

**Supplementary Table 1.**

Distribution of cases in both patient groups for 18 chronic diseases

	<b>Controls n (%N)</b>	<b>Dementia n (%N)</b>
<b>Arthritis</b>	1.634 (54.1)	354 (51.2)
<b>Atherosclerosis</b>	88 (2.9)	17 (3.4)
<b>Isquemic Heart disease</b>	556 (18.2)	97 (15.2)
<b>Diabetes Mellitus</b>	1.076 (35.4)	155 (26.8)
<b>Cerebrovascular disease</b>	448 (14.6)	67 (15.8)
<b>Hepatic diseases</b>	126 (4.2)	14 (2.3)
<b>Respiratory diseases</b>	719 (23.6)	96 (14.8)
<b>Hyperlipidemia</b>	554 (18.5)	135 (19)
<b>Hypertension</b>	2.342 (78.3)	461 (69.1)
<b>Chronic Renal Failure</b>	366 (12)	61 (9.8)
<b>Benign Neoplasm</b>	126 (4.1)	27 (2.9)
<b>Malign Neoplasm</b>	256 (8.4)	31 (5.6)
<b>Parkinson' disease</b>	15 (0.5)	35 (10.9)
<b>Anxiety disorders</b>	623 (20.6)	136 (18.4)
<b>Delirant disorders</b>	4 (0.2)	4 (0.6)
<b>Schizophrenia disorder</b>	5 (0.2)	0 (0.2)
<b>Sleep disorders</b>	224 (7.6)	62 (8.6)
<b>Toxic Abuse</b>	21 (0.7)	5 (0.9)

**Supplementary Table 2.** Mini-Mental State Examination (MMSE); Blessed Dementia Rating Scale (BDRS) and Global Deterioration Scale (GDS) values by dementia subtype; Not Otherwise Specified (NOS)

Clinical index	Score	Alzheimer's disease	Vascular Dementia	Other degenerative dementias	Secondary Dementia	Dementia NOS
<b>MMSE</b>	0 - 15	140 (21.1%)	48 (26.8%)	21 (22.1%)	4 (15.4%)	9 (60.0%)
	16 - 23	396 (59.6%)	100 (55.9%)	54 (56.8%)	15 (57.7%)	5 (33.3%)
	24 - 30	128 (19.3%)	31 (17.3%)	20 (21.1%)	7 (26.9%)	1 (6.7%)
<b>Blessed cognitive</b>	mean ± SD	2.97 ± 1.57	3.43 ± 1.72	3.32 ± 1.85	3.67 ± 1.77	4.55 ± 1.86
<b>Blessed functional</b>	mean ± SD	0.65 ± 1.44	1.63 ± 2.0	1.58 ± 2.06	2.17 ± 2.2	3.00 ± 2.61
<b>Blessed behaviour</b>	mean ± SD	3.06 ± 1.7	3.68 ± 1.58	3.57 ± 1.45	3.72 ± 1.53	4.27 ± 1.10
<b>Global Deterioration Scale (GDS)</b>	Mild cognitive decline	64 (9.6%)	9 (5.1%)	7 (7.6%)	1 (4.5%)	
	Moderate cognitive decline (Mild Dementia)	443 (66.3%)	86 (49.1%)	41 (44.6%)	10 (45.5%)	4 (33.3%)
	Moderately severe cognitive decline (Moderate Dementia)	80 (12%)	42 (24.0%)	17 (18.5%)	4 (18.2%)	2 (16.7%)
	Severe cognitive decline (Moderately Severe)	76 (11.4%)	37 (21.1%)	26 (28.3%)	7 (31.8%)	5 (41.7%)
	Very severe cognitive decline (Severe Dementia)	5 (0.7%)	1 (0.6%)	1 (1.1%)		1 (8.3%)

**Supplementary Table 3.** Cumulative mortality rate and follow-up period by year of inclusion in both cohorts of patients.

Year diagnosis / inclusion	Persons included		Survivors at 31/12/2017		Cumulative mortality rate at 31/12/2017		Follow-up (months) (median $\pm$ SD)	
	Controls	Dementia	Controls	Dementia	Controls	Dementia	Controls	Dementia
2007	96	32	38	6	60,4%	81,3%	125.8 $\pm$ 42.5	111.0 $\pm$ 34.5
2008	291	97	107	16	63,2%	83,5%	116.7 $\pm$ 40.3	100.4 $\pm$ 37.4
2009	336	112	174	35	48,2%	68,8%	117.3 $\pm$ 35.3	106.0 $\pm$ 34.9
2010	336	112	181	33	46,1%	70,5%	109.1 $\pm$ 31.1	97.7 $\pm$ 31.1
2011	411	137	253	61	38,4%	55,5%	101.9 $\pm$ 27.2	97.8 $\pm$ 25.7
2012	384	128	263	66	31,5%	48,4%	95.9 $\pm$ 21.1	92.3 $\pm$ 21
2013	444	148	332	92	25,2%	37,8%	88.1 $\pm$ 16.4	86.1 $\pm$ 15.9
2014	381	127	286	80	24,9%	37,0%	77.5 $\pm$ 13	76.6 $\pm$ 12.6
2015	309	103	263	86	14,9%	16,5%	69.6 $\pm$ 6.8	70.2 $\pm$ 4.9
<b>Total</b>	2.988	996	1.897	475	36,5%	52,3%	97.4 $\pm$ 31.0	91.4 $\pm$ 27.5

Supplementary Table 4. Healthcare cost per year of inclusion for controls and dementia subtypes

		Controls	Alzheimer's disease	Vascular Dementia	Other degenerative dementias	Secondary Dementia	Dementia NOS
HCE (t-3)	N	2.789	615	171	85	22	16
	Mean	2.037,6	1.851,7	2.449,4	1.987,4	3.389,3	2.023,3
	DS	2.924,2	2.449,0	3.548,2	1.760,2	3.986,9	1.753,9
HCE (t-2)	N	2.843	623	171	90	24	18
	Mean	2.236,6	2.054,2	2.997,9	2.644,9	3.887,1	2.366,4
	DS	3.400,1	2.733,3	4.234,9	3.675,0	7.120,7	3.419,0
HCE (t-1)	N	<b>2.916</b>	<b>653</b>	<b>174</b>	<b>94</b>	<b>25</b>	<b>18</b>
	Mean	<b>2.450,1</b>	<b>2.052,7</b>	<b>3.629,6</b>	<b>3.159,3</b>	<b>2.832,8</b>	<b>3.752,4</b>
	DS	<b>4.120,9</b>	<b>2.555,1</b>	<b>4.977,1</b>	<b>3.593,0</b>	<b>2.494,6</b>	<b>7.522,0</b>
HCE (t0)	N	2.988	669	182	97	27	19
	Mean	3.059,1	3.221,9	5.453,2	5.802,8	3.624,8	4.483,2
	DS	4.372,5	3.986,6	7.158,0	5.530,5	3.596,0	4.847,3
HCE (t+1)	N	2.747	624	159	90	25	18
	Mean	2.752,3	4.030,5	5.377,2	6.562,6	3.444,0	6.276,0
	DS	4.401,9	4.821,6	6.406,5	9.509,9	3.351,8	6.466,8
HCE (t+2)	N	2.538	578	135	73	23	17
	Mean	2.734,0	4.292,5	6.401,2	6.161,4	2.367,8	3.987,1
	DS	4.451,5	5.869,1	8.746,8	9.972,1	2.105,7	3.485,4
HCE (t+3)	N	2.111	457	108	53	17	7
	Mean	2.836,6	4.718,7	5.358,8	6.001,8	2.259,6	10.375,5
	DS	4.919,5	7.283,2	8.107,3	7.454,5	2.283,1	11.800,4
HCE (t+4)	N	1.697	352	81	47	8	6
	Mean	2.810,5	5.164,2	5.110,6	4.802,3	2.195,9	7.276,4
	DS	4.831,7	8.906,4	7.673,2	5.810,3	1.944,1	7.288,5
HCE (t+5)	N	1.255	233	51	30	5	4
	Mean	2.730,0	5.728,8	3.818,0	7.680,4	1.346,9	7.512,0
	DS	4.469,9	9.970,5	5.574,4	13.217,0	624,8	9.967,5
HCE (t+6)	N	892	154	28	17	5	2
	Mean	2.874,3	6.038,0	5.264,8	5.525,8	3.106,1	3.723,0
	DS	5.473,7	10.623,0	7.718,3	7.649,8	3.217,6	4.102,5
HCE (t+7)	N	579	89	16	7	3	-
	Mean	3.226,1	5.836,9	2.031,5	9.093,5	1.704,4	
	DS	6.039,7	9.547,9	828,7	11.781,5	1.308,5	
HCE (t+8)	N	358	55	8	4	2	-
	Mean	2.936,1	2.793,7	3.292,4	10.168,8	1.528,1	
	DS	4.654,2	3.558,0	2.835,9	16.676,8	614,0	
HCE (t+9)	N	155	17	3	1	1	-
	Mean	2.573,4	2.460,9	2.236,8	378,2	754,4	
	DS	4.414,1	1.903,0	1.632,0			
HCE (t+10)	N	36	4	1	-	1	-
	Mean	2.099,3	1.348,7	3.433,2		619,9	
	DS	1.925,1	365,6				

**Supplementary Table 5.** Comparison of average cost per year of inclusion and cost component between both patient cohorts

Cost Component	t-3	t-2	t-1	t0	t+1	t+2	t+3	t+4	t+5	t+6	t+7	t+8	t+9	t+10
Primary care visits	NS	NS	NS	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	NS	NS
Specialized care visits	NS	NS	0,001	0,001	0,001	0,001	0,001	NS	NS	NS	NS	NS	NS	NS
Emergency Room	NS	NS	NS	NS	NS	0,02	0,02	NS	NS	NS	NS	NS	NS	NS
Acute Inpatient	NS	NS	NS	NS	NS	NS	NS	0,001	0,001	0,001	0,001	NS	NS	NS
Pharmacy	NS	NS	NS	0,001	0,001	0,001	0,001	0,001	0,001	0,001	NS	NS	NS	NS
Long-stay Inpatient	NS	NS	NS	0,001	0,001	0,001	0,001	0,001	0,001	NS	NS	NS	NS	NS
Ambulatory Day Hospital	NS	NS	NS	0,001	0,001	0,001	0,001	0,001	0,001	0,001	NS	NS	NS	NS
Nursing home	NS	NS	NS	NS	NS	0,001	0,001	0,001	0,001	0,001	0,001	NS	NS	NS
Total HCE	NS	NS	NS	0,001	0,001	0,001	0,001	0,001	0,001	0,001	0,001	NS	NS	NS

**Supplementary Table 6.** Generalized linear mixed model (GLMM) on healthcare expenditure over the full follow-up period for dementia without burden of disease (CRG Status)

Reference category	Factor	Main Coefficients	RR (95% CI)	Significant at
	Intercept	7,9655	6.946 - 8.987	95%
Dementia=NO	Dementia=YES	0,1799	-2,86	NS
Age < 65 y	age 64 - 75 y	0,0184	-0,104	NS
	age 75 - 84 y	-0,1074	-0,083	95%
	age > 84y	-0,0078	-0,056	NS
Sex= Male	sexe= female	-0,0007	-0,033	NS
Follow-up= 0	Follow_up months	0,0012	0.001 - 0.002	95%
Exitus= NO	Exitus= Yes	0,3954	0.373 - 0.418	95%
Dementia=SI * Exitus=NO	Dementia=SI *Exitus= Yes	-0,1745	-0,053	95%

**Supplementary Table 7.** Generalized linear mixed model (GLMM) on healthcare expenditure over the full follow-up period for severity dementia categories (CDR scores) and burden of disease (CRG status)

Reference category	Factor	Main Coefficients	95% CI	Significant at
	Intercept	8,4726	-2.0518 ; 1.899	90%
Dementia=NO	Dementia=YES; Clinical Dementia Rate (CDR)=Mild	0,9992	-0.4854 ; 2.4825	90%
	Dementia=YES; Clinical Dementia Rate (CDR)=Moderate	-0,7117	-1.8152 ; 0.391	NS
	Dementia=YES; Clinical Dementia Rate (CDR)=Severe	0,3197	-0.1758 ; 0.8148	NS
Age < 65 y	age 64 - 75 y	0,0991	0.0496 ; 0.1485	95%
	age 75 - 84 y	-0,0668	-0.1063 ; -0.0274	95%
	age > 84y	-0,0153	-0.042 ; 0.0114	NS
Sex= Male	sexe= female	0,0516	0.036 ; 0.0673	95%
CRG Status = 1 Healthy	status=2	1,8536	1.7409 ; 1.9662	95%
	status=3	1,4918	1.3867 ; 1.5968	95%
	status=4	-0,0405	-0.1384 ; 0.0574	NS
	status=5	0,1237	0.0303 ; 0.217	NS
	status=6	0,3722	0.2812 ; 0.4631	95%
	status=7	0,1917	0.1207 ; 0.2627	95%
	status=8	0,1378	0.0712 ; 0.2043	95%
	status=9	-0,0189	-0.0726 ; 0.0348	NS
Exitus= NO	Exitus= Yes	0,2277	0.1908 ; 0.2645	95%
Dementia=NO * Exitus = NO	Dementia=YES; Clinical Dementia Rate (CDR)=Mild * Exitus=YES	-0,1205	-0.2044 ; -0.0366	95%
	Dementia=YES; Clinical Dementia Rate (CDR)=Moderate * Exitus=YES	0,1625	0.0899 ; 0.235	95%
	Dementia=YES; Clinical Dementia Rate (CDR)=Severe * Exitus=YES	0,0356	-0.0235 ; 0.0947	NS

**Supplementary Table 8.** Generalized linear mixed model (GLMM) on healthcare expenditure over the full follow-up period for severity dementia categories (CDR scores) without burden of disease (CRG status)

Reference category	Factor	Main Coefficients	95% CI	Significant at
	Intercept	8,1583	7.4845 ; 8.8279	95%
Dementia=NO	Dementia=YES; Clinical Dementia Rate (CDR)=Mild	0,2199	-0.4677 ; 0.8985	NS
	Dementia=YES; Clinical Dementia Rate (CDR)=Moderate	-0,0907	-0.5966 ; 0.4216	NS
	Dementia=YES; Clinical Dementia Rate (CDR)=Severe	0,1086	-0.123 ; 0.337	NS
Age < 65 y	age 64 - 75 y	0,0359	-0.0162 ; 0.0879	90%
	age 75 - 84 y	-0,1089	-0.1506 ; -0.0673	95%
	age > 84y	-0,0046	-0.0328 ; 0.0236	NS
Sex= Male	sex= female	0,0003	-0.0162 ; 0.0168	NS
Exitus= NO	Exitus= Yes	0,4238	0.4059 ; 0.4417	95%