

# The prevalence and risk factors of epiretinal membranes: a systematic review and meta-analysis of population-based studies

Wei Xiao, Xiaoyun Chen, William Yan, Zhuoting Zhu, Mingguang He

## Literature search strategy

### Terms

1. prevalence, epidemiology, epidemic\*, risk
2. epiretinal membrane\*; erm\*; ierm\*; cellophane macular reflex; preretinal macular fibrosis

## Search strategy

### PubMed (up to July 11, 2016)

|     |   |         |
|-----|---|---------|
| #1  | prevalence<br>Fields: Title/Abstract              | 459388  |
| #2  | epidemiology<br>Fields: Title/Abstract            | 143403  |
| #3  | epidemic*<br>Fields: Title/Abstract               | 80597   |
| #4  | risk<br>Fields: Title/Abstract                    | 1507737 |
| #5  | #1 OR #2 OR #3 OR #4                              | 1973101 |
| #6  | epiretinal membrane*<br>Fields: Title/Abstract    | 2259    |
| #7  | ERM<br>Fields: Title/Abstract                     | 3126    |
| #8  | iERM<br>Fields: Title/Abstract                    | 23      |
| #9  | cellophane macular reflex<br>Fields: All fields   | 18      |
| #10 | preretinal macular fibrosis<br>Fields: All fields | 69      |
| #11 | #6 OR #7 OR #8 OR #9 OR #10                       | 4935    |
| #12 | #5 AND #11  | 569     |

### Embase (up to July 11, 2016)

|    |            |        |
|----|------------|--------|
| #1 | prevalence | 609473 |
|----|------------|--------|

|     |   |         |
|-----|---|---------|
|     | Fields: ti, ab                                    |         |
| #2  | epidemiology<br>Fields: ti, ab                    | 144993  |
| #3  | epidemic*<br>Fields: ti, ab                       | 89089   |
| #4  | risk<br>Fields: ti, ab                            | 2059117 |
| #5  | #1 OR #2 OR #3 OR #4                              | 2622649 |
| #6  | epiretinal membrane*<br>Fields: ti, ab            | 2491    |
| #7  | ERM<br>Fields: ti, ab                             | 3555    |
| #8  | iERM<br>Fields: ti, ab                            | 22      |
| #9  | cellophane macular reflex<br>Fields: All fields   | 18      |
| #10 | preretinal macular fibrosis<br>Fields: All fields | 75      |
| #11 | #6 OR #7 OR #8 OR #9 OR #10                       | 5570    |
| #12 | #5 AND #11  | 619     |

#### Web of Science (All Databases, 1980 to July 11, 2016)

##### All languages, all document types

|     |                                |         |
|-----|--------------------------------|---------|
| #1  | TS = prevalence                | 684438  |
| #2  | TS = epidemiology              | 1440407 |
| #3  | TS=epidemic*                   | 100419  |
| #4  | TS=risk                        | 2386116 |
| #5  | #1 OR #2 OR #3 OR #4           | 3597103 |
| #6  | TS=epiretinal membrane*        | 3045    |
| #7  | TS=ERM                         | 369     |
| #8  | TS=iERM                        | 21      |
| #9  | TS=cellophane macular reflex   | 17      |
| #10 | TS=preretinal macular fibrosis | 67      |
| #11 | #6 OR #7 OR #8 OR #9 OR #10    | 6344    |
| #12 | #5 AND #11                     | 956     |

**Table S1.** Appraisal criteria for study methodology

| Quality Criteria                           | Maximum score |
|--|---------------|
| 1. Representing the general population     | 1             |
| 2. Appropriately recruiting the population | 1             |
| 3. Adequate response rate (>70%)           | 1             |
| 4. Objective documentation of the outcomes | 1             |

**Table S2.** Quality score of included studies

| Study      | Representing the general population | Appropriately recruiting the population | Adequate response rate (>70%) | Objective documentation of the outcomes | Total score |
|------------|-------------------------------------|---|-------------------------------|---|-------------|
| BDES       | 1                                   | 1                                       | 1                             | 1                                       | 4           |
| Beixinjing | 1                                   | 1                                       | 1                             | 1                                       | 4           |
| BMES       | 1                                   | 1                                       | 1                             | 1                                       | 4           |
| Funagata   | 1                                   | 1                                       | 0                             | 1                                       | 3           |
| HES        | 1                                   | 1                                       | 1                             | 1                                       | 4           |
| Hisayama   | 1                                   | 1                                       | 0                             | 1                                       | 3           |
| Jiangning  | 1                                   | 1                                       | 1                             | 1                                       | 4           |
| LALES      | 1                                   | 1                                       | 1                             | 1                                       | 4           |
| MESA       | 1                                   | 1                                       | 1                             | 1                                       | 4           |
| SCES       | 1                                   | 1                                       | 1                             | 1                                       | 4           |
| SiMES      | 1                                   | 1                                       | 1                             | 1                                       | 4           |
| SINDI      | 1                                   | 1                                       | 1                             | 1                                       | 4           |
| VIP        | 1                                   | 1                                       | 1                             | 1                                       | 4           |