

ESCRS new guidelines for cataract surgery

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Background: Cataract is a leading cause of visual impairment, and surgical intervention remains the exclusive effective approach for vision restoration. Currently, there are no non-surgical therapeutic modalities to address this ocular disease. Furthermore, the prevalence of cataracts increases with age, significantly augmenting its impact on global visual health. The patient pathway for cataract management includes diagnostic and therapeutic steps such as screening, patient selection, preoperative diagnostics, treatment strategies, surgery itself and postoperative care.

Objective: To establish evidence-based guidelines by the European Society of Cataract and Refractive Surgeons (ESCRS) to support patients, clinicians and other relevant stakeholders in decisions about cataract management.

Methods: The ESCRS formed a multidisciplinary guideline panel balanced to minimize potential bias from conflicts of interest. The panel prioritized clinical questions and outcomes according to their importance for clinicians and patients. The guideline-development process, using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach, including GRADE Evidence-to-Decision framework, and was supported by a team of methodologists.

Results: The panel agreed on recommendations concerning 31 questions for patient pathway for cataract managements.

Conclusions: Key recommendations of these guidelines include (according to level of evidence):

1. An intracameral injection should be used (e.g. cefuroxime 1 mg in 0.1 ml.) at the end of the cataract surgery to lower the risk for postoperative endophthalmitis. (GRADE +++)
2. Topical anesthesia appears to be the most used anesthesia technique during cataract surgery, if suitable for the patient. (GRADE ++/+++)
3. Toric IOLs should be considered in eyes with a degree of corneal astigmatism of 1.0D or more, with strong evidence for corneal astigmatism above 2.0D, moderate evidence for corneal astigmatism above 1.5D, and may be beneficial above 1.0D. (GRADE ++)
4. The selection of a specific target refraction highly depends on the selected IOL, expectations and preferences of the patient. The patient and ophthalmologist should take the shared decision for IOL target selection. (GRADE ++)
5. The primary treatment options for CME after cataract surgery are topical NSAIDs or steroids. However, there is a lack of sufficient evidence to establish the optimal treatment approach for this condition. (GRADE ++)
6. Both conventional cataract surgery (CCS) and femtosecond laser assisted cataract surgery (FLACS) can be used as they are both safe and effective

procedures. (GRADE +/++). They give comparable visual acuity and refractive outcomes and overall intraoperative and postoperative complication rates. (GRADE +/++)

7. A combination of NSAIDs and corticosteroid eye drops is more effective to use after routine cataract surgery to prevent inflammation and CME compared to monotherapy. (GRADE +/++)
8. In diabetic patients without diabetic retinopathy, it is recommended to use a combination of corticosteroid and non-steroidal anti-inflammatory drug (NSAID) eye drops to prevent cystoid macular edema. (GRADE +/++) In patients with diabetic retinopathy, a supplementary depot of triamcinolone should be considered to reduce this risk. Intraocular pressure must be monitored postoperatively when using a triamcinolone depot. (GRADE +)
9. ISBCS (Immediate Sequential Bilateral Cataract Surgery) is effective and safe, has a high degree of patient satisfaction and can be considered in patients without complication-inducing ocular comorbidities. (GRADE +)
10. EDF IOLs or pseudophakic monovision can be recommended for patients who desire a good intermediate visual acuity, with significantly less dysphotopsia compared to patients who received multifocal IOLs. (GRADE +)
11. In general, posterior segment OCT in cataract surgery should be used when there is a clinical indication, such as age-related macular degeneration, diabetic retinopathy, glaucoma, or when the visual acuity is worse than expected. (GRADE +)
12. Patient selection for pseudophakic presbyopia correcting IOLs should be based on the presence of ocular comorbidities, the desire for spectacle independence, and realistic patient expectations. (GRADE +)
13. In the case of implantation of a toric IOL the preoperative assessment should encompass not only general mandatory evaluations but also corneal topography and/or tomography. (GRADE +) Methods which include measurements of factors such as the additional posterior corneal astigmatism and effective lens position are preferred for toric IOL calculation. (GRADE +)
14. Specific IOL formulae are recommended for eyes with certain conditions to ensure accurate outcomes. In extreme long and short eyes new-generation formulae are recommended. (GRADE +)
15. Postoperative remote care after cataract surgery might replace short-term clinical examination to better allocate hospital resources and increase time and cost efficiency. Accuracy and validity of remote care and telemonitoring are still to be evaluated. (GRADE +)

Keywords: Cataract, ophthalmology, practice guidelines, GRADE