

# Persistence of gastrointestinal symptoms in irritable bowel syndrome and ulcerative colitis: from risk factors to modification

<b>Submission date</b> 12/07/2021	<b>Recruitment status</b> No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 21/07/2021	<b>Overall study status</b> Completed	<input checked="" type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 02/01/2026	<b>Condition category</b> Digestive System	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

Current plain English summary as of 26/11/2021:

Background and study aims:

Ulcerative colitis (UC) and irritable bowel syndrome (IBS) are distressing chronic diseases associated with abdominal pain and altered bowel habits of unknown origin. Results from previous studies indicate that, across both diseases, increased levels of illness-related anxiety and dysfunctional symptom expectations contribute to symptom persistence. Thus, comparing both disorders with regard to common and disease-specific factors in the persistence and modification of gastrointestinal symptoms seems justified. Our primary hypothesis is that persistent gastrointestinal symptoms in UC and IBS can be improved by modifying dysfunctional symptom expectations and illness-related anxiety using expectation management strategies.

Who can participate?

Adults over the age of 17 with UC or IBS suffering from at least moderate gastrointestinal symptoms.

What does the study involve?

To assess the extent to which persistent somatic symptoms are modifiable in adult patients with UC and IBS, we will conduct an observer-blinded, 3-arm randomised controlled proof-of-concept trial. A total of 117 patients with UC and 117 patients with IBS will be randomly allocated into 3 groups of equal size: targeted expectation management aiming to reduce illness-related anxiety and dysfunctional symptom expectations in addition to standard care (intervention 1), non-specific supportive treatment in addition to standard care (intervention 2), or standard care only (control). Both active intervention groups will comprise 3 individual online consultation sessions and a booster session after 3 months. The primary outcome is baseline to post-interventional change in gastrointestinal symptom severity. For outcome assessment, study participants complete online self-report questionnaires at five measurement points over 1 year. Blood and stool samples are collected at the baseline assessment and after 3 months.

What are the possible benefits and risks of participating?

There is a potential that participants in the two intervention groups of the SOMAGUT-RCT study

will benefit from the interventions in terms of fewer gastrointestinal symptoms and reduced illness anxiety. The participants will also contribute to a better understanding of the effectiveness and mechanisms of action of a targeted expectation management intervention for persistent gastrointestinal symptoms and to the further advancement of evidence-based intervention strategies. To the best of our knowledge, for the participants, there is no risk for serious adverse events caused by the application of the study interventions.

Where is the study run from?

The SOMA.GUT-RCT is being conducted by the University Medical Centre Hamburg-Eppendorf, Hamburg, Germany. Since it is an online study, people with ulcerative colitis or irritable bowel syndrome from all over Germany can participate.

When is the study starting and how long is it expected to run for?

April 2020 to March 2025

Who is funding the study?

Deutsche Forschungsgemeinschaft, DFG (German Research Foundation)

Who is the main contact?

Prof. Dr. Bernd Löwe, [b.loewe@uke.de](mailto:b.loewe@uke.de)

Previous plain English summary:

Background and study aims:

Ulcerative colitis (UC) and irritable bowel syndrome (IBS) are distressing chronic diseases associated with abdominal pain and altered bowel habits of unknown origin. Results from previous studies indicate that, across both diseases, increased levels of illness anxiety and dysfunctional symptom expectations contribute to symptom persistence. Thus, comparing both disorders with regard to common and disease-specific factors in the persistence and modification of gastrointestinal symptoms seems justified. Our primary hypothesis is that persistent gastrointestinal symptoms in UC and IBS can be improved by modifying dysfunctional symptom expectations and illness-related anxiety using expectation management strategies.

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## Contact information

### Type(s)

Scientific

### Contact name

Prof Bernd Löwe

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### Type(s)

Public

### Contact name

Prof Bernd Löwe

### ORCID ID

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## Additional identifiers

### Clinical Trials Information System (CTIS)

Nil known

### ClinicalTrials.gov (NCT)

Nil known

### Protocol serial number

DFG grant numbers LO 766/22-1 and LO 368/11-1

## Study information

### Scientific Title

Persistence of gastrointestinal symptoms in irritable bowel syndrome and ulcerative colitis: a 3-arm randomised controlled trial

### Acronym

SOMA.GUT-RCT

### Study objectives

Current study hypothesis as of 26/11/2021:

Hypothesis 1: Persistent gastrointestinal symptoms in ulcerative colitis (UC) and irritable bowel syndrome (IBS) can be improved by modifying dysfunctional symptom expectations and illness-related anxiety using expectation management strategies.

Hypothesis 2: In addition, further biological, psychological, and social factors contributing to the persistence of gastrointestinal symptoms in both UC and IBS can be identified.

Previous study hypothesis:

Hypothesis 1: Persistent gastrointestinal symptoms in ulcerative colitis (UC) and irritable bowel syndrome (IBS) can be improved by modifying dysfunctional symptom expectations and illness anxiety using expectation management strategies.

Hypothesis 2: In addition, further biological, psychological, and social factors contributing to the persistence of gastrointestinal symptoms in both UC and IBS can be identified.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Approved 25/01/2021, Ethics Committee of the Hamburg Medical Association (Ethik-Kommission der Ärztekammer Hamburg, Weidestraße 122 b, 22083, Hamburg, Germany; +49 40 202299-240; ethik@aekhh.de), ref: 2020-10198-BO-ff

## **Study design**

Interventional randomized controlled trial

## **Primary study design**

Interventional

## **Study type(s)**

Treatment

## **Health condition(s) or problem(s) studied**

Gastrointestinal symptoms in patients with irritable bowel syndrome or ulcerative colitis

## **Interventions**

Current intervention as of 26/11/2021:

We will use the design of a three-arm randomised-controlled trial (RCT).

A fixed randomisation schedule, stratified by diagnostic group and sex, will be programmed and conducted electronically.

Experimental intervention 1 (GUT.EXPECT + SC):

This experimental intervention consists of an expectation management intervention (GUT.EXPECT) in addition to standard care (SC). The manualised intervention primarily aims at optimising expectations about symptoms, treatment outcome, and coping strategies and at reducing illness-related anxiety. The design of the intervention is based on the preferences expressed by patients in a pilot study, the demonstrated effectiveness of the expectation management intervention from the PSY-HEART and the PSY-BREAST trials, and other previous studies. The intervention consists of 3 individual online consultation sessions in intervals of 2 weeks each and a booster session after 3 months, with each session lasting 45 minutes. Homework will be given after each session to deepen the acquired skills. The intervention thus addresses the topics "dealing with anxiety", "improving expectations" as well as patients' need for information about their disease.

Experimental intervention 2 (GUT.SUPPORT + SC):

This experimental intervention consists of a non-specific supportive intervention (GUT.SUPPORT) in addition to SC. GUT.SUPPORT is identical to GUT.EXPECT in terms of common and non-specific treatment elements, i.e. time, personal attention and emotional support, but does not use specific interventions aimed at modifying expectations and illness-related anxiety.

Control intervention (standard care):

The control intervention consists of SC only. In all study groups, SC entails the patient's usual medical treatment without any interference by the study.

Previous intervention:

We will use the design of a three-arm randomised-controlled trial (RCT).

A fixed randomisation schedule, stratified by diagnostic group and sex, will be programmed and conducted electronically.

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#### **Control intervention (standard care):**

The control intervention consists of SC only. In all study groups, SC entails the patient's usual medical treatment without any interference by the study.

### **Intervention Type**

Behavioural

### **Primary outcome(s)**

Gastrointestinal symptom severity assessed using the Irritable Bowel Syndrome - Severity Scoring System (IBS-SSS) at baseline, after 6 weeks, after 3 months (post-interventional follow-up), after 6 and 12 months

### **Key secondary outcome(s)**

Current secondary outcome measures as of 26/11/2021:

1. Total somatic symptom severity measured using the Patient Health Questionnaire-15 (PHQ-15) at baseline, 6 weeks, 3 months, 6 months, and 12 months
2. Illness-related anxiety measured using the Somatic Symptom Disorder – B-Criteria Scale (SSD-12) at baseline, 6 weeks, 3 months, 6 months. and 12 months
3. Illness-related worries measured using the Whitley Index – 7 item scale (WI-7) at baseline, 6 weeks, 3 months, 6 months. and 12 months
4. Expectations of symptom severity measured using a Numeric Rating Scale (NRS) at baseline, 6 weeks, 3 months, 6 months, and 12 months
5. Expectations of coping with symptoms measured using a Numeric Rating Scale (NRS) at baseline, 6 weeks, 3 months, 6 months, and 12 months
6. Expectations of impairment due to somatic symptoms measured using a Numeric Rating Scale (NRS) at baseline, 6 weeks, 3 months, 6 months, and 12 months
7. Treatment expectations measured using the Treatment Expectation Questionnaire (TEX-Q) at baseline, 6 weeks, 3 months, 6 months, and 12 months
8. Disease activity measured using the Simple Clinical Colitis Activity Index (SCCAI) at baseline, 6 weeks, 3 months, 6 months, and 12 months
9. Time since last treatment measured using a single question at baseline, 6 weeks, 3 months, 6 months, and 12 months
10. Utilisation of medical treatment measured using gastrointestinal questions at baseline, 6 weeks, 3 months, 6 months, and 12 months
11. Adverse effects measured using a single question at baseline, 6 weeks, 3 months, 6 months, and 12 months
12. Evaluation of the interventions measured using Numeric Rating Scales (NRS) at 3 months

13. Systemic inflammation measured using C-reactive protein (CRP), interleukin 6 (IL-6), and tumour necrosis factor (TNF) at baseline and 3 months
14. Intestinal inflammation measured using faecal calprotectin at baseline and 3 months
15. Risk factors of somatic symptom persistence measured using the SOMACROSS research unit's core instruments at baseline, 3 months, 6 months, and 12 months

Previous secondary outcome measures:

1. Total somatic symptom severity measured using the Patient Health Questionnaire-15 (PHQ-15) at baseline, 6 weeks, 3 months, 6 months, and 12 months.
2. Illness related anxiety measured using the Somatic Symptom Disorder – B-Criteria Scale (SSD-12) at baseline, 6 weeks, 3 months, 6 months, and 12 months.
3. Expectations of symptom severity measured using a Numeric Rating Scale (NRS) at baseline, 6 weeks, 3 months, 6 months, and 12 months.
4. Expectations of coping with symptoms measured using a Numeric Rating Scale (NRS) at baseline, 6 weeks, 3 months, 6 months, and 12 months.
5. Treatment expectations measured using the Treatment Expectation Questionnaire (TEX-Q) at baseline, 6 weeks, 3 months, 6 months, and 12 months.
6. Disease activity (ulcerative colitis only) measured using the Simple Clinical Colitis Activity Index (SCCAI) at baseline, 6 weeks, 3 months, 6 months, and 12 months.
7. Time to next treatment measured using a single question at baseline, 6 weeks, 3 months, 6 months, and 12 months.
8. Utilisation of medical treatment measured using a single question at baseline, 6 weeks, 3 months, 6 months, and 12 months.
9. Adverse effects measured using a single question at baseline, 6 weeks, 3 months, 6 months, and 12 months.
10. Satisfaction with interventions measured using a Numeric Rating Scale (NRS) at 3 months.
11. Systemic inflammation measured using C-reactive protein (CRP), interleukin 6 (IL-6), and tumour necrosis factor (TNF) at baseline and 3 months.
12. Intestinal inflammation measured using faecal calprotectin at baseline and 3 months.
13. Risk factors of somatic symptom persistence measured using the SOMACROSS research unit's core instruments at baseline, 3 months, 6 months, and 12 months.

**Completion date**

01/03/2025

## Eligibility

**Key inclusion criteria**

1. Diagnosis of ulcerative colitis (UC) or irritable bowel syndrome (IBS; Rome IV);
2. at least moderate gastrointestinal symptoms according to the Irritable Bowel Syndrome - Severity Scoring System (IBS-SSS  $\geq 175$ );
3. UC/IBS treatment according to current German AWMF guidelines;
4. informed consent.

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Total final enrolment**

0

**Key exclusion criteria**

1. Necessity of acute emergency treatment
2. Acute suicidality
3. Psychotherapeutic treatment in the past 3 months
4. Insufficient German language skills

**Date of first enrolment**

04/04/2022

**Date of final enrolment**

24/02/2024

## **Locations**

**Countries of recruitment**

Germany

**Study participating centre**

**University Medical Centre Hamburg-Eppendorf, Department of Psychosomatic Medicine and Psychotherapy**

Martinistraße 52

Hamburg

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20246

**Study participating centre**

**University Medical Centre Hamburg-Eppendorf, I. Department of Medicine**

Martinistraße 52

20246

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20246

**Study participating centre**

**Israelitisches Krankenhaus**

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**Study participating centre**

**Helmut-Schmidt-University / University of the Federal Armed Forces Hamburg, Hamburg, Germany**  
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Hamburg  
Germany  
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**Study participating centre**

**University Medical Centre Hamburg-Eppendorf, Department of Medical Biometry and Epidemiology**  
Martinistraße 52  
Hamburg  
Germany  
20246

## **Sponsor information**

**Organisation**

University Medical Center Hamburg-Eppendorf

**ROR**

<https://ror.org/01zgy1s35>

## **Funder(s)**

**Funder type**

Research organisation

**Funder Name**

Deutsche Forschungsgemeinschaft

**Alternative Name(s)**

German Research Association, German Research Foundation, Deutsche Forschungsgemeinschaft (DFG), DFG

**Funding Body Type**  
Government organisation

**Funding Body Subtype**  
National government

**Location**  
Germany

## Results and Publications

**Individual participant data (IPD) sharing plan**

The datasets generated during and/or analysed during the current study will be stored in a publically available repository (e.g., DRYAD Digital Repository; <https://datadryad.org/stash>). Study protocol and statistical analysis plan will be available at the ISRCTN registry. Individual participant data that underlie the reported results in a published article will be shared after de-identification beginning 3 months and ending 5 years following article publication. Data will be shared with researchers who provide a methodologically sound proposal to achieve aims in the approved proposal. Proposals should be directed to [b.loewe@uke.de](mailto:b.loewe@uke.de). To gain access, data requestors will need to sign a data access agreement. Informed consent from participants was obtained.

**IPD sharing plan summary**  
Stored in publicly available repository

**Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	version 10	28/11/2025	17/12/2025	Yes	No
<a href="#">Protocol article</a>		14/06/2022	16/06/2022	Yes	No
<a href="#">Statistical Analysis Plan</a>		19/09/2024	20/09/2024	No	No
<a href="#">Study website</a>		11/11/2025	11/11/2025	No	Yes