

Diagnostic, management and outcome of bone flap osteomyelitis following craniectomy: a cohort study

P0701

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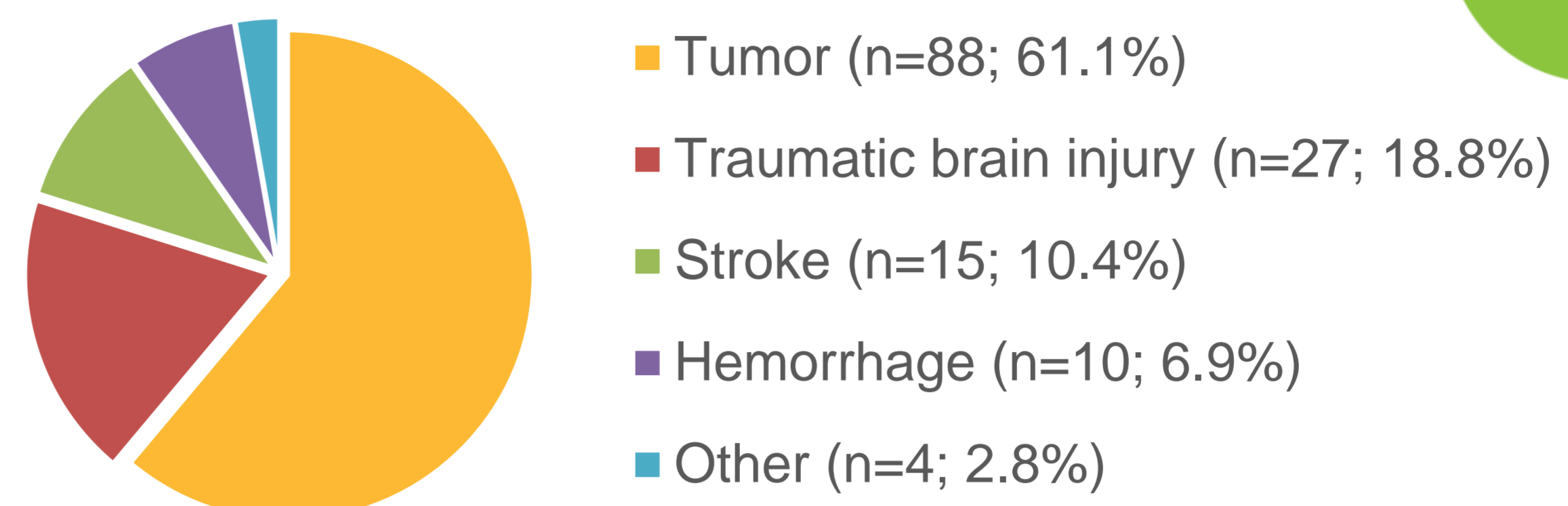
Included population

- **Retrospective cohort study** (2013-2021)
- Inclusion of all patients with **bone flap osteomyelitis** in our tertiary care center hosting one of the French reference center for the management of complex bone and joint infection

144 included patients

- Sex: 81 (56.3%) males
- Median age: 53.4 (IQR, 42.6-62.5)
- Modified Charlson's comorbidity index: 3 (IQR, 1-5)
- Main comorbidities
 - Obesity (BMI>30): 16 (11.3%)
 - Diabetes mellitus: 15 (10.4%)
 - Solid tumor: 48 (33.3%)

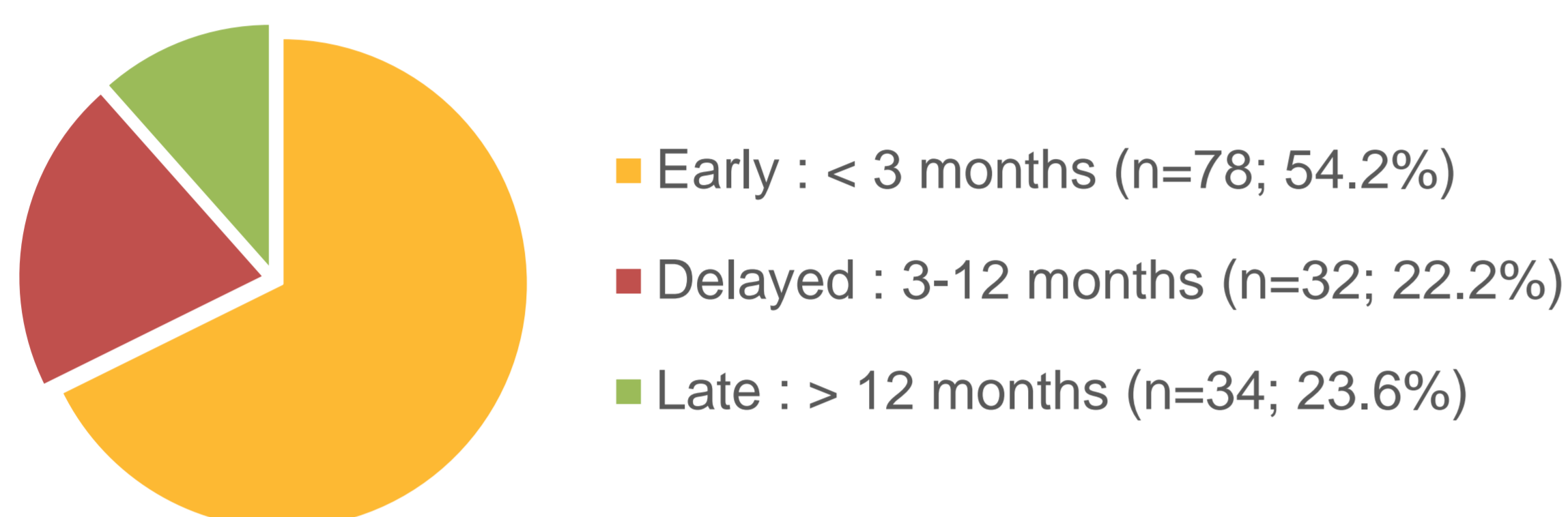
Index surgery



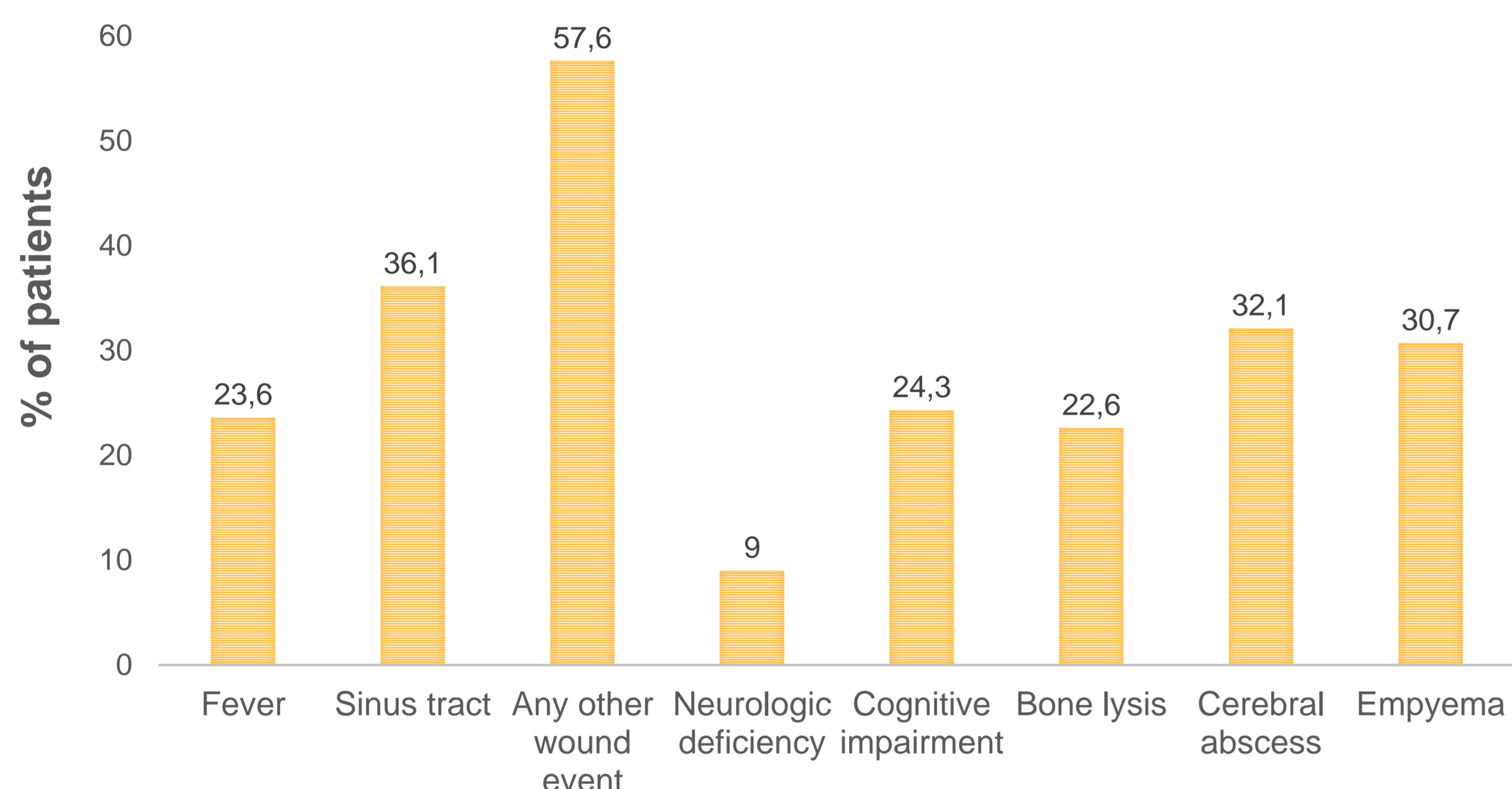
- Size of the bone flap: 45.5 (IQR, 22.3-81.0) cm²
- Previous irradiation at the infected site: 27 (18.8%)

Clinical characteristics

- **Timing** : delay between index surgery and diagnostic

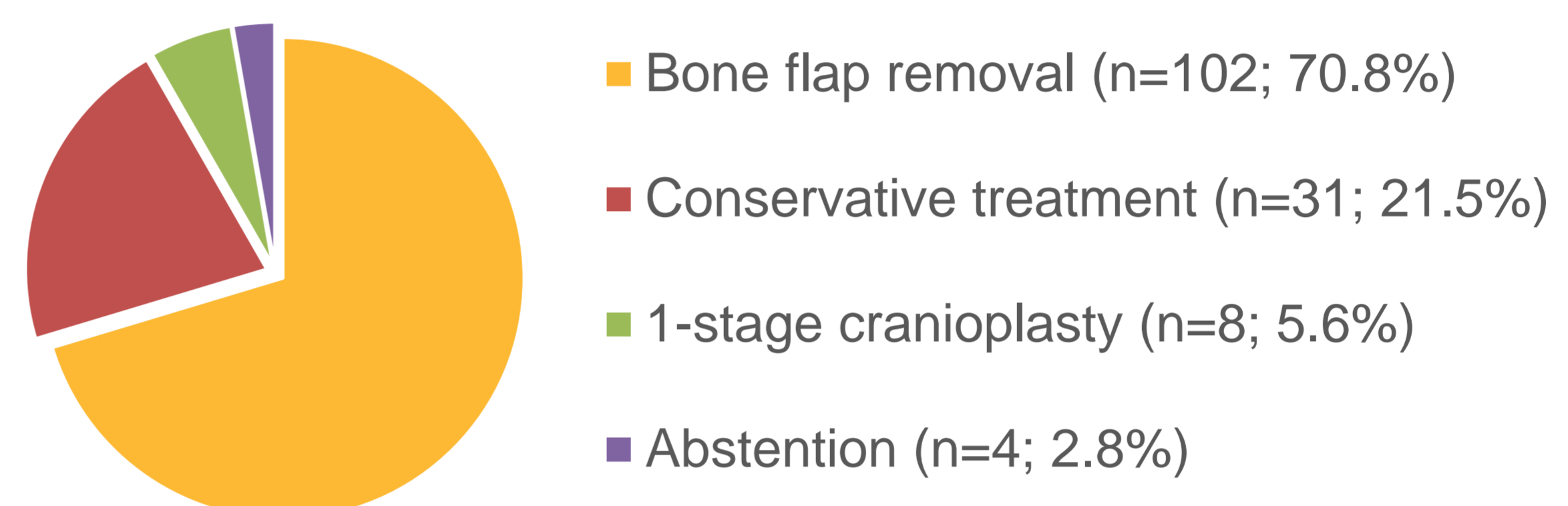


- **Clinical and radiological features**



Management and outcome

- **Initial surgical strategy**



- Duraplasty removal: 18/103 (17.5%)
- Curettage of bone edges: 104/131 (79.4%)

- **Antimicrobial therapy**

- Total duration (weeks): 12.7 (IQR, 8.0-14.0)
- Duration of IV therapy (weeks): 5.1 (IQR, 2.3-7.8)

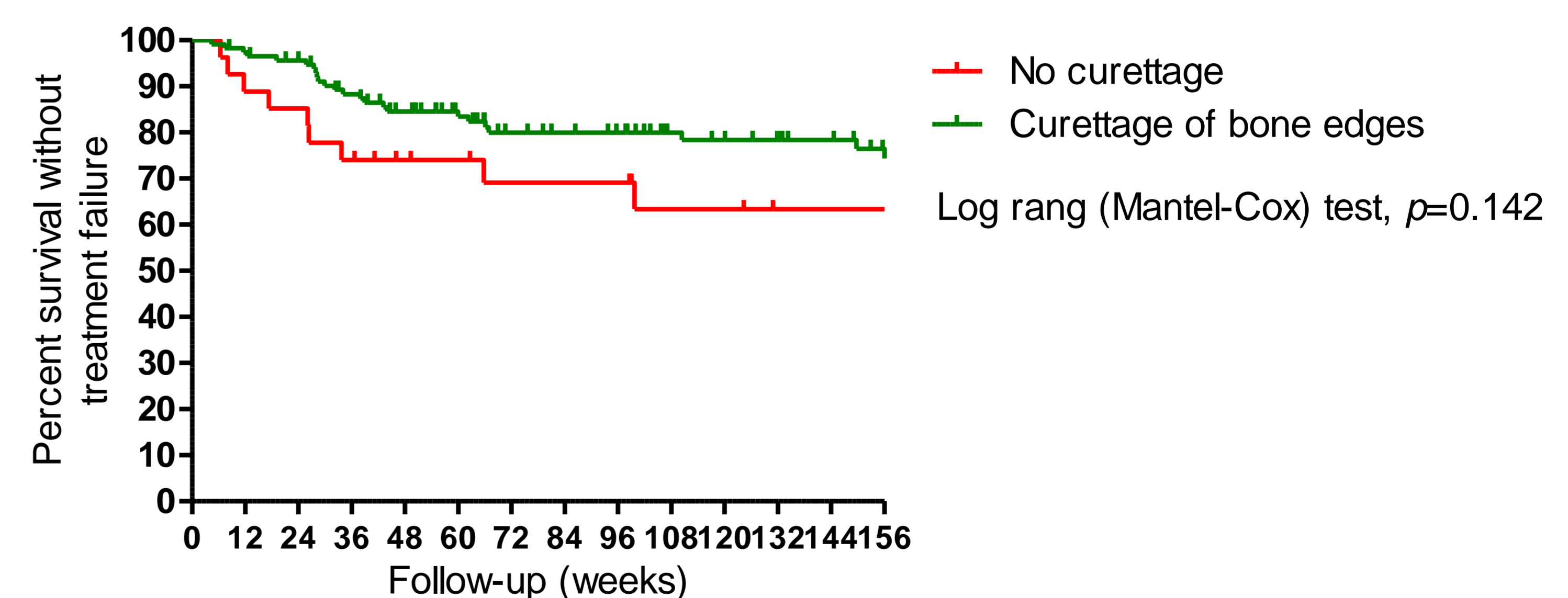
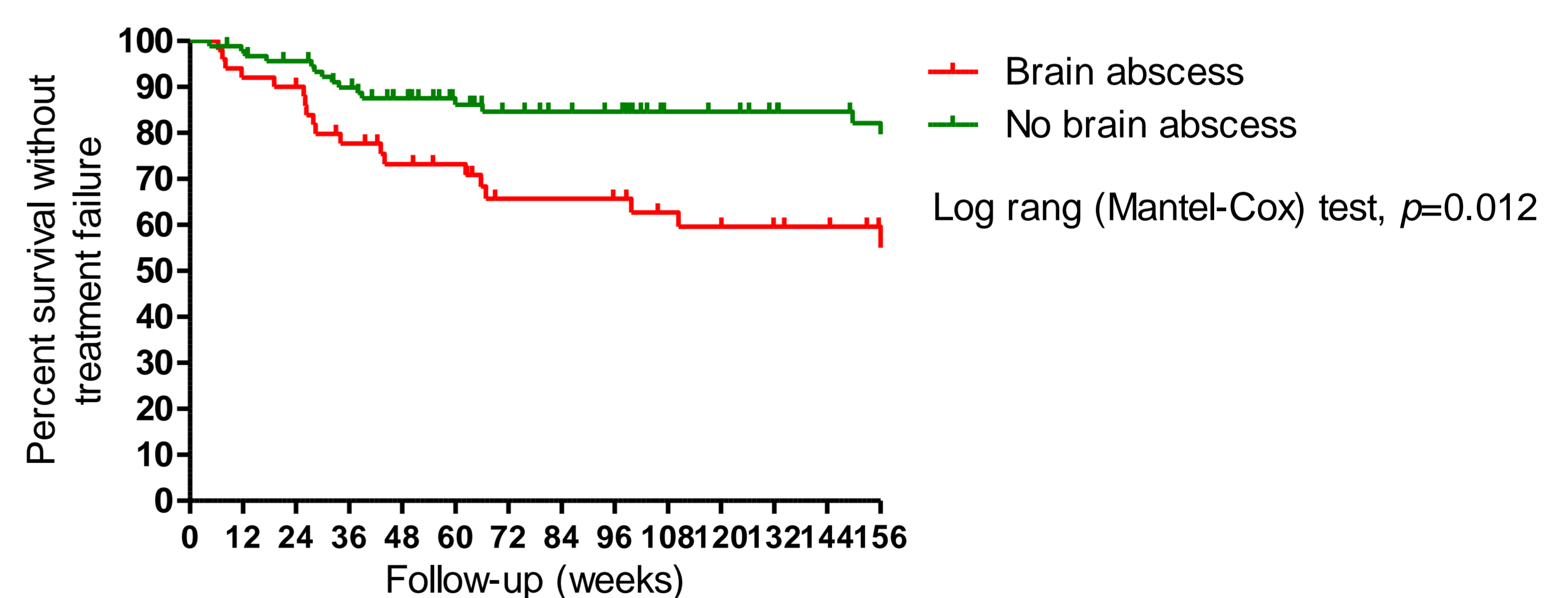
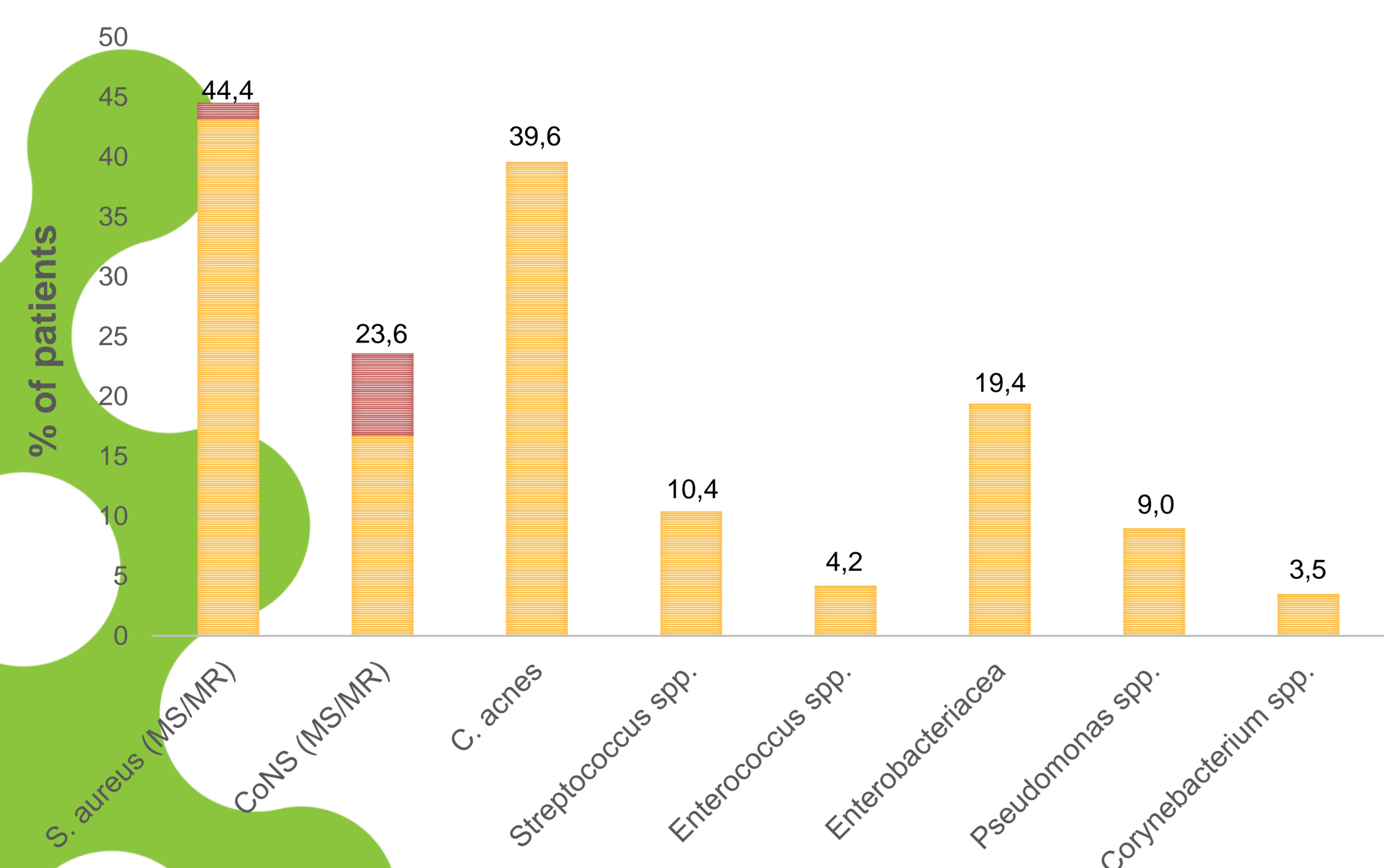
- **Follow-up**: 117 (IQR, 63-236) weeks

37 (26.1%) treatment failures

- Infection persistence: 16 (11.1%)
- Relapse: 3 (2.1%)
- Superinfection: 22 (15.3%)
- Infection-related death: 2 (1.4%)
- Need for additional surgical procedure: 24 (16.7%)
- Need for suppressive antimicrobial therapy: 11 (8.9%)

Microbiological findings

- **Microbiological documentation** : 100%
- **Plurimicrobial infection** : 64 (44.4%)



Bone flap osteomyelitis following craniectomy are difficult-to-treat infections, necessitating prolonged antimicrobial therapy with appropriate surgical debridement, advocating for multidisciplinary management in dedicated reference centers.