



# Tracheobronchomalacia: Studying the windpipe using MRI, a prospective study

S. Prountzos<sup>1</sup>, O. Sardeli<sup>2</sup>, S. Antonakis<sup>1</sup>, D. Moriki<sup>2</sup>, A.  
Karachaliou<sup>1</sup>, A. Galani<sup>2</sup>, A. Mazioti<sup>1</sup>, K. Douros<sup>2</sup>, E. Alexopoulou<sup>1</sup>

1: 2nd Department of Radiology, University General Hospital "Attikon", National and Kapodistrian University of Athens

2: Pediatric Pulmonology and Allergology Unit, 3rd Pediatric Clinic, University General Hospital "Attikon", National and Kapodistrian University of Athens



HELLENIC REPUBLIC  
National and Kapodistrian  
University of Athens  
EST. 1837

# Introduction

Large airway diseases

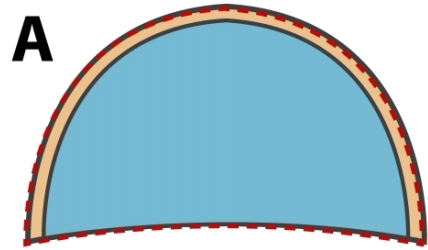
Congenital

Acquired

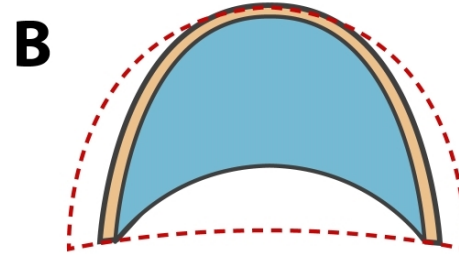
Dynamic

Tracheobronchomalacia

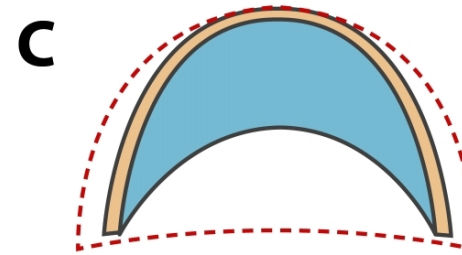
# Types of tracheobronchomalacia



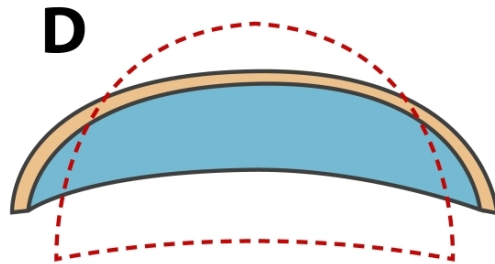
Airway at equilibrium



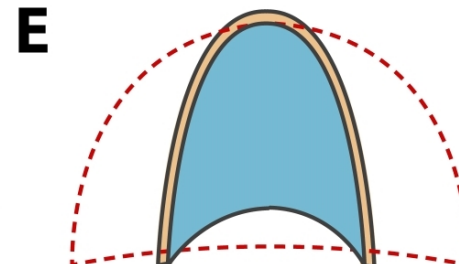
Forced expiration  
DAC



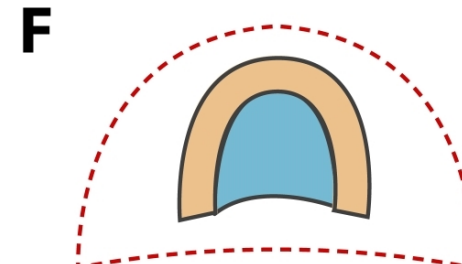
HDAC



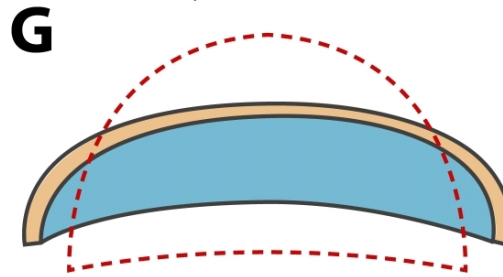
Crescent type TBM



Saber-sheath  
type TBM

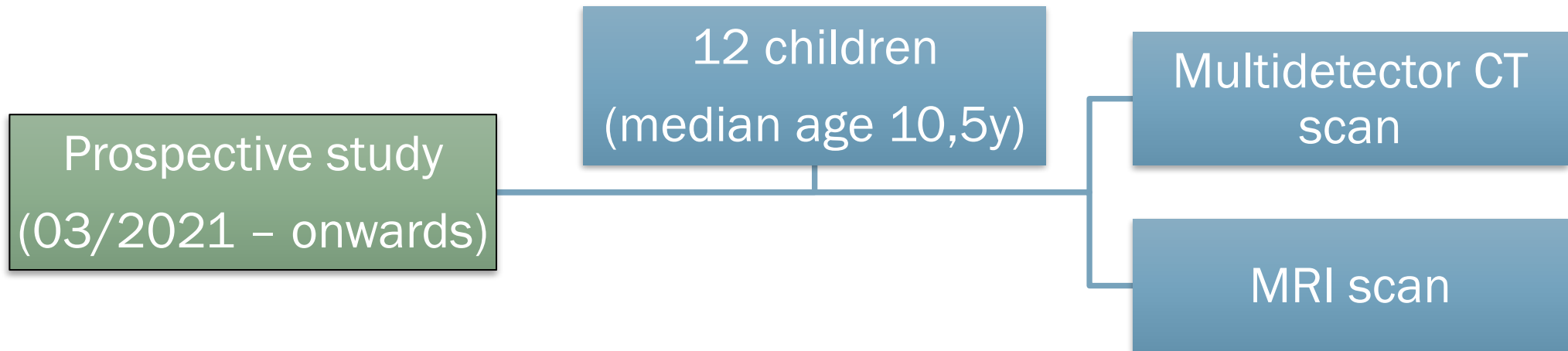


Circumferential  
type TBM

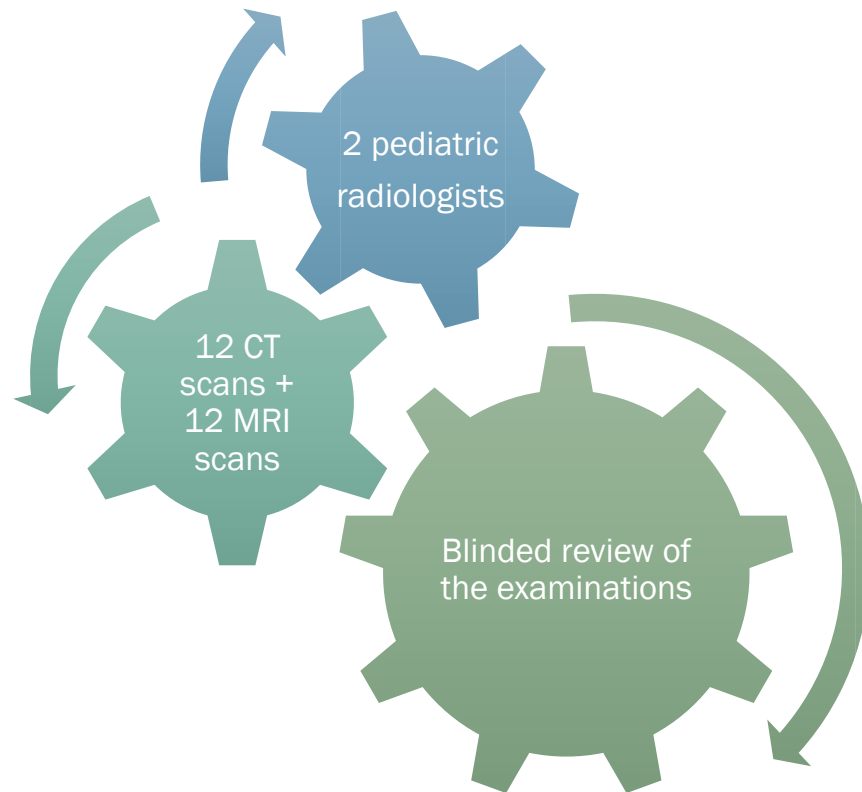


Combine TBM and HDAC

# Materials & Methods



# Materials & Methods

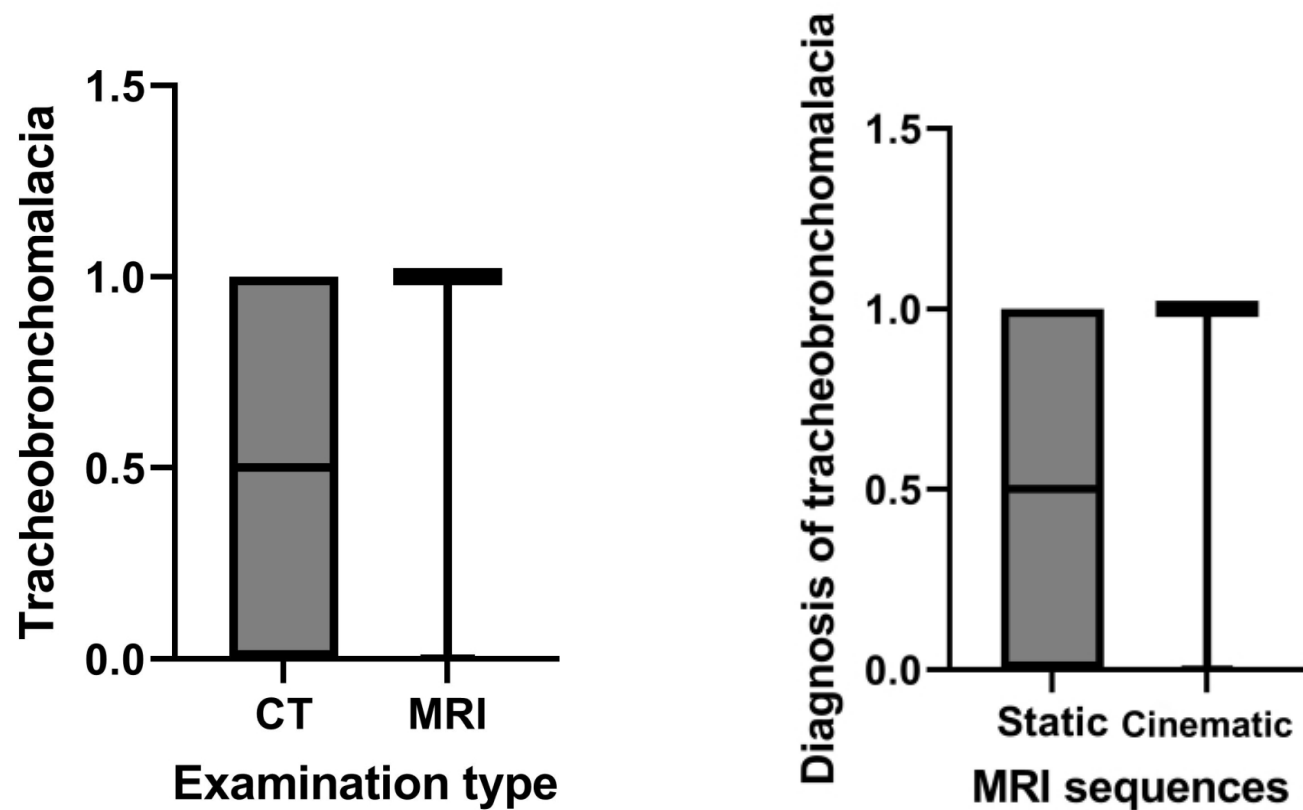


Children with suspected tracheobronchomalacia

Paired end-inspiratory & forced-expiratory CT scan

MRI scan - static and cinematic sequences

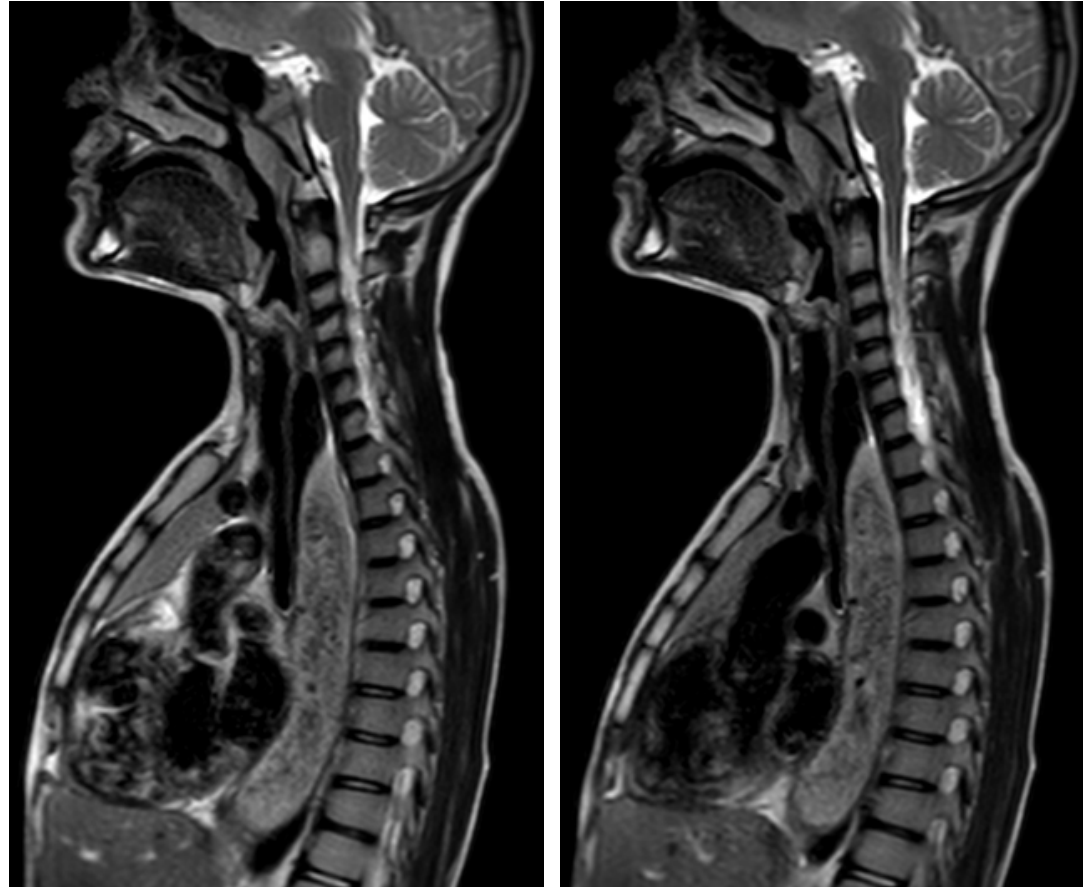
# Results



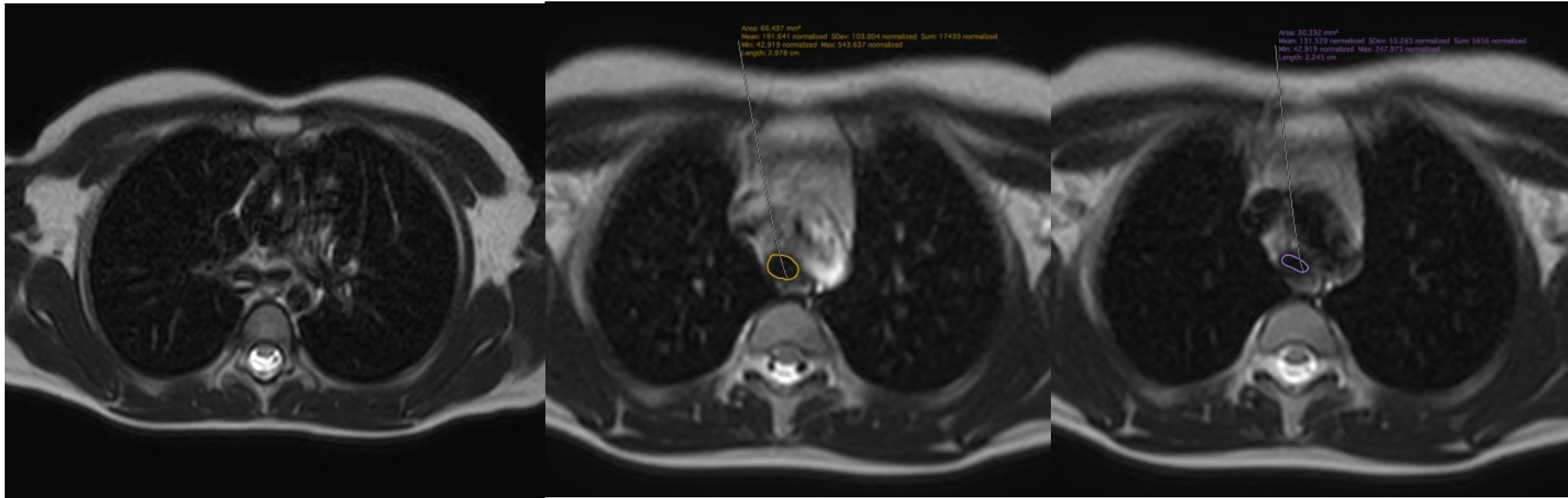
Mean time of  
examination: 4'20"

$P_{\text{value}}=0.0172$

# Results

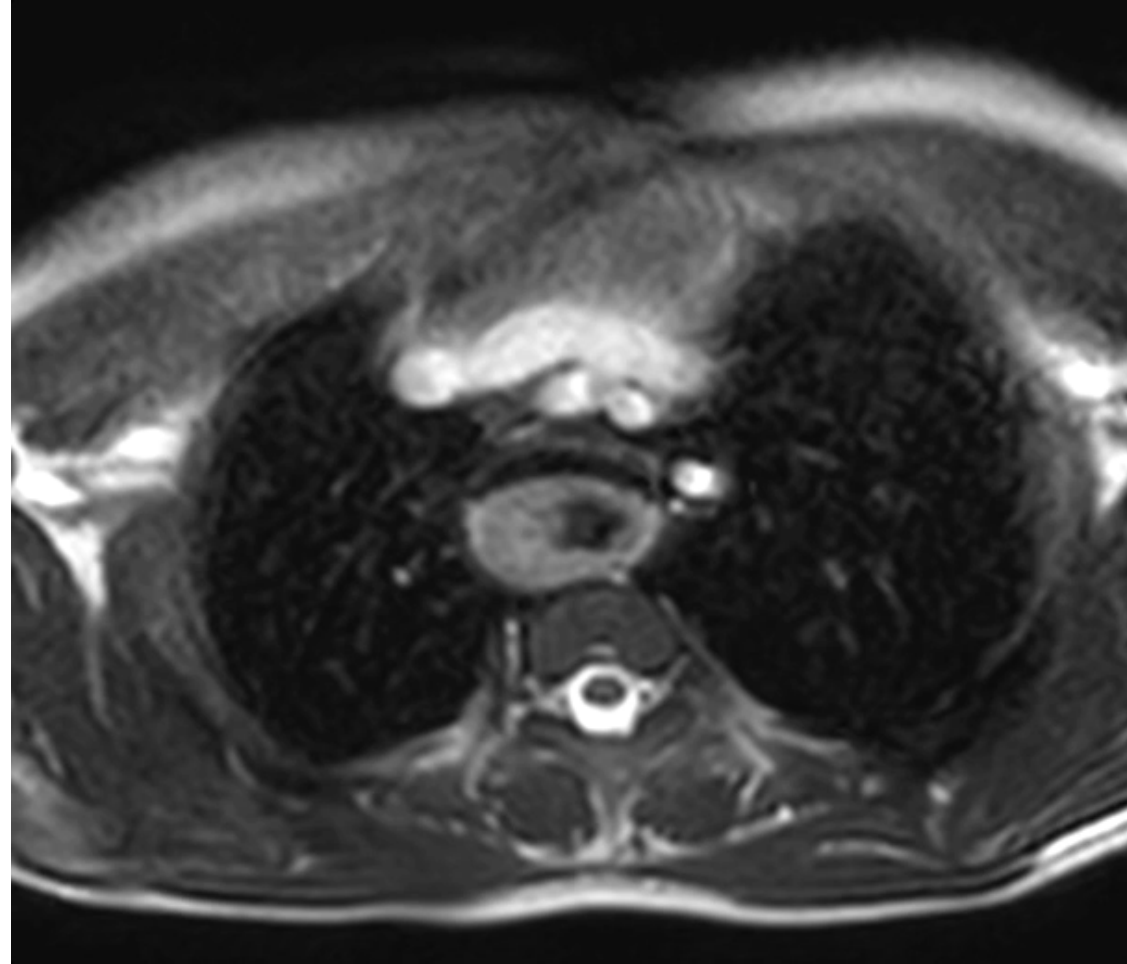


# Results





# Results



# Limitations



No data from bronchoscopy (gold standard)

Small cohort

On-going study

# Conclusions



THANK YOU