**Early-Onset Subgroup of** **Type 2 Diabetes and Risk of Dementia, Alzheimer's disease and Stroke: A Cohort Study**

**eMethod:**

**Dementia surveillance and case ascertainment**

The Epidemiology of Dementia Study has tracked incident cases of dementia in the Framingham cohort. Although not formally initiated until 1986, the initial baseline dementia-free Original cohort was determined from 1976-78. Tracking for incident dementia in the Offspring cohort also began in 1976 and subjects have had serial Mini-Mental State Examination(MMSE) since 1991[[1](#_ENREF_1)]. Participants are flagged with suspected cognitive impairment using the MMSE if (1) performance falls below education-based cutoff scores, 14 (2) a decline of 3 or more points is observed between consecutive examinations, or (3) a decrease of 5 or more points is observed from the participant’s highest past MMSE score. Participants are also flagged following referrals or concern expressed by the participant, their family, or primary care physician. Once flagged with suspected cognitive impairment, participants complete annual neuropsychological and neurologic evaluations until they develop dementia or are adjudicated to be normal. Evaluations indicative of possible dementia are followed by referral to our study dementia review committee, comprising a neurologist and neuropsychologist. The committee adjudicates a diagnosis of dementia in line with the DSM-IV. A diagnosis of AD dementia is based on the criteria of the National Institute of Neurologic and Communicative Disorders and Stroke and the Alzheimer’s disease and Related Disorders Association for definite, probable, or possible AD[[2](#_ENREF_2)].

eTable 1. Comparison of the disease duration between different subgroup of diabetes age of onset

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| --- | --- |
| Age of diabetes onset | Duration of diabetes |
| All dementia | AD dementia | Stroke | All |
| <55 years | 22(17-29) | 23(17-31) | 28(22-33) | 22(18-29) |
| 55–64 years | 15(8-19) | 15(8-24) | 12(8-22) | 15(8-18) |
| >65 years | 5(2-17) | 6(1-13) | 6(2-17) | 7(6-17) |
| Overall | 19(15-27) | 22(17-29) | 8(5-22) | 12(6-19) |
| P value | <0.001 | <0.001 | <0.001 | <0.001 |

Abbreviations: AD, Alzheimer disease.

**REFERENCE**

[1] Bachman DL, Wolf PA, Linn R, Knoefel JE, Cobb J, Belanger A, D'Agostino RB, White LR (1992) Prevalence of dementia and probable senile dementia of the Alzheimer type in the Framingham Study. *Neurology***42**, 115-119.

[2] McKhann G, Drachman D, Folstein M, Katzman R, Price D, Stadlan EM (1984) Clinical diagnosis of Alzheimer's disease: report of the NINCDS-ADRDA Work Group under the auspices of Department of Health and Human Services Task Force on Alzheimer's Disease. *Neurology***34**, 939-944.