

Supplementary Table S1: Pre- and 12 months post-operative IOPs in current and previous studies of ab interno goniotomy procedures reported in subjects group including POAG

Procedure	Combined CE	Preoperative IOP (mmHg)	Postoperative IOP (mmHg)	Difference (mmHg)	%IOP reduction	Reference
μLOT	mix	18.8	12.9	5.9	31	Current study
μLOT	combined	19.3	12.8	6.5	34	¹
μLOT	solo	22.4	14.4	8	36	¹
μLOT	mix	28.5	15	13.5	47	²
μLOT	mix	27	16	11	41	²
μLOT	combined	20.5	13.9	6.6	32	³
μLOT	combined	24.7	13	11.7	47	⁴
μLOT	mix	24.1	12.5	11.6	48	⁵
μLOT	mix	28.4	17.8	10.6	37	⁶
KDB	combined	22.3	13.6	8.7	39	³
KDB	combined	23.2	16.7	6.5	28	⁴
KDB	combined	24	17.2	6.8	28	⁷
KDB	combined	14.8	13.1	1.7	11	⁸
KDB	combined	21.3	13.5	7.8	37	⁸
KDB	solo	21.6	16.5	5.1	24	⁹
KDB	combined	19.8	13.4	6.4	32	¹⁰
KDB	combined	16.5	14.1	2.4	15	¹¹
KDB	solo	24.3	16.9	7.4	30	¹¹
KDB	combined	18.5	15.4	3.1	17	¹²
KDB	mix	17.1	14.7	2.4	14	¹³
KDB	combined	18.2	13.2	5	27	¹⁴
KDB	combined	17.4	15	2.4	14	¹⁵
KDB	combined	16.8	12.4	4.4	26	¹⁶
KDB	combined	16.7	13.8	2.9	17	¹⁷
KDB	solo	20.4	14.1	6.3	31	¹⁷

GATT	mix	18.7	13.8	4.9	26	¹⁸
GATT	mix	18.7	13.9	4.8	26	¹⁸
GATT	mix	18.3	13.3	5	27	¹⁸
GATT	mix	28.3	13.3	15	53	¹⁹
GATT	combined	22.7	13.5	9.2	41	²⁰
GATT	solo	24.9	14.3	10.6	43	²⁰
GATT	solo	27.4	14.4	13	47	²¹
GATT	combined	24.7	16.3	8.4	34	²²
GATT	solo	26	16.4	9.6	37	²²
GATT	combined	21.9	12	9.9	45	²³
GATT	solo	26.6	14.7	11.9	45	²³
GATT	combined	23.9	15.5	8.4	35	²⁴
GATT	solo	25.6	15.7	9.9	39	²⁴
TOM	mix	24.6	13.3	11.3	46	⁵
TOM	mix	15.3	12.5	2.8	18	²⁵
TOM	mix	22	13	9	41	²⁵
TOM	mix	31.9	13.5	18.4	58	²⁵
TOM	mix	22.3	16	6.3	28	²⁶
TOM	combined	18.3	13.3	5	27	²⁷
TOM	combined	15.3	13.3	2	13	²⁸
TOM	combined	19.3	13.8	5.5	28	²⁹
TOM	mix	23	16.8	6.2	27	³⁰
TOM	combined	20	16.8	3.2	16	³¹
TOM	mix	20	13.6	6.4	32	³²
TOM	mix	21.2	16.1	5.1	24	³³
TOM	mix	21.2	15.7	5.5	26	³³
TOM	mix	21.4	16.5	4.9	23	³⁴
TOM	mix	24	16.1	7.9	33	³⁵
TOM	mix	22.6	15.7	6.9	31	³⁵
TOM	mix	23.6	15	8.6	36	³⁶

TOM	mix	22.6	15.8	6.8	30	³⁷
TOM	solo	19.1	14.4	4.7	25	³⁸
TOM	solo	22.5	13.7	8.8	39	³⁸
TOM	mix	23.6	16	7.6	32	³⁹
TOM	mix	37.6	16.9	20.7	55	⁴⁰
TOM	combined	18.3	13.5	4.8	26	⁴¹
TOM	combined	18.1	15.2	2.9	16	⁴²
TOM	combined	19.3	15.6	3.7	19	⁴²
TOM	combined	19.2	15.1	4.1	21	⁴²
TOM	combined	25.7	16.4	9.3	36	⁴²
TOM	combined	20.9	16	4.9	23	⁴³
TOM	combined	22.3	15.6	6.7	30	⁴⁴
TOM	mix	19.6	15.7	3.9	20	⁴⁵
TOM	mix	21.6	15.9	5.7	26	⁴⁵
TOM	mix	24.5	16.2	8.3	34	⁴⁵
TOM	mix	29	16.7	12.3	42	⁴⁵
TOM	solo	20.7	16.2	4.5	22	⁴⁶
TOM	solo	23	16.4	6.6	29	⁴⁶
TOM	solo	26.1	16.6	9.5	36	⁴⁶
TOM	solo	29.1	16.7	12.4	43	⁴⁶
TOM	mix	31.6	16.4	15.2	48	⁴⁷
TOM	solo	21.7	15.9	5.8	27	⁴⁸
TOM	combined	19.7	15.5	4.2	21	⁴⁸
TOM	solo	28.8	17.1	11.7	41	⁴⁹
TOM	solo	22.3	15.1	7.2	32	⁵⁰
TOM	mix	19.3	14.6	4.7	24	⁵¹
TOM	solo	27.3	15.7	11.6	42	⁵²
TOM	solo	26.1	16.4	9.7	37	⁵²
TOM	combined	20.7	15.7	5	24	⁵²
TOM	combined	22.6	17	5.6	25	⁵²

TOM	solo	25.9	19.3	6.6	25	⁵³
TOM	combined	16.5	14.6	1.9	12	⁵³
TOM	solo	25.5	18	7.5	29	⁵⁴
TOM	combined	19.9	15.8	4.1	21	⁵⁴
TOM	combined	20	14.8	5.2	26	⁵⁵
TOM	mix	25.7	16.1	9.6	37	⁵⁶
TOM	mix	27.6	16.4	11.2	41	⁵⁷
TOM	solo	28.2	16.3	11.9	42	⁵⁸

IOP, intraocular pressure; POAG, primary open angle glaucoma; μ LOT, microhook trabeculotomy; KDB, Kahook Dual Blade; GATT, gonioscopy-assisted transluminal trabeculotomy; TOM, Trabectome; CE, cataract extraction.

Reference

1. Tanito M, Sugihara K, Tsutsui A, et al. Midterm Results of Microhook ab Interno Trabeculotomy in Initial 560 Eyes with Glaucoma. *J Clin Med* 2021;10(4).
2. Mori S, Murai Y, Ueda K, et al. Comparison of efficacy and early surgery-related complications between one-quadrant and two-quadrant microhook ab interno trabeculotomy: a propensity score matched study. *Acta Ophthalmol* 2021.
3. Omoto T, Fujishiro T, Asano-Shimizu K, et al. Comparison of 12-month surgical outcomes of ab interno trabeculotomy with phacoemulsification between spatula-shaped and dual-blade microhooks. *Jpn J Ophthalmol* 2021.
4. Aoki R, Hirooka K, Goda E, et al. Comparison of Surgical Outcomes Between Microhook Ab Interno Trabeculotomy and Goniotomy with the Kahook Dual Blade in Combination with Phacoemulsification: A Retrospective, Comparative Case Series. *Adv Ther* 2021;38(1):329-36.
5. Tojo N, Otsuka M, Hayashi A. Comparison of trabectome and microhook surgical outcomes. *Int Ophthalmol* 2021;41(1):21-6.
6. Mori S, Murai Y, Ueda K, et al. A comparison of the 1-year surgical outcomes of ab externo trabeculotomy and microhook ab interno trabeculotomy using propensity score analysis. *BMJ Open Ophthalmol* 2020;5(1):e000446.
7. Chihara E, Chihara T. Turn Back Elevation of Once Reduced IOP After Trabeculotomy Ab Externo and Kahook Dual Blade Surgeries Combined with Cataract Surgery. *Clin Ophthalmol* 2020;14:4359-68.
8. Porter M, Garza A, Gallardo M. Excisional Goniotomy in Latino Patients with Open-Angle Glaucoma: Outcomes Through 24 Months. *Clin Ophthalmol* 2020;14:3619-25.

9. ElMallah MK, Berdahl JP, Williamson BK, et al. Twelve-Month Outcomes of Stand-Alone Excisional Goniotomy in Mild to Severe Glaucoma. *Clin Ophthalmol* 2020;14:1891-7.
10. Iwasaki K, Takamura Y, Orii Y, et al. Performances of glaucoma operations with Kahook Dual Blade or iStent combined with phacoemulsification in Japanese open angle glaucoma patients. *Int J Ophthalmol* 2020;13(6):941-5.
11. Wakil SM, Birnbaum F, Vu DM, et al. Efficacy and safety of a single-use dual blade goniotomy: 18-month results. *J Cataract Refract Surg* 2020;46(10):1408-15.
12. Falkenberry S, Singh IP, Crane CJ, et al. Excisional goniotomy vs trabecular microbypass stent implantation: a prospective randomized clinical trial in eyes with mild to moderate open-angle glaucoma. *J Cataract Refract Surg* 2020;46(8):1165-71.
13. Kornmann HL, Fellman RL, Feuer WJ, et al. Early Results of Goniotomy with the Kahook Dual Blade, a Novel Device for the Treatment of Glaucoma. *Clin Ophthalmol* 2019;13:2369-76.
14. ElMallah MK, Seibold LK, Kahook MY, et al. 12-Month Retrospective Comparison of Kahook Dual Blade Excisional Goniotomy with iStent Trabecular Bypass Device Implantation in Glaucomatous Eyes at the Time of Cataract Surgery. *Adv Ther* 2019;36(9):2515-27.
15. Le C, Kazaryan S, Hubbell M, et al. Surgical Outcomes of Phacoemulsification Followed by iStent Implantation Versus Goniotomy With the Kahook Dual Blade in Patients With Mild Primary Open-angle Glaucoma With a Minimum of 12-Month Follow-up. *J Glaucoma* 2019;28(5):411-4.
16. Dorairaj SK, Seibold LK, Radcliffe NM, et al. 12-Month Outcomes of Goniotomy Performed Using the Kahook Dual Blade Combined with Cataract Surgery in Eyes with Medically Treated Glaucoma. *Adv Ther* 2018;35(9):1460-9.
17. Sieck EG, Epstein RS, Kennedy JB, et al. Outcomes of Kahook Dual Blade Goniotomy with and without Phacoemulsification Cataract Extraction. *Ophthalmol Glaucoma* 2018;1(1):75-81.
18. Sato T, Kawaji T. 12-month randomised trial of 360° and 180° Schlemm's canal incisions in suture trabeculotomy ab interno for open-angle glaucoma. *Br J Ophthalmol* 2020.
19. Yalinbas D, Dilekmen N, Hepsen IF. Comparison of Ab Externo and Ab Interno 360-degree Suture Trabeculotomy in Adult Open-angle Glaucoma. *J Glaucoma* 2020;29(11):1088-94.
20. Aktas Z, Ucgul AY, Bektas C, Sahin Karamert S. Surgical Outcomes of Prolene Gonioscopy-assisted Transluminal Trabeculotomy in Patients With Moderate to Advanced Open-Angle Glaucoma. *J Glaucoma* 2019;28(10):884-8.
21. Aktas Z, Ozmen MC, Atalay HT, Ucgul AY. Evaluation of episcleral venous fluid wave during gonioscopy assisted transluminal trabeculotomy in patients with advanced glaucoma. *Eye (Lond)* 2019;33(4):668-73.

22. Grover DS, Smith O, Fellman RL, et al. Gonioscopy-assisted Transluminal Trabeculotomy: An Ab Interno Circumferential Trabeculotomy: 24 Months Follow-up. *J Glaucoma* 2018;27(5):393-401.
23. Rahmatnejad K, Pruzan NL, Amanullah S, et al. Surgical Outcomes of Gonioscopy-assisted Transluminal Trabeculotomy (GATT) in Patients With Open-angle Glaucoma. *J Glaucoma* 2017;26(12):1137-43.
24. Grover DS, Godfrey DG, Smith O, et al. Gonioscopy-assisted transluminal trabeculotomy, ab interno trabeculotomy: technique report and preliminary results. *Ophthalmology* 2014;121(4):855-61.
25. Tojo N, Hayashi A. The Outcomes of Trabectome Surgery in Patients with Low, Middle, and High Preoperative Intraocular Pressure. *Clin Ophthalmol* 2020;14:4099-108.
26. Strzalkowska A, Strzalkowski P, Al Yousef Y, et al. Exact matching of trabectome-mediated ab interno trabeculectomy to conventional trabeculectomy with mitomycin C followed for 2 years. *Graefes Arch Clin Exp Ophthalmol* 2020.
27. Al Yousef Y, Strzalkowska A, Hillenkamp J, et al. Comparison of a second-generation trabecular bypass (iStent inject) to ab interno trabeculectomy (Trabectome) by exact matching. *Graefes Arch Clin Exp Ophthalmol* 2020;258(12):2775-80.
28. Weiner AJ, Weiner Y, Weiner A. Intraocular Pressure After Cataract Surgery Combined With Ab Interno Trabeculectomy Versus Trabecular Micro-bypass Stent: An Intrasubject Same-surgeon Comparison. *J Glaucoma* 2020;29(9):773-82.
29. Jozic L, Magner J, Funk J, Töteberg-Harms M. Success of combined cataract extraction plus excimer laser trabeculotomy exceeds that of combined ab interno trabeculectomy with the trabectome or cataract extraction alone. *Int Ophthalmol* 2020;40(3):529-37.
30. Avar M, Jordan JF, Neuburger M, et al. Long-term follow-up of intraocular pressure and pressure-lowering medication in patients after ab-interno trabeculectomy with the Trabectome. *Graefes Arch Clin Exp Ophthalmol* 2019;257(5):997-1003.
31. Ting JLM, Rudnisky CJ, Damji KF. Prospective randomized controlled trial of phaco-trabectome versus phaco-trabeculectomy in patients with open angle glaucoma. *Can J Ophthalmol* 2018;53(6):588-94.
32. Esfandiari H, Shah P, Torkian P, et al. Five-year clinical outcomes of combined phacoemulsification and trabectome surgery at a single glaucoma center. *Graefes Arch Clin Exp Ophthalmol* 2019;257(2):357-62.
33. Nazarali SA, Damji KF. Ab interno trabeculectomy with Trabectome: outcomes in African American versus Caucasian patients. *Can J Ophthalmol* 2018;53(4):361-4.
34. Dang YL, Wang X, Dai WW, et al. Two-year outcomes of ab interno trabeculectomy with the Trabectome for Chinese primary open angle glaucoma: a retrospective multicenter study. *Int J Ophthalmol* 2018;11(6):945-50.

35. Ahmed SF, Bhatt A, Schmutz M, Mosaed S. Trabectome outcomes across the spectrum of glaucoma disease severity. *Graefes Arch Clin Exp Ophthalmol* 2018;256(9):1703-10.
36. Esfandiari H, Shazly TA, Waxman SA, et al. Similar Performance of Trabectome and Ahmed Glaucoma Devices in a Propensity Score-matched Comparison. *J Glaucoma* 2018;27(6):490-5.
37. Kinoshita-Nakano E, Nakanishi H, Ohashi-Ikeda H, et al. Comparative outcomes of trabeculotomy ab externo versus trabecular ablation ab interno for open angle glaucoma. *Jpn J Ophthalmol* 2018;62(2):201-8.
38. Pahlitzsch M, Davids AM, Zorn M, et al. Three-year results of ab interno trabeculectomy (Trabectome): Berlin study group. *Graefes Arch Clin Exp Ophthalmol* 2018;256(3):611-9.
39. Okeke CO, Miller-Ellis E, Rojas M. Trabectome success factors. *Medicine (Baltimore)* 2017;96(24):e7061.
40. Akil H, Chopra V, Huang AS, et al. Short-Term Clinical Results of Ab Interno Trabeculotomy Using the Trabectome with or without Cataract Surgery for Open-Angle Glaucoma Patients of High Intraocular Pressure. *J Ophthalmol* 2017;2017:8248710.
41. Hashemian SJ, Miraftabi A, Jafari ME, Hemami MR. Combined cataract extraction and trabeculotomy by the internal approach for coexisting cataract and open-angle glaucoma. *J Curr Ophthalmol* 2017;29(1):17-22.
42. Roy P, Loewen RT, Dang Y, et al. Stratification of phaco-trabectome surgery results using a glaucoma severity index in a retrospective analysis. *BMC Ophthalmol* 2017;17(1):30.
43. Kurji K, Rudnisky CJ, Rayat JS, et al. Phaco-trabectome versus phaco-iStent in patients with open-angle glaucoma. *Can J Ophthalmol* 2017;52(1):99-106.
44. Gonnermann J, Bertelmann E, Pahlitzsch M, et al. Contralateral eye comparison study in MICS & MIGS: Trabectome® vs. iStent inject®. *Graefes Arch Clin Exp Ophthalmol* 2017;255(2):359-65.
45. Dang Y, Roy P, Bussel, II, et al. Combined analysis of trabectome and phaco-trabectome outcomes by glaucoma severity. *F1000Res* 2016;5:762.
46. Loewen RT, Roy P, Parikh HA, et al. Impact of a Glaucoma Severity Index on Results of Trabectome Surgery: Larger Pressure Reduction in More Severe Glaucoma. *PLoS One* 2016;11(3):e0151926.
47. Shoji N, Kasahara M, Iijima A, et al. Short-term evaluation of Trabectome surgery performed on Japanese patients with open-angle glaucoma. *Jpn J Ophthalmol* 2016;60(3):156-65.
48. Parikh HA, Bussel, II, Schuman JS, et al. Coarsened Exact Matching of Phaco-Trabectome to Trabectome in Phakic Patients: Lack of Additional Pressure Reduction from Phacoemulsification. *PLoS One* 2016;11(2):e0149384.
49. Yildirim Y, Kar T, Duzgun E, et al. Evaluation of the long-term results of trabectome surgery. *Int Ophthalmol* 2016;36(5):719-26.

50. Mizoguchi T, Nishigaki S, Sato T, et al. Clinical results of Trabectome surgery for open-angle glaucoma. *Clin Ophthalmol* 2015;9:1889-94.
51. Fellman RL, Feuer WJ, Grover DS. Episcleral Venous Fluid Wave Correlates with Trabectome Outcomes: Intraoperative Evaluation of the Trabecular Outflow Pathway. *Ophthalmology* 2015;122(12):2385-91.e1.
52. Bussel, II, Kaplowitz K, Schuman JS, Loewen NA. Outcomes of ab interno trabeculectomy with the trabectome by degree of angle opening. *Br J Ophthalmol* 2015;99(7):914-9.
53. Ahuja Y, Ma Khin Pyi S, Malihi M, et al. Clinical results of ab interno trabeculotomy using the trabectome for open-angle glaucoma: the Mayo Clinic series in Rochester, Minnesota. *Am J Ophthalmol* 2013;156(5):927-35.e2.
54. Ting JL, Damji KF, Stiles MC. Ab interno trabeculectomy: outcomes in exfoliation versus primary open-angle glaucoma. *J Cataract Refract Surg* 2012;38(2):315-23.
55. Francis BA, Minckler D, Dustin L, et al. Combined cataract extraction and trabeculotomy by the internal approach for coexisting cataract and open-angle glaucoma: initial results. *J Cataract Refract Surg* 2008;34(7):1096-103.
56. Minckler D, Mosaed S, Dustin L, Ms BF. Trabectome (trabeculectomy-internal approach): additional experience and extended follow-up. *Trans Am Ophthalmol Soc* 2008;106:149-59; discussion 59-60.
57. Minckler D, Baerveldt G, Ramirez MA, et al. Clinical results with the Trabectome, a novel surgical device for treatment of open-angle glaucoma. *Trans Am Ophthalmol Soc* 2006;104:40-50.
58. Minckler DS, Baerveldt G, Alfaro MR, Francis BA. Clinical results with the Trabectome for treatment of open-angle glaucoma. *Ophthalmology* 2005;112(6):962-7.