What Are Upper Airway Fungal Colonization Patterns Among Children With Asthma and Their Relationship With Loss of Asthma Control?

**STUDY DESIGN**

- Prospective trial of school-age children with mild asthma being treated with daily low-dose inhaled corticosteroids
- ITS1 sequencing of nasal blow samples
- Collected from children with:
  - Well-Controlled Asthma
  - Early Signs of Loss of Asthma Control (Yellow Zone [YZ])

```latex
\begin{align*}
\text{Well-Controlled Asthma} & \quad n = 194 \\
\text{Early Signs of Loss of Asthma Control (Yellow Zone [YZ])} & \quad n = 107
\end{align*}
```

**RESULTS**

**Increased relative abundance of *Malassezia globosa* at baseline**

- Increased risk of future YZ episodes

**Increased relative abundance of *Malassezia globosa* at YZ**

- Increased risk of progression from YZ episode to severe asthma exacerbation

![Graph showing the relationship between Malassezia globosa abundance and asthma control](image_url)

The upper airway commensal mycobiome is associated with future asthma control. This highlights the importance of the mycobiota in asthma control and may contribute to development of fungi-based markers to predict asthma exacerbation.

Yuan H, et al. *CHEST* August 2023  |  @journal_CHEST  |  https://doi.org/10.1016/j.chest.2023.03.034

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