



A Pharmacoepidemiologic Evaluation of Echinocandin Use

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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^{1,2}
- 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 threat³
- Currently three available classes of systemic antifungals are echinocandin-, azole-, and amphotericin-based therapies⁴
- Comparatively, echinocandins demonstrate low minimum inhibitory concentration (MICs) against most *Candida* species and favorable toxicity⁴

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)

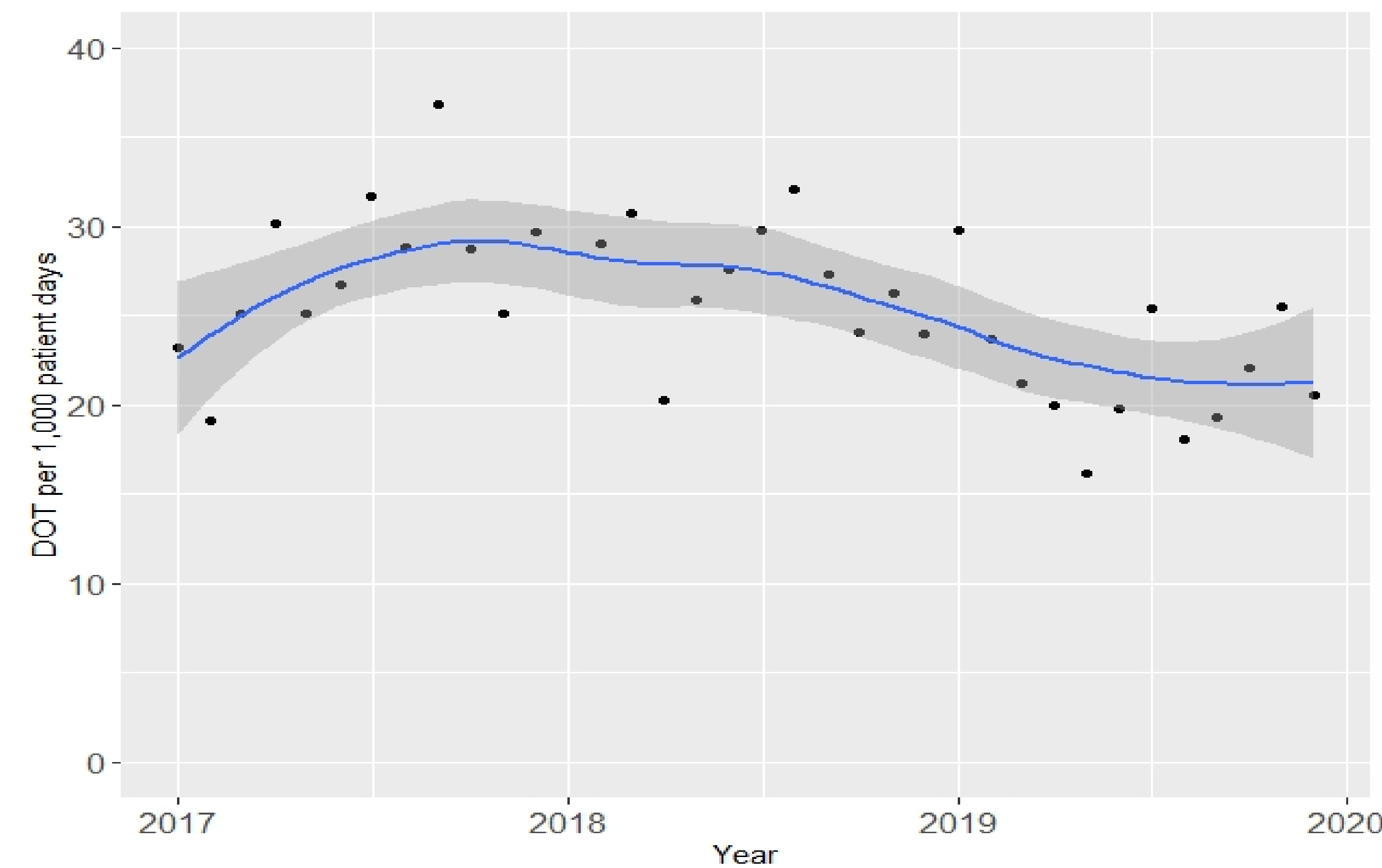


Figure 2. Echinocandin initiation in relation to total hospital stay

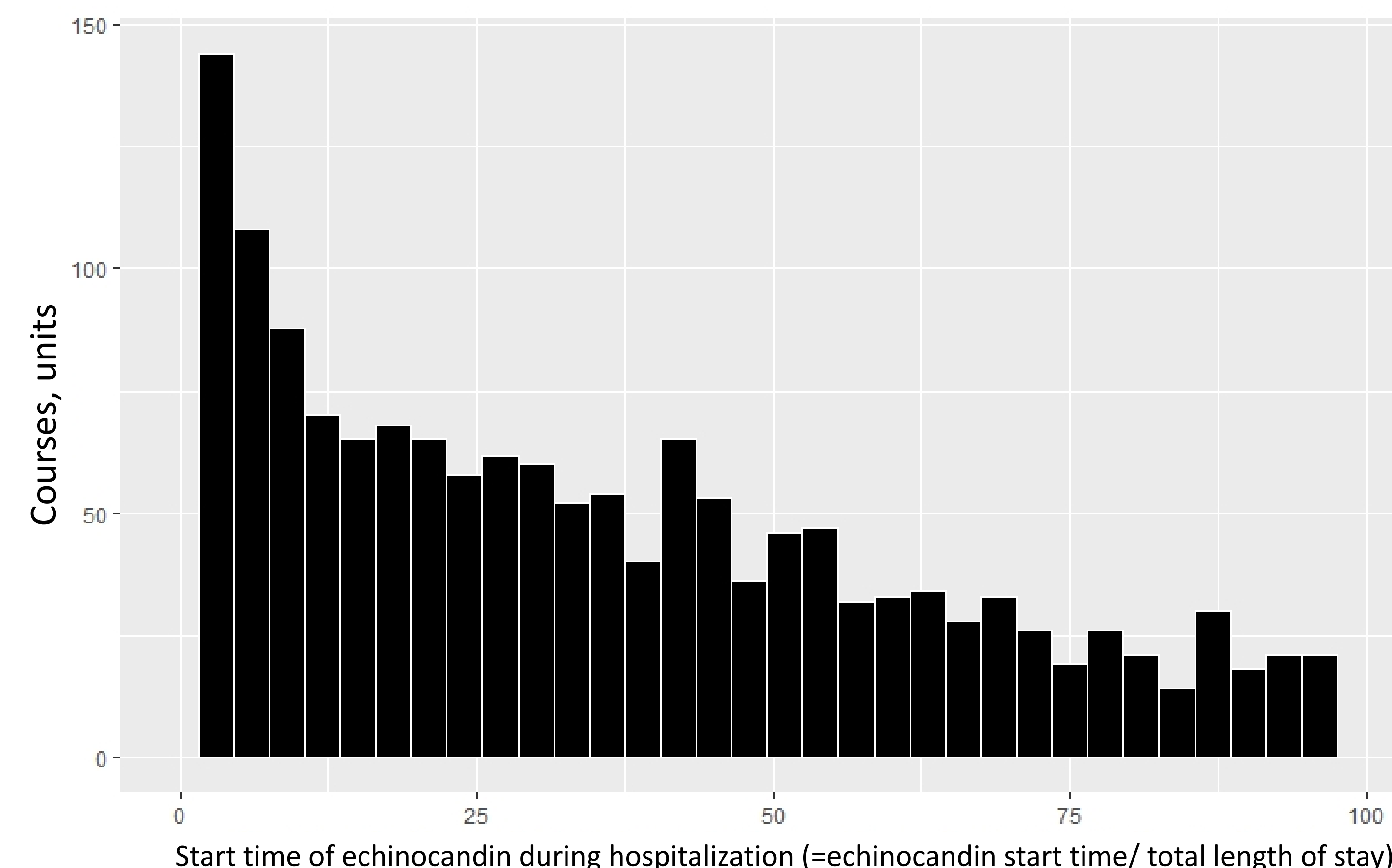


Figure 3. Length of therapy during the hospital stay

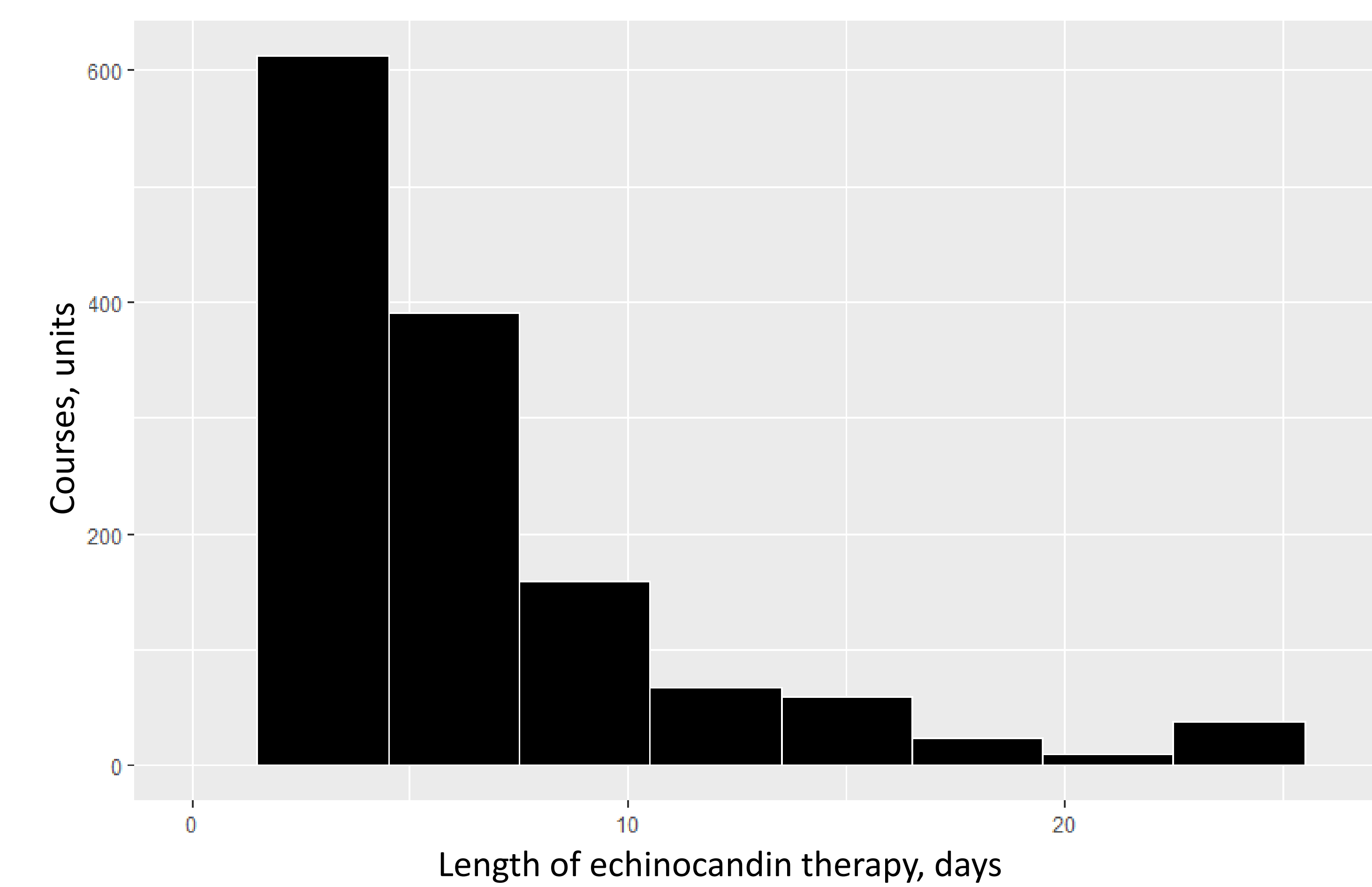
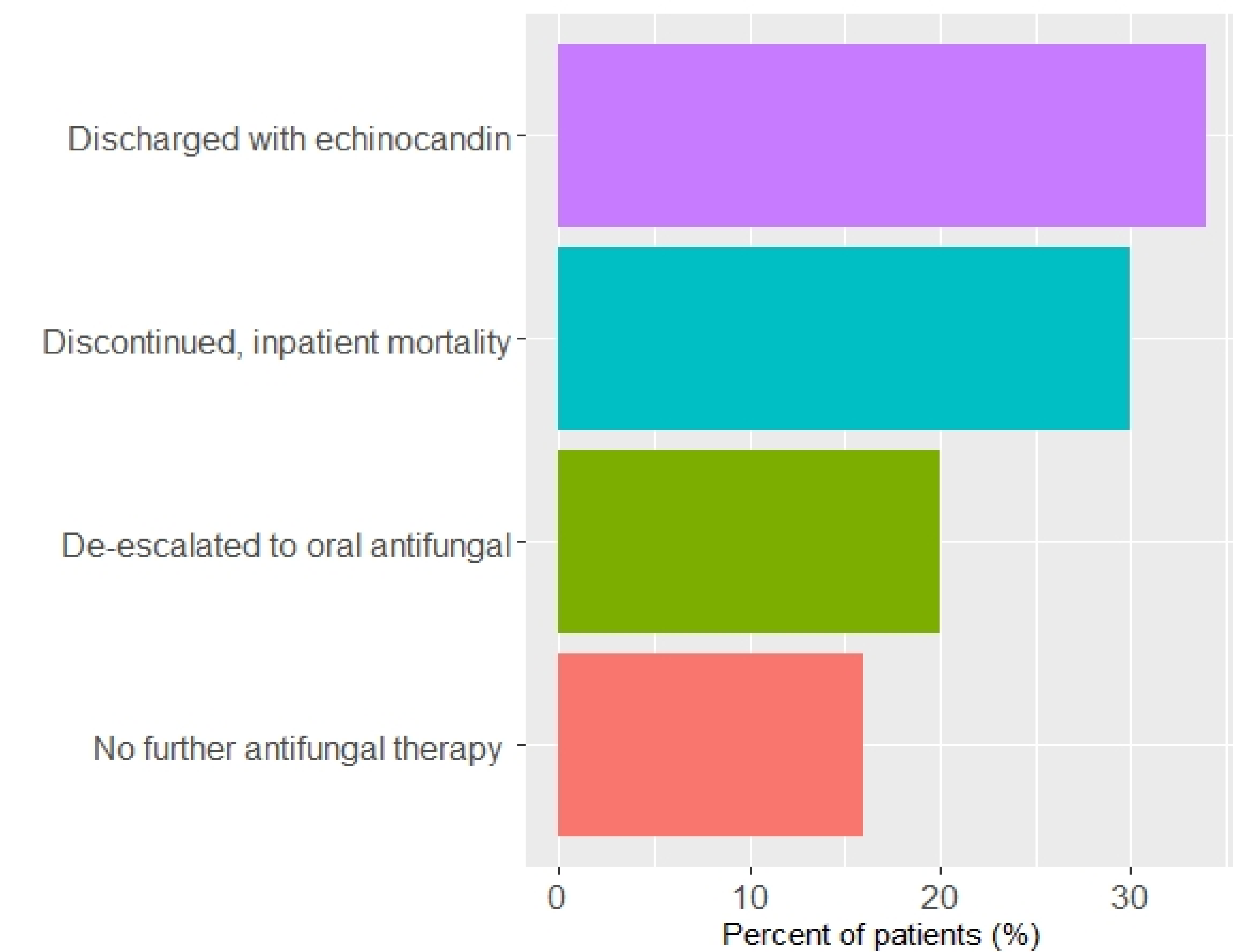


Figure 4. Echinocandin discharge disposition (n=50)



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