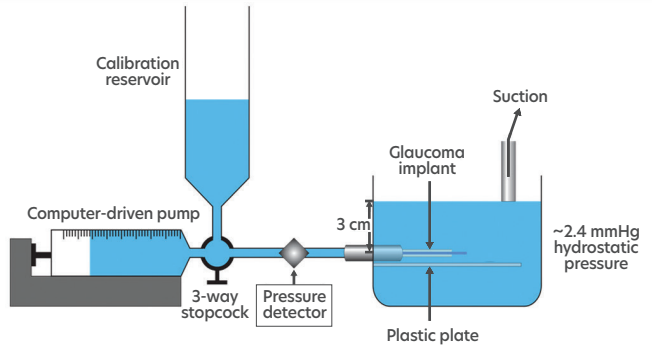
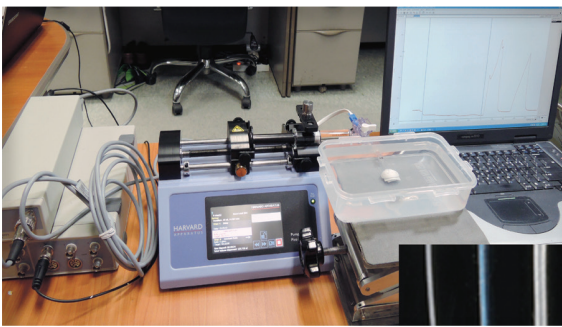


MicroMT*는 안전하고 효과적인 Outflow 특성을 보여주었습니다¹

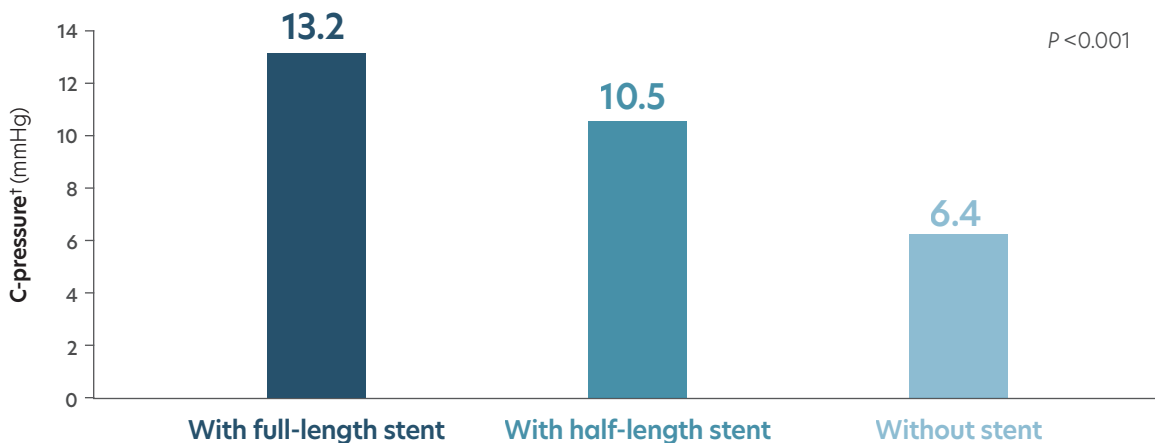
MicroMT* silicone 튜브(내경 100 μ m)에 증류수를 2 μ L/min의 유량으로 공급하면서 튜브 내 스텐트(7-0 nylon intraluminal stent 포함)가 있는 경우, 절반만 있는 경우, 없는 경우 각각에 대하여 fluid dynamics를 측정하였습니다.¹



Schematic diagram of the perfusion apparatus used in the present experiment. The instrument consisted of a perfusion pump, syringe, pressure transducer, pressure detector, and a housing unit where the glaucoma implant was submerged in fluid. The height of the fluid was fixed at 3 cm (approximately 2.4 mmHg) from the plastic plate. The three-way stopcock was used to remove the fluid to maintain the baseline pressure during the experiments.

MicroMT* 튜브의 C-pressure는 유량 2 μ L/min, 상공막정맥압 6 mmHg의 생리학적인 상태에서 튜브 내 스텐트가 있는 경우, 절반만 있는 경우, 없는 경우 각각에 대하여 13.2 $\pm$ 3.0, 10.5 $\pm$ 2.4, 6.4 $\pm$ 0.2 mmHg로 측정되었습니다.¹

C-pressure[†] of the silicone tube of a MT type glaucoma shunt device (MicroMT*) with and without an intraluminal stent (n=30, flow 2 μ L/min)¹



[†]C-pressure (corrected pressure), the pressure adjusted based on the assumption that the pressure at the 0 μ L/min flow would be 6 mmHg (known estimated episcleral venous pressure).

*MicroMT는 Astream®의 prototype device입니다.

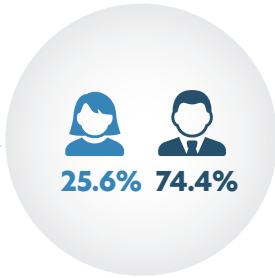
REFERENCE 1. Han JC, et al. Korean J Ophthalmol 2019;33:371-8.

약물 치료에도 불구하고 IOP 조절이 되지 않는 **한국인 녹내장 환자**를 대상으로 Astream® Prototype의 Surgical Outcome을 확인하였습니다¹

Baseline characteristics of subjects¹



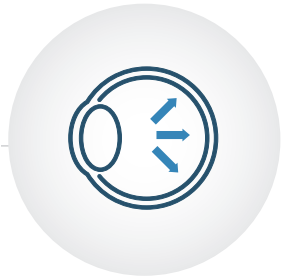
- 43 eyes of 43 subjects
- Mean age of 57.3 (14.8)*
- Range 27-81



- Female 25.6%
- Male 74.4%



- POAG 94%
- PACG 3%
- Pseudoexfoliative glaucoma 3%
- Exclusion criteria included severe conjunctival fibrosis because of previous ocular surgeries or ocular pathology, uveitic glaucoma, or neovascular glaucoma.

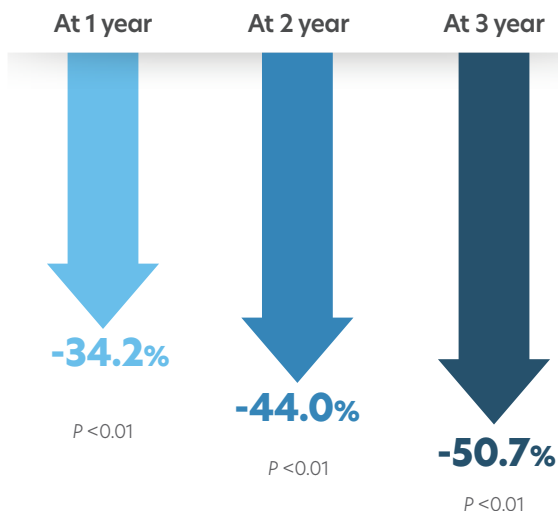


- IOP 22.5 mmHg (6.9)*
- Range 18-44
- Number of IOP-lowering medication 2.6 (0.6)*
- Range 1-3
- Visual acuity (logMAR)[†] 0.35 (0.42)*
- Range 0-2.00

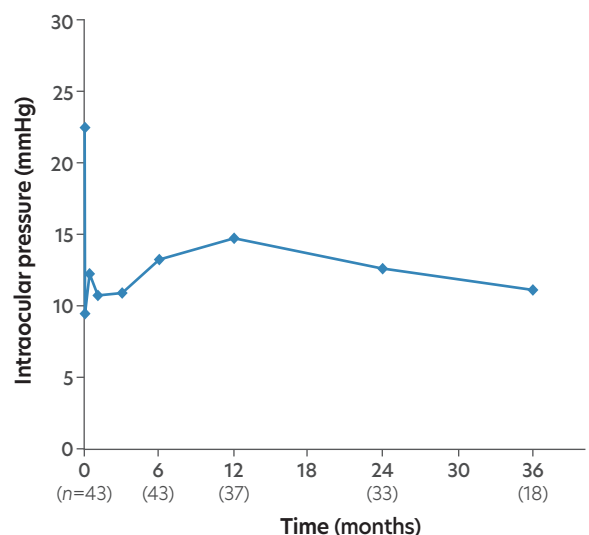
*Mean (SD). [†]Logarithm of the minimum.

Astream® Prototype은 이식 후 강력한 IOP 강하를 보이며, 장기간 IOP를 안정적으로 유지하였습니다¹

Mean IOP reduction % from baseline after implantation of the MicroMT^{*1}



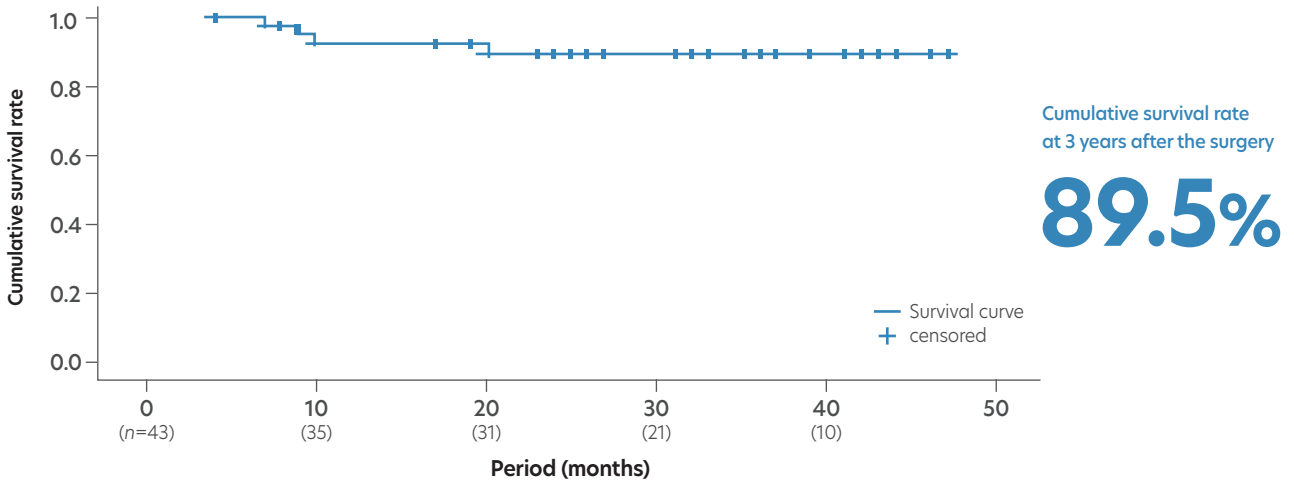
Changes in IOP after implantation of the MicroMT^{*1}



*MicroMT는 Astream®의 prototype device입니다.

Astream® Prototype 이식 후 장기간 높은 Survival Rate를 보였습니다¹

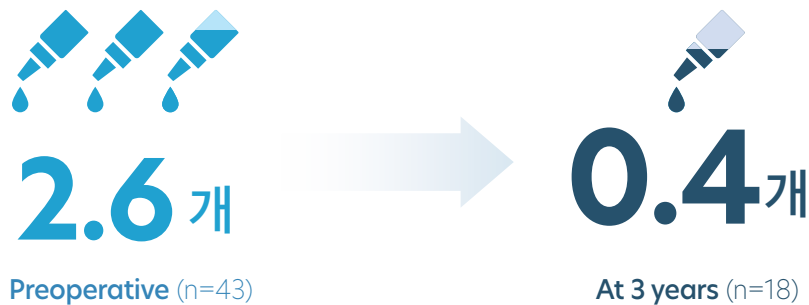
Kaplan-Meier survival curve for the implantation of the MicroMT^{®1}



*MicroMT는 Astream®의 prototype device입니다.

Astream® Prototype 이식 후 IOP 강하 약물 사용 개수가 유의하게 감소하였습니다¹

Number of IOP-lowering medications¹



IOP, intraocular pressure; logMAR, logarithm of the minimum angle of resolution; MicroMT, micro membrane-tube; PACG, primary angle-closure glaucoma; POAG, primary open-angle glaucoma; SD, standard deviation.

REFERENCE 1. Ahn BH, et al. Clin Exp Ophthalmol 2016;44:776-782.

Astream® Prototype 이식 환자와 섬유주절제술을 받은 한국인 녹내장 환자의 Clinical Outcome을 비교 분석하였습니다¹

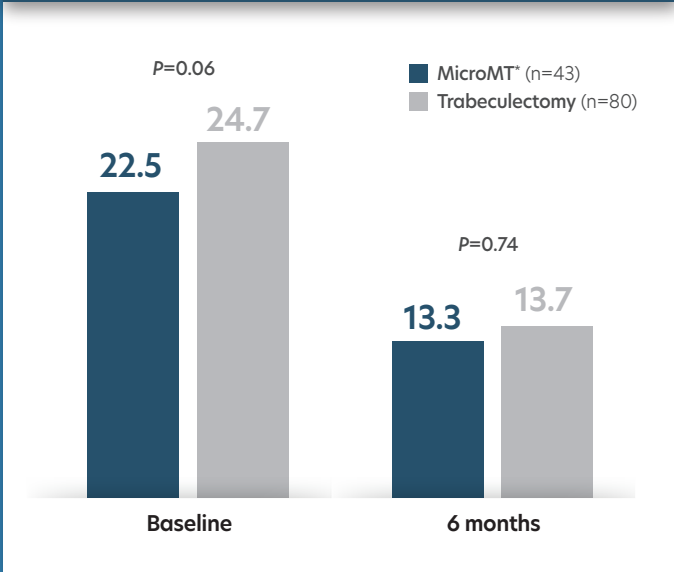
2011년 3월부터 2013년 7월까지 삼성서울병원에서 MicroMT* 삽입술을 시행받은 녹내장 환자의 의무기록을 후향적으로 분석

Baseline characteristics of subjects¹

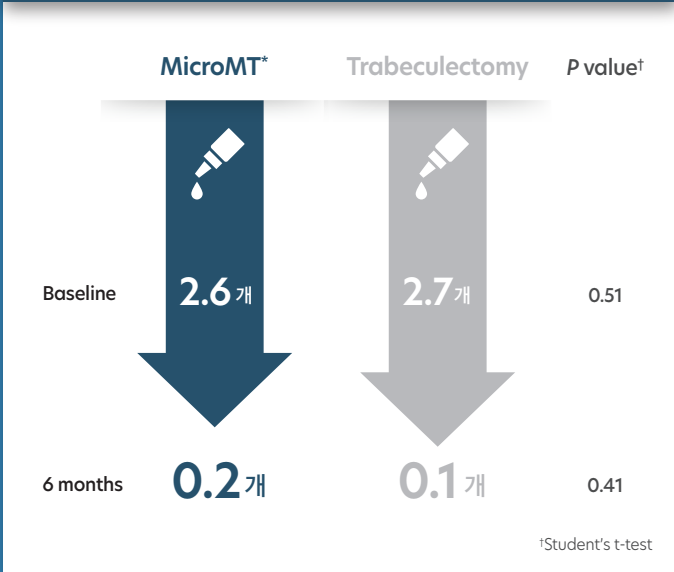
	MicroMT* group (n=43)	Trabeculectomy group (n=80)	P value
Age at operation (years)			
Mean ± SD	57.3 ± 14.8	61.3 ± 16.0	0.17
Range	27 - 81	20 - 85	
Follow-up period (months)	27.9 ± 13.7	25.8 ± 13.5	0.40
Gender (male:female)	32 : 11	46 : 34	0.08
Diabetes mellitus, n (%)	6 (14%)	20 (25%)	0.17
Hypertension, n (%)	14 (33%)	31 (39%)	0.56
Glaucoma diagnosis			
Primary open angle	41 (94%)	62 (78%)	
Chronic angle closure	1 (3%)	10 (13%)	
Pseudoexfoliative	1 (3%)	5 (7%)	
Uveitic	0	2 (3%)	
BCVA (logMAR), mean ± SD	0.35 ± 0.42	0.36 ± 0.49	0.96
Combined cataract surgery, n (%)	11 (26%)	28 (35%)	0.32

Astream® Prototype은 섬유주절제술과 비슷한 안압 조절 및 IOP 강하 약물 사용 감소 효과를 보였습니다¹

IOP (mmHg) at baseline and 6 months¹

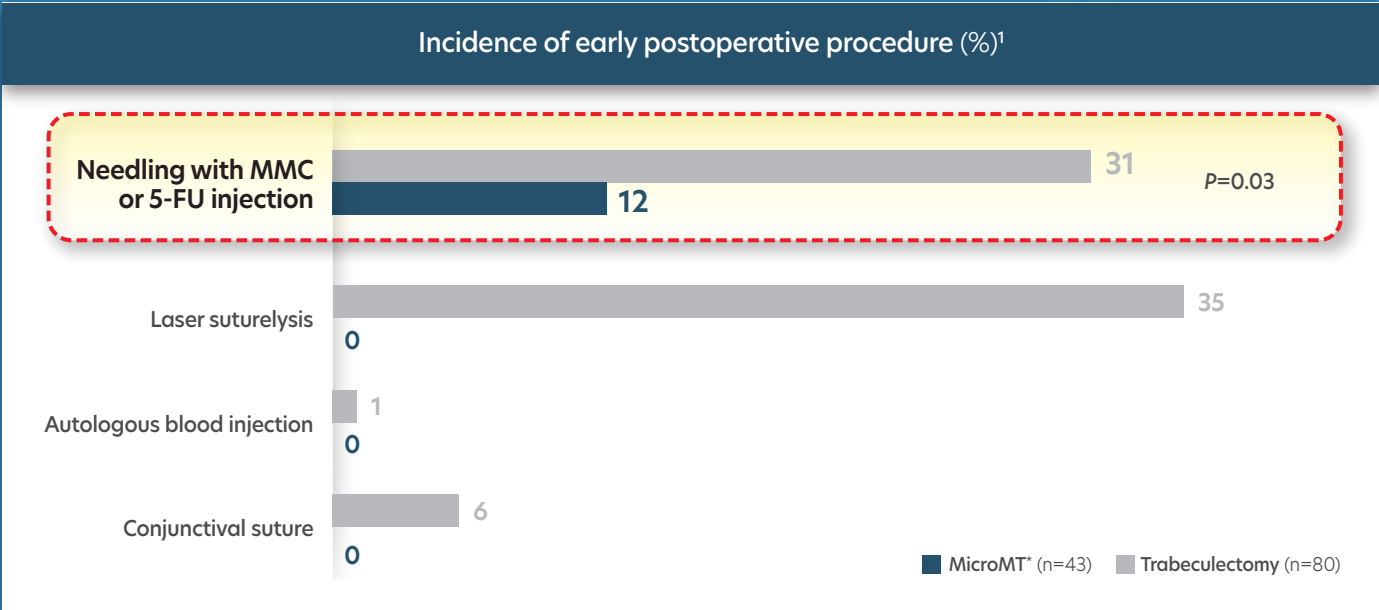


Number of IOP-lowering medications¹

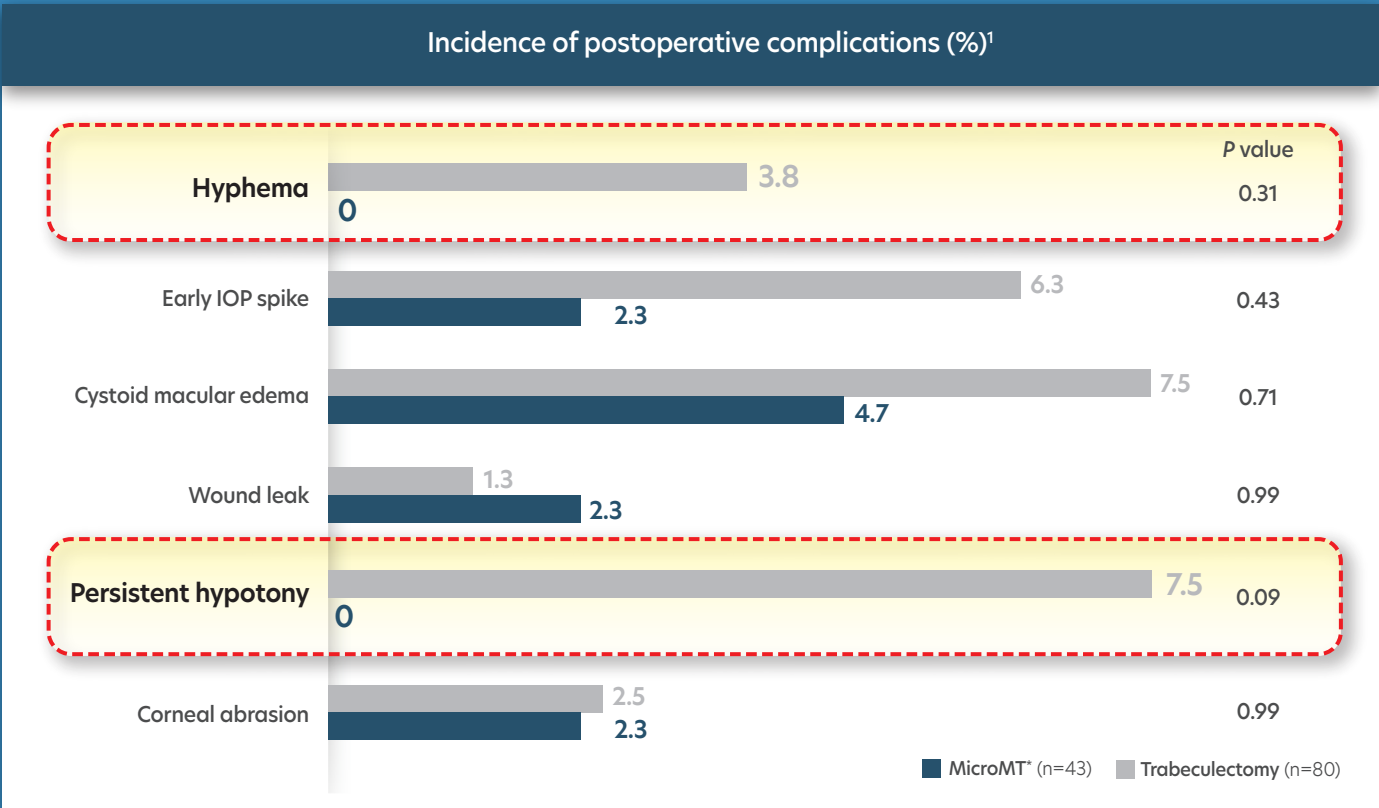


*MicroMT는 Astream®의 prototype device입니다.

Astream® Prototype 이식 후 여과포 유착으로 Needling을 시행한 비율이 섬유주절제술 대비 유의하게 적었습니다¹



Astream® Prototype 이식 후 지속적인 저안압, 전방출혈이 발생한 증례는 없었습니다¹



*MicroMT는 Astream®의 prototype device입니다.
5-FU, 5-fluorouracil; BCVA, best corrected visual acuity; IOP, intraocular pressure; logMAR, logarithm of the minimum angle of resolution; MicroMT, micro membrane-tube; MMC, mitomycin C; SD standard deviation.
REFERENCE 1. Data on file.