

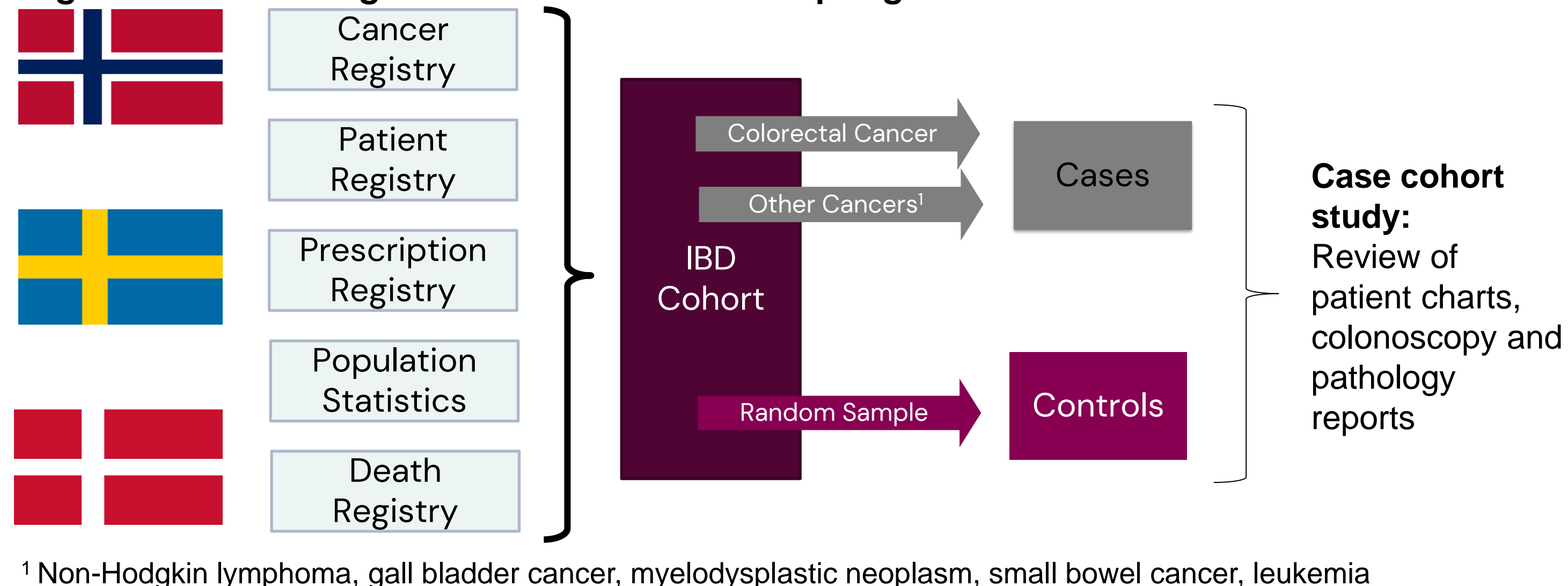
# Shifts in the Management of Inflammatory Bowel Disease in Scandinavia, 1982 – 2016

J. Young<sup>1</sup>, L. Mørkved Helsingen<sup>2</sup>, E. Refsum<sup>3</sup>, V. Perrin<sup>4</sup>, R. Hvidbjerg Gantzel<sup>5</sup>, A. Hogden<sup>4</sup>, A. Berglund<sup>1</sup>, H. Adami<sup>2,1</sup>, S. Brackman, T. Jess<sup>6</sup>, J. Blom<sup>4</sup>, M. Hernán<sup>7,1</sup>, M. Kalager<sup>2</sup>

1. Unit of Epidemiology, IMM, Karolinska Institutet; 2. University of Oslo, Norway; 3. National Institute of Public Health, Norway; 4. Karolinska Institutet, Sweden; 5. Aarhus University, Denmark; 6. Aalborg University Hospital, Denmark; 7. Harvard T.H. Chan School of Public Health; USA

Advancements in endoscopic techniques and pharmacotherapies for inflammatory bowel disease (IBD) have emerged, but their impact on clinical care remains unclear. We aim to reveal changes in IBD management practices.

Figure 1. Data linkage and case-control sampling



We established an IBD cohort enhancing registry data with detailed structured medical chart review

## In more recent periods we see:

- More extensive endoscopy procedures
- A shift away from surveillance towards clinically indicated endoscopies
- Increased use of immunosuppressants/biologics
- Decreased colon resection rates in individuals with Crohn's Disease

Table 1. Endoscopy exams occurring prior to and within 90 days of IBD diagnosis, by time period

Endoscopic Exams	Crohn's Disease		Ulcerative Colitis	
	Pre-biologic Period N=109	Post-biologic Period N=186	Pre-biologic Period N=186	Post-biologic Period N=254
Number of patients with at least 1 Endoscopy (%)	71 (65.1)	167 (89.8)	150 (80.6)	239 (94.1)
Type of lower endoscopy, %				
Colonoscopy	70.4	91.6	68	85.4
Sigmoidoscopy	16.9	12.6	12.7	20.1
Rectoscopy	36.6	10.8	54.7	20.9
Other*	4.2	4.2	3.3	2.9
Indication, %				
Clinical	88.7	98.2	96.7	96.7
IBD-surveillance	11.3	6.6	22	11.3
Other **	7	3	0.7	4.2
Unknown	5.6	1.2	0.7	3.3

Figure 2. Cumulative proportion of patients undergoing colon resection surgery during follow-up, by time period

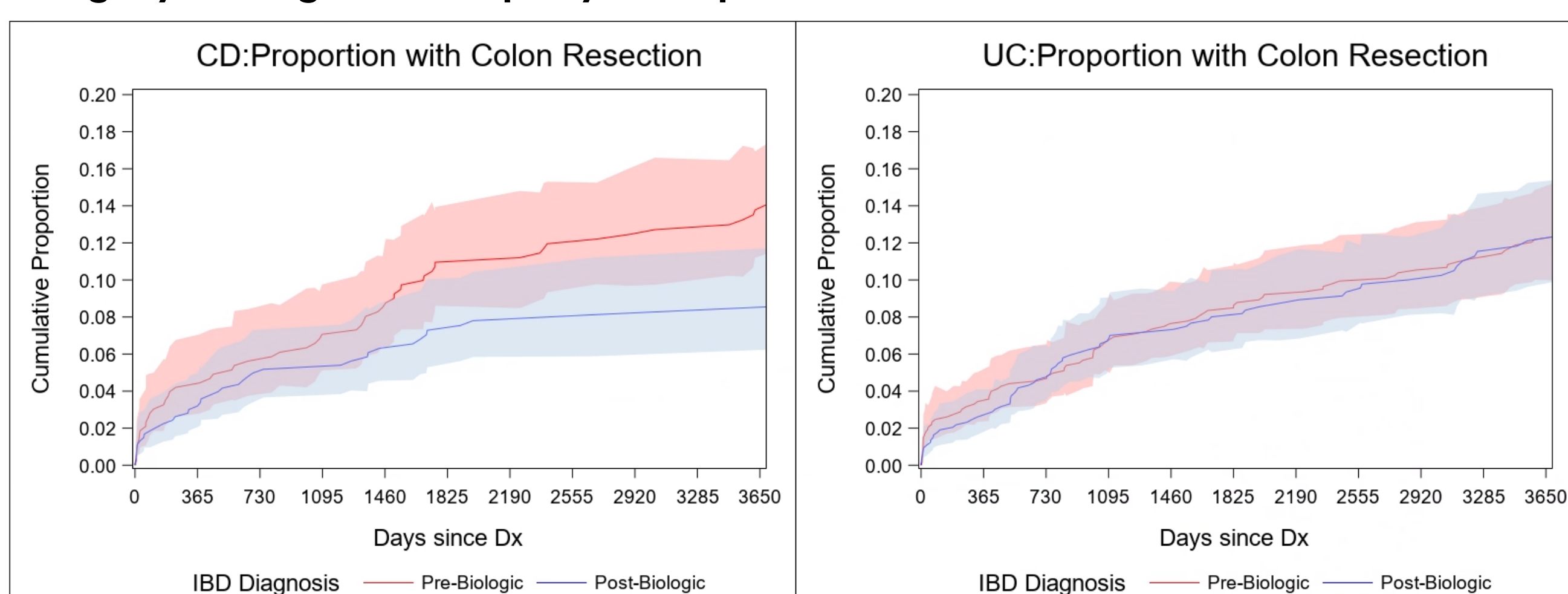
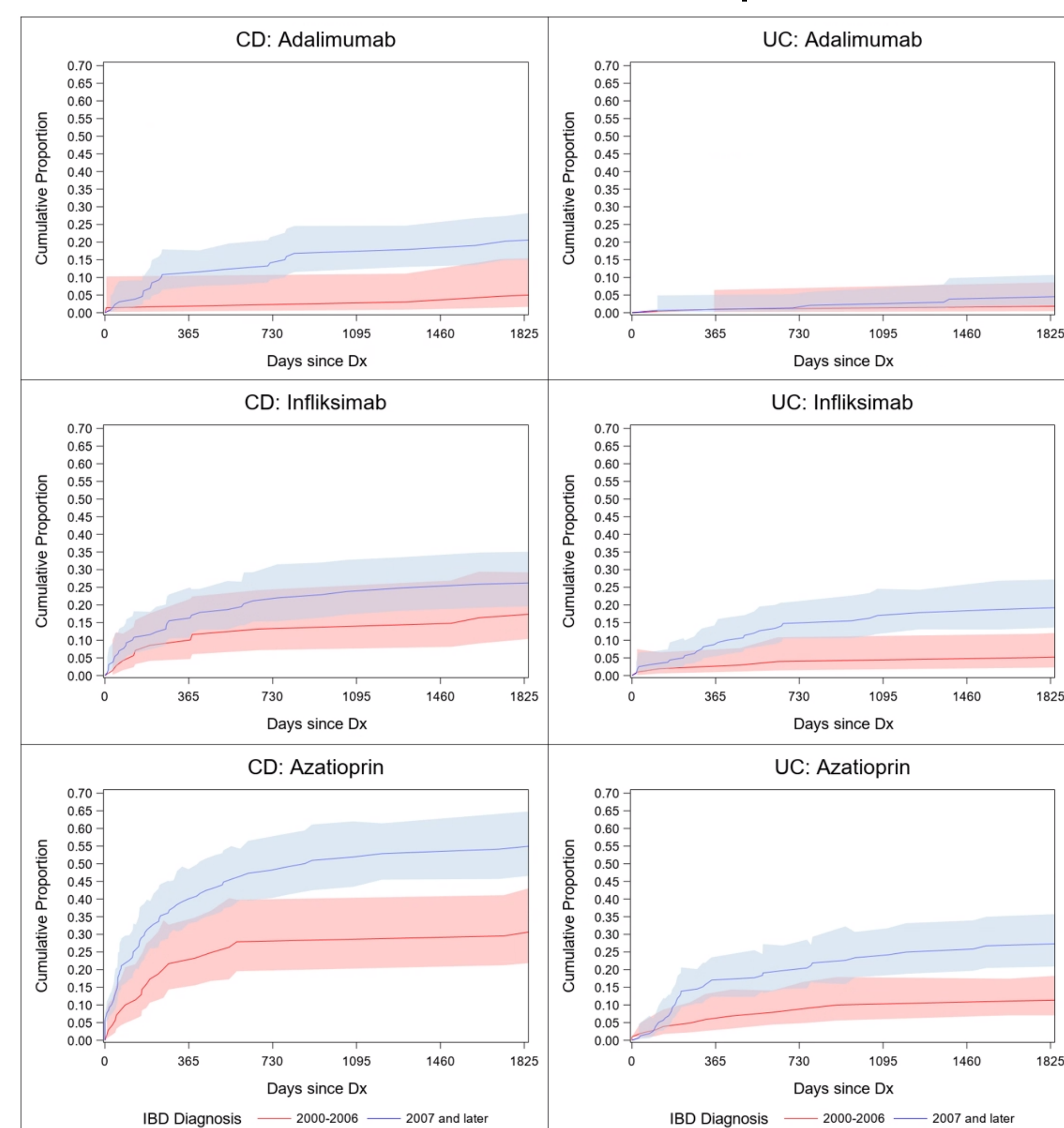


Figure 1. Proportion of patients initiating azathioprine, infliximab, or adalimumab over follow-up



## Methods

- All individuals diagnosed with IBD between 1987 – 2016 were identified from nationwide registries
- Detailed chart abstraction was conducted for a randomly selected representative sample
- We stratify by Crohn's Disease (CD) and Ulcerative colitis (UC), and compare patients diagnosed in the pre-biologic period (1982-1999) and the post-biologic period (2000-2016).



Jessica C. Young  
Postdoctoral Researcher  
CAUSALab, Department of Epidemiology  
Institutet of Environmental Medicine  
Karolinska Institutet  
E-mail: jessica.young@ki.se

