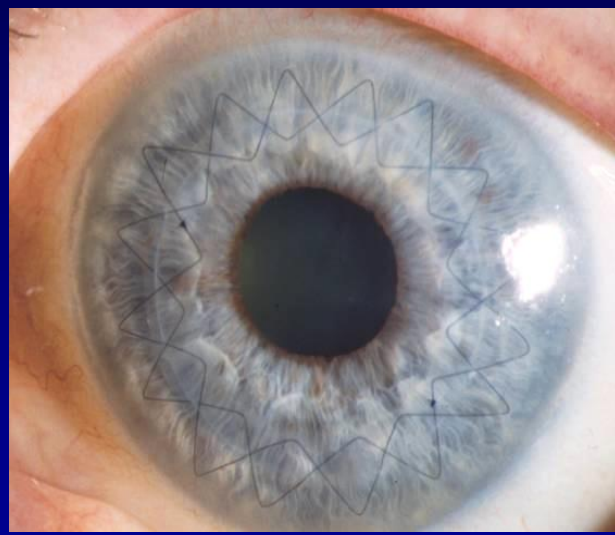


Deutsches Keratoplastikregister 2018

DOG-Sektion Kornea

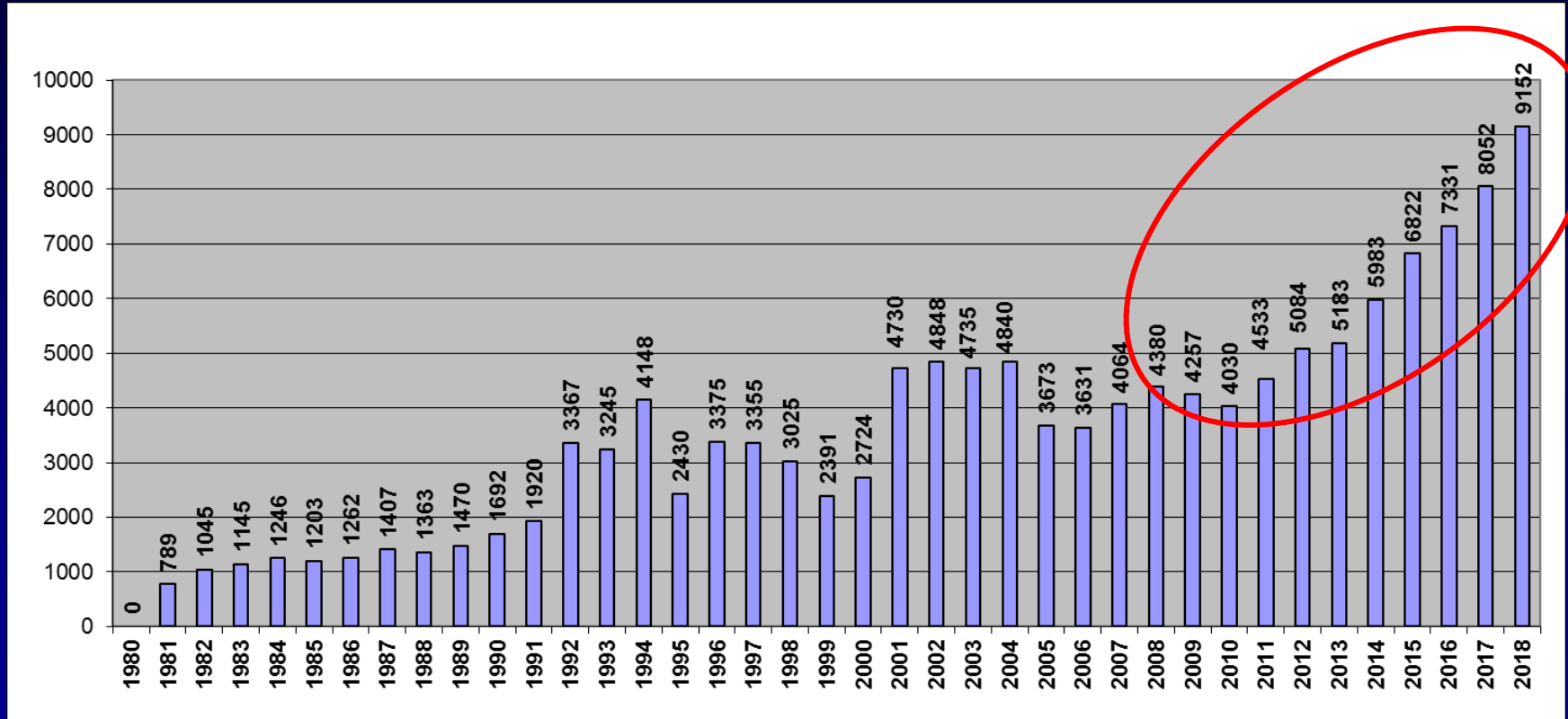


Universitätsklinikum des Saarlandes UKS
Klinik für Augenheilkunde, Homburg/Saar
Direktor: Prof. Dr. Berthold Seitz ML, FEBO

Deutsches Keratoplastikregister

Gemeldete Hornhauttransplantationen pro Jahr

1980 - 2018



Keratoplastiken 2014 - 2018

	2014	2015	2016	2017	2018
Gesamtsumme	5983	6822	7331	8052	9152
Mittelwert	76	92	68	86	86
Median	28	36	21	24	28
Minimum	0	1	0	0	0
Maximum	607	708	880	868	819

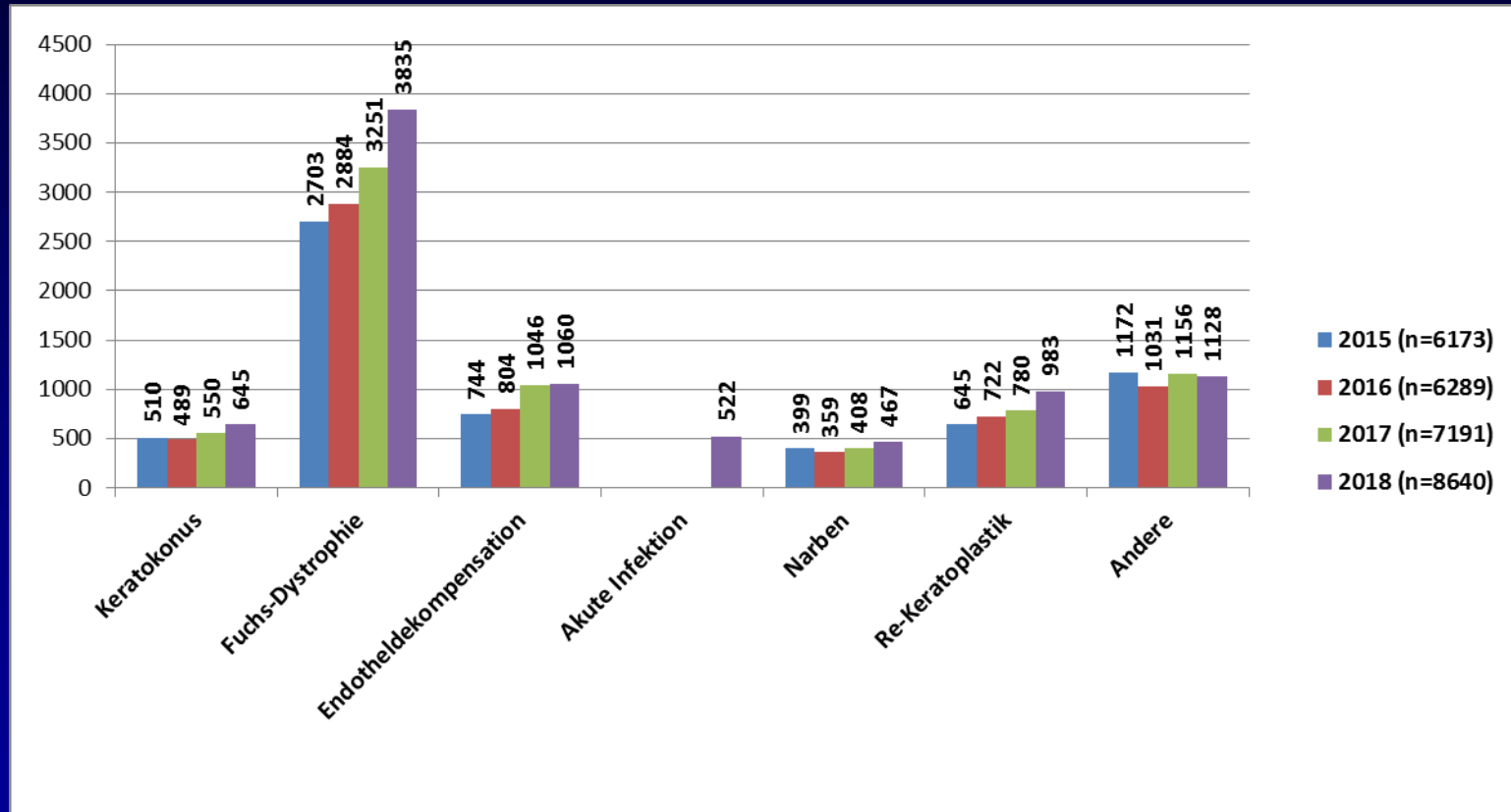
Diagnosen 2018

Auflistung aller gemeldeten Diagnosen

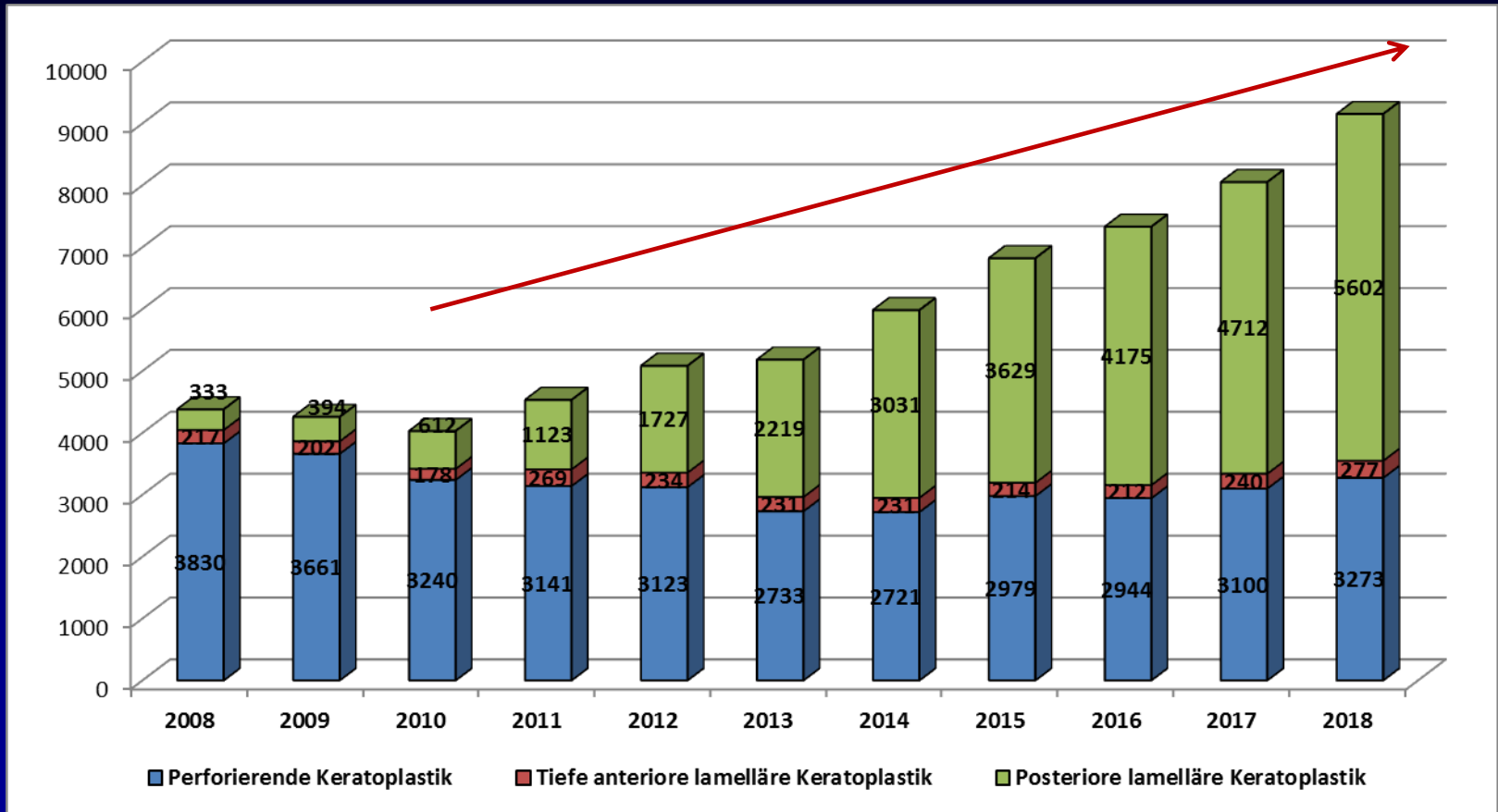
Gemeldete Diagnosen:	2018	8640	2017	7191
• Fuchs Dystrophie	3835	44,4%	3251	45,2 %
• Re-Keratoplastik	983	11,4%	780	10,9 %
• Endotheldekompensation	1060	12,3%	1046	14,5 %
• Keratokonus	645	7,5%	550	7,7 %
• Narben	467	5,4%	408	5,6 %
• Akute Infektion	522	6,0%		
• Andere	1128	13,0%	1156	16,1 %

Diagnosen 2015 – 2018 im Vergleich

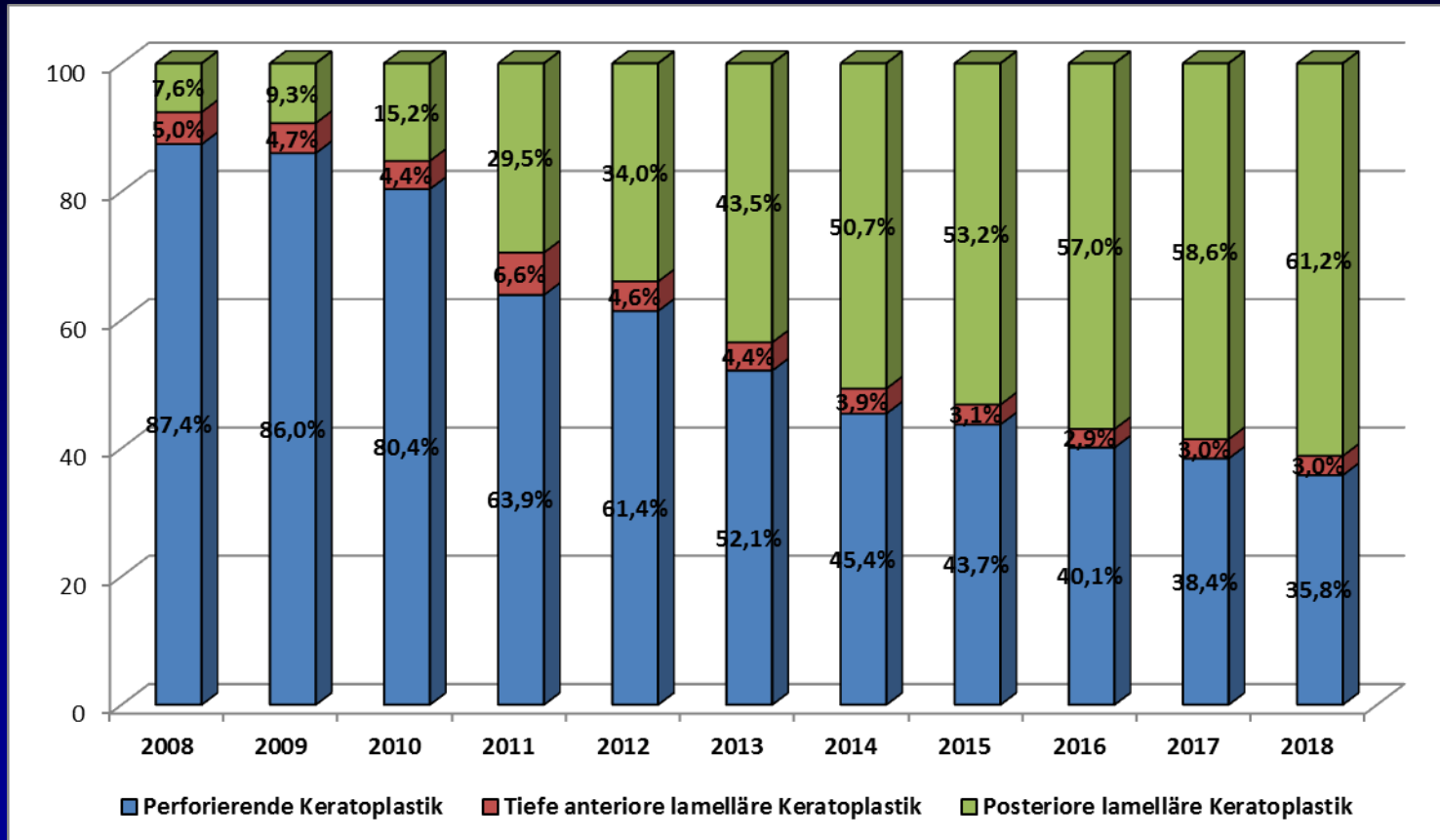
Auflistung aller gemeldeten Diagnosen



Verteilung der perforierenden und lamellären Keratoplastiken 2008 - 2018

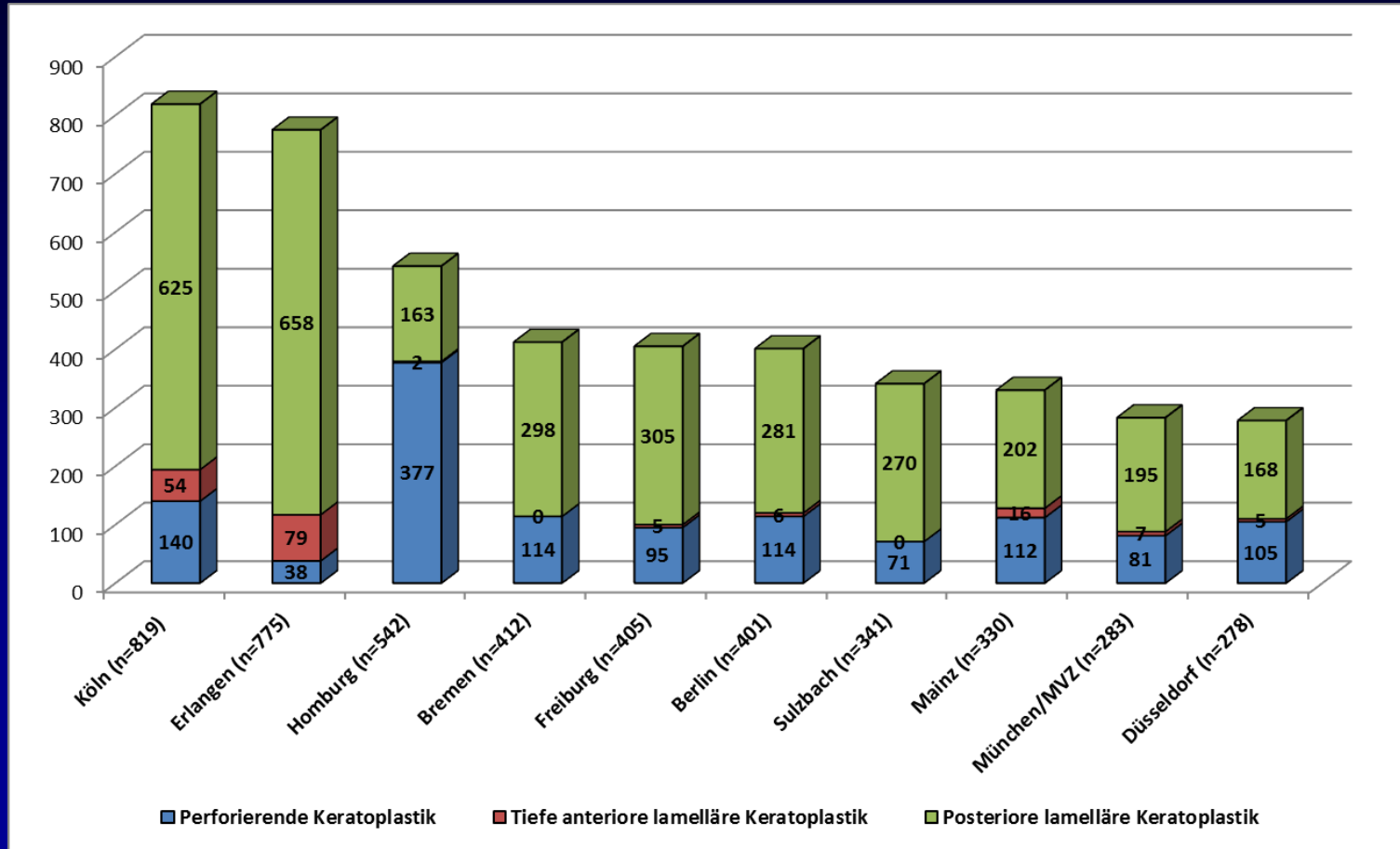


Prozentuale Anteile der Keratoplastikmethoden 2008 - 2018



**97,0%
DMEK**

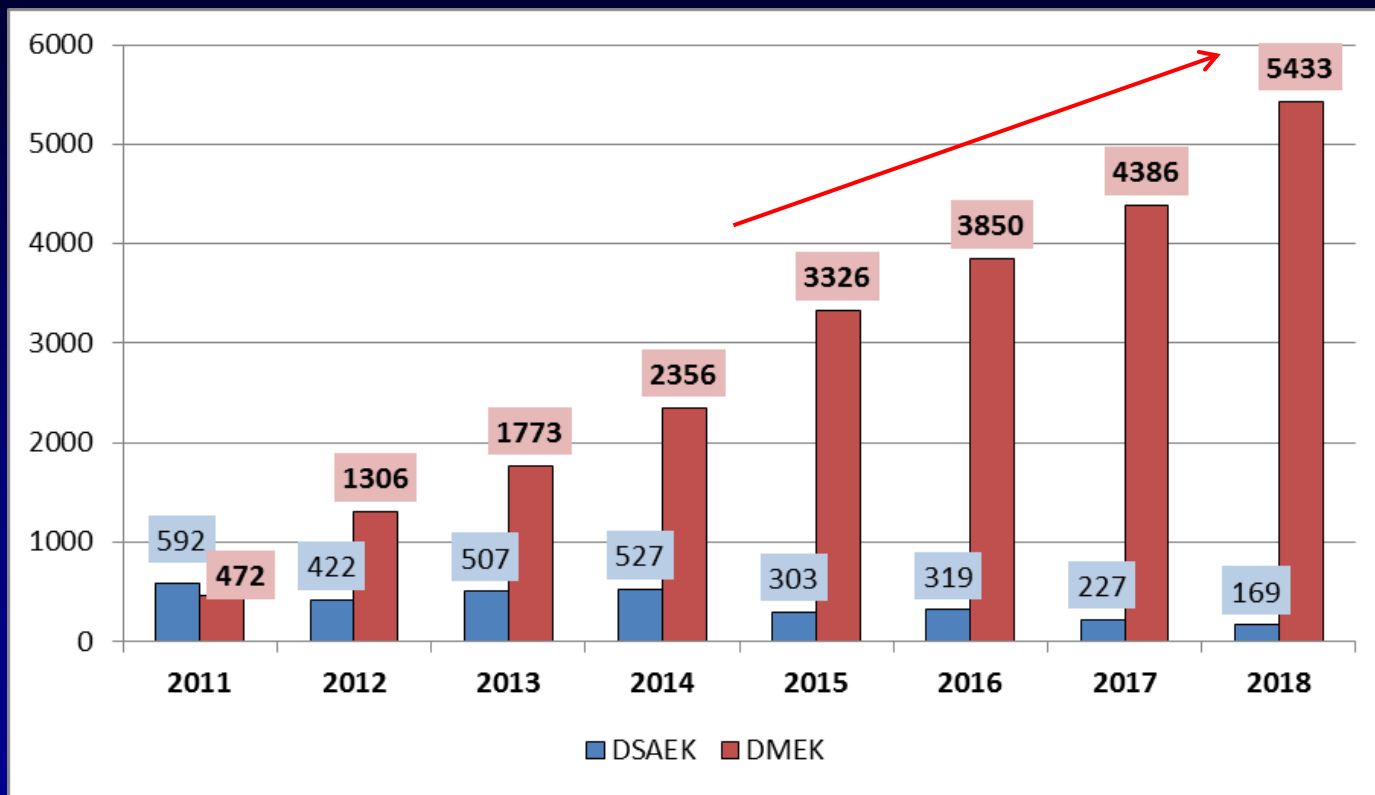
TOP 10 Keratoplastik-Zentren in Deutschland in 2018



Posteriore lamelläre Keratoplastiken 2018

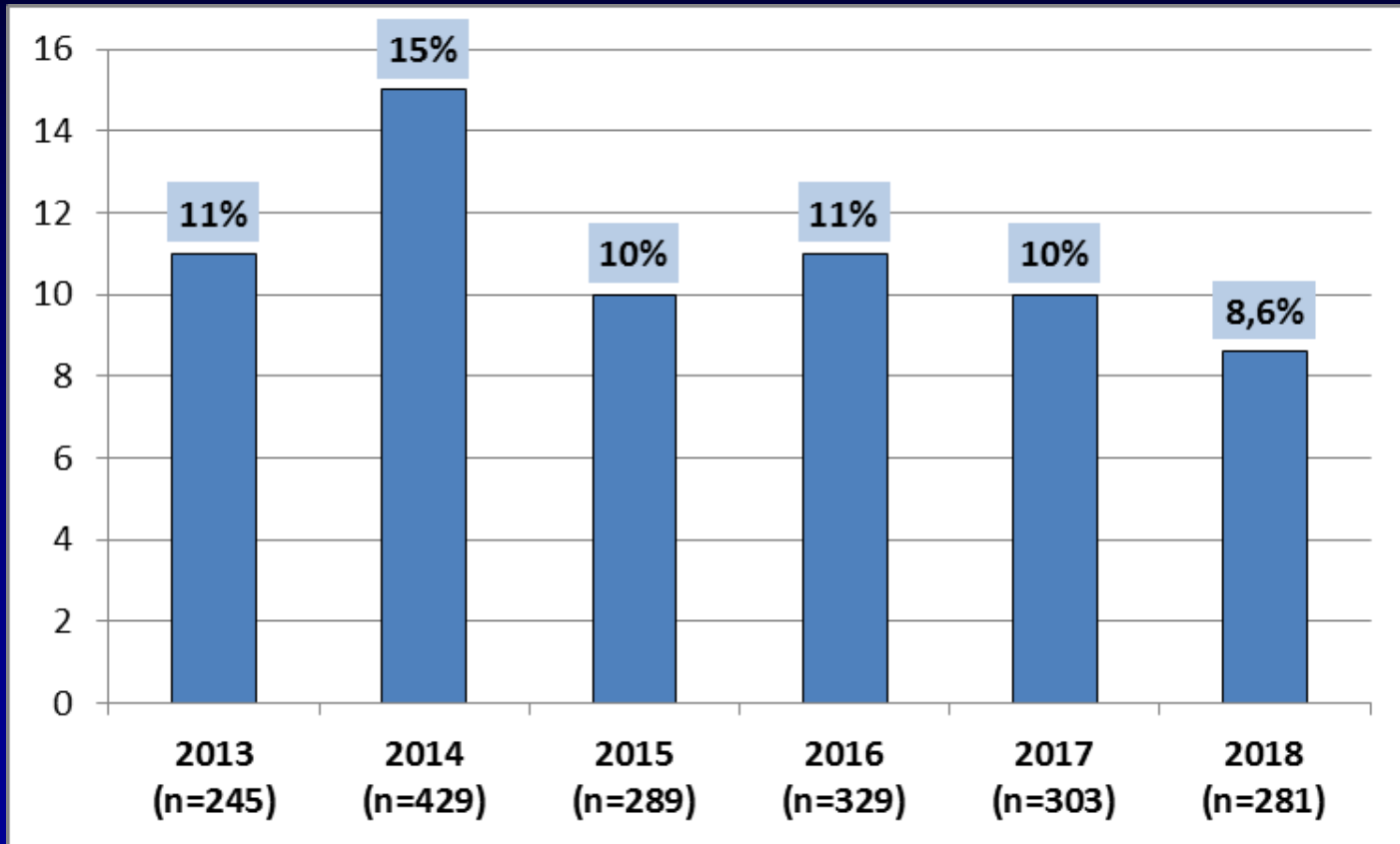
Insgesamt gemeldet :	5602	
• davon DSAEK:	169	3,0 %
• davon DMEK:	5433	97,0 %
• davon Pre-Cut-Tissue verwendet:	422	7,5 %
• kombiniert mit Linsenoperation:	1851	33,0 %
• davon pseudophak präop:	2328	41,6 %

DMEK vs. DSAEK



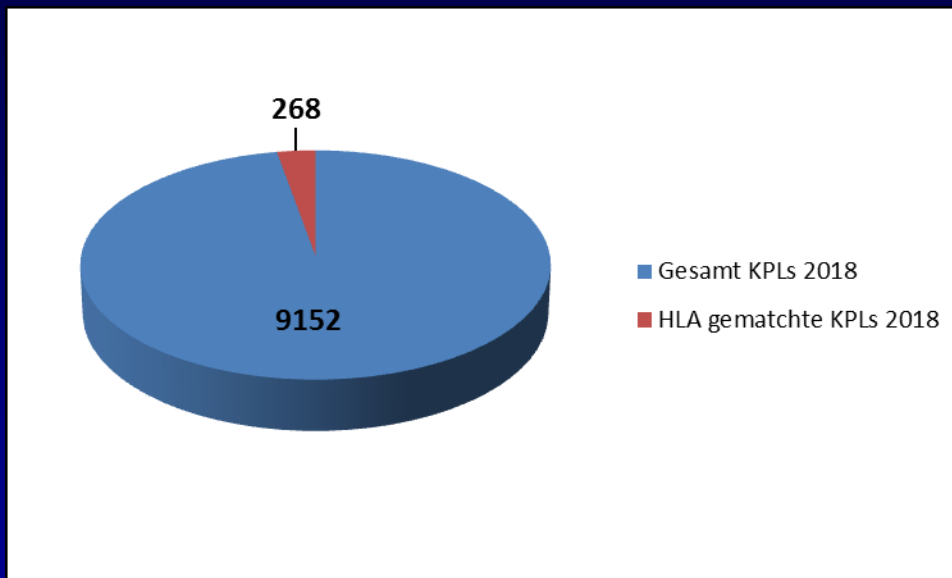
**97,0 %
DMEK**

Prozentualer Anteil der perforierenden Keratoplastiken kombiniert mit Linsenoperationen („Triple-Prozedur“) 2013- 2018



Anzahl der HLA-gematchten KPLs 2018

268 HLA-gematchte KPL's = 2,9 %



2017: 170 HLA-gematchte KPL's von 8052 = 2 %

2016: 247 HLA-gematchte KPL's von 7331 = 5 %

Patienten-Warteliste für Keratoplastik

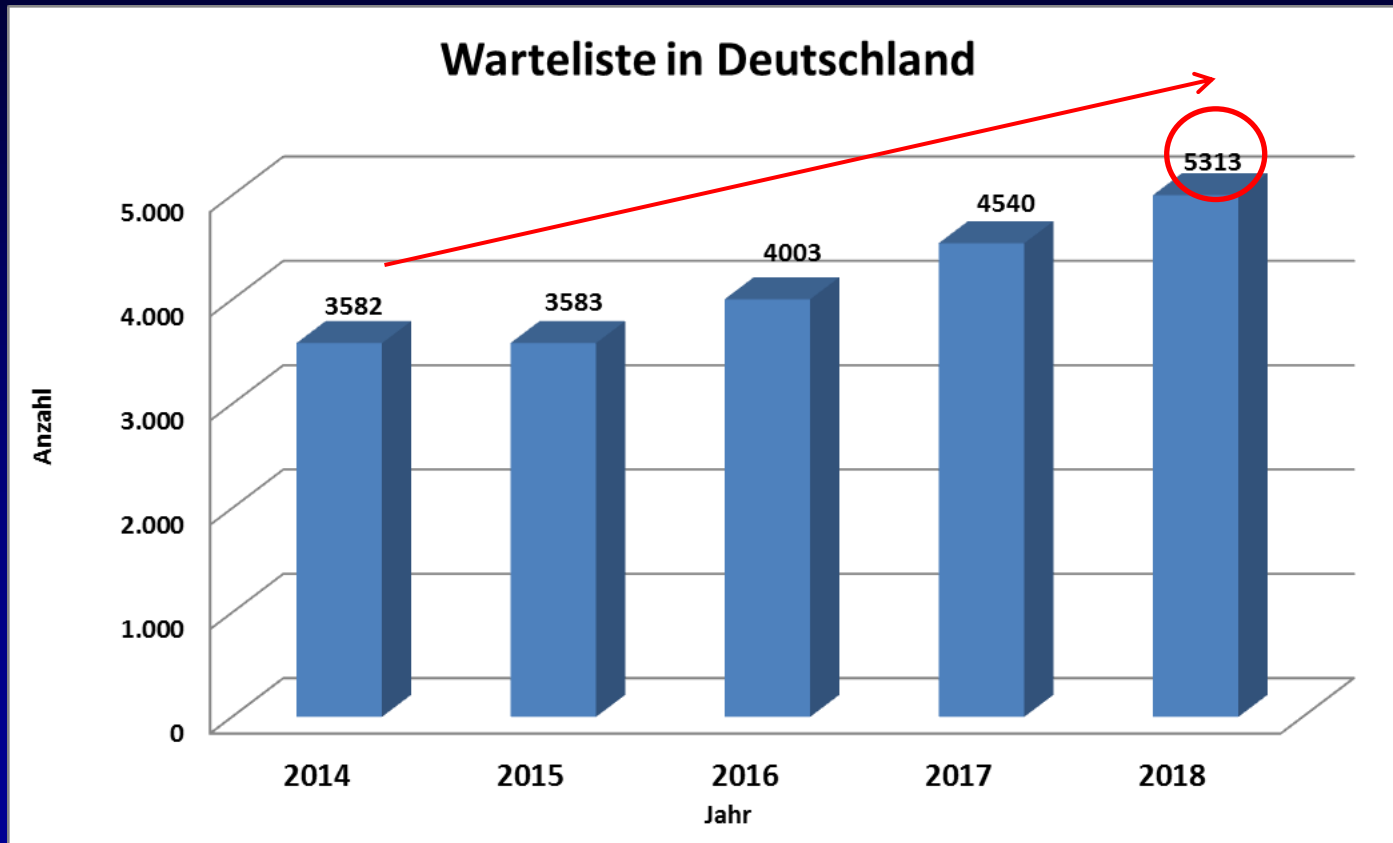
**5313 Patienten standen
zum Stichtag 31.12.2018
auf der Warteliste für eine Hornhaut !**

31.12.2017 = 4540

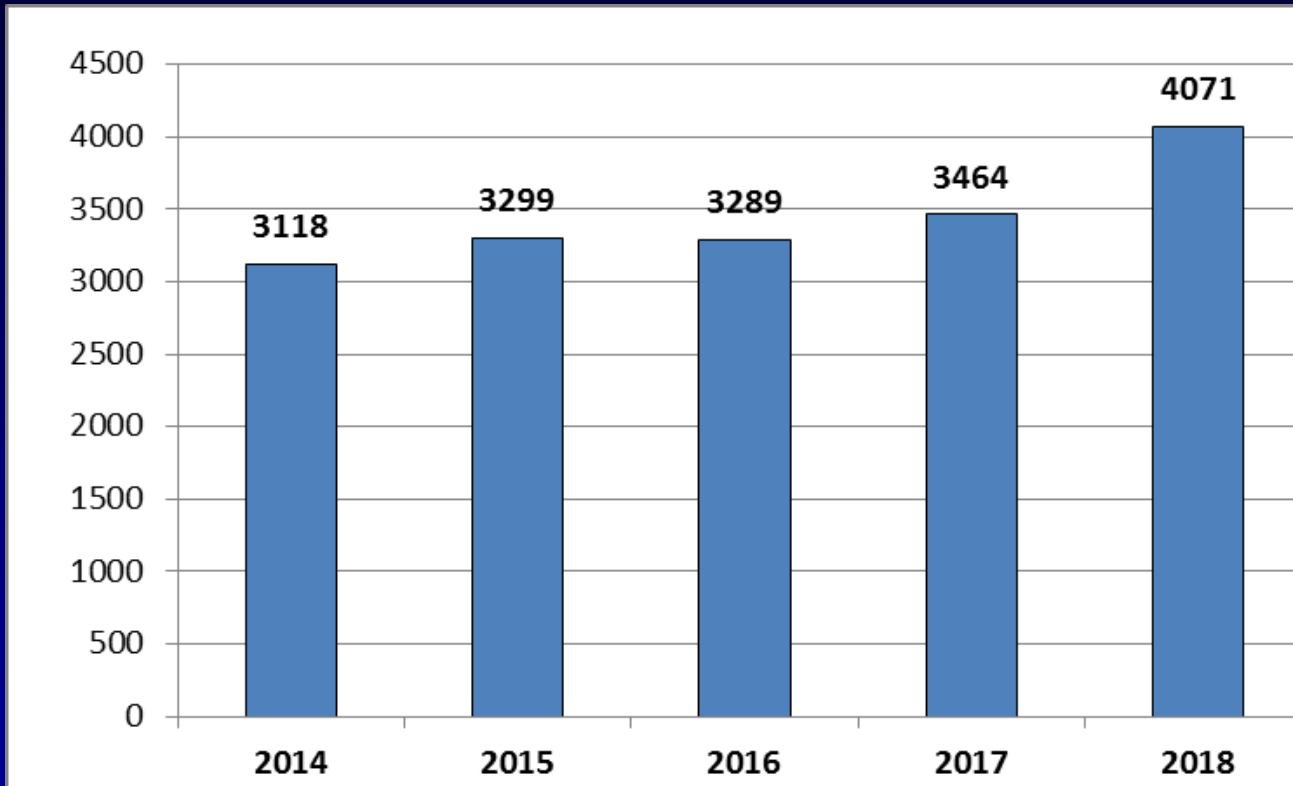
31.12.2016 = 4003

31.12.2015 = 3583

Patienten – Warteliste 2014 – 2018



Amnionmembrantransplantationen 2014 - 2018



Keratoplastik DRG

	KPL	Triple
2009	1,543	1,734
2010	1,762	1,995
2011	2,001	2,240
2012	1,980	2,338
2013	1,909	2,204
2014	1,902	2,129
2015	1,832	2,044
2016	1,772	1,934
2017	1,705	1,861
2018	1,671	1,788
2019	1,653	1,740

Basisfallwert Saarland 2018: 3.483,00 €
Basisfallwert Saarland 2019: 3.568,50 €

Trends in Corneal Transplantation from 2001 to 2016 in Germany: A Report of the DOG-Section Cornea and its Keratoplasty Registry




ELIAS FLOCKBRZI, PHILIP MAIER, DANIEL BÖHRINGER, HELGA REINSHAGEN, FRIEDRICH KRUSE, CLAUS CURSIEFEN, THOMAS REINHARD, GERD GEERLING, NECIP TORUN, AND BERTHOLD SEITZ, ON BEHALF OF ALL GERMAN KERATOPLASTY REGISTRY CONTRIBUTORS

- **PURPOSE:** The purpose of this retrospective panel study was to provide an overview of absolute numbers and of trends in the types of and indications for corneal transplantation in Germany from 2001 to 2016.
- **METHODS:** A questionnaire about absolute numbers, types of transplantation, and indications was sent to 111 ophthalmologic departments in Germany, out of which 94 (85%) provided their data.
- **RESULTS:** Since the year 2001, the number of corneal transplantations has increased by 1.5-fold, from 4730 penetrating keratoplasties (PKPs) in 2001 to 7325 penetrating and lamellar keratoplasties in 2016. The shift from penetrating to lamellar procedures began in 2006. In 2014, lamellar procedures (231 [4%] anterior and 2883 [49%] posterior lamellar keratoplasties) surpassed PKPs (2721, 47%) for the first time. Main indications for keratoplasty in Germany (2016) are Fuchs endothelial corneal dystrophy (46%), pseudophakic corneal decompensation (bullous keratopathy, 13%), repeated keratoplasty after graft failure (11%), keratoconus (8%), and corneal scarring (6%); others: 16%. The number of Descemet membrane endothelial keratoplasties (DMEKs) was 12 times higher (3850, 53%) than Descemet stripping automated endothelial keratoplasties (DSAEKs, 319, 4.4%) in 2016. The proportion of deep anterior lamellar keratoplasties (DALKs) never exceeded 6% (269 in 2011).
- **CONCLUSIONS:** The number of keratoplasties in Germany has increased from 2001 to 2016. Since

2014, posterior lamellar keratoplasties have surpassed PKPs. There was a constant increase of DMEKs, with a 12-fold higher number compared to DSAEKs in 2016. The shorter recovery time after DMEK seems to contribute to the trend toward earlier operative intervention in corneal endothelial diseases. (Am J Ophthalmol 2018;188:91-98. © 2018 The Author(s). Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

PENETRATING KERATOPLASTY (PKP) IS ONE OF THE oldest, the most commonly performed, and the most successful transplantation in humans.¹ The first successful corneal transplantation was performed by Eduard Zirm in Olmütz (today Olomouc, Czech Republic) in 1905.² The penetrating procedure remained the gold standard in the cure of corneal diseases for much of the 20th century. The process of developing further corneal transplantation techniques already began in the middle of the 20th century, when Tillett described the concept of a posterior lamellar keratoplasty in 1956.³ This pioneering concept was not adopted at that time because it was associated with poor vision⁴ in comparison with the penetrating procedure. At the end of the 20th century, in 1998, Melles and associates revitalized not only the concept of a posterior lamellar keratoplasty by presenting the successful attachment of a posterior lamellar graft consisting of stroma, Descemet membrane, and endothelium to recipient stroma without suturing^{4,5} but also the concept of deep anterior lamellar keratoplasty (DALK), which initiated the new era of increasingly implementing lamellar techniques in day-to-day practice. The concept of Descemet membrane endothelial keratoplasty (DMEK) was also published by Melles and associates in 2006.⁵

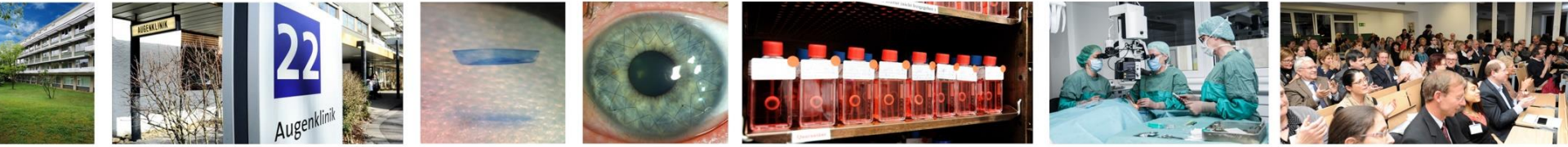
The aim of this manuscript is to reflect on the changing trends in absolute numbers, surgical techniques, and indications of corneal transplantations having been performed over a period of 16 years in Germany between 2001 and 2016, as evidenced by data from the German Keratoplasty Registry from the Cornea Section of the German Ophthalmological Society (DOG).

 Supplemental Material available at [AJCO.com](http://ajco.com).

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Augenärzte sind Organspender!



Besten Dank für Ihre Aufmerksamkeit!

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