

How can we improve the journey to diagnosis and beyond?

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Cognitive disorders clinic, National Hospital for Neurology & Neurosurgery



Guarantors of Brain



‘Talking lines’: Please try and think back to when you first noticed something was wrong
 Please draw a line that describes your journey from that point to when you were diagnosed

"It was like an explosion, not an immediate explosion but over a period of maybe a year or so where all of this was happening that I couldn't understand..."



"...then as the journey progressed with the assessments and everything, I started to get a little bit of understanding..."



"That's what those little lines represent it's all the little things that came together to make this big thing...the build-up"

"...and then the huge relief...I found it a huge relief when I got the diagnosis"

[Participant with a diagnosis of PCA]

Slide courtesy of Charlie Harrison, Creative Consultant, RDS

Awareness of atypical symptoms – early referral

Referrals accepted nationally from primary, secondary and tertiary care

Referral information for healthcare professionals

☎ [020 3448 3171](tel:02034483171)

[020 3448 3011](tel:02034483011)

@ uclh.cognitivedisordersclinic@nhs.net

Referral

☎ [020 3448 3171](tel:02034483171)

[020 3448 3011](tel:02034483011)

@ uclh.cognitivedisordersclinic@nhs.net

Other referral information

National referral centre for familial young onset and unusual dementias

Multidisciplinary clinic with specialist nurse, psychology, neurology and psychiatry input



Referral address

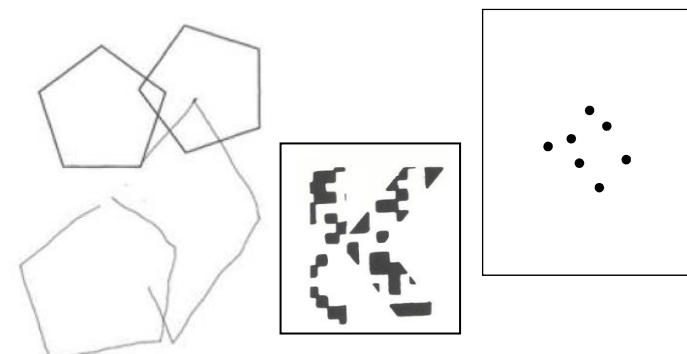
All referrals from General Practitioners must be submitted via the NHS e-Referral Service

Cognitive Disorders Clinic
1st Floor
8-11 Queens Square
Box 16
London WC1N 3BG

www.uclh.nhs.uk/our-services/find-service/neurology-and-neurosurgery/cognitive-disorders-clinic

Maximising the clinic appointment

- Referrals triaged by consultant
- Previous investigations requested and reviewed
- Cognitive questionnaire sent out before appointment
- Clinic preparation and allocation of patients into same day MRI and neuropsychology slots
- Clinic appointment (1 hr)
 - detailed history, cognitive and neurological examination (NB. Motor features including asymmetrical upper limb rigidity seen in 30% PCA patients in our cohort. Overlap with corticobasal syndrome (CBS), due to AD



Neurobiology of Aging 35 (2014) 2845–2857



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Contents lists available at ScienceDirect

Neurobiology of Aging

journal homepage: www.elsevier.com/locate/neuaging

Featured Article

Alzheimer's & Dementia 13 (2017) 870-884

Consensus classification of posterior cortical atrophy

Sebastian J. Crutch^{a,*}, Jonathan M. Schott^a, Gil D. Rabinovici^b, Melissa Murray^c,

Motor features in posterior cortical atrophy and their imaging correlates[☆]

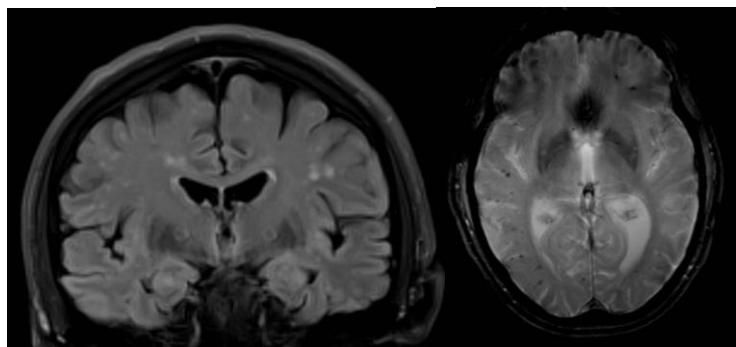
Natalie S. Ryan^{a,*}, Timothy J. Shakespeare^{a,1}, Manja Lehmann^a, Shiva Keihaninejad^a, Jennifer M. Nicholas^{a,b}, Kelvin K. Leung^a, Nick C. Fox^a, Sebastian J. Crutch^a

^a Dementia Research Centre, Department of Neurodegenerative Disease, University College London (UCL) Institute of Neurology, Queen Square, London, UK

^b Department of Medical Statistics, Faculty of Epidemiology and Population Health, London School of Hygiene and Tropical Medicine, Keppel St, London, UK

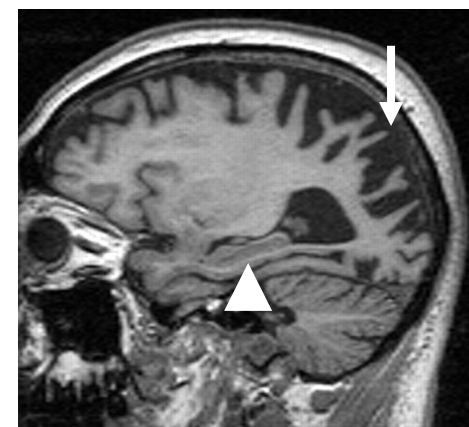
Investigations to support diagnostic specificity

- International diagnostic guidelines including NICE recommend imaging to rule out “reversible causes” of cognitive decline and to assist “subtype diagnosis”
- MRI preferred modality - excellent tissue contrast, lack of ionizing radiation, superior in detecting atrophy patterns, vascular burden and signal change. Susceptibility-weighted imaging sequences for microbleeds
- BUT normal MRI doesn't exclude neurodegeneration



White matter hyperintensities and microbleeds in PSEN1 - familial AD with behavioural/dysexecutive presentation

Ryan, et al. Brain, 2011. Ryan et al., Lancet Neurol, 2016



Preserved hippocampal volume (arrowhead) & parieto-occipital atrophy (arrows) in PCA

CSF biomarkers for dementia

Ashvini Keshavan ¹, Frankie O'Shea, Miles D Chapman, ^{2,3} Melanie S Hart, ^{2,3} Michael PT Lunn ^{2,4}, Ross W Paterson ¹, Jonathan D Rohrer ⁵, Catherine J Mummery, ⁶ Nick C Fox ¹, Henrik Zetterberg ^{7,8}, Jonathan M Schott ¹

- Nurse-led LP clinic on daycare unit
- Positive predictive value of low abeta 42/40 ratio for diagnosis of AD higher in younger people

Success of experimental Alzheimer's drug hailed as 'historic moment'

Study shows cognition in early-stage patients on lecanemab declines by 27% less than those on placebo



THE NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Lecanemab in Early Alzheimer's Disease

C.H. van Dyck, C.J. Swanson, P. Aisen, R.J. Bateman, C. Chen, M. Gee, M. Kanekiyo, D. Li, L. Reyderman, S. Cohen, L. Froelich, S. Katayama, M. Sabbagh, B. Vellas, D. Watson, S. Dhadda, M. Irizarry, L.D. Kramer, and T. Iwatsubo

NEJM November 2022, FDA licensing Jan 2023

“Preparing for disease modifying therapies for dementia: implications for research, trials and clinical services”



Symposium April 27th

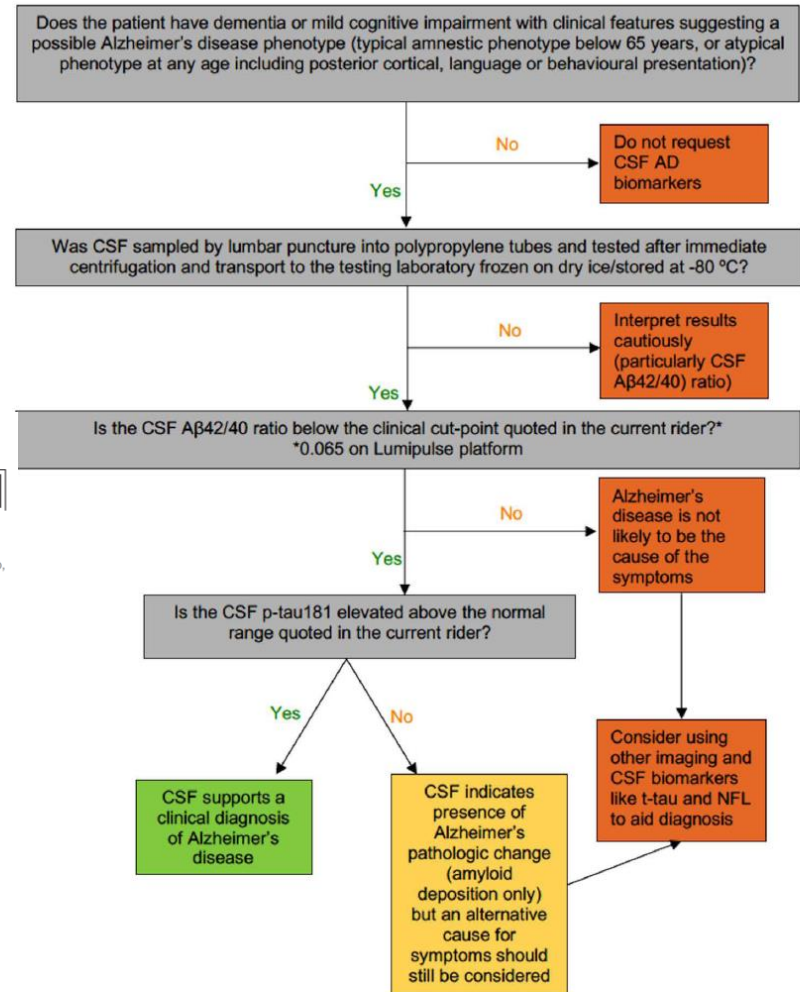


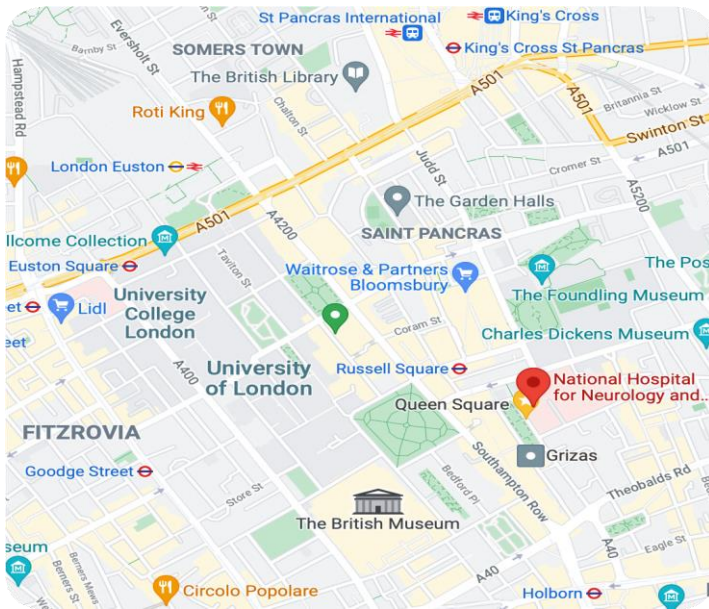
Figure 3 Flow diagram for interpretation of CSF AD biomarkers requested in the context of a possible AD phenotype. AD, Alzheimer's disease; CSF, cerebrospinal fluid; NFL, neurofilament light chain.

Discussing the diagnosis and what we can do

- Explanation, time for questions, emphasis on variability in progression strategies for managing symptoms, focusing on strengths
- If AD or DLB, symptomatic therapy (cholinesterase inhibitor)
- Specialist referrals eg. ophthalmology (for registration as partially sighted in PCA) speech and language therapy in PPA (primary progressive aphasia)
- Practical considerations and sources of support locally and through RDS – further explored with specialist nurse either after clinic or in separate telephone appointment
- Research opportunities
eg. BRAPID study – using advances in MRI physics to decrease MRI time from 20-30 to 5-7 mins, plus blood biomarkers

**Biomarkers &
RAPid
Imaging in
Dementia
Diagnosis**





Our clinical trial unit is at **National Hospital for Neurology and Neurosurgery, UCLH, Queen Square, London WC1N 3BG**



Clinical Trials

Getting involved...

If you are interested in participating in our clinical trials or other research, please email our recruitment team at drctrialequiries@ucl.ac.uk

The DRC also actively supports [Join Dementia Research](#), which matches participants to appropriate research studies throughout the UK.

Injections of hope: supporting participants in clinical trials

Understanding hope and better appreciating the personal investments of trial participants could improve patient experience and trial design, argue Emma Harding, Catherine Mummery, and colleagues

Emma Harding,¹ Philip Robinson,² James Wilson,³ Sebastian J Crutch,¹ Catherine J Mummery^{4,1}

BMJ 2021;375:e066851

Inspired by chance: valuing patients' informal contributions to research

Serendipitous contributions from patients that influence the research agenda should be better recognised and acknowledged, argue **Sebastian Crutch and colleagues**

Sebastian Crutch,¹ Daniel Herron,² James Pickett,³ Simon Rosser,⁴ Martin Rossor^{1,2}

BMJ 2020;371:m4478

> *Dementia (London)*. 2018 Nov;17(8):1011-1022. doi: 10.1177/1471301218789296.

Contributions of patient and citizen researchers to 'Am I the right way up?' study of balance in posterior cortical atrophy and typical Alzheimer's disease

Sebastian J Crutch¹, Keir Xx Yong¹, Amy Peters², Dilek Ocal³, Diego Kaski², Aida Suarez Gonzalez³, Natalie Ryan³, Simon Ball⁴, Charlie R Harrison⁵, Charlie Murphy⁵, Pam Hulme⁶, Isabel Phillips⁶, Gaynor Hulme⁶, Andrew Brown⁶, Lu Brown⁶, Peter Riley⁷, Lynn Ramsey⁷, Anthony Woods⁸, Brian Day⁹

Affiliations + expand

PMID: 30373456 DOI: 10.1177/1471301218789296



Mobile Brain-Body Imaging and the Neuroscience of Art, Innovation and Creativity pp 135-143

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Created Out of Mind: Shaping Perceptions of Dementia Through Art and Science

Sebastian J. Crutch , Charles R. Harrison, Emilie V. Brotherhood, Paul M. Camic, Brian Day & Anthony J. Woods

Chapter | [First Online: 16 November 2019](#)

579 Accesses

Part of the [Springer Series on Bio- and Neurosystems](#) book series (SSBN,volume 10)

Thank you!

Colleagues, collaborators
referring clinicians

All the individuals who
participate in and shape
research, through the
questions they ask, the
contributions they make
and the stories they
share

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A A A

How do changes in the brain cause us to see differently? What if dementia did not affect your memory but affected your vision?

Experience the world through the eyes of people living with posterior cortical atrophy (PCA) in this stunning, short animation.



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