Innovative Medicines Initiative

EMIF-AD

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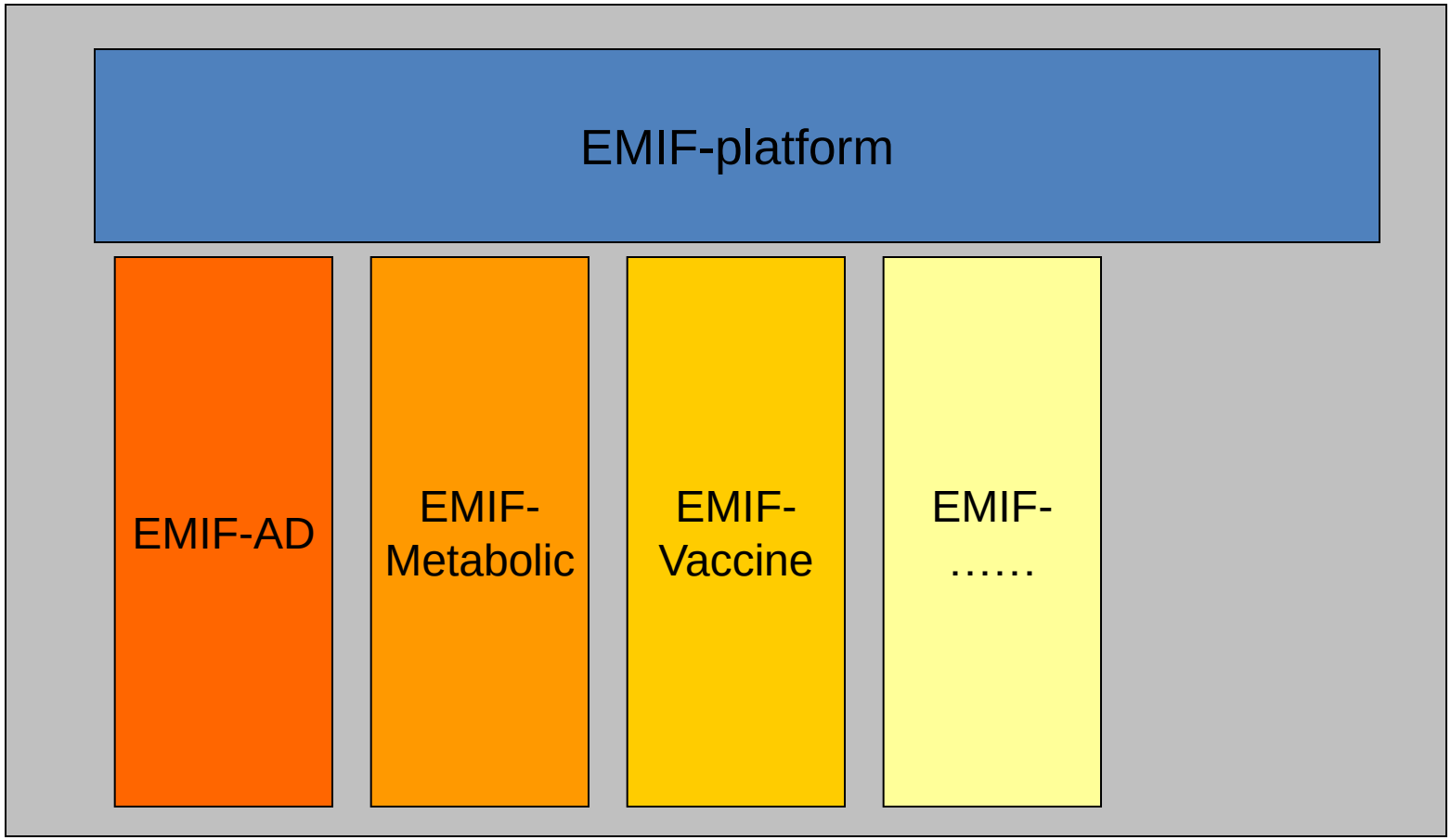
EMIF-AD

- EMIF = European Medical Information Framework

- AD = Alzheimer's disease

EMIF family



Why EMIF?

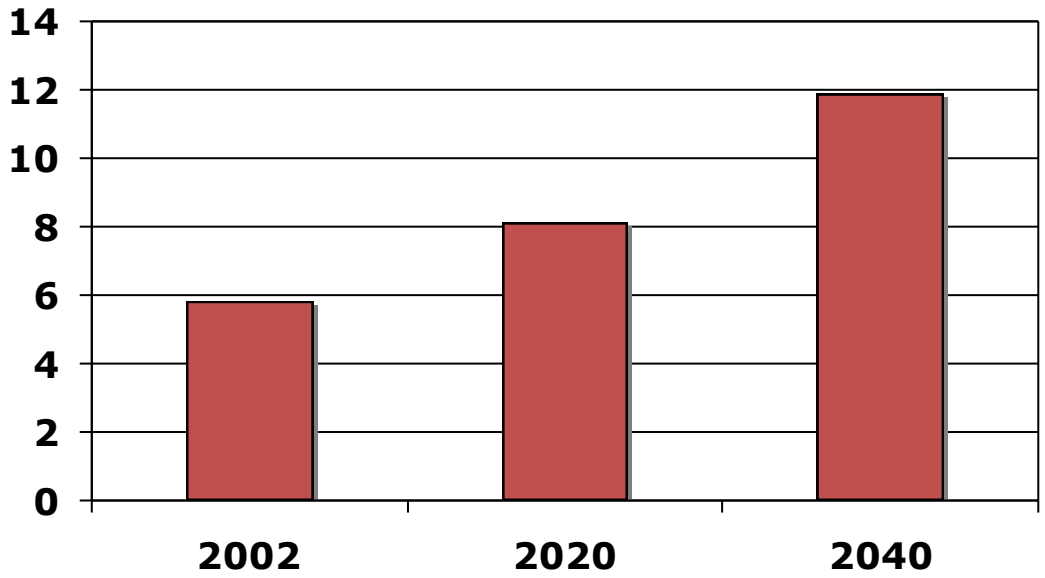
- Improve access to clinical data

  - Research data are scattered among many small cohort studies

  - Electronic health registry data are not easily accessible
    - Health insurance data
    - Hospital data
    - General practitioner registries
    - Pharmacy registries

Why an EMIF for AD?

- Alzheimer's disease is a major clinical burden

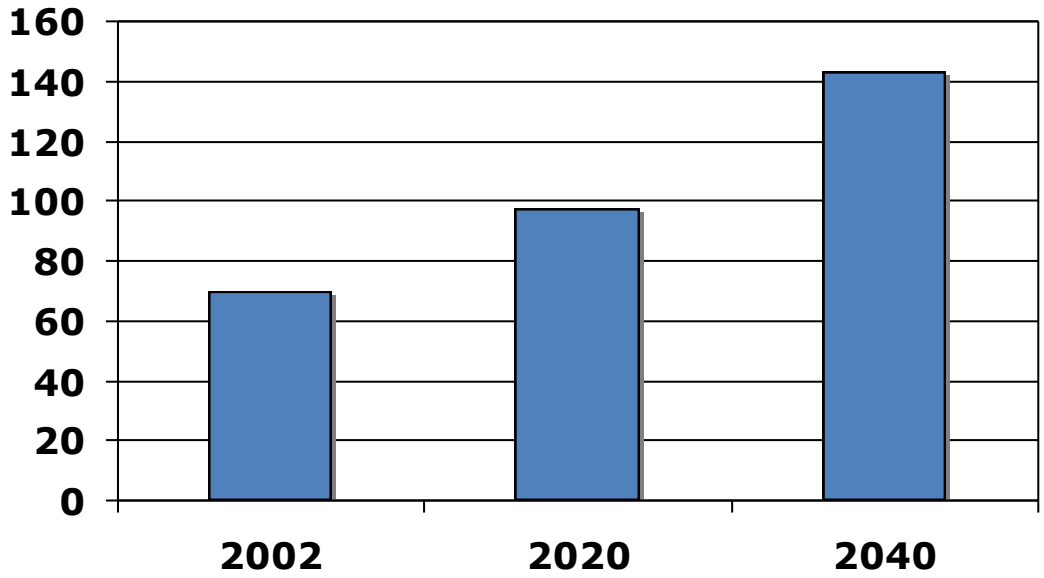


Number of patients in millions

Ferri et al 2005

Why an EMIF for AD?

- Alzheimer's disease is a major societal burden



Annual societal costs in billion Euro

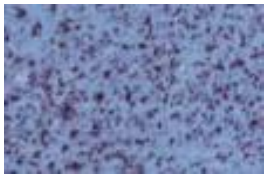
Wimo et al 2007

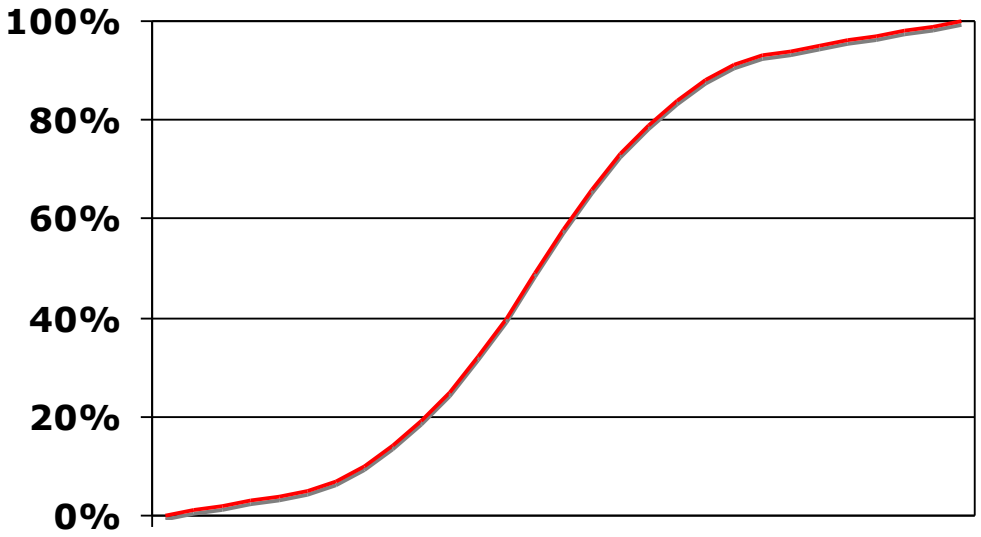
Why an EMIF for AD?

- Current diagnosis and treatment are too late

AD diagnosis

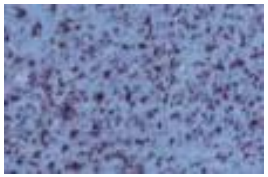
Severity amyloid pathology

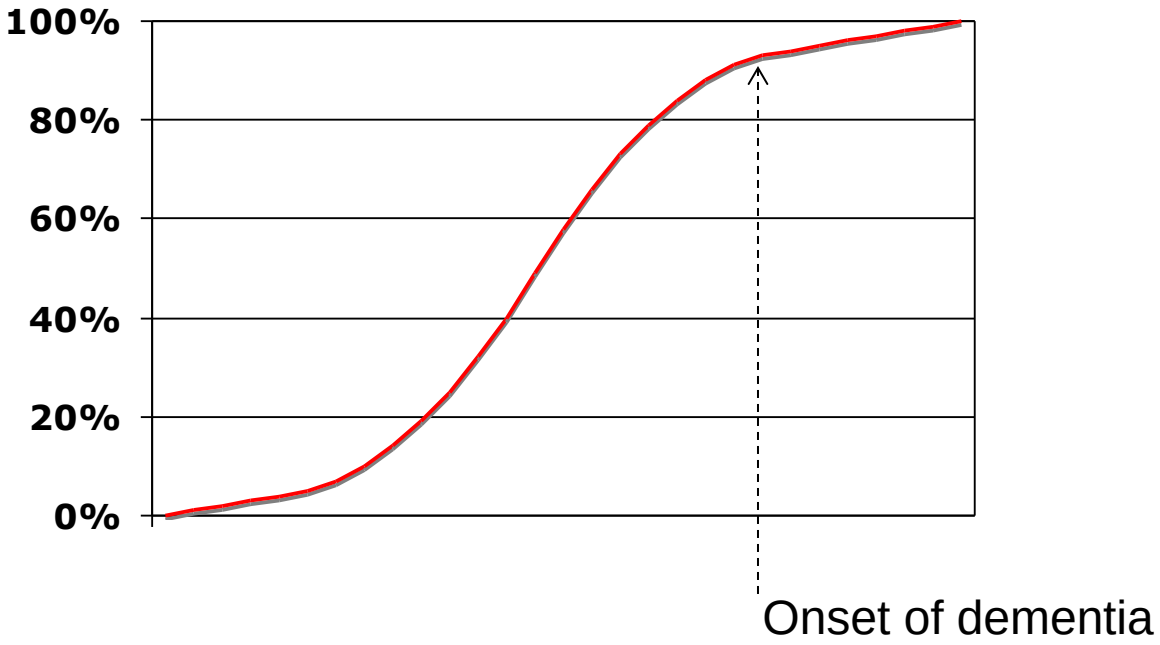




AD diagnosis

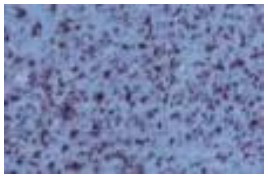
Severity amyloid pathology

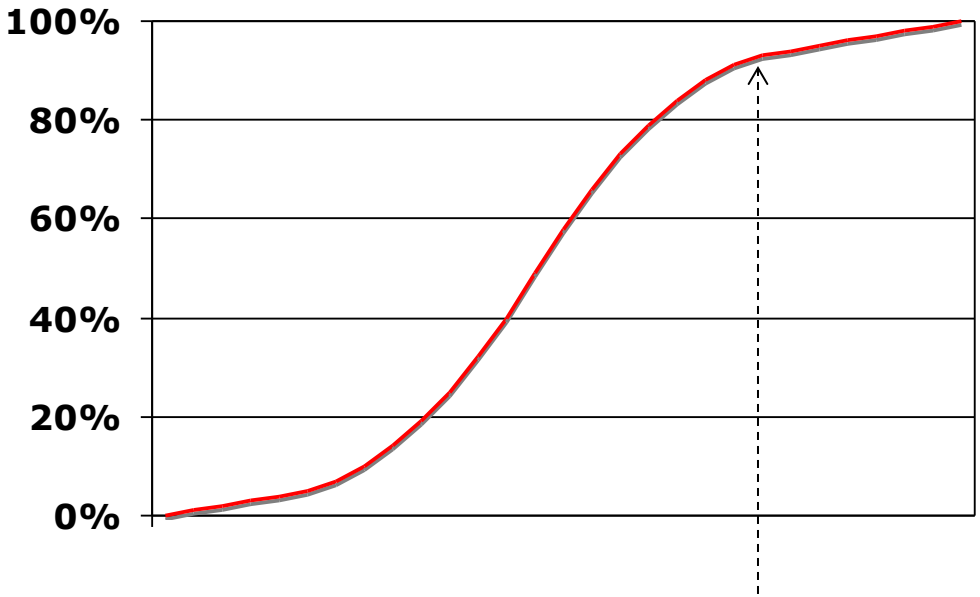




AD diagnosis

Severity amyloid pathology





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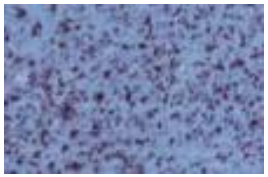

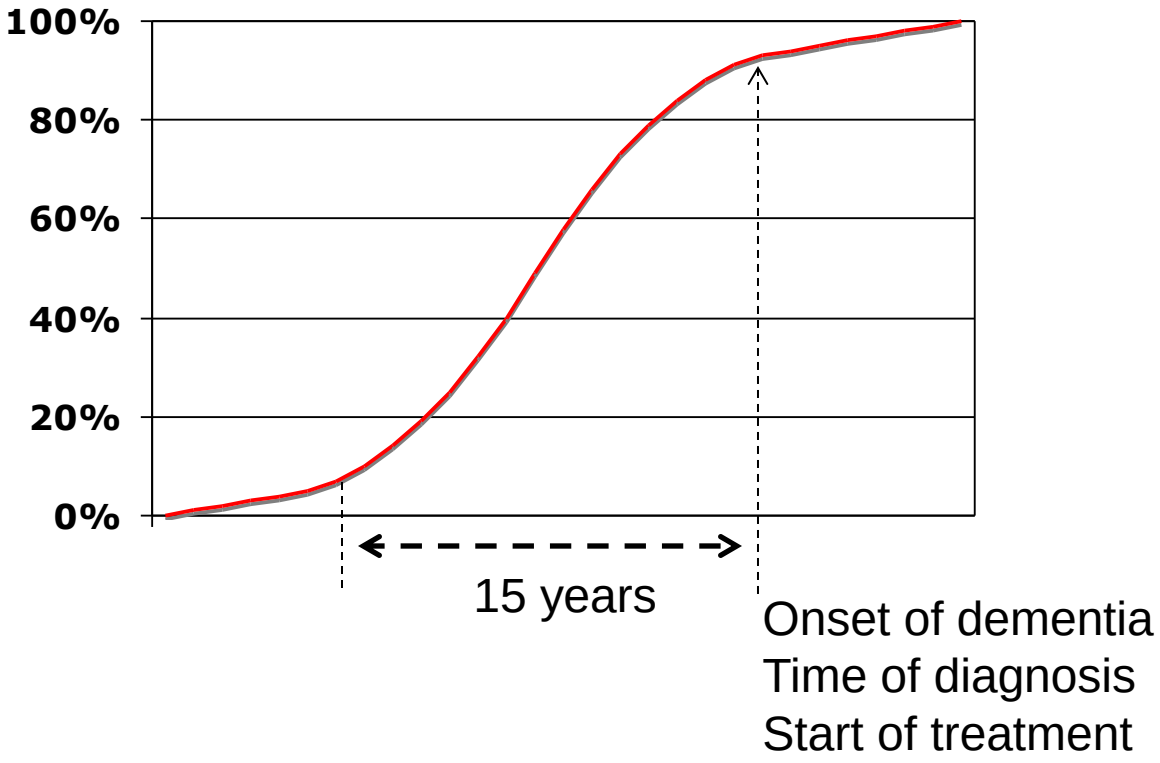

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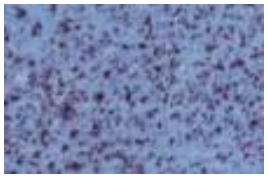
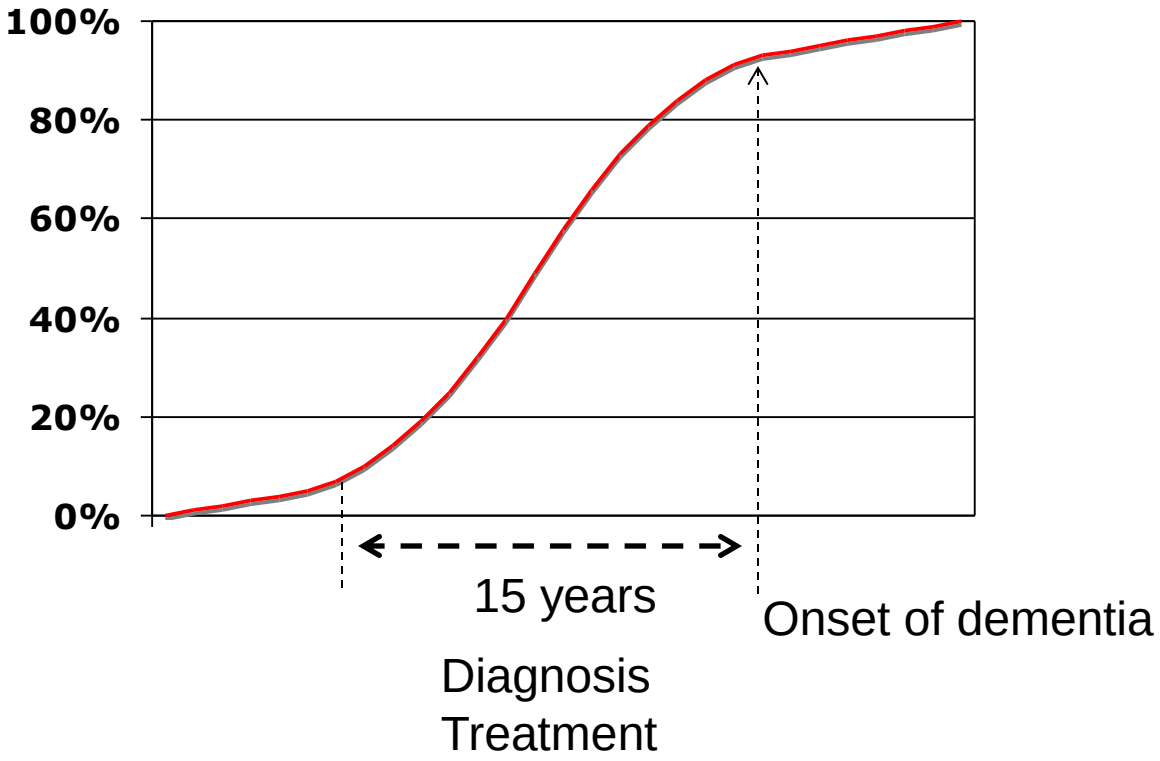


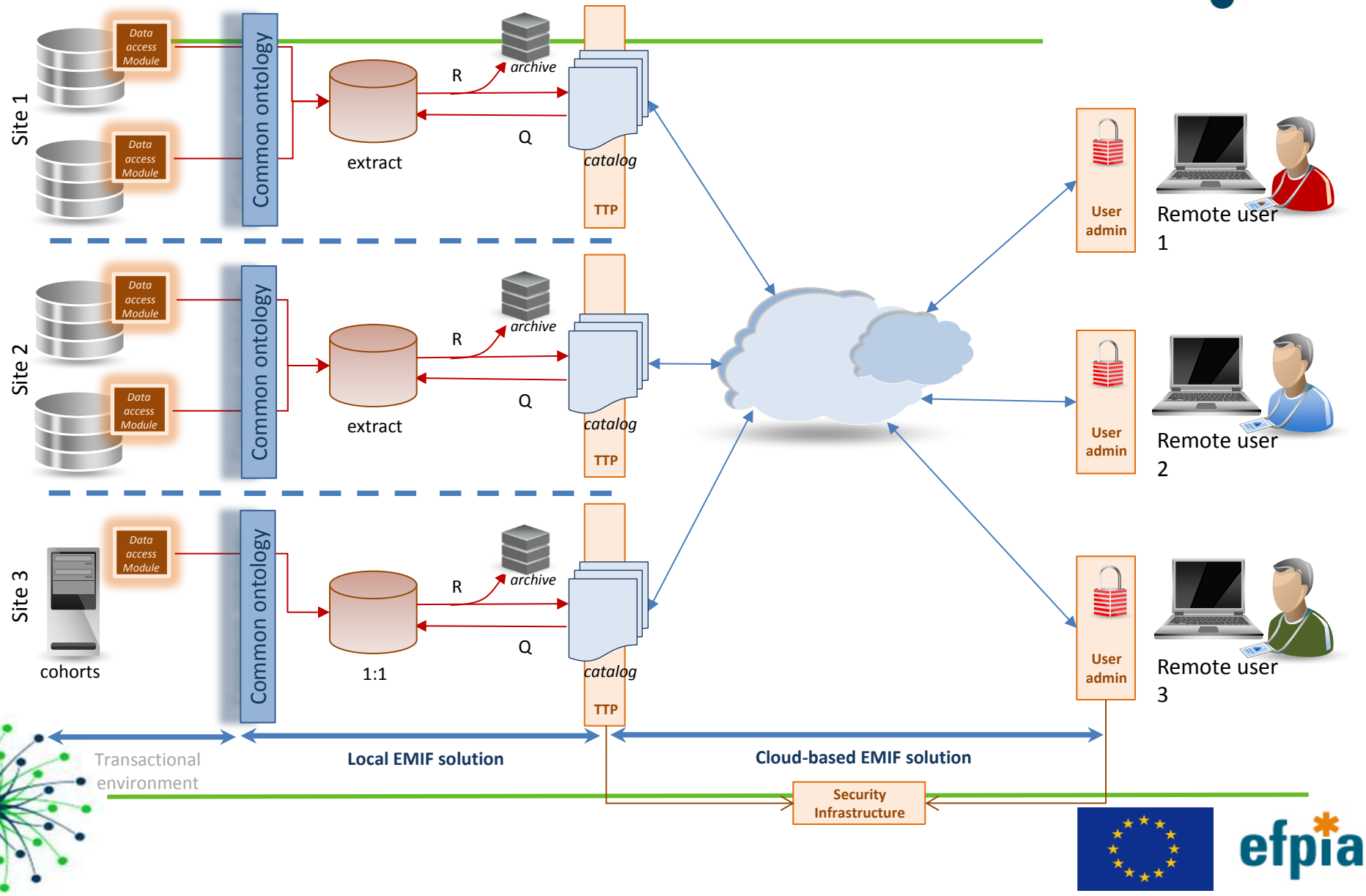


Needs

- EMIF
  - Platform that allows pooling cohort studies
  - Platform that allows access to Electronic Health Registry data

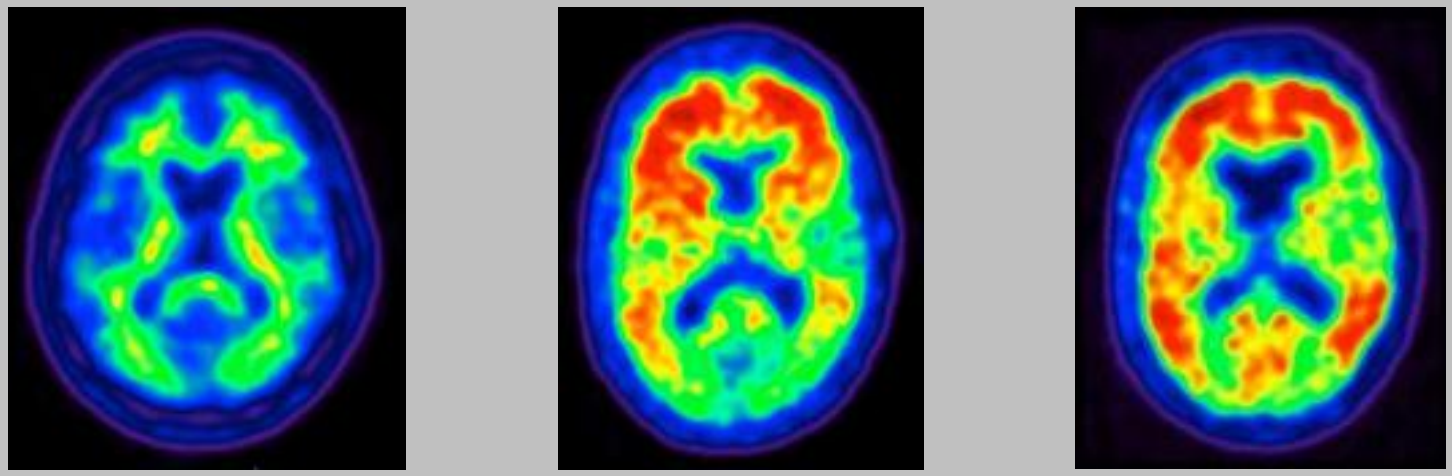
- AD
  - Tools for diagnosis of predementia AD
  - Tools for prognosis of predementia AD
  - Insight in early development of AD

Research challenge EMIF



Research challenge AD

Amyloid PET scan



Research challenge AD

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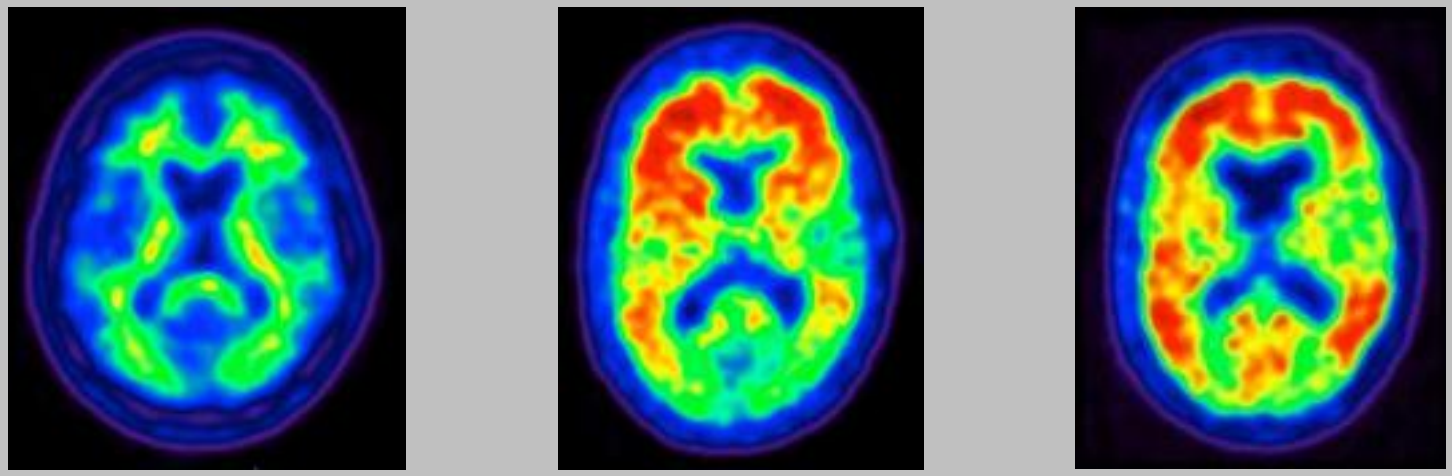
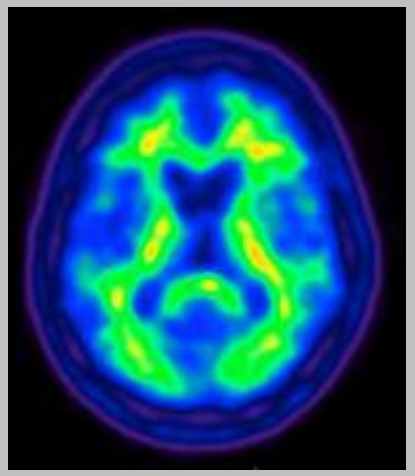


Cognitively normal

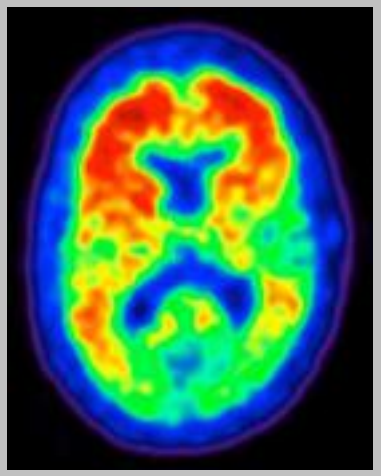
Demented

Research challenge AD

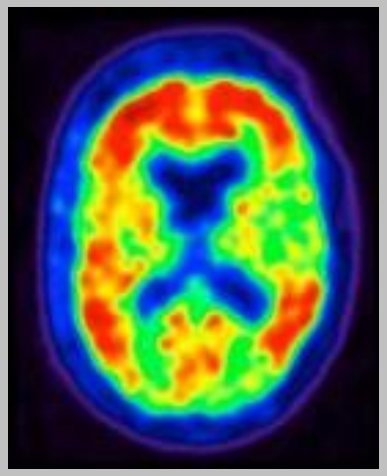
Amyloid PET scan



Cognitively normal

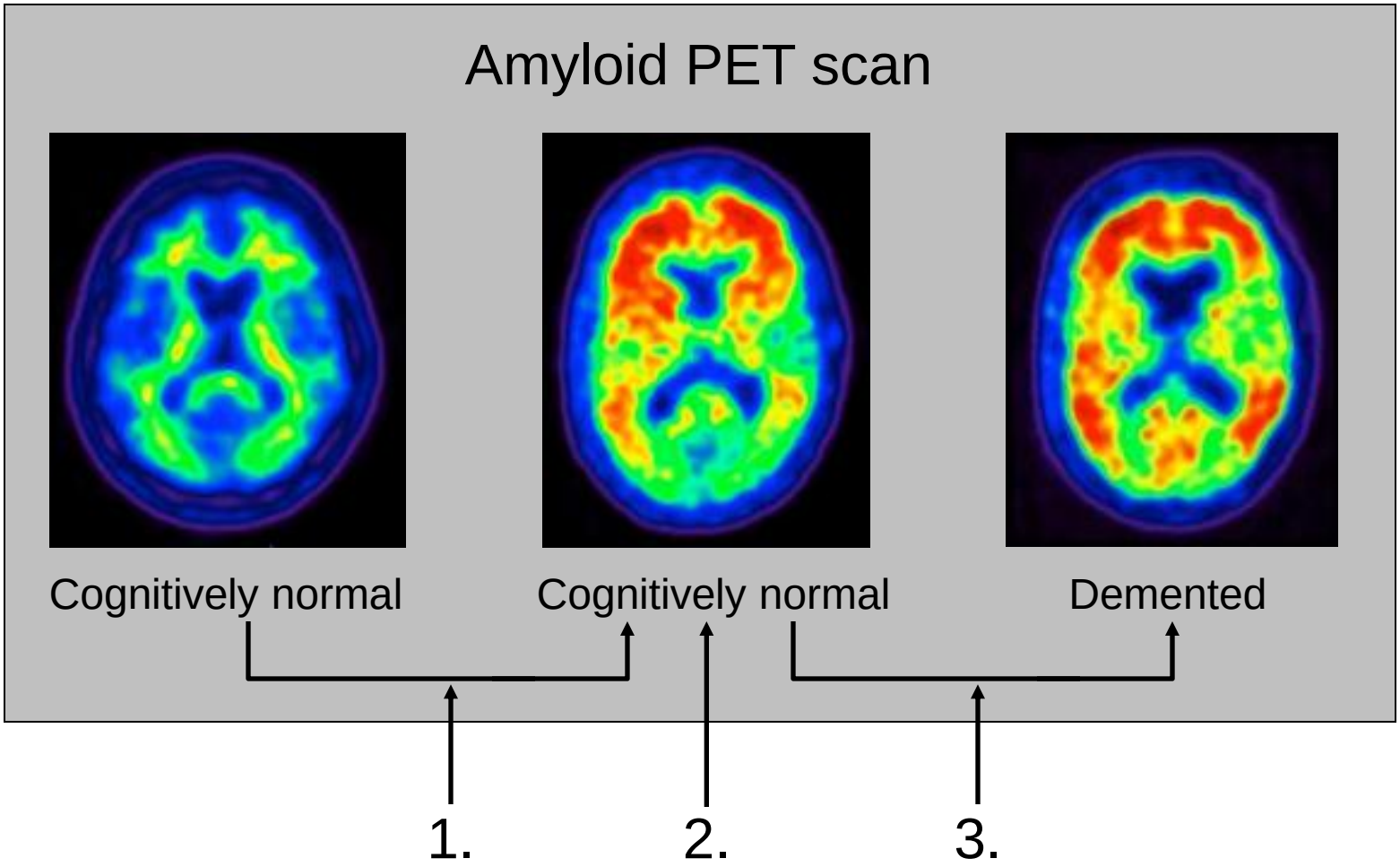


Cognitively normal



Demented

Research challenge AD



The need for a PPP

- EFPIA partners
  - Data cohorts from AD trials
  - Expertise on statistics, ICT, and trial design

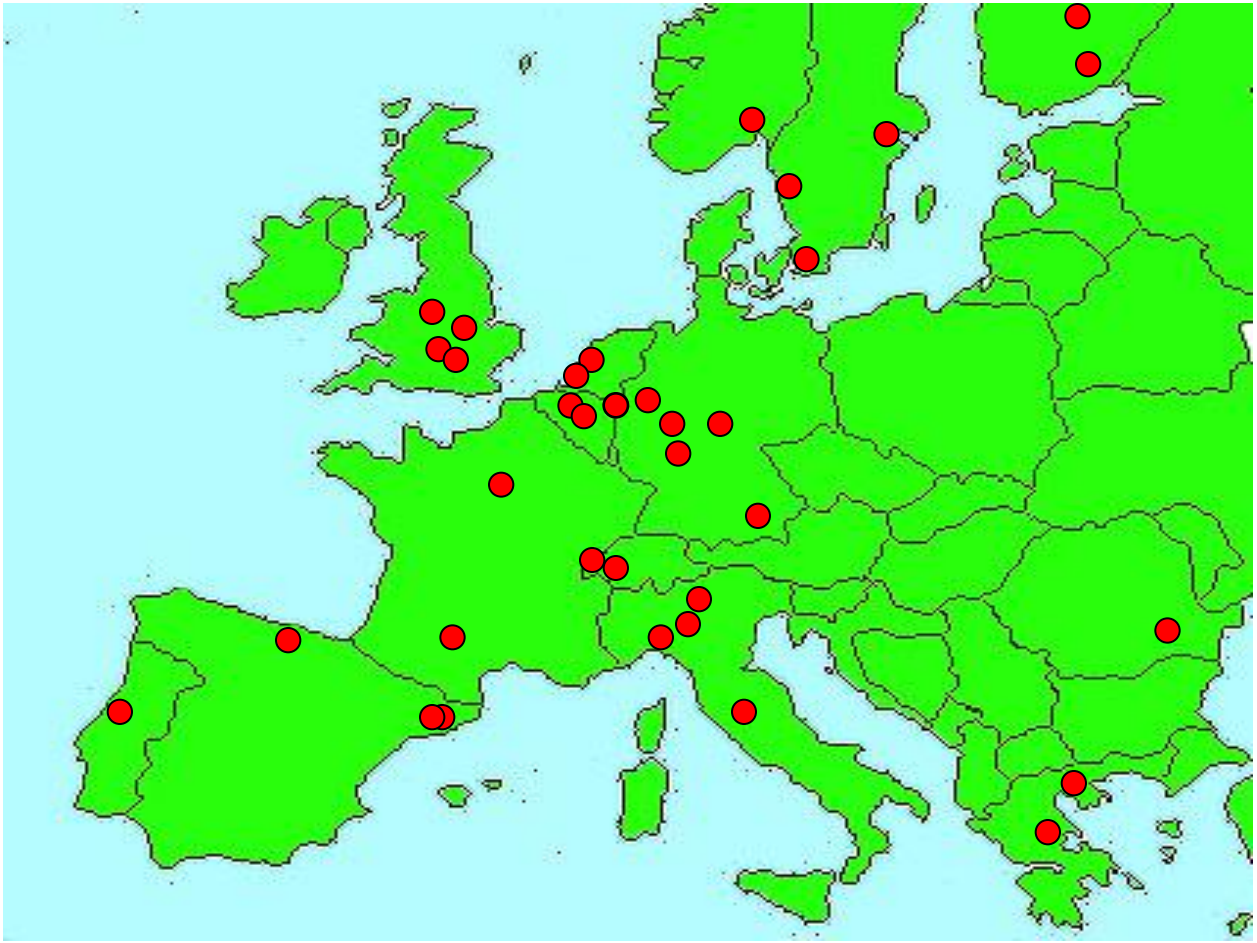
- Academic partners
  - Electronic health registries
  - Research cohorts
  - Biomarker discovery experience
  - Access to trial sites

Expected outcomes EMIF

- Catalogue of data from research cohorts and electronic health registries

- Workflows for accessing and pooling datasets

EMIF-AD data providers



EMIF-AD has access to:

1. **Cohorts of cognitively normal subjects.**

- 75000 subject of which 800 have CSF data, 6000 MRI scans, 70 FDG-PET scans, 200 amyloid PET scans, 40000 plasma samples, 40000 DNA samples, and 350 RNA samples

2. **Clinical cohorts of subjects with MCI or subjective complaints.**

- 6500 subjects with MCI of which 2500 have CSF data, 3500 MR scans, 500 FDG-PET scans, 500 amyloid PET scans, 3000 plasma samples, 4000 DNA samples, and 450 RNA samples

3. Electronic health registries

- >10 million patients; >30,000 samples, >10 years follow up

Expected outcomes AD

- Development:
  - New genetic markers for AD pathology
- Diagnosis:
  - Blood markers for diagnosis of AD in predementia stage
- Prognosis:
  - Cerebrospinal fluid, blood, imaging, and cognitive markers for prognosis

What next?

- EMIF
  - Continuous update with new data

- AD
  - Large (>1000 subjects) long-term (>10 years) follow-up studies of cognitively normal elderly subjects with repeated biomarker assessment

Thank you

http://www.imi.europa.eu/content/emif

- EMIF-AD:
  - Academic leads: Pieter Jelle Visser, Simon Lovestone
  - EFPIA leads: Mike Krams, Johannes Streffer
- EMIF-platform:
  - Academic lead: Johan van der Lei
  - EFPIA lead: Bart Vanieuwenhuysen