

Long-term Stability of SGRQ Total Score in Individuals with AATD-associated Lung Disease

Participating in AlphaNet's Disease Management Program

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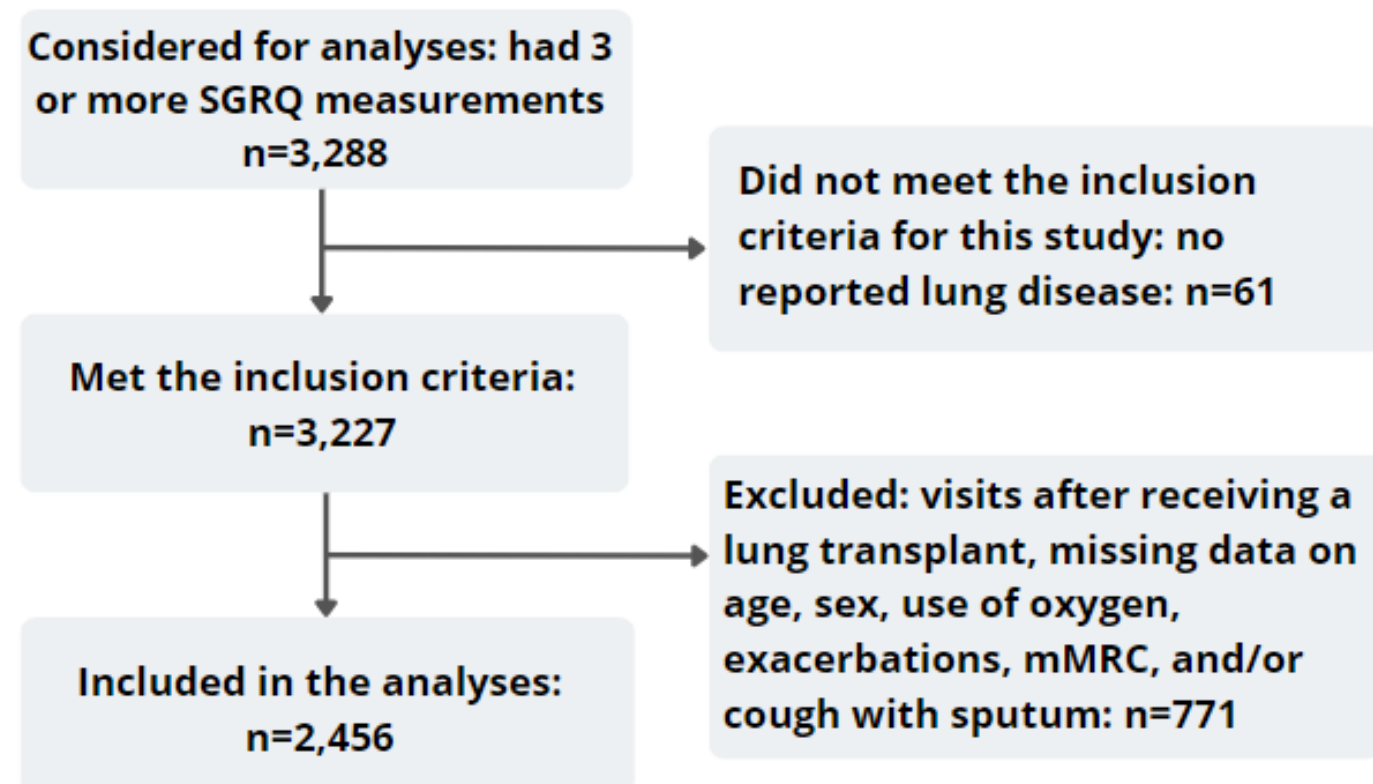
Introduction

- St. George's Respiratory Questionnaire (SGRQ) is often used as an outcome measure to evaluate patient-perceived changes in health status. Research suggests that engagement in interventions such as pulmonary rehab or a new therapy is associated with stabilization or improvement in SGRQ scores over time.
- The objectives of this study were to describe the longitudinal changes in HRQoL in people with AATD-associated lung disease participating in a disease management program and to evaluate factors associated with SGRQ trajectories.

Methods

- This study included data collected via structured telephone interviews between 2008 and 2019 from 2,456 participants of AlphaNet, a not-for-profit health management organization for individuals with AATD in the United States who are prescribed augmentation therapy.
- Mixed effects models with random intercepts and slopes were used to assess longitudinal changes in SGRQ total and subscale scores in the overall cohort and by baseline variables of interest: age, sex, dyspnea severity, productive cough, oxygen use, and exacerbation frequency.

Study Flow Diagram

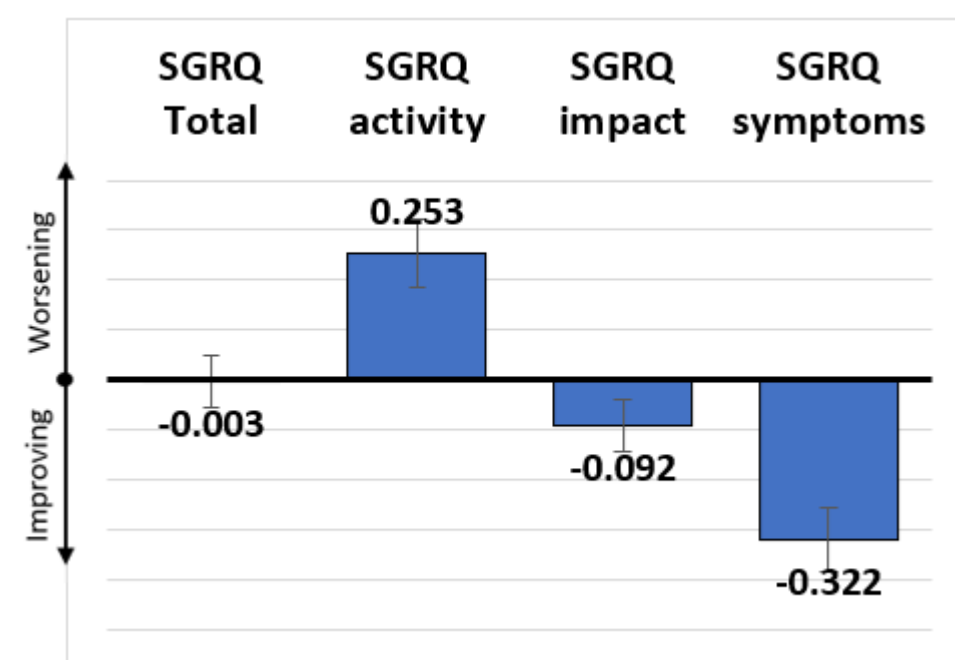


Results

Baseline characteristics of the study population, n=2,456

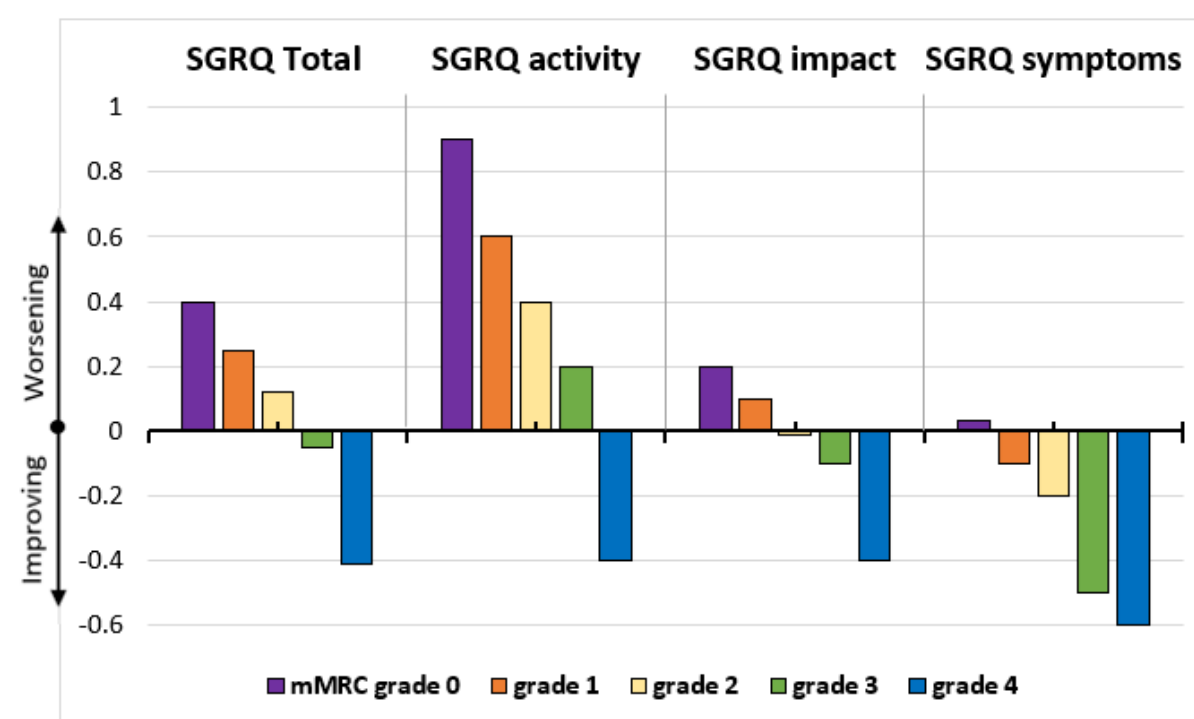
	Median (IQR)
Age, years	57 (50-64)
mMRC	2 (1-4)
SGRQ total score	46 (31-60)
SGRQ symptoms	46 (30-64)
SGRQ activities	66 (48-86)
SGRQ impact	32 (18-46)
Number of SGRQ measurements	5 (3-8)
Number of years of follow-up	6 (3-9)

Annual change in the mean SGRQ total score and subscales



- SGRQ total and impact scores – no significant change over time (p=0.96 and p=0.07)
- SGRQ activity and symptoms scores- significant change over time (p<0.001 and p<0.0001)
- Mean SGRQ total score change is well below the MCID of 4 points

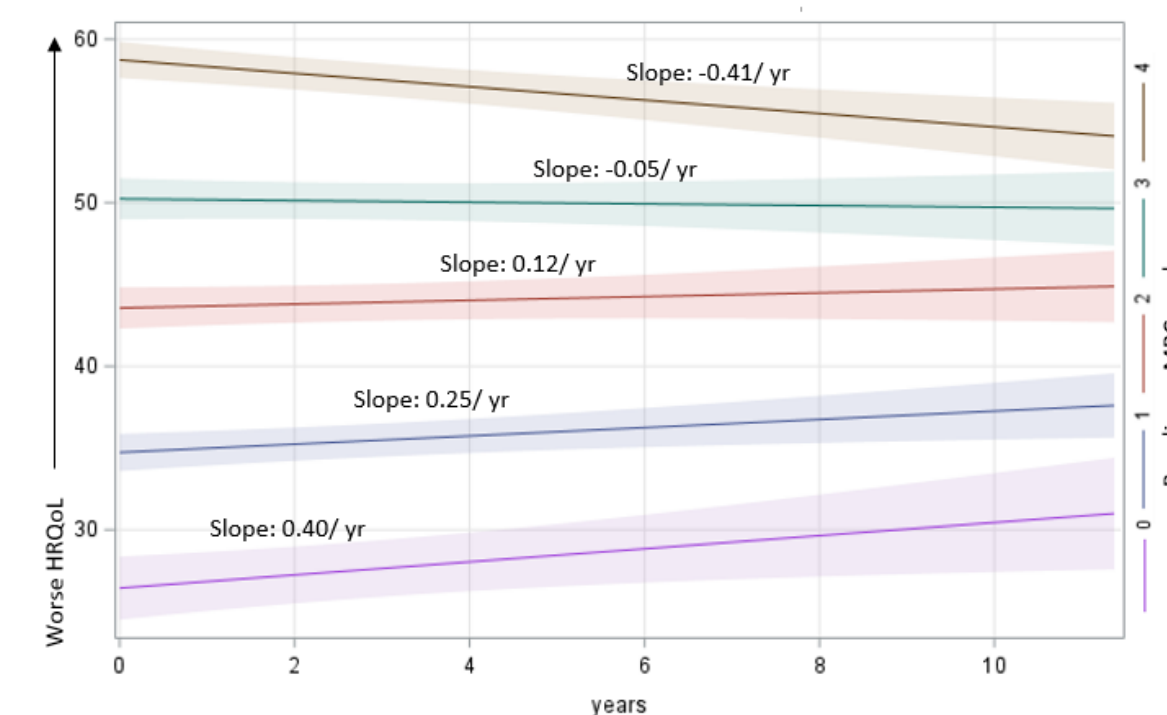
Annual change in the mean SGRQ total and subscale scores by mMRC grade



- SGRQ activity domain scores showed the highest annual worsening.
- SGRQ symptoms domain demonstrated the greatest improvement over time.

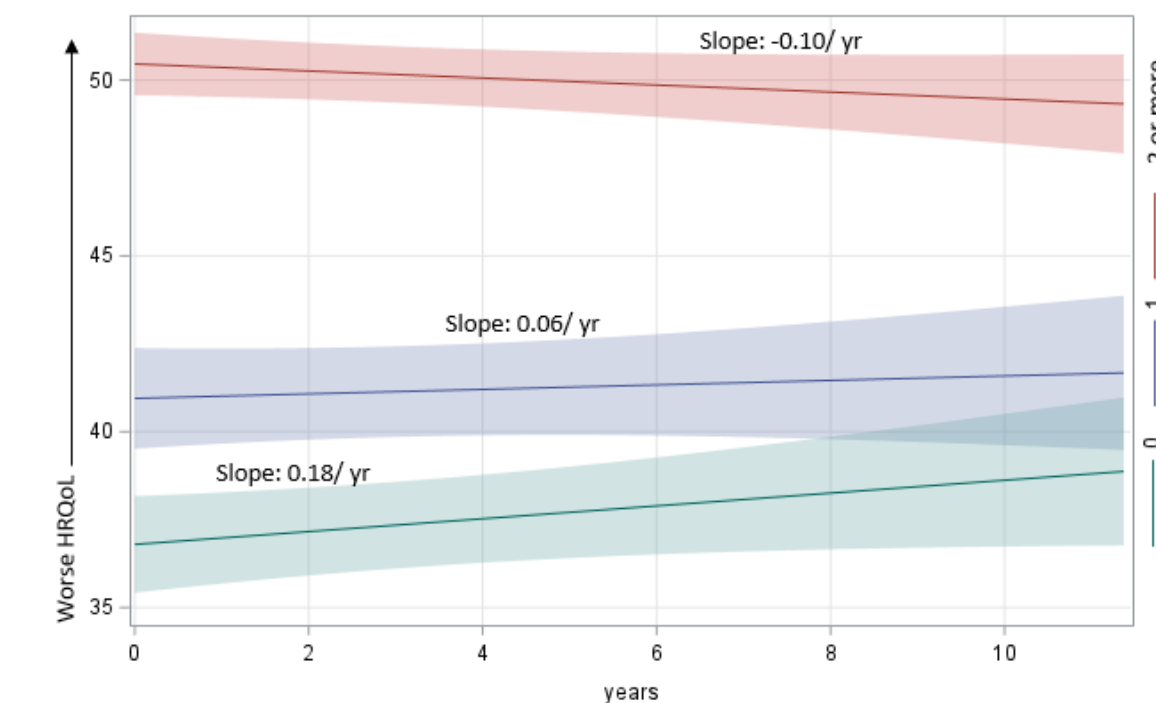
Results (continued)

SGRQ total score longitudinal trajectories by baseline mMRC grade



- SGRQ total score intercepts and slopes are significantly different by baseline mMRC grade (p<.0001)

SGRQ total score longitudinal trajectories by baseline exacerbation frequency



- SGRQ total score intercepts are significantly different by baseline exacerbation frequency (p<.0001)
- No difference in the slopes of SGRQ total score by exacerbation frequency

Conclusions

- Long-term stability in HRQoL measured by SGRQ was observed in this cohort of individuals with AATD-associated lung disease.
- These findings highlight the positive effect of participating in a disease management program on HRQoL in this population.

