

# IS THERE A DIFFERENCE IN PROGRESSION OF RENAL DISEASE BETWEEN SOUTH ASIAN AND WHITE EUROPEAN DIABETIC PATIENTS WITH MODERATELY REDUCED KIDNEY FUNCTION?



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## OBJECTIVES

- Current evidence suggests that South-Asians (SA, originating from the Indian Subcontinent) with diabetes (DM) have an increased risk of diabetic nephropathy, a more rapid progression of nephropathy, and a higher incidence of end-stage renal failure than White Europeans (WE).
- We compared the rate of change in eGFR between SA and WE adults with DM and stage 3 CKD over 5 yrs.

## SUBJECTS & METHODS

- All patients with DM who had attended a diabetes or renal outpatient clinic with eGFR  $\geq 30$  and  $< 60$  ml/min/1.73m<sup>2</sup> between 01/01 and 31/12 2005 were selected [N=1173; 891 (76%) were WE and 282 (24%) were SA].
- Demographic and biochemical parameters between 2005 and 2010 were extracted from the electronic database. Ethnicity was self-reported. The eGFR using 4 variable MDRD formula and the HbA1c (DCCT aligned) in 2005 and 2010 were compared.

## RESULTS

- There was no difference in baseline eGFR between SA and WE patients. Compared to WE, SA were younger and had worse baseline glucose control - HbA1c (Tab. 1; Fig. 1).
- Over 5-yr follow-up, 122 (13.7%) WE and 39 (13.8%) SA patients were lost to follow-up. The 5-yr follow-up eGFR did not differ between SA and WE patients and there was no difference in decline in eGFR over 5 yrs between the two groups (Tab. 1; Fig. 2). 35 (12.4%) patients in SA group and 82 (9.2%) in WE group progressed to stage 4 or 5 CKD (P=0.112). There was a trend towards higher 5-yr follow-up HbA1c levels in SA than in WE patients (Tab. 1; Fig. 1).

**Table 1: Clinical and biochemical characteristics (N=1173)**

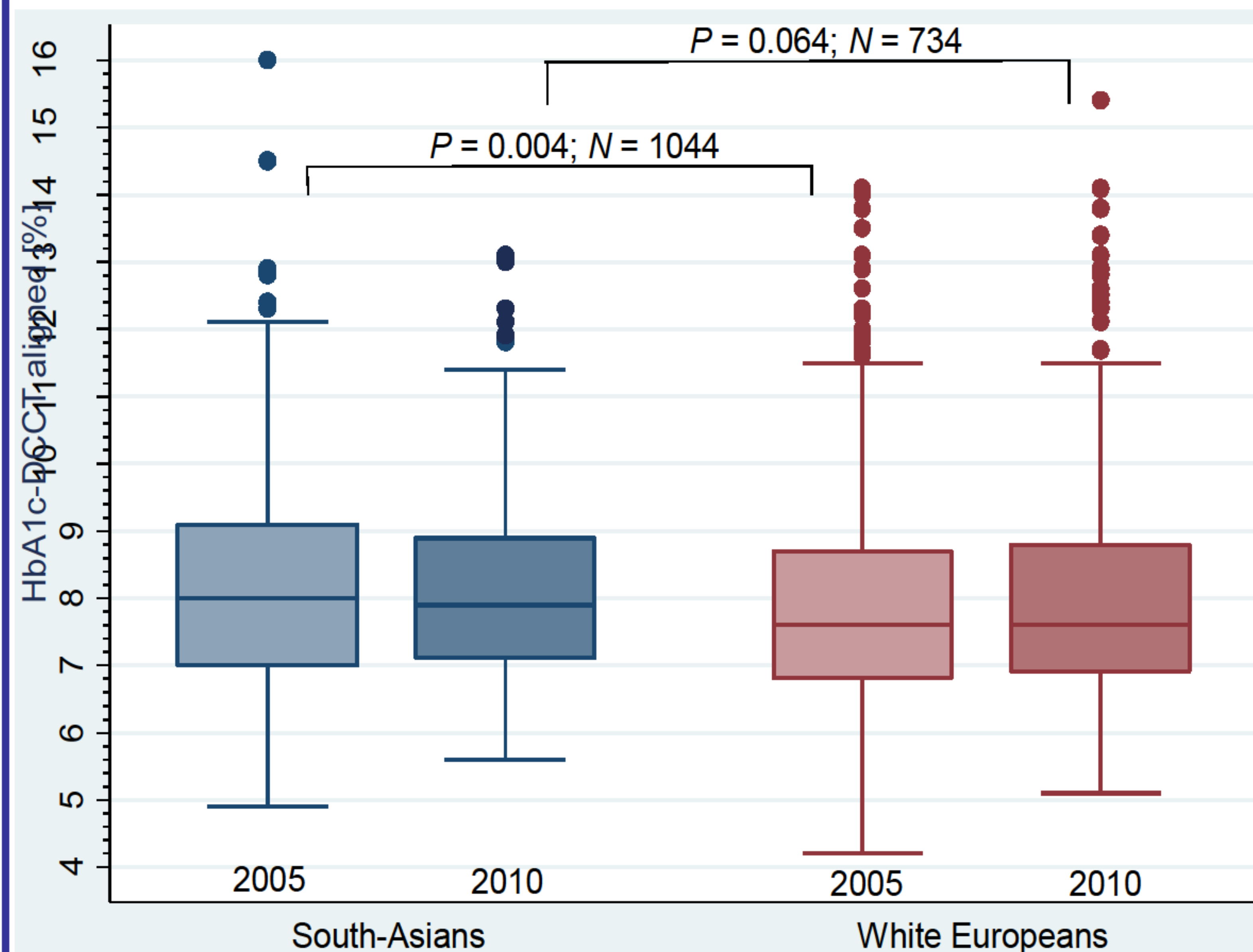
	SA (N=282)	WE (N=891)	N	P
Age, yrs	68 (63-73)	70 (64-77)	1173	<0.001
Baseline eGFR, ml/min/1.73m <sup>2</sup>	49.7 (42.8-55.8)	51.7 (43.7-56.5)	1173	0.103
Baseline HbA1c, %	8.0 (7.0-9.1)	7.6 (6.8-8.7)	1044	0.004
Baseline total cholesterol, mmol/l	4 (3.5-4.7)	4.1 (3.6-4.8)	1133	0.242
5-yr follow-up eGFR, ml/min/1.73m <sup>2</sup>	46.8 (34.3-56.1)	45.9 (36.2-58.0)	1012	0.589
Decline in eGFR over 5 yrs, ml/min/1.73m <sup>2</sup>	-2.9 (-10.2, 5.9)	-3.2(-10.8, 5.9)	1012	0.659
<b>5-yr follow-up HbA1c, %</b>	<b>7.9 (7.1-8.9)</b>	<b>7.6 (6.9-8.8)</b>	<b>734</b>	<b>0.064</b>

Data expressed as median (interquartile range)

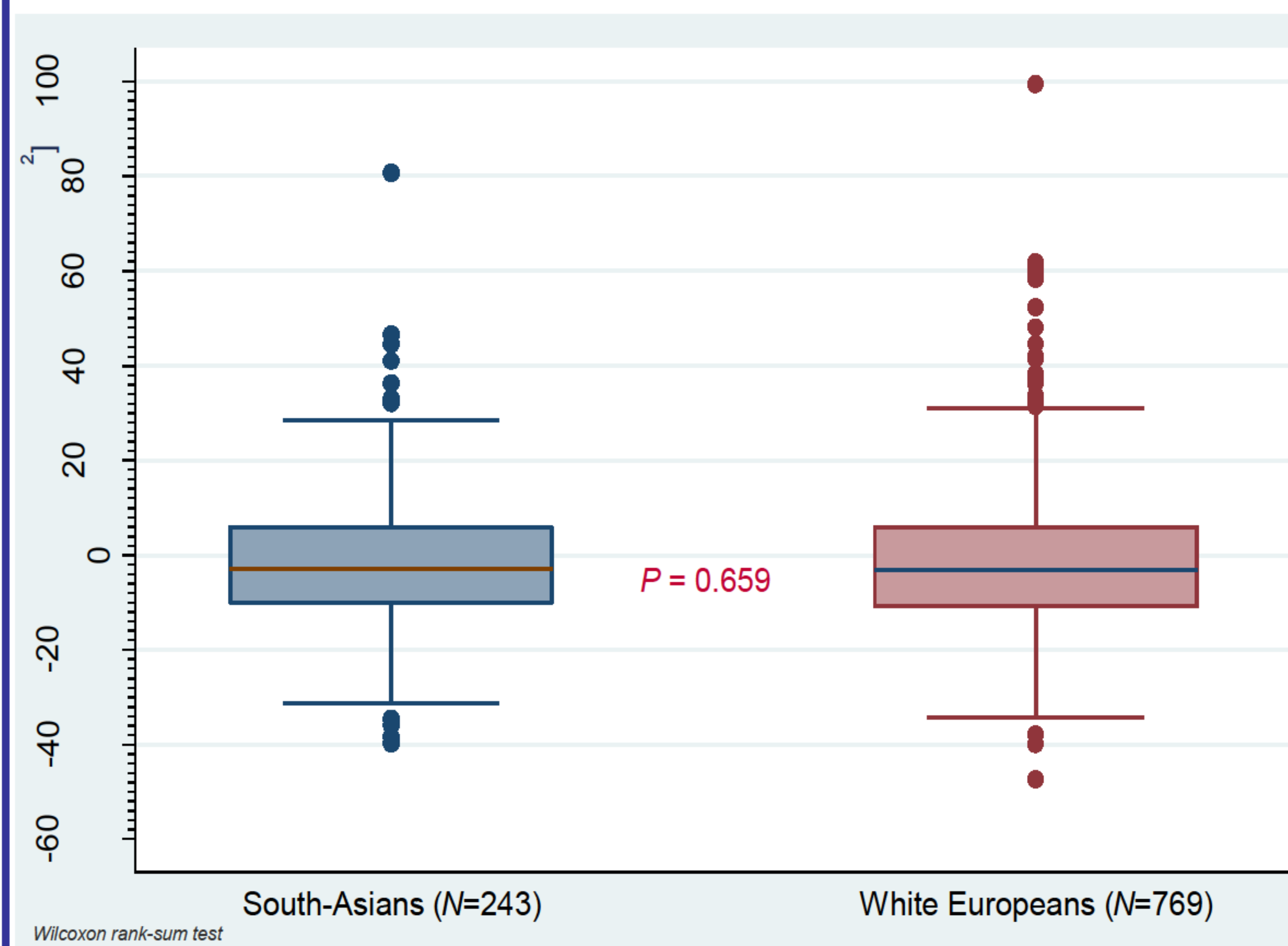
**Funding:** MP and ST were funded by the National Institute for Health Research (NIHR) through the Collaborations for Leadership in Applied Health Research and Care for Birmingham and Black Country (CLAHRC-BBC) programme. **NIHR disclaimer:** This report presents independent research funded by the National Institute for Health Research (NIHR). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health. **Competing interests:** M. Pallayova: Grant/Research support from: Slovakian Diabetes Association/Lilly Diabetes Clinical Research Initiative. H. Rayner: No competing interests. S. Taheri: No competing interests. I. Dasgupta: No competing interests.

## FIGURES

**Figure 1: Glycaemic control of diabetic patients**



**Figure 2: Progression of renal disease in diabetic patients over 5 yrs (N=1012)**



## CONCLUSIONS

- Despite having worse glycaemic control, SA patients with DM and CKD stage 3 did not show any difference in decline in eGFR compared with WE patients over 5-yr follow-up.
- These data do not support a difference in progression of diabetic nephropathy due to ethnicity between SA and WE patients.

