## Supplementary data

Table 6. Cox proportional hazards models with endpoint revision for any reason and due to dislocation, stratified by sex

| Outcome Head size | Univariable model |  | Multivariable model |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Females $\mathrm{HR}(\mathrm{Cl})$ | Males HR (CI) | Females $\mathrm{HR}(\mathrm{Cl})$ | Males $\mathrm{HR}(\mathrm{Cl})$ |
| Revision for any reason |  |  |  |  |
| 32-mm |  | 1 | 1 | 1 |
| 36-mm | 1.1 (0.8-1.5) | 0.8 (0.5-1.1) | 1.1 (0.8-1.5) | 0.8 (0.5-1.2) |
| Revision due to dislocation |  |  |  |  |
| 32-mm | 1 | 1 | 1 |  |
| $36-\mathrm{mm}$ | 0.8 (0.5-1.5) | 0.8 (0.3-1.8) | 0.8 (0.5-1.5) | 0.9 (0.4-1.9) |

The multivariable model was adjusted for patient age, year of surgery, and type of surgical approach.
HR (CI) = Hazard ratio (95\% confidence interval)

Table 7. Univariable Cox proportional model stratified by national register. Hazard ratios refer to $36-\mathrm{mm}$ heads with $32-\mathrm{mm}$ as the reference

| Nation | n | Revision for any reason Revisions (\%) HR (CI) |  | Revision due to Revisions (\%) | to dislocation $\mathrm{HR}(\mathrm{CI})$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Denmark | 2,088 | 128 (6.1) | 1.0 (0.7-1.4) | 40 (1.9) | 1.3 (0.7-2.5) |
| Norway | 712 | 30 (4.3) | 0.4 (0.1-1.2) | 4 (0.6) | a |
| Sweden | 1,280 | 28 (2.2) | 0.8 (0.4-1.6) | 11 (0.9) | 0.9 (0.3-2.8) |
| Finland | 950 | 47 (5.0) | 0.8 (0.4-1.4) | 18 (1.9) | 0.2 (0.1-0.4) |
| $\mathrm{HR}(\mathrm{Cl})=$ a Hazard | zard and | atio (95\% confí Cls could not | idence interval) be calculated. |  |  |

Table 8. Distribution of head size for each nation contributing to NARA. Values are number (\%)

| Nation | 32-mm THA | 36-mm THA |
| :--- | :--- | :--- |
| Denmark | $1,019(41)$ | $1,069(43)$ |
| Norway | $560(22)$ | $152(6)$ |
| Sweden | $661(26)$ | $619(25)$ |
| Finland | $275(11)$ | $675(26)$ |



Figure 3. The absolute standardized difference in means (ASDM) between 32- and $36-\mathrm{mm}$ groups before and after matching


Figure 6. Kaplan-Meier survival for each national register with endpoint revision due to dislocation separately for $32-\mathrm{mm}$ (left panel) and $36-\mathrm{mm}$ (right panel) THA. $36-\mathrm{mm}$ THA seems to perform quite equally among the 4 national registers while $32-\mathrm{mm}$ THA seems to have a poorer Kaplan-Meier survival in the Finish Register compared with the remaining 3 national registers.

