

Supplementary Table 1.

Adapted Newcastle-Ottawa Scale for case-control studies	
Selection	1. <u>Is the case definition adequate?</u> a) yes, with independent validation ♦ b) yes, record linkage or based on self reports c) no description
	2. <u>Representativeness of the cases</u> a) consecutive or obviously representative series of cases ♦ b) potential for selection biases or not stated
	3. <u>Selection of Controls^a</u> a) healthy controls ♦ b) rheumatology outpatient controls c) no description
	4. <u>Definition of Controls</u> a) no history of disease (endpoint) ♦ b) no description of source
Comparability	1. <u>Comparability of cases and controls on the basis of the design or analysis^a</u> a) study controls for sex ♦ b) study controls for age ♦
Exposure	1. <u>Ascertainment of exposure^a</u> a) detailed description of the test about insulin resistance/leptin/adiponectin/resistin levels and definition of SLE ♦ b) no description
	2. <u>Same method of ascertainment for cases and controls</u> a) yes ♦ b) no
	3. <u>Non-Response Rate</u> a) same rate for both groups ♦ b) non respondents described c) rate different and no designation
A study can be awarded a maximum of one star for each numbered item within the Selection and Exposure categories. A maximum of two stars can be given for Comparability a We modified the items for adaption of current study	

Supplementary Table 2. Summary of included studies

Study	Country	Disease duration, year*	Disease activity (SLEDAI)*	Cumulative damage (SLICC/ACR DI)*	Control	Sample size, n, SLE/control	Quality score [†]
Garcia-Gonzalez et al, 2002 ¹	Mexico	7 ± 5	NA	NA	Hospital staff	41/23	8
El Magadmi et al, 2006 ²	United Kingdom	12(1–35) (median[range])	2(0–8) (median[range])	NA	Healthy	44/45	8
Sada et al, 2006 ³	Japan	9.2 ± 6.5	NA	NA	Healthy	37/80	9
Tso et al, 2006 ⁴	Taiwan	9 ± 7	3.3 ± 4.4	NA	Healthy	70/34	9
Chung et al, 2007 ⁵	United States	6(3– 11) (median[range])	NA	NA	Without SLE or any autoimmune disease	102/101	6
Elwakkad et al, 2007 ⁶	Egypt	NA	NA	NA	Healthy	12/21	9
Sato et al, 2007 ⁷	Japan	18.9 ± 10	1.8 ± 1.7	NA	Healthy	39/39	9
Tso et al, 2007 ⁸	Taiwan	9 ± NA	4 (median)	NA	Healthy	68/34	9
Almehed et al, 2008 ⁹	Sweden	11(1– 41) (median[range])	NA	2(0–11) (median[range])	Healthy	163/42	9
Chung et al, 2008 ¹⁰	United States	NA	4(1–6) (median[IQR])	0(0–1) (median[IQR])	Rheumatoid arthritis	103/124	5

Kao et al, 2008 ¹¹	United States	16.5 ± 7.2	NA	NA	Healthy	105/105	7
Wislowska et al, 2008 ¹²	Poland	11.2 ± 8.0	7.7 ± 4.2	0.62 ± 0.7	Healthy	30/30	9
Al et al, 2009 ¹³	Canada	NA	3.5 ± 3.7	NA	Healthy	105/77	8
Chung et al, 2009 ¹⁴	United States	8.2 ± 7.3	4.1 ± 4	0.9 ± 1.3	Without SLE or any autoimmune disease	109/78	8
De Sanctis et al, 2009 ¹⁵	Venezuela	NA	5.5 ± 2.8	NA	Without infectious, autoimmune or lipid disorders	60/60	6
Koca et al, 2009 ¹⁶	Turkey	3(0.1–14) (median[range])	10(0–30) (median[range])	NA	Healthy	30/15	9
Tso et al, 2009 ¹⁷	Taiwan	10.5 ± 7.2	4 (median)	NA	Healthy	87/32	9
Vadacca et al, 2009 ¹⁸	Italy	NA	NA	NA	NA	50/26	7
Anania et al, 2010 ¹⁹	Sweden	11.67 ± NA	NA	NA	Population control	114/122	8
Kim et al, 2010 ²⁰	Korea	3.95 ± 2.8	3.24 ± 2.81	0.49 ± 0.65	Healthy	70/39	8
Penn et al, 2010 ²¹	United States	16.5 ± 7.1	2(0–2) (median[IQR])	NA	Rheumatoid arthritis	149/177	6

Reynolds et al, 2010 ²²	United States	13.6 ± 10.0	NA	NA	Healthy	119/71	9
Santos et al, 2010 ²³	Portugal	6.6(0.5–34) (median[range])	NA	0(1) (median[IQR])	Without chronic inflammatory disorders	100/102	8
Baker et al, 2011 ²⁴	United States	8(3.8–17) (median[IQR])	4(2–6) (median[IQR])	2(1–3) (median[IQR])	Non-pregnant female without autoimmune disease	159/70	8
McMahon et al, 2011 ²⁵	United States	11.9 ± 8.5	NA	1.3 ± 1.7	Healthy	250/122	9
Ozgen et al, 2011 ²⁶	Turkey	3.8 ± 3.9	8.3 ± 6.0	0.69 ± 1.12	Healthy	26/29	7
Elshishtawy et al, 2012 ²⁷	Egypt	2.29 ± 1.25	28.16 ± 19.91	NA	Healthy	50/40	9
Gheita et al, 2013 ²⁸	Egypt	5.8 ± 3.1	8.2 ± 4.7	4.2 ± 2.3	Healthy	92/30	9
Ormseth et al, 2013 ²⁹	United States	6(3–11) (median[IQR])	4(0–6) (median[IQR])	1(0–1) (median[IQR])	Without SLE or any inflammatory disease	156/90	8
Shields et al, 2013 ³⁰	United States	NA	NA	NA	Healthy	153/158	8
Tanaka et al, 2013 ³¹	Japan	NA	NA	NA	Healthy	18/140	7
Vadacca et al, 2013 ³²	Italy	10 ± 5	9.9 ± 5	2.13 ± 1.6	Without	60/29	8

					autoimmune disease		
Koca et al, 2014 ³³	Turkey	4.0 ± 4.1	8.1 ± 6.3	0.75 ± 1.2	Healthy	20/23	9
Lozovoy et al, 2014 ³⁴	Brazil	NA	NA	NA	Healthy	123/102	9
Sabio et al, 2014 ³⁵	Spain	11 ± 7	2(0–4) (median[IQR])	0(0–1) (median[IQR])	Hospital nonmedical staff	99/101	7
Afroze et al, 2015 ³⁶	India	NA	NA	NA	Healthy	100/100	9
Barbosa et al, 2015 ³⁷	Brazil	7.79 ± 6.59	3.1 ± 4.4	NA	Healthy	52/33	9
Bhat et al, 2015 ³⁸	India	3(2–5.25) (median[IQR])	1.59(0–10) (median[range])	0.8(0–3) (median[range])	Healthy	82/82	9
Chen et al, 2015 ³⁹	China	4.7 ± 5.4	14.1 ± 4.6	NA	Healthy	8/9	9
Hutcheson et al, 2015 ⁴⁰	United States	NA	10(4–16) (median[IQR])	NA	Healthy	28/9	7
Sabio et al, 2015 ⁴¹	Spain	10(6–17) (median[IQR])	2(0–4) (median[IQR])	0(0–1) (median[IQR])	Hospital staff or investigators’ acquaintances	106/101	7
Badawi et al, 2017 ⁴²	Egypt	2.83 ± 2.91	9.0 ± 3.88	NA	Healthy	56/20	9
Diaz-Rizo et al, 2017 ⁴³	Mexico	9.1 ± 6.3	2.5 ± 3.1	0.8 ± 0.9	Healthy	103/83	9
Khairy et al, 2017 ⁴⁴	Egypt	3.6 ± 4.3	20.1 ± 6.4	NA	Healthy	53/25	9
Rezaieyazdi et al,	Iran	4.56 ± NA	10.15 ± NA	NA	Healthy	73/65	9

2017 ⁴⁵							
Sánchez-Pérez et al, 2017 ⁴⁶	Spain	16(9–21) (median[IQR])	2(0–6) (median[IQR])	2(1–3) (median[IQR])	From Spanish Camargo Cohort	87/82	7
Shields et al, 2017 ⁴⁷	United States	NA	NA	NA	Healthy	143/143	8
Wang et al, 2017 ⁴⁸	China	2.23 ± 3.44	NA	NA	Healthy	47/25	8
Chougule et al, 2018 ⁴⁹	India	1.55 ± NA	NA	NA	Healthy	60/40	9
Demir et al, 2018 ⁵⁰	Turkey	6.2 ± 4.6	1.18 ± 1.5	0.16 ± 0.48	Healthy	66/28	8
Hrycek et al, 2018 ⁵¹	Poland	1.33 ± NA	NA	NA	Healthy	41/38	8
Miyake et al, 2018 ⁵²	Brazil	9.4 ± 5.6	0.33 ± 0.9	0.33 ± 0.69	Healthy	33/16	9
Mohammed et al, 2018 ⁵³	Egypt	7.95 ± 5.7	6.43 ± 5.59	NA	Healthy	40/20	9
Stanescu et al, 2018 ⁵⁴	Romania	11.5(1.5– 34.0)(median [range])	NA	NA	Without autoimmune or infectious disorders	24/5	8
Pedro et al, 2019 ⁵⁵	Brazil	NA	3(2–6) (median[IQR])	NA	Healthy	105/120	8
Rashad et al, 2019 ⁵⁶	Egypt	5.4 ± 2.5	16.7 ± 8.8	NA	Healthy	140/100	9

SLE, Systemic lupus erythematosus; *NA*, Not available; *SLEDAI*, Systemic Lupus Erythematosus Disease Activity Index; *SLICC/ACR DI*, Systemic Lupus International collaborating clinics/American College of Rheumatology Damage Index; *IQR*, interquartile range.

* Data are presented as mean $\pm$ standard deviation (SD); the conversion between median, IQR, range, mean, and SD is based on following formula: median=mean; SD=IQR/1.35; SD=range/4. ^{57,58}

†The methodologic quality of the studies was rated by using an adapted version of the Newcastle-Ottawa scale for case-control studies with a maximum score of 9 points.

Supplementary Table 3. Demographic characteristics and HOMA IR, serum adiponectin, leptin and resistin levels in different groups

Study	Group	Age, y	Sex, n, M:F	BMI (median[range])	HOMA IR	Serum adiponectin level, ug/ml	Serum leptin level, ng/ml	Serum resistin level, ng/ml
Garcia- Gonzalez et al, 2002 ¹	SLE	35±11	0:41	26(17–47) (median[range])	NA	NA	30(4–74) (median[range])	NA
	Control	NA	0:23	25(22–38) (median[range])	NA	NA	15(2–59) (median[range])	NA
El Magadmi et al, 2006 ²	SLE	NA	0:44	26.6(18.6–37.4) (median[range])	2.09±1.92	NA	NA	NA
	Control	NA	NA	24.8(17–36.2) (median[range])	1.41±1.28	NA	NA	NA
Sada et al, 2006 ³	SLE	44±15	NA	22.1±3.5	2.32±2.34	14.3±4.8	22.5±21	NA
	Control	44±6	NA	22.2±3.2	1.32±0.99	8.5±3.2	10.1±4.4	NA
Tso et al, 2006 ⁴	SLE	38.48±13.77	0:70	22.95±4.44	1.83±1.12	NA	NA	NA
	Control	40.13±6.58	0:34	22.32±2.39	1.08±0.57	NA	NA	NA
Chung et al, 2007 ⁵	SLE	NA	9:93	28(24.1–33.2) (median[IQR])	1.78±1.64	NA	NA	NA
	Control	NA	11:90	25.9(23.1–31.0) (median[IQR])	1.17±1.29	NA	NA	NA
Elwakkad et al, 2007 ⁶	SLE	15.8±2.9	2:10	25.3±4.9	NA	NA	21.9±30.4	NA
	Control	NA	NA	NA	NA	NA	2.76±0.7	NA
	SLE	51.59±9.65	0:39	22.4±2.3	Premenopause	NA	NA	NA

Sato et al, 2007 ⁷					1.38(0.84–1.8)			
					Post menopause 1.89(1.3–2.75) (median[IQR])			
	Control	51.58±9.66	0:39	22.0±2.7	Premenopause 0.82(0.53–1.69) Post menopause 0.91(0.64–1.07) (median[IQR])	NA	NA	NA
Tso et al, 2007 ⁸	SLE	38±NA	0:68	NA	1.84±1.15	NA	NA	NA
	Control	NA	0:34	NA	1.08±0.58	NA	NA	NA
Almehed et al, 2008 ⁹	SLE	NA	0:163	24.2(17.2–37.2) (median[range])	NA	NA	NA	6.53(2.23–19.14) (median[range])
	Control	NA	0:42	NA	NA	NA	NA	6.24(0.47–17.12) (median[range])
Chung et al, 2008 ¹⁰	SLE	NA	34:90	27(24–33) (median[IQR])	1.4(0.8–2.6) (median[IQR])	NA	NA	NA
	Control	NA	9:94	28(24–32) (median[IQR])	2(1.0–3.5) (median[IQR])	NA	NA	NA
Kao et al, 2008 ¹¹	SLE	51.1±9.3	0:105	28.2±6.4	2.6(1.9–3.9) (median[IQR])	NA	NA	NA
	Control	51.6±8.6	0:105	28.4±6.7	2.6(2.1–3.6)	NA	NA	NA

(median[IQR])								
Wisłowska et al, 2008 ¹²	SLE	50.4±14.3	0:30	25.3±4.8	NA	NA	7.5(1.8–66.3) (median[range])	NA
	Control	51.0±12.2	0:30	25.5±5.1	NA	NA	8.8(0.7–39.2) (median[range])	NA
Al et al, 2009 ¹³	SLE	14.98±2.46	21:84	23.8±5.0	NA	15±8	22.4±18.5	NA
	Control	NA	21:56	NA	NA	15.6±7.4	9.8±8.7	NA
Chung et al, 2009 ¹⁴	SLE	40.2±11.5	9:100	29.2±7.5	2±1.8	28.7±17.9	41.1±49.9	10.7±7.6
	Control	40.5±12.0	11:67	27.0±6.0	1.5±1	22±15.3	19.8±24.6	9.1±5.1
De Sanctis et al, 2009 ¹⁵	SLE	35±9	9:51	26.1±4.6	NA	0.019±0.0041	4.1±2.3	5.9±2.8
	Control	32±12	6:54	22±2.0	NA	0.011±0.0047	9.8±2.4	6.6±3.2
Koca et al, 2009 ¹⁶	SLE	NA	1:29	22.3(16.5–29.3) (median[range])	1.7(0.5–6.5) (median[range])	NA	NA	NA
	Control	NA	3:12	24.1(18.9–28.8) (median[range])	1.2(0.8–2.9) (median[range])	NA	NA	NA
Tso et al, 2009 ¹⁷	SLE	38±18.65	0:87	23±9.3	1.76±1.03	NA	NA	NA
	Control	40±5.66	0:32	22.0±5.7	1.04±0.57	NA	NA	NA
Vadacca et al, 2009 ¹⁸	SLE	NA	0:50	24.2(19.8–35.0) (median[range])	1.6(0.6–8.2) (median[range])	NA	NA	NA
	Control	NA	0:26	22.8(19.0–37.3) (median[range])	1.3(0.6–2.9) (median[range])	NA	NA	NA
Anania et	SLE	47.94±13.17	14:100	24.89(20.96–	1.34(0.8–1.96)	NA	NA	NA

al, 2010 ¹⁹				27.85)	(median[IQR])			
				(median[IQR])				
	Control	49.11±12.68	13:109	24.67(22.41–27.82)	1.05(0.69–1.48)	NA	NA	NA
				(median[IQR])	(median[IQR])			
Kim et al, 2010 ²⁰	SLE	34.6±6.7	NA	NA	NA	NA	0.14±0.10	NA
	Control	27.4±6.6	NA	NA	NA	NA	0.09±0.04	NA
Penn et al, 2010 ²¹	SLE	49.8±9.7	0:149	27.6±6.2	With HCQ 2.51(1.73–3.55) Without HCQ 2.87(1.97–4.28) (median[IQR])	NA	NA	NA
	Control	58.5±10.4	0:177	27.8±5.8	With HCQ 2.22(1.82–3.09) Without HCQ 2.48(1.71–3.05) (median[IQR])	NA	NA	NA
Reynolds et al, 2010 ²²	SLE	42.6±12.4	11:108	25.9±6.3	NA	16±9.2	NA	NA
	Control	41.3±11.9	6:65	24.8±5.3	NA	11.4±6.1	NA	NA
Santos et al, 2010 ²³	SLE	46.6±13.4	0:100	NA	0.72±2.5	NA	NA	NA
	Control	47.7±13.4	0:102	NA	3.5±6.4	NA	NA	NA
Baker et al,	SLE	43.2±11.1	0:159	28.4(6.9)	3(1.8–4.2)	NA	NA	14.18±10.94

2011 ²⁴				(median[IQR])	(median[IQR])			
	Control	44.8±9.8	0:70	29.0(6.4)	2.8(1.9–3.8)	NA	NA	9.95±6.48
				(median[IQR])	(median[IQR])			
McMahon	SLE	42.0±13.1	0:250	26.1±6.5	NA	15.3±8.4	23.7±28	NA
et al, 2011 ²⁵	Control	41.4±13.5	0:122	24.2±5.1	NA	14±7.8	13.3±12.9	NA
Ozgen et al,	SLE	34.2±11.0	2:24	23.2±4.4	1.89±1.4	NA	NA	NA
2011 ²⁶	Control	38.0±10.3	9:20	25.9±4.7	1.49±0.75	NA	NA	NA
Elshishtawy	SLE	23.1±6.9	0:50	27.6±0.83	NA	NA	NA	14.1±3.88
et al, 2012 ²⁷	Control	23.36±5.13	0:40	27.21±0.75	NA	NA	NA	6.44±1.34
Gheita et al,	SLE	30.18±8.27	8:84	25.9±3.5	2.61±0.84	NA	NA	NA
2013 ²⁸	Control	28±5.37	3:27	24.74±2.29	1.86±0.28	NA	NA	NA
Ormseth et	SLE	NA	19:137	27.3(23.4–32.7)	1.47(0.69–2.52)	NA	NA	NA
al, 2013 ²⁹				(median[IQR])	(median[IQR])			
	Control	NA	12:78	25.2(22.5–30.1)	1.08(0.66–2.08)	NA	NA	NA
				(median[IQR])	(median[IQR])			
Shields et	SLE	49.5±9.7	0:153	27.0(22.6–31.9)	7.01(4.0–10)	NA	NA	NA
al, 2013 ³⁰				(median[IQR])	(median[IQR])			
	Control	51.1±9.7	0:158	26.9(23.8–32.1)	6.66(5.4–9.4)	NA	NA	NA
				(median[IQR])	(median[IQR])			
Tanaka et	SLE	NA	4:14	NA	NA	NA	Female	Male 16.4(6.2–55.2)
al, 2013 ³¹							2.5(1.4–7.1)	Female 5.2(3.5–
							(median[IQR])	15.1) (median[IQR])

	Control	45.6±13.8	22:118	22.3±2.9	NA	NA	Female 7(3.8–12.0) (median[IQR])	Male 3.7(3.3–5.1) Female 3.5(3.0–4.4) (median[IQR])
Vadacca et al, 2013 ³²	SLE	42.26±10.54	0:60	25.2±4	NA	6.9(3–25.9) (median[range])	26(5–175) (median[range])	NA
	Control	45.69±11.57	0:29	24±4.6	NA	7.1(4.1–13) (median[range])	17.2(5–42) (median[range])	NA
Koca et al, 2014 ³³	SLE	35.8±10.9	0:20	23.9±4.6	2.2±1.5	NA	NA	NA
	Control	39.5±9.2	0:23	26.4±5.1	1.6±0.7	NA	NA	NA
Lozovoy et al, 2014 ³⁴	SLE	NA	10:92	Active 28.8(26.1–32.8) Inactive 26.4(23.5–30.9) (median[IQR])	Active 2.75(1.68–4.95) Inactive 2.40(1.60–3.52) (median[IQR])	NA	NA	NA
	Control	NA	9:114	26.0(24.1–29.4) (median[IQR])	1.59(1.02–2.68) (median[IQR])	NA	NA	NA
Sabio et al, 2014 ³⁵	SLE	37±11	0:99	24±4	1.6(1.1–2.1) (median[IQR])	NA	NA	NA
	Control	37±11	0:101	24±4	1.2(0.9–1.7) (median[IQR])	NA	NA	NA
Afroze et al, 2015 ³⁶	SLE	26.4±6.5	3:97	25.7±11.5	NA	NA	23.9±19.5	NA
	Control	28.1±8.4	2:98	24.2±9.2	NA	NA	14.8±10.4	NA

Barbosa et al, 2015 ³⁷	SLE	33.4±9.4	0:52	23.8±3.5	NA	0.000088±0.000070	20.7±17.1	NA
	Control	32.5±10.5	0:33	21.8±2.5	NA	0.00012±0.000071	8±5	NA
Bhat et al, 2015 ³⁸	SLE	28.7±6.8	0:82	22.6±3	1.31(0.06–9.32) (median[range])	NA	NA	NA
	Control	29.3±9.3	0:82	21.5±4	1.55(0.01–7.92) (median[range])	NA	NA	NA
Chen et al, 2015 ³⁹	SLE	29.8±7.9	0:8	NA	NA	NA	9.93 ± 2.15	NA
	Control	27.3±2.3	0:9	NA	NA	NA	2.01 ± 0.28	NA
Hutcheson et al, 2015 ⁴⁰	SLE	NA	NA	29.5±1.6	NA	178(73–234) (median[IQR])	0.078(0.055–0.10) (median[IQR])	13790000(8280000–20860000) (median[IQR])
	Control	36±NA	5:4	NA	NA	12(40–97) (median[IQR])	0.055(0.014–0.079) (median[IQR])	6210000(3450000–8790000) (median[IQR])
Sabio et al, 2015 ⁴¹	SLE	NA	0:106	23.5(21.4–26.5) (median[IQR])	1.58(1.07–2.19) (median[IQR])	NA	NA	NA
	Control	NA	0:101	23.3(20.7–25.6) (median[IQR])	1.2(0.85–1.71) (median[IQR])	NA	NA	NA
Badawi et al, 2017 ⁴²	SLE	27.1±6.3	NA	25.8±2.8	NA	NA	5.1±1.7	NA
	Control	25.2±4	NA	25±1.9	NA	NA	1.6±0.6	NA
Diaz-Rizo	SLE	42.6±11.3	0:103	27.3±4.9	NA	17±8.9	25.7±27.6	NA

et al, 2017 ⁴³	Control	44.6±10.0	0:83	27.5±4.9	NA	12±6.5	19.7±19	NA
Khairy et al, 2017 ⁴⁴	SLE	30.5±9.6	0:53	26.5±4.5	NA	NA	32.3±24.2	NA
	Control	30.4±7,1	0:25	NA	NA	NA	NA	NA
Rezaieyazdi et al, 2017 ⁴⁵	SLE	30.55±9.38	8:65	24.04±NA	NA	NA	NA	6.88±4.53
	Control	31.80±6.37	9:56	NA	NA	NA	NA	6.74±3.74
Sánchez-Pérez et al, 2017 ⁴⁶	SLE	50±10	4:83	28±5	1.01±0.67	NA	NA	NA
	Control	54±10	5:77	29±6	1.13±0.7	NA	NA	NA
Shields et al, 2017 ⁴⁷	SLE	NA	0:143	27(23–31) (median[IQR])	6.71(4.9–10) (median[IQR])	NA	NA	NA
	Control	NA	0:143	27.2(24–32) (median[IQR])	6.79(5.4–9.4) (median[IQR])	NA	NA	NA
Wang et al, 2017 ⁴⁸	SLE	30.17±11.11	0:47	21.34±3.5	NA	NA	17.98 ± 2.75	NA
	Control	35.28±11.69	NA	21.7±2.16	NA	NA	5.32 ± 0.73	NA
Chougule et al, 2018 ⁴⁹	SLE	28.53±8.7	1:10	NA	NA	11.64±9.01	8.34±14.41	0.04±0.04
	Control	NA	NA	NA	NA	9.67±3	14.23±11.05	0.01±0.01
Demir et al, 2018 ⁵⁰	SLE	34.4±8.9	0:66	25.6±5.2	1.79 (median)	NA	17.56 (median)	NA
	Control	29.9±5.6	0:28	21.82±3.09	1.12 (median)	NA	8.28 (median)	NA
Hrycek et al, 2018 ⁵¹	SLE	47±29	0:41	26.1±NA	NA	10.79±6.45	38.82±34.92	NA
	Control	44±26	0:38	25.2±NA	NA	7.42±4.31	10.76±5.82	NA
Miyake et al, 2018 ⁵²	SLE	31.8±6.4	0:33	25.3±3.3	1.85(1.68) (median[IQR])	NA	NA	NA

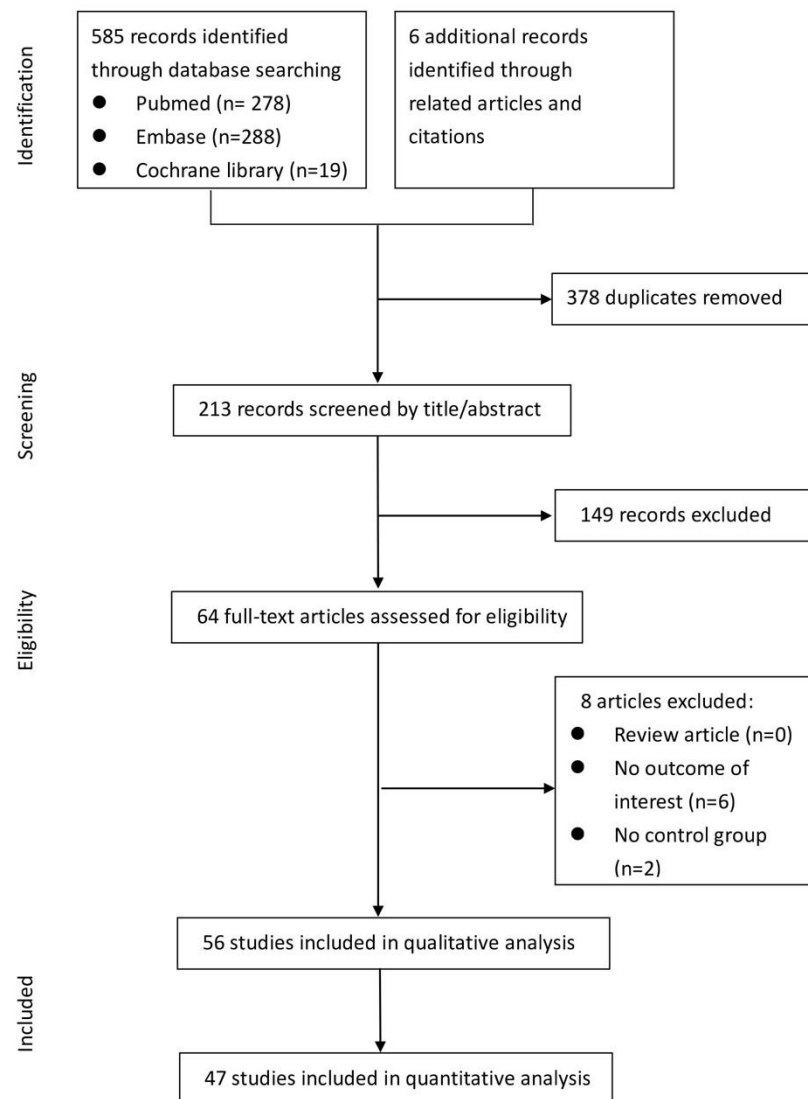
	Control	31.0±6.2	0:16	25.2±3.3	1.40(0.86) (median[IQR])	NA	NA	NA
Mohammed et al, 2018 ⁵³	SLE	29.62±7.84	0:40	25.36±2.33	NA	NA	6.23±2.06	NA
	Control	NA	0:20	NA	NA	NA	2.96±1.44	NA
Stanescu et al, 2018 ⁵⁴	SLE	46.0±9.9	0:24	23.8±2.9	NA	NA	118.5(53.5–182.2) (median[range])	NA
	Control	38.2±11.6	0:5	21.0±1.9	NA	NA	51.4(32.4–137.2) (median[range])	NA
Pedro et al, 2019 ⁵⁵	SLE	NA	5:100	27.5±0.6	2.67±0.18	NA	NA	NA
	Control	NA	33:87	25.8±0.4	2.12±0.14	NA	NA	NA
Rashad et al, 2019 ⁵⁶	SLE	31.1±7.6	0:140	29.38±5.87	1.5±0.32	NA	NA	4.9 ± 0.2
	Control	NA	0:100	33.58±7.43	6.15±15.84	NA	NA	3.02 ± 0.9

NA, Not available; BMI, body mass index; IQR, interquartile range; HCQ, hydroxychloroquine.

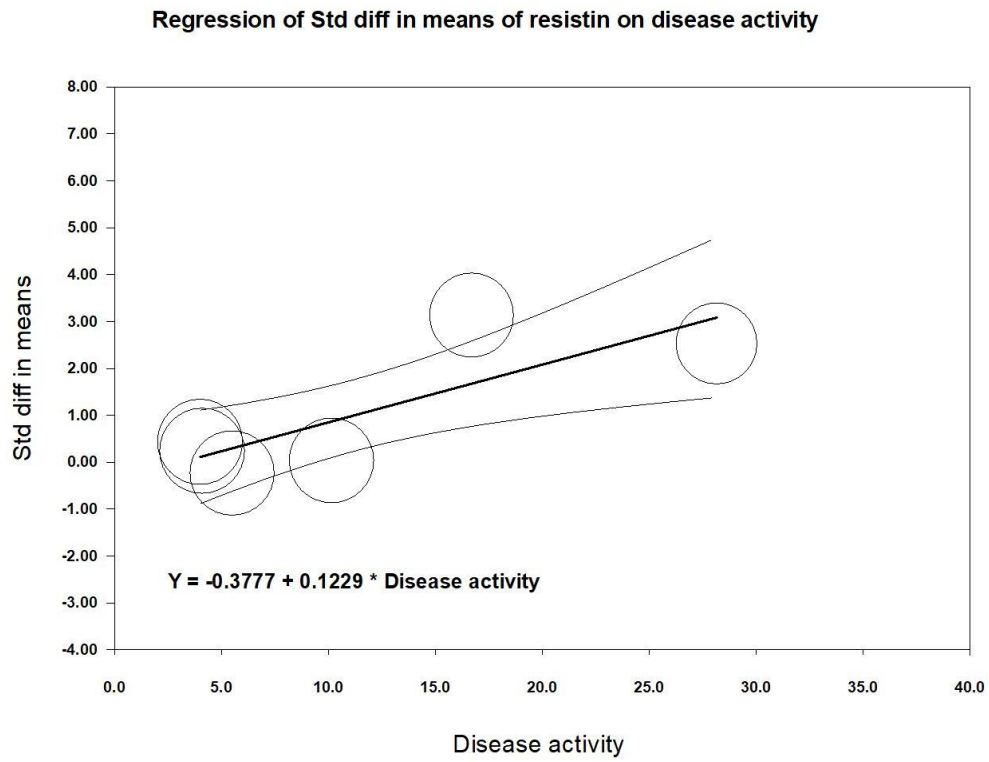
Data are presented as mean ± standard deviation (SD); the conversion between median, IQR, range, mean, and SD is based on following formula:

median=mean; SD=IQR/1.35; SD=range/4. ^{57,58}

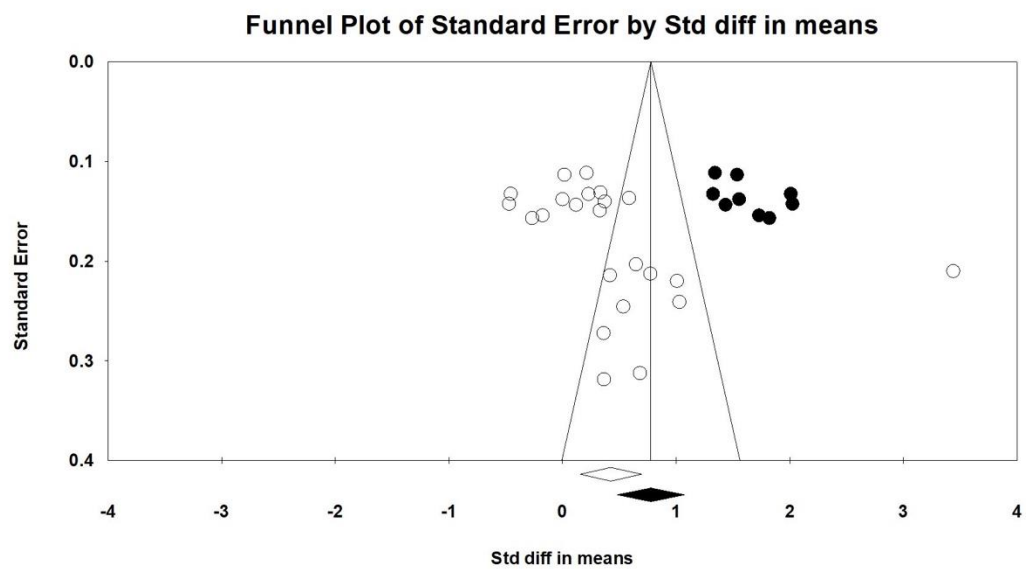
Supplemetnary Figure 1.



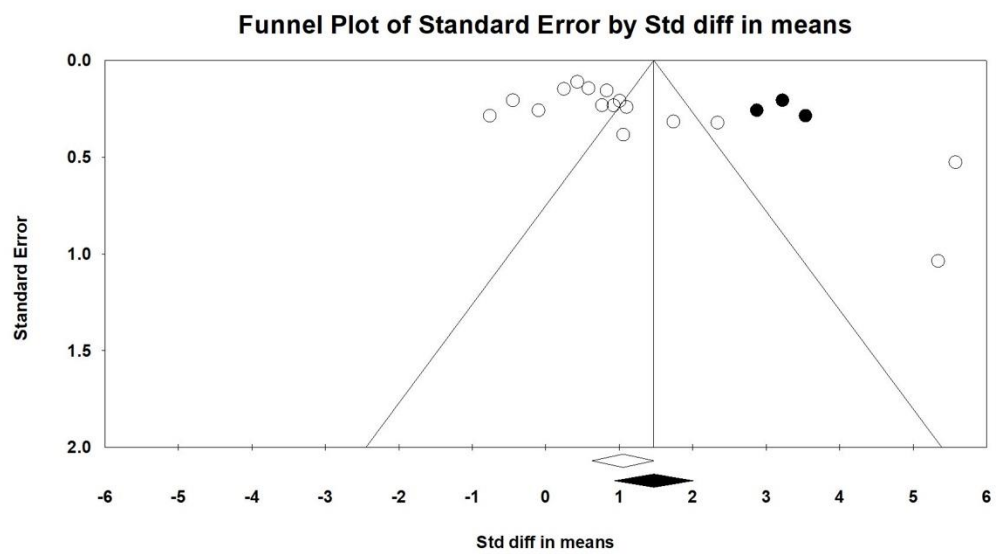
Supplemetnary Figure 2.



Supplemetnary Figure 3a.



Supplemetnary Figure 3b.



Supplementary references

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