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Presentation #210



# Candidemia in Cancer Patients: A Retrospective Analysis; 2001-2014



Fellow:

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### BACKGROUND

While the global epidemiology of candidemia has been studied in detail, there is relatively little data examining the effect of recent changes in antifungal usage patterns on the susceptibility and distribution of Candida species. Likewise, there is relatively little data documenting outcomes in patients with candidemia.

### **METHODS**

Chart review was conducted of patients at Moffitt Cancer Center, Tampa, FL with candidemia between January 1, 2001 and June 18, 2014. Patients were selected based on one or more positive peripheral and central line blood cultures; catheter tips were excluded.

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The yeast species had been cultured on Sabouraud dextrose and chocolate agars and identified using either the RapID Yeast One system or the Vitek 2 system. Drug susceptibilities were determined using the TREK Sensititre YeastOne system.

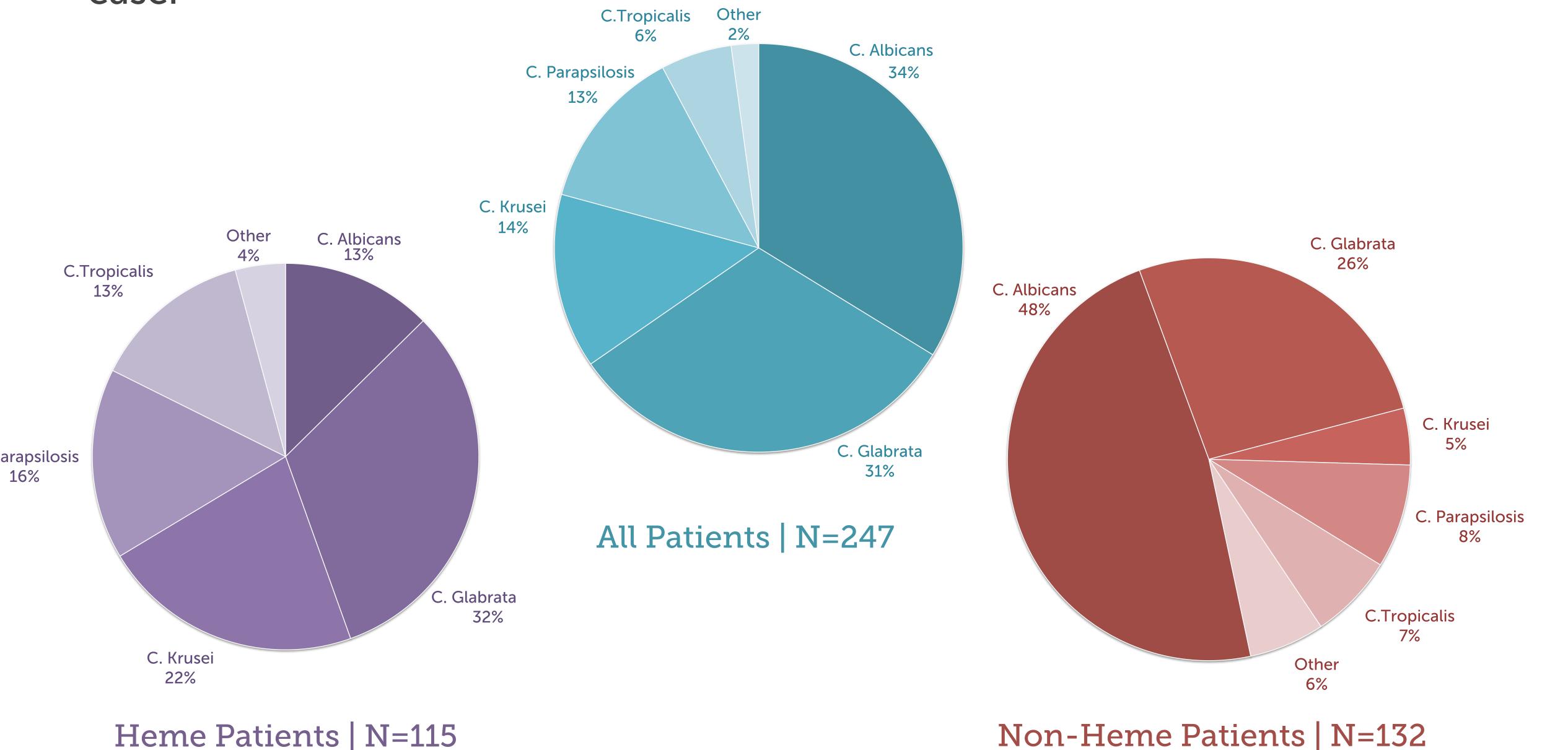
Data on exposure to fluconazole, amphotericin B, voriconazole, mi-c. Parapsilosis cafungin, 5-flucytosine, posaconazole, caspofungin, itraconazole, and anidulafungin was collected. Analysis was conducted by comparing the frequencies of each Candida species over specified time intervals for all patients, those with non-hematological malignancies.

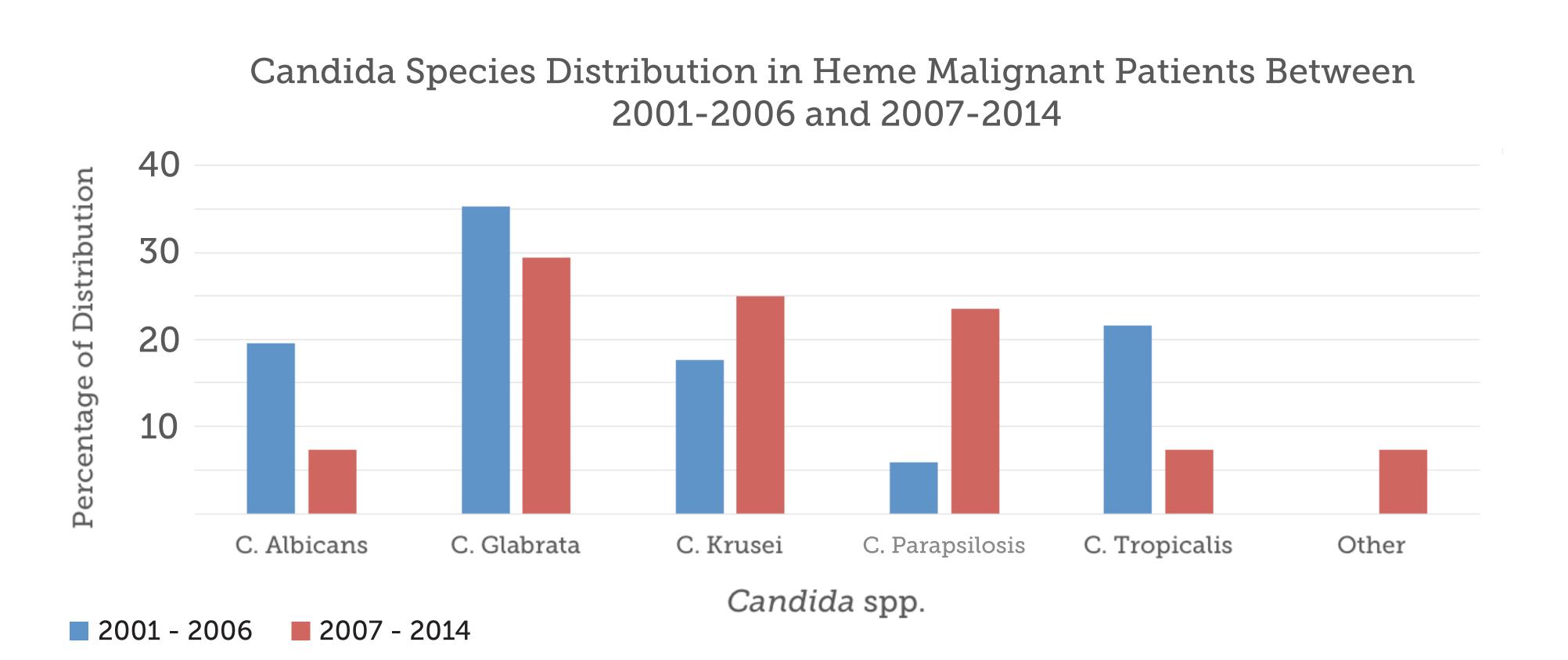
### RESULTS

247 candidemic patients were identified, 115 of them with hematologic malignancies. The most prevalent infecting species was *C. albicans* which grew in slightly less than half of non-hematological malignancy patients. The most prevalent infecting species for patients with hematological malignancies was *C. glabrata* followed by *C. krusei*, which combined for more than half of infections. *C. albicans* was not as frequent in this group, and was the least prevalent of the major species.

Over time, incidences of *C. albicans* and *C. tropicalis* fell, while *C. parapsilosis* and *C. krusei* rose.

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## CONCLUSION

- There is a significant increase in the number of cases of *C. para-psilosis* but a decrease in the number of cases of *C. albicans* and *C. tropicalis* fungemias during the last 5 years compared to the first five years likely due to increased prophylactic use of mica-fungin in the hematologic malignancy population during that time period.
- There is a dramatic difference in the causes of candidemia in the Heme vs non Heme patients with significantly less cases of *C. albicans* and more *C. parapsilosis* and *C. krusei* likely due to the higher use of prophylactic micafungin and voriconazole in the former population.
- Heme patients who died while candidemic were more likely to die from end stage leukemia than candidemia itself.
- Further information is needed to determine how these trends might impact prognosis and treatment recommendations for candidemia.