



# A Pharmacoepidemiologic Evaluation of Echinocandin Use

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Poster# 43

## BACKGROUND

- Invasive candidiasis (IC) is a devastating fungal infection and candidemia is the most common bloodstream infection with high attributable mortality rates of 30-40% in the US hospitals<sup>1,2</sup>
- Rates of IC caused by drug-resistant *Candida* spp, designated by the CDC as a serious threat, are increasing, and *Candida auris* has become an urgent threat<sup>3</sup>
- Currently three available classes of systemic antifungals are echinocandin-, azole-, and amphotericin-based therapies<sup>4</sup>
- Comparatively, echinocandins demonstrate low minimum inhibitory concentration (MICs) against most *Candida* species and favorable toxicity<sup>4</sup>

## OBJECTIVES

- To perform a pharmacoepidemiologic analysis on echinocandin use at a quaternary care medical center
- To review duration of therapy of echinocandins for positive *Candida* cultures and days to therapy initiation during hospitalization
- To assess echinocandin disposition upon discharge after hospitalization

## METHODS

- Echinocandin use and clinical microbiologic data between 2017 and 2019 were pooled via Theradoc
- Monthly days of therapy (DOT) per 1,000 patient days were calculated
- The proportion of echinocandin-treated patients with or without positive *Candida* cultures was evaluated along with echinocandin use, and hospital admission and discharge dates was also evaluated
- A subgroup analysis of the first 50 included patients was performed to evaluate echinocandin discharge disposition
- R statistical analysis (ggplot2) was used to generate visual data

## CONCLUSION

- Overall, echinocandin use did not change appreciably
- Initiation of echinocandin occurred throughout the entire hospitalization time period
- A significant portion of echinocandin courses continued after hospital discharge
- Further studies evaluating potential benefits of long-acting echinocandin with an emphasis of transition of care are warranted

## FUNDING

- This study was funded by Cidara Therapeutics

## RESULTS

Table 1. Echinocandin courses and patients evaluated

Number of unique patients evaluated	1,665
Total number of days of therapy	7,820
Number of patients with positive <i>Candida</i> microbiologic cultures	842 (51%)
Ongoing patient medical chart reviewed for echinocandin discharge disposition (Figure 4)	50

Figure 1. Echinocandin DOT per 1,000 patient days (2017 -2019)

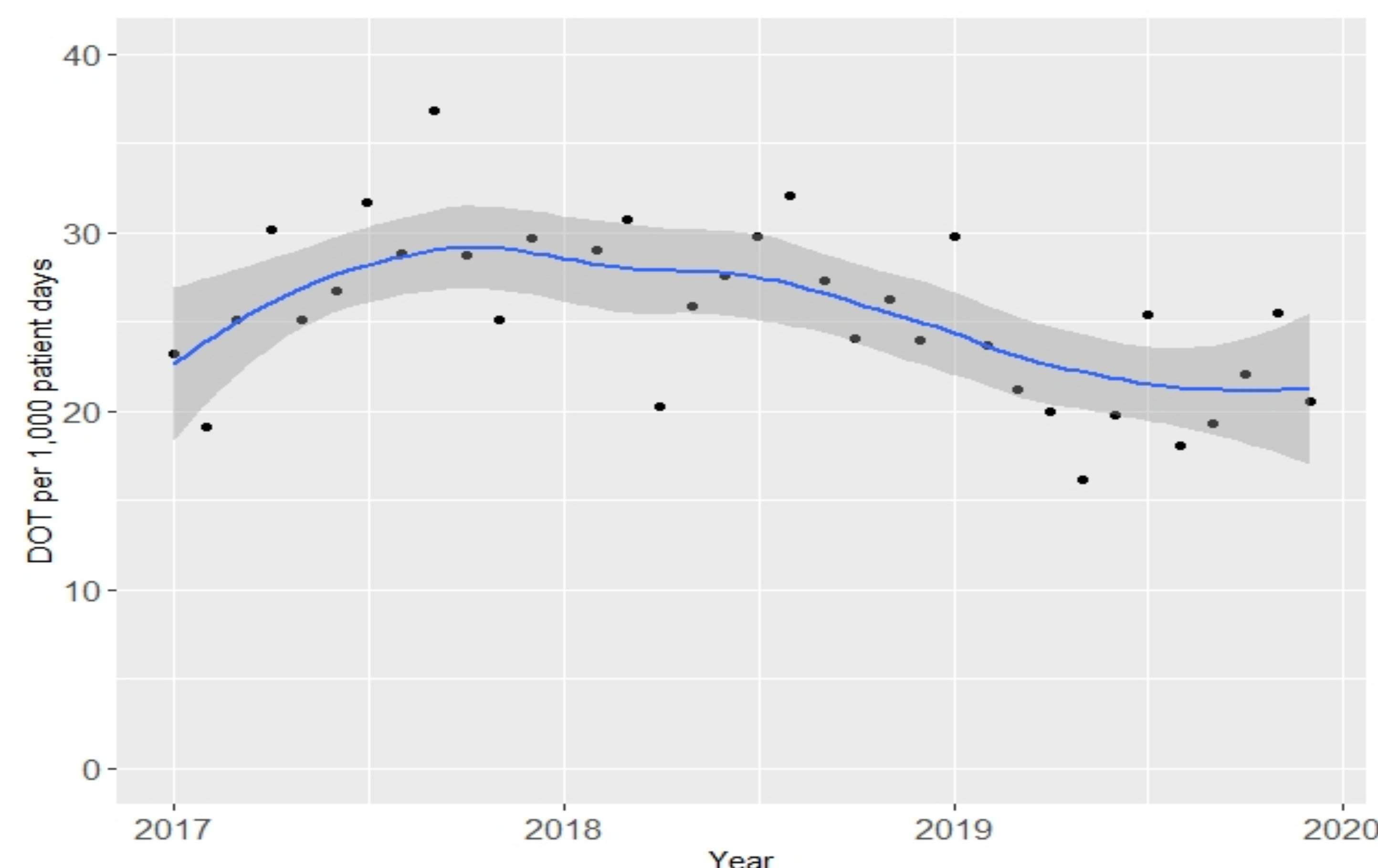


Figure 2. Echinocandin initiation in relation to total hospital stay

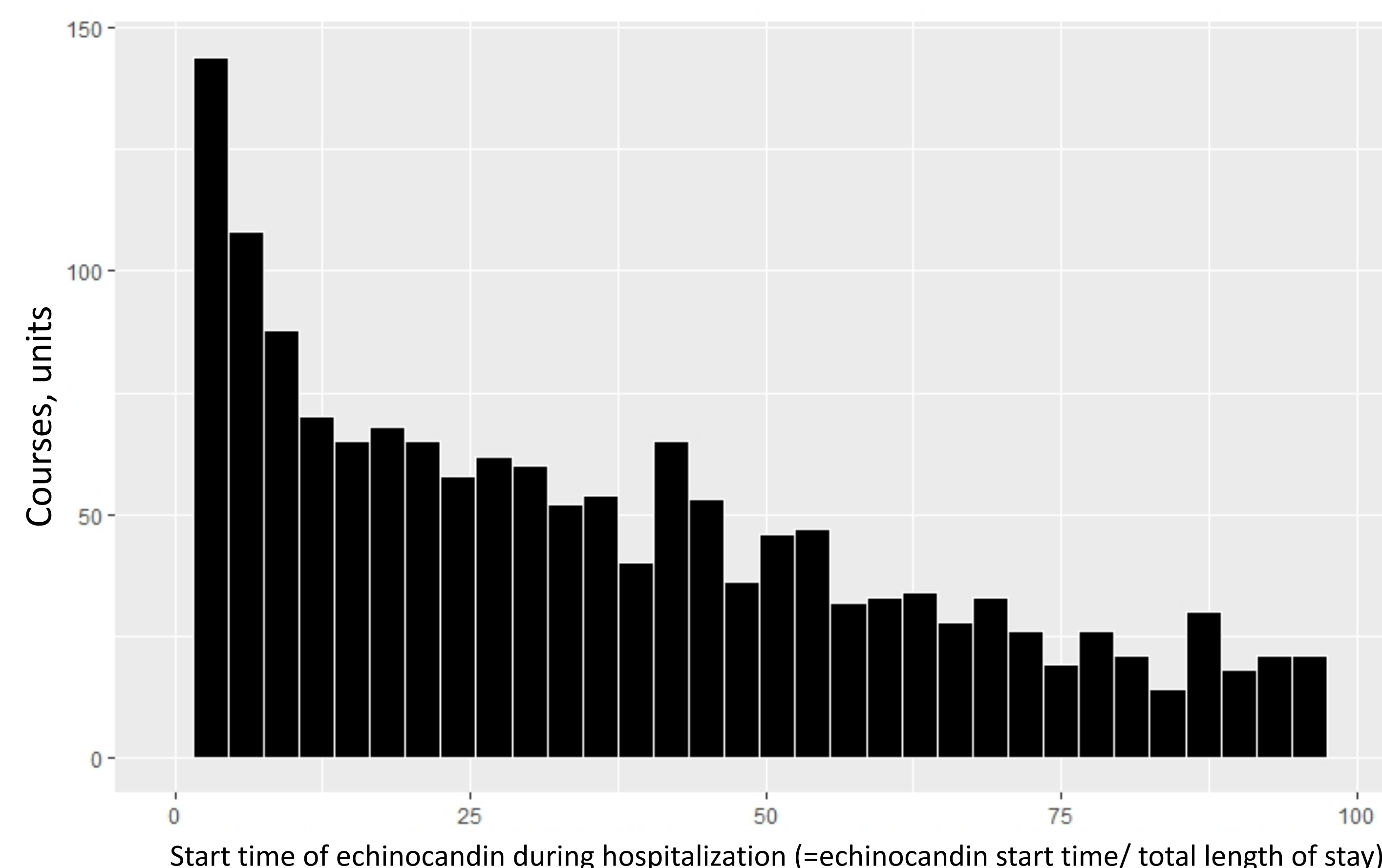


Figure 3. Length of therapy during the hospital stay

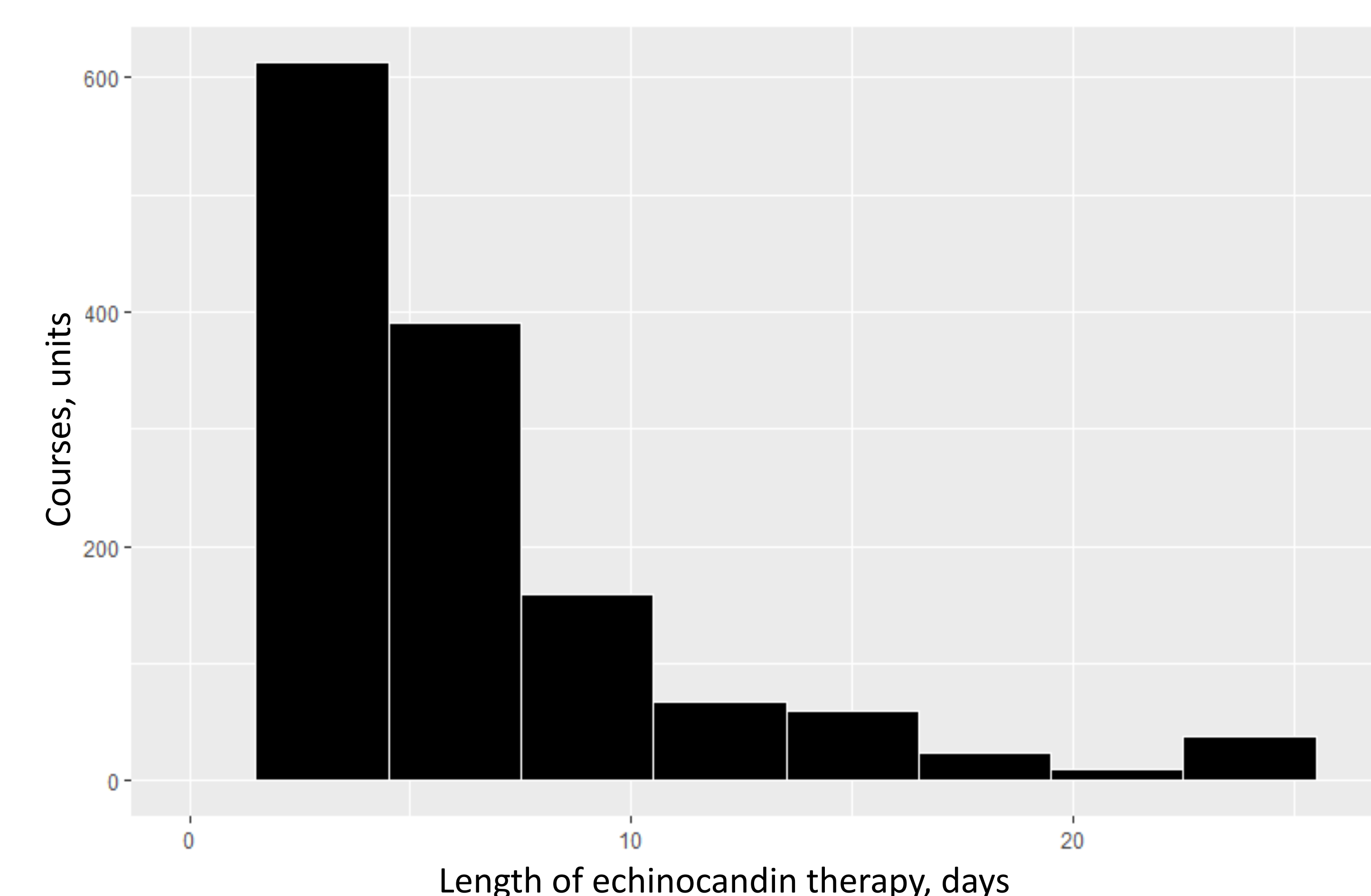
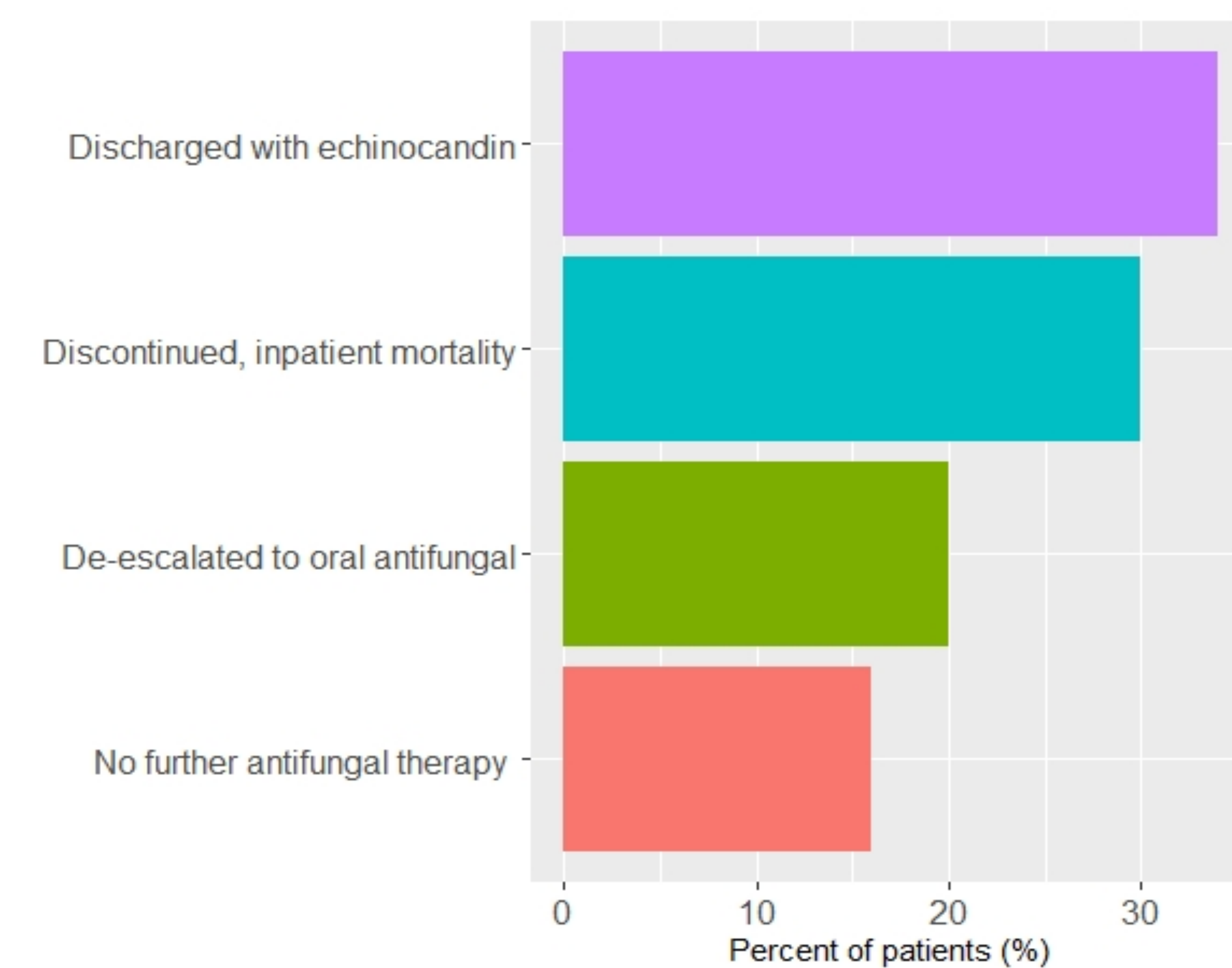


Figure 4. Echinocandin discharge disposition (n=50)



## REFERENCES

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