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Statistical Analysis of DASI Questionnaire and Modeling the Prediction of Heart Failure Risk in Patients

College of Sciences and Health Professions

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Abstract

9,880 patients were asked to complete the DASI questionnaire along with other questions to assess the predictability of heart failure risk. In this paper we attempt to reduce the amount of questions asked by hierarchical clustering of the question responses to determine if there is a change in the predictability of heart failure risk in patients. The data was modeled using Cox hazards multiple regression and validated through ROC and AUC. Our validation models show there is no difference between the usage of 12 and 6 DASI questions, therefore improving the simplicity of the questionnaire. *Abbreviations: DASI, Duke Activity Status Index.*