

Supplemental Table 1: Baseline demographic, clinical, and genetic characteristics, and outcomes of 1538 Probable AD patients								
	All cases (n= 1538)		No FU clinical evaluation (n=581)		FU clinical evaluation (n=957)		t-test-χ^2	p-value
	Mean	S.D.	Mean	S.D.	Mean	S.D		
Age at study entry	73.5	8.5	74.2	8.1	73.1	8.7	2.35	0.01
Education level, in years	12.1	2.9	11.7	2.9	12.4	2.9	-4.45	<0.0001
MMSE	16.9	6.0	14.9	6.3	18.2	5.4	-10.7	<0.0001
CDR	1.3	.69	1.5	.78	1.2	.60	9.27	<0.0001
HDRS	6.5	4.7	7.2	5.2	6.2	4.4	3.91	.002
HRS	2.5	1.8	2.7	2.1	2.4	1.7	3.28	.001
Duration of the disease, in years*	4.0	2.5	4.4	2.9	3.8	2.3	3.89	<0.0001
	N	%	N	%	N	%		
Gender, Women	1054	69	409	70	645	67.5	1.43	N.S.
APOE-4 allele (n= 1086)	624	57.5	194	56	430	58	0.23	N.S.
Hypertension†	603	39	217	37	386	40	1.38	N.S.
Diabetes Mellitus‡	110	7	47	8	63	7	1.22	N.S.
Heart Disease #	199	13	66	11	133	14	2.08	N.S.
Deceased	602	39	199	36	403	42	9.47	0.002
Nursing home admission	445	28	137	24	308	32	13.1	<0.0001
† told by doctor; ‡ told by doctor and using hypoglycemic agents, # History of congestive heart failure, angina, or coronary by-pass grafting/coronary angioplasty. * From the onset of the symptoms to initial visit.								
Abbreviations: MMSE: Mini-Mental State examination; CDR: Clinical Dementia Rating, HDRS: Hamilton Depression Rating Scale, HRS: Hachinski Rating Scale. N.S.: not significant								

Supplemental Table 2: Clinical characteristics and medication use of 1537 Probable AD patients								
	All cases (n= 1538)		No FU clinical evaluation (n=581)		FU clinical evaluation (n=957)		χ^2	p-value
	N	%	N	%	N	%		
Baseline psychiatric symptoms								
Major Depression	170	11	70	12	100	10.5	0.92	N.S.
Psychosis	633	41	280	48	343	37	18.8	<0.0001
Aggression	273	18	131	23	142	15	13.0	<0.0001
Agitation	906	60	357	63	549	57.5	5.16	0.02
Baseline neurological syndromes								
Baseline Extrapyramidal signs	748	49	346	60	402	42	44.0	<0.0001
Baseline psychiatric and dementia medications								
Antidepressants	348	23	114	20	234	24.5	4.86	0.02
Antipsychotics	115	7	44	8	71	7	0.01	N.S.
Dementia medications	290	19	76	13	214	22	20.4	<0.0001
Aggression								

Supplemental Table 3: Results of the proportional hazard model examining risks associated with <u>nursing home admission</u> in subjects using antipsychotics									
Variable	Model 1			Model 2			Model 3		
	Hazard Ratio	95% CI	p-value	Hazard Ratio	95% CI	p-value	Hazard Ratio	95% CI	p-value
Antipsychotics	1.80	(1.39 – 2.32)	<0.0001	1.83	(1.42 – 2.37)	<0.0001	1.22	(0.92 – 1.61)	.17
Age	1.00	(.99 – 1.01)	.97	0.99	(0.98 – 1.01)	.35	1.00	(0.98 – 1.01)	.70
Education	1.05	(1.01 – 1.09)	0.01	1.05	(1.01 – 1.10)	0.01	1.07	(1.03 – 1.11)	0.001
Gender	0.90	(0.70 – 1.16)	.43	0.86	(0.67 – 1.11)	.23	.082	(0.64 – 1.06)	.13
MMSE	0.93	(0.92 – 0.97)	<0.0001	0.95	(0.92 – 0.97)	<0.0001	0.95	(0.93 – 0.98)	<0.0001
EPS				1.25	(0.98 – 1.59)	.07	1.26	(0.98 – 1.61)	.07
Incident Stroke				1.06	(0.71 – 1.57)	.78	0.88	(0.58 – 1.33)	.54
Hypertension				0.98	(0.76 – 1.25)	.85	1.16	(0.90 – 1.49)	.26
Diabetes mellitus				1.22	(0.78 – 1.91)	.39	1.18	(0.75 – 1.88)	.47
Heart disease				1.53	(1.10 – 2.14)	.01	1.56	(1.11 – 2.19)	.01
Aggression							1.28	(0.96 – 1.70)	.09
Agitation							1.36	(1.03 – 1.81)	.03
Depression							1.12	(0.81 – 1.57)	.49
Psychosis							1.58	(1.21 – 2.07)	.001
Dementia medication							0.35	(0.27 – 0.47)	<.0001
Model 1: Controlled for age, education level (<12 years), gender, and baseline Mini-mental state examination (MMSE) scores.									
Model 2: Model 1 + extrapyramidal signs (EPS), incident stroke, heart disease, diabetes mellitus, and hypertension.									
Model 3: Model 2 + psychosis, depression, aggression, agitation, and dementia medication.									

Supplemental Table 4: Results of the proportional hazard model examining risks associated with <u>death</u> in subjects using antipsychotics									
Variable	Model 1			Model 2			Model 3		
	Hazard Ratio	95% CI	p-value	Hazard Ratio	95% CI	p-value	Hazard Ratio	95% CI	p-value
Antipsychotics	0.98	(.79 – 1.22)	0.85	.99	(0.79 – 1.23)	.90	0.88	(0.69 – 1.11)	.27
Age	1.04	(1.02 – 1.05)	<.0001	1.03	(1.02 – 1.04)	<.0001	1.03	(1.02 – 1.04)	<.0001
Education	1.05	(1.01 – 1.09)	.008	1.06	(1.02 – 1.09)	.0002	1.06	(1.02 – 1.09)	0.002
Gender	1.54	(1.24 – 1.90)	<.0001	1.53	(1.23 – 1.09)	<.001	1.50	(1.20 – 1.87)	<.001
MMSE	0.94	(0.92 – 0.95)	<.0001	0.94	(0.92 – 0.96)	<.0001	1.58	(1.27 – 1.95)	<.0001
EPS				1.51	(1.22 – 1.86)	<.001	1.58	(1.27 – 1.95)	<.0001
Incident Stroke				1.34	(0.97 – 1.85)	.07	1.24	(0.89 – 1.73)	.21
Hypertension				1.17	(0.95 – 1.44)	.15	1.15	(0.93 – 1.42)	.20
Diabetes mellitus				1.42	(0.97 – 2.08)	.07	1.36	(0.92 – 2.02)	.12
Heart disease				0.89	(0.66 – 1.19)	.89	0.66	(1.11 – 1.20)	.44
Aggression							1.30	(1.01 – 1.67)	.03
Agitation							0.98	(0.77 – 1.26)	.88
Depression							1.28	(0.97 – 1.70)	.08
Psychosis							1.24	(0.99 – 1.56)	.06
Dementia medication							1.03	(0.81 – 1.31)	.79
Model 1: Controlled for age, education level (<12 years), gender, and baseline Mini-mental state examination (MMSE) scores.									
Model 2: Model 1 + extrapyramidal signs (EPS), incident stroke, heart disease, diabetes mellitus, and hypertension.									
Model 3: Model 2 + psychosis, depression, aggression, agitation, and dementia medication.									