Supplemental Table S1. IOL decentration and tilt

	Decentration (mm)	Direction of decentration (°)	Tilt (°)	Direction of tilt (°)
Ciliary sulcus fixation cases（n=61）	0.430±0.168	200±117	6.26±3.14	229±98
Right eyes （n=33）	0.457±0.146	242±93. 8	6.03±3.37	223±72.3
Left eyes （n=28）	0.398±0.187	149±121	6.53±2.82	236±121
Standard cataract surgery(n=54)	0.279±0.189	131±102	4.77±2.01	222.9±97.8
P value between Ciliary sulcus fixation cases and Standard cataract surgery	p<0.001	p=0.006	p=0.002	p=0.97
P value between right eyes and left eyes of Ciliary sulcus fixation cases	p=0.21	p=0.004	p=0.28	p=0.98

Data are mean ± standard deviation; IOL＝intraocular lens

Mann Whitney U test was used to compare Decentration and Tilt, and Welch's t test was used in those directions.

Supplemental Table S2. Comparison of transsclerally sutured reports with a postoperative observation period of 10 years or more

Authors	Vote et al	Bading et al	McAllister and Hirst	Sugiura et al
Reference No.	17	18	19	This report
Journal / Year	Am J Ophthalmol ／2006	Am J Ophthalmol ／2007	J Cataract Refract Surg /2011	2022
Observation period	12mos～127mos	12mos～132mos	6.7mos～166.5mos	12mos～174mos
Mean observation period	67.0 mos.	43.0 mos.	83.3 mos.	56.0 mos.
Number of cases	61eyes of 48patients	63eyes of 63patients	82eyes of 72 patients	146 eyes of 142 patients
Surgeon	Several surgeons	More than 2 surgeons	1 surgeon	1 surgeon
Technique	Pars plana vitrectomy + ciliary sulcus suture fixation. The suture needle was inserted into the 1.5 mm sclera from limbus. The suture thread is buried in a triangular flap.	Pars plana vitrectomy ＋ transsclerally suture fixation. The suture needle wad inserted into the 2 mm from the limbus.	Anterior vitrectomy + ciliary sulcus suture fixation. The suture thread is ligated into a 1 mm deep scleral half-layer straight incision.	Ciliary sulcus suture fixation with the Ciliary Sulcus Pad Injector. Suture thread was confirmed to be correctly inserted into the ciliary sulcus by Endoscope.
Major Preoperative ocular pathologies: ratio	Marfan:40%, Trauma:33%, Genetic disease: 8%	Trauma:40％, Complicated cataract surgery:25％, Pseudoexfoliation:14％	Complicated cataract surgery:26％, IOL disloacion:21％, Lens dislocaiton:24％, Trauma:19.5％	IOL dislocation:38.4％, Complicated cataract surgery:27.4％, Aphakia due to ECCE or ICCE:11％, Trauma:7.5％
Preoperative CDVA / Postoperative final CDVA	LogMAR 0.5 → 0.5	LogMAR 1.025 → 0.766	Snellen 6/18 → 6/12	LogMAR 0.30 → 0.15
Major postoperative complications: ratio	Suture thread breakage: 28％, Retinal detachment: 8％, Elevated IOP: 22%, Glaucoma requiring surgery: 5％, Choroidal hemorrhage: 3％	Elevated IOP: 30%, Retinal detachment: 9.5%, Iris capture: 8%, Choroidal bleeding requiring surgery: 6%, Vitreous hemorrhage requiring surgery: 5%, Wound suture failure: 6％, Suture thread breakage: 3.2％, Complications that affect vision: 19％	Elevated IOP: 30.5%, Exposed suture thread: 11％, Hysema:9.8％, CME: 7.3％, Suture thread breakage: 6.1％, Retinal detachment: 4.9％, Glaucoma requiring surgery:3.7%, Endophthalmitis:1.2％	Vitreous hemorrhage:24%, Exposed suture thread: 19.2％, Corectopia:18.5％, Glaucoma:11％, Iris capture:6.2%, Retinal detachmen:4.1%, Bullous keratitis:2.1%, Suture thread breakage and IOL dislocation:0%
Postoperative reoperation ratio	49.2%	40.0%	15.8%	5.5%

Summary of conclusions	When observed in the long term after surgery, the incidence of complications is high and reoperation is necessary, so preoperative informed consent is important. ACIOL could be an alternative.	20% have serious complications that require surgery, which depend on the preoperative pathological condition. Postoperative results are good, safer than ACIOL and recommended for younger patients.	Visual acuity results are good and complications are common. Rupture of the suture thread is a problem in young cases, and it is important to discuss it well in the informed consent when selecting an IOL (ACIOL or PCIOL).	Visual acuity results are very good for a long period of time, and there is no IOL dislocation due to suture thread breakage and endophthalmitis. It is a safe procedure recommended for young patients.

mos., months; IOL, intraocular lens; IOL, intraocular lens; CME, cystoid macula edema; ACIOL, anterior chamber IOL; PCIOL, posterior chamber IOL;