

Supplementary Table 1: Definition of rheumatic disease conditions contained within the Western Australia Rheumatic Disease Epidemiological Registry.

Descriptor	ICD-9 codes	ICD-10 codes
Pyogenic arthritis	711.00-711.09	M00.0-M00.9
Direct infections of joint in infectious disease	711.00-711.09	M01.0-M01.8
Reactive arthropathies	711.1-711.99, 713.0-713.8	M02.0-M02.9
Post-infective and reactive arthropathies	711.1-711.99, 713.0-713.8	M03.0-M03.6
Seropositive rheumatoid arthritis	714.0-714.9	M05.0-M05.9
Other rheumatoid arthritis	714.0-714.9	M06.0-M06.9
Psoriatic and enteropathic arthropathies	696, 713.1, 713.3, 716.1-716.8	M07.0-M07.6
Juvenile arthritis	714.31-714.33	M08.0-M08.9
Juvenile arthritis in diseases classified elsewhere	714.31-714.33	M09.0-M09.8
Gout	274.0-274.9	M10.0-M10.9
Other crystal arthropathies	712.1-712.9	M11.0-M11.9
Other arthritis	716.0-716.8	M13.0-M13.9
Arthropathies in other diseases classified elsewhere	713.0, 713.1, and 713.8	M14.0, M14.1 & M14.8
Polyarthrosis	715.09	M15.0-M15.9
Coxarthrosis arthrosis of hip	715.15	M16.0-M16.9
Gonarthrosis arthrosis of knee	715.16	M17.0-M17.9
Arthrosis of first carpometacarpal joint	715.14	M18.0-M18.9
Other arthrosis	715.17, 715.90-715.99	M19.0-M19.9
Polyarteritis nodosa and related conditions	446.0-446.7, 447.5-447.6, 709.1, 725	M30.0-M30.8
Other necrotizing vasculopathies	136.1, 287, 446.0-446.7, 447.6, 709.1	M31.0-M31.9
Systemic lupus erythematosus	710	M32.0-M32.9
Dermato-polymyositis	710.3-710.4	M33.0-M33.9
Systemic sclerosis	710.1	M34.0-M34.9
Other systemic involvement of connective tissue	443, 710.2, 710.9	M35.0-M35.9
Systemic disorders of connective tissue (defined elsewhere)	710.9	M36.0-M36.9
Ankylosing spondylitis	720	M45
Other inflammatory spondylopathies	720.1-720.9	M46.0-M46.9
Spondylosis	721.0-721.7	M47.0-M47.9
Other spondylopathies	721.0-721.7	M48.0-M48.9
Spondylopathies in diseases classified elsewhere	720.81	M49.8

Supplementary Table 2: ICD Coding.

	ICD-9/ICD-9-CM	ICD-10-AM/ACHI
Exposure codes		
- Systemic lupus erythematosus	710.1	M32
Comorbidity codes		
- Charlson Comorbidity Index	Quan et al ¹⁹	Quan et al ¹⁹
- Osteoporosis with/without fracture	733.0, 733.1	M80, M81, M82
- Nephritis, proteinuria and haematuria)	599.7, 580-587, 791.0	N00-N08.5, N16, N19, N26, R31, R80
- Rheumatoid arthritis	714	M05-M06
- Polymyalgia rheumatica	725	M31.5
- Sicca syndrome	710.2	M35.0
- Raynaud's phenomena	443	I73.0
- Vasculidities	136.1, 287, 446.0-446.7, 447.5-447.6, 709.1, 725	M30.0 - M30.8
- Myositis (excluding infective)	710.3-710.4	M33.0-M33.9
- Gout	274	M10
- Scleroderma	710.1	M34
- Other connective tissue diseases	359.6, 443, 710.9, 729.1	M35.1-M36.4, G72.4, M60.8, M60.9
Survival mediator codes		
- Smoking	305.1, V15.82	F17, Z72.0, Z86.43
- Obesity	278.0, 278.1	E65-E68
- Harmful alcohol consumption	291, 303, 305.0-305.03, 980.0, 980.1	F10, X45, Y15
- Hypertension	401-405	I10-I13, I15
- Hypothyroidism	244	E01, E02, E03, E89
- Dyslipidaemia	272	E78
- Diabetes	250	E10-E14
- Antiphospholipid syndrome	298.8	D68.9
- Thromboembolic disease		
- IV/IM corticosteroids		
Multiple causes of death	AIHW ¹⁸	AIHW ¹⁸
ICD: International Classifications of Diseases		
CM: Clinical Modification		
AM: Australian Modification		
ACHI: Australian Classification of Health Interventions		

Supplementary Table 3: Association between prevalent rheumatic, thromboembolic and nephritic disease with 20-year mortality within patients with systemic lupus erythematosus.

	SLE patients only		Cox Proportional Hazards	
	Died	Person-years	aHR (95%CI)	p-value
Other prevalent immune-mediated rheumatic diseases	148	4,273	1.01 (0.82, 1.25)	0.904
Rheumatoid arthritis / "rhusus"	61	1,534	0.98 (0.74, 1.29)	0.865
Thromboembolic events	95	2,393	1.08 (0.86, 1.37)	0.550
Antiphospholipid autoantibodies ever	11	972	1.08 (0.85, 1.36)	0.543
Nephritis, proteinuria and haematuria	100	3,966	1.43 (1.13, 1.80) *	0.004

aHR: Adjusted hazard ratio. * Adjusted for age, sex, Aboriginality, and CCI categories. ** Age- and sex-adjusted only.

Supplementary Table 4: Standardised mortality rates between SLE patients and the general population of WA in 2011.

	SMR	P-value
Overall SMR	2.29 (2.12, 2.47)	<0.001
5-year rolling SMR	5.14 (4.56, 5.80)	<0.001
Time since hospitalisation	SMR	P-value
1-year	10.23 (8.49, 12.32)	<0.001
>1 - 5 years	3.78 (3.23, 4.43)	<0.001
>5 - 10 years	2.18 (1.80, 2.63)	<0.001
>10 - 15 years	2.20 (1.82, 2.66)	<0.001
>15 years	1.75 (1.38, 2.21)	<0.001