

Supplementary material

Zagórowicz E, Walkiewicz D, Kucha P, et al. Nationwide data on epidemiology of inflammatory bowel disease in Poland between 2009 and 2020. *Pol Arch Intern Med.* 2022; 132: 16194. doi:10.20452/pamw.16194

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Table S1. Active ingredients and trade names of drugs used in verifying IBD patients^a.

Active ingredient	Trade names
Sulfasalazine	Salazopyrin EN
	Sulfasalazin
Mesalazine	Asamax
	Crohnax
	Pentasa
	Salofalk
Azathioprine	Azathioprine
	Imuran
Mercaptopurine	Mercaptopurinum
Budesonide	Cortiment MMX
	Entocort

Methylprednisolone	Metypred
Prednisone	Encorton

^aBiological drugs and new molecules are not prescription drugs in Poland: they are reimbursed through hospitals' pharmacies and so are not included in the analysis. Metotrexate was not fully reimbursed in IBD in the years covered by the analysis, and the drug was not included.

Table S2. ICD-9 codes and names for intestinal surgeries used in verifying IBD patients.

ICD-9 Code	Description
45.61	Multiple segmental resection of small intestine
45.62	Other partial resection of small intestine
45.71	Open and other multiple segmental resection of large intestine
45.72	Open and other cecectomy
45.73	Open and other right hemicolectomy
45.75	Open and other left hemicolectomy
45.76	Open and other sigmoidectomy
45.79	Other and unspecified partial excision of large intestine
45.91	Small-to-small intestinal anastomosis
45.93	Other small-to-large intestinal anastomosis
45.92	Anastomosis of small intestine to rectal stump
46.01	Exteriorization of small intestine
46.02	Resection of exteriorized segment of small intestine
46.03	Exteriorization of large intestine
46.11	Temporary colostomy
46.13	Permanent colostomy
46.21	Temporary ileostomy
46.22	Continent ileostomy
46.23	Other permanent ileostomy
46.52	Closure of stoma of large intestine
46.93	Revision of anastomosis of small intestine
46.94	Revision of anastomosis of large intestine

48.82	Excision of perirectal tissue
48.93	Repair of perirectal fistula

Table S3. Prevalence of Crohn's disease in Poland in the years 2009-2020, by age groups

Year	Age group	Cases	Population	Rate (per 100,000 population)
2009	<20	810	8,311,840	9.7
2010	<20	1,008	8,280,106	12.2
2011	<20	1,145	8,133,701	14.1
2012	<20	1,287	8,015,276	16.1
2013	<20	1,413	7,895,735	17.9
2014	<20	1,568	7,802,648	20.1
2015	<20	1,670	7,732,280	21.6
2016	<20	1,779	7,693,130	23.1
2017	<20	1,833	7,689,955	23.8
2018	<20	1,860	7,690,235	24.2
2019	<20	1,874	7,690,007	24.4
2020	<20	1,730	7,672,644	22.5
2009	<10	121	3,742,825	3.2
2010	<10	134	3,870,098	3.5
2011	<10	136	3,891,880	3.5
2012	<10	164	3,923,846	4.2
2013	<10	184	3,940,567	4.7
2014	<10	187	3,957,510	4.7
2015	<10	189	3,957,225	4.8
2016	<10	193	3,959,959	4.9

2017	<10	179	3,961,761	4.5
2018	<10	171	3,922,424	4.4
2019	<10	166	3,868,610	4.3
2020	<10	138	3,812,706	3.6
2009	10-19	689	4,569,015	15.1
2010	10-19	874	4,410,008	19.8
2011	10-19	1,009	4,241,821	23.8
2012	10-19	1,123	4,091,430	27.4
2013	10-19	1,229	3,955,168	31.1
2014	10-19	1,381	3,845,138	35.9
2015	10-19	1,481	3,775,055	39.2
2016	10-19	1,586	3,733,171	42.5
2017	10-19	1,654	3,728,194	44.4
2018	10-19	1,689	3,767,811	44.8
2019	10-19	1,708	3,821,397	44.7
2020	10-19	1,592	3,859,938	41.2
2009	20-29	1,233	6,234,876	19.8
2010	20-29	1,796	6,117,121	29.4
2011	20-29	2,287	6,014,975	38.0
2012	20-29	2,625	5,854,195	44.8
2013	20-29	3,024	5,651,760	53.5
2014	20-29	3,373	5,451,377	61.9
2015	20-29	3,644	5,243,746	69.5
2016	20-29	3,915	5,062,349	77.3
2017	20-29	4,152	4,890,144	84.9
2018	20-29	4,355	4,712,695	92.4
2019	20-29	4,450	4,541,741	98.0
2020	20-29	4,422	4,372,406	101.1
2009	30-39	1,067	5,673,589	18.8
2010	30-39	1,546	5,895,155	26.2

2011	30-39	2,013	6,005,590	33.5
2012	30-39	2,521	6,123,509	41.2
2013	30-39	3,040	6,239,471	48.7
2014	30-39	3,515	6,314,471	55.7
2015	30-39	3,989	6,348,320	62.8
2016	30-39	4,377	6,330,563	69.1
2017	30-39	4,740	6,290,061	75.4
2018	30-39	5,153	6,234,802	82.6
2019	30-39	5,463	6,145,086	88.9
2020	30-39	5,618	6,045,893	92.9
2009	40-49	669	4,862,319	13.8
2010	40-49	962	4,847,195	19.8
2011	40-49	1,264	4,822,159	26.2
2012	40-49	1,526	4,838,436	31.5
2013	40-49	1,802	4,879,816	36.9
2014	40-49	2,106	4,956,005	42.5
2015	40-49	2,455	5,064,587	48.5
2016	40-49	2,827	5,202,444	54.3
2017	40-49	3,235	5,341,530	60.6
2018	40-49	3,628	5,481,594	66.2
2019	40-49	4,065	5,632,338	72.2
2020	40-49	4,314	5,768,371	74.8
2009	50-59	709	5,801,976	12.2
2010	50-59	1,010	5,847,720	17.3
2011	50-59	1,218	5,765,460	21.1
2012	50-59	1,457	5,656,651	25.8
2013	50-59	1,659	5,536,118	30.0
2014	50-59	1,873	5,406,320	34.6
2015	50-59	2,021	5,245,352	38.5
2016	50-59	2,152	5,089,290	42.3

2017	50-59	2,317	4,928,276	47.0
2018	50-59	2,443	4,783,429	51.1
2019	50-59	2,565	4,669,659	54.9
2020	50-59	2,682	4,605,466	58.2
2009	60-69	307	3,500,382	8.8
2010	60-69	528	3,711,989	14.2
2011	60-69	759	3,931,289	19.3
2012	60-69	1,062	4,171,206	25.5
2013	60-69	1,324	4,409,809	30.0
2014	60-69	1,615	4,642,821	34.8
2015	60-69	1,944	4,888,294	39.8
2016	60-69	2,185	5,024,702	43.5
2017	60-69	2,406	5,127,315	46.9
2018	60-69	2,629	5,188,969	50.7
2019	60-69	2,768	5,219,163	53.0
2020	60-69	2,786	5,185,843	53.7
2009	70+	221	3,782,347	5.8
2010	70+	322	3,830,580	8.4
2011	70+	469	3,865,273	12.1
2012	70+	629	3,874,026	16.2
2013	70+	760	3,882,950	19.6
2014	70+	903	3,904,960	23.1
2015	70+	1,061	3,914,660	27.1
2016	70+	1,242	4,030,514	30.8
2017	70+	1,442	4,166,277	34.6
2018	70+	1,644	4,319,424	38.1
2019	70+	1,873	4,484,582	41.8
2020	70+	2,022	4,614,390	43.8

Table S4. Prevalence of Crohn's disease in Poland in the years 2009-2020 - females

Year	Cases - females	Population - females	Rate (per 100,000 population) - females	EASR – females	95% LCL	95% UCL
2009	2,610	19,738,587	13.2	12.7	12.2	13.2
2010	3,696	19,876,741	18.6	17.9	17.3	18.5
2011	4,723	19,883,870	23.8	22.9	22.3	23.6
2012	5,683	19,883,965	28.6	27.7	27.0	28.4
2013	6,638	19,866,124	33.4	32.4	31.6	33.2
2014	7,562	19,858,793	38.1	37.1	36.3	37.9
2015	8,505	19,839,248	42.9	41.9	41.0	42.8
2016	9,309	19,839,826	46.9	45.9	45.0	46.9
2017	10,100	19,840,383	50.9	49.9	49.0	50.9
2018	10,876	19,829,262	54.8	53.9	52.9	54.9
2019	11,529	19,815,524	58.2	57.3	56.3	58.4
2020	11,713	19,762,772	59.3	58.4	57.3	59.5

Abbreviations: EASR, European age-standardized rate

Table S5. Prevalence of Crohn's disease in Poland in the years 2009-2020 - males

Year	Cases - males	Population - males	Rate (per 100,000 population) - males	EASR - males	95% LCL	95% UCL
2009	2,406	18,428,742	13.1	11.6	11.1	12.0
2010	3,476	18,653,125	18.6	16.7	16.2	17.3
2011	4,432	18,654,577	23.8	21.4	20.8	22.1
2012	5,424	18,649,334	29.1	26.6	25.9	27.3
2013	6,384	18,629,535	34.3	31.5	30.7	32.3
2014	7,391	18,619,809	39.7	36.6	35.7	37.5
2015	8,279	18,597,991	44.5	41.4	40.5	42.3
2016	9,168	18,593,166	49.3	46.2	45.2	47.2
2017	10,025	18,593,175	53.9	50.9	49.9	51.9
2018	10,836	18,581,886	58.3	55.3	54.2	56.3
2019	11,529	18,567,052	62.1	59.1	58.0	60.2
2020	11,861	18,502,241	64.1	61.3	60.2	62.5

Abbreviations: EASR, European age-standardized rate

Table S6. Prevalence of Crohn's disease – results of joinpoint regression.

Groups	Segment	Lower endpoint	Upper endpoint	APC	(95% CI)	P-value for parallel test
Overall						
Combined	1	2012	2015	14.8 ^a	(12.4 to 17.3)	
Combined	2	2015	2018	8.7 ^a	(6.8 to 10.5)	
Females vs. males						0.08
Combined	1	2012	2015	14.8 ^a	(13.1 to 16.5)	
Combined	2	2015	2018	8.7 ^a	(7.4 to 10.0)	
Age: <20 vs. 20-39						0.02
<20	1	2012	2015	11.0 ^a	(9.1 to 12.9)	
<20	2	2015	2018	3.5 ^a	(2.0 to 5.1)	
20-39	1	2012	2014	17.3 ^a	(13.4 to 21.4)	
20-39	2	2014	2018	10.1 ^a	(9.2 to 11.1)	
Age: <20 vs. 40-59						0.05
<20	1	2012	2015	11.0 ^a	(9.1 to 12.9)	
<20	2	2015	2018	3.5 ^a	(2.0 to 5.1)	
40-59	1	2012	2015	15.2 ^a	(12.2 to 18.2)	
40-59	2	2015	2018	10.7 ^a	(8.4 to 13.0)	
Age: <20 vs. 60+						0.02
<20	1	2012	2015	11.0 ^a	(9.1 to 12.9)	
<20	2	2015	2018	3.5 ^a	(2.0 to 5.1)	
60+	1	2012	2015	17.6 ^a	(15.2 to 19.9)	
60+	2	2015	2018	9.4 ^a	(7.8 to 11.0)	
Age: 20-39 vs. 40-59						0.25
Combined	1	2012	2014	17.1 ^a	(13.6 to 20.8)	
Combined	2	2014	2018	10.6 ^a	(9.7 to 11.5)	

Age: 20-39 vs. 60+						0.04
20-39	1	2012	2014	17.3 ^a	(13.4 to 21.4)	
20-39	2	2014	2018	10.1 ^a	(9.2 to 11.1)	
60+	1	2012	2015	17.6 ^a	(15.2 to 19.9)	
60+	2	2015	2018	9.4 ^a	(7.8 to 11.0)	
Age: 40-59 vs. 60+						0.10
Combined	1	2012	2015	16.1 ^a	(14.3 to 17.8)	
Combined	2	2015	2018	10.2 ^a	(8.9 to 11.4)	

Abbreviations: APC, annual percent change

^a APC significantly different than 0 (at 0.05 significance level).

Table S7. Incidence of Crohn's disease - females

Year	Cases - females	Population - females	Rate (per 100,000 population) - females	EASR - females	95% LCL	95% UCL
2009	2,613	19,738,587	13.2	12.7	12.3	13.2
2010	1,092	19,876,741	5.5	5.3	4.9	5.6
2011	1,041	19,883,870	5.2	5.1	4.7	5.4
2012	989	19,883,965	5.0	4.9	4.6	5.2
2013	1,007	19,866,124	5.1	4.9	4.6	5.3
2014	978	19,858,793	4.9	4.9	4.6	5.2
2015	1,027	19,839,248	5.2	5.2	4.8	5.5
2016	906	19,839,826	4.6	4.6	4.3	4.9
2017	886	19,840,383	4.5	4.5	4.2	4.8
2018	883	19,829,262	4.5	4.4	4.2	4.7
2019	783	19,815,524	4.0	4.0	3.7	4.3
2020	348	19,762,772	1.8	1.8	1.6	2.0

Abbreviations: EASR, European age-standardized rate

Table S8. Incidence of Crohn's disease in the years 2009-2020 - males

Year	Cases - males	Population – males	Rate (per 100,000 population) - males	EASR - males	95% LCL	95% UCL
2009	2,409	18,428,742	13.1	11.6	11.1	12.1
2010	1,078	18,653,125	5.8	5.2	4.9	5.5
2011	970	18,654,577	5.2	4.7	4.4	5.0
2012	1,011	18,649,334	5.4	5.1	4.7	5.4
2013	996	18,629,535	5.3	4.9	4.6	5.2
2014	1,068	18,619,809	5.7	5.3	5.0	5.7
2015	953	18,597,991	5.1	4.9	4.5	5.2
2016	963	18,593,166	5.2	5.0	4.7	5.3
2017	931	18,593,175	5.0	4.8	4.5	5.1
2018	911	18,581,886	4.9	4.7	4.4	5.0
2019	801	18,567,052	4.3	4.2	3.9	4.5
2020	451	18,502,241	2.4	2.4	2.2	2.6

Abbreviations: EASR, European age-standardized rate

Table S9. Incidence of Crohn's disease in the years 2009-2020 by age group

Year	Age group	Cases	Population	Rate (per 100 000 population)
2009	<20	810	8,311,840	9,7
2010	<20	302	8,280,106	3,6
2011	<20	301	8,133,701	3,7
2012	<20	311	8,015,276	3,9
2013	<20	325	7,895,735	4,1
2014	<20	357	7,802,648	4,6
2015	<20	351	7,732,280	4,5
2016	<20	361	7,693,130	4,7
2017	<20	302	7,689,955	3,9
2018	<20	309	7,690,235	4,0
2019	<20	310	7,690,007	4,0
2020	<20	164	7,672,644	2,1
2009	<10	121	3,742,825	3.2
2010	<10	38	3,870,098	1.0
2011	<10	44	3,891,880	1.1
2012	<10	50	3,923,846	1.3
2013	<10	51	3,940,567	1.3
2014	<10	54	3,957,510	1.4
2015	<10	43	3,957,225	1.1
2016	<10	53	3,959,959	1.3
2017	<10	33	3,961,761	0.8
2018	<10	37	3,922,424	0.9
2019	<10	45	3,868,610	1.2
2020	<10	17	3,812,706	0.4
2009	10-19	689	4,569,015	15.1

2010	10-19	264	4,410,008	6.0
2011	10-19	257	4,241,821	6.1
2012	10-19	261	4,091,430	6.4
2013	10-19	274	3,955,168	6.9
2014	10-19	303	3,845,138	7.9
2015	10-19	308	3,775,055	8.2
2016	10-19	308	3,733,171	8.3
2017	10-19	269	3,728,194	7.2
2018	10-19	272	3,767,811	7.2
2019	10-19	265	3,821,397	6.9
2020	10-19	147	3,859,938	3.8
2009	20-29	1,234	6,234,876	19.8
2010	20-29	577	6,117,121	9.4
2011	20-29	512	6,014,975	8.5
2012	20-29	429	5,854,195	7.3
2013	20-29	489	5,651,760	8.7
2014	20-29	466	5,451,377	8.5
2015	20-29	419	5,243,746	8.0
2016	20-29	444	5,062,349	8.8
2017	20-29	430	4,890,144	8.8
2018	20-29	388	4,712,695	8.2
2019	20-29	321	4,541,741	7.1
2020	20-29	191	4,372,406	4.4
2009	30-39	1,068	5,673,589	18.8
2010	30-39	456	5,895,155	7.7
2011	30-39	411	6,005,590	6.8
2012	30-39	408	6,123,509	6.7
2013	30-39	421	6,239,471	6.7
2014	30-39	404	6,314,471	6.4
2015	30-39	382	6,348,320	6.0

2016	30-39	338	6,330,563	5.3
2017	30-39	334	6,290,061	5.3
2018	30-39	368	6,234,802	5.9
2019	30-39	288	6,145,086	4.7
2020	30-39	134	6,045,893	2.2
2009	40-49	670	4,862,319	13.8
2010	40-49	265	4,847,195	5.5
2011	40-49	253	4,822,159	5.2
2012	40-49	230	4,838,436	4.8
2013	40-49	234	4,879,816	4.8
2014	40-49	239	4,956,005	4.8
2015	40-49	246	5,064,587	4.9
2016	40-49	228	5,202,444	4.4
2017	40-49	236	5,341,530	4.4
2018	40-49	231	5,481,594	4.2
2019	40-49	233	5,632,338	4.1
2020	40-49	113	5,768,371	2.0
2009	50-59	710	5,801,976	12.2
2010	50-59	302	5,847,720	5.2
2011	50-59	249	5,765,460	4.3
2012	50-59	258	5,656,651	4.6
2013	50-59	238	5,536,118	4.3
2014	50-59	236	5,406,320	4.4
2015	50-59	212	5,245,352	4.0
2016	50-59	173	5,089,290	3.4
2017	50-59	200	4,928,276	4.1
2018	50-59	173	4,783,429	3.6
2019	50-59	153	4,669,659	3.3
2020	50-59	72	4,605,466	1.6
2009	60-69	309	3,500,382	8.8

2010	60-69	184	3,711,989	5.0
2011	60-69	171	3,931,289	4.3
2012	60-69	234	4,171,206	5.6
2013	60-69	186	4,409,809	4.2
2014	60-69	213	4,642,821	4.6
2015	60-69	235	4,888,294	4.8
2016	60-69	198	5,024,702	3.9
2017	60-69	202	5,127,315	3.9
2018	60-69	200	5,188,969	3.9
2019	60-69	153	5,219,163	2.9
2020	60-69	82	5,185,843	1.6
2009	70+	221	3,782,347	5.8
2010	70+	84	3,830,580	2.2
2011	70+	114	3,865,273	2.9
2012	70+	130	3,874,026	3.4
2013	70+	110	3,882,950	2.8
2014	70+	131	3,904,960	3.4
2015	70+	135	3,914,660	3.4
2016	70+	127	4,030,514	3.2
2017	70+	113	4,166,277	2.7
2018	70+	125	4,319,424	2.9
2019	70+	126	4,484,582	2.8
2020	70+	43	4,614,390	0.9

Table S10. Incidence of Crohn's disease – results of joinpoint regression

Group	Segment	Lower Endpoint	Upper Endpoint	APC	(95% CI)	P-value for parallel test
Overall						
Combined	1	2012	2014	1.1	(-8.1 to 11.2)	
Combined	2	2014	2018	-3.4 ^a	(-6.3 to -0.3)	
Females vs. males						0.40
Combined	Full Range	2012	2018	-2.1 ^a	(-3.2 to -1.0)	
Age: <20 vs. 20-39						0.28
Combined	Full Range	2012	2018	-0.8	(-2.5 to 0.9)	
Age: <20 vs. 40-59						0.16
Combined	Full Range	2012	2018	-1.6	(-3.6 to 0.5)	
Age: <20 vs. 60+						0.13
Combined	Full Range	2012	2018	-1.9	(-4.6 to 0.8)	
Age: 20-39 vs. 40-59						0.34
Combined	Full Range	2012	2018	-1.8 ^a	(-3.0 to -0.6)	
Age: 20-39 vs. 60+						0.39
Combined	Full Range	2012	2018	-2.0 ^a	(-3.7 to -0.3)	
Age: 40-59 vs. 60+						0.47
Combined	Full Range	2012	2018	-3.2 ^a	(-5.0 to -1.5)	

Abbreviations: APC, annual percent change

^a APC significantly different than 0 (at 0.05 significance level).

Table S11. Prevalence of ulcerative colitis in Poland in the years 2009-2020, by age group

Year	Age group	Cases	Population	Rate (per 100,000 population)
2009	<20	978	8,311,840	11.8
2010	<20	1,183	8,280,106	14.3
2011	<20	1,307	8,133,701	16.1
2012	<20	1,500	8,015,276	18.7
2013	<20	1,641	7,895,735	20.8
2014	<20	1,793	7,802,648	23.0
2015	<20	1,922	7,732,280	24.9
2016	<20	1,970	7,693,130	25.6
2017	<20	2,047	7,689,955	26.6
2018	<20	2,091	7,690,235	27.2
2019	<20	2,173	7,690,007	28.3
2020	<20	2,064	7,672,644	26.9
2009	<10	116	3,742,825	3.1
2010	<10	124	3,870,098	3.2
2011	<10	143	3,891,880	3.7
2012	<10	161	3,923,846	4.1

2013	<10	183	3,940,567	4.6
2014	<10	212	3,957,510	5.4
2015	<10	225	3,957,225	5.7
2016	<10	236	3,959,959	6.0
2017	<10	240	3,961,761	6.1
2018	<10	238	3,922,424	6.1
2019	<10	242	3,868,610	6.3
2020	<10	196	3,812,706	5.1
2009	10-19	862	4,569,015	18.9
2010	10-19	1,059	4,410,008	24.0
2011	10-19	1,164	4,241,821	27.4
2012	10-19	1,339	4,091,430	32.7
2013	10-19	1,458	3,955,168	36.9
2014	10-19	1,581	3,845,138	41.1
2015	10-19	1,697	3,775,055	45.0
2016	10-19	1,734	3,733,171	46.4
2017	10-19	1,807	3,728,194	48.5
2018	10-19	1,853	3,767,811	49.2
2019	10-19	1,931	3,821,397	50.5
2020	10-19	1,868	3,859,938	48.4
2009	20-29	2,389	6,234,876	38.3

2010	20-29	3,345	6,117,121	54.7
2011	20-29	4,249	6,014,975	70.6
2012	20-29	5,053	5,854,195	86.3
2013	20-29	5,625	5,651,760	99.5
2014	20-29	6,150	5,451,377	112.8
2015	20-29	6,518	5,243,746	124.3
2016	20-29	6,843	5,062,349	135.2
2017	20-29	7,149	4,890,144	146.2
2018	20-29	7,307	4,712,695	155.0
2019	20-29	7,313	4,541,741	161.0
2020	20-29	6,930	4,372,406	158.5
2009	30-39	2,793	5,673,589	49.2
2010	30-39	4,133	5,895,155	70.1
2011	30-39	5,339	6,005,590	88.9
2012	30-39	6,702	6,123,509	109.4
2013	30-39	8,084	6,239,471	129.6
2014	30-39	9,307	6,314,471	147.4
2015	30-39	10,388	6,348,320	163.6
2016	30-39	11,379	6,330,563	179.7
2017	30-39	12,095	6,290,061	192.3
2018	30-39	12,787	6,234,802	205.1

2019	30-39	13,275	6,145,086	216.0
2020	30-39	13,332	6,045,893	220.5
2009	40-49	2,843	4,862,319	58.5
2010	40-49	3,925	4,847,195	81.0
2011	40-49	4,936	4,822,159	102.4
2012	40-49	6,058	4,838,436	125.2
2013	40-49	6,957	4,879,816	142.6
2014	40-49	7,869	4,956,005	158.8
2015	40-49	8,869	5,064,587	175.1
2016	40-49	9,766	5,202,444	187.7
2017	40-49	10,712	5,341,530	200.5
2018	40-49	11,639	5,481,594	212.3
2019	40-49	12,610	5,632,338	223.9
2020	40-49	13,296	5,768,371	230.5
2009	50-59	3,710	5,801,976	63.9
2010	50-59	5,152	5,847,720	88.1
2011	50-59	6,423	5,765,460	111.4
2012	50-59	7,637	5,656,651	135.0
2013	50-59	8,503	5,536,118	153.6
2014	50-59	9,255	5,406,320	171.2
2015	50-59	9,756	5,245,352	186.0

2016	50-59	10,263	5,089,290	201.7
2017	50-59	10,602	4,928,276	215.1
2018	50-59	10,907	4,783,429	228.0
2019	50-59	11,066	4,669,659	237.0
2020	50-59	11,125	4,605,466	241.6
2009	60-69	2,418	3,500,382	69.1
2010	60-69	3,658	3,711,989	98.5
2011	60-69	4,911	3,931,289	124.9
2012	60-69	6,515	4,171,206	156.2
2013	60-69	8,004	4,409,809	181.5
2014	60-69	9,335	4,642,821	201.1
2015	60-69	10,724	4,888,294	219.4
2016	60-69	11,784	5,024,702	234.5
2017	60-69	12,763	5,127,315	248.9
2018	60-69	13,568	5,188,969	261.5
2019	60-69	14,242	5,219,163	272.9
2020	60-69	14,261	5,185,843	275.0
2009	70+	1,430	3,782,347	37.8
2010	70+	2,331	3,830,580	60.9
2011	70+	3,236	3,865,273	83.7
2012	70+	4,290	3,874,026	110.7

2013	70+	5,199	3,882,950	133.9
2014	70+	6,049	3,904,960	154.9
2015	70+	6,828	3,914,660	174.4
2016	70+	7,919	4,030,514	196.5
2017	70+	9,100	4,166,277	218.4
2018	70+	10,247	4,319,424	237.2
2019	70+	11,401	4,484,582	254.2
2020	70+	12,227	4,614,390	265.0

Table S12. Prevalence of ulcerative colitis in Poland in the years 2009-2020 - females

Year	Cases - females	Population - females	Rate (per 100,000 population) - females	EASR - females	95% LCL	95% UCL
2009	8,353	19,738,587	42.3	42.0	41.1	42.9
2010	11,931	19,876,741	60.0	59.6	58.5	60.6
2011	15,197	19,883,870	76.4	75.7	74.5	76.9
2012	18,764	19,883,965	94.4	93.2	91.8	94.5
2013	21,827	19,866,124	109.9	108.1	106.7	109.6
2014	24,607	19,858,793	123.9	121.4	119.9	123.0
2015	27,182	19,839,248	137.0	133.8	132.2	135.4
2016	29,500	19,839,826	148.7	144.9	143.3	146.6
2017	31,730	19,840,383	159.9	155.6	153.9	157.4
2018	33,658	19,829,262	169.7	164.7	163.0	166.5
2019	35,338	19,815,524	178.3	172.6	170.8	174.4
2020	35,964	19,762,772	182.0	175.5	173.7	177.4

Abbreviations: EASR, European age-standardized rate

Table S13. Prevalence of ulcerative colitis in Poland in the years 2009-2020 - males

Year	Cases - males	Population - males	Rate (per 100,000 population) – males	EASR - males	95% LCL	95% UCL
2009	8,208	18,428,742	44.5	45.6	44.5	46.6
2010	11,796	18,653,125	63.2	65.0	63.8	66.2
2011	15,204	18,654,577	81.5	83.7	82.3	85.1
2012	18,991	18,649,334	101.8	104.7	103.1	106.2
2013	22,186	18,629,535	119.1	122.0	120.3	123.7
2014	25,151	18,619,809	135.1	137.9	136.1	139.6
2015	27,823	18,597,991	149.6	152.1	150.2	154.0
2016	30,424	18,593,166	163.6	166.0	164.0	167.9
2017	32,738	18,593,175	176.1	178.6	176.6	180.6
2018	34,888	18,581,886	187.8	190.0	187.9	192.0

2019	36,742	18,567,052	197.9	199.6	197.5	201.7
2020	37,271	18,502,241	201.4	202.7	200.5	204.8

Abbreviations: EASR, European age-standardized rate

Table S14 . Prevalence of ulcerative colitis – results of joinpoint regression.

Groups	Segment	Lower Endpoint	Upper Endpoint	APC	(95% CI)	P-value for paralell test
Overall						
Combined	1	2012	2015	13.4 ^a	(10.0 to 16.8)	
Combined	2	2015	2018	7.3 ^a	(4.7 to 10.0)	
Females vs. males						0.49
Combined	1	2012	2015	13.4 ^a	(12.1 to 14.7)	
Combined	2	2015	2018	7.3 ^a	(6.3 to 8.3)	
Age: <20 vs. 20-39						0.07
Combined	1	2012	2015	13.6 ^a	(8.6 to 18.9)	
Combined	2	2015	2018	7.1 ^a	(3.1 to 11.3)	
Age: <20 vs. 40-59						0.07
Combined	1	2012	2015	11.3 ^a	(8.4 to 14.2)	
Combined	2	2015	2018	6.1 ^a	(3.8 to 8.5)	
Age: <20 vs. 60+						0.04
<20	1	2012	2015	9.9 ^a	(8.0 to 11.8)	
<20	2	2015	2018	2.9 ^a	(1.3 to 4.5)	
60+	1	2012	2014	16.4 ^a	(8.4 to 24.9)	
60+	2	2014	2018	8.4 ^a	(6.6 to 10.3)	
Age: 20-39 vs. 40-59						0.12
Combined	1	2012	2015	12.7 ^a	(9.2 to 16.3)	
Combined	2	2015	2018	7.0 ^a	(4.2 to 9.8)	
Age: 20-39 vs. 60+						0.20
Combined	1	2012	2014	16.5 ^a	(13.9 to 19.1)	
Combined	2	2014	2018	8.5 ^a	(7.9 to 9.1)	

Age: 40-59 vs. 60+						0.11
Combined	1	2012	2014	14.6 ^a	(7.8 to 21.7)	
Combined	2	2014	2018	7.8 ^a	(6.2 to 9.5)	

Abbreviations: APC, annual percent change

^a APC significantly different than 0 (at 0.05 significance level).

Table S15. Incidence of ulcerative colitis in the years 2009-2020 - females

Year	Cases - females	Population - females	Rate (per 100,000 population) - females	EASR - females	95% LCL	95% UCL
2009	8,356	19,738,587	42.3	42.0	41.1	42.9
2010	3,585	19,876,741	18.0	17.8	17.2	18.4
2011	3,267	19,883,870	16.4	16.2	15.6	16.7
2012	3,628	19,883,965	18.2	17.9	17.3	18.5
2013	3,179	19,866,124	16.0	15.7	15.1	16.2
2014	2,938	19,858,793	14.8	14.4	13.9	14.9
2015	2,784	19,839,248	14.0	13.7	13.2	14.2
2016	2,563	19,839,826	12.9	12.6	12.1	13.1
2017	2,513	19,840,383	12.7	12.5	12.0	13.0
2018	2,254	19,829,262	11.4	11.2	10.7	11.7
2019	2,028	19,815,524	10.2	10.2	9.7	10.6
2020	1,095	19,762,772	5.5	5.6	5.2	5.9

Abbreviations: EASR, European age-standardized rate

Table S16. Incidence of ulcerative colitis in the years 2009-2020 - males

Year	Cases - males	Population - males	Rate (per 100,000 population) - males	EASR - males	95% LCL	95% UCL
2009	8,209	18,428,742	44.5	45.6	44.5	46.6
2010	3,590	18,653,125	19.2	19.7	19.0	20.4
2011	3,417	18,654,577	18.3	18.3	17.7	19.0
2012	3,864	18,649,334	20.7	21.0	20.3	21.7
2013	3,391	18,629,535	18.2	18.1	17.5	18.7
2014	3,199	18,619,809	17.2	17.0	16.4	17.6
2015	2,952	18,597,991	15.9	15.6	15.0	16.2
2016	2,922	18,593,166	15.7	15.5	14.9	16.1
2017	2,674	18,593,175	14.4	14.2	13.6	14.7
2018	2,554	18,581,886	13.7	13.5	13.0	14.1
2019	2,312	18,567,052	12.5	12.3	11.8	12.9
2020	1,214	18,502,241	6.6	6.5	6.1	6.9

Abbreviations: EASR, European age-standardized rate

Table S17. Incidence of ulcerative colitis in the years 2009-2020, by age group

Year	Age group	Cases	Population	Rate (per 100, 000 population)
2009	<20	978	8,311,840	11.8
2010	<20	366	8,280,106	4.4
2011	<20	345	8,133,701	4.2
2012	<20	396	8,015,276	4.9
2013	<20	384	7,895,735	4.9
2014	<20	440	7,802,648	5.6
2015	<20	417	7,732,280	5.4
2016	<20	412	7,693,130	5.4
2017	<20	447	7,689,955	5.8
2018	<20	420	7,690,235	5.5
2019	<20	445	7,690,007	5.8
2020	<20	280	7,672,644	3.6
2009	<10	116	3,742,825	3.1
2010	<10	38	3,870,098	1.0
2011	<10	52	3,891,880	1.3
2012	<10	52	3,923,846	1.3
2013	<10	48	3,940,567	1.2
2014	<10	70	3,957,510	1.8
2015	<10	62	3,957,225	1.6
2016	<10	53	3,959,959	1.3
2017	<10	60	3,961,761	1.5
2018	<10	61	3,922,424	1.6
2019	<10	56	3,868,610	1.4
2020	<10	28	3,812,706	0.7

2009	10-19	862	4,569,015	18.9
2010	10-19	328	4,410,008	7.4
2011	10-19	293	4,241,821	6.9
2012	10-19	344	4,091,430	8.4
2013	10-19	336	3,955,168	8.5
2014	10-19	370	3,845,138	9.6
2015	10-19	355	3,775,055	9.4
2016	10-19	359	3,733,171	9.6
2017	10-19	387	3,728,194	10.4
2018	10-19	359	3,767,811	9.5
2019	10-19	389	3,821,397	10.2
2020	10-19	252	3,859,938	6.5
2009	20-29	2,389	6,234,876	38.3
2010	20-29	1,094	6,117,121	17.9
2011	20-29	1,102	6,014,975	18.3
2012	20-29	1,158	5,854,195	19.8
2013	20-29	1,031	5,651,760	18.2
2014	20-29	1,046	5,451,377	19.2
2015	20-29	959	5,243,746	18.3
2016	20-29	903	5,062,349	17.8
2017	20-29	842	4,890,144	17.2
2018	20-29	772	4,712,695	16.4
2019	20-29	686	4,541,741	15.1
2020	20-29	356	4,372,406	8.1
2009	30-39	2,793	5,673,589	49.2
2010	30-39	1,313	5,895,155	22.3
2011	30-39	1,183	6,005,590	19.7
2012	30-39	1,329	6,123,509	21.7
2013	30-39	1,297	6,239,471	20.8
2014	30-39	1,183	6,314,471	18.7

2015	30-39	1,151	6,348,320	18.1
2016	30-39	1,047	6,330,563	16.5
2017	30-39	944	6,290,061	15.0
2018	30-39	925	6,234,802	14.8
2019	30-39	795	6,145,086	12.9
2020	30-39	394	6,045,893	6.5
2009	40-49	2,843	4,862,319	58.5
2010	40-49	1,148	4,847,195	23.7
2011	40-49	1,029	4,822,159	21.3
2012	40-49	1,096	4,838,436	22.7
2013	40-49	965	4,879,816	19.8
2014	40-49	867	4,956,005	17.5
2015	40-49	824	5,064,587	16.3
2016	40-49	802	5,202,444	15.4
2017	40-49	769	5,341,530	14.4
2018	40-49	722	5,481,594	13.2
2019	40-49	679	5,632,338	12.1
2020	40-49	352	5,768,371	6.1
2009	50-59	3,710	5,801,976	63.9
2010	50-59	1,471	5,847,720	25.2
2011	50-59	1,378	5,765,460	23.9
2012	50-59	1,441	5,656,651	25.5
2013	50-59	1,122	5,536,118	20.3
2014	50-59	1,027	5,406,320	19.0
2015	50-59	866	5,245,352	16.5
2016	50-59	801	5,089,290	15.7
2017	50-59	740	4,928,276	15.0
2018	50-59	648	4,783,429	13.5
2019	50-59	582	4,669,659	12.5
2020	50-59	303	4,605,466	6.6

2009	60-69	2,420	3,500,382	69.1
2010	60-69	1,086	3,711,989	29.3
2011	60-69	974	3,931,289	24.8
2012	60-69	1,263	4,171,206	30.3
2013	60-69	1,094	4,409,809	24.8
2014	60-69	980	4,642,821	21.1
2015	60-69	963	4,888,294	19.7
2016	60-69	967	5,024,702	19.2
2017	60-69	896	5,127,315	17.5
2018	60-69	818	5,188,969	15.8
2019	60-69	693	5,219,163	13.3
2020	60-69	361	5,185,843	7.0
2009	70+	1,432	3,782,347	37.9
2010	70+	697	3,830,580	18.2
2011	70+	673	3,865,273	17.4
2012	70+	809	3,874,026	20.9
2013	70+	677	3,882,950	17.4
2014	70+	594	3,904,960	15.2
2015	70+	556	3,914,660	14.2
2016	70+	553	4,030,514	13.7
2017	70+	549	4,166,277	13.2
2018	70+	503	4,319,424	11.6
2019	70+	460	4,484,582	10.3
2020	70+	263	4,614,390	5.7

Table S18. Incidence of ulcerative colitis – results of joinpoint regression.

Groups	Segment	Lower Endpoint	Upper Endpoint	APC	(95% CI)	P-value for parallel test
Overall						
Combined	1	2012	2018	-6.7 ^a	(-7.9 to -5.4)	
Females vs. males						0.30
Combined	1	2012	2014	-9.4 ^a	(-13.4 to -5.1)	
Combined	2	2014	2018	-5.4 ^a	(-7.0 to -3.8)	
Age: <20 vs. 20-39						0.01
<20	1	2012	2018	2.2	(-0.3 to 4.7)	
20-39	1	2012	2018	-4.8 ^a	(-5.3 to -4.3)	
Age: <20 vs. 40-59						0.01
<20	1	2012	2018	2.2	(-0.3 to 4.7)	
40-59	1	2012	2014	-13.5 ^a	(-20.3 to -6.1)	
40-59	2	2014	2018	-6.8 ^a	(-9.7 to -3.8)	
Age: <20 vs. 60+						0.02
<20	1	2012	2018	2.2	(-0.3 to 4.7)	
60+	1	2012	2014	-14.9 ^a	(-27.5 to -0.2)	
60+	2	2014	2018	-6.2 ^a	(-11.5 to -0.5)	
Age: 20-39 vs. 40-59						0.01
20-39	1	2012	2018	-4.8 ^a	(-5.3 to -4.3)	
40-59	1	2012	2014	-13.5 ^a	(-20.3 to -6.1)	
40-59	2	2014	2018	-6.8 ^a	(-9.7 to -3.8)	
Age: 20-39 vs. 60+						0.04
20-39	1	2012	2018	-4.8 ^a	(-5.3 to -4.3)	
60+	1	2012	2014	-14.9 ^a	(-27.5 to -0.2)	
60+	2	2014	2018	-6.2 ^a	(-11.5 to -0.5)	

Age: 40-59 vs. 60+						0.65
Combined	1	2012	2014	-14.1 ^a	(-17.3 to -10.9)	
Combined	2	2014	2018	-6.5 ^a	(-7.8 to -5.2)	

Abbreviations: APC, annual percent change

^a APC significantly different than 0 (at 0.05 significance level).

Figure S1 Flow chart depicting the identification of prevalent Crohn's disease and ulcerative colitis cases in Poland as of December 31, 2020

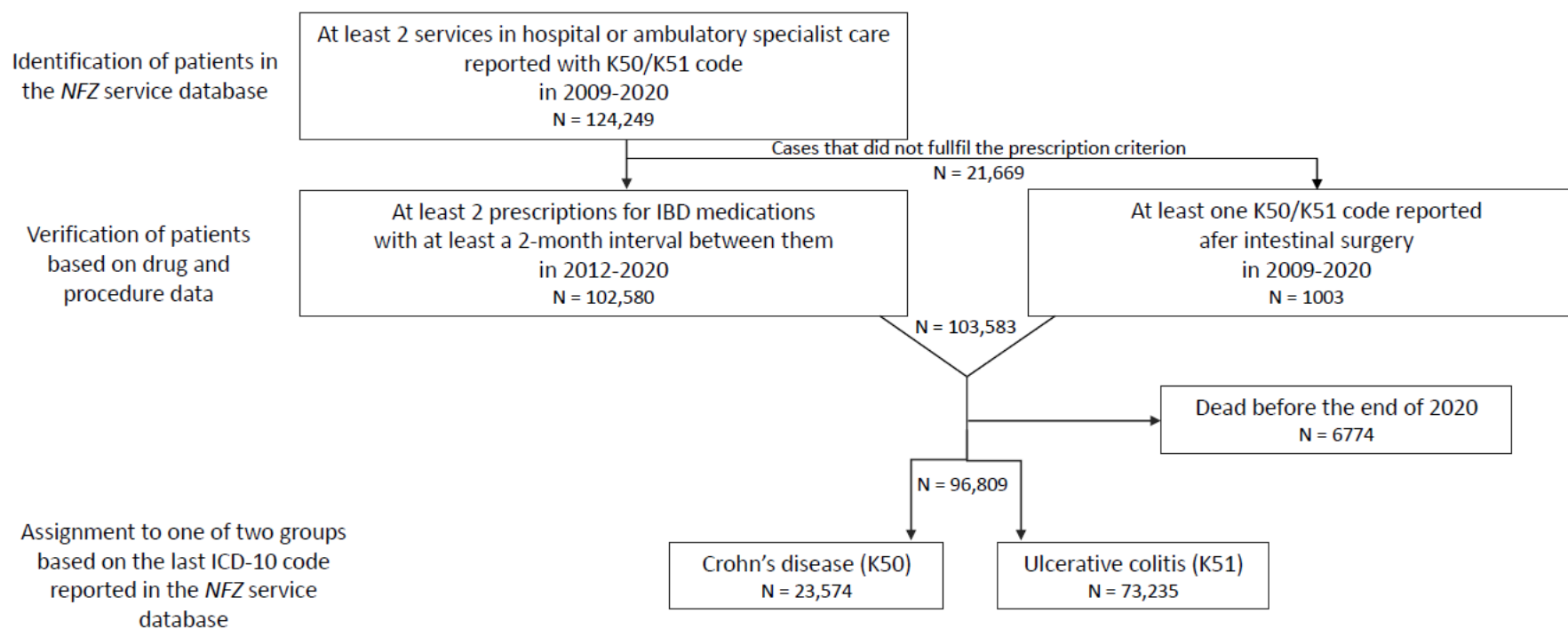


Figure S2. Age patterns in the prevalence of Crohn's disease in Poland in the year 2020

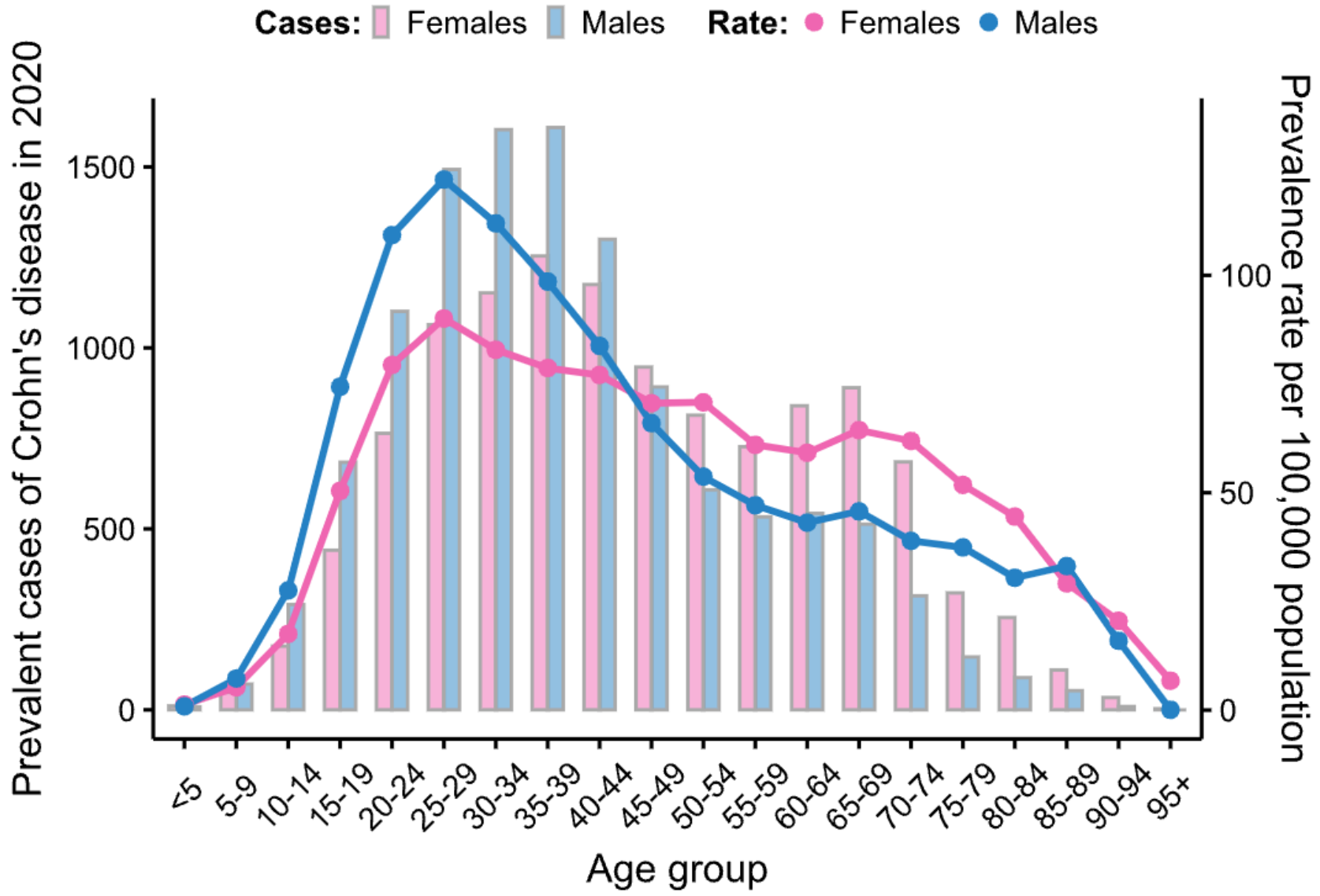


Figure S3. Age patterns in the prevalence of ulcerative colitis in Poland in the year 2020

