**Supplementary Material**

**Supplementary Text**

**Supplementary Table 1.** ICD-9 codes used to identify ischemic colitis in database studies.

**Supplementary Table 2A.** Examination of risk factors (comorbidities and medications) associated with ischemic colitis and age groups <40 years and 40-59 years.

**Supplementary Table 2B.** Examination of risk factors (comorbidities and medications) associated with ischemic colitis and age groups 60-79 years and >80 years.

**Supplementary Figure 1.** Sex-specific incidence of ischemic colitis in: A. Men from Olmsted County, Minnesota, 1976-2009, by age and calendar period (includes definite and probable cases). B. Women from Olmsted County, Minnesota, 1976-2009, by age and calendar period (includes definite and probable cases).

**Supplementary Figure 2.** Cumulative probability of recurrence of ischemic colitis following the first episode among Olmsted County, Minnesota, residents, 1976-2009.

**Supplementary Figure 3.** Survival of patients with and without ascending colon/cecal involvement in patients with ischemic colitis among Olmsted County, Minnesota, residents, 1976-2009.

**Supplementary Text**

## METHODS

### Rochester Epidemiology Project

The Rochester Epidemiology Project is a unique medical records linkage system that contains all medical records from multiple health care institutions for virtually all persons residing in Olmsted County, Minnesota(10). Through 2012, the REP encompassed 6,239,353 person-years of follow-up for a total of 502,820 unique individuals between 1966 and 2010(11). Diagnoses generated from all outpatient visits, emergency room visits, hospitalizations, nursing home visits, surgical procedures, autopsy examinations, and death certificates are recorded in a central diagnostic index. Thus, it is not only possible to identify virtually all diagnosed cases of a given disease for which patients sought medical attention, but review of the original medical records provides a level of clinical detail about the condition not available in large administrative databases(9, 10).

### Cases

Based on review of community records, cases were classified as "definite" or "probable". The diagnostic criteria for definite IC were as follows: 1) gross evidence of colonic inflammation by endoscopy, radiography, surgery, or autopsy; 2) no previous or subsequent evidence of idiopathic inflammatory bowel disease (Crohn's disease or ulcerative colitis); 3) if available, no evidence of infectious agents or toxins as a cause of colitis (e.g., *Salmonella*, *Shigella*, *Escherichia coli*, *Campylobacter*, *Clostridium difficile*); and 4) histologic evidence of colonic ischemia or necrosis, or histologic changes thought to be compatible with colonic ischemia. Associated superficial ulceration and crypt abscesses can also be seen. Cases of ischemia or necrosis that were related to a mechanical obstruction of the colon for any reason (e.g., cancer,

volvulus, and hernia) were excluded. The diagnostic criteria for a probable case of IC were similar to those for a definite case, except that histologic confirmation was not required. Olmsted County residence at the time of diagnosis of IC was reconfirmed for both definite and probable cases. Using ICD-9 and HICDA-2 codes, 1147 patients with a probable diagnosis of IC were identified for the period 1976 to 2009. Manual review of these records revealed that only 445 (38.8%) met the criteria for probable and definite cases.

**Controls**

Two controls per case, matched on gender (exact), age (within 5 years) at index date, and closest institutional registration number, were selected. Since registration numbers are assigned sequentially at the patient's first visit, matching on closest registration number provides a comparable duration of prior medical history for cases and their matched controls. Patients (both cases and controls) were excluded if they had withdrawn authorization for review of their medical records for research, which has been provided by >96% of Olmsted County adults[11].

**Definition of Risk Factors**

Potential risk factors of interest included: 1) circulatory system disorders (e.g., coronary artery disease, peripheral vascular disease, cerebrovascular disease, congestive heart failure, arterial or venous thrombosis, coagulation disorders, or hypotension); 2) use of certain medications within the past 30 days (e.g., diuretics, digoxin, nonsteroidal anti-inflammatory drugs, estrogen replacement, oral contraceptives, psychotropic agents, migraine medications); 3) other gastrointestinal conditions, such as irritable bowel syndrome (IBS); 4) other risk factors for vascular disease (e.g., diabetes mellitus, hypertension, hyperlipidemia, cigarette smoking, obesity, chronic obstructive pulmonary disease [COPD]); and 5) surgical risk factors (e.g., recent

vascular or coronary surgery). Smokers were classified as current or former smokers. Current smokers were patients who smoked at the time of diagnosis of IC, while former smokers were patients who smoked before the date of diagnosis of IC (no specific amount). Hypertension was defined by clinical diagnosis, systolic blood pressure of >140 mm Hg, and a diastolic blood pressure of >90 mm Hg. Coronary artery disease, peripheral vascular disease, cerebrovascular disease, coagulation disorders, irritable bowel syndrome, diabetes mellitus (DM) were all defined using clinical diagnosis. Congestive heart failure was defined according to the clinical diagnosis, and an echocardiographic confirmation of low ejection fraction. Hypotension was defined by clinical diagnosis, systolic blood pressure of <90 mm Hg, and diastolic blood pressure of <60 mm Hg. Hyperlipidemia was defined according to clinical diagnosis as well as laboratory values (low density lipoprotein [LDL] >100 mg/dL, [in DM, LDL >80 mg/dL]; high density lipoprotein <50 mg/dL for females and <40 mg/dL for males; triglycerides >150 mg/dL). Chronic obstructive pulmonary disease was defined according to clinical diagnosis, the patient's use of inhalers, and pulmonary function tests. Obesity was defined by a body mass index of 30 $kg/m^2$ or greater, after documenting each patient's height in centimeters and weight in kilograms. Surgical risk factors (e.g., recent vascular or coronary surgery) were defined by the surgical procedure notes and clinical diagnosis. All the medications were documented by checking the patient medication data (outpatient and inpatient, whenever applicable) up to 30 days prior to IC diagnosis. Psychotropic/neuroleptic agents included chlorpromazine (Thorazine), haloperidol (Haldol), trifluoperazine (Stelazine) and migraine medications included sumatriptan (Imitrex), naratriptan (Amerge), rizatriptan (Maxalt), almotriptan (Axert), zolmitriptan (Zomig), frovatriptan (Frova) and eletriptan (Relpax).

**Statistical Analysis**

Rates were directly age- and sex-adjusted using the 2010 U.S. white population as the standard population. Ninety-five percent confidence intervals (95% CI) for the rates were calculated assuming a Poisson distribution of cases. A Poisson regression model was utilized to estimate the association of age at diagnosis, gender, and calendar year of diagnosis with the incidence rates.

Among cases only, the association of putative risk factors with age (categorized as <40 years of age, 40 to 59 years old, 60 to 79 years old, and greater than or equal to 80 years old) was assessed using Fisher's exact test. A proportional hazards regression analysis (Cox models) was used to assess factors potentially associated with recurrence of IC.

To assess the influence of IC on mortality independent of age, gender, and co-morbidities, we performed a multiple variable analysis of survival incorporating both IC cases and their controls and adjusted for age, gender, and co-morbidities.

## RESULTS

### Incidence

Most of the rise in incidence in men could be explained by an increased incidence of IC in the age group over 80 years (Supplementary Figure 1A), while in women the rise was due to increases in the 60 - 79 and the over 80 age groups (Supplementary Figure 1B).

A Poisson regression analysis considering gender, midpoint of calendar year interval as a linear term and age group (age <40 years, 40-59 years, 60-79 years, ≥80 years) demonstrated a significant increase in the incidence rate of IC over the time period of this study ($p<0.001$). There was also a significant association of age-groups with the incidence rate, with this difference dependent on gender, $p=0.003$. In general, rates in females up to 80 years were higher, and after 80 years the rates for males and females were similar (Supplementary Figures 1A & 1B).

### Risk Factor Analysis

Among cases, the association of putative risk factors with age (Supplementary Table 2) indicated that younger patients with IC were less likely to have coronary artery disease, peripheral vascular disease, cerebrovascular disease, congestive heart failure, hypertension, and hyperlipidemia, and less likely to have taken digoxin or diuretics in the preceding 30 days. Younger cases (women only) were more likely to have taken oral contraceptives. Middle-aged cases (women only) were more likely to have been on hormone replacement therapy. Younger cases were more likely to be current cigarette or ever smokers. The case-control analysis was stratified by age groups (Supplementary Tables 3A and 3B). For the 40-59 year age group, significant associations were seen with hypertension, coronary disease, recent hypotensive

episode, and recent diuretic use (Supplementary Table 3A). Among the 60-79 year age group, significant associations were noted with hypertension, coronary disease, peripheral vascular disease, cerebrovascular disease, congestive heart failure, diabetes mellitus, recent aortic or coronary surgery, collagen vascular disease, and recent use of diuretics, digoxin, and psychotropic medications (Supplementary Table 3B). Among those 80 years or older, significant associations were observed with hypertension, coronary disease, peripheral vascular disease, cerebrovascular disease, recent hypotensive episode, congestive heart failure, diabetes mellitus, and recent use of diuretics and digoxin (Supplementary Table 3B). Conversely, hyperlipidemia was protective in the 60-79 year and 80 and over age groups.

**Outcomes**

Surgery resulted in 19 patients with an end ileostomy, and 11 with an end colostomy. Among the 76 patients who underwent surgery, 71 (94%) had surgery the same day as diagnosis of IC. The median time to surgery was 0 days (range, 0 – 1042 days). All but two patients had their IC diagnosis and first bowel surgery within two days of diagnosis. Surgery for IC was associated with a 2.3 times higher mortality (hazard ratio [HR], 2.3; 95% CI, 1.6 – 3.1).

Cancer (breast, ovarian, lung, pancreatic, sarcoma, leukemia, colon, prostate) and ischemic colitis were the primary causes of death for 27 cases (11.3%) each. Cardiovascular causes (myocardial infarction, congestive heart failure, arrhythmia) were the primary cause of death in 50 patients (20.9%), while cerebrovascular/neurological disease (stroke, encephalopathy, dementia, cerebral hemorrhage) was the primary cause of death in 20 patients, Sixty-six patients (27.6%) died primarily due to respiratory disorders (pneumonia, respiratory failure, pulmonary embolism, chronic obstructive pulmonary disorder, bronchitis, pulmonary fibrosis, pulmonary hypertension, adult respiratory distress syndrome), and 46 patients (19.2%)

died of other causes such as sepsis, failure to thrive, natural cause, renal failure, uremia, multiple organ failure, hyperkalemia, peritonitis and liver disease.

In a multiple variable model of survival that included both IC cases and their matched controls, the presence of IC was associated with a threefold increased risk of death relative to controls, even after adjusting for age, gender, and comorbidities (Supplementary Table 3).

**Supplementary Table 1.** ICD-9 codes generally used to identify ischemic colitis in database studies.

| ICD-9 Code | Description |
|---|---|
| **557.0** | **Acute vascular insufficiency of intestine**<br><br>• Acute:<br>  o hemorrhagic enterocolitis<br>  o ischemic colitis, enteritis, or enterocolitis<br>  o massive necrosis of intestine<br>• Bowel infarction<br>• Embolism of mesenteric artery<br>• Fulminant enterocolitis<br>• Hemorrhagic necrosis of intestine<br>• Infarction of appendices epiploicae<br>• Intestinal gangrene<br>• Intestinal infarction (acute) (agnogenic) (hemorrhagic) (nonocclusive)<br>• Mesenteric infarction (embolic) (thrombotic)<br>• Necrosis of intestine<br>• Terminal hemorrhagic enteropathy<br>• Thrombosis of mesenteric artery |
| **557.9** | **Unspecified vascular insufficiency of intestine**<br><br>• Alimentary pain due to vascular insufficiency<br>• Ischemic colitis, enteritis, or enterocolitis NOS |

**Supplementary Table 2.** Prevalence of putative risk factors among 62 ischemic colitis cases younger than 50 years, 269 between 50 and 79 years, and 114 who were at least 80 years old.

| **Co-Morbidities** | **< 40 Years 27 (6%)** | **40 - 59 Years 89 (20%)** | **60 - 79 Years 215(48%)** | **≥ 80 Years 114 n (26%)** | **P-value*** |
|---|---|---|---|---|---|
| Hypertension | 3 (11) | 35 (39) | 142 (66) | 86 (75) | <0.001 |
| Coronary artery disease | 0 (0) | 9 (10) | 73 (34) | 56 (49) | <0.001 |
| Peripheral vascular disease | 0 (0) | 3 (3) | 47 (22) | 35 (31) | <0.001 |
| Cerebrovascular disease | 0 (0) | 4 (4) | 49 (23) | 38 (33) | <0.001 |
| Hypotensive episode past month | 4 (15) | 12 (13) | 39 (18) | 27 (24) | 0.28 |
| Congestive heart failure | 0 (0) | 3 (3) | 31 (14) | 36 (32) | <0.001 |
| Hyperlipidemia | 1 (4) | 23 (26) | 90 (42) | 32 (28) | <0.001 |
| Current smoking | 6 (22) | 23 (26) | 43 (20) | 7 (6) | 0.002 |
| Ever smoking (current plus former) | 11 (41) | 55 (62) | 129 (61) | 45 (40) | 0.001 |
| Diabetes mellitus | 2 (7) | 8 (9) | 44 (20) | 23 (20) | 0.04 |
| Irritable bowel syndrome | 2 (7) | 7 (8) | 14 (7) | 10 (9) | 0.90 |
| History of thromboembolism | 1 (4) | 4 (4) | 14 (7) | 10 (9) | 0.59 |
| Aortic aneurysm or coronary bypass surgery | 0 (0) | 1 (1) | 19 (9) | 13 (11) | 0.01 |
| Collagen vascular disease | 1 (4) | 1 (1) | 7 (3) | 3 (3) | 0.68 --- |
| Chronic obstructive pulmonary disease | 0 (0) | 6 (7) | 43 (20) | 18 (16) | 0.003 |
| Body mass index (>30) | 5 (22) | 24 (36) | 46 (28) | 14 (15) | 0.03 |
| **Medication Use (Past 30 Days)** | | | | | |
| Diuretics | 0 (0) | 17 (19) | 82 (38) | 61 (54) | <0.001 |
| Digoxin | 0 (0) | 1 (1) | 20 (9) | 19 (17) | 0.001 |
| NSAIDs | 5 (19) | 16 (18) | 33 (15) | 14 (12) | 0.68 |
| Estrogen replacement † | 3 (14) | 14 (24) | 24 (17) | 5 (6) | 0.04 |
| Psychotropic medications | 0 (0) | 1 (1) | 6 (3) | 3 (3) | 0.91 |
| Oral contraceptives † | 7 (33) | 1 (1) | 1 (1) | 0 (0) | <0.001 |
| Pseudoephedrine | 0 (0) | 1 (1) | 3 (1) | 0 (0) | 0.65 |
| Migraine medications | 0 (0) | 4 (4) | 3 (1) | 0 (0) | 0.10 |

| | | | | | |
|---|---|---|---|---|---|
| Gold | 0 (0) | 0 (0) | 0 (0) | 0 (0) | -- |

† Among women only, <40 (n =21 ), 40 – 59 (n=58), 60 – 79 (n = 140 ), ≥80 (n = 78).

**Supplementary Table 3A.** Examination of risk factors (comorbidities and medications) associated with ischemic colitis and age groups <40 years and 40-59 years

| Comorbidities/Medications | | <40 years | | | 40-59 years | |
|---|---|---|---|---|---|---|
| | Case, N (%) | Control, N (%) | Odds Ratio (95% CI) | Case, N (%) | Control, N (%) | Odds Ratio (95% CI) |
| Hypertension | 3 (11.1) | 3 (5.6) | 2.0 (0.4-9.9) | 35 (39.3) | 36 (20.2) | **2.8 (1.5-5.2)** |
| Coronary artery disease | | | | 9 (10.1) | 6 (3.3) | **3.3 (1.1-10.0)** |
| Peripheral vascular disease | | | | 3 (3.4) | 1 (0.6) | 6.0 (0.6-57.6) |
| Cerebrovascular disease | | | | 4 (4.5) | 2 (1.1) | 4.0 (0.7-21.8) |
| Hypotensive episode past month | 4 (14.8) | 1 (1.9) | 8.0 (0.8-71.5) | 12 (13.5) | 2 (1.1) | **12.0 (2.6-53.6)** |
| Congestive heart disease | | | | 3 (3.4) | 0 (0.0) | >999 (<0.0->999.9) |
| Hyperlipidemia | 1 (3.7) | 1 (1.9) | 2.0 (0.1-31.9) | 23 (25.8) | 51 (28.7) | 0.8 (0.4-1.5) |
| Diabetes mellitus | 2 (7.4) | 0 (0.0) | >999 (<0.0->999.9) | 8 (8.9) | 12 (6.7) | 1.4 (0.5-3.7) |
| Irritable bowel syndrome | 2 (7.4) | 0 (0.0) | >999 (<0.0->999.9) | 7 (7.9) | 7 (3.9) | 2.3 (0.7-7.4) |
| History of thromboembolism | 1 (3.7) | 0 (0.0) | >999 (<0.0->999.9) | 4 (4.5) | 1 (0.6) | 8.0 (0.8-71.5) |
| Aortic aneurysm or coronary artery bypass | | | | 1 (1.1) | 1 (0.6) | 2.0 (0.1-31.9) |
| Collagen vascular disease | 1 (3.7) | 0 (0.0) | >999 (<0.0->999.9) | 1 (1.1) | 0 (0.0) | >999 (<0.0->999.9) |
| Diuretics | 0 (0.0) | 1 (1.9) | >999 (<0.0->999.9) | 17 (19.1) | 15 (8.4) | **2.6 (1.2-5.7)** |
| Digoxin | | | | 1 (1.1) | 0 (0.0) | >999 (<0.0->999.9) |
| NSAIDS | 5 (18.5) | 6 (11.1) | 1.7 (0.5-6.2) | 16 (17.9) | 36 (20.2) | 0.8 (0.4-1.6) |
| Psychotropic medications | | | | 1 (1.1) | 0 (0.0) | >999 (<0.0->999.9) |
| Pseudoephedrine | | | | 1 (1.1) | 2 (1.1) | 1.0 (0.0-11.0) |
| Migraine medications | 0 (0.0) | 1 (1.9) | >999 (<0.0->999.9) | 4 (4.5) | 4 (2.3) | 2.0 (0.5-7.9) |
| Estrogen replacement | 3 (14.3) | 1 (2.4) | 6.0 (0.6-57.6) | 14 (24.1) | 29 (25.0) | 0.9 (0.4-2.0) |
| Oral contraceptives | 7 (33.3) | 8 (19.5) | 1.9 (0.6-5.9) | 1 (1.7) | 9 (7.8) | 0.2 (0.0-1.6) |

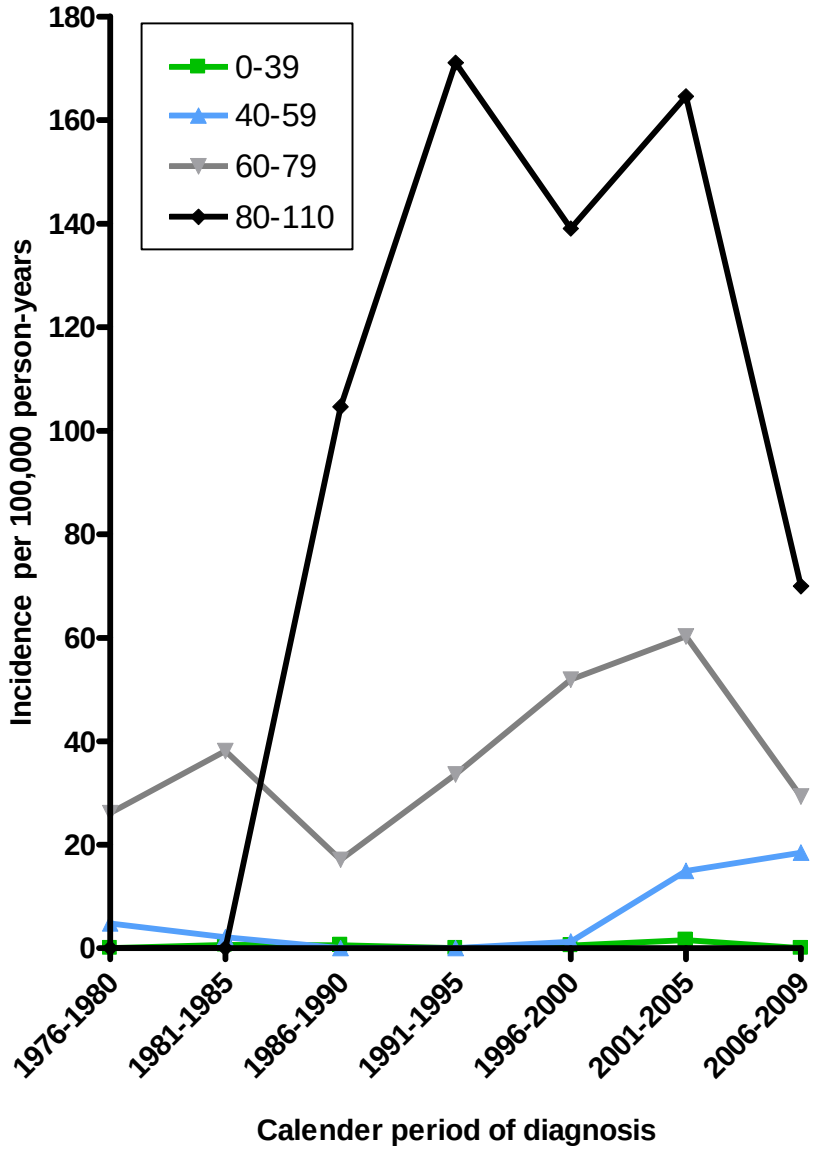
**Supplementary Table 3B.** Examination of risk factors (comorbidities and medications) associated with ischemic colitis and age groups 60-80 years and >80 years

| Comorbidities/Medications | | 60-79 years | | | ≥80 years | |
|---|---|---|---|---|---|---|
| | Case, N (%) | Control, N (%) | Odds Ratio (95% CI) | Case, N (%) | Control, N (%) | Odds Ratio (95% CI) |
| **Hypertension** | 142 (66.7) | 217 (50.5) | **1.9 (1.3-2.6)** | 86 (75.4) | 134 (58.8) | **2.1 (1.3-3.6)** |
| **Coronary artery disease** | 73 (34.0) | 71 (16.5) | **2.6 (1.7-3.8)** | 56 (49.1) | 64 (28.1) | **2.5 (1.5-4.1)** |
| **Peripheral vascular disease** | 47 (21.9) | 20 (4.7) | **8.0 (4.0-16.0)** | 35 (30.7) | 17 (7.5) | **7.9 (3.5-18.1)** |
| **Cerebrovascular disease** | 49 (22.8) | 21 (4.9) | **5.6 (3.2-10.0)** | 38 (33.3) | 47 (20.6) | **1.8 (1.4-3.1)** |
| **Hypotensive episode past month** | 39 (18.1) | 0 (0.0) | >999 (<0.0->999.9) | 27 (23.7) | 2 (0.9) | **27.0 (6.4-113.5)** |
| **Congestive heart disease** | 31 (14.4) | 17 (4.0) | **4.3 (2.2-8.3)** | 36 (31.6) | 26 (11.4) | **3.5 (1.9-6.3)** |
| **Hyperlipidemia** | 90 (41.9) | 220 (51.2) | 0.68 (0.4-0.90) | 32 (28.7) | 86 (37.7) | 0.6 (0.3-1.0) |
| **Diabetes mellitus** | 44 (20.5) | 54 (12.6) | **1.8 (1.1-2.9)** | 23 (20.2) | 24 (10.5) | **2.3 (1.2-4.6)** |
| **Irritable bowel syndrome** | 14 (6.5) | 25 (5.8) | 1.1 (0.5-2.3) | 10 (8.8) | 17 (7.5) | 1.2 (0.5-2.7) |
| **History of thromboembolism** | 14(6.5) | 17 (4.0) | 1.6 (0.8-3.4) | 10 (8.8) | 13 (5.7) | 1.6 (0.6-3.8) |
| **Aortic aneurysm or coronary artery bypass** | 19 (8.8) | 15 (3.5) | **2.8 (1.3-5.9)** | 13 (11.4) | 13 (5.7) | 2.1 (0.9-4.8) |
| **Collagen vascular disease** | 7 (3.3) | 1 (0.2) | **14.0 (1.7-113.7)** | 3 (2.6) | 2 (0.9) | 3.0 (0.5-17.9) |
| **Diuretics** | 82 (38.1) | 125 (29.1) | **1.4 (1.0-2.0)** | 61 (53.5) | 94 (41.2) | **1.6 (1.0-2.5)** |
| **Digoxin** | 20 (9.3) | 11 (2.6) | **4.4 (1.9-10.2)** | 19 (16.7) | 15 (7.0) | **2.8 (1.3-5.9)** |
| **NSAIDS** | 33 (15.4) | 78 (18.1) | 0.8 (0.5-1.2) | 14 (12.3) | 34 (14.9) | 0.7 (0.4-1.5) |
| **Psychotropic medications** | 6 (2.8) | 3 (0.7) | **4.0 (1.0-15.9)** | 2 (2.6) | 3 (1.3) | 0.7 (0.2-2.1) |
| **Pseudoephedrine** | 3 (1.4) | 4 (0.9) | 1.5 (0.3-6.7) | 0 (0.0) | 1 (0.4) | 0.0 (0.0->999.9) |
| **Migraine medications** | 3 (1.4) | 0 (0.0) | >999 (<0.0->999.9) | 0 (0.0) | 1 (0.4) | 0.0 (0.0->999.9) |
| **Estrogen replacement** | 24 (17.1) | 47 (16.6) | 1.0 (0.5-1.7) | 5 (6.4) | 13 (8.4) | 0.7 (0.2-2.1) |
| **Oral contraceptives** | 1 (0.7) | 6 (2.1) | 0.3 (0.0-2.7) | 0 (0.0) | 2 (1.3) | 0.0 (0.0->999.9) |

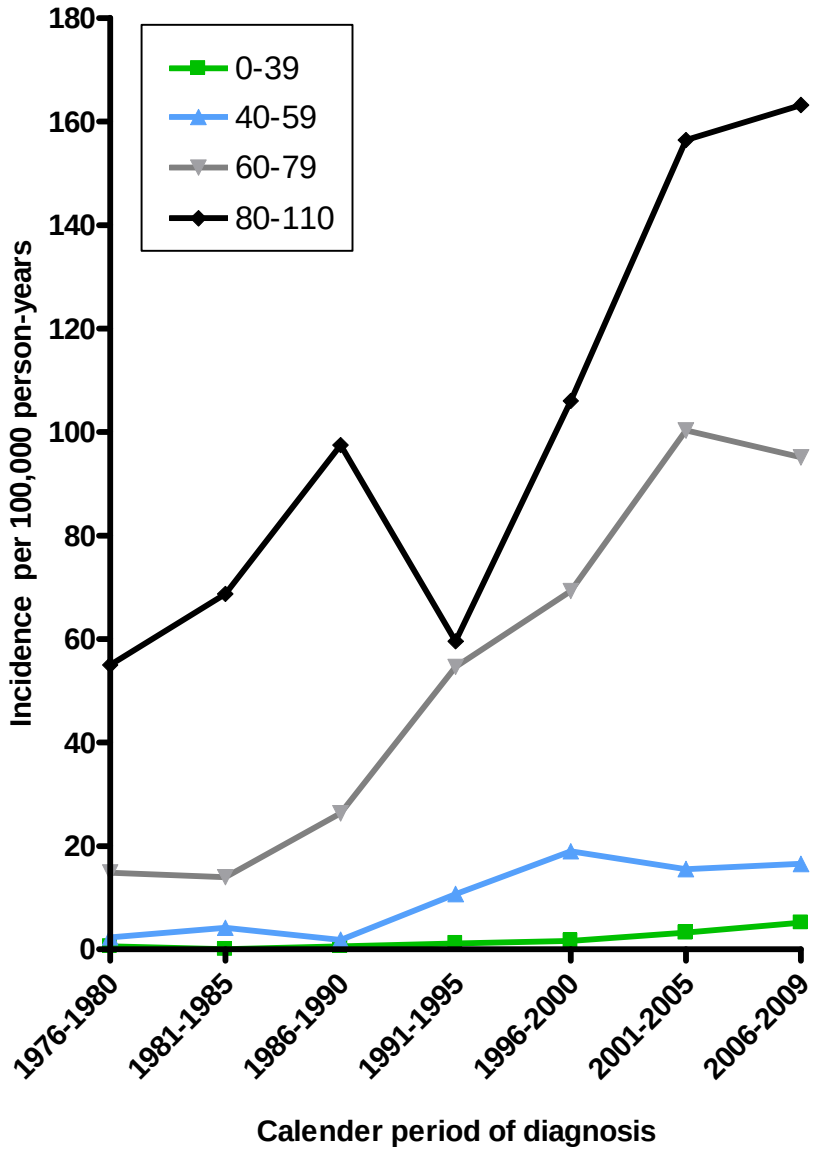
**Supplementary Table 4:** Multiple variable model of survival among ischemic colitis cases and their age- and gender-matched controls, adjusting for age, gender, and various comorbidities.

| **Variables** | **Hazard Ratio** | **95% CI** |
|---|---|---|
| Gender (male) | 1.2 | 0.9-1.5 |
| Age (40-60) | 4.33 | 1.0-18.7 |
| 60-80 | 11.64 | 2.8-48.07 |
| >80 | 57.58 | 13.9-238.3 |
| <40 | - | - |
| Hypertension | 1.01 | 0.8-1.2 |
| Coronary artery disease | 1.66 | 1.2-2.1 |
| Peripheral vascular disease | 1.31 | 0.9-1.7 |
| Cerebrovascular disease | 1.54 | 1.1-2.0 |
| Hypotensive episode past month | 1.58 | 1.1-2.1 |
| Congestive heart failure | 1.96 | 1.4-2.6 |
| Hyperlipidemia | 0.78 | 0.6-0.9 |
| smoking (current) | 1.22 | 0.8-1.7 |
| former | 1.24 | 0.98-1.5 |
| Diabetes mellitus | 1.34 | 1.0- 1.8 |
| Irritable bowel syndrome | 0.69 | 0.4-1.0 |
| History of thromboembolism | 1.19 | 0.8-1.7 |
| Aortic aneurysm or coronary bypass surgery | 1.18 | 0.7-1.7 |
| Collgen vascular disease | 1.5 | 0.7-3.0 |
| COPD | 2.97 | 2.1-4.0 |
| Obese | 0.96 | 0.7-1.2 |
| Status (Case) | 3 | 2.3-3.8 |
| Control | 1.0 | (ref) |

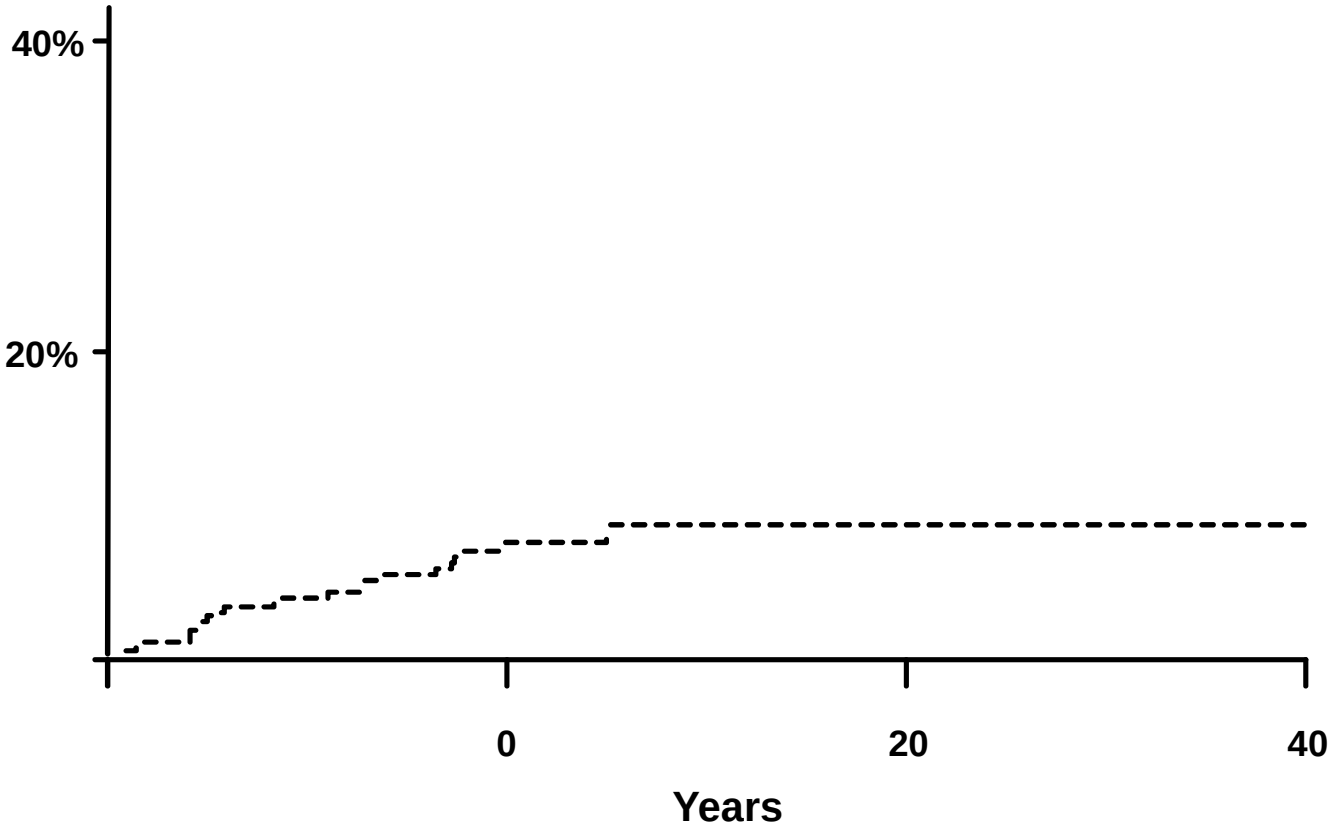
**Supplementary Figure 1A.** Sex-specific incidence of ischemic colitis in men from Olmsted County, Minnesota, 1976-2009, by age and calendar period (includes definite and probable cases).



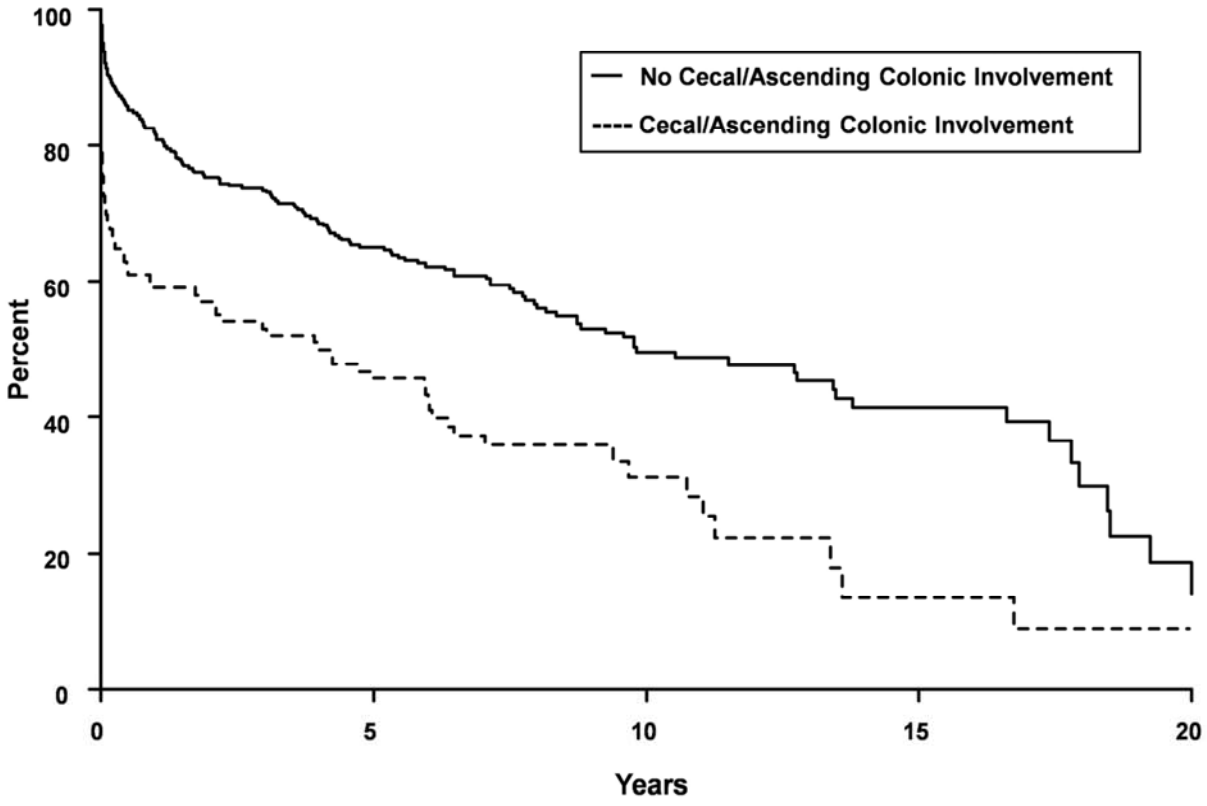
**Supplementary Figure 1B.** Gender-specific incidence of ischemic colitis in women from Olmsted County, Minnesota, 1976-2009, by age and calendar period (includes definite and probable cases).

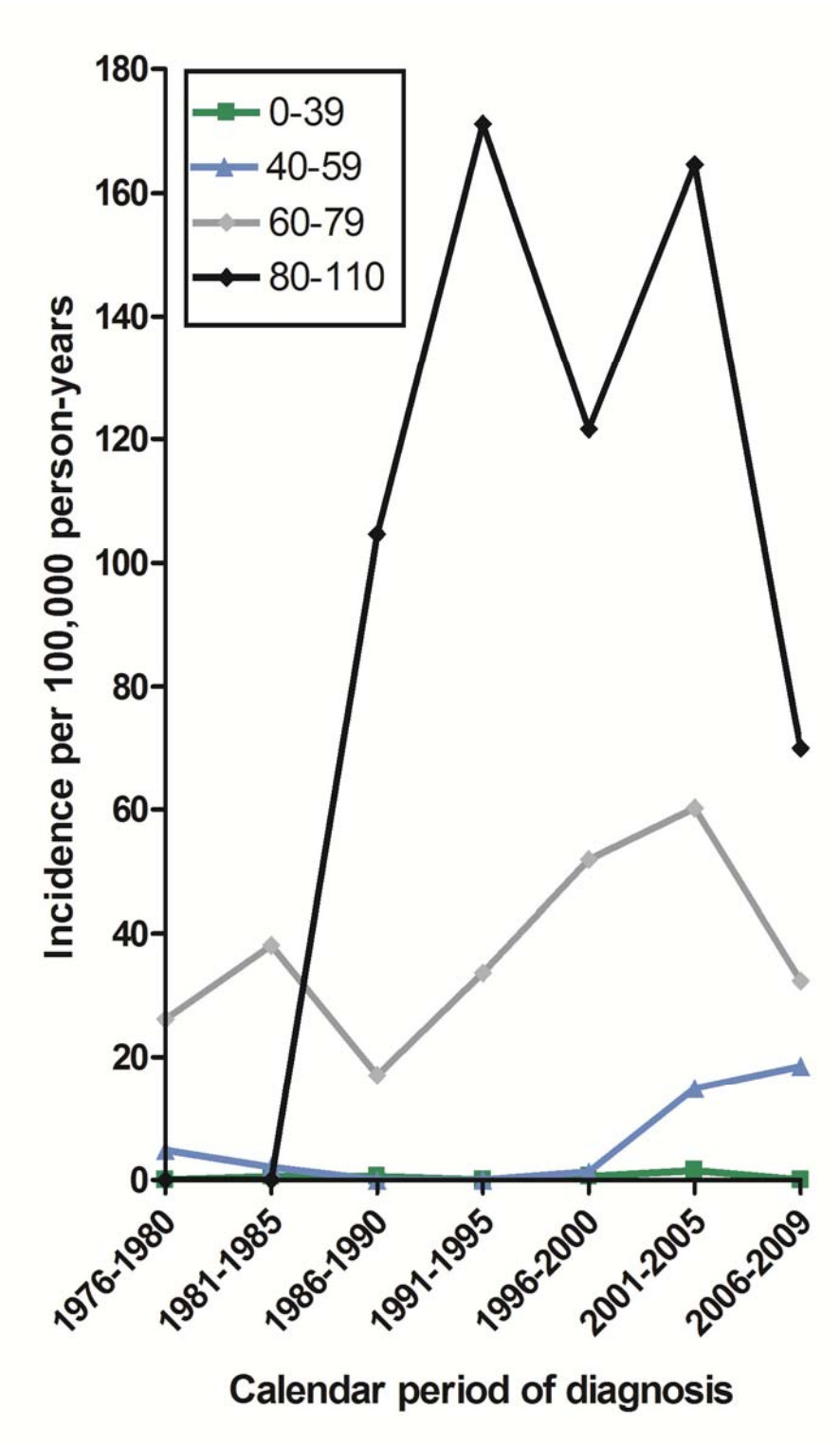


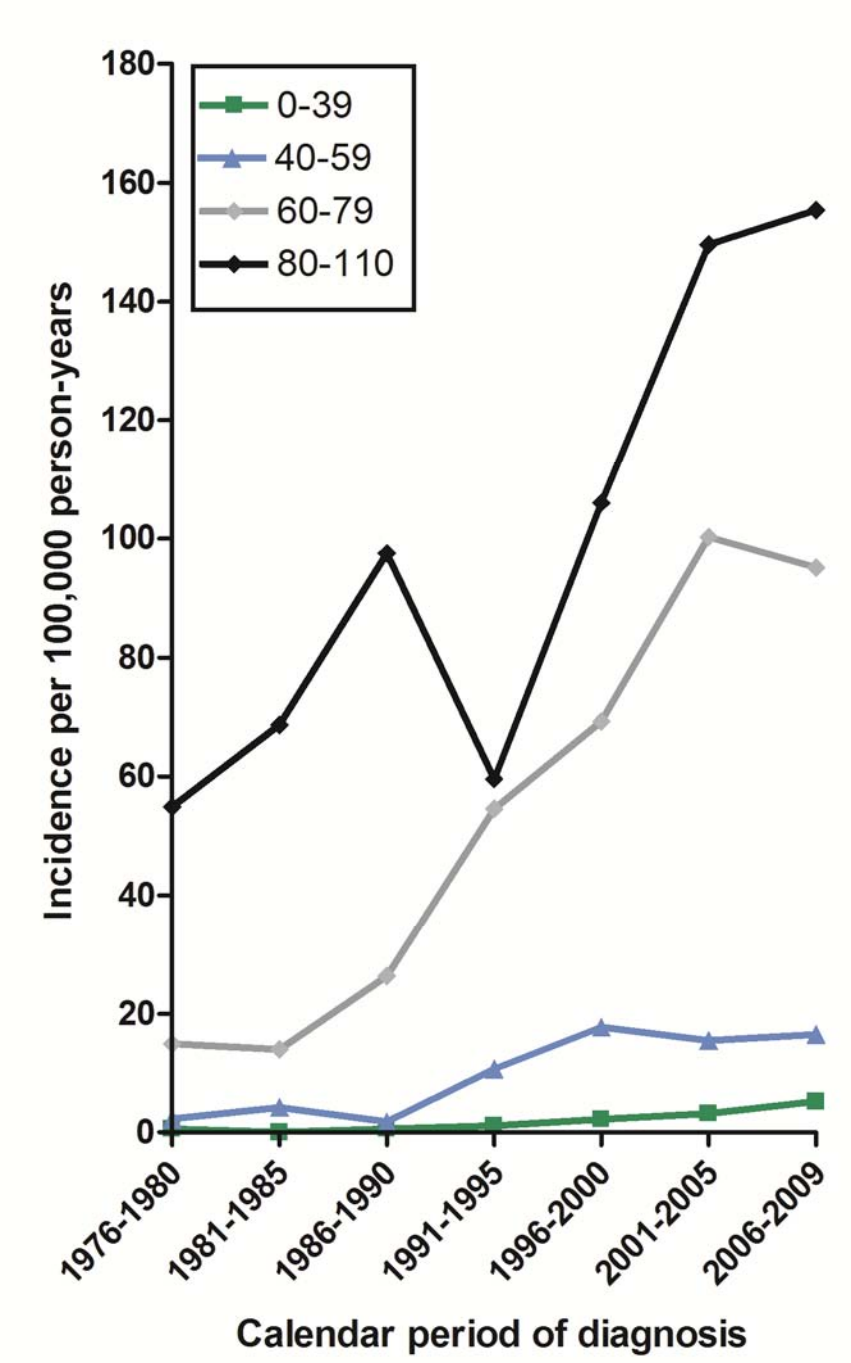
**Supplementary Figure 2.** Cumulative probability of recurrence of ischemic colitis following the first episode among Olmsted County, Minnesota, residents, 1976-2009.



**Supplementary Figure 3.** Survival of patients with and without ascending colon/cecal involvement in patients with ischemic colitis among Olmsted County, Minnesota, residents, 1976-2009.




0-39
40-59
60-79
80-110
Incidence per 100,000 person-years
180
160
140
120
100
80
60
40
20
0
1976-1980
1981-1985
1986-1990
1991-1995
1996-2000
2001-2005
2006-2009
Calendar period of diagnosis


0-39
40-59
60-79
80-110
Incidence per 100,000 person-years
180
160
140
120
100
80
60
40
20
0
1976-1980
1981-1985
1986-1990
1991-1995
1996-2000
2001-2005
2006-2009
Calendar period of diagnosis