## Table A1: Model input parameters to project impact of natural history of MCI from Prados et al. 1

|  |  |  |
| --- | --- | --- |
| **Input parameter** | **Estimate** | **Source** |
| HR, death for MCI (reference: normal cognition) | 1.7 | 2 |
| HR, death for mild dementia (reference: MCI) | 1.318 | 3 |
| HR, death for moderate dementia (reference: MCI) | 2.419 | 3 |
| HR, death for severe dementia (reference: MCI) | 4.267 | 3 |
| Transition probability, community to nursing home |  |  |
|  Mild dementia | 0.038 | 4 |
|  Moderate dementia | 0.11 | 4 |
|  Severe dementia | 0.259 | 4 |
| HR, Community to nursing home: male (reference: female) |  |  |
|  Mild dementia | 0.65 | 4 |
|  Moderate dementia | 0.97 | 4 |
|  Severe dementia | 1.21 | 4 |
| HR, Community to nursing home: age 65-74 (reference: 50-64) |  |  |
|  Mild dementia | 0.84 | 4 |
|  Moderate dementia | 1.09 | 4 |
|  Severe dementia | 1.02 | 4 |
| HR, Community to nursing home: age 75+ (reference: 50-64) |  |  |
|  Mild dementia | 1.8 | 4 |
|  Moderate dementia | 0.98 | 4 |
|  Severe dementia | 0.92 | 4 |
| Health utility score, patient |  |  |
|  MCI | 0.73 | 5 |
|  Mild dementia | 0.69 | 5 |
|  Moderate dementia | 0.53 | 5 |
|  Severe dementia | 0.38 | 5 |
| Health utility score, caregiver, community |  |  |
|  MCI | 0.88 | 5 |
|  Mild dementia | 0.87 | 6 |
|  Moderate dementia | 0.86 | 6 |
|  Severe dementia | 0.86 | 6 |
| Health utility score, caregiver, institution |  |  |
|  MCI | 0.89 | 6; assume same as mild |
|  Mild dementia | 0.89 | 6 |
|  Moderate dementia | 0.89 | 6 |
|  Severe dementia | 0.88 | 6 |
| Medical costs, patient |  |  |
|  MCI | $14,649 | 7 |
|  Mild dementia | $17,184 | 7 |
|  Moderate dementia | $18,290 | scaled using 7,8 |
|  Severe dementia | $19,002 | scaled using 7,8 |
| Medical costs, caregiver |  |  |
|  MCI | $8,805 | 7 |
|  Mild dementia | $9,126 | 7 |
|  Moderate dementia | $9,126 | 7; assume same as mild |
|  Severe dementia | $9,126 | 7; assume same as mild |
| Social care cost, community |  |  |
|  MCI | $2,286 | 7; scaled using mild from 8 |
|  Mild dementia | $4,229 | 8 |
|  Moderate dementia | $4,563 | 8 |
|  Severe dementia | $6,344 | 8 |
| Social care cost, institution |  |  |
|  MCI | $0 | 8 |
|  Mild dementia | $114,557 | 8 |
|  Moderate dementia | $114,557 | 8 |
|  Severe dementia | $117,896 | 8 |
| Caregiver time loss cost |  |  |
|  MCI | $11,626 | 7 |
|  Mild dementia | $25,697 | 7 |
|  Moderate dementia | $28,482 | scaled using 7,8 |
|  Severe dementia | $33,178 | scaled using 7,8 |

Note: Monetary values in 2021 USD, which were inflated to 2023 USD for this study

## Table A2: Transition probabilities after transition to MCI

|  |  |  |
| --- | --- | --- |
|   |   | TO |
|   |  | Mild dementia | Moderate dementia | Severe dementia |
| FROM | MCI | 0.187 | NA | NA |
| Mild dementia | NA | 0.323 | 0.044 |
| Moderate dementia | NA | NA | 0.401 |
| Severe dementia | NA | NA | NA |

Notes: Assumed all MCI patients progress only to mild dementia. Distribution assumed for probabilistic sensitivity analysis is +/- 10% uniform. MCI = Mild Cognitive Impairment.

Source: Derived from published analysis of National Alzheimer’s Coordinating Center data9.

## Table A3: Predicted outcomes of 2023 prevalent cohort over 30 years

|  |  |  |  |
| --- | --- | --- | --- |
|   | Reference | Treatment | Difference |
| Cumulative cases of incident MCI [in 1 million persons] | 15.97 | 10.23 | 5.75 |
| Cumulative deaths [in 1 million persons] | 29.10 | 26.62 | 2.49 |
| Cumulative deaths with MCI [in 1 million persons] | 11.50 | 4.32 | 7.19 |
| LYs/person (survival years) | 6.29 | 7.10 | 0.81 |
| LYs/person in MCI | 1.79 | 1.22 | -0.57 |
| NNT to avoid one case of MCI in 30 years |   |   | 6 |
| NNT to avoid one case of death |   |   | 13 |

Note: LYs denotes life-years, NNT Number needed to treat

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