

**1 APPENDIX**

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3 Appendix 1. Search strategy for MEDLINE

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5 Database: Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid  
6 MEDLINE(R) <1946 to Present>

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8 Search Strategy:

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- 10 1 Glaucoma, Open-Angle/ (11185)
- 11 2 Hydrophthalmos/ (541)
- 12 3 open angle glaucoma\$.ti,ab. (9118)
- 13 4 compensat\$ glaucoma\$.ti,ab. (6)
- 14 5 (simpl\$ adj1 glaucoma\$).ti,ab. (620)
- 15 6 wide angle glaucoma\$.ti,ab. (24)
- 16 7 hydrophthalm\$.ti,ab. (83)
- 17 8 buphthalm\$.ti,ab. (344)
- 18 9 megophthalm\$.ti,ab. (8)
- 19 10 Ocular Hypertension/ (5556)
- 20 11 ocular hypertensions. Ti,ab. (4058)
- 21 12 intraocular pressure/ (31463)
- 22 13 intraocular pressure. Ti,ab. (25366)
- 23 14 intraocular hypertensions. Ti,ab. (199)
- 24 15 intra ocular hypertension. Ti,ab. (10)
- 25 16 ocular pressure. Ti,ab. (1109)
- 26 17 ocular tension. Ti,ab. (257)
- 27 18 intraocular tension.ti,ab. (182)
- 28 19 (eye\$ adj3 hypertension\$).ti,ab. (349)
- 29 20 (eye\$ adj3 pressure).ti,ab. (1663)
- 30 21 (eye\$ adj3 tension).ti,ab. (249)
- 31 22 or/1-21 (48485)
- 32 23 exp Prostaglandins, Synthetic/ (14043)
- 33 24 (prostaglandin\$ adj3 analog\$).ti,ab. (3103)
- 34 25 pg analog\$.ti,ab. (166)
- 35 26 synthetic prostaglandin\$.ti,ab. (412)
- 36 27 latanoprost.mp. (1665)
- 37 28 bimatoprost.mp. (618)
- 38 29 travoprost.mp. (580)
- 39 30 tafluprost.mp. (142)
- 40 31 latisse.mp. (10)
- 41 32 lumigan.mp. (51)
- 42 33 travatan.mp. (63)
- 43 34 xalatan.mp. (137)
- 44 35 izba.mp. (7)
- 45 36 taflotan.mp. (5)
- 46 37 zioptan.mp. (1)

- 47 38 or/23-37 (15962)  
 48 39 22 and 38 (1967)  
 49 40 animals/ (5802956)  
 50 41 humans/ (15763478)  
 51 42 40 not 41 (4175932)  
 52 43 39 not 42 (1791)  
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 54 Appendix 2. Data extraction form  
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Data Extraction
<b>Basic Information</b>
Ref ID
First Author (Last Name)
Year
Country
Study Design
1=case study
2=observational study
3=randomized trial
Funding Source
0=none
1=industry
2=not-for-profit
3=n/a
<b>Key Information</b>
<b>Group 1</b>
n at baseline
Mean Age
Median Age
Age range
SD of age
Disease studied
n of patient with previous sx
PGA agent
n of uveitis
n of non-op CME
n of post-op CME
Other
<b>Group 2</b>

n at baseline
Mean Age
Median Age
Age range
SD of age
Disease studied
n of patient with previous sx
PGA agent
n of uveitis
n of non-op CME
n of post-op CME
Other
<b>Group 3</b>
n at baseline
Mean Age
Median Age
Age range
SD of age
Disease studied
n of patient with previous sx
PGA agent
n of uveitis
n of non-op CME
n of post-op CME
Other
<b>Group 4</b>
n at baseline
Mean Age
Median Age
Age range
SD of age
Disease studied
n of patient with previous sx
PGA agent
n of uveitis
n of non-op CME

n of post-op CME
Other

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## Appendix 3. Case study data extraction form

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Authors	Eyes/patients	History	Time to Uveitis/Postoperatively	Rechallenged/Recurred	Outcome
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## Appendix 4. Fisher Exact Test Calculated using Social Science Statistics Website comparing the proportion of uveitis among latanoprost and bimatoprost users

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Results			
	Develop uveitis	Do not develop uveitis	Marginal Row Totals
Latanoprost	59	12651	12710
Bimatoprost	1	6745	6746
<b>Marginal Column Totals</b>	60	19396	19456 (Grand Total)

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The Fisher exact test statistic value is  $< 0.00001$ . The result is significant at  $p < .05$ .

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## Appendix 5. Fisher Exact Test Calculated using Social Science Statistics Website comparing the proportion of cystoid macular edema among latanoprost and bimatoprost users

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Results			
	Develop CME	Do not develop CME	Marginal Row Totals
Latanoprost	23	12153	12176
Bimatoprost	0	6746	6746
<b>Marginal Column Totals</b>	23	18899	18922 (Grand Total)

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The Fisher exact test statistic value is 0.0001. The result is significant at  $p < .05$ .

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## Appendix 6. Case Studies Summary for Cystoid Macular Edema among prostaglandin analogue users

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Authors	Eyes/patients	Clinical history	Time to CME/postoperative	Re-challenged/Recurred	Outcome
Rowe et al.*	1/1	PCIOL, prior CME	1 month/No	No	DC alone
Ayyala et al.*	6/4	4 PCIOL, 2 aphakic, 5 PCR, 1 intact capsule with prior CME and uveitis	7 days/10 days/10 days/14 days/30 days/30 days/No	Yes (2)/Yes when diclofenac and steroids discontinued	DC alone (4), (2) without DC but concurrent use of diclofenac, corticosteroids
Avakian et al.*	2/2	1. PCIOL with endoscopic cyclophotocoagulation 2. ACIOL with PCR and AV	3 weeks/2 months/No	Yes (1)/Yes	DC alone; with ketorolac on re-challenge
Heier et al.*	1/1	Sutured PCIOL, PK/IOL exchange from ACIOL, BK, PCR, AV	3 weeks/No	No	DC alone
Callanan et al.*	2/2	1. PCIOL with PCR	7 weeks/4 months/No	Yes (1)/Yes	DC with brimonidine,

		2. sutured PCIOL with PCR, radial keratotomy, AV, trab twice, avascular bleb			ketorolac and prednisolone
Thorne et al.*	2/1	2 ACIOL	4 weeks (2)/No	Yes (1, twice)/No (twice)	DC alone
Gaddie and Bennett*	2/2	1. PCIOL, PCR, ALT twice 2. ACIOL, yag, intermittent low grade AU, surgical iridotomy, vitreous macular traction, dipivefrin	3 months/2 weeks/No	No	DC alone (1), with discontinuation of dipivefrin and with ketorolac (1)
Moroi et al.*	7/7	1. Phakic, BRVO, ERM, prior CME, dipivefrin 2. PCIOL, Acute AU, ERM, trab, ALT, Ahmed 3. Subluxed lens, Marfan syndrome, HLA-B27 associated uveitis, thermal sclerostomy, bleb revision, AV 4. PCIOL, yag, ERM, ALT, posterior lip sclerectomy, PPV, MP 5. PCIOL, yag, dipivefrin-associated CME 6. PCIOL, yag, ERM 7. PCIOL, PCR, PPV for retained lens fragment	1 month/1 month/1.5 months/2 months/2 months/7 months/11 months/No	No	DC alone (4), with ketorolac and prednisolone (2), with rimexolone, prednisone, cyclogel (1)
Schumer et al.*	1/1	ACIOL, PCR, AV, RD treated with cryotherapy and scleral buckle, ALT, trab, CME	1 month/No	No	DC with diclofenac and prednisolone
Wand and Gaudio+~	3/3	1. PCIOL, PCR, trab, 1 wk postop endophthalmitis, PPV and intravitreal abx	2 weeks/4 months/1 year/No	Yes (1, on anti-inflammatories)/No (on anti-inflammatories)	DC with ketorolac (3), with dexamethasone (2)
Altintas et al.*	2/2	2 PCIOL, 1 PCR	10 days/1 month/Yes	No	DC with ketorolac, acetazolamide
Brasil et al.*	4/2	4 PCIOL, 4 yag	1 month (2) /3 months (2)/No	No	DC alone (2), with dorzolamide, timolol (2)
Carrillo et al.=	1/1	PCIOL, ALT twice	9 months/Yes	No	DC with diclofenac
Esquenazi~	1/1	PCIOL, dry eyes, corneal anterior basement membrane dystrophy, ALT	3 weeks/No	No	DC with brimonidine, topical steroids, nonsteroidals
Halpern and Pasquale*	1/1	PCIOL, yag, trab, Crohn's, chronic lymphocytic leukemia	5 months/No	No	DC with ketorolac
Tokunaga et al.*	1/1	PCIOL, PPV	2 months/No	No	DC with fluorometholone, indomethacin
Dhingra et al.*	1/1	PCIOL	3 months/Yes	Yes (after trab, needling)/Yes	DC with sub-tenon's triamcicolone

Agange*	2/1	2 PCIOL	4 months (2)/Yes	Yes (twice, but with bimatoprost and travoprost)/Yes	DC with diclofenac
Ozdemir et al.*	2/2	2 PCIOL, 1 extracapsular extraction, 1 PCR, 1 AV	2 weeks/1 month/No	No	DC alone
Sacchi et al.!	1/1	PCIOL	2 months/Yes	No	DC with topical nepafenac and oral indomethacin, subtenon's, dexamethasone intravitreal implant
Makri et al.*	1/1	PCIOL OD	7 months/post op 19 months for cataract	No	DC with topical nepafenac, replace with brinzolamide
21 studies 17* 1+~ 1= 1~ 1!	48 eyes /43 patients	47 Pseudophakic/aphakic/subluxated 47 incisional ocular surgery	Median 30 days (range 7-365) only 10 eyes postop	8 eyes re-challenged, 1 eye did not recur twice	All cases were reversible.

76 \*latanoprost; + unoprostone; = bimatoprost; ~ travoprost; ! tafluprost; Ahmed, Ahmed glaucoma valve; ALT, argon laser trabeculoplasty; AU, anterior uveitis; AV, anterior vitrectomy; BK, bullous keratopathy; BRVO, branch retinal vein occlusion; CME, cystoid macular edema; DC, resolved with discontinuation of drug; ERM, epiretinal membrane; HRVO, hemi-retinal vein occlusion; IOL, intraocular lens; MP, membrane peel; PCIOL, posterior chamber intraocular lens; PCR, posterior capsule rupture; PK, penetrating keratoplasty; PPV, pars planas vitrectomy; RD, retinal detachment; trab, trabeculectomy; yag, yag laser capsulotomy

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## 82 Appendix 7. Summary of case studies reporting uveitis after prostaglandin analogue use

Authors	Eyes/patients	History	Time to Uveitis/Postoperatively	Rechallenged/Recurred	Outcome
Faulkner~	2/1	1. 1 aphakic with RD repair 2. PCIOL, 2 mild corneal guttata	5 days (2)/No	No	DC with loteprednol
Fechtner et al.*	5/4	1. Sutured PCIOL, intraoperative suprachoroidal hemorrhage, trab, bleb leak revision, repeat trab, AV 2. 1 PCIOL, 1 phakic with amblyopia, retinal macroaneurysm focal laser photocoagulation 3. traumatic glaucoma (pupillary sphincter tear, an eccentric pupil, and angle recession) and superiorly subluxed lens (with limited	3 weeks/4 days (2) /1 day/13 days/No	Yes (5)/Yes	DC with prednisolone (4), with rimexolone (1)

		vitreous prolapse), single episode of iritis in the other eye 4. aphakic, yag			
Kumarasamy and Desai~	1/1	PCIOL, trab	3 weeks/No, but started 2 weeks postoperatively	Yes/Yes	DC alone
Packer et al.=	2/1	None	1 day (2)/No	No	DC with loteprednol
Parentin=	1/1	Laser trabeculoplasty	1 week/No	No	DC alone
Suominen and Valimaki~	2/1	Bilateral laser trabeculoplasty	1 week (2) No	No	DC with dexamethasone
Waheed and Laganowski*	2/1	None	2 months (2) /No	No	DC alone
7 studies 2* 3~ 2=	15/10	8 pseudophakic/aphakic/subluxed 7 with incisional surgery	Median 6 days (range 1-61) 0 cases postoperatively	6 re-challenged, 6 recurred	All were reversible

83 \*latanoprost; = bimatoprost; ~ travoprost; AV, anterior vitrectomy; DC, resolved with discontinuation of drug; PCIOL, posterior chamber  
84 intraocular lens; trab, trabeculectomy; yag, yag laser capsulotomy

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