

DICOM Correction Item

Correction Number CP-817	
Log Summary: Ultrasound Protocol Codes	
Type of Modification	Name of Standard
Modification	PS 3.6 and 3.16 – 2008
<p>Rationale for Correction:</p> <p>1. Very few of the SNOMED codes in CID 12001 Ultrasound Protocol Types, and <i>none</i> of the codes in 12002 Ultrasound Protocol Stage Types, actually exist in SNOMED. While these non-existent codes do no harm (yet), it is inappropriate for DICOM to assert them as SNOMED codes, and in fact SNOMED could use them for other concepts. [For the record, these terms were added in CP230.]</p> <p>2. The codes as listed in DICOM for “Transthoracic echocardiography” and “Epicardial echocardiography” conflict with the actual codes in SNOMED, and with each other. (For the record, TTE in SNOMED is P5-B3004 but is listed in DICOM as P5-B3003 – which is the code for a different concept in SNOMED, and ECE in SNOMED is P5-B3007 but is listed in DICOM as P5-B3004). SNOMED has assigned new codes to resolve the conflict and potential ambiguity.</p> <p>3. SNOMED had assigned other codes for Exercise stress echocardiography (P5-B3009), Contrast echocardiography (P5-B3008) and Fetal echocardiography (P5-B3001). SNOMED has agreed to reassign these concepts with the codes published in DICOM (P5-B3050, P5-B3090, and P5-B8215, respectively).</p> <p>4. The various Stress Protocol names in CID 12001 are pre-coordinated with the term “echocardiography”, e.g., “Bruce treadmill stress echocardiography”. For other uses in stress testing we simply use a protocol name without the modality term, e.g., “Bruce protocol” (SNOMED P2-7131A). It would simplify applications if there were a common set of protocol names used across all modalities, without having to map to a different code for each modality. The pre-coordinated terms are therefore replaced by the terms of CID 3261 Stress Protocols.</p> <p>5. Similarly, the various Stage names in CID 12002 are pre-coordinated with the term “image acquisition”, e.g., “Peak-stress image acquisition”. For other staged modality protocols (stress testing) we simply use a stage name, as some modalities do not acquire images. The pre-coordinated terms are therefore replaced by the terms of CID 3207 Stress Test Procedure Phases (copied from Sup128_FZ).</p> <p>6. Various Stage names in CID 12002 are pre-coordinated with very specific terms for test conditions, e.g., “Image acquisition at dobutamine 50 mcg/kg/min plus atropine”. It is not clear that this is a useful or practical type of concept to be selected or entered on the imaging modality. For other uses in stress testing we rely on the protocol definition or other reporting mechanism to convey the details of the stage test conditions (see Supplement 128). These terms are retired.</p>	
Sections of documents affected	
PS 3.6 Annex A, 3.16 Annexes B and J	
Correction Wording:	

Add to new table to PS 3.6 Annex A

**Table A-3
 CONTEXT GROUP UID VALUES**

Context UID	Context Identifier	Context Group Name

1.2.840.10008.6.1.637	3207	Stress Test Procedure Phases
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Modify CID 12001 and CID 12002 in PS 3.16 Annex B

CID 12001 Ultrasound Protocol Types

**Context ID 12001
 Ultrasound Protocol Types**

Type: Extensible Version: 2002090420081027

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
SRT	P5-B3000	Echocardiography
SRT	P5-B3002	Transesophageal echocardiography
SRT	P5-B3003 P5-B3012	Transthoracic echocardiography
SRT	P5-B3004 P0-05F95	Epicardial echocardiography
SRT	P5-B3005	Intravascular echocardiography
SRT	P5-B3006	Intracardiac echocardiography
SRT	P5-B301F	Limited M-mode only echocardiography
SRT	P5-B303F	Limited Doppler only echocardiography
SRT	P5-B3050	Exercise stress echocardiography
SRT	P5-B3051	Maximal stress echocardiography
SRT	P5-B3052	Submaximal stress echocardiography
SRT	P5-B3053	Treadmill exercise stress echocardiography
SRT	P5-B3054	Bruce treadmill stress echocardiography
SRT	P5-B3055	Modified Bruce treadmill stress echocardiography
SRT	P5-B3056	Naughton treadmill stress echocardiography
SRT	P5-B3058	Bicycle exercise stress echocardiography
SRT	P5-B3060	Echocardiography with administered drug stress
SRT	P5-B3061	Dobutamine stress echocardiography
SRT	P5-B3062	High dose dobutamine stress echocardiography
SRT	P5-B3063	Low dose dobutamine stress echocardiography
SRT	P5-B3065	Arbutamine stress echocardiography
SRT	P5-B3066	Dipyridamole stress echocardiography
SRT	P5-B3070	Cardiac pacing echocardiography
SRT	P5-B3081	Adult echocardiography
SRT	P5-B3082 P5-B300F	Pediatric echocardiography
SRT	P5-B3083 P5-B300C	Intraoperative echocardiography

SRT	P5-B3084	Upright echocardiography
SRT	P5-B3085	Supine echocardiography
SRT	P5-B3090	Contrast echocardiography
SRT	P5-B3091	Contrast left ventricular opacification echocardiography
SRT	P5-B3092	Contrast perfusion echocardiography
SRT	P5-B3093	Contrast Doppler enhancement echocardiography
SRT	P5-B3191	2D complete echocardiography
SRT	P5-B3192	Limited 2D only echocardiography
SRT	P5-B8215	Fetal echocardiography
<u>Include CID 3261 Stress Protocols</u>		

Note: In a prior version of this context group, Transthoracic echocardiography was assigned the code P5-B3003 and Epicardial echocardiography was assigned the code P5-B3004; these codes conflict with other SNOMED code assignments. In addition, the prior version used many codes that are not actually in SNOMED. Receiving applications should be aware of this change, and the possibility of misinterpretation of SOP Instances that may include the deprecated codes; see Annex J.

CID 12002 Ultrasound Protocol Stage Types

Context ID 12002
 Ultrasound Protocol Stage Types

Type: Extensible Version: 2002090420081027

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
<u>Include CID 3207 Stress Test Procedure Phases</u>		
<u>Include CID12102 Temporal Periods Relating to Procedure or Therapy</u>		
SRT	P5-01000	Image acquisition procedure
SRT	P5-01101	Image acquisition after administration of contrast agent
SRT	P5-01103 <u>P2-35000</u>	Image acquisition during Cardiac pacing
SRT	P5-01104	Image acquisition at user-defined cardiac pacing rate
SRT	P5-01111 <u>P2-71306</u>	Image acquisition during Hand grip maneuver
SRT	P5-01112 <u>R-40928</u>	Image acquisition during Valsalva
SRT	P5-01113	Image acquisition during postural maneuver
SRT	P5-01120	Pre-procedure image acquisition
SRT	P5-01121	Preoperative image acquisition
SRT	P5-01130	Intra-procedure image acquisition
SRT	P5-01131	Intra-operative image acquisition
SRT	P5-01140	Post-procedure image acquisition
SRT	P5-01141	Post-operative image acquisition
SRT	P5-01142	Image acquisition following first cardiopulmonary

		bypass
SRT	P5-01143	Image acquisition following second cardiopulmonary bypass
SRT	P5-01144	Image acquisition following third cardiopulmonary bypass
SRT	P5-01200	Image acquisition during stress procedure
SRT	P5-01201	Image acquisition at baseline
SRT	P5-01202	Pre-stress image acquisition
SRT	P5-01203	Mid-stress image acquisition
SRT	P5-01204	Peak-stress image acquisition
SRT	P5-01205	Image acquisition during recovery
SRT	P5-01300	Image acquisition after drug administration
SRT	P5-01310	Image acquisition at user-defined dobutamine dose
SRT	P5-01311	Image acquisition at low-dose dobutamine
SRT	P5-01312	Image acquisition at mid-dose dobutamine
SRT	P5-01313	Image acquisition at peak dose dobutamine
SRT	P5-01314	Image acquisition at dobutamine 5 mcg/kg/min
SRT	P5-01315	Image acquisition at dobutamine 10 mcg/kg/min
SRT	P5-01316	Image acquisition at dobutamine 20 mcg/kg/min
SRT	P5-01317	Image acquisition at dobutamine 30 mcg/kg/min
SRT	P5-01318	Image acquisition at dobutamine 40 mcg/kg/min
SRT	P5-01319	Image acquisition at dobutamine 50 mcg/kg/min
SRT	P5-0131A	Image at dobutamine 40 mcg/kg/min plus atropine
SRT	P5-0131B	Image acquisition at dobutamine 50 mcg/kg/min plus atropine
SRT	P5-01323	Image acquisition at peak Arbutamine dose
SRT	P5-01333	Image acquisition at peak dipyridamole
SRT	P5-01341	Image acquisition after nitroglycerin
SRT	P5-01342	Image acquisition after amyl nitrite
SRT	P5-01343	Image acquisition after adenosine

Note: A prior version of this context group used many codes that are not actually in SNOMED. Although there is minimal possibility of misinterpretation with SOP Instances that may include the deprecated use, receiving applications should be aware of this change; see Annex J.

Add CID 3207 (also defined in Supplement 128 Frozen Draft for Trial Use)

Context ID 3207
 Stress Test Procedure Phases

Type: Extensible Version: 20081031

Coding Scheme Designator	Code Value	Code Meaning
SRT	F-01604	Resting State

SRT	F-05019	Cardiac stress state
SRT	F-05028	Peak cardiac stress state
SRT	F-05018	Cardiac stress recovery state
SRT	F-25040	Hyperventilation

Modify CID 3261 (including modifications in Supplement 128 Frozen Draft for Trial Use)

CID 3261 Stress Protocols

**Context ID 3261
 Stress Protocols**

Type: Extensible Version: 2002090420081027

Coding Scheme	Code Value	Code Meaning
SRT	P2-7131C	Balke protocol
SRT	P2-7131A	Bruce protocol
SRT	P2-7131D	Ellestad protocol
SRT	P2-7131B	Modified Bruce protocol
SRT	P2-713A1	Modified Naughton protocol
SRT	P2-713A0	Naughton protocol
SRT	P2-7131F	Pepper protocol
SRT	P2-7131E	Ramp protocol
<u>SRT</u>	<u>P2-31102</u>	<u>Stress test using Bicycle Ergometer</u>
<u>SRT</u>	<u>P2-31107</u>	<u>Pharmacologic Stress protocol</u>
<u>SRT</u>	<u>P2-3110A</u>	<u>Dipyridamole Stress protocol</u>
<u>SRT</u>	<u>P2-31109</u>	<u>Adenosine Stress protocol</u>
<u>SRT</u>	<u>P2-31108</u>	<u>Dobutamine Stress protocol</u>
<u>SRT</u>	<u>P2-31011</u>	<u>Pharmacologic and exercise stress test</u>
<u>SRT</u>	<u>P2-3110B</u>	<u>Stress test using cardiac pacing</u>

For reference, CID 12102 from PS3.16-2008 (no change)

CID 12102 Temporal Periods Relating to Procedure or Therapy

Context ID 12102

Temporal Periods Relating to Procedure or Therapy

Type: Extensible Version: 20050110

Coding Scheme Designator (0008,0102)	Code Value (0008,0100)	Code Meaning (0008,0104)
SRT	R-422A4	After Procedure
SRT	R-40FBA	During Procedure
SRT	R-40FB9	Before Procedure

Add the following rows to PS 3.16 Annex J

SNOMED DICOM Microglossary Retired Codes

Retired Code Value	Code Meaning	Replacement Code (SNOMED)	Notes
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P5-B3003	Transthoracic echocardiography	P5-B3012	
P5-B3004	Epicardial echocardiography	P0-05F95	
P5-B3082	Pediatric echocardiography	P5-B300F	
P5-B3083	Intraoperative echocardiography	P5-B300C	
P5-01000	Image acquisition procedure		
P5-01101	Image acquisition after administration of contrast agent		
P5-01103	Image acquisition during cardiac pacing	P2-35000	Replacement code has meaning "Cardiac pacing"
P5-01104	Image acquisition at user-defined cardiac pacing rate	P2-35000	Replacement code has meaning "Cardiac pacing"
P5-01111	Image acquisition during hand grip maneuver	P2-71306	Replacement code has meaning "Hand grip"
P5-01112	Image acquisition during Valsalva	R-40928	Replacement code has meaning "Valsalva"
P5-01113	Image acquisition during postural maneuver		
P5-01120	Pre-procedure image acquisition	R-40FB9	Replacement code has meaning "Before Procedure"
P5-01121	Preoperative image acquisition	R-40FB9	Replacement code has meaning "Before Procedure"
P5-01130	Intra-procedure image acquisition	R-40FBA	Replacement code has meaning "During Procedure"
P5-01131	Intra-operative image acquisition	R-40FBA	Replacement code has meaning "During Procedure"
P5-01140	Post-procedure image acquisition	R-422A4	Replacement code has meaning "After Procedure"
P5-01141	Post-operative image acquisition	R-422A4	Replacement code has meaning "After Procedure"

P5-01142	Image acquisition following first cardiopulmonary bypass	R-422A4	Replacement code has meaning "After Procedure"
P5-01143	Image acquisition following second cardiopulmonary bypass	R-422A4	Replacement code has meaning "After Procedure"
P5-01144	Image acquisition following third cardiopulmonary bypass	R-422A4	Replacement code has meaning "After Procedure"
P5-01200	Image acquisition during stress procedure	R-40FBA	Replacement code has meaning "During Procedure"
P5-01201	Image acquisition at baseline	F-01602	Replacement code has meaning "Baseline"
P5-01202	Pre-stress image acquisition	F-01602	Replacement code has meaning "Baseline"
P5-01203	Mid-stress image acquisition	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01204	Peak-stress image acquisition	F-05028	Replacement code has meaning "Peak cardiac stress state"
P5-01205	Image acquisition during recovery	F-05018	Replacement code has meaning "Cardiac stress recovery state"
P5-01300	Image acquisition after drug administration	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01310	Image acquisition at user-defined dobutamine dose	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01311	Image acquisition at low-dose dobutamine	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01312	Image acquisition at mid-dose dobutamine	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01313	Image acquisition at peak dose dobutamine	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01314	Image acquisition at dobutamine 5 mcg/kg/min	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01315	Image acquisition at dobutamine 10 mcg/kg/min	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01316	Image acquisition at dobutamine 20 mcg/kg/min	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01317	Image acquisition at dobutamine 30 mcg/kg/min	F-05019	Replacement code has meaning "Cardiac stress state"

P5-01318	Image acquisition at dobutamine 40 mcg/kg/min	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01319	Image acquisition at dobutamine 50 mcg/kg/min	F-05019	Replacement code has meaning "Cardiac stress state"
P5-0131A	Image at dobutamine 40 mcg/kg/min plus atropine	F-05019	Replacement code has meaning "Cardiac stress state"
P5-0131B	Image acquisition at dobutamine 50 mcg/kg/min plus atropine	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01323	Image acquisition at peak Arbutamine dose	F-05028	Replacement code has meaning "Peak cardiac stress state"
P5-01333	Image acquisition at peak dipyridamole	F-05028	Replacement code has meaning "Peak cardiac stress state"
P5-01341	Image acquisition after nitroglycerin	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01342	Image acquisition after amyl nitrite	F-05019	Replacement code has meaning "Cardiac stress state"
P5-01343	Image acquisition after adenosine	F-05019	Replacement code has meaning "Cardiac stress state"
P5-B301F	Limited M-mode only echocardiography	P5-B3000	Replacement code has meaning "Echocardiography"
P5-B303F	Limited Doppler only echocardiography	P5-B3000	Replacement code has meaning "Echocardiography"
P5-B3051	Maximal stress echocardiography	P5-B3050	Replacement code has meaning "Exercise stress echocardiography"
P5-B3052	Submaximal stress echocardiography	P5-B3050	Replacement code has meaning "Exercise stress echocardiography"
P5-B3053	Treadmill exercise stress echocardiography	P5-B3050	Replacement code has meaning "Exercise stress echocardiography"
P5-B3054	Bruce treadmill stress echocardiography	P2-7131A	Replacement code has meaning "Bruce protocol"
P5-B3055	Modified Bruce treadmill stress echocardiography	P2-7131B	Replacement code has meaning "Modified Bruce protocol"
P5-B3056	Naughton treadmill stress echocardiography	P2-713A0	Replacement code has meaning "Naughton protocol"
P5-B3058	Bicycle exercise stress echocardiography	P2-31102	Replacement code has meaning "Stress test using Bicycle Ergometer"

P5-B3060	Echocardiography with administered drug stress	P2-31107	Replacement code has meaning "Pharmacologic Stress protocol"
P5-B3061	Dobutamine stress echocardiography	P2-31108	Replacement code has meaning "Dobutamine Stress protocol"
P5-B3062	High dose dobutamine stress echocardiography	P2-31108	Replacement code has meaning "Dobutamine Stress protocol"
P5-B3063	Low dose dobutamine stress echocardiography	P2-31108	Replacement code has meaning "Dobutamine Stress protocol"
P5-B3065	Arbutamine stress echocardiography	P2-31107	Replacement code has meaning "Pharmacologic Stress protocol"
P5-B3066	Dipyridamole stress echocardiography	P2-3110A	Replacement code has meaning "Dipyridamole Stress protocol"
P5-B3070	Cardiac pacing echocardiography	P2-3110B	Replacement code has meaning "Stress test using cardiac pacing"
P5-B3081	Adult echocardiography	P5-B3004	Replacement code has meaning "Transthoracic echocardiography"
P5-B3084	Upright echocardiography	P5-B3004	Replacement code has meaning "Transthoracic echocardiography"
P5-B3085	Supine echocardiography	P5-B3004	Replacement code has meaning "Transthoracic echocardiography"
P5-B3091	Contrast left ventricular opacification echocardiography	P5-B3090	Replacement code has meaning "Contrast echocardiography"
P5-B3092	Contrast perfusion echocardiography	P5-B3090	Replacement code has meaning "Contrast echocardiography"
P5-B3093	Contrast Doppler enhancement echocardiography	P5-B3090	Replacement code has meaning "Contrast echocardiography"
P5-B3191	2D complete echocardiography	P5-B3004	Replacement code has meaning "Transthoracic echocardiography"
P5-B3192	Limited 2D only echocardiography	P5-B3004	Replacement code has meaning "Transthoracic echocardiography"