



Management of Parkinson's disease dementia

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Declaration of interest

- Receive funding from EU, NIHR, Parkinson's UK, Dunhill Medical Trust, Michael J Fox Foundation, Weston Brain Institute
- Received funding and/or honoraria from Britannia, UCB, Abbvie, GSK, Teva-Lundbeck and Genus for attending educational events



Parkinson's disease: a common disorder

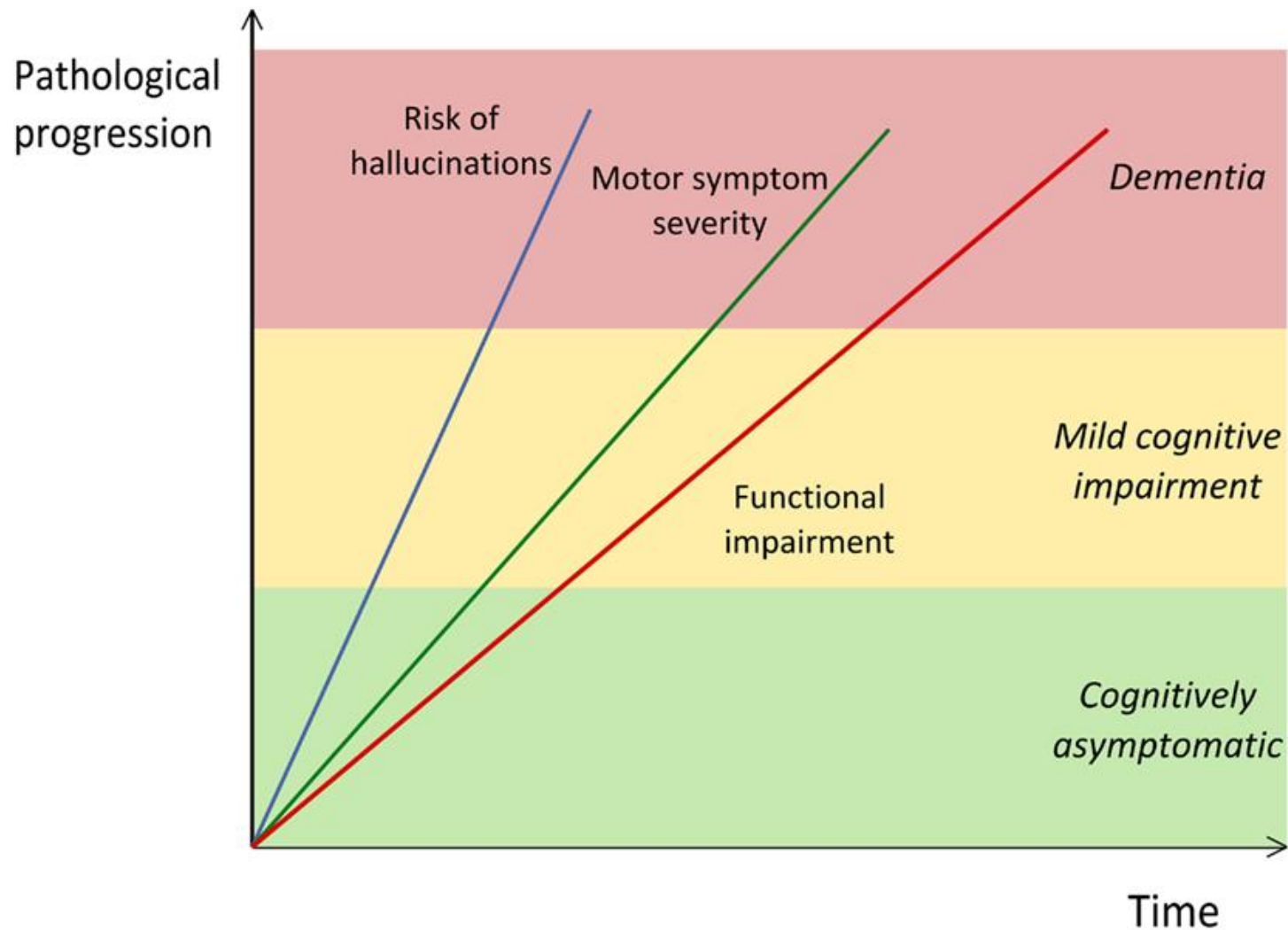
- We *all* have a 1 in 37 chance of developing Parkinson's in our lifetime
- Every day ~30 people in the UK are told they have PD
- Median age at onset 60 years; increases with age



Lees 2009; <https://www.parkinsons.org.uk>



Cognitive impairment in Parkinson's disease



Meireles 2012



Cognitive impairment in Parkinson's disease

Characterizing mild cognitive impairment in incident Parkinson disease

The ICICLE-PD Study

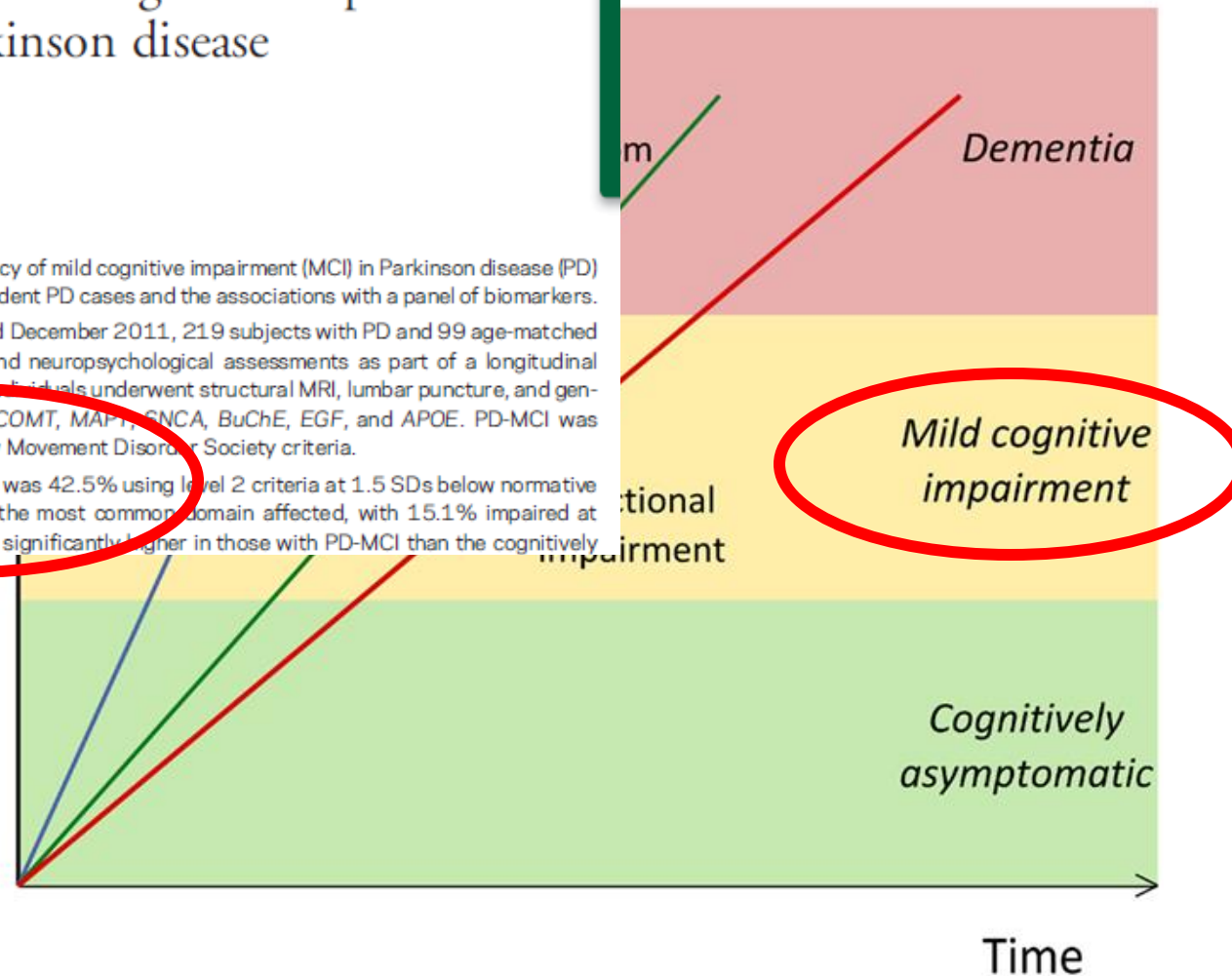
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ABSTRACT

Objective: To describe the frequency of mild cognitive impairment (MCI) in Parkinson disease (PD) in a cohort of newly diagnosed incident PD cases and the associations with a panel of biomarkers.

Methods: Between June 2009 and December 2011, 219 subjects with PD and 99 age-matched controls participated in clinical and neuropsychological assessments as part of a longitudinal observational study. Cognitively impaired individuals underwent structural MRI, lumbar puncture, and genotyping for common variants of COMT, MAPT, SNCA, BuChE, EGF, and APOE. PD-MCI was defined with reference to the new Movement Disorder Society criteria.

Results: The frequency of PD-MCI was 42.5% using level 2 criteria at 1.5 SDs below normative values. Memory impairment was the most common domain affected, with 15.1% impaired at 1.5 SDs. Depression scores were significantly higher in those with PD-MCI than the cognitively



Meireles 2012

Yarnall 2014



Cognitive impairment in Parkinson's disease

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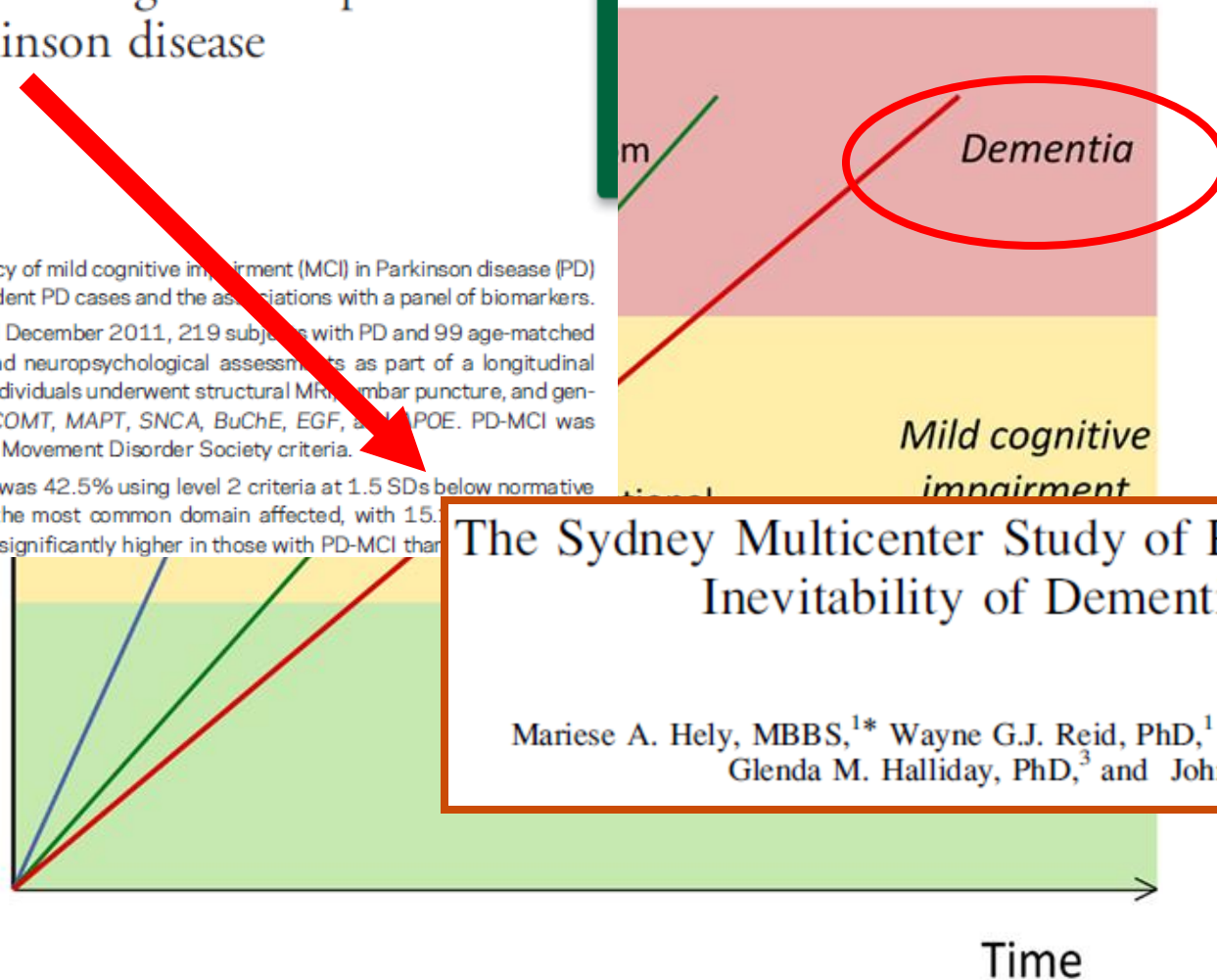
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Meireles 2012

Yarnall 2014

Hely 2008

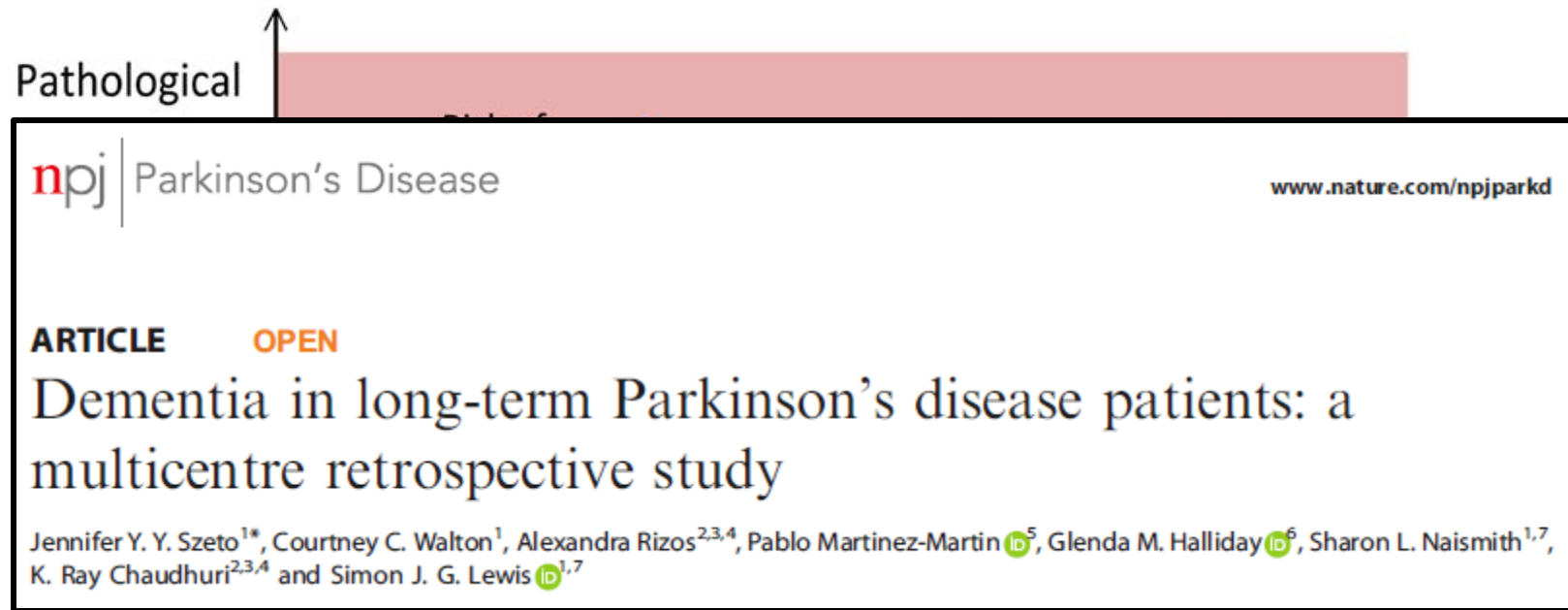


The Sydney Multicenter Study of Parkinson's Disease: The Inevitability of Dementia at 20 years

Mariese A. Hely, MBBS,^{1*} Wayne G.J. Reid, PhD,¹ Michael A. Adena, PhD, ASTAT,² Glenda M. Halliday, PhD,³ and John G.L. Morris, MD¹



Cognitive impairment in Parkinson's disease



Szeto 2020

**2327 patients pooled → 36 disease duration
>20 years → only 7 of these probable PDD**

Time



Management of cognitive decline in PD

- Rule out “reversible” causes
- Principles of basic dementia care
 - Education, financial, driving, advance care planning, carer support etc
- MDT input
- Stepwise removal of potential culprit medications
 - Graded, gradual withdrawal
 - Use the “withdrawal ladder”
- Simplification of antiparkinsonian treatment regime



Modifiable risk factor?



Dementia 'linked' to common over-the-counter drugs



Use of drugs with anticholinergic effect and impact on cognition in Parkinson's disease: a cohort study

Uwe Ehrt, Karl Broich, Jan Petter Larsen, et al.

Increased Alzheimer Pathology in Parkinson's Disease Related to Antimuscarinic Drugs

Elaine K. Perry, PhD,¹ Linda Kilford, MPhil,² Andrew J. Lees, FRCP,³ David J. Burn, FRCP,¹ and Robert H. Perry, FRCPath¹

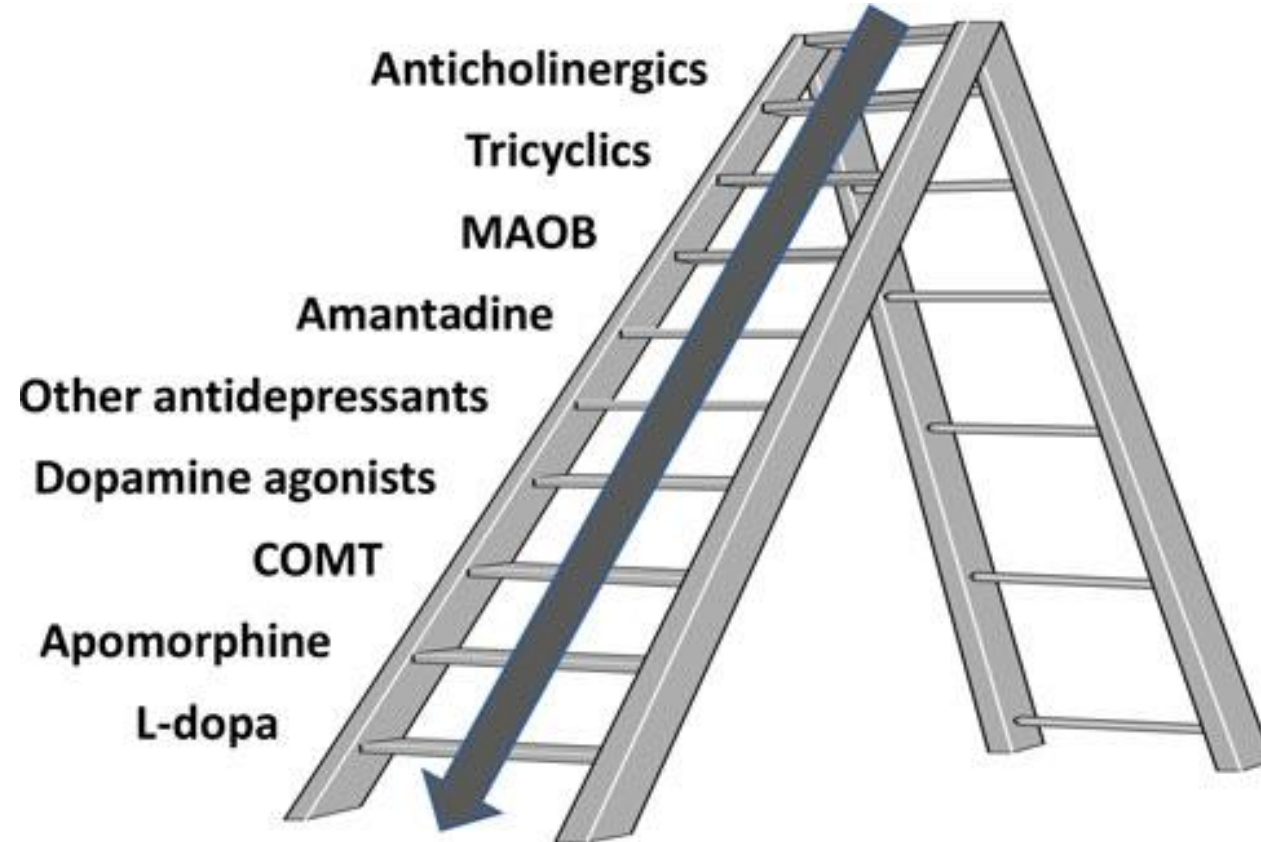


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The “withdrawal ladder”



Hindle 2013



Pharmacological management of PDD

- Rivastigmine & donepezil effective
 - ?Rivastigmine more adverse events
 - High-dose AChE-I may benefit some DLB?
- Galantamine – little evidence
- Memantine
 - Well tolerated
 - Evidence mixed
 - NICE – only if AChE-I not tolerated/contraindicated

COBALT



Stinton 2015; Wang 2015; Taylor 2020; Pakrasi 2006; NICE guideline NG71 2017



Conclusions

- Cognitive impairment common but not inevitable
- One size does not fit all
- Involve MDT
- Simplify PD medications; rationalise others
- Cholinesterase inhibitors effective; ?memantine



Acknowledgements



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| | | |
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