

# Ethnic and gender variations in self-reported functional capacity in chronic kidney disease

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## Introduction

- Chronic kidney disease (CKD) is associated with high levels of co-morbidity including elevated cardiovascular risk, muscle wasting, functional decline and depression.
- In addition, patients frequently suffer from weakness and fatigue which can contribute to a sedentary lifestyle.
- There is increasing evidence that exercise can impact positively on these factors, yet its incorporation into routine care of CKD patients has been slow.
- For the effective development and implementation of rehabilitation programmes, understanding the factors that influence activity levels and motivation in different cross sections of the population is required

## Objective

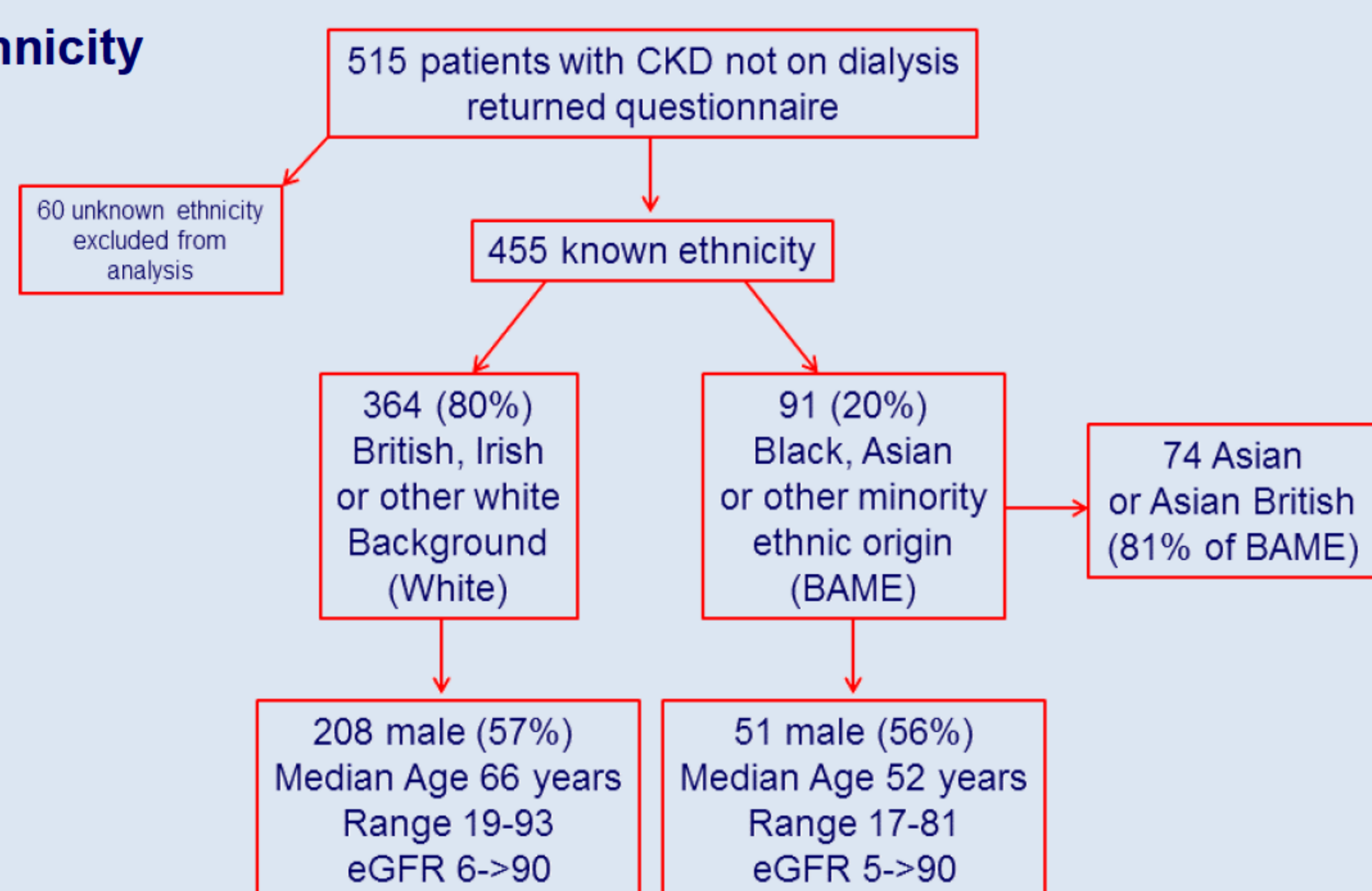
To explore the impact of gender and ethnicity on functional capacity in patients with CKD not on dialysis.

## Methods

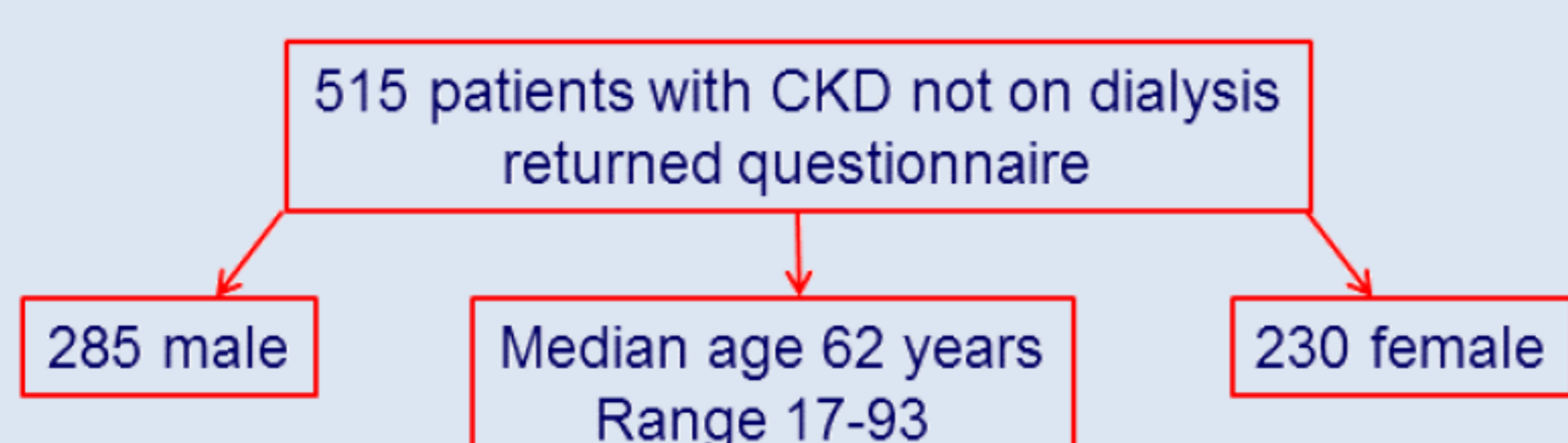
- Patients with established CKD not on dialysis were approached in nephrology outpatient clinic waiting areas at Leicester General Hospital;
- Patients were invited to complete a series of simple questionnaires including the Dukes Activity Status Index (DASI), a validated measure of functional capacity;
- The DASI asks patients whether or not they are able to carry out each of a list of 12 common daily activities. Each activity is assigned a standard metabolic equivalent of task (MET) score, which are added to assign a total MET score for the individual;
- Participants were also asked for their permission for researchers to access their medical records to extract further clinical information relating to blood biochemistry and co-morbidities.

## Subjects

### Ethnicity



### Gender

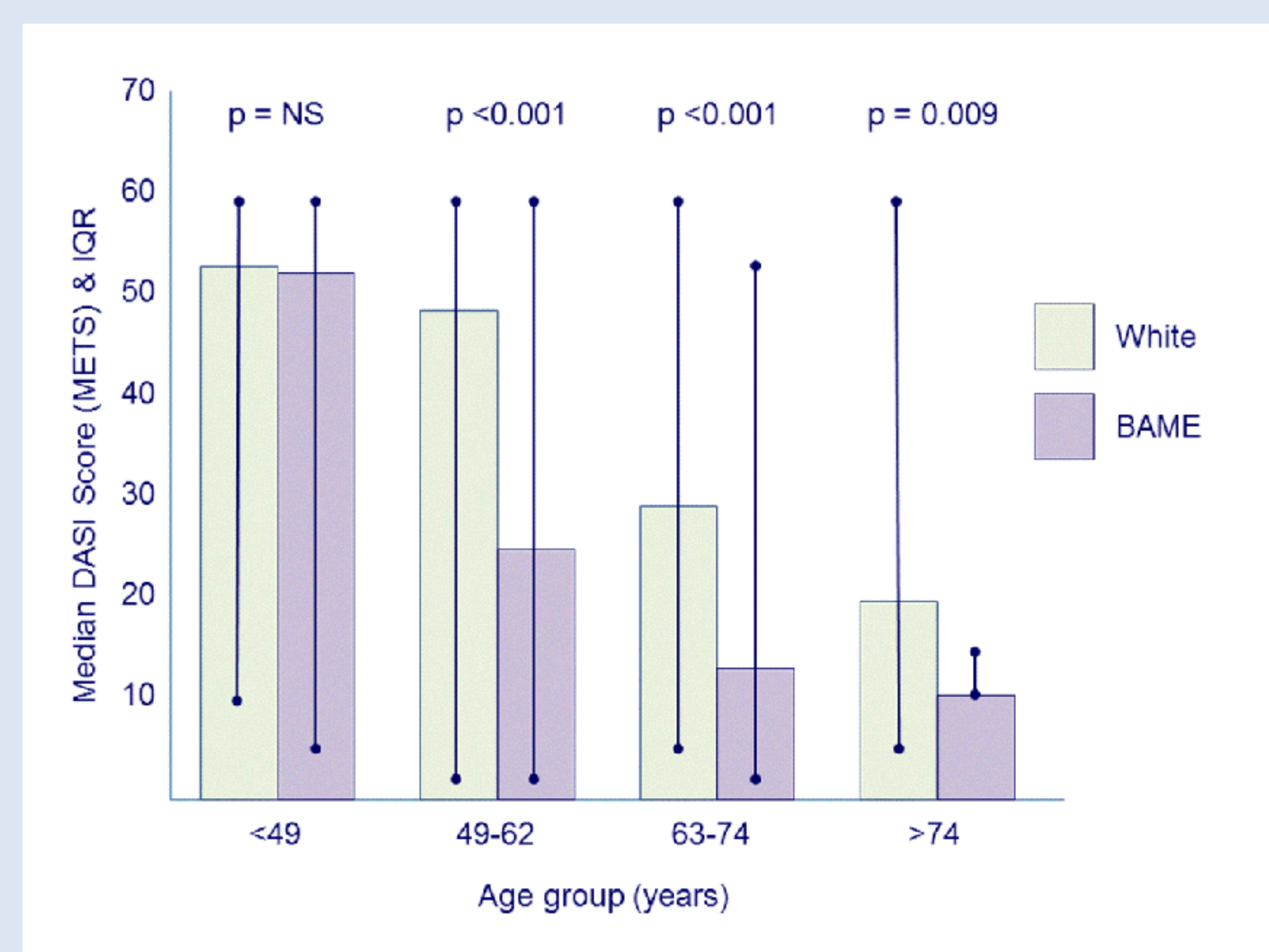


## Results

### Ethnicity

- The BAME group were significantly younger than the White group (median age 52 vs 66 years,  $p < 0.001$ );
- Therefore, both groups were divided into 4 age group quartiles for comparison;
- DASI functional capacity scores were significantly lower in the BAME group for all age quartiles except the youngest, as shown in Figure 1

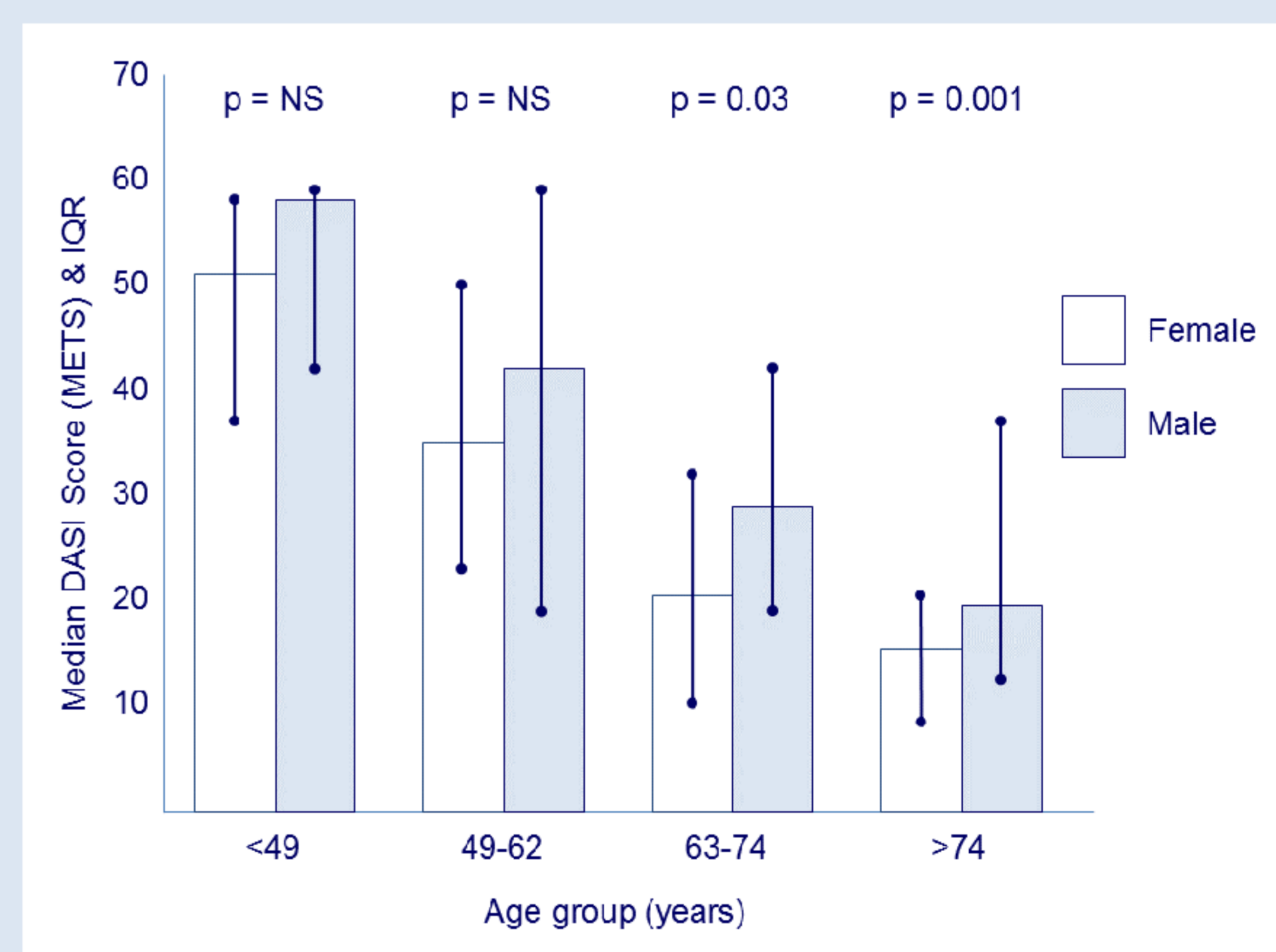
Figure 1 : Impact of Ethnicity on Functional Capacity by age group



### Gender

- Functional capacity declines with age. Therefore, the gender groups were divided into 4 age group quartiles for comparison as for ethnicity above;
- DASI functional capacity scores were significantly lower in females than males in the older age groups, as shown in Figure 2

Figure 2 : Impact of Gender on Functional Capacity by age group



## Conclusions

- Neither ethnicity nor gender influences functional capacity in younger CKD patients;
- However, with increasing age, functional capacity drops more rapidly in the BAME and female groups;
- This highlights the need for tailored rehabilitation strategies to meet the particular challenges inherent in encouraging and facilitating physical activity behaviour in specific groups of CKD patients.

## Acknowledgments

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