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UK dialysis cognition study

Submission date
30/10/2025

Recruitment status
No longer recruiting

Registration date
02/09/2026

Overall study status
Ongoing

Last Edited
02/09/2026

Condition category
Urological and Genital Diseases

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims
This study looks at how well the brain works in people with kidney failure who are starting dialysis. Brain function—also called cognitive function—includes things like memory, learning, and decision-making. Many people on dialysis experience a decline in these abilities, especially after starting treatment. Researchers believe that this decline may happen faster in people who receive haemodialysis (HD) compared to those who receive peritoneal dialysis (PD). The aim of the study is to track changes in brain function over the first year of dialysis and compare the results between HD and PD patients.

Who can participate?
Adults aged between 18 and 80 who are starting dialysis at one of 16 centres across the UK can take part. Each centre will recruit 10 patients starting HD and 10 patients starting PD.

What does the study involve?
Participants will take part in computer-based tests to measure brain function before starting dialysis, and again at 3, 6, and 12 months. These tests are done using a system called Cogstate. The study will also look at other aspects of health, such as frailty, physical ability, and quality of life. Researchers will also collect routine information about dialysis treatment from hospital records. All personal information will be removed before the data is stored and analysed.

What are the possible benefits and risks of participating?
There are no direct medical benefits to participants, but the study may help improve understanding of how dialysis affects brain function. This could help future patients choose the type of dialysis that best supports their long-term brain health. The risks are minimal, as the tests are non-invasive and involve answering questions on a computer.

Where is the study run from?
University Hospitals Birmingham NHS Foundation Trust (UK)

When is the study starting and how long is it expected to run for?
May 2025 to August 2028.

Who is funding the study?
Vantive US Healthcare (USA)

Who is the main contact?
DOPPSUKDCstudy@uhb.nhs.uk

Contact information

Type(s)
Scientific, Principal investigator

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Type(s)
Public

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Additional identifiers

Integrated Research Application System (IRAS)
346120

Central Portfolio Management System (CPMS)
66400

Study information

Scientific Title

A comparative study of cognitive decline in end-stage kidney disease patients commencing peritoneal dialysis and haemodialysis in the UK

Acronym
UKDC

Study objectives
Primary objective: To assess if PD is associated with better preservation of cognitive function, as measured by a cognitive function battery, compared to HD in incident ESKD patients over 12 months, using two well-characterised cohorts of patients from the Dialysis Outcomes & Practice Patterns Study (DOPPS) and the Peritoneal Dialysis Outcomes and Practice Patterns (PDOPPS) study in the UK.
Secondary objective: To assess the association between cognitive decline with frailty scores over 12 months between HD and PD for incident ESKD patients.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 08/05/2025, Yorkshire and Humber - Leeds East (2 Redman Place, Stratford, E20 1JQ, United Kingdom; +44 207 104 8012; leedseast.rec@hra.nhs.uk), ref: 25/YH/0041

Primary study design
Observational

Study design
Prospective observational comparative cohort study

Study type(s)
Other

Health condition(s) or problem(s) studied
Cognitive function in end stage kidney disease

Interventions
The participants will be assessed at baseline, 3, 6, and 12 months for assessment of their cognitive function. At 0, 6 and 12 months they will also be assessed for frailty, activities of daily living, depression and quality of life. The assessments will be done during their routine visits for dialysis (for haemodialysis patients) or outpatient patient appointment (for peritoneal dialysis patients). There will be no extra research visits. Routinely collected laboratory test results will be extracted from the electronic health records. The total duration of observation will be 12 months and the maximum duration of follow up will be 24 months.

Intervention Type
Other

Primary outcome(s)
Composite cognitive score measured using a computerised cognitive function battery (Cogstate) at baseline and 12 months

Key secondary outcome(s)
Frailty score measured using Rockwood Frailty Score at baseline and 12 months

Completion date
31/08/2028

Eligibility

Key inclusion criteria
1. Age ≥45 years of age
2. End Stage Kidney Disease
3. Incident patients on haemodialysis or peritoneal dialysis

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
18 Years

Upper age limit
80 Years

Sex
All

Total final enrolment
0

Key exclusion criteria
1. Unable to give informed consent
2. History of neuropsychiatric disorder, dementia, cerebrovascular disease (stroke), or cancer (except skin cancers)
3. Use of sedatives and psychotropic drugs
4. Previous renal replacement therapy (kidney transplantation, PD, or HD)
5. Patients receiving home haemodialysis
6. Patients who have a live donor transplant planned within 6 months

Date of first enrolment
01/11/2025

Date of final enrolment
31/08/2026

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
University Hospitals Birmingham NHS Foundation Trust - Cov Boost Covid19 Trials
Heritage Building
Mindelsohn Way
Edgabaston
Birmingham
England
B15 2TH

Study participating centre
University Hospitals of North Midlands NHS Trust
Newcastle Road
Stoke-on-trent
England
ST4 6QG

Study participating centre
University Hospitals Coventry and Warwickshire NHS Trust
Walsgrave General Hospital
Clifford Bridge Road
Coventry
England
CV2 2DX

Study participating centre
University Hospitals of Leicester NHS Trust
Leicester Royal Infirmary
Infirmary Square
Leicester
England
LE1 5WW

Study participating centre
Nottingham University Hospitals NHS Trust - Queen's Medical Centre Campus
Nottingham University Hospital

Derby Road
Nottingham
England
NG7 2UH

Study participating centre
Sheffield Teaching Hospitals NHS Foundation Trust
Northern General Hospital
Herries Road
Sheffield
England
S5 7AU

Study participating centre
Royal Free London NHS Foundation Trust
Royal Free Hospital
Pond Street
London
England
NW3 2QG

Study participating centre
Barts Health NHS Trust
The Royal London Hospital
80 Newark Street
London
England
E1 2ES

Study participating centre
Imperial College Health Partners (imperial College)
24 Monument Street
London
England
EC3R 8AJ

Study participating centre
Portsmouth Hospitals University NHS Trust
Queen Alexandra Hospital
Southwick Hill Road
Cosham

Portsmouth
England
PO6 3LY

Study participating centre
Epsom and St Helier University Hospitals NHS Trust
St Helier Hospital
Wrythe Lane
Carshalton
England
SM5 1AA

Study participating centre
Guys and St Thomas' NHS Foundation Trust - Cov Boost Covid19 Trials
249 Westminster Bridge Road
London
England
SE1 7EH

Study participating centre
Manchester Royal Infirmary
Oxford Road
Manchester
England
M13 9WL

Study participating centre
Oxford University Hospitals
John Radcliffe Hospital
Headley Way
Headington
Oxford
England
OX3 9DU

Study participating centre
Northern Care Alliance NHS Foundation Trust
Salford Royal
Stott Lane

Salford
England
M6 8HD

Study participating centre
Royal Preston Hospital
Sharoe Green Lane
Fulwood
Preston
England
PR2 9HT

Sponsor information

Organisation
University Hospitals Birmingham NHS Foundation Trust

ROR
https://ror.org/014ja3n03

Funder(s)

Funder type
Industry

Funder Name
Vantive US Healthcare

Results and Publications

Individual participant data (IPD) sharing plan
Anonymised individul particiapnt data will be shared, on application, with other researchers for use in ethics approved research projects

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
	version 5.0				

Participant information sheet	16/07/2025	31/10/2025	No	Yes