

**Supplementary Table.** Articles included in the systemic lupus erythematosus (online)

Author(s), [year]	Sex	Age	1 <sup>st</sup> diagnosis	SSc diagnosis	SSc involvement	SSc autoantibodies	Time between diagnosis	RF/ACPA	RA involvement	Treatment	Other associations
Alkassab (2007) [17]	Female	45	dcSSc	dcSSc	Cutaneous	Anti-Scl-70 +	6 years	RF and ACPA +	Erosive arthritis	MTX and ETA	NA
Anand et al. (2014) [18]	Female	71	Same time	SSc sine scleroderma	Vascular, pulmonary and gastrointestinal	ACA	NA	RF and ACPA +	Erosive arthritis	HCQ, RTX and a low dose of PDN	ANCA-vasculitis
Armstrong et Gibson (1982) [19]	Female	27	lcSSc	lcSSc	Cutaneous and vascular	NA	19 years	RF +	Erosive arthritis	PDN	NA
	Female	48	lcSSc	lcSSc	Cutaneous and pulmonary	NA	14 years	RF +	Erosive arthritis	D-penicillamine	NA
	Female	58	lcSSc	lcSSc	Vascular, cutaneous, pulmonary and gastrointestinal	NA	9 years	RF +	Erosive arthritis	Steroids, NSAIDs, D-penicillamine	NA
	Female	51	lcSSc	lcSSc	Vascular, cutaneous, gastrointestinal, pulmonary	NA	2 years	RF +	Erosive arthritis	D-penicillamine	NA
Baron et al. (1982) [20]	Female	77	NA	NA	Pulmonary, gastrointestinal	NA	NA	RF +	Erosive arthritis	NA	NA
Boletto et al. (2021) [21]	Male	48	Same time	dcSSc	Vascular, pulmonary and cutaneous	Anti-Scl-70 +	NA	RF and ACPA +	Erosive arthritis	PDN and MTX (ineffective) -> RTX (failure) -> TCZ (failure and AEs) -> ABA (failure) -> baricitinib	NA
Cohen et Persellin (1982) [22]	Male	42	Same time	dcSSc	Vascular, gastrointestinal, pulmonary and cutaneous	NA	NA	RF +	Erosive arthritis	Gold and steroids, penicillamine	NA
	Male	41	NA	dcSSc	Cutaneous, gastrointestinal, vascular and pulmonary	NA	NA	RF +	Erosive arthritis	Gold and penicillamine	NA
	Female	46	Same time	dcSSc	Cutaneous, vascular, pulmonary	NA	NA	RF +	Erosive arthritis	Gold and penicillamine	NA
	Female	23	RA	lcSSc	Pulmonary, vascular and cutaneous	NA	13 years	RF +	Erosive arthritis	NA	NA
Doran et al. (2001) [23]	Female	58	dcSSc	dcSSc	Vascular, pulmonary, cutaneous	ACA and anti-Scl-70 negative	NA	RF +	Erosive arthritis	NA	NA
	Female	27	dcSSc	dcSSc	Vascular, pulmonary, cutaneous	Anti-Scl-70 +	NA	RF +	Erosive arthritis	NA	NA
	Female	75	dcSSc	dcSSc	Vascular, pulmonary, cutaneous	Anti-Scl-70 +	NA	RF +	Erosive arthritis	NA	NA
	Female	50	dcSSc	dcSSc	Vascular, pulmonary, cutaneous	Anti-Scl-70 +	NA	RF +	Erosive arthritis	NA	NA
Filali et al. (2006) [24]	NA	31	NA	NA	NA	NA	NA	RF +	NA	D-penicillamine and PDN	Histoplasma capsulatum tenosynovitis
Fujita et al. (2019) [25]	Female	67	lcSSc	lcSSc	Pulmonary, vascular and cutaneous	NA	3 years	RF and ACPA +	Erosive arthritis	MTX, TCZ (secondary failure), ADA (primary failure), baricitinib + MTX	NA
Gendi et al. (1992) [26]	Female	52	lcSSc	lcSSc	Cutaneous, vascular	Not reported	2 years	RF +	Erosive arthritis	D-penicillamine, gold and diclofenac	SLE

Supplementary Table. Cont.

Author(s), [year]	Sex	Age	1 <sup>st</sup> diagnosis	SSc diagnosis	SSc involvement	SSc autoantibodies	Time between diagnosis	RF/ACPA	RA involvement	Treatment	Other associations
Hamaguchi et al. (2007) [27]	Female	30	RA	lcSSc	Cutaneous, vascular	ACA	14 years	RF +	Polyarthritis	NSAID, PDN, MTX + IFX -> MPD -> MTX and PDN	NA
Horiki et al. (1996) [28]	Female	58	Same time	dcSSc	Vascular, cutaneous, pulmonary and gastrointestinal	Anti-Scl-70 +	NA	RF +	Erosive polyarthritis	Not reported	Siögren's syndrome, amyloidosis
	Female	59	RA	dcSSc	Vascular, cutaneous, pulmonary and gastrointestinal	Anti-Scl-70 +	1 year	RF +	Polyarthritis	Not reported	Polymyositis
	Male	50	Same time	dcSSc	Vascular, cutaneous, pulmonary	Anti-Scl-70 +	NA	RF +	Polyarthritis	Sulfasalazine	-
	Female	56	dcSSc	dcSSc	Vascular, cutaneous, pulmonary, gastrointestinal	Anti-Scl-70 +	3 years	RF +	Polyarthritis	NA	-
	Female	41	SSc	dcSSc	Vascular, cutaneous, gastrointestinal, pulmonary	Anti-Scl-70 +	14 years	RF +	Polyarthritis	NA	-
Ingegnoli et al. (2007) [29]	Female	49	RA	lcSSc	Vascular, gastrointestinal, cutaneous, pulmonary	Not reported	4 years	RF +	Polyarthritis	Gold salts -> three pulses of f.v.MPD -> CYC -> AZA + NSAIDs	Bilateral vocal fold immobility
Kono et al. (2018) [30]	Female	25	RA	lcSSc	Cutaneous, pulmonary	Anti-Scl-70 +	2 years	RF and ACPA +	Polyarthritis	MTX + ETA -> PDN + CYC + TAC -> TCZ + PDN+TAC	NA
Lee et al. (2018) [31]	Female	48	lcSSc	lcSSc	Cutaneous, vascular	Anti-Scl-70 +	1 year	RF and ACPA +	Polyarthritis	MTX + HCO + SSZ + steroids -> LFN + MTX + PDN	NA
Maekawa et al. (1992) [32]	Female	49	RA	dcSSc	Cutaneous	Anti-Scl-70 and ACA+	3 years	RF +	NA	D-penicillamine	Primary biliary cirrhosis
Rozenbaum et Rosner (1993) [33]	Female	41	RA	lcSSc	Vascular, cutaneous, pulmonary	ACA, anti- Scl-70 and anti- RNP negative	Few months	RF +	Erosive polyarthritis	D-penicillamine, colchicine, PDN, antimalarials, and NSAIDs -> MTX + pulse steroids -> SSZ -> AZA + MTX + penicillamine	NA
Saito et al. (2014) [34]	Female	57	NA	lcSSc	Vascular, cutaneous	ACA +	NA	RF and ACPA +	Polyarthritis	Bucillamine -> MTX + IFX -> Mizoribine, TAC and SSZ -> TCZ + MTX	Primary biliary cirrhosis
Shimomura et al. (1989) [35]	Male	37	SSc	lcSSc	Vascular and cutaneous	Anti-Scl-70 +	NA	RF +	Destructive polyarthritis	NA	NA
Szegedi et al. (2004) [36]	Female	62	dcSSc	dcSSc	Cutaneous and vascular	Not reported	2 years	RF +	Erosive polyarthritis	NSAID -> D-penicillamine -> MTX	Siögren's syndrome

Supplementary Table. Cont.

Author(s), [year]	Sex	Age	1 <sup>st</sup> diagnosis	SSc diagnosis	SSc involvement	SSc autoantibodies	Time between diagnosis	RF/ACPA	RA involvement	Treatment	Other associations
Szűcs et al. (2007) [37]	Female	33	dcSSc	dcSSc	Cutaneous, vascular, renal, pulmonary, cardiac and gastrointestinal	–	3 years	RF and ACPA +	Erosive polyarthritis	NA	NA
	Male	55	lcSSc	lcSSc	Cutaneous, vascular and cardiac	–	1 year	RF and ACPA +	Erosive polyarthritis	NA	NA
	Male	41	dcSSc	dcSSc	Cutaneous, vascular, pulmonary, cardiac and gastrointestinal	Anti-Scl-70 +	12 years	RF and ACPA +	Erosive polyarthritis	NA	NA
	Female	38	lcSSc	lcSSc	Vascular, pulmonary, cardiac and gastrointestinal	–	16 years	RF and ACPA +	Erosive polyarthritis	NA	NA
	Female	24	lcSSc	lcSSc	Cutaneous, vascular, cardiac	–	9 years	ACPA +	Erosive polyarthritis	NA	NA
	Male	37	lcSSc	lcSSc	Cutaneous, vascular, pulmonary, cardiac and gastrointestinal	NA	7 years	RF and ACPA +	Erosive polyarthritis	NA	NA
	Female	56	lcSSc	lcSSc	Cutaneous, vascular, pulmonary and gastrointestinal	NA	6 years	NA	Erosive polyarthritis	NA	NA
	Female	24	RA	lcSSc	Cutaneous, vascular, pulmonary, renal, cardiac and gastrointestinal	NA	18 years	RF and ACPA +	Erosive polyarthritis	NA	NA
	Female	54	lcSSc	lcSSc	Cutaneous, vascular, pulmonary, renal, cardiac and gastrointestinal	NA	8 years	RF and ACPA +	Erosive polyarthritis	NA	NA
	Female	58	dcSSc	dcSSc	Cutaneous, vascular	NA	1 year	RF and ACPA +	Erosive polyarthritis	NA	NA
Female	19	lcSSc	lcSSc	Cutaneous, vascular, pulmonary and gastrointestinal	Anti-Scl-70 and ACA +	7 years	RF and ACPA +	Erosive polyarthritis	NA	NA	
Female	58	dcSSc	dcSSc	Cutaneous, vascular, pulmonary, renal, cardiac and gastrointestinal	Anti-Scl-70 +	1 year	RF and ACPA +	NA	NA	NA	
Male	52	lcSSc	lcSSc	Cutaneous, vascular, pulmonary, cardiac	NA	6 years	RF and ACPA +	Erosive polyarthritis	NA	NA	
Male	29	lcSSc	lcSSc	Cutaneous, vascular	NA	2 years	ACPA +	Erosive polyarthritis	NA	NA	
Female	39	lcSSc	lcSSc	Cutaneous, vascular, pulmonary	NA	1 year	NA	NA	NA	NA	
Male	43	RA	lcSSc	Cutaneous, vascular, pulmonary and gastrointestinal	NA	5 years	RF and ACPA +	Erosive polyarthritis	NA	NA	
Female	42	lcSSc	lcSSc	Cutaneous, vascular, pulmonary	NA	9 years	RF and ACPA +	NA	NA	NA	
Female	20	dcSSc	dcSSc	Cutaneous, vascular, pulmonary and gastrointestinal	Anti-Scl-70 +	15 years	RF and ACPA +	Erosive polyarthritis	NA	NA	
Female	30	lcSSc	lcSSc	Cutaneous, vascular, pulmonary	Anti-Scl-70 +	12 years	ACPA +	Erosive polyarthritis	NA	NA	
Female	47	lcSSc	lcSSc	Cutaneous, vascular, pulmonary, cardiac and gastrointestinal	ACA	8 years	RF and ACPA +	Erosive polyarthritis	NA	NA	
Female	37	lcSSc	lcSSc	Cutaneous, vascular, pulmonary	NA	8 years	NA	NA	NA	NA	
Female	50	RA	lcSSc	Cutaneous, vascular, renal	NA	4 years	RF +	Erosive polyarthritis	NA	NA	

Supplementary Table. Cont.

Author(s), [year]	Sex	Age	1 <sup>st</sup> diagnosis	Ssc diagnosis	Ssc involvement	Ssc autoantibodies	Time between diagnosis	RF/ACPA	RA involvement	Treatment	Other associations
Wada et al. (2011) [38]	Female	67	Same time	lcSSc	Vascular, cutaneous, pulmonary	Anti-Scl-70 +	NA	RF +	Erosive polyarthritis	Steroids + bucillamine -> salazosulfapyridine, mizoribine, and steroids -> ETA	Cardiac AA amyloidosis
Wakabayashi et al. (2019) [39]	Female	64	RA	lcSSc	Cutaneous, pulmonary	ACA	12 years	RF and ACPA +	Polyarthritis	MTX + steroids + salazosulfapyridine -> TCZ	NA
	Female	27	RA	dcSSc	Cutaneous, pulmonary	Anti-Scl-70 +	32 years	RF and ACPA +	Polyarthritis	Cyclosporine, SSZ, steroids -> TCZ + cyclosporine + steroids	NA
Yamakawa et al. (2017) [6]	Female	61	dcSSc	dcSSc	Cutaneous, vascular, pulmonary	Anti-Scl-70 +	5 years	RF and ACPA +	Polyarthritis	Bucillamine and low-dose prednisolone	Sjögren's syndrome
Zhu et al. (2018) [40]	Female	34	NA	dcSSc	Cutaneous, vascular, pulmonary	Anti-Scl-70 +	NA	RF and ACPA +	Polyarthritis	MPD IV -> MTX + PDN -> CYC + PDN	Sweet's syndrome
Zimmermann et al. (1998) [41]	Female	22	RA	lcSSc	Vascular, gastrointestinal, cutaneous	ACA, anti-CENP-A and anti-CENP-B +	32 years	RF +	NA	NSAIDs, steroids, chloroquine and MTX	NA
	Female	19	RA	lcSSc	Cutaneous, vascular	ACA, anti-CENP-A and anti-CENP-B +	52 years	RF negative	NA	NSAIDs, steroids, gold salts, chloroquine and MTX	NA
	Female	25	RA	lcSSc	Cutaneous, vascular	ACA, anti-CENP-A and anti-CENP-B +	55 years	RF +	NA	NSAIDs, steroids, gold salts, SSZ and MTX	Hypothyroidism

ABA – abatacept, ACA – anti-centromere antibody, ACPA – anti-citrullinated protein antibody, ADA – adalimumab, ANCA – antineutrophil cytoplasmic antibodies, anti-Scl-70 – anti-topoisomerase I, AZA – azathioprine, CENP-A, CENP-B, CYC – cyclophosphamide, dcSSc – diffuse cutaneous systemic sclerosis, ETA – etanercept, HCO – hydroxychloroquine, IFX – infliximab, IV – intravenous, lcSSc – limited cutaneous systemic sclerosis, MPD – prednisone, MTX – methotrexate, NA – not applicable, NSAIDs – non-steroidal anti-inflammatory drugs, PDN – prednisolone, RA – rheumatoid arthritis, RF – rheumatoid factor, SSc – systemic sclerosis, SSZ – sulfasalazine, TCZ – tocilizumab.