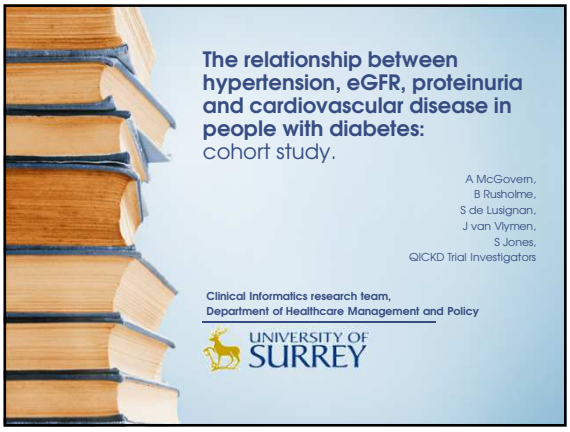

**The relationship between hypertension, eGFR, proteinuria and cardiovascular disease in people with diabetes:** cohort study.

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## Study aims

1. What is the overlap between **hypertension**, reduced estimated glomerular filtration rate (**eGFR**), and **proteinuria**?
2. How does this compare with the non-diabetic population?
3. How do **hypertension,** reduced **eGFR,** and **proteinuria** combine to influence **cardiovascular risk**?

## Methods

- Study cohort taken from the QICKD trial.
  - **127 GP practices across England.**
  - **Anonymous GP records for all patients.**
  - **Five years of data (2006-2011).**
- Diabetes population: Adults with Type 1 or Type 2
  - **Identified from using clinical read codes**
  - **Validated using serum glucose and HbA1c results.**
- Comparison population: all adults without diabetes.

## Methods

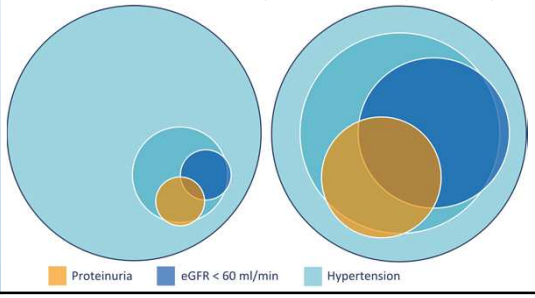
- GP records used to define hypertension, proteinuria, and eGFR.

| 2.5 years: **To define baseline characteristics** | 2.5 years: **Follow up** |
|---|---|

- Composite outcome: death, myocardial infarction, stroke, transient ischaemic attacks, and cardiac revascularisation procedures.
- Kaplan-Meier survival analysis to investigate the impact of disease components on cardiovascular outcomes.

## Results

No diabetes (N=563,755) Diabetes (N=35,502)

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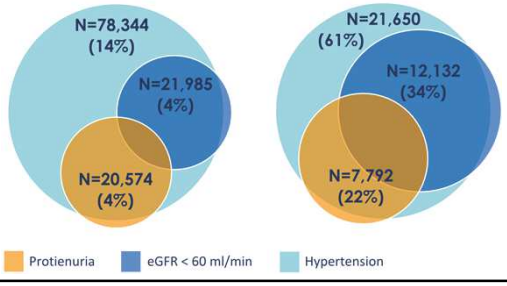
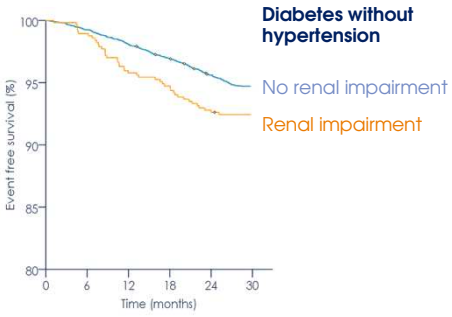


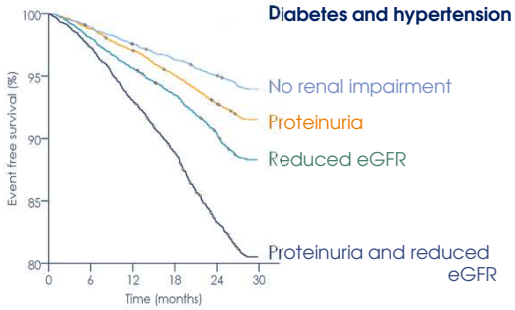
## Results

- **84%** of people with diabetes and hypertension also have chronic kidney disease.
  - **Compared to 56% in people without diabetes.**
- **96%** of people with diabetes and chronic kidney disease also have hypertension.
  - **Compared to 88% in people without diabetes.**

## Kaplan-Meier survival analysis




## Kaplan-Meier survival analysis




## Conclusions

- Renal disease is disproportionately more common compared to hypertension in diabetes.
- People with one disease component are disproportionately more likely to have another.
- Each disease component contributes separately to cardiovascular risk.