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ORIGINAL RESEARCH

Academy IRIS® Registry Analysis of Incidence of Laser Capsulotomy Due to Posterior Capsule Opacification After Intraocular Lens Implantation

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Purpose: Academy IRIS® (Intelligent Research in Sight) Registry was used to determine the incidence of postoperative neodymium-doped yttrium aluminum garnet laser capsulotomy (Nd:YAG) and time to posterior capsular opacification (PCO) diagnosis based on intraocular lens (IOL) type and brand.

Methods: This retrospective analysis included eyes implanted with 1 of 2 IOL brands, with ≥365 days of follow-up available in the IRIS Registry, and ≥2 visits within 180 days of surgery. Analyses included Nd:YAG incidence due to PCO within 1 year after surgery by IOL type and brand, mean time to PCO diagnosis, and mean time to Nd:YAG.

Results: Of 89,947 eyes after cataract surgery, 24,834 (28%) had PCO diagnosis within 365 days, and 9262 (10%) underwent Nd:YAG; 4.1% of 57,523 eyes with monofocal and 21.2% of 32,424 eyes with diffractive multifocal (MF) or diffractive extended depth of focus (EDOF) IOLs had Nd:YAG. Nd:YAG was 3.2 times more likely in eyes with diffractive MF or diffractive EDOF IOLs versus monofocal. For monofocal IOLs, 3.2% of eyes with AcrySof® and 8.1% of eyes with Tecnis® had Nd:YAG ($P<0.0001$). For diffractive MF or diffractive EDOF IOLs, 13.0% of eyes with AcrySof and 21.7% of eyes with Tecnis had Nd:YAG ($P<0.0001$). Nd:YAG risk was 2.4 times higher in eyes with Tecnis versus AcrySof IOLs. Overall, mean time to PCO diagnosis and Nd:YAG was 150.7 and 180.7 days. Mean time to PCO for monofocal versus diffractive MF or diffractive EDOF IOLs was 165.3 versus 139.7 days ($P<0.0001$). Mean time to Nd:YAG for monofocal versus diffractive MF or diffractive EDOF IOLs was 196.4 versus 175.3 days ($P<0.05$).

Conclusion: Real-world data for AcrySof and Tecnis IOLs revealed lower Nd:YAG rates and longer time to PCO diagnosis and Nd:YAG after monofocal versus diffractive multifocal or diffractive EDOF implantation. Nd:YAG rates were significantly lower with AcrySof versus Tecnis IOLs.

Keywords: monofocal intraocular lenses, diffractive multifocal intraocular lenses, diffractive extended depth of focus intraocular lenses

Introduction

Posterior capsular opacification (PCO) is a common complication of cataract surgery and typically develops 1 to 3 years after surgery.[1,2] PCO is caused by the migration of postoperative residual lens epithelial cells to the posterior capsule.[2] The increased opacity impairs vision, with a reduction in visual acuity and contrast sensitivity, as well as glare disability.[2,3]

Clinically significant visual impairment induced by PCO such as a decrease in best corrected distance visual acuity, increased glare, or decreased contrast sensitivity, can be readily and effectively treated with neodymium-doped yttrium aluminum garnet laser capsulotomy (Nd:YAG).[2,3] Nd:YAG capsulotomy is a simple and generally safe procedure that results in the immediate improvement of the subject's vision.[2,4] However, potential complications include damage to the optic portion of the intraocular lens (IOL), retinal detachment (eg, high myopes), cystoid macular edema, and a transient elevation in intraocular pressure.[5,6] Moreover, surgical complications such as vitreous loss during lens exchange have been associated with prior Nd:YAG capsulotomy.[7] A number of risk factors have been associated with PCO development, including younger age, dry eye disease, glaucoma, uveitis, age-related macular degenerations, surgery type, and

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experience of the surgeon.[8–10] Several studies have shown that the rates of PCO and Nd:YAG as well as the time to Nd:YAG after cataract surgery are influenced by the IOL biomaterial and its optic edge design.[3,4,11–14] A systemic review of the literature reported the incidence of PCO was from 5% to 32% for hydrophobic IOLs and from 18% to 65% for hydrophilic IOLs within 3 years of cataract surgery.[14] During the same time period, Nd:YAG rates were 0% to 25% for hydrophobic IOLs and 3% to 51% for hydrophilic IOLs.[14]

The American Academy of Ophthalmology IRIS® (Intelligent Research in Sight) Registry was developed as a centralized data repository and reporting tool for patient data collected from physicians' electronic health records (EHRs).[15,16] It is the largest EHR-based comprehensive eye disease and condition registry in the world, with over 60 million unique patients and 349 million encounters.[15] The IRIS Registry includes patient demographics, diagnosis codes, and visit rates that can be used to generate real-world clinical evidence and address clinical questions.[15,16]

In this report, we describe a real-world study using IRIS Registry data to compare the incidence of Nd:YAG due to PCO by optical design type (monofocal or multifocal) and brand type (AcrySof®, Alcon Research LLC, Fort Worth, TX, USA; or Tecnis®, Johnson & Johnson Surgical Vision, Santa Ana, CA, USA) of implanted hydrophobic acrylic IOLs. Additional analyses included the mean time to PCO diagnosis and Nd:YAG treatment within 365 days after IOL implantation.

Methods

Study Design and Study Population

This was a retrospective database analysis using data from the IRIS Registry. The analysis included the medical records from eyes implanted with IOLs from January 1, 2016, to March 31, 2018, and required the respective practices to have ≥365 days of follow-up available in the registry. Data extraction and analysis were independently performed by Verana Health (San Francisco, CA).

Patient records were eligible for inclusion if they were aged ≥45 years at the time of cataract surgery; had a Current Procedural Terminology (CPT) code of 66984 (extracapsular cataract removal with insertion of IOL prosthesis [1 stage procedure], manual or mechanical technique [eg, irrigation and aspiration or phacoemulsification]); had a diagnosis of age-related cataract as shown by an International Classification of Disease (ICD)-10 diagnosis code (Supplementary Table 1) 30 days before and including the day of the surgery and with ≥2 visits included in the IRIS Registry within 180 days of cataract procedure; had surgery at a practice that contributed data to the IRIS Registry for ≥365 days following the date of the procedure; and both the brand (AcrySof, Alcon Vision LLC, Fort Worth, TX; Tecnis, Johnson & Johnson, New Brunswick, NJ) and optical design type (toric/non-toric monofocal, diffractive multifocal, or diffractive extended depth of focus [EDOF]) of the implanted IOL could be identified (Supplementary Table 2).

Patient records were excluded if they showed an ICD-10 code indicating specific exclusion conditions indicative of pre-existing conditions that could potentially confound the outcomes (Supplementary Table 1); had unspecified laterality of the diagnosis code for mature cataract or the procedure code for cataract removal; or their records showed a CPT code for specific procedures indicative of surgical complications (Supplementary Table 2). Patient attrition is summarized in Supplementary Figure 1.

Outcomes

The primary analyses compared the incidence of Nd:YAG due to PCO, the mean time to first diagnosis of PCO, and mean time to Nd:YAG procedure after IOL implantation by brand and type of IOL within 365 days after implantation. Nd:YAG due to PCO was defined as the presence of a Nd:YAG procedure code (CPT 66821) with an accompanying PCO diagnosis code (ICD-10 code H26.491, H26.492, H26.493, or H26.499) for the same eye on the date of the Nd:YAG procedure or between the Nd:YAG procedure and the cataract procedure.

Statement of Ethics

Data were extracted automatically from the practice's EHR system and placed in a clinical data repository, while maintaining compliance with the Health Insurance Portability and Accountability Act data protection, security, quality, and audits. This analysis of de-identified data did not qualify as human subjects research, and no ethics committee review

or approval was required or undertaken. An Institutional Review Board waiver was not applicable to the Submission because (i) the research and analysis were conducted on anonymized data in accordance with de-identification standard promulgated under 45 CFR § 164.514 and (ii) no research was conducted on human subjects. To ensure consistent results during the data analysis, the incidence of Nd:YAG post-implantation was calculated for model type, brand, and both model type and brand.

Statistical Analysis

All statistical analyses were performed by Verana Health (San Francisco, CA), the vendor retained by the American Academy of Ophthalmology for the curation and analysis of the IRIS Registry data. Verana Health applied a set of policies and procedures to ensure data equality, integrity, security, and traceability. Data quality at Verana Health was assessed based on a matrix of 6 data quality dimensions (completeness, accuracy, traceability, consistency, generalizability, timeliness) across 3 data quality classifications (technical, clinical, scientific). Categorical and continuous variables were summarized using chi-square and analysis of variance, respectively. Odds ratios were calculated using logistic regression to determine the risk of Nd:YAG due to PCO. Descriptive analysis included mean ± SD.

Results

Study Population

A total of 89,947 eyes were identified from the IRIS Registry as meeting all the inclusion and exclusion criteria and comprised the master cohort (Table 1). In the master cohort, the most frequently implanted IOL types were monofocal (55%) and diffractive EDOF (44%). Demographics and baseline characteristics were generally balanced between patients receiving AcrySof or Tecnis IOLs. Of the 89,947 eyes in the master cohort, 24,834 eyes (28%) received a diagnosis of PCO within 365 days of cataract surgery (Table 2). Most patients were female (64%) and white (85%). Overall, 71% of surgeries were conducted in the South and Midwest regions of the United States.

Table 1 Demographics and Baseline Characteristics of Master Cohort

Characteristic	AcrySof (n=47,930)	Tecnis (n=42,017)	Total (N=89,947)
Age, mean (SD), y	71.3 (8.1)	68.6 (7.7)[a]	70.0 (8.0)
Sex, n (%)			
Female	29,400 (61.3)	25,275 (60.2)[a]	54,675 (60.8)
Male	18,530 (38.7)	16,742 (39.8)	35,272 (39.2)
Race, n (%)			
White	39,004 (81.4)	34,899 (83.1)[a]	73,903 (82.2)
Black	3364 (7.0)	1292 (3.1)	4656 (5.2)
Other or not reported	5562 (11.6)	5826 (13.9)	11,388 (12.7)
Region, n (%)			
Midwest	13,697 (28.6)	8568 (20.4)[a]	22,265 (24.8)
North	5769 (12.0)	3955 (9.4)	9724 (10.8)
South	22,792 (47.6)	22,616 (53.8)	45,408 (50.5)
West	5672 (11.8)	6878 (16.4)	12,550 (14.0)
IOL type, n (%)			
Monofocal	40,611 (84.7)	8447 (20.1)[a]	49,058 (54.5)
Monofocal toric	5515 (11.5)	2950 (7.0)	8465 (9.4)
Diffractive multifocal	1675 (3.5)	5105 (12.1)	6780 (7.5)
Diffractive multifocal toric	129 (0.3)	–	129 (0.3)
Diffractive EDOF	–	18,521 (44.1)	18,521 (44.1)
Diffractive EDOF toric	–	6994 (16.6)	6994 (16.6)

Note: [a]$P<0.001$.
Abbreviations: EDOF, extended depth of focus; IOL, intraocular lens.

Table 2 Demographics and Baseline Characteristics of Patients with a Diagnosis of PCO[a] After Cataract Surgery

Characteristic	1-Year Follow-Up (N=24,834)
Age, mean (SD), y	68.9 (7.7)
Sex, n (%)	
Female	15,815 (63.7)
Male	9019 (36.3)
Race, n (%)	
White	21,044 (84.7)
Black	775 (3.1)
Other or not reported	3015 (12.1)
Region, n (%)	
Midwest	5233 (21)
North	2452 (10)
South	12,420 (50)
West	4729 (19)

Note: [a]PCO was defined as the presence of a PCO diagnosis code (ICD-10 code H26.491 or H26.492 or H26.493 or H26.499) within 365 days of the cataract procedure.
Abbreviations: ICD-10, International Classification of Diseases, 10th revision; PCO, posterior capsular opacification.

Outcomes

Overall, 9262 of 89,947 enrolled eyes (10.3%) had a Nd:YAG procedure. Across all eyes, the rates of Nd:YAG were significantly lower in eyes with monofocal IOLs versus those with diffractive multifocal or diffractive EDOF IOLs ($P<0.0001$, Figure 1A). Across brands, the rates of Nd:YAG were significantly lower in eyes implanted with AcrySof monofocal versus Tecnis monofocal ($P<0.0001$) or AcrySof multifocal versus Tecnis multifocal or diffractive EDOF IOLs ($P<0.0001$, Figure 1B). The risk of Nd:YAG treatment was 3 times higher in eyes with diffractive multifocal or

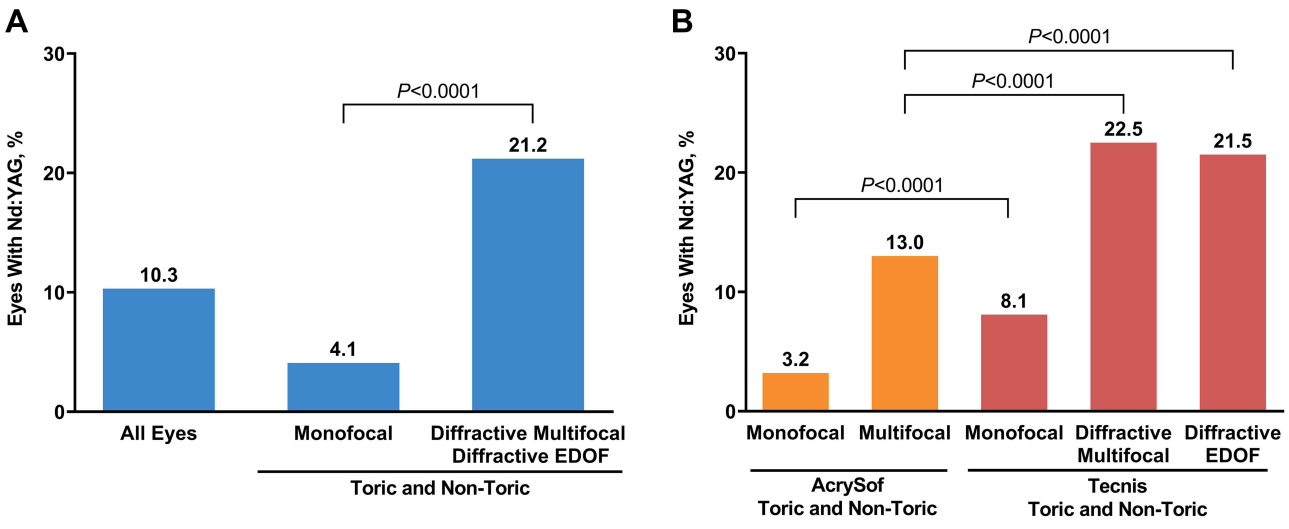

Figure 1 Incidence of Nd:YAG due to PCO (**A**) by type and (**B**) by brand of IOL. Nd:YAG laser capsulotomy due to PCO was defined as the presence of an Nd:YAG procedure code (CPT 66821) with an accompanying PCO diagnosis code (ICD-10 code H26.491 or H26.492 or H26.493 or H26.499) for the same eye on the date of the Nd:YAG procedure or between the Nd:YAG procedure and the cataract procedure.
Abbreviations: CPT, current procedural terminology; EDOF, extended depth of focus; ICD-10, International Classification of Diseases, 10th revision; IOL, intraocular lens; PCO, posterior capsular opacification; Nd:YAG, neodymium-doped yttrium aluminum garnet.

diffractive EDOF lenses compared with monofocal lenses, and 2 times higher in eyes with Tecnis compared with AcrySof lenses (Figure 2).

Among all eyes diagnosed with PCO that completed at least 1-year follow-up (n=24,834), the mean time ± SD to PCO was 150.7±96.0 days. The time to PCO was significantly greater for eyes implanted with monofocal IOLs compared with diffractive multifocal and diffractive EDOF IOLs (P<0.0001; Figure 3A). Similarly, the time to PCO was greater for AcrySof monofocal IOLs compared with Tecnis monofocal IOLs (P<0.0001; Figure 3B). Mean ± SD time to Nd:YAG (defined as the presence of Nd:YAG procedure code within 1 year of the cataract surgery) for all eyes was 180.7±86.8

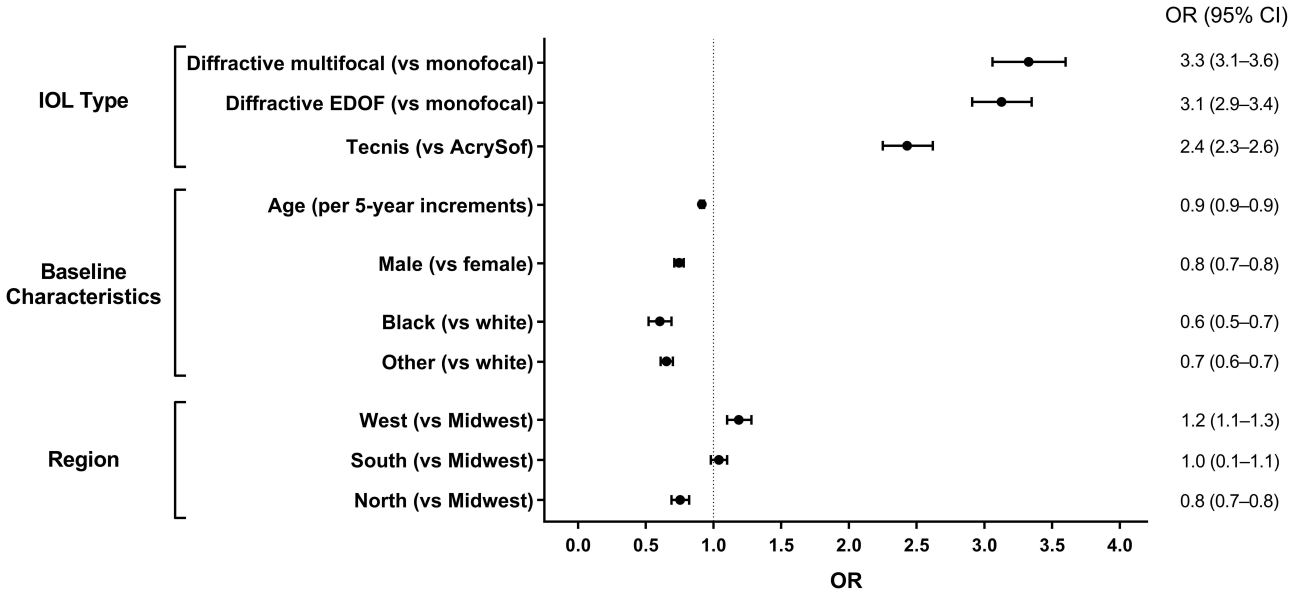

Figure 2 Risk of Nd:YAG due to PCO by IOL type or brand, baseline characteristics, and region. Nd:YAG laser capsulotomy due to PCO was defined as the presence of an Nd:YAG procedure code (CPT 66821) with an accompanying PCO diagnosis code (ICD-10 code H26.491 or H26.492 or H26.493 or H26.499) for the same eye on the date of the Nd:YAG procedure or between the Nd:YAG procedure and the cataract procedure.
Abbreviations: CPT, current procedural terminology; EDOF, extended depth of focus; ICD-10, International Classification of Diseases, 10th revision; IOL, intraocular lens; OR, odds ratio; PCO, posterior capsular opacification; Nd:YAG, neodymium-doped yttrium aluminum garnet.

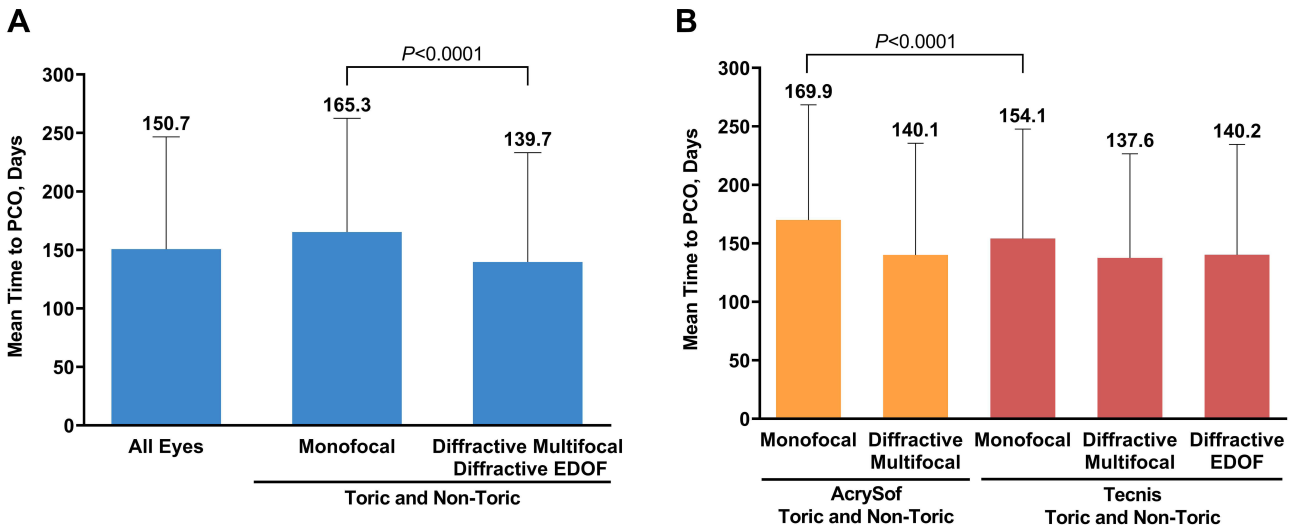

Figure 3 Time to PCO diagnosis (**A**) by type and (**B**) by brand. PCO was defined as the presence of a PCO diagnosis code (ICD-10 code H26.491 or H26.492 or H26.493 or H26.499) within 365 days of the cataract procedure.
Abbreviations: ICD-10, International Classification of Diseases, 10th revision; PCO, posterior capsular opacification.

days. The time to Nd:YAG was significantly greater for eyes implanted with monofocal compared with diffractive multifocal or diffractive EDOF IOLs ($P<0.05$; Figure 4A). The time to Nd:YAG was significantly greater for AcrySof diffractive multifocal IOLs compared with Tecnis diffractive multifocal and diffractive EDOF IOLs ($P<0.05$ for both; Figure 4B).

Discussion

This real-world study analyzed data from 89,947 eyes in the IRIS Registry that underwent cataract surgery and found the overall rate of Nd:YAG was 10.3% at 1 year after surgery. Significantly lower rates of Nd:YAG were reported for patients implanted with monofocal (4.1%) versus those implanted with diffractive multifocal or diffractive EDOF IOLs (21.2%). This difference held whether comparing AcrySof monofocal lenses (3.2%) to AcrySof multifocal (ReSTOR®) lenses (13.0%) or Tecnis monofocal lenses (8.1%) to Tecnis multifocal (22.5%) or Tecnis EDOF (21.5%) lenses. The rates of Nd:YAG in patients receiving AcrySof IOLs were significantly lower compared with those receiving Tecnis IOLs. A greater risk of Nd:YAG treatment was associated with implanting diffractive multifocal or diffractive EDOF lenses as well as Tecnis lenses.

The mean time to PCO diagnosis was significantly greater for patients implanted with monofocal IOLs (toric and non-toric) versus patients implanted with diffractive multifocal or diffractive EDOF IOLs. Time to PCO diagnosis was also longer in patients implanted with monofocal AcrySof compared with those implanted with monofocal Tecnis IOLs. Mean time to PCO diagnosis data were consistent with mean time to Nd:YAG procedure. There was a significantly longer time to Nd:YAG procedure for patients with AcrySof multifocal IOLs compared with Tecnis multifocal or Tecnis EDOF IOLs.

Differences in PCO development and Nd:YAG rates have been attributed to the biocompatibility of the lens material and its design (eg, optic edge).[1,9,12,17] Several studies indicate that hydrophobic lenses,[11,17,18] especially lenses made of acrylic material,[12] are more effective in preventing PCO and lowering Nd:YAG rates. A meta-analysis showed that hydrophobic lenses generally result in lower subjective and estimated PCO scores, as well as Nd:YAG rates, compared with hydrophilic lenses.[18] A review of EHRs from ophthalmology clinics in the United Kingdom found that 2 hydrophobic acrylic IOLs (AcrySof, Tecnis) had the lowest 3- and 5-year incidence of Nd:YAG compared with their hydrophilic counterparts.[4] Patients with hydrophilic lenses showed a significantly greater severity and area of PCO ($P<0.001$) 1 year after cataract surgery than patients with hydrophobic lenses.[17] Systematic reviews have shown that in addition to lens material, sharp-edged IOLs have a mitigating effect on PCO development.[3,12]

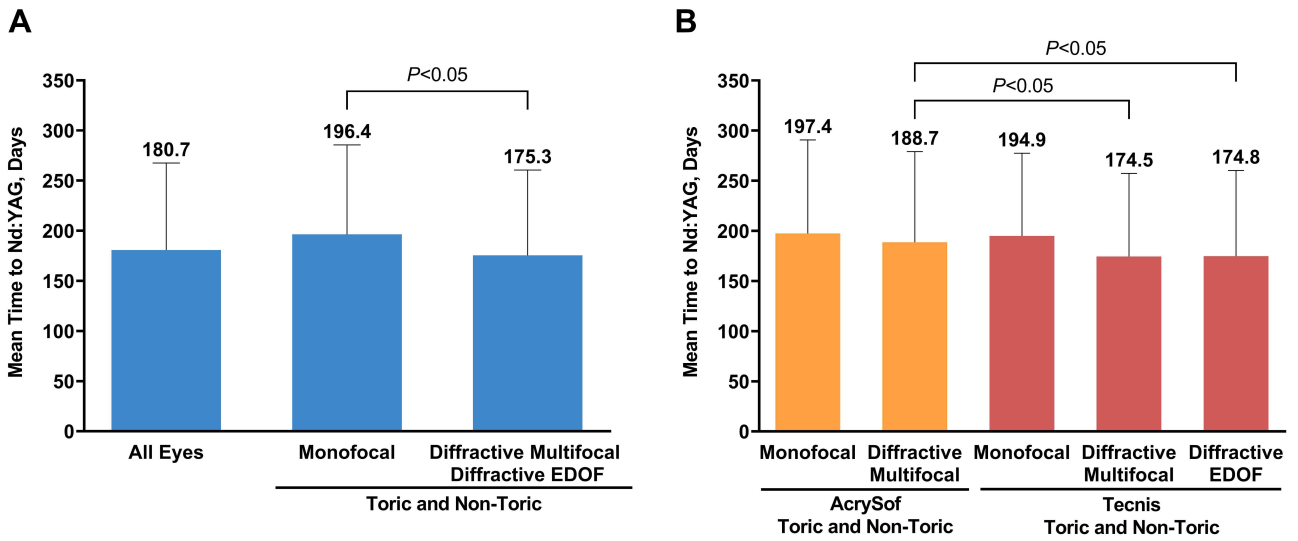

Figure 4 Time to Nd:YAG diagnosis (**A**) by type and (**B**) by brand. Nd:YAG was defined as the presence of an Nd:YAG procedure code (CPT code 66821) within 365 days of the cataract procedure.

Abbreviations: CPT, current procedural terminology; Nd:YAG, neodymium-doped yttrium aluminum garnet.

Both the longer time to PCO diagnosis and the lower Nd:YAG rate and risk of Nd:YAG treatment observed with monofocal IOLs compared with diffractive multifocal and diffractive EDOF IOLs were consistent with the findings of several studies.[19–22] In a retrospective chart review, the Nd:YAG rates for 2 monofocal groups were 17% and 4% versus 25% for a multifocal group.[19] In a case-controlled study, patients with multifocal IOLs needed to undergo treatment with Nd:YAG earlier compared with patients implanted with a monofocal IOL (8.8 vs 10.4 months, respectively).[20]

The AcrySof and Tecnis diffractive multifocal and diffractive EDOF IOLs were based on the AcrySof and Tecnis platforms, respectively, sharing the edge and haptic designs and using the same biomaterials as their monofocal counterparts, but with the addition of diffractive optics.[23–28] The observed differences in PCO and Nd:YAG rates between monofocal and diffractive multifocal/EDOF IOLs were consistent regardless of the brand of the lens, suggesting that the diffractive multifocal and diffractive EDOF IOL optical design and the related visual outcomes play an important role in post-surgical complications.

Reduced contrast sensitivity and photic phenomena are typically experienced more often by patients receiving diffractive multifocal and diffractive EDOF IOLs because light is distributed among multiple focal points to provide an extended range of vision.[20,29–32] Mild PCO in such patients may lead to greater intolerance or greater sensitivity to early functional vision loss and worse quality of vision than in patients implanted with monofocal IOLs with the same level of PCO, consequently decreasing the time to Nd:YAG treatment.[20,21,33] Moreover, the higher expectations of patients receiving diffractive multifocal/EDOF IOLs may be associated with the higher out-of-pocket costs related to multifocal/EDOF IOLs.[34,35]

Photic phenomena, such as glare and halos, occurring after implantation with a multifocal IOL may not be caused by PCO, but rather by the properties inherent to the optic design. An Nd:YAG procedure will not resolve photic phenomena caused by optic design and could lead to complications if a subsequent IOL exchange is needed.[36] Therefore, it is important to differentiate the cause of glare and halos before Nd:YAG treatment.

The AcrySof and Tecnis IOLs, regardless of type (ie, monofocal vs diffractive multifocal/EDOF), have similar characteristics that include hydrophobic acrylic material and a posterior square-edged design.[25,26,28] However, there were significantly lower rates of Nd:YAG and risk of Nd:YAG treatment in eyes implanted with the AcrySof lens compared with the Tecnis lens. The mean time to PCO diagnosis was longer in patients implanted with either brand of monofocal IOL, but there was also a significantly longer time to PCO for patients receiving monofocal AcrySof compared with those receiving monofocal Tecnis. The resulting differences may be attributed to slight distinctions between the lenses. AcrySof is composed of an acrylate and methacrylate copolymer, and its posterior square edge is interrupted at the haptic-optic junction.[23,24,28] Tecnis is composed of an acrylic material and has a continuous 360° edge.[25,26] Previous studies have indicated that the material of a lens and its surface properties contribute to PCO formation. In a comparison of monofocal hydrophobic and hydrophilic acrylic IOLs, including the hydrophobic AcrySof lens, the incidence of Nd:YAG for eyes implanted with AcrySof was 2–4 times lower than the non-AcrySof hydrophobic and hydrophilic IOLs, respectively, 3 years after cataract surgery.[37] A retrospective study comparing 3 hydrophobic IOLs (Hoya FY60AD, Hoya PY60AD, AcrySof SN60WF), reported that the sharper-edged Hoya PY60AD had a significantly lower Nd:YAG rate than its predecessor (4.3% vs 8.9%).[28] The AcrySof lens had a still lower Nd:YAG rate (1.4%) than either Hoya IOL, although it had a slightly rounder edge than the Hoya PY60AD.[28] Similarly, a prospective randomized contralateral eye study comparing 2 single-piece, sharp-edged hydrophobic acrylic IOLs (iMiCs NY-60, AcrySof SN60WF) 3 years after cataract surgery, reported a significantly lower PCO score and Nd:YAG rate in eyes implanted with AcrySof (36% vs 14%).[38] These data suggest that modern IOL materials and edge design may each play a role in the incidence of PCO and Nd:YAG after cataract surgery.[17,28,37]

The low PCO incidence observed with AcrySof lenses may result from its posterior edge design.[39] However, comparisons against sharper-edged IOLs suggest that the biocompatibility of its acrylic polymer strengthens its binding to the capsule and minimizes PCO formation.[14,28,38] Successful mitigation of PCO development has been attributed to the formation of a physical barrier caused by the IOL adhering tightly to the capsular bag, which deters the migration of residual lens epithelial cells.[2,14] This resulting barrier may be formed by either the edge of the IOL causing the capsule to bend and wrap more tightly around the IOL,[40,41] or by the binding of a sandwich-like structure (fibronectin-lens, epithelial cell, monolayer-fibronectin) to the bioactive material of the IOL and to the posterior capsule, thus creating

a blockade to migrating cells.[42] Results from assays testing the bioadhesive properties of different IOLs have demonstrated that the AcrySof IOL's material adhered strongly to collagen film,[43] and when compared with Tecnis, fibronectin bonded better to the AcrySof lens.[44] Consequently, the AcrySof biomaterial attaches to the capsule through fibronectin, creating an effective barrier to migrating cells and minimizing PCO formation.[14,44]

Limitations of these analyses included reliance on EHR and physician's documentation in the EHR. There could be potential errors in documentation or variations among the EHR systems. The pre-collected data in the EHR were fixed and were not collected by the investigators; therefore, not all relevant information was available or provided at the level of detail comparable to clinical studies.[45] For example, Nd:YAG due to PCO may not be captured in patients who changed their physician to one not participating in the IRIS Registry. Moreover, other factors that could contribute to the observed differences in the Nd:YAG rates or the elapsed time to PCO or Nd:YAG, such as the differences in surgical technique, criteria used for PCO diagnosis and Nd:YAG, or patient history (eg, uveitis, glaucoma, or diabetes), may not have been captured in the EHR.[9,13,46] The follow-up period of 365 days may have been insufficient to capture PCO development. Future analyses should consider extending to 2, 5, or 10 years as PCO development has been observed up to 10 years after cataract surgery,[14] and the risk of PCO development that requires treatment with Nd:YAG is associated with follow-up time.[47]

Outcomes of this analysis suggest that retrospective studies using comprehensive clinical databases, such as the IRIS Registry, can generate real-world evidence to answer clinically important questions. Additional analytic applications and user interfaces can be designed to further enhance the value of the IRIS Registry. The IRIS Registry data revealed that overall Nd:YAG rates were lower, and the time to PCO diagnosis and Nd:YAG was longer after monofocal implantation than diffractive multifocal or diffractive EDOF implantation when using AcrySof and Tecnis IOLs. AcrySof Nd:YAG rates were significantly lower than Tecnis Nd:YAG rates.

Data Sharing Statement

Study level data for this study can be provided by Dr. Xiaolin Gu (xiaolin.gu@Alcon.com) upon reasonable request.

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- Horn J, Relucio A, Gu X. Incidence of YAG due to PCO following intraocular lens implantation: an analysis of Academy IRIS Registry.
- Terveen D, Relucio A, Gu X. Description of a retrospective study using EHR-based registry to correlate IOL biocompatibility with YAG.

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Disclosure

JDH is a consultant and clinical investigator for Alcon Vision LLC, has received speaker fees from Alcon, and is a clinical investigator for Bausch & Lomb. BLF is a consultant for Alcon, AcuFocus, CorneaGen, and Imprimis Pharmaceuticals and a Medical Monitor for Ziemer NA. DT reports personal fees for medical monitor from Rayner; grants from Glaukos, Sight Sciences, and Alcon, outside the submitted work. HF is an employee of Verana Health, which was contracted by Alcon Vision LLC to conduct this study. MM and XG are employees of Alcon Vision LLC. The authors report no other conflicts of interest in this work.

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