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Project Title

Genetic Determinants and Prediction of Spirometry

Project Summary

Obstructive lung diseases, such as asthma and chronic obstructive pulmonary disease (COPD), are common in the general population and can lead to decreased health status, exercise capacity, morbidity and mortality. These diseases can be difficult to differentiate clinically, since their clinical presentations are similar, and are diagnosed with spirometry. However, spirometry is difficult to deploy in most clinical settings, requiring specialized clinical testing. Because of these challenges many people with asthma and COPD remain undiagnosed in the general population, and a considerable proportion of both diseased populations are mis-diagnosed because of lack of access to spirometry. We propose to improve diagnostic strategies for identifying people with COPD and asthma by predicting their risk of abnormal spirometry results using genetic risk factors. To do so, we will develop a genetic risk score for abnormal spirometry results, to detect people at risk.

Keywords

GWAS, Spirometry