Background and Importance
Therapeutic drug monitoring (TDM) of linezolid may be especially useful in situations when there is a potential alteration of its pharmacokinetics or an increased risk of adverse events (AE); obesity, renal failure, drug interactions or prolonged treatments.

Aim and objectives
- To assess effectiveness and safety of linezolid in soft-tissue and osteoarticular infections (SOI) regarding linezolid serum concentrations (LSC)
- To analyze the influence of glomerular filtration rate (GFR) and body mass index (BMI) in LSC.

Materials and methods
Observational retrospective study, including patients with SOI treated with linezolid between January-2019→ December-2021
- Therapeutic target trough LSC were settle at 2-8 mg/L.
- We studied the relationship among GFR and BMI with LSC using a multivariate regression analysis with IBM SPSS® Statistics program.

Results

<table>
<thead>
<tr>
<th>Total patients included</th>
<th>42</th>
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<tbody>
<tr>
<td>Mean age</td>
<td>58.7±16.1 years old</td>
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<td>Sex</td>
<td>69.1% male</td>
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<td>Initial dose of Linezolid</td>
<td>600mg q12</td>
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<td>Median duration of treatment</td>
<td>34.2±17.4 days</td>
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Adverse events: in 16 (38.1%) patients →7 (43.8%) above TR
Eight (50%) of them discontinued treatment due to AE:

- 12%
- 25%
- 50%
- 62%
  - Diarrhea
  - Glossitis
  - Trombocytopenia
  - Anemia

Patients with LSC outside therapeutic range (TR):
- Above TR: 10 (45.5%)
- Below TR: 12 (54.5%)

No relevant drug interactions were found.
In only 3 (18.7%) patients with supratherapeutical LSC posology was modified.
All infections (including ones in patients with LSC below TR) were resolved.

Conclusion and relevance
In a great proportion of patients LSC were outside the TR, and the variable that seems to affect the most is GFR (p=0.01), so TDM would be specially recommended in patients with a lower GFR to decrease AE, which occur frequently with high LSC. Effectiveness was demonstrated in all patients including the ones with LSC below TR.