



# Infectious Endocarditis in Patients with Hematologic Malignancy at the University of Wisconsin

Poster: 2113

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## Introduction

- Infective Endocarditis (IE) is a serious complication of blood stream infections (BSI) often requiring a transesophageal echocardiogram (TEE) for diagnosis and prolonged course of IV antibiotics.
- Patients with hematologic malignancies frequently develop neutropenic fever from BSI with high-risk organisms (e.g. Streptococcus spp.), but IE is rare amongst this population.
- Given the paucity of data on this topic, we evaluated the rate of IE amongst patients with hematologic malignancies at the University of Wisconsin (UW).

## Methodology

- Retrospective cohort study.
- Inclusion criteria
  - Adult patients (≥18 years)
  - Admitted to hematology ward at UW Jan '18 – Dec '20
  - ≥ 1 positive blood culture at UW in 5 day window before/after admission
- Exclusion criteria
  - Isolate was not typical organism of endocarditis (i.e. Strep spp., Staph spp., Granulicatella spp., Gamella spp., Facklamia spp., Enterococcus spp., HACEK, Fungi). Coxiella burnetii serology were not included.
  - Contaminants meeting three criteria: only one set of cultures, coagulase negative Staph spp. or Strep mitis/oralis, and treated as contaminant by treatment team.
- Polymicrobial BSI: ≥2 organisms isolated on same day (excluding contaminants)
- Unique BSI: cultures separated ≥1 day growing distinct organisms
- Neutropenia at any point during admission (ANC <500 cells/uL)
- Rejected/Possible/Definite IE cases defined by Modified Duke's Criteria
  - Definite cases reviewed by two authors independent of initial data collection
  - Possible cases reviewed up to 90 days after discharge for readmission, repeat positive blood cultures, suspected IE, stroke, brain abscess, meningitis, new heart failure, valvular disease, pulmonary embolism, mycotic aneurysm, renal abscess, splenic infarction, osteomyelitis, septic arthritis, glomerulonephritis

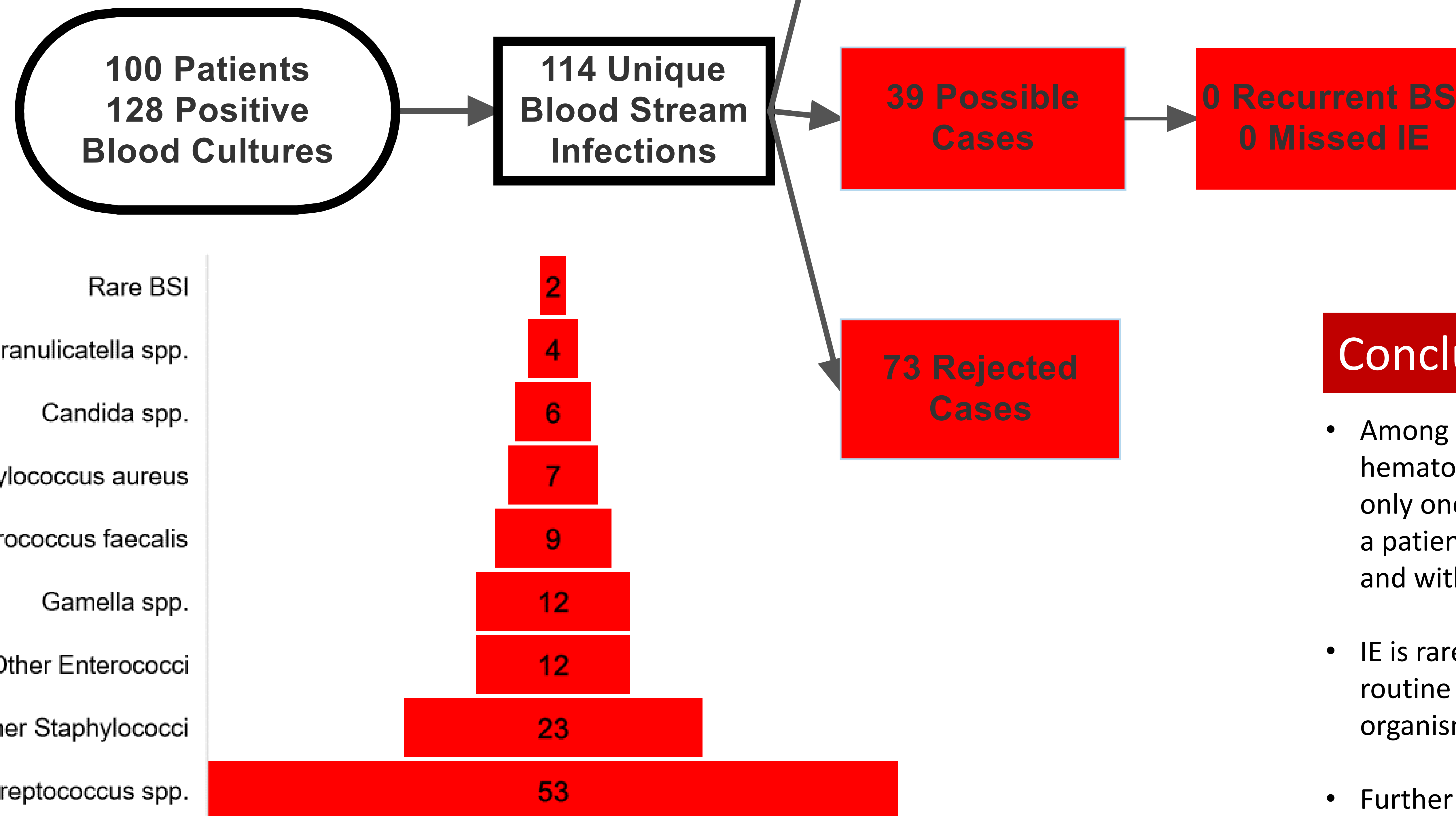
## Results

100 Patients

- 35% Female
- Mean age 59 years
- 11 patients with multiple BSI

114 Unique BSI

- 94 (82.4%) Neutropenic Admission
- 43 (37.7%) Community Acquired BSI
- 23 (20.2%) Polymicrobial
- TTE: 64 exams
- TEE: 13 exams



### Confirmed Case

- DLBCL, not Neutropenic
- Austrian Syndrome: Streptococcus pneumoniae pneumonia, meningitis, and IE. Confirmed on TEE

### Rejected Case

- Myeloid Sarcoma, profound Neutropenia
- Prolonged candidemia, GI source, initial TTE with vegetation
- Subsequent TTE without vegetation, TEE unable to be done

## Conclusion

- Among 100 admitted patients with hematologic malignancies and 114 unique BSI, only one confirmed case of IE was identified in a patient with fulminant Austrian Syndrome and without neutropenia.
- IE is rare among this patient population and routine examinations with TEE for BSI with organisms typical for IE may not be warranted.
- Further study could aim to help determine the utility of TTE during neutropenic fever.

\*Rare BSI: Rhodotorula mucilaginosa and Trichosporon asahii