

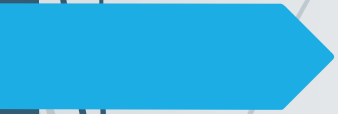
# A Multi-Center Study of Autoimmunity in Rosai Dorfman Disease

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*No financial disclosures*

# Background

Association of RDD with autoimmune conditions – ‘immune related RDD’

Most data from case reports and small case series (8-10%)

Lack a comprehensive evaluation of Autoimmunity in RDD

Retrospective chart review of patients diagnosed with RDD between 2003-2023 from three referral centers.

- Mayo Clinic, Rochester, MN, USA
- Peking Union Medical College Hospital, Beijing, China
- University of Alabama at Birmingham, AL, USA

Identified the patients who underwent autoimmune testing and patient diagnosed with autoimmune diseases.

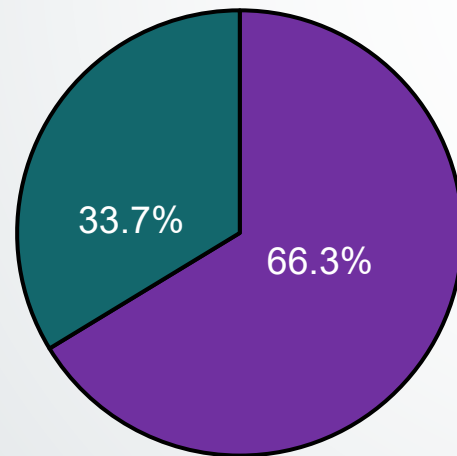
Compared the demographic, clinical, serological and mutational profiles of patients with and without autoimmunity



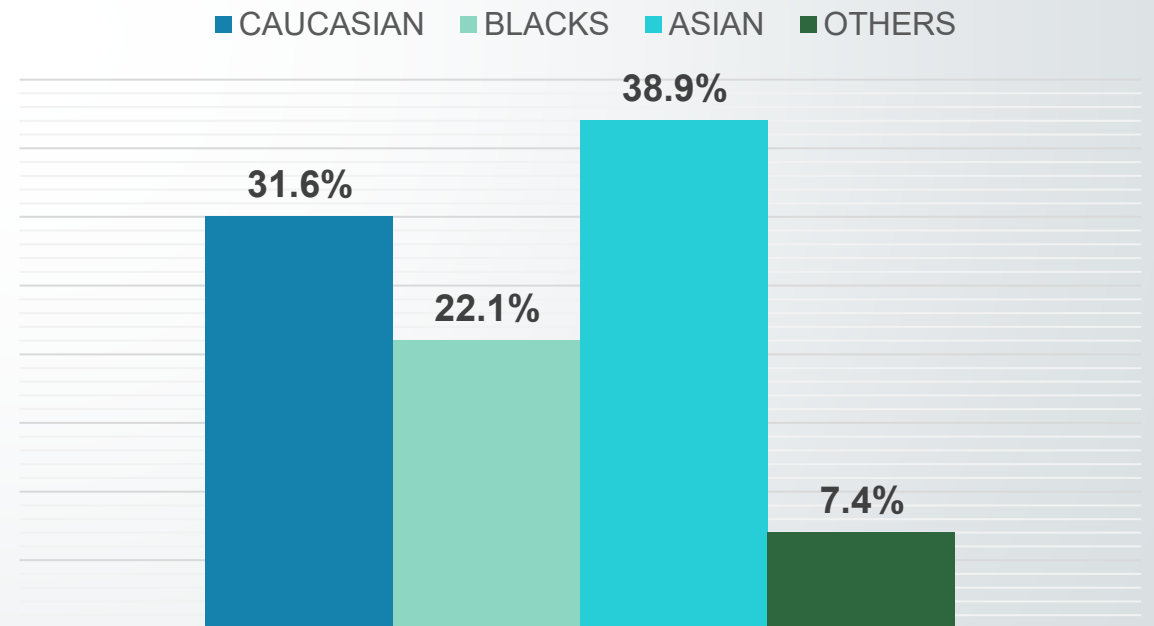
# *Results*

# Demographic profiles of RDD cohort

- ▶ 95 patients with RDD - diagnosed from 2003-2023.
- ▶ Median age at RDD diagnosis 49 years (range, 39-59)



■ Female ■ Male



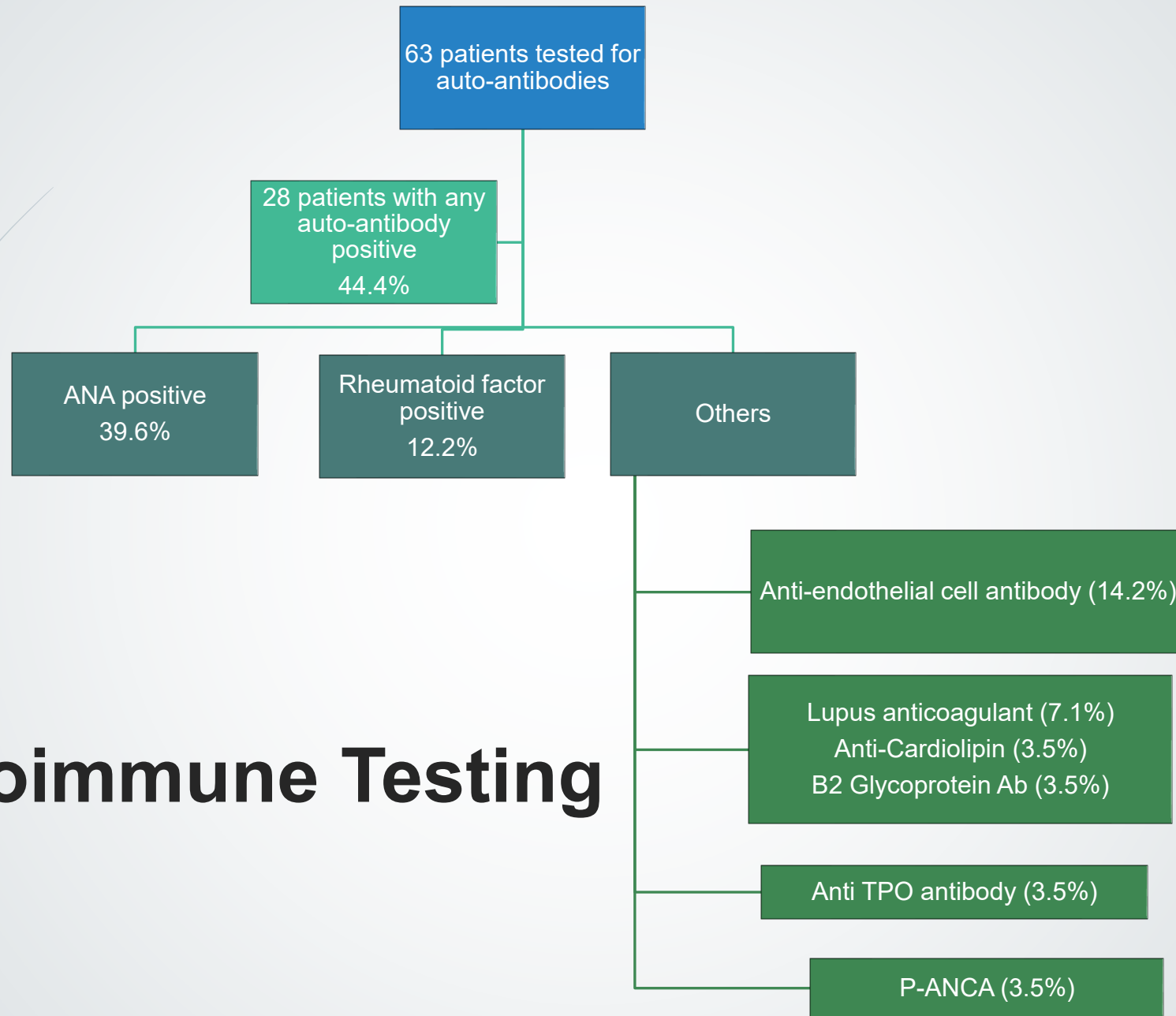
RACE

## Characteristics of individuals with RDD and autoimmunity

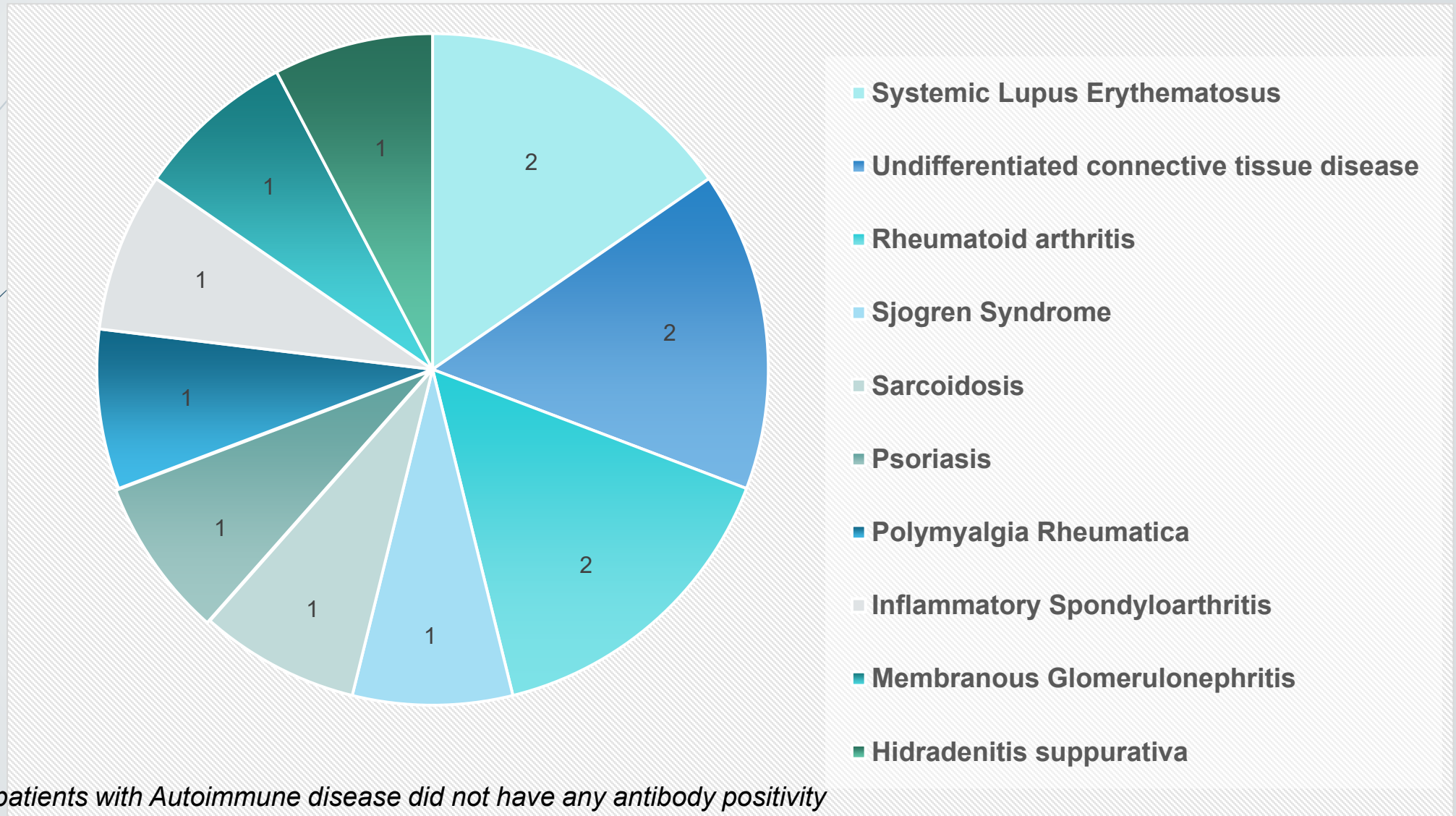
	<b>Autoimmune Disease</b>	<b>Any Auto-antibody</b>
<b>N (%)</b>	13 (13.7%)	28 (44.4%)
<b>Median Age in years</b>	52 (31.5-64)	47.5 (33-65.8)
<b>Race</b>		
Black	4 (31%)	6 (21.4%)
White	3 (23%)	3 (10.7%)
Asian	3 (23%)	17 (60.7%)
Other	3 (23%)	2 (7.2%)

*Autoimmune disease seems more prevalent among individuals from North America compared with China, although Chinese cohort had more autoantibody prevalence.*

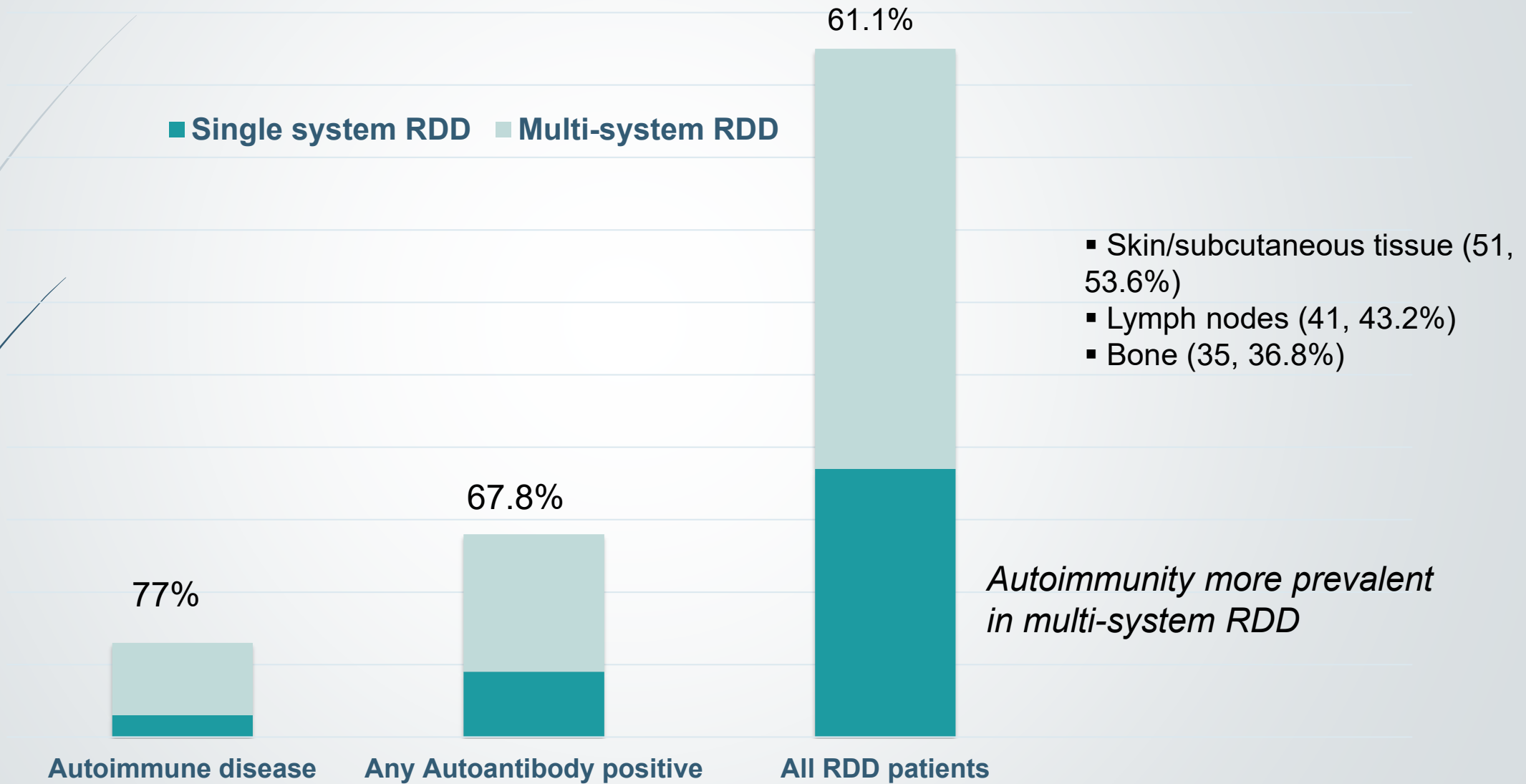
# Autoimmune Testing



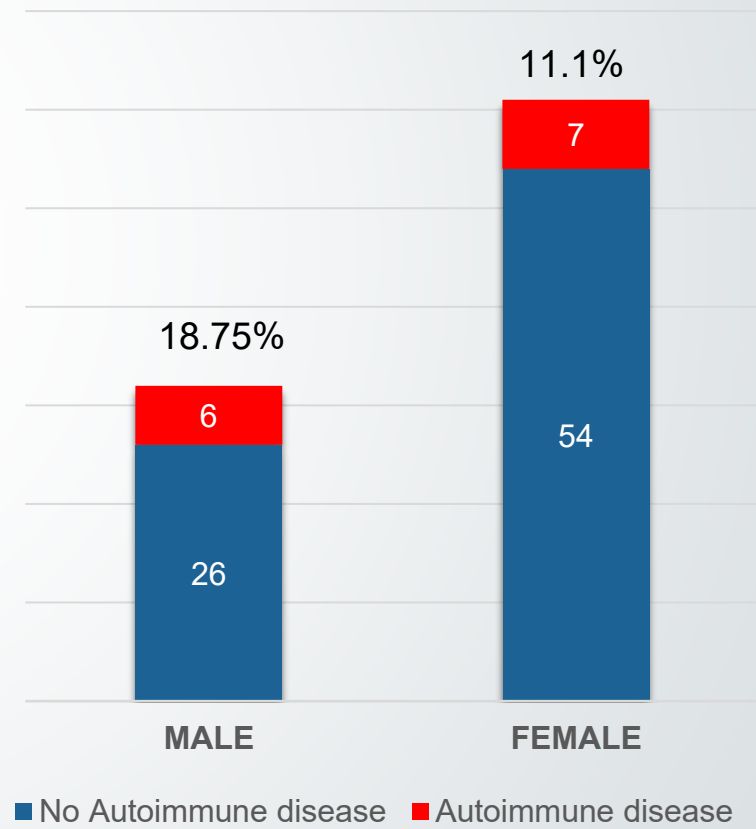
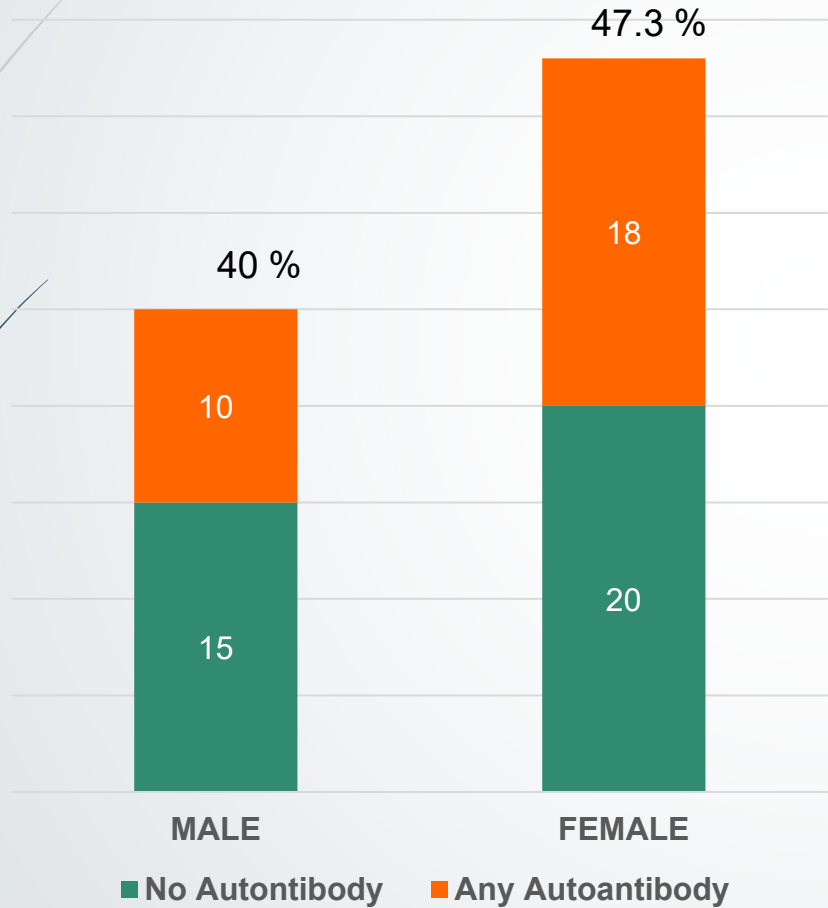
# Autoimmune Diseases in RDD patients



# RDD Organ Involvement

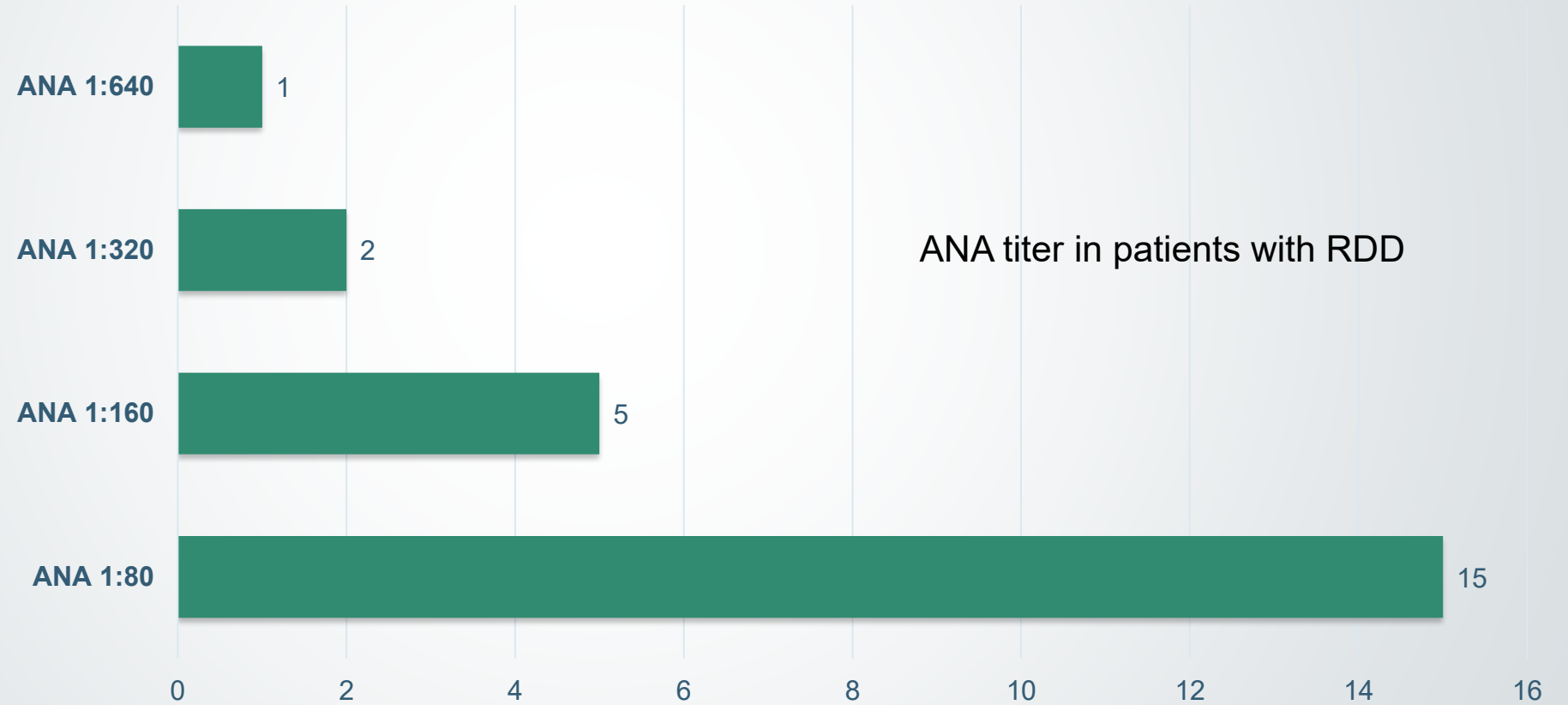


# Autoimmunity by Sex

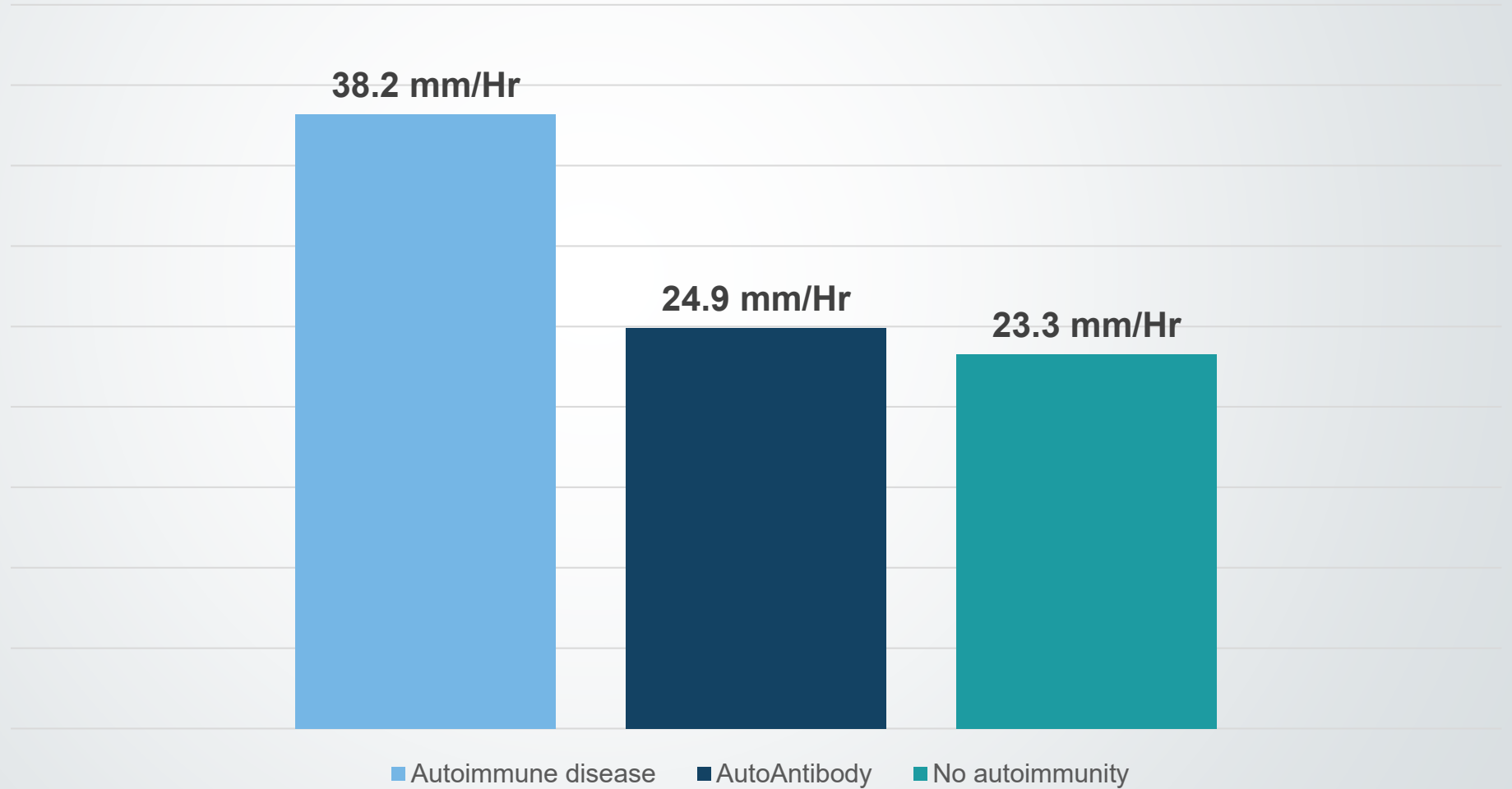


# ANA Testing

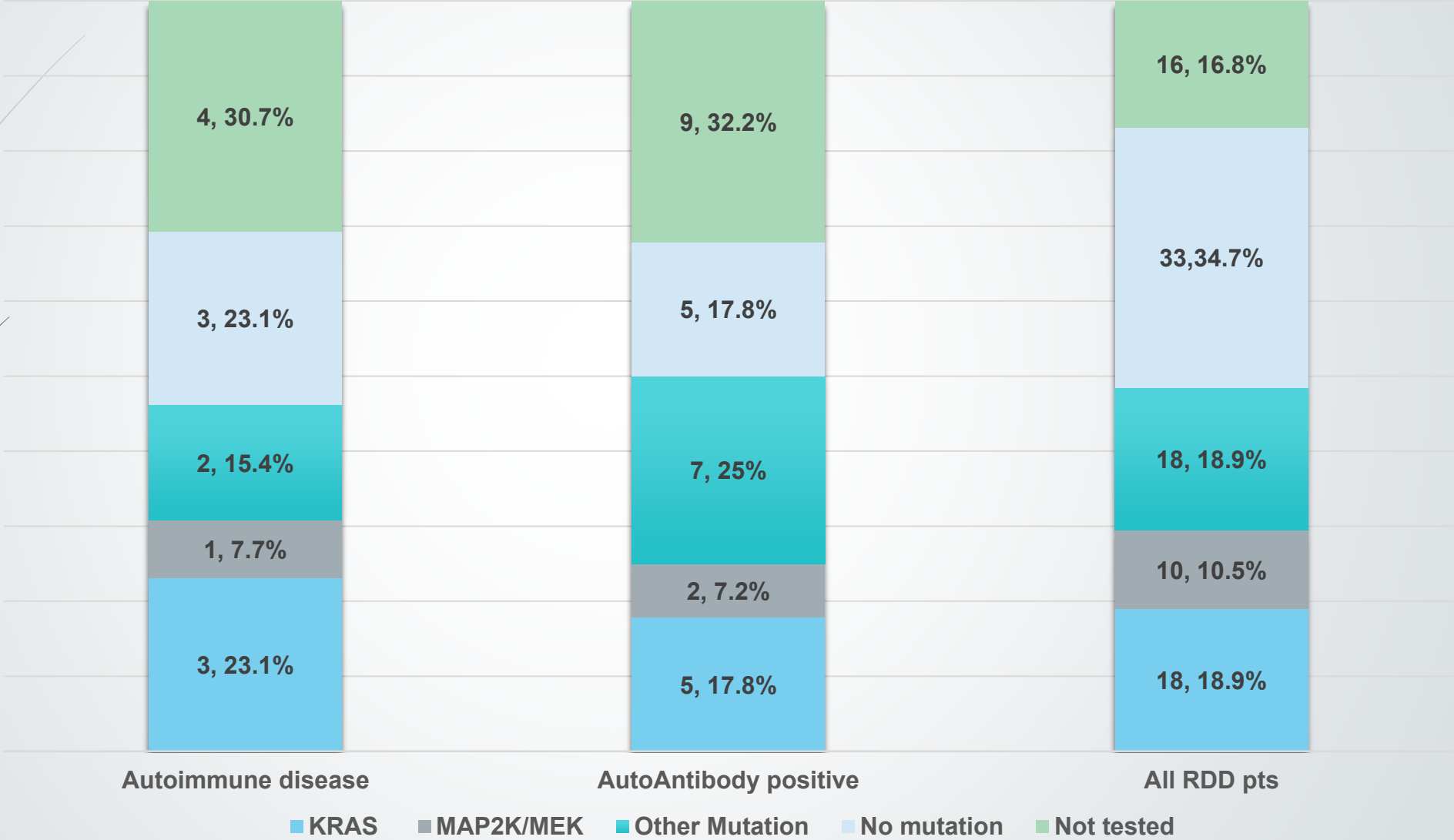
ANA Positive (23/58, 39.6%)



# ESR at RDD Diagnosis

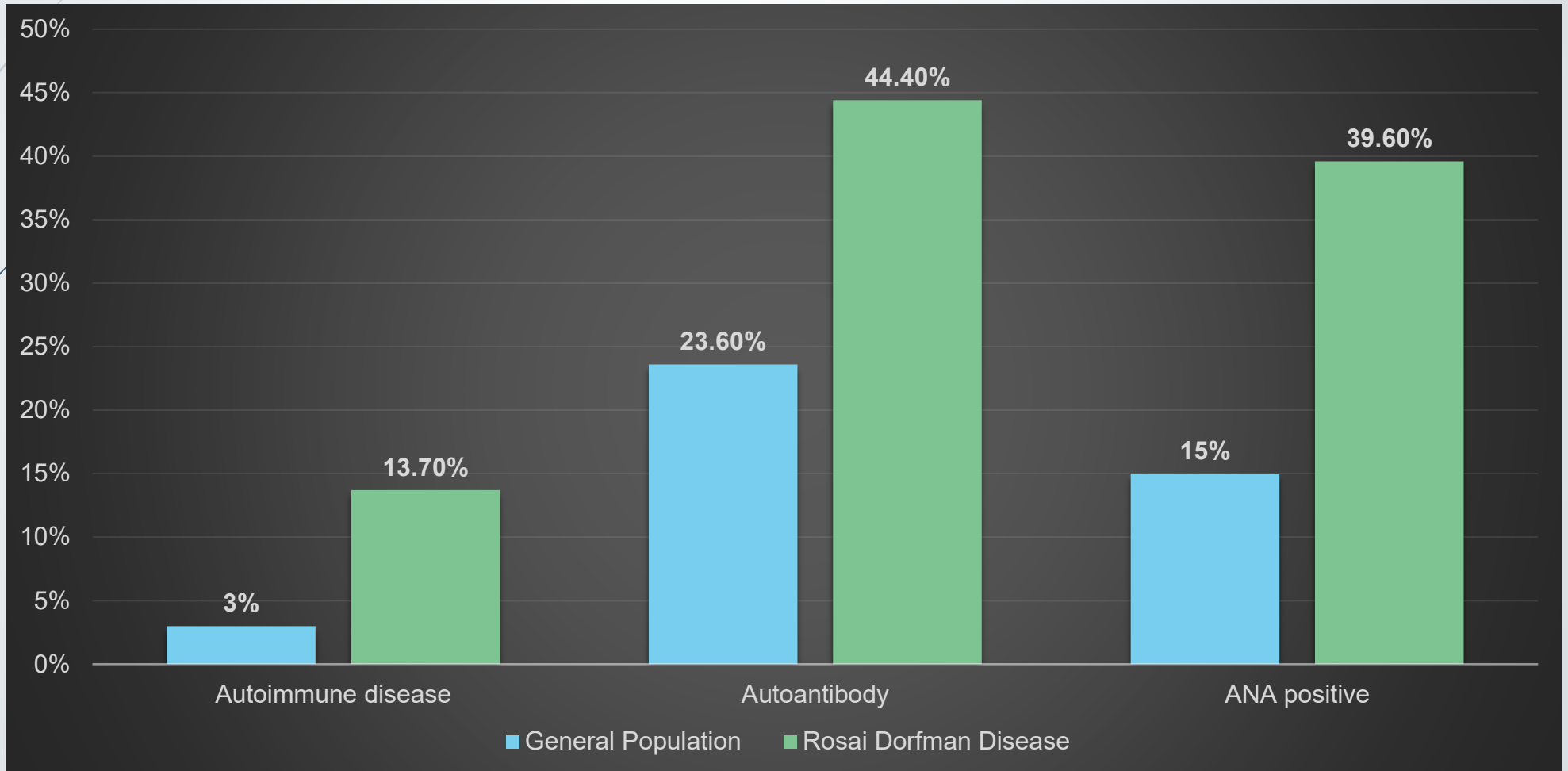


# Mutational Status of RDD patient with Autoimmunity

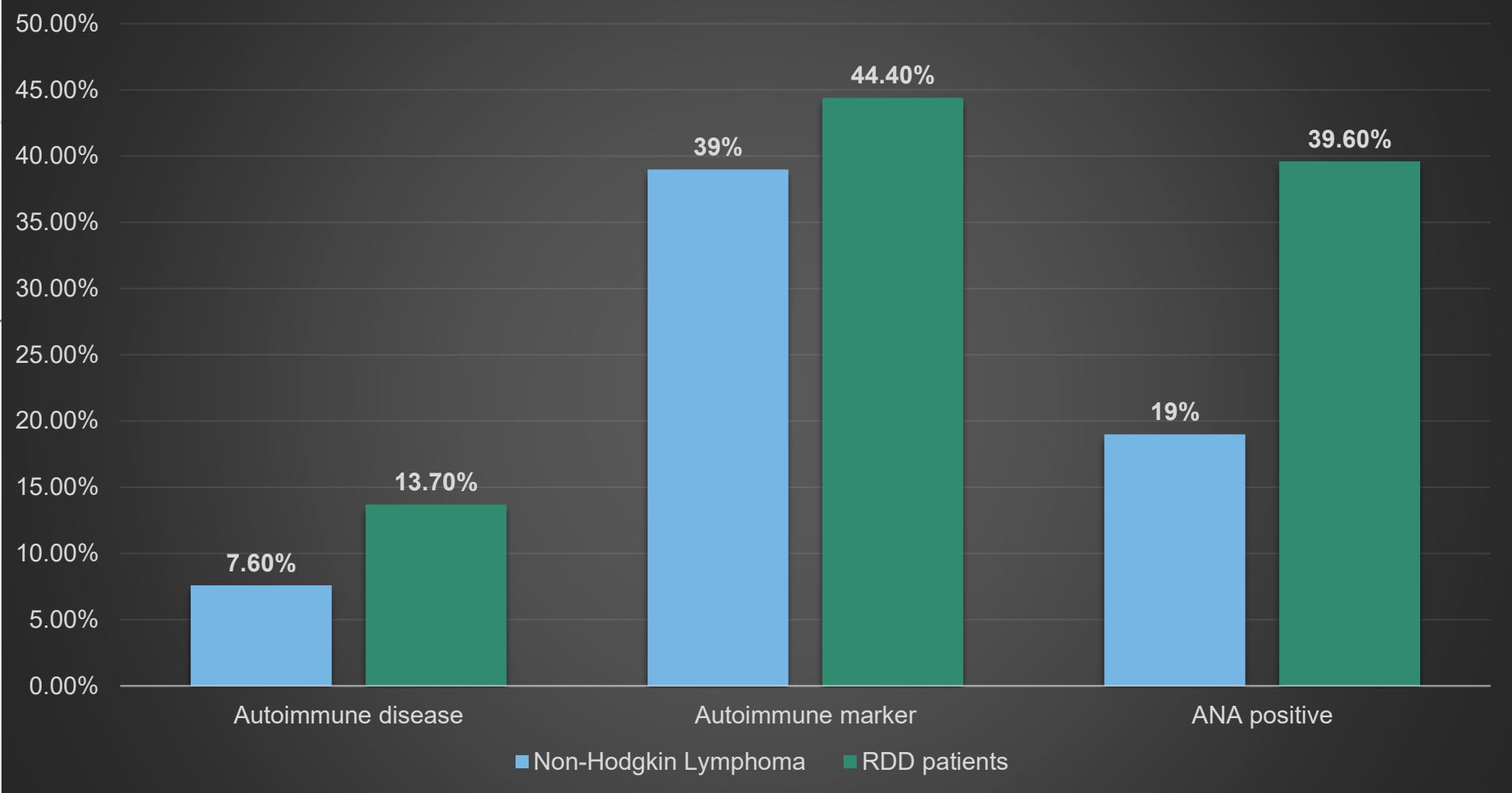


*We compared patients with autoimmune disease and their driver mutations but did not find any statistically significant association.*

# Autoimmunity is more prevalent in RDD vs general population



# Autoimmunity in RDD vs Non-Hodgkin Lymphoma



# Take home suggestions



Higher prevalence of autoimmunity in patients with RDD compared with general population.

Higher prevalence of autoimmunity among men and those with multisystem RDD

Autoimmune disease does not always correlate with serologies

Critical to evaluate patients with RDD for concomitant autoimmunity

Further expansion of the cohort is underway to include other Histiocytic neoplasms



# Acknowledgements

*Appreciate the patients and staff involved in the care of Histiocytosis patients from our three referral centers*

- *Mayo Clinic, Rochester, MN, USA*
- *Peking union Medical College Hospital, Beijing, China*
- *University of Alabama at Birmingham, AL, USA*



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*Thank you !*