

# DICOM Change Proposal

STATUS	Assigned
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Change Number	CP-2615
Log Summary: Add Pupil Size to Ophthalmic Acquisition Parameters Macro Attributes	
Name of Standard	PS3.3
<p>Rationale for Change:</p> <p>Storing pupil size in ophthalmology is critical for diagnostic, therapeutic, and surgical planning, as it provides objective data on the eye's optical system, neurological function, and response to treatment. Pupil diameter directly influences retinal image quality, visual acuity, and the effectiveness of corneal and lens-based procedures.</p> <p>While the Standard already has a pupil size attribute in Table C.8.26.6-2., Ophthalmic Patient Clinical Information and Test Lens Parameters Macro Attributes, and allows to store pupil size with some IODs, like Autorefractometry Measurements and Ophthalmic Visual Field Static Perimetry Measurements, it does not support this attribute with other ophthalmic IODs.</p> <p>It is proposed to add Pupil Size (0046,0044) in Table C.8.17.8-2., Ophthalmic Acquisition Parameters Macro Attributes, which is used in context of Ophthalmic Photography, Ophthalmic Tomography, Ophthalmic Thickness Map, and Corneal Topography Map IODs.</p>	
Change Wording:	

5 ***Modify PS3.3 Section C.8.17.8, Table C.8.17.8-2. Ophthalmic Acquisition Parameters Macro Attributes, as indicated (changes to existing text are bold and underlined for additions and bold and struckthrough for removals):***

## C.8.17.8 Ophthalmic Tomography Acquisition Parameters Module

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10 **Table C.8.17.8-2. Ophthalmic Acquisition Parameters Macro Attributes**

Attribute Name	Tag	Type	Attribute Description
Refractive State Sequence	(0022,001B)	2	<p>The refractive state of the imaged eye at the time of acquisition.</p> <p>Zero or one Item shall be included in this Sequence.</p> <p>Zero length means the refractive state was not measured.</p>

Attribute Name	Tag	Type	Attribute Description
>Spherical Lens Power	(0022,0007)	1	Sphere value in diopters.
>Cylinder Lens Power	(0022,0008)	1	Cylinder value in diopters.
>Cylinder Axis	(0022,0009)	1	Axis value in degrees.
>Vertex Distance	(0022,000F)	3	The distance from the corneal vertex of the eye to the back of the corrective lens, in mm.
Emmetropic Magnification	(0022,000A)	2	Emmetropic magnification value (dimensionless). Zero length means the emmetropic magnification was not measured.
Intra Ocular Pressure	(0022,000B)	2	Value of intraocular pressure in mmHg. Zero length means the pressure was not measured.
<b><u>Pupil Size</u></b>	<b><u>(0046,0044)</u></b>	<b><u>3</u></b>	<b><u>The horizontal diameter measurement of the pupil, in mm.</u></b>  <b><u>Note</u></b>  <b><u>Since the size of the pupil can be influenced by the mydriatic agent applied or the type of illumination used during acquisition, it is beneficial to provide the information with corresponding attributes, i.e., Pupil Dilated (0022,000D), Mydriatic Agent Sequence (0022,0058), Degree of Dilation (0022,000E), or Illumination Type Code Sequence (0022,0016), respectively.</u></b>
Pupil Dilated	(0022,000D)	2	Whether or not the patient's pupils were pharmacologically dilated for this acquisition.  Enumerated Values: <b>YES</b> <b>NO</b>  If this Attribute is empty, no information is available.
Mydriatic Agent Sequence	(0022,0058)	2C	Information about the agent administered.  Zero or more Items shall be included in this Sequence.  <b>Note</b>  An empty Sequence indicates that an agent was used for dilation, but the name was not entered.  Required if the Value of Pupil Dilated (0022,000D) is YES.
>Mydriatic Agent Code Sequence	(0022,001C)	1	The actual agent administered to dilate the pupil.  Only a single Item shall be included in this Sequence.
>>Include Table 8.8-1 "Code Sequence Macro Attributes"			BCID 4208 "Mydriatic Agent".
>Mydriatic Agent Concentration	(0022,004E)	3	The concentration of the agent.

Attribute Name	Tag	Type	Attribute Description
>Mydriatic Agent Concentration Units Sequence	(0022,0042)	1C	Units of measure for the Mydriatic Agent Concentration. Only a single Item shall be included in this Sequence. Required if Mydriatic Agent Concentration (0022,004E) is present.
>>Include Table 8.8-1 "Code Sequence Macro Attributes"			DCID 82 "Measurement Unit".
Degree of Dilation	(0022,000E)	2C	The degree of the dilation in mm. Required if the Value of Pupil Dilated (0022,000D) is YES.