



Background

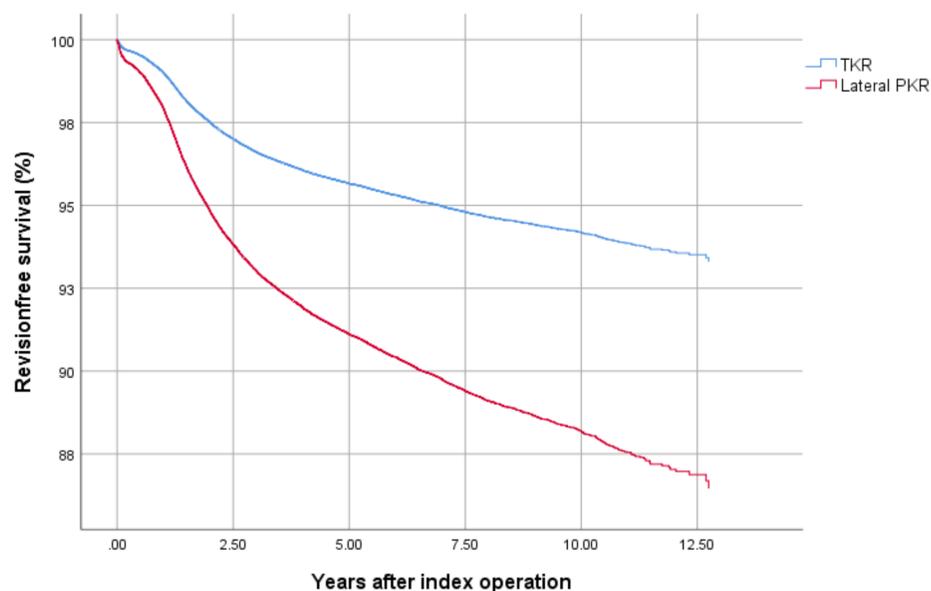
Only 12.6% of the knee replacement population has lateral osteoarthritis (OA) and most lateral OA is treated with a total knee replacement (TKR).

Low volume, technical complexity and different biomechanics may affect failure modes and survival rates of lateral PKRs. Since medial and lateral partial knee replacement (PKR) both have their own indications, comparison of the lateral PKR with the TKR, seems a logical next step.

AIM: To investigate whether the survival of lateral PKR is different from the TKR using Dutch Arthroplasty Register data.

Results

Survival of TKR compared to lateral PKR



	K-M 4 year survival (95% CI)
TKR	95,8% (95,7 - 95,9)
Lateral PKR	90.1% (87,6 - 92,6)

	HR (95% CI)	p-value
TKR	1.0 (reference)	
Lateral PKR	2,10 (1,68 – 2,62)	<0,001

Discussion and Conclusions

In line with previous registry data on medial and patellofemoral partial knee replacements, lateral partial knee replacements are associated with an inferior survival compared to total knee replacement.

The most important reason for revisions is progression of osteoarthritis.

Factors that may play a role and bias the results are:

1. Low surgeon volume
2. Wrong indication
3. Inclusion of all wear patterns in the TKR group
4. Technical complexity
5. High risk of bearing dislocation in the mobile bearing PKRs

Future research:

Inferior results because of:

- Technical complexity?
- Low volumes?
- Inclusion of all wear patterns in TKR?



Methods

Data from the Dutch Arthroplasty Register was used between 2007 and 2019.

- A total of 216,650 Total Knee Replacements (TKRs) and 657 lateral Partial Knee Replacement (PKRs)
- Only patients diagnosed with osteoarthritis



Cox regression models were conducted

- HRs were adjusted for age, ASA score, gender, fixation type, number of KR performed each year (routine score)

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