



**Karolinska
Institutet**

Memory clinic introduction

Maria Eriksdotter, MD, PhD

Dean KI South, professor,

Div Clin geriatrics, dept NVS; KI

Senior consultant geriatric medicine

Karolinska university hospital, Huddinge

Karolinska Institutet

One university – two campuses

- Campus Solna
- Campus Flemingsberg

Collaboration with and presence at the main hospitals, local health authorities and primary care facilities in the Stockholm region.



KI at Campus Flemingsberg



Campus Flemingsberg

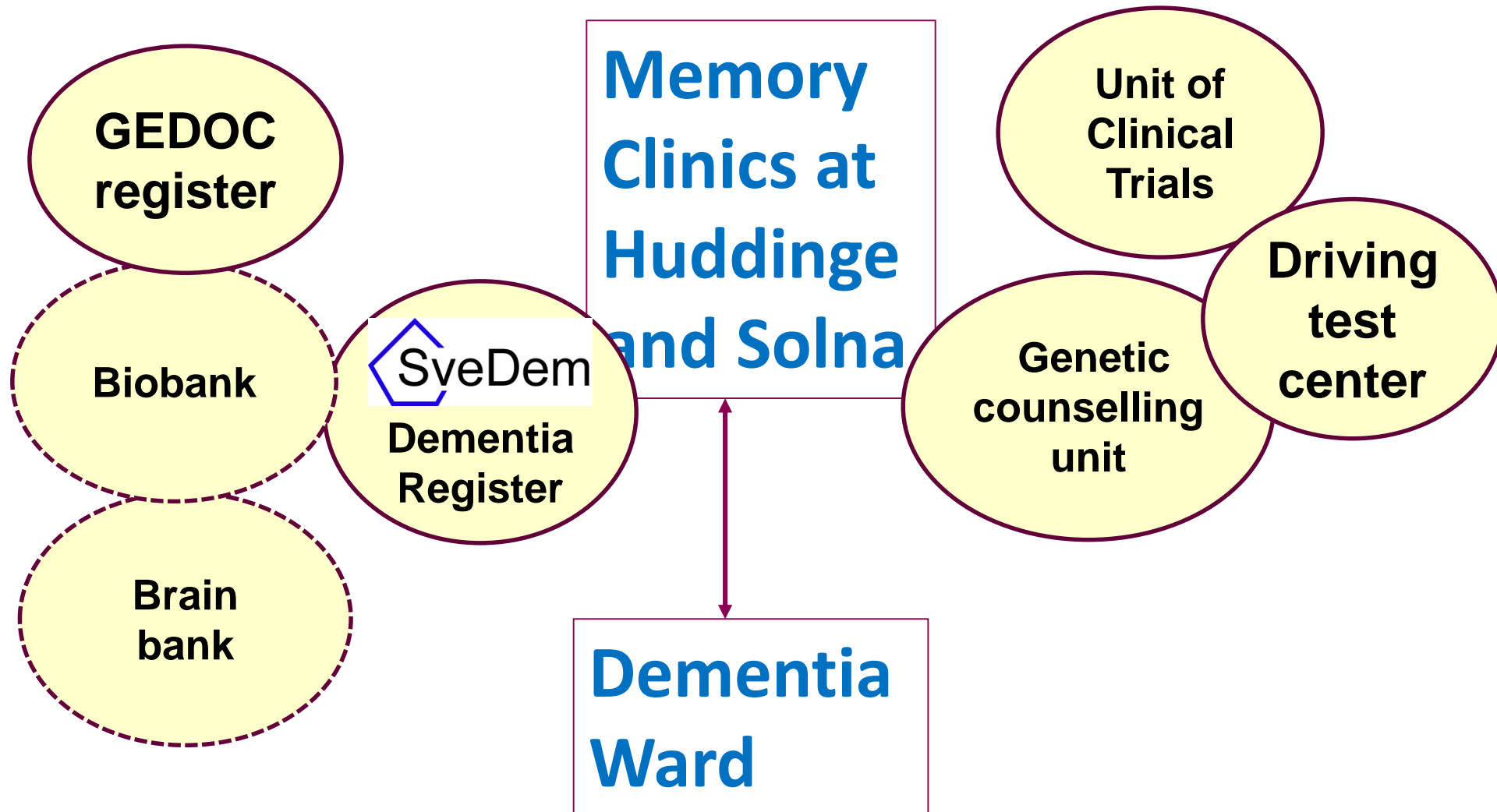


Karolinska
Institutet



Two highly specialized Memory Clinics at Karolinska University Hospital in Huddinge and in Solna





Demographics from SveDem on persons with dementia 2007-2018



Photo: Yanan Li

Demographics	2007-2018
N	82 188
Women (%)	58
Age, mean (y)	79,6
Stratification by age (%)	
<65	4
65-74	19
75-84	48
≥85	29
Living in own home (%)	91
Living alone (%)	48
MMSE median	22
MMSE ≥ 25 (%)	24
MMSE <10 (%)	3

SveDem annual report 2018



Some facts about the Memory Clinic in Huddinge



Karolinska
Institutet

- Established in 1990
- Catchment area; 350 000, 26 primary care units
also patients < 65 y
- Total visits per year: 9000
→ including ca 600 new referrals
- Mean age at referral: 63 y
→ *Mean age at dementia: 75 y*
- Mean MMSE at referral: 26
→ Mean MMSE at dementia: 23



Some facts about Memory Clinic in Solna



Karolinska
Institutet

- Clinic started April 2018
 - Patients referred from the greater Northern Stockholm area, including Stockholm City north
 - Specialized referrals; Patients younger than 70 years, still working.
 - Mean age at referral: 58 y
Mean age at dementia diagnosis: 61 y, MMSE 24
-

M 51

Memory Outpatient Clinic M 51

- out-patient cognitive assessment
- mild dementia, younger patients
- MCI (assessment, follow-up)
- asymptomatic patients with high risk-profile



R 71

Inpatient ward R 71

- 16 beds
- advanced dementia or delirium
- fast progression
- BPSD / treatment
- ADL assessment
- planning för long-term care settings

Dementia work-up according to National guidelines

Basal dementia work-up

Primary care

- Patient history
- Physical examination
- Routine blood work
- MMSE and clock test
- Evaluation of functional ability
- CT brain scan

Extended work-up

Memory clinic

- Neuropsychology testing
- Testing by occupational therapist
- Testing by speech therapist
- MRI scan
- Lumbar puncture-CSF analyses
- PET-Scan
- EEG

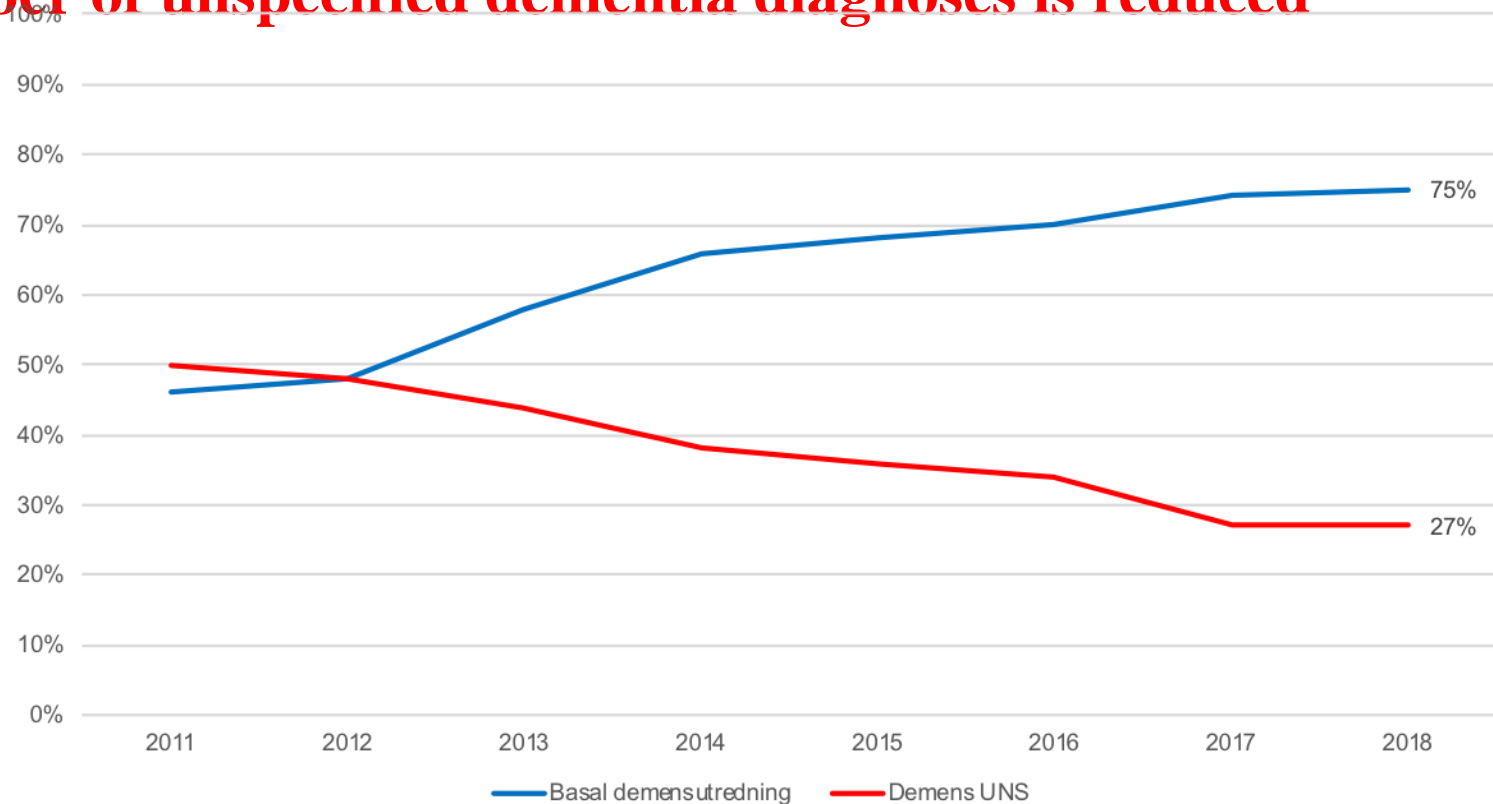


National Swedish dementia Guidelines, 2010, Revised 2017

In primary care:

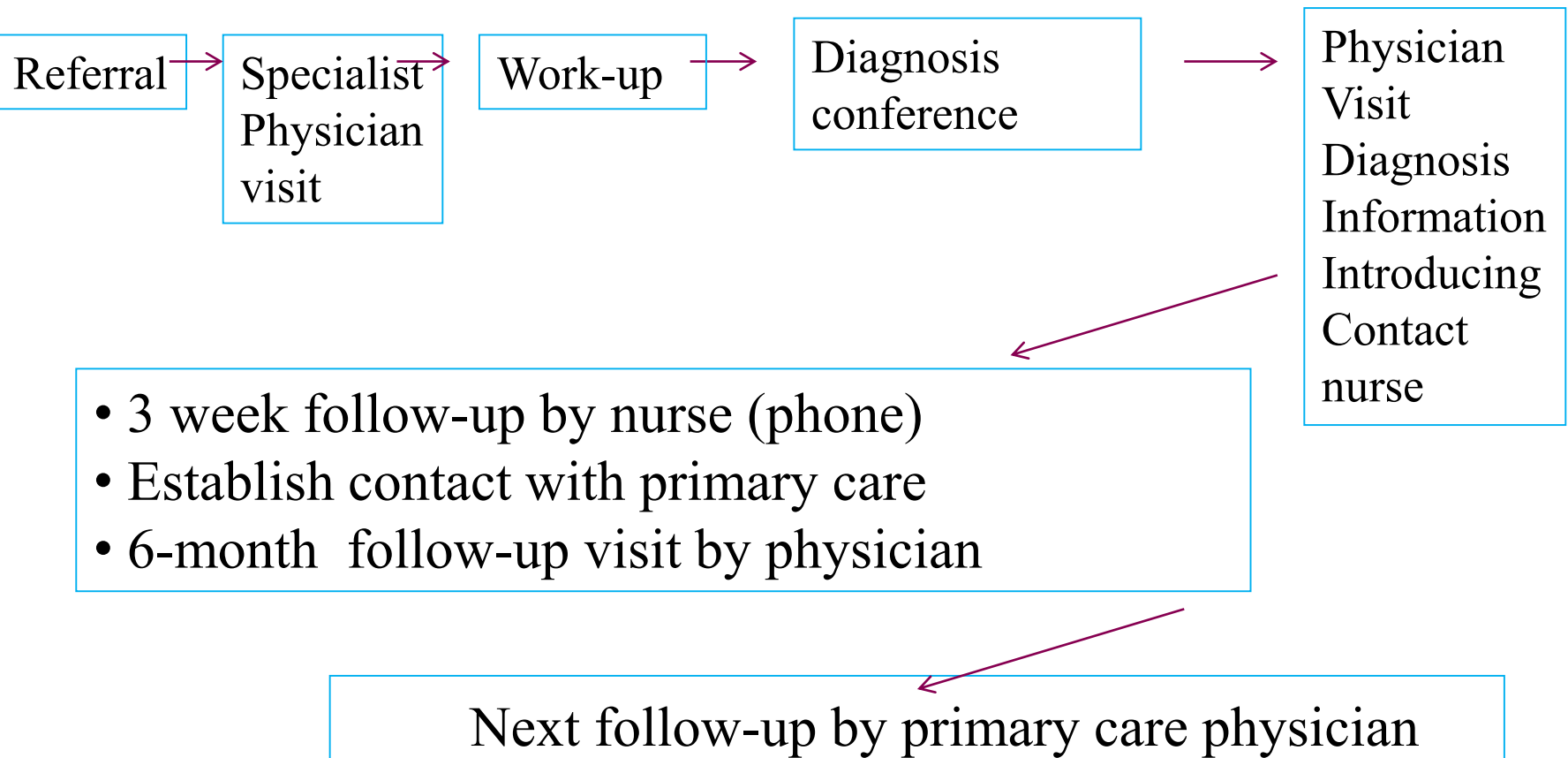
When quality of dementia work-up improves

Number of unspecified dementia diagnoses is reduced

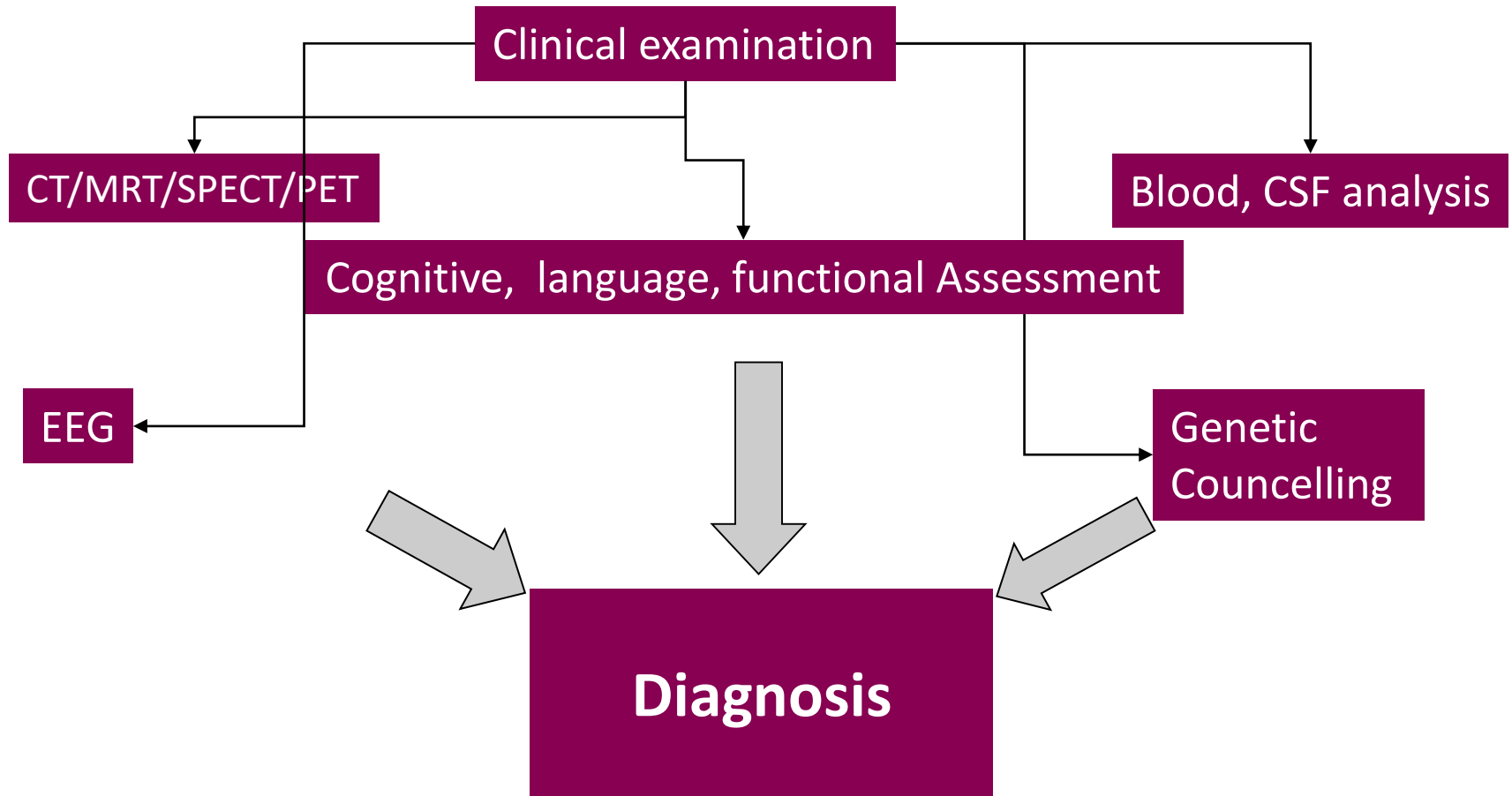


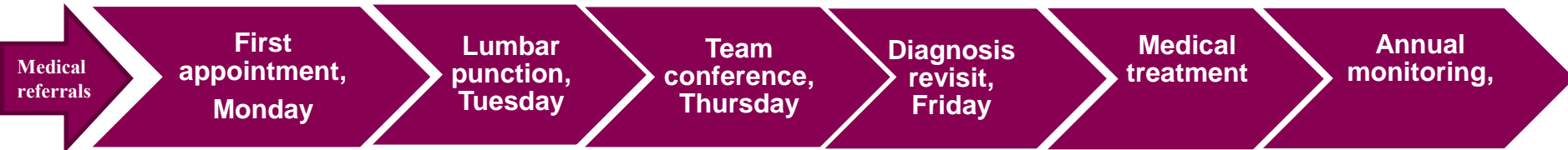
SveDem annual report 2018

Patient Flow in the memory clinic at Huddinge



Diagnostic work-up at Memory clinic at Huddinge





Monday : Multiprofessional teamwork: Meetings with physician, nurse, neuropsychologist, occupational therapist, speech therapist. Everyone visits the patient in one single office. Investigation using 3T MRI.

Tuesday: Lumbar punction, possible investigation using 3T MRI.

Thursday: Team conference with the entire team for consensus diagnosis.

Friday: Diagnosis revisit, possible inclusion in clinical trial when applicable (pharmacological studies or lifestyle interventions), visit to dentist or inclusion in patient group with neuropsychologist.

Work process:



- Daily referral assessments with the entire team
- Continuous teamwork throughout the entire process
- Patient centered rooms
- The clinic is integrated with front line clinical research from day one
- Use of set times for lumbar puncture/MRI/blood sampling
- Use of digital workflows and tools
 - Digital medical records
 - 1177/online national Health Care system
 - Digital questionnaire sent to the patient
 - Alignment of use of templates



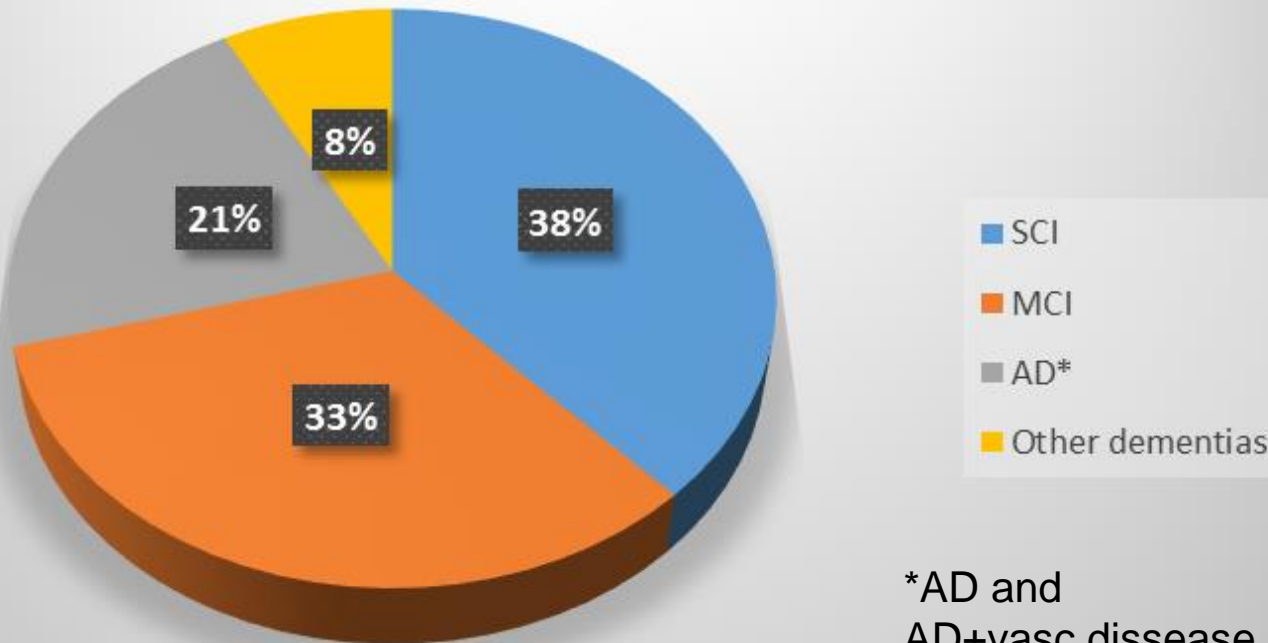
DIAGNOSES AT HUDDINGE

Based on 1700 patients

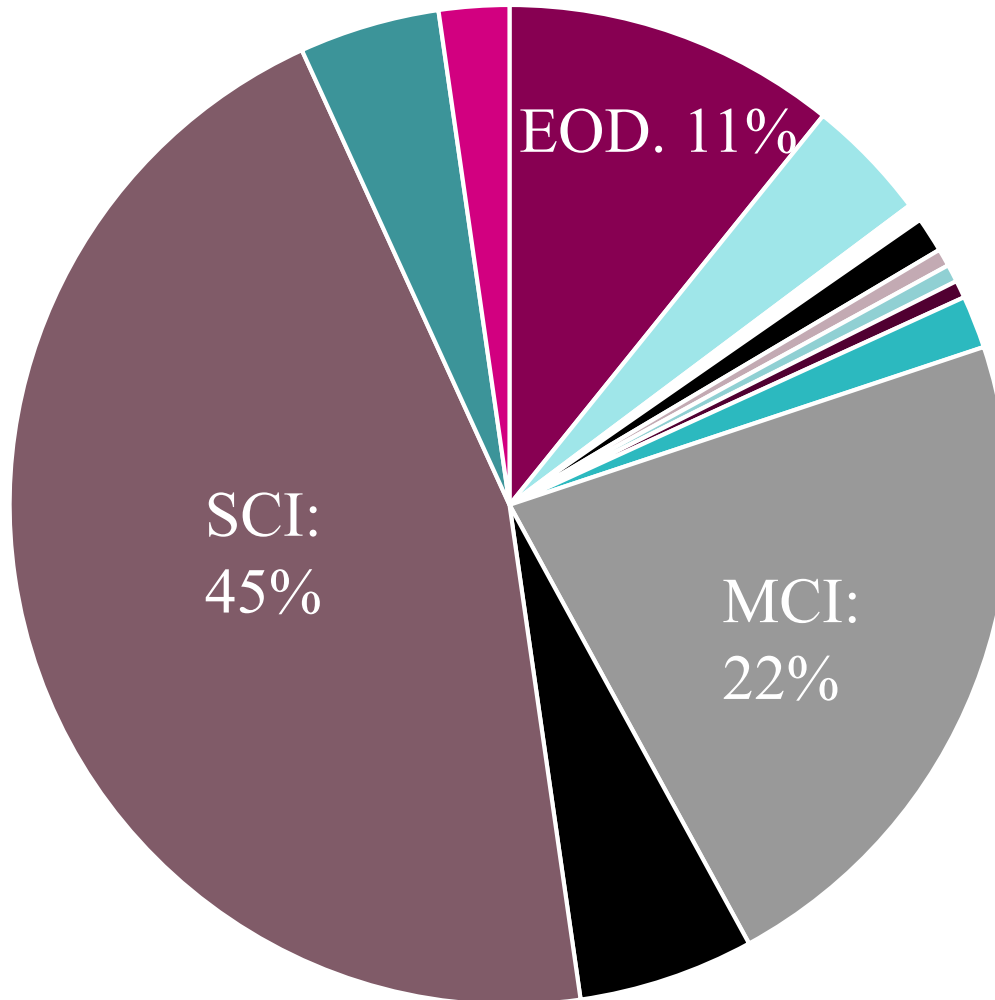
Mild Cognitive Impairment (**MCI**) – *Winblad et al, 2004* criteria

Subjective Cognitive Impairment (**SCI**) – no objective impairment

Clinical diagnoses



Diagnoses at Solna based on 315 patients



315 patients

Average age: 58,4 years



43% 57%

Successful research at the memory clinics

- Clinical Cohort follow-ups
- SveDembased registry studies
- Biomarker studies: CSF, lab, neuroimaging (MRI, PET), EEG
- Clinical trials on prevention and dementia treatments
- Studies using digital tools, APPs, robotics, AI

