

Supplementary Table 1: Prevalence and incidence studies of AD-DS since 1995¹⁻¹¹

Reference	Study Design and population	Location sample size	Dementia Criteria	Age	Prevalence (%)	Incidence	Survival
McCarron et al 2014	Longitudinal institutional	Ireland n = 77 (all women)	ICD10	By 50 By 55 By 60 By 68		Cumulative incidence: 26.10% 50.70% 79.70% 95.70%	Median survival 7 years
Margallo-Lana, et al., 2007	Longitudinal institutional	UK n = 92	ICD10 Neuropathological confirmation in majority	45-49 50-54 55-59 60+		Per 100 person years 0.99 3.4 7.4 7.5	Mean survival 3.5 years
Coppus, et al., 2006	Longitudinal community and institutional (4 regions)	The Netherlands n = 506	ICD10	45-49 50-54 55-59 60+	8.9 17.7 32.1 25.6	Per 100 person years 2.5 2.8 4.9 13.3	
Zigman et al, 2002	Longitudinal community	US n = 248	Significant functional decline	By 50 By 72		Cumulative incidence 4.00% 67.00%	
Tyrrell, et al., 2001	Cross-sectional community and institutional	Ireland n = 285	DSM IV	35-40 40-49 50-59 60+	1.4 5.7 30.4 41.7		
Van Buggenhout, et al., 1999	Cross-sectional one large Institution	The Netherlands n = 96	Clinical diagnoses	40-49 50-59	11.1 42.4		
Holland, et al., 1998; Holland, Hon, Huppert, & Stevens, 2000	Longitudinal community and institutional	UK n= 68	ICD10; DSM IV, CAMDEX-AD, DLB and FTD criteria	30-39 40-49 50-59	20.7 20.7 40	new cases over 18 months 26.10% 26.30% 22.20%	
Oliver 1998	Longitudinal community	UK n = 57	Moderate to severe cognitive decline on neuropsychological tests	30-39 40-49 50 +		Decline over 50 months 11.80% 23.10% 70.00%	
Sekijima, et al., 1998	Longitudinal Institutional	Japan n = 106	Clinical diagnoses	30-39 40-49	0 16		
Visser, et al., 1997	Longitudinal Institutional	The Netherlands n = 307	Significant deterioration/ symptoms of dementia	<39 40-49 50-59 60-69	0 11 66 77		

Reference List

1. Coppus,A. *et al.* Dementia and mortality in persons with Down's syndrome. *Journal of Intellectual Disability Research* **50**, 768-777 (2006).
2. Holland,A.J., Hon,J., Huppert,F.A., Stevens,F., & Watson,P. Population-based study of the prevalence and presentation of dementia in adults with Down's syndrome. *British Journal of Psychiatry* **172**, 493-498 (1998).
3. Holland,A.J., Hon,J., Huppert,F.A., & Stevens,F. Incidence and course of dementia in people with Down's syndrome: findings from a population-based study. *J Intellect. Disabil. Res* **44**, 138-146 (2000).
4. Margallo-Lana,M.L. *et al.* Fifteen-year follow-up of 92 hospitalized adults with Down's syndrome: incidence of cognitive decline, its relationship to age and neuropathology. *Journal of Intellectual Disability Research* **51**, 463-477 (2007).
5. McCarron,M., McCallion,P., Reilly,E., & Mulryan,N. A prospective 14-year longitudinal follow-up of dementia in persons with Down syndrome. *Journal of Intellectual Disability Research* **58**, 61-70 (2014).
6. Oliver,C., Crayton,L., Holland,A., Hall,S., & Bradbury,J. A four year prospective study of age-related cognitive change in adults with Down's syndrome. *Psychological Medicine* **28**, 1365-1377 (1998).
7. Sekijima,Y. *et al.* Prevalence of dementia of Alzheimer type and apolipoprotein E phenotypes in aged patients with Down's syndrome. *European Neurology* **39**, 234-237 (1998).
8. Tyrrell,J. *et al.* Dementia in people with Down's syndrome. *International Journal of Geriatric Psychiatry* **16**, 1168-1174 (2001).
9. Van Buggenhout,G.J.C.M. *et al.* Down syndrome in a population of elderly mentally retarded patients: Genetic-diagnostic survey and implications for medical care. *American Journal of Medical Genetics* **85**, 376-384 (1999).
10. Visser,F.E., Aldenkamp,A.P., vanHuffelen,A.C., Kuilman,M., & Overweg,J. Prospective study of the prevalence of Alzheimer-type dementia in institutionalized individuals with Down syndrome. *American Journal on Mental Retardation* **101**, 400-412 (1997).
11. Zigman,W.B., Schupf,N., Urv,T., Zigman,A., & Silverman,W. Incidence and temporal patterns of adaptive behavior change in adults with mental retardation. *American Journal on Mental Retardation* **107**, 161-174 (2002).