

NON-ONCOLOGICAL MEGAPROSTHESIS OF THE LOWER LIMB: ARE THEY DIFFERENT?

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AIM

To describe the clinical characteristics of megaprosthesis of lower limb implanted for non-oncological diseases and to compare them with those placed for an oncological indication.

METHODS

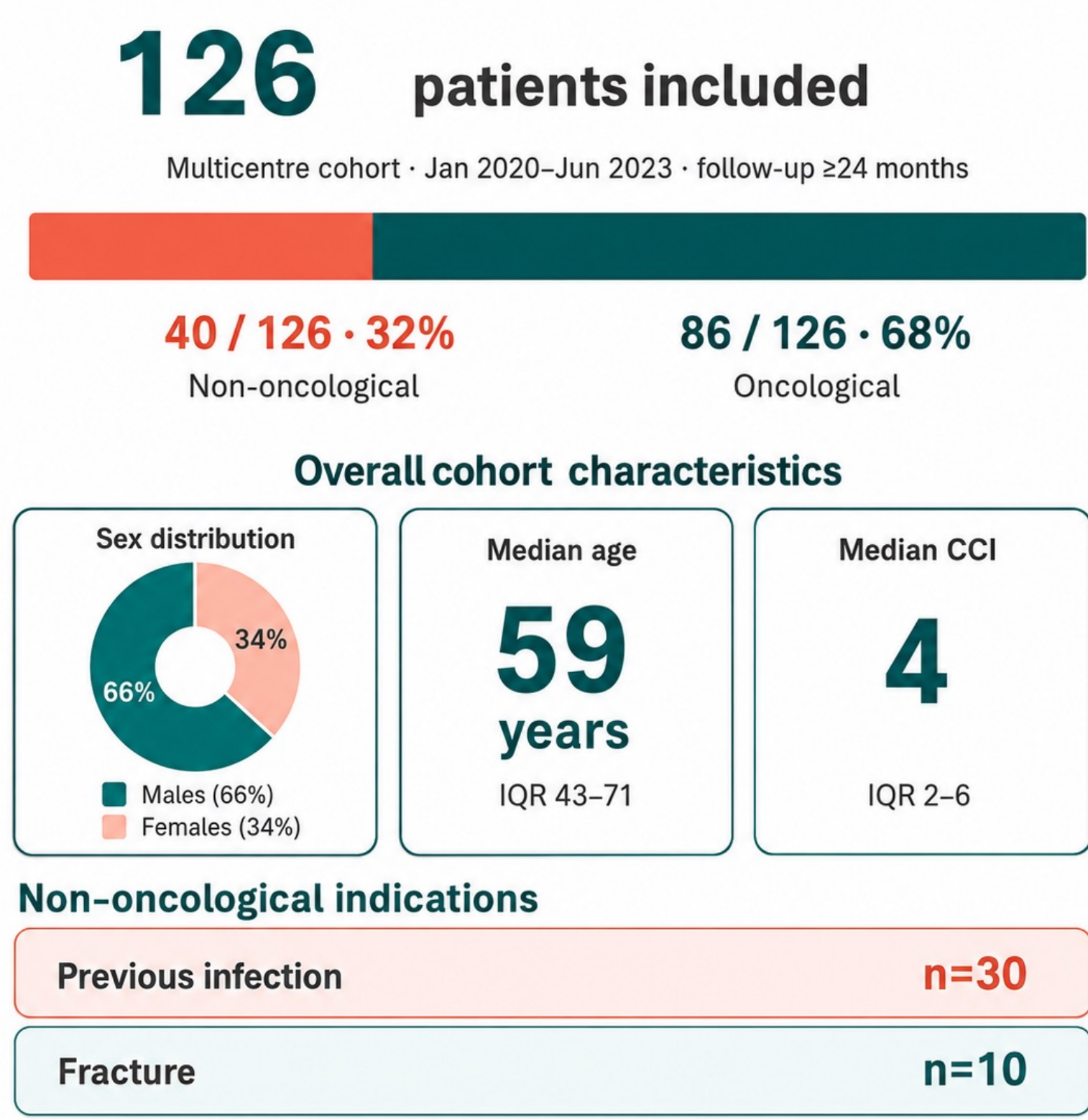
Multicentre (3 Italian hospitals), observational retrospective study including patients aged ≥ 14 years undergoing placement of a lower limb megaprosthesis from January 2020 to June 2023 and with a follow-up of at least 24 months. Patients who underwent megaprosthesis placement for non-oncological reasons were compared with those with an oncological indication.

STATISTICAL APPROACH

Differences between groups were tested by parametric and non-parametric tests for continuous variables and with Chi-square or Fisher's exact test for categorical variables as appropriate. Statistical significance was considered for p<0.05.

RESULTS

STUDY POPULATION

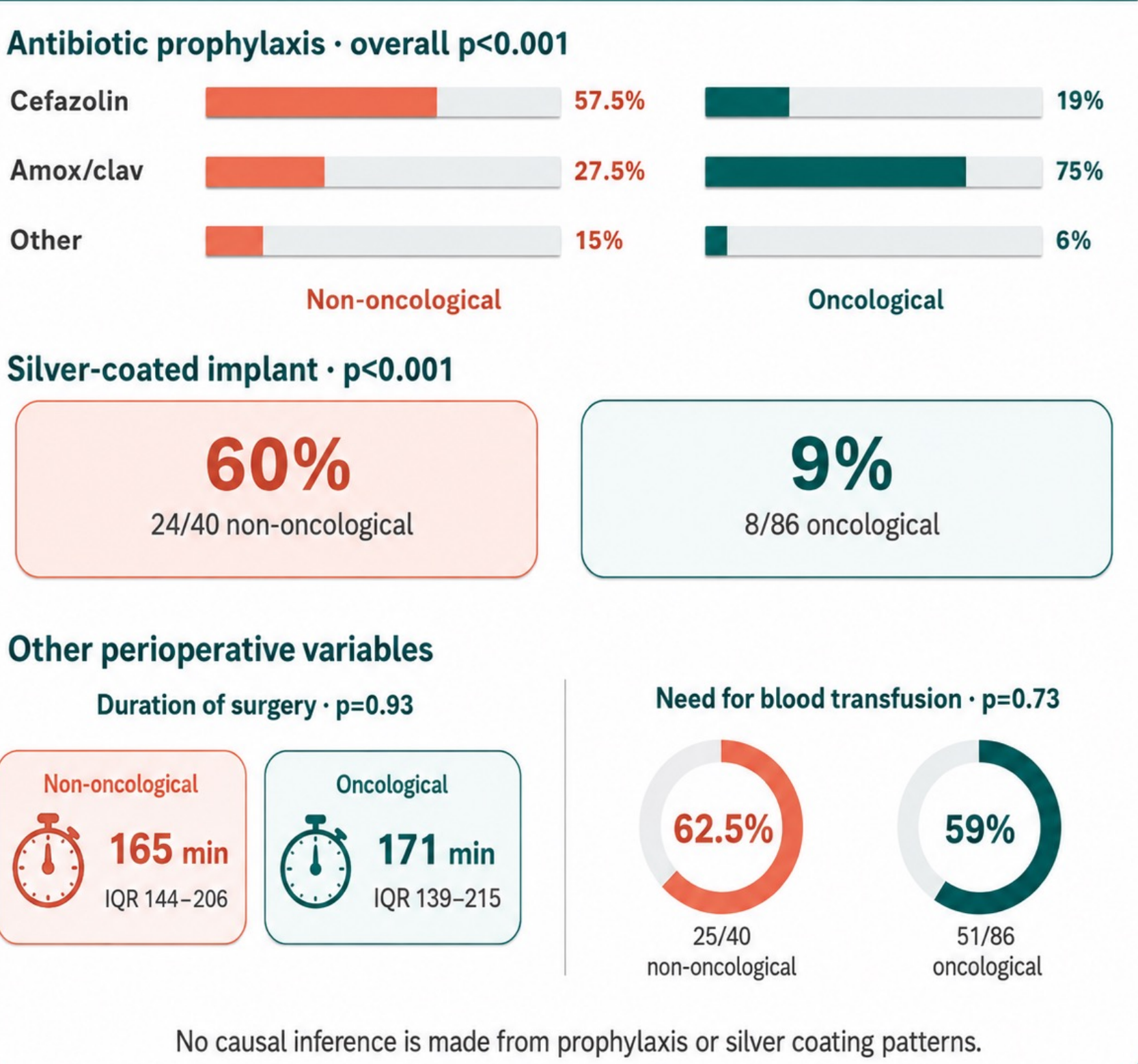


KEY DIFFERENCES

1. Baseline profile			
Metric	Non-onc	Onc	p
Age, years	65 (48–72)	57 (30–70)	p = 0.04
BMI	27 (24–32)	24 (21–27)	p = 0.02
CCI	3 (2–5)	5 (2–7)	p = 0.002
LOS, days	14 (10–18)	11 (9–15)	p = 0.04
Diabetes, n(%)	4 (10%)	5 (6%)	p = 0.46
ASA score	2 (1–3)	2 (2–3)	p = 0.26

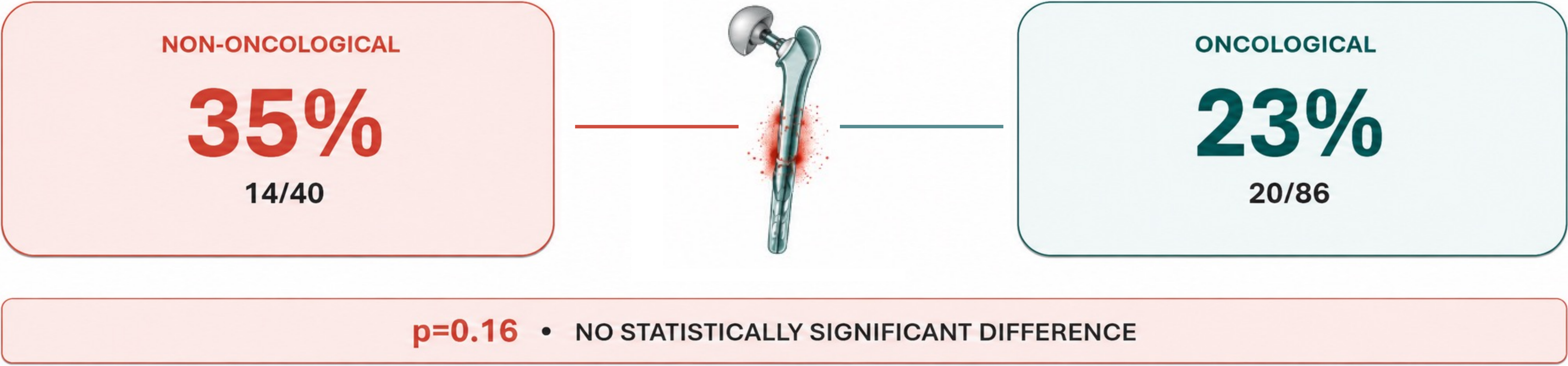
2. Site distribution		
Site distribution, n(%)		
overall p = 0.12		
No statistically significant differences in prosthesis site distribution between groups.		
Proximal femur	9 (22)	32 (37)
Distal femur	24 (60)	41 (48)
Proximal tibia	6 (15)	6 (7)
Total femur	1 (2.5)	7 (8)

MANAGEMENT DIFFERENCES



PJI DURING 24-MONTH FOLLOW-UP

Numerically more frequent among non-oncological patients, but not statistically significant.



CONCLUSIONS

CLINICAL RELEVANCE / LIMITATIONS

Clinical relevance

Non-oncological megaprosthesis recipients should not automatically be considered equivalent to oncological patients.

Interpretive caution

The observed PJI difference is hypothesis-generating, non statistically significant, and should be interpreted with caution.

Limitations

Retrospective design; limited non-oncological sample size; no multivariable adjustment available

TAKE-HOME MESSAGE

Non-oncological lower-limb megaprosthesis recipients represented one-third of the cohort and showed a distinct clinical and perioperative profile; PJI was numerically more frequent, but the difference was not statistically significant.

Further studies are needed to better characterize these patients and refine infection-prevention strategies.