S1 Table. Studies addressing Body Mass Index and mortality after stroke

Study	Patients with information on Body Mass Index (n)	Follow-Up	Risk of Mortality		Factors adjusted for in multivariate analysis
Olsen, 2008[1] (Denmark)	21'884 patients with acute stroke	5 year mortality (Median Follow-up 1.5 years)	Underweight: HR: 1.63 (95% CI 1.41 – 1.90)		Age, Sex, Civil Status, stroke severity (Scandinavian Stroke Scale score), cardiovascular risk factors
			Normal-weight: HR: 1 (reference)		
			Overweight: HR: 0.73 (95% CI 0.66-0.81)		
			Obese: HR: 0.84 (95% CI 0.74 – 0.96)		
			Severely Obese: HR: 0.84 (95% CI 0.64 – 1.10)		
Towfighi, 2009[2] (USA)	644 patients with baseline history of stroke	All - cause mortality rate ratios per kg/m^2 relative to person of same age (Median Follow up 11.5 years)	Age 40: HR: 1.05 (95% CI 0.99 – 1.11)		Age, Hypertension, Diabetes, Hypercholesterolemia, Smoking, History of myocardial infarction
			Age 80: HR: 0.95 (95% CI 0.95 – 0.98)		
Vemmos, 2011[3] (Greece)	2785 patients with first-ever acute stroke	Cumulative probability of Survival (%) (Median Follow-Up 47 months)	1 wk	Normal-weight: 90.2 (95% CI 88.4 – 92.0)	-
				Overweight: 92.8 (95% CI 91.2 – 94.4)	
				Obese: 96.4 (95% CI 94.8 – 97.9)	
			10 yr	Normal-weight: 41.5 (95% CI 39.7 – 45.0)	
				Overweight: 47.4 (95% CI 43.5 – 51.3)	
				Obese: 10 yr: 52.5 (95% CI 46.4 – 58.6)	
		10 yr mortality	Normal-weight: HR: 1 (reference)		Age, Discharge Treatment

			Overweight: HR: 0.84 (95% CI 0.73 - 0.97)	
			Obese: HR: 0.74 (95% CI 0.61 – 0.90)	
Kim, 2011[4] (South Korea)	1356 patients with hemorrhagic stroke	30 – day mortality	Underweight: HR: 0.75 (95% CI 0.26 – 2.11)	Age at study entry, diabetes, Glasgow Coma Scale Score, surgical management, systolic blood pressure, glucose, volume of hematoma, extension of hemorrhage into ventricles
			Normal-weight: HR: 1 (reference)	
			Overweight: HR: 0.86 (95% CI 0.47 – 1.56)	
			Obese: HR: 0.89 (95% CI 0.47 – 1.68)	
		Long - term mortality (Mean Follow-Up 33.6 months)	Underweight: HR: 1.64 (95% CI 1.11 – 2.40)	Age at study entry, diabetes, Glasgow Coma Scale Score, glucose, volume of hematoma and extension of hemorrhage into ventricles
			Normal-weight: HR: 1 (reference)	
			Overweight: HR: 0.69 (95% CI 0.49 – 0.96)	
			Obese: HR: 0.61 (95% CI 0.43 – 0.88)	
Ryu, 2011[5] (South Korea)	1592 patients with ischemic stroke	Long - term all-cause mortality (Median Follow-Up 4 years)	Underweight: HR: 2.79 (95% CI 1.92 – 4.05)	Age, sex, previous stroke, hypertension, diabetes, current smoking, heart disease, NIHSS score categorized into 0-1, 2-3, 4-6, and ≥7
			Normal-weight: HR: 1 (reference)	
			Overweight: HR: 0.95 (95% CI 0.73 – 1.25)	
			Obese: HR: 0.76 (95% CI 0.57 – 1.01)	
Kim, 2012[6] (South Korea)	34132 patients with acute ischemic stroke	Mortality rate ratios per kg/m^2 increase of BMI (Mean Follow-Up 32.6 months)	HR: 0.96 (95% CI 0.95 – 0.97)	-

		Mortality at various time points after onset of ischemic stroke	30 d	BMI < 18.5: HR: 1.04 (95% CI 0.85 – 1.27)	-
				BMI 20 – 23: HR: 1 (reference)	
				BMI 23 – 25: HR: 1.05 (95% CI 0.90 – 1-22)	
				BMI 27.5 – 30: HR: 1.23 (95% CI 0.95 – 1.59)	
			90 d	BMI < 18.5: HR: 1.21 (95% CI 1.06 – 1.39	
				BMI 20 – 23: HR: 1 (reference)	
				BMI 23 – 25: HR: 0.98 (95% CI 0.87 – 1.11)	
				BMI 27.5 – 30: HR: 1.06 (0.86 – 1.30)	
			1 yr	BMI < 18.5: HR: 1.30 (95% CI 1.17 – 1.44)	
				BMI 20 – 23: HR: 1 (reference)	
				BMI 23 – 25: HR: 0.90 (95% CI 0.83 – 0.99)	
				BMI 27.5 – 30: HR 0.92 (0.79 – 1.07)	
Doehner, 2013[7] (Germany)	1521 patients with TIA or stroke	Death at 30 months Follow-Up		Underweight: HR: 2.76 (95% CI 1.75 – 4.36)	Age, sex, living in partnership prior to the event, co-morbidities, stroke severity, classification of the cerebral event (TIA vs. ischemic stroke vs. intracerebral hemorrhage), assignment to the Telestroke Unit or conventional treatment arm of the TEMPiS study protocol
				Normal weight: HR: 1.0 (reference)	
				Overweight: HR: 0.86 (95% CI 0.69 – 1.08)	
				Obese: HR: 0.76 (95% CI 0.53 – 1.10)	
				Very obese: HR: 0.55 (95% CI 0.29 – 1.02)	
Bell, 2013[8]	3173	Mortality (Follow-Up time		Underweight: HR: 2.02 (95% CI 0.98 – 4.16)	Age, marriage, social support

(USA)	postmenopausal women aged 50 – 79 with stroke	unknown)	Normal weight: HR: 1.0 (reference)	score, income, diabetes, hypertension, smoking status, pre-stroke physical activity, pre-stroke functional ability, incident stroke type, prevalent conditions pre-stroke, post-stroke Glasgow outcome scale
			Overweight: HR: 0.72 (95% CI 0.58 – 0.90)	
			Obese: HR: 0.69 (95% CI 0.53 – 0.88)	
Skolarus, 2014[9] (USA)	1791 Patients with acute ischemic stroke ≥ 45 years	All-cause mortality in acute ischemic stroke (Median Follow-Up 660 days)	-	Age, race/ ethnicity, sex, stroke severity, hypertension, atrial fibrillation, coronary artery disease, diabetes mellitus, heart failure, high cholesterol chronic obstructive pulmonary disease, dementia, end-stage renal disease, cancer, history of stroke or transient ischemic attack, excessive alcohol use, smoking
			-	
Zhao, 2014[10] (China)	10905 patients with t acute ischemic stroke	All-cause mortality at 3-month Follow-Up	Underweight: OR: 1.30 (95% CI 0.93 – 1.82)	Age, gender, stroke severity (NIHSS), prestrike mRS, AIS Trial of ORG 10172 in Acute Stroke Treatment subtype, and risk factors or comorbidities (including hypertension, diabetes,
			Normal-weight: OR: 1 (reference)	
			Overweight: OR: 1.06 (95% CI 0.89 – 1.28)	
			Obese: OR: 1.06 (95% CI 0.81 – 1.38)	
			Severely obese: OR 2.01 (95% CI 1.10 – 3.69)	

					dyslipidemia, coronary heart disease, atrial fibrillation or flutter, heart failure, current or previous smoking, and history of stroke)
Dehlendorff, 2014[11] (Denmark)	53'812 patients with acute stroke	Mortality at 1 week and 1 month Follow-Up	1 wk	Underweight: HR: 1.41 (95% CI 1.13 – 1.76)	Age, sex, stroke type, stroke severity (Scandinavian Stroke Scale score), cardiovascular risk factors, civil status, socioeconomic status
				Normal weight: HR: 1.0 (reference)	
				Overweight: HR: 0.85 (95% CI 0.69 – 1.04)	
				Obese: HR: 1.19 (95% CI 0.92 – 1.52)	
			1 m	Underweight: HR: 1.55 (95% CI 1.37 – 1.76)	
				Normal weight: HR: 1.0 (reference)	
				Overweight: HR: 0.88 (95% CI 0.78 – 0.98)	
				Obese: HR: 0.98 (95% CI 0.84 – 1.15)	
Andersen, 2015[12] (Denmark)	29'326 patients with acute first-ever stroke	Mortality (Median Follow-Up 2.6 years)	Underweight: HR: 1.66 (95% CI 1.49 – 1.84)		Cardiovascular risk factors, age, gender, civil status, stroke severity (Scandinavian Stroke Scale score),
			Normal weight: HR: 1.0 (reference)		
			Overweight: HR: 0.72 (95% CI 0.68 – 0.78)		
			Obese: HR: 0.80 (95% CI 0.73 – 0.88)		

HR: Hazard Ratio, OR: Odds Ratio, RR: Relative Risk, CI: Confidence Interval, - : no data available in study, wk: week, m: month, yr: year

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