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## Outcomes of Dupilumab treatment in patients presenting with severe asthma or chronic rhinosinusitis with nasal polyps, over the age of 65

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Outcomes of Dupilumab treatment in patients presenting with severe asthma or chronic rhinosinusitis with nasal polyps, over the age of 65

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### Introduction:

Dupilumab is an IL-4/13 inhibitor that has been successfully implemented in the treatment of severe asthma and chronic rhinosinusitis with nasal polyps (CRSwNP). The safety and efficacy of Dupilumab has not been reported for these indications in patients over the age of 65. This study aims to determine the long-term benefits of dupilumab while detailing adverse effects.

### Methods:

This study is a single institution retrospective review of patients receiving dupilumab for severe asthma and/or CRSwNP from 2018 to present. Charts were reviewed for patient demographics, Sino-nasal Outcome Test (SNOT-22) scores, asthma control test (ACT) scores, polyp scores, and adverse effects. We reported the findings of patients over the age of 65 whose first biologic was dupilumab.

### Results:

Thirty-one patients over the age of 65 were identified (mean = 72.2), 18 (58.1%) of whom are female. Twelve (38.7%) presented with severe asthma, 7 (22.6%) with CRSwNP and 12 (38.7%) with both severe asthma and CRSwNP.

Compared to baseline, there was a significant difference observed within patients in mean ACT (17.8 to 20.3; n=13,  $p=0.002$ ), SNOT-22 (40.5 to 23.4; n=10,  $p=0.015$ ), and polyp scores (3.06 to 1.13; n=8,  $p=0.010$ ) post-treatment initiation.

Seven patients (22.6%) reported adverse reactions that may or may not be related to dupilumab. Adverse reactions included ophthalmologic (1), musculoskeletal (1), dermatologic (2) and other (2) which included lower extremity edema, tinnitus, hair loss, and TMJ pain. Zero patients reported allergic reactions. Four of the 7 patients who experienced adverse reactions chose to continue dupilumab therapy, while 3 discontinued.

### Conclusions:

Patients over 65 on dupilumab showed improvement in asthma and CRSwNP symptoms. There were significant improvements in ACT, SNOT-22, and nasal polyp scores within 9 months of therapy initiation. The majority did not experience any adverse effects, demonstrating the value of dupilumab treatment in this patient cohort.