation Module

360 Defined CIDs for the Concept Name Code Sequence (0040,A043) in the Waveform Annotation Sequence (0040,B020) are CID 3037 "EOG Annotations" and CID 3039 "Device-related and Environment-related Events".

Note:

365 Annotations can be stored either in the Waveform Annotation Module of the waveform to which they apply, or in a separate Structured Report object. The Waveform Annotation Module is only intended for annotations made at the time of acquisition.

Add the following new content to PS3.3 Section A.34:

Add A.34.15 Sleep Electroencephalogram IOD

A.34.15 Sleep Electroencephalogram IOD

370 A.34.15.1 Sleep Electroencephalogram IOD Description

The Sleep Electroencephalogram (EEG) IOD is the specification of digitized electrical signals from the patient's encephalon collected on the skull surface, which has been acquired by an EEG modality or by an EEG acquisition function within a polysomnography modality.

A.34.15.2 Sleep Electroencephalogram IOD Entity-Relationship Model

375 The E-R Model in Section A.34.1 applies to the Sleep Electroencephalogram IOD.

A.34.15.3 Sleep Electroencephalogram IOD Module Table

Table A.34.15-1: Sleep Electroencephalogram IOD Modules

IE	Module	Reference	Usage
Patient	Patient	C.7.1.1	M
	Clinical Trial Subject	C.7.1.3	U
Study	General Study	C.7.2.1	M
	Patient Study	C.7.2.2	U
	Clinical Trial Study	C.7.2.3	U
Series	General Series	C.7.3.1	M
	Clinical Trial Series	C.7.3.2	U
Frame of Reference	Synchronization	C.7.4.2	U
Equipment	General Equipment	C.7.5.1	M
	Enhanced General Equipment	C.7.5.2	M
Waveform	Waveform Identification	C.10.8	M
	Waveform	C.10.9	M
	Acquisition Context	C.7.6.14	U
	Waveform Annotation	C.10.10	C - Required if annotation is present
	SOP Common	C.12.1	M

A.34.15.4 Sleep Electroencephalogram IOD Constraints

380 A.34.15.4.1 Modality

The value of Modality (0008,0060) shall be EEG.

A.34.15.4.2 Waveform Sequence

The number of Waveform Sequence (5400,0100) Items is not constrained

A.34.15.4.3 Number of Waveform Channels

385 The value of Number of Waveform Channels (003A,0005) in each Waveform Sequence Item shall be between 1 and 64, inclusive.

A.34.15.4.4 Sampling Frequency

The value of Sampling Frequency (003A,001A) in each Waveform Sequence Item is not constrained.

A.34.15.4.5 Channel Source and Channel Source Modifiers

390 The Defined CID for the Channel Source Sequence (003A,0208) in each Channel Definition Sequence Item shall be CID 3030 "EEG Leads".

The Channel Source Modifiers Sequence (003A,0209) in each Channel Definition Sequence (003A,0200) Item shall be used to specify additional qualifiers of the semantics of the waveform source, including technique and anatomic location, if not encoded by the Channel Source Code Value.

395 EEG recordings not using a common reference electrode shall contain the location of the reference electrode for the given channel in the Channel Source Modifiers Sequence (003A,0209) as follows:

- First Item: "Differential signal" (CID 3240)
- Second Item: Location of the reference lead (CID 3030 "EEG Leads")

400 EEG recordings using a common reference electrode shall be coded in the same way, but contain the same reference lead in every Channel Source Modifier.

Note:

CID 3030 "EEG Leads" is extensible. Terms from other Context Groups or elsewhere may be used in the Channel Source Sequence as well as in the Channel Source Modifier Sequence to identify channels not contained in CID 3030 "EEG Leads". Such Terms are expected to be described in the Conformance Statement.

405

A.34.15.4.6 Waveform Sample Interpretation

The value of Waveform Sample Interpretation (5400,1006) in each Waveform Sequence Item shall be SS or SL.

A.34.15.4.7 Waveform Annotation Module

410 Defined CIDs for the Concept Name Code Sequence (0040,A043) in the Waveform Annotation Sequence (0040,B020) are CID 3035 "EEG Annotations – Neurophysiologic Enumerations (EEG)", CID 3038 "Pattern Events, CID 3039 "Device-related and Environment-related Events", and CID 3040 "EEG Annotations – Neurological Monitoring Measurements".

415 Note:

Annotations can be stored either in the Waveform Annotation Module of the waveform to which they apply, or in a separate Structured Report object. The Waveform Annotation Module is only intended for annotations made at the time of acquisition.

420

Add the following new content to PS3.3 Section A.34:

Add A.34.16 Multi-channel Respiratory Waveform IOD

A.34.16 Multi-channel Respiratory Waveform IOD

A.34.16.1 Multi-channel Respiratory Waveform IOD Description

425 The Multi-channel Respiratory Waveform IOD is the specification of digitized electrical signals from the patient respiratory system, which has been acquired by a Respiratory modality or by a Respiratory acquisition function within a neurophysiology recording device or a polysomnography modality.

A.34.16.2 Multi-channel Respiratory Waveform IOD Entity-Relationship Model

This IOD uses the E-R Model in Section A.1.2, with only the Waveform IE below the Series IE.

430 **A.34.16.3 Multi-channel Respiratory Waveform IOD Module Table**

Table A.34.16-1: Multi-channel Respiratory Waveform IOD Modules

IE	Module	Reference	Usage
Patient	Patient	C.7.1.1	M
	Clinical Trial Subject	C.7.1.3	U
Study	General Study	C.7.2.1	M
	Patient Study	C.7.2.2	U
	Clinical Trial Study	C.7.2.3	U
Series	General Series	C.7.3.1	M
	Clinical Trial Series	C.7.3.2	U
Frame of Reference	Synchronization	C.7.4.2	U
Equipment	General Equipment	C.7.5.1	M
	Enhanced General Equipment	C.7.5.2	M
Waveform	Waveform Identification	C.10.8	M
	Waveform	C.10.9	M
	Acquisition Context	C.7.6.14	U
	Waveform Annotation	C.10.10	C - Required if annotation is present
	SOP Common	C.12.1	M

A.34.16.4 Multi-channel Respiratory Waveform IOD Constraints

A.34.16.4.1 Modality

435 The value of Modality (0008,0060) shall be RESP.

A.34.16.4.2 Waveform Sequence and Number of Waveform Channels

The number of Waveform Sequence (5400,0100) items is unconstrained.

Note:

If the total number of Waveform Channels is one the Respiratory Waveform IOD could be used instead

440

A.34.16.4.3 Sampling Frequency

The value of Sampling Frequency (003A,001A) in each Waveform Sequence Item is not constrained.

A.34.16.4.4 Channel Source and Channel Source Modifiers

The Defined CID for the Channel Source Sequence (003A,0208) in each Channel Definition Sequence Item is CID 3005 “Respiration Waveform”.

445

A.34.16.4.5 Waveform Sample Interpretation

The value of Waveform Sample Interpretation (5400,1006) in each Waveform Sequence Item shall be SS or SL.

A.34.16.4.6 Waveform Annotation Module

Defined CIDs for the Concept Name Code Sequence (0040,A043) in the Waveform Annotation Sequence (0040,B020) are CID 3038 “Pattern Events” and CID 3039 “Device-related and Environment-related Events”

450

Note:

Annotations can be stored either in the Waveform Annotation Module of the waveform to which they apply, or in a separate Structured Report object. The Waveform Annotation Module is only intended for annotations made at the time of acquisition.

455

Add the following new content to PS3.3 Section A.34:

Add A.34.17 Body Position Waveform IOD

460

A.34.17 Body Position Waveform IOD

A.34.17.1 Body Position Waveform IOD Description

The Body Position Waveform IOD is the specification of digitized electrical signals acquired by a device or sensor on the body of the patient measuring the position of the patient. Depending on the measurement method, either the digitized sensor data is saved directly or values derived from it.

465

A.34.17.2 Body Position Waveform IOD Entity-Relationship Model

This IOD uses the E-R Model in Section A.1.2, with only the Waveform IE below the Series IE.

A.34.17.3 Body Position Waveform IOD Module Table

Table A.34.17-1: Body Position Waveform IOD Modules

IE	Module	Reference	Usage
Patient	Patient	C.7.1.1	M

	Clinical Trial Subject	C.7.1.3	U
Study	General Study	C.7.2.1	M
	Patient Study	C.7.2.2	U
	Clinical Trial Study	C.7.2.3	U
Series	General Series	C.7.3.1	M
	Clinical Trial Series	C.7.3.2	U
Frame of Reference	Synchronization	C.7.4.2	U
Equipment	General Equipment	C.7.5.1	M
	Enhanced General Equipment	C.7.5.2	M
Waveform	Waveform Identification	C.10.8	M
	Waveform	C.10.9	M
	Acquisition Context	C.7.6.14	U
	Waveform Annotation	C.10.10	C - Required if annotation is present
	SOP Common	C.12.1	M

470

A.34.17.4 Body Position Waveform IOD Constraints

A.34.17.4.1 Modality

The value of Modality (0008,0060) shall be POS.

A.34.17.4.2 Waveform Sequence

475 The number of Waveform Sequence (5400,0100) Items is unconstrained.

A.34.17.4.3 Number of Channels

The value of Number of Waveform Channels (003A,0005) in each Waveform Sequence depends on the measurement type; see A.34.17.4.4 Channel Source

480 To encode the patient's position as fixed values a single channel shall be used.

To encode the patient's position as rotation and elevation, two channels shall be used. The first angle is the patient's angle of rotation around the longitudinal axis (head-feet axis). The second angle is the angle of elevation of the patient against horizontal, which could change if the patient sits up in bed, if the head of the bed is elevated, or if the patient stands up.

A.34.17.4.4 Channel Source

485 The Defined CID for the Channel Source Sequence (003A,0208) in each Channel Definition Sequence Item is CID 3034 "Body Position Channels".

The Channel Source Code for a channel encoding the patient’s position as fixed values is (130410, DCM, “Patient position”).

490 The Channel Source Code for a channel encoding the patient’s rotation around the body’s longitudinal axis (head-feet axis) is (130411, DCM, “Patient rotation longitudinal”).

The Channel Source Code for a channel encoding the elevation of the patient against horizontal is (130412, DCM, “Patient elevation”).

A.34.17.4.5 Waveform Sample Interpretation

495 For channels encoding the patient’s position as fixed values the value of Waveform Sample Interpretation (5400,1006) is UB.

For channels encoding the patient’s position as rotation angles the value of Waveform Sample Interpretation (5400,1006) is SS.

A.34.17.4.6 Waveform Data

500 For channels encoding the patient’s position as fixed values Waveform Data (5400,1010) shall only contain defined values listed in Table A.34.17-2.

Table A.34.17-2: Defined Body Position Data Values

Value	Meaning
0x00	supine
0x01	left lateral decubitus
0x02	prone
0x03	right lateral decubitus
0x04	upright
0xff	undefined

Note

505 1. With 8-bit Waveform Data and a single channel there may be an odd number of samples; see PS3.5 for encoding rules.

For channels encoding the patient’s rotation and elevation, angles are stored in Waveform data (5400,1010). Units of measure (Channel Sensitivity Units (003A,0211)) shall be degrees. Both angles having the value 0° is body position supine. Table A.34.17-3 shows the angle values of selected body positions.

510

Table A.34.17-3: Selected Body Position Angles

Position Value	Value in Channel 1	Value in Channel 2
supine	0	0

lateral decubitus left	90	0
prone	180	0
lateral decubitus right	270	0
upright	0	90
feet up	0	-90

A.34.17.4.7 Waveform Annotation Module

515 The Defined CID for the Concept Name Code Sequence (0040,A043) in the Waveform Annotation Sequence (0040,B020) shall be CID 19 "Patient Orientation". The Defined CID for the Modifier Code Sequence (0040,A195) shall be CID 20 "Patient Orientation Modifier".

Note:

520 Annotations can be stored either in the Waveform Annotation Module of the waveform to which they apply, or in a separate Structured Report object. The Waveform Annotation Module is only intended for annotations made at the time of acquisition.

525 **Add the following new Defined Terms to PS3.3 C.7.3.1.1.1 Modality:**

C.7.3.1.1 General Series Attribute Descriptions

C.7.3.1.1.1 Modality

Defined Terms:

...

530 **ECG** Electrocardiography

EEG **Electroencephalography**

EMG **Electromyography**

EOG **Electrooculography**

EPS Cardiac Electrophysiology

535 ...

POS **Position Sensor**

...

Add the following new content to PS3.3 Section C.10.9 Table C.10-9. Waveform Module Attributes:

C.10.9 Waveform Module

540 The table in this section contains Attributes that describe a time-based waveform. A waveform consists of one or more multiplex groups, each encoded into an Item in the Waveform Sequence. All channels within a multiplex group are synchronously digitized at a common sampling frequency.

Table C.10-9. Waveform Module Attributes

545

Attribute Name	Tag	Type	Attribute Description
Waveform Sequence	(5400,0100)	1	Sequence of Items, each representing one waveform multiplex group. One or more Items shall be included in this Sequence. Ordering of Items in this Sequence is significant for external reference to specific multiplex groups.
<u>>Multiplex Group UID</u>	<u>(003A,0310)</u>	<u>1C</u>	<u>Unique Identifier for the multiplex group.</u> <u>Required if the same Multiplex Group is used in more than one SOP Instance.</u>

Attribute Name	Tag	Type	Attribute Description
			<u>May be present otherwise.</u>
...			
>Powerline Frequency	(003A,0311)	3	Frequency of the power line in Hz
....			
>Channel Definition Sequence	(003A,0200)	1	Sequence of Items, with one Item per channel (see Section C.10.9.1.4). One or more Items shall be included in this Sequence. Ordering of Items in this Sequence is significant for reference to specific channels.
...			
>>Notch Filter Bandwidth	(003A,0223)	3	Nominal 3dB bandwidth of notch filter(s); in Hz
>>>Channel Impedance Sequence	(003A,0312)	3	<u>Sequence of items with impedance values for the given channel (see Section C.10.9.1.11).</u> <u>One or more Items are permitted in this Sequence.</u>
>>>>Impedance Value	(003A,0313)	1	<u>Measured value of the impedance in Ohm</u>
>>>>Impedance Measurement DateTime	(003A,0314)	1	<u>Point in time the measurement took place.</u>
>>>>Impedance Measurement Frequency	(003A,0315)	3	<u>Frequency of the impedance measurement current in Hz</u>
>>>>Impedance Measurement Current Type	(003A,0316)	3	<u>Type of current used to measure the impedance</u> <u>Defined Terms:</u> <u>AC</u> <u>DC</u>
>>>Channel Minimum Value	(5400,0110)	3	Minimum valid sample value as limited by the acquisition equipment (see Section C.10.9.1.4.5)
....			

Add the following new content to PS3.3 Section C.10.9.1.11:

C.10.9.1.11 Channel Impedance Sequence

550 The Impedance Value (003A,0313) is stored as a measure (ohm) at a given point in time per electrode. Technically this happens before or after a recording. Recording has to be paused, if impedance testing is done during a recording.

Changes to NEMA Standards Publications PS 3.4

555

**Digital Imaging and Communications in Medicine (DICOM)
Part 4: Service Class Specifications**

Add new SOP Class to PS 3.4 Annex B tables

B.5 Standard SOP classes

560 The SOP Classes in the Storage Service Class identify the Composite IODs to be stored. Table B.5-1 identifies Standard SOP Classes.

Table B.5-1. Standard SOP Classes

SOP Class Name	SOP Class UID	IOD Specification (defined in PS 3.3)
...
<u>Routine Scalp Electroencephalogram Waveform Storage</u>	<u>1.2.840.10008.5.1.4.1.1.9.7.1</u>	<u>Routine Scalp Electroencephalogram IOD</u>
<u>Electromyogram Waveform Storage</u>	<u>1.2.840.10008.5.1.4.1.1.9.7.2</u>	<u>Electromyogram IOD</u>
<u>Electrooculogram Waveform Storage</u>	<u>1.2.840.10008.5.1.4.1.1.9.7.3</u>	<u>Electrooculogram IOD</u>
<u>Sleep Electroencephalogram Waveform Storage</u>	<u>1.2.840.10008.5.1.4.1.1.9.7.4</u>	<u>Sleep Electroencephalogram IOD</u>
<u>Multi-channel Respiratory Waveform Storage</u>	<u>1.2.840.10008.5.1.4.1.1.9.6.2</u>	<u>Multi-channel Respiratory Waveform IOD</u>
<u>Body Position Waveform Storage</u>	<u>1.2.840.10008.5.1.4.1.1.9.8.1</u>	<u>Body Position Waveform IOD</u>
...		

565

Changes to NEMA Standards Publications PS 3.6

**Digital Imaging and Communications in Medicine (DICOM)
Part 6: Data Dictionary**

Add new Elements to PS 3.6 Table 6-1. Registry of Data Elements

570

Table 6-1. Registry of DICOM Data Elements

Tag	Name	Keyword	VR	VM	
<u>(003A,0310)</u>	<u>Multiplex Group UID</u>	<u>MultiplexGroupUID</u>	<u>UI</u>	<u>1</u>	
<u>(003A,0311)</u>	<u>Powerline Frequency</u>	<u>PowerlineFrequency</u>	<u>DS</u>	<u>1</u>	
<u>(003A,0312)</u>	<u>Channel Impedance Sequence</u>	<u>ChannellImpedanceSequence</u>	<u>SQ</u>	<u>1</u>	
<u>(003A,0313)</u>	<u>Impedance Value</u>	<u>ImpedanceValue</u>	<u>DS</u>	<u>1</u>	
<u>(003A,0314)</u>	<u>Impedance Measurement DateTime</u>	<u>ImpedanceMeasurementDateTime</u>	<u>DT</u>	<u>1</u>	
<u>(003A,0315)</u>	<u>Impedance Measurement Frequency</u>	<u>ImpedanceMeasurementFrequency</u>	<u>DS</u>	<u>1</u>	
<u>(003A,0316)</u>	<u>Impedance Measurement Current Type</u>	<u>ImpedanceMeasurementCurrentType</u>	<u>CS</u>	<u>1</u>	

Add new SOP Classes to PS 3.6 Annex A Table A-1:

UID Value	UID Name	UID Type	Part
<u>1.2.840.10008.5.1.4.1.1.9.7.1</u>	<u>Routine Scalp Electroencephalogram Waveform Storage</u>	<u>SOP Class</u>	<u>PS 3.4</u>
<u>1.2.840.10008.5.1.4.1.1.9.7.2</u>	<u>Electromyogram Waveform Storage</u>	<u>SOP Class</u>	<u>PS 3.4</u>
<u>1.2.840.10008.5.1.4.1.1.9.7.3</u>	<u>Electrooculogram Waveform Storage</u>	<u>SOP Class</u>	<u>PS 3.4</u>

<u>1.2.840.10008.5.1.4.1.1.9.7.4</u>	<u>Sleep Electroencephalogram Waveform Storage</u>	<u>SOP Class</u>	<u>PS3.4</u>
<u>1.2.840.10008.5.1.4.1.1.9.6.2</u>	<u>Multi-channel Respiratory Waveform Storage</u>	<u>SOP Class</u>	<u>PS3.4</u>
<u>1.2.840.10008.5.1.4.1.1.9.8.1</u>	<u>Body Position Waveform Storage</u>	<u>SOP Class</u>	<u>PS3.4</u>

575

Add new Context Group UID Values to Table A-3:

Context UID	Context Identifier	Context Group Name
<u>1.2.840.10008.6.1.1328</u>	<u>CID 3030</u>	<u>EEG Leads</u>
<u>1.2.840.10008.6.1.1329</u>	<u>CID 3031</u>	<u>Lead Locations near muscles</u>
<u>1.2.840.10008.6.1.1330</u>	<u>CID 3032</u>	<u>Lead locations near peripheral nerves</u>
<u>1.2.840.10008.6.1.1331</u>	<u>CID 3033</u>	<u>EOG Leads</u>
<u>1.2.840.10008.6.1.1332</u>	<u>CID 3034</u>	<u>Body Position Channels</u>
<u>1.2.840.10008.6.1.1333</u>	<u>CID 3035</u>	<u>EEG Annotations</u>
<u>1.2.840.10008.6.1.1334</u>	<u>CID 3036</u>	<u>EMG Annotations</u>
<u>1.2.840.10008.6.1.1335</u>	<u>CID 3037</u>	<u>EOG Annotations</u>
<u>1.2.840.10008.6.1.1336</u>	<u>CID 3038</u>	<u>Pattern Events</u>
<u>1.2.840.10008.6.1.1337</u>	<u>CID 3039</u>	<u>Device-related and Environment-related Events</u>
<u>1.2.840.10008.6.1.1338</u>	<u>CID 3040</u>	<u>EEG Annotations – Neurological Monitoring Measurements</u>

580

Changes to NEMA Standards Publications PS 3.16

595

**Digital Imaging and Communications in Medicine (DICOM)
Part 16: Content Mapping Resource**

Amend existing context groups CID 29 and CID 3005:

CID 29 Acquisition Modality

600 ...

Version: **2019032720200623**

...

Table CID 29. Acquisition Modality

Coding Scheme Designator	Code Value	Code Meaning
...		
<u>DCM</u>	<u>EEG</u>	<u>Electroencephalography</u>
<u>DCM</u>	<u>EMG</u>	<u>Electromyography</u>
<u>DCM</u>	<u>EOG</u>	<u>Electrooculography</u>
<u>DCM</u>	<u>POS</u>	<u>Position Sensor</u>
...		

605

CID 3005 Respiration Waveform

...

Version: 2009040920200623

...

610

Table CID 3005. Respiration Waveform

Coding Scheme Designator	Code Value	Code Meaning
...		
<u>DCM</u>	<u>130416</u>	<u>Airflow Thermistor</u>
<u>DCM</u>	<u>130417</u>	<u>Airflow Thermocouple</u>
<u>DCM</u>	<u>130418</u>	<u>Airflow Nasal Prong</u>
<u>DCM</u>	<u>130419</u>	<u>Airflow PVDF</u>
<u>DCM</u>	<u>130420</u>	<u>Airflow CPAP</u>
<u>DCM</u>	<u>130421</u>	<u>Airflow</u>
<u>DCM</u>	<u>130422</u>	<u>PAP Pressure</u>
<u>DCM</u>	<u>130423</u>	<u>PAP Leak Pressure</u>
<u>DCM</u>	<u>130424</u>	<u>PAP Tidal Volume</u>
<u>DCM</u>	<u>130425</u>	<u>Esophageal Pressure</u>
<u>DCM</u>	<u>130426</u>	<u>Respiratory Pressure</u>
<u>DCM</u>	<u>130427</u>	<u>Thoracic Respiratory Inductance</u>
<u>DCM</u>	<u>130428</u>	<u>Abdominal Respiratory Inductance</u>
<u>DCM</u>	<u>130429</u>	<u>Thoracic Respiratory PVDF</u>
<u>DCM</u>	<u>130430</u>	<u>Abdominal Respiratory PVDF</u>
<u>DCM</u>	<u>130431</u>	<u>Thoracic Respiratory Effort</u>
<u>DCM</u>	<u>130432</u>	<u>Abdominal Respiratory Effort</u>
<u>DCM</u>	<u>130433</u>	<u>Respiratory Effort</u>
<u>DCM</u>	<u>130434</u>	<u>CO2 Transcutaneous</u>
<u>DCM</u>	<u>130435</u>	<u>CO2 Waveform End-tidal Main-stream</u>
<u>DCM</u>	<u>130436</u>	<u>CO2 Trend End-tidal Main-stream</u>

Coding Scheme Designator	Code Value	Code Meaning
<u>DCM</u>	<u>130437</u>	<u>CO2 Waveform End-tidal Side-stream</u>
<u>DCM</u>	<u>130438</u>	<u>CO2 Trend End-tidal Side-stream</u>
<u>DCM</u>	<u>130439</u>	<u>CO2 Waveform Main-stream</u>
<u>DCM</u>	<u>130440</u>	<u>CO2 Waveform Side-stream</u>
<u>DCM</u>	<u>130441</u>	<u>CO2 Trend Main-stream</u>
<u>DCM</u>	<u>130442</u>	<u>CO2 Trend Side-stream</u>
<u>DCM</u>	<u>130443</u>	<u>CO2 Respiration</u>

Add CID 3030 EEG Leads

CID 3030 EEG Leads

615 This Context Group comprises the EEG lead identifiers of ISO/IEEE 11073-10101. The terms included in the table below may not constitute the complete list; see the ISO/IEEE Standard.

Note:

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620 Note:

The Code Meaning is taken from the ISO/IEEE 11073 Acronym column.

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML

Type: Extensible

625 **Version:** 20200623

UID: 1.2.840.10008.6.1.1328

Table CID 3030. EEG Leads

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:996	Nz	MDC_HEAD_NASION_MID
MDC	7:1000	Fpz	MDC_HEAD_FRONT_POLAR_MID
MDC	7:1004	AFz	MDC_HEAD_FRONT_ANT_MID
MDC	7:1008	Fz	MDC_HEAD_FRONT_MID
MDC	7:1012	FCz	MDC_HEAD_FRONT_CENT_MID
MDC	7:1016	Cz	MDC_HEAD_CENT_MID

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:1020	CPz	MDC_HEAD_PARIET_MEDIA
MDC	7:1024	Pz	MDC_HEAD_PARIET_MID
MDC	7:1028	POz	MDC_HEAD_PARIET_OCCIP_MID
MDC	7:1032	Oz	MDC_HEAD_OCCIP_MID
MDC	7:1036	Iz	MDC_HEAD_INION_MID
MDC	7:1041	Fp1	MDC_HEAD_FRONT_POLAR_L
MDC	7:1042	Fp2	MDC_HEAD_FRONT_POLAR_R
MDC	7:1049	F1	MDC_HEAD_FRONT_L_1
MDC	7:1054	F2	MDC_HEAD_FRONT_R_2
MDC	7:1057	F3	MDC_HEAD_FRONT_L_3
MDC	7:1062	F4	MDC_HEAD_FRONT_R_4
MDC	7:1065	F5	MDC_HEAD_FRONT_L_5
MDC	7:1070	F6	MDC_HEAD_FRONT_R_6
MDC	7:1073	F7	MDC_HEAD_FRONT_L_7
MDC	7:1078	F8	MDC_HEAD_FRONT_R_8
MDC	7:1081	F9	MDC_HEAD_FRONT_L_9
MDC	7:1086	F10	MDC_HEAD_FRONT_R_10
MDC	7:1089	FC1	MDC_HEAD_FRONT_CENT_L_1
MDC	7:1094	FC2	MDC_HEAD_FRONT_CENT_R_2
MDC	7:1097	FC3	MDC_HEAD_FRONT_CENT_L_3
MDC	7:1102	FC4	MDC_HEAD_FRONT_CENT_R_4
MDC	7:1105	FC5	MDC_HEAD_FRONT_CENT_L_5
MDC	7:1110	FC6	MDC_HEAD_FRONT_CENT_R_6
MDC	7:1113	FT7	MDC_HEAD_FRONT_TEMPOR_L7
MDC	7:1118	FT8	MDC_HEAD_FRONT_TEMPOR_R8
MDC	7:1121	FT9	MDC_HEAD_FRONT_TEMPOR_L9
MDC	7:1126	FT10	MDC_HEAD_FRONT_TEMPOR_R10
MDC	7:1129	C1	MDC_HEAD_CENT_L_1
MDC	7:1134	C2	MDC_HEAD_CENT_R_2
MDC	7:1137	C3	MDC_HEAD_CENT_L_3
MDC	7:1142	C4	MDC_HEAD_CENT_R_4
MDC	7:1145	C5	MDC_HEAD_CENT_L_5
MDC	7:1150	C6	MDC_HEAD_CENT_R_6

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:1153	CP1	MDC_HEAD_PARIET_CENT_L_1
MDC	7:1158	CP2	MDC_HEAD_PARIET_CENT_R_2
MDC	7:1161	CP3	MDC_HEAD_PARIET_CENT_L_3
MDC	7:1166	CP4	MDC_HEAD_PARIET_CENT_R_4
MDC	7:1169	CP5	MDC_HEAD_PARIET_CENT_L_5
MDC	7:1174	CP6	MDC_HEAD_PARIET_CENT_R_6
MDC	7:1177	P1	MDC_HEAD_PARIET_L_1
MDC	7:1182	P2	MDC_HEAD_PARIET_R_2
MDC	7:1185	P3	MDC_HEAD_PARIET_L_3
MDC	7:1190	P4	MDC_HEAD_PARIET_R_4
MDC	7:1193	P5	MDC_HEAD_PARIET_L_5
MDC	7:1198	P6	MDC_HEAD_PARIET_R_6
MDC	7:1201	P9	MDC_HEAD_PARIET_L_9
MDC	7:1206	P10	MDC_HEAD_PARIET_R_10
MDC	7:1209	O1	MDC_HEAD_OCCIP_L
MDC	7:1214	O2	MDC_HEAD_OCCIP_R
MDC	7:1217	AF3	MDC_HEAD_FRONT_ANT_L_3
MDC	7:1222	AF4	MDC_HEAD_FRONT_ANT_R_4
MDC	7:1225	AF7	MDC_HEAD_FRONT_ANT_L_7
MDC	7:1230	AF8	MDC_HEAD_FRONT_ANT_R_8
MDC	7:1233	PO3	MDC_HEAD_PARIET_OCCIP_L_3
MDC	7:1238	PO4	MDC_HEAD_PARIET_OCCIP_R_4
MDC	7:1241	PO7	MDC_HEAD_PARIET_OCCIP_L_7
MDC	7:1246	PO8	MDC_HEAD_PARIET_OCCIP_R_8
MDC	7:1249	T3	MDC_HEAD_TEMPOR_L_3
MDC	7:1254	T4	MDC_HEAD_TEMPOR_R_4
MDC	7:1257	T5	MDC_HEAD_TEMPOR_L_5
MDC	7:1262	T6	MDC_HEAD_TEMPOR_R_6
MDC	7:1265	T9	MDC_HEAD_TEMPOR_L_9
MDC	7:1270	T10	MDC_HEAD_TEMPOR_R_10
MDC	7:1273	TP7	MDC_HEAD_TEMPOR_PARIET_L_7
MDC	7:1278	TP8	MDC_HEAD_TEMPOR_PARIET_R_8
MDC	7:1281	TP9	MDC_HEAD_TEMPOR_PARIET_L_9

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:1286	TP10	MDC_HEAD_TEMPOR_PARIET_R_10
MDC	7:1289	A1	MDC_HEAD_EAR_L
MDC	7:1290	A2	MDC_HEAD_EAR_R
MDC	7:1297	T1	MDC_HEAD_TEMPOR_ANT_L
MDC	7:1298	T2	MDC_HEAD_TEMPOR_ANT_R
MDC	7:1305	Pg1	MDC_HEAD_PHARYNGEAL_L
MDC	7:1306	Pg2	MDC_HEAD_PHARYNGEAL_R
MDC	7:1313	Sp1	MDC_HEAD_SPHENOIDAL_L
MDC	7:1314	Sp2	MDC_HEAD_SPHENOIDAL_R

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Add CID 3031 Lead locations near or in muscles

CID 3031 Lead locations near or in muscles

This Context Group comprises the EMG lead identifiers of ISO/IEEE 11073-10101. The terms included in the table below may not constitute the complete list; see the ISO/IEEE Standard.

635 Note

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Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML

640 **Type:** Extensible

Version: 20200623

UID: 1.2.840.10008.6.1.1329

Table CID 3031 Lead locations near or in muscles

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:252	Musculi capitis	MDC_MUSC_HEAD
MDC	7:253	Musculi capitis, left	MDC_MUSC_HEAD_L
MDC	7:254	Musculi capitis, right	MDC_MUSC_HEAD_R
MDC	7:256	Musculi bulbi	MDC_MUSC_HEAD_EYE
MDC	7:257	Musculi bulbi, left	MDC_MUSC_HEAD_EYE_L
MDC	7:258	Musculi bulbi, right	MDC_MUSC_HEAD_EYE_R
MDC	7:260	Musculus rectus superior	MDC_MUSC_HEAD_RECT_SUP

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:261	Musculus rectus superior, left	MDC_MUSC_HEAD_RECT_SUP_L
MDC	7:262	Musculus rectus superior, right	MDC_MUSC_HEAD_RECT_SUP_R
MDC	7:264	Musculus rectus inferior	MDC_MUSC_HEAD_RECT_INF
MDC	7:265	Musculus rectus inferior, left	MDC_MUSC_HEAD_RECT_INF_L
MDC	7:266	Musculus rectus inferior, right	MDC_MUSC_HEAD_RECT_INF_R
MDC	7:268	Musculus rectus medialis	MDC_MUSC_HEAD_RECT_MED
MDC	7:269	Musculus rectus medialis, left	MDC_MUSC_HEAD_RECT_MED_L
MDC	7:270	Musculus rectus medialis, right	MDC_MUSC_HEAD_RECT_MED_R
MDC	7:272	Musculus rectus lateralis	MDC_MUSC_HEAD_RECT_LAT
MDC	7:273	Musculus rectus lateralis, left	MDC_MUSC_HEAD_RECT_LAT_L
MDC	7:274	Musculus rectus lateralis, right	MDC_MUSC_HEAD_RECT_LAT_R
MDC	7:276	Musculus obliquus superior	MDC_MUSC_HEAD_OBLIQ_SUP
MDC	7:277	Musculus obliquus superior, left	MDC_MUSC_HEAD_OBLIQ_SUP_L
MDC	7:278	Musculus obliquus superior, right	MDC_MUSC_HEAD_OBLIQ_SUP_R
MDC	7:280	Musculus obliquus inferior	MDC_MUSC_HEAD_OBLIQ_INF
MDC	7:281	Musculus obliquus inferior, left	MDC_MUSC_HEAD_OBLIQ_INF_L
MDC	7:282	Musculus obliquus inferior, right	MDC_MUSC_HEAD_OBLIQ_INF_R
MDC	7:284	Musculi faciales et masticatores	MDC_MUSC_HEAD_FACIAL
MDC	7:285	Musculi faciales et masticatores, left	MDC_MUSC_HEAD_FACIAL_L
MDC	7:286	Musculi faciales et masticatores, right	MDC_MUSC_HEAD_FACIAL_R
MDC	7:288	Musculus occipitofrontalis, Venter frontalis	MDC_MUSC_HEAD_OCCIPITOFRONT_VENTER

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:289	Musculus occipitofrontalis, Venter frontalis, left	MDC_MUSC_HEAD_OCCIPITOFRONT_VENTER_L
MDC	7:290	Musculus occipitofrontalis, Venter frontalis, right	MDC_MUSC_HEAD_OCCIPITOFRONT_VENTER_R
MDC	7:292	Musculus orbicularis oculi	MDC_MUSC_HEAD_ORBIC_OCUL
MDC	7:293	Musculus orbicularis oculi, left	MDC_MUSC_HEAD_ORBIC_OCUL_L
MDC	7:294	Musculus orbicularis oculi, right	MDC_MUSC_HEAD_ORBIC_OCUL_R
MDC	7:296	Musculus orbicularis oculi, Pars orbitalis	MDC_MUSC_HEAD_ORBIC_OCUL_PARS_ORBIT
MDC	7:297	Musculus orbicularis oculi, Pars orbitalis, left	MDC_MUSC_HEAD_ORBIC_OCUL_PARS_ORBIT_L
MDC	7:298	Musculus orbicularis oculi, Pars orbitalis, right	MDC_MUSC_HEAD_ORBIC_OCUL_PARS_ORBIT_R
MDC	7:300	Musculus auricularis posterior	MDC_MUSC_HEAD_AURIC_POST
MDC	7:301	Musculus auricularis posterior, left	MDC_MUSC_HEAD_AURIC_POST_L
MDC	7:302	Musculus auricularis posterior, right	MDC_MUSC_HEAD_AURIC_POST_R
MDC	7:304	Musculus orbicularis oris	MDC_MUSC_HEAD_ORBIC_ORIS
MDC	7:305	Musculus orbicularis oris, left	MDC_MUSC_HEAD_ORBIC_ORIS_L
MDC	7:306	Musculus orbicularis oris, right	MDC_MUSC_HEAD_ORBIC_ORIS_R
MDC	7:308	Musculus depressor anguli oris	MDC_MUSC_HEAD_DEPRESSOR_ANGUL_ORIS
MDC	7:309	Musculus depressor anguli oris, left	MDC_MUSC_HEAD_DEPRESSOR_ANGUL_ORIS_L
MDC	7:310	Musculus depressor anguli oris, right	MDC_MUSC_HEAD_DEPRESSOR_ANGUL_ORIS_R
MDC	7:312	Musculus risorius	MDC_MUSC_HEAD_RISOR
MDC	7:313	Musculus risorius, left	MDC_MUSC_HEAD_RISOR_L
MDC	7:314	Musculus risorius, right	MDC_MUSC_HEAD_RISOR_R
MDC	7:316	Musculus zygomaticus major	MDC_MUSC_HEAD_ZYGOMATIC_MAJOR

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:317	Musculus zygomaticus major, left	MDC_MUSC_HEAD_ZYGOMATIC_MAJOR_L
MDC	7:318	Musculus zygomaticus major, right	MDC_MUSC_HEAD_ZYGOMATIC_MAJOR_R
MDC	7:320	Musculus zygomaticus minor	MDC_MUSC_HEAD_ZYGOMATIC_MINOR
MDC	7:321	Musculus zygomaticus minor, left	MDC_MUSC_HEAD_ZYGOMATIC_MINOR_L
MDC	7:322	Musculus zygomaticus minor, right	MDC_MUSC_HEAD_ZYGOMATIC_MINOR_R
MDC	7:324	Musculus levator labii superioris	MDC_MUSC_HEAD_LEVATOR_LAB_SUP
MDC	7:325	Musculus levator labii superioris, left	MDC_MUSC_HEAD_LEVATOR_LAB_SUP_L
MDC	7:326	Musculus levator labii superioris, right	MDC_MUSC_HEAD_LEVATOR_LAB_SUP_R
MDC	7:328	Musculus levator labii superioris alaeque nasi	MDC_MUSC_HEAD_LEVATOR_LAB_SUP_AL_NA SI
MDC	7:329	Musculus levator labii superioris alaeque nasi, left	MDC_MUSC_HEAD_LEVATOR_LAB_SUP_AL_NA SI_L
MDC	7:330	Musculus levator labii superioris alaeque nasi, right	MDC_MUSC_HEAD_LEVATOR_LAB_SUP_AL_NA SI_R
MDC	7:332	Musculus depressor labii inferioris	MDC_MUSC_HEAD_DEPRESSOR_LAB_INF
MDC	7:333	Musculus depressor labii inferioris, left	MDC_MUSC_HEAD_DEPRESSOR_LAB_INF_L
MDC	7:334	Musculus depressor labii inferioris, right	MDC_MUSC_HEAD_DEPRESSOR_LAB_INF_R
MDC	7:336	Musculus levator anguli oris	MDC_MUSC_HEAD_LEVATOR_ANGUL_ORIS
MDC	7:337	Musculus levator anguli oris, left	MDC_MUSC_HEAD_LEVATOR_ANGUL_ORIS_L
MDC	7:338	Musculus levator anguli oris, right	MDC_MUSC_HEAD_LEVATOR_ANGUL_ORIS_R
MDC	7:340	Musculus buccinator	MDC_MUSC_HEAD_BUCCINATOR
MDC	7:341	Musculus buccinator, left	MDC_MUSC_HEAD_BUCCINATOR_L
MDC	7:342	Musculus buccinator, right	MDC_MUSC_HEAD_BUCCINATOR_R

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:344	Musculus mentalis	MDC_MUSC_HEAD_MENTAL
MDC	7:345	Musculus mentalis, left	MDC_MUSC_HEAD_MENTAL_L
MDC	7:346	Musculus mentalis, right	MDC_MUSC_HEAD_MENTAL_R
MDC	7:348	Musculus masseter	MDC_MUSC_HEAD_MASSETER
MDC	7:349	Musculus masseter, left	MDC_MUSC_HEAD_MASSETER_L
MDC	7:350	Musculus masseter, right	MDC_MUSC_HEAD_MASSETER_R
MDC	7:352	Musculus temporalis	MDC_MUSC_HEAD_TEMPOR
MDC	7:353	Musculus temporalis, left	MDC_MUSC_HEAD_TEMPOR_L
MDC	7:354	Musculus temporalis, right	MDC_MUSC_HEAD_TEMPOR_R
MDC	7:356	Musculus Pterygoideus	MDC_MUSC_HEAD_PTERYGOID
MDC	7:357	Musculus Pterygoideus, left	MDC_MUSC_HEAD_PTERYGOID_L
MDC	7:358	Musculus Pterygoideus, right	MDC_MUSC_HEAD_PTERYGOID_R
MDC	7:360	Musculus Pterygoideus lateralis	MDC_MUSC_HEAD_PTERYGOID_LAT
MDC	7:361	Musculus Pterygoideus lateralis, left	MDC_MUSC_HEAD_PTERYGOID_LAT_L
MDC	7:362	Musculus Pterygoideus lateralis, right	MDC_MUSC_HEAD_PTERYGOID_LAT_R
MDC	7:364	Musculus Pterygoideus, medialis	MDC_MUSC_HEAD_PTERYGOID_MED
MDC	7:365	Musculus Pterygoideus, medialis, left	MDC_MUSC_HEAD_PTERYGOID_MED_L
MDC	7:366	Musculus Pterygoideus, medialis, right	MDC_MUSC_HEAD_PTERYGOID_MED_R
MDC	7:368	Musculi linguae	MDC_MUSC_HEAD_LING
MDC	7:369	Musculi linguae, left	MDC_MUSC_HEAD_LING_L
MDC	7:370	Musculi linguae, right	MDC_MUSC_HEAD_LING_R
MDC	7:372	Musculus genioglossus	MDC_MUSC_HEAD_GENIOGLOSS
MDC	7:373	Musculus genioglossus, left	MDC_MUSC_HEAD_GENIOGLOSS_L
MDC	7:374	Musculus genioglossus, right	MDC_MUSC_HEAD_GENIOGLOSS_R
MDC	7:376	Musculi laringis	MDC_MUSC_HEAD_LARING
MDC	7:377	Musculi laringis, left	MDC_MUSC_HEAD_LARING_L
MDC	7:378	Musculi laringis, right	MDC_MUSC_HEAD_LARING_R

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:380	Musculus cricothyroideus	MDC_MUSC_HEAD_CRICOTHYROID
MDC	7:381	Musculus cricothyroideus, left	MDC_MUSC_HEAD_CRICOTHYROID_L
MDC	7:382	Musculus cricothyroideus, right	MDC_MUSC_HEAD_CRICOTHYROID_R
MDC	7:384	Musculus thyroartenoideus	MDC_MUSC_HEAD_THYROARYTEROID
MDC	7:385	Musculus thyroartenoideus, left	MDC_MUSC_HEAD_THYROARYTEROID_L
MDC	7:386	Musculus thyroartenoideus, right	MDC_MUSC_HEAD_THYROARYTEROID_R
MDC	7:388	Musculi colli	MDC_MUSC_NECK
MDC	7:389	Musculi colli, left	MDC_MUSC_NECK_L
MDC	7:390	Musculi colli, right	MDC_MUSC_NECK_R
MDC	7:392	Platysma	MDC_MUSC_NECK_PLATYSMA
MDC	7:393	Platysma, left	MDC_MUSC_NECK_PLATYSMA_L
MDC	7:394	Platysma, right	MDC_MUSC_NECK_PLATYSMA_R
MDC	7:396	Musculus capitis longus	MDC_MUSC_NECK_CAPT_LONG
MDC	7:397	Musculus capitis longus, left	MDC_MUSC_NECK_CAPT_LONG_L
MDC	7:398	Musculus capitis longus, right	MDC_MUSC_NECK_CAPT_LONG_R
MDC	7:400	Musculus Sternocleidomastoideus	MDC_MUSC_NECK_STERNOCLEIDOMASTOID
MDC	7:401	Musculus Sternocleidomastoideus, left	MDC_MUSC_NECK_STERNOCLEIDOMASTOID_L
MDC	7:402	Musculus Sternocleidomastoideus, right	MDC_MUSC_NECK_STERNOCLEIDOMASTOID_R
MDC	7:404	Musculus digastricus	MDC_MUSC_NECK_DIGRASTRIC
MDC	7:405	Musculus digastricus, left	MDC_MUSC_NECK_DIGRASTRIC_L
MDC	7:406	Musculus digastricus, right	MDC_MUSC_NECK_DIGRASTRIC_R
MDC	7:408	Musculus digastricus, Venter anterior	MDC_MUSC_NECK_DIGRASTRIC_VENTER_ANT
MDC	7:409	Musculus digastricus, Venter anterior, left	MDC_MUSC_NECK_DIGRASTRIC_VENTER_ANT_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:410	Musculus digastricus, Venter anterior, right	MDC_MUSC_NECK_DIGRASTRIC_VENTER_ANT_R
MDC	7:412	Musculus digastricus, Venter posterior	MDC_MUSC_NECK_DIGRASTRIC_VENTER_POST
MDC	7:413	Musculus digastricus, Venter posterior, left	MDC_MUSC_NECK_DIGRASTRIC_VENTER_POST_L
MDC	7:414	Musculus digastricus, Venter posterior, right	MDC_MUSC_NECK_DIGRASTRIC_VENTER_POST_R
MDC	7:416	Musculus mylohyoideus	MDC_MUSC_NECK_MYLOHYOID
MDC	7:417	Musculus mylohyoideus, left	MDC_MUSC_NECK_MYLOHYOID_L
MDC	7:418	Musculus mylohyoideus, right	MDC_MUSC_NECK_MYLOHYOID_R
MDC	7:424	Musculi dorsi	MDC_MUSC_BACK
MDC	7:425	Musculi dorsi, left	MDC_MUSC_BACK_L
MDC	7:426	Musculi dorsi, right	MDC_MUSC_BACK_R
MDC	7:436	Musculus trapezius	MDC_MUSC_BACK_TRAPEZ
MDC	7:437	Musculus trapezius, left	MDC_MUSC_BACK_TRAPEZ_L
MDC	7:438	Musculus trapezius, right	MDC_MUSC_BACK_TRAPEZ_R
MDC	7:440	Musculus latissimus dorsi	MDC_MUSC_BACK_LASTISSIM_DORS
MDC	7:441	Musculus latissimus dorsi, left	MDC_MUSC_BACK_LASTISSIM_DORS_L
MDC	7:442	Musculus latissimus dorsi, right	MDC_MUSC_BACK_LASTISSIM_DORS_R
MDC	7:444	Musculus rhomboideus major	MDC_MUSC_BACK_RHOMB_MAJOR
MDC	7:445	Musculus rhomboideus major, left	MDC_MUSC_BACK_RHOMB_MAJOR_L
MDC	7:446	Musculus rhomboideus major, right	MDC_MUSC_BACK_RHOMB_MAJOR_R
MDC	7:448	Musculus rhomboideus minor	MDC_MUSC_BACK_RHOMB_MINOR
MDC	7:449	Musculus rhomboideus minor, left	MDC_MUSC_BACK_RHOMB_MINOR_L
MDC	7:450	Musculus rhomboideus minor, right	MDC_MUSC_BACK_RHOMB_MINOR_R
MDC	7:452	Musculus levator scapulae	MDC_MUSC_BACK_SCAP_LEVATOR

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:453	Musculus levator scapulae, left	MDC_MUSC_BACK_SCAP_LEVATOR_L
MDC	7:454	Musculus levator scapulae, right	MDC_MUSC_BACK_SCAP_LEVATOR_R
MDC	7:456	Musculus serratus posterior	MDC_MUSC_BACK_SERRAT_POST
MDC	7:457	Musculus serratus posterior, left	MDC_MUSC_BACK_SERRAT_POST_L
MDC	7:458	Musculus serratus posterior, right	MDC_MUSC_BACK_SERRAT_POST_R
MDC	7:460	Musculus splenius capitis	MDC_MUSC_BACK_SPLEN_CAPT
MDC	7:461	Musculus splenius capitis, left	MDC_MUSC_BACK_SPLEN_CAPT_L
MDC	7:462	Musculus splenius capitis, right	MDC_MUSC_BACK_SPLEN_CAPT_R
MDC	7:464	Musculus splenius cervicis	MDC_MUSC_BACK_SPLEN_CERVIC
MDC	7:465	Musculus splenius cervicis, left	MDC_MUSC_BACK_SPLEN_CERVIC_L
MDC	7:466	Musculus splenius cervicis, right	MDC_MUSC_BACK_SPLEN_CERVIC_R
MDC	7:468	Musculus splenius	MDC_MUSC_BACK_SPLEN
MDC	7:469	Musculus splenius, left	MDC_MUSC_BACK_SPLEN_L
MDC	7:470	Musculus splenius, right	MDC_MUSC_BACK_SPLEN_R
MDC	7:472	Musculus erector spinae	MDC_MUSC_BACK_SPINAL_ERECTOR
MDC	7:473	Musculus erector spinae, left	MDC_MUSC_BACK_SPINAL_ERECTOR_L
MDC	7:474	Musculus erector spinae, right	MDC_MUSC_BACK_SPINAL_ERECTOR_R
MDC	7:476	Musculus spinalis	MDC_MUSC_BACK_SPINAL
MDC	7:477	Musculus spinalis, left	MDC_MUSC_BACK_SPINAL_L
MDC	7:478	Musculus spinalis, right	MDC_MUSC_BACK_SPINAL_R
MDC	7:480	Musculus spinalis thoracis	MDC_MUSC_BACK_SPINAL_THORAC
MDC	7:481	Musculus spinalis thoracis, left	MDC_MUSC_BACK_SPINAL_THORAC_L
MDC	7:482	Musculus spinalis thoracis, right	MDC_MUSC_BACK_SPINAL_THORAC_R
MDC	7:484	Musculus spinalis cervicis	MDC_MUSC_BACK_SPINAL_CERVIC

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:485	Musculus spinalis cervicis, left	MDC_MUSC_BACK_SPINAL_CERVIC_L
MDC	7:486	Musculus spinalis cervicis, right	MDC_MUSC_BACK_SPINAL_CERVIC_R
MDC	7:488	Musculus spinalis capitis	MDC_MUSC_BACK_SPINAL_CAPIT
MDC	7:489	Musculus spinalis capitis, left	MDC_MUSC_BACK_SPINAL_CAPIT_L
MDC	7:490	Musculus spinalis capitis, right	MDC_MUSC_BACK_SPINAL_CAPIT_R
MDC	7:492	Musculus semispinalis	MDC_MUSC_BACK_SEMISPINAL
MDC	7:493	Musculus semispinalis, left	MDC_MUSC_BACK_SEMISPINAL_L
MDC	7:494	Musculus semispinalis, right	MDC_MUSC_BACK_SEMISPINAL_R
MDC	7:496	Musculus semispinalis thoracis	MDC_MUSC_BACK_SEMISPINAL_THOR
MDC	7:497	Musculus semispinalis thoracis, left	MDC_MUSC_BACK_SEMISPINAL_THOR_L
MDC	7:498	Musculus semispinalis thoracis, right	MDC_MUSC_BACK_SEMISPINAL_THOR_R
MDC	7:500	Musculus semispinalis cervicis	MDC_MUSC_BACK_SEMISPINAL_CERV
MDC	7:501	Musculus semispinalis cervicis, left	MDC_MUSC_BACK_SEMISPINAL_CERV_L
MDC	7:502	Musculus semispinalis cervicis, right	MDC_MUSC_BACK_SEMISPINAL_CERV_R
MDC	7:504	Musculus semispinalis capitis	MDC_MUSC_BACK_SEMISPINAL_CAPIT
MDC	7:505	Musculus semispinalis capitis, left	MDC_MUSC_BACK_SEMISPINAL_CAPIT_L
MDC	7:506	Musculus semispinalis capitis, right	MDC_MUSC_BACK_SEMISPINAL_CAPIT_R
MDC	7:508	Musculi multifidii	MDC_MUSC_BACK_MULTIFID
MDC	7:509	Musculi multifidii, left	MDC_MUSC_BACK_MULTIFID_L
MDC	7:510	Musculi multifidii, right	MDC_MUSC_BACK_MULTIFID_R
MDC	7:512	Musculi interspinales	MDC_MUSC_BACK_INTERSPINAL
MDC	7:513	Musculi interspinales, left	MDC_MUSC_BACK_INTERSPINAL_L
MDC	7:514	Musculi interspinales, right	MDC_MUSC_BACK_INTERSPINAL_R

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:516	Musculi interspinales cervicis	MDC_MUSC_BACK_INTERSPINAL_CERVIC
MDC	7:517	Musculi interspinales cervicis, left	MDC_MUSC_BACK_INTERSPINAL_CERVIC_L
MDC	7:518	Musculi interspinales cervicis, right	MDC_MUSC_BACK_INTERSPINAL_CERVIC_R
MDC	7:520	Musculi interspinales thoracis	MDC_MUSC_BACK_INTERSPINAL_THORAC
MDC	7:521	Musculi interspinales thoracis, left	MDC_MUSC_BACK_INTERSPINAL_THORAC_L
MDC	7:522	Musculi interspinales thoracis, right	MDC_MUSC_BACK_INTERSPINAL_THORAC_R
MDC	7:524	Musculi interspinales lumborum	MDC_MUSC_BACK_INTERSPINAL_LUMBOR
MDC	7:525	Musculi interspinales lumborum, left	MDC_MUSC_BACK_INTERSPINAL_LUMBOR_L
MDC	7:526	Musculi interspinales lumborum, right	MDC_MUSC_BACK_INTERSPINAL_LUMBOR_R
MDC	7:528	Musculi thoracis	MDC_MUSC_THORAX
MDC	7:529	Musculi thoracis, left	MDC_MUSC_THORAX_L
MDC	7:530	Musculi thoracis, right	MDC_MUSC_THORAX_R
MDC	7:532	Musculus pectoralis major	MDC_MUSC_THORAX_PECTORAL_MAJOR
MDC	7:533	Musculus pectoralis major, left	MDC_MUSC_THORAX_PECTORAL_MAJOR_L
MDC	7:534	Musculus pectoralis major, right	MDC_MUSC_THORAX_PECTORAL_MAJOR_R
MDC	7:536	Musculus pectoralis minor	MDC_MUSC_THORAX_PECTORAL_MINOR
MDC	7:537	Musculus pectoralis minor, left	MDC_MUSC_THORAX_PECTORAL_MINOR_L
MDC	7:538	Musculus pectoralis minor, right	MDC_MUSC_THORAX_PECTORAL_MINOR_R
MDC	7:540	Musculus subclavius	MDC_MUSC_THORAX_SUBCLAV
MDC	7:541	Musculus subclavius, left	MDC_MUSC_THORAX_SUBCLAV_L
MDC	7:542	Musculus subclavius, right	MDC_MUSC_THORAX_SUBCLAV_R
MDC	7:544	Musculus serratus anterior	MDC_MUSC_THORAX_SERRAT_ANT
MDC	7:545	Musculus serratus anterior, left	MDC_MUSC_THORAX_SERRAT_ANT_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:546	Musculus serratus anterior, right	MDC_MUSC_THORAX_SERRAT_ANT_R
MDC	7:548	Musculi intercostales	MDC_MUSC_THORAX_INTERCOSTAL
MDC	7:549	Musculi intercostales, left	MDC_MUSC_THORAX_INTERCOSTAL_L
MDC	7:550	Musculi intercostales, right	MDC_MUSC_THORAX_INTERCOSTAL_R
MDC	7:552	Diaphragma	MDC_MUSC_THORAX_DIAPHRAGM
MDC	7:553	Diaphragma, left	MDC_MUSC_THORAX_DIAPHRAGM_L
MDC	7:554	Diaphragma, right	MDC_MUSC_THORAX_DIAPHRAGM_R
MDC	7:556	Musculi abdominis	MDC_MUSC_ABDOM
MDC	7:557	Musculi abdominis, left	MDC_MUSC_ABDOM_L
MDC	7:558	Musculi abdominis, right	MDC_MUSC_ABDOM_R
MDC	7:560	Musculus rectus abdominis	MDC_MUSC_ABDOM_ABDOMIN
MDC	7:561	Musculus rectus abdominis, left	MDC_MUSC_ABDOM_ABDOMIN_L
MDC	7:562	Musculus rectus abdominis, right	MDC_MUSC_ABDOM_ABDOMIN_R
MDC	7:564	Musculus obliquus externus abdominis	MDC_MUSC_ABDOM_OBLIQ_EXT
MDC	7:565	Musculus obliquus externus abdominis, left	MDC_MUSC_ABDOM_OBLIQ_EXT_L
MDC	7:566	Musculus obliquus externus abdominis, right	MDC_MUSC_ABDOM_OBLIQ_EXT_R
MDC	7:568	Musculus obliquus internus abdominis	MDC_MUSC_ABDOM_OBLIQ_INT
MDC	7:569	Musculus obliquus internus abdominis, left	MDC_MUSC_ABDOM_OBLIQ_INT_L
MDC	7:570	Musculus obliquus internus abdominis, right	MDC_MUSC_ABDOM_OBLIQ_INT_R
MDC	7:572	Musculus transversus abdominis	MDC_MUSC_ABDOM_ABDOM_TRANSVERS
MDC	7:573	Musculus transversus abdominis, left	MDC_MUSC_ABDOM_ABDOM_TRANSVERS_L
MDC	7:574	Musculus transversus abdominis, right	MDC_MUSC_ABDOM_ABDOM_TRANSVERS_R
MDC	7:576	Musculus quadratus lumborum	MDC_MUSC_ABDOM_LUMBOR_QUADRAT

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:577	Musculus quadratus lumborum, left	MDC_MUSC_ABDOM_LUMBOR_QUADRAT_L
MDC	7:578	Musculus quadratus lumborum, right	MDC_MUSC_ABDOM_LUMBOR_QUADRAT_R
MDC	7:580	Musculi diaphragmatis pelvis	MDC_MUSC_ABDOM_PELV
MDC	7:581	Musculi diaphragmatis pelvis, left	MDC_MUSC_ABDOM_PELV_L
MDC	7:582	Musculi diaphragmatis pelvis, right	MDC_MUSC_ABDOM_PELV_R
MDC	7:584	Musculus puborectalis	MDC_MUSC_ABDOM_PUBORECT
MDC	7:585	Musculus puborectalis, left	MDC_MUSC_ABDOM_PUBORECT_L
MDC	7:586	Musculus puborectalis, right	MDC_MUSC_ABDOM_PUBORECT_R
MDC	7:588	Musculus coccygeus	MDC_MUSC_ABDOM_COCCYG
MDC	7:589	Musculus coccygeus, left	MDC_MUSC_ABDOM_COCCYG_L
MDC	7:590	Musculus coccygeus, right	MDC_MUSC_ABDOM_COCCYG_R
MDC	7:592	Musculus sphincter ani	MDC_MUSC_ABDOM_ANI_SPHINCTER
MDC	7:596	Musculus sphincter ani externus	MDC_MUSC_ABDOM_ANI_SPHINCTER_EXT
MDC	7:600	Musculi membri superioris	MDC_MUSC_UPEXT
MDC	7:601	Musculi membri superioris, left	MDC_MUSC_UPEXT_L
MDC	7:602	Musculi membri superioris, right	MDC_MUSC_UPEXT_R
MDC	7:604	Musculus deltoideus	MDC_MUSC_UPEXT_DELTOID
MDC	7:605	Musculus deltoideus, left	MDC_MUSC_UPEXT_DELTOID_L
MDC	7:606	Musculus deltoideus, right	MDC_MUSC_UPEXT_DELTOID_R
MDC	7:608	Musculus supraspinatus	MDC_MUSC_UPEXT_SUPRASPINAT
MDC	7:609	Musculus supraspinatus, left	MDC_MUSC_UPEXT_SUPRASPINAT_L
MDC	7:610	Musculus supraspinatus, right	MDC_MUSC_UPEXT_SUPRASPINAT_R
MDC	7:612	Musculus infraspinatus	MDC_MUSC_UPEXT_INFRASPINAT
MDC	7:613	Musculus infraspinatus, left	MDC_MUSC_UPEXT_INFRASPINAT_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:614	Musculus infraspinatus, right	MDC_MUSC_UPEXT_INFRASPINAT_R
MDC	7:616	Musculus teres minor	MDC_MUSC_UPEXT_TERES_MINOR
MDC	7:617	Musculus teres minor, left	MDC_MUSC_UPEXT_TERES_MINOR_L
MDC	7:618	Musculus teres minor, right	MDC_MUSC_UPEXT_TERES_MINOR_R
MDC	7:620	Musculus teres major	MDC_MUSC_UPEXT_TERES_MAJOR
MDC	7:621	Musculus teres major, left	MDC_MUSC_UPEXT_TERES_MAJOR_L
MDC	7:622	Musculus teres major, right	MDC_MUSC_UPEXT_TERES_MAJOR_R
MDC	7:624	Musculus subscapularis	MDC_MUSC_UPEXT_SUBSCAP
MDC	7:625	Musculus subscapularis, left	MDC_MUSC_UPEXT_SUBSCAP_L
MDC	7:626	Musculus subscapularis, right	MDC_MUSC_UPEXT_SUBSCAP_R
MDC	7:628	Musculus biceps brachii	MDC_MUSC_UPEXT_BRACHI_BICEPS
MDC	7:629	Musculus biceps brachii, left	MDC_MUSC_UPEXT_BRACHI_BICEPS_L
MDC	7:630	Musculus biceps brachii, right	MDC_MUSC_UPEXT_BRACHI_BICEPS_R
MDC	7:632	Musculus brachialis	MDC_MUSC_UPEXT_BRACHIAL
MDC	7:633	Musculus brachialis, left	MDC_MUSC_UPEXT_BRACHIAL_L
MDC	7:634	Musculus brachialis, right	MDC_MUSC_UPEXT_BRACHIAL_R
MDC	7:636	Musculus coracobrachialis	MDC_MUSC_UPEXT_CORACOBRACH
MDC	7:637	Musculus coracobrachialis, left	MDC_MUSC_UPEXT_CORACOBRACH_L
MDC	7:638	Musculus coracobrachialis, right	MDC_MUSC_UPEXT_CORACOBRACH_R
MDC	7:640	Musculus triceps brachii	MDC_MUSC_UPEXT_BRACH_TRICEPS
MDC	7:641	Musculus triceps brachii, left	MDC_MUSC_UPEXT_BRACH_TRICEPS_L
MDC	7:642	Musculus triceps brachii, right	MDC_MUSC_UPEXT_BRACH_TRICEPS_R
MDC	7:644	Musculus triceps brachii, Caput longum	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LO NG
MDC	7:645	Musculus triceps brachii, Caput longum, left	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LO NG_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:646	Musculus triceps brachii, Caput longum, right	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LONG_R
MDC	7:648	Musculus triceps brachii, Caput laterale	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LAT
MDC	7:649	Musculus triceps brachii, Caput laterale, left	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LAT_L
MDC	7:650	Musculus triceps brachii, Caput laterale, right	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_LAT_R
MDC	7:652	Musculus triceps brachii, Caput mediale	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_MED
MDC	7:653	Musculus triceps brachii, Caput mediale, left	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_MED_L
MDC	7:654	Musculus triceps brachii, Caput mediale, right	MDC_MUSC_UPEXT_BRACH_TRICEPS_CAP_MED_R
MDC	7:656	Musculus anconeus	MDC_MUSC_UPEXT_ANCON
MDC	7:657	Musculus anconeus, left	MDC_MUSC_UPEXT_ANCON_L
MDC	7:658	Musculus anconeus, right	MDC_MUSC_UPEXT_ANCON_R
MDC	7:660	Musculus pronator teres	MDC_MUSC_UPEXT_PRONATOR
MDC	7:661	Musculus pronator teres, left	MDC_MUSC_UPEXT_PRONATOR_L
MDC	7:662	Musculus pronator teres, right	MDC_MUSC_UPEXT_PRONATOR_R
MDC	7:664	Musculus flexor carpi radialis	MDC_MUSC_UPEXT_FLEX_CARPI_RADIAL
MDC	7:665	Musculus flexor carpi radialis, left	MDC_MUSC_UPEXT_FLEX_CARPI_RADIAL_L
MDC	7:666	Musculus flexor carpi radialis, right	MDC_MUSC_UPEXT_FLEX_CARPI_RADIAL_R
MDC	7:668	Musculus palmaris longus	MDC_MUSC_UPEXT_PALMAR_LONG
MDC	7:669	Musculus palmaris longus, left	MDC_MUSC_UPEXT_PALMAR_LONG_L
MDC	7:670	Musculus palmaris longus, right	MDC_MUSC_UPEXT_PALMAR_LONG_R
MDC	7:672	Musculus flexor carpi ulnaris	MDC_MUSC_UPEXT_FLEX_CARPI_ULNAR
MDC	7:673	Musculus flexor carpi ulnaris, left	MDC_MUSC_UPEXT_FLEX_CARPI_ULNAR_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:674	Musculus flexor carpi ulnaris, right	MDC_MUSC_UPEXT_FLEX_CARPI_ULNAR_R
MDC	7:676	Musculus flexor digitorum superficialis	MDC_MUSC_UPEXT_FLEX_DIGIT_SUPERF
MDC	7:677	Musculus flexor digitorum superficialis, left	MDC_MUSC_UPEXT_FLEX_DIGIT_SUPERF_L
MDC	7:678	Musculus flexor digitorum superficialis, right	MDC_MUSC_UPEXT_FLEX_DIGIT_SUPERF_R
MDC	7:680	Musculus flexor digitorum profundus	MDC_MUSC_UPEXT_FLEX_DIGIT_PROFUND
MDC	7:681	Musculus flexor digitorum profundus, left	MDC_MUSC_UPEXT_FLEX_DIGIT_PROFUND_L
MDC	7:682	Musculus flexor digitorum profundus, right	MDC_MUSC_UPEXT_FLEX_DIGIT_PROFUND_R
MDC	7:684	Musculus flexor pollicis longus	MDC_MUSC_UPEXT_FLEX_POLLIC_LONG
MDC	7:685	Musculus flexor pollicis longus, left	MDC_MUSC_UPEXT_FLEX_POLLIC_LONG_L
MDC	7:686	Musculus flexor pollicis longus, right	MDC_MUSC_UPEXT_FLEX_POLLIC_LONG_R
MDC	7:688	Musculus pronator quadratus	MDC_MUSC_UPEXT_PRONATOR_QUADRAT
MDC	7:689	Musculus pronator quadratus, left	MDC_MUSC_UPEXT_PRONATOR_QUADRAT_L
MDC	7:690	Musculus pronator quadratus, right	MDC_MUSC_UPEXT_PRONATOR_QUADRAT_R
MDC	7:692	Musculus brachioradialis	MDC_MUSC_UPEXT_BRACHIORADIAL
MDC	7:693	Musculus brachioradialis, left	MDC_MUSC_UPEXT_BRACHIORADIAL_L
MDC	7:694	Musculus brachioradialis, right	MDC_MUSC_UPEXT_BRACHIORADIAL_R
MDC	7:696	Musculus extensor carpi radialis longus	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_LONG
MDC	7:697	Musculus extensor carpi radialis longus, left	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_LONG_L
MDC	7:698	Musculus extensor carpi radialis longus, right	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_LONG_R

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:700	Musculus extensor carpi radialis brevis	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_B_REV
MDC	7:701	Musculus extensor carpi radialis brevis, left	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_B_REV_L
MDC	7:702	Musculus extensor carpi radialis brevis, right	MDC_MUSC_UPEXT_EXTENS_CARP_RADIAL_B_REV_R
MDC	7:704	Musculus extensor digitorum	MDC_MUSC_UPEXT_EXTENS_DIGIT
MDC	7:705	Musculus extensor digitorum, left	MDC_MUSC_UPEXT_EXTENS_DIGIT_L
MDC	7:706	Musculus extensor digitorum, right	MDC_MUSC_UPEXT_EXTENS_DIGIT_R
MDC	7:708	Musculus extensor digiti minimi	MDC_MUSC_UPEXT_EXTENS_DIGIT_MIN
MDC	7:709	Musculus extensor digiti minimi, left	MDC_MUSC_UPEXT_EXTENS_DIGIT_MIN_L
MDC	7:710	Musculus extensor digiti minimi, right	MDC_MUSC_UPEXT_EXTENS_DIGIT_MIN_R
MDC	7:712	Musculus extensor carpi ulnaris	MDC_MUSC_UPEXT_EXTENS_CARP_ULNAR
MDC	7:713	Musculus extensor carpi ulnaris, left	MDC_MUSC_UPEXT_EXTENS_CARP_ULNAR_L
MDC	7:714	Musculus extensor carpi ulnaris, right	MDC_MUSC_UPEXT_EXTENS_CARP_ULNAR_R
MDC	7:716	Musculus supinator	MDC_MUSC_UPEXT_SUPINATOR
MDC	7:717	Musculus supinator, left	MDC_MUSC_UPEXT_SUPINATOR_L
MDC	7:718	Musculus supinator, right	MDC_MUSC_UPEXT_SUPINATOR_R
MDC	7:720	Musculus abductor pollicis longuss	MDC_MUSC_UPEXT_ABDUC_POLLIC_LONG
MDC	7:721	Musculus abductor pollicis longuss, left	MDC_MUSC_UPEXT_ABDUC_POLLIC_LONG_L
MDC	7:722	Musculus abductor pollicis longuss, right	MDC_MUSC_UPEXT_ABDUC_POLLIC_LONG_R
MDC	7:724	Musculus extensor pollicis brevis	MDC_MUSC_UPEXT_EXTENS_POLLIC_BREV
MDC	7:725	Musculus extensor pollicis brevis, left	MDC_MUSC_UPEXT_EXTENS_POLLIC_BREV_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:726	Musculus extensor pollicis brevis, right	MDC_MUSC_UPEXT_EXTENS_POLLIC_BREV_R
MDC	7:728	Musculus extensor pollicis longus	MDC_MUSC_UPEXT_EXTENS_POLLIC_LONG
MDC	7:729	Musculus extensor pollicis longus, left	MDC_MUSC_UPEXT_EXTENS_POLLIC_LONG_L
MDC	7:730	Musculus extensor pollicis longus, right	MDC_MUSC_UPEXT_EXTENS_POLLIC_LONG_R
MDC	7:732	Musculus extensor indicis	MDC_MUSC_UPEXT_EXTENS_INDIC
MDC	7:733	Musculus extensor indicis, left	MDC_MUSC_UPEXT_EXTENS_INDIC_L
MDC	7:734	Musculus extensor indicis, right	MDC_MUSC_UPEXT_EXTENS_INDIC_R
MDC	7:736	Musculus palmaris brevis	MDC_MUSC_UPEXT_PALMAR_BREV
MDC	7:737	Musculus palmaris brevis, left	MDC_MUSC_UPEXT_PALMAR_BREV_L
MDC	7:738	Musculus palmaris brevis, right	MDC_MUSC_UPEXT_PALMAR_BREV_R
MDC	7:740	Musculus abductor pollicis brevis	MDC_MUSC_UPEXT_ABDUC_POLLIC_BREV
MDC	7:741	Musculus abductor pollicis brevis, left	MDC_MUSC_UPEXT_ABDUC_POLLIC_BREV_L
MDC	7:742	Musculus abductor pollicis brevis, right	MDC_MUSC_UPEXT_ABDUC_POLLIC_BREV_R
MDC	7:744	Musculus flexor pollicis brevis	MDC_MUSC_UPEXT_FLEX_POLLIC_BREV
MDC	7:745	Musculus flexor pollicis brevis, left	MDC_MUSC_UPEXT_FLEX_POLLIC_BREV_L
MDC	7:746	Musculus flexor pollicis brevis, right	MDC_MUSC_UPEXT_FLEX_POLLIC_BREV_R
MDC	7:748	Musculus opponens pollicis	MDC_MUSC_UPEXT_OPPON_POLLIC
MDC	7:749	Musculus opponens pollicis, left	MDC_MUSC_UPEXT_OPPON_POLLIC_L
MDC	7:750	Musculus opponens pollicis, right	MDC_MUSC_UPEXT_OPPON_POLLIC_R
MDC	7:752	Musculus adductor pollicis	MDC_MUSC_UPEXT_ADDUC_POLLIC

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:753	Musculus adductor pollicis, left	MDC_MUSC_UPEXT_ADDUC_POLLIC_L
MDC	7:754	Musculus adductor pollicis, right	MDC_MUSC_UPEXT_ADDUC_POLLIC_R
MDC	7:756	Musculus abductor digiti minimi	MDC_MUSC_UPEXT_ABDUC_DIGIT_MIN
MDC	7:757	Musculus abductor digiti minimi, left	MDC_MUSC_UPEXT_ABDUC_DIGIT_MIN_L
MDC	7:758	Musculus abductor digiti minimi, right	MDC_MUSC_UPEXT_ABDUC_DIGIT_MIN_R
MDC	7:760	Musculus flexor digiti minimi brevis	MDC_MUSC_UPEXT_FLEX_DIGIT_BREV_MIN
MDC	7:761	Musculus flexor digiti minimi brevis, left	MDC_MUSC_UPEXT_FLEX_DIGIT_BREV_MIN_L
MDC	7:762	Musculus flexor digiti minimi brevis, right	MDC_MUSC_UPEXT_FLEX_DIGIT_BREV_MIN_R
MDC	7:764	Musculus opponens digiti minimi	MDC_MUSC_UPEXT_OPPON_DIGIT_MIN
MDC	7:765	Musculus opponens digiti minimi, left	MDC_MUSC_UPEXT_OPPON_DIGIT_MIN_L
MDC	7:766	Musculus opponens digiti minimi, right	MDC_MUSC_UPEXT_OPPON_DIGIT_MIN_R
MDC	7:768	Musculi lumbricales	MDC_MUSC_UPEXT_LUMBRICAL
MDC	7:769	Musculi lumbricales, left	MDC_MUSC_UPEXT_LUMBRICAL_L
MDC	7:770	Musculi lumbricales, right	MDC_MUSC_UPEXT_LUMBRICAL_R
MDC	7:772	Musculi interossei dorsales	MDC_MUSC_UPEXT_INTEROSS_DORSAL
MDC	7:773	Musculi interossei dorsales, left	MDC_MUSC_UPEXT_INTEROSS_DORSAL_L
MDC	7:774	Musculi interossei dorsales, right	MDC_MUSC_UPEXT_INTEROSS_DORSAL_R
MDC	7:776	Musculi interossei palmares	MDC_MUSC_UPEXT_INTEROSS_PALMAR
MDC	7:777	Musculi interossei palmares, left	MDC_MUSC_UPEXT_INTEROSS_PALMAR_L
MDC	7:778	Musculi interossei palmares, right	MDC_MUSC_UPEXT_INTEROSS_PALMAR_R
MDC	7:792	Musculus iliopsoas	MDC_MUSC_LOEXT_ILLIOPS
MDC	7:793	Musculus iliopsoas, left	MDC_MUSC_LOEXT_ILLIOPS_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:794	Musculus iliopsoas, right	MDC_MUSC_LOEXT_ILLIOPS_R
MDC	7:796	Musculus gluteus maximus	MDC_MUSC_LOEXT_Glut_MAX
MDC	7:797	Musculus gluteus maximus, left	MDC_MUSC_LOEXT_Glut_MAX_L
MDC	7:798	Musculus gluteus maximus, right	MDC_MUSC_LOEXT_Glut_MAX_R
MDC	7:800	Musculus gluteus medius	MDC_MUSC_LOEXT_Glut_MED
MDC	7:801	Musculus gluteus medius, left	MDC_MUSC_LOEXT_Glut_MED_L
MDC	7:802	Musculus gluteus medius, right	MDC_MUSC_LOEXT_Glut_MED_R
MDC	7:804	Musculus gluteus minimus	MDC_MUSC_LOEXT_Glut_MIN
MDC	7:805	Musculus gluteus minimus, left	MDC_MUSC_LOEXT_Glut_MIN_L
MDC	7:806	Musculus gluteus minimus, right	MDC_MUSC_LOEXT_Glut_MIN_R
MDC	7:808	Musculus tensor fasciae latae	MDC_MUSC_LOEXT_TENSOR_FASC_LAT
MDC	7:809	Musculus tensor fasciae latae, left	MDC_MUSC_LOEXT_TENSOR_FASC_LAT_L
MDC	7:810	Musculus tensor fasciae latae, right	MDC_MUSC_LOEXT_TENSOR_FASC_LAT_R
MDC	7:812	Musculus piriformis	MDC_MUSC_LOEXT_PIRIFORM
MDC	7:813	Musculus piriformis, left	MDC_MUSC_LOEXT_PIRIFORM_L
MDC	7:814	Musculus piriformis, right	MDC_MUSC_LOEXT_PIRIFORM_R
MDC	7:816	Musculus obturator	MDC_MUSC_LOEXT_OBTURATOR
MDC	7:817	Musculus obturator, left	MDC_MUSC_LOEXT_OBTURATOR_L
MDC	7:818	Musculus obturator, right	MDC_MUSC_LOEXT_OBTURATOR_R
MDC	7:820	Musculus gmellus	MDC_MUSC_LOEXT_GEMEL
MDC	7:821	Musculus gmellus, left	MDC_MUSC_LOEXT_GEMEL_L
MDC	7:822	Musculus gmellus, right	MDC_MUSC_LOEXT_GEMEL_R
MDC	7:824	Musculus quadratus femoris	MDC_MUSC_LOEXT_QUADRAT_FEMOR
MDC	7:825	Musculus quadratus femoris, left	MDC_MUSC_LOEXT_QUADRAT_FEMOR_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:826	Musculus quadratus femoris, right	MDC_MUSC_LOEXT_QUADRAT_FEMOR_R
MDC	7:828	Musculus sartorius	MDC_MUSC_LOEXT_SARTOR
MDC	7:829	Musculus sartorius, left	MDC_MUSC_LOEXT_SARTOR_L
MDC	7:830	Musculus sartorius, right	MDC_MUSC_LOEXT_SARTOR_R
MDC	7:832	Musculus quadriceps femoris	MDC_MUSC_LOEXT_QUADRICEPS_FEMOR
MDC	7:833	Musculus quadriceps femoris, left	MDC_MUSC_LOEXT_QUADRICEPS_FEMOR_L
MDC	7:834	Musculus quadriceps femoris, right	MDC_MUSC_LOEXT_QUADRICEPS_FEMOR_R
MDC	7:836	Musculus rectus femoris	MDC_MUSC_LOEXT_RECT_FEMOR
MDC	7:837	Musculus rectus femoris, left	MDC_MUSC_LOEXT_RECT_FEMOR_L
MDC	7:838	Musculus rectus femoris, right	MDC_MUSC_LOEXT_RECT_FEMOR_R
MDC	7:840	Musculus vastus lateralis	MDC_MUSC_LOEXT_VAST_LAT
MDC	7:841	Musculus vastus lateralis, left	MDC_MUSC_LOEXT_VAST_LAT_L
MDC	7:842	Musculus vastus lateralis, right	MDC_MUSC_LOEXT_VAST_LAT_R
MDC	7:844	Musculus vastus intermedius	MDC_MUSC_LOEXT_VAST_INTERMED
MDC	7:845	Musculus vastus intermedius, left	MDC_MUSC_LOEXT_VAST_INTERMED_L
MDC	7:846	Musculus vastus intermedius, right	MDC_MUSC_LOEXT_VAST_INTERMED_R
MDC	7:848	Musculus vastus medialis	MDC_MUSC_LOEXT_VAST_MED
MDC	7:849	Musculus vastus medialis, left	MDC_MUSC_LOEXT_VAST_MED_L
MDC	7:850	Musculus vastus medialis, right	MDC_MUSC_LOEXT_VAST_MED_R
MDC	7:852	Musculus pectineus	MDC_MUSC_LOEXT_PECTIN
MDC	7:853	Musculus pectineus, left	MDC_MUSC_LOEXT_PECTIN_L
MDC	7:854	Musculus pectineus, right	MDC_MUSC_LOEXT_PECTIN_R
MDC	7:856	Musculus adductor longus	MDC_MUSC_LOEXT ABDUC_LONG

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:857	Musculus adductor longus, left	MDC_MUSC_LOEXT_ABDUC_LONG_L
MDC	7:858	Musculus adductor longus, right	MDC_MUSC_LOEXT_ABDUC_LONG_R
MDC	7:860	Musculus adductor brevis	MDC_MUSC_LOEXT_ABDUC_BREV
MDC	7:861	Musculus adductor brevis, left	MDC_MUSC_LOEXT_ABDUC_BREV_L
MDC	7:862	Musculus adductor brevis, right	MDC_MUSC_LOEXT_ABDUC_BREV_R
MDC	7:864	Musculus adductor magnus	MDC_MUSC_LOEXT_ABDUC_MAGN
MDC	7:865	Musculus adductor magnus, left	MDC_MUSC_LOEXT_ABDUC_MAGN_L
MDC	7:866	Musculus adductor magnus, right	MDC_MUSC_LOEXT_ABDUC_MAGN_R
MDC	7:868	Musculus gracilis	MDC_MUSC_LOEXT_GRACIL
MDC	7:869	Musculus gracilis, left	MDC_MUSC_LOEXT_GRACIL_L
MDC	7:870	Musculus gracilis, right	MDC_MUSC_LOEXT_GRACIL_R
MDC	7:872	Musculus biceps femoris	MDC_MUSC_LOEXT_BICEPS_FEMOR
MDC	7:873	Musculus biceps femoris, left	MDC_MUSC_LOEXT_BICEPS_FEMOR_L
MDC	7:874	Musculus biceps femoris, right	MDC_MUSC_LOEXT_BICEPS_FEMOR_R
MDC	7:876	Musculus biceps femoris Caput longum	MDC_MUSC_LOEXT_BICEPS_FEMOR_LONG
MDC	7:877	Musculus biceps femoris Caput longum, left	MDC_MUSC_LOEXT_BICEPS_FEMOR_LONG_L
MDC	7:878	Musculus biceps femoris Caput longum, right	MDC_MUSC_LOEXT_BICEPS_FEMOR_LONG_R
MDC	7:880	Musculus biceps femoris Caput breve	MDC_MUSC_LOEXT_BICEPS_FEMOR_BREV
MDC	7:881	Musculus biceps femoris Caput breve, left	MDC_MUSC_LOEXT_BICEPS_FEMOR_BREV_L
MDC	7:882	Musculus biceps femoris Caput breve, right	MDC_MUSC_LOEXT_BICEPS_FEMOR_BREV_R
MDC	7:884	Musculus semitendinosus	MDC_MUSC_LOEXT_SEMITENDIN
MDC	7:885	Musculus semitendinosus, left	MDC_MUSC_LOEXT_SEMITENDIN_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:886	Musculus semitendinosus, right	MDC_MUSC_LOEXT_SEMITENDIN_R
MDC	7:888	Musculus semimembranosus	MDC_MUSC_LOEXT_SEMIMEMBRAN
MDC	7:889	Musculus semimembranosus, left	MDC_MUSC_LOEXT_SEMIMEMBRAN_L
MDC	7:890	Musculus semimembranosus, right	MDC_MUSC_LOEXT_SEMIMEMBRAN_R
MDC	7:892	Musculus tibialis anterior	MDC_MUSC_LOEXT_TIBIAL_ANT
MDC	7:893	Musculus tibialis anterior, left	MDC_MUSC_LOEXT_TIBIAL_ANT_L
MDC	7:894	Musculus tibialis anterior, right	MDC_MUSC_LOEXT_TIBIAL_ANT_R
MDC	7:896	Musculus extensor digitorum longus	MDC_MUSC_LOEXT_EXTENS_DIGIT_LONG
MDC	7:897	Musculus extensor digitorum longus, left	MDC_MUSC_LOEXT_EXTENS_DIGIT_LONG_L
MDC	7:898	Musculus extensor digitorum longus, right	MDC_MUSC_LOEXT_EXTENS_DIGIT_LONG_R
MDC	7:900	Musculus extensor hallucis longus	MDC_MUSC_LOEXT_EXTENS_HALLUC_LONG
MDC	7:901	Musculus extensor hallucis longus, left	MDC_MUSC_LOEXT_EXTENS_HALLUC_LONG_L
MDC	7:902	Musculus extensor hallucis longus, right	MDC_MUSC_LOEXT_EXTENS_HALLUC_LONG_R
MDC	7:908	Musculus peroneus longus	MDC_MUSC_LOEXT_PERON_LONG
MDC	7:909	Musculus peroneus longus, left	MDC_MUSC_LOEXT_PERON_LONG_L
MDC	7:910	Musculus peroneus longus, right	MDC_MUSC_LOEXT_PERON_LONG_R
MDC	7:912	Musculus peroneus brevis	MDC_MUSC_LOEXT_PERON_BREV
MDC	7:913	Musculus peroneus brevis, left	MDC_MUSC_LOEXT_PERON_BREV_L
MDC	7:914	Musculus peroneus brevis, right	MDC_MUSC_LOEXT_PERON_BREV_R
MDC	7:916	Musculustriceps surae	MDC_MUSC_LOEXT_TRICEPS_SUR
MDC	7:917	Musculustriceps surae, left	MDC_MUSC_LOEXT_TRICEPS_SUR_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:918	Musculustriceps surae, right	MDC_MUSC_LOEXT_TRICEPS_SUR_R
MDC	7:920	Musculus gastrocnemius	MDC_MUSC_LOEXT_GASTROCNEM
MDC	7:921	Musculus gastrocnemius, left	MDC_MUSC_LOEXT_GASTROCNEM_L
MDC	7:922	Musculus gastrocnemius, right	MDC_MUSC_LOEXT_GASTROCNEM_R
MDC	7:924	Musculus gastrocnemius Caput laterale	MDC_MUSC_LOEXT_GASTROCNEM_LAT
MDC	7:925	Musculus gastrocnemius Caput laterale, left	MDC_MUSC_LOEXT_GASTROCNEM_LAT_L
MDC	7:926	Musculus gastrocnemius Caput laterale, right	MDC_MUSC_LOEXT_GASTROCNEM_LAT_R
MDC	7:928	Musculus gastrocnemius Caput mediale	MDC_MUSC_LOEXT_GASTROCNEM_MED
MDC	7:929	Musculus gastrocnemius Caput mediale, left	MDC_MUSC_LOEXT_GASTROCNEM_MED_L
MDC	7:930	Musculus gastrocnemius Caput mediale, right	MDC_MUSC_LOEXT_GASTROCNEM_MED_R
MDC	7:932	Musculus soleus	MDC_MUSC_LOEXT_SOL
MDC	7:933	Musculus soleus, left	MDC_MUSC_LOEXT_SOL_L
MDC	7:934	Musculus soleus, right	MDC_MUSC_LOEXT_SOL_R
MDC	7:936	Musculus plantaris	MDC_MUSC_LOEXT_PLANTAR
MDC	7:937	Musculus plantaris, left	MDC_MUSC_LOEXT_PLANTAR_L
MDC	7:938	Musculus plantaris, right	MDC_MUSC_LOEXT_PLANTAR_R
MDC	7:940	Musculus popliteus	MDC_MUSC_LOEXT_POPLIT
MDC	7:941	Musculus popliteus, left	MDC_MUSC_LOEXT_POPLIT_L
MDC	7:942	Musculus popliteus, right	MDC_MUSC_LOEXT_POPLIT_R
MDC	7:944	Musculus tibialis posterior	MDC_MUSC_LOEXT_TIBIAL_POST
MDC	7:945	Musculus tibialis posterior, left	MDC_MUSC_LOEXT_TIBIAL_POST_L
MDC	7:946	Musculus tibialis posterior, right	MDC_MUSC_LOEXT_TIBIAL_POST_R
MDC	7:948	Musculus flexor digitorum longus	MDC_MUSC_LOEXT_FLEX_DIGIT_LONG

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:949	Musculus flexor digitorum longus, left	MDC_MUSC_LOEXT_FLEX_DIGIT_LONG_L
MDC	7:950	Musculus flexor digitorum longus, right	MDC_MUSC_LOEXT_FLEX_DIGIT_LONG_R
MDC	7:952	Musculus extensor hallucis brevis	MDC_MUSC_LOEXT_EXTENS_HALLUC_BREV
MDC	7:953	Musculus extensor hallucis brevis, left	MDC_MUSC_LOEXT_EXTENS_HALLUC_BREV_L
MDC	7:954	Musculus extensor hallucis brevis, right	MDC_MUSC_LOEXT_EXTENS_HALLUC_BREV_R
MDC	7:956	Musculus extensor digitorum brevis	MDC_MUSC_LOEXT_EXTENS_DIGIT_BREV
MDC	7:957	Musculus extensor digitorum brevis, left	MDC_MUSC_LOEXT_EXTENS_DIGIT_BREV_L
MDC	7:958	Musculus extensor digitorum brevis, right	MDC_MUSC_LOEXT_EXTENS_DIGIT_BREV_R
MDC	7:960	Musculus abductor hallucis	MDC_MUSC_LOEXT_ABDUC_HALLUC
MDC	7:961	Musculus abductor hallucis, left	MDC_MUSC_LOEXT_ABDUC_HALLUC_L
MDC	7:962	Musculus abductor hallucis, right	MDC_MUSC_LOEXT_ABDUC_HALLUC_R
MDC	7:964	Musculus flexor hallucis brevis	MDC_MUSC_LOEXT_FLEX_HALLUC_BREV
MDC	7:965	Musculus flexor hallucis brevis, left	MDC_MUSC_LOEXT_FLEX_HALLUC_BREV_L
MDC	7:966	Musculus flexor hallucis brevis, right	MDC_MUSC_LOEXT_FLEX_HALLUC_BREV_R
MDC	7:968	Musculus adductor hallucis	MDC_MUSC_LOEXT_ADDUC_HALLUC
MDC	7:969	Musculus adductor hallucis, left	MDC_MUSC_LOEXT_ADDUC_HALLUC_L
MDC	7:970	Musculus adductor hallucis	MDC_MUSC_LOEXT_ADDUC_HALLUC_R
MDC	7:972	Musculus abductor digiti minimi	MDC_MUSC_LOEXT_ABDUC_DIGIT_MIN
MDC	7:973	Musculus abductor digiti minimi, left	MDC_MUSC_LOEXT_ABDUC_DIGIT_MIN_L
MDC	7:974	Musculus abductor digiti minimi	MDC_MUSC_LOEXT_ABDUC_DIGIT_MIN_R

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:976	Musculus flexor digiti minimi brevis	MDC_MUSC_LOEXT_FLEX_DIGIT_BREV_MIN
MDC	7:977	Musculus flexor digiti minimi brevis, left	MDC_MUSC_LOEXT_FLEX_DIGIT_BREV_MIN_L
MDC	7:978	Musculus flexor digiti minimi brevis, right	MDC_MUSC_LOEXT_FLEX_DIGIT_BREV_MIN_R
MDC	7:980	Musculus quadratus plantae	MDC_MUSC_LOEXT_QUADRAT_PLANT
MDC	7:981	Musculus quadratus plantae, left	MDC_MUSC_LOEXT_QUADRAT_PLANT_L
MDC	7:982	Musculus quadratus plantae, right	MDC_MUSC_LOEXT_QUADRAT_PLANT_R
MDC	7:984	Musculi lunbricales	MDC_MUSC_LOEXT_LUMBRICAL
MDC	7:985	Musculi lunbricales, left	MDC_MUSC_LOEXT_LUMBRICAL_L
MDC	7:986	Musculi lunbricales, right	MDC_MUSC_LOEXT_LUMBRICAL_R
MDC	7:988	Musculus interossei dorsales	MDC_MUSC_LOEXT_INTEROSS_DORSAL
MDC	7:989	Musculus interossei dorsales, left	MDC_MUSC_LOEXT_INTEROSS_DORSAL_L
MDC	7:990	Musculus interossei dorsales, right	MDC_MUSC_LOEXT_INTEROSS_DORSAL_R
MDC	7:992	Musculus interossei plantares	MDC_MUSC_LOEXT_INTEROSS_PLANTAR
MDC	7:993	Musculus interossei plantares, left	MDC_MUSC_LOEXT_INTEROSS_PLANTAR_L
MDC	7:994	Musculus interossei plantares, right	MDC_MUSC_LOEXT_INTEROSS_PLANTAR_R

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Add CID 3032 Lead locations near peripheral nerves

CID 3032 Lead locations near peripheral nerves

This Context Group comprises the lead identifiers of ISO/IEEE 11073-10101 for locations near peripheral nerves. The terms included in the table below may not constitute the complete list; see the ISO/IEEE Standard.

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Note

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Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML
Type: Extensible
Version: 20200623
UID: 1.2.840.10008.6.1.1330

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Table CID 3032. Lead locations near peripheral nerves

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:8	Nervi craniales	MDC_NERV_CRAN
MDC	7:9	Nervi craniales, left	MDC_NERV_CRAN_L
MDC	7:10	Nervi craniales, right	MDC_NERV_CRAN_R
MDC	7:12	Nervus opticus (II)	MDC_NERV_CRAN_OPTIC
MDC	7:13	Nervus opticus (II), left	MDC_NERV_CRAN_OPTIC_L
MDC	7:14	Nervus opticus (II), right	MDC_NERV_CRAN_OPTIC_R
MDC	7:16	Nervus oculomotorius (III)	MDC_NERV_CRAN_OCULUMOTOR
MDC	7:17	Nervus oculomotorius (III), left	MDC_NERV_CRAN_OCULUMOTOR_L
MDC	7:18	Nervus oculomotorius (III), right	MDC_NERV_CRAN_OCULUMOTOR_R
MDC	7:20	Nervus trochlearis (IV)	MDC_NERV_CRAN_TROCHLEAR
MDC	7:21	Nervus trochlearis (IV), left	MDC_NERV_CRAN_TROCHLEAR_L
MDC	7:22	Nervus trochlearis (IV), right	MDC_NERV_CRAN_TROCHLEAR_R
MDC	7:24	Nervus trigeminus (V)	MDC_NERV_CRAN_TRIGEMIN
MDC	7:25	Nervus trigeminus (V), left	MDC_NERV_CRAN_TRIGEMIN_L
MDC	7:26	Nervus trigeminus (V), right	MDC_NERV_CRAN_TRIGEMIN_R
MDC	7:28	Nervus ophtalmicus	MDC_NERV_CRAN_OPHTALMIC
MDC	7:29	Nervus ophtalmicus, left	MDC_NERV_CRAN_OPHTALMIC_L
MDC	7:30	Nervus ophtalmicus, right	MDC_NERV_CRAN_OPHTALMIC_R
MDC	7:32	Nervus supraorbitalis	MDC_NERV_CRAN_SUPRAORBITAL
MDC	7:33	Nervus supraorbitalis, left	MDC_NERV_CRAN_SUPRAORBITAL_L
MDC	7:34	Nervus supraorbitalis, right	MDC_NERV_CRAN_SUPRAORBITAL_R
MDC	7:36	Nervus maxillaris	MDC_NERV_CRAN_MAXILLAR
MDC	7:37	Nervus maxillaris, left	MDC_NERV_CRAN_MAXILLAR_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:38	Nervus maxillaris, right	MDC_NERV_CRAN_MAXILLAR_R
MDC	7:40	Nervus infraorbitalis	MDC_NERV_CRAN_INFRAORBITAL
MDC	7:41	Nervus infraorbitalis, left	MDC_NERV_CRAN_INFRAORBITAL_L
MDC	7:42	Nervus infraorbitalis, right	MDC_NERV_CRAN_INFRAORBITAL_R
MDC	7:44	Nervus mandibularis	MDC_NERV_CRAN_MANDIBULAR
MDC	7:45	Nervus mandibularis, left	MDC_NERV_CRAN_MANDIBULAR_L
MDC	7:46	Nervus mandibularis, right	MDC_NERV_CRAN_MANDIBULAR_R
MDC	7:48	Nervus abducens (VI)	MDC_NERV_CRAN_ABDUCENS
MDC	7:49	Nervus abducens (VI), left	MDC_NERV_CRAN_ABDUCENS_L
MDC	7:50	Nervus abducens (VI), right	MDC_NERV_CRAN_ABDUCENS_R
MDC	7:52	Nervus facialis (VII)	MDC_NERV_CRAN_FACIAL
MDC	7:53	Nervus facialis (VII), left	MDC_NERV_CRAN_FACIAL_L
MDC	7:54	Nervus facialis (VII), right	MDC_NERV_CRAN_FACIAL_R
MDC	7:56	Nervus vestibulocochlearis (VIII)	MDC_NERV_CRAN_VESTIB_COCHL
MDC	7:57	Nervus vestibulocochlearis (VIII), left	MDC_NERV_CRAN_VESTIB_COCHL_L
MDC	7:58	Nervus vestibulocochlearis (VIII), right	MDC_NERV_CRAN_VESTIB_COCHL_R
MDC	7:60	Nervus vestibularis	MDC_NERV_CRAN_VESTIB
MDC	7:61	Nervus vestibularis, left	MDC_NERV_CRAN_VESTIB_L
MDC	7:62	Nervus vestibularis, right	MDC_NERV_CRAN_VESTIB_R
MDC	7:64	Nervus cochlearis	MDC_NERV_CRAN_COCHL
MDC	7:65	Nervus cochlearis, left	MDC_NERV_CRAN_COCHL_L
MDC	7:66	Nervus cochlearis, right	MDC_NERV_CRAN_COCHL_R
MDC	7:68	Nervus glossopharyngeus (IX)	MDC_NERV_CRAN_GLOSSOPHARYNG
MDC	7:69	Nervus glossopharyngeus (IX), left	MDC_NERV_CRAN_GLOSSOPHARYNG_L
MDC	7:70	Nervus glossopharyngeus (IX), right	MDC_NERV_CRAN_GLOSSOPHARYNG_R
MDC	7:72	Nervus vagus (X)	MDC_NERV_CRAN_VAGUS
MDC	7:73	Nervus vagus (X), left	MDC_NERV_CRAN_VAGUS_L
MDC	7:74	Nervus vagus (X), right	MDC_NERV_CRAN_VAGUS_R

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:76	Nervus accessorius (XI), Radices craniales	MDC_NERV_CRAN_ACCESS_CRAN_RADIC
MDC	7:77	Nervus accessorius (XI), Radices craniales, left	MDC_NERV_CRAN_ACCESS_CRAN_RADIC_L
MDC	7:78	Nervus accessorius (XI), Radices craniales, right	MDC_NERV_CRAN_ACCESS_CRAN_RADIC_R
MDC	7:80	Nervus accessorius (XI), Radices spinales	MDC_NERV_CRAN_ACCESS_RADIC_SPINAL
MDC	7:81	Nervus accessorius (XI), Radices spinales, left	MDC_NERV_CRAN_ACCESS_RADIC_SPINAL_L
MDC	7:82	Nervus accessorius (XI), Radices spinales, right	MDC_NERV_CRAN_ACCESS_RADIC_SPINAL_R
MDC	7:84	Nervus hypoglossus (XII)	MDC_NERV_CRAN_HYPOGLOSS
MDC	7:85	Nervus hypoglossus (XII), left	MDC_NERV_CRAN_HYPOGLOSS_L
MDC	7:86	Nervus hypoglossus (XII), right	MDC_NERV_CRAN_HYPOGLOSS_R
MDC	7:88	Nervi spinales	MDC_NERV_SPIN
MDC	7:89	Nervi spinales, left	MDC_NERV_SPIN_L
MDC	7:90	Nervi spinales, right	MDC_NERV_SPIN_R
MDC	7:92	Nervi cervicales	MDC_NERV_SPIN_CERVIC
MDC	7:93	Nervi cervicales, left	MDC_NERV_SPIN_CERVIC_L
MDC	7:94	Nervi cervicales, right	MDC_NERV_SPIN_CERVIC_R
MDC	7:96	Nervus phrenicus	MDC_NERV_SPIN_PHRENIC
MDC	7:97	Nervus phrenicus, left	MDC_NERV_SPIN_PHRENIC_L
MDC	7:98	Nervus phrenicus, right	MDC_NERV_SPIN_PHRENIC_R
MDC	7:100	Plexus brachialis	MDC_NERV_SPIN_BRACH_PLEX
MDC	7:101	Plexus brachialis, left	MDC_NERV_SPIN_BRACH_PLEX_L
MDC	7:102	Plexus brachialis, right	MDC_NERV_SPIN_BRACH_PLEX_R
MDC	7:104	Nervus thoracicus longus	MDC_NERV_SPIN_THORACIC_LONG
MDC	7:105	Nervus thoracicus longus, left	MDC_NERV_SPIN_THORACIC_LONG_L
MDC	7:106	Nervus thoracicus longus, right	MDC_NERV_SPIN_THORACIC_LONG_R
MDC	7:108	Nervus musculocutaneus	MDC_NERV_SPIN_MUSCULOCUT

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:109	Nervus musculocutaneus, left	MDC_NERV_SPIN_MUSCULOCUT_L
MDC	7:110	Nervus musculocutaneus, right	MDC_NERV_SPIN_MUSCULOCUT_R
MDC	7:112	Nervus cutaneus antebrachii lateralis	MDC_NERV_SPIN_CUT_ANTEBRACH_LAT
MDC	7:113	Nervus cutaneus antebrachii lateralis, left	MDC_NERV_SPIN_CUT_ANTEBRACH_LAT_L
MDC	7:114	Nervus cutaneus antebrachii lateralis, right	MDC_NERV_SPIN_CUT_ANTEBRACH_LAT_R
MDC	7:116	Nervus cutaneus antebrachii medialis	MDC_NERV_SPIN_CUT_ANTEBRACH_MED
MDC	7:117	Nervus cutaneus antebrachii medialis, left	MDC_NERV_SPIN_CUT_ANTEBRACH_MED_L
MDC	7:118	Nervus cutaneus antebrachii medialis, right	MDC_NERV_SPIN_CUT_ANTEBRACH_MED_R
MDC	7:120	Nervus medianus	MDC_NERV_SPIN_MEDIAN
MDC	7:121	Nervus medianus, left	MDC_NERV_SPIN_MEDIAN_L
MDC	7:122	Nervus medianus, right	MDC_NERV_SPIN_MEDIAN_R
MDC	7:124	Ramus palmaris nervi mediani	MDC_NERV_SPIN_MEDIAN_PALMAR
MDC	7:125	Ramus palmaris nervi mediani, left	MDC_NERV_SPIN_MEDIAN_PALMAR_L
MDC	7:126	Ramus palmaris nervi mediani, right	MDC_NERV_SPIN_MEDIAN_PALMAR_R
MDC	7:128	Nervus medianus, Nervi digitales palmares proprii	MDC_NERV_SPIN_MEDIAN_PALMAR_DIGIT_PRO PR
MDC	7:129	Nervus medianus, Nervi digitales palmares proprii, left	MDC_NERV_SPIN_MEDIAN_PALMAR_DIGIT_PRO PR_L
MDC	7:130	Nervus medianus, Nervi digitales palmares proprii, right	MDC_NERV_SPIN_MEDIAN_PALMAR_DIGIT_PRO PR_R
MDC	7:132	Nervus ulnaris	MDC_NERV_SPIN_ULNAR
MDC	7:133	Nervus ulnaris, left	MDC_NERV_SPIN_ULNAR_L
MDC	7:134	Nervus ulnaris, right	MDC_NERV_SPIN_ULNAR_R

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:136	Ramus dorsalis nervi ulnaris	MDC_NERV_SPIN_ULNAR_RAM_DORSAL
MDC	7:137	Ramus dorsalis nervi ulnaris, left	MDC_NERV_SPIN_ULNAR_RAM_DORSAL_L
MDC	7:138	Ramus dorsalis nervi ulnaris, right	MDC_NERV_SPIN_ULNAR_RAM_DORSAL_R
MDC	7:140	Ramus palmaris nervi ulnaris	MDC_NERV_SPIN_ULNAR_RAM_PALMAR
MDC	7:141	Ramus palmaris nervi ulnaris, left	MDC_NERV_SPIN_ULNAR_RAM_PALMAR_L
MDC	7:142	Ramus palmaris nervi ulnaris, right	MDC_NERV_SPIN_ULNAR_RAM_PALMAR_R
MDC	7:144	Nervus ulnaris, Nervi digitales palmares proprii	MDC_NERV_SPIN_ULNAR_PALMAR_DIGIT_PRO PR
MDC	7:145	Nervus ulnaris, Nervi digitales palmares proprii, left	MDC_NERV_SPIN_ULNAR_PALMAR_DIGIT_PRO PR_L
MDC	7:146	Nervus ulnaris, Nervi digitales palmares proprii, right	MDC_NERV_SPIN_ULNAR_PALMAR_DIGIT_PRO PR_R
MDC	7:148	Nervus radialis	MDC_NERV_SPIN_RADIC
MDC	7:149	Nervus radialis, left	MDC_NERV_SPIN_RADIC_L
MDC	7:150	Nervus radialis, right	MDC_NERV_SPIN_RADIC_R
MDC	7:152	Nervus radialis Ramus superficialis	MDC_NERV_SPIN_RADIC_SUPERF
MDC	7:153	Nervus radialis Ramus superficialis, left	MDC_NERV_SPIN_RADIC_SUPERF_L
MDC	7:154	Nervus radialis Ramus superficialis, right	MDC_NERV_SPIN_RADIC_SUPERF_R
MDC	7:156	Nervi subscapulares	MDC_NERV_SPIN_SUBSCAP
MDC	7:157	Nervi subscapulares, left	MDC_NERV_SPIN_SUBSCAP_L
MDC	7:158	Nervi subscapulares, right	MDC_NERV_SPIN_SUBSCAP_R
MDC	7:160	Nervus axillaris	MDC_NERV_SPIN_AXILLAR
MDC	7:161	Nervus axillaris, left	MDC_NERV_SPIN_AXILLAR_L
MDC	7:162	Nervus axillaris, right	MDC_NERV_SPIN_AXILLAR_R
MDC	7:164	Nervi thoracici	MDC_NERV_SPIN_THORACIC
MDC	7:165	Nervi thoracici, left	MDC_NERV_SPIN_THORACIC_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:166	Nervi thoracici, right	MDC_NERV_SPIN_THORACIC_R
MDC	7:168	Nervi lumbales	MDC_NERV_SPIN_LUMBAL
MDC	7:169	Nervi lumbales, left	MDC_NERV_SPIN_LUMBAL_L
MDC	7:170	Nervi lumbales, right	MDC_NERV_SPIN_LUMBAL_R
MDC	7:172	Plexus lumbosacralis	MDC_NERV_SPIN_LUMBOSACRAL_PLEX
MDC	7:173	Plexus lumbosacralis, left	MDC_NERV_SPIN_LUMBOSACRAL_PLEX_L
MDC	7:174	Plexus lumbosacralis, right	MDC_NERV_SPIN_LUMBOSACRAL_PLEX_R
MDC	7:176	Plexus lumbalis	MDC_NERV_SPIN_LUMBAL_PLEX
MDC	7:177	Plexus lumbalis, left	MDC_NERV_SPIN_LUMBAL_PLEX_L
MDC	7:178	Plexus lumbalis, right	MDC_NERV_SPIN_LUMBAL_PLEX_R
MDC	7:180	Nervus iliohypogastricus	MDC_NERV_SPIN_ILIOHYPOGASTRIC
MDC	7:181	Nervus iliohypogastricus, left	MDC_NERV_SPIN_ILIOHYPOGASTRIC_L
MDC	7:182	Nervus iliohypogastricus, right	MDC_NERV_SPIN_ILIOHYPOGASTRIC_R
MDC	7:184	Nervus ilio-inguinalis	MDC_NERV_SPIN_ILIOINGUINAL
MDC	7:185	Nervus ilio-inguinalis, left	MDC_NERV_SPIN_ILIOINGUINAL_L
MDC	7:186	Nervus ilio-inguinalis, right	MDC_NERV_SPIN_ILIOINGUINAL_R
MDC	7:188	Nervus cutaneus femoris lateralis	MDC_NERV_SPIN_CUT_FEMORAL_LAT
MDC	7:189	Nervus cutaneus femoris lateralis, left	MDC_NERV_SPIN_CUT_FEMORAL_LAT_L
MDC	7:190	Nervus cutaneus femoris lateralis, right	MDC_NERV_SPIN_CUT_FEMORAL_LAT_R
MDC	7:192	Nervus obturatorius	MDC_NERV_SPIN_OBTURATOR
MDC	7:193	Nervus obturatorius, left	MDC_NERV_SPIN_OBTURATOR_L
MDC	7:194	Nervus obturatorius, right	MDC_NERV_SPIN_OBTURATOR_R
MDC	7:196	Nervus femoralis	MDC_NERV_SPIN_FEMORAL
MDC	7:197	Nervus femoralis, left	MDC_NERV_SPIN_FEMORAL_L
MDC	7:198	Nervus femoralis, right	MDC_NERV_SPIN_FEMORAL_R
MDC	7:200	Nervus saphenus	MDC_NERV_SPIN_SAPHEN
MDC	7:201	Nervus saphenus, left	MDC_NERV_SPIN_SAPHEN_L
MDC	7:202	Nervus saphenus, right	MDC_NERV_SPIN_SAPHEN_R
MDC	7:204	Nervi sacrales at Nervus coccygeus	MDC_NERV_SPIN_SACRAL

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:205	Nervi sacrales at Nervus coccygeus, left	MDC_NERV_SPIN_SACRAL_L
MDC	7:206	Nervi sacrales at Nervus coccygeus, right	MDC_NERV_SPIN_SACRAL_R
MDC	7:208	Plexus sacralis	MDC_NERV_SPIN_PLEX
MDC	7:209	Plexus sacralis, left	MDC_NERV_SPIN_PLEX_L
MDC	7:210	Plexus sacralis, right	MDC_NERV_SPIN_PLEX_R
MDC	7:212	Nervus ischiadicus	MDC_NERV_SPIN_ISCHIADIC
MDC	7:213	Nervus ischiadicus, left	MDC_NERV_SPIN_ISCHIADIC_L
MDC	7:214	Nervus ischiadicus, right	MDC_NERV_SPIN_ISCHIADIC_R
MDC	7:216	Nervus fibularis communis	MDC_NERV_SPIN_FIBULAR_COMMUN
MDC	7:217	Nervus fibularis communis, left	MDC_NERV_SPIN_FIBULAR_COMMUN_L
MDC	7:218	Nervus fibularis communis, right	MDC_NERV_SPIN_FIBULAR_COMMUN_R
MDC	7:220	Nervus fibularis profundus	MDC_NERV_SPIN_FIBULAR
MDC	7:221	Nervus fibularis profundus, left	MDC_NERV_SPIN_FIBULAR_L
MDC	7:222	Nervus fibularis profundus, right	MDC_NERV_SPIN_FIBULAR_R
MDC	7:224	Nervus fibularis superficialis	MDC_NERV_SPIN_FIBULAR_SUPERF
MDC	7:225	Nervus fibularis superficialis, left	MDC_NERV_SPIN_FIBULAR_SUPERF_L
MDC	7:226	Nervus fibularis superficialis, right	MDC_NERV_SPIN_FIBULAR_SUPERF_R
MDC	7:228	Nervus tibialis	MDC_NERV_SPIN_TIBIAL
MDC	7:229	Nervus tibialis, left	MDC_NERV_SPIN_TIBIAL_L
MDC	7:230	Nervus tibialis, right	MDC_NERV_SPIN_TIBIAL_R
MDC	7:232	Nervus surealis	MDC_NERV_SPIN_SURAL
MDC	7:233	Nervus surealis, left	MDC_NERV_SPIN_SURAL_L
MDC	7:234	Nervus surealis, right	MDC_NERV_SPIN_SURAL_R
MDC	7:236	Nervus plantaris medialis	MDC_NERV_SPIN_PLANTAR_MEDIAL
MDC	7:237	Nervus plantaris medialis, left	MDC_NERV_SPIN_PLANTAR_MEDIAL_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:238	Nervus plantaris medialis, right	MDC_NERV_SPIN_PLANTAR_MEDIAL_R
MDC	7:240	Nervus plantaris lateralis	MDC_NERV_SPIN_PLANTAR_LAT
MDC	7:241	Nervus plantaris lateralis, left	MDC_NERV_SPIN_PLANTAR_LAT_L
MDC	7:242	Nervus plantaris lateralis, right	MDC_NERV_SPIN_PLANTAR_LAT_R
MDC	7:244	Nervus pudendus	MDC_NERV_SPIN_PUDEND
MDC	7:245	Nervus pudendus, left	MDC_NERV_SPIN_PUDEND_L
MDC	7:246	Nervus pudendus, right	MDC_NERV_SPIN_PUDEND_R

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Add CID 3033 EOG Leads

CID 3033 EOG Leads

This Context Group comprises the EOG lead identifiers of ISO/IEEE 11073-10101. The terms included in the table below may not constitute the complete list; see the ISO/IEEE Standard.

670 Note:
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675 Note:
The Code Meaning is taken from the ISO/IEEE 11073 10101 Acronym column.

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML
Type: Extensible
Version: 20200623
680 **UID:** 1.2.840.10008.6.1.1331

Table CID 3033 EOG Leads

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:1320	E0	MDC_EYE_AXIS_HORIZ
MDC	7:1325	EI1	MDC_EYE_CENT_ABOVE_L
MDC	7:1329	EI2	MDC_EYE_CENT_BELOW_L
MDC	7:1333	EI3	MDC_EYE_CANTH_LAT_ABOVE_MID_L

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	7:1337	EI4	MDC_EYE_CANTH_LAT_BELOW_MID_L
MDC	7:1341	EI5	MDC_EYE_CANTH_OUTER_ABOVE_L
MDC	7:1345	EI6	MDC_EYE_CANTH_OUTER_BELOW_L
MDC	7:1349	EI7	MDC_EYE_CANTH_OUTER_CENTER_L
MDC	7:1354	Er1	MDC_EYE_CENT_ABOVE_R
MDC	7:1358	Er2	MDC_EYE_CENT_BELOW_R
MDC	7:1362	Er3	MDC_EYE_CANTH_LAT_ABOVE_R
MDC	7:1366	Er4	MDC_EYE_CANTH_LAT_BELOW_R
MDC	7:1370	Er5	MDC_EYE_CANTH_OUTER_ABOVE_R
MDC	7:1374	Er6	MDC_EYE_CANTH_OUTER_BELOW_R
MDC	7:1378	Er7	MDC_EYE_CANTH_OUTER_CENTER_R
MDC	7:1381	EIL	MDC_EYE_EYELID_L
MDC	7:1386	ErL	MDC_EYE_EYELID_R
MDC	7:1389	EIa	MDC_EYE_ABOVE_L
MDC	7:1393	EIb	MDC_EYE_BELOW_L
MDC	7:1398	EIa	MDC_EYE_ABOVE_R
MDC	7:1402	EIb	MDC_EYE_BELOW_R

CID 3034 Body Position Channels

685 **Resources:** [HTML](#) | [FHIR JSON](#) | [FHIR XML](#) | [IHE SVS XML](#)
Type: Extensible
Version: 20200623
UID: 1.2.840.10008.6.1.1332

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Table CID 3034 Body Position Channels

Coding Scheme	Code Value	Code Meaning
DCM	130410	Patient position
DCM	130411	Patient rotation longitudinal
DCM	130412	Patient elevation

CID 3035 EEG Annotations – Neurophysiologic Enumerations (EEG)

This Context Group comprises codes for Neurophysiologic Enumerations related to electroencephalography. MDC codes come from the corresponding table of ISO/IEEE 11073-10101.

695 MDC terms included in the table below may not constitute the complete list; see the ISO/IEEE Standard.

Note

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700 **Resources:** HTML | FHIR JSON | FHIR XML | IHE SVS XML

Type: Extensible

Version: 20200623

UID: 1.2.840.10008.6.1.1333

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Table CID 3035 Neurophysiologic Enumerations (EEG)

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	2:23560	Background activity	MDC_EEG_BKGD_CRTX
MDC	2:23568	Background activity beta	MDC_EEG_BKGD_CRTX_ACTIV_BETA
MDC	2:23576	Background activity sigma	MDC_EEG_BKGD_CRTX_ACTIV_SIGMA
MDC	2:23584	Background activity gamma	MDC_EEG_BKGD_CRTX_ACTIV_GAMMA
MDC	2:23592	Background activity alpha	MDC_EEG_BKGD_CRTX_ACTIV_ALPHA
MDC	2:23600	Background Mu activity	MDC_EEG_BKGD_CRTX_ACTIV_MU
MDC	2:23608	Background activity theta	MDC_EEG_BKGD_CRTX_ACTIV_THETA
MDC	2:23616	Background activity bisynchronous theta	MDC_EEG_BKGD_CRTX_ACTIV_THETA_BISYNC
MDC	2:23624	Background activity delta	MDC_EEG_BKGD_CRTX_ACTIV_DELTA
MDC	2:23632	Background activity bisynchronous delta	MDC_EEG_BKGD_CRTX_ACTIV_DELTA_BISYNC
MDC	2:23640	Background activity arrhythmic delta	MDC_EEG_BKGD_CRTX_ACTIV_ARRHY_DELTA

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	2:23648	Background activity slow fused transients	MDC_EEG_BKGD_CRTX_TRANS_FUSED_SLOW
MDC	2:23656	Sleep stage unspecified	MDC_EEG_CLS_CRTX_SLP_STG
MDC	2:23664	Sleep stage unstageable	MDC_EEG_CLS_CRTX_UNSTGABLE
MDC	2:23672	Sleep stage wake	MDC_EEG_CLS_CRTX_WAKE_STG
MDC	2:23680	Sleep stage REM	MDC_EEG_CLS_CRTX_SLP_REM
MDC	2:23688	Sleep stage REM with sleep spindle	MDC_EEG_CLS_CRTX_SLP_REM_SPINDLE
MDC	2:23696	Sleep Stage I	MDC_EEG_CLS_CRTX_SLP_STG_I
MDC	2:23704	Sleep Stage II	MDC_EEG_CLS_CRTX_SLP_STG_II
MDC	2:23712	Sleep Stage III	MDC_EEG_CLS_CRTX_SLP_STG_III
MDC	2:23720	Sleep stage IV	MDC_EEG_CLS_CRTX_SLP_STG_IV
MDC	2:23728	Alphadelta Sleep	MDC_EEG_CLS_CRTX_SLP_STG_ALPHA_DELTA
MDC	2:23736	Sleep activity and event	MDC_EEG_CLS_CRTX_SLP_ACTIV
MDC	2:23744	Sleep spindle	MDC_EEG_CLS_CRTX_SLP_SPINDLE
MDC	2:23752	Sleep V wave	MDC_EEG_CLS_CRTX_WV_V
MDC	2:23760	Sleep F wave	MDC_EEG_CLS_CRTX_WV_F
MDC	2:23768	Sleep K complex	MDC_EEG_CLS_CRTX_CMPLX_K
MDC	2:23776	Sleep post occipital sharp transient	MDC_EEG_CLS_CRTX_POSTOCCIP_TRANS_SHARP
MDC	2:23784	Sleep sawtooth wave	MDC_EEG_CLS_CRTX_WV_SAW
MDC	2:23792	Sleep stage shift	MDC_EEG_CLS_CRTX_SLP_STG_SHIFT
MDC	2:23800	Sleep arousal	MDC_EEG_CLS_CRTX_AROUSAL
MDC	2:23808	Sleep awakening	MDC_EEG_CLS_CRTX_AWAKENING
MDC	2:23816	Sharp appearing or epileptiform activity	MDC_EEG_PAROX_CRTX_DISCHG_EPILEP
MDC	2:23824	Sharp transient	MDC_EEG_PAROX_CRTX_TRANS_SHARP
MDC	2:23832	Wicket	MDC_EEG_PAROX_CRTX_WICKET
MDC	2:23840	Small sharp spike	MDC_EEG_PAROX_CRTX_SPK_SHARP_SMALL
MDC	2:23848	Zeta wave	MDC_EEG_PAROX_CRTX_WV_ZETA

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	2:23856	Triphasic wave	MDC_EEG_PAROX_CRTX_WV_TRIPHAS
MDC	2:23864	Phantom spike and wave activity	MDC_EEG_PAROX_CRTX_SPK_AND_WV_PHANTOM
MDC	2:23872	14 and 6 Hz positive bursts	MDC_EEG_PAROX_CRTX_BURST_POS_14_AND_6HZ
MDC	2:23880	Lambda wave	MDC_EEG_PAROX_CRTX_WV_LAMBDA
MDC	2:23888	Epileptic or potentially epileptogenic activity	MDC_EEG_PAROX_CRTX_DISCHG
MDC	2:23896	Epileptic or potentially epileptogenic sharp wave	MDC_EEG_PAROX_CRTX_WV_SHARP
MDC	2:23904	Epileptic or potentially epileptogenic spike	MDC_EEG_PAROX_CRTX_SPK
MDC	2:23912	Multiple spike	MDC_EEG_PAROX_CRTX_SPK_MULT
MDC	2:23920	Spike and wave complex	MDC_EEG_PAROX_CRTX_SPK_AND_WV_CMPLX
MDC	2:23928	Atypical spike and wave complex	MDC_EEG_PAROX_CRTX_SPK_AND_WV_CMPLX_ATYP
MDC	2:23936	Sharp and slow wave complex	MDC_EEG_PAROX_CRTX_WV_CMPLX_SHARP_SLOW
MDC	2:23944	Rhythmic sharp waves	MDC_EEG_PAROX_CRTX_WV_RHYTHMIC_MULT_SHARP
MDC	2:23952	Burst suppression	MDC_EEG_PAROX_CRTX_BURST_SUPPRN
MDC	2:23960	Multiple independent spikes and asynchronous slow waves	MDC_EEG_PAROX_CRTX_SPK_MULT_AND_ASYNC_SLOW
MDC	2:23968	Periodic and quasiperiodic cerebral activity	MDC_EEG_PAROX_CRTX_CEREB_ACTIV_PERI
MDC	2:23976	Quasiperiodic triphasic waves	MDC_EEG_PAROX_CRTX_WV_TRIPHAS_MULT_QUASIPERI
MDC	2:23984	Periodic triphasic waves	MDC_EEG_PAROX_CRTX_WV_TRIPHAS_MULT_PERI

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	2:23992	Periodic epileptiform discharges	MDC_EEG_PAROX_CRTX_DISCHG_EPILEP_MULT_PERI
MDC	2:24000	Periodic cerebral complexes	MDC_EEG_PAROX_CRTX_CMPLX_MULT_PERI
MDC	2:24008	Quasiperiodic cerebral sharp waves	MDC_EEG_PAROX_CRTX_WV_MULT_SHARP_QUASIPERI
MDC	2:24016	Periodic sharp waves	MDC_EEG_PAROX_CRTX_WV_MULT_SHARP_PERI
MDC	2:24024	Periodic suppressions	MDC_EEG_PAROX_CRTX_SUPPRN_MULT_PERI
MDC	2:24032	Periodic bursts with suppressions	MDC_EEG_PAROX_CRTX_BURST_W_SUPPRN_MULT_PERI
MDC	2:24040	Eye-related activity	MDC_EEG_EXT_CRTX_EYE_MVMT_MULT
MDC	2:24048	Eye blinks	MDC_EEG_EXT_CRTX_EYE_BLINK
MDC	2:24056	Nystagmoid eye movements	MDC_EEG_EXT_CRTX_EYE_MVMT_NYSTAG_MULT
MDC	2:24064	Slow eye movements	MDC_EEG_EXT_CRTX_EYE_MVMT_NYSTAG_MULT
MDC	2:24072	Fast irregular eye movements	MDC_EEG_EXT_CRTX_EYE_MVMT_MULT_FAST_IRREG
MDC	2:24080	Rapid eye movements	MDC_EEG_EXT_CRTX_EYE_MVMT_MULT_RAPID
MDC	2:24088	Eye-related photodriving activity	MDC_EEG_EXT_CRTX_EYE_ACTIV_PHOTIC_DRV
MDC	2:24096	Eye-related photomyogenic activity	MDC_EEG_EXT_CRTX_EYE_ACTIV_PHOTOMYOGENIC
MDC	2:24104	Eye-related photoparadoxysmal activity	MDC_EEG_EXT_CRTX_EYE_ACTIV_PHOTOPARADOX
MDC	2:24112	Eye-related activity electroretinogram	MDC_EEG_EXT_CRTX_EYE_ERG
MDC	2:24120	Myogenic noncerebral activity	MDC_EEG_EXT_ACTIV_MYOGENIC
MDC	2:24128	Myogenic palatal myoclonus	MDC_EEG_EXT_PALATAL_MYOCOLONUS

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	2:24136	Myogenic noncerebral myokymia	MDC_EEG_EXT_MYOKYMIA
MDC	2:24144	Myogenic noncerebral facial synkinesis	MDC_EEG_EXT_FACIA_SYNKINESIS
MDC	2:24152	Myogenic hemifacial spasms	MDC_EEG_EXT_HEMIFACIAL_SPASM
MDC	2:24160	Extraocular muscle activity	MDC_EEG_EXT_EXTRA_OCUL_MUSCL_ACTIV
MDC	2:24168	Myogenic tremor activity	MDC_EEG_EXT_ACTIV_TREMOR
MDC	2:24176	Myoclonic activity	MDC_EEG_EXT_ACTIV_MYOCLONIC
MDC	2:24184	Periodic movements of sleep	MDC_EEG_EXT_SLP_MVMT_MULT_PERI
MDC	2:24192	Periodic movements of sleep with arousals	MDC_EEG_EXT_SLP_MVMT_W_AROUS_MULT_PERI
MDC	2:24200	Artifactual activity	MDC_EEG_ARTIF
MDC	2:24208	Electrode instrumental artifactual activity	MDC_EEG_ARTIF_ELECTRODE_INSTRUM
MDC	2:24216	Movement artifactual activity	MDC_EEG_ARTIF_MVMT
MDC	2:24224	Sweat of galvanic artifactual activity	MDC_EEG_ARTIF_SWEAT_OR_GALV
MDC	2:24232	Pulse artifactual activity	MDC_EEG_ARTIF_PULSE
MDC	2:24240	ECG artifactual activity	MDC_EEG_ARTIF_EKG
MDC	2:24248	Respiratory artifactual activity	MDC_EEG_ARTIF_RESP
MDC	2:24256	Glossokinetic artifactual activity	MDC_EEG_ARTIF_GLOSSOKINETIC
MDC	2:24264	Swallowing and chewing artifactual activity	MDC_EEG_ARTIF_SWALLOW_ETC

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	2:24272	External interference Artifactual activity	MDC_EEG_ARTIF_EXT_INTERF
SCT	271782 001	Drowsy	

Ed. Note. CRS Request ID #752076 to add 271782001 to DICOM SNOMED Subset

CID 3036 EMG Annotations – Neurophysiological Enumerations (EMG)

710 This Context Group comprises the nomenclature and codes neurophysiologic enumerations of ISO/IEEE 11073-10101, which apply to electromyography. The terms included in the table below may not constitute the complete list; see the ISO/IEEE Standard.

Note

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Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML

Type: Extensible

Version: 20200623

UID: 1.2.840.10008.6.1.1334

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Table CID 3036 Neurophysiological Enumerations (EMG)

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	2:24336	EMG unspecified waveform	MDC_EMG_PAROX_MUSCL
MDC	2:24344	EMG waveform under voluntary control	MDC_EMG_PAROX_MUSCL_VOL_CTL
MDC	2:24352	EMG motor unit potential	MDC_EMG_PAROX_MUSCL_MOTOR_UNIT_POTL
MDC	2:24360	EMG doublet waveform	MDC_EMG_PAROX_MUSCL_DOUBLET
MDC	2:24368	EMG triplet waveform	MDC_EMG_PAROX_MUSCL_TRIPLET

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	2:24376	EMG multiplet waveform	MDC_EMG_PAROX_MUSCL_MULTIPLET
MDC	2:24384	EMG insertional activity	MDC_EMG_PAROX_MUSCL_ACTIV_INSERTIONAL
MDC	2:24392	EMG endplate noise	MDC_EMG_PAROX_MUSCL_NOISE_ENDPLATE
MDC	2:24400	EMG endplate spike	MDC_EMG_PAROX_MUSCL_SPK_ENDPLATE
MDC	2:24408	EMG unspecified iterative discharge	MDC_EMG_PAROX_MUSCL_DISCHG_ITER
MDC	2:24416	EMG fibrillation potential	MDC_EMG_PAROX_MUSCL_FIBRIL_POTL
MDC	2:24424	EMG positive sharp wave	MDC_EMG_PAROX_MUSCL_WV_SHARP_POS
MDC	2:24432	EMG fasciculation potential	MDC_EMG_PAROX_MUSCL_FASCIC_POTL
MDC	2:24440	EMG myotonic discharge	MDC_EMG_PAROX_MUSCL_DISCHG_MYOTONIC
MDC	2:24448	EMG complex repetitive discharge	MDC_EMG_PAROX_MUSCL_DISCHG_MULT_CMLPX_REPET
MDC	2:24456	EMG myokymic discharge	MDC_EMG_PAROX_MUSCL_DISCHG_MYOKEMIC_MULT
MDC	2:24464	EMG cramp discharge	MDC_EMG_PAROX_MUSCL_DISCHG_CRAMP_MULT
MDC	2:24472	EMG waveform after discharge	MDC_EMG_PAROX_MUSCL_AFTER_DISCHG_MULT

CID 3037 EOG Annotations – Neurophysiological Enumerations (EOG)

725 This Context Group comprises the nomenclature and codes for neurophysiologic enumerations of ISO/IEEE 11073-10101, which apply to electrooculogram. The terms included in the table below may not constitute the complete list; see the ISO/IEEE Standard.

Note

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730

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML

Type: Extensible

Version: 20200623

UID: 1.2.840.10008.6.1.1335

735

Table CID 3037 EOG Annotations – Neurophysiological Enumerations (EOG)

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	2:24280	Eye blink	MDC_EOG_EYE_MVMT_BLINK
MDC	2:24288	Saccade	MDC_EOG_EYE_MVMT_SACCADIC
MDC	2:24296	REM	MDC_EOG_EYE_MVMT_RAPID
MDC	2:24304	Slow eye movement	MDC_EOG_EYE_MVMT_SLOW
MDC	2:24312	Other eye movement	MDC_EOG_EYE_MVMT_OTHER
MDC	2:24320	Eyes closed	MDC_EOG_EYE_MVMT_CLOSING
MDC	2:24328	Eyes open	MDC_EOG_EYE_MVMT_OPENING

CID 3038 Pattern Events

This Context Group comprises codes for patient-oriented events in physiologic monitoring.

740 MDC codes come from the corresponding table of ISO/IEEE 11073-10101. MDC terms included in the table below may not constitute the complete list; see the ISO/IEEE Standard.

Note

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745

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML

Type: Extensible

Version: 20200623

UID: 1.2.840.10008.6.1.1336

750

Table CID 3038 Pattern Events

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	3:3158	Irregular heart rate	MDC_EVT_ECG_CARD_BEAT_RATE_IRREG
MDC	3:3072	Apnea	MDC_EVT_APNEA
MDC	3:3284	Apnea 15 sec	MDC_EVT_VENT_RESP_APNEA_15_SEC
MDC	3:3292	Apnea 30 sec	MDC_EVT_VENT_RESP_APNEA_30_SEC
MDC	3:3246	Desaturation	MDC_EVT_DESAT
MDC	3:3076	Asystole	MDC_EVT_ECG_ASYSTOLE
MDC	3:3266	Arrhythmia event	MDC_EVT_ECG_ARRHY
MDC	3:3264	Clinical seizure discharge	MDC_EVT_EEG_DISCHG_SEIZ_CLIN
MDC	3:3190	Supraventricular extrasystole	MDC_EVT_ECG_SV_P_C
MDC	3:3294	Pacer artifact	MDC_EVT_ECG_PACER_ARTIF_RECOG
MDC	3:3146	First-degree AV block	MDC_EVT_ECG_AV_HEART_BLK_DEG_1
MDC	3:3148	Second-degree AV block	MDC_EVT_ECG_AV_HEART_BLK_DEG_2
MDC	3:3258	Third-degree AV block	MDC_EVT_ECG_AV_HEART_BLK_DEG_3
MDC	3:3084	Bradycardia	MDC_EVT_ECG_SINUS_BRADY
MDC	3:3128	Atrial fibrillation	MDC_EVT_ECG_ATR_FIB
MDC	3:3276	Atrial flutter	MDC_EVT_ECG_ATR_FLUT
MDC	3:3118	Irregular rhythm	MDC_EVT_ECG_RR_IRREG
MDC	3:3262	Sinus tachycardia	MDC_EVT_ECG_SINUS_TACHY
MDC	3:3270	Sharp spikes	MDC_EVT_EEG_SPK_SHARP
MDC	3:3254	Spikes and waves	MDC_EVT_EEG_SPK_AND_WV
SCT	68978004	Hyperventilation	
DCM	130413	Hyperventilation begin	
DCM	130414	Hyperventilation end	
DCM	130415	Post-hyperventilation	

CID 3039 Device-related and Environment-related Events

755 This Context Group comprises the nomenclature and codes for device-related and environment-related events of ISO/IEEE 11073-10101. The terms included in the table below may not constitute the complete list; see the ISO/IEEE Standard.

Note

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760

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML

Type: Extensible

Version: 20200623

UID: 1.2.840.10008.6.1.1337

765

Table CID 3039 Device-related and Environment-related Events

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	3:268	Lead disconnected	MDC_EVT_LEAD_DISCONN
MDC	3:236	Power line problem	MDC_EVT_ELEC_PWR_LINE_PROB
MDC	3:458	Power supply problem	MDC_EVT_POWER_SUPPLY_PROB
MDC	3:432	Artifact	MDC_EVT_WAVE_ARTIF_ERR

CID 3040 EEG Annotations - Neurological Monitoring Measurements

770 This Context Group comprises the nomenclature and codes for neurological monitoring measurements of ISO/IEEE 11073-10101. The terms included in the table below may not constitute the complete list; see the ISO/IEEE Standard.

Note

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775

Resources: HTML | FHIR JSON | FHIR XML | IHE SVS XML

Type: Extensible

Version: 20200623

UID: 1.2.840.10008.6.1.1338

780

Table CID 3040 EEG Annotations - Neurological Measurements

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	2:22784	Circum head	MDC_CIRCUM_HEAD

Coding Scheme	Code Value	Code Meaning	ISO/IEEE 11073 MDC Equivalent Reference ID (Informative)
MDC	2:22952	Arousal	MDC_EEG_NUM_AROUS

Add to Annex D DICOM Controlled Terminology Definitions Table D-1:

Annex D DICOM Controlled Terminology Definitions

785

Table D-1. DICOM Controlled Terminology Definitions (Coding Scheme Designator "DCM" Coding Scheme Version "01")

Code Value	Code Meaning	Definition	Notes
<u>EEG</u>	<u>Electroencephalography</u>	<u>An acquisition device, process or method that performs electroencephalography.</u>	
<u>EMG</u>	<u>Electromyography</u>	<u>An acquisition device, process or method that performs electromyography.</u>	
<u>EOG</u>	<u>Electrooculography</u>	<u>An acquisition device, process or method that performs electrooculography.</u>	
<u>POS</u>	<u>Position Sensor</u>	<u>A device or sensor measuring the orientation of the patient's body</u>	
<u>130410</u>	<u>Patient position</u>	<u>A channel monitoring the patient's position</u>	
<u>130411</u>	<u>Patient rotation longitudinal</u>	<u>A channel monitoring the patient's rotation around the body's longitudinal (head – feet) axis</u>	
<u>130412</u>	<u>Patient elevation</u>	<u>A channel monitoring the angle of elevation of the patient against horizontal</u>	
<u>130413</u>	<u>Hyperventilation begin</u>	<u>Begin of deepened or accelerated breathing</u>	
<u>130414</u>	<u>Hyperventilation end</u>	<u>End of deepened or accelerated breathing</u>	
<u>130415</u>	<u>Post-hyperventilation</u>	<u>Point in time after end of hyperventilation</u>	
<u>130416</u>	<u>Airflow Thermistor</u>	<u>Airflow measured by a thermistor sensor</u>	
<u>130417</u>	<u>Airflow Thermocouple</u>	<u>Airflow measured by a thermocouple sensor</u>	

<u>130418</u>	<u>Airflow Nasal Prong</u>	<u>Airflow measurement by a nasal prong</u>	
<u>130419</u>	<u>Airflow PVDF</u>	<u>Airflow measurement by a nasal piezoelectric polyvinylidene fluoride sensor</u>	
<u>130420</u>	<u>Airflow CPAP</u>	<u>Airflow measurement by a Continuous Positive Airway Pressure device</u>	
<u>130421</u>	<u>Airflow</u>	<u>Airflow measured by an unspecified method or device</u>	
<u>130422</u>	<u>PAP Pressure</u>	<u>Pressure delivered by a positive airway pressure device like a CPAP or BiPAP machine</u>	
<u>130423</u>	<u>PAP Leak Pressure</u>	<u>Pressure of air leaking from a positive airway pressure device like a CPAP or BiPAP machine</u>	
<u>130424</u>	<u>PAP Tidal Volume</u>	<u>Tidal volume during breathing when subject is using a positive airway pressure device like a CPAP or BiPAP machine</u>	
<u>130425</u>	<u>Esophageal Pressure</u>	<u>Pressure in the esophagus measured by esophageal manometry</u>	
<u>130426</u>	<u>Respiratory Pressure</u>	<u>Respiratory pressure measured with an unspecified method or device</u>	
<u>130427</u>	<u>Thoracic Respiratory Inductance</u>	<u>Respiratory effort delivered by a respiratory inductance plethysmography (RIP) belt applied on the patient's thorax</u>	
<u>130428</u>	<u>Abdominal Respiratory Inductance</u>	<u>Respiratory effort delivered by a respiratory inductance plethysmography (RIP) belt applied on the patient's abdomen</u>	
<u>130429</u>	<u>Thoracic Respiratory PVDF</u>	<u>Respiratory effort delivered by a piezoelectric polyvinylidene fluoride sensor belt applied on the patient's thorax</u>	
<u>130430</u>	<u>Abdominal Respiratory PVDF</u>	<u>Respiratory effort delivered by a piezoelectric polyvinylidene fluoride sensor belt applied on the patient's abdomen</u>	

130431	<u>Thoracic Respiratory Effort</u>	<u>Respiratory effort measured by an unspecified method or device on the patient's thorax</u>	
130432	<u>Abdominal Respiratory Effort</u>	<u>Respiratory effort measured by an unspecified method or device on the patients abdomen</u>	
130433	<u>Respiratory Effort</u>	<u>Respiratory effort measured by an unspecified method or device</u>	
130434	<u>CO2 Transcutaneous</u>	<u>Partial pressure of carbon dioxide in the respiratory gases measured transcutaneously</u>	
130435	<u>CO2 Waveform End-tidal Main-stream</u>	<u>Partial pressure of carbon dioxide measured in the end-tidal main-stream respiratory gases</u>	
130436	<u>CO2 Trend End-tidal Main-stream</u>	<u>Partial pressure of carbon dioxide measured in the end-tidal main-stream respiratory gases averaged over time</u>	
130437	<u>CO2 Waveform End-tidal Side-stream</u>	<u>Partial pressure of carbon dioxide measured in the end-tidal side-stream respiratory gases</u>	
130438	<u>CO2 Trend End-tidal Side-stream</u>	<u>Partial pressure of carbon dioxide measured in the end-tidal side-stream respiratory gases averaged over time</u>	
130439	<u>CO2 Waveform Main-stream</u>	<u>Partial pressure of carbon dioxide measured in the main-stream respiratory gases</u>	
130440	<u>CO2 Waveform Side-stream</u>	<u>Partial pressure of carbon dioxide measured in the side-stream respiratory gases</u>	
130441	<u>CO2 Trend Main-stream</u>	<u>Partial pressure of carbon dioxide measured in the main-stream respiratory gases averaged over time</u>	
130442	<u>CO2 Trend Side-stream</u>	<u>Partial pressure of carbon dioxide measured in the side-stream respiratory gases averaged over time</u>	
130443	<u>CO2 Respiration</u>	<u>Partial pressure of carbon dioxide in the respiratory gases measured</u>	

		<u>using an unspecified method or device</u>	
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Changes to NEMA Standards Publications PS 3.17

Digital Imaging and Communications in Medicine (DICOM) Part 17: Explanatory Information

795

PS 3.17 Section C.3 – Change URL to time distribution methods

800

The method used for time synchronization of equipment clocks is implementation or site specific, and therefore outside the scope of this proposal. If required, standard time distribution protocols are available (e.g., NTP, IRIG, GPS).

An informative description of time distribution methods can be found at:

<http://www.bancomm.com/cntpApp.htm>

<http://web.archive.org/web/20001001065227/http://www.bancomm.com/cntpApp.htm>

805

A second method of synchronizing acquisitions is to utilize a common reference channel (temporal fiducial), ...

Add new Section to Annex SSSS of PS 3.17

810

Annex SSSS Neurophysiology Waveforms

SSSS.1 Purpose of this Annex

This Annex describes the most common types, methods and use cases associated with the capture and usage of clinical neurophysiology waveforms.

815 **SSSS. .. Electroencephalography**

Electroencephalography (EEG) is a diagnostic technique recording the electrical activity of the brain. Usually the electrodes are placed on the scalp; special techniques use electrodes implanted extracranially as well, such as sphenoidal electrodes.

820 EEG is used to diagnose seizure disorders and epilepsy, to monitor EEG background activity in certain conditions such as encephalopathy, anesthesia and coma, and within polysomnography studies. In clinical practice, an EEG is typically recorded for 20-60 minutes. Long term monitoring (e.g., to monitor epilepsy) may last from one hours to several days. In both cases often video of the patient is recorded as well.

825 Within polysomnography recordings, the EEG is used to delineate wake and sleep stages and diagnosis of parasomnias and nocturnal epilepsy.

Electrical potentials are typically in the range of 1-500 μV .

SSSS. .. Electromyography

830 Electromyography (EMG) is a diagnostic technique recording the electrical activity of skeletal muscles. The electrical potential of the muscle cells changes on activation, due to a patient's movement or triggered by external stimulation. The data are used to detect neuromuscular abnormalities or to monitor muscular activity. In polysomnography, electromyography is used to measure muscle tension and movement.

835 Two different techniques are used. Surface EMG assesses muscle function by recording electrical potentials from muscle using macroelectrodes at the skin surface. Intramuscular EMG uses needle electrodes inserted through the skin into the muscle, often in combination with surface electrodes as reference.

Within Polysomnography only surface EMG is used.

Measured values are typically in the range of 50 μV – 30mV.

SSSS. .. Electrooculography

840 Electrooculography (EOG) is a diagnostic technique to record eye movement using electrodes placed on the skin surface around the eye. EOG is used in polysomnography studies to help define the sleep stage (such as in rapid eye movement sleep) and in EEG to help differentiate eye movement artifact from frontal EEG patterns.

845 Typically two electrodes are used to measure the eye movement. They are placed above or below the outer canthus of the eyes.

Measured values and sampling rates are approximately in the same range as EEG.

SSSS. .. Body Position

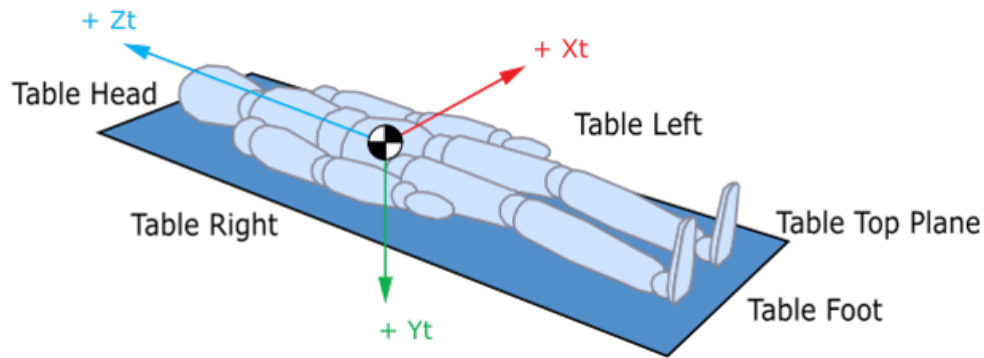
Continuous monitoring of the patient's position synchronously to the recording of neurophysiology data is an essential requirement especially in polysomnography.

850 Besides using synchronized video, body position can be monitored with various body position monitoring devices. Different techniques are used, e.g. simple mercury switches or acceleration sensors providing six data channels with angles and acceleration relatively to gravity.

Two types of data collection are common in polysomnography.

855 The first uses a single channel and records five discrete, defined values indicating the patient position: prone, lateral decubitus left, supine, lateral decubitus right, and upright.

860 The second used two channels to record two angles. The first channel records the patient's angle of rotation around the longitudinal axis (head-feet axis). An angle of zero indicates supine, and angle of 90° indicates left lateral decubitus, and angle of 180° indicates prone, and an angle of 270° indicates right lateral decubitus. The second channel records the angle of elevation of the patient against horizontal, which could change if the patient sits up in bed, if the head of the bed is elevated, or if the patient stands up. An angle of zero indicates the patient is lying flat, an angle of 90° indicates upright, and an angle of -90° indicates complete reverse Trendelenburg position with the head down and the legs pointed straight up.



865

Position Value	Channel 1	Channel 2
Supine	0	0
Lateral decubitus left	90	0
Prone	180	0
Lateral decubitus right	270	0
Upright	0	90
Feet up	0	-90

The sampling rate varies but is relatively slow (60 Hz or less).

SSSS. .. Polysomnography

870 In sleep medicine, polysomnography (PSG), also called a “sleep study”, is a test to diagnose sleep disorders. Physiological parameters are recorded during sleep in order to identify the sleep stages, measure brain functioning, monitor respiratory control, and monitor patient movement and body position.

A polysomnography study consists of several measured quantities, the most important ones are:

- brain activity (EEG)
- eye movements (EOG)

- 875 ○ activity of skeletal muscles (EMG)

Additionally some of the following parameters are recorded:

- 880 ○ electrical activity of the heart (ECG)
 ○ changes in blood oxygen levels (pulse oximetry)
 ○ respiratory parameters like nasal and oral airflow via pressure transducers in front of nostrils and
 ○ mouth or chest and abdominal expansion during breathing (via belts)
 ○ sound recordings to measure snoring
 ○ body position

885 Data acquisition is done via a multichannel recording unit which samples sensors attached to different parts of the patient's body. Study duration is typically up to 8 hours. Channel selection varies somewhat between labs. Recommended channels for PSG are defined by the American Academy of Sleep Medicine (Reference: Berry RB, Albertario CL, Harding SM, et al.; for the American Academy of Sleep Medicine. The AASM Manual for the Scoring of Sleep and Associated Events: Rules, Terminology and Technical Specifications. Version 2.5. Darien, IL: American Academy of Sleep Medicine; 2018).

In many cases a video is taken to show the person's movements during sleep.

890 **SSSS.x .. Mapping of polysomnographic data to DICOM**

Neurophysiology time series SOP Classes relevant to sleep studies are:

- 895 ○ **Sleep Electroencephalogram Waveform Storage**
 The Sleep Electroencephalogram (EEG) Waveform SOP Class is the specification of digitized electrical signals from the patient's encephalon collected on the skull surface, which has been acquired by an EEG modality or by an EEG acquisition function within a polysomnography modality.
- 900 ○ **Electromyogram Waveform Storage**
 The Electromyography (EMG) Waveform SOP Class is the specification of digitized electrical signals evoked by the patient's muscle movements collected on the skin, which has been acquired by an EMG modality or by an EMG acquisition function within a neurophysiology recording device or a polysomnography modality.
- 905 ○ **Electrooculogram Waveform Storage**
 The Electrooculogram (EOG) Waveform SOP Class is the specification of digitized electrical signals evoked by the patient's eye movements collected on the face, which has been acquired by an EOG modality or by an EOG acquisition function within a neurophysiology recording device or a polysomnography modality.

Non-neurophysiologic time series or video SOP Classes relevant to sleep studies, are:

- 910 ○ **General ECG Waveform Storage**
 The General Electrocardiogram (ECG) SOP class is used to store digitized electrical signals from the patient cardiac conduction system collected on the body surface, which has been acquired by

an ECG modality or by an ECG acquisition function within an imaging modality or a recording device.

- **Basic Voice Audio Waveform Storage**

915 The Basic Voice Audio SOP class is used to store digitized sound that has been acquired or created by an audio modality or by an audio acquisition function within an imaging modality or a recording device. A typical use is report dictation. In the context of Polysomnography this object could be used for snoring detection

- **Arterial Pulse Waveform Storage**

920 The Arterial Pulse Waveform SOP class is used to store digitized electrical signals from the patient arterial system collected through pulse oximetry or other means by a Pulse modality or by a Pulse acquisition function within an imaging modality or a recording device. In the context of polysomnography this object could be used to record the oxygen saturation in blood.

- **Respiratory Waveform Storage and Multi-channel Respiratory Waveform Storage**

925 The Respiratory Waveform SOP classes are used to store digitized electrical signals from the respiratory system, acquired by a Respiratory modality or by a Respiratory acquisition function within an imaging modality or a recording device.

In the context of polysomnography this object could be used to record the patient's respiration.

- **Body Position Waveform Storage**

930 The Body Position Waveform IOD is the specification of digitized electrical signals, which have been acquired by a device or sensor on the patient's body. Depending on the measurement method either the acquired sensor data or values derived from it are recorded.

- **Video Photographic Image Storage**

935 Video Photographic Image Storage SOP class is used to store visible light multiframe photographic images. This SOP class is used to store the video data acquired during Video-EEG or in polysomnography.

SSSS. .. Considerations on storing large data recordings

940 In principle, continuous recordings are stored within a single DICOM object, i.e., as a single file, as long as the limits resulting from DICOM data restrictions are not exceeded.

The length of Waveform Data (0054,1010), in which all of the data for a single channel is encoded, is limited to 4 GB of data by the 32 Bit unsigned integer used to store the length in bytes of the data element

945 For example, using 24 channels within one multiplex group, a sampling frequency of 256 Hz, and 16 Bit samples would allow a maximum recording time of more than 3 days.

Enhanced neurophysiology techniques like High Density EEG using 512 channels and a sampling frequency of 5 kHz would reach this limit in less than 15 minutes, if all channels were stored within one multiplex group.

950 The file system or database, in which the DICOM data is stored, may place additional constraints on the total size of the DICOM object.

When such limits are reached, the recording has to be split into several objects with appropriate offsets and times. Synchronization has to be provided across such multiple objects.

To keep the data objects easy to handle, long duration recordings could be split in time slices of e.g., single days.

955 In addition, it may be desirable to use smaller objects to address reliability and random access concerns.

Such objects consisting of one recording being split to multiple parts shall belong to the same series.

SSSS. .. Example DICOM Routine Scalp EEG Waveform Object

Setup: 24 leads: 1 ECG, 23 EEG

The following is a non-comprehensive sample representation of a 23-lead Routine EEG object.

Nesting	Attribute	Tag	VR	VL (hex)	Value
	SOP Class UID	(0008,0016)	UI	001C	1.2.840.10008.5.1.4.1.1.9.7.1
	SOP Instance UID	(0008,0018)	UI	0036	1.3.6.1.4.1.23154.1.4.2881783832.12156.1533548323.951
	Study Date	(0008,0020)	DA	0008	20000101
	Content Date	(0008,0023)	DA	0008	20180806
	Acquisition Date Time	(0008,002a)	DT	0016	20000101000000.000000
	Study Time	(0008,0030)	TM	000e	000000.000000
	Content Time	(0008,0033)	TM	0006	113843
	Accession Number	(0008,0050)	SH	0008	76123455
	Modality	(0008,0060)	CS	0004	EEG
	Manufacturer	(0008,0070)	LO	0014	someManufacturerName
	Referring Physician's Name	(0008,0090)	PN	0000	
	Patient's Name	(0010,0010)	PN	000c	PATIENT1^edf
	Patient ID	(0010,0020)	LO	000a	ssspid0815
	Patient's Birth Date	(0010,0030)	DA	0008	19670329
	Patient's Sex	(0010,0040)	CS	0002	F
	Synchronization Trigger	(0018,106a)	CS	000a	NO TRIGGER
	Acquisition Time Synchronized	(0018,1800)	CS	0002	Y
	Study Instance UID	(0020,000d)	UI	0036	1.3.6.1.4.1.23154.1.2.2881783832.12156.1533548324.952
	Series Instance UID	(0020,000e)	UI	0036	1.3.6.1.4.1.23154.1.3.2881783832.12156.1533548324.953

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Study ID	(0020,0010)	SH	0004	4711
	Series Number	(0020,0011)	IS	0002	1
	Instance Number	(0020,0013)	IS	0002	1
	Synchronization Frame of Reference UID	(0020,0200)	UI	0036	1.3.6.1.4.1.23154.1.5.2881783832.12156.1533548324.954
	Acquisition Context Sequence	(0040,0555)	SQ	ffffff	
%endseq					
	Waveform Sequence	(5400,0100)	SQ	ffffff	
%item					
	Waveform Originality	(003a,0004)	CS	0008	ORIGINAL
	Number of Waveform Channels	(003a,0005)	US	0002	0x0017
	Number of Waveform Samples	(003a,0010)	UL	0004	0x001c1700
	Sampling Frequency	(003a,001a)	DS	0004	256
	Multiplex Group Label	(003a,0020)	SH	0004	EEG
	Channel Definition Sequence	(003a,0200)	SQ	ffffff	
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	1
	Channel Label	(003a,0203)	SH	0002	O1
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1209
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	O1
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	

Nesting	Attribute	Tag	VR	VL (hex)	Value
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
	Channel Impedance Sequence	(003A,0312)	SQ	ffffff	
%item					
	Impedance Value	(003A,0313)	DS	0008	67

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Impedance Timepoint	(003A,0314)	DT	0016	19991231235835.000000
%enditem					
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	2
	Channel Label	(003a,0203)	SH	0002	P3
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1185
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	P3
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	

Nesting	Attribute	Tag	VR	VL (hex)	Value
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	3
	Channel Label	(003a,0203)	SH	0002	C3
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1137
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	C3
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	4
	Channel Label	(003a,0203)	SH	0002	F3
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Code Value	(0008,0100)	SH	0006	7:1057
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	F3
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	5
	Channel Label	(003a,0203)	SH	0004	FP1
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1041
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	Fp1
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	6
	Channel Label	(003a,0203)	SH	0002	P7
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1257
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	P7
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	7
	Channel Label	(003a,0203)	SH	0002	T7
	Channel Source Sequence	(003a,0208)	SQ	ffffff	

Nesting	Attribute	Tag	VR	VL (hex)	Value
%item					
	Code Value	(0008,0100)	SH	0006	7:1249
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	T7
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	8
	Channel Label	(003a,0203)	SH	0002	F7
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1073
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	F7
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	9
	Channel Label	(003a,0203)	SH	0002	O2
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1214
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	O2
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	10
	Channel Label	(003a,0203)	SH	0002	P4
	Channel Source Sequence	(003a,0208)	SQ	ffffff	

Nesting	Attribute	Tag	VR	VL (hex)	Value
%item					
	Code Value	(0008,0100)	SH	0006	7:1190
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	P4
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	11
	Channel Label	(003a,0203)	SH	0002	C4
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1142
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	C4
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	12
	Channel Label	(003a,0203)	SH	0002	F4
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1062
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	F4
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	13
	Channel Label	(003a,0203)	SH	0004	FP2
	Channel Source Sequence	(003a,0208)	SQ	ffffff	

Nesting	Attribute	Tag	VR	VL (hex)	Value
%item					
	Code Value	(0008,0100)	SH	0006	7:1042
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	Fp2
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	14
	Channel Label	(003a,0203)	SH	0002	P8
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1262
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	P8
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	15
	Channel Label	(003a,0203)	SH	0002	T8
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1254
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	T8
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	16
	Channel Label	(003a,0203)	SH	0002	F8
	Channel Source Sequence	(003a,0208)	SQ	ffffff	

Nesting	Attribute	Tag	VR	VL (hex)	Value
%item					
	Code Value	(0008,0100)	SH	0006	7:1078
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	F8
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	17
	Channel Label	(003a,0203)	SH	0002	FZ
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1008
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	Fz
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	18
	Channel Label	(003a,0203)	SH	0002	CZ
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1016
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	Cz
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	19
	Channel Label	(003a,0203)	SH	0002	PZ
	Channel Source Sequence	(003a,0208)	SQ	ffffff	

Nesting	Attribute	Tag	VR	VL (hex)	Value
%item					
	Code Value	(0008,0100)	SH	0006	7:1024
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0002	Pz
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	20
	Channel Label	(003a,0203)	SH	0004	SP2
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1314
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	Sp2
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	21
	Channel Label	(003a,0203)	SH	0004	SP1
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1313
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	Sp1
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	22
	Channel Label	(003a,0203)	SH	0004	FT9
	Channel Source Sequence	(003a,0208)	SQ	ffffff	

Nesting	Attribute	Tag	VR	VL (hex)	Value
%item					
	Code Value	(0008,0100)	SH	0006	7:1121
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	FT9
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%item					
	Waveform Channel Number	(003a,0202)	IS	0002	23
	Channel Label	(003a,0203)	SH	0004	FT10
	Channel Source Sequence	(003a,0208)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	7:1126
	Coding Scheme Designator	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	FT10
%enditem					
%endseq					
	Channel Source Modifier Sequence	(003a,0209)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0006	109006
	Coding Scheme Designator	(0008,0102)	SH	0004	DCM
	Code Meaning	(0008,0104)	LO	0014	Differential signal
%enditem					
%item					
	Code Value	(0008,0100)	SH	0006	7:1020
	Coding Scheme	(0008,0102)	SH	0004	MDC
	Code Meaning	(0008,0104)	LO	0004	CPz
%enditem					
%endseq					
	Channel Sensitivity	(003a,0210)	DS	0008	0.100008

Nesting	Attribute	Tag	VR	VL (hex)	Value
	Channel Sensitivity Units Sequence	(003a,0211)	SQ	ffffff	
%item					
	Code Value	(0008,0100)	SH	0002	uV
	Coding Scheme Designator	(0008,0102)	SH	0004	UCUM
	Code Meaning	(0008,0104)	LO	000a	uV
%enditem					
%endseq					
	Channel Sensitivity Correction Factor	(003a,0212)	DS	0002	1
	Channel Baseline	(003a,0213)	DS	000a	0.0500038
	Channel Sample Skew	(003a,0215)	DS	0002	0
	Channel Offset	(003a,0218)	DS	0002	0
	Waveform Bits Stored	(003a,021a)	US	0002	0x0010
%enditem					
%endseq					
	Multiplex Group ID	(003A,0310)	UI	0036	1.3.6.1.4.1.23154.1.5.2881783832.12156.1533548324.955
	Powerline Frequency	(003A,0311)	DS	0002	50
	Waveform Bits Allocated	(5400,1004)	US	0002	0x0010
	Waveform Sample Interpretation	(5400,1006)	CS	0002	SS
	Waveform Data	(5400,1010)	O W	50c2200	...
%enditem					
%endseq					