

## INTRODUCTION

- Symptoms of inflammatory bowel disease (IBD) and irritable bowel syndrome (IBS) can often overlap.
- IBD patients with documented remission may continue to experience IBS symptoms of abdominal pain, bloating and altered bowel function.
- Patients with IBS were found to have a disproportionate high prevalence abdominal and pelvic surgeries than the general population, such as cholecystectomy and appendectomy.

## AIM

- To determine the history of surgical interventions and gastrointestinal symptoms of patients with concomitant IBD and IBS and compare with patients with IBD alone.

## METHOD

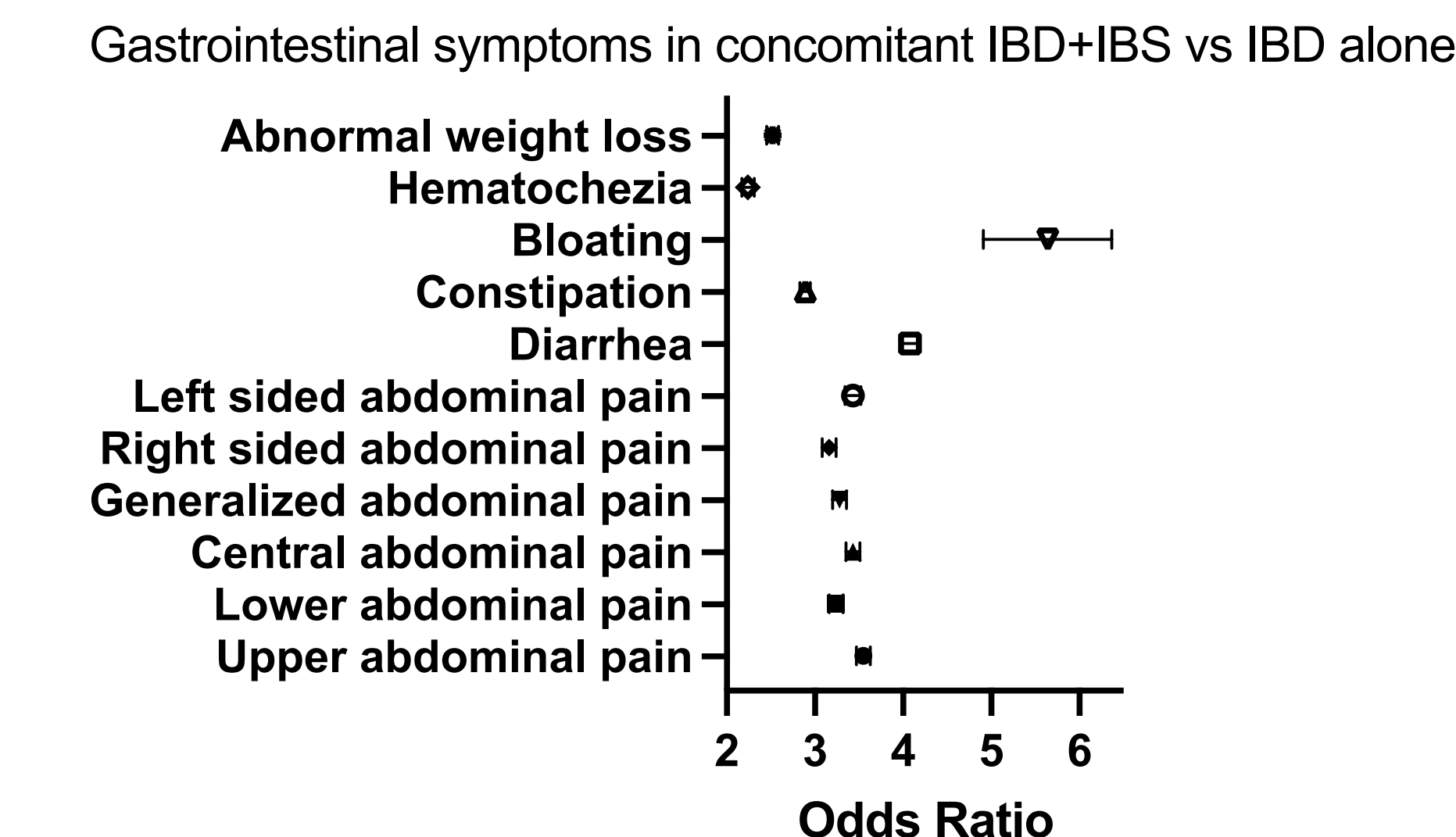
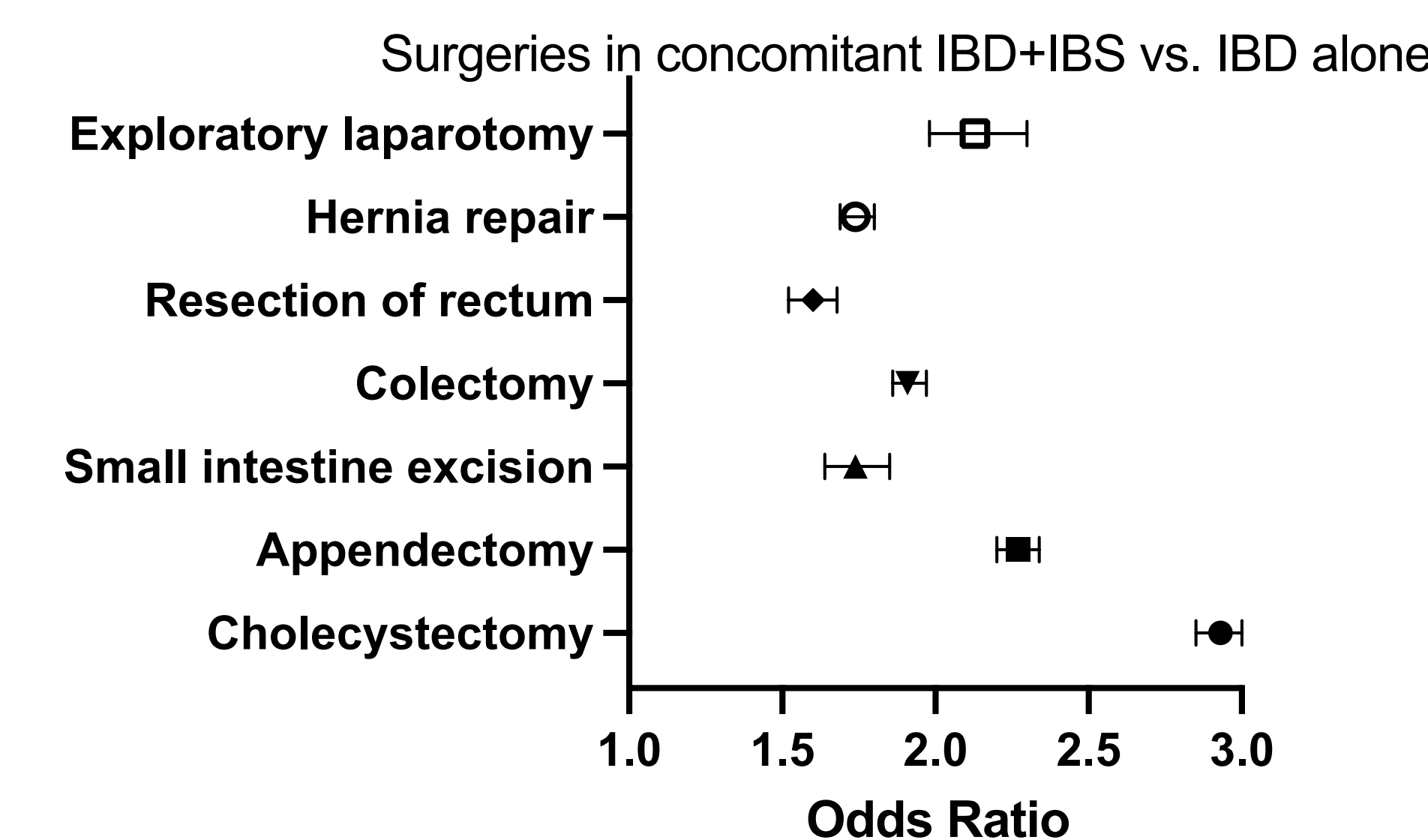
- A population-based study was performed using IBM Explorys (1999-2022), a large pooled de-identified database with a patient information from more than 300 hospitals across the US
- We identified patients with concomitant diagnosis of IBD and IBS (IBD+IBS).
- The control group consisted of patients with IBD without IBS.
- We collected surgical history and common gastrointestinal symptoms in both cohorts.
- Categorical data was presented as number of subjects and percentages.
- Odds ratio (OR) at 95% confidence interval was reported.

## RESULTS

- We identified a total of 366,420 patients with IBD, of which 38,650 (10.5%) patients were reported to have coexisting IBD and IBS, and 327,770 (89.5%) patients had IBD without a concurrent diagnosis of IBS.
- Patients with both IBD and IBS are more likely to have undergone surgical intervention when compared to patients with IBD alone, including cholecystectomy (24.3 vs 9.9%), appendectomy (15.9% vs 7.7%), small intestine excision (3.3 vs 1.9%), colectomy (17.2% vs 9.8%), rectal resection (5.1 vs 3.2%), hernia repair (11.5 vs 7.0%) and exploratory laparotomy (2.2 vs 1.1%) (all p value < 0.0001).
- Compared to the patients with IBD alone, patients with coexisting IBD and IBS are more likely to report gastrointestinal symptoms, including abdominal pain (23.1-38.8% vs 8.1-15.2%), diarrhea (66.9% vs 33.2%), constipation (36.2% vs 16.4%), bloating (0.9% vs 0.2%), hematochezia (16.2 vs 8.0%) and abnormal weight loss (19.2 vs 8.6%) (all p value < 0.0001).

**Table 1 Surgeries and GI symptoms in patients with IBD+IBS vs IBD alone**

		IBD with IBS (N=38650)	%	IBD without IBS (N=327770)	%	OR	95% CI	P
Surgeries	Cholecystectomy	9390	24.3%	32380	9.9%	2.93	2.85-3.00	< 0.0001
	Appendectomy	6140	15.9%	25190	7.7%	2.27	2.20-2.34	< 0.0001
	Small intestine excision	1260	3.3%	6220	1.9%	1.74	1.64-1.85	< 0.0001
	Colectomy	6650	17.2%	32170	9.8%	1.91	1.86-1.97	< 0.0001
	Resection of rectum	1960	5.1%	10610	3.2%	1.60	1.52-1.68	< 0.0001
	Hernia repair	4460	11.5%	22810	7.0%	1.74	1.69-1.80	< 0.0001
	Exploratory laparotomy	860	2.2%	3460	1.1%	2.13	1.98-2.30	< 0.0001
Symptoms	Upper abdominal pain	14990	38.8%	49690	15.2%	3.55	3.47-3.63	< 0.0001
	Lower abdominal pain	12740	33.0%	43210	13.2%	3.24	3.16-3.32	< 0.0001
	Central abdominal pain	11610	30.0%	36460	11.1%	3.43	3.35-3.52	< 0.0001
	Generalized abdominal pain	10690	27.7%	34190	10.4%	3.28	3.20-3.37	< 0.0001
	Right sided abdominal pain	10600	27.4%	35020	10.7%	3.16	3.08-3.24	< 0.0001
	Left sided abdominal pain	8940	23.1%	26410	8.1%	3.43	3.34-3.53	< 0.0001
	Diarrhea	25860	66.9%	108690	33.2%	4.08	3.99-4.17	< 0.0001
	Constipation	13990	36.2%	53840	16.4%	2.89	2.82-2.95	< 0.0001
	Bloating	330	0.9%	500	0.2%	5.64	4.90-6.48	< 0.0001
	Hematochezia	6260	16.2%	26060	8.0%	2.24	2.17-2.31	< 0.0001
	Abnormal weight loss	7420	19.2%	28230	8.6%	2.52	2.45-2.59	< 0.0001



## CONCLUSIONS

- Surgery and gastrointestinal symptoms appear to be more common in patients with concomitant IBD and IBS when compared to patients with IBD alone.
- Targeted therapies may help to reduce the need for unnecessary surgical intervention and improve the quality of life of patients with overlapping IBD and IBS.

## REFERENCES

1. Spiller R, Major G. IBS and IBD - separate entities or on a spectrum? Nat Rev Gastroenterol Hepatol 2016;13:613-21.
2. Hasler WL, Schoenfeld P. Systematic review: Abdominal and pelvic surgery in patients with irritable bowel syndrome. Aliment Pharmacol Ther 2003;17:997-1005.

## CONTACT INFORMATION

Yuhan Fu Email: [yfu@metrohealth.org](mailto:yfu@metrohealth.org)

Gengqing Song Email: [songgavin2010@gmail.com](mailto:songgavin2010@gmail.com)