

*Supplemental Table 1 Studies evaluating regional amyloid deposition.*

X = cross-sectional, L = longitudinal, FDS = full dementia spectrum, ES = early symptomatic, AS = asymptomatic, CN = cognitively normal, CSF = Cerebrospinal fluid; DVR = Distribution volume ratio, SUVR = Standardized Uptake value ratio; PVEC = partial volume effect correction (Y = yes; N = no); WM = White matter; “-“ = not applicable; n/k not known. The population is ethnically Caucasian unless otherwise specified.

Author, year	Methodology	Study Design	N [N model]	N Cohorts	Staged population (population used for staging model)	Percentage of clinical stages in the staged population CN/MCI/AD DEM/NON-AD DEM [model population]	Age mean (min-max) [model population]	N brain regions	Brain regions	Amyloid phases (N)	Amyloid biomarker	Regional cut- off determination	PVEC	Reference region	Deviations from staging (% cases)
Braak 1991 (20)	Descriptive observational	X	83	1	End of life FDS	65 / 10 / 25 / -	Old age (exact age: - )	24	Global	0-3 (4)	histology	Histological continuum	-	-	-
Thal 2002 (14)	Frequency analysis	X	47	1	End of life FDS	19 / 2 / 34 / 4 / 43 (n/k)	77.7 ± 10.9 (42-93)	-	Global	0-5 (6)	histology	Histological continuum	-	-	-
Huang 2013 (25)	Clinico- pathological analysis	X	36	1	FDS Chinese	31 / 36 (aMCI) / 33 / -	CN 69.3±6.6, aMCI 70.0±11.2, AD 75.8±5.7	7	Cortical	-	FBP	Global SUVR cut-off	N	Cerebellum (whole)	-
Villeneuve 2015 (26)	Cluster analysis	X	222	1	FDS	78 / 3 / 5 / 13	70.4	-	Cortical	-	PIB	Cut-offs from probability of subject belonging to a specific cluster	N	Cerebellar cortex	-
	Iterative voxel- based analysis											DVR continuum			
Cho 2016 (27)	Frequency analysis	X	195	1	FDS	34 / 12 (naMCI), 27 (aMCI) / 27 / -	CN 66.1±8.6, naMCI 68.5±7.8, aMCI 70.3±9.7, AD 74.9±8.1	25	Cortical	-	FBB	Global SUVR cut-off	Both N and Y	Cerebellar cortex	-
Grothe 2017 (28)	Frequency analysis	X	667 [179]	1	FDS [CN]	27 / 60 / 13 / - [100 / - / - / - / -]	CN 73.8±6.5, MCI 71.7±7.7,	52	Global	0-4 (5)	FBP + CSF	Global SUVR cut-off	Y	Cerebellum	2%

							$AD\ 75.6 \pm 8.3$								
Sakr 2019 (32)	Frequency analysis	X	318	1	ES/AS	100 / - / - / -	$76.1 \pm 3.5$ (70-85)	52	Global	0-3 (4)	FBP	Global SUVR cut-off	Y	Cerebellum (whole)	1.30%
Lopes-Alves 2018 (29)	Event-based modelling	X	1267	3	FDS	57 / 4 / 25 / 14 (FMM) 84 / 6 / 9 / 1 (PIB) 84 / 7 / 8 / 1 (FBP)	CN 66.4 $\pm$ 9.0, MCI 69.5 $\pm$ 7.9, AD 68.4 $\pm$ 8.9, non AD 62.6 $\pm$ 6.0	21	Cortex + striatum	-	FMM, PIB, FBP	Regional specific implicit cut-offs from Gaussian Mixture Modelling	N	Cerebellar cortex	-
Collij 2019 (35)	Frequency analysis	X and L	3025 [989]	6	FDS [CN]	58 / 22 / 15 / 4 / 1 (n/k) [100 / - / - / -]	68.36 $\pm$ 8.75 [-]	27	Cortical	0-4 (5)	FBP, FMM, FBB, PIB	Global SUVR cut-off	Both N and Y	Cerebellar cortex	<1%
Palmqvist 2017 (37)	Longitudinal voxel- and ROI-wise accumulation rate comparison	L	406 [473]	2	ES/AS	34 / 66 / - / - [37 / 63 / - / -]	- [72.0 $\pm$ 7.0]	68	Cortical	-	FBP, FMM + CSF	Global SUVR cut-off	Y	Composite	-
Mattsson 2019 (40)	Longitudinal ROI-based accumulation rate comparison	L	1215 [641]	2	FDS	41 / 52 / 7 [39 / 54 / 7]	-	68	Cortical + striatum	0-3 (4)	PIB, FBP + CSF	Global and model ROI SUVR cut-off	-	Composit	<2%
Hansseuw 2018 (36)	Longitudinal, Likelihood of transition	L	1433	2	FDS	45 / 40 / 15 / -	- (55-94)	2	Cortex vs striatum	0-2 (3)	PIB, FBP	By region	Y	PIB: cerebellar cortex FBP: Composite (cerebellum + WM)	0.25%
Murray 2015 (9)	Correlation of PET with Thal phasing (14)	X	35	1	End of life FDS	17 / 17 / 31 / 23	- (56-95)	1	Cortical	-	PIB + histology	Global SUVR cut-off	Y	Cerebellum (whole)	-

La Joie 2019 (21)	Correlation of PET with Thal phasing (14)	X	179	5	End of life FDS	12 / 15 / 35 / 37	$73.0 \pm 11.7$	1	Cortical	-	PIB + histology	Gloal SUVR cut-off	N	Cerebellar crus gray median	-
Thal 2015 (23)	Correlation of PET with Thal phasing (Thal et., 2002)	X	68	1	End of life FDS	31 / - / 45 / 25	$80.8 \pm 8.19$ (60-95)	5	Cortical	-	FMM + histology	Majority read from visual assessment	N	Cerebellar cortex and pons to exclude bias	-
Thal 2018 (24)	Regional threshold transition	X	97	2	End of life FDS	14 (non demented) / 67 / 19	$72.8 \pm 10.49$ (non demented), $82.6 \pm 7.69$ AD, $80.7 \pm 6.7$ nonAD	6	Global	0-3 (4)	FMM + histology	Cortical composite and caudate nucleus SUVR cut-off	N	Pons	3.09% when allowing $\pm 1$ phase, otherwise 27.84%