**Supplementary material**

**Supplementary table 1.** Quantification of project impact, including individual and aggregated cost estimates.

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| --- | --- |
| **Impact measure in AD-RIDDLE** | **Value** |
| *Reduction of specialized costly testing in early AD diagnosis*  |
| Estimated number of people with AD (prodromal AD and dementia) seeking care / year in Europe | 4 000 000 (1, 2) |
| % Diagnosed in specialised care | 83% (3) |
| % increase in toolbox platform use over 10 years\* | 10% |
| Number of patients impacted\*\* | 3 320 000 |
| % decrease in lumbar punctures\* | 2% |
| Avoided CSF tests\*\* | 66 400 |
| CSF-related cost per sample | 750 EUR (4) |
| Avoided CSF costs\*\*  | 49 800 000 EUR |
| % decrease in amyloid-PET scans\* | 0.5% |
| Avoided PET costs\*\* | 16 600 |
| PET-related cost per scan | 1350 EUR (4) |
| Avoided PET costs\*\* | 22 410 000 EUR |
| % decrease in neuropsychological testing time\* | 10% |
| Number of patients needing specialized testing (prodromal AD) | 1 660 000 (1, 2) |
| Neuropsychological testing related cost per assessment | 500 EUR (4) |
| Reduction in testing cost\*\* | 83 000 000 EUR |
| Total costs avoided\*\* | 155 210 000 EUR |
| *Impact of improved early AD diagnosis on appropriate use of DMTs* |
| Number of people with AD (prodromal AD and dementia) seeking care / year in Europe | 4 000 000 (1, 2) |
| % AD misdiagnosed in specialized care | 30% (5) |
| % patients eligible for DMTs | 10% |
| Number of DMT-eligible patients impacted\*\* | 120 000 |
| Improved early AD diagnosis leading to appropriate DMT use\* | 10% (6) |
| Number of DMT-eligible patients impacted\*\* | 12 000 |
| Value of appropriate use | 5 700 EUR (7) |
| Value of improved use\*\* | 68 400 000 EUR |
| *Impact of improved dementia risk detection and prevention in primary care (based on the FINGER model)* |
| Number of patients with high risk of dementia identified  | 22.56 million (1, 8) |
| Share participating in FINGER intervention program\* | 5% |
| Net monetary benefit per patient of participating in FINGER program | 3745 EUR (9) |
| Value of dementia risk detection and prevention\*\* | 4.2 billion EUR |

In green cells are listed areas of impact, while in blue cells are listed estimated AD-RIDDLE project impact.

Abbreviations: AD, Alzheimer's disease; CSF: cerebrospinal fluid; DMT, disease-modifying therapies; FINGER, Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability; PET, Positron Emission Tomography.

\* Estimation-based value for impact in the AD-RIDDLE project. \*\* Calculated value.

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