

Medial Unicompartmental Knee Arthroplasty for Osteonecrosis: A Cohort Study Comparing Cemented and Cementless Fixation

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Background

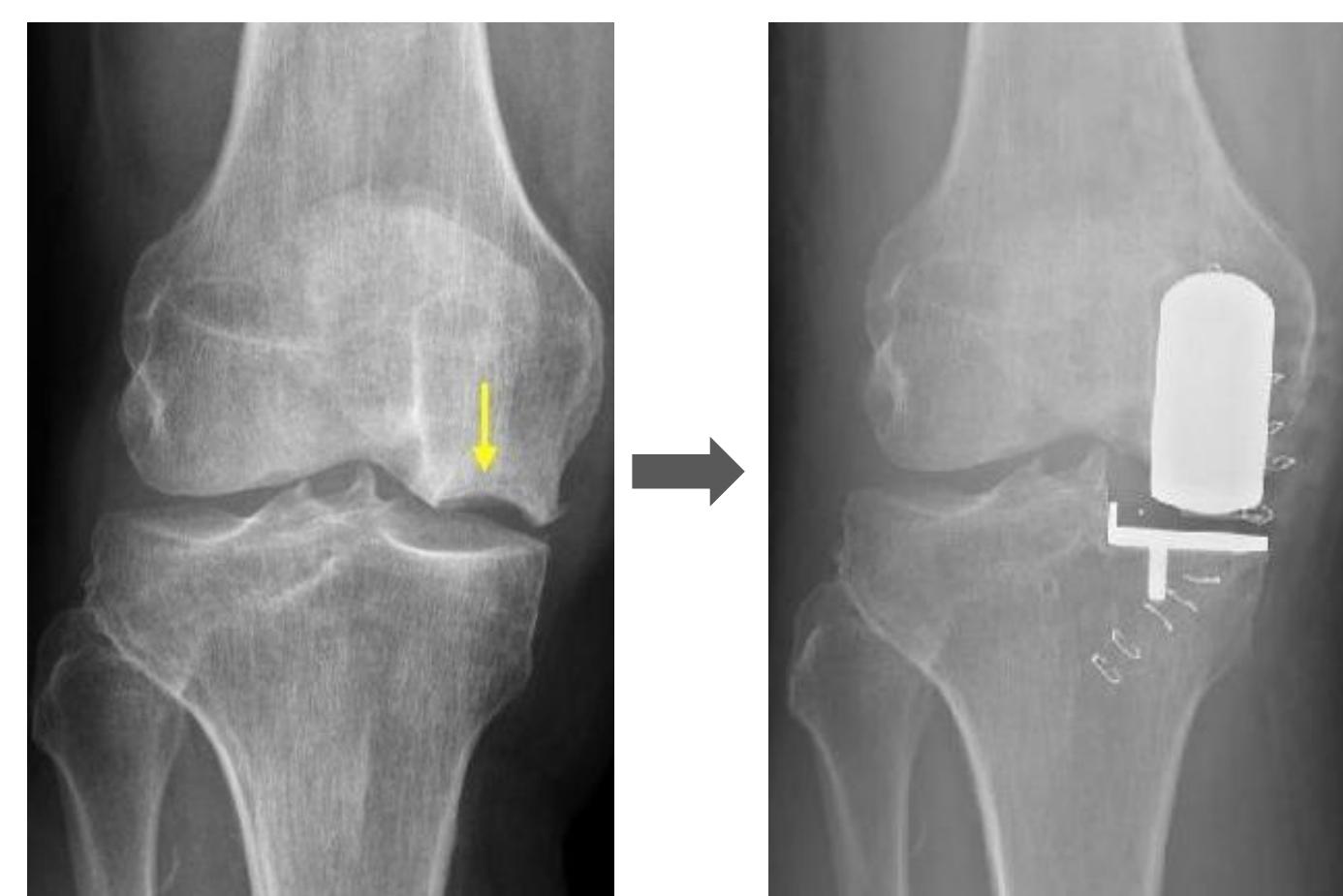
- Several studies reported good results of medial UKA for osteonecrosis (ON) with **cemented** fixation^{1,2}
- Outcome of **cementless** medial UKA in knees with ON is unknown

Aim of Study

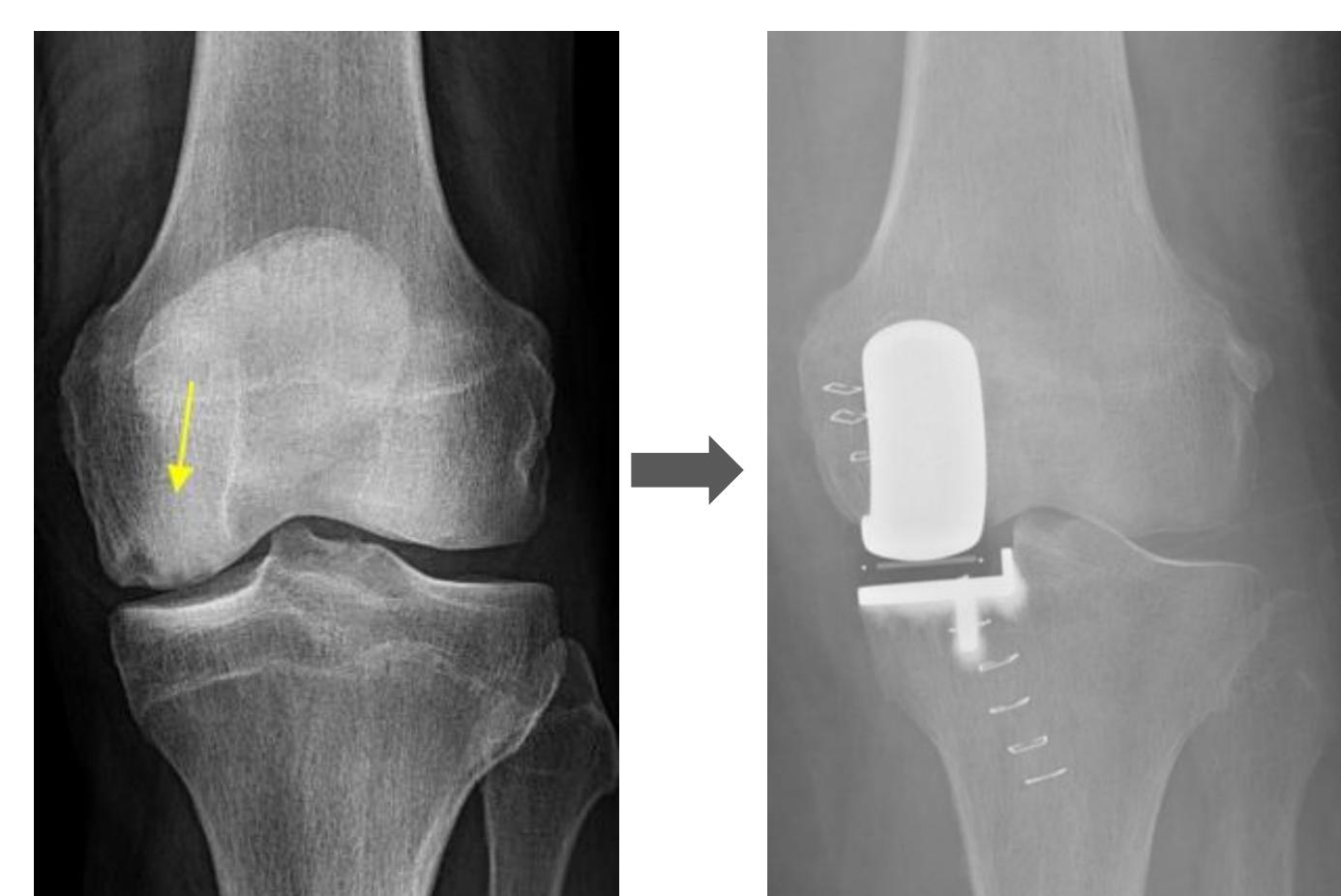
- Assessment of survival after medial **cementless** vs. **cemented** UKA (twin-peg Oxford®)
- Evaluation of Reasons for Re-operation
- Assessment of functional outcome

Methods

Single-center study
2020-2022
(n=2,744 medial UKA,
minimum FU ≥2 years)



n=137 knees with ON
n=124 contacted
Follow-up rate 91%



n=3 no consent, n=2
concomitant PFJ or ACLR

Final cohort n=119
(80% SPONK, 10% sec. ON, 10% post-
arthroscopic)

Cohort Characteristics

	Cemented (n=63)	Cementless (n=56)	p-value
♂ Age (yr)	70	72	0.184
Female (%)	70	30	<0.001
BMI (kg/m ²)	29	28	0.226
Follow-up (m)	45	38	<0.001

References
1: Greco NJ et al. J Bone Joint Surg Am. 2019; 101:1077-84.2
2: Fukuoka S et al. Knee. 2019; 26:1111-6

Results

Cumulative Survivalrate at 4 Years

(Cemented versus Cementless)

	Aseptic loosening	Implant revision	Re-operation
100% vs 97.7%	97.5% vs 93.3%	92.1% vs 87.0%	
p=0.352	p=0.359	p=0.346	

Reasons for Re-operation

	Cemented (n=3)	Cementless (n=7)
Disease Progression	1 (33.3)	2 (28.6)
Aseptic Loosening (Tibia)	0	1 (14.3)
Infection	1 (33.3)	0
Periprosthetic Fracture	0	1 (14.3)
Bearing Dislocation	1 (33.3)	1 (14.3)
Wound Complication	0	2 (28.6)

Functional Outcome

	Cemented	Cementless	p-value
Ø Oxford Knee Score (postop)	42.6 ± 5.4	43.5 ± 6.3	0.124
Ø UCLA Activity Score (postop)	6.1 ± 1.0	6.1 ± 1.2	0.573

Conclusion

- Cementless UKA is a **safe & reproducible** treatment option in ON knees
- Revisions in cementless UKA **unrelated to osteonecrosis**
- No aseptic loosening** at the site of osteonecrosis
- Limitations: gender bias & short follow-up