

Risk Factors for Endogenous Endophthalmitis (EE) in Hospitalized Patients with Candida Fungemia

Aditya Uppuluri, MD; Marco A. Zarbin, MD, PhD; Greg Budoff, MD; Neelakshi Bhagat, MD, MPH

Introduction

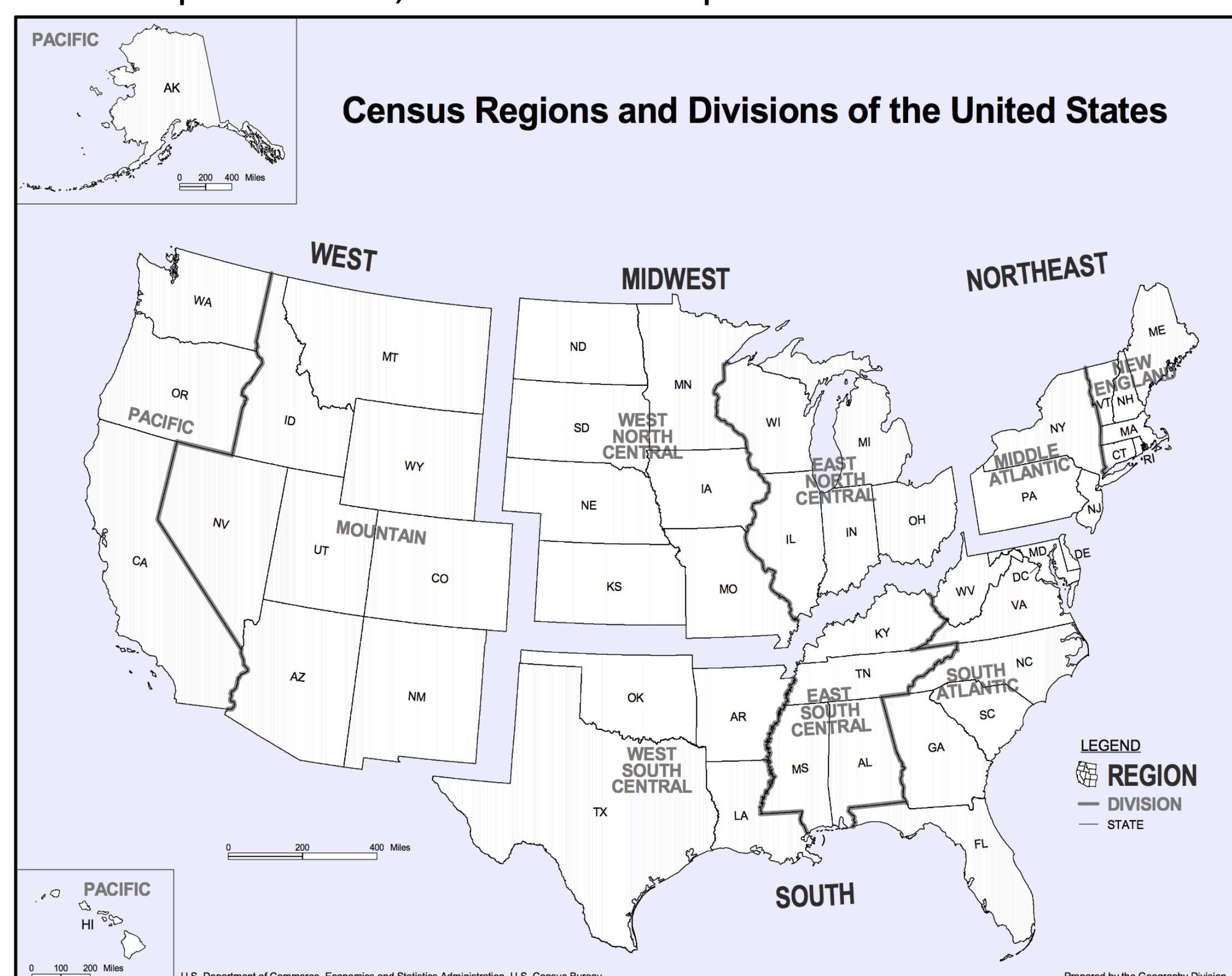
- Endogenous Endophthalmitis (EE) is a potentially devastating intraocular infection that is due to metastatic seeding of the eye by bacteria from a different bodily source.
- Treatment for EE involves intravenous antibiotics (L), intravitreal antibiotics (Center), and pars plana vitrectomy (R).



- The objective of this project is to identify and describe risk factors for EE in hospitalized inpatients with Candida fungemia.

Methods and Materials

- Retrospective, cross-sectional study of the 2002-2014 National Inpatient Sample (NIS) Database.
- Codes from the *International Classification of Diseases, Ninth Revision* (ICD-9 codes) were used to identify cases of endogenous endophthalmitis, systemic comorbidities, and procedures performed on patients
- Chi square analysis and independent samples t-testing were used to compare categorical and numerical variables between Candidemic patients with and without endophthalmitis; statistics were performed with IBM SPSS

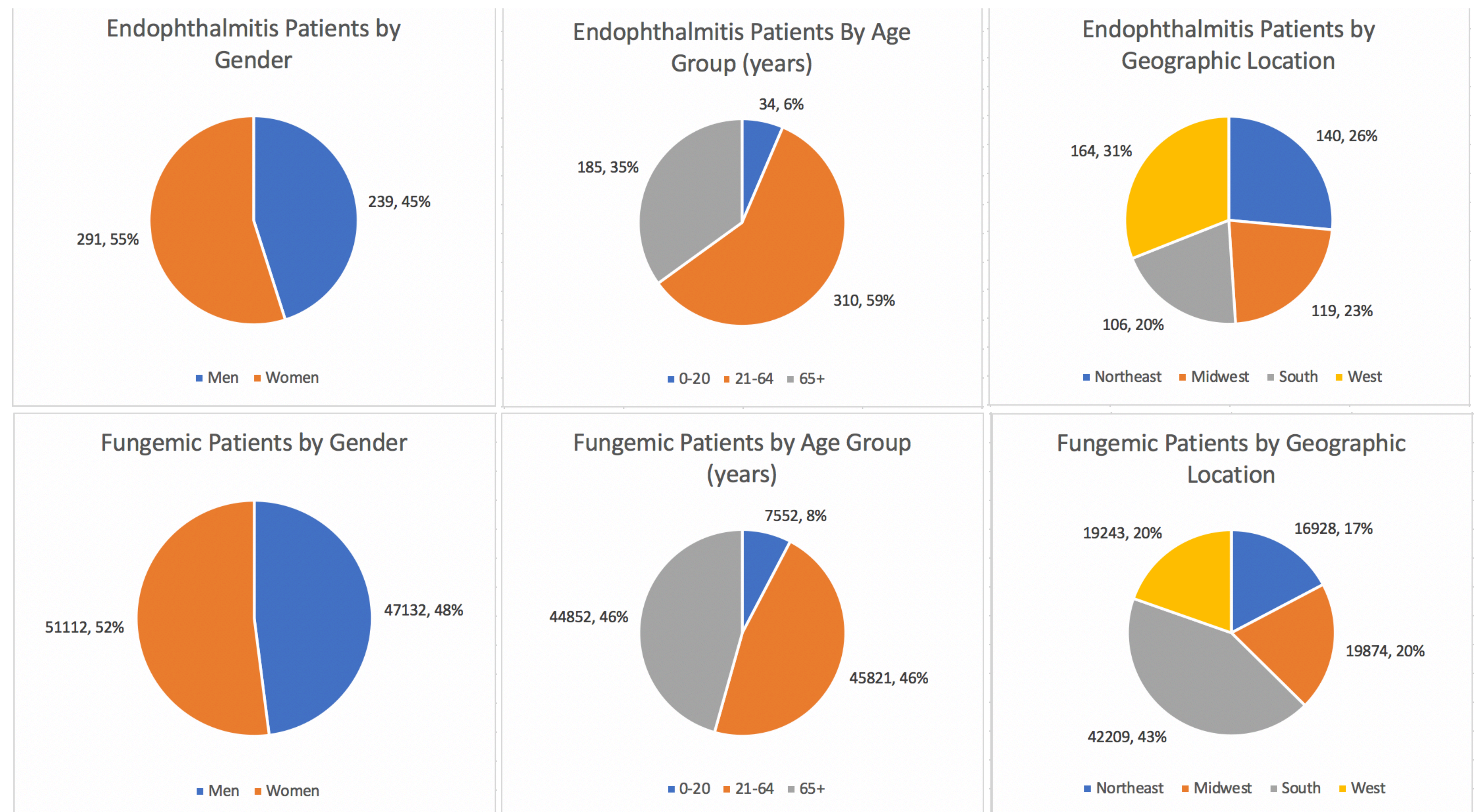


Results

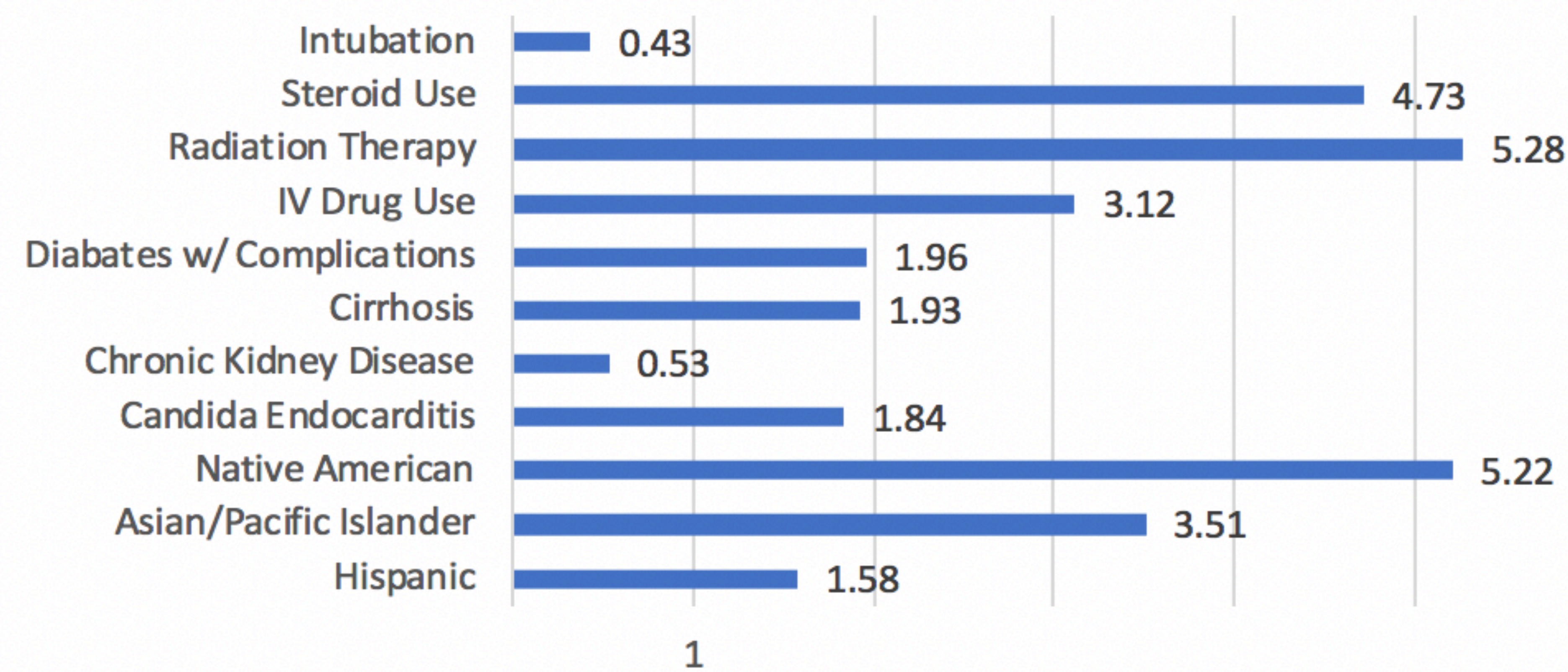
General Results

- We identified 98,783 cases of candida fungemia, 529 (0.5%) of which had concurrent EE during the hospitalization.
- The average age of patients with EE was 54.6 years (range: 0-95) vs. 58.2 years (range: 0-105) in those who did not ($p < 0.001$).
- The average length of stay was 22.89 days in Candidemic patients without EE and 19.52 days in candidemia patients with EE ($p < 0.001$).
- The percentage of patients who died during admission was significantly lower in the EE group (2.8% vs 15.6%; $p < 0.001$).
- The average cost per day of hospitalization was not significantly different between Candidemic with EE vs. those without EE (\$7,182.82 vs. \$7,510.60; $p = 0.175$).

Comparison of Patients with Fungemia only vs. Fungemia + Endogenous Endophthalmitis



Risk Ratio for Developing Endophthalmitis by Demographics and Comorbidities



Conclusions

- In this study, the prevalence of EE in Candidemic patients was low at 0.5%.
- The greatest risk factors for EE were active/history of radiation therapy, Native American ethnicity, steroid use, and IV drug use.
- Patients with a history of chronic kidney disease and recent intubation were less likely to develop EE.

Financial Disclosures

- Aditya Uppuluri has no financial disclosures.
- Marco A. Zarbin is a consultant for Genentech/Roche, Novartis Pharma AG, Frequency Therapeutics, Iveric Bio, Ophthotech, and Healos KK. He is a stockholder for Frequency Therapeutics, Iveric Bio, and NVasc. He is a speaker for Iridex. He is Co-Founder of NVasc.
- Greg Budoff has no financial disclosures.
- Neelakshi Bhagat has no financial disclosures.