Is There a Lack of Dietary Data Collection in Real-world IBD Studies? Literature Review and Future Considerations

PCR147

Neil R. Brett,[1] Garthiga Manickam,[1] Marielle Bassel,[1] Daniela Castano,[2] John S. Sampalis[1]

[1]Thermo Fisher Scientific, Montreal, Canada; [2]Thermo Fisher Scientific, Waltham, MA, USA

Background

- Leading gastroenterology associations (e.g., American Gastroenterological Association [AGA] and the European Crohn's and Colitis Organization [ECCO]), have recent guidelines that highlight evidence showing that healthy dietary patterns in patients with inflammatory bowel disease (IBD) can help manage their disease, reduce progression, or induce remission.[1,2]
- However, due to cost, data availability, and collection burden, it is unclear how often diet is ascertained in observational IBD studies, and the methods used to collect the data.
- This gap assessment will help guide recommendations for integrating dietary data into real-world evidence and applying to clinical practice.

Objective

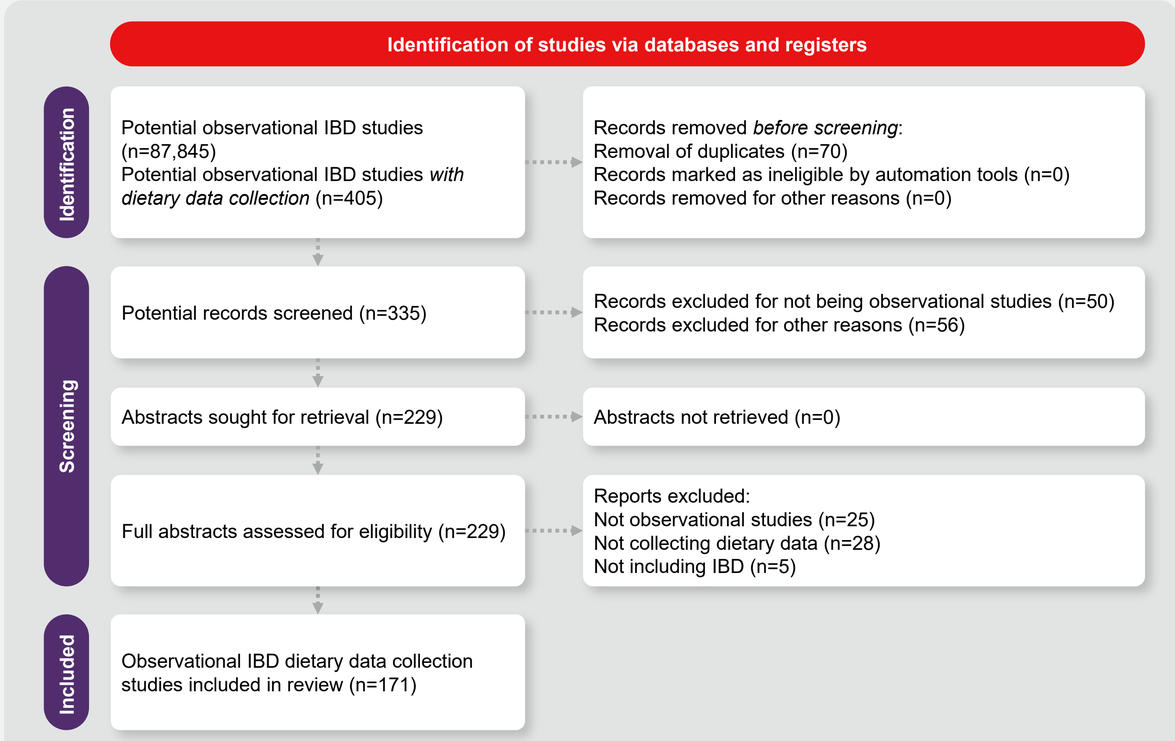
- **The objective was to describe dietary data collection methods and purposes in observational IBD studies and provide considerations to enhance future research.**

Methods

- A targeted literature review was conducted to identify observational IBD studies that collected dietary data. Searches were performed for IBD or ulcerative colitis (UC) or Crohn's disease (CD) and any of the following: 'nutrition', 'diet', 'dietary', 'food', 'diet record' 'diet questionnaire'.
- Records were retrieved from the databases (Embase and MEDLINE) and de-duplicated. Two individuals independently reviewed the remaining abstracts and full-text studies to ensure they met the search criteria and extracted key information, such as population, disease, data collection methods, and study outcomes.

Results

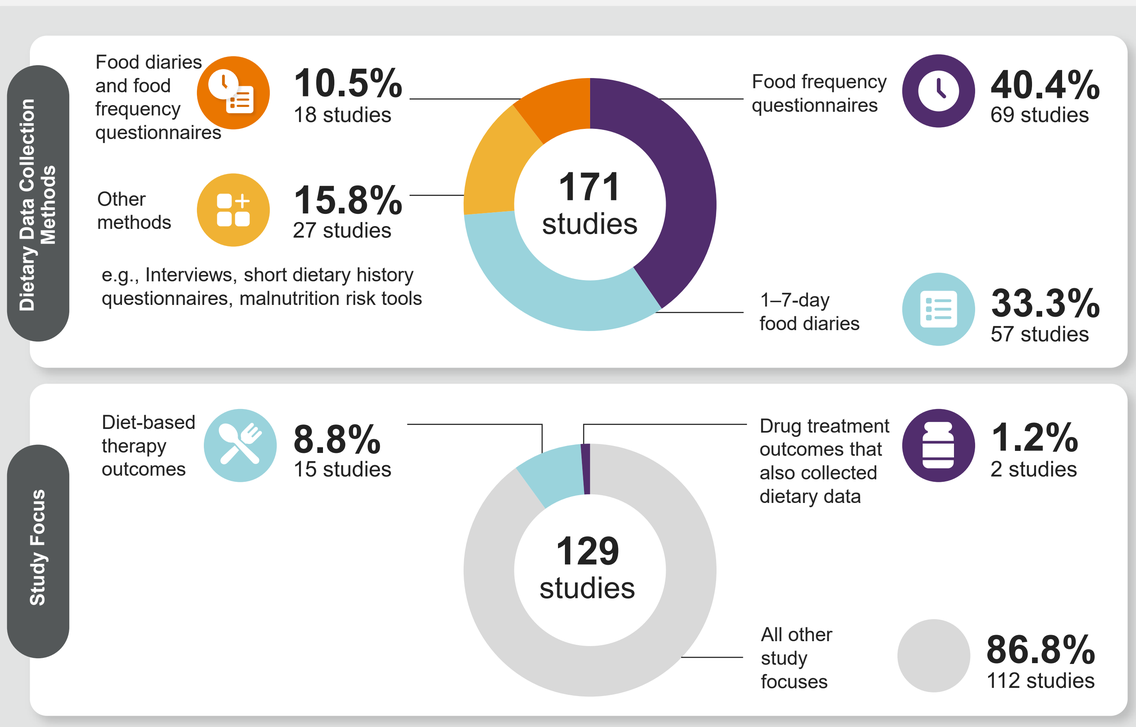
Figure 1. PRISMA Flow Diagram of Abstract Screening



Abbreviations: IBD = inflammatory bowel disease; PRISMA = Preferred Reporting Items for Systematic Reviews and Meta-analyses

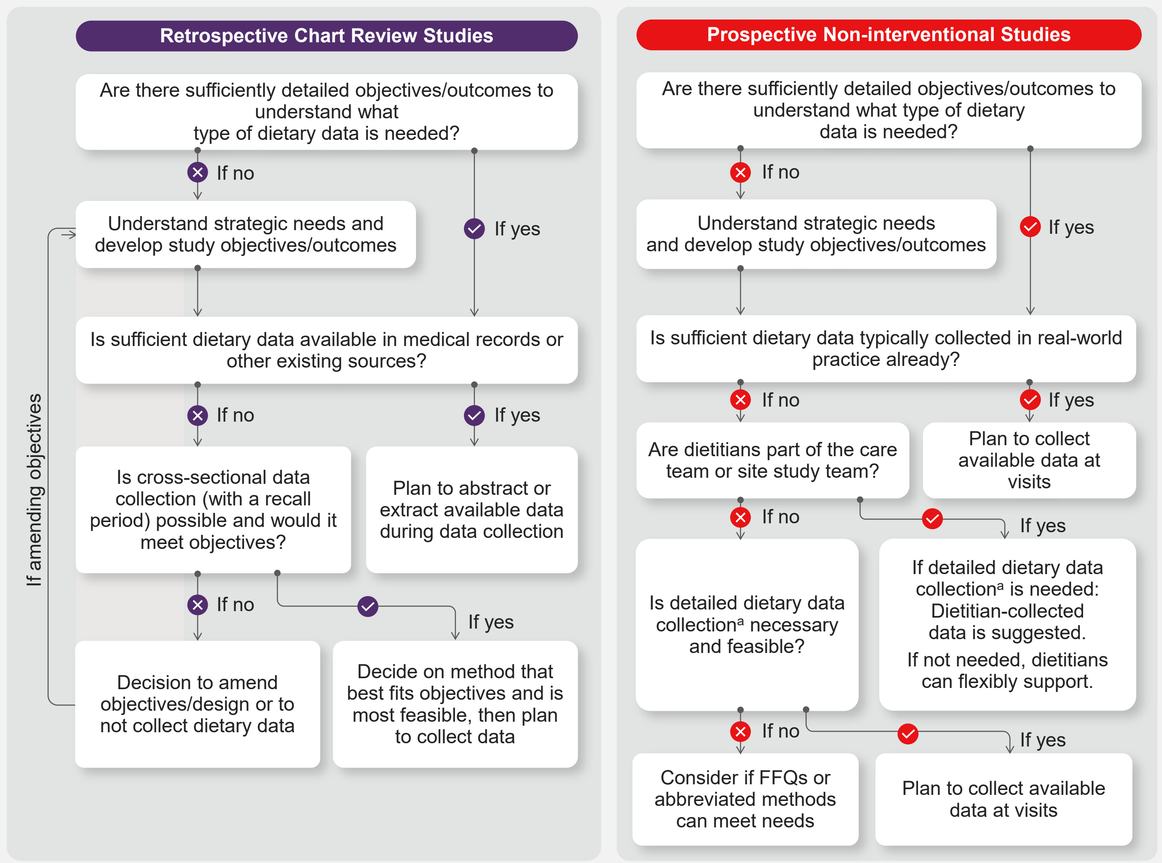
- Of the 171 studies included, 40 (23.4%) studies were in CD, 24 (14.0%) were in UC, and 107 (62.6%) included both. One-hundred and nineteen studies (69.6%) focused on adults, while the remainder included children or both age groups.

Figure 2. Data Collection Methods



Key Finding (Figure 2): Despite known links between diet and IBD outcomes, only 1.2% of reviewed studies collected dietary data to support assessment of drug treatment effectiveness.

Figure 3. Flow Diagrams For Selecting Appropriate Dietary Data Collection Methods For Future Studies



Abbreviations: FFQ = Food Frequency Questionnaire. [a]Detailed dietary data collection could include 24-hour recalls or food diaries.

Figure 4. Considerations For Selecting Dietary Data Collection Methods

Alignment of Dietary Data Collection to Objectives/Outcomes	• To assess general dietary patterns (e.g., diet frequency, dietary quality) and association with outcomes – Use brief tools such as FFQs or short questionnaires	• To associate specific nutrients with disease outcomes – Use detailed methods (e.g., food diaries, multiple 24-hour recalls)	
Leveraging Existing Data Sources (When Possible)	• Patients may have some dietary data in clinical records: – Inpatients or those receiving enteral/parenteral nutrition – Pediatric or adult patients on structured dietary interventions – Patients with diagnosed malnutrition or under care of dietitians • Feasibility checks needed to determine level of detail available		
Cross-sectional Data Collection in Retrospective Studies	• Use validated FFQs: – Low burden, capture usual intake over the past 30 days to 1 year – Can be administered electronically or on paper	• Limitations: – Potential recall bias – FFQ recall period may not align with entire follow-up period – Requires patient consent	
Prospective Data Collection	• FFQs or brief dietary surveys at multiple timepoints: – Capture general intake patterns	• Food diaries (3–7 days) or 24-hour recalls: – Best for tracking detailed macro/micronutrient intake – Require more participant effort	• Involving dietitians is strongly recommended: – Improves data quality – Supports flexible recall methods (in-person/phone) – Reduces participant burden
Technology Considerations	• Nutrition-specialized digital platforms: – Guided input (e.g., prompts, pictures) reduces missing data – Enables real-time data analysis and monitoring	• Emerging AI tools (e.g., food image recognition): – Improve data quality through visual verification – Allows proxy input (e.g., caregivers, parents) – May reduce patient burden	

Abbreviations: AI = artificial intelligence; FFQ = Food Frequency Questionnaire

Conclusions

- **Dietary data collection methods varied among observational IBD studies.**
- **Few studies collected dietary data when evaluating drug treatment outcomes.**
- **Future study designs should align data collection methods with research objectives/ population and balance participant burden with data quality**
- **Many real-world limitations can be minimized through planning—including early input from clinical, nutrition, and operational experts during study design and start-up.**

References

1. Hashash JG, et al. *Gastroenterology*. 2024 Mar;166(3):521-532.
2. Vaios Svolos V, et al. *J Crohns Colitis*. Published online July 12, 2025.

Disclosures

NRB and **NDM** are employees of PPD™ Observational Studies, Thermo Fisher Scientific. **GM** is an employee of PPD Evidera™ Health Economics & Market Access. **DC** is employed by PPD clinical research business of Thermo Fisher Scientific. Funding provided by Thermo Fisher Scientific.

Editorial and graphic design support were provided by Michael Grossi and Richard Leason of Thermo Fisher Scientific.

Presented at ISPOR —The Professional Society for Health Economics and Outcomes Research—Europe | 9–12 November 2025 | Glasgow, Scotland, UK