THE PHILIPPINE ACADEMY OF OPHTHALMOLOGY, INC.



(Formerly the Philippine Society of Ophthalmology and the Philippine Academy of Ophthalmology and Otolaryngology)

Unit 815, 8th Floor, Medical Plaza Makati Condominium Amorsolo corner dela Rosa Streets, Legaspi Village Makati City Tel (+632) 8813-5324 • (+632) 8813-5318 E-mail: secretariat@pao.org.ph http://www.pao.org.ph

A BRIEF DESCRIPTION OF INTRAOCULAR LENS CATEGORIES FOR PURPOSES OF PHILHEALTH REIMBURSEMENT

Philippine Academy of Ophthalmology Position Paper

Cataract is an opacification of the natural crystalline lens of the eye. When cataract surgery is performed, the opacified natural lens is removed and replaced with a synthetic intraocular lens (IOL) implant. An IOL can potentially restore a patient's vision to their vision prior to the development of a cataract. At the same time, it can also correct the preexisting eye grade before the development of a cataract. In addition to spherical error, certain types of IOL can also correct astigmatism. The implantation of IOLs to correct spherical refractive error and astigmatism offers the opportunity to improve vision and lessen the need for eyeglasses after cataract surgery.

This would in turn improve the patient's functionality in their activities of daily living, such as eating, reading, doing chores, or playing sports, without the additional cost and burden of having to take care of or even replace eyeglasses. They will also be at a lower risk for accidents that may be caused by uncorrected vision.

IOLs can be classified in several ways: according to IOL material, IOL design (IOL structure or features), optics, and other properties. Of these, IOL optics are more commonly used for classification, as it describes how the IOL focuses light and provides vision. The types of IOL according to IOL optics are monofocal, multifocal, extended depth of focus, and enhanced monofocal or monofocal plus IOLs.

Monofocal IOLs focus light from a single distance, usually from far. As improved distance or far vision is the most common target of cataract surgery, monofocal IOLs are then the most frequently implanted. With good far vision, patients will be able to see well when watching TV, driving, and walking around. However, patients would need eyeglasses for intermediate vision tasks such as eating, computer work, and desk work, and near vision tasks such as reading and text messaging. Additional advantages of monofocal IOLs are their relatively inexpensive price point, and excellent quality of vision, even for eyes with conditions aside from cataracts.

Multifocal IOLs focus light from more than one distance. A multifocal IOL may be bifocal or trifocal. A **bifocal multifocal IOL** provides a focal point for far vision, and another focal point for either intermediate or near vision. Currently, the **trifocal multifocal IOLs** offer the widest range of vision, as they provide a focal point for far, intermediate, and near

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vision by splitting incoming light; thus, giving the patient the best chance to see well at all distances and the highest likelihood of being spectacle independent. However, multifocal IOLs are not suitable for all patients. Patients with eye conditions that need more focused light energy (i.e. glaucoma, macular degeneration, diabetic retinopathy, etc), may suffer from decreased image contrast and quality caused by the splitting of light, making trifocal IOLs unsuitable for such patients. In addition, the diffractive rings of multifocal IOLs, which enable patients to see at different distances, also produce side effects of night-time glare and haloes, which may be bothersome to patients who drive at night. In addition, multifocal IOLs are also considerably more expensive than monofocal IOLs, so fewer patients can afford to have multifocal IOLs implanted.

Extended depth of focus (EDOF) IOLs were introduced about 10 years ago. Instead of having separate focal points, EDOF IOLs extend the focused light over a wider range, thus providing good distance and intermediate vision. By design, EDOF IOLs produce minimal glare and haloes at night, especially when compared to traditional multifocals, making them better in this respect. However, the near vision provided by EDOF IOLs is less sharp than that provided by multifocal IOLs. For purposes of Philhealth circular 2025-001, EDOF IOLS are classified as multifocal.

Innovations in IOLs continue. A newer type known as **enhanced monofocal or monofocal plus IOLs** were developed to bridge the gap between monofocal IOLs and EDOF IOLs. Further research is necessary to conclusively define this new category of IOL.

Astigmatism is a distortion in vision caused by an uneven curvature of the cornea and/or an uneven curvature of the lens. Astigmatism may be corrected by eyeglasses. When an eye undergoes cataract surgery, the natural lens is removed, so any astigmatism caused by the lens will be eliminated. However, the corneal astigmatism will be largely unchanged. A toric IOL corrects for astigmatism as well as for spherical error. Toric versions of monofocal and multifocal IOLs can be implanted to address significant corneal astigmatism and reduce the need for glasses after surgery.

It is difficult to neatly classify some existing IOLs conclusively as either "monofocal" or "multifocal," because some classes of IOLs exhibit overlapping functionalities. Moreover, IOLs are manufactured in different countries, which may have varying classification schemes for regulatory purposes.

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The Philippine Academy of Ophthalmology (PAO) has conducted extensive research on the FDA approved IOLs in the Philippines. The attached list (current as of May 19, 2025) provides data on each IOL, including the manufacturer, brand and model, expiry date of the Certificate of Medical Device Registration (CMDR), and a copy of the IOL sticker usually affixed to the operative record post-surgery. Only IOLs with original CMDRs submitted by distributors were considered; draft certificates or certificates in process/for renewal were excluded. This list contains the IOLs submitted by distributors known to PAO and may not include all available FDA approved IOLs in the Philippine market. PAO has no financial interest in any of the IOLs in the list.

Through this list, the PAO seeks to assist PhilHealth by clarifying the technical aspects of each IOL. The PAO will continue to monitor further developments in IOL technology. The current classification of individual IOLs may change as better evidence becomes available. The PAO recommends periodic updates to the list to maintain accuracy.

Sincerely For the Executive Council

MARY ELLEN A. SY, MD

President Philippine Academy of Ophthalmology