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Performance of the early clinical judgement for the diagnosis of syncope on the emergency department

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Background: Clinical judgement of the emergency department (ED) physician at time of discharge outperforms prognostic risk scores but the early clinical judgment (ECJ) regarding diagnosis has never been assessed.
Methods: We evaluated the diagnostic accuracy of the ED physicians' ECJ 90 minutes after admission of patients >40 years presenting with syncope to the ED in a prospective diagnostic multicenter study. Cardiac syncope, as adjudicated by two physicians based on information available including 1-year follow-up, was the diagnostic endpoint. Death and MACE were the prognostic endpoints. Lasso-regression was used to identify variables contributing most to the ECJ or to the diagnosis of cardiac syncope. Syncope-specific diagnostic and prognostic scores, high-sensitivity cardiac troponin I (hs-cTnI) and B-type natriuretic peptide (BNP) were used for comparison.
Results: Cardiac syncope was adjudicated in 252/1494 patients (15.2%). The diagnostic accuracy of the ECJ for cardiac syncope, as quantified by the Area Under the Curve (AUC), was 0.87 (95% CI 0.84–0.89) and was superior to the one of biomarkers and diagnostic score, constant between all centers, but poorly calibrated. 16 variables available very-early on the ED achieved a comparable performance (AUC 0.84 (95% CI 0.82–0.87), p=0.136).
The extrapolated prognostic accuracy of the ECJ was moderate for MACE (AUC 0.73–0.8) but poor for death (0.58–0.63) over two years follow-up.
Conclusion: The ECJ performs well for the diagnosis of cardiac syncope but a similar accuracy can be obtained using structured variables obtained very-early in the diagnostic process.

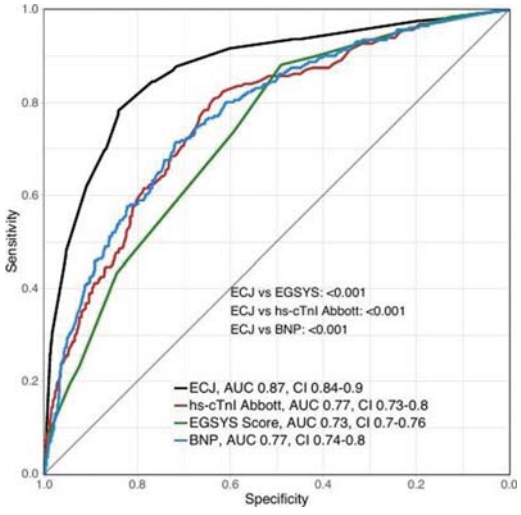

Figure 1