Corneal remodelling and topography following biological inlay implantation with combined crosslinking in a rabbit model

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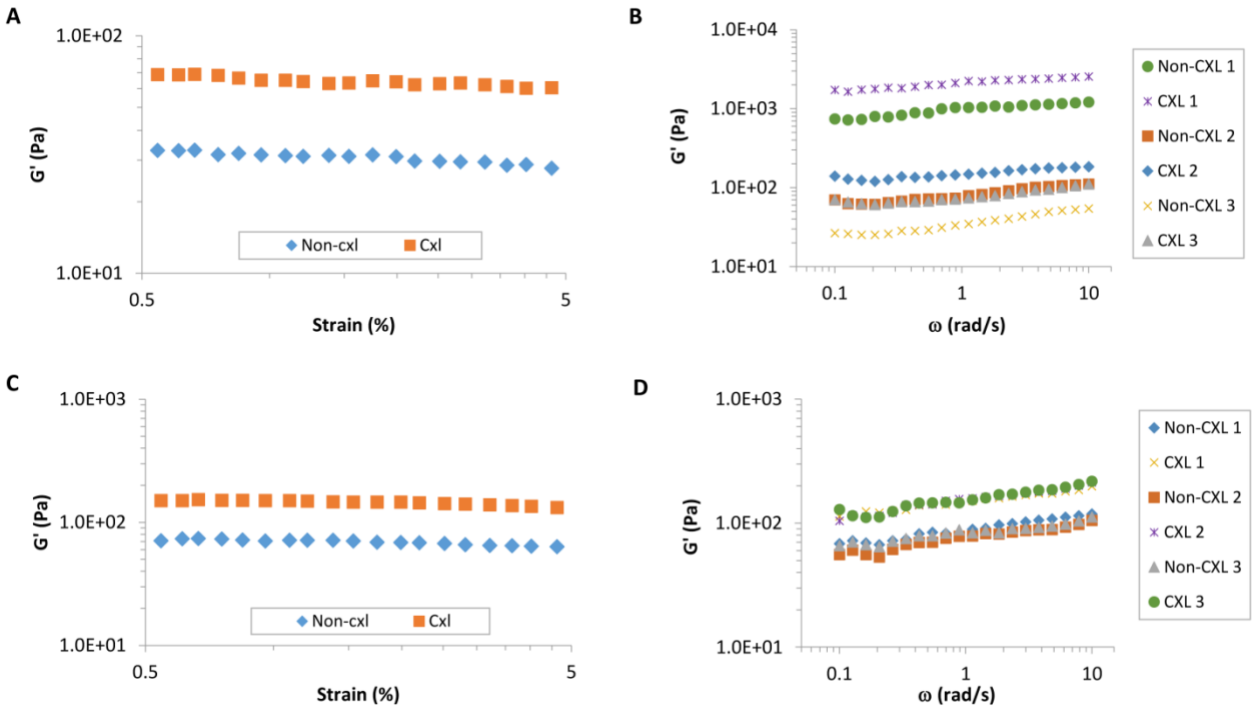
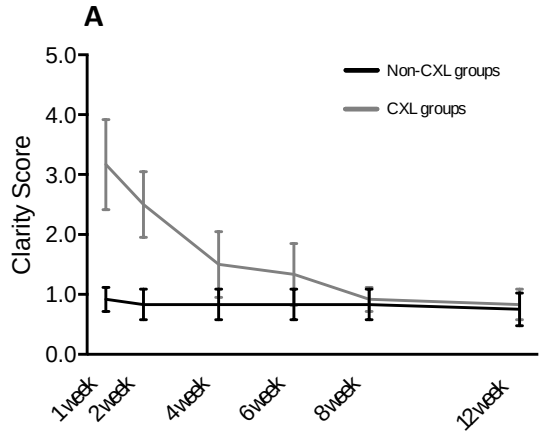
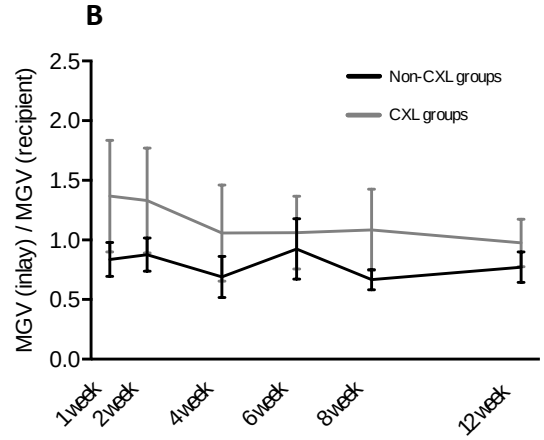


Supplementary Figure S1. Dynamic strain sweep and comparison of frequency dependent G' of crosslinked and non-crosslinked lenticules. (A) Dynamic strain sweep of crosslinked and non-crosslinked human lenticules performed at 1 rad/s and room temperature. (B) G' of paired crosslinked and non-crosslinked human lenticules performed at 1% strain and room temperature. (C) Similar to human lenticules, dynamic strain sweep of rabbit lenticules was also performed at 1 rad/s and room temperature. (D) G' of paired crosslinked and non-crosslinked rabbit lenticules.

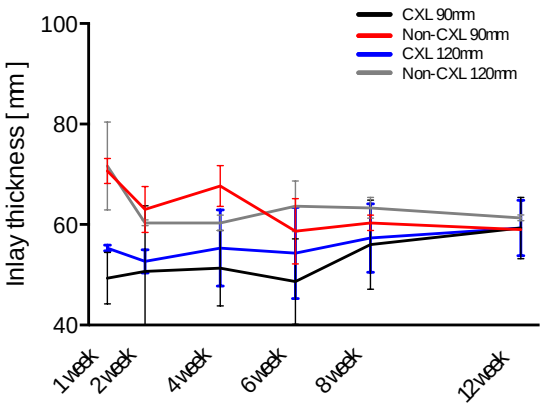


	Non-CXL n=6	CXL n=6
1 week	0.92 ±0.20	3.17 ±0.75
2 week	0.83 ±0.26	2.50 ±0.55
4 week	0.83 ±0.26	1.50 ±0.55
6 week	0.83 ±0.26	1.33 ±0.52
8 week	0.83 ±0.26	0.92 ±0.20
12 week	0.75 ±0.27	0.83 ±0.26



	Non-CXL n=6	CXL n=6
1 week	0.84 ±0.14	1.34 ±0.47
2 week	0.88 ±0.14	1.33 ±0.44
4 week	0.69 ±0.17	1.06 ±0.40
6 week	0.93 ±0.25	1.06 ±0.31
8 week	0.67 ±0.08	1.09 ±0.34
12 week	0.77 ±0.13	0.98 ±0.20

Supplementary Figure S2: Clarity of non-CXL and CXL inlays following intrastromal implantation. (A) Clarity Score for the CXL treated and untreated inlays, evaluated by biomicroscopy. 0: None, 4: Severe. (B) The ratio of the mean gray value (MGV_{inlay} / $MGV_{recipient}$) for the CXL treated (CXL-90 and CXL-120) and untreated groups (non-CXL-90 and non-CXL-120). The MGV, ranging from 0 to 255, was measured using 32-bit grey scale OCT images and the ImageJ software. No difference in MGV ratio was seen between the CXL treated and untreated inlays at 12-week examination (p=0.06).



	90 µm depth		120 µm depth	
	Non-CXL n=3	**CXL n=3**	**Non-CXL n=3**	**CXL n=3**
1 week	70.7±2.5	49.3±5.1	71.7±8.7	55.3±0.6
2 week	63.0±4.6	50.7±13.1	60.3±0.6	52.7±2.3
4 week	67.7±4.0	51.3±7.5	60.3±1.5	55.3±7.6
6 week	58.7±6.5	48.7±8.5	63.7±5.0	54.3±9.1
8 week	60.3±1.5	56.0±8.9	63.3±2.1	57.3±6.8
12 week	59.0±0.0	59.3±6.1	61.3±0.6	59.3±5.5

Supplementary Figure S3: The average inlay thickness acquired using anterior segment optical coherence tomography and the ImageJ software.