

## Brown et al, Supplementary material

### Search terms

Database: Journals@Ovid Full Text <July 26, 2018>, Embase <1974 to 2018 July 26>, Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Daily, and Versions(R) <1946 to July 26, 2018>

Search Strategy:

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- 1 Fungal keratitis {Including Limited Related Terms} (4387)
  - 2 Mycotic keratitis {Including Limited Related Terms} (4387)
  - 3 Keratomycosis {Including Limited Related Terms} (4387)
  - 4 Oculomycosis {Including Limited Related Terms} (199)
  - 5 Corneal ulcer {Including Limited Related Terms} (13894)
  - 6 Fungal infection of cornea] {Including Limited Related Terms} (4387)
  - 7 Infectious keratitis {Including Limited Related Terms} (10036)
  - 8 microbial keratitis {Including Limited Related Terms} (11687)
  - 9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 (27705)
  - 10 incidence {Including Limited Related Terms} (47901)
  - 11 prevalence {Including Limited Related Terms} (114018)
  - 12 rate {Including Limited Related Terms} (114299)
  - 13 burden {Including Limited Related Terms} (28728)
  - 14 epidemiology {Including Limited Related Terms} (15781)
  - 15 10 or 11 or 12 or 13 or 14 (317552)
  - 16 9 and 15 (131)

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**Supplementary Figure 1**

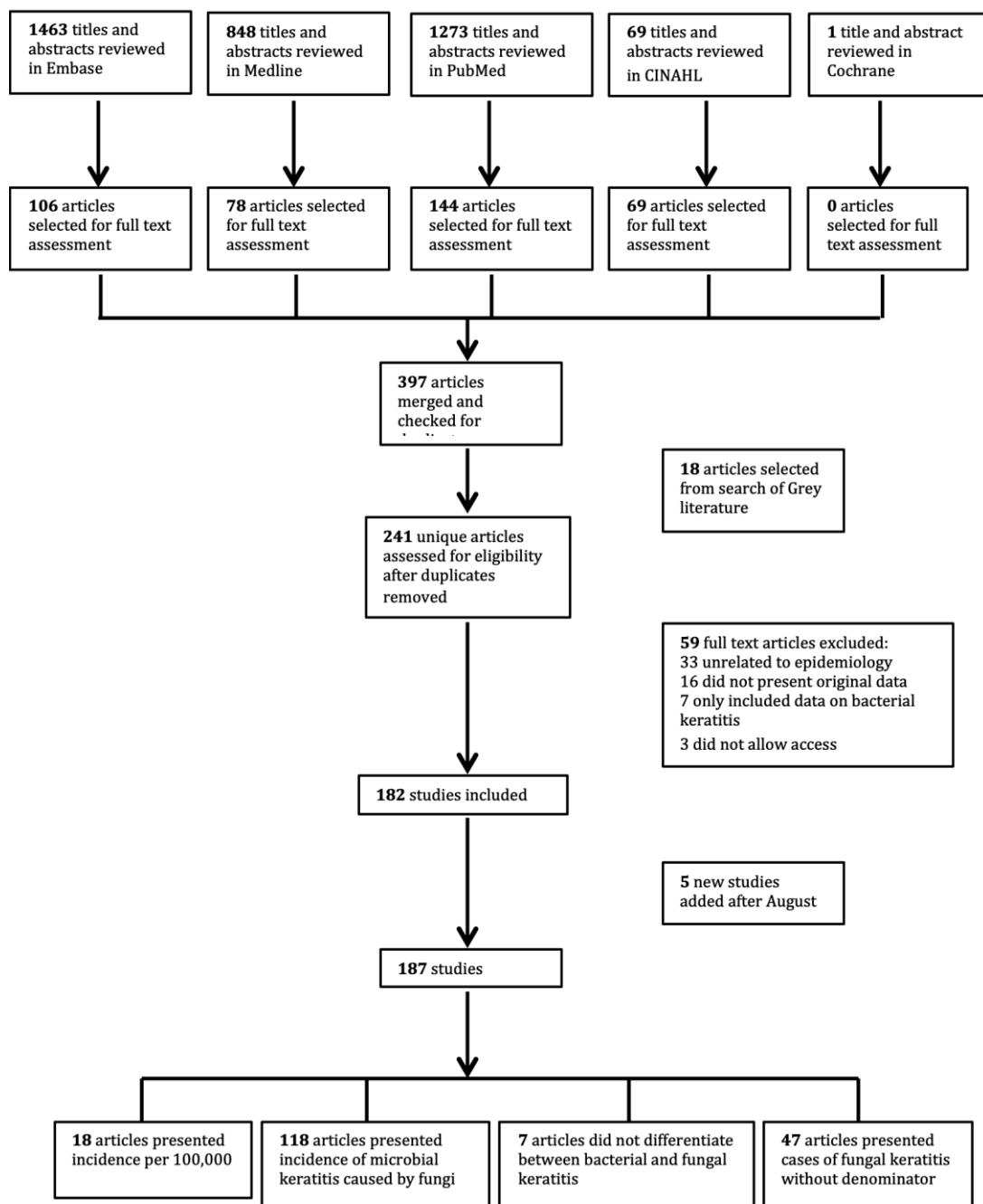


Figure 1 Literature search and study selection.

**Supplementary Table 2: Scoring system for modified GRADE criteria**

<b>PCR/IVCM + Culture/smear</b>	<b>2</b>
<b>Culture, smear</b>	<b>1</b>
<b>Clinical suspicion only</b>	<b>0</b>
<b>Age</b>	<b>Score</b>
<b>≤5 yrs</b>	<b>2</b>
<b>5yrs &lt; x ≤10 yrs</b>	<b>1</b>
<b>&gt;10 yrs</b>	<b>0</b>
<b>Patient no</b>	<b>Score</b>
<b>≥30</b>	<b>1</b>
<b>&lt;30</b>	<b>0</b>
<b>%FK/MK given</b>	<b>Score</b>
<b>Yes</b>	<b>1</b>
<b>No</b>	<b>0</b>

**Supplementary Table 3:** Fungal keratitis as a proportion of all microbial keratitis, and cases without a confirmed pathogen, GDP and distance from the equator. Where more than one study in past 10 years, a weighted mean has been calculated. Reference numbers refer to supplementary references

Country	Year	%FK/MK	Culture negative cases (%)	GDP per capita at median time of study (\$USD)	Mean distance from equator (km)#	Reference in supplementary or (in main text)
<b>AFRICA</b>						
<b>Egypt</b>	2011-2015	44.3*	192/608 (31.6)	3213	3003	6, 8, 9 (m13), 189
<b>Ethiopia</b>	2014-5	45.1	-	571	1001	1
<b>Ghana</b>	1995	56.0	85/199 (42.7)	386	9110	17
<b>Libya</b>	2008-10	32.9	-	10,297	3114	11
<b>Nigeria</b>	1995-2005	15.8	71/169 (42)	379	1112	20
<b>Sierra Leone</b>	2005-6	39.0	4/73 (5)	292	941	22
<b>South Africa</b>	2013-15	2.2	-	6434	3399	16
<b>Tanzania</b>	2008-10	24.6	26/52 (46)	659	667	5 (m1)
<b>Tunisia</b>	1995-2016	15.4*	12/30 (40)	3195	3782	13, 15
<b>ASIA</b>						
<b>Bangladesh</b>	2008	39.2	24/120 (20)	616	2670	47
<b>China</b>	2009-2014	51.0*	1663/2973 (60.0)	5634	3893	28 (m15), 31
<b>China - Hong Kong</b>	2004-2013	9.2	238/398 (59.8)	31,516	10,372	39, 40
<b>China - Taiwan</b>	2012-2014	8.2	-	24,818	7341	23
<b>India</b>	2003-2015	54.9*	9443/23799 (39.7)	1090	2447	49, 51-55, 58-60, 64, 66, 67, 75, 76, 78, 81, 83 (m6), 84, 85, 87-89
<b>Iran</b>	2007-2013	7.2*	55/70 (78.6)	6532	3559	90, 92, 93
<b>Iraq</b>	2013-2018	23.6*	32/105 (30.5)	4974	2281	178, 181
<b>Japan</b>	1999-2003	8.4 *	51/123 (41.5)	33,846	3969	43
<b>Korea (RO)</b>	2012-2014	10.0	-	18,640	3994	45
<b>Malaysia</b>	2007-2016	26.0	132/207 (63.8)	10,405	278	107, 108 (m18)
<b>Nepal</b>	1981-2014	44.8	455/1745 (26.1)	220	3114	
<b>Oman</b>	2000-2007	23.0*	100/176 (56.8)	9070	1451	120, 121
<b>Pakistan</b>	2013	29.5	-	1272	3337	104
<b>Philippines</b>	2012-2014	27.0	-	2768	1446	109 (m19)
<b>Saudi Arabia</b>	2006-2009	3.8	-	16,472	2781	123
<b>Singapore</b>	2012-2014	0.7	-	56,389	142	23
<b>Sri Lanka</b>	2012	40.4	-	3351	876	106
<b>Thailand</b>	2013	15.0	166/223 (74.4)	6168	8991	113, 114 (m20)
<b>Turkey</b>	2014-2015	9.4	395/620 (63.8)	12,127	4338	126
<b>Vietnam</b>	2008	60.0	-	1143	1798	119
<b>EUROPE</b>						
<b>Netherlands</b>	2014-2017	14.0	92/185 (50)	44,746	5812	142
<b>Spain</b>	2010-2016	1.0	92/297 (31)	29,212	4449	138
<b>UK</b>	2006-2017	6.9	-	41,791	6160	134 (m7), 183
<b>LATIN AMERICA AND THE CARRIBEAN</b>						
<b>Brazil</b>	1975-2013	13.9	581/2049 (28.4)	3495	1112	146, 147, 150-152

<b>Mexico</b>	2016	33.4	-	8444	2558	177
<b>Paraguay</b>	1988-2011	46.3*	-	1615	2595	154-156, 180
<b>NORTH AMERICA</b>						
<b>USA</b>	1976-2014	12.1	79/232 (34)	45,056	2748	158-161, (m27), 162, 163, 166, 167
<b>OCEANIA</b>						
<b>Australia</b>	1999-2004	7.3	-	19,483	2781	172
<b>New Zealand</b>	2003-2007	1.7	91/265 (34.4)	27,751	4549	174

FK = fungal keratitis; MK= microbial keratitis; GDP = gross domestic product

\*Weighted mean

# One degree of latitude is equivalent to about 111 kilometers (69 miles).

**Supplementary Table 4:** Trends in fungal keratitis as a proportion of all microbial keratitis over time. Reference numbers refer to supplementary references

<b>Country</b>	<b>Year</b>	<b>%FK/MK</b>	<b>Size of study (eyes) (n)</b>	<b>Reference (in supplementary)</b>
Tanzania	1994-1995	15.1	212	4
	2008-2010	24.6	170	5
Egypt	2012	55.0	60	9
	2011-2013	43.3	834	189
	2013-2015	55.5	247	6
Tunisia	1995-2012	12.4	60	13
	2016	30.0	100	15
Ghana	1995	56.1	199	17
	1999-2001	74.7	290	18
China (west)	1999-2004	61.9	1054	34
	2009-2013	71.7	2973	28
Hong Kong	1997-1998	6.4	223	39
	2004-2013	9.2	347	40
Japan	1999-2003	6.1	123	43
	2003	10.6	261	42
India – Aravind, South	1994	51.9	434	70
	1999-2002	52.1	3183	68
	2006-2009	63.0	5221	75
	2012-2013	75.8	252	67
Iran	2007-2009	9.4	466	92
	2011-2013	5.6	2180	90
	2012-2013	18.2	220	93

Nepal	1981	23.1	133	102
	1992-1993	22.1	558	98
	1998-1999	65.5	86	95
	2004-2008	61.1	351	94
	2006-2007	36.5	1880	99
	2007-2008	60.0	44	100
	2011	70.0	1644	103
	2011-2012	27.5	2768	97
Sri Lanka	1976-1981	33.3	66	105
	2012	40.4	1069	106
Malaysia	2007-2011	25.3	186	107
	2016	26.7	207	108
Thailand	1982-2003	13.6	556	112
	1988-2000	24.6	292	111
	2001-2004	39.2	127	117
	2004-2005	37.5	176	116
	2003-2006	50.8	310	115
Vietnam	1974-1982	23.6	1219	176
	2008	59.6	1153	118, 119

#### **List of studies for full-text analysis**

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