

Excellent implant survivorship and knee function of primary fixed-lateral unicompartmental knee arthroplasty – a consecutive single-center series of 1016 knees at a mean follow up of 5 years

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Background

- Isolated lateral-compartment knee osteoarthritis (OA) is a condition challenging to treat
- Lateral unicompartmental knee arthroplasty (UKA) may offer therapeutic advantages over total knee arthroplasty (TKA)
- Lateral UKA is infrequently performed

Purpose

- Determine **implant survivorship** and **reoperation-free survival**
- Assess patient-reported outcome measures (**PROMs**) and **radiological outcomes**

Patients and Methods

- N=1258 primary Oxford® Fixed-Lateral UKA (ZimmerBiomet) performed between 2016-2021
- Standardized indication: varus/valgus stress views
- **Structured telephone interview:**
 - Implant survivorship
 - Evaluation of any reoperation
 - UCLA Activity Score
 - Oxford Knee Score (OKS)
- N=1057 patients (1157 knees) with a minimum follow-up of 2 years successfully contacted (follow-up rate 92%)
- Retrospective exclusion of patients with previous ipsilateral medial UKA (n=48) or no consent (n=93)
- Standardized protocol for pre-, and postoperative radiographs

Final study cohort

Patients (n)	928
Age (yrs)	70 ± 10
Sex	75% women
BMI (kg/m ²)	27.6 ± 5.1
Follow-up (yrs)	5.2 ± 1.8



Fig. 1: Postoperative example of the Oxford fixed lateral UKA.
A: AP radiograph, B: lateral radiograph

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Results

- Cumulative 9-year **implant survivorship: 98%** (CI 95%: 0.965-0.985) (Fig. 2A)
- Cumulative 9-year reoperation-free survival: **92%** (CI 95%: 0.904-0.944) (Fig. 2B)

Fig. 2A

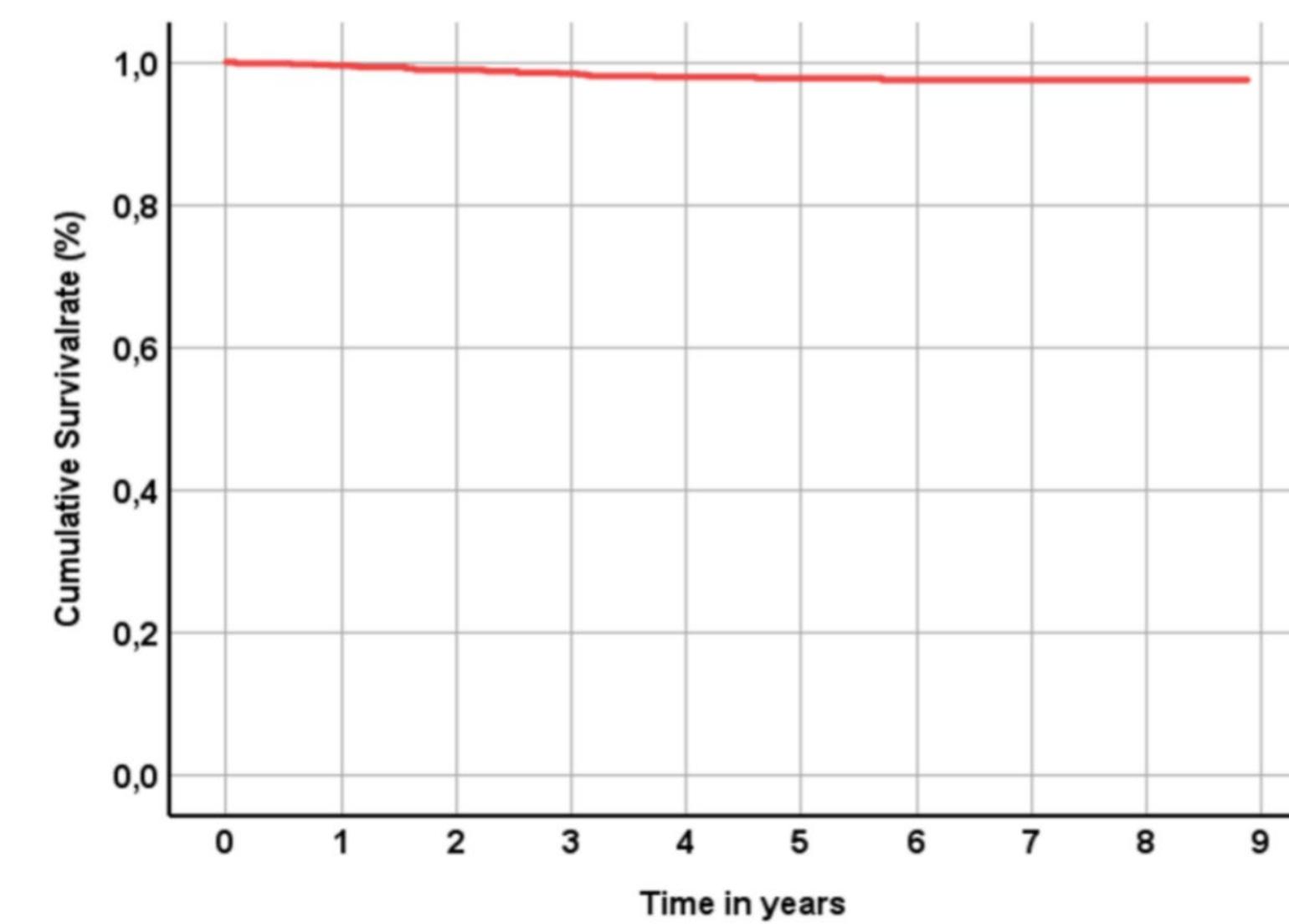
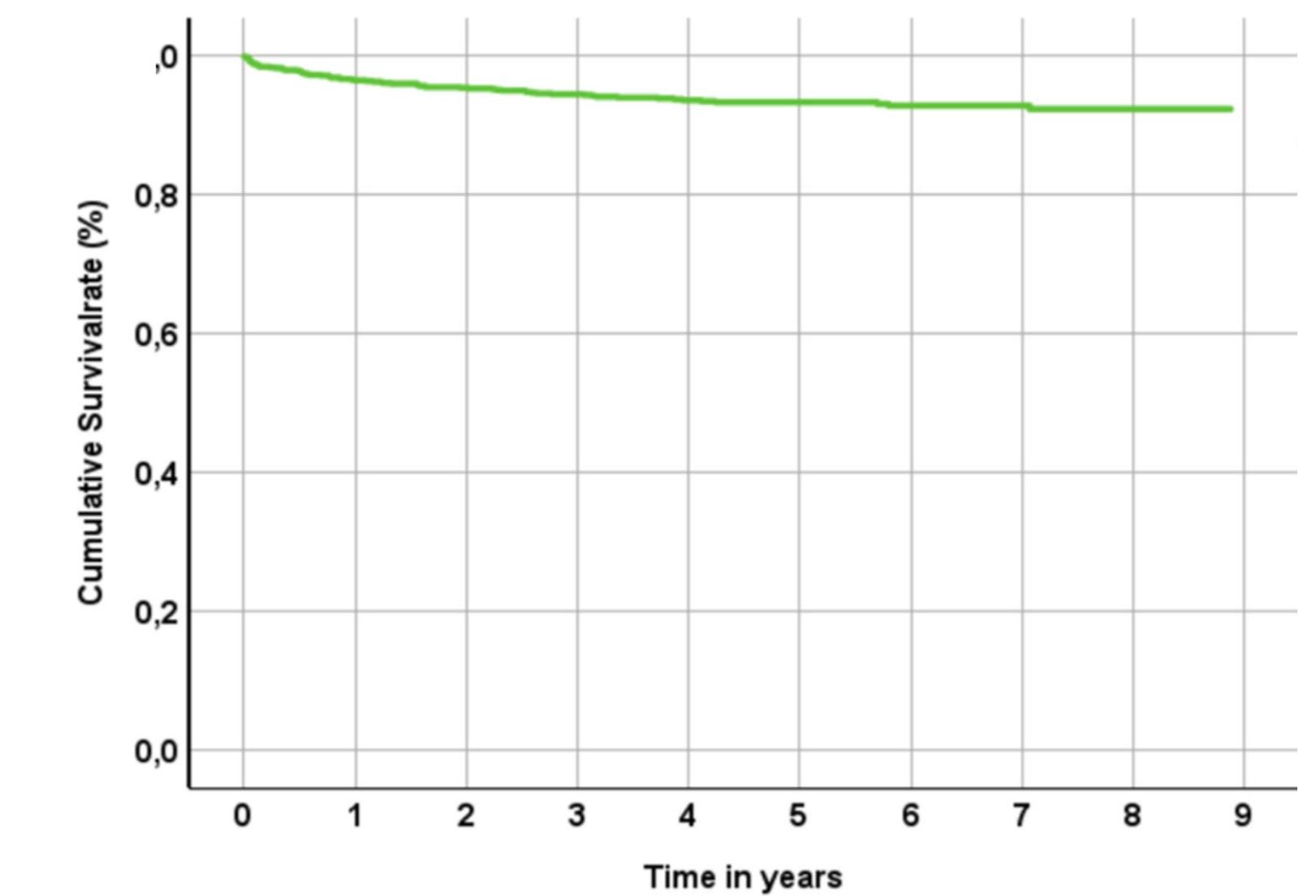


Fig. 2B



Reoperation in 67 patients:

- Additional medial UKA: n=25
- Conversion to TKA: n=22
- Arthroscopy (meniscus lesion/infection): n=10
- Secondary capsular closure/wound closure: n=8
- DAIR: n=3
- Other (traumatic patella fracture, osteophyte impingement): n=2

Table 1: Lateral UKA resulted in a significant improvement of PROMs.

	Preop.	Postop.	
Ø UCLA Activity Score	4.7 (SD 2.1)	5.80 (SD 1.6)	p < 0.001*
Ø OKS	24.9 (SD 9.4)	43.1 (SD 6.4)	p < 0.001*

Table 2: Lateral UKA undercorrected the overall mechanical valgus alignment.

	Preop.	Postop.	
Ø Alignment	7.4° Valgus (SD 4.5)	2.4° Valgus (SD 2.6)	p < 0.001*

*Wilcoxon Signed Ranks Test

Conclusions

- Largest series of primary lateral UKA
- Excellent clinical outcomes
- At 9 years:
 - **98% implant survivorship**
- Overall low reoperation rate (6.6%):
 - addition of medial UKA most common re-operation
 - capsular dehiscence most common soft-tissue complication
- Avoid overcorrection