Supplementary Material

The complete search strategies used for PubMed/MEDLINE, Scopus, Web of Science Core Collection and IEEE Xplore are presented. Search syntax was adapted to the requirements of each database while preserving the same core concepts relating to corneal imaging, geometric misalignment and artificial intelligence.

Table S1. Database-specific search strategies used in the literature review.

Database	Search	Search strategy
PubMed/MEDLINE	Geometric misalignment	(("corneal topography"[Title/Abstract] OR "corneal tomography"[Title/Abstract] OR "corneoscleral topography"[Title/Abstract] OR "corneoscleral tomography"[Title/Abstract] OR videokeratograph*[Title/Abstract] OR "eye surface profiler"[Title/Abstract]) AND (misalign*[Title/Abstract] OR fixation[Title/Abstract] OR decentr*[Title/Abstract] OR tilt[Title/Abstract] OR rotation[Title/Abstract] OR translation[Title/Abstract] OR "ocular axis"[Title/Abstract] OR "visual axis"[Title/Abstract] OR limbus[Title/Abstract] OR levelling[Title/Abstract] OR leveling[Title/Abstract] OR registration[Title/Abstract] OR stitching[Title/Abstract] OR repeatab*[Title/Abstract] OR agreement[Title/Abstract]))
PubMed/MEDLINE	Artificial intelligence	((keratoconus[Title/Abstract] OR "corneal ectasia"[Title/Abstract]) AND ("artificial intelligence"[Title/Abstract] OR "machine learning"[Title/Abstract] OR "deep learning"[Title/Abstract] OR "neural network"[Title/Abstract] OR "neural networks"[Title/Abstract]) AND ("corneal topography"[Title/Abstract] OR "corneal tomography"[Title/Abstract] OR "anterior segment OCT"[Title/Abstract] OR "optical coherence tomography"[Title/Abstract]))
Scopus	Geometric misalignment	TITLE-ABS(("corneal topography" OR "corneal tomography" OR "corneoscleral topography" OR "corneoscleral tomography" OR videokeratograph* OR "eye surface profiler") AND (misalign* OR fixation OR decentr* OR tilt OR rotation OR translation OR "ocular axis" OR "visual axis" OR limbus OR levelling OR leveling OR registration OR stitching OR repeatab* OR agreement))
Scopus	Artificial intelligence	TITLE-ABS((keratoconus OR "corneal ectasia") AND ("artificial intelligence" OR "machine learning" OR "deep learning" OR "neural network" OR "neural networks") AND ("corneal topography" OR "corneal tomography" OR "anterior segment OCT" OR "optical coherence tomography"))
Web of Science Core Collection	Geometric misalignment	((TI=("corneal topography" OR "corneal tomography" OR "corneoscleral topography" OR "corneoscleral tomography" OR videokeratograph* OR "eye surface profiler") OR AB=("corneal topography" OR "corneal tomography" OR "corneoscleral topography" OR "corneoscleral tomography" OR videokeratograph* OR "eye surface profiler")) AND (TI=(misalign* OR fixation OR decentr* OR tilt OR rotation OR translation OR "ocular axis" OR "visual axis" OR limbus OR levelling OR leveling OR registration OR stitching OR repeatab* OR agreement) OR AB=(misalign* OR fixation OR decentr* OR tilt OR rotation OR translation OR "ocular axis" OR "visual axis" OR limbus OR levelling OR leveling OR registration OR stitching OR repeatab* OR agreement)))
Web of Science Core Collection	Artificial intelligence	((TI=(keratoconus OR "corneal ectasia") OR AB=(keratoconus OR "corneal ectasia")) AND (TI=("artificial intelligence" OR "machine learning" OR "deep learning" OR "neural network" OR "neural networks") OR AB=("artificial intelligence" OR "machine learning" OR "deep learning" OR "neural network" OR "neural networks")) AND (TI=("corneal topography" OR "corneal tomography" OR "anterior segment OCT" OR "optical coherence tomography") OR AB=("corneal topography" OR "corneal tomography" OR "anterior segment OCT" OR "optical coherence tomography")))

Database	Search	Search strategy
IEEE Xplore	Geometric misalignment	("corneal topography" OR "corneal tomography" OR "corneoscleral topography" OR "corneoscleral tomography" OR videokeratograph* OR "eye surface profiler") AND (misalign* OR fixation OR decentr* OR tilt OR rotation OR translation OR "ocular axis" OR "visual axis" OR limbus OR levelling OR leveling OR registration OR stitching OR repeatab* OR agreement)
IEEE Xplore	Artificial intelligence	(keratoconus OR "corneal ectasia") AND ("artificial intelligence" OR "machine learning" OR "deep learning" OR "neural network" OR "neural networks") AND ("corneal topography" OR "corneal tomography" OR "anterior segment OCT" OR "optical coherence tomography")