Supplementary table e-1.

Coefficient of variation for the quality control (QC) samples that were used during the time periods when the samples were analyzed.

	QC (low)/ %	QC (high)/ %
Aβ1-42 (n=618)	8,9	7,9
Aβ42/Aβ40 (n=10)	3,6	5,1
T-tau (n=678)	6,6	7,9
P-tau (n=532)	6,3	6,4

Table e-2

CSF biomarkers mean values and variation in a representative population-based sample of 70-year-olds.

All participants

	Men (n=166)					Women (n=156)						All (n=322)				
	mean	**sd**	**median**	**min**	**max**	**mean**	**sd**	**median**	**min**	**max**	**p**	**mean**	**sd**	**median**	**min**	**max**
CSF Aβ 42 (ng/L)	702.4	*(231.0)*	745	195	1200	727.2	*(221.8)*	753	145	1200	0.33	714.4	*(226.5)*	753.0	145	1200
CSF T-Tau (ng/L)	335.0	*(135.6)*	304	115	821	333.3	*(145.0)*	298	115	1040	0.92	334.2	*(140.0)*	300	115	1040
CSF- P-tau (ng/L)	49.6	*(17.3)*	48	18	113	49.7	*(17.9)*	47	19	128	0.98	49.7	*(17.6)*	47	18	128
	Men (n=163)					**Women (n=150)**					**All (n= 318)**					
	mean	**sd**	**median**	**min**	**max**	**Mean**	**sd**	**median**	**min**	**max**	**p**	**Mean**	**sd**	**median**	**min**	**max**
CSF Aβ 40	6102.5	*(1352.9)*	6063	3130	9760	6299.0	*(1423.8)*	6346	2752	9968	0.21	6197.7	*(1389.0)*	6242	2752	9968
CSFAβ42/40	0.86	*(0.23)*	0.95	0.26	1.3	0.88	*(0.21)*	0.96	0.35	1.19	0.33	0.87	*(0.23)*	0.96	0.26	1.3

Participants without dementia

	Men (n=165)					Women (n=152)						All (n=317)				
	mean	**sd**	**median**	**min**	**max**	**mean**	**sd**	**median**	**min**	**max**	**p**	**mean**	**sd**	**median**	**min**	**max**
CSF Aβ 42 (ng/L)	701.8	*(231.5)*	745	195	1200	737,5	*(214.9)*	762	145	1200	0,16	718.9	*(224.1)*	753	145	1200
CSF T-Tau (ng/L)	335.4	*(135.9)*	306	115	821	326.4	*(133.4)*	296	115	963	0,55	331.1	*(134.6)*	299	115	963
CSF P-tau (ng/L)	49.7	*(17.3)*	48	18	113	49	*(17.1)*	47	19	128	0,73	49.4	*(17.2)*	47	18	128
	Men (n=163)					**Women (n=150)**						**All (n= 313)**				
	mean	**sd**	**median**	**min**	**max**	**Mean**	**sd**	**median**	**min**	**max**	**p**	**Mean**	**sd**	**median**	**min**	**max**
CSF Aβ40(pg/ml)	6113.0	*(1350.4)*	6094	3130	9760	6336.8	*(1411.1)*	6351	2752	9968	0.15	6220.3	*(1382.1)*	6262	2752	9968
CSF Aβ 42/40	0.86	*(0.23)*	0.95	0.26	1.3	0.89	*(0.2)*	0.97	0.38	1.2	0.12	0.88	*(0.21)*	0.96	0.26	1.3

Participants with dementia[2]

		Men (n=1)					Women (n=4)					All (n=5)				
		mean	**sd**	**median**	**min**	**max**	**mean**	**sd**	**median**	**min**	**max**	**mean**	**sd**	**median**	**min**	**max**
CSF Aβ 42 (ng/L)		804	(-)	(-)	804	804	334,3	*(78.0)*	309	240	420	428.2	*(220.7)*	366	240	804
CSF T-Tau (ng/L)		262	(-)	(-)	262	262	598,5	*(308.3)*	401	373	1040	531.2	*(306.5)*	401	262	1040
CSF P-tau (ng/L)		40	(-)	(-)	40	40	74.5	*(32.4)*	59	55	123	67.6	*(32.0)*	59	40	123
		Men (n=1)					**Women (n=4)**					**All (n=5)**				
		mean	**sd**	**median**	**min**	**max**	**Mean**	**min**	**median**	**max**		**mean**	**sd**	**median**	**min**	**max**
CSF Aβ40 (pg/ml)		4388	(-)	(-)	4388	4388	4880.3	*(1316.4)*	4403	3312	6361	4781.8	*(1161.1)*	4403	3312	6361
CSF Aβ 42/40		1.1	(-)	(-)	1.1	1.1	0.88	*(0.2)*	0.38	0.35	1.2	0.55	*(0.29)*	0.47	0.35	1.1

1. Differences in mean are estimated with T-test.
2. As the group with dementia consisted of only 5 participants no test between the groups was performed.

Supplementary table e-3.

CSF biomarker mean values and variation in a representative population sample of 70-year olds according to the A/T/N classifications system, At-risk-risk-for Alzheimer´s disease and preclinical Alzheimer`s disease according to the Dubois 2016 criteria and SNAP according to the NIA-AA criteria, Asymptomatic at risk according to the IWG-2 criteria with CDR 0.

Normal CSF																
		Men (n=63)					**Women (n=76)**						**All (n=139)**			
		mean	**sd**	**median**	**min**	**max**	**mean**	**sd**	**median**	**min**	**max**	**p1**	**mean**	**sd**	**median**	**min**	**max**
CSF-Aβ 42 (ng/L)		775.1	(145.2)	771	542	1140	801.4	(149.1)	800	535	1140	0.30	789.5	(147.4)	781	535	1140
CSF-Tau (ng/L)		252.3	(50.8)	253	115	340	264.5	(58.2)	271	133	349	0.20	258.9	(55.1)	263	115	349
CSF-P-tau (ng/L)		39.6	(8.3)	38	23	59	42.1	(9.1)	44	24	61	0.11	40.9	(8.8)	41	23	61
CSF Aβ 40(pg/ml)		5592.0	(919.8)	5710	3163	7527	6018.5	(1098.1)	6221	3588	9067	0.02	5822.3	(1038.5)	5933	3163	9067
CSF Aβ 42/Aβ 40		0.96	(0.11)	0.97	0.57	1.21	0.98	(0.12)	0.99	0.58	1.18	0.23	0.97	(0.11)	0.96	0.57	1.21

A+/T-/N-		Men (n=15)				Women (n=19)					All (n=34)					
	mean	sd	median	min	max	mean	sd	median	min	max	p[1]	mean	sd	median	min	max
CSF Aβ 42(ng/L)	409.3	*(101.2)*	430	203	526	416.6	*(92.3)*	435	145	521	0.83	413.4	*(94.9)*	433	145	526
CS F T-Tau (ng/L)	224.0	*(63.3)*	234	134	341	256.8	*(64.6)*	278	115	358	0.15	242.4	*(65.2)*	250	115	348
CSF P-tau (ng/L)	36.5	*(11.4)*	36	18	57	40.2	*(9.9)*	42	19	58	0.32	38.6	*(10.6)*	40	18	58
CSF Aβ 40 (pg/ml)	4505.4	*(1047.9)*	3985	3171	6660	5098.8	*(1108.7)*	5256	2752	6578	0.14	4857.7	*(1107.5)*	4872	2752	6660
CSF Aβ 42/Aβ 40	0.68	*(0.2)*	0.67	0.39	0.98	0.67	*(0.12)*	0.64	0.42	0.9	0.81	0.67	*(0.16)*	0.66	0.39	0.98

A+/T-/N+		Men (n=14)				Women (n=5)					All (n=19)					
	mean	sd	median	min	max	mean	sd	median	min	max	p[1]	mean	sd	median	min	max
CSF-Aβ 42 (ng/L)	402.7	*(71.1)*	409	297	517	406.0	*(65.8)*	393	322	488	0.93	403.6	*(67.9)*	409	297	517
CSF-Tau (ng/L)	463.3	*(73.5)*	437	353	614	478.6	*(79.9)*	430	414	592	0.70	467.3	*(73.2)*	437	353	614
CSF P-tau (ng/L)	63.1	*(10.7)*	59	49	79	64.2	*(4.9)*	64	58	70	0.84	63.4	*(9.4)*	61	49	79
CSF Aβ40 (pg/ml)	6464.4	*(1486.7)*	6586	3130	9760	6959.2	*(997.0)*	7081	5526	8274	0.50	6594.6	*(1366.5)*	6667	3130	9760
CSF Aβ 42/40	0.48	*(0.09)*	0.45	0.34	0.64	0.49	*(0.04)*	0.49	0.44	0.54	0.85	0.49	*(0.08)*	0.47	0.34	0.64

A+/T+/N+		Men (n=5)				Women (n=1)					All (n=6)					
	mean	sd	median	min	max	mean	sd	median	min	max	p 2	mean	sd	median	min	max
CSF-Aβ 42 (ng/L)	375.0	*(123.3)*	*365*	202	508	447	*(-)*	*(-)*	447	447	-	387.0	*(114.1)*	365	202	508
CSF-Tau (ng/L)	765.2	*(84.2)*	*798*	619	821	963	*(-)*	*(-)*	963	963	-	789.2	*(110.4)*	798	619	963
CSF P-tau (ng/L)	99.6	*(11.4)*	*100*	82	113	128	*(-)*	*(-)*	128	128	-	104.3	*(15.4)*	100	82	128
CSF Aβ40 (pg/ml)	7979.4	*(1269.5)*	*8335*	5744	8865	8204	*(-)*	*(-)*	8204	8204	-	8016.8	*(1139.2)*	8327	5744	8865
CSF Aβ 42/40	0.42	*(0.13)*	*0.40*	0.28	0.59	0.48	*(-)*	*(-)*	0.48	0.48	-	0.43	*(0.12)*	0.40	0.28	0.59

A-/T-/N+		Men (n=29)				Women (n=20)						All (n=49)				
	mean	sd	median	min	max	mean	sd	median	min	max	p 1	mean	sd	median	min	max
CSF-Aβ 42 (ng/L)	876.3	(166.1)	895	556	1200	911.5	(152.6)	929	562	1200	0.46	890.7	(160.1)	898	556	1200
CSF-Tau (ng/L)	408.9	(48.4)	393	350	549	429.5	(46.1)	416	360	533	0.14	417.3	(48.1)	405	350	549
CSF P-tau (ng/L)	58.1	(7.13)	56	45	77	59.2	(7.1)	59	44	76	0.64	58.6	(7.1)	58	44	77
CSF Aβ40 (pg/ml)	7266.4	(784.6)	7190	5595	8868	7813.0	(1040.8)	7969	5624	9324	0.05	7489.5	(928.2)	7401	5595	9324
CSF Aβ 42/40	0.96	(0.16)	1.02	0.52	1.15	0.96	(0.16)	1.01	0.61	1.19	0.97	0.96	(0.16)	1.01	0.52	1.19

A-/T+/N+			Men (n=4)			Women (n=8)					All (n=12)					
	mean	sd	median	min	max	mean	sd	median	min	max	p 1	mean	sd	median	min	max
CSF-Aβ 42 (ng/L)	893.8	(143.5)	871	705	1040	831.9	(192.5)	764	589	1140	0.59	825.5	(173.6)	800	589	1140
CSF-Tau (ng/L)	656.8	(104.7)	661	512	759	625.8	(152.0)	595	360	800	0.73	636.2	(133.9)	661	360	800
CSF P-tau (ng/L)	90.8	(14.9)	84	82	113	93.4	(9.4)	92	81	107	0.71	92.5	(10.9)	85	81	113
CSF Aβ40 (pg/ml)	8858.0	(836.8)	8736	7727	9588	8450.6	(1316.7)	8628	5615	9968	0.59	8586.4	(1155.2)	8736	5615	9968
CSF Aβ 42/40	1.0	(0.04)	0.98	0.96	1.04	0.88	(0.23)	0.93	0.58	1.17	0.37	0.93	(0.19)	0.96	0.58	1.17

AR-AD		Men (=48)				Women (n=47)						All (n=95)				
	mean	sd	median	min	max	mean	sd	median	min	max	p1	mean	sd	median	min	max
CSF Aβ 42 (ng/L)	731.8	(262.8)	807	203	1200	697.9	(272.4)	724	145	1200	0.54	715.0	(266.8)	764	145	1200
CSF T-Tau (ng/L)	371.8	(134.2)	380	134	759	393.1	(153.9)	384	115	800	0.47	382.3	(143.9)	383	115	800
CSF P-tau (ng/L)	54.1	(17.5)	54	18	113	57.3	(20.5)	57	19	107	0.416	55.7	(19.0)	55	18	113
CSF Aβ 40(pg/ml)	6624.5	(1651.9)	6834	3171	9588	6824.3	(1818.5)	6932	2752	9968	0.58	6725.4	(1731.6)	6922	2752	9968
CSF Aβ 42/Aβ 40	0.88	(0.21)	0.98	0.39	1.15	0.83	(0.21)	0.81	0.42	1.19	0.2	0.86	(0.21)	0.93	0.39	1.19

Preclinical AD		Men (n=19)					Women (n=6)					All (n=25)				
	mean	sd	median	min	max	mean	sd	median	min	max	p1	mean	sd	median	min	max
CSF-Aβ 42 (ng/L)	395.4	(84.7)	409	202	517	412.8	(61.2)	393	322	488	0.65	399.6	(78.9)	409	202	517
CSF-Tau (ng/L)	542.7	(155.3)	485	353	821	559.3	(210.3)	430	414	963	0.84	546.7	(165.4)	485	353	963
CSF P-tau (ng/L)	72.7	(19.6)	70	49	113	74.83	(26.4)	64	58	128	0.83	73.24	(20.8)	68	49	128
CSF Aβ40 (pg/ml)	6863.1	(1557.0)	6721	3130	9760	7166.7	(1026.4)	7081	5526	8274	0.70	6936.0	(1433.6)	6855	3130	9760
CSF Aβ 42/40	0.47	(0.1)	0.45	0.28	0.64	0.49	(0.04)	0.48	0.44	0.54	0.64	0.47	(0.09)	0.47	0.28	0.64

SNAP		Men (n=33)				Women (n=28)					All (N=61)				
	mean	sd	median	min	max	mean	sd	median	min	max	p 1	mean	Sd	median	min	max
CSF Aβ 42 (ng/L)	878.4	(161.5)	895	556	1200	888.7	(165.3)	876	562	1200	0.81	883.1	(162.0)	895	556	1200
CSF T-tau (ng/L)	438.9	(99.1)	399	350	759	485.6	(125.1)	447	360	800	0.12	460.4	(113.3)	422	350	800
CSF P-tau (ng/L)	62.1	(13.5)	59	45	113	68.9	(17.5)	61	44	107	0.09	65.2	(15.7)	61	44	113
CSF Aβ 40 (pg/ml)	7459.4	(939.4)	7327	5595	9588	7995.1	(1139.2)	8063	5615	9968	0.05	7705	(1061.7)	7670	5595	9968
CSF Aβ42/Aβ 40	0.96	(0.15)	1.02	0.52	1.15	0.94	(0.18)	0.98	0.58	1.19	0.54	0.95	(0.17)	1.01	0.52	1.19

NIA –AA Stage 1		Men (n=15)					Women (n=19)					All (n=34)				
	mean	sd	median	min	max	mean	sd	median	min	max	p[1]	mean	median	sd	min	
CSF Aβ 42(ng/L)	409.3	(101.2)	430	203	526	416.6	(92.3)	435	145	521	0.83	413.4	433	(94.9)	145	526
CS F T-Tau (ng/L)	224.0	(63.3)	234	134	341	256.8	(64.6)	256	115	358	0.15	242.4	250	(65.2)	115	348
CSF P-tau (ng/L)	36.5	(11.4)	36	18	57	40.2	(9.9)	42	19	58	0.31	38.6	40	(10.6)	18	58
CSF Aβ 40 (pg/ml)	4505.4	(1047.9)	3985	3171	6660	5098.8	(1108.7)	5256	2752	6578	0.14	4857.7	4872	(1107.5)	2752	6660
CSF Aβ 42/Aβ 40	0.68	(0.2)	0.67	0.39	0.98	0.67	(0.12)	0.64	0.42	0.9	0.81	0.67	0.66	(0.16)	0.39	0.98

NIA-AA Stage 2		Men (n=19)					Women (n=6)					All (n=25)				
	mean	sd	median	min	max	mean	sd	median	min	max	p1	mean	sd	median	min	max
CSF-Aβ 42 (ng/L)	395.4	(84.7)	409	202	517	412.8	(61.2)	393	322	488	0.65	399.6	(78.9)	409	202	517
CSF-Tau (ng/L)	542.7	(155.3)	485	353	821	559.3	(210.3)	430	414	963	0.84	546.7	(165.4)	485	353	963
CSF P-tau (ng/L)	72.7	(19.6)	70	49	113	74.83	(26.4)	64	58	128	0.83	73.24	(20.8)	68	49	128
CSF Aβ40 (pg/ml)	6863.1	(1557.0)	6721	3130	9760	7166.7	(1026.4)	7081	5526	8274	0.70	6936.0	(1433.6)	6855	3130	9760
CSF Aβ 42/40	0.47	(0.1)	0.45	0.28	0.64	0.49	(0.04)	0.48	0.44	0.54	0.64	0.47	(0.09)	0.47	0.28	0.64

1. Differences in mean between men and women are tested with T-test.
2. As the sample size was very small no test between groups was performed.

Table e-4.

CSF biomarker mean values and variation in a representative population sample of 70-year-olds by ApolipoproteinE ε4 status with CDR 0.

Participants without Apolipoprotein E ε4																	
		Men (n=79)					**Women (n=89)**						**All (n=168)**				
		mean	**sd**	**median**	**min**	**max**	**mean**	**sd**	**median**	**min**	**max**	**p 1**	**mean**	**sd**	**median**	**min**	**max**
CSF Aβ 42 (ng/L)		768.9	(190.7)	790	409	1 200	799.7	(212.2)	842	145	1200	0.33	785.3	(202.3)	820	145	1200
CSF T-Tau (ng/L)		310	(108.4)	297	115	661	311.6	(114.7)	288	115	726	0.95	311.0	(111.4)	290	115	726
CSF P-tau (ng/L)		46.5	(13.6)	47	20	84	47.6	(16.1)	45	19	107	0.63	47.1	(14.9)	45	19	107
		Men (n=79)					**Women (n=88)**					**All (n=167)**					
		mean	**sd**	**median**	**min**	**max**	**Mean**	**sd**	**median**	**min**	**max**	**p1**	**mean**	**sd**	**median**	**min**	**max**
CSF Aβ40 (pg/ml)		6120.6	(1350.5)	6023	3163	9760	6343.2	(1461.0)	6351	2752	9968	0.31	6237.9	(1410.0)	6262	2752	9968
CSF Aβ 42/40		0.93	(0.17)	0.98	0.41	1.21	0.95	(0.16)	0.99	0.45	1.18	0.62	0.94	(0.16)	0.98	0.41	1.21

Participants with Apolipoprotein E ε4																	
		Men (n=50)					**Women (n=36)**						**All (n=86)**				
		mean	**sd**	**median**	**min**	**max**	**mean**	**sd**	**median**	**min**	**max**	**p1**	**mean**	**sd**	**median**	**min**	**max**
CSF Aβ 42 (ng/L)		596.0	(249.3)	556	409	1 200	620.8	(181.4)	617	145	1200	0.62	606.4	(222.6)	589	145	1200
CSF T-Tau (ng/L)		385.9	(183.7)	341	115	661	360.9	(175.8)	299	115	726	0.53	375.5	(179.8)	303	115	726
CSF P-tau (ng/L)		55.3	(23.0)	49	20	84	53.6	(20.6)	49	19	107	0.73	54.6	(21.9)	49	19	107
		Men (n=48)					**Women (n=36)**					**All (n= 84)**					
		mean	**sd**	**median**	**min**	**max**	**Mean**	**sd**	**median**	**min**	**max**	**p1**	**mean**	**sd**	**median**	**min**	**max**
CSF Aβ40 (pg/ml)		6200.3	(1571.4)	6103	3130	9381	6477.4	(1490.5)	6399	3815	9136	0.42	6319.1	(1534.3)	6291	3130	9381
CSF Aβ 42/40		0.73	(0.25)	0.76	0.28	1.14	0.79	(0.22)	0.78	0.42	1.19	0.23	0.76	(0.21)	0.76	0.28	1.21

1. Differences in mean are estimated with T-test