

*A new way of thinking about
Parkinson's disease*

Barry Snow

Cause



Dopamine deficit



Tremor, rigidity, bradykinesia, postural impairment



Dopamine replacement

Cause Cause Cause Cause Cause

Mechanism

Dopamine deficit

Cortical Lewy bodies

Other neurotransmitters

Parkinsonism

Dementia

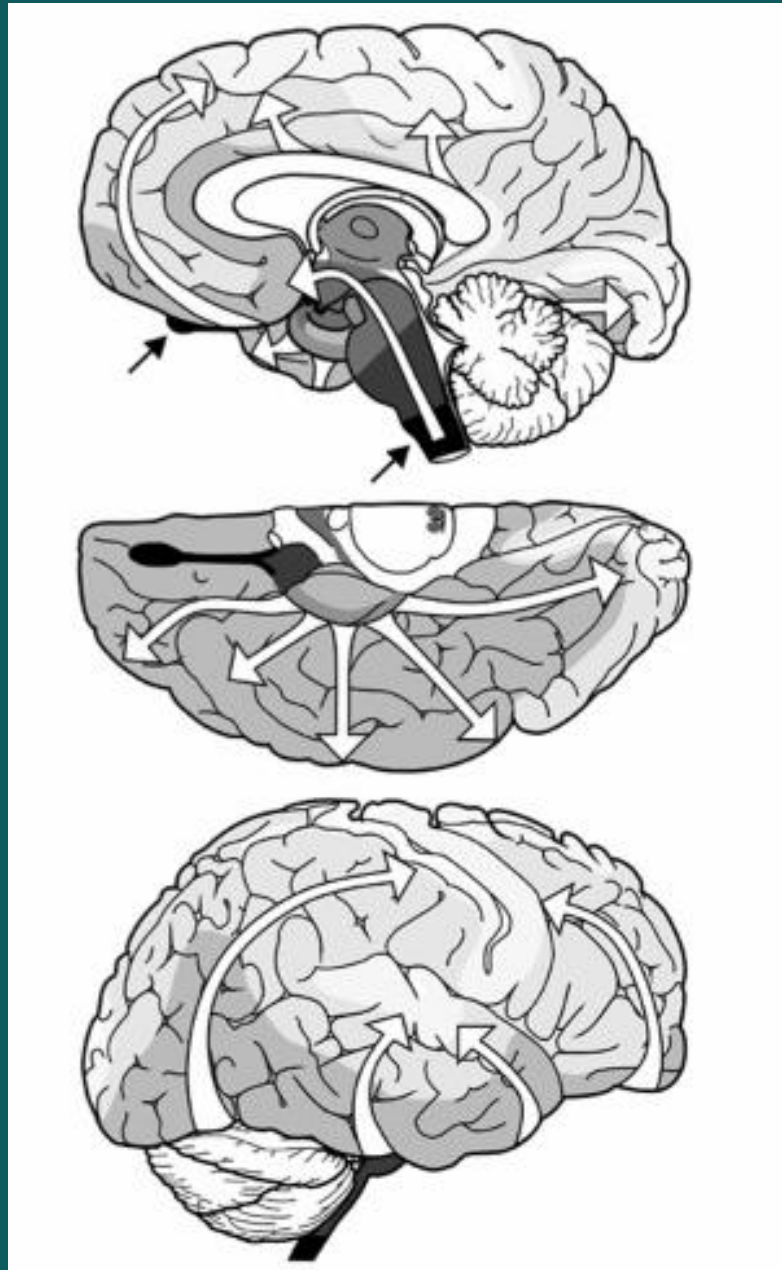
Depression

Pain

Levodopa complications

Autonomic disturbance

Falls



Braak 2005

Dopaminergic

Parkinsonism

Motor fluctuations
and dyskinesia

Diagnosis and early treatment

Motor complications

General neurodegeneration

5[↑] years

10[↑] years

anosmia
RBD

anxiety
depression

pain

Falls
autonomic failure
dementia

Non-Dopaminergic

Presentation

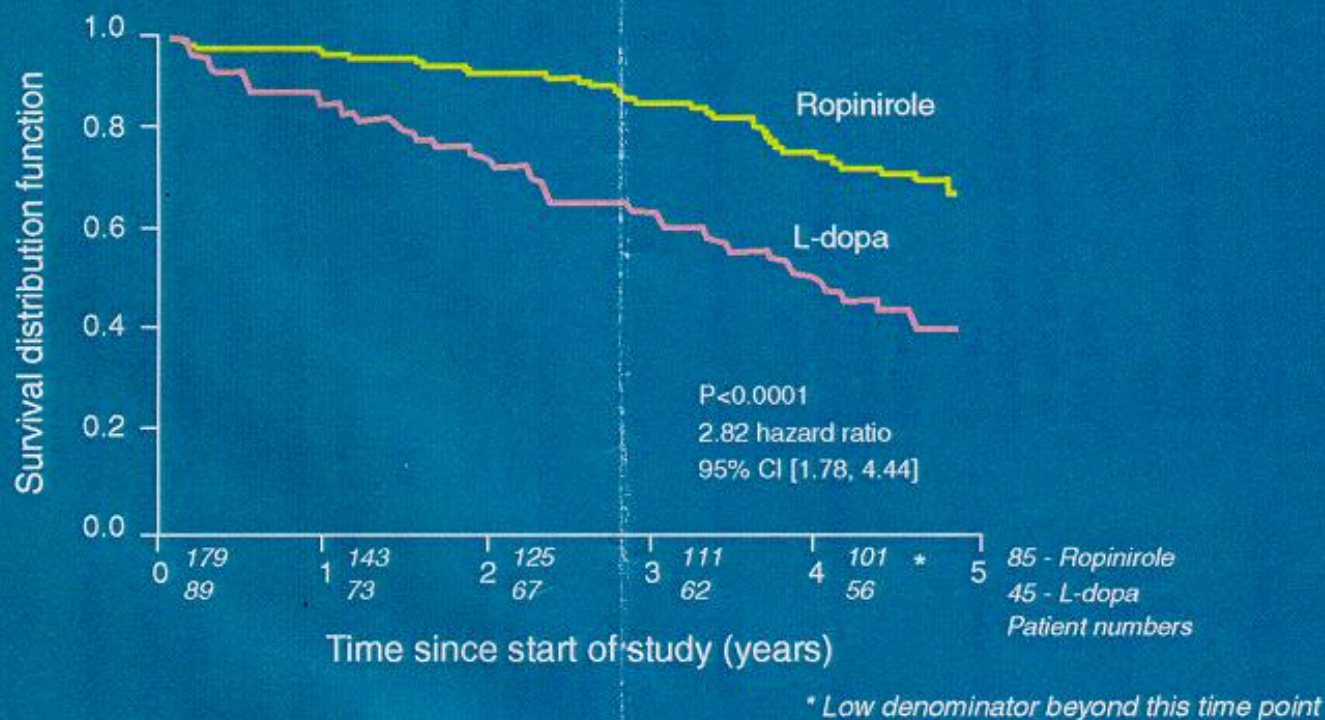
- Anosmia
- RBD
- Frozen shoulder
- Parkinsonism

Initial treatment

- No evidence for affecting rate of disease progression
- Young patients: dyskinesia
 - Dopamine agonists (ropinirole 3 mg tds)
- Old patients: cognitive disturbance
 - levodopa (100 mg tds)

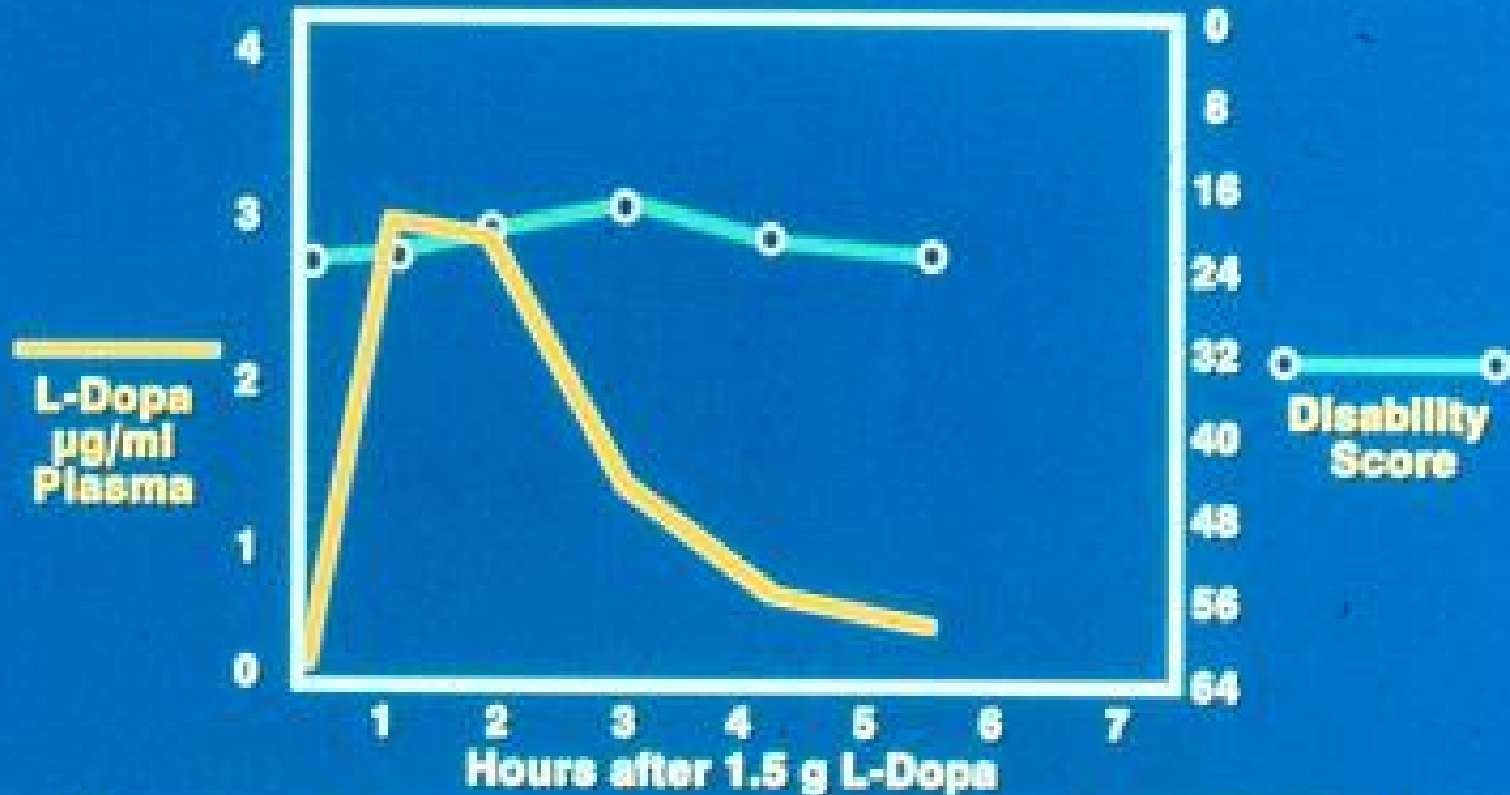
Ropinirole and dyskinesias

Figure 2: Kaplan-Meier survival curves showing reduced risk of dyskinesia with ropinirole in all patients

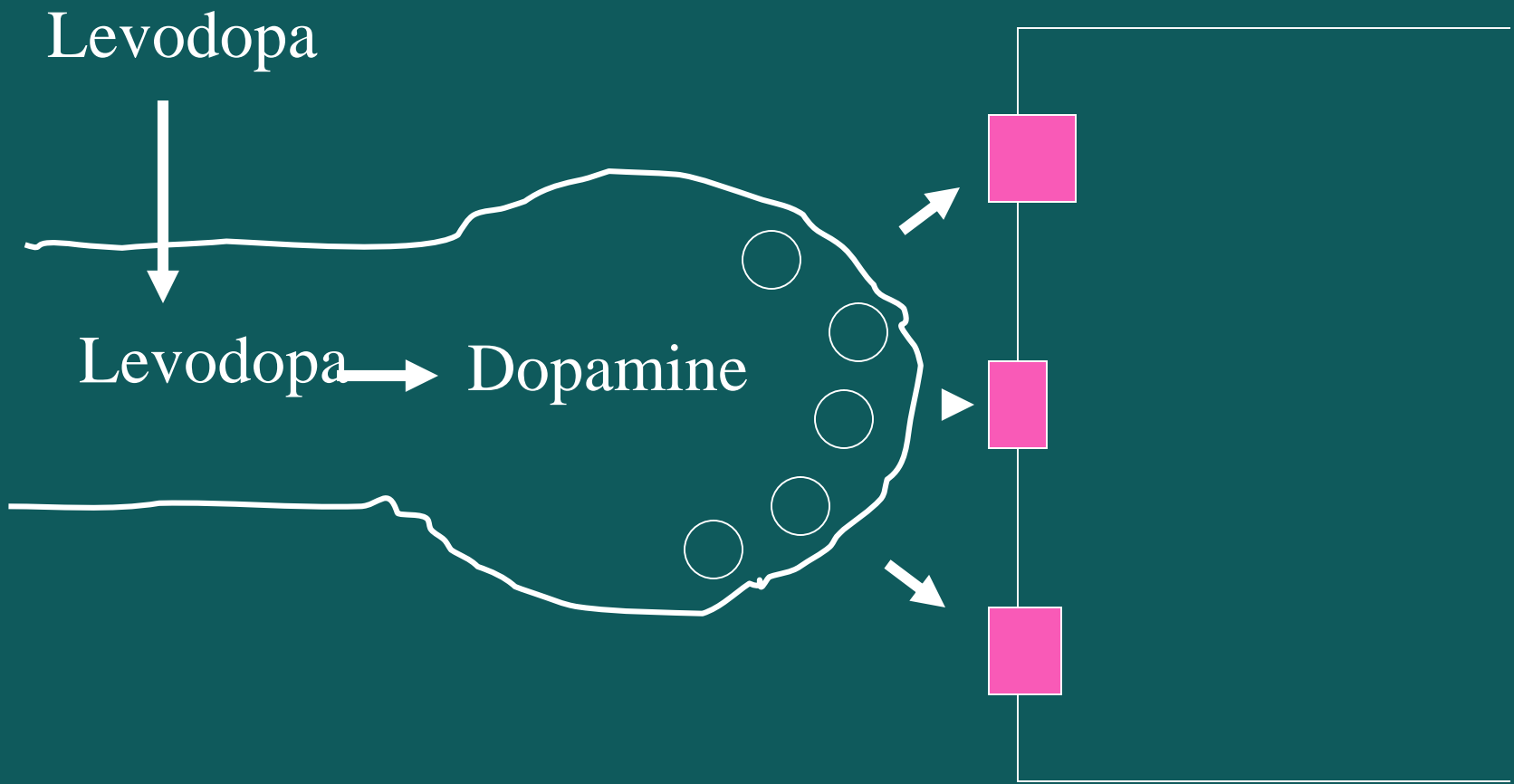


Agonists and disinhibition

- Gambling
- Impulsive sexual behaviour
- Shopping
- Eating
- Punding



Marked long-duration improvement and mild short-duration improvement in patient with moderate disease. Short-duration improvement occurs after peak plasma concentration of levodopa



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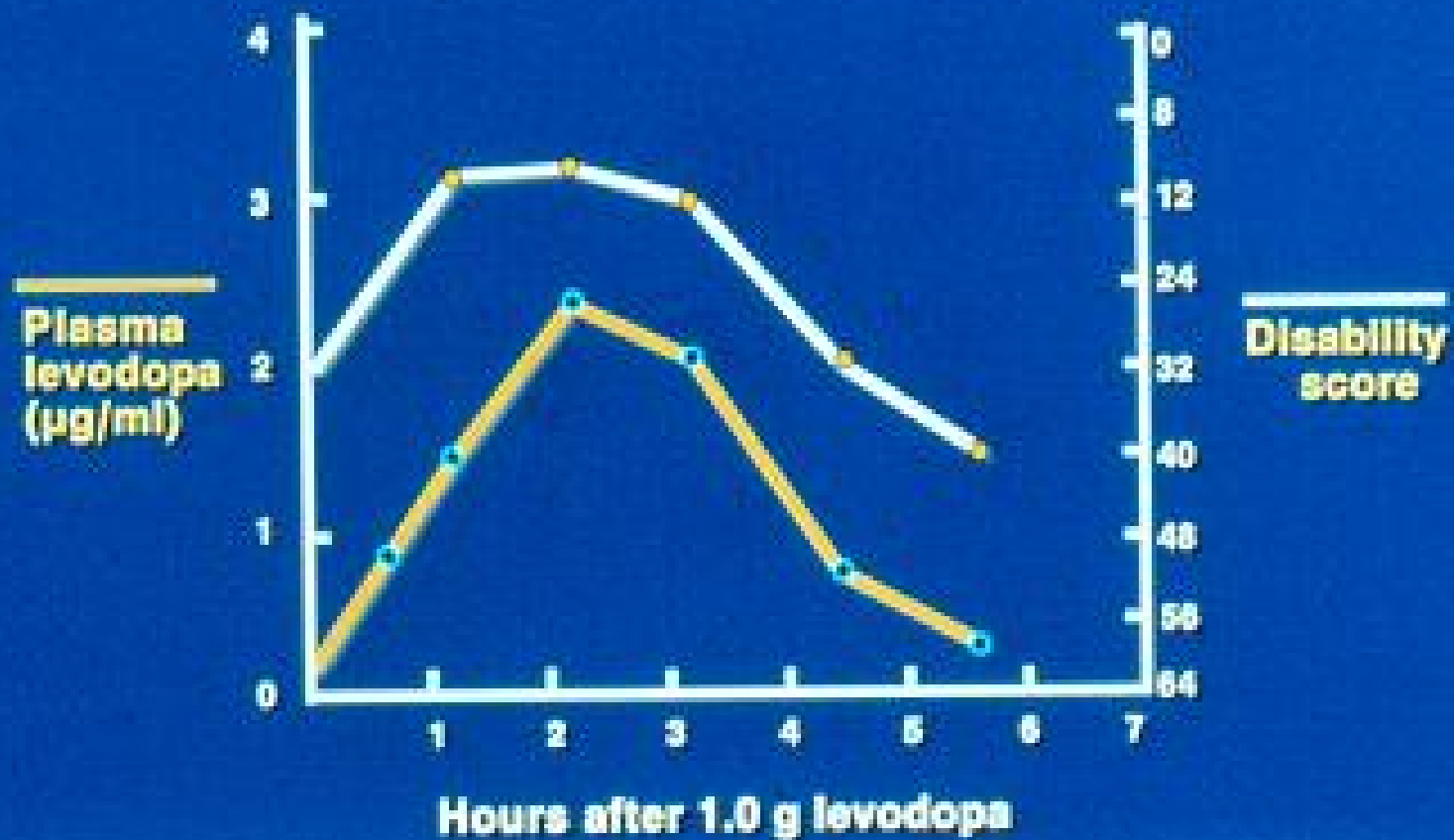
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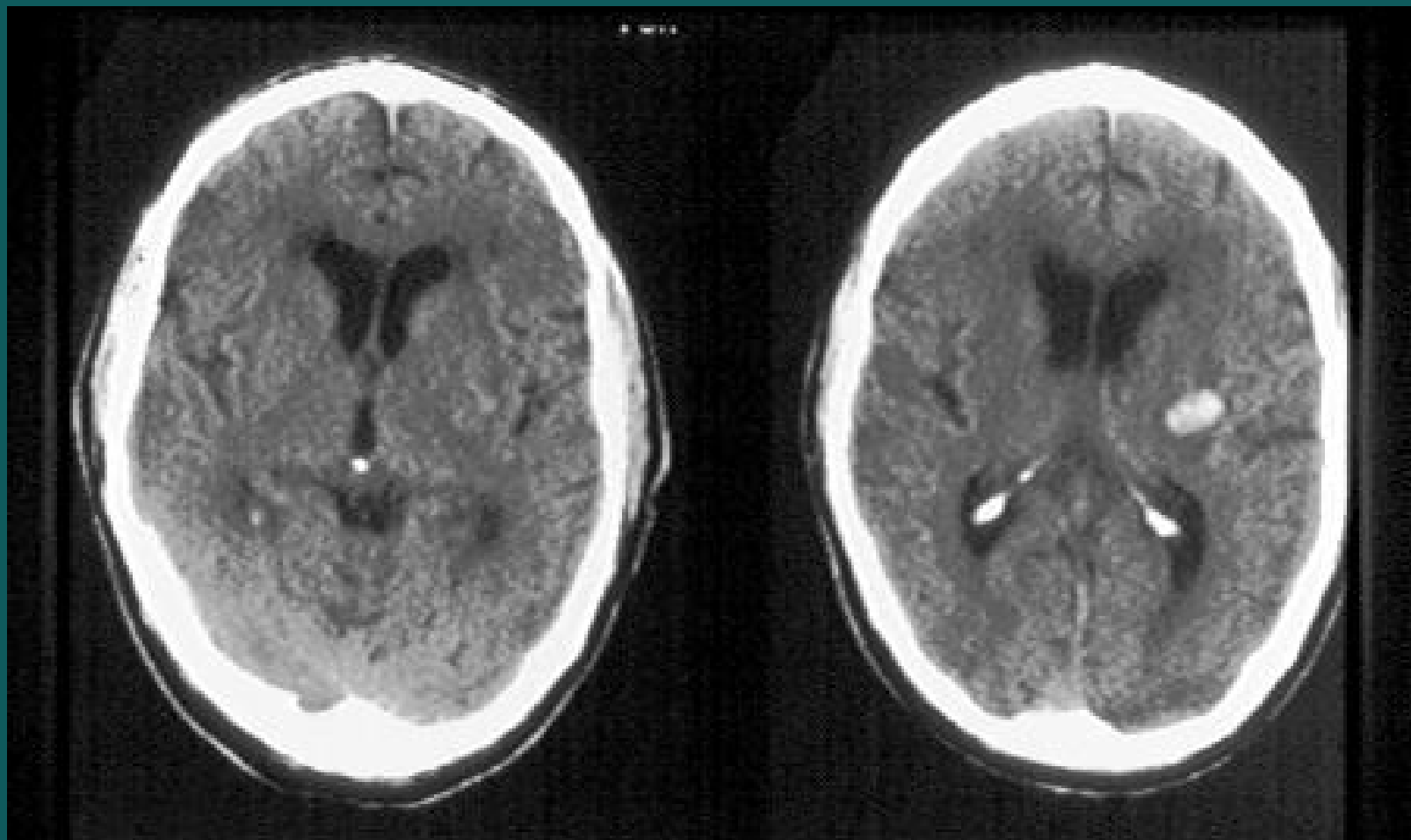
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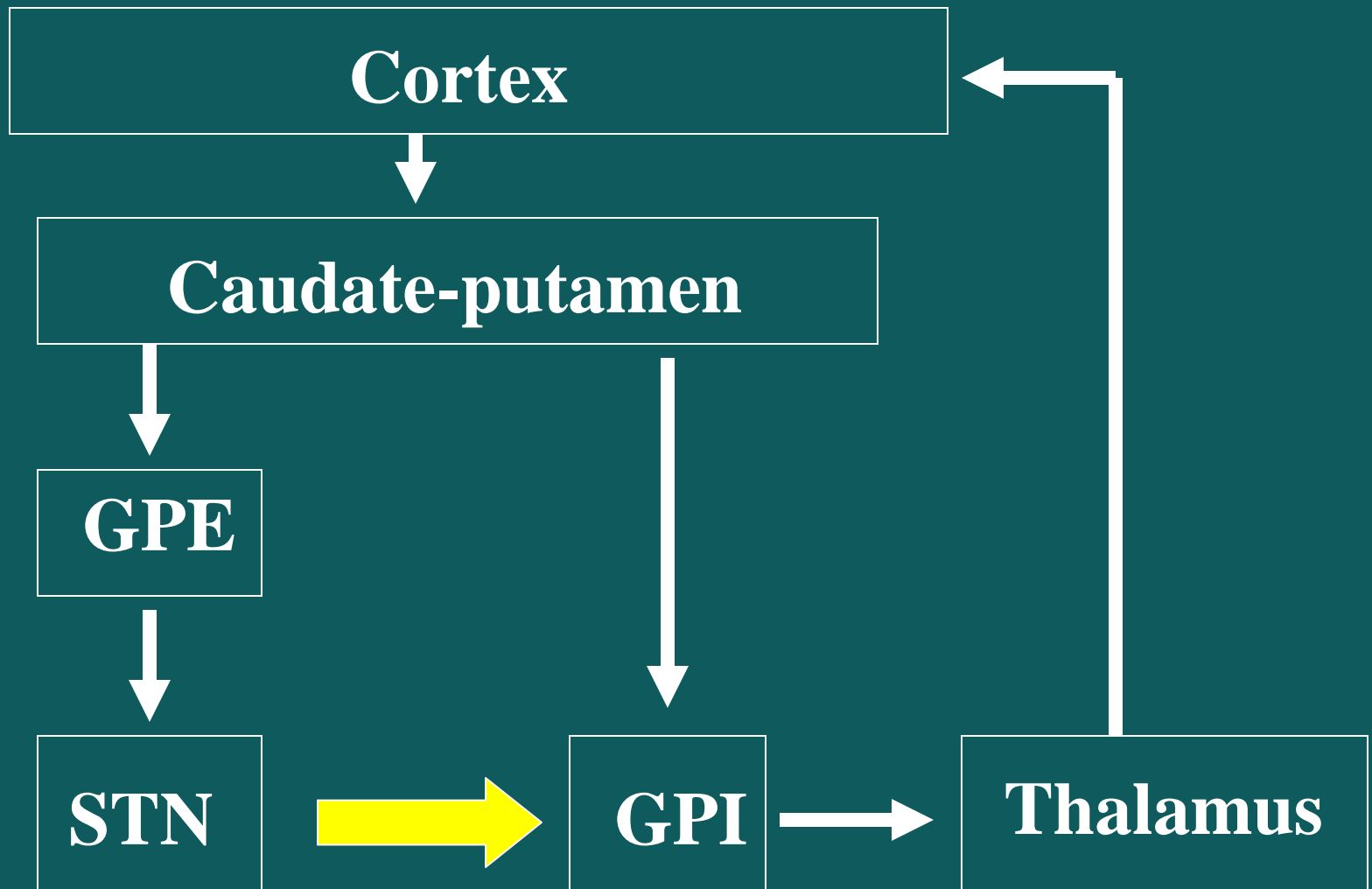
Non-Dopaminergic



Management of motor fluctuations

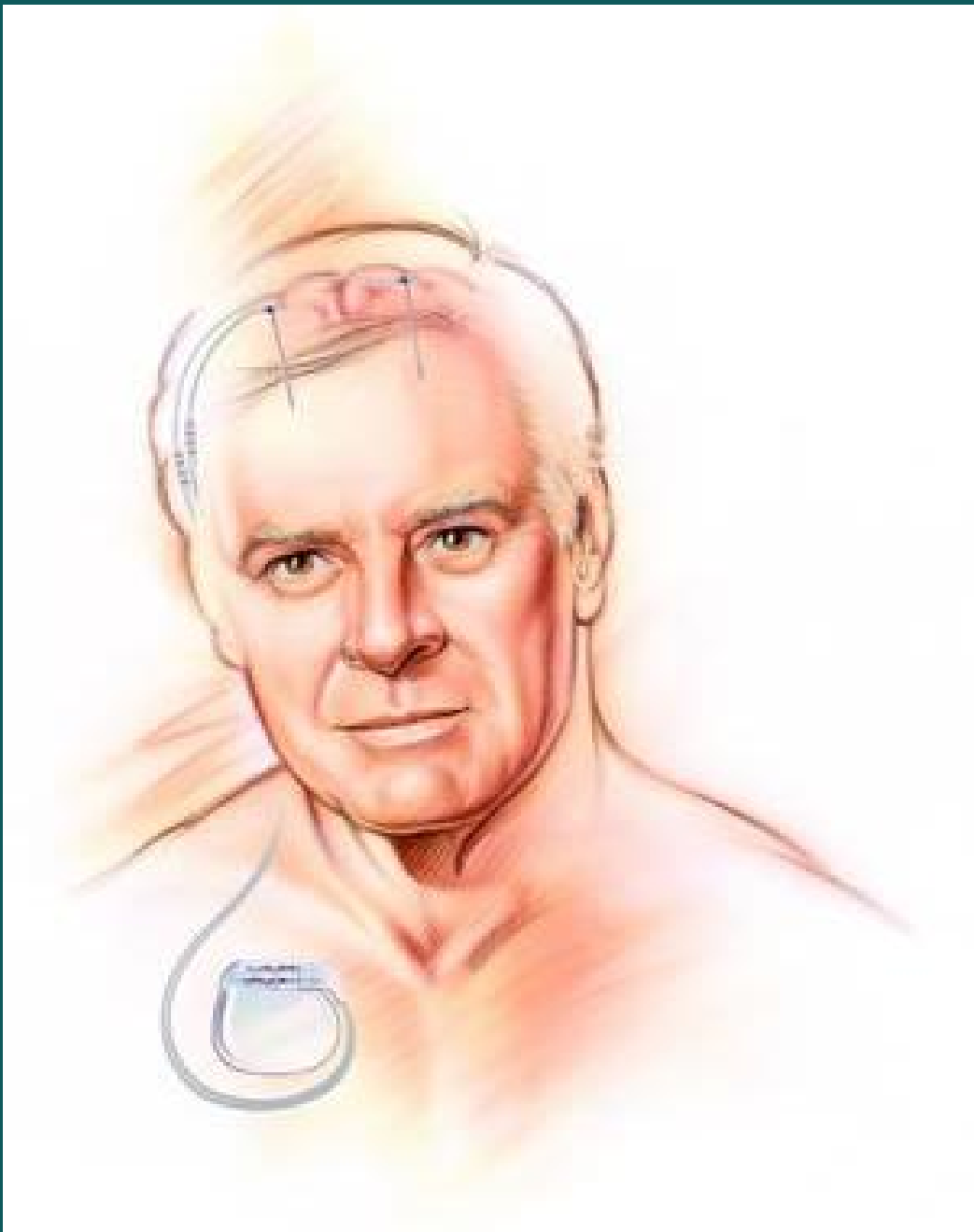
- Adjust levodopa
 - Change dose and interval
 - Different preparation
- Slow the breakdown of levodopa
 - COMT inhibitor
- Add adjunctive agent
 - Amantadine
 - MAO-B inhibitor
 - Dopamine agonist
- Consider surgery

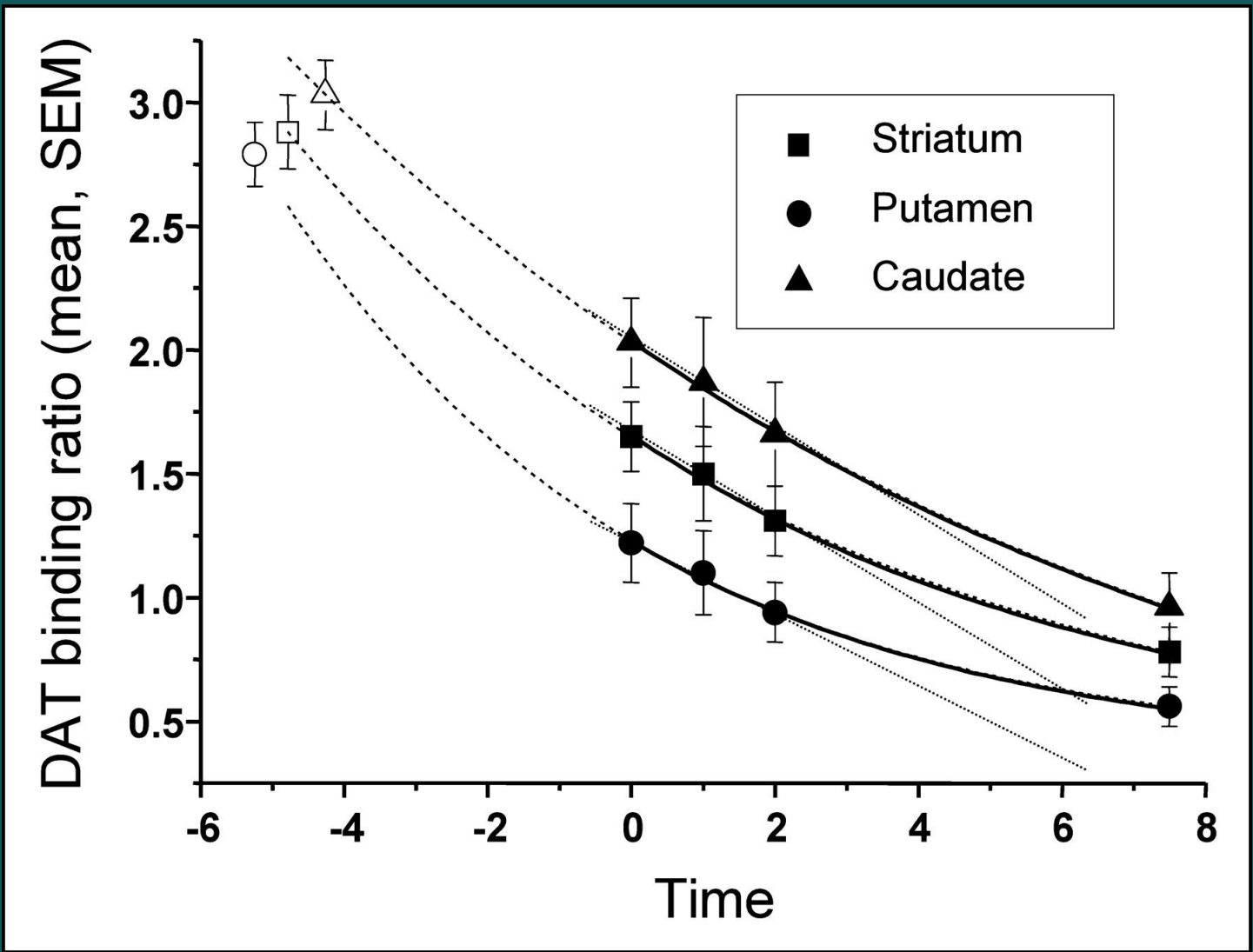




Papa SM, Chase TN. Levodopa-induced dyskinesias improved by a glutamate agonist in parkinsonian monkeys.

Ann Neurol 1996;39:574-578.





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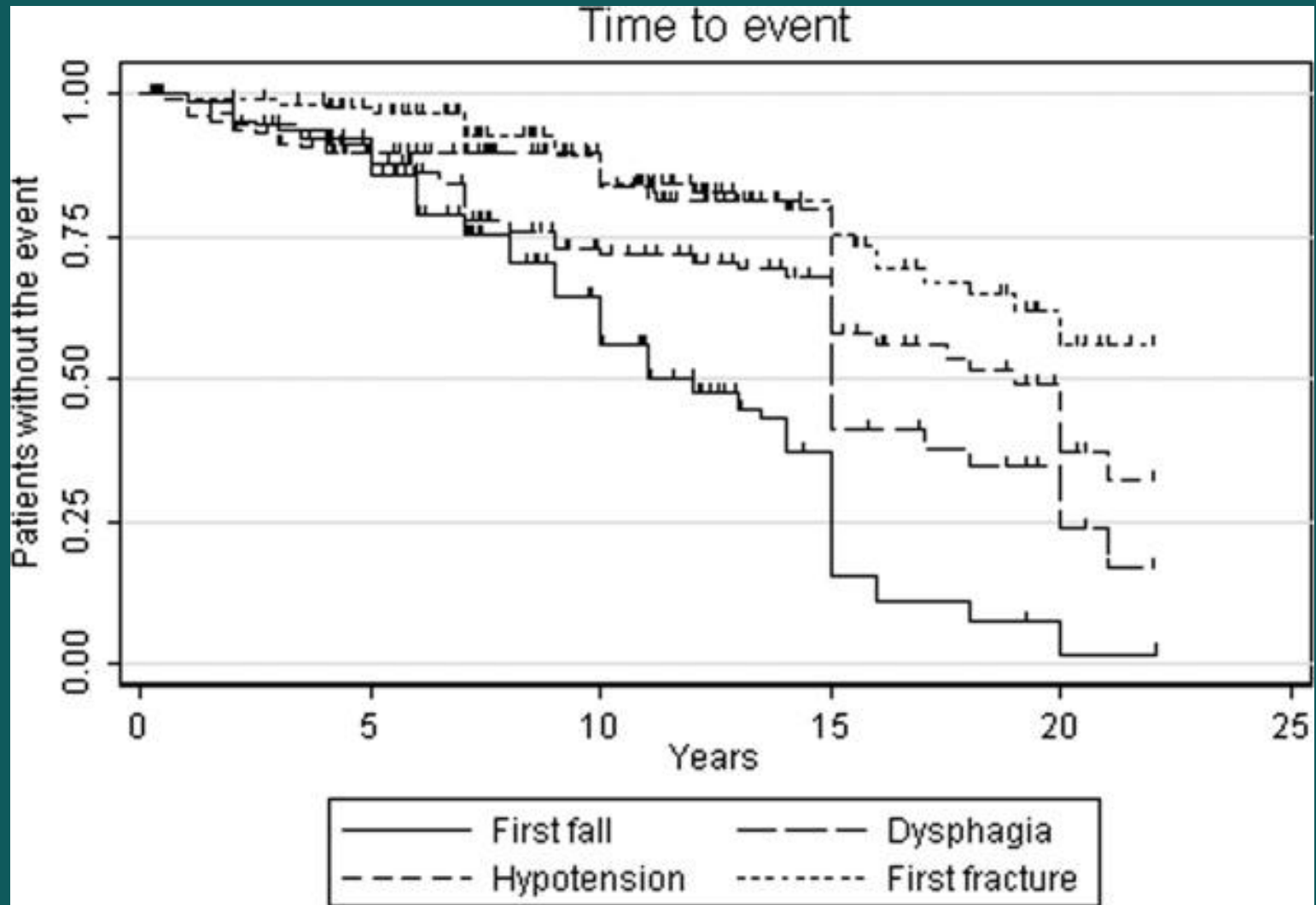
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Sydney progression study

- 149 people; 15 to 18 years follow up
- Mortality ratio = 1.86
- Falls 81%
- Cognitive decline 84%
 - 48% dementia
- Hallucinations and depression 50%
- Postural hypotension 35%
- Urinary incontinence 41%



Don't give up!

Multisystem management

- Falls
- Postural hypotension
- Urinary frequency and incontinence
- Depression
- Drug-induced psychosis
- Dementia