

1 **Appendix 1: Search strategy to identify THR acetabular implants studied with EBRA**

2 PubMed

3 (Arthroplasty, Replacement, Hip[mh] OR Hip Arthroplasty[tiab] OR Hip Replacement[tiab]
4 OR THR[tiab] Acetabular cup[tiab] Acetabular component[tiab] OR cup[tiab] OR cups[tiab]
5 OR acetabular[tiab] OR liner[tiab] OR polyethylene[tiab]) AND (Migration[tiab] OR
6 Migrat*[tiab] OR movement [tiab] OR rotat*[tiab] OR inclination[tiab] OR translat*[tiab]
7 OR micromotion [tiab]) AND (Ein Bild Röntgen Analyse [mh] OR EBRA[tiab])

8

9 Embase

10 (hip arthroplasty or hip replacement or hip arthroplasty or hip replacement) AND (THR
11 acetabular component or cup or cups or acetabular or liner or polyethylene) AND (Migration
12 OR Migrat OR movement OR rotation OR inclination OR translation OR micromotion) AND
13 (Ein Bild Rontgen Analyse OR EBRA)

14

15 Scopus

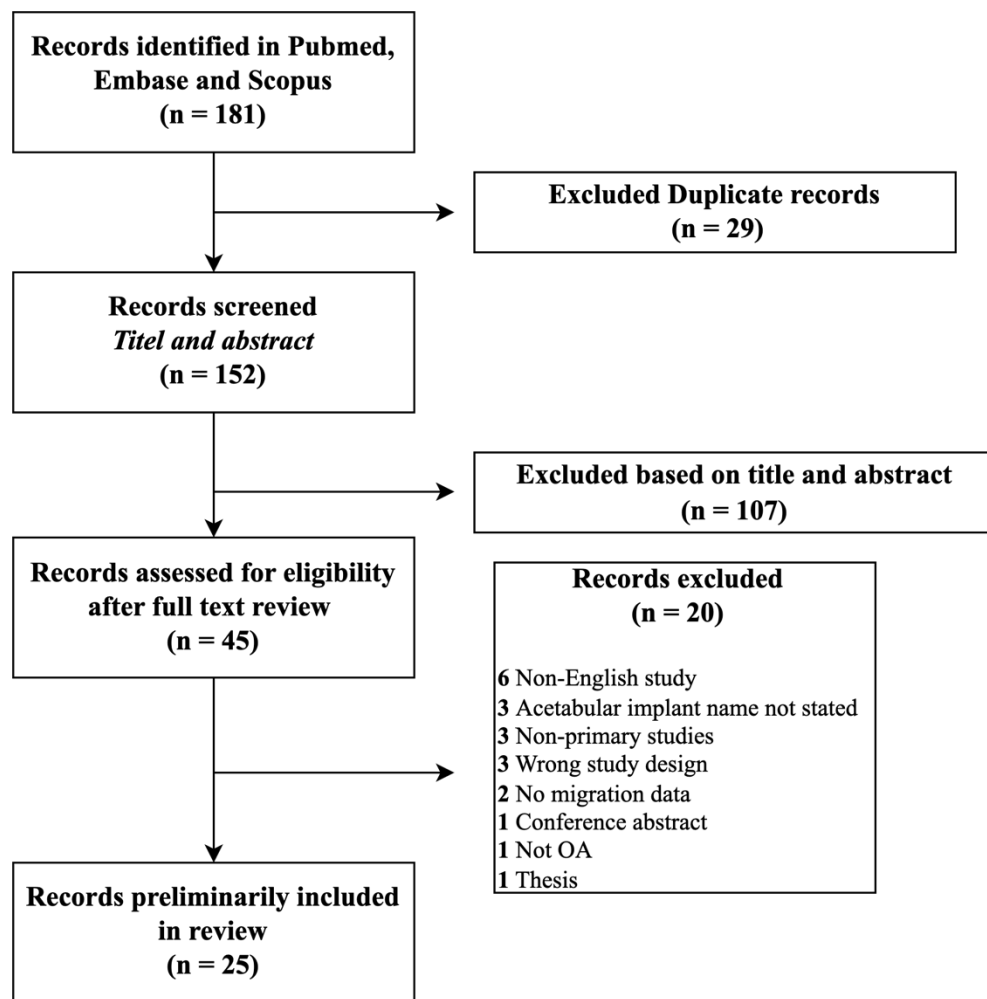
16 (hip arthroplasty OR hip replacement OR total hip replacement OR thr) AND (acetabular
17 component OR cup OR cups OR acetabular OR liner OR poly-ethylene) AND (migrat* OR
18 movement OR rotat* OR inclination OR translat* OR micromotion) AND (EBRA or Einzel
19 Bild Rontgen Analyse or Ein Bild Rontgen Analyse)

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23 **Appendix 2: PRISMA flowchart of the systematic review of primary THR acetabular**
 24 **implants studied with EBRA**



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27 **Appendix 3: The inclusion and exclusion criteria for the systematic review of THR**
 28 **acetabular implants studied with EBRA**

29 The inclusion criteria were any studies that reported: (1) primary THR, (2) migration measured
 30 using EBRA and (3) the migration of the acetabular implant in any direction. Studies were
 31 excluded if they did not report acetabular implant migration; reported on fewer than 5
 32 acetabular cups; acetabular implant migration was not measured using EBRA; the cohorts
 33 integrated the migration of acetabular cups used at revision THR; the studies were conference
 34 proceedings, thesis manuscript, or used languages not spoken by the review team; the studies

35 used in vitro or animal models; the studies did not separate acetabular cup migration via implant

36 design

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