

IS ABDOMINAL AORTIC CALCIFICATION RELATED TO RENAL RESISTIVE INDEX?

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BACKGROUND

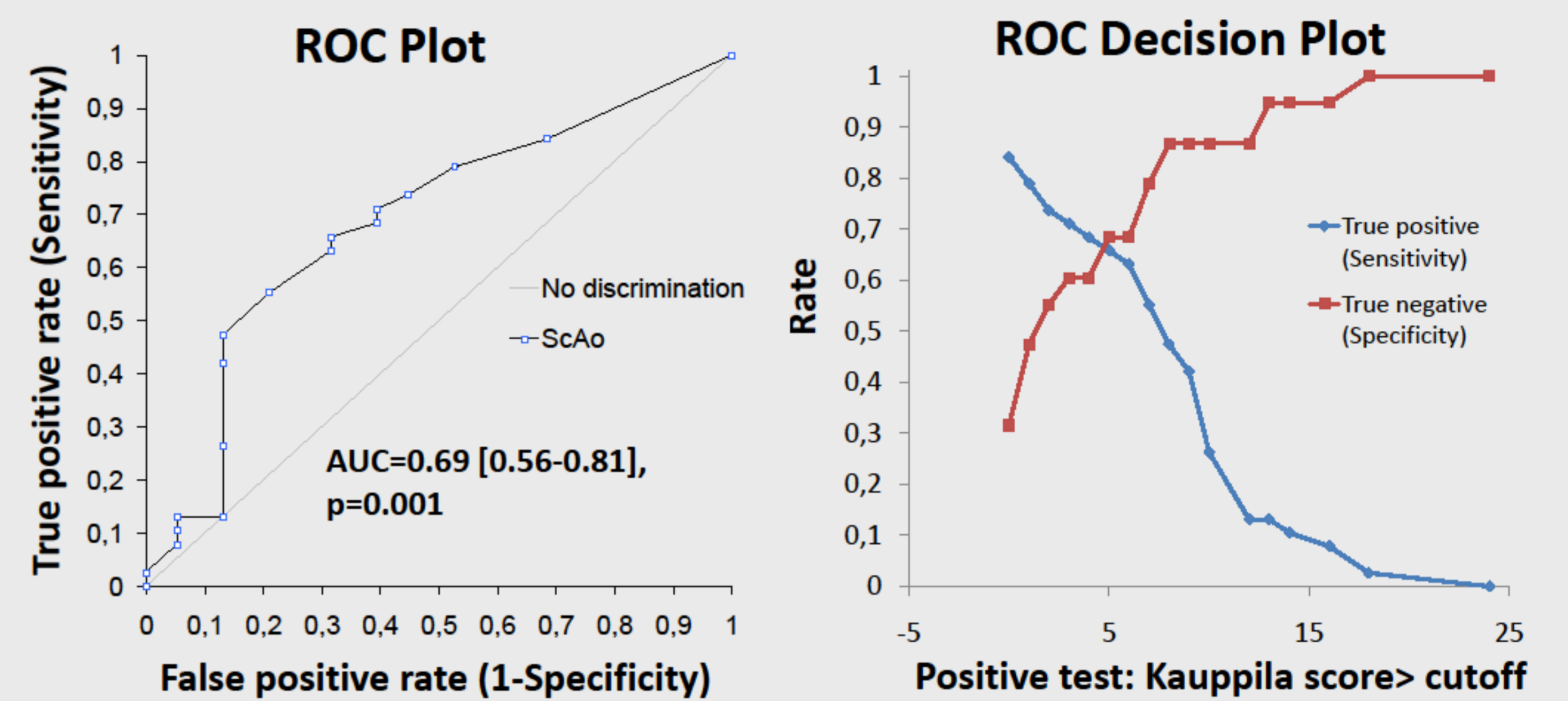
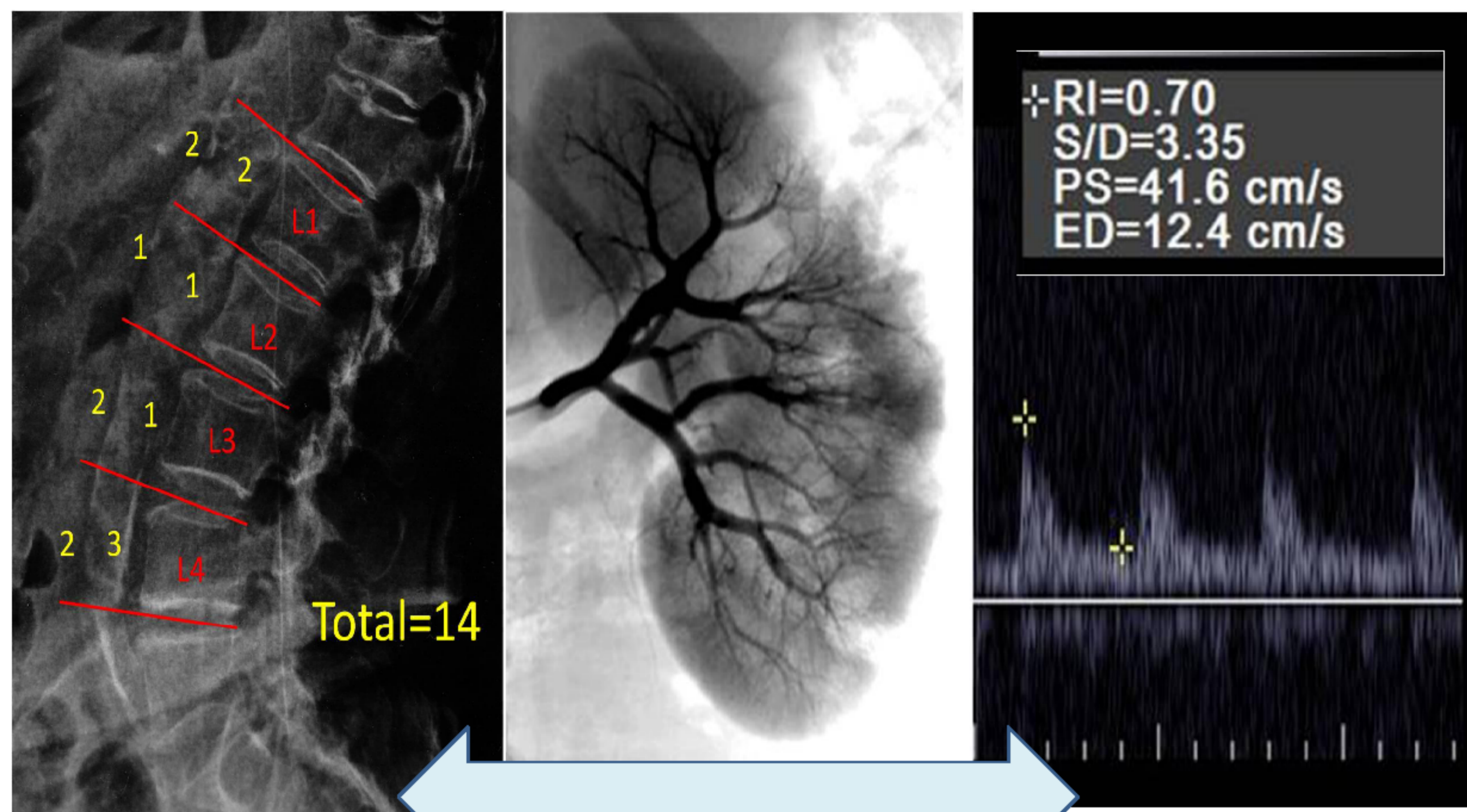
In chronic kidney disease (CKD) patients, abdominal aorta calcification (AAC) is frequent and was associated with an increased cardiovascular (CV) risk¹. Renal resistive index (RRI) predicts both the renal and the CV outcome^{2,3}.

OBJECTIVE

The purpose of this study was to evaluate the relationship between AAC and RRI in non-dialysis CKD patients.

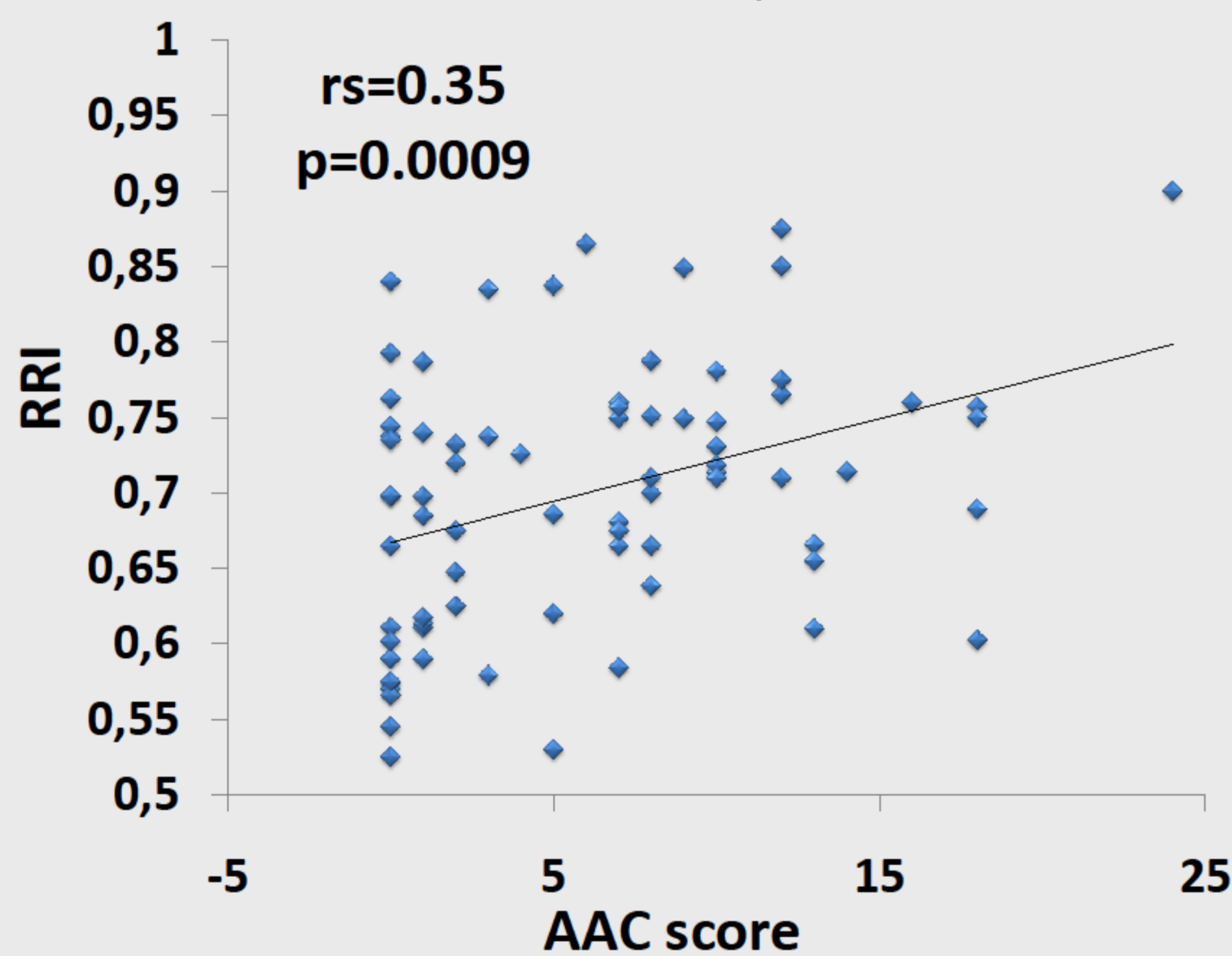
METHODS

Seventy-seven stable CKD patients - 49% male, median age 70 [65-73] years, median eGFR 33.5 [30.1-36.9] ml/min - with a positive history of systemic atherosclerosis were prospectively enrolled. RRI, carotid intima-media thickness (IMT), AAC score (Kauppila), cardio-ankle vascular index (CAVI) and ankle-brachial index (ABI) were assessed. Traditional and non-traditional atherosclerosis risk factors were also evaluated.



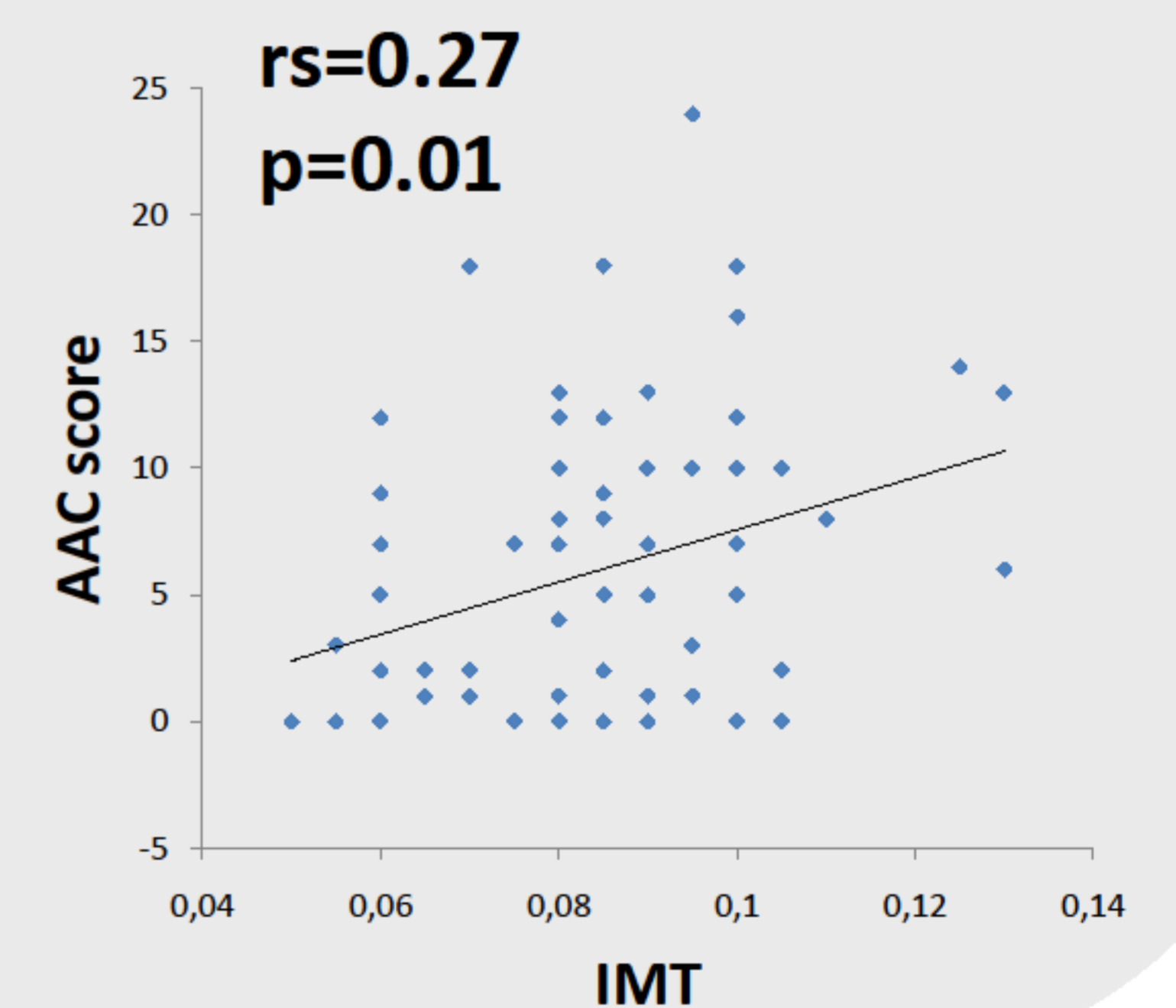
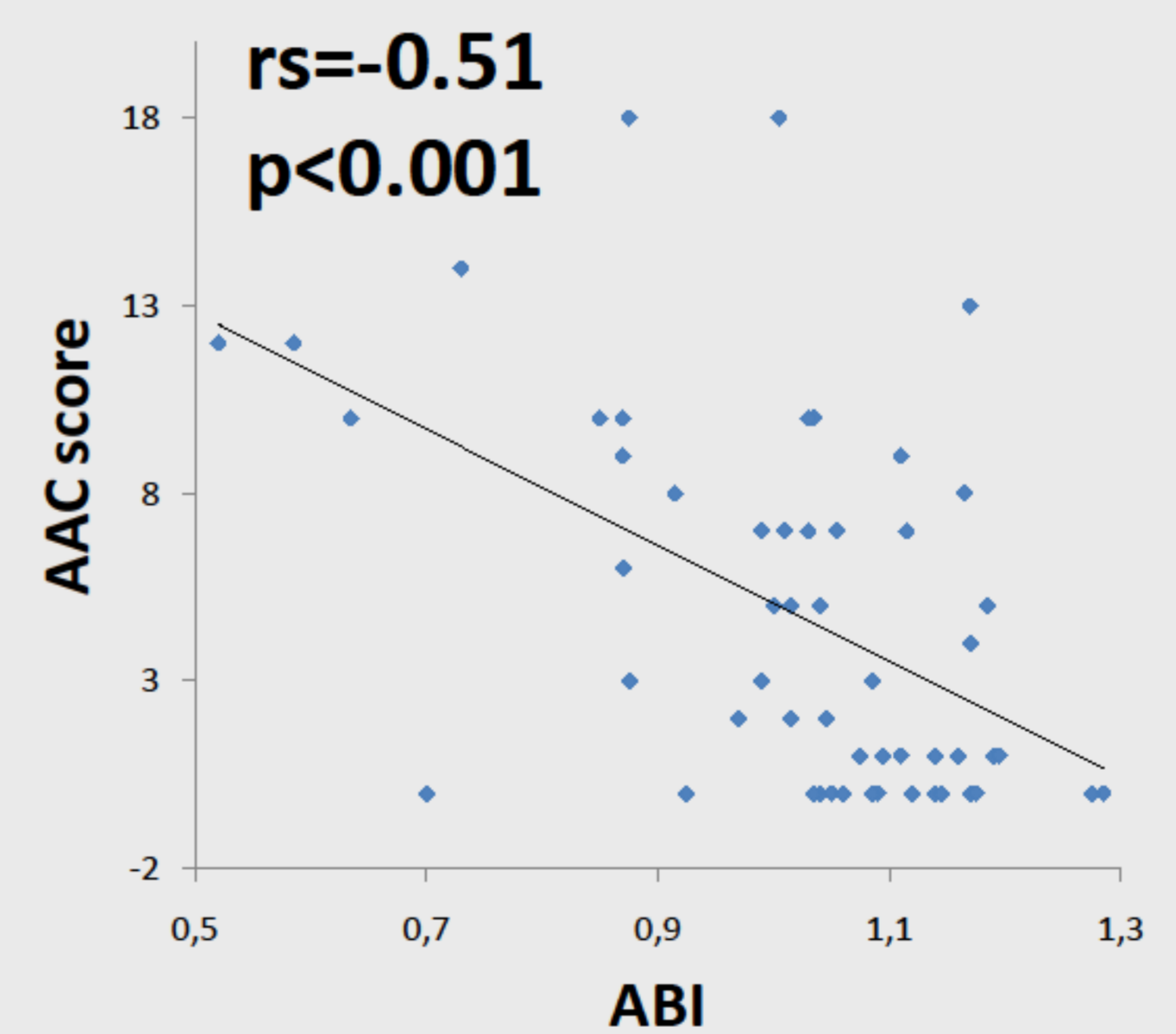
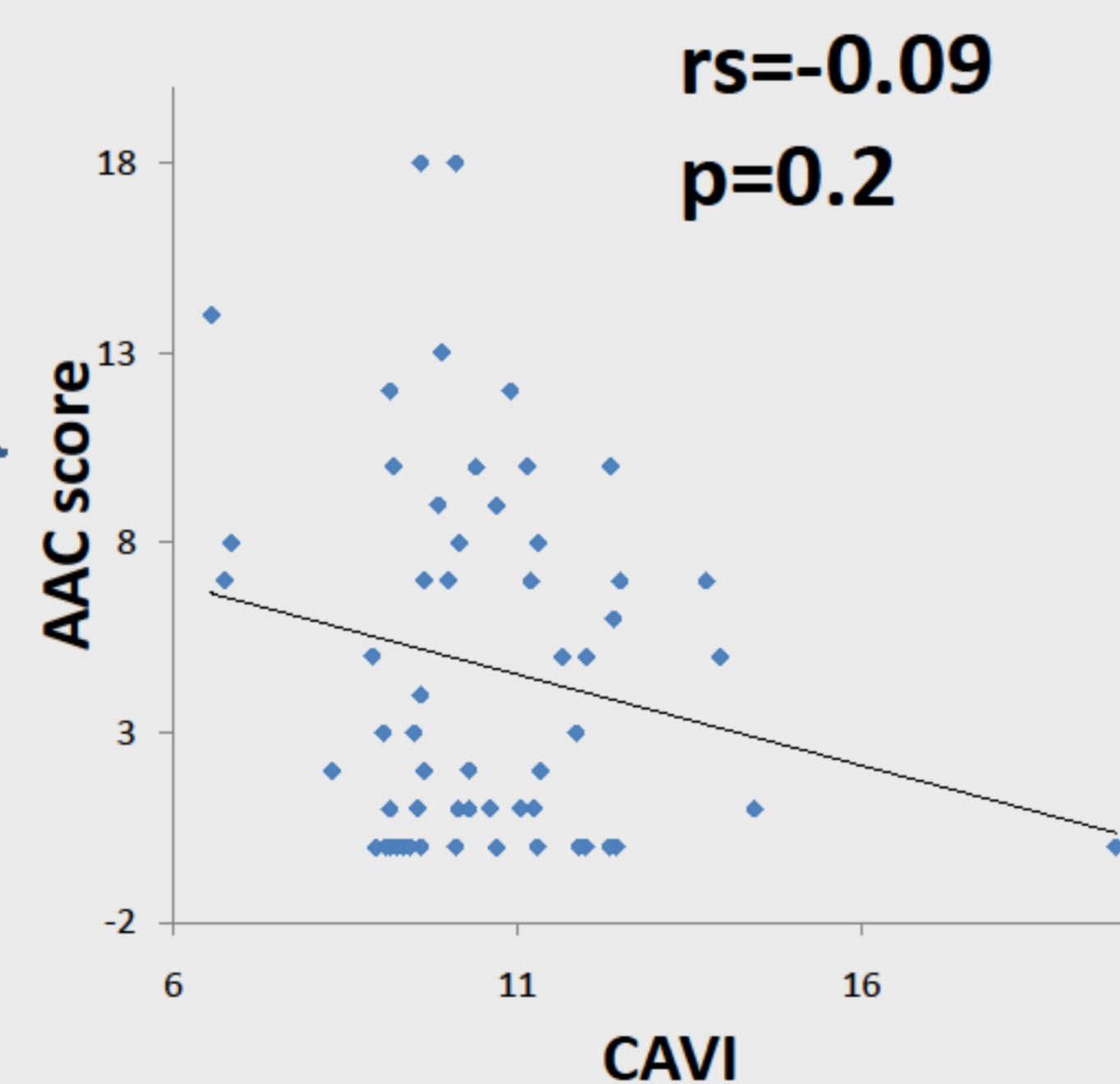
Kauppila score of 5 had the best combination of sensitivity (65%) and specificity (68%) for a pathologic RRI (>0.7)

RESULTS



	AAC >5	AAC ≤5	p
Age (years)	71.8 [68.8-74.8]	66.7 [64-69.5]	0.006
eGFR (MDRD)	30.2 [28-35.2]	33.7 [30.3-39]	0.1
Cholesterol (mg/dL)	193 [175-211]	167 [160-182]	0.006
CRP (mg/dL)	6 [4-12]	3 [2-7]	0.01
ABI	0.92 [0.84-1.0]	1.08 [1.04-1.21]	<0.001
IMT	0.08 [0.08-0.09]	0.07 [0.07-0.08]	0.006
CAVI	10.1 [9.3-10.9]	10.8 [10.07-11.53]	0.2
RRI	0.73 [0.70-0.75]	0.68 [0.64-0.69]	<0.001

AAC was negatively correlated with ABI and positively with IMT, underlining the relationship of AACs with the extension of atherosclerosis in other territories rather than with the arterial stiffness



CONCLUSIONS

AAC could be used as a fast, available and inexpensive tool for estimation of RRI and consequently of the intrarenal vascular status, but further research is warranted.

Assessment of AAC by Kauppila score can predict advanced atherosclerosis, since it was associated with carotid plaques (IMT) and vascular artery disease (ABI).

REFERENCES

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