Recognizing and treating Alzheimer's disease: The importance of a multidisciplinary approach for early diagnosis and continuum of care



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Why is an early diagnosis of Alzheimer's disease so important for patient outcomes?

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How much does an early diagnosis affect the clinical outlook for patients with AD?



Benefits of early AD diagnosis

Clinical benefits¹

- Increased opportunity to slow disease progression (disease-modifying agents)
- Increased opportunity to preserve cognition and functional capacity (symptomatic agents)
- Delay entry to nursing homes and reduce costs

Early diagnosis

Future planning

- Earlier access to services and support²
- Advanced care planning and organization of long-term care¹ before significant cognitive decline
- Taking control and organization of financial and legal affairs²

AD; Alzheimer's disease.

- 1. Rasmussen J, Langerman H. Degener Neurol Neuromuscul Dis. 2019;9:123–30;
- 2. Social Care Institute for Excellence. 2020. Available at: www.scie.org.uk/dementia/symptoms/diagnosis/early-diagnosis.asp (accessed 1 February 2022).

What are the goals of pharmacologic intervention for AD?



Goals of pharmacologic treatment in AD

Disease-modifying agents¹

Aducanumab Mild cognitive (FDA accelerated approval) impairment/dementia

Reduce amyloid-β plaque formation and slow disease progression

Symptomatic agents^{1,2}

- Donepezil
- Galantamine
- Rivastigmine
- + Memantine

Mild-moderate cognitive impairment

Severe disease

Temporary improvement of:

- Cognitive function
- Global clinical status
- Performance of activities of daily living



How is AD diagnosed and which assessments are important?



Diagnosis of Alzheimer's disease

Clinical diagnosis¹



History taking from the patient or close individual

Objective assessment

indicating at least two of:

- Impaired acquisition/recall of new information
- Impaired reasoning/handling complex tasks, poor judgement
- Impaired visuospatial abilities
- Impaired language functions
- Changes in personality, behaviour, or comportment

Identification of dementia

 Cognitive and behavioural symptoms that interfere with work/usual activities, represent declining function, and are not caused by delirium or major psychiatric disorder

Imaging



- Flortaucipir PET²
- Amyloid PET³
- Structural and functional MRI³

Probable Alzheimer's disease

- Insidious onset
- Worsening history of cognition
- · Amnestic or non-amnestic cognitive deficits
- No concomitant cerebrovascular disease, Lewy body dementia, frontotemporal dementia, primary progressive aphasia, neurological disease or drug toxicity

Biomarkers^{3,4}

Plasma

- P-tau-127
- P-tau-181
- P-tau-231
- Total tau
- Totalta
- NfL
- Αβ 42/40

CSF

- Αβ42
- P-tau
- Total tau
- NfL

Aβ, amyloid-β; CSF, cerebrospinal fluid; MRI, magnetic resonance imaging; NfL, neurofilament light chain; PET, positron emission tomography; P-tau, phosphorylated tau. 1. Cummings JL, et al. *Ann Clin Transl Neurol*. 2015;2:307–23; 2. Tian M, et al. *Eur J Nucl Med Mol Imaging*. 2022;49:895–904;

3. García-Morales V, et al. Biomedicines. 2021;9:1910; 4. Doecke JD, et al. Neurology. 2020;94:e1580-91.



What are the barriers preventing early AD diagnosis and care provision, and how might they be overcome?



Barriers and solutions to the early diagnosis of AD



Complex aetiology¹
Complex diagnostic process¹
PCP skills and confidence²

Improved training for PCPs^{2,3}
Increased funding and access to diagnostic tools^{1,4}
Development of better cognitive and biomarker tests⁴
Use of specialist multidisciplinary teams²



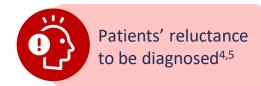
Limited PCP time^{4,5}

Additional training for nurses, NPs and PAs⁵



Cognitive decline or normal ageing?^{1,4,5}

Gather historical information from a carer or relative⁵



AD, Alzheimer's disease; NP, nurse practitioner; PA, physician assistant; PCP, primary care physician.

1. Swallow J. Soc Sci Med. 2017;184:57–64; 2. Aminzadeh F, et al. Can Geriatr J. 2012;15:85–94; 3. Small GW. Available at:

www.todaysgeriatricmedicine.com/archive/ND17p28.shtml (accessed 1 February 2022); 4. Judge D, et al. Int J Alzheimers Dis. 2019;2019:3637954; 5. Porsteinsson AP, et al. J Prev Alz Dis. 2021:3:371–86.



How can the MDT help improve patient outcomes in Alzheimer's disease?

Dr Jennifer Bute

Dementia patient, advocate and former GP, UK

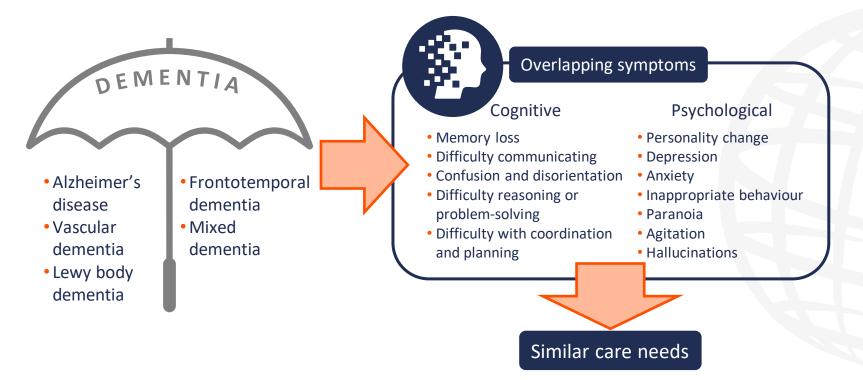




How is AD related to other forms of dementia?



Types of dementia and symptoms

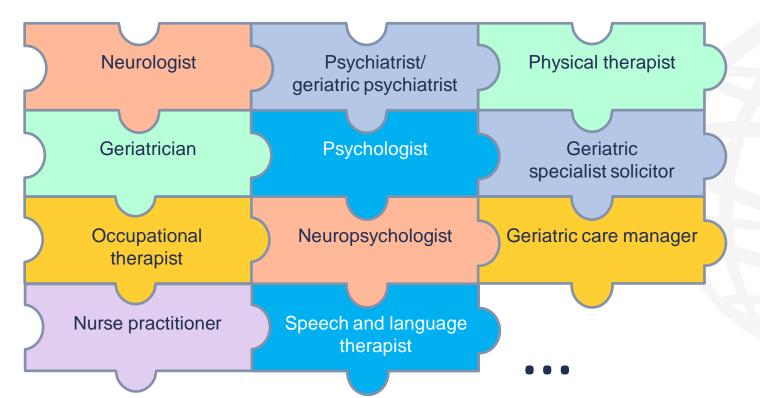




Who are the key members of an MDT for patients with AD, especially during the early stages of diagnosis and treatment?



Key members of the multidisciplinary team for AD^{1,2}



AD, Alzheimer's disease.



^{1.} Ellison JM. 2021. Available at: www.brightfocus.org/alzheimers/article/understanding-health-care-team-alzheimers-disease (accessed 1 February 2022); 2. Galvin JE, et al. www.brightfocus.org/alzheimers/article/understanding-health-care-team-alzheimers-disease (accessed 1 February 2022); 2. Galvin JE, et al. www.brightfocus.org/alzheimers/article/understanding-health-care-team-alzheimers-disease (accessed 1 February 2022); 2. Galvin JE, et al. www.brightfocus.org/alzheimers/article/understanding-health-care-team-alzheimers-disease (accessed 1 February 2022); 2. Galvin JE, et al. www.brightfocus.org/alzheimers/article/understanding-health-care-team-alzheimers-disease (accessed 1 February 2022); 2. Galvin JE, et al. www.brightfocus.org/alzheimers-disease (accessed 1 February 2022); 2. Galvin JE, et al. www.brightfocus.org/alzheimers-disease (accessed 1 February 2022); 2. Galvin JE, et al. www.brightfocus.org/alzheimers-disease (accessed 1 February 2022); 2. Galvin JE, et al. www.brightfocus.org/alzheimers-disease (accessed 1 February 2022); 2. Galvin JE, et al. www.brightfocus.org/alzheimers-disease (accessed 1 February 2022); 2. Galvin JE, et al. <a href="https://www.brightfo

How might an early AD diagnosis affect a patient's treatment plan?



Impact of early AD diagnosis on treatment and care plans



Hope for improvement

Active interventions
Slower progression
Quality of life



What are the important principles of care for people with dementia and how can these improve disease management?



Principles of dementia care provision

SLEDGE

Diet

Social Engagement
Laughter
Enjoyment and exercise

Coonitive stimulation

Principles of care

- 1. There is always a reason for a behaviour
- Feelings remain when facts are forgotten
- Behaviour patterns continue



What nonpharmacological aspects of AD care should primary care physicians consider?

Non-pharmacological approaches to AD care

