

Clinical and economic burden of systemic lupus erythematosus in the years preceding end-stage kidney disease diagnosis: A retrospective observational study

Shirley P Huang^{1*}, Amy Guisinger^{1*}, Carlyne Averell^{1*}, Christopher F Bell¹, Bernie Rubin²

¹GSK, US Value, Evidence and Outcomes, Durham, NC, USA; ²GSK, US Medical Affairs, Immuno-inflammation, Durham, NC, USA

*At the time of the study

Corresponding author:

Name: Christopher F Bell

Address: GSK, US Value, Evidence and Outcomes, 410 Blackwell Street, Durham, NC 27701, USA

Tel: +1 919 483 8058

Email: christopher.f.bell@gsk.com

ORCID ID: 0000-0001-6413-2537

SUPPLEMENTARY MATERIALS

Diagnosis codes for end-stage kidney disease (ESKD) and systemic lupus erythematosus (SLE)

The International Classification of Diseases (ICD) clinical modification (CM) codes used to identify ESKD were ICD-9-CM, 404.02, 404.03, 404.12, 404.13, 404.92, 404.93, 585.5, 585.6; and ICD-10-CM, I12.0, I13.11, I13.2, N18.5, N18.6.

The ICD-CM codes used to identify SLE were ICD-9-CM, 710.0x; and ICD-10-CM, M32 (excluding M32.0: drug-induced SLE), M32.1x, M32.8, M32.9.

Supplementary Tables

Supplementary Table 1. Patient attrition table

	Number of patients
Presence of ESKD between 1 March, 2012 to 31 December, 2019	234,172
No Presence of ESKD pre-index*	187,863
Presence of SLE pre-index	2241
At least 12 months continuous enrolment and pharmacy benefits preceding index	1377
No Medicare Advantage or Medicare Supplemental Coverage during 12 months preceding index	1377
At least 18 years of age at index	1356

*The index date was the first observed medical encounter with an ESKD ICD-9-CM and ICD-10-CM diagnosis code.

ESKD, end-stage kidney disease; ICD-9/10-CM, International Classification of Diseases-9/10-Clinical Modification; SLE, systemic lupus erythematosus

Supplementary Table 2. Use of SLE-related medications in the 12 months and 5 years pre-ESKD diagnosis

Medications, n (%)	12 months pre-ESKD diagnosis (N=1356)	Patients with 5 years of continuous enrolment (N=616)				
		Year 1 pre-ESKD	Year 2 pre-ESKD	Year 3 pre-ESKD	Year 4 pre-ESKD	Year 5 pre-ESKD
Antimalarials	478 (35.3)	209 (33.9)	215 (34.9)	210 (34.1)	193 (31.3)	190 (30.8)
Oral corticosteroids	786 (58.0)	360 (58.4)	314 (51.0)	296 (48.1)	297 (48.2)	279 (45.3)
Immunosuppressants	637 (47.0)	282 (45.8)	255 (41.4)	252 (40.9)	234 (38.0)	210 (34.1)
Methotrexate	43 (3.2)	20 (3.2)	21 (3.4)	25 (4.1)	21 (3.4)	24 (3.9)
Mycophenolate	419 (30.9)	179 (29.1)	164 (26.6)	165 (26.8)	149 (24.2)	131 (21.3)
Cyclophosphamide	68 (5.0)	32 (5.2)	14 (2.3)	5 (0.8)	6 (1.0)	7 (1.1)
Azathioprine	120 (8.8)	50 (8.1)	48 (7.8)	55 (8.9)	52 (8.4)	46 (7.5)
Cyclosporine	63 (4.6)	25 (4.1)	22 (3.6)	21 (3.4)	23 (3.7)	21 (3.4)
Tacrolimus	147 (10.8)	56 (9.1)	53 (8.6)	48 (7.8)	42 (6.8)	36 (5.8)
Biologics	86 (6.3)	44 (7.1)	39 (6.3)	28 (4.5)	22 (3.6)	10 (1.6)
Rituximab	51 (3.8)	25 (4.1)	24 (3.9)	13 (2.1)	12 (1.9)	7 (1.1)
Belimumab	36 (2.7)	19 (3.1)	18 (2.9)	15 (2.4)	10 (1.6)	3 (0.5)

ESKD, end-stage kidney disease; SLE, systemic lupus erythematosus