

ECHO Ontario: Care of the Elderly

Dementia: Screening & Assessment



David Conn - Baycrest & U. of Toronto

Jan 29th, 2019

Baycrest



North East Specialized
Geriatric Centre
Centre gériatrique
spécialisé du Nord-Est

Faculty/Presenter Disclosure

- Faculty: **David Conn**
- Relationships with commercial interests:
 - Grants/Research Support: **None**
 - Speakers Bureau/Honoraria: **None**
 - Consulting Fees: **None**

Disclosure of Commercial Support

- This program has **NOT** received financial support other than the support of the MOHLTC
- This program has **NOT** received in-kind support
- Potential for conflict(s) of interest:
None to be disclosed

Mitigating Potential Bias

The information presented in this CME program is based on recent information that is explicitly “evidence-based”.

This CME Program and its material is peer reviewed and all the recommendations involving clinical medicine are based on evidence that is accepted within the profession; and all scientific research referred to, reported, or used in the CME/CPD activity in support or justification of patient care recommendations conforms to the generally accepted standards



North East Specialized
Geriatric Centre
Centre gériatrique
spécialisé du Nord-Est

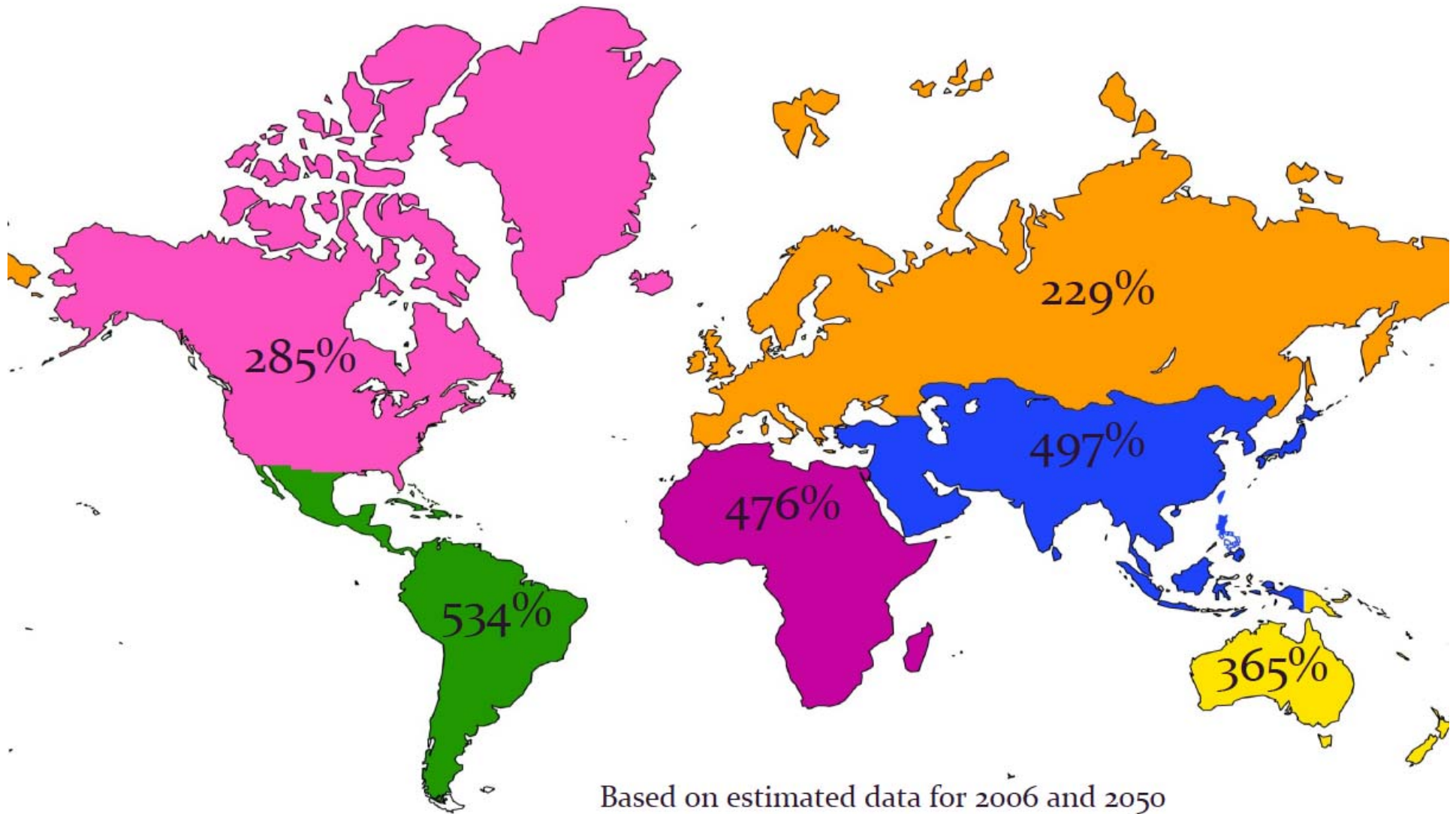


Learning Objectives

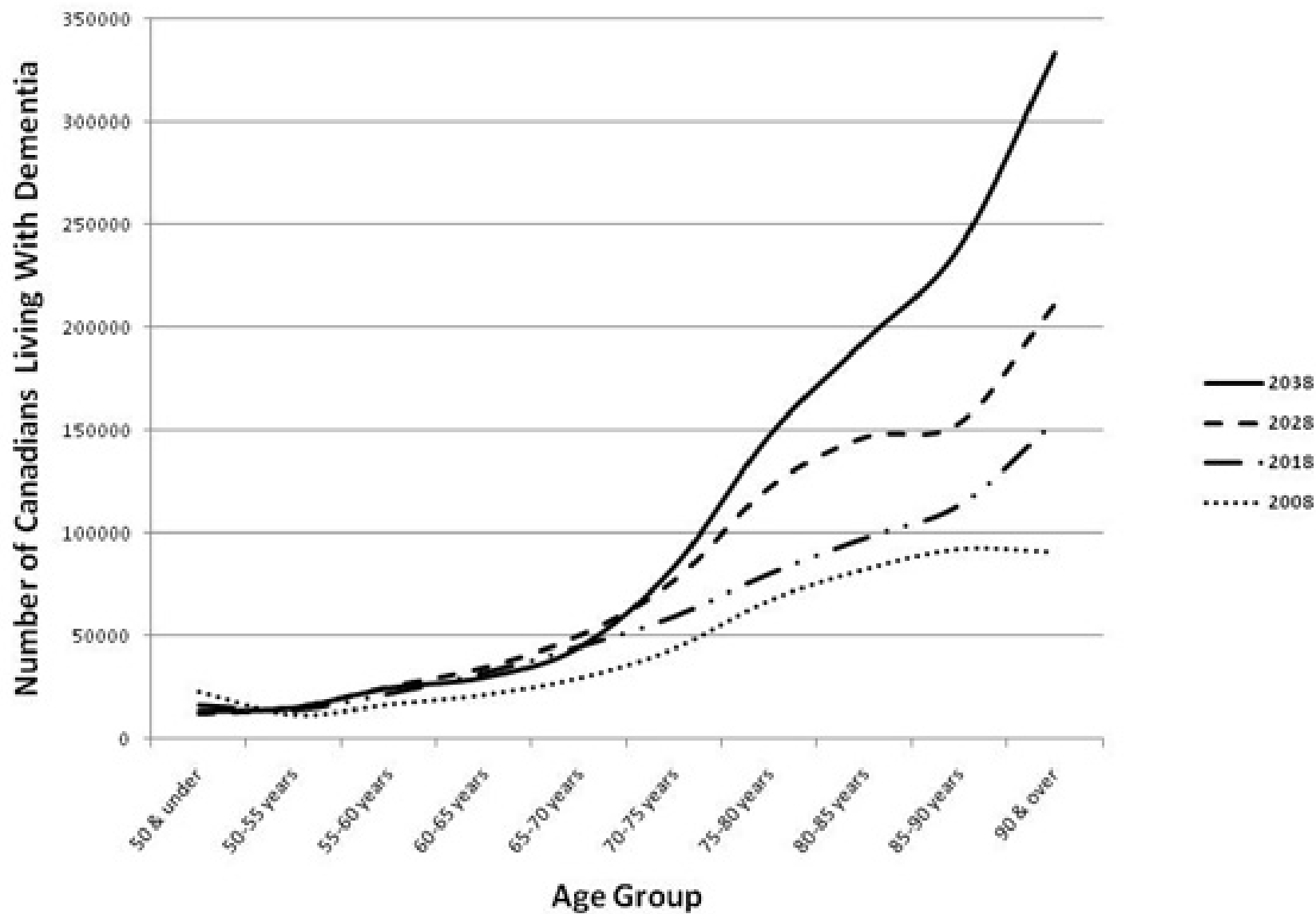
By the end of the session participants will:

- Be aware of some Risk Factors for Dementia
- Be able to select appropriate screening tools and outline the assessment process
- Be able to describe the common subtypes of dementia

Predicted Increase in Alzheimer's Disease Prevalence by 2050



Prevalence of Dementia in Canada by Age Group 2008 to 2038



- Dementia

- an acquired syndrome consisting of a decline in memory and other cognitive functions

DSM-5 Diagnosis: Major Neurocognitive Disorder

- Significant cognitive decline in one or more domains
- Deficits sufficient to interfere with independence
- Not delirium or attributable to another mental disorder
- NOTE: MCI is termed Mild Neurocognitive Disorder in DSM-5



Alzheimer's & Dementia 7 (2011) 263–269

Alzheimer's
&
Dementia

The diagnosis of dementia due to Alzheimer's disease:
Recommendations from the National Institute on Aging-Alzheimer's
Association workgroups on diagnostic guidelines for Alzheimer's disease

Proposed: Probable AD, Possible AD or AD with
evidence of pathophysiological process.

Also MCI due to AD & Preclinical AD



Alzheimer's & Dementia 11 (2015) 718-726

Alzheimer's
&
Dementia

Summary of the evidence on modifiable risk factors for cognitive decline and dementia: A population-based perspective

Matthew Baumgart^a, Heather M. Snyder^{b,*}, Maria C. Carrillo^b, Sam Fazio^c,
Hye Kim^a, Harry Johns^d

^a*Division of Public Policy, Alzheimer's Association, Washington, DC, USA*

^b*Division of Medical & Scientific Relations, Alzheimer's Association, Chicago, IL, USA*

^c*Division of Constituent Relations, Alzheimer's Association, Chicago, IL, USA*

^d*President & CEO, Alzheimer's Association, Chicago, IL, USA*

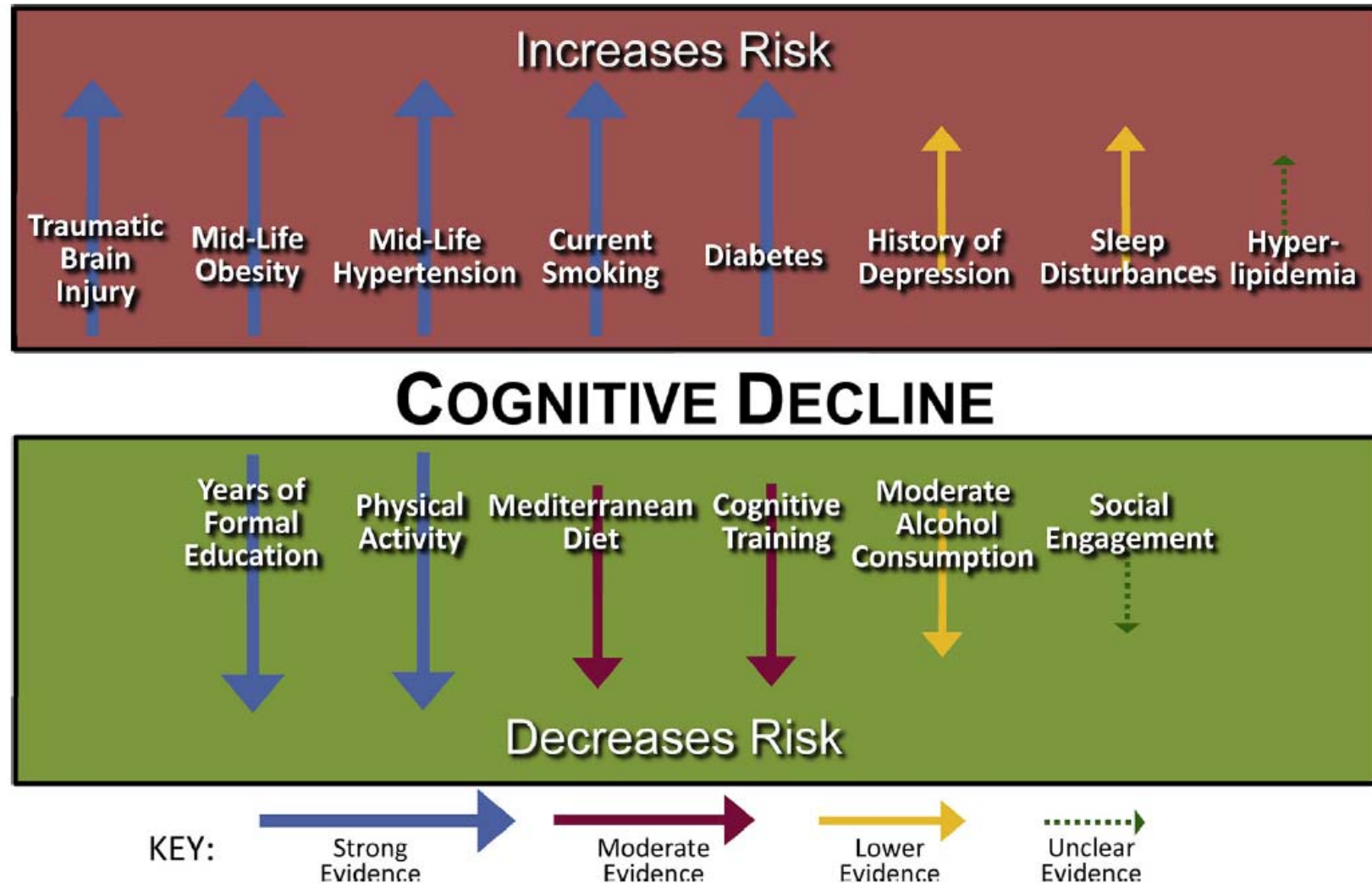


Fig. 1. Strength of evidence on risk factors for cognitive decline.

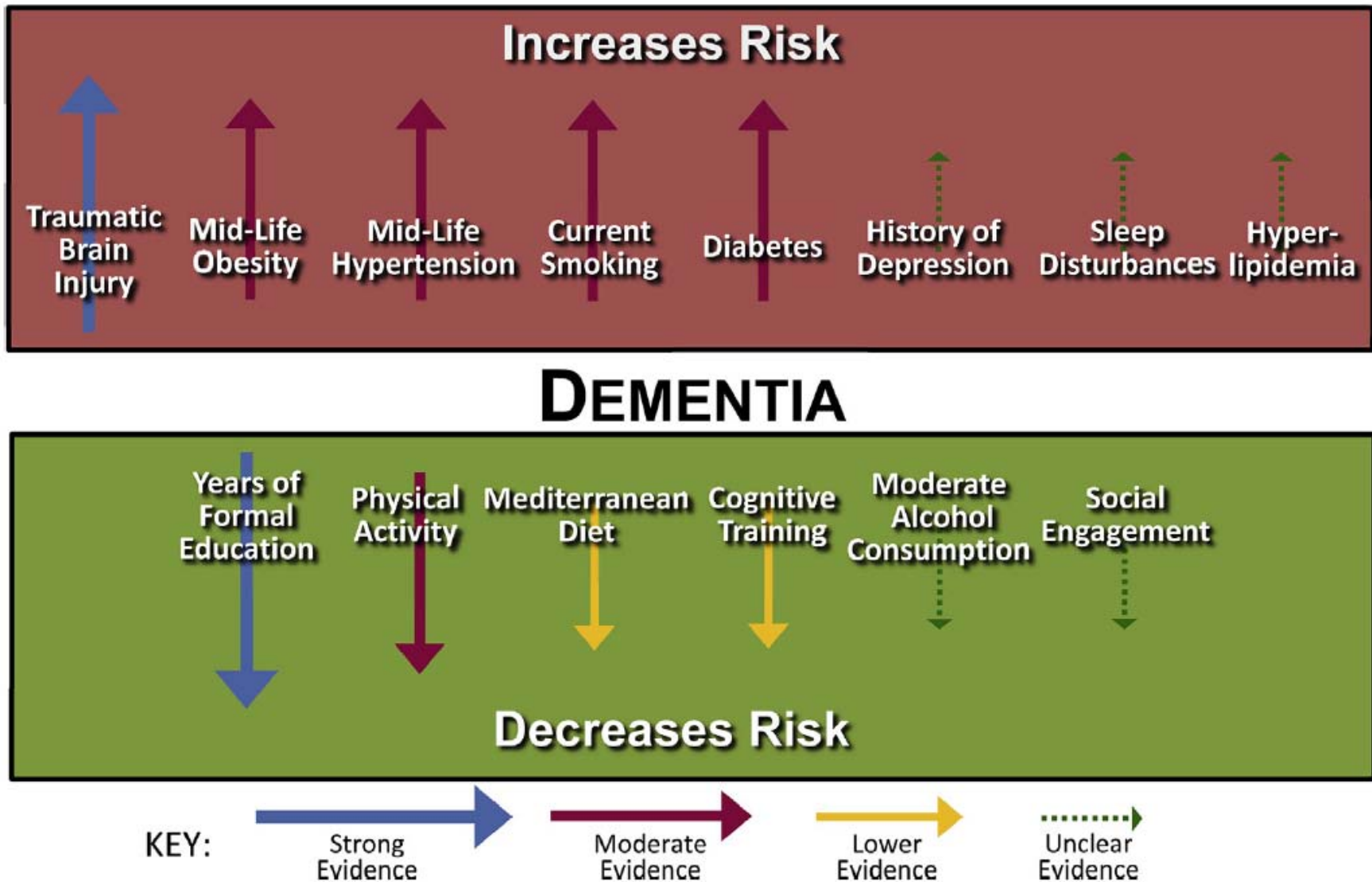


Fig. 2. Strength of evidence on risk factors for dementia.

Early Warning Signs Suggesting Cognitive Challenges

(Adapted from the Dementia Tool box, 2006)

Signs Caregivers Can Detect	Signs Health Professionals Can Detect
<ul style="list-style-type: none">▪ Difficulty performing familiar tasks▪ Problems with language▪ Disorientation of time and place▪ poor and decreased judgment▪ problems with abstract thinking▪ Misplacing things▪ changes in mood and behavior▪ changes in personality▪ loss of initiative▪ memory loss affecting day-to-day function	<ul style="list-style-type: none">▪ Frequent phone calls/appointments – missing/wrong day▪ Poor historian, vague, seems “off, repetitive questions or stories▪ Poor compliance meds/instructions▪ Appearance/mood/personality/behaviour▪ word-finding/decreased social interaction▪ Subacute change in function without clear explanation/frequent visits to ER▪ confusion - surgery/illness/meds▪ weight loss/dwindles/ “failure to thrive”▪ driving – accident/problems/tickets/family concerns▪ Head turning sign (turning to caregiver for answer)

Population Screening

Table 2: Summary of recommendations for screening older people (≥ 65 yr) for cognitive impairment from Canada and elsewhere

Organization	Recommendation
Canadian Task Force on Preventive Health Care (current)	Do not screen asymptomatic older adults (≥ 65 yr) for cognitive impairment
Canadian Task Force on Preventive Health Care (2001) ¹⁵	Insufficient evidence to recommend for or against screening for cognitive impairment
National Institute for Health and Care Excellence (2011) ³⁶	Screening for dementia in general population should not be undertaken
BC Ministry of Health, 2014 ³⁹	Do not screen asymptomatic population
US Preventive Services Task Force (2014) ⁴⁰	Insufficient evidence to assess the balance of benefits and harms of screening for cognitive impairment



**Canadian Task Force
on Preventive Health Care**

Instead of population screening, the CTFPHC
“acknowledges the importance of **clinical
evaluation or case-finding in the context of signs
and symptoms** to ensure patients are attended to
and treated individually.”

Using the Dementia Risk Calculator

The Dementia Risk Calculator Doubling Rule

(de la Torre, 2004, Gauthier et al., 1997 and Siu, 1991)

Risk doubles for every 5 years of age

<65 years	1%
65 years	2%
70 years	4%
75 years	8%
80 years	16%
85 years	32%

Each additional vascular risk factor approximately doubles the risk (One risk factor: risk multiplier is 2; 2 or more risk factors: risk multiplier is 4)

Positive family history doubles the risk. (One family member: risk multiplier is 2; 2 or more family members: risk multiplier is 4)

Overall risk = age risk _____% x family hx risk multiplier ___ x vascular risk multiplier ___ = _____%

Question: Which cognitive screening tool do you find most useful in your practice ?

- a) MMSE (Mini-Mental State Exam)
- b) MoCA (Montreal Cognitive assessment)
- c) Mini-Cog
- d) Clock test alone
- e) Other

Screening Tests

Mini-Mental Status Exam (MMSE)

- Orientation (10 points)
- Registration (3 points)
- Attention and Calculation (5 points)
- Recall (3 points)
- Language (8 points)
- Visuospatial (1 point)
- Total=30, if less than 25, consider dementia.

Normative Data on MMSE

Education	Age (years)													
	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>84
4 th Grade	22	25	25	23	23	23	23	22	23	22	22	21	20	19
8 th Grade	27	27	26	26	27	26	27	26	26	26	25	25	25	23
High School	29	29	29	28	28	28	28	28	28	28	27	27	25	26
College	29	29	29	29	29	29	29	29	29	29	28	28	27	27

Normative scores vary with age
and education level!

MMSE

Pros and Cons

- Pros
 - Widely used and therefore can track cognition over time and between clinicians
 - 5-10 minutes.
- Cons
 - False positives: those with little education.
 - False negatives: those with high premorbid intellectual functioning.

MoCA is better for Mild Cognitive Impairment (MCI) Screening

MONTREAL COGNITIVE ASSESSMENT (MOCA)
Version 7.1 Original Version

NAME :
Education : Date of birth :
Sex : DATE :

VISUOSPATIAL / EXECUTIVE		Copy cube	Draw CLOCK (Ten past eleven) (3 points)	POINTS																		
		[]	<input type="checkbox"/> Contour <input type="checkbox"/> Numbers <input type="checkbox"/> Hands	___/5																		
NAMING					___/3																	
MEMORY		Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.	<table border="1"> <tr> <td></td> <td>FACE</td> <td>VELVET</td> <td>CHURCH</td> <td>DAISY</td> <td>RED</td> </tr> <tr> <td>1st trial</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2nd trial</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		FACE	VELVET	CHURCH	DAISY	RED	1st trial						2nd trial						No points
	FACE	VELVET	CHURCH	DAISY	RED																	
1st trial																						
2nd trial																						
ATTENTION		Read list of digits (1 digit/ sec.). Subject has to repeat them in the forward order [] 2 1 8 5 4 Subject has to repeat them in the backward order [] 7 4 2			___/2																	
Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors		[] FBACMNAAJKLBAFAKDEAAAJAMOFAAB			___/1																	
Serial 7 subtraction starting at 100		[] 93 [] 86 [] 79 [] 72 [] 65	4 or 5 correct subtractions: 3 pts , 2 or 3 correct: 2 pts , 1 correct: 1 pt , 0 correct: 0 pt		___/3																	
LANGUAGE		Repeat : I only know that John is the one to help today. [] The cat always hid under the couch when dogs were in the room. []			___/2																	
Fluency / Name maximum number of words in one minute that begin with the letter F		[] _____ (N ≥ 11 words)			___/1																	
ABSTRACTION		Similarity between e.g. banana - orange = fruit [] train - bicycle [] watch - ruler			___/2																	
DELAYED RECALL		Has to recall words WITH NO CUE	<table border="1"> <tr> <td>FACE</td> <td>VELVET</td> <td>CHURCH</td> <td>DAISY</td> <td>RED</td> </tr> <tr> <td>[]</td> <td>[]</td> <td>[]</td> <td>[]</td> <td>[]</td> </tr> </table>	FACE	VELVET	CHURCH	DAISY	RED	[]	[]	[]	[]	[]	Points for UNCUEDE recall only	___/5							
FACE	VELVET	CHURCH	DAISY	RED																		
[]	[]	[]	[]	[]																		
Optional		Category cue																				
		Multiple choice cue																				
ORIENTATION		[] Date [] Month [] Year [] Day [] Place [] City			___/6																	
© Z.Nasreddine MD		www.mocatest.org		Normal ≥ 26 / 30	TOTAL ___/30																	
Administered by: _____					Add 1 point if ≤ 12 yr edu																	

Very Brief Screening

- Mini-Cog (Borson et al, 2006)
 - 3 item recall
 - clock test
- Dementia Quick Screen
 - Same as above plus:
Animal Name Generation

Patient name: _____

Date: _____

GPCOG Screening Test

Step 1: Patient Examination

Unless specified, each question should only be asked once

Name and Address for subsequent recall test

1. *"I am going to give you a name and address. After I have said it, I want you to repeat it. Remember this name and address because I am going to ask you to tell it to me again in a few minutes: John Brown, 42 West Street, Kensington." (Allow a maximum of 4 attempts).*

Time Orientation

Correct Incorrect

2. *What is the date? (exact only)*

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

Clock Drawing – use blank page

3. *Please mark in all the numbers to indicate the hours of a clock (correct spacing required)*

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

4. *Please mark in hands to show 10 minutes past eleven o'clock (11.10)*

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

Information

5. *Can you tell me something that happened in the news recently? (Recently = in the last week. If a general answer is given, eg "war", "lot of rain", ask for details. Only specific answer scores).*

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

Recall

6. *What was the name and address I asked you to remember*

John

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

Brown

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

42

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

West (St)

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

Kensington

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

(To get a total score, add the number of items answered correctly

Total correct (score out of 9)

If patient scores 9, no significant cognitive impairment and further testing not necessary.

If patient scores 5-8, more information required. Proceed with Step 2, informant section.

If patient scores 0-4, cognitive impairment is indicated. Conduct standard investigations.

Informant Interview

Date: _____

Informant's name: _____

Informant's relationship to patient, i.e. informant is the patient's: _____

These six questions ask how the patient is compared to when s/he was well, say 5 – 10 years ago
Compared to a few years ago:

- | | Yes | No | Don't Know | N/A |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| ▪ Does the patient have more trouble remembering things that have happened recently than s/he used to? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| ▪ Does he or she have more trouble recalling conversations a few days later? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| ▪ When speaking, does the patient have more difficulty in finding the right word or tend to use the wrong words more often? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| ▪ Is the patient less able to manage money and financial affairs (e.g. paying bills, budgeting)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Is the patient less able to manage his or her medication independently? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Does the patient need more assistance with transport (either private or public)?
(If the patient has difficulties due only to physical problems, e.g. bad leg, tick 'no') | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

(To get a total score, add the number of items answered 'no', 'don't know' or 'N/A')

Total score (out of 6)

If patient scores 0-3, cognitive impairment is indicated. Conduct standard investigations.

Assessment

- Taking the patient's history
- Interviewing caregiver / family
- Cognitive tests
- Basic lab tests
- Physical examination
- Structural imaging – if certain criteria are met

ref: CCCDTD-3

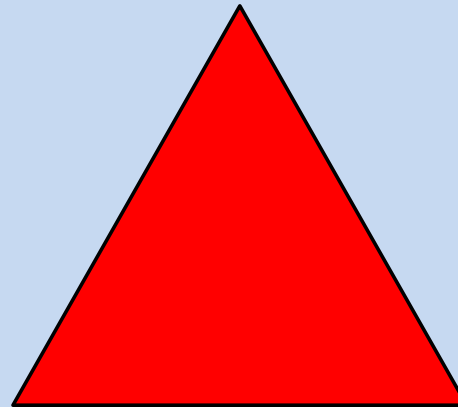
Caregiver Informant screen (ABC concerns)
Please tick items in the ABCs where you have concerns

A = ADL's

Finances
Shopping
Driving
Cooking
Travel
Laundry

B = Behaviour

Anger
Irritability
Apathy
Depression



C = Cognition

Forgetfulness
Repetitive questions/stories
Word finding problems
Misplacing objects/getting lost

Benefits of early cognitive assessment (adapted from Dalziel, 2007)

Social Benefits	Medical Benefits
Allows self determination Early caregiver education/potential lightening of caregiver burden Safety: compliance, driving, cooking Advance directives planning Better quality of life Social/financial planning Earlier identification of driving risk	Reversible cause/component Risk factor treatment Compliance strategies Treatment of other diseases Earlier AChEI treatment Crisis avoidance

Assessment of Function is more important than any cognitive test: many tools available

Has There Been An Effect On Functional Activities?

<u>Instrumental Activities of Daily Living</u>	Independent	Can do with difficulty	Needs some help	Dependent on others
1. Pay bills/manage finances (forgets to pay bills, pays bills twice)	0	1	2	3
2. Plan meals and organize shopping (food spoiled)	0	1	2	3
3. Food preparation/Cooking (oven or stove left on, food has "funny" taste, not properly cooked)	0	1	2	3
4. Ability to deal with emergencies (fire, fall, medical emergency, lock outside, power outages)	0	1	2	3
5. Manage medication (misses doses, takes too many)	0	1	2	3
6. Transportation (driving issues, gets lost, wandering)	0	1	2	3
7. Plan trip and outings	0	1	2	3
8. Home maintenance	0	1	2	3
9. Housekeeping/laundry (difficulty using appliances)	0	1	2	3
10. Ability to carry out hobbies	0	1	2	3
11. Telephone use	0	1	2	3
<u>Activities of Daily Living</u>				
1. Feeding	0	1	2	3
2. Bathing	0	1	2	3
3. Grooming (hair, shaving, nails, makeup)	0	1	2	3
4. Dressing	0	1	2	3
5. Toileting	0	1	2	3
6. Transfers	0	1	2	3
7. Ambulation	0	1	2	3
8. Climbing stairs	0	1	2	3

(Adapted from the Dementia Tool Box, 2006)

Other resources: (see appendix)

The Modified Physician Self-Maintenance Scale /Instrumental Activities of Daily Living Scale
Lawton-Brody

Functional Assessment Questionnaire (FAQ)

SMAF and e-SMAF – e-mail to get French and English copies and information:

iugs@ssss.gouv.qc.ca

Table 3. Studies Recommended by the American Geriatrics Society for Patients with Suspected Dementia

<i>Laboratory tests</i>	<i>Imaging tests</i>	<i>Tests to consider in patients with specific risk factors</i>
Calcium level Complete blood count Complete metabolic panel Folate level Thyroid-stimulating hormone level* Vitamin B ₁₂ level*	Computed tomography or magnetic resonance imaging of the brain if any of the following are present: <ul style="list-style-type: none"> • Abrupt or rapid decline • Age younger than 60 years • Focal deficits • Predisposing conditions Consider positron emission tomography if definitive diagnosis will change management decisions	Cerebrospinal fluid analysis Human immunodeficiency virus test Lyme titer Rapid plasma reagin test

*—The only tests routinely recommended by the American Academy of Neurology for all patients with suspected dementia are thyroid-stimulating hormone and vitamin B₁₂ levels.²⁸

Information from references 27 and 28.

TABLE 4.

Recommendations from CCCDTD2 about CT scan needed if:

- age less than 60 years
- rapid (e.g., 1 or 2 months) unexplained decline in cognition or function
- “short” duration of dementia (less than 2 years)
- recent and significant head trauma
- unexplained neurological symptoms (e.g. new onset of severe headache or seizures)
- history of cancer (especially in sites and types that metastasize to the brain)
- use of anticoagulants or history of bleeding disorder
- history of urinary incontinence and gait disorder early in the course of dementia (as may be found in normal pressure hydrocephalus)
- any new localizing sign (e.g., hemiparesis or a Babinski reflex)
- unusual or atypical cognitive symptoms or presentation (e.g. progressive aphasia)
- gait disturbance

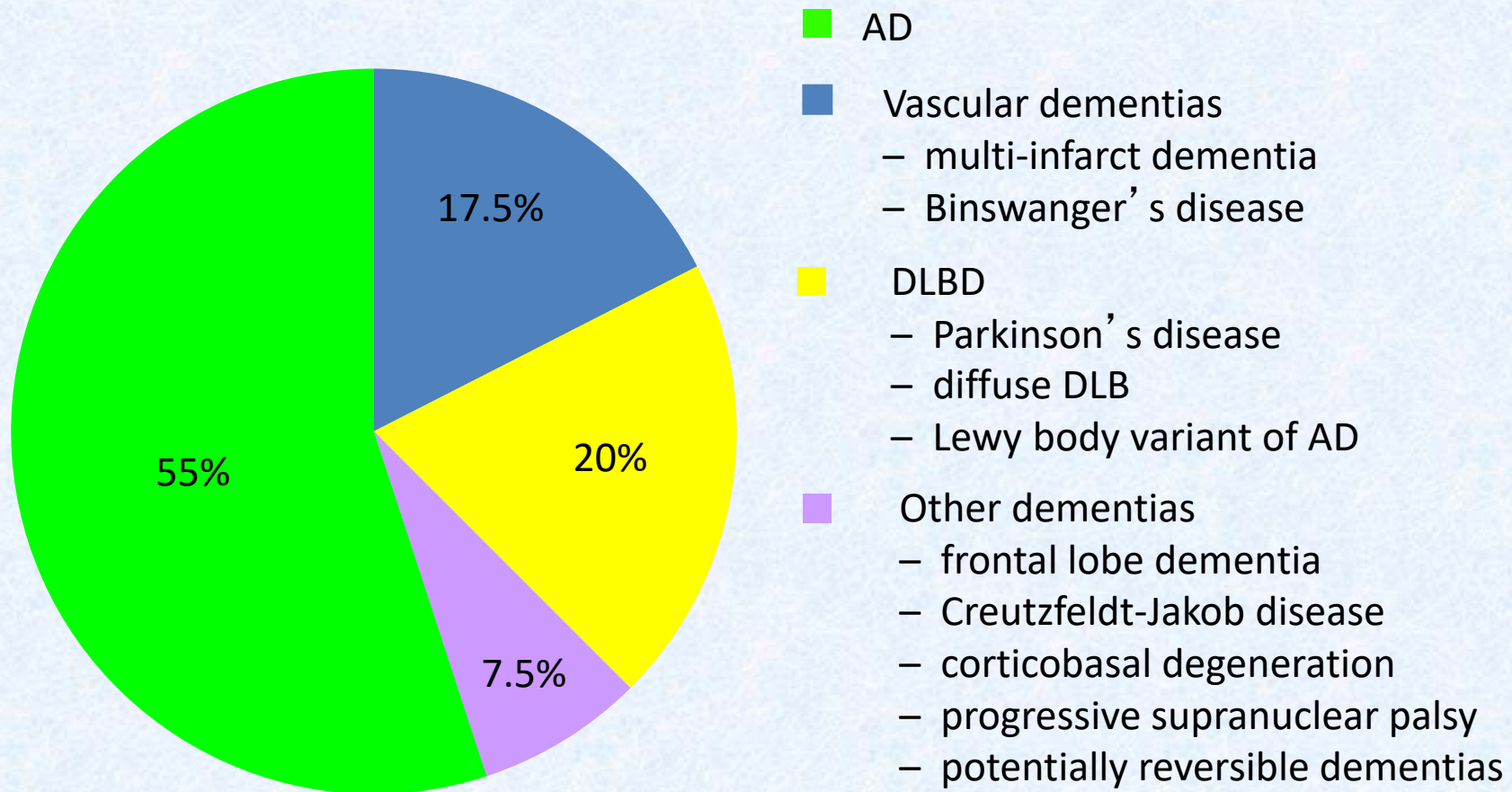
Table 1. Key Findings and Suggested Diagnoses in Patients with Cognitive Dysfunction

<i>Key findings on history and physical examination</i>	<i>Suggested diagnosis</i>
Ascending paresthesias, tongue soreness, limb weakness, weight loss	Vitamin B ₁₂ deficiency
Broad-based shuffling gait, urinary incontinence	Normal pressure hydrocephalus
Current use of psychoactive drugs, such as benzodiazepines or anticholinergics	Adverse effects from medication
Depressed mood, anhedonia, feelings of worthlessness, flat affect, slowed speech	Depression
Fatigue, cold intolerance, constipation, weight gain, reduced body hair	Hypothyroidism
Head trauma within the previous three months, headache, seizures, hemiparesis, papilledema	Subdural hematoma
History of alcoholism, nystagmus or extraocular muscle weakness, broad-based gait and stance	Wernicke-Korsakoff syndrome
History of high-risk sexual behavior or drug use, hyperreflexia, incoordination, peripheral neuropathy	Human immunodeficiency virus–associated dementia
History of high-risk sexual behavior or drug use, hyporeflexia, papillary abnormalities, decreased proprioception	Neurosyphilis
Recent hospitalization or acute illness, inattention, fluctuating behavioral changes, altered level of consciousness	Delirium

Simmons et al, 2011

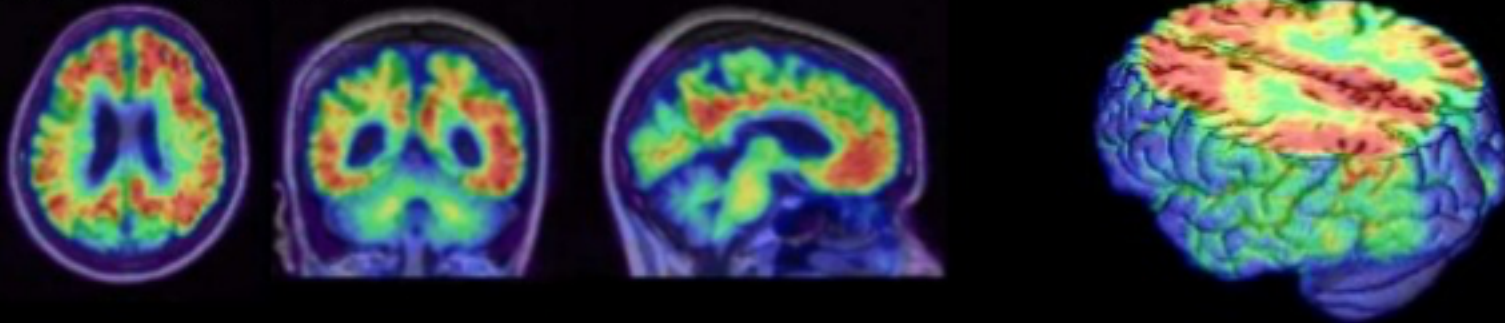
Types of Dementia

(mixed not included)

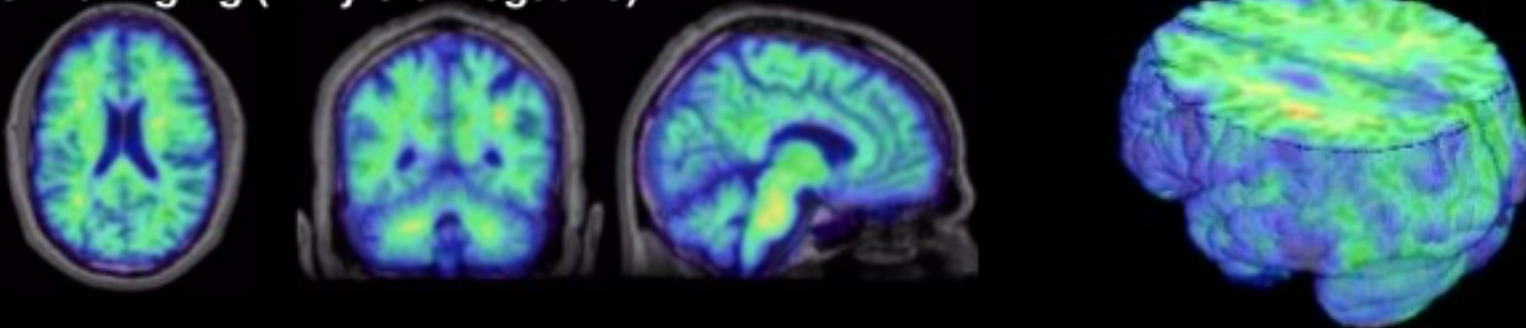


Amyloid PET Imaging in Aging

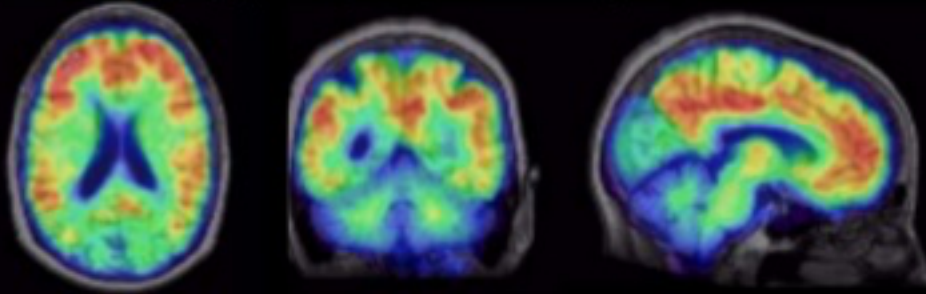
Alzheimer's Disease



Normal Aging (Amyloid Negative)



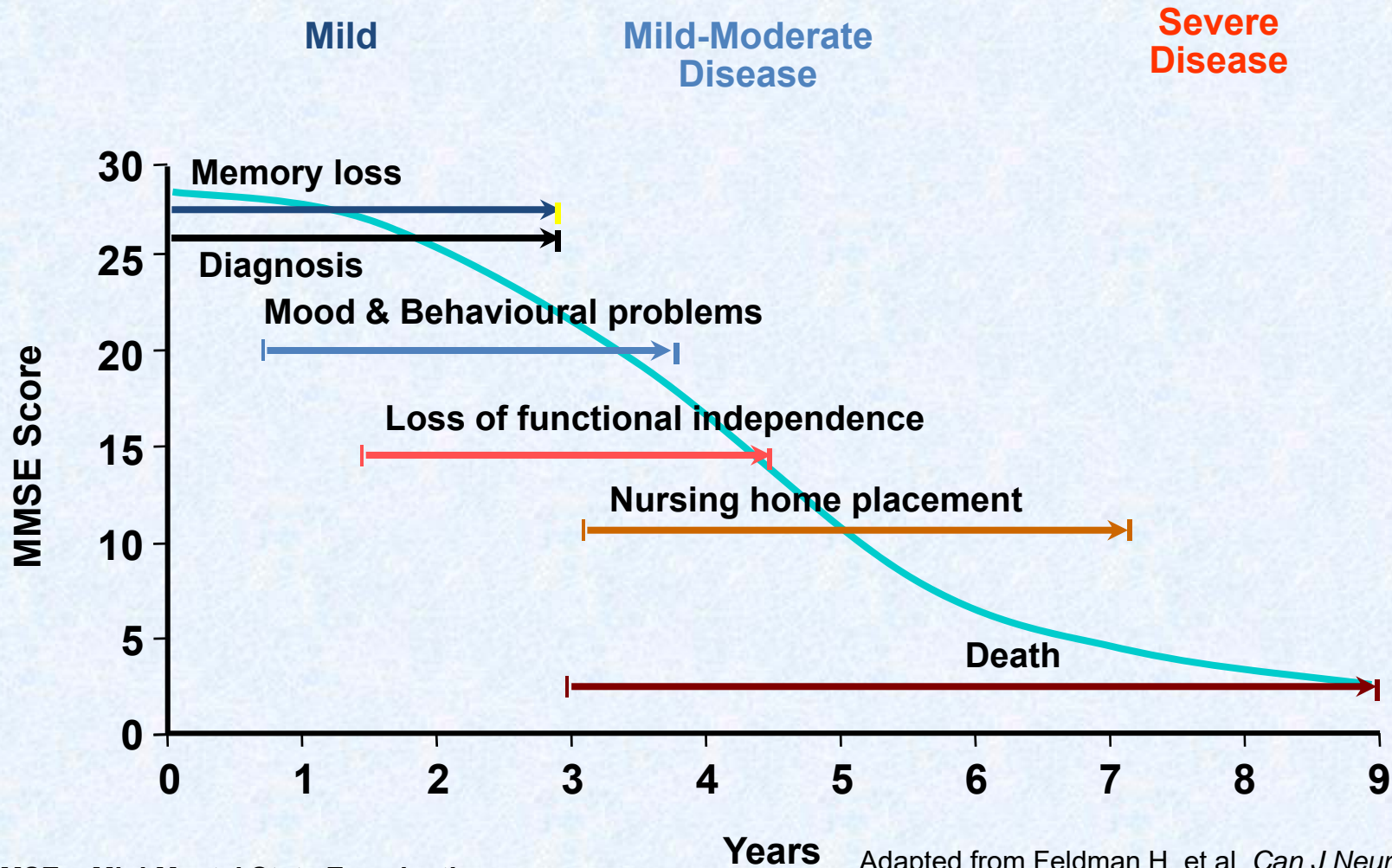
Normal Aging (Amyloid Positive)



30% of normal older people are amyloid positive

S. Landau, UCB

Course of the Disease



MMSE = Mini Mental State Examination

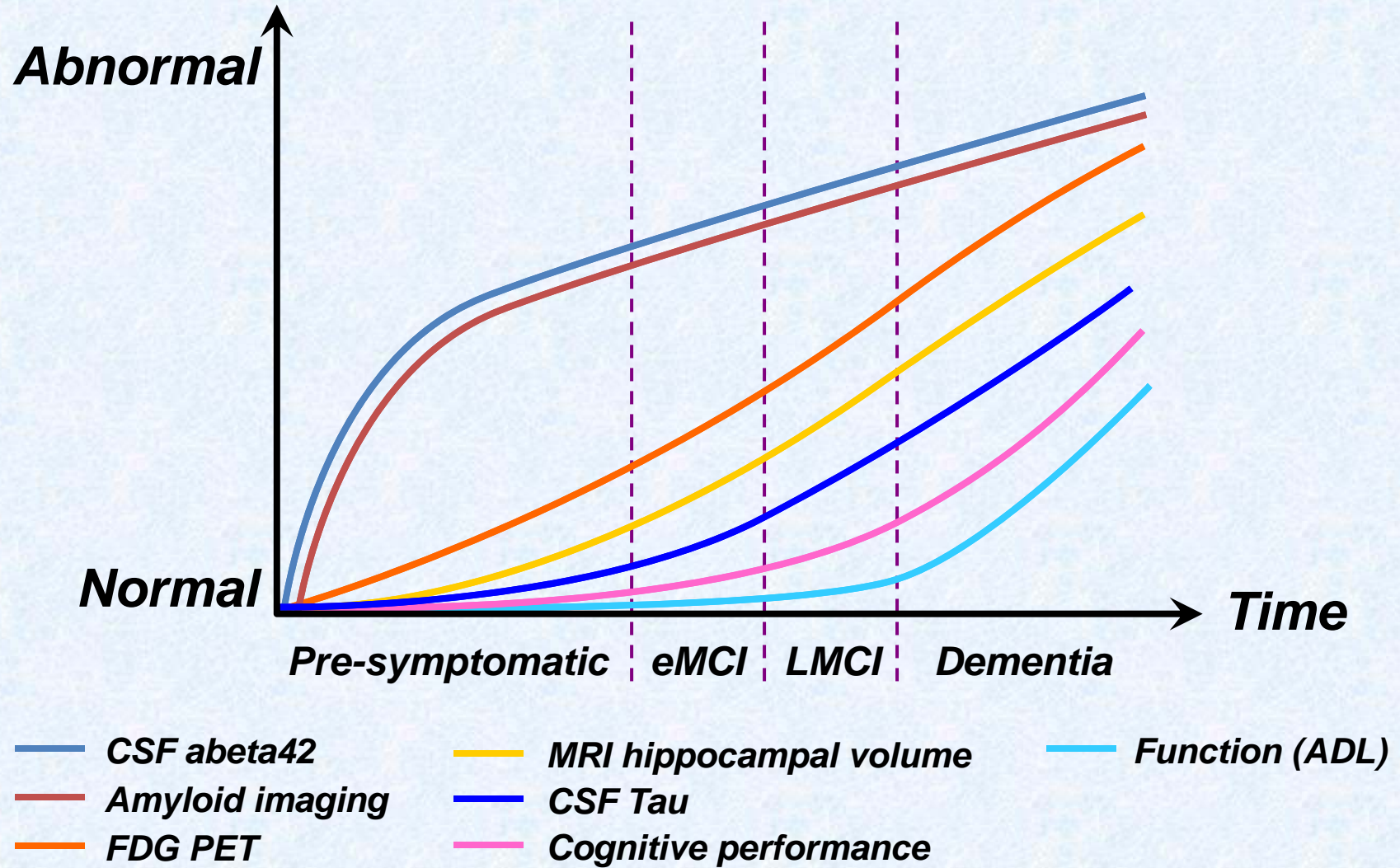
Adapted from Feldman H, et al. *Can J Neurol Sci* 2001; 28 (Suppl 1):S17-S27.



North East Specialized
Geriatric Centre
Centre gériatrique
spécialisé du Nord-Est



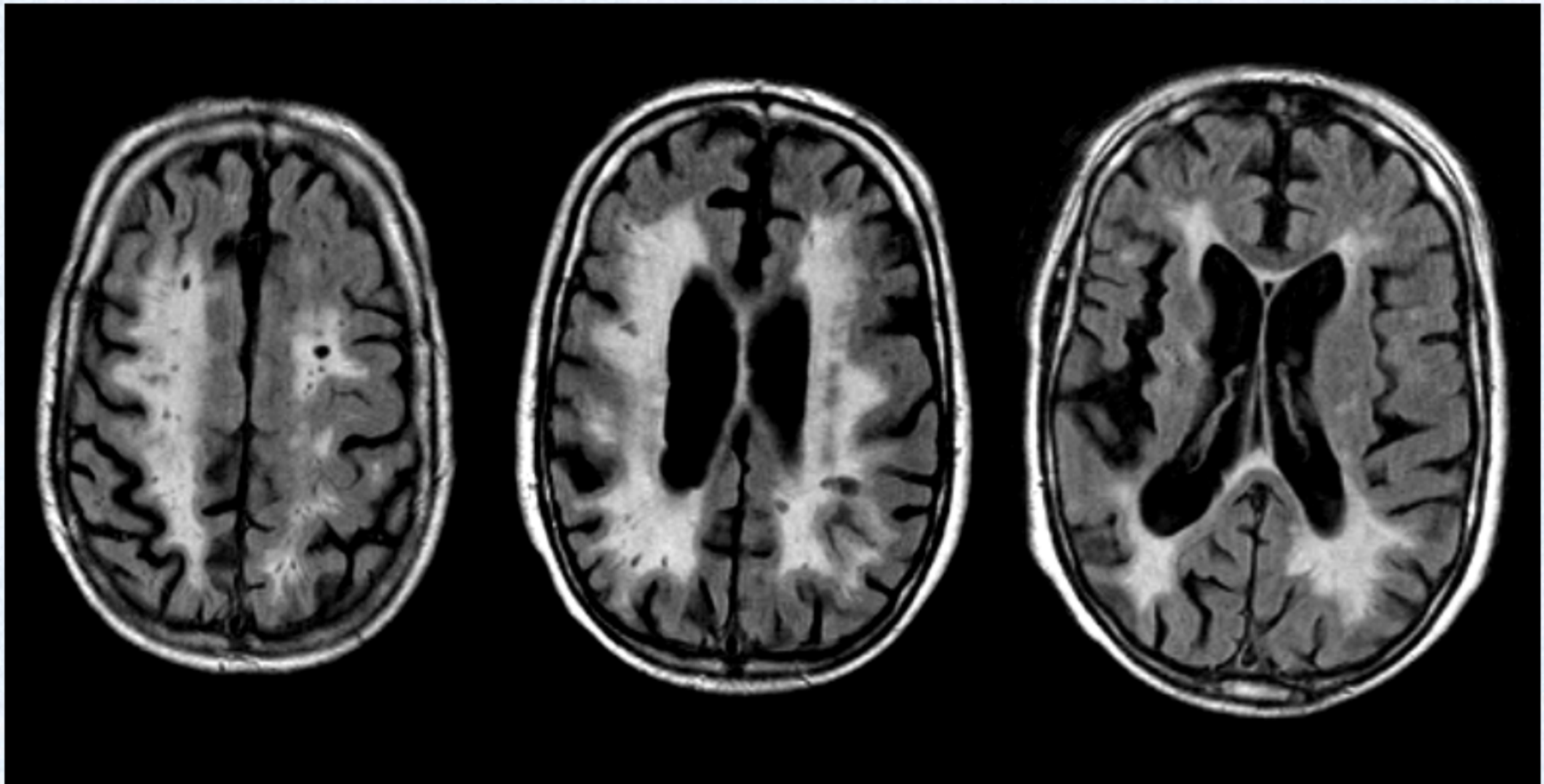
AD Progression



Vascular Dementia – classic features

- Abrupt onset
- Stepwise progression
- Memory problems (not predominant)
- Impaired executive function
- Emotional lability
- History of cerebrovascular risk factors
- Focal neurological signs and symptoms or neuroimaging evidence

Vascular Dementia



Scheltens, 2001.

Alzheimer's disease and vascular dementia share common risk factors

- hypertension
- generalized atherosclerosis
- coronary heart disease
- atrial fibrillation
- diabetes mellitus
- hyperlipidemia
- elevated plasma homocysteine
- white matter lesions
- history of stroke

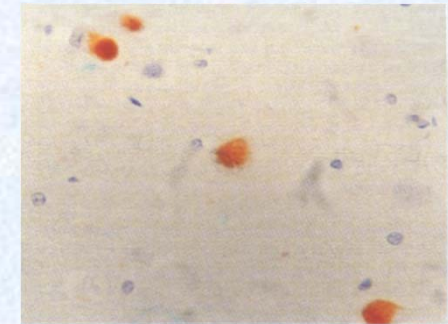
Skoog I. Neuroepidemiology 1998;17:2-9.

MacPherson KM, et al. Perspectives in Cardiology 2001;June/July:19-26.

Seshadri S, et al. N Engl J Med;346:476-483.

Dementia With Lewy Bodies

- Characterized by 3 core symptoms:
 - Fluctuating cognitive impairment (~80%)
 - Persistent visual hallucinations (>60%)
 - Parkinsonism (65%–70%)



Also:

- Systematized delusions (~70%)
- Depression (38%)
- Neuroleptic sensitivity (>50%)
- REM Sleep Disorder

Summary of Personality/Behavioral Symptoms of Frontal Lobe Disorders

- **POSITIVE**

- Disinhibition
- Impulsivity
- Vulgarly
- Irritability
- Emotional lability
- Inappropriate laughter, crying
- Bizarre social behavior

- **NEGATIVE**

- Apathy
- Reduced initiative (Abulia)
- Reduced interest in daily activities/self-care
- Akinetic mutism
- Social withdrawal

Terminology

Frontotemporal Lobar Degeneration (FTLD)

- Behavioural variant frontotemporal dementia (bvFTD)
- Semantic dementia (SD)
- Non-fluent progressive aphasia (NFPA)

Neary et al, 1998

Possible bvFTD (at least 3 of following)

- Early behavioural disinhibition
- Early apathy or inertia
- Early loss of sympathy or empathy
- Early perseverative, stereotyped or compulsive/ritualistic behaviour
- Hyperorality and dietary changes
- Neuropsychological profile: executive dysfunction with relative sparing of memory and visuospatial function

Rascovsky et al. Brain 134:2456-77, 2011

Probable bvFTD

Possible bvFTD plus

- Functional decline
- Imaging consistent with one of
 - i) Frontal and /or anterior temporal atrophy (MRI or CT)
 - ii) Frontal and/or anterior temporal hypoperfusion or hypometabolism (SPECT or PET)

Rascovsky et al. Brain 134:2456-77, 2011

Dementia: Care & Management

- Optimal Environment
- Person-Centred Care
- Caregiver education & support / respite
- Psychosocial interventions
- Optimal healthcare
- Pharmacological treatment

Ideal Goals for Dementia Medications:

- Slow course of disease
- Improve memory/cognition
- Improve daily function
- Improve behavioural abnormalities
- Improve mood, quality of life

Cholinergic Treatment of AD and related dementias

- Aricept[®] (donepezil hydrochloride) – approved 1997
- Exelon[®] (rivastigmine) – approved 2000
- Reminyl[®] (galantamine) – approved 2001
- Note: Memantine (Ebixa) works on Glutamate receptors (blocks NMDA).

Question: From your experience - Please rate the overall effectiveness of Dementia Medications

- a) Very useful
- b) A little useful
- c) Neither useful or harmful
- d) A little harmful
- e) Very harmful

GUIDELINES FOR USE

- Caution in patients with **bradycardia or cardiac conduction problems**, COPD, Peptic Ulcers
- Assess cognitive and functional level at baseline
- Cholinesterase inhibitors covered by ODB if AD / related disorders plus MMSE of 10 to 26.
- Review regularly (e.g. every 3 months)
- Diaries for caregiver

Can we prevent / delay Dementia ?

Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability (FINGER) study

A proof-of-concept randomised controlled trial **assesses a multidomain approach to prevent cognitive decline** in at-risk elderly people from the general population.

Double-blind randomised controlled trial; aged 60–77 years

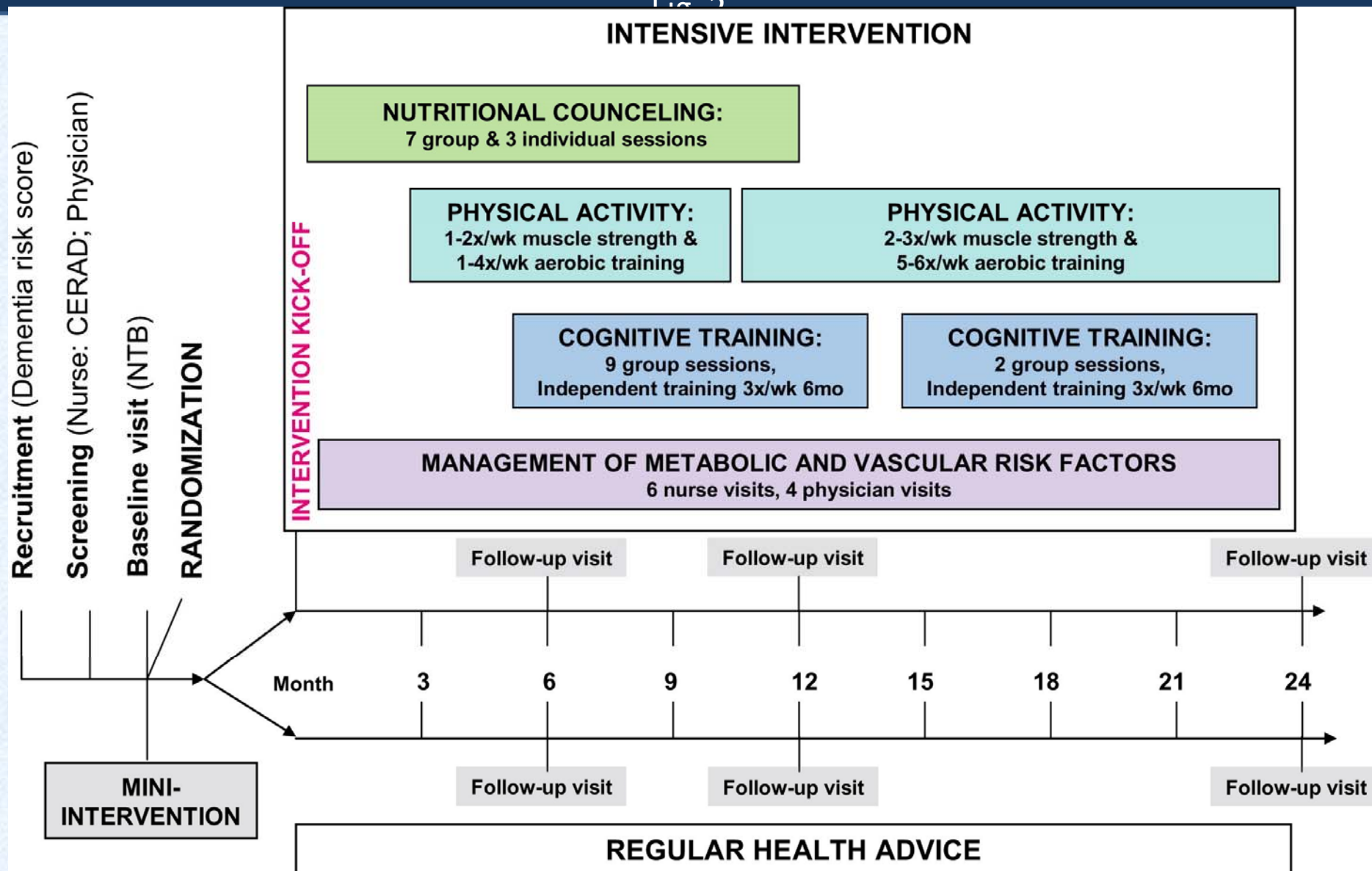
2 year multidomain intervention (diet, exercise, cognitive training, vascular risk monitoring), or a control group (general health advice).

Primary outcome: change in cognition - comprehensive neuropsychological test battery (NTB) Z score.

Screened 2654 individuals and randomly assigned 1260 to the intervention group (n=631) or control group (n=629).

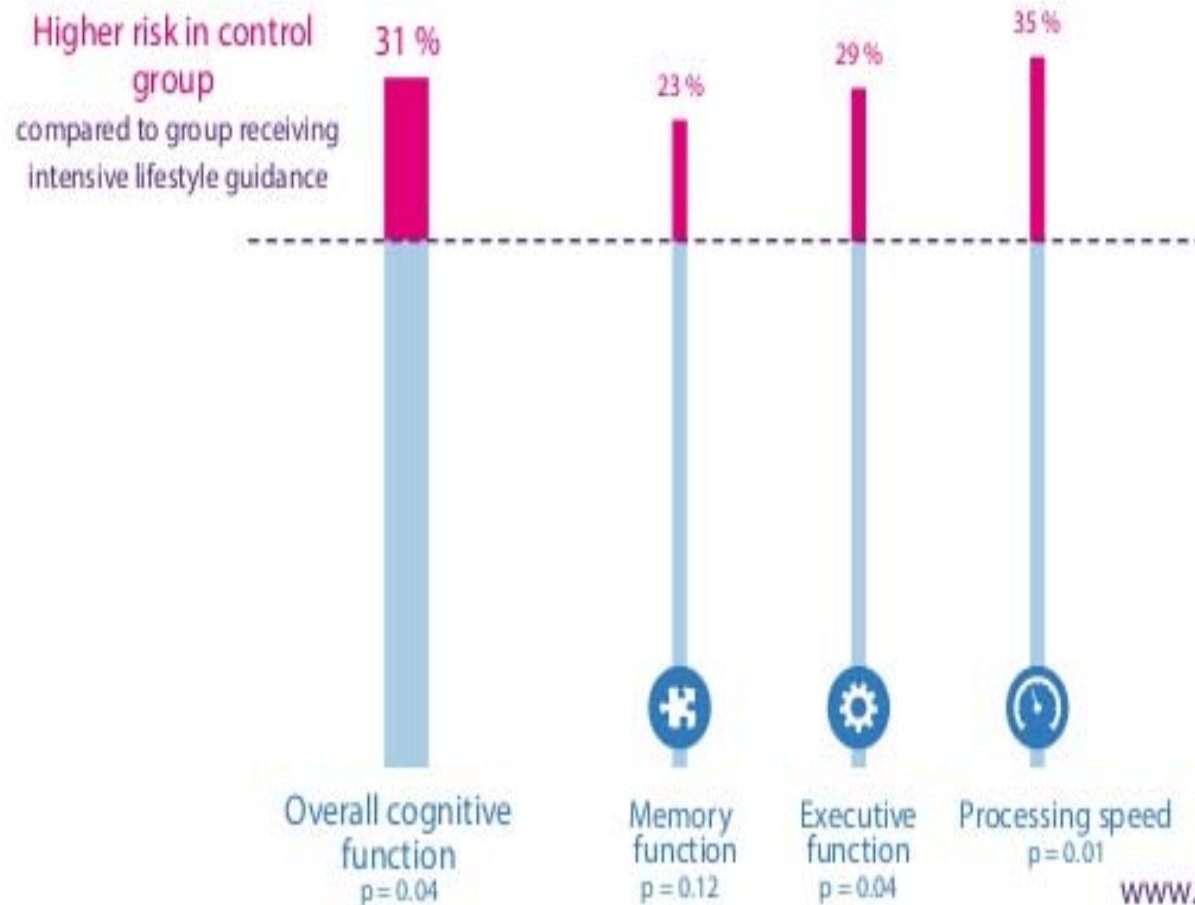
Miia Kivipelto et al. Lancet; Volume 385, No. 9984, p2255–2263, 6 June 2015

Fig. 2



Cognitive decline can be prevented by implementing lifestyle changes

Results from the FINGER research project show that when people received regular health advice, the risk of cognitive decline was 31 % higher than when they received intensive lifestyle guidance.



The Fountain of Health Initiative

www.fountainofhealth.ca

**Bringing Seniors' Mental Health Promotion into
Clinical Practice**



Baycrest



North East Specialized
Geriatric Centre
Centre gériatrique
spécialisé du Nord-Est

FoH 5 Key Messages



Social Activity

Positive Thinking

Physical Activity

Mental Health

Lifelong Learning

Baycrest



North East Specialized
Geriatric Centre
Centre gériatrique
spécialisé du Nord-Est



Thank you!



Baycrest



North East Specialized
Geriatric Centre
Centre gériatrique
spécialisé du Nord-Est

