

Supplementary Table 1. Sensitivity analyses: overall adjusted associations of categorical age at survey with summary health-related quality of life scores among systemic lupus erythematosus patients in the Georgians Organized Against Lupus cohort, September 2013-November 2014, with additional adjustments for other potential mediators, compared to primary models*

Domain/model	Difference in score (95% CI), compared to age 20-39 years	
	Age 40-59 years	≥Age 60 years
Physical Component Summary		
Primary model (including BILD, SLAQ; N=684)	-1.85 (-3.55,-0.15)	-3.05 (-5.43,-0.66)
Primary model + BMI, depression, LIT (N=642)	-1.79 (-3.40,-0.19)	-3.53 (-5.77,-1.28)
Primary model + income (N=630)	-1.82 (-3.56,-0.09)	-2.90 (-5.33,-0.47)
Primary model + renal involvement (N=633)	-2.42 (-4.19,-0.66)	-3.29 (-5.69,-0.89)
Physical Functioning		
Primary model (including BILD, SLAQ; N=684)	-1.52 (-3.32,0.27)	-2.94 (-5.46,-0.42)
Primary model + BMI, depression, LIT (N=642)	-1.44 (-3.17,0.30)	-3.40 (-5.83,-0.98)
Primary model + income (N=630)	-1.68 (-3.50,-0.35)	-2.92 (-5.50,-0.35)
Primary model + renal involvement (N=633)	-1.66 (-3.54,0.22)	-2.95 (-5.51,-0.39)
Role Physical		
Primary model (including BILD, SLAQ; N=683)	-1.45 (-3.15,0.25)	-2.07 (-4.45,0.31)
Primary model + BMI, depression, LIT (N=641)	-1.47 (-2.99,0.06)	-2.87 (-5.00,-0.73)
Primary model + income (N=629)	-1.27 (-3.04,0.50)	-2.16 (-4.65,0.32)
Primary model + renal involvement (N=632)	-1.85 (-3.64,-0.06)	-2.29 (-4.72,0.13)
Bodily Pain		
Primary model (including BILD, SLAQ; N=674)	-0.15 (-1.88,1.58)	-1.12 (-3.55,1.31)
Primary model + BMI, depression, LIT (N=633)	-0.29 (-1.82,1.25)	-2.32 (-4.48,-0.17)
Primary model + income (N=621)	0.02 (-1.76,1.79)	-1.10 (-3.59,1.39)
Primary model + renal involvement (N=623)	-0.64 (-2.44,1.16)	-0.99 (-3.44,1.46)
General Health		
Primary model (including BILD, SLAQ; N=679)	-1.52 (-3.24,0.20)	-1.11 (-3.52,1.31)
Primary model + BMI, depression, LIT (N=638)	-1.44 (-3.05,0.17)	-1.71 (-3.97,0.55)
Primary model + income (N=626)	-1.41 (-3.19,0.37)	-1.38 (-3.88,1.11)
Primary model + renal involvement (N=630)	-1.58 (-3.41,0.24)	-1.10 (-3.57,1.38)
Mental Component Summary		
Primary model (including BILD, SLAQ; N=684)	0.76 (-1.04,2.56)	1.62 (-0.90,4.15)
Primary model + BMI, depression, LIT (N=642)	0.49 (-1.06,2.03)	-0.13 (-2.29,2.02)
Primary model + income (N=630)	0.94 (-0.92,2.80)	1.15 (-1.46,3.76)
Primary model + renal involvement (N=633)	1.30 (-0.62,3.22)	2.14 (-0.46,4.75)
Mental Health		
Primary model (including BILD, SLAQ; N=684)	0.79 (-0.93,2.51)	1.77 (-0.64,4.18)
Primary model + BMI, depression, LIT (N=642)	0.44 (-1.10,1.97)	0.39 (-1.76,2.54)
Primary model + income (N=630)	1.00 (-0.79,2.80)	1.50 (-1.01,4.02)
Primary model + renal involvement (N=633)	1.29 (-0.53,3.12)	2.40 (-0.07,4.88)
Role Emotional		
Primary model (including BILD, SLAQ; N=681)	-0.38 (-2.50,1.74)	-0.33 (-3.30,2.64)
Primary model + BMI, depression, LIT (N=639)	-0.31 (-2.22,1.60)	-1.74 (-4.41,0.92)
Primary model + income (N=628)	-0.50 (-2.72,1.73)	-1.16 (-4.27,1.95)
Primary model + renal involvement (N=630)	-0.02 (-2.24,2.21)	0.10 (-2.92,3.12)
Social Functioning		
Primary model (including BILD, SLAQ; N=680)	-0.16 (-1.89,1.57)	0.04 (-2.37,2.46)
Primary model + BMI, depression, LIT (N=638)	-0.11 (-1.57,1.35)	-1.40 (-3.44,0.64)
Primary model + income (N=626)	-0.29 (-2.07,1.49)	-0.24 (-2.72,2.24)
Primary model + renal involvement (N=629)	-0.15 (-1.97,1.68)	-0.16 (-2.63,2.32)
Vitality		
Primary model (including BILD, SLAQ; N=682)	-0.18 (-1.92,1.55)	-0.84 (-3.27,1.59)
Primary model + BMI, depression, LIT (N=640)	-0.65 (-2.23,0.94)	-2.43 (-4.66,-0.21)
Primary model + income (N=628)	0.46 (-1.32,2.24)	-0.53 (-3.02,1.96)
Primary model + renal involvement (N=631)	-0.25 (-2.11,1.62)	-0.65 (-3.18,1.89)

Complete case analysis was used (only individuals with complete information on the outcome and all covariates included). All subdomain scores are norm-based SF-12 scores. BILD, Brief Index of Lupus Damage; SLAQ, Systemic Lupus Activity Questionnaire; BMI, body mass index; LIT, Lupus Impact Tracker score. Renal involvement determined by American College of Rheumatology diagnostic criteria.*Adjusted for sex, race (African-American vs. not African-American), employment, marital status, social support, lupus duration, BILD score, and SLAQ score.

Supplementary Table 2. Sensitivity analyses: overall associations of continuous age at survey with summary health-related quality of life scores among systemic lupus erythematosus patients in the Georgians Organized Against Lupus cohort, September 2013-November 2014

Domain/model	Mean difference in score (95% CI), per +10 years of age
Physical Component Summary (N=684)	
Crude	-1.47 (-2.09,-0.86)
Multivariable adjusted*	-1.37 (-2.07,-0.67)
Multivariable + BILD and SLAQ score	-1.15 (-1.79,-0.51)
Physical Functioning (N=684)	
Crude	-1.38 (-2.02,-0.73)
Multivariable adjusted*	-1.22 (-1.95,-0.50)
Multivariable + BILD and SLAQ score	-1.03 (-1.71,-0.35)
Role Physical (N=683)	
Crude	-0.84 (-1.47,-0.21)
Multivariable adjusted*	-0.73 (-1.43,-0.03)
Multivariable + BILD and SLAQ score	-0.53 (-1.17,0.11)
Bodily Pain (N=674)	
Crude	-0.88 (-1.54,-0.22)
Multivariable adjusted*	-0.83 (-1.57,-0.10)
Multivariable + BILD and SLAQ score	-0.62 (-1.27,0.04)
General Health (N=679)	
Crude	-0.71 (-1.33,-0.10)
Multivariable adjusted*	-0.68 (-1.40,0.03)
Multivariable + BILD and SLAQ score	-0.48 (-1.13,0.17)
Mental Component Summary (N=684)	
Crude	0.58 (-0.08,1.24)
Multivariable adjusted*	0.64 (-0.09,1.37)
Multivariable + BILD and SLAQ score	0.75 (0.07,1.42)
Mental Health (N=684)	
Crude	0.48 (-0.15,1.11)
Multivariable adjusted*	0.55 (-0.15,1.25)
Multivariable + BILD and SLAQ score	0.65 (0.01,1.30)
Role Emotional (N=681)	
Crude	-0.02 (-0.80,0.76)
Multivariable adjusted*	0.03 (-0.82,0.88)
Multivariable + BILD and SLAQ score	0.19 (-0.61,0.99)
Social Functioning (N=680)	
Crude	-0.30 (-0.94,0.34)
Multivariable adjusted*	-0.15 (-0.87,0.57)
Multivariable + BILD and SLAQ score	0.03 (-0.62,0.68)
Vitality (N=682)	
Crude	-0.26 (-0.85,0.33)
Multivariable adjusted*	-0.28 (-0.97,0.41)
Multivariable + BILD and SLAQ score	-0.16 (-0.82,0.49)

Complete case analysis was used (only individuals with complete information on the outcome and all covariates included). All subdomain scores are norm-based SF-12 scores. BILD, Brief Index of Lupus Damage; SLAQ, Systemic Lupus Activity Questionnaire.

*Adjusted for sex, race (African-American vs. not African-American), employment, marital status, social support, and lupus duration.