HICG/1/30 - Application Of Support Vector Machine Learning To Predict The Risk Of Death From Chronic Obstructive Pulmonary Disease Using Electronic Primary Care Medical Records

Chronic obstructive pulmonary disease (COPD) is a common cause of death and represents an enormous NHS health burden. Most people with COPD are cared for in primary care. Being able to predict death from COPD would allow people to be better informed about their disease course, and decisions could be made around how often people should be followed up and when interventions should be offered. However, there is currently no formal way to judge when a person in primary care will die from COPD. The aim of this study is to: (1) see if death from COPD can be predicted using routinely collected data contained in electronic primary care medical records; and (2) examine whether new approaches such as machine learning perform better than a standard statistical approach. The findings of this study will increase our understanding of what influences death from COPD in primary care.