Abstract: **758**

Reclassification of the intermediate group classified according to heartscore taking in consideration individual genetic predisposition to coronary artery disease

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Topic(s):
Risk factors: others

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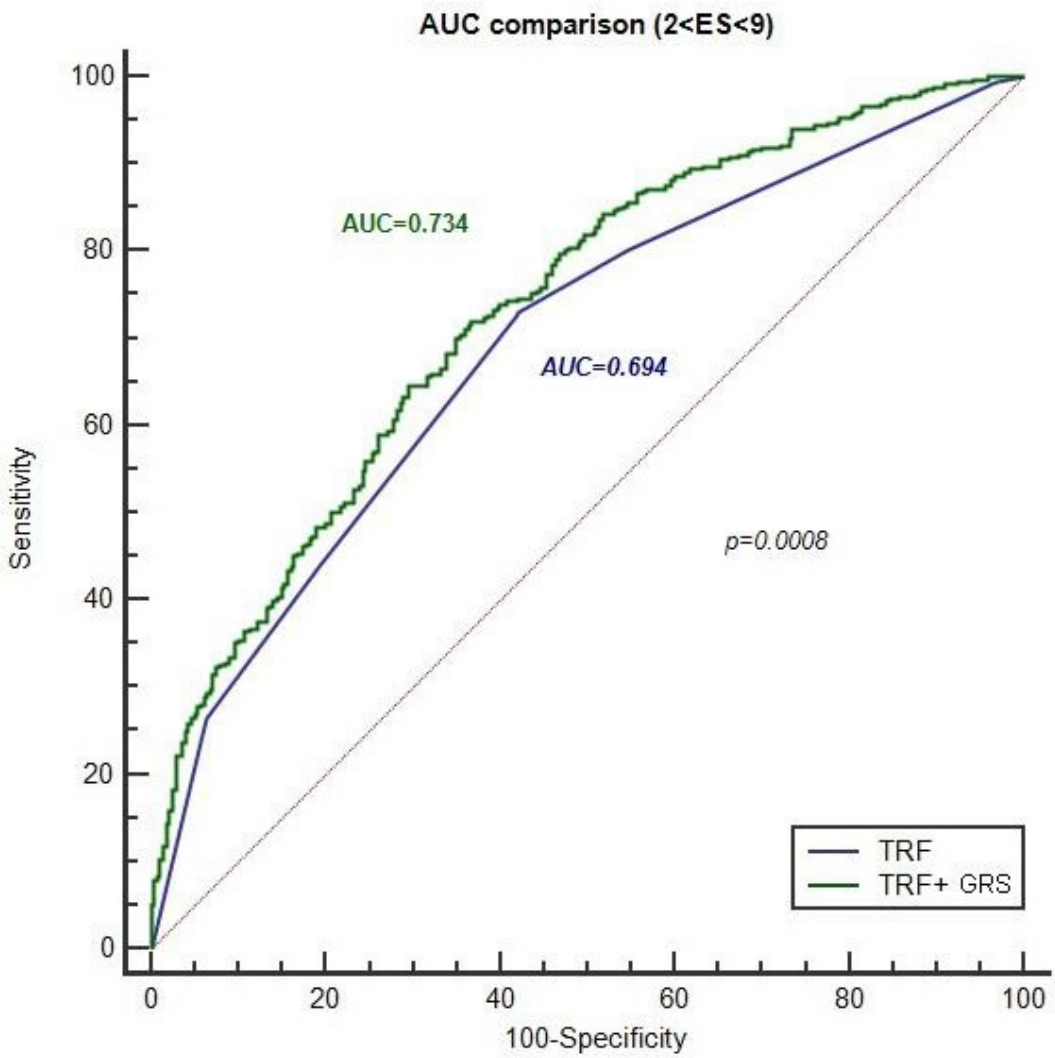
Introduction: Cardiovascular risk stratification has included traditional cardiovascular risk factors (TRF) including tobacco, cholesterol and blood pressure adjusted to age and sex. The utility of genetic risk scores (GRS) as predictors of cardiovascular risk remains inconclusive.
Objective: We intended to evaluate the ability of a multi-locus GRS within the intermediate risk subgroup, defined by the European Heart score, to add predictive power for the association with coronary artery arterial disease (CAD).
Methods: After applying European SCORE (ES) stratification to a total population of 2703 Portuguese individuals, 639 individuals with 59.0 ± 4.3 years were considered to be at intermediate risk subgroup (2<es<9).>
Results: GRS was an independent predictor for CAD (OR=2.411; p<0.0001). Diabetes mellitus (OR=3.196; p<0.0001), arterial hypertension (OR=2.201; p=0.003) and smoking (OR=3.148; p<0.0001) were also significantly associated with CAD. AUC increased from 0.694 to 0.734 after adding GRS to TRF. When discriminated by tertiles of GRS, the AUC for TRF was maximum for the 2nd tertile GRS [AUC (TRF)=0.734] and lower for the 1st and 3rd tertiles (AUC =0.673 and AUC =0.671, respectively). NRI showed better increase in the intermediate risk subgroup with a 35.2% interpreted as the proportion of patients reclassified to a more appropriate risk category, and 29.4% on the lower risk.
Conclusion: In our population, the GRS increased the predictive value of TRF in the subgroup of patients at intermediate risk by the European Score. The predictive value of TRF is lower in patients with higher GRS. In this subgroup, the inclusion of genotyping may be considered for better stratification of cardiovascular risk.
</es<9).>


AUC comparison (2<ES<9)
100
80
60
40
20
0
Sensitivity
AUC=0.734
AUC=0.694
p=0.0008
TRF
TRF+ GRS
0
20
40
60
80
100
100-Specificity