

DICOM Correction Item

Correction Number		CP-230
Log Summary: Addition of Stage Code Sequence to Ultrasound IODs		
Type of Modification	Name of Standard	
Addition	PS 3.3, 3.6, 3.16 2000	
<p>Rationale for Correction</p> <p>Currently there is no way to unambiguously convey coded values for performed ultrasound protocol stages in Ultrasound Image and Ultrasound Multi-frame Image IODs. This is a critical feature required in order to unambiguously convey ultrasound protocol data management information.</p> <p>The proposal is to enhance the existing Ultrasound Image and Ultrasound Multi-frame Image IODs so that coded ultrasound stage information can be conveyed. To do this a new Element for specifying the stage code is added. In addition, a new Element is added to convey a view name as currently only a view number can be specified.</p> <p>This change proposal also specifies a Baseline Context Group ID to use when conveying Protocol Codes for ultrasound protocol data management information. CP 201 changes the names of the Scheduled and Performed Action-Item Code Sequence Elements (0040,0008), and (0040,0260), of the General Series Module to Scheduled and Performed Protocol Code Sequence Elements, respectively. However, because these elements are not contained in an Ultrasound specific module the specification of the Baseline Context Group ID must be contained in the notes for the Ultrasound IODs rather than for the specific elements of the General Series module themselves. This change proposal specifies such changes.</p>		
<p>Sections of documents affected</p> <p>PS 3.3, PS 3.6, PS 3.16 2000</p>		
Correction Wording:		

Add this Note following the Table A.6-1, US Image IOD Modules, in A.6.4 in Part 3.3

Note: 1. For the purpose of conveying ultrasound protocol data management information it is recommended that the Performed Protocol Code Sequence (0040,0260) be assigned the code value(s) of the performed ultrasound protocol, if any. The Baseline Context Group for these code values is Context ID 12001 (defined in PS 3.16).

Add this Note following the Table A.7-1, US Multi-Frame Image IOD Modules, in A.7.4 in Part 3.3

Note: 1. For the purpose of conveying ultrasound protocol data management information it is recommended that the Performed Protocol Code Sequence (0040,0260) be assigned the code value(s) of the performed ultrasound protocol if any. The Baseline Context Group for these code values is Context ID 12001 (defined in PS 3.16).

Add the listed Elements following the Stage Name Element (0008,2120) in Table C.8-18, US Image Module Attributes, in Part 3.3

Stage Code Sequence	(0040,000A)	3	Sequence of items describing the performed Ultrasound Protocol Stage(s).
>Include 'Code Sequence Macro' Table 8.8-1		Baseline Context ID is 12002.	

Add the listed Elements following the Stage Number Element (0008,2122) in Table C.8-18, US Image Module Attributes, in Part 3.3

View Name	(0008,2127)	3	A View is a particular combination of the position and orientation when a set of images are acquired. Images are acquired at the same View in different Stages for the purposes of comparison.
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Add the following Data Elements to PS 3.6, Section 6, Registry of DICOM data elements

Tag	Name	VR	VM
(0008,2127)	View Name	SH	1
(0040,000A)	Stage Code Sequence	SQ	1

Add the following Context ID Tables to PS 3.16, Annex B, DCMR Context Groups (Normative)

**CID 12001
 ULTRASOUND PROTOCOL TYPES**

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
SNM3	P5-B3002	Transesophageal echocardiography
SNM3	P5-B3003	Transthoracic echocardiography
SNM3	P5-B3004	Epicardial echocardiography
SNM3	P5-B3005	Intravascular echocardiography
SNM3	P5-B3006	Intracardiac echocardiography
SNM3	P5-B301F	Limited M-mode only echocardiography
SNM3	P5-B303F	Limited Doppler only echocardiography
SNM3	P5-B3050	Exercise stress echocardiography
SNM3	P5-B3051	Maximal stress echocardiography
SNM3	P5-B3052	Submaximal stress echocardiography
SNM3	P5-B3053	Treadmill exercise stress echocardiography
SNM3	P5-B3054	Bruce treadmill stress echocardiography
SNM3	P5-B3055	Modified Bruce treadmill stress echocardiography
SNM3	P5-B3056	Naughton treadmill stress echocardiography
SNM3	P5-B3058	Bicycle exercise stress echocardiography
SNM3	P5-B3060	Echocardiography with administered drug stress
SNM3	P5-B3061	Dobutamine stress echocardiography
SNM3	P5-B3062	High dose dobutamine stress echocardiography
SNM3	P5-B3063	Low dose dobutamine stress echocardiography
SNM3	P5-B3065	Arbutamine stress echocardiography
SNM3	P5-B3066	Dipyridamole stress echocardiography
SNM3	P5-B3070	Cardiac pacing echocardiography
SNM3	P5-B3081	Adult echocardiography
SNM3	P5-B3082	Pediatric echocardiography
SNM3	P5-B3083	Intraoperative echocardiography
SNM3	P5-B3084	Upright echocardiography
SNM3	P5-B3085	Supine echocardiography
SNM3	P5-B3090	Contrast echocardiography
SNM3	P5-B3091	Contrast left ventricular opacification echocardiography
SNM3	P5-B3092	Contrast perfusion echocardiography
SNM3	P5-B3093	Contrast Doppler enhancement echocardiography
SNM3	P5-B3191	2D complete echocardiography
SNM3	P5-B3192	Limited 2D only echocardiography
SNM3	P5-B8215	Fetal echocardiography

**CID 12002
 ULTRASOUND PROTOCOL STAGE TYPES**

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
SNM3	P5-01000	Image acquisition procedure
SNM3	P5-01101	Image acquisition after administration of contrast agent
SNM3	P5-01103	Image acquisition during cardiac pacing
SNM3	P5-01104	Image acquisition at user-defined cardiac pacing rate
SNM3	P5-01111	Image acquisition during hand grip maneuver
SNM3	P5-01112	Image acquisition during Valsalva
SNM3	P5-01113	Image acquisition during postural maneuver
SNM3	P5-01120	Pre-procedure image acquisition
SNM3	P5-01121	Preoperative image acquisition
SNM3	P5-01130	Intra-procedure image acquisition
SNM3	P5-01131	Intra-operative image acquisition
SNM3	P5-01140	Post-procedure image acquisition
SNM3	P5-01141	Post-operative image acquisition
SNM3	P5-01142	Image acquisition following first cardiopulmonary bypass
SNM3	P5-01143	Image acquisition following second cardiopulmonary bypass
SNM3	P5-01144	Image acquisition following third cardiopulmonary bypass
SNM3	P5-01200	Image acquisition during stress procedure
SNM3	P5-01201	Image acquisition at baseline
SNM3	P5-01202	Pre-stress image acquisition
SNM3	P5-01203	Mid-stress image acquisition
SNM3	P5-01204	Peak-stress image acquisition
SNM3	P5-01205	Image acquisition during recovery
SNM3	P5-01300	Image acquisition after drug administration
SNM3	P5-01310	Image acquisition at user-defined dobutamine dose
SNM3	P5-01311	Image acquisition at low-dose dobutamine
SNM3	P5-01312	Image acquisition at mid-dose dobutamine
SNM3	P5-01313	Image acquisition at peak dose dobutamine
SNM3	P5-01314	Image acquisition at dobutamine 5 mcg/kg/min
SNM3	P5-01315	Image acquisition at dobutamine 10 mcg/kg/min
SNM3	P5-01316	Image acquisition at dobutamine 20 mcg/kg/min
SNM3	P5-01317	Image acquisition at dobutamine 30 mcg/kg/min
SNM3	P5-01318	Image acquisition at dobutamine 40 mcg/kg/min

SNM3	P5-01319	Image acquisition at dobutamine 50 mcg/kg/min
SNM3	P5-0131A	Image at dobutamine 40 mcg/kg/min plus atropine
SNM3	P5-0131B	Image acquisition at dobutamine 50 mcg/kg/min plus atropine
SNM3	P5-01323	Image acquisition at peak Arbutamine dose
SNM3	P5-01333	Image acquisition at peak dipyridamole
SNM3	P5-01341	Image acquisition after nitroglycerin
SNM3	P5-01342	Image acquisition after amyl nitrite
SNM3	P5-01343	Image acquisition after adenosine