Human corneal anatomy redefined: a novel pre-Descemet's layer (Dua's layer)

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#	Paper	IF	Citations
336	Lessons in corneal structure and mechanics to guide the corneal surgeon. *Ophthalmology*, **2013**, 120, 1715-7	7.3	16
335	Blunt scissors stromal dissection technique for deep anterior lamellar keratoplasty. **2014**, 8, 1849-54		8
334	Tonometry. **2014**,		0
333	Gelatin-Based Materials in Ocular Tissue Engineering. **2014**, 7, 3106-3135		204
332	Anatomy of the Eye and the Role of Ocular Mucosa in Drug Delivery. **2014**, 39-60		1
331	DMEK lenticule preparation from donor corneas using a novel 'SubHyS' technique followed by anterior corneal dissection. **2014**, 98, 1120-5		17
330	Deep anterior lamellar keratoplasty for keratoconus: a review. **2014**, 40, 382-9		16
329	Modified Miyake-Apple camera: illustration of deep anterior lamellar keratoplasty pearls learned from simultaneous anterior and posterior corneal imaging. **2014**, 33, 733-7		3
328	Pre-Descemet's endothelial keratoplasty (PDEK). **2014**, 98, 1181-5		80
327	Re: Pinna et al.: Meibomian gland dysfunction and hypercholesterolemia (Ophthalmology 2013;120:2385-2389). *Ophthalmology*, **2014**, 121, e18-9	7.3	
326	Atypical hydrops in keratoconus. **2014**, 34, 951-5		5
325	Author reply: To PMID 23714320. *Ophthalmology*, **2014**, 121, e25-6	7.3	8
324	Re: Dua et al.: Human corneal anatomy redefined: a novel pre-Descemet layer (Dua's layer) (Ophthalmology 2013;120:1778-85). *Ophthalmology*, **2014**, 121, e24-5	7.3	17
323	Clinicopathology of graft detachment after Descemet's membrane endothelial keratoplasty. **2014**, 92, e556-61		29
322	Modified big-bubble deep anterior lamellar keratoplasty using peripheral air injection. **2014**, 98, 1597-600		9
321	Author reply: To PMID 23474249. *Ophthalmology*, **2014**, 121, e23-4	7.3	1
320	The collagen matrix of the human trabecular meshwork is an extension of the novel pre-Descemet's layer (Dua's layer). **2014**, 98, 691-7		40

319	Re: Ramakrishnaiah et al.: Reliability of magnetic resonance imaging for the detection of hypopituitarism in children with optic nerve hypoplasia (Ophthalmology 2014;121:387-91). *Ophthalmology*, **2014**, 121, e26-7	7.3	1
318	Re: Jester et al.: Lessons in corneal structure and mechanics to guide the corneal surgeon (Ophthalmology 2013;120:1715-1717). *Ophthalmology*, **2014**, 121, e18	7.3	4
317	Pediatric genetic disease of the cornea. **2014**, 3, 195-207		4
316	Effects produced by different types of laser in cornea of Guinea pigs: Identification of a laser capable of producing superficial lesions without leaving scars. **2015**, 90, 458-466		
315	Bubble technique for Descemet membrane endothelial keratoplasty tissue preparation in an eye bank: air or liquid?. **2015**, 93, e129-34		18
314	Dua□ layer: discovery, characteristics, clinical applications, controversy and potential relevance to glaucoma. **2015**, 10, 531-547		20
313	Pachymetry-guided intrastromal air injection ("pachy-bubble") for deep anterior lamellar keratoplasty: results of the first 110 cases. **2015**, 34, 625-31		26
312	Confocal microscopy investigation of the deep corneal layers. **2015**,		
311	Intraoperative review of different bubble types formed during pneumodissection (big-bubble) deep anterior lamellar keratoplasty. **2015**, 34, 621-4		36
310	On behalf of tradition: An analysis of medical student and physician beliefs on how anatomy should be taught. **2015**, 28, 980-4		17
309	Pre-Descemet Endothelial Keratoplasty With Infant Donor Corneas: A Prospective Analysis. **2015**, 34, 859-65		22
308	Big bubble deep anterior lamellar keratoplasty: the collagen layer in the wall of the big bubble is unique. **2015**, 93, 427-30		20
307	Impact of Donor Age on Corneal Endothelium-Descemet Membrane Layer Scroll Formation. **2015**, 41, 236-9		20
306	Eye Bank-Prepared Femtosecond Laser-Assisted Automated Descemet Membrane Endothelial Grafts. **2015**, 34, 838-43		5
305	Glued Intrascleral Fixation of Intraocular Lens With Pupilloplasty and Pre-Descemet Endothelial Keratoplasty: A Triple Procedure. **2015**, 34, 1627-31		15
304	Substrates for Expansion of Corneal Endothelial Cells towards Bioengineering of Human Corneal Endothelium. **2015**, 6, 917-45		33
303	13 spectral-domain optical coherence tomography (SD OCT)pre-Descemet endothelial keratoplastypre-Descemet endothelial keratoplasty (PDEK)Spectral-Domain Optical Coherence Tomography Evaluation of Pre-Descemet Endothelial Keratoplasty Graft. **2015**,		
302	Differentiating type 1 from type 2 big bubbles in deep anterior lamellar keratoplasty. **2015**, 9, 1155-7		29

301	Age-Related Changes in Corneal Deformation Dynamics Utilizing Scheimpflug Imaging. **2015**, 10, e0140093		6
300	Deep stroma investigation by confocal microscopy. **2015**,		1
299	Ultrastructure of the posterior corneal stroma. *Ophthalmology*, **2015**, 122, 693-9	7.3	44
298	Deep anterior lamellar keratoplasty--triple procedure: a useful clinical application of the pre-Descemet's layer (Dua's layer). **2015**, 29, 323-6		33
297	The role of the posterior corneal surface in surgical planning. **2015**, 10, 587-593		
296	[Complications of deep anterior lamellar keratoplasty. Avoid, recognize and treat]. **2015**, 112, 961-8		1
295	Long-term clinical outcomes of deep anterior lamellar keratoplasty in patients with keratoconus. **2015**, 159, 505-11		63
294	[Deep layers of the cornea and basic research in Spain]. **2015**, 90, 301-2		
293	Endothelial cell loss following tissue harvesting by pneumodissection for endothelial keratoplasty: an ex vivo study. **2015**, 99, 710-3		19
292	A new clinico-tomographic classification and management algorithm for Descemet's membrane detachment. **2015**, 38, 327-33		19
291	A year of cornea in review: 2013. **2015**, 4, 40-50		5
290	Transverse depth-dependent changes in corneal collagen lamellar orientation and distribution. **2015**, 12, 20140717		33
289	A cornucopia of cornea: the challenge of being well-informed in an era of rapid change. **2015**, 4, 2-4		
288	Surgical technique for graft exchange after big-bubble deep anterior lamellar keratoplasty. **2015**, 34, 486-9		4
287	Efficacy and safety of pre-Descemet's membrane sutures for the management of acute corneal hydrops in keratoconus. **2015**, 99, 773-7		44
286	Corneal structure and transparency. **2015**, 49, 1-16		321
285	Split of Descemet's membrane and pre-Descemet's layer in fungal keratitis: new definition of corneal anatomy incorporating new knowledge of fungal infection. **2015**, 66, 1046-9		9
284	Postoperative spectral-domain optical coherence tomography evaluation of pre-Descemet endothelial keratoplasty grafts. **2015**, 41, 1535-6		5

283	WNT10A exonic variant increases the risk of keratoconus by decreasing corneal thickness. **2015**, 24, 5060-8	50
282	Deep layers of the cornea and basic research in Spain. **2015**, 90, 301-302	
281	Effects produced by different types of laser in cornea of Guinea pigs: Identification of a laser capable of producing superficial lesions without leaving scars. **2015**, 90, 458-66	1
280	Cornea. **2015**, 79-154	1
279	The Eye. **2015**, 1-39	1
278	Applications of biomaterials in corneal wound healing. **2015**, 78, 212-7	18
277	In Vivo Imaging and Morphometry of the Human Pre-Descemet's Layer and Endothelium With Ultrahigh-Resolution Optical Coherence Tomography. **2016**, 57, 2782-7	25
276	Central corneal thickness of Iraqi population in relation to age, gender, refractive errors, and corneal curvature: a hospital-based cross-sectional study. **2016**, 10, 2369-2376	13
275	Measurement of central corneal thickness by ultrasonic pachymeter and oculus pentacam in patients with well-controlled glaucoma: hospital-based comparative study. **2016**, 10, 359-64	6
274	24 Intrascleral Haptic Fixation of a PCIOL (Glued IOL). **2016**,	
273	Big-bubble deep anterior lamellar keratoplasty using central vs peripheral air injection: a clinical trial. **2016**, 26, 297-302	8
272	DMEK lenticule preparation using an air dissection technique: central versus peripheral injection. **2016**, 26, 6-11	1
271	Current techniques of lamellar keratoplasty for keratoconus. **2016**, 37, 127-36	6
270	Seven-day storage of pneumatically dissected Descemet's endothelial grafts with and without Dua's layer. **2016**, 94, e130-4	6
269	Eye and Lacrimal Apparatus. **2016**, 1145-1157	1
268	In Vitro Cell Models for Ophthalmic Drug Development Applications. **2016**, 5, 94-108	45
267	In vitro study of air bubble dynamics following pneumodissection of donor corneas and relationship of air bubble pattern with a peripheral paracentesis incision. **2016**, 100, 1738-1741	2
266	Cannula DALK Versus Needle DALK for Keratoconus. **2016**, 35, 1508-1511	20

265	Scrolling Characteristics of Pre-Descemet Endothelial Keratoplasty Tissue: An Ex Vivo Study. **2016**, 166, 84-90	14
264	Clinical evidence of the pre-Descemets layer (Dua's layer) in corneal pathology. **2016**, 30, 1144-5	18
263	Pre-Descemet Endothelial Keratoplasty. **2016**, 205-216	
262	Anatomy of the Cornea. **2016**, 1-11	
261	Updates in anterior lamellar keratoplasty: the state of the debates. **2016**, 11, 339-346	1
260	Human corneal cell culture models for drug toxicity studies. **2016**, 6, 660-675	40
259	Mastering Endothelial Keratoplasty. **2016**,	0
258	Optical coherence tomography characteristics of different types of big bubbles seen in deep anterior lamellar keratoplasty by the big bubble technique. **2016**, 30, 1509-1516	10
257	Mastering Endothelial Keratoplasty. **2016**,	
256	Characterization of Ocular Iontophoretic Drug Transport of Ionic and Non-ionic Compounds in Isolated Rabbit Cornea and Conjunctiva. **2016**, 39, 959-68	7
255	Corrosion casts of big bubbles formed during deep anterior lamellar keratoplasty. **2016**, 60, 492-499	
254	A comprehensive insight on ocular pharmacokinetics. **2016**, 6, 735-754	167
253	Needle Depth and Big-Bubble Success in Deep Anterior Lamellar Keratoplasty: An Ex Vivo Microscope-Integrated OCT Study. **2016**, 35, 1471-1477	22
252	Descemet's Membrane Detachment with Schisis Induced by Phacoemulsification. **2016**, 93, 1562-1566	4
251	Progress in Corneal Stromal Repair: From Tissue Grafts and Biomaterials to Modular Supramolecular Tissue-Like Assemblies. **2016**, 28, 5381-99	37
250	[Update: Deep anterior lamellar keratoplasty (DALK) for keratoconus. When, how and why]. **2016**, 113, 204-12	10
249	Outcomes of Air Injection Within 2 mm Inside a Deep Trephination for Deep Anterior Lamellar Keratoplasty in Eyes With Keratoconus. **2016**, 164, 6-13	20
248	Three-dimensional arrangement of elastic fibers in the human corneal stroma. **2016**, 146, 43-53	43

247	Evaluation of the Ocular Tolerance of Three Tacrolimus Topical Pharmaceutical Preparations by Bovine Corneal Opacity and Permeability Test. **2016**, 41, 890-6		11
246	Thermosensitive chitosan-based hydrogels for sustained release of ferulic acid on corneal wound healing. **2016**, 135, 308-15		62
245	Ocular and Visual Physiology. **2016**,		13
244	Epithelial, non-melanocytic and melanocytic proliferations of the ocular surface. **2016**, 33, 122-32		15
243	Neurological Regeneration. **2017**,		1
242	Stem Cell Applications in Corneal Regeneration and Wound Repair. **2017**, 213-255		
241	Corneal biomechanics - a review. **2017**, 37, 240-252		78
240	Pre-Descemets endothelial keratoplasty: the PDEK clamp for successful PDEK. **2017**, 31, 1106-1110		12
239	Revisiting the Cornea and Trabecular Meshwork Junction With 2-Photon Excitation Fluorescence Microscopy. **2017**, 36, 704-711		7
238	Two-photon optical microscopy imaging of endothelial keratoplasty grafts. **2017**, 255, 575-582		5
237	3D Microfabricated Scaffolds and Microfluidic Devices for Ocular Surface Replacement: a Review. **2017**, 13, 430-441		9
236	Elastic microfibril distribution in the cornea: Differences between normal and keratoconic stroma. **2017**, 159, 40-48		38
235	Large (9 mm) Deep Anterior Lamellar Keratoplasty with Clearance of a 6-mm Optical Zone Optimizes Outcomes of Keratoconus Surgery. *Ophthalmology*, **2017**, 124, 1072-1080	7.3	26
234	Visualizing Micro-anatomical Structures of the Posterior Cornea with Micro-optical Coherence Tomography. **2017**, 7, 10752		24
233	Contact Lens Practice, Third Edition Nathan Efron (Editor) Elsevier, Edinburgh, UK, 2018, 471 pages, RRP $220. **2017**, 100, 545-545		1
232	Air Pump-Assisted Graft Centration, Graft Edge Unfolding, and Graft Uncreasing in Young Donor Graft Pre-Descemet Endothelial Keratoplasty. **2017**, 36, 1009-1013		5
231	Young donor-graft assisted endothelial keratoplasty (PDEK/DMEK) with epithelial debridement for chronic pseudophakic bullous keratopathy. **2017**, 52, 519-526		5
230	[Complications of DMEKeratoplasty: Avoid, Recognize and Treat]. **2017**, 234, 1354-1361		2

229	Current Treatment Options for Fuchs Endothelial Dystrophy. **2017**,	2
228	Intra- and Postoperative Complications and Their Management in DMEK (Including Re-DMEK). **2017**, 153-164	0
227	29 Intraocular Lens Fixation in the Absence of Support: The Glued Intraocular Lens. **2017**,	
226	34 Corneal Problems Associated with Phacoemulsification. **2017**,	
225	Quality of Vision after Deep Anterior Lamellar Keratoplasty (Fluid Dissection) Compared to Penetrating Keratoplasty for the Treatment of Keratoconus. **2017**, 2017, 4507989	6
224	Molecular and Histopathological Changes Associated with Keratoconus. **2017**, 2017, 7803029	52
223	1 Anatomy of the Cornea and Pre-Descemet Layer. **2017**,	
222	9 Pre-Descemet Endothelial Keratoplasty. **2017**,	
221	11 Surgically Mastering Pre-Descemet Endothelial Keratoplasty in 15 Steps. **2017**,	
220	13 Endoilluminator-Assisted Descemet Membrane Endothelial Keratoplasty and Endoilluminator-Assisted Pre-Descemet Endothelial Keratoplasty. **2017**,	
219	15 Endothelial Keratoplasty Including Pre-Descemet Endothelial Keratoplasty with Glued Intraocular Lens. **2017**,	
218	20 Spectral Domain Optical Coherence Tomography Evaluation of Pre-Descemet Endothelial Keratoplasty Graft. **2017**,	
217	22 Complications of Pre-Descemet Endothelial Keratoplasty. **2017**,	
216	23 Eye Bank Preparation of Endothelial Keratoplasty Grafts. **2017**,	
215	Corneal thickness in dry eyes in an Iraqi population. **2017**, 11, 435-440	10
214	Morphological study of the eye and adnexa in capuchin monkeys (Sapajus sp.). **2017**, 12, e0186569	2
213	Eye and Pollution. **2018**, 341-351	1
212	Deep anterior lamellar keratoplasty: dissection plane with viscoelastic and air can be different. **2018**, 102, 1646-1652	9

211	Morphological analysis of corneal findings modifications after death: A preliminary OCT study on an animal model. **2018**, 169, 20-27	16
210	Big double bubble trouble: in vivo real time demonstration of 'mixed-type bubble' and its consequent effects during deep anterior lamellar keratoplasty. **2018**, 32, 1282-1283	
209	Results of viscobubble deep anterior lamellar keratoplasty after failure of pneumatic dissection. **2018**, 102, 1288-1292	7
208	Frequency of Complications During Preparation of Corneal Lamellae Used in Posterior Lamellar Keratoplasty Using the Pneumodissection Technique (Big Bubble). **2018**, 37, 904-908	2
207	Dynamics of big bubble formation in deep anterior lamellar keratoplasty by the big bubble technique: in vitro studies. **2018**, 96, 69-76	27
206	Double bubble with the big-bubble technique during deep anterior lamellar keratoplasty. **2018**, 38, 1313-1316	1
205	Air pressure changes in the creation and bursting of the type-1 big bubble in deep anterior lamellar keratoplasty: an ex vivo study. **2018**, 32, 146-151	16
204	Biomaterials for corneal bioengineering. **2018**, 13, 032002	52
203	Triple chamber: a clinical rarity after deep anterior lamellar keratoplasty and role of optical coherence tomography in management. **2018**, 38, 2683-2687	2
202	Structural, ultrastructural, and morphometric study of the zebrafish ocular surface: a model for human corneal diseases?. **2018**, 43, 175-185	5
201	Imaging the Cornea, Anterior Chamber, and Lens in Corneal and Refractive Surgery. **2018**,	2
200	[Cornea Imaging by Optical Coherence Tomography - Historical Aspects and Most Recent Technical Developments]. **2018**, 235, 1342-1351	0
199	Predictive Factors for Successful Type 1 Big Bubble during Deep Anterior Lamellar Keratoplasty. **2018**, 2018, 4685406	12
198	Potential role of stromal collagen in cystine crystallization in cystinosis patients. **2018**, 551, 232-240	5
197	Anterior Eye. **2018**, 10-27.e2	3
196	Anterior Segment Optical Coherence Tomography of Post-Descemet Stripping Automated Endothelial Keratoplasty Eyes to Evaluate Graft Morphology and Its Association With Visual Outcome. **2018**, 37, 1087-1092	5
195	Deep anterior lamellar keratoplasty: A surgeon's guide. **2018**, 30, 297-310	18
194	Histopathology of the Ocular Surface. **2018**,	1

193	Stimuli sensitive ocular drug delivery systems. **2018**, 211-270	5
192	Biomechanics and structure of the cornea: implications and association with corneal disorders. **2018**, 63, 851-861	51
191	A comparative study of the elastic fibre system within the mouse and human cornea. **2018**, 177, 35-44	15
190	Double-infusion cannula technique for glued fixation of intraocular lens with endothelial keratoplasty. **2018**, 53, 503-509	
189	Anatomy of the Eye. **2018**, 1-12	
188	Elastin Content and Distribution in Endothelial Keratoplasty Tissue Determines Direction of Scrolling. **2018**, 194, 16-25	20
187	Corneal Epithelial Wound Healing and Management Strategies. **2018**, 91-102	1
186	Microbubble technique in failed deep anterior lamellar keratoplasty: 2-year outcomes. **2018**, 28, 243-245	2
185	Are Descemet Membrane Ruptures the Root Cause of Corneal Hydrops in Keratoconic Eyes?. **2019**, 205, 204	5
184	Penetration Enhancers in Ocular Drug Delivery. **2019**, 11,	66
183	Immune reactions after modern lamellar (DALK, DSAEK, DMEK) versus conventional penetrating corneal transplantation. **2019**, 73, 100768	81
182	New Ultra-Structural Aspects of Cornea: Significance of Ascorbate Micronutrient Deficiency. **2019**, 605-623	
181	. **2019**,	
180	Design and Development of Ocular Formulations for Preclinical and Clinical Trials. **2019**, 331-365	1
179	Management of Type 2 Bubble Formed During Big Bubble Deep Anterior Lamellar Keratoplasty. **2019**, 38, 189-193	17
178	Factors Affecting Formation of Type-1 and Type-2 Big Bubble during Deep Anterior Lamellar Keratoplasty. **2019**, 44, 701-706	6
177	A review on recent advancements in ophthalmology devices: Currently in market and under clinical trials. **2019**, 52, 334-345	7
176	Ocular Surface Epithelium: Applied Anatomy. **2019**, 175-190	1

175	Are Descemet Membrane Ruptures the Root Cause of Corneal Hydrops in Keratoconic Eyes?. **2019**, 205, 147-152	15
174	Effect of Air Injection Depth on Big-bubble Formation in Lamellar Keratoplasty: an Ex Vivo Study. **2019**, 9, 3785	4
173	Triple procedure for pseudophakic bullous keratopathy in complicated cataract surgery: Glued IOL with single-pass four-throw pupilloplasty with pre-Descemet's endothelial keratoplasty. **2019**, 45, 398-403	3
172	A Review of Structural and Biomechanical Changes in the Cornea in Aging, Disease, and Photochemical Crosslinking. **2019**, 7, 66	57
171	Applied Anatomy of the Corneal Stroma. **2019**, 349-362	1
170	Corneal Microlayer Optical Tomography Review. **2019**,	
169	Evaluation of Big Bubble Technique for Deep Anterior Lamellar Keratoplasty in Patients With Radial Keratotomy. **2019**, 38, 194-197	3
168	Corneal Dystrophies and Degenerations. **2019**,	
167	Determination of Corneal Nonlinear Viscoelastic Biomechanical Properties using Corvis ST. **2019**,	
166	Novel Drug Delivery Technologies. **2019**,	2
165	Surgical Corneal Anatomy in Deep Anterior Lamellar Keratoplasty: Suggestion of New Acronyms. **2019**, 38, 515-522	14
164	Management of Descemet Membrane's Folds After Deep Anterior Lamellar Keratoplasty: Descemet Membrane-Tucking Technique. **2019**, 38, 772-774	5
163	Outcomes of a Modified Technique for Successful Pneumatic Dissection in Pediatric Eyes With Corneal Scars. **2019**, 38, 825-828	1
162	Technique for Ensuring Type I Bubble Formation for Pre-Descemet Endothelial Keratoplasty Preparation. **2019**, 38, 1336-1338	4
161	Reply. **2019**, 38, e45-e46	3
160	Deep Trephination Allows High Rates of Successful Pneumatic Dissection for DALK Independent of Surgical Experience. **2019**, 38, 645-647	10
159	Anatomy and Physiology of the Cornea and Related Structures. **2019**, 33-64	1
158	Phacoemulsification with coexisting corneal opacities. **2019**, 45, 94-100	7

157	Comparison of corneal densitometry between big-bubble and visco-bubble deep anterior lamellar keratoplasty. **2020**, 104, 336-340	7
156	Triple anterior chamber following deep anterior lamellar keratoplasty: An unknown complication. **2020**, 76, 217-219	0
155	Age related changes seen in human cornea in formalin fixed sections and on biomicroscopy in living subjects: A comparison. **2020**, 33, 245-256	5
154	Cornea and Sclera. **2020**, 272-356.e7	
153	Descemet membrane detachment. **2020**, 65, 279-293	18
152	Compression sutures combined with intracameral air injection versus thermokeratoplasty for acute corneal hydrops: a prospective-randomised trial. **2021**, 105, 1645-1650	3
151	Preliminary Results of a Novel Standardized Technique of Femtosecond Laser-Assisted Deep Anterior Lamellar Keratoplasty for Keratoconus. **2020**, 2020, 5496162	3
150	"Descemet Membrane Detachment": A Novel Concept in Diagnosis and Classification. **2020**, 218, 84-98	11
149	Considerations about the use of eponyms in Ophthalmology. **2020**, 95, 573-574	
148	Corneal Infection Models: Tools to Investigate the Role of Biofilms in Bacterial Keratitis. **2020**, 9,	15
147	Femtosecond Laser-Assisted Deep Anterior Lamellar Keratoplasty for Keratoconus: Multi-surgeon Results. **2020**, 220, 191-202	12
146	Autophagy modulation in animal models of corneal diseases: a systematic review. **2020**, 474, 41-55	0
145	Collagen Remodeling Plays a Pivotal Role in Endothelial Corneal Dystrophies. **2020**, 61, 1	1
144	How to Improve Visual Acuity in Keratoconic Cornea?. **2020**,	
143	Granular corneal dystrophy recurrence at the posterior graft-host interface after type 1 big bubble deep anterior lamellar keratoplasty. **2020**, 20, 100960	2
142	Emerging Trends in Nanomedicine for Improving Ocular Drug Delivery: Light-Responsive Nanoparticles, Mesoporous Silica Nanoparticles, and Contact Lenses. **2020**, 6, 6587-6597	11
141	Was it thickened Dua's layer? Clinical, tomographical, and histopathological correlation: A case report. **2020**, 1120672120974271	0
140	Optimizing pre-Descemet endothelial keratoplasty technique. **2020**, 46, 667-674	2

139	Descemet's membrane development, structure, function and regeneration. **2020**, 197, 108090	20
138	Hydrogel Biomaterials for Application in Ocular Drug Delivery. **2020**, 8, 228	52
137	Optimizing outcomes for keratoplasty in ectatic corneal disease. **2020**, 31, 268-275	8
136	Keratoconus: advances in anterior lamellar keratoplasty techniques. **2020**, 15, 59-66	3
135	Stem cell therapies in ocular repair, regeneration, and diseases. **2020**, 45-78	0
134	Lamellar keratoplasty in children. **2020**, 65, 675-690	5
133	Descemetocele. **2021**, 66, 2-19	4
132	Corneal endothelium tissue engineering: An evolution of signaling molecules, cells, and scaffolds toward 3D bioprinting and cell sheets. **2020**, 236, 3275	8
131	Descemet Membrane Endothelial Keratoplasty and Bowman Layer Transplantation: An Anatomic Review and Historical Survey. **2021**, 64, 532-553	0
130	i-PDEK: Microscope-integrated OCT-assisted pre-Descemet endothelial keratoplasty. **2021**, 47, e44-e48	1
129	**2021**, 135-139	
128	Deep Anterior Lamellar Keratoplasty (DALK): Science and Surgery. **2021**, 1-22	0
127	Comparison of the effects of femtosecond laser energy on corneal endothelium at two different dissection levels in femtosecond laser-assisted deep anterior lamellar keratoplasty for keratoconus. **2021**, 41, 1167-1177	
126	Biomechanics and Wound Healing in the Cornea. **2021**, 1-22	
125	In vitro reconstructed 3D corneal tissue models for ocular toxicology and ophthalmic drug development. **2021**, 57, 207-237	2
124	Pre-Descemet's endothelial keratoplasty: a simple, Descemet's membrane scoring technique for successful graft preparation. **2021**,	1
123	[Excimer laser-assisted DALK: a case report from the Homburg Keratoconus Center (HKC)]. **2021**, 118, 1245-1248	5
122	Cell sheet technology: Influence of culture conditions on in vitro-cultivated corneal stromal tissue for regenerative therapies of the ocular surface. **2021**, 109, 1488-1504	1

121	Bio-polymeric hydrogels for regeneration of corneal epithelial tissue*View all notes. 1-18	0
120	CLEAR - Anatomy and physiology of the anterior eye. **2021**, 44, 132-156	12
119	Corneal transillumination: technique to detect big bubble in deep anterior lamellar keratoplasty. **2021**, 47, 671-673	
118	Long-Term Results and Refractive Error After Cataract Surgery With a Scleral Incision in Eyes With Deep Anterior Lamellar Keratoplasty. **2021**, 40, 1466-1473	0
117	Central versus peripheral corneal thickness - A White spot on the corneal (anatomy) map. **2021**, 44, 101473	
116	Integrins: An Important Link between Angiogenesis, Inflammation and Eye Diseases. **2021**, 10,	2
115	Spectral Transmission of the Human Corneal Layers. **2021**, 10,	1
114	Corneal Epithelial Stem Cells-Physiology, Pathophysiology and Therapeutic Options. **2021**, 10,	1
113	Impact of Post-Refractive Surgeries on Corneal Biomechanics-A Review. **2021**, 46, 177-188	0
112	Ultrastructural Alterations of Grafted Corneal Buttons: The Anatomic Basis for Stromal Peeling Along a Natural Plane of Separation. **2021**, 231, 144-153	0
111	Ocular Rigidity and Cornea Disease. **2021**, 245-266	
110	Further Reading. **2021**,	
109	The Corneal Disc. **2021**, 423-463	1
108	Ocular drug delivery systems. **2021**, 515-566	1
107	Endothelial Keratoplasty Versus Penetrating Keratoplasty. **2016**, 57-74	1
106	Ophthalmic and Otic Drug Administration: Novel Approaches and Challenges. **2019**, 335-381	13
105	Using the posterior to anterior corneal curvature radii ratio to minimize the risk of a postoperative hyperopic shift after Descemet membrane endothelial keratoplasty. **2020**, 258, 1065-1071	6
104	Dua's layer: its discovery, characteristics and applications. **2014**, 35-47	8

103	Considerations about the use of eponyms in Ophthalmology. **2020**, 95, 573-574	3
102	Cleavage plane after liquid-bubble preparation of Descemet's membrane. **2021**, 99, e937-e942	2
101	Ocular Surface as Barrier of Innate Immunity. **2015**, 9, 49-55	22
100	Matrix regenerative therapy. **2017**, 61, 2-10	8
99	Repeatability of central and peripheral corneal thickness measurements with the iVue100 optical coherence tomographer. **2016**, 75,	1
98	Demonstration of cornea Dua's layer at a deep anterior lamellar keratoplasty surgery. **2016**, 9, 179-181	2
97	Pre-Descemet's endothelial keratoplasty. **2017**, 65, 443-451	4
96	Predescemetocele: A distinct clinical entity. **2017**, 65, 1224-1226	2
95	Component corneal surgery: An update. **2017**, 65, 658-672	8
94	Anatomy of cornea and ocular surface. **2018**, 66, 190-194	136
93	Lamellar keratoplasty techniques. **2018**, 66, 1239-1250	16
92	Chitosan-Based Hydrogels for Tissue Engineering. **2021**, 519-571	0
91	Anatomy and Physiology: Considerations in Relation to Transplantation. **2016**, 9-22	0
90	Anterior Lamellar Surgery. **2016**, 53-65	
89	Endothelial Keratoplasty. **2016**, 35-52	
88	Ocular media. **2016**, 93-102	
87	The PDEK Bubble. **2016**, 189-204	
86	The Cornea and Sclera. **2016**, 29-46	

85	Complications of Pre-Descemet's Endothelial Keratoplasty (PDEK). **2016**, 127-140	
84	Techniques for Graft Visualization and Identification of Graft Orientation: Endoilluminator-Assisted Descemet's Membrane Endothelial Keratoplasty (E-DMEK) and Others. **2016**, 217-226	
83	Air-Pump-Assisted Pre-Descemet's Endothelial Keratoplasty. **2016**, 227-238	
82	DMEK: Step-by-Step Surgical Approach. **2017**, 165-187	
81	Descemet's membrane macroperforation during interface irrigation in big bubble deep anterior lamellar keratoplasty. **2017**, 10, 241-243	3
80	Corneas: Tissue Engineering. **2017**, 370-394	
79	Surgical Management of Type II Big Bubble in Deep Anterior Lamellar Keratoplasty. **2018**, 7, 145-150	
78	Use of Pressurized Air Infusion For Pre Descemet's Endothelial Keratoplasty (PDEK) - The Air Pump Assisted PDEK Technique. **2018**, 12, 175-180	0
77	Medical education at the crossroads. How to step into the future of medicine and medicine of the future?. **2018**, XII, 91-96	
76	Pachymetry-guided (Pachy-bubble) Deep Anterior Lamellar Keratoplasty. **2019**, 47, 12-15	
75	Big-bubble deep anterior lamellar keratoplasty. **2019**, 60,	
74	[Modern methods of surgical treatment of keratectasias]. **2019**, 135, 138-143	2
73	Anatomy of Nociceptors. **2020**, 11-32	
72	Dynamics of Big Bubble Formation During Deep Anterior Lamellar Keratoplasty in Eyes with Advanced Keratoconus. **2020**, 14, 4305-4310	0
71	"Split Descemet's Membrane" diagnosed by anterior segment OCT. **2020**, 43, e383-e385	
70	Characterization of Endothelial Cell Loss in Pre-Descemet Endothelial Keratoplasty Graft Preparation. **2021**, 40, 364-369	0
69	Further Reading. **2020**,	
68	Controlled Drug Delivery via the Ocular Route. **2021**, 349-375	

67	In vivo Histology of the Cornea - from the "Rostock Cornea Module" to the "Rostock Electronic Slit Lamp" - a Clinical "Proof of Concept" Study. **2020**, 237, 1442-1454		1
66	Severe Corneal Hydrops With Suspected Posterior Stromal Rupture Managed With Ultrathin Descemet-Stripping Automated Endothelial Keratoplasty. **2021**, 40, 513-515		
65	Extracellular matrix changes in corneal opacification vary depending on etiology. **2021**, 27, 26-36		1
64	Femtosecond-Laser Assisted Deep Anterior Lamellar Keratoplasty (F-DALK). **2022**, 213-222		
63	Donor-Recipient Crosslinking-Assisted Manual Deep Anterior Lamellar Keratoplasty: DRXL-DALK. **2022**, 233-248		
62	Further Reading. **2021**,		
61	Human body: new organs. **2021**, 12, 23-32		1
60	Modified big-bubble for deep anterior lamellar keratoplasty. **2021**, 47, e6-e9		
59	Ocular Surface Anatomy and Physiology: Impact on Product Development. **2021**, 15-37		
58	Further Reading. **2022**,		
57	Comparison of corneal endothelial changes following phacoemulsification in diabetic and non-diabetic patients.. **2022**, 70, 1208-1213		
56	A unique pre-endothelial layer at the posterior peripheral cornea: ultrastructural study.. **2022**, 12, 2556		
55	edding New Light on the Role of Hedgehog Signaling in Corneal Wound Healing.. *International Journal of Molecular Sciences*, **2022**, 23,	6.3	1
54	Current Perspectives on Corneal Transplantation (Part 2).. **2022**, 16, 647-659		1
53	Thickness Measurement of Endothelium-Descemet Membrane in Descemt Membrane Detachment Patients Using High-Definition Optical Coherence Tomography.. **2022**, 11,		
52	An Experimental Model of Neuro-Immune Interactions in the Eye: Corneal Sensory Nerves and Resident Dendritic Cells.. *International Journal of Molecular Sciences*, **2022**, 23,	6.3	1
51	Clear Cornea Femto DALK: a novel technique for performing deep anterior lamellar keratoplasty.. **2022**, 1		
50	Risk factors for fluctuations in corneal endothelial cell density (Review).. **2022**, 23, 129		1

49	Rescue Technique to Solve Postoperative Refractory Double Anterior Chamber in Deep Anterior Lamellar Keratoplasty. **2021**, 41,		
48	Assessment of Corneal Densitometry in Big-Bubble Dissection Versus Manual Dissection Deep Anterior Lamellar Keratoplasty.. **2021**, 41,		0
47	A new method for the in vivo identification of degenerated material property ranges of the human eye: feasibility analysis based on synthetic data.. **2021**, 21, 401		0
46	A Comparative Analysis of the Camera-like Eyes of Jumping Spiders and Humans.. **2021**, 6,		
45	Are fenestrations in peripheral pre-Descemet layer the route for intracameral air bubble migration during femtosecond LASIK?. **2022**, 163, 110844		
44	Deep Anterior Lamellar Keratoplasty (DALK): Science and Surgery. **2022**, 469-490		
43	Biomechanics and Wound Healing in the Cornea. **2022**, 1235-1255		
42	Vaginal epithelial drug delivery.. **2022**, 114293		4
41	In Vivo Confocal Microscopy in Different Types of Dry Eye and Meibomian Gland Dysfunction.. **2022**, 11,		1
40	On the issue of allocating the pre-Descemet layer in the corneal structure. **2022**, 138, 149		0
39	Cornea: anatomical and functional features, new methods of in vivo diagnostics of abnormalities. **2022**, 11, 78-86		
38	3D Printed Hydrogels for Ocular Wound Healing. **2022**, 10, 1562		0
37	Labial Mucosa Stem Cells: Isolation, Characterization, and Their Potential for Corneal Epithelial Reconstruction. **2022**, 63, 16		1
36	Layer-by-Layer Investigation of Ultrastructures and Biomechanics of Human Cornea. *International Journal of Molecular Sciences*, **2022**, 23, 7833	6.3	1
35	Groove and Peel Deep Anterior Lamellar Keratoplasty: How Deep Can You Go?. **2022**, Publish Ahead of Print,		0
34	Nanomedicine and drug delivery to the retina: current status and implications for gene therapy.		1
33	Assessment of Efficacy and Safety Using PPAR- Agonist-Loaded Nanocarriers for Inflammatory Eye Diseases. **2022**, 23, 11184		1
32	Deep Anterior Lamellar Keratoplasty: How Can We Achieve Bubble Formation in All Cases?. **2022**, 889-896		0

31	Pathophysiology and Histopathology of Keratoconus. **2022**, 31-43	0
30	Lamellar Keratoplasty in Keratoconus. **2022**, 205-220	0
29	Indications and Contraindications for Corneal Transplantation in Keratoconus. **2022**, 869-880	0
28	How to Deal with a Type 2 Bubble in Deep Anterior Lamellar Keratoplasty. **2022**, 905-911	0
27	Deep Anterior Lamellar Keratoplasty: How to Avoid Conversion to Penetrating Keratoplasty. **2022**, 913-924	0
26	Ocular Drug Delivery System: Barrier for Drug Permeation, Method to Overcome Barrier.	0
25	Pre-Descemet Endothelial Keratoplasty (PDEK), Complicated by Dislocation of the IOL into the Vitreous. Case Report. **2022**, 19, 672-680	0
24	Pathophysiology of Keratoconus. **2023**, 51-64	0
23	Lamellar Keratoplasty in Keratoconus. **2023**, 457-478	0
22	Posterior Corneal Curvature Changes After Pre-Descemet's Endothelial Keratoplasty: A Prospective Analysis. **2022**, 41, 1525-1529	0
21	Comparative Histology of the Cornea and Palisades of Vogt in the Different Wild Ruminants (Bovidae, Camelidae, Cervidae, Giraffidae, Tragulidae). **2022**, 12, 3188	0
20	Late Descemet membrane detachment after uneventful cataract surgery. **2022**, 101783	0
19	The pre-Descemet's layer (Dua's layer, also known as the Dua-Fine layer and the pre-posterior limiting lamina layer): Discovery, characterisation, clinical and surgical applications, and the controversy. **2023**, 101161	0
18	Features of morphological and ultrastructural organization of the cornea (literature review). **2022**, 7, 194-202	0
17	Overview of Corneal Transplantation for the Nonophthalmologist. **2023**, 9, e1434	1
16	Impact of Topographic Localization of Corneal Ectasia on the Outcomes of Deep Anterior Lamellar Keratoplasty Employing Large (9 mm) Versus Conventional Diameter (8 mm) Grafts.	0
15	Comparison of Pre-Descemet Endothelial Keratoplasty and Descemet Membrane Endothelial Keratoplasty in Endothelial Decompensation. **2023**, 42, 292-297	0
14	A new surgical approach to pre-Descemet endothelial keratoplasty. **2023**, 139, 55	0

13	Stromal peeling for deep anterior lamellar keratoplasty in a post-penetrating keratoplasty eye with hematocornea. **2023**, 29, 101808	0
12	Types of Descemet Membrane Detachment After Ocular Surface Burns: The Factor Long Been Ignored. **2022**, Publish Ahead of Print,	0
11	Vanadium inhalation effects on the corneal ciliary neurotrophic factor (CNTF): study in a murine model. **2023**, 42, 49-54	0
10	Design and Experiment of an Ultrasound-Assisted Corneal Trephination System. **2023**, 14, 438	0
9	Does the wall thickness of the left atrial appendage and its isthmus depend on their macroscopic characteristics?. **2023**, 43, 59-70	0
8	Anatomie und Physiologie des vorderen Augenabschnitts. **2023**, 7-12	0
7	Anterior Eye. **2024**, 9-28.e2	0
6	DMEK F-marking complication: case report and literature review. **2023**,	0
5	Current microfluidic platforms for reverse engineering of cornea. **2023**, 100634	0
4	Ex vivo demonstration of canine corneal pre-Descemet anatomy using pneumodissection as for the big bubble technique for deep anterior lamellar keratoplasty. **2023**, 13,	0
3	On the issue of separate designation of the pre-Descemet layer in the structure of the cornea. **2023**, 139, 108	0
2	On the issue of separate designation of the pre-Descemet layer in the structure of the cornea. **2023**, 139, 113	0
1	Impact of topographic localization of corneal ectasia on the outcomes of deep anterior lamellar keratoplasty employing large (9 mm) versus conventional diameter (8 mm) grafts.	0