**Appendix 3.** Intraoperative complications, implant survival, and patient survival after metal-on-metal hip replacement revision surgery in the unmatched cohort

The unmatched cohort consisted of 4908 metal-on-metal hip replacement revision procedures meeting the study inclusion criteria. The study endpoints after revision surgery were compared between the unmatched ARMD and non-ARMD groups using univariable logistic (intraoperative complications) and Cox (mortality and rerevision surgery) regression models. The findings from the unmatched cohort (summarized subsequently) were different compared with those obtained from the matched cohort (Table 2), therefore supporting the use of the propensity score matching methods in the main article.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Unmatched cohort | Number of hips (%) | Intraoperative complications | 5-year all-cause implant survival (95% CI) | 5-year all-cause patient survival(95% CI) |
| Overall | 4908 | 2.1% (n = 101)  | 88.1% (87%-89%) | 94.8% (94%-96%) |
| ARMD | 2547 | 1.7% (n = 42) | 89.6%(87%-91%) | 95.8% (92%-98%) |
| Non-ARMD | 2361 | 2.5% (n = 59) | 87.3% (86%-89%) | 93.9% (92%-95%) |
| Regression analysis (95% CI) |  | Crude OR = 0.65(0.44-0.98)**p = 0.037** | Crude HR = 0.89 (0.73-1.07)p = 0.217 | Crude HR = 0.62 (0.43-0.89)**p = 0.010** |

Statistically significant differences (p < 0.05) are highlighted in bold; odds and hazard ratios > 1 represent an increased risk of the specified endpoint in ARMD revisions; ARMD = adverse reactions to metal debris; CI = confidence interval; OR = odds ratio; HR = hazard ratio.