



Impact Of Autoimmune Connective Tissue Diseases On Breast Reduction Complication Rates



Keisha E. Montalmant MD, MPH¹; Ivory Fu, BA¹; Olachi Oleru MD¹; Nargiz Seyidova, MD, MHQS¹; Peter Shamamian, BS¹; Daniel Kwon, BS¹; Esther Kim, BS¹; Abena Gyasi, BA¹; Peter Henderson MD, MBA, FACS¹

1. Division of Plastic and Reconstructive Surgery
Icahn School of Medicine at Mount Sinai (New York, NY)

1. BACKGROUND

- Autoimmune diseases can destroy native tissues due to immune system dysregulation and loss of physiological tolerance to “self-antigen”, which increases the risk for postoperative complications
- Autoimmune diseases can either be a connective tissue disease or a non-connective tissue disease
- While breast reduction remains one of the most popular plastic surgery procedures in the United States, with over 70,000 procedures reported in 2022 (54% increase in patient demand from 2019), limited data exists regarding postoperative outcomes among patients with connective tissue versus non-connective tissue autoimmune diseases

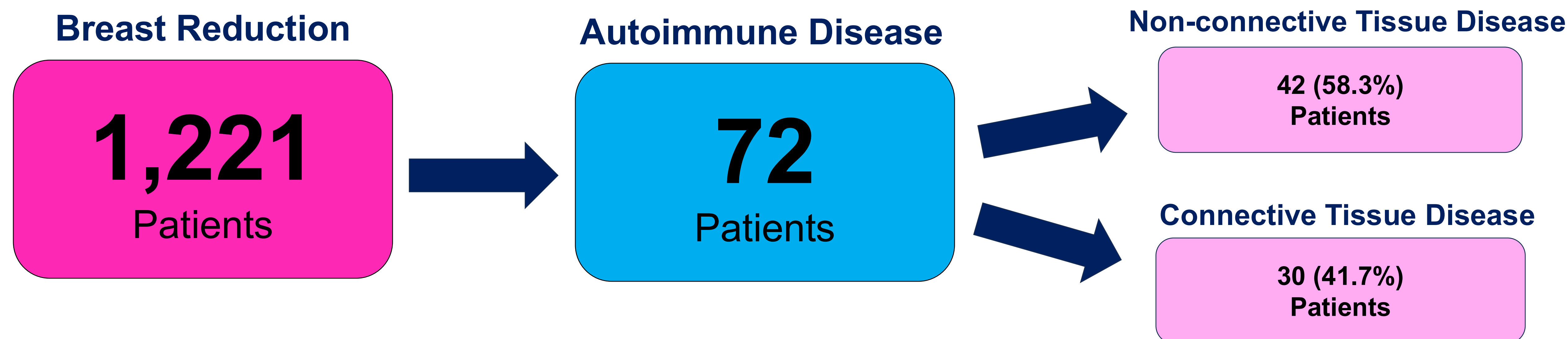
2. OBJECTIVE

- Quantify the risk of postoperative complications following breast reduction procedures in patients with autoimmune connective tissue vs non-connective tissue diseases

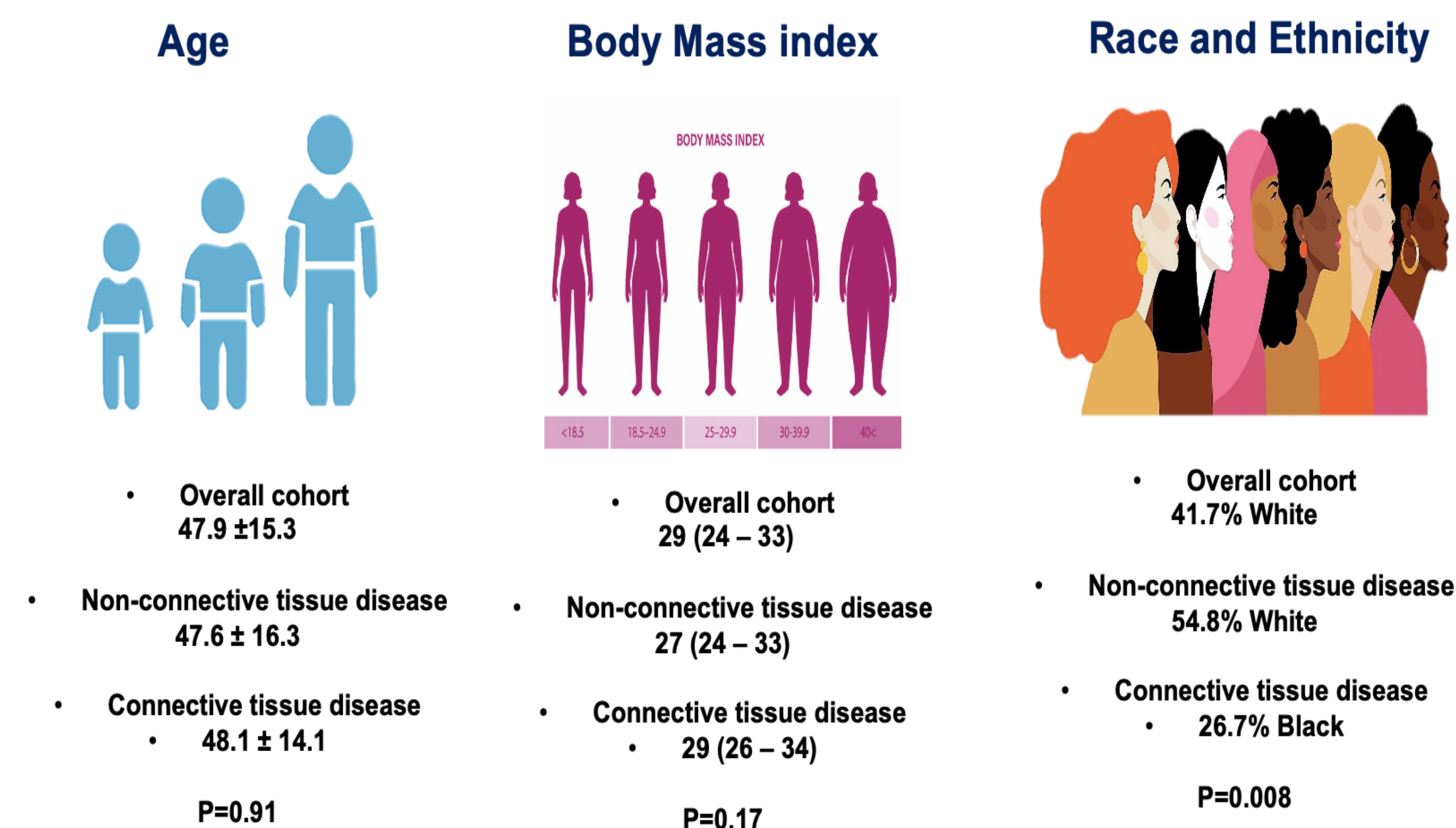
3. METHODS

- An institutional retrospective review of patients who underwent breast reduction surgery between 2017 and 2023 was conducted
- Data collection:** Autoimmune diseases were categorized as connective tissue disease (CTD) (systemic lupus erythematosus, rheumatoid arthritis, Sjogren’s disease, and polymyalgia rheumatica) and non-connective tissue disease (non-CTD) (multiple sclerosis, Grave’s disease, Hashimoto’s thyroiditis, Crohn’s disease, and celiac disease). Demographics, comorbidities, operative techniques, and complications were collected
- Primary outcome:** Postoperative outcomes
- Statistical analysis:** Chi-square test, Fisher’s exact test, and logistic Regression analysis were utilized to compare the two cohorts, and the p-value was set to 0.05

4. RESULTS

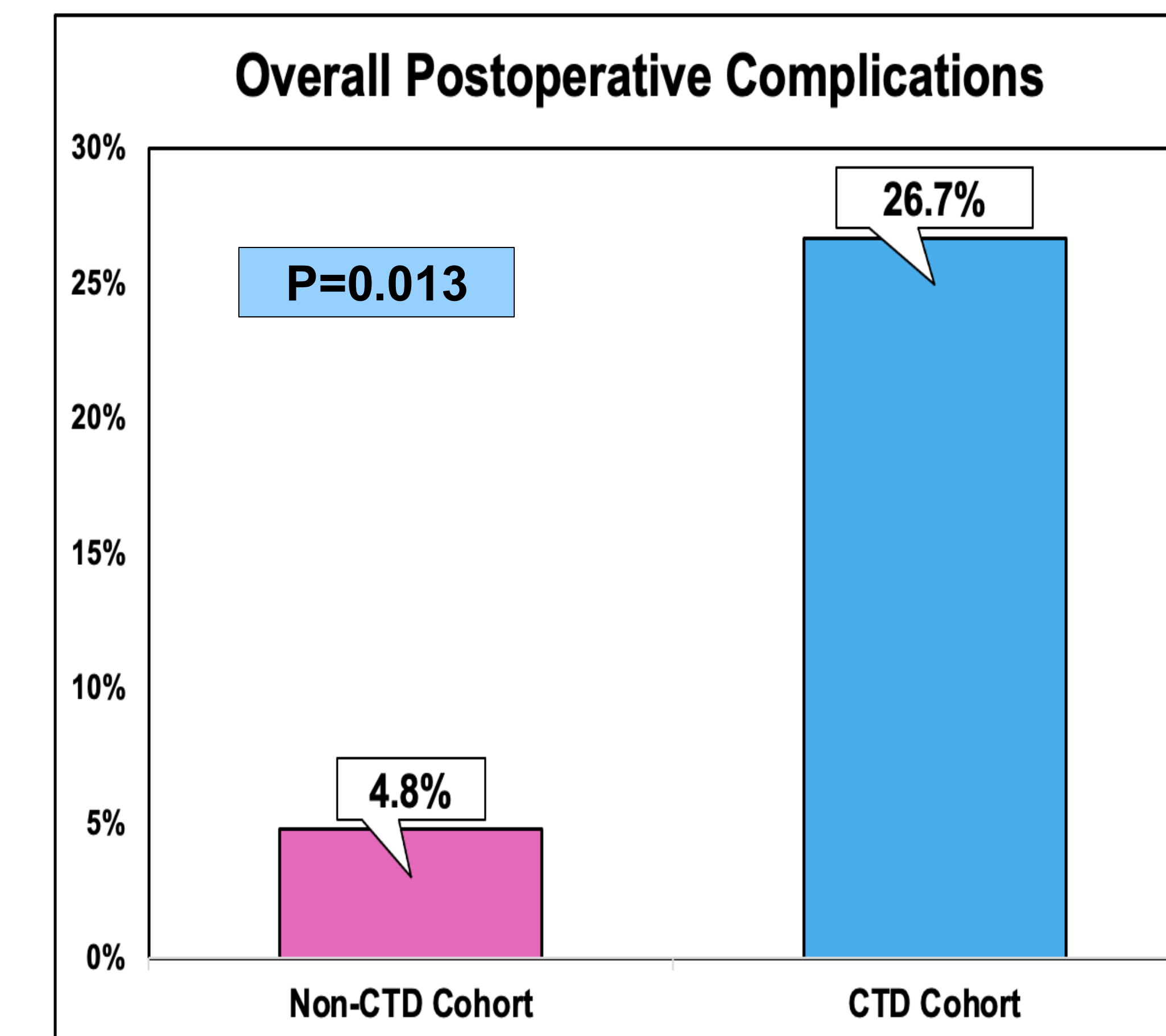


Patient Demographics



Unadjusted	Overall Postoperative Complication	
	OR (95% CI)	P-Value
Autoimmune Connective Tissue Disease	8.3 (1.47 – 46.59)	0.016

Univariate analysis demonstrated autoimmune connective disease as a statistically significant predictor of overall postoperative complication, highlighting an eight-fold increase in risk



Adjusted	Overall Postoperative Complication	
	OR (95% CI)	P-Value
Autoimmune Connective Tissue Disease	10.41 (1.59 – 67.77)	0.014

Multivariate analysis adjusted for body mass index and current immunosuppressant therapy demonstrated autoimmune connective disease as a statistically significant predictor of overall postoperative complication, highlighting a ten-fold increase in the risk

5. CONCLUSION

- Autoimmune connective tissue disease patients had a higher odd of postoperative complications compared to non-connective tissue disease patients

6. CLINICAL RELEVANCE

- These findings suggest that CTD patients may have a greater risk of postoperative complications than non-CTD autoimmune disease patients
- Careful patient selection, preoperative risk stratification, and tailored postoperative care are required among this growing population of patients