

ASSESSMENT OF THERAPEUTIC DRUG MONITORING IN ADULT CYSTIC FIBROSIS PATIENTS ON OUPATIENT PARENTERAL ANTIMICROBIAL THERAPY

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Background and importance

- Outpatient parenteral antimicrobial treatment (OPAT) is an alternative to in-patient care in selected patients.
- Adults with cystic fibrosis (CF) need repeated treatments and can specially benefit from OPAT.
- The standard treatment for these patients includes aminoglycosides, linezolid, voriconazole and teicoplanin.
- Due to drug-associated toxicity risk, proactive therapeutic drug monitoring (TDM) can be valuable for dosing adjustment to optimise efficacy and minimise toxicity.

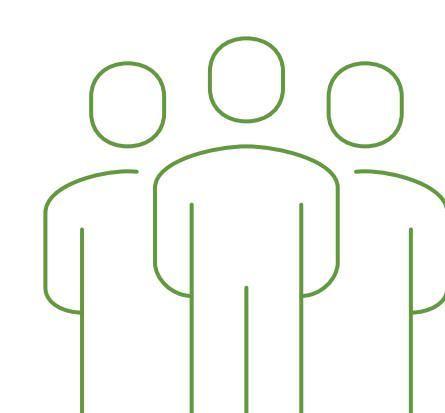
Aim and objectives

- To establish in **how many OPAT episodes**, out of the total that could benefit from it, **TDM is performed**.
- **To analyze** the alteration of the analytical variables due to **antimicrobial toxicity**.

Materials and methods



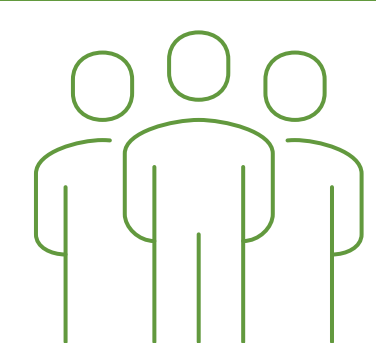
Retrospective single-centre study from January 2019 to December 2023.



Adult **CF patients** treated with **aminoglycosides, linezolid, teicoplanin and voriconazole**.

Demographic, clinical, analytical, OPAT episode outcome and TDM variables were collected.

Results

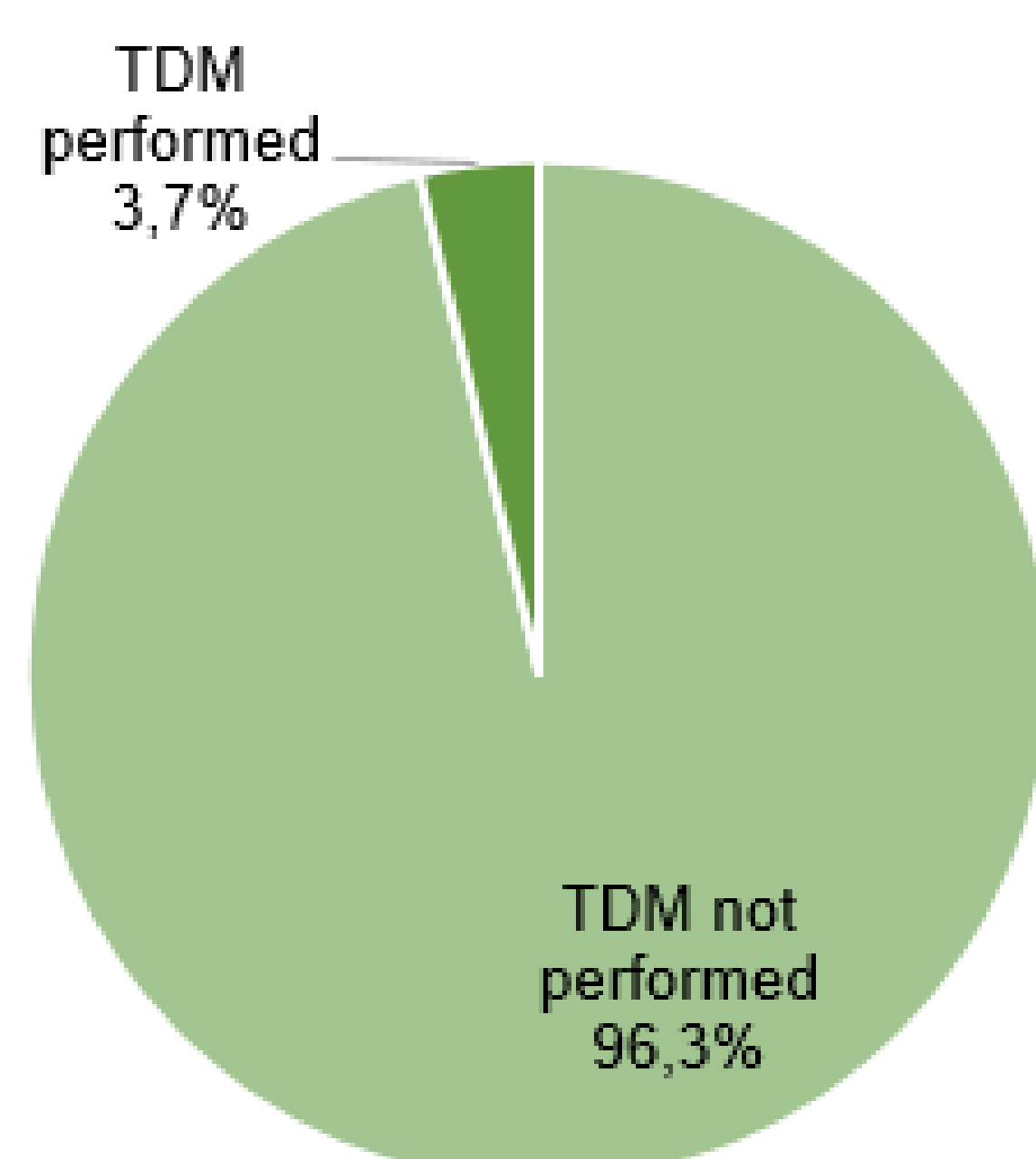


64 patients, 33 women (51,6%), mean age 31,5 years ($\pm 9,8$) at the onset of the episode.



Median treatment duration: **21 days** (IQR: 15,0-23,0).

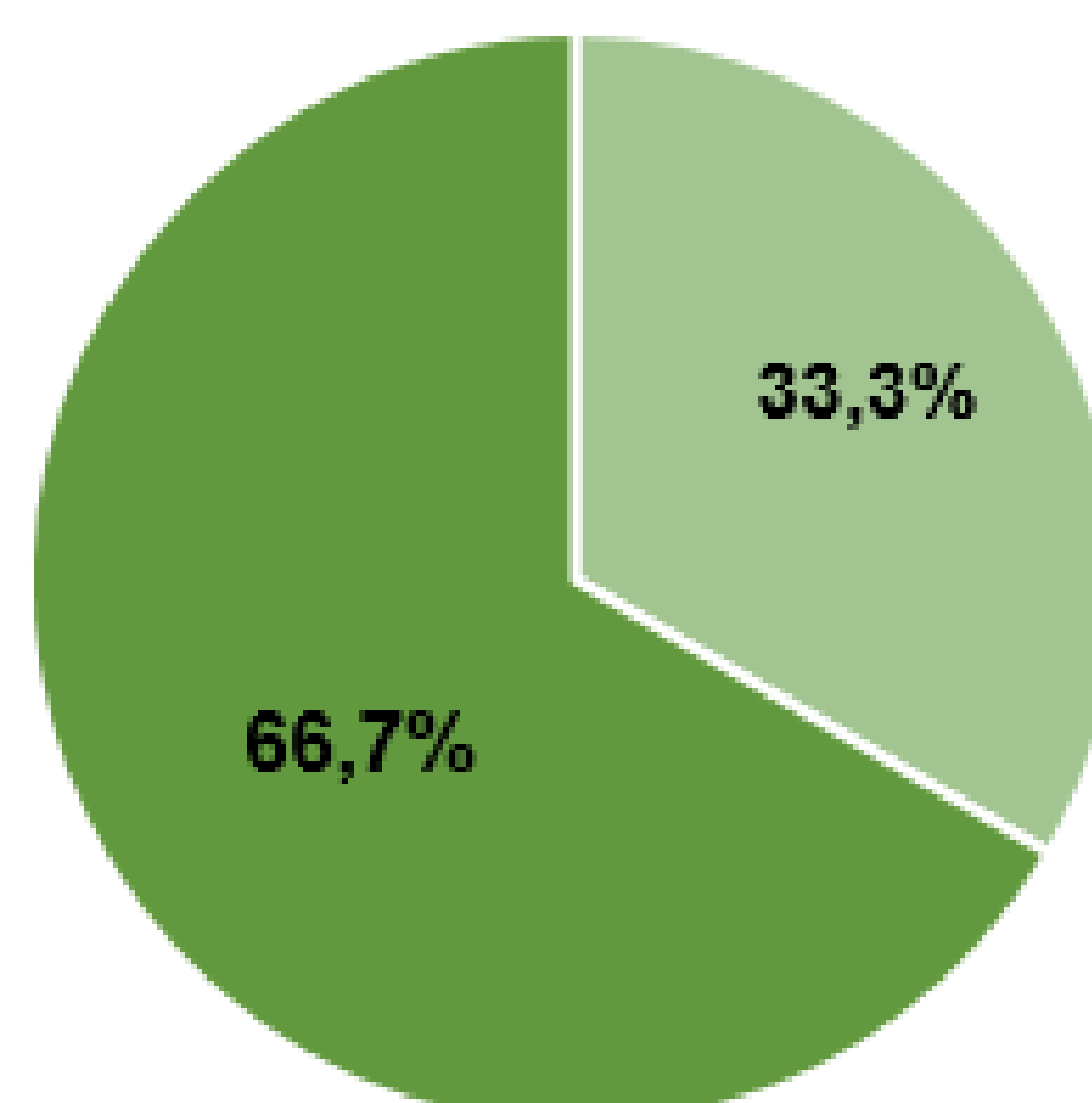
236 OPAT episodes analysed, **160 (67,8%) could benefit from TDM**.



The monitored episodes were treated with:

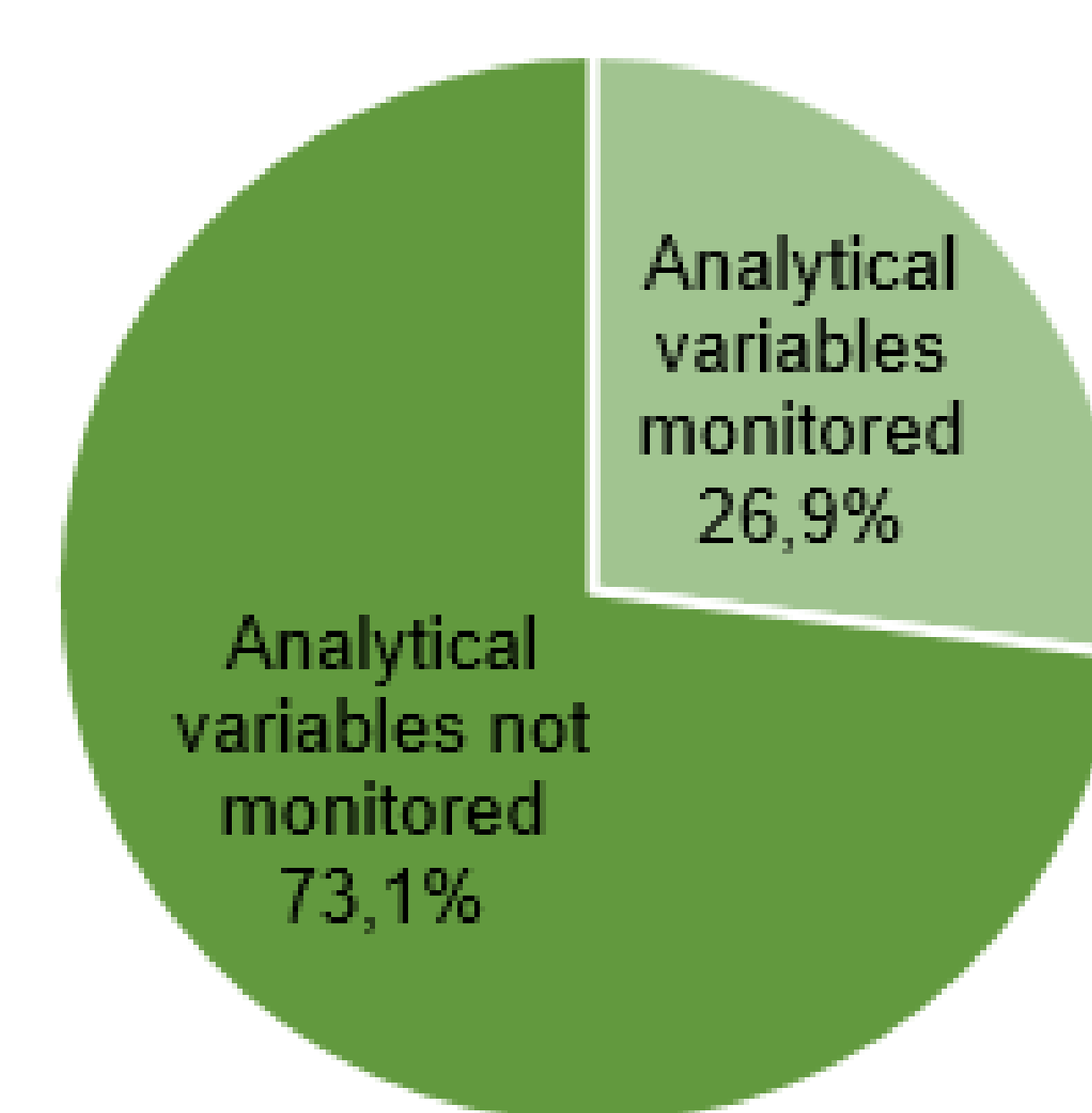
- **5 (3,4%) aminoglycosides**
- **1 voriconazol**

ANTIMICROBIAL CONCENTRATION VALUES



- Concentration values in-range
 - Concentration values out-of-range
- Out of the 6 episodes monitored, 4 (66,7%) showed drug levels out-of-range.

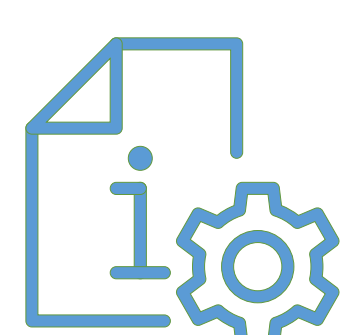
DRUG-RELATED TOXICITY



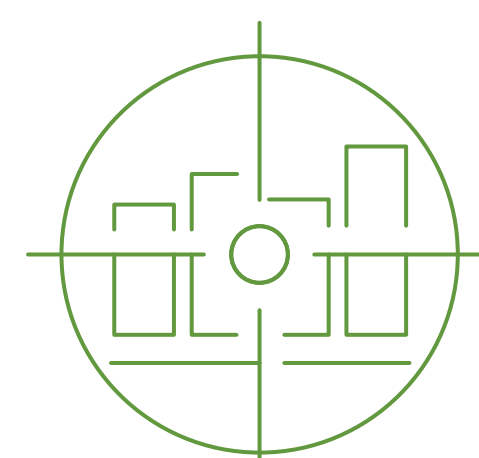
Out of 43 episodes with analytical results, **10 (23,3%) showed altered values**.

- Impaired **renal function**: 3 episodes treated with **aminoglycosides**
- Impaired **hepatic function**: 1 episode treated with **voriconazole**

Conclusions



TDM is performed in a limited number of OPAT episodes.



Analytical variables are rarely monitored, and if so, altered values are seen.



TDM in OPAT treatments could help to **optimize treatment and reduce toxicity risk**.



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