

## Background

- Rising incidence of diabetes along with already lacking epidemiological data on mucormycosis may portend a rising incidence of rhinocerebral mucormycosis - an invasive and debilitating fungal infection.
- This study evaluates epidemiological trends in rhinocerebral mucormycosis infection in relation to diabetes and other predisposing health conditions.

## Methods

- This is a cross-sectional study conducted via review of de-identified electronic medical records of 132 million patients across 96 healthcare organizations via TriNetX clinical database.
- We assessed incidence and prevalence of mucormycosis from January 2004 to December 2023.
- We then stratified by age, race, and sex to capture evolving trends between diagnosis and clinical characteristics of the study population.

**Table 1:** Cohort Demographics and Characteristics

	n	Incidence <sup>1</sup>	Prevalence <sup>1</sup>
<b>Total Cohort</b>	3470	2.53	2.57
<b>Sex</b>			
Female	59.0%	1.90	1.93
Male	39.5%	3.29	3.34
<b>Race</b>			
Asian	4.2%	2.81	2.88
Black	13.4%	2.93	2.98
Other	7.4%	2.55	3.00
White	59.7%	2.96	2.56
American Indian	1.04%	4.73	4.73
<b>Ethnicity</b>			
Hispanic/Latino	14.97%	4.07	4.09
Non-Hispanic	63.97%	3.38	3.45

<sup>1</sup>Cases per 100,000 persons

## Results

- Compared with previous population studies, we observed a higher incidence of mucormycosis across the study period.
- A higher proportion of mucormycosis cases in our study occurred in patients with underlying disease.
- 61% of cases occurred in patients with underlying respiratory disease, 59% of patients had underlying endocrine disease - including 32% of patients with diabetes mellitus, and 39% of patients had underlying hematological disease.
- Our study observed an increasing average age of mucormycosis infection. Mean age of mucormycosis infection was 57 years in our study compared to 38.8 years in a prior study.
- Mucormycosis predominance in the male sex was unchanged from previous studies.
- Compared with previous population studies, a higher proportion of patients had underlying diabetes mellitus or hematologic disease.

## Conclusions

- This study observed a rising incidence of mucormycosis infection in diabetics and patients with underlying hematologic disease compared to prior population-level studies.

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### REFERENCES:

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