Table 38: Effect of MIGS + Cataract Surgery Versus Comparators on IOP in Adults With Glaucoma

Quality Assessment							Summary of Findings				Importance
							No. of Eyes		Effect	Quality	
No. of Studies	Study Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other Considerations	MIGS	Comparator			
MIGS + Cataract Surgery Vs. Cataract Surgery Alone: ECP + Phaco Vs. Phaco Alone											
5	Prospective cohort and retrospective cohort[a]	Very serious risk of bias[b]	No serious inconsistency	No serious indirectness	No serious imprecision	None	555	282	**Mixed Findings; ECP + Phaco =/>/[?] Phaco Alone:** In 3/4 retrospective cohort studies, **IOP** was reduced from baseline in both groups (to ~14 mm Hg to 17.5 mm Hg) but was not different between groups at up to 36 mo follow-up.[73-75] In the fourth retrospective cohort study, IOP was reduced from baseline at mean follow-up of 21 mo in the ECP + Phaco group (to ~14 mm Hg) but was not reported in the Phaco alone group.[72] In the prospective cohort study, **IOP** was significantly reduced from baseline from 6 to 36 mo follow-up but was significantly lower in ECP + Phaco	⊕OOO VERY LOW	CRITICAL

Quality Assessment							Summary of Findings				Importance
							No. of Eyes		Effect	Quality	
No. of Studies	Study Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other Considerations	MIGS	Comparator			
									vs. Phaco alone (~15 mm Hg vs. 17 mm Hg at 36 mo respectively).[84]		
MIGS + Cataract Surgery Vs. Cataract Surgery Alone: iStent + Phaco Vs. Phaco Alone											
2	RCTs[c]	Serious risk of bias[d]	Serious inconsistency[e]	No serious indirectness	No serious imprecision	None	129	147	**iStent + Phaco = Phaco Alone: IOP** was not significantly reduced from baseline in either group at 12 to 48 mo follow-up, was significantly lower at both medicated (15 mo) and unmedicated (16 mo) follow-up in the iStent + Phaco vs. Phaco alone groups, but was not different between groups at 48 mo follow-up (~16 mm Hg vs. 17 mm Hg before medication washout respectively).[66,67] **IOP** was numerically similar between groups (~17 mm Hg at 12 and 24 mo follow-up; statistical comparison not reported).[34,68]	⊕⊕OO LOW	CRITICAL

Quality Assessment							Summary of Findings				Importance
							No. of Eyes		Effect	Quality	
No. of Studies	Study Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other Considerations	MIGS	Comparator			
									Meta-analysis results: At 12 mo, mean difference = –0.42 mm Hg, 95% CI, –1.30 to 0.46, $P = 0.34$, $I^2 = 85.47\%$		
MIGS + Cataract Surgery Vs. Cataract Surgery Alone: 2 iStents + Phaco Vs. Phaco Alone											
1	RCT[f]	Serious risk of bias[g]	No serious inconsistency	No serious indirectness	Serious imprecision[h]	None	17	16	**2x iStent + Phaco > Phaco Alone: IOP** was significantly lower in the 2x iStent + Phaco group vs. Phaco alone at 1 to 12 mo follow-up (~2 mm Hg to 4 mm Hg difference between groups).[69]	⊕⊕OO LOW	CRITICAL
MIGS + Cataract Surgery Vs. Cataract Surgery Alone: 1 or 2 iStent(s) + Phaco Vs. Phaco Alone											
1	Retrospective cohort[i]	Very serious risk of bias[j]	No serious inconsistency	No serious indirectness	Serious imprecision[k]	None	iStent + Phaco, 31 2x iStent + Phaco, 22	78	**1 or 2 iStent(s) + Phaco [?] Phaco Alone:** Inconsistent reporting (i.e., different values reported in abstract, tables, and text) so interpretation of findings is unclear.[76]	⊕OOO VERY LOW	CRITICAL
MIGS + Cataract Surgery Vs. Cataract Surgery Alone: CyPass Micro-Stent + Phaco Vs. Phaco Alone											
1	RCT[l]	No serious risk of bias[m]	No serious inconsistency	No serious indirectness	Serious imprecision[n]	None	374	131	**CyPass Micro-Stent + Phaco > Phaco Alone:** The reduction in **IOP** from baseline	⊕⊕⊕O MODERATE	CRITICAL

Quality Assessment							Summary of Findings				Importance
							No. of Eyes		Effect	Quality	
No. of Studies	Study Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other Considerations	MIGS	Comparator			
									was significantly greater in the CyPass Micro-Stent + Phaco vs. Phaco alone group at 12 and 24 mo follow-up (between-group difference in IOP ~2 mm Hg).[70]		
MIGS + Cataract Surgery Vs. Cataract Surgery Alone: Hydrus Microstent + Phaco Vs. Phaco Alone											
2	RCTs[o]	No serious risk of bias[p]	No serious inconsistency	No serious indirectness	No serious imprecision	None	419	237	**Hydrus Microstent + Phaco > Phaco Alone: Diurnal IOP** was reduced from baseline in both groups and was not different between groups at 12 mo follow-up, but was significantly lower in the Hydrus Microstent + Phaco vs. Phaco alone group at 24 mo follow-up (washed-out diurnal IOP ~17 mm Hg vs. 19 mm Hg respectively).[71] The reduction in **modified diurnal IOP** from baseline was significantly greater in the Hydrus Microstent + Phaco vs. Phaco	⊕⊕⊕⊕ HIGH	CRITICAL

Quality Assessment							Summary of Findings				Importance
							No. of Eyes		Effect	Quality	
No. of Studies	Study Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other Considerations	MIGS	Comparator			
									alone group at 12 and 24 mo follow-up (washed-out diurnal IOP ~17 mm Hg vs. 19 mm Hg at 24 mo respectively).[88] Meta-analysis results: At 24 mo, mean difference = –1.87 mm Hg, 95% CI, –2.49 to –1.26, $P < 0.0001$, $I^2 = 0.00\%$		
MIGS + Cataract Surgery Vs. A Different MIGS + Cataract Surgery: Goniotomy With KDB + Phaco Vs. iStent + Phaco											
1	Retrospective cohort[q]	Serious risk of bias[r]	No serious inconsistency	No serious indirectness	Serious imprecision[s]	None	KDB + Phaco, 237 iStent + Phaco, 198	NA[t]	**KDB + Phaco > iStent + Phaco: IOP** was significantly reduced from baseline up to 6 mo follow-up in both groups, and the reduction was significantly greater in the KDB + Phaco vs. iStent + Phaco group up to 6 mo follow-up.[86]	⊕OOO VERY LOW	CRITICAL
MIGS + Cataract Surgery Vs. A Different MIGS + Cataract Surgery: Trabectome + Phaco Vs. 2x iStent + Phaco											
2	Retrospective cohort[u]	Serious risk of bias[v]	No serious inconsistency	No serious indirectness	No serious imprecision	None	Trabectome + Phaco, 88 2x iStent + Phaco, 83	NA[t]	**Mixed Findings; Trabectome + Phaco </[?] 2x iStent + Phaco: IOP** was significantly higher	⊕OOO VERY LOW	CRITICAL

Quality Assessment							Summary of Findings				Importance
							No. of Eyes		Effect	Quality	
No. of Studies	Study Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other Considerations	MIGS	Comparator			
									in the Trabectome + Phaco versus 2x iStent + Phaco group at baseline and was numerically higher at 12 mo (values shown in figure only) but this did not reach statistical significance.[79] The between-group difference in the reduction in IOP from baseline to 6 mo was inconsistently reported in the paper (i.e., as not significantly different in the text, or as a significantly smaller reduction in the Trabectome + Phaco versus 2x iStent + Phaco group in a figure). **IOP** was significantly reduced from baseline in both groups, but was significantly higher in the Trabectome + Phaco vs. 2x iStent + Phaco group at 6 and 12 mo (~17 mm Hg vs. 14 mm Hg respectively) in		

Quality Assessment							Summary of Findings				Importance
							No. of Eyes		Effect	Quality	
No. of Studies	Study Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other Considerations	MIGS	Comparator			
									one study.[78] Meta-analysis results: Mean difference = 2.55 mm Hg, 95% CI, 1.44 to 3.66, P < 0.0001, I^2 = 0.00%		
MIGS + Cataract Surgery Vs. A Different MIGS + Cataract Surgery: Trabectome + MICS Vs. 2x iStent Inject + MICS											
1	Retrospective cohort[w]	Serious risk of bias[x]	No serious inconsistency	No serious indirectness	Serious imprecision[y]	None	Trabectome + MICS, 25 2x iStent Inject + MICS, 25	NA[t]	**Trabectome + MICS = 2x iStent Inject + MICS: IOP** was significantly reduced from baseline in both groups but was not different between groups up to 12 mo follow-up (values shown in figure only).[77]	⊕OOO VERY LOW	CRITICAL
MIGS + Cataract Surgery Vs. A Different MIGS + Cataract Surgery: Different Numbers of iStents + Phaco											
2	Retrospective cohort and non-randomized controlled clinical trial[z]	Serious risk of bias[aa]	No serious inconsistency	No serious indirectness	No serious imprecision	None	iStent + Phaco, 39 2x iStent + Phaco, 58 3x iStent + Phaco, 25	NA[t]	**1 iStent + Phaco = 2 iStents + Phaco: IOP** was significantly reduced from baseline to 12 mo follow-up (by ~2 to 4 mm Hg), but was not different between groups at any time point.[80] **2 iStents + Phaco = 3 iStents + Phaco:**	⊕OOO VERY LOW	CRITICAL

Quality Assessment							Summary of Findings				Importance
							No. of Eyes		Effect	Quality	
No. of Studies	Study Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other Considerations	MIGS	Comparator			
									IOP was significantly reduced from baseline up to 12 mo follow-up (by ~4 mm Hg), but was not different between groups at any time point.[83]		
MIGS + Cataract Surgery Vs. A Different MIGS + Cataract Surgery: ECP + iStent + Phaco Vs. iStent + Phaco											
1	Retrospective cohort[bb]	Serious risk of bias[cc]	No serious inconsistency	No serious indirectness	Serious imprecision[dd]	None	ECP + iStent + Phaco, 51 iStent + Phaco, 50	NA[t]	**ECP + iStent + Phaco > iStent + Phaco:** **IOP** reductions were significantly greater at 12 mo follow-up (mean reductions of 7.14 mm Hg and 4.48 mm Hg, to ~14 mm Hg vs. 16 mm Hg), in ECP + iStent + Phaco vs. iStent + Phaco.[81]	⊕OOO VERY LOW	CRITICAL
MIGS + Cataract Surgery Vs. A Different MIGS + Cataract Surgery: ECP + Phaco Vs. Trabectome + Phaco											
1	Retrospective cohort[ee]	Serious risk of bias[ff]	No serious inconsistency	No serious indirectness	Serious imprecision[gg]	None	ECP + Phaco, 35 Trabectome + Phaco, 26	NA[t]	**ECP + Phaco = Trabectome + Phaco:** **IOP** was numerically reduced from baseline in both groups up to 12 mo follow-up (by ~3 mm Hg to 4 mm Hg; not tested statistically) and was not significantly	⊕OOO VERY LOW	CRITICAL

Quality Assessment							Summary of Findings				Importance
							No. of Eyes		Effect	Quality	
No. of Studies	Study Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other Considerations	MIGS	Comparator			
									different between groups from 1 wk to 12 mo follow-up.[89]		
MIGS + Cataract Surgery Vs. Filtration Surgery + Cataract Surgery: Trabectome + Phaco Vs. Trabeculectomy With MMC + Phaco											
1	RCT[hh]	Very serious risk of bias[ii]	No serious inconsistency	No serious indirectness	Serious imprecision[jj]	None	10	9	**Trabectome + Phaco = Trabeculectomy + Phaco:** **IOP** was numerically reduced from baseline at 6 and 12 mo of follow-up in both groups (by ~3 mm Hg to 7 mm Hg) but this did not reach statistical significance; **IOP** was not significantly different between groups at baseline or any follow-up time point (at 12 months, ~17 mm Hg in both groups).[87]	⊕OOO VERY LOW	CRITICAL
MIGS + Cataract Surgery Vs. Filtration Surgery + Cataract Surgery: Trabectome + Phaco Vs. Trabeculotomy + Phaco											
1	Prospective and retrospective cohort[kk]	Serious risk of bias[ll]	No serious inconsistency	No serious indirectness	Serious imprecision[mm]	None	47	29	**Trabectome + Phaco = Trabeculotomy + Phaco:** **IOP** was numerically reduced from baseline from 3 to 36 mo of follow-up in both groups (by	⊕OOO VERY LOW	CRITICAL

Quality Assessment							Summary of Findings				Importance
							No. of Eyes		Effect	Quality	
No. of Studies	Study Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Other Considerations	MIGS	Comparator			
									~6 mm Hg to 9 mm Hg) but this was not tested statistically; **IOP** was not significantly different between groups at baseline or any follow-up time point (~14 mm Hg at 36 mo in both groups).[85]		
MIGS + Cataract Surgery Vs. Filtration Surgery + Cataract Surgery: ECP + Phaco Vs. Trabeculectomy With MMC + Phaco											
1	Retrospective cohort[nn]	Serious risk of bias[oo]	No serious inconsistency	No serious indirectness	Serious imprecision[pp]	None	24	29	**ECP + Phaco = Trabeculectomy With MMC + Phaco:** **IOP** was not significantly different between groups at baseline or 6 mo follow-up; IOP was transiently greater post-operative (1 d) in the ECP + Phaco vs. Trabeculectomy + Phaco group.[82]	⊕OOO VERY LOW	CRITICAL

= = not significantly different between groups; > = intervention more favourable than comparator; < = intervention less favourable than comparator; [?] = not compared statistically or non-interpretable; 2x = two devices; CI = confidence interval; d = days; ECP = endoscopic cyclophotocoagulation; IOP = intraocular pressure; KDB = Kahook Dual Blade; MICS = micro-incision cataract surgery; MIGS = minimally invasive glaucoma surgery; MMC = mitomycin C; mo = months; NA = not applicable; no. = number; Phaco = phacoemulsification; RCT = randomized controlled trial; vs. = versus; wk = weeks; y = years.

Note: Data were collected by RCT, non-randomized controlled clinical trial, retrospective or prospective cohort, with up to four years of follow-up. IOP was measured by Goldmann applanation tonometry where reported. The CyPass Micro-Stent was voluntarily withdrawn from the global market by the manufacturer in August 2018 due to five-year data from a long-term safety study;[37,38] however, at the time of report publication, this device was still active in the Medical Devices Active Licence Listing and is therefore included in this report.

[a] One prospective cohort study[84] and four retrospective cohort studies.[72-75]

[b] Very serious risk of bias. Bias due to confounding: retrospective study and rationale for assigning treatments likely to be different between groups;[72-75] baseline characteristics not reported for Phaco alone group so unable to assess whether groups were systematically different at baseline;[72] treatment assignment based on patient characteristics and groups were systematically different;[73] baseline characteristics (including baseline IOP[73]) were different between groups;[73,74,84] treatment group was assigned based on patient choice and treatment availability;[75] how participants were prospectively assigned to groups was not reported;[84] potential confounding variables not controlled

for in analyses.[72-75,84] Bias in selection of participants: only those with complete data or sufficient follow-up were included and it is possible that those with complete data or a given follow-up duration were systematically different from those without complete data or a particular follow-up duration (i.e., different from those in routine clinical practice);[72,73,84] patients with intraoperative complications were excluded.[74] Bias due to deviations from intended interventions: important co-intervention may not have been balanced between groups (number of medications was not reported in one group;[72] number of medications was inconsistently reported as being significantly different or not significantly different between groups[75]); important co-intervention not balanced between groups (number of medications significantly different between groups). [73,74,84] Bias due to missing data: IOP not reported at baseline or follow-up in the Phaco alone group, and reasons for patient exclusion only reported for the ECP + Phaco group;[72] follow-up duration significantly different between groups (mean of 7.4 vs. 2.1 mo in the ECP + Phaco and Phaco alone groups respectively);[74] low risk up to 24 mo of follow-up but large amount of missing data at later time points and reasons not reported.[84] Bias in measurement of outcomes: diurnal variation was not accounted for in measurement of IOP;[72-75,84] IOP was measured without medication washout and 1) the number of medications was not reported in the Phaco alone group so it is not possible to assess whether this was differentially impacting IOP between groups,[72] 2) the number of medications was not compared statistically between groups,[73] 3) the number of medications was significantly different between groups,[74,84] or 4) number of medications was inconsistently reported as being significantly different or not significantly different between groups.[75] Bias in selection of the reported result: IOP data not reported for Phaco alone group;[72] types of analyses not described in methods and names of statistical tests only reported in table footnotes;[84] reductions from baseline presented only as proportions for IOP but as absolute values for other variables and no rationale reported.[84]

[c] Two RCTs in four publications.[34,66-68]

[d] Serious risk of bias. Selection bias: no indication of allocation concealment.[34,66-68] Detection bias: unclear whether diurnal variation accounted for in measurement of IOP;[34,66-68] no blinding of outcome assessors.[34,68] Attrition bias: low risk up to 15 months of follow-up (reasons for missing data reported and not likely to be related to the outcome), but a large amount of missing data at four year follow-up and amount not balanced across groups;[66,67] large amount of missing data (~9% per group at 12 months and 16% to 18% per group at 24 months), and reasons for missing data may be related to the true outcome (e.g., those with failed Phaco due to adverse event were excluded post-randomization).[34,68] Reporting bias: results not reported comprehensively and rationale for analysis choice not reported (i.e., some results reported with the ITT population and others reported with the "consistent cohort" population); 90% CIs used and no rationale provided (90% CIs are not standard and may have been chosen to narrow the CIs to avoid crossing the line of no effect or to avoid overlap in CIs between groups).[34,68]

[e] Serious inconsistency.[34,66-68] Statistical heterogeneity was substantial.

[f] One RCT.[69]

[g] Serious risk of bias.[69] Selection bias: no indication of allocation concealment. Detection bias: unclear whether diurnal variation accounted for in measurement of IOP; no blinding of outcome assessors.

[h] Serious imprecision.[69] Only a single study.

[i] One retrospective cohort study.[76]

[j] Very serious risk of bias.[76] Bias due to confounding: retrospective study and rationale for assigning treatments likely to be different between groups; potential confounding variables not controlled for in analyses. Bias due to deviations from intended interventions: important co-intervention (number of medications) may not have been balanced across groups. Bias due to missing data: substantial loss to follow-up, reasons for missing data not reported, and amount of missing data not balanced across groups. Bias in measurement of outcomes: method of measurement not reported; diurnal variation not accounted for in measurement of IOP; IOP measured without medication washout and possible that number of medications was different across groups. Bias in selection of the reported result: different numerical values reported in the abstract, tables, and text, leading to unclear interpretation of findings.

[k] Serious imprecision. Only a single study, and no measures of variability.[76]

[l] One RCT.[70]

[m] No serious risk of bias. Only concern was: possible risk of selection bias; no indication of allocation concealment.[70]

[n] Serious imprecision. Only a single study.[70]

[o] Two RCTs.[71,88]

[p] No serious risk of bias. Only concern was: possible risk of selection bias; allocation concealment not explicitly specified but likely, based on method of randomization (online computer algorithms).[71,88]

[q] One retrospective cohort study.[86]

[r] Serious risk of bias.[86] Bias due to confounding: retrospective design and rationale for assigning treatments likely to be different between groups; significant differences between groups at baseline; potential confounding variables not controlled for in analyses. Bias in selection of participants: only those with six-month complete data were included and it is possible that those with complete data were systematically different from those without complete data (i.e., different from those in routine clinical practice). Bias due to deviations from intended interventions: important co-intervention not balanced between groups (number of medications significantly different between groups). Bias due to missing data: large amount of missing data at one month and three months, reasons for missing data not reported, and amount of missing data not balanced across groups. Bias in measurement of outcomes: diurnal variation not accounted for in measurement of IOP; IOP was measured without medication washout and the number of medications was significantly different between groups. Bias in selection of the reported result: *P* value for between-group comparison at baseline not reported.

[s] Serious imprecision.[86] Only a single study.

[t] In these studies, one MIGS performed in combination with cataract surgery was compared with another MIGS combined with cataract surgery.[77-81,83,86]

[u] Two retrospective cohort studies.[78,79]

[v] Serious risk of bias. Bias due to confounding: retrospective design and rationale for assigning treatments likely to be different between groups;[78,79] different surgeons performed procedures in the different treatment arms;[79] only one potential confounding factor controlled for in analyses (i.e., "between-eye correlation" for patients with two eyes in the study);[79] baseline characteristics (including baseline IOP) were different between groups;[79] potential confounding variables not controlled for in analyses.[78] Bias in selection of participants: only those with 12-month follow-up were included and it is possible that those with 12-month follow-up were systematically different from those with shorter follow-up (i.e., different from those in routine clinical practice).[78,79] Bias due to deviations from intended interventions: important co-intervention not balanced between groups (number of medications significantly different between groups).[78] Bias due to missing data: substantial amount of missing data, amount of missing data not balanced across groups and analyses conducted with last observation carried forward (but disease progression or treatment effectiveness may change over time).[78] Bias in measurement of outcomes: unclear whether diurnal variation was accounted for in measurement of IOP;[78,79] IOP was measured without medication washout and the number of medications was significantly different between groups.[78] Bias in selection of the reported result: inconsistency in reporting of adverse events between abstract, figures, and main text.[79]

[w] One retrospective cohort study.[77]

[x] Serious risk of bias.[77] Bias in selection of participants: only those with complete follow-up were included and it is possible that those with versus without complete follow-up were systematically different (i.e., different from those in routine clinical practice). Bias due to deviations from intended interventions: by design the post-operative medication regimen was different between groups, the number of medications was significantly different between groups at six-week follow-up, and IOP was measured without washout. Bias in measurement of outcomes: unclear whether diurnal variation was accounted for in measurement of IOP; IOP was measured without medication washout and number of medications was significantly different between groups at six-week follow-up.

[y] Serious imprecision.[77] Only a single study.

[z] One retrospective cohort[80] and one non-randomized controlled clinical trial.[83]

[aa] Serious risk of bias. Bias due to confounding: retrospective design and rationale for assigning treatments likely to be different between groups;[80] treatment assigned based on patient characteristics and judgment of operating surgeon (i.e., with those requiring greater IOP control receiving three versus two iStents);[83] potential confounding variables not controlled for in analyses.[80,83] Bias in selection of participants: only those with 12-month follow-up were included and it is possible that those with 12-month follow-up were systematically different from those with shorter follow-up (i.e., different from those in routine clinical practice).[83] Bias due to deviations from intended interventions: important co-intervention not balanced between groups (number of medications significantly different between groups).[83] Bias due to missing data: substantial loss to follow-up, amount of missing data not balanced across groups, and reasons for missing data not reported.[80] Bias in measurement of outcomes: unclear whether diurnal variation was accounted for in measurement of IOP;[80,83] IOP was measured without medication washout and the number of medications was significantly different between groups.[83]

[bb] One retrospective cohort study.[81]

[cc] Serious risk of bias.[81] Bias due to confounding: retrospective design and rationale for assigning treatments likely to be different between groups, groups not matched on baseline characteristics, and potential confounding variables not controlled for in analyses. Bias due to deviations from intended interventions: important co-intervention not balanced between groups (number of medications significantly different between groups). Bias in measurement of outcomes: unclear whether diurnal variation was accounted for in measurement of IOP; IOP was measured without medication washout and the number of medications was significantly different between groups.

[dd] Serious imprecision.[81] Only a single study; measures of variability only provided at some time points and the variability in the estimate (standard deviation) was similar in magnitude to the parameter (mean).

[ee] One retrospective cohort study.[89]

[ff] Serious risk of bias.[89] Bias due to confounding: retrospective design and rationale for assigning treatments likely to be different between groups; some baseline characteristics (e.g., age) different between groups; potential confounding variables not controlled for in analyses. Bias in selection of participants: only those with 12-month follow-up were included and it is possible that those with 12-month follow-up were systematically different from those with shorter follow-up (i.e., different from those in routine clinical practice); at least one patient who did not meet inclusion criteria was included (the inclusion criteria specified age > 40 years, but the range of ages in one group was reported as 30 to 85 years). Bias in measurement of outcomes: unclear whether diurnal variation was accounted for in measurement of IOP.

[gg] Serious imprecision.[89] Only a single study.

[hh] One RCT.[87]

[ii] Very serious risk of bias.[87] Selection bias: inclusion criteria were altered after the start of the study due to slow patient recruitment and specific changes to inclusion criteria were not reported. Performance bias: the study occurred over a long duration and how the intervention (Trabectome + Phaco) was conducted changed over the course of the study (i.e., length of the ablation cleft increased from ~90 to 160 degrees). Detection bias: unclear whether diurnal variation accounted for in measurement of IOP; no blinding of outcome assessors. Attrition bias: only one patient missing data in each group but the sample size was so small that this still represented a substantial proportion of the data (~10% per group). Other bias: the trial was stopped early due to difficulties in patient recruitment and lack of clinical equipoise over time, so fewer participants were recruited than planned a priori.

[jj] Serious imprecision.[87] Only a single study.

[kk] One cohort study; data for one group (Trabeculotomy + Phaco) collected retrospectively and data for the other group (Trabectome + Phaco) collected prospectively.[85]

[ll] Serious risk of bias.[85] Bias due to confounding: data for one group (Trabectome + Phaco) collected retrospectively and data for the other group (Trabeculotomy + Phaco) collected prospectively and it is possible that groups were systematically different; potential confounding variables not controlled for in the analysis. Bias in selection of participants: only those with 12-month follow-up were included and it is possible that those with 12-month follow-up were systematically different from those with shorter follow-up (i.e., different from those in routine clinical practice). Bias due to deviations from intended interventions: important co-intervention not balanced between groups (number of medications significantly different between groups). Bias in measurement of outcomes: unclear whether diurnal variation was accounted for in measurement of IOP; IOP was measured without medication washout and the number of medications was significantly different between groups. Bias due to missing data: substantial amount of missing data, amount of missing data not balanced across groups, and reasons for missing data not reported.

[mm] Serious imprecision. Only a single study.[85]

[nn] One retrospective cohort study.[82]

[pp] Serious risk of bias.[82] Bias due to confounding: participants in the different treatment arms were systematically different; Trabeculectomy + Phaco patients had healthy conjunctiva, ECP + Phaco patients had thin conjunctiva or plateau iris; potential confounding variables not controlled for in the analysis. Bias due to deviations from intended interventions: important co-intervention not balanced between groups (number of medications significantly different between groups). Bias due to missing data: substantial amount of missing data, amount of missing data not balanced across groups, and reasons for missing data not reported. Bias in measurement of outcomes: unclear whether diurnal variation was accounted for in measurement of IOP; IOP was measured without medication washout and the number of medications was significantly different between groups.

[pp] Serious imprecision. Only a single study; large variability (variability in the estimate similar in magnitude to the parameter).[82]