

Supplementary material

Social and behavioural determinants of the difference in survival among older adults in Japan and England

Short title: Differences in Survival among Older Adults in Japan and England

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Supplemental Table 1. Results of Laplace regression and Cox hazard regression with multiple imputation and sampling weight among women in English Longitudinal Study of Ageing (ELSA) and Japan Gerontological Evaluation Study (JAGES)

		ELSA (Women, N= 3,083)				JAGES (Women, N=6,882)			
		15th survival percentile difference (days) (95%CI)		Hazard ratio on mortality (95%CI)		15th survival percentile difference (days) (95%CI)		Hazard ratio on mortality (95%CI)	
		Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate
Age (Ref = 65-69)	70-74	-931.9 (-1,273.0; -590.7)	-477.8 (-797.5; -158.2)	2.1 (1.7; 2.7)	1.8 (1.4; 2.4)	-586.6 (-731.3; -441.9)	-518.2 (-688.3; -348.2)	1.8 (1.5; 2.3)	1.7 (1.4; 2.1)
	75-79	-1,977.4 (-2,550.1; -1,404.7)	-1,360.2 (-1,749.5; -970.8)	3.7 (2.9; 4.7)	3.1 (2.4; 4.0)	-1,261.7 (-1,461.9; -1,061.5)	-1,040.1 (-1,241.1; -839.1)	2.9 (2.4; 3.6)	2.6 (2.1; 3.3)
	80-84	-2,333.9 (-2,556.1; -2,111.7)	-1,769.9 (-2,200.6; -1,339.2)	5.8 (4.6; 7.3)	4.5 (3.5; 5.8)	-1,937.8 (-2,093.8; -1,781.8)	-1,689.0 (-1,950.4; -1,427.6)	5.5 (4.4; 6.8)	4.5 (3.5; 5.7)
	85+	-3,062.9 (-3,251.0; -2,874.8)	-2,229.2 (-2,609.9; -1,848.5)	11.4 (8.9; 14.7)	8.7 (6.6; 11.5)	-3,179.7 (-3,328.4; -3,031.0)	-2,575.8 (-2,812.1; -2,339.5)	15.1 (12.1; 18.8)	11.0 (8.5; 14.2)
ADL (Ref = no ADL limitation) Comorbidity	Partially disabled	-1,180.3 (-1,420.6; -940.0)	-589.7 (-852.7; -326.7)	2.3 (2.0; 2.6)	1.5 (1.3; 1.7)	-1,815.6 (-2,152.6; -1,478.6)	-861.4 (-1,253.6; -469.1)	3.2 (2.5; 4.0)	1.8 (1.4; 2.3)
	Cancer	-1,004.9 (-1,242.2; -767.7)	-706.3 (-1,118.2; -294.3)	1.7 (1.4; 2.1)	1.6 (1.2; 2.0)	-1,564.8 (-1,866.3; -1,263.3)	-1,291.8 (-2,477.6; -106.1)	2.0 (1.5; 2.8)	2.1 (1.6; 2.8)
	Heart disease	-791.5 (-1,081.7; -501.3)	-380.7 (-601.3; -160.1)	1.6 (1.4; 1.8)	1.3 (1.1; 1.5)	-970.6 (-1,227.4; -713.7)	-359.6 (-545.2; -174.0)	1.8 (1.6; 2.2)	1.4 (1.2; 1.6)
	Stroke	-902.6 (-1,171.9; -633.3)	-282.0 (-662.0; 98.0)	2.1 (1.7; 2.5)	1.4 (1.1; 1.7)	-622.4 (-1,186.9; -57.8)	-440.1 (-2,132.7; 1,252.4)	1.6 (1.0; 2.5)	1.1 (0.6; 1.9)
	Hypertension	-117.4 (-438.1; 203.3)	-270.5 (-472.4; -68.5)	1.1 (1.0; 1.2)	1.0 (0.9; 1.2)	-73.6 (-225.6; 78.4)	97.8 (-46.1; 241.8)	1.0 (0.9; 1.2)	1.0 (0.8; 1.1)
	Diabetes	-607.8 (-1,058.6; -157.0)	-615.2 (-863.7; -366.7)	1.4 (1.1; 1.7)	1.3 (1.0; 1.7)	-362.7 (-563.7; -161.8)	-498.0 (-705.9; -290.1)	1.3 (1.1; 1.6)	1.4 (1.1; 1.7)
	Psychiatric disorders	-119.0 (-617.2; 379.1)	-6.9 (-300.8; 287.1)	1.0 (0.7; 1.3)	1.0 (0.7; 1.3)	-200.5 (-869.8; 468.9)	147.9 (-933.2; 1,229.1)	1.0 (0.6; 1.7)	0.8 (0.4; 1.3)
Education (Ref = 15 years or under)	16-18 years	382.4 (-21.2; 786.0)	179.1 (-109.6; 467.9)	0.7 (0.6; 0.9)	0.9 (0.7; 1.0)	388.7 (173.2; 604.1)	189.0 (43.1; 334.9)	0.8 (0.7; 0.9)	0.9 (0.8; 1.0)
	19 years or more	866.3 (239.7; 1,493.0)	406.3 (-118.2; 930.7)	0.7 (0.5; 0.9)	0.8 (0.6; 1.1)	560.6 (117.6; 1,003.7)	82.3 (-213.4; 378.1)	0.7 (0.5; 1.0)	0.8 (0.6; 1.2)

Family-based social relationships (marital status, ref = married)	Divorced & widowed	-1,157.1 (-1,372.0; -942.3)	-63.1 (-346.9; 220.6)	2.0 (1.8; 2.3)	1.1 (0.9; 1.3)	-1,116.2 (-1,259.6; -972.9)	-124.8 (-265.4; 15.8)	2.1 (1.8; 2.3)	1.1 (1.0; 1.3)
Friendships-based social relationships (social network, ref = meet up with friend once or more a week) Physical activity (Ref = Non sport club participation) Alcohol drinking (Ref = Non) Smoking (Ref = Current smoker) BMI (Ref = 22.5-24.9kg/m ²)	Non-married	-1,219.1 (-1,587.8; -850.4)	-396.2 (-819.3; 27.0)	2.0 (1.5; 2.6)	1.2 (0.9; 1.7)	-418.2 (-1,448.0; 611.6)	-48.2 (-420.9; 324.5)	1.3 (0.9; 1.9)	1.0 (0.7; 1.4)
	Once or twice a month	40.3 (-577.5; 658.0)	12.6 (-320.1; 345.3)	0.8 (0.7; 1.1)	0.9 (0.7; 1.1)	-567.8 (-809.6; -325.9)	-158.8 (-338.9; 21.2)	1.3 (1.1; 1.6)	1.1 (0.9; 1.4)
	Less than once a month	-321.5 (-927.1; 284.1)	-39.9 (-375.0; 295.2)	1.0 (0.8; 1.3)	0.9 (0.7; 1.2)	-740.0 (-978.9; -501.1)	-183.3 (-358.0; -8.6)	1.5 (1.3; 1.8)	1.2 (1.0; 1.4)
	Yes	1,539.6 (1,032.9; 2,046.4)	250.9 (-135.1; 636.9)	0.4 (0.3; 0.6)	0.7 (0.5; 1.0)	1,231.9 (1,014.7; 1,449.1)	356.5 (151.6; 561.4)	0.4 (0.3; 0.5)	0.7 (0.5; 0.9)
Alcohol drinking (Ref = Non)	Not every day	846.8 (573.5; 1,120.1)	452.1 (246.9; 657.3)	0.6 (0.5; 0.6)	0.7 (0.6; 0.9)	530.0 (246.9; 813.1)	-40.2 (-290.6; 210.3)	0.7 (0.6; 0.9)	1.0 (0.8; 1.3)
	Every day	693.5 (283.3; 1,103.7)	363.9 (-58.9; 786.8)	0.6 (0.5; 0.8)	0.7 (0.6; 0.9)	555.8 (104.6; 1,007.0)	332.1 (-16.6; 680.8)	0.7 (0.5; 1.0)	0.8 (0.6; 1.2)
Smoking (Ref = Current smoker)	Past smoker	12.6 (-449.5; 474.7)	435.4 (-42.4; 913.1)	0.9 (0.8; 1.1)	0.8 (0.6; 0.9)	367.2 (-583.5; 1,317.8)	590.8 (-219.5; 1,401.2)	0.8 (0.5; 1.2)	0.6 (0.4; 1.0)
	Never smoker	480.2 (82.6; 877.8)	701.5 (242.0; 1,161.0)	0.7 (0.6; 0.9)	0.6 (0.5; 0.7)	1,331.6 (861.6; 1,801.6)	1,100.6 (328.7; 1,872.6)	0.5 (0.4; 0.7)	0.4 (0.3; 0.6)
BMI (Ref = 22.5-24.9kg/m ²)	<18.5	-516.1 (-1,152.4; 120.2)	-175.2 (-614.7; 264.3)	1.9 (1.2; 2.9)	1.4 (0.9; 2.3)	-1,673.8 (-2,053.3; -1,294.3)	-678.7 (-897.8; -459.6)	2.7 (2.2; 3.4)	1.8 (1.4; 2.2)
	18.5-22.4	-89.3 (-495.1; 316.6)	-174.7 (-568.4; 219.0)	1.1 (0.9; 1.4)	1.0 (0.7; 1.3)	-453.2 (-688.6; -217.9)	-179.3 (-348.6; -10.1)	1.3 (1.1; 1.6)	1.1 (1.0; 1.3)
	≥25	410.3 (36.2; 784.4)	239.4 (-15.6; 494.4)	0.8 (0.6; 0.9)	0.8 (0.7; 1.0)	82.8 (-134.6; 300.2)	-61.3 (-280.0; 157.4)	1.0 (0.8; 1.2)	1.0 (0.8; 1.2)

ADL, activities of daily living; BMI, body mass index; CI, confidence interval

Supplemental Table 2. Results of Laplace regression and Cox hazard regression with multiple imputation and sampling weight among men in English Longitudinal Study of Ageing (ELSA) and Japan Gerontological Evaluation Study (JAGES)

		ELSA (Men, N= 2,468)				JAGES (Men, N=6,294)			
		15th survival percentile difference (days) (95%CI)		Hazard ratio on mortality (95%CI)		15th survival percentile difference (days) (95%CI)		Hazard ratio on mortality (95%CI)	
		Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate
Age (Ref = 65-69)	70-74	-1,036.5 (-1,596.2; -476.8)	-815.5 (-1,213.5; -417.6)	1.9 (1.5; 2.3)	1.8 (1.5; 2.3)	-1,127.0 (-1,365.7; -888.3)	-795.0 (-952.8; -637.1)	2.0 (1.7; 2.3)	1.9 (1.6; 2.2)
	75-79	-1,584.1 (-2,178.6; -989.5)	-1,219.2 (-1,712.8; -725.6)	2.9 (2.4; 3.6)	2.7 (2.2; 3.3)	-1,724.2 (-1,937.2; -1,511.3)	-1,279.5 (-1,437.8; -1,121.1)	3.4 (2.9; 3.9)	3.0 (2.5; 3.5)
	80-84	-2,038.5 (-2,589.8; -1,487.2)	-1,746.3 (-2,169.4; -1,323.3)	5.0 (4.0; 6.1)	4.5 (3.6; 5.7)	-2,405.9 (-2,654.1; -2,157.7)	-1,967.6 (-2,128.6; -1,806.7)	5.5 (4.7; 6.5)	4.8 (4.0; 5.7)
	85+	-2,343.5 (-2,861.2; -1,825.8)	-1,959.2 (-2,397.2; -1,521.3)	8.2 (6.5; 10.2)	6.9 (5.3; 8.8)	-2,650.4 (-2,871.1; -2,429.6)	-2,171.7 (-2,437.0; -1,906.4)	9.5 (7.8; 11.6)	7.8 (6.3; 9.6)
ADL (Ref = no ADL limitation) Comorbidity	Partially disabled	-923.1 (-1,128.2; -718.0)	-600.4 (-912.2; -288.6)	2.3 (2.0; 2.6)	1.5 (1.3; 1.8)	-1,620.1 (-1,973.2; -1,266.9)	-686.7 (-965.2; -408.1)	2.8 (2.1; 3.7)	1.7 (1.3; 2.2)
	Cancer	-885.7 (-1,200.8; -570.6)	-1,075.0 (-1,493.7; -656.3)	1.8 (1.4; 2.2)	1.8 (1.5; 2.3)	-1,508.9 (-1,640.2; -1,377.5)	-1,471.2 (-1,737.7; -1,204.7)	2.1 (1.7; 2.6)	1.9 (1.5; 2.4)
	Heart disease	-669.5 (-876.4; -462.6)	-479.5 (-752.7; -206.4)	1.5 (1.3; 1.7)	1.3 (1.1; 1.5)	-445.5 (-637.5; -253.4)	-289.6 (-417.3; -162.0)	1.3 (1.2; 1.5)	1.2 (1.1; 1.4)
	Stroke	-549.1 (-762.2; -335.9)	-457.9 (-778.5; -137.3)	1.9 (1.6; 2.3)	1.2 (1.0; 1.6)	-481.1 (-742.9; -219.4)	-158.2 (-563.6; 247.2)	1.8 (1.4; 2.3)	1.5 (1.1; 1.9)
	Hypertension	99.4 (-124.6; 323.4)	-21.7 (-279.6; 236.2)	1.0 (0.9; 1.2)	1.0 (0.9; 1.1)	145.5 (-7.9; 299.0)	4.4 (-124.3; 133.0)	1.0 (0.9; 1.1)	1.0 (0.9; 1.1)
	Diabetes	-210.1 (-555.5; 135.4)	-213.3 (-570.1; 143.5)	1.3 (1.1; 1.6)	1.3 (1.1; 1.6)	-441.6 (-628.0; -255.2)	-649.2 (-786.6; -511.7)	1.4 (1.2; 1.6)	1.4 (1.2; 1.7)
	Psychiatric disorders	245.9 (-243.2; 734.9)	252.4 (-243.3; 748.0)	1.0 (0.8; 1.4)	1.0 (0.7; 1.3)	-416.1 (-806.9; -25.4)	-630.2 (-1,167.6; -92.8)	1.5 (0.9; 2.3)	1.2 (0.7; 1.9)
Education (Ref = 15 years or under)	16-18 years	497.8 (228.6; 766.9)	139.1 (-166.3; 444.5)	0.7 (0.6; 0.8)	0.8 (0.7; 1.0)	397.8 (219.1; 576.6)	-52.5 (-196.4; 91.4)	0.8 (0.7; 0.9)	0.9 (0.8; 1.1)
	19 years or more	751.9 (154.7; 1,349.0)	467.8 (106.3; 829.4)	0.6 (0.5; 0.8)	0.8 (0.6; 1.0)	549.9 (378.7; 721.0)	244.2 (89.4; 399.1)	0.7 (0.6; 0.8)	0.9 (0.7; 1.0)

Family-based social relationships (marital status, ref = married)	Divorced & widowed	-720.9 (-906.9; -534.9)	-256.9 (-531.2; 17.3)	1.7 (1.4; 1.9)	1.1 (0.9; 1.3)	-861.9 (-1,023.5; -700.2)	-166.5 (-309.7; -23.2)	1.8 (1.6; 2.1)	1.3 (1.1; 1.5)
Friendships-based social relationships (social network, ref = meet up with friend once or more a week) Physical activity (Ref = Non sport club participation) Alcohol drinking (Ref = Non) Smoking (Ref = Current smoker) BMI (Ref = 22.5-24.9kg/m ²)	Non-married	-609.7 (-1,365.3; 146.0)	-734.7 (-1,348.8; -120.7)	1.3 (1.0; 1.7)	1.3 (1.0; 1.9)	362.4 (-539.0; 1,263.9)	-559.3 (-2,780.9; 1,662.4)	1.1 (0.6; 2.0)	1.0 (0.5; 1.8)
	Once or twice a month	131.1 (-211.8; 474.0)	112.1 (-230.1; 454.3)	0.9 (0.8; 1.1)	0.9 (0.8; 1.1)	-196.0 (-355.3; -36.8)	-166.1 (-326.0; -6.1)	1.2 (1.1; 1.4)	1.2 (1.0; 1.4)
	Less than once a month	94.5 (-275.3; 464.2)	156.0 (-189.9; 501.8)	1.0 (0.8; 1.3)	0.9 (0.8; 1.1)	-766.2 (-908.5; -624.0)	-372.5 (-503.4; -241.6)	1.6 (1.4; 1.8)	1.3 (1.2; 1.5)
	Yes	804.7 (89.1; 1,520.4)	311.0 (-301.5; 923.6)	0.5 (0.4; 0.7)	0.7 (0.6; 1.0)	898.7 (713.3; 1,084.0)	269.2 (112.2; 426.1)	0.5 (0.5; 0.6)	0.8 (0.6; 0.9)
	Not every day	191.4 (-320.1; 703.0)	-82.1 (-610.5; 446.4)	0.8 (0.7; 1.0)	1.0 (0.8; 1.3)	744.3 (562.6; 925.9)	401.5 (227.1; 575.9)	0.7 (0.6; 0.8)	0.9 (0.8; 1.0)
BMI (Ref = 22.5-24.9kg/m ²)	Every day	192.2 (-334.8; 719.1)	33.2 (-531.5; 598.0)	0.8 (0.6; 1.0)	1.0 (0.8; 1.3)	767.3 (627.1; 907.5)	340.7 (203.0; 478.4)	0.7 (0.6; 0.8)	0.9 (0.8; 1.0)
	Past smoker	337.7 (-36.4; 711.8)	599.7 (202.8; 996.6)	0.8 (0.6; 0.9)	0.6 (0.5; 0.8)	273.3 (63.9; 482.6)	396.0 (255.8; 536.2)	0.8 (0.7; 0.9)	0.7 (0.6; 0.8)
	Never smoker	493.2 (57.9; 928.5)	820.6 (407.6; 1,233.6)	0.6 (0.5; 0.8)	0.6 (0.5; 0.8)	550.7 (338.1; 763.4)	590.9 (414.8; 767.0)	0.7 (0.6; 0.8)	0.6 (0.5; 0.7)
	<18.5	-731.6 (-1,382.7; -80.5)	-394.2 (-1,499.3; 710.9)	2.0 (1.1; 3.6)	1.6 (0.8; 3.0)	-1,569.1 (-1,708.5; -1,429.7)	-747.0 (-921.7; -572.3)	0.0 (0.0; 0.0)	2.0 (1.7; 2.5)
	18.5-22.4	-303.2 (-742.6; 136.1)	-307.4 (-909.6; 294.9)	1.3 (1.0; 1.7)	1.1 (0.8; 1.5)	-616.5 (-751.1; -481.8)	-264.8 (-421.9; -107.6)	0.0 (0.0; 0.0)	1.2 (1.0; 1.3)
	≥25	117.8 (-225.7; 461.4)	84.0 (-183.2; 351.2)	0.8 (0.7; 1.0)	0.9 (0.7; 1.0)	-170.6 (-349.0; 7.8)	-193.6 (-362.1; -25.0)	0.0 (0.0; 0.0)	1.1 (0.9; 1.3)

ADL, activities of daily living; BMI, body mass index; CI, confidence interval

Supplemental Table 3. Number (%) of missing responses in English Longitudinal Study of Ageing (ELSA) and Japan Gerontological Evaluation Study (JAGES).

	ELSA (Women) N= 3,083	JAGES (Women) N=6,882	ELSA (Men) N=2,468	JAGES (Men) N=6,294
Age	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
ADL limitation	68 (2.3)	472 (7.4)	45 (1.9)	241 (4.0)
Comorbidity				
Cancer	5 (0.2)	468 (7.3)	2 (0.1)	315 (5.3)
Heart disease	4 (0.1)	447 (6.9)	2 (0.1)	299 (5.0)
Stroke	4 (0.1)	470 (7.3)	2 (0.1)	315 (5.3)
Hypertension	4 (0.1)	368 (5.6)	2 (0.1)	264 (4.4)
Diabetes	0 (0.0)	452 (7.0)	0 (0.0)	301 (5.0)
Psychiatric disorders	0 (0.0)	468 (7.3)	1 (0.0)	316 (5.3)
Education	71 (2.4)	121 (1.8)	56 (2.3)	66 (1.1)
Family-based social relationships (marital status)	0 (0.0)	207 (3.1)	0 (0.0)	119 (1.9)
Friendships-based social relationships (social network)	740 (31.6)	389 (6.0)	627 (34.1)	321 (5.4)
Physical activity	558 (22.1)	1017 (17.3)	368 (17.5)	722 (13.0)
Alcohol drinking	35 (1.1)	199 (3.0)	43 (1.8)	106 (1.7)
Smoking	68 (2.3)	395 (6.1)	45 (1.9)	245 (4.1)
BMI	302 (10.9)	424 (6.6)	214 (9.5)	247 (4.1)

ADL, activities of daily living; BMI, body mass index

Supplemental Table 4. Multivariate adjusted Laplace regression analysis on the 15th survival percentile difference (days (95%CI)) among women in the English Longitudinal Study of Ageing (ELSA) and the Japan Gerontological Evaluation Study (JAGES): Complete case analysis.

		ELSA (Women, N=2,021)	JAGES (Women, N=4,659)
Age (Ref = 65-69)	70-74	-675.5 (-1,042.0; -309.0)	-445.4 (-696.6; -194.1)
	75-79	-1,285.0 (-2,229.5; -340.5)	-952.9 (-1,267.8; -638.0)
	80-84	-1,582.1 (-2,047.3; -1,116.9)	-1,446.2 (-1,889.7; -1,002.7)
	85+	-2,321.0 (-2,841.2; -1,800.8)	-2,537.7 (-2,945.7; -2,129.6)
ADL (Ref = no ADL limitation)	Partially disabled	-502.7 (-1,025.1; 19.6)	-930.1 (-1,606.6; -253.7)
Comorbidity	Cancer	-987.1 (-1,688.9; -285.3)	-1,295.9 (-2,274.6; -317.3)
	Heart disease	-382.7 (-790.5; 25.1)	-449.8 (-766.0; -133.6)
	Stroke	-464.7 (-1,242.2; 312.8)	-512.0 (-1,520.9; 497.0)
	Hypertension	-388.3 (-749.1; -27.4)	57.7 (-141.6; 257.0)
	Diabetes	-764.3 (-1,241.1; -287.5)	-494.5 (-782.4; -206.7)
	Psychiatric disorders	6.7 (-474.1; 487.4)	15.4 (-877.6; 908.3)
Education (Ref = 15 years or under)	16-18 years	241.0 (-247.1; 729.2)	185.6 (-62.2; 433.3)
	19 years or more	375.5 (-572.8; 1,323.7)	145.8 (-210.6; 502.1)
Family-based social relationships (marital status, ref = married)	Divorced & widowed	-141.3 (-520.5; 237.8)	-34.9 (-258.3; 188.4)
	Non-married	-377.8 (-1,003.9; 248.3)	-19.0 (-766.3; 728.3)
Friendships-based social relationships (social network, ref = meet up with friend once or more a week)	Once or twice a month	43.4 (-349.6; 436.3)	-168.0 (-445.0; 109.1)
	Less than once a month	103.1 (-240.7; 447.0)	-139.7 (-405.9; 126.4)
Physical activity (Ref = Non sport club participation)	Yes	59.3 (-560.1; 678.7)	510.1 (236.5; 783.8)
Alcohol drinking (Ref = Non)	Not every day	551.7 (187.1; 916.4)	-72.7 (-426.8; 281.4)
	Every day	408.3 (-143.8; 960.4)	224.7 (-435.3; 884.6)
Smoking (Ref = Current smoker)	Past smoker	501.3 (-148.4; 1,150.9)	525.4 (-633.8; 1,684.5)
	Never smoker	778.4 (181.6; 1,375.2)	1,138.8 (76.7; 2,200.9)
BMI (Ref = 22.5-24.9kg/m ²)	<18.5	-451.5 (-12,481.2; 11,578.3)	-729.0 (-1,105.6; -352.5)
	18.5-22.4	11.1 (-516.2; 538.4)	-206.4 (-449.3; 36.4)
	≥25	270.1 (-173.0; 713.1)	-284.4 (-575.3; 6.5)

ADL, activities of daily living; BMI, body mass index; CI, confidence interval

Supplemental Table 5. Multivariate adjusted Laplace regression analysis on the 15th survival percentile difference (days (95%CI)) among men in the English Longitudinal Study of Ageing (ELSA) and the Japan Gerontological Evaluation Study (JAGES): Complete case analysis.

		ELSA (Men, N=1,605)	JAGES (Men, N=4,699)
Age (Ref = 65-69)	70-74	-869.4 (-1,454.3; -284.4)	-608.4 (-846.0; -370.8)
	75-79	-1,283.6 (-1,988.9; -578.3)	-1,165.1 (-1,400.2; -930.0)
	80-84	-1,872.1 (-2,491.2; -1,253.0)	-1,805.1 (-2,173.7; -1,436.4)
	85+	-2,164.8 (-2,857.8; -1,471.9)	-2,159.2 (-2,598.0; -1,720.5)
ADL (Ref = no ADL limitation)	Partially disabled	-447.1 (-997.7; 103.5)	-733.9 (-1,087.2; -380.7)
Comorbidity	Cancer	-1,274.7 (-2,049.7; -499.6)	-1,600.5 (-1,950.7; -1,250.3)
	Heart disease	-518.2 (-893.5; -142.9)	-377.4 (-591.9; -162.9)
	Stroke	-371.8 (-914.4; 170.9)	-137.1 (-576.7; 302.5)
	Hypertension	-55.0 (-481.5; 371.5)	-137.2 (-324.6; 50.1)
	Diabetes	-239.5 (-609.4; 130.4)	-697.9 (-925.4; -470.4)
	Psychiatric disorders	168.5 (-390.3; 727.2)	-1,248.9 (-2,654.2; 156.3)
Education (Ref = 15 years or under)	16-18 years	26.1 (-402.4; 454.6)	-41.4 (-254.5; 171.8)
	19 years or more	440.2 (-246.2; 1,126.5)	146.3 (-117.6; 410.2)
Family-based social relationships (marital status, ref = married)	Divorced & widowed	-211.6 (-633.1; 209.9)	-216.8 (-470.4; 36.8)
	Non-married	-611.5 (-1,861.0; 638.0)	269.9 (-440.0; 979.7)
Friendships-based social relationships (social network, ref = meet up with friend once or more a week)	Once or twice a month	266.6 (-144.8; 677.9)	-45.7 (-277.6; 186.2)
	Less than once a month	221.5 (-180.1; 623.0)	-329.7 (-550.7; -108.8)
Physical activity (Ref = Non sport club participation)	Yes	468.5 (-124.5; 1,061.5)	250.6 (37.2; 464.0)
Alcohol drinking (Ref = Non)	Not every day	-193.8 (-873.5; 485.9)	350.4 (108.8; 592.0)
	Every day	62.9 (-674.4; 800.3)	339.8 (132.4; 547.1)
	Past smoker	882.7 (238.0; 1,527.3)	407.8 (179.3; 636.3)
	Never smoker	1,013.8 (347.6; 1,680.0)	556.2 (248.2; 864.2)
BMI (Ref = 22.5-24.9kg/m ²)	<18.5	-492.0 (-1,534.1; 550.1)	-785.8 (-1,048.5; -523.1)
	18.5-22.4	-141.2 (-727.4; 445.1)	-406.8 (-664.4; -149.3)
	≥25	177.0 (-194.9; 548.9)	-42.2 (-308.4; 224.0)

ADL, activities of daily living; BMI, body mass index; CI, confidence interval

Supplemental Table 6. Results of multivariate adjusted analysis excluded data from participants who died or dropped out during one year or two years from the baseline: analysis with multiple imputation among women in English Longitudinal Study of Ageing (ELSA) and Japan Gerontological Evaluation Study (JAGES)

		ELSA (Women)			JAGES (Women, N=6,882)		
		Differences in 15%tile of survival (days) (95%CI)			Differences in 15%tile of survival (days) (95%CI)		
		All data (N=3,083)	1 year (N=3,012)	2 years (N=2,931)	All data (N=6,882)	1 year (N=6,814)	2 years (N=6,721)
Age (Ref = 65-69)	70-74	-522.3 (-853.8; -190.7)	-550.5 (-861.4; -239.5)	-537.0 (-802.6; -271.4)	-545.3 (-753.2; -337.3)	-561.6 (-770.9; -352.3)	-473.8 (-665.3; -282.3)
	75-79	-1,429.6 (-1,821.3; -1,037.9)	-1,412.3 (-1,810.3; -1,014.3)	-1,294.0 (-1,647.6; -940.4)	-1,070.8 (-1,324.9; -816.8)	-1,047.4 (-1,300.6; -794.1)	-974.6 (-1,200.0; -749.3)
	80-84	-1,845.3 (-2,254.2; -1,436.5)	-1,715.5 (-2,139.9; -1,291.1)	-1,584.2 (-1,905.8; -1,262.6)	-1,735.8 (-2,046.9; -1,424.6)	-1,715.5 (-2,026.0; -1,405.0)	-1,604.9 (-1,887.2; -1,322.5)
	85+	-2,288.9 (-2,686.4; -1,891.3)	-2,153.9 (-2,542.0; -1,765.9)	-1,993.9 (-2,284.8; -1,703.0)	-2,633.8 (-2,947.3; -2,320.3)	-2,624.7 (-2,925.8; -2,323.6)	-2,480.7 (-2,744.7; -2,216.7)
ADL (Ref = no ADL limitation) Comorbidity	Partially disabled	-560.1 (-855.1; -265.0)	-398.9 (-674.8; -123.0)	-373.3 (-615.4; -131.3)	-876.1 (-1,271.8; -480.5)	-618.0 (-1,345.6; 109.6)	-515.9 (-1,020.6; -11.2)
	Cancer	-691.2 (-1,101.6; -280.7)	-587.7 (-951.8; -223.5)	-425.6 (-740.9; -110.3)	-1,713.1 (-2,505.0; -921.2)	-1,202.1 (-5,319.6; 2,915.3)	-672.1 (-1,105.0; -239.1)
	Heart disease	-369.4 (-619.8; -119.0)	-478.2 (-722.4; -234.0)	-366.9 (-599.1; -134.8)	-384.2 (-634.9; -133.4)	-405.4 (-653.5; -157.4)	-350.6 (-562.5; -138.8)
	Stroke	-305.4 (-725.3; 114.6)	-230.6 (-672.4; 211.2)	-288.5 (-758.2; 181.2)	-497.3 (-1,334.0; 339.3)	-574.2 (-1,315.1; 166.8)	-507.5 (-1,253.5; 238.4)
	Hypertension	-280.2 (-496.9; -63.4)	-308.0 (-537.4; -78.5)	-250.4 (-448.9; -51.9)	55.8 (-119.3; 230.9)	16.5 (-152.8; 185.7)	16.6 (-141.3; 174.6)
	Diabetes	-604.5 (-895.7; -313.3)	-576.9 (-894.9; -258.9)	-476.9 (-797.0; -156.8)	-455.9 (-751.0; -160.7)	-442.0 (-727.7; -156.3)	-440.3 (-708.7; -171.8)
	Psychiatric disorders	3.6 (-322.4; 329.6)	-105.3 (-508.8; 298.3)	-188.9 (-512.2; 134.3)	-78.9 (-960.0; 802.1)	-38.4 (-1,094.9; 1,018.0)	64.3 (-558.7; 687.3)
Education (Ref = 15 years or under)	16-18 years	134.6 (-140.6; 409.8)	97.0 (-161.0; 355.0)	38.4 (-210.4; 287.2)	138.2 (-71.2; 347.7)	185.2 (-12.6; 383.1)	174.0 (3.6; 344.4)
	19 years or more	380.4 (-155.2; 915.9)	399.6 (-259.7; 1,058.8)	351.4 (-18.1; 720.8)	51.6 (-348.5; 451.7)	115.1 (-273.2; 503.4)	182.1 (-210.4; 574.5)
Family-based social relationships (marital status, ref = married)	Divorced & widowed	-87.0 (-368.9; 194.9)	-159.7 (-440.8; 121.4)	-93.5 (-310.1; 123.1)	-93.9 (-278.0; 90.1)	-43.0 (-223.0; 137.0)	-56.7 (-228.3; 115.0)
	Non-married	-436.5 (-875.2; 2.2)	-478.7 (-951.5; -5.8)	-220.9 (-655.4; 213.7)	-128.2 (-685.6; 429.2)	-154.0 (-846.9; 538.9)	-75.1 (-624.5; 474.3)

Friendships-based social relationships (social network, ref = meet up with friend once or more a week)	Once or twice a month	-1.2 (-342.5; 340.0)	27.4 (-326.6; 381.4)	58.0 (-244.5; 360.5)	-87.0 (-328.9; 154.9)	-105.2 (-360.2; 149.9)	-63.9 (-298.6; 170.8)
	Less than once a month	-34.2 (-385.6; 317.3)	0.0 (-385.0; 385.0)	83.4 (-303.2; 469.9)	-145.6 (-358.9; 67.8)	-139.8 (-335.4; 55.9)	-92.5 (-264.5; 79.4)
Physical activity (Ref = Non sport club participation)	Yes	256.2 (-133.8; 646.3)	191.7 (-218.3; 601.8)	221.9 (-116.4; 560.3)	389.6 (141.8; 637.4)	386.1 (139.6; 632.5)	354.9 (110.8; 599.0)
Alcohol drinking (Ref = Non)	Not every day	447.4 (222.9; 671.8)	438.2 (195.6; 680.9)	399.2 (177.9; 620.6)	21.3 (-313.3; 355.9)	-7.0 (-323.1; 309.2)	-15.9 (-307.0; 275.2)
	Every day	268.0 (-185.3; 721.2)	207.0 (-236.5; 650.4)	253.3 (-94.0; 600.7)	400.1 (16.4; 783.8)	406.6 (-21.0; 834.2)	252.2 (-240.0; 744.3)
Smoking (Ref = Current smoker)	Past smoker	496.0 (13.7; 978.3)	337.1 (-57.6; 731.8)	194.5 (-107.1; 496.0)	718.7 (74.0; 1,363.3)	613.6 (-232.8; 1,459.9)	415.4 (-178.0; 1,008.8)
	Never smoker	767.7 (302.1; 1,233.3)	574.8 (199.3; 950.2)	539.2 (249.1; 829.3)	1,146.5 (554.3; 1,738.8)	1,030.4 (231.4; 1,829.5)	749.5 (309.2; 1,189.9)
BMI (Ref = 22.5-24.9kg/m ²)	<18.5	-140.3 (-595.1; 314.4)	-216.4 (-708.9; 276.1)	-297.9 (-745.4; 149.7)	-564.0 (-837.4; -290.7)	-552.2 (-821.7; -282.8)	-483.2 (-733.0; -233.4)
	18.5-22.4	-161.5 (-538.8; 215.9)	-185.1 (-590.9; 220.6)	-124.9 (-462.5; 212.8)	-151.7 (-354.7; 51.4)	-143.0 (-346.0; 59.9)	-115.1 (-300.0; 69.8)
	≥25	242.7 (-21.5; 506.8)	257.2 (4.3; 510.1)	282.4 (-0.5; 565.4)	-136.7 (-392.3; 118.8)	-107.2 (-354.0; 139.5)	-80.1 (-298.8; 138.6)

ADL, activities of daily living; BMI, body mass index; CI, confidence interval

Supplemental Table 7. Results of multivariate adjusted analysis excluded data from participants who died or dropped out during one year or two years from the baseline: analysis with multiple imputation among men in English Longitudinal Study of Ageing (ELSA) and Japan Gerontological Evaluation Study (JAGES)

		ELSA (Men)			JAGES (Men)		
		Differences in 15%tile of survival (days) (95%CI)			Differences in 15%tile of survival (days) (95%CI)		
		All data (N=2,468)	1 year (N=2,356)	2 years (N=2,284)	All data (N=6,294)	1 year (N=6,167)	2 years (N=5,996)
Age (Ref = 65-69)	70-74	-818.6 (-1,207.6; -429.6)	-845.2 (-1,265.2; -425.2)	-801.3 (-1,195.5; -407.1)	-686.2 (-906.4; -466.0)	-637.2 (-839.7; -434.7)	-648.6 (-844.5; -452.7)
	75-79	-1,215.7 (-1,692.3; -739.2)	-1,094.7 (-1,498.1; -691.3)	-1,096.3 (-1,465.3; -727.2)	-1,234.8 (-1,434.3; -1,035.2)	-1,235.1 (-1,413.0; -1,057.2)	-1,205.4 (-1,378.0; -1,032.7)
	80-84	-1,736.6 (-2,156.2; -1,316.9)	-1,623.4 (-2,047.0; -1,199.8)	-1,538.6 (-1,899.4; -1,177.8)	-1,851.9 (-2,098.7; -1,605.2)	-1,717.2 (-1,932.8; -1,501.7)	-1,588.2 (-1,827.6; -1,348.7)
	85+	-1,974.7 (-2,390.6; -1,558.8)	-1,821.5 (-2,264.5; -1,378.4)	-1,584.1 (-1,968.0; -1,200.1)	-2,169.5 (-2,505.6; -1,833.4)	-2,003.1 (-2,399.9; -1,606.4)	-1,915.9 (-2,316.2; -1,515.6)
ADL (Ref = no ADL limitation) Comorbidity	Partially disabled	-591.5 (-891.8; -291.1)	-411.8 (-653.2; -170.5)	-403.0 (-620.4; -185.7)	-816.9 (-1,277.9; -356.0)	-629.2 (-891.7; -366.6)	-507.0 (-955.0; -59.0)
	Cancer	-1,104.6 (-1,475.5; -733.7)	-341.8 (-689.8; 6.3)	-437.9 (-792.0; -83.8)	-1,524.3 (-1,822.0; -1,226.5)	-1,226.4 (-1,643.5; -809.2)	-948.1 (-1,387.1; -509.2)
	Heart disease	-474.1 (-719.5; -228.7)	-343.9 (-593.0; -94.9)	-269.2 (-496.7; -41.8)	-338.9 (-514.1; -163.7)	-315.7 (-461.7; -169.7)	-316.9 (-479.7; -154.0)
	Stroke	-451.8 (-756.2; -147.3)	-670.1 (-1,024.0; -316.3)	-744.1 (-1,058.1; -430.0)	-241.0 (-644.3; 162.2)	-231.1 (-529.8; 67.5)	-319.8 (-671.0; 31.4)
	Hypertension	-13.4 (-266.0; 239.2)	-26.7 (-254.8; 201.4)	-16.4 (-229.3; 196.5)	-20.8 (-173.9; 132.3)	-43.8 (-190.9; 103.2)	-123.4 (-262.2; 15.3)
	Diabetes	-225.7 (-560.0; 108.5)	-223.1 (-521.4; 75.1)	-336.6 (-623.8; -49.3)	-671.0 (-840.8; -501.2)	-695.3 (-866.9; -523.7)	-617.2 (-836.6; -397.8)
	Psychiatric disorders	227.0 (-290.4; 744.4)	19.7 (-394.0; 433.5)	-40.0 (-724.8; 644.7)	-669.2 (-1,273.9; -64.5)	-343.8 (-1,335.6; 648.0)	-276.6 (-906.5; 353.4)
Education (Ref = 15 years or under)	16-18 years	160.8 (-139.2; 460.7)	-57.3 (-366.2; 251.5)	7.7 (-283.3; 298.8)	-4.9 (-185.4; 175.6)	26.9 (-136.9; 190.7)	78.3 (-87.3; 243.9)
	19 years or more	458.6 (93.2; 824.1)	213.3 (-96.9; 523.6)	157.7 (-264.0; 579.3)	172.7 (-43.5; 389.0)	144.2 (-60.4; 348.8)	144.7 (-56.4; 345.8)
Family-based social relationships (marital status, ref = married)	Divorced & widowed	-237.0 (-509.3; 35.3)	-296.6 (-514.2; -79.0)	-378.5 (-613.4; -143.5)	-190.9 (-383.5; 1.7)	-258.7 (-455.0; -62.5)	-278.9 (-487.2; -70.6)
	Non-married	-765.6 (-1,343.4; -187.7)	-727.5 (-1,273.1; -182.0)	-333.4 (-1,467.7; 800.8)	-525.3 (-1,372.2; 321.6)	-615.0 (-1,414.6; 184.7)	-50.4 (-2,894.7; 2,793.9)

Friendships-based social relationships (social network, ref = meet up with friend once or more a week)	Once or twice a month	133.0 (-213.0; 479.0)	139.7 (-130.1; 409.4)	89.6 (-153.0; 332.3)	-60.2 (-239.3; 118.9)	-63.2 (-240.3; 113.8)	-83.5 (-241.9; 74.9)
	Less than once a month	165.6 (-170.6; 501.9)	110.4 (-181.0; 401.7)	-53.5 (-377.5; 270.5)	-297.9 (-472.9; -122.9)	-257.7 (-423.6; -91.8)	-177.6 (-334.6; -20.6)
Physical activity (Ref = Non sport club participation)	Yes	285.1 (-314.1; 884.3)	374.8 (-17.1; 766.7)	360.4 (36.2; 684.5)	245.7 (43.0; 448.5)	215.9 (3.0; 428.8)	189.6 (-23.5; 402.8)
Alcohol drinking (Ref = Non)	Not every day	-60.9 (-517.7; 396.0)	-111.5 (-475.2; 252.2)	-206.2 (-533.3; 120.9)	386.6 (160.8; 612.4)	335.0 (143.3; 526.8)	230.9 (72.4; 389.3)
	Every day	44.9 (-461.7; 551.6)	-83.2 (-515.6; 349.2)	-80.4 (-482.3; 321.6)	330.2 (158.9; 501.6)	258.7 (100.9; 416.5)	157.7 (6.4; 309.1)
Smoking (Ref = Current smoker)	Past smoker	592.9 (194.2; 991.6)	542.3 (169.3; 915.2)	503.3 (138.7; 867.9)	433.6 (271.9; 595.4)	379.6 (212.8; 546.5)	381.3 (219.0; 543.5)
	Never smoker	830.5 (417.7; 1,243.3)	748.5 (359.6; 1,137.4)	698.3 (313.4; 1,083.2)	579.1 (370.5; 787.7)	546.2 (335.2; 757.2)	510.9 (314.0; 707.7)
BMI (Ref = 22.5-24.9kg/m ²)	<18.5	-415.2 (-1,537.7; 707.2)	-1,129.4 (-1,760.8; -498.0)	-139.8 (-994.8; 715.1)	-678.9 (-875.0; -482.7)	-715.9 (-923.8; -508.0)	-719.5 (-930.4; -508.6)
	18.5-22.4	-292.8 (-889.9; 304.2)	-180.3 (-564.6; 203.9)	-57.5 (-474.7; 359.7)	-297.3 (-487.1; -107.5)	-252.9 (-419.5; -86.3)	-253.2 (-418.0; -88.4)
	≥25	78.8 (-189.6; 347.1)	-42.0 (-329.9; 245.9)	44.8 (-250.1; 339.7)	-120.5 (-329.6; 88.6)	-78.4 (-279.1; 122.3)	-49.3 (-232.8; 134.1)

ADL, activities of daily living; BMI, body mass index; CI, confidence interval

Supplemental Table 8. Results of Cox hazard regression with multiple imputation among women and men in English Longitudinal Study of Ageing (ELSA) and Japan Gerontological Evaluation Study (JAGES)

		ELSA (Women, N= 3,083)		JAGES (Women, N=6,882)		ELSA (Men, N= 2,468)		JAGES (Men, N=6,294)	
		Hazard ratio on mortality (95%CI)		Hazard ratio on mortality (95%CI)		Hazard ratio on mortality (95%CI)		Hazard ratio on mortality (95%CI)	
		Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate	Univariate	Multivariate
Age (Ref = 65-69)	70-74	2.1 (1.7; 2.7)	1.8 (1.4; 2.4)	1.8 (1.5; 2.2)	1.7 (1.4; 2.1)	1.9 (1.5; 2.3)	1.8 (1.5; 2.2)	1.8 (1.6; 2.0)	1.7 (1.4; 1.9)
	75-79	3.7 (2.9; 4.7)	3.2 (2.5; 4.0)	3.0 (2.5; 3.7)	2.8 (2.3; 3.3)	2.8 (2.3; 3.5)	2.6 (2.1; 3.2)	3.2 (2.8; 3.7)	2.8 (2.4; 3.2)
	80-84	6.0 (4.7; 7.5)	4.6 (3.6; 5.9)	5.4 (4.4; 6.5)	4.6 (3.7; 5.6)	4.9 (4.0; 6.1)	4.4 (3.6; 5.5)	5.0 (4.3; 5.8)	4.2 (3.6; 4.9)
	85+	11.4 (9.0; 14.5)	8.7 (6.7; 11.2)	15.2 (12.6; 18.3)	11.6 (9.3; 14.4)	8.0 (6.4; 10.0)	6.7 (5.2; 8.5)	9.1 (7.6; 10.9)	7.0 (5.8; 8.5)
ADL (Ref = no ADL limitation) Comorbidity	Partially disabled	2.2 (1.9; 2.5)	1.4 (1.2; 1.6)	3.2 (2.6; 4.0)	1.8 (1.4; 2.2)	2.3 (2.0; 2.6)	1.5 (1.3; 1.8)	2.8 (2.3; 3.5)	1.6 (1.3; 2.0)
	Cancer	1.6 (1.3; 1.9)	1.5 (1.2; 1.8)	2.0 (1.5; 2.6)	2.3 (1.7; 3.0)	1.8 (1.5; 2.2)	1.8 (1.5; 2.2)	2.2 (1.8; 2.6)	2.0 (1.6; 2.3)
	Heart disease	1.6 (1.4; 1.8)	1.2 (1.1; 1.4)	1.9 (1.6; 2.2)	1.4 (1.2; 1.6)	1.5 (1.3; 1.7)	1.3 (1.1; 1.5)	1.4 (1.3; 1.6)	1.3 (1.2; 1.5)
	Stroke	2.1 (1.7; 2.6)	1.4 (1.2; 1.8)	1.9 (1.3; 2.8)	1.3 (0.9; 1.9)	1.9 (1.5; 2.3)	1.2 (1.0; 1.5)	1.8 (1.4; 2.3)	1.5 (1.2; 1.9)
	Hypertension	1.1 (1.0; 1.3)	1.0 (0.9; 1.2)	1.0 (0.9; 1.2)	1.0 (0.9; 1.1)	1.0 (0.9; 1.2)	1.0 (0.9; 1.1)	1.0 (0.9; 1.1)	1.0 (0.9; 1.1)
	Diabetes	1.4 (1.2; 1.8)	1.3 (1.1; 1.7)	1.3 (1.1; 1.5)	1.4 (1.1; 1.6)	1.3 (1.1; 1.6)	1.3 (1.1; 1.6)	1.4 (1.3; 1.6)	1.5 (1.3; 1.7)
	Psychiatric disorders	1.0 (0.7; 1.3)	1.0 (0.7; 1.3)	1.2 (0.8; 1.8)	0.9 (0.6; 1.3)	1.1 (0.8; 1.5)	1.0 (0.7; 1.4)	1.5 (1.0; 2.2)	1.2 (0.8; 1.8)
Education (Ref = 15 years or under)	16-18 years	0.8 (0.6; 0.9)	0.9 (0.8; 1.0)	0.8 (0.7; 0.9)	0.9 (0.8; 1.0)	0.7 (0.6; 0.8)	0.8 (0.7; 1.0)	0.8 (0.7; 0.9)	0.9 (0.8; 1.0)
	19 years or more	0.6 (0.5; 0.8)	0.8 (0.6; 1.1)	0.7 (0.6; 1.0)	0.9 (0.7; 1.2)	0.6 (0.5; 0.8)	0.8 (0.6; 1.0)	0.7 (0.7; 0.9)	0.9 (0.8; 1.0)
Family-based social relationships (marital status, ref = married)	Divorced & widowed	1.9 (1.7; 2.2)	1.1 (0.9; 1.3)	2.0 (1.8; 2.2)	1.1 (0.9; 1.2)	1.7 (1.5; 2.0)	1.1 (1.0; 1.3)	1.9 (1.7; 2.1)	1.3 (1.1; 1.5)
	Non-married	1.9 (1.5; 2.5)	1.3 (1.0; 1.7)	1.4 (1.0; 2.0)	1.1 (0.8; 1.5)	1.4 (1.0; 1.9)	1.4 (1.0; 1.9)	1.3 (0.8; 2.2)	1.1 (0.7; 1.9)
Friendships-based social relationships (social network, ref = meet up with friend once or more a week)	Once or twice a month	0.8 (0.7; 1.0)	0.9 (0.7; 1.1)	1.2 (1.0; 1.5)	1.1 (0.9; 1.3)	0.9 (0.8; 1.1)	0.9 (0.8; 1.1)	1.1 (1.0; 1.3)	1.1 (1.0; 1.3)
	Less than once a month	1.0 (0.8; 1.3)	0.9 (0.7; 1.1)	1.5 (1.3; 1.7)	1.1 (1.0; 1.3)	1.0 (0.8; 1.3)	0.9 (0.8; 1.1)	1.5 (1.4; 1.7)	1.3 (1.2; 1.4)

Physical activity (Ref = Non sport club participation)	Yes	0.4 (0.3; 0.6)	0.7 (0.5; 0.9)	0.4 (0.3; 0.5)	0.7 (0.5; 0.8)	0.5 (0.4; 0.7)	0.8 (0.6; 1.0)	0.6 (0.5; 0.7)	0.8 (0.7; 0.9)
Alcohol drinking (Ref = Non)	Not every day	0.5 (0.5; 0.6)	0.7 (0.6; 0.8)	0.7 (0.5; 0.8)	1.0 (0.8; 1.2)	0.8 (0.7; 1.0)	1.0 (0.8; 1.2)	0.7 (0.6; 0.8)	0.9 (0.8; 1.0)
	Every day	0.6 (0.5; 0.8)	0.8 (0.6; 0.9)	0.7 (0.5; 1.0)	0.8 (0.6; 1.2)	0.8 (0.6; 1.0)	1.0 (0.8; 1.3)	0.7 (0.6; 0.8)	0.9 (0.8; 1.0)
Smoking (Ref = Current smoker)	Past smoker	0.9 (0.7; 1.1)	0.7 (0.6; 0.9)	0.8 (0.5; 1.1)	0.6 (0.4; 0.9)	0.8 (0.6; 0.9)	0.6 (0.5; 0.8)	0.8 (0.7; 0.9)	0.7 (0.7; 0.8)
	Never smoker	0.7 (0.6; 0.8)	0.6 (0.5; 0.7)	0.5 (0.4; 0.7)	0.4 (0.3; 0.6)	0.6 (0.5; 0.8)	0.6 (0.5; 0.8)	0.7 (0.6; 0.8)	0.7 (0.6; 0.8)
BMI (Ref = 22.5-24.9kg/m ²)	<18.5	1.9 (1.3; 2.9)	1.5 (0.9; 2.3)	2.5 (2.1; 3.0)	1.6 (1.3; 1.9)	2.0 (1.1; 3.7)	1.5 (0.8; 3.0)	3.0 (2.6; 3.5)	2.0 (1.7; 2.3)
	18.5-22.4	1.1 (0.9; 1.4)	1.0 (0.8; 1.2)	1.3 (1.1; 1.5)	1.1 (1.0; 1.3)	1.3 (1.0; 1.7)	1.1 (0.8; 1.5)	1.5 (1.3; 1.6)	1.2 (1.1; 1.4)
	≥25	0.8 (0.6; 0.9)	0.8 (0.7; 1.0)	1.0 (0.8; 1.2)	1.0 (0.9; 1.2)	0.8 (0.7; 1.0)	0.8 (0.7; 1.0)	1.0 (0.9; 1.2)	1.0 (0.9; 1.2)

ADL, activities of daily living; BMI, body mass index; CI, confidence interval

Supplemental Table 9. Laplace regression analysis with multiple imputation on the 15th survival percentile difference (days (95%CI)) between English Longitudinal Study of Ageing (ELSA) and Japan Gerontological Evaluation Study (JAGES) among women (N=9,826): Pooled analysis.

		Model1	Model2	Model3	Model4	Model5	Model6	Model7	Model8	Model9	Model10
Difference between ELSA and JAGES (Ref = ELSA)		318.8 (158.7; 479.0)	311.1 (159.8; 462.5)	296.8 (137.3; 456.3)	345.5 (190.2; 500.8)	320.8 (166.0; 475.6)	313.7 (161.6; 465.7)	494.1 (306.8; 681.4)	123.1 (-55.3; 301.6)	449.8 (265.2; 634.3)	373.1 (117.3; 628.9)
Age (Ref = 65-69 years)	70-74	-651.4 (-828.7; -474.1)	-629.8 (-806.2; -453.4)	-631.5 (-813.2; -449.8)	-660.2 (-835.7; -484.8)	-624.0 (-806.2; -441.8)	-597.1 (-781.6; -412.5)	-607.8 (-779.6; -435.9)	-626.7 (-806.1; -447.3)	-598.8 (-777.7; -419.8)	-563.0 (-749.0; -377.1)
	75-79	-1,441.6 (-1,671.6; -1,211.6)	-1,442.2 (-1,668.1; -1,216.2)	-1,412.9 (-1,642.2; -1,183.6)	-1,434.1 (-1,682.1; -1,186.2)	-1,406.9 (-1,638.8; -1,175.0)	-1,351.6 (-1,569.2; -1,134.1)	-1,382.1 (-1,608.9; -1,155.4)	-1,357.7 (-1,592.7; -1,122.7)	-1,324.4 (-1,561.1; -1,087.8)	-1,248.3 (-1,487.9; -1,008.8)
	80-84	-2,039.9 (-2,227.0; -1,852.8)	-1,987.8 (-2,178.6; -1,796.9)	-2,009.0 (-2,215.1; -1,803.0)	-2,061.4 (-2,247.9; -1,874.8)	-1,978.8 (-2,185.8; -1,771.8)	-1,907.0 (-2,113.8; -1,700.1)	-1,958.0 (-2,175.6; -1,740.5)	-1,970.6 (-2,176.3; -1,764.9)	-1,919.3 (-2,172.5; -1,666.2)	-1,794.9 (-2,050.5; -1,539.2)
	85+	-2,861.3 (-3,065.8; -2,656.9)	-2,823.6 (-3,019.7; -2,627.5)	-2,815.2 (-3,047.3; -2,583.2)	-2,763.5 (-2,950.4; -2,576.6)	-2,714.7 (-2,939.8; -2,489.5)	-2,645.6 (-2,874.5; -2,416.8)	-2,641.1 (-2,867.2; -2,415.1)	-2,680.1 (-2,898.4; -2,461.8)	-2,578.1 (-2,799.7; -2,356.5)	-2,473.8 (-2,723.4; -2,224.2)
ADL (Ref = no ADL limitation)	Partially disabled	-650.8 (-872.8; -428.7)	-637.9 (-848.5; -427.4)	-627.6 (-849.0; -406.2)	-657.2 (-874.6; -439.8)	-624.7 (-824.0; -425.4)	-628.1 (-866.3; -389.9)	-635.5 (-849.7; -421.4)	-665.0 (-886.6; -443.5)	-658.1 (-863.6; -452.6)	-659.7 (-913.1; -406.3)
Comorbidities	Cancer	-807.9 (-1,333.0; -282.9)	-771.9 (-1,170.7; -373.2)	-851.7 (-1,445.3; -258.0)	-755.2 (-1,138.0; -372.4)	-758.1 (-1,161.2; -355.1)	-793.1 (-1,253.2; -333.0)	-773.7 (-1,205.5; -341.9)	-799.2 (-1,120.5; -477.8)	-832.4 (-1,271.2; -393.6)	-897.8 (-1,344.5; -451.2)
	Heart disease	-421.7 (-604.7; -238.6)	-415.7 (-579.3; -252.0)	-447.0 (-625.0; -269.0)	-414.0 (-591.3; -236.7)	-427.1 (-609.1; -245.0)	-401.5 (-595.7; -207.3)	-422.9 (-606.4; -239.4)	-412.2 (-584.7; -239.6)	-406.1 (-580.4; -231.8)	-364.3 (-550.2; -178.3)
	Stroke	-400.4 (-839.2; -38.4)	-449.1 (-774.0; -124.3)	-400.1 (-886.7; -86.4)	-429.7 (-974.8; -115.4)	-442.8 (-877.1; -8.4)	-405.0 (-871.8; -61.8)	-430.4 (-822.7; -38.2)	-498.4 (-887.6; -109.2)	-421.7 (-840.6; -2.8)	-445.5 (-807.0; -84.0)
	Hypertension	13.1 (-131.4; 157.6)	20.1 (-123.8; 164.0)	6.1 (-141.9; 154.1)	-4.2 (-145.0; 136.6)	5.5 (-137.3; 148.3)	-5.6 (-152.2; 141.0)	-9.7 (-152.6; 133.3)	-7.6 (-148.3; 133.1)	-54.6 (-207.4; 98.3)	-71.1 (-223.6; 81.4)
	Diabetes	-464.4 (-684.7; -244.2)	-462.5 (-671.1; -254.0)	-454.6 (-672.1; -237.1)	-488.5 (-688.5; -288.4)	-474.6 (-691.1; -258.0)	-448.8 (-654.0; -243.5)	-469.2 (-676.5; -262.0)	-502.2 (-708.4; -296.0)	-520.8 (-754.2; -287.5)	-523.7 (-719.9; -327.5)
	Psychiatric disorders	-188.6 (-573.7; 196.6)	-169.9 (-596.7; 256.8)	-203.9 (-662.7; 254.9)	-136.2 (-606.5; 334.2)	-137.2 (-645.1; 370.7)	-131.1 (-634.6; 372.4)	-116.5 (-541.1; 308.1)	9.2 (-332.2; 350.6)	-71.1 (-457.2; 314.9)	-11.5 (-357.7; 334.8)
Education (Ref = 15 years or under)	16-18 years		214.5 (64.4; 364.6)			195.5 (34.0; 357.1)	181.7 (13.3; 350.1)	205.7 (37.2; 374.1)	197.5 (25.2; 369.9)	213.4 (51.5; 375.3)	195.9 (30.6; 361.2)
	19 years or more		207.5 (-110.1; 525.1)			238.9 (-49.5; 527.2)	223.6 (-63.6; 510.8)	229.0 (-67.9; 525.8)	233.8 (-15.1; 482.6)	223.8 (-82.1; 529.7)	168.5 (-190.4; 527.3)
Family-based social relationships (marital status, ref = married)	Divorced or widowed			-78.2 (-233.1; 76.6)		-78.4 (-223.0; 66.1)	-73.3 (-218.0; 71.4)	-94.8 (-235.5; 45.9)	-84.5 (-237.2; 68.2)	-85.1 (-240.9; 70.7)	-71.0 (-234.7; 92.7)
	Non-married			-322.2 (-762.5; 118.1)		-317.1 (-750.8; 116.6)	-312.8 (-718.3; 92.7)	-297.6 (-754.5; 159.3)	-243.4 (-604.4; 117.5)	-321.8 (-730.4; 86.8)	-276.5 (-671.7; 118.7)

Friendship-based social relationships (social network, ref = meet up with friends once or more a week)	Once or twice a month	-94.3 (-301.2; 112.6)	-93.3 (-305.5; 118.9)	-51.2 (-266.7; 164.2)	-84.6 (-279.7; 110.5)	-127.8 (-320.9; 65.4)	-91.0 (-318.0; 136.0)	-80.5 (-285.7; 124.8)
	Less than once a month	-276.1 (-446.1; -106.2)	-271.7 (-450.6; -92.8)	-217.9 (-399.0; -36.8)	-256.9 (-441.0; -72.7)	-263.9 (-442.7; -85.1)	-231.5 (-412.6; -50.4)	-143.7 (-331.1; 43.7)
	Physical activity (Ref = No sport club participation)			447.7 (224.1; 671.3)				390.3 (168.9; 611.7)
Alcohol drinking (Ref = Non-drinking)	Not every day				294.9 (103.3; 486.4)			284.3 (78.7; 489.8)
	Every day				121.9 (-158.8; 402.6)			262.9 (-50.3; 576.1)
Smoking (Ref = Current smoker)	Past smoker					637.0 (254.1; 1,019.9)		554.0 (141.9; 966.0)
	Never smoker					987.1 (641.3; 1,332.9)		950.7 (561.3; 1,340.1)
BMI (Ref = 22.5-24.9kg/m ²)	<18.5						-582.8 (-833.6; -332.1)	-553.5 (-813.7; -293.3)
	18.5-22.4						-150.8 (-338.9; 37.4)	-117.3 (-314.7; 80.0)
	≥25						66.5 (-134.3; 267.3)	47.0 (-160.7; 254.8)

ADL, activities of daily living; BMI, body mass index; CI, confidence interval

Supplemental Table 10. Laplace regression analysis with multiple imputation on the 15th survival percentile difference (days (95%CI)) between English Longitudinal Study of Ageing (ELSA) and Japan Gerontological Evaluation Study (JAGES) among men (N=8,523): Pooled analysis.

		Model1	Model2	Model3	Model4	Model5	Model6	Model7	Model8	Model9	Model10
Difference between ELSA and JAGES (Ref = ELSA)		131.6 (-27.5; 290.8)	99.0 (-55.4; 253.3)	26.2 (-157.2; 209.7)	177.0 (16.2; 337.8)	78.5 (-85.5; 242.4)	55.1 (-101.4; 211.6)	225.6 (33.0; 418.3)	125.1 (-37.5; 287.6)	290.7 (87.0; 494.4)	404.9 (208.4; 601.4)
Age (Ref = 65-69 years)	70-74	-913.1 (-1,135.0; -691.3)	-917.5 (-1,137.5; -697.6)	-876.2 (-1,082.5; -669.9)	-874.2 (-1,067.1; -681.2)	-858.7 (-1,044.7; -672.7)	-816.6 (-1,032.1; -601.1)	-829.3 (-1,024.7; -634.0)	-838.3 (-1,056.3; -620.3)	-798.4 (-1,008.6; -588.1)	-732.5 (-932.5; -532.4)
	75-79	-1,399.4 (-1,606.2; -1,192.7)	-1,369.0 (-1,570.9; -1,167.2)	-1,377.9 (-1,605.8; -1,150.0)	-1,369.3 (-1,582.5; -1,156.1)	-1,334.2 (-1,533.8; -1,134.5)	-1,306.9 (-1,504.7; -1,109.1)	-1,262.4 (-1,457.6; -1,067.3)	-1,363.3 (-1,556.8; -1,169.8)	-1,279.9 (-1,476.3; -1,083.5)	-1,224.9 (-1,409.9; -1,039.9)
	80-84	-1,965.9 (-2,168.3; -1,763.5)	-1,953.5 (-2,156.9; -1,750.2)	-1,935.2 (-2,127.8; -1,742.5)	-1,971.5 (-2,155.7; -1,787.3)	-1,887.2 (-2,072.9; -1,701.6)	-1,839.0 (-2,030.9; -1,647.2)	-1,829.6 (-2,056.8; -1,602.4)	-1,954.0 (-2,156.3; -1,751.7)	-1,794.2 (-2,011.5; -1,576.9)	-1,801.1 (-2,012.2; -1,590.0)
	85+	-2,392.1 (-2,607.7; -2,176.5)	-2,424.2 (-2,632.8; -2,215.6)	-2,333.0 (-2,564.9; -2,101.1)	-2,351.6 (-2,558.3; -2,144.9)	-2,207.4 (-2,439.3; -1,975.5)	-2,178.7 (-2,430.6; -1,926.7)	-2,152.1 (-2,429.0; -1,875.1)	-2,266.6 (-2,488.8; -2,044.4)	-2,089.4 (-2,332.1; -1,846.7)	-2,096.2 (-2,389.2; -1,803.2)
ADL (Ref = no ADL limitation)	Partially disabled	-763.6 (-1,020.9; -506.3)	-750.8 (-991.4; -510.1)	-762.8 (-995.3; -530.3)	-779.9 (-1,027.0; -532.8)	-759.2 (-957.4; -561.1)	-728.1 (-906.3; -550.0)	-709.2 (-949.3; -469.1)	-741.8 (-992.6; -490.9)	-677.9 (-892.5; -463.4)	-650.3 (-875.6; -424.9)
Comorbidities	Cancer	-1,318.8 (-1,545.1; -1,092.4)	-1,388.3 (-1,679.9; -1,096.8)	-1,400.7 (-1,674.9; -1,126.5)	-1,323.5 (-1,533.4; -1,113.6)	-1,367.7 (-1,631.0; -1,104.4)	-1,379.0 (-1,646.0; -1,112.1)	-1,352.2 (-1,606.8; -1,097.6)	-1,373.9 (-1,640.9; -1,107.0)	-1,356.0 (-1,567.0; -1,145.0)	-1,363.1 (-1,592.2; -1,134.1)
	Heart disease	-464.2 (-627.6; -300.9)	-447.5 (-615.1; -279.8)	-426.4 (-619.4; -233.3)	-425.8 (-607.5; -244.2)	-375.3 (-571.7; -178.8)	-396.1 (-565.4; -226.7)	-365.5 (-526.4; -204.6)	-394.9 (-559.6; -230.3)	-378.1 (-536.0; -220.2)	-366.8 (-513.4; -220.1)
	Stroke	-404.0 (-674.8; -133.3)	-379.8 (-655.3; -104.3)	-444.6 (-728.0; -161.2)	-405.7 (-667.8; -143.5)	-417.9 (-804.3; -31.6)	-437.2 (-700.3; -174.0)	-411.6 (-684.5; -138.7)	-374.1 (-625.8; -122.3)	-413.4 (-692.6; -134.2)	-360.9 (-612.3; -109.5)
	Hypertension	115.4 (-21.6; 252.5)	103.4 (-35.6; 242.5)	108.6 (-30.6; 247.8)	94.7 (-36.8; 226.1)	84.4 (-43.8; 212.7)	77.5 (-50.8; 205.8)	68.6 (-63.8; 201.1)	69.9 (-65.4; 205.3)	27.1 (-115.5; 169.7)	4.6 (-127.5; 136.6)
	Diabetes	-564.5 (-747.7; -381.3)	-578.5 (-752.6; -404.3)	-566.3 (-740.3; -392.3)	-515.1 (-674.5; -355.6)	-522.1 (-699.5; -344.7)	-495.9 (-666.4; -325.4)	-520.5 (-684.8; -356.3)	-551.3 (-721.9; -380.7)	-562.7 (-733.9; -391.6)	-594.4 (-747.2; -441.5)
	Psychiatric disorders	-158.0 (-1,196.1; 880.1)	-105.8 (-1,077.2; 865.6)	-129.4 (-712.9; 454.0)	-181.6 (-1,376.3; 1,013.1)	-111.3 (-943.7; 721.1)	-167.8 (-913.6; 578.0)	-18.4 (-9,898.0; 9,861.2)	-130.4 (-965.1; 704.3)	-84.7 (-1,030.8; 861.5)	-141.9 (-782.2; 498.5)
Education (Ref = 15 years or under)	16-18 years		91.4 (-93.6; 276.3)			134.0 (-30.5; 298.5)	89.0 (-88.3; 266.3)	90.3 (-83.0; 263.6)	94.6 (-79.4; 268.7)	107.3 (-56.5; 271.0)	14.2 (-139.9; 168.3)
	19 years or more		328.0 (149.3; 506.7)			337.6 (159.6; 515.6)	299.6 (116.9; 482.3)	307.3 (135.4; 479.1)	297.7 (85.2; 510.2)	313.1 (139.9; 486.2)	230.4 (50.4; 410.3)
Family-based social relationships (marital status, ref = married)	Divorced or widowed			-323.2 (-495.6; -150.8)		-287.9 (-443.6; -132.3)	-297.7 (-455.4; -140.0)	-304.3 (-463.5; -145.0)	-262.4 (-436.0; -88.9)	-293.0 (-519.3; -66.7)	-242.5 (-405.5; -79.4)

	Non-married	-828.7 (-1,382.0; -275.4)		-860.9 (-1,402.0; -319.7)	-836.9 (-1,479.5; -194.3)	-738.7 (-1,550.1; 72.6)	-604.1 (-1,454.0; 245.7)	-769.1 (-1,395.7; -142.5)	-709.7 (-1,332.2; -87.3)
Friendship-based social relationships (social network, ref = meet up with friends once or more a week)	Once or twice a month		38.3 (-130.6; 207.1)	20.7 (-145.3; 186.7)	55.9 (-111.0; 222.8)	19.7 (-147.3; 186.7)	-8.8 (-172.9; 155.2)	-25.9 (-189.7; 137.8)	19.4 (-141.4; 180.2)
Physical activity (Ref = No sport club participation)	Less than once a month		-299.9 (-451.8; -148.1)	-344.6 (-501.2; -188.0)	-294.2 (-451.0; -137.3)	-330.8 (-489.6; -172.0)	-325.5 (-518.2; -132.9)	-257.9 (-421.3; -94.5)	-192.3 (-346.0; -38.6)
	Yes				318.5 (115.2; 521.8)				279.0 (92.4; 465.7)
Alcohol drinking (Ref = Non-drinking)	Not every day					312.7 (113.3; 512.2)			302.9 (120.7; 485.2)
	Every day					272.9 (101.7; 444.1)			301.3 (151.1; 451.4)
Smoking (Ref = Current smoker)	Past smoker						493.2 (328.6; 657.7)		449.9 (291.4; 608.3)
	Never smoker						646.7 (437.3; 856.0)		660.2 (481.6; 838.8)
BMI (Ref = 22.5-24.9kg/m ²)	<18.5							-774.7 (-986.3; -563.2)	-720.2 (-940.7; -499.6)
	18.5-22.4							-359.2 (-544.6; -173.7)	-306.8 (-485.1; -128.5)
	≥25							-47.5 (-226.3; 131.3)	-71.4 (-241.5; 98.8)

ADL, activities of daily living; BMI, body mass index; CI, confidence interval