

BACKGROUND

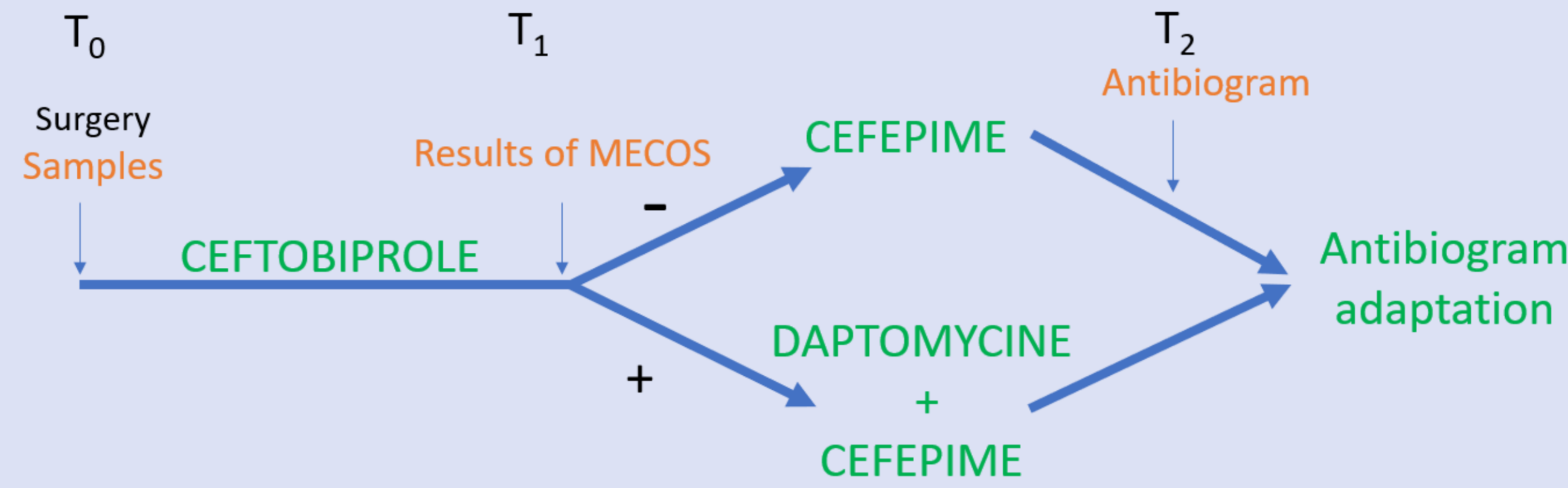
In empirical treatment for **bone and joint prosthetic device infections** use of « **MECOS PROTOCOL** », which associates

1. Use of efficient antibiotics on Methicillin Resistant Staphylococci (MRS) and Gram Negative Bacilli (BGN)

- Before January 2018: Daptomycine (10 mg/kg/day) + Cefepime (2g 3X/day)
- After January 2018: Ceftobiprole (500 mg 3X/day)

2. Search for gene *mecA* indicating resistance to methicillin

- Obtained without 2 hours after the sampling
- Test GenXpert MRSA SA SSTI®



Patient inclusion criteria:

- Surgery for bone and joint prosthetic device infections
- With materials (no external fixator)
- No previous history of MRS

PURPOSE

Evaluate

- **Respect of this protocol**
- **Economic impact** of using ceftobiprole instead of daptomycine-cefepime combination

PROTOCOLE D'ANTIBIOTHERAPIE
HEBERGEMENT SEPTIQUE
CLINIQUE D'ORTHOPÉDIE-TRAUMATOLOGIE
CHU LILLE

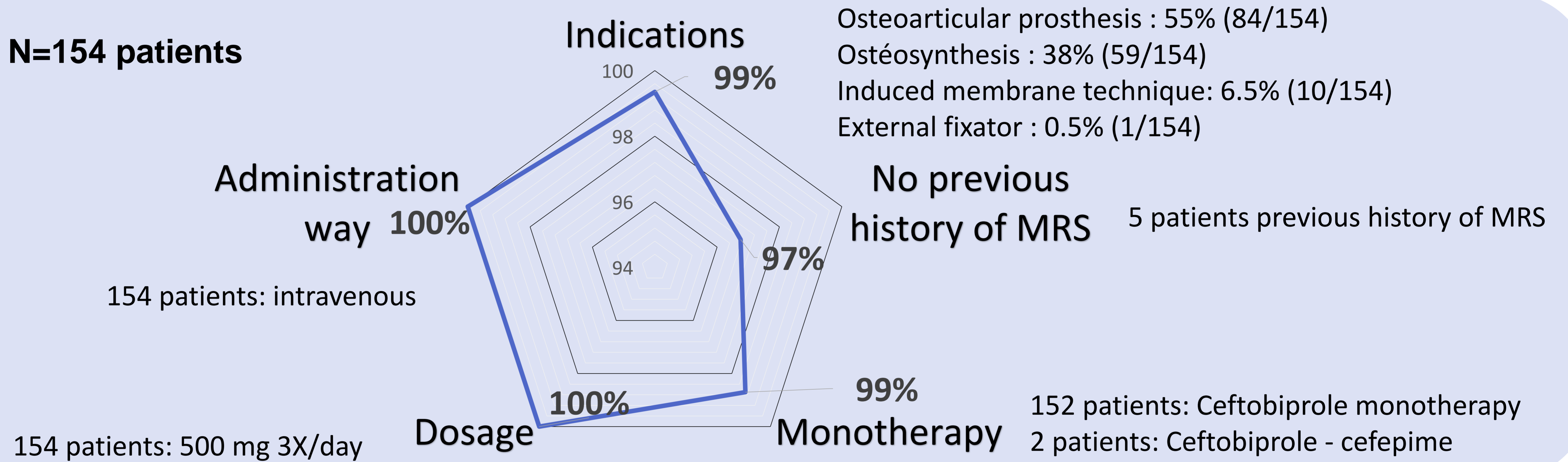
MATERIALS AND METHODS

- **Prospective monocentric study** : 15th January – 15th July 2018
- Data were collected by **analysis of all prescription by Sillage® and pharmacist participation at multidisciplinary team meeting**: Indications, previous history of MRS, prescriptions (monotherapy, way of administration, posology), results of expression of *mecA*, number of administration and switch
- **Comparison of cost** : Number of ceftobiprole used vs theoretical cost of daptomycine (10 mg/kg/day)- cefepime (2g 3X/day) combination on the same period before the switch

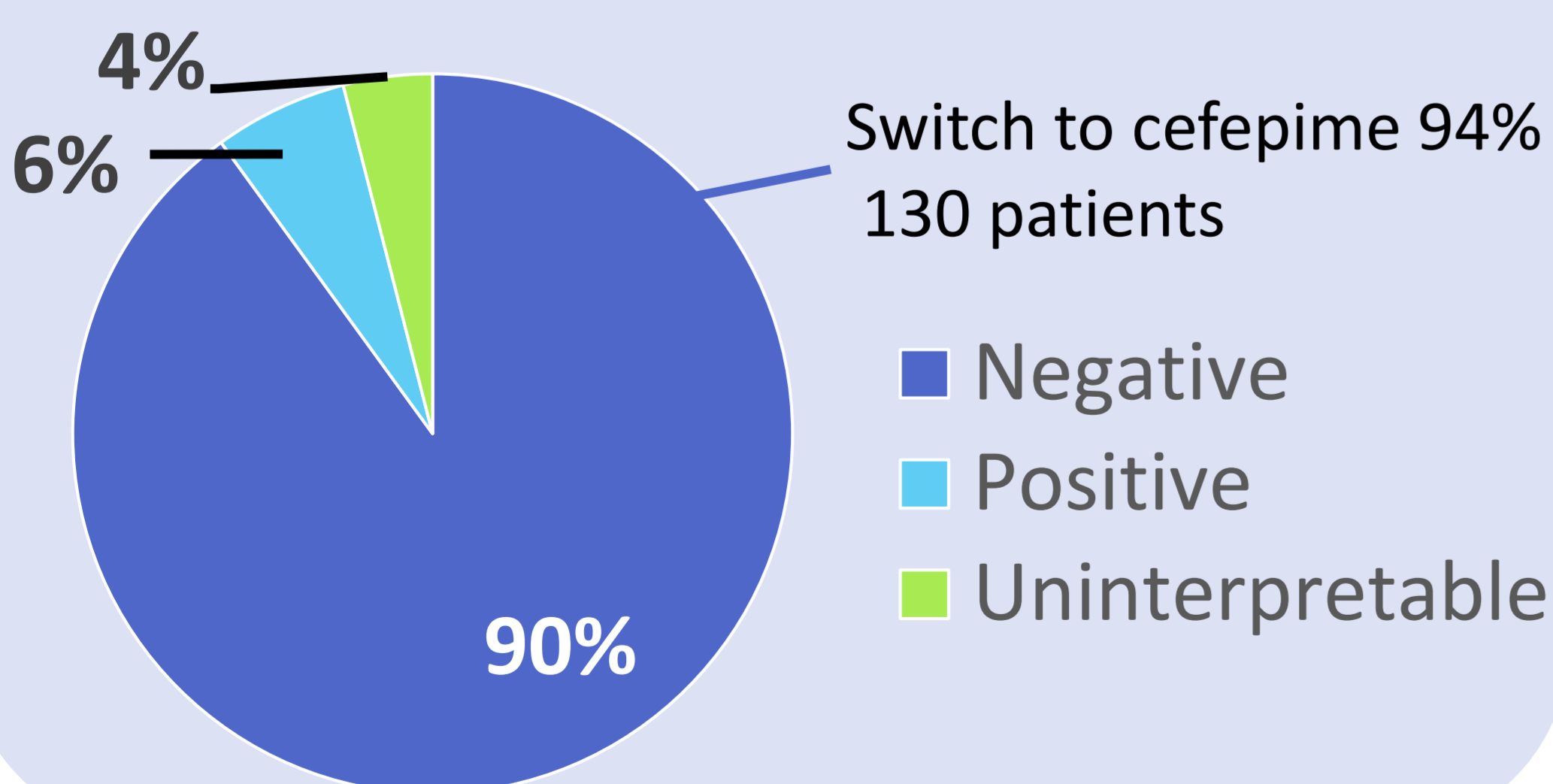
RESULTS

RESPECT OF PROTOCOL

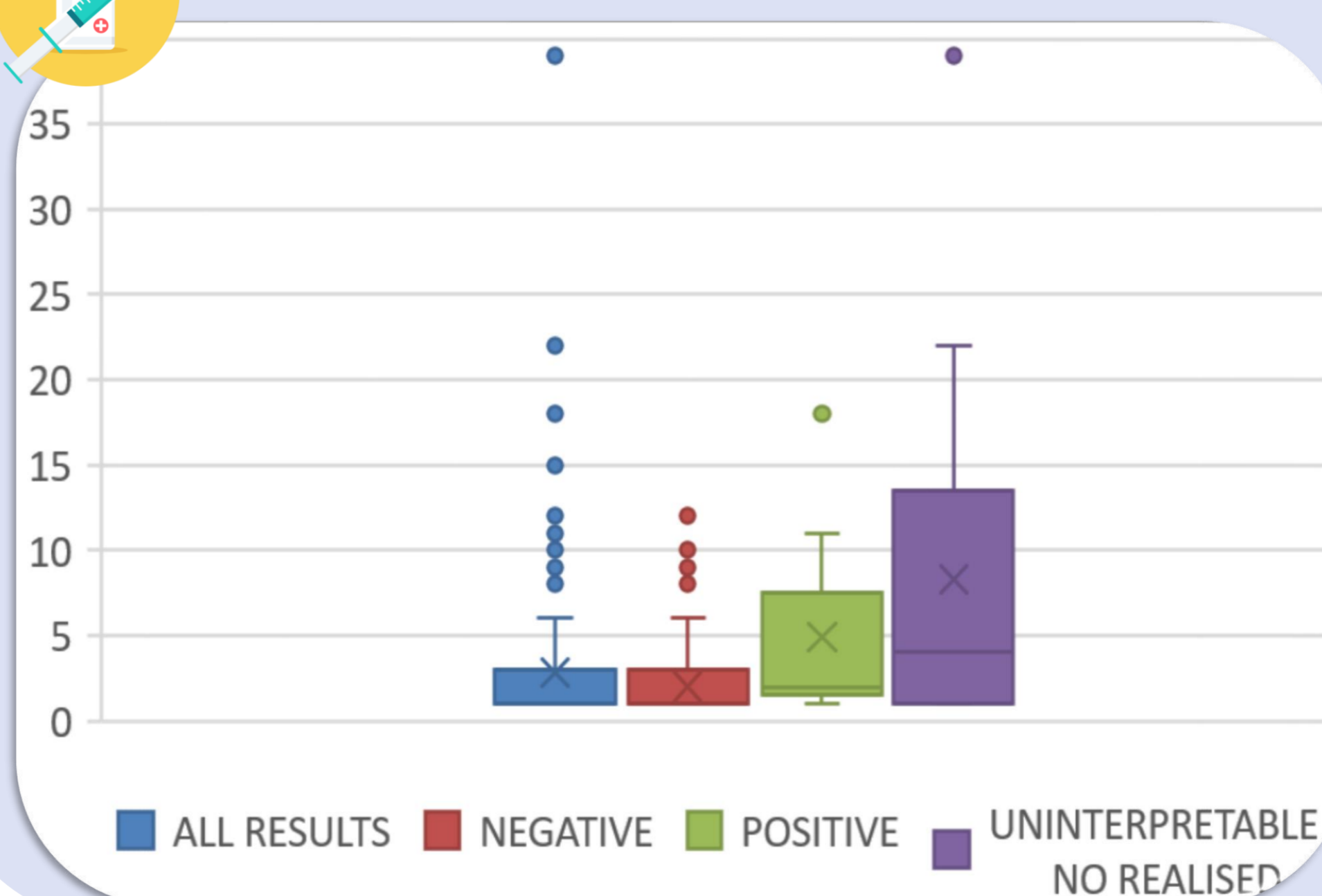
N=154 patients



RESULT OF SEARCH OF *mecA* GENE



NUMBER OF INJECTIONS



COST

To 154 patients
Theoretical cost of daptomycin-cefepime : 54 920 €
Ceftobiprol cost : 340 injections, 30 420 €
Economic gain over six months: 24 500 €

CONCLUSION

Respect of protocol



- Only **8 (5%)** of the prescriptions **did not comply with the protocol**: indications (6;4%) (external fixator, history of MRS), monotherapy (2;1%)
- If search *mecA* gene is negative, **switch was appropriate mainly by cefepime**

Economic gain was **demonstred** over this period. It will be **reassessed** with the **arrival of the daptomycin generic**.

Preserving daptomycin: risk of **resistance selection**