

Table S1. Demographic and clinical characteristics of the study groups (XEN group and Control group). All PARTICIPANTS have bilateral POAG. One eye of each patient was assigned to the XEN group and the other to the Control group (the POAG group).

	XEN Group n = 18		Control Group n = 18		p-Value *
	Mean \pm SD	95% CI	Mean \pm SD	95% CI	
SE [D]	-0.75 \pm 1.0	-2.5–1.50	-0.25 \pm 0.75	-2.5–1.75	0.59
CCT [μ m]	534 \pm 36	521–548	535 \pm 41	516–555	0.51
ACD [μ m]	3.24 \pm 0.77	2.91–3.57	3.01 \pm 0.72	2.56–3.46	0.57
AXL [μ m]	23.9 \pm 1.7	23.1–24.4	23.1 \pm 1.4	22.9–24.1	0.73
BCVA [logMAR]	0.06 \pm 0.10	-0.02–0.22	0.08 \pm 0.12	0.00–0.20	0.81
MD [dB]	-8.8 \pm 8.1	-11.7 – -6.5	-8.7 \pm 8.5	-13.3 – -4.3	0.92
PSD [dB]	6.1 \pm 4.1	4.9– 7.2	6.1 \pm 3.9	4.1–8.1	0.74
RNFLT [μ m]	62 \pm 11	–	64 \pm 14	–	0.87
Number of patients on topical medication	3		18		–
Number of patients on systemic medication	0		0		–

Mann-Whitney U test; CCT - central corneal thickness, ACD - anterior chamber depth, AXL - axial length of the globe, BCVA - best-corrected visual acuity, MD - mean deviation (perimetry), PSD - pattern standard deviation (perimetry), RNFLT - retinal nerve fiber layer thickness, SE-spherical equivalent

Table S2. Variables and definitions of the corneal deformation signal parameters obtained by Ocular Response Analyzer

Variable	Description
IOPg [mmHg]	Goldmann correlated intraocular pressure
IOPcc [mmHg]	Corneal compensated intraocular pressure
CH [mmHg]	Corneal hysteresis; parameter describing corneal viscosity
CRF [mmHg]	Corneal resistance factor
WS	Waveform score - quality factor informing about the reliability of the measurement
aindex, bindex	Smoothness – Degree of “non-monotonicity” of rising and falling edges of peak1 and peak2 (normalized by area)
p1area, p2area	Area of peak1 or peak2 (sum of values) derived from upper 75% of applanation peak
p1area1, p2area1	Area of peak1 or peak2 (sum of values) derived from upper 50% of applanation peak

aindex	Control	8.4 ± 0.9	8.8 ± 1.2	8.3 ± 1.5	8.2 ± 1.2	8.7 ± 1.3	0.78 IV
	XEN-Gel	8.7 ± 1.3	8.8 ± 0.7	8.2 ± 1.1	8.8 ± 0.6	8.8 ± 0.9	0.37 IV
p1area	Control	4200 ± 1300	3800 ± 1100	3800 ± 1400	3340 ± 990	3100 ± 1100	<0.001 III
	XEN-Gel	4200 ± 1500	3900 ± 1000	3800 ± 1100	3400 ± 1000	3400 ± 1100	<0.05 IV
p1area1	Control	1800 ± 630	1620 ± 510	1640 ± 690	1370 ± 460	1350 ± 510	<0.001 III
	XEN-Gel	1800 ± 790	1660 ± 510	1580 ± 540	1450 ± 460	1420 ± 490	<0.05 III
aspect1	Control	18.4 ± 4.6	16.9 ± 5.6	15.3 ± 5.4	13.6 ± 5.1	12.8 ± 5.4	<0.001 III
	XEN-Gel	17.4 ± 6.2	16.7 ± 4.7	15.2 ± 5.4	13.8 ± 6.0	13.4 ± 6.2	<0.05 III
aspect11	Control	24.5 ± 7.5	23 ± 9.6	20.6 ± 6.3	18.3 ± 6.2	17 ± 7.5	<0.005 III
	XEN-Gel	22.5 ± 8.4	21.9 ± 7.1	20.3 ± 7.9	18.5 ± 9.8	17 ± 8.5	<0.05 IV
h1	Control	420 ± 100	390 ± 110	370 ± 120	320 ± 100	300 ± 110	<0.001 III
	XEN-Gel	400 ± 130	382 ± 93	360 ± 110	330 ± 110	320 ± 120	<0.01 III
h11	Control	279 ± 69	257 ± 75	245 ± 83	217 ± 66	202 ± 74	<0.001 III
	XEN-Gel	268 ± 85	255 ± 62	242 ± 73	218 ± 77	211 ± 80	<0.01 III
w1	Control	23.3 ± 2.1	23.6 ± 2.2	24.8 ± 2.5	25.6 ± 4.4	25.3 ± 4.3	0.13 IV
	XEN-Gel	24.4 ± 3.3	23.7 ± 2.2	24.8 ± 2.8	25 ± 2.9	25.1 ± 3.5	<0.05 IV
w11	Control	12.2 ± 2	12.6 ± 2.2	12.9 ± 2.4	13.5 ± 3.3	13.7 ± 4.1	0.72 IV
	XEN-Gel	13.2 ± 2.7	12.6 ± 1.9	13 ± 2.7	13.3 ± 2.9	13.8 ± 2.8	0.47 III
uslope1	Control	71 ± 21	65 ± 23	61 ± 17	56 ± 19	48 ± 21	<0.001 III
	XEN-Gel	68 ± 21	62 ± 18	58 ± 20	56 ± 29	51 ± 27	<0.05 IV
uslope11	Control	65 ± 20	62 ± 27	56 ± 17	55 ± 22	46 ± 21	<0.05 III
	XEN-Gel	62 ± 17	58 ± 16	57 ± 22	51 ± 26	49 ± 23	<0.05 IV
dslope1	Control	26 ± 7	24 ± 8	21 ± 8	19 ± 8	18 ± 8	<0.001 III
	XEN-Gel	25 ± 9	24 ± 8	22 ± 8	19 ± 8	19 ± 9	<0.05 IV
dslope11	Control	41 ± 13	38 ± 17	33 ± 12	29 ± 11	28 ± 13	<0.005 III
	XEN-Gel	37 ± 15	37 ± 15	34 ± 16	29 ± 15	27 ± 13	<0.05 III
dive1	Control	320 ± 100	320 ± 110	310 ± 120	266 ± 92	250 ± 120	<0.05 III
	XEN-Gel	340 ± 120	321 ± 78	320 ± 110	270 ± 110	270 ± 120	<0.05 III
path1	Control	21.7 ± 3.9	21 ± 3.8	20.6 ± 3.5	20.7 ± 3.8	20.4 ± 6.3	0.71 IV
	XEN-Gel	20.1 ± 2.8	20.2 ± 2.8	20.5 ± 3.9	19.3 ± 3.3	19.3 ± 3.4	0.35 III
path11	Control	31.5 ± 5.4	32 ± 8	30.4 ± 7.8	31.9 ± 7.2	30.1 ± 10.1	0.58 IV
	XEN-Gel	30.2 ± 5.5	30.2 ± 6.2	31.3 ± 9.7	28.1 ± 4.4	29.2 ± 7.6	0.43 IV
mslew1	Control	119 ± 33	108 ± 33	103 ± 32	93 ± 30	82 ± 33	<0.01 IV
	XEN-Gel	116 ± 37	107 ± 33	101 ± 33	92 ± 40	87 ± 41	<0.05 IV
slew1	Control	69 ± 20	67 ± 26	63 ± 17	57 ± 20	49 ± 24	<0.01 III
	XEN-Gel	69 ± 21	63 ± 19	62 ± 20	57 ± 29	51 ± 28	0.05 IV
Second applanation (peak2)							
bindex	Control	8.7 ± 1.3	8.6 ± 1.1	8.2 ± 1.6	8.3 ± 1.5	9.0 ± 0.9	0.18 IV
	XEN-Gel	8.9 ± 1.2	8.8 ± 0.8	8.4 ± 1.3	8.4 ± 1.4	8.7 ± 1.3	0.27 IV

p2area	Control	2480 ± 740	2350 ± 670	2280 ± 590	2390 ± 700	2210 ± 680	0.06 III
	XEN-Gel	2250 ± 650	2400 ± 710	2290 ± 600	2200 ± 730	2340 ± 760	0.39 III
p2area1	Control	1050 ± 370	980 ± 290	940 ± 270	1000 ± 310	950 ± 320	0.09 III
	XEN-Gel	950 ± 280	1010 ± 320	940 ± 260	910 ± 310	990 ± 350	0.33 III
aspect2	Control	17.5 ± 5	16.7 ± 6.1	14.7 ± 6.4	14.9 ± 6.2	13.6 ± 6.2	<0.05 III
	XEN-Gel	19.4 ± 6.4	17.6 ± 4.9	15.3 ± 5.2	13.4 ± 5.8	14.1 ± 7.0	<0.001 III
aspect21	Control	25.6 ± 8.6	24.3 ± 9	22.8 ± 10.2	21.2 ± 8.6	18.4 ± 8.6	<0.05 IV
	XEN-Gel	28.5 ± 9.9	25 ± 7.5	22.3 ± 8.7	19.4 ± 10.1	19.8 ± 11.9	<0.005 IV
h2	Control	319 ± 66	304 ± 91	286 ± 78	283 ± 77	259 ± 88	<0.01 III
	XEN-Gel	316 ± 78	310 ± 63	285 ± 70	254 ± 73	268 ± 89	<0.01 III
h21	Control	213 ± 44	203 ± 61	191 ± 52	189 ± 51	173 ± 58	<0.01 III
	XEN-Gel	210 ± 52	207 ± 42	190 ± 47	169 ± 49	178 ± 60	<0.005 III
w2	Control	20.1 ± 3.3	20.3 ± 3.4	21.5 ± 4.1	21.8 ± 4.8	21.7 ± 4.5	0.19 III
	XEN-Gel	19.2 ± 4	19.6 ± 3.9	21.5 ± 4.9	22 ± 5.2	22 ± 5.5	<0.01 IV
w21	Control	9.6 ± 2	9.8 ± 2.3	10.4 ± 2.4	10.8 ± 3.3	11.3 ± 3.2	0.18 IV
	XEN-Gel	9.0 ± 2.0	9.5 ± 2.4	10.5 ± 2.9	11.0 ± 3.1	11.4 ± 3.7	<0.005 III
uslope2	Control	82 ± 23	82 ± 30	81 ± 33	70 ± 24	65 ± 30	<0.05 III
	XEN-Gel	92 ± 27	89 ± 26	78 ± 27	60 ± 24	64 ± 28	<0.001 III
uslope21	Control	41 ± 16	38 ± 14	33 ± 16	33 ± 15	28 ± 15	0.13 III
	XEN-Gel	73 ± 28	72 ± 24	64 ± 24	47 ± 18	51 ± 19	<0.001 III
dslope2	Control	23 ± 7	22 ± 8	19 ± 9	19 ± 8	17 ± 8	<0.05 III
	XEN-Gel	26 ± 10	23 ± 7	20 ± 6	17 ± 8	19 ± 9	<0.05 III
dslope21	Control	68 ± 16	66 ± 27	67 ± 28	61 ± 21	54 ± 25	<0.05 IV
	XEN-Gel	45 ± 20	37 ± 11	34 ± 15	30 ± 18	31 ± 22	<0.05 IV
dive2	Control	235 ± 68	236 ± 86	222 ± 73	217 ± 66	198 ± 70	0.10 IV
	XEN-Gel	243 ± 93	242 ± 69	208 ± 55	188 ± 66	204 ± 70	<0.05 III
path2	Control	25.3 ± 4.8	25 ± 4.2	25.1 ± 5.2	23.4 ± 4.5	22.2 ± 5.1	<0.05 III
	XEN-Gel	27.5 ± 6.3	25.8 ± 4.8	24.6 ± 5.3	23.2 ± 4.8	22.9 ± 5.8	<0.005 IV
path21	Control	36.7 ± 6.6	35.4 ± 5.6	37 ± 7.1	35.1 ± 8.2	32.2 ± 7.5	0.07 IV
	XEN-Gel	37.2 ± 8.3	35.7 ± 5.5	35.8 ± 8.1	33.1 ± 6.8	32 ± 7.8	<0.05 III
mslew2	Control	133 ± 30	130 ± 39	121 ± 38	114 ± 38	106 ± 40	<0.01 III
	XEN-Gel	137 ± 27	137 ± 28	122 ± 36	102 ± 32	107 ± 45	<0.001 IV
slew2	Control	82 ± 22	84 ± 29	83 ± 32	72 ± 23	65 ± 29	<0.05 III
	XEN-Gel	92 ± 27	90 ± 27	81 ± 28	61 ± 23	65 ± 27	<0.001 III