**Supplementary Digital Content Table 1.** Master Key Word Search for EMBASE and Medline via OvidSP

|  |  |  |
| --- | --- | --- |
| **#** | **Searches** | **Results** |
| **1** | keratoconus/ | 9761 |
| **2** | keratoconus\*.mp. | 10562 |
| **3** | 1 or 2 | 10562 |
| **4** | collagen/ | 136269 |
| **5** | collagen\*.mp. | 373438 |
| **6** | exp cross linking/ | 63512 |
| **7** | cross-link\*.mp. | 129208 |
| **8** | (collagen cross adj2 link\*).mp. | 3489 |
| **9** | collagen crosslink\*.mp. | 1885 |
| **10** | (CCL or CXL).tw. | 7845 |
| **11** | 4 or 5 or 6 or 7 or 8 or 9 or 10 | 492381 |
| **12** | oxygen/ | 238101 |
| **13** | oxygen\*.mp. | 1042058 |
| **14** | 12 or 13 | 1042058 |
| **15** | 3 and 11 and 14 | 60 |
| **16** | Limit 16 to yr=”2012-Current” | 58 |

Search syntaxes for PubMed, Medline, Scopus, Web of Science and EMBASE databases.

**Concepts**

1. Condition: keratoconus
2. Procedure: corneal crosslinking
3. Topic of interest: oxygen

**Search conducted on:** November 3, 2021

Master key word search for EMBASE and Medline via OvidSP (1946 – present) included

**Medline: n=20**

**Embase: n=58**

**Scopus: n =48**

2012 – 2021

( TITLE-ABS-KEY ( "keratoconus"  OR  "keratoconic" )  AND  TITLE-ABS-KEY ( "cross-linking"  OR  "crosslinking"  OR  "cross linking"  OR  "corneal cross-linking"  OR  "corneal crosslinking"  OR  "corneal cross linking"  OR  "corneal collagen cross-linking"  OR  "corneal collagen crosslinking"  OR  "corneal collagen cross linking"  OR  "conventional corneal collagen cross-linking"  OR  "conventional corneal collagen crosslinking"  OR  "conventional corneal collagen cross linking" )  AND  TITLE-ABS-KEY ( "oxygen"  OR  "hypoxemia"  OR  "hypoxia"  OR  "anaerobic"  OR  "aerobic"  OR  "oxygen assisted"  OR  "supplemental oxygen"  OR  "oxygen availability" ) )  AND  ( LIMIT-TO ( PUBYEAR ,  2021 )  OR  LIMIT-TO ( PUBYEAR ,  2020 )  OR  LIMIT-TO ( PUBYEAR ,  2019 )  OR  LIMIT-TO ( PUBYEAR ,  2018 )  OR  LIMIT-TO ( PUBYEAR ,  2017 )  OR  LIMIT-TO ( PUBYEAR ,  2016 )  OR  LIMIT-TO ( PUBYEAR ,  2015 )  OR  LIMIT-TO ( PUBYEAR ,  2014 )  OR  LIMIT-TO ( PUBYEAR ,  2013 )  OR  LIMIT-TO ( PUBYEAR ,  2012 ) ) View less

**Pubmed: n=28**

2012 - 2021

((keratoconus OR keratoconic) AND ("cross-linking" OR crosslinking OR "cross linking" OR "corneal cross-linking" OR "corneal crosslinking" OR "corneal cross linking" OR "corneal collagen cross-linking" OR "corneal collagen crosslinking" OR "corneal collagen cross linking" OR "conventional corneal collagen cross-linking" OR "conventional corneal collagen crosslinking" OR "conventional corneal collagen cross linking") AND ("oxygen" OR hypoxemia OR hypoxia OR anaerobic OR aerobic OR "oxygen assisted" OR "supplemental oxygen" OR "oxygen availability"))

**Web of science: n=27**

2012 - 2021

ALL=(Keratoconus OR keratoconic) AND ALL=("cross-linking" OR crosslinking OR "cross linking” OR "corneal cross-linking" OR "corneal crosslinking" OR "corneal cross linking" OR "corneal collagen cross-linking" OR "corneal collagen crosslinking" OR "corneal collagen cross linking" OR “conventional corneal collagen cross-linking” OR “conventional corneal collagen crosslinking” OR “conventional corneal collagen cross-linking”) AND ALL=( oxygen OR hypoxemia OR hypoxia OR anaerobic OR aerobic OR “oxygen assisted” OR “supplemental oxygen” OR “oxygen availability")