

DICOM Correction Proposal

STATUS	Letter Ballot
Date of Last Update	2014/09/08
Person Assigned	Rob Horn
Submitter Name	Karl-Heinz Fleischer (karl-heinz.fleischer@zeiss.com)
Submission Date	2014/03/20

Correction Number	CP-1385
Log Summary: Add 'Measurement Laterality' to General Ophthalmic Refractive Measurements Module	
Name of Standard PS 3.3 – 2014a	
<p>Rationale for Correction:</p> <p>The attribute "Laterality" (0020,0060) is defined in the General Series Module. To specify laterality information more precisely, certain IODs furthermore define the attribute "Image Laterality" (0020,0062) or "Frame Laterality" (0020,9072) or "Measurement Laterality" (0024,0113).</p> <p>The Lensometry Measurements IOD, the Autorefraction Measurements IOD, the Keratometry Measurements IOD, the Subjective Refraction Measurements IOD, the Visual Acuity Measurements IOD, the Ophthalmic Axial Measurements IOD, and the Intraocular Lens Calculations IOD do only have the attribute "Laterality" from the General Series Module. Instances of these IODs can relate to one examined eye or lens, but also can contain measurements of both eyes or lenses for which "Laterality" (0020,0060) is inappropriate.</p> <p>Therefore it is proposed to add the attribute "Measurement Laterality" (0024,0113) at instance level and to include it into the General Ophthalmic Refractive Measurements Module. To ensure backwards compatibility, this attribute should be of Type 3. Furthermore, notes should be added to the sequences in the measurement and calculations modules containing laterality information to ensure consistency.</p> <p>Additionally, it is proposed to correct the condition on Laterality accordingly, in the same manner as was done for Image Laterality for the DX family of objects and Frame Laterality for the Enhanced MR object.</p>	
Correction Wording:	

Add Measurement Laterality reference to Laterality attribute in General Series Module Attributes Table C.7-5a

**Table C.7-5a
GENERAL SERIES MODULE ATTRIBUTES**

Attribute Name	Tag	Type	Attribute Description
...
Laterality	(0020,0060)	2C	<p>Laterality of (paired) body part examined. Required if the body part examined is a paired structure and Image Laterality (0020,0062) or Frame Laterality (0020,9072) or Measurement Laterality (0024,0113) are not sent. Enumerated Values:</p> <p>R = right L = left</p> <p>Note: Some IODs support Image Laterality (0020,0062) at the Image level or Frame Laterality(0020,9072) at the Frame level in the Frame Anatomy functional group macro or Measurement Laterality (0024,0113) at the Measurement level, which can provide a more comprehensive mechanism for specifying the laterality of the body part(s) being examined.</p>

Add "Measurement Laterality" attribute to General Ophthalmic Refractive Measurements Module Attributes Table C.8.25.7-1

Table C.8.25.7-1

GENERAL OPHTHALMIC REFRACTIVE MEASUREMENTS MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
...
Content Time	(0008,0033)	1	The time the measurements data creation started.

Measurement Laterality	(0024,0113)	3	<p><u>Laterality of refractive measurement performed.</u> <u>Enumerated Values:</u> <u>R = right</u> <u>L = left</u> <u>B = both left and right together</u></p> <p><u>Note:</u> 1. <u>Laterality (0020,0060) is a Series level Attribute and must be the same for all Measurements in the Series, hence it must be absent if multiple instances from different eyes or lenses are encoded.</u> 2. <u>Needs to be consistent with any other laterality information contained at the Measurement level.</u></p>
Referenced Refractive Measurements Sequence	(0046,0145)	2C	<p>A sequence that specifies Ophthalmic Refractive Measurements SOP Instances that are relevant to the interpretation of this SOP Instance.</p> <p>Zero or more items shall be included in this sequence.</p> <p>See section C.8.25.7.1.1 for further explanation.</p> <p>Required if Visual Acuity Type Code Sequence (0046,0121) is present. May be present otherwise.</p>
...			

Add Note to Lensometry Measurements Module Attributes Table C.8.25.8-1

Table C.8.25.8-1

LENSOMETRY MEASUREMENTS MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
...
Right Lens Sequence	(0046,0014)	1C	<p>A sequence that specifies measurements of a patient's right lens.</p> <p>Required if the right lens is measured.</p> <p>Only a single Item shall be included in this sequence.</p> <p><u>Note:</u> <u>If Right Lens Sequence (0046,0014) is present, Measurement Laterality (0024,0113), if present, will have a value of R or B as appropriate.</u></p>
<i>>Include 'Lensometry Measurements Macro' Table C.8.25.8-2</i>			
Left Lens Sequence	(0046,0015)	1C	<p>A sequence that specifies measurements of a patient's left lens.</p> <p>Required if the left lens is measured.</p> <p>Only a single Item shall be included in this sequence.</p> <p><u>Note:</u> <u>If Left Lens Sequence (0046,0015) is present, Measurement Laterality (0024,0113), if present, will have a</u></p>

			<u>value of L or B as appropriate.</u>
>Include 'Lensometry Measurements Macro' Table C.8.25.8-2			
...			

Add Note to Autorefraction Measurements Module Attributes Table C.8.25.9-1

Table C.8.25.9-1

AUTOREFRACTION MEASUREMENTS MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
Autorefraction Right Eye Sequence	(0046,0050)	1C	<p>A sequence that specifies refractive measurements of a patient's right eye. Only a single item shall be included in this sequence.</p> <p>Required if the right eye is measured.</p> <p>Note: <u>If Autorefraction Right Eye Sequence (0046,0050) is present, Measurement Laterality (0024,0113), if present, will have a value of R or B as appropriate.</u></p>
...			
Autorefraction Left Eye Sequence	(0046,0052)	1C	<p>A sequence that specifies refractive measurements of a patient's left eye. Only a single item shall be included in this sequence.</p> <p>Required if the left eye is measured.</p> <p>Note: <u>If Autorefraction Left Eye Sequence (0046,0052) is present, Measurement Laterality (0024,0113), if present, will have a value of L or B as appropriate.</u></p>
...			

Table C.8.25.10-1

KERATOMETRY MEASUREMENTS MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
Keratometry Right Eye Sequence	(0046,0070)	1C	<p>A sequence that specifies keratometric measurements of a patient's right eye, defining principal meridians wherein the steepest meridian is separated by 90 degrees from the flattest.</p> <p>Only a single item shall be included in this sequence.</p> <p>Required if the right eye is measured.</p> <p>Note: <u>1. Consideration for steep, flat, and spherical meridians is made. For instances where spherical keratometric measurements are obtained, values specified in the steep and flat Attributes are equivalent.</u></p> <p><u>2. If Keratometry Right Eye Sequence (0046,0070) is present, Measurement Laterality (0024,0113), if present, will have a value of R or B as appropriate.</u></p>
>Include 'Keratometric Measurements Macro' Table C.8.25.10-2			
Keratometry Left Eye Sequence	(0046,0071)	1C	<p>A sequence that specifies keratometric measurements of a patient's left eye, defining principal meridians wherein the steepest meridian is separated by 90 degrees from the flattest.</p> <p>Only a single item shall be included in this sequence.</p> <p>Required if the left eye is measured.</p> <p>Note: See Note for attribute Keratometry Right Eye Sequence (0046,0070)</p> <p><u>1. Consideration for steep, flat, and spherical meridians is made. For instances where spherical keratometric measurements are obtained, values specified in the steep and flat Attributes are equivalent.</u></p> <p><u>2. If Keratometry Left Eye Sequence (0046,0071) is present, Measurement Laterality (0024,0113), if present, will have a value of L or B as appropriate.</u></p>
>Include 'Keratometric Measurements Macro' Table C.8.25.10-2			

Add Note to Subjective Refractive Measurements Module Attributes Table C.8.25.11-1

Table C.8.25.11-1

SUBJECTIVE REFRACTIVE MEASUREMENTS MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
Subjective Refraction Right Eye Sequence	(0046,0097)	1C	A sequence that specifies the subjective refractive measurements of a patient's right eye. Only a single item shall be included in this sequence. Required if the right eye is measured. Note: If Subjective Refraction Right Eye Sequence (0046, 0097) is present, Measurement Laterality (0024,0113), if present, will have a value of R or B as appropriate.
>Include 'Subjective Refractive Measurements Macro' Table C.X.8.11-2			
Subjective Refraction Left Eye Sequence	(0046,0098)	1C	A sequence that specifies the subjective refractive measurements of a patient's left eye. Only a single item shall be included in this sequence. Required if the left eye is measured. Note: If Subjective Refraction Left Eye Sequence (0046, 0098) is present, Measurement Laterality (0024,0113), if present, will have a value of L or B as appropriate .
>Include 'Subjective Refractive Measurements Macro' Table C.X.8.11-2			

Add Note to Visual Acuity Measurements Module Attributes Table C.8.25.12-1

Table C.8.25.12-1

VISUAL ACUITY MEASUREMENTS MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
...			
Visual Acuity Right Eye Sequence	(0046,0122)	1C	A sequence that specifies the subjective measurement of a patient's visual acuity for the right eye. Only a single item shall be included in this sequence. Required if the right eye is measured. Note: If Visual Acuity Right Eye Sequence (0046, 0122) is present, Measurement Laterality (0024,0113), if present, will have a value of R or B as appropriate.
>Include 'Visual Acuity Measurements Macro' Table C.8.25.12-2			
Visual Acuity Left Eye Sequence	(0046,0123)	1C	A sequence that specifies the subjective measurements of a patient's visual acuity for the left eye.

			<p>Only a single item shall be included in this sequence.</p> <p>Required if the left eye is measured.</p> <p>Note: <u>If Visual Acuity Left Eye Sequence (0046, 0123) is present, Measurement Laterality (0024,0113), if present, will have a value of L or B as appropriate.</u></p>
<i>>Include 'Visual Acuity Measurements Macro' Table C.8.25.12-2</i>			
Visual Acuity Both Eyes Open Sequence	(0046,0124)	3	<p>A sequence that specifies a patient's subjective visual acuity measurements with both eyes open.</p> <p>Only a single item is permitted in this sequence.</p> <p>Note: <u>If Visual Acuity Both Eyes Open Sequence (0046, 0124) is present, Measurement Laterality (0024,0113), if present, will have a value of B.</u></p>
<i>>Include 'Visual Acuity Measurements Macro' Table C.8.25.12-2</i>			

Add Note to Ophthalmic Axial Measurements Module Attributes Table C.8.25.14-1

Table C.8.25.11-1

OPHTHALMIC AXIAL MEASUREMENTS MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
Ophthalmic Axial Measurements Right Eye Sequence	(0022,1007)	1C	<p>Axial measurements of a patient's right eye.</p> <p>Only a single Item shall be included in this sequence.</p> <p>Required if the right eye is measured.</p> <p>Note: <u>If Ophthalmic Axial Measurements Right Eye Sequence (0022,1007) is present, Measurement Laterality (0024,0113), if present, will have a value of R or B as appropriate.</u></p>
<i>>Include ' Ophthalmic Axial Measurements Macro' Table C.8.25.14-2</i>			
<i>>Include ' Ophthalmic Axial Measurements Selected Macro' Table C.8.25.14-5</i>			
Ophthalmic Axial Measurements Left Eye Sequence	(0022,1008)	1C	<p>Axial measurements of a patient's left eye.</p> <p>Only a single Item shall be included in this sequence.</p> <p>Required if the left eye is measured.</p> <p>Note: <u>If Ophthalmic Axial Measurements Left Eye Sequence (0022,1008) is present, Measurement Laterality (0024,0113), if present, will have a value of L or B as appropriate.</u></p>
<i>>Include ' Ophthalmic Axial Measurements Macro' Table C.8.25.14-2</i>			
<i>>Include ' Ophthalmic Axial Measurements Selected Macro' Table C.8.25.14-5</i>			

Table C.8.25.16-1

SUBJECTIVE REFRACTIVE MEASUREMENTS MODULE ATTRIBUTES

Attribute Name	Tag	Type	Attribute Description
Intraocular Lens Calculations Right Eye Sequence	(0022,1300)	1C	<p>Calculations of intraocular lens power for a patient's right eye. One or more Items shall be included in this sequence. Required if the device calculated intraocular lens power for the right eye.</p> <p>Note: <u>If Intraocular Lens Calculations Right Eye Sequence (0022,1300) is present, Measurement Laterality (0024,0113), if present, will have a value of R or B as appropriate.</u></p>
>Include 'Intraocular Lens Calculations Macro' Table C.8.25.16-2			
Intraocular Lens Calculations Left Eye Sequence	(0022,1310)	1C	<p>Calculations of intraocular lens power for a patient's left eye. One or more Items shall be included in this sequence. Required if the device calculated intraocular lens power for the left eye.</p> <p>Note: <u>If Intraocular Lens Calculations Left Eye Sequence (0022,1310) is present, Measurement Laterality (0024,0113), if present, will have a value of L or B as appropriate.</u></p>
>Include 'Intraocular Lens Calculations Macro' Table C.8.25.16-2			