

# DICOM Correction Proposal

STATUS	Letter Ballot
Date of Last Update	2024/03/21
Person Assigned	Kevin O'Donnell
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Submission Date	2023/10/26

Correction Number	CP-2369
Log Summary:	Add Peak Blood Velocity to CID 12120 and CID 12222
Name of Standard	PS 3.16
Rationale for Correction:	<p>This CP adds (20355-4, LN, "Peak Blood Velocity") to CID 12120 and CID 12222 to make it available to users of TID 5200, in addition to the existing (11726-7, LN, "Peak Systolic Blood Velocity").</p> <p>TID 5200 uses codes with varying patterns of pre-coordination and post-coordination. Possibly due to this variability, some vendors have been observed encoding Peak Blood Velocity at some other time point by using (11726-7, LN, "Peak Systolic Blood Velocity") and adding a post-coordinated time point to override the "Systolic" semantics. This is not appropriate.</p> <p>No fix is required to TID 5300 since it never does partial pre-coordination; such details are always fully pre-coordinated or fully post-coordinated.</p>
Correction Wording:	

*Modify PS3.16 CID 12120 and 12222 as shown*

## CID 12120 ULTRASOUND BLOOD VELOCITY MEASUREMENT

**Resources:** HTML | FHIR JSON | FHIR XML | IHE SVS XML  
**Keyword:** UltrasoundBloodVelocityMeasurement  
**FHIR Keyword:** dicom-cid-12120-UltrasoundBloodVelocityMeasurement  
**Type:** Extensible  
**Version:** 20191108yyymmdd  
**UID:** 1.2.840.10008.6.1.586

**Table CID 12120. Ultrasound Blood Velocity Measurement**

Coding Scheme Designator	Code Value	Code Meaning	UMLS Concept Unique ID
LN	11653-3	End Diastolic Velocity	C0551772
LN	11665-7	Minimum Diastolic Velocity	C0551784
LN	11726-7	Peak Systolic Velocity	C0551845
<b><u>LN</u></b>	<b><u>20355-4</u></b>	<b><u>Peak Blood Velocity</u></b>	<b><u>C0803170</u></b>
LN	20352-1	Time averaged mean velocity	C0803167
LN	11692-1	Time averaged peak velocity	C0551811

Coding Scheme Designator	Code Value	Code Meaning	UMLS Concept Unique ID
LN	20354-7	Velocity Time Integral	C0803169
DCM	110828	Flow velocity	

### CID 12222 ORIFICE FLOW PROPERTY

**Resources:** [HTML](#) | [FHIR JSON](#) | [FHIR XML](#) | [IHE SVS XML](#)  
**Keyword:** OrificeFlowProperty  
**FHIR Keyword:** dicom-cid-12222-OrificeFlowProperty  
**Type:** Extensible  
**Version:** 201400317yyvymdd  
**UID:** 1.2.840.10008.6.1.614

**Table CID 12222. Orifice Flow Property**

Coding Scheme Designator	Code Value	Code Meaning	SNOMED-RT ID	UMLS Concept Unique ID
LN	33878-0	Volume Flow		C1316341
LN	34141-2	Peak Instantaneous Flow Rate		C1316604
SCT	399367004	Cardiovascular Orifice Area	G-038E	C1302344
SCT	399027007	Cardiovascular Orifice Diameter	G-038F	C1302176
SCT	399301000	Regurgitant Fraction	G-0390	C1302309
LN	11653-3	End Diastolic Velocity		C0551772
LN	11726-7	Peak Systolic Velocity		C0551845
<b><u>LN</u></b>	<b><u>20355-4</u></b>	<b><u>Peak Blood Velocity</u></b>		<b><u>C0803170</u></b>
LN	20352-1	Time Averaged Mean Velocity		C0803167
LN	11692-1	Time Averaged Peak Velocity		C0551811
LN	20247-3	Peak Gradient		C0803062
LN	20256-4	Mean Gradient		C0803071
LN	20354-7	Velocity Time Integral		C0803169
LN	20280-4	Pressure Half-Time		C0803095
LN	20168-1	Acceleration Time		C0802983
LN	20217-6	Deceleration Time		C0803032
LN	20216-8	Deceleration Slope		C0803031
LN	12144-2	Systolic to Diastolic Velocity Ratio		C0552246
LN	59102-4	Flow Radius		C2923437

Coding Scheme Designator	Code Value	Code Meaning	SNOMED-RT ID	UMLS Concept Unique ID
LN	59130-5	Alias velocity		C2923486
LN	20167-3	Acceleration Slope		C0802982
LN	59127-1	D-E Slope		C2923482
LN	59128-9	E-F Slope		C2923484
LN	59103-2	A-C Interval		C2923439
LN	59104-0	Peak E wave/Peak A wave by US		C2923440
LN	59106-5	Stenosis Peak Gradient		C2923443
LN	59107-3	Stenosis Peak Velocity		C2923444
LN	59079-4	Peak Reversal Velocity during Atrial Contraction		C2923402
LN	59080-2	E-Wave Peak Velocity		C2923404
LN	59081-0	A-Wave Peak Velocity		C2923405
LN	59111-5	E Velocity to Annulus E Velocity Ratio		C2923452
LN	59115-6	Velocity of Flow Propagation		C2923460

Note

1. In a prior version of this Context Group, the code LN: 11726-7 was specified for Peak Velocity. This has been corrected to be Peak Systolic Velocity. Some applications might continue to send code LN: 11726-7 instead of LN: 20351-3 for Peak Velocity. **Applications that need to encode peak velocity without pre-coordinating the phase can use LN: 20355-4 Peak Blood Velocity.**
2. In a prior version of this Context Group, the code LN: 20352-1 was specified for Mean Velocity. This has been corrected to be Time Averaged Mean Velocity. Some applications might continue to send code LN: 20352-1 instead of LN: 11692-1 for Time Averaged Peak Velocity.

Modify PS3.16 Annex H as shown to remove the incorrect synonym  
 (Note: 20355-4 Peak Blood Velocity was already present)  
**Also consider reordering Annex H to numerical order.**

**H Code Meanings of LOINC Codes in DCMR**

**Table H-1. Code Meanings of LOINC Codes**

Code Value	Code Meaning
...	
<b>11726-7</b>	<b>Peak Velocity</b>

