



Purpose

- Invasive fungal infections (IFIs), though uncommon, are on the rise and have a high mortality rate.
- Fungal colonization is common in medical and surgical intensive care units across the country, but its clinical significance is unclear.

Study Aim

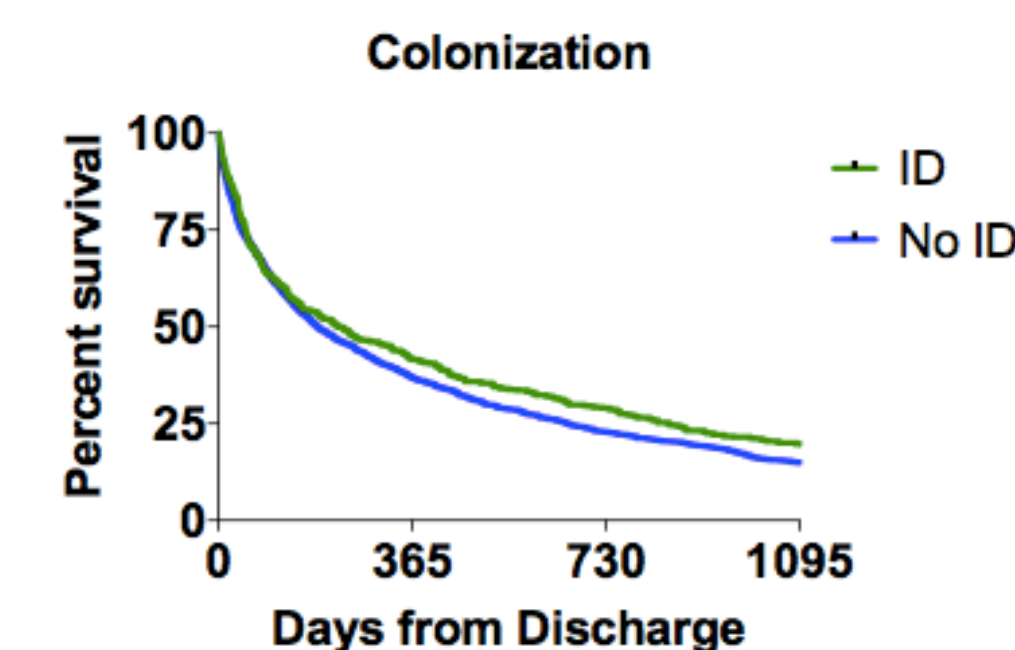
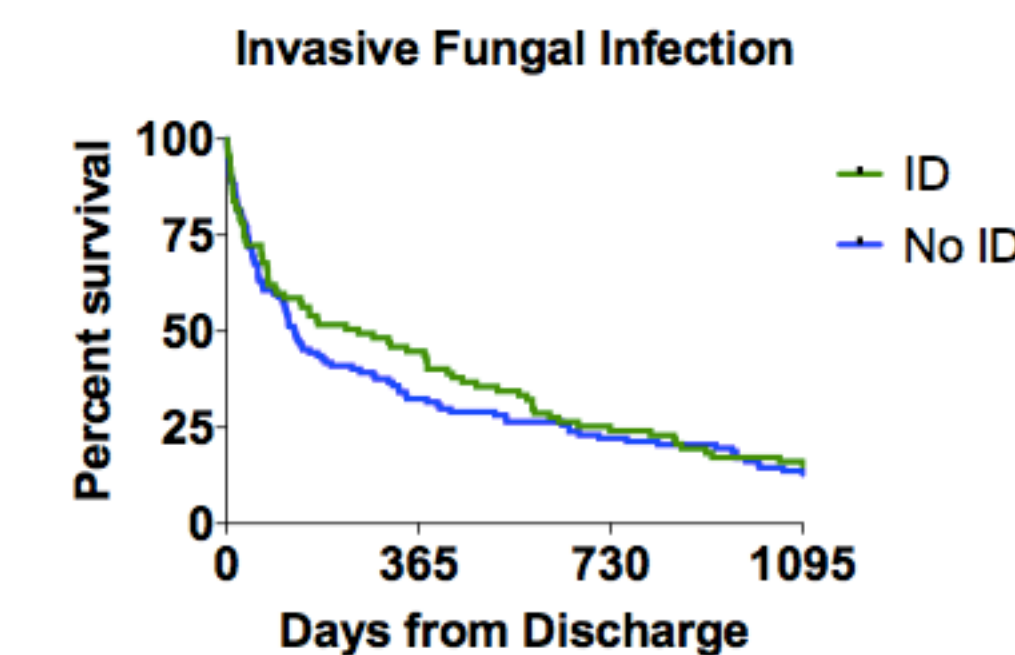
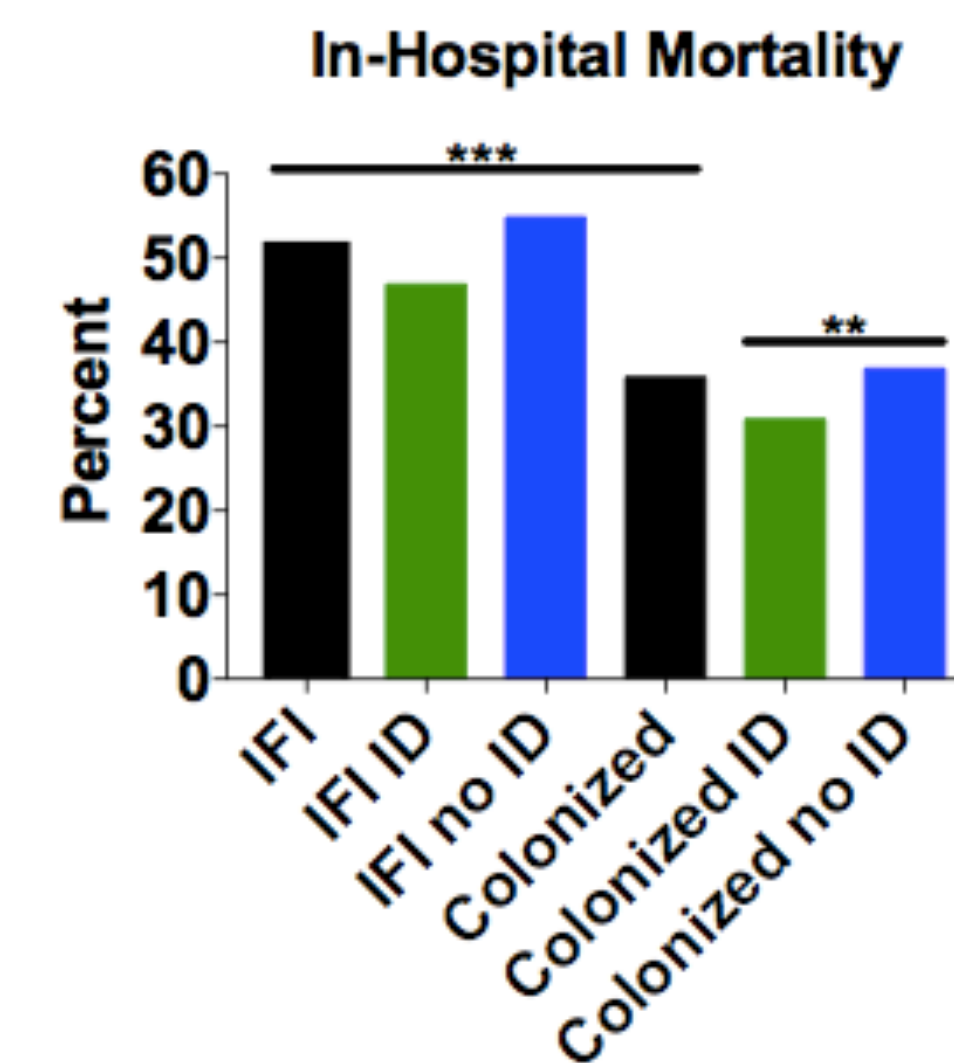
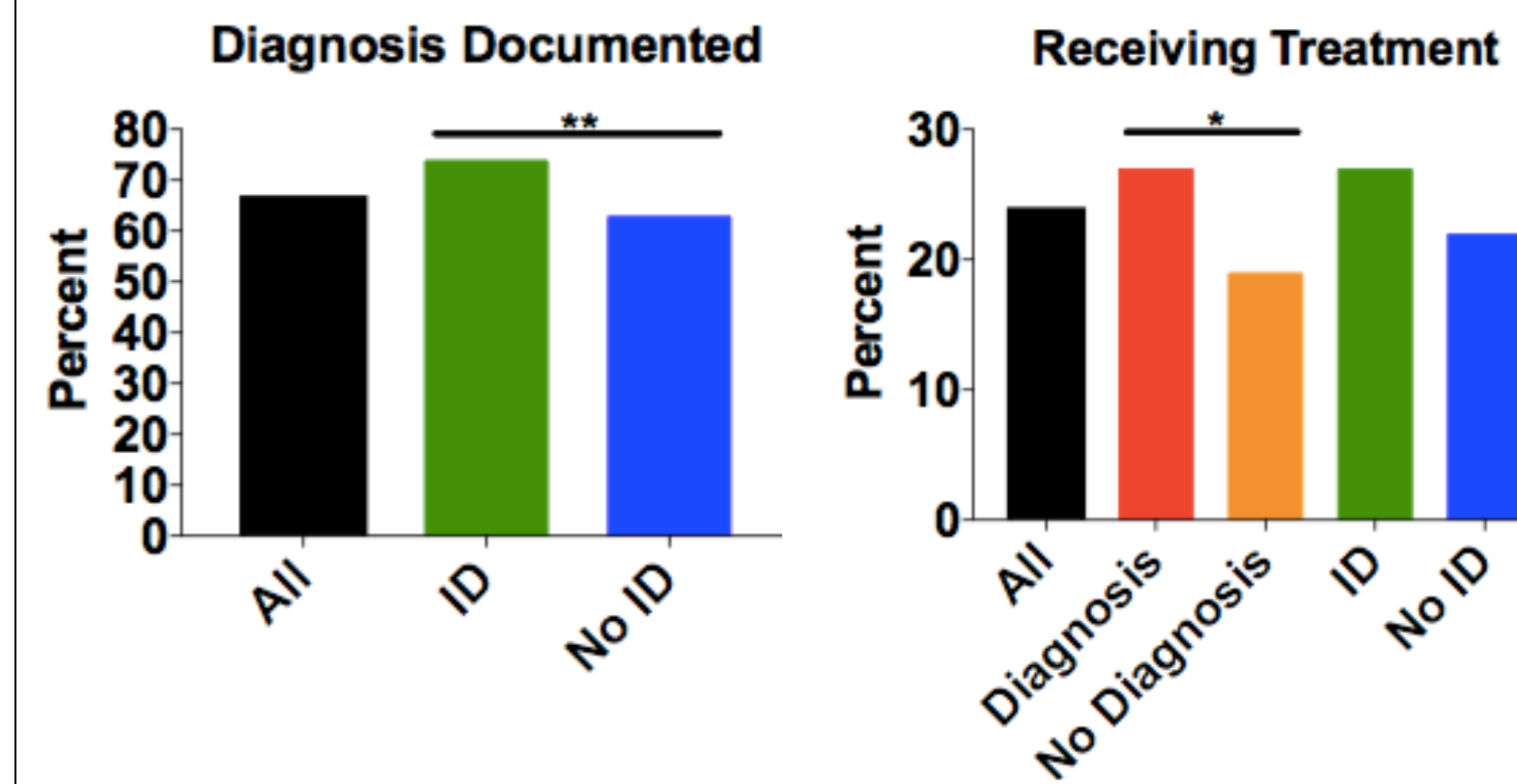
- Our study aims to characterize the impact of the diagnoses of invasive fungal infection versus fungal colonization and their management on outcomes in a large intensive care unit population.

Methods

- We utilized the Multiparameter Intelligent Monitoring in Intensive Care III database for this retrospective cohort study.
- Adults with positive fungal cultures were classified as colonized or infected (IFI) using definitions from the EORTC/MSG guidelines and the Blot protocol for Aspergillus.
- IFI diagnosis documentation and Infectious Disease consultation were identified by chart review.
- Outcomes were compared between groups.

Results

- **Epidemiology**
 - There were 595 hospital admissions with IFI (11.7/1000 admissions) and 5789 with colonization (114/1000 admissions).
 - In-hospital mortality occurred in 52% of patients with IFIs and 36% of colonized patients.
- **Diagnosis documented**
 - 67% of patients with IFIs had the diagnosis documented.
 - Patients without documentation of IFI had significantly lower treatment rates.
 - 24% of patients with IFIs and 8% of colonized patients received antifungal therapy.
 - Treatment did not significantly impact mortality in infected or colonized patients but was associated with increased length of hospital and ICU stay.
- **ID Consultation**
 - ID consultation was performed in 40% of patients with IFIs and 20% of patients with colonization.
 - There was a significant increase in diagnosis of IFI in the ID group and a trend toward increased treatment.
 - In IFI patients and colonized patients with ID consultation, in-hospital mortality was lower. In colonized patients with ID consultation, survival post-discharge improved.
 - Hospital and ICU length of stay were longer for patients with ID consultation.



Conclusion

- Critically ill patients with IFIs have high mortality rates, which were not reduced by treatment.
- The prevalence of colonization was high, and colonized patients experienced significant in-hospital and post-discharge mortality.
- This study supports the need for additional investigation into Infectious Disease consultation, which may improve outcomes in critically ill patients with fungal infection and colonization.

References

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