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 threat\(^3\)
- Currently, three available classes of systemic antifungals are echinocandin-, azole-, and amphotericin-based therapies\(^4\)
- Comparatively, echinocandins demonstrate low minimum inhibitory concentration (MICs) against most *Candida* species and favorable toxicity\(^5\)

**OBJECTIVES**
1. To perform a pharmacoepidemiologic analysis on echinocandin use at a quaternary care medical center
2. To review duration of therapy of echinocandins for positive *Candida* cultures and days to therapy initiation during hospitalization
3. 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>
<thead>
<tr>
<th>Table 1. Echinocandin courses and patients evaluated</th>
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<tr>
<td>Number of unique patients evaluated</td>
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<td>Total number of days of therapy</td>
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<tr>
<td>Number of patients with positive <em>Candida</em> microbiologic cultures</td>
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<td>Ongoing patient medical chart reviewed for echinocandin discharge disposition (Figure 4)</td>
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**REFERENCES**