

Online Supplementary Material

Table S.1. Exclusion path for case patients with 365-day follow-up by comorbidity

Comorbidity	Total	Negative Cost (1)	Inadequate Coverage (2)	No Controls (3)	Main Sample (4)	Alt Sample (5)
Infertility, subfertility	8,277	1	4,771	63	3,442	1,932
Ovarian cyst	22,028	8	12,133	321	9,566	4,030
Uterine fibroids	14,693	1	7,798	149	6,745	2,491
Pelvic inflammatory disorder	1,740	0	981	38	721	144
Pregnancy complications	11,008	2	5,474	148	5,384	3,371
Interstitial cystitis	2,400	0	1,332	41	1,027	563
Cystitis, urinary tract infection	32,222	4	16,647	745	14,826	6,246
Irritable bowel syndrome	9,290	0	4,595	218	4,477	1,799
Constipation, dyschezia	13,875	1	6,963	381	6,530	2,443
Eczema	2,870	0	1,239	37	1,594	319
Depression, anxiety	25,613	4	13,371	556	11,682	6,182
Mood disorders	434	0	204	18	212	70
Stress	878	0	431	18	429	108
Fatigue, chronic fatigue syndrome	33,447	6	16,401	863	16,177	7,523
Fibromyalgia	15,899	2	7,523	363	8,011	3,961
Headache, migraine headache	28,659	2	14,595	627	13,435	6,534
Ovarian cancer	576	0	293	19	264	100
Endometrial cancer	278	0	150	7	121	43
Breast cancer	545	0	236	15	294	142
Hypothyroidism	12,921	3	6,307	233	6,378	3,269
SLE, RA, Sjogren's, MS	1,198	1	562	40	595	247
Sprue	833	0	411	25	397	142
<b>Total</b>	<b>239,684</b>	<b>35</b>	<b>122,417</b>	<b>4,925</b>	<b>112,307</b>	<b>51,659</b>

Notes:

Abbreviations: SLE – systemic lupus erythematosus; RA – rheumatoid arthritis; MS – multiple sclerosis

Patients with multiple comorbidities appear in multiple rows

(1) Negative Cost: case patient had pre-index, index or post-index total cost < \$0

(2) Inadequate coverage: case patient does not have ≥ 365 days of continuous enrollment before and after index date

(3) No controls: case patient failed to match to any eligible control patients. Match factors were Census division, insurance product, and age

(4) Main sample: endometriosis and comorbidity presence each identified by ≥ 1 claim with a diagnosis

(5) Alt sample: endometriosis and comorbidity presence each identified by ≥ 2 claims with a diagnosis

Figure S.1. Comorbidity patient and control patient matching schematic

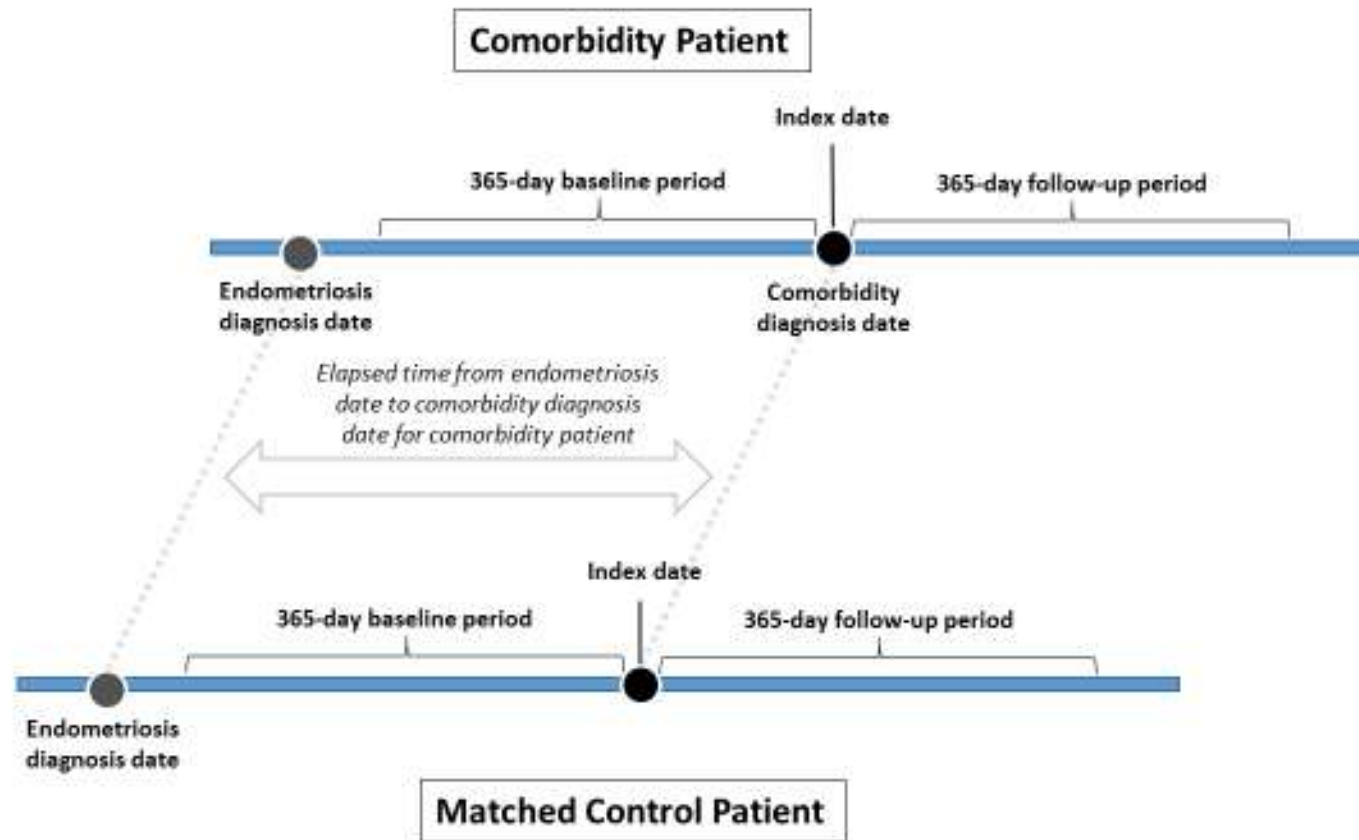


Table S.2. Difference-in-differences in 365-day total spending for comorbidity patients vs. controls

Comorbidity	N	(Before - After) Spending Difference		Difference in Differences (\$)	P-value	95% CI
		Control Patients (\$)	Comorbidity Patients (\$)			
Infertility, subfertility	6,884	-1,111	4,630	5,741	<0.001	[4,985; 6,497]
Ovarian cyst	19,132	-1,267	3,866	5,133	<0.001	[4,514; 5,751]
Uterine fibroids	13,490	60	4,007	3,948	<0.001	[3,227; 4,668]
Pelvic inflammatory disorder	1,442	-4,687	671	5,358	<0.001	[3,280; 7,435]
Pregnancy complications	10,768	-2,115	7,728	9,843	<0.001	[9,162; 10,523]
Interstitial cystitis	2,054	-5,490	1,445	6,935	<0.001	[5,156; 8,715]
Cystitis, urinary tract infection	29,652	-5,295	-1,312	3,983	<0.001	[3,586; 4,379]
Irritable bowel syndrome	8,954	-4,162	-278	3,884	<0.001	[3,132; 4,636]
Constipation, dyschezia	13,060	-5,557	538	6,094	<0.001	[5,365; 6,824]
Eczema	3,188	-1,669	-1,626	43	0.94	[-1,122; 1,207]
Depression, anxiety	23,364	-3,650	145	3,795	<0.001	[3,320; 4,269]
Mood disorders	424	-4,739	636	5,376	<0.001	[2,471; 8,280]
Stress	858	-3,700	1,235	4,935	<0.001	[2,224; 7,646]
Fatigue, chronic fatigue syndrome	32,354	-3,754	-385	3,369	<0.001	[2,936; 3,802]
Fibromyalgia	16,022	-4,125	271	4,396	<0.001	[3,826; 4,966]
Headache, migraine headache	26,870	-3,508	373	3,881	<0.001	[3,467; 4,295]
Ovarian cancer	528	-7,255	19,881	27,136	<0.001	[18,477; 35,795]
Endometrial cancer	242	-10,222	4,004	14,227	<0.001	[7,311; 21,142]
Breast cancer	588	-6,756	54,453	61,210	<0.001	[53,763; 68,656]
Hypothyroidism	12,756	-2,832	-168	2,663	<0.001	[2,040; 3,287]
SLE, RA, Sjogren's, MS	1,190	-4,898	5,073	9,970	<0.001	[7,190; 12,751]
Sprue	794	-4,052	-112	3,940	0.003	[1,326; 6,553]

Notes:

Total spending amounts are reported in 2015 USD

Abbreviations: SLE – systemic lupus erythematosus; RA – rheumatoid arthritis; MS – multiple sclerosis; CI – confidence interval

Table S.3. 365-day total spending before and after index date for comorbidity patients (alternative sample)

Comorbidity	N	Mean Spending		(After - Before)		95% CI
		365 Days Before Index Date (\$)	Mean Spending 365 Days After Index Date (\$)	Spending Difference (\$)	P-value	
Infertility, subfertility	1,932	12,009	17,398	5,389	<0.001	[4,484; 6,294]
Ovarian cyst	4,030	12,036	18,482	6,446	<0.001	[5,730; 7,162]
Uterine fibroids	2,491	9,317	17,804	8,487	<0.001	[7,715; 9,258]
Pelvic inflammatory disorder	144	18,848	23,113	4,265	0.07	[-364; 8,894]
Pregnancy complications	3,371	14,289	23,378	9,088	<0.001	[8,246; 9,931]
Interstitial cystitis	563	19,668	21,937	2,269	0.09	[-313; 4,852]
Cystitis, urinary tract infection	6,246	15,490	15,912	422	0.21	[-243; 1,087]
Irritable bowel syndrome	1,799	17,186	18,243	1,057	0.06	[-38; 2,151]
Constipation, dyschezia	2,443	17,818	20,932	3,114	<0.001	[1,969; 4,260]
Eczema	319	13,421	13,311	-110	0.91	[-2,049; 1,829]
Depression, anxiety	6,182	14,237	15,220	983	0.003	[336; 1,630]
Mood disorders	70	19,324	19,938	614	0.80	[-4,071; 5,298]
Stress	108	14,129	13,270	-859	0.57	[-3,814; 2,096]
Fatigue, chronic fatigue syndrome	7,523	14,007	13,541	-466	0.09	[-1,002; 70]
Fibromyalgia	3,961	16,024	16,867	843	0.026	[103; 1,582]
Headache, migraine headache	6,534	13,605	15,032	1,427	<0.001	[861; 1,993]
Ovarian cancer	100	19,664	55,072	35,407	<0.001	[22,454; 48,360]
Endometrial cancer	43	21,289	38,281	16,993	0.024	[2,233; 31,753]
Breast cancer	142	17,731	83,486	65,754	<0.001	[53,621; 77,888]
Hypothyroidism	3,269	14,620	14,707	86	0.81	[-617; 790]
SLE, RA, Sjogren's, MS	247	19,198	28,869	9,671	<0.001	[5,734; 13,608]
Sprue	142	16,239	16,912	673	0.73	[-3,107; 4,453]

Notes:

Selection criteria require  $\geq 2$  claims for a comorbidity

Total spending amounts are reported in 2015 USD

Abbreviations: SLE – systemic lupus erythematosus; RA – rheumatoid arthritis; MS – multiple sclerosis CI – confidence interval

Index date defined as date of earliest claim with comorbidity diagnosis code

Table S.4. Difference-in-differences in 365-day total spending for comorbidity patients vs. controls (alternative sample)

Comorbidity	N	(Before - After) Spending Difference		Difference in Differences (\$)	P-value	95% CI
		Control Patients (\$)	Comorbidity Patients (\$)			
Infertility, subfertility	3,864	-1,484	5,389	6,872	<0.001	[5,888; 7,857]
Ovarian cyst	8,060	-2,302	6,446	8,748	<0.001	[7,963; 9,533]
Uterine fibroids	4,982	167	8,487	8,319	<0.001	[7,477; 9,162]
Pelvic inflammatory disorder	288	-7,156	4,265	11,421	<0.001	[6,365; 16,477]
Pregnancy complications	6,742	-2,732	9,088	11,820	<0.001	[10,865; 12,775]
Interstitial cystitis	1,126	-6,850	2,269	9,119	<0.001	[6,424; 11,815]
Cystitis, urinary tract infection	12,492	-6,090	422	6,512	<0.001	[5,791; 7,233]
Irritable bowel syndrome	3,598	-4,565	1,057	5,622	<0.001	[4,249; 6,995]
Constipation, dyschezia	4,886	-6,528	3,114	9,642	<0.001	[8,331; 10,953]
Eczema	638	-2,953	-110	2,843	0.005	[866; 4,820]
Depression, anxiety	12,364	-4,417	983	5,400	<0.001	[4,697; 6,104]
Mood disorders	140	-4,401	614	5,015	0.11	[-1,173; 11,202]
Stress	216	-3,805	-859	2,946	0.08	[-371; 6,262]
Fatigue, chronic fatigue syndrome	15,046	-4,928	-466	4,462	<0.001	[3,858; 5,066]
Fibromyalgia	7,922	-5,134	843	5,976	<0.001	[5,114; 6,838]
Headache, migraine headache	13,068	-4,333	1,427	5,760	<0.001	[5,122; 6,399]
Ovarian cancer	200	-7,775	35,407	43,182	<0.001	[29,615; 56,750]
Endometrial cancer	86	-5,854	16,993	22,847	0.004	[7,160; 38,533]
Breast cancer	284	-7,339	65,754	73,093	<0.001	[61,150; 85,036]
Hypothyroidism	6,538	-3,465	86	3,551	<0.001	[2,640; 4,462]
SLE, RA, Sjogren's, MS	494	-5,588	9,671	15,259	<0.001	[10,906; 19,613]
Sprue	284	-6,190	673	6,863	0.005	[2,117; 11,609]

Notes:

Selection criteria require  $\geq 2$  claims for a comorbidity

Total spending amounts are reported in 2015 USD

Abbreviations: SLE – systemic lupus erythematosus; RA – rheumatoid arthritis; MS – multiple sclerosis; CI – confidence interval