

## DICOM Correction Proposal

STATUS	Letter Ballot
Date of Last Update	2025/01/19
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Correction Number	CP-2434
Log Summary: Add new IOL calculation formulas to CID 4236	
Name of Standard PS3.16	
Rationale for Correction: CID 4236 "IOL Calculation Formula" defines formulas used to calculate Intraocular Lenses (IOL). During the last years, new formulas have been defined and used to improve the patient's vision after a cataract surgery, which are not covered by current specification of CID 4236. The scope of this proposal is to add code definitions for these new formulas to CID 4236.	
Correction Wording:	

*In PS3.16, Annex B.1 modify CID 4236 to add codes for new IOL calculation formulas:*

### CID 4236 IOL Calculation Formula

Version: ~~20190124~~yyyymmdd

**Table CID 4236. IOL Calculation Formula**

Coding Scheme Designator	Code Value	Code Meaning
DCM	111760	Haigis
DCM	111761	Haigis-L
DCM	111762	Holladay 1
DCM	111763	Holladay 2
DCM	111764	Hoffer Q
DCM	111765	Olsen
DCM	111766	SRKII
DCM	111767	SRK-T
DCM	111860	Haigis Toric
DCM	111861	Haigis-L Toric
DCM	111862	Barrett Toric
DCM	111863	Barrett True-K

Coding Scheme Designator	Code Value	Code Meaning
DCM	111864	Barrett True-K Toric
DCM	111865	Barrett Universal II
<u>DCM</u>	<u>aaaaaa</u>	<u>Kane</u>
<u>DCM</u>	<u>bbbbbb</u>	<u>Kane Toric</u>
<u>DCM</u>	<u>ccccc</u>	<u>Kane Keratoconus</u>
<u>DCM</u>	<u>dddddd</u>	<u>Barrett Keratoconus</u>
<u>DCM</u>	<u>eeeeee</u>	<u>Barrett Rx</u>
<u>DCM</u>	<u>ffffff</u>	<u>EVO</u>
<u>DCM</u>	<u>gggggg</u>	<u>Shammas No-History</u>
<u>DCM</u>	<u>hhhhh</u>	<u>Camellin-Calossi</u>
<u>DCM</u>	<u>iiiii</u>	<u>Hill RBF 3.0</u>
<u>DCM</u>	<u>jjjjj</u>	<u>PEARL-DGS</u>

In PS3.16, Annex D add to Table D-1

Code Value	Code Meaning	Definition	Notes
...	...	...	...
<u>aaaaaa</u>	<u>Kane</u>	<p><u>The Kane intraocular lens calculation formula.</u></p> <p><u>Connell BJ, Kane JX. Comparison of the Kane formula with existing formulas for intraocular lens power selection. BMJ Open Ophthalmol. 2019 Apr 1;4(1):e000251. doi: 10.1136/bmjophth-2018-000251. PMID: 31179396; PMCID: PMC6528763.</u></p>	
<u>bbbbbb</u>	<u>Kane Toric</u>	<p><u>The Kane Toric intraocular lens calculation formula.</u></p> <p><u>Kane JX, Connell B. A Comparison of the Accuracy of 6 Modern Toric Intraocular Lens Formulas. Ophthalmology. 2020 Nov;127(11):1472-1486. doi: 10.1016/j.ophtha.2020.04.039. Epub 2020 May 1. PMID: 32371252.</u></p>	
<u>ccccc</u>	<u>Kane Keratoconus</u>	<p><u>The Kane Keratoconus intraocular lens calculation formula.</u></p> <p><u>Kane JX, Connell B, Yip H, McAlister JC, Beckingsale P, Snibson GR, Chan E. Accuracy of Intraocular Lens Power Formulas Modified for Patients with Keratoconus. Ophthalmology. 2020 Aug;127(8):1037-1042. doi: 10.1016/j.ophtha.2020.02.008. Epub 2020 Apr 9. PMID: 32279887.</u></p>	

Code Value	Code Meaning	Definition	Notes
<u>ddddd</u>	<u>Barrett Keratoconus</u>	<p><u>The Barrett Keratoconus intraocular lens calculation formula.</u></p> <p><u>Ton, Yokrat MD; Barrett, Graham D. MD, FRANZCO; Kleinmann, Guy MD; Levy, Adi MHA; Assia, Ehud I. MD. Toric intraocular lens power calculation in cataract patients with keratoconus. Journal of Cataract &amp; Refractive Surgery 47(11):p 1389-1397, November 2021.   doi: 10.1097/j.jcrs.0000000000000638</u></p>	
<u>eeeeee</u>	<u>Barrett Rx</u>	<p><u>The Barrett Rx intraocular lens calculation formula.</u></p> <p><u>Barrett GD. The Barrett Rx formula: predicting IOL power based on refraction after cataract surgery. Barcelona. Spain: European Society of Cataract &amp; Refractive Surgeons; 2015.</u></p>	
<u>fffff</u>	<u>EVO</u>	<p><u>The Emmetropia Verifying Optical (EVO) intraocular lens calculation formula.</u></p> <p><u>Yeo, T.K. (2024). Emmetropia Verifying Optical (EVO) Formula. In: Aramberri, J., Hoffer, K.J., Olsen, T., Savini, G., Shammas, H.J. (eds) Intraocular Lens Calculations. Essentials in Ophthalmology. Springer, Cham. doi:10.1007/978-3-031-50666-6_40</u></p>	
<u>ggggg</u>	<u>Shammas No-History</u>	<p><u>The Shammas no-history method using Shammas-PL IOL calculation formula.</u></p> <p><u>Shammas HJ, Shammas MC. No-history method of intraocular lens power calculation for cataract surgery after myopic laser in situ keratomileusis. J Cataract Refract Surg. 2007 Jan;33(1):31-6. doi: 10.1016/j.jcrs.2006.08.045. PMID: 17189790.</u></p>	
<u>hhhhh</u>	<u>Camellin-Calossi</u>	<p><u>The Camellin and Calossi IOL calculation formula.</u></p> <p><u>Camellin M, Calossi A. A new formula for intraocular lens power calculation after refractive corneal surgery. J Refract Surg. 2006 Feb;22(2):187-99. doi: 10.3928/1081-597X-20060201-18. PMID: 16523839.</u></p>	
<u>iiiiii</u>	<u>Hill RBF 3.0</u>	<p><u>The Hill Radial Basis Function (RBF) Formula Version 3.0</u></p> <p><u>Hill Radial Basis Function calculator</u></p>	

Code Value	Code Meaning	Definition	Notes
		<a href="https://rbfcalculator.com">https://rbfcalculator.com</a>	
iiiiii	<u>PEARL-DGS</u>	<p><u>The PEARL-DGS IOL calculation formula.</u></p> <p><u>Debellemannie`re G, Dubois M, Gauvin M, Wallerstein A, Brenner L, Rampat R, Saad A, Gatinel D. The PEARL-DGS formula: the development of an open-source machine learning-based thick IOL calculation formula. Am J Ophthalmol. 2021;232:58–69. <a href="https://doi.org/10.1016/j.ajo.2021.05.004">https://doi.org/10.1016/j.ajo.2021.05.004</a>.</u></p>	