



bsg BRITISH SOCIETY OF
GASTROENTEROLOGY

Research Strategy

2021-2024

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FOREWORD BY DR ROBERT LOGAN, National Specialty Advisor, NHS England

Research is fundamental to every aspect of medicine, regardless of academic discipline, clinical speciality, locality or level of practice. The UK and the NHS have, over many years, gained an internationally acclaimed reputation for outstanding biomedical and clinical research output.

The British Society of Gastroenterology, as a specialist professional society with a broad membership and a diverse range of interests, has over many years made numerous contributions to global research, often leading in these endeavours, including most notably during the current COVID-19 pandemic.

In that regard, I welcome and entirely endorse the latest iteration of the BSG research strategy, not only for its pragmatic goal-focused approach, but also to recognise that formulating this strategy has been undertaken during the most extreme of circumstances. I particularly welcome the strategic focus to broaden participation in research and the emphasis on the role of Artificial Intelligence and the importance of the microbiome.

Realising the ambitions and goals articulated by Ramesh and his colleagues will require all of us to work together collaboratively with colleagues, partner societies and stakeholders, and above all, patients.

R Logan

FOREWORD BY DR ALASTAIR MCKINLAY AND PROFESSOR RAMESH ARASARADNAM

President of the BSG and Chair of the BSG Research Committee

Research is one of the fundamental pillars on which all of modern medicine rests, and stems from the belief that patients should receive not only the best care that is currently available, but ideally even better care in the future. Progress requires a better understanding of disease processes and the careful assessment of new therapies and procedures, all of which depend on active, motivated researchers. If COVID-19 has taught the UK anything, it is that world-class researchers, universities and institutes, that respond rapidly to new challenges, can not only save lives, but also livelihoods and ultimately the economy.

The BSG was formed from a small club of highly motivated doctors, who met under the guidance of Sir Arthur Hurst, to discuss the latest developments in the newly emerging specialty of gastroenterology. Research has, therefore, been at the heart of the BSG since its inception, and it is fitting that it remains one of the principal charitable aims of the modern organisation.

This strategy provides an update on the key priorities that the BSG Research Committee will deliver over the next three years and also a review of progress since the last strategy was published in 2018. We outline not just a road map of areas we seek to develop but also areas which we feel are important but, perhaps beyond our remit. Importantly, key steps are outlined to enable the execution of our aims.

The strategy is a working document, and confirms the BSG's belief that better treatment for diseases of the gastrointestinal tract and liver can be developed. Above all, it is a commitment to enhancing the options available to our patients, who ultimately have to bear the burden of GI and Liver disease.

We would like to thank the many people who have contributed to the development of this strategy and everyone who has supported fellow BSG members during the many challenges that the COVID-19 pandemic poses.

We welcome comments and suggestions from members and other partners interested in research in gastroenterology and hepatology and we can be contacted at research@bsg.org.uk. You can follow us on Twitter [@britsocgastro](https://twitter.com/britsocgastro) and via our website www.bsg.org.uk.

A McKinlay

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Executive Summary

The BSG is delighted to publish this Research Strategy 2021-24, which builds on work done over many years and provides an update since the last strategy was published in 2018.

This document has been written for the BSG membership, for patients and carers, for our charity partners, for our colleagues at the National Institute for Health Research and their Clinical Research Networks and for funders of the important research we do in Gastroenterology and Hepatology.

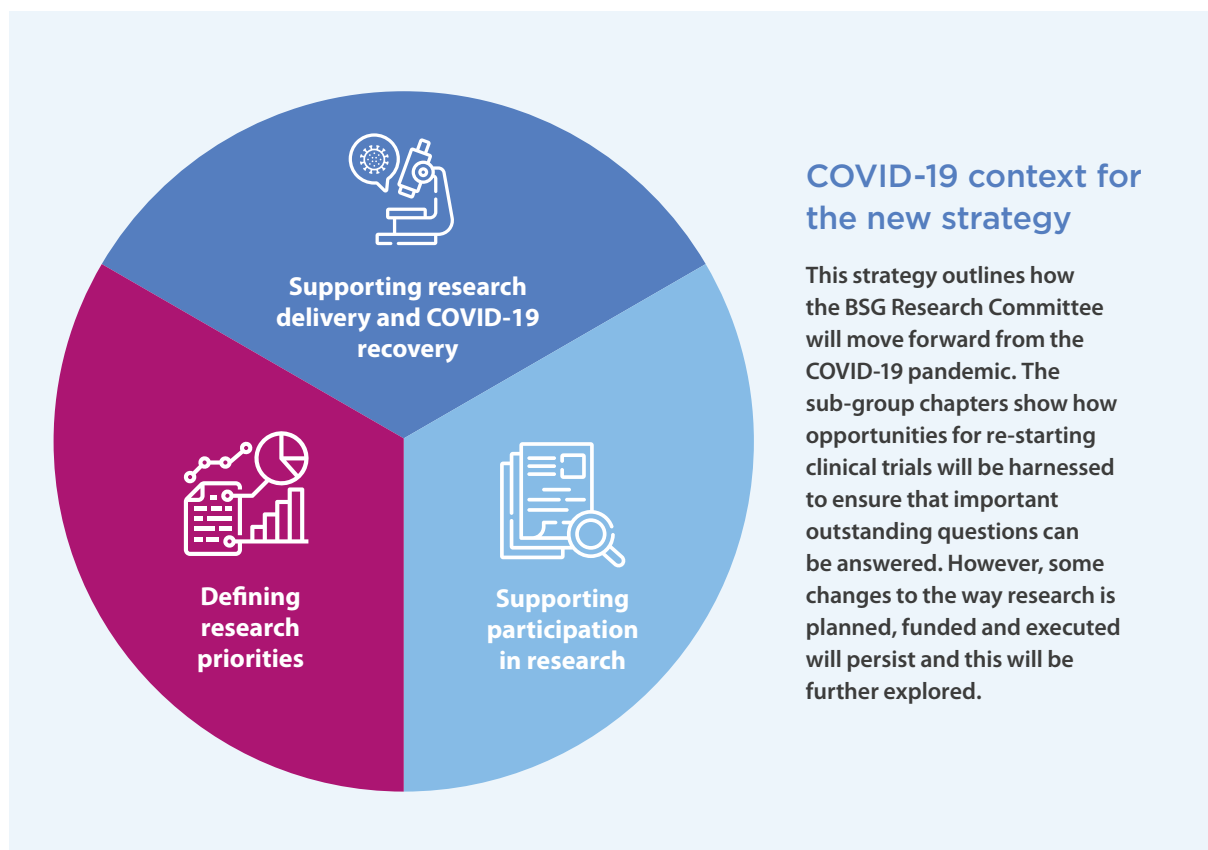
The BSG Research Committee has further strengthened its composition in recent years by adding a new Pancreas Clinical Research Group (CRG) to the portfolio. This new CRG has developed an ambitious programme, including the delivery of a Priority Setting Partnership during 2021/22.

We also greatly welcome the addition of an Artificial Intelligence (AI) Task Force to the BSG Research

Committee family. The Task Force brings together colleagues from a variety of backgrounds to help shape and accelerate the research impact from AI.

Nothing, however, could have prepared us for the disruption that the COVID-19 pandemic brought in 2020, both on front-line care and on research. Urgent new research priorities had to be developed, funded and executed. This strategy shows how the BSG Research community responded to the pandemic through production of key clinical guidance and how it will support the recovery from the pandemic.

This strategy will outline the key priorities for each of the clinical research groups and also our three overarching priorities.



Background

The British Society of Gastroenterology (BSG) is a professional membership organisation that aims to promote excellence in gastroenterology and hepatology in the UK and internationally.

This is achieved by working in collaboration with partners, producing consensus guidelines, defining standards of education for medical trainees, organising or endorsing high-quality education events, networking globally with leaders in gastroenterology and hepatology and by supporting high-quality research activity in these specialties.

Diseases of the gut, liver and pancreas place a significant burden on society and some conditions are very common. However, many questions remain about early diagnosis, treatment, surveillance and underlying conditions for good digestive health and funding in these areas has historically lagged behind other priority areas.

The Research Committee is one of five higher committees within the BSG and its aim is to promote high quality research in gastroenterology and hepatology. The Research Committee membership includes appointed Chair and Deputy Chair, the Chairs of each of the 7 sub-groups, BSG President, BSG Section Committee representation, representation from Guts UK, NIHR Specialty Group Chairs Gastroenterology and Hepatology and BSG Councillors.

The Research Committee delivers much of its important work via the following 7 sub-groups:

- Endoscopy Clinical Research Group
- Liver Clinical Research Group
- Inflammatory Bowel Disease Clinical Research Group
- Food and Function Clinical Research Group
- Pancreas Clinical Research Group (new since 2018)
- Gut Microbiota for Health Focus Group
- Artificial Intelligence Task Force (new since 2018)

WHAT HAS BEEN DELIVERED SINCE THE LAST STRATEGY WAS PUBLISHED?

In the three years that have passed since the publication of the previous research strategy, the work of the committee has resulted in many important successes, which are described in detail in each sub-group chapter.

However, no-one in 2018 had planned for the major upheaval that the COVID-19 pandemic brought. This includes major disruptions of healthcare operations across the country and also the resulting interruption of important research projects.

The BSG responded swiftly with timely and much-needed practical advice on safe service provision and advice to patients and staff. Members of the research committee also contributed to guidance on halting and re-starting clinical trials, have held virtual events on the impact of the pandemic on clinical trials and, later in the pandemic, have published position statements on vaccination.

As well as negatively impacting on many planned and funded clinical trials (see later chapters), the pandemic also brought the opportunity for researchers in gastroenterology and hepatology to ensure that important COVID-19 related questions for their patients are answered through high-quality research projects.

Two of the Clinical Research Groups, in particular, rapidly developed collaborative plans to design and delivery studies under the COVID-19 NIHR 'Urgent Public Health Research' funding umbrella or by submitted grant applications to other funding bodies. Further details of this work can be found under the 'Endoscopy Clinical Research Group' and the 'IBD Clinical Research Group'.



PATIENT AND PUBLIC INVOLVEMENT

The involvement of patients and the public in research is multi-faceted. There are well-established ways in which clinical trials involve patients and the public from the design stage to execution and analysis. NIHR Involve provides tools and guidance on how researchers can and should engage with patients and the public.

The other important way that members of the public contribute to research is by participating as equal partners in prioritisation exercises to decide what the most pressing unanswered questions are in a particular area of gastroenterology and hepatology.

One of the BSG Research Committee's key deliverables is to develop and publish up to date research priorities for a variety of sub-specialties. One way of achieving this in an inclusive and patient centred way is via 'Priority Setting Partnership (PSP)'. PSPs are usually carried out under the experienced guidance of the [James Lind Alliance](#) and includes patients, carers and clinicians. This strategy will outline how the BSG Clinical Research Group will review and update their research priorities.

The BSG Research Committee works closely with [Guts UK](#), the leading charity for digestive diseases. [Guts UK](#), together with the BSG, awards grants to young researchers

to support their development. [Guts UK](#) prioritises its work in areas of gastroenterology and hepatology that are underrepresented or under-funded, despite causing a significant disease burden in society. This includes Irritable Bowel Syndrome (IBS), diverticular disease and pancreatitis (amongst others).

[Guts UK](#) will be launching a patient panel in the next 12 months and the BSG Research Committee will develop an ongoing partnership with [Guts UK](#) to deploy the panel to inform the work of the Research Committee and establish close communication between the BSG and patients and carers.



The Research Committee also supports the ambitions of the [NIHR Include Project](#), which aims to ensure that under-served groups are better represented in clinical research at all levels.



WORKING IN COLLABORATION

The work of the BSG, including the work of the Research Committee, is greatly dependent on broad and active collaboration with external partner organisations. Several other organisations have as their focus the enhancement of gastrointestinal and liver research and a joint strategic approach will enhance overall benefit generated for professionals and patients alike.

The Research Committee and its Clinical Research Groups work closely with funders, for example National Institute for Health Research, the Medical Research Council and the Wellcome Trust.

It also works closely with healthcare societies, such as [Royal College of Physicians \(RCP\)](#), [British Association for the Study of the Liver \(BASL\)](#), [United European Gastroenterology \(UEG\)](#), [Association of Coloproctology of Great Britain and Ireland \(ACPGBI\)](#), [British Association of Parenteral and Enteral Nutrition \(BAPEN\)](#), [British Society for Paediatric Gastroenterology Hepatology and Nutrition \(BSPGHAN\)](#).

The BSG has a long and close association with the [Guts UK](#) charity, and also works with [Crohn's and Colitis UK](#), [Coeliac UK](#), [British Liver Trust](#), [Bowel Research UK](#), [Bile Acid Diarrhoea UK](#) and others and others.



BSG STRATEGIC PRIORITIES 2021-2024

STRATEGIC PRIORITY 1:

SUPPORTING PARTICIPATION IN RESEARCH

One key aim of the BSG Research Committee and its sub-groups is to support more BSG members who wish to participate in research to be able to do so.

This is in line with Royal College of Physicians (RCP) findings that the main barrier to research participation for clinicians is a lack of time or lack of dedicated time. This is particularly pronounced for women, people from an ethnic minority background and clinicians working in smaller or rural hospitals ([RCP Research For All 2020](#)).

The BSG Research Committee supports the recommendations of the RCP report and, as a professional membership organisation, has identified the following ways in which the ambition of 'research for all' can be supported ways:

- Produce a guide for new consultants and trainees in Gastroenterology and Hepatology on overcoming barriers to research participation, especially in relation to equality, diversity and inclusion
- Working with the Clinical Service and Standards Committee to ensure that the BSG Job Planning Guidance makes clear reference to supporting research activity
- Working in collaboration with the BSG Training Committee to ensure that Good Clinical Practice (GCP) training is easily accessible for trainees
- Working with the BSG Trainee Section Committee to develop specific support for Trainees getting involved in research, including creating strong links with the BSG Mentorship programme for experienced researchers to support trainees and also producing guides (such as online articles) to help trainees understand different ways in which to get into research and overcome any barriers
- Increase the number of gastroenterology and hepatology studies that are listed in the ['NIHR Associate Principle Investigator Scheme'](#)
- Supporting BSG members, including nurse and allied health professional members, in accessing the ['NIHR Associate Principle Investigator Scheme'](#)
- Publicise internal and external funding opportunities, such as fellowships and awards, to members to ensure members can benefit from such awards.



STRATEGIC PRIORITY 2: DEFINING RESEARCH PRIORITIES

Defining priorities for research is a collaborative effort that involves patients, carers, scientists and clinicians.

The BSG has, over the years, supported and participated in a number of prioritisation projects that were led by the [James Lind Alliance](#), including: Alcohol-related Liver Disease (2016), Inflammatory Bowel Disease (2015) and Coeliac Disease (2018). [Research priority setting in Barrett's oesophagus and gastro-oesophageal reflux disease](#) using the James Lind Alliance methodology was also published in 2017. In addition, the BSG Adolescents and Young Persons Section is working with the Inflammatory Bowel Disease Clinical Research Group to support a new prioritisation project: Digital technology in adolescents with inflammatory bowel disease (IBD).

The priorities published following a prioritisation partnership are reviewed regularly to ensure that projects are designed to answer the most pressing questions.

The BSG Research Committee is also supporting the development of research questions for future prioritisation via the NIHR Health Technology Assessment programme.

Details of prioritisation projects can be found in the chapters of the sub-groups of the BSG Research Committee and include two new James Lind Alliance Prioritisation Partnerships, one for Pancreatitis and one for Irritable Bowel Syndrome (IBS).

Another key priority for the Research Committee will be to investigate the impact of health inequalities and social determinants of health on people who require gastroenterology and hepatology services and to ensure that research priorities and research delivery are focused on addressing such inequalities.

The BSG Research Committee will also support wider efforts in the NHS and in the Gastroenterology and Hepatology community to reduce the very significant carbon footprint that these specialties contribute to the overall health and care carbon footprint. This will be achieved by supporting the national and international collaborative efforts in developing carbon reduction strategies. BSG members have come together in groups such as Green Endoscopy Group and they are promoting research and advocacy into sustainable solutions.

The BSG community will join the debate on climate change by advocating, educating, amplifying, promoting, and organizing sustainable endoscopy practices as the next generation and we face the enormous challenges posed by global warming. This will be underpinned by research quantifying the carbon cost-effectiveness of clinical activities including endoscopic procedures.

STRATEGIC PRIORITY 3: SUPPORTING SUCCESSFUL DELIVERY OF RESEARCH AND RE-START IN COVID-19 RECOVERY PHASE

One of the key success factors of the BSG Research Committee and its sub-groups is the mutual support and facilitation in successfully delivering research projects across the country.

Each Clinical Research Group chapter outlines how this has been achieved in the past and how BSG research networks have enabled the rapid development and deployment of clinical studies across the UK in response to the COVID-19 pandemic and re-start of paused studies.

There are several ways in which CRGs can facilitate the successful delivery of clinical trials and this strategy shows how each CRG is building on past successes.

To support the recovery of clinical trials post COVID-19, CRGs will publish guidance on how to streamline patient recruitment and how to maximise the use of technology (for example electronic consenting). All CRGs have identified priority studies that they wish to collectively support to reach target recruitment numbers. There are also further opportunities to develop patient registries to facilitate future recruitment.

PART TWO

Clinical Research Groups

CLINICAL RESEARCH GROUP: ENDOSCOPY

The BSG Endoscopy Clinical Research Group (CRG) has transformed the UK landscape in recent years in terms of delivery of endoscopy trials. The UK is now one of the major world players in this field, consistently delivering some of the largest endoscopy trials internationally. Around 15,000 patients have been recruited to UK-led endoscopy trials in the last 5 years. Several prestigious awards have been delivered to BSG endoscopy researchers, including the RCP Excellence in Patient Care award for research in 2020.

The ambition in 2018 was to build research infrastructure and the following progress has been made:

Improving surveillance strategies: [post-polyp adenoma surveillance guidelines](#) have now been published.

Use of 'Big Data' (large data sets that can be analysed to reveal trends or patterns) in endoscopy research, specifically the [National Endoscopy Database](#) (NED). This will be a rich source of data for service evaluation and research purposes. NED automatically uploads a minimum dataset for individual endoscopic procedures from compliant endoscopy reporting systems. Preparatory meetings have developed an initial framework for research priorities using NED data. CRG workshops have taken place identifying priority areas for using NED data in research.

A process for access to NED data has been developed. Particular areas of research potential include measuring and improving endoscopic quality, developing training interventions and linkage with other databases. NED data have been used to inform endoscopy delivery during the pandemic and published in the British Medical Journal 'BMJ Open Gastroenterology' (Rutter et al 2020 – [see Appendix 2](#)).

Improving quality in endoscopy services: specifically strengthening the evidence underpinning key performance indicators (KPIs) has continued since 2018. For example, in collaborative research validating the clinical relevance of detection studies.

Developing collaborative research groups with the aim of promoting early diagnosis and prevention of GI cancer e.g. Colorectal Cancer Screening, Prevention, Endoscopy and Early Diagnosis. This has now been awarded funding of £1 million in one region, with roll out to other regions planned depending upon funding.

PATIENT QUOTE: Steve has survived oesophageal cancer...

Why do you feel it's important that research is carried out into early diagnosis and alternatives to endoscopy procedures?

“ In my case I was diagnosed with oesophageal cancer by accident and a chance remark to my GP. This research is essential in promoting early diagnosis and to help save more lives. Finding new methods and getting quick results must make an impact on the overall survival rate for this disorder. ”

Four key priority research questions were agreed in 2018 for the CRG to take forward:

1. How do we develop the best multimodality approach to optimally use resources to detect and prevent colorectal cancer (CRC)?
2. How can we improve the quality of upper gastrointestinal endoscopy, Endoscopic Retrograde Cholangiopancreatography (ERCP) and Endoscopic Ultrasound (EUS) using lessons learned from colonoscopy?
3. How can we use minimally invasive tests to stratify GI cancer risk?
4. What is the role of bariatric endoscopy in treating patients with obesity and diabetes?

The CRG worked together to support the development of successful bids for funding in these important areas of research (with the exception of priority 4, which has not been progressed). Appendix 2 summarises a list of key studies that have been funded and are either ongoing or completed.

HOW HAS SUCCESS BEEN ACHIEVED?

Multi-centre studies are now delivered using a collaborative approach including study development, peer review, collaborative grant applications and innovative patient and public involvement. Multi-site studies have replaced traditional single centre studies. A network of enthusiastic units has been identified with keen researchers in those units. A number of endoscopists have been supported to become research leaders. Additionally, collective approaches to funders have been successful in shaping funder prioritisation with a number of commissioned research calls, for example, the Health Technology Assessment Bowel scope and Faecal Immunochemical Test calls ([20/140 Faecal immunochemical test \(FIT\) based tools to triage patients in primary care](#)).

A summary of key publications resulting from this work can be found in [Appendix 1](#).

ENDOSCOPY RESEARCH AND COVID-19

The endoscopy CRG responded rapidly to the pandemic by establishing a well-coordinated programme of endoscopy research. Working groups were convened with two key aims: 1) To ensure that the impact of the pandemic on current research was well understood and managed as best as possible and consistently across the country, and 2) To ensure that any key research questions and opportunities arising from the pandemic were acted on with coordination and peer support. The five working groups generated publications, grant applications and ongoing studies (details in Appendix 2).

COVID-19 has had a major impact on recruitment to endoscopy studies. Many studies had to be paused or restricted in 2020. There are now plans to ramp up study activity significantly in 2021. Strategies to support multiple studies with research nurses and [Clinical Research Network \(CRN\)](#) support will be needed, including liaison with NIHR Gastroenterology National Specialty Lead, CRNs and other opinion influencers to emphasise the need for evidence-based diagnostics in a world recovering from COVID-19. No cost or, in some cases, costed extensions to studies will be required.

AIMS OF THE ENDOSCOPY CRG 2021 TO 2024

The CRG will focus on delivering the following four objectives:

Objective 1: Re-starting research following COVID-19 pandemic. The CRG will work together to ensure that endoscopy research recommences following COVID-19 surge and develop streamlined processes for research in this new era, including electronic consent, minimising contact and using automated data capture. The CRG will develop support for restarting endoscopy research and on how to overcome barriers.

Objective 2: Developing successful research proposals. The group will develop research proposals to mitigate the impact of COVID-19 and improve endoscopy in the future. For example, new diagnostic techniques, safe endoscopy, patient pathways and ensuring that evidence is robust and collected in the most efficient ways possible.

Objective 3: Studying new ways of delivering endoscopy optimally post COVID-19. Endoscopy is one of the services significantly affected by the pandemic and the safe delivery of endoscopy in the future requires high-quality research to ensure patients get timely and safe diagnosis and treatment.

Objective 4: Agreeing a new set of endoscopy research priorities. The group will develop and publish a revised set of endoscopy research priorities by the end of 2021.

CLINICAL RESEARCH GROUP: LIVER

The 2018 strategy laid out objectives in the establishment of both recognised specialist interest groups within hepatology and a development programme for hepatology interested trainees.

Both of these aims have been achieved. Nine specialist interest groups (SIGs), encompassing both common and rare liver diseases and complications of liver disease, have been established. These have brought together groups of investigators and several SIGs have had success in securing national grant funding. Clinical research training was a major part of the strategy and, working with the hepatology National Specialty Group, a very successful pilot of clinical research training in hepatology was completed. This has been expanded to include trainees in Gastroenterology more widely and will be expanded to all medical specialties.

Research priorities were set against the Alcohol-related Liver Disease (ArLD) Priority Setting Partnership from 2016. Progress has been made against some of these priorities,

particularly focused on interventions that improve survival in advanced ArLD and, by design, other causes of advanced liver disease.

Currently, studies are funded in 2 of the priorities and the year 1 target was met. The year 5 target of funding against 60% of these priorities is likely to be missed. The focus in the community has been to target studies of medical intervention in areas where investigators and the medical community has identified treatments to prevent early deaths due to liver disease largely among patients on the wards. The priorities involving outpatient care, or upstream prevention are more challenging and will involve networks of investigators with complementary skills. Indeed, some of these questions are arguably not best addressed by teams led by hepatology specialists. Recognising this, together with the National Specialty Group, the CRG will focus on building the necessary collaborations to tackle questions relating to disease causality, including harmful alcohol consumption and multimorbidity.

PATIENT STORY: Shani has lived experience of cirrhosis and ascites

“ I have had quite a few ascitic drains in hospital in the past few years, and although they were a necessity, having to attend the hospital for the drains was quite difficult, as the pain in my stomach, and tightness around my organs made it incredibly hard to walk and breathe and the shame of having to have these drains had a detrimental effect on my mental health. ”

On the importance of better palliative options for ascites in patients with cirrhosis:

“ Alternatively, being able to have long term ascitic drains in my own home would have avoided the pain, and distress of having to make a repeated journey to the hospital for me and my family and allow me some control over my treatment. Ultimately, I feel that being treated at home, especially in end of life care is the way forward for the patient and their family. To make things as easy as possible. ”

AIMS OF THE LIVER CRG FROM 2021 TO 2024

Delivery of current research priorities is the major target for the Liver CRG and NIHR National Specialty Group over the next three years.

Over the past decade, the UK has established itself as the home for pragmatic trials to address important aspects of care for patients with severe liver disease. Current studies, including Carvedilol versus variceal band ligation in primary prevention of variceal bleeding in liver cirrhosis (CALIBRE), Beta blockers Or Placebo for Primary Prophylaxis of oesophageal varices in cirrhosis (BOPPP), Primary Antibiotic prophylaxis using co-trimoxazole to prevent Spontaneous bacterial Peritonitis in Cirrhosis (ASEPTIC), and A PROspective double-blind placebo-controlled multicentre trial of faecal Microbiota transplantation to improve outcomes in patients with cirrhosis (PROMISE) have all been funded by NIHR Health Technology Assessment (HTA) or Efficacy and Mechanism Evaluation (EME). These need to be delivered to time and target to maintain the credibility of the UK as a home for large clinical trials in cirrhosis. Importantly, the success of previous studies (including: STeroids Or Pentoxifylline for Alcoholic Hepatitis (STOPAH) and Albumin To prevent Infection in chronic liver failure (ATTIRE)) was built on widespread adoption, often outside specialist hepatology centres.

This wider engagement with ongoing studies will be supported by the CRG and the BSG Research Committee more widely and developed through links with both the Hepatology and Gastroenterology National Specialty Groups.

Objective 1: Recovery of funded trials following COVID-19 delays. The CRG will facilitate patient recruitment to target nationally funded trials in hepatology 2021-24, including CALIBRE, BOPPP, ASEPTIC, and PROMISE.

There is increasing awareness of liver disease as part of wider multimorbidity complexes that include complications of harmful alcohol consumption together with impacts of obesity, type-2 diabetes mellitus and other features of the metabolic syndrome. This multimorbidity shows regional and sub-regional variation with areas of socioeconomic deprivation affected most. It is likely that these regional disparities will widen following the COVID-19 pandemic.

The research focus in terms of primary trials has to date been on interventions in cirrhosis. There is increasing recognition that earlier diagnosis of persons at risk of liver related morbidity and mortality is critical in improving outcomes. Several strategies to achieve this have been developed

and these take approaches that range from identification of liver fibrosis in at risk patients through risk stratification in diagnosed liver disease to optimal diagnostic testing in patients with abnormal liver blood tests. Ultimately the impact of early diagnosis will have its greatest benefit if strategies are tested in parallel to reduce the risk of progressive liver disease.

The impact of trials in decompensated cirrhosis aim to delay or prevent complications though in the majority of cases, death from liver failure is the inevitable outcome when liver disease is advanced.

Objective 2: Improving early diagnosis of patients with significant liver disease. This will be achieved by establishing a specialist interest group for early diagnosis of liver disease by the end of 2021 and by working towards a nationally-funded study in early diagnosis of liver disease by the end of 2024.

Objective 3: Prevention of progressive liver disease. The CRG will work towards a funded study relating to treatment of alcohol dependence in patients with significant liver disease by the end of 2023 and by engaging with primary care and public health to develop strategies to reduce alcohol consumption in populations at risk of severe liver disease by the end of 2023.

Objective 4: Developing strategies to improve palliative care of patients with liver disease. This will be achieved by promoting research to understand the need and role for specialist palliative care in the care of patients with advanced liver disease.

COVID-19 RECOVERY

A key priority for the CRG is to support existing studies in achieving continued recruitment into trials, including trials such as CALIBRE and BOPPP as well as the other studies in advanced liver disease.

The rapid development of treatments for non-alcoholic fatty liver disease (NAFLD) holds considerable promise for patients with this disease diagnosed in early detection programmes. Ongoing and future commercial trials offer the possibility for patients to access new therapeutics before they are routinely available.

Objective 5: Return commercial trial activity (number of participants enrolled in commercial studies) to pre-pandemic rates by end of 2022 by working collaboratively with the NIHR National Specialty Group and Clinical Research Networks.

CLINICAL RESEARCH GROUP: INFLAMMATORY BOWEL DISEASE

When the Inflammatory Bowel Disease (IBD) CRG was re-formed 10 years ago there were pockets of successful research but little in the way of collaborative clinical research. The UK IBD Genetics Consortium was the exception to this, producing a series of pivotal observations that were world-leading not just in IBD but for all complex disease genetics. This demonstrated the strength of collaborative work across the UK and has fostered a collegiate spirit that is at the core of recent successes.

Recent years have seen a significant amount of research activity in IBD spanning basic, translational and clinical research. The core focus of the CRG has been to help facilitate investigator-led research. This focus has largely been on the non-commercial portfolio. The group has taken a facilitative inclusive approach as opposed to being directive. Central to this has been the annual IBD investigators meeting, attended each year by over 100 gastroenterologists, surgeons, nurses, trainees, fellows and trial managers.

A few pivotal studies from recent years can be found in Appendix 3.

Progress against the 2016 [James Lind Alliance Priority Setting Partnership for Inflammatory Bowel Disease](#) was reviewed in 2021 ([BSG Campus Poster](#)).

This review shows that, over the past 3 years, multiple clinical trials have been set up in the UK addressing the top 10 research priorities in IBD, mainly focusing on development and assessment of therapeutic strategies (priority 1).

Other research priorities, and especially patient-reported outcomes such as IBD-related pain, fatigue and management of diarrhoea/incontinence are also addressed, but less frequently. It remains debatable to what extent the current research landscape adequately represents all stakeholders' viewpoints on needs for expanded knowledge in IBD, particularly the patients' perspective.

PATIENT QUOTE: Alicia has Ulcerative Colitis

On the BSG COVID-19 response:

“ It has been useful to have accessible advice during the pandemic as there is conflicting information out there. It's reassuring to know that, should a scenario like this happen, the BSG will have IBD patients at the forefront of their mind. ”

On future development of genomic medicine:

“ Personally, I think this would be the best way forward, as through my own experience speaking with others who have IBD, I've found that everyone has different disease patterns - there is no one size fits all. It'd be great to have something in place that would minimise the trial-and-error process of new treatments. ”

IBD RESEARCH AND COVID-19

The vast majority of IBD studies across both commercial and non-commercial portfolios were halted in March 2020 at the start of the pandemic.

Whilst many studies have now resumed, there continues to be a significant impact on recruitment due to delays in Research and Development Departments and reallocation of research staff to clinical care. The impact of COVID-19 on endoscopy with the subsequent backlog of procedures has been a big issue for commercial studies. The NIHR strategy of prioritising COVID-19 studies has had a major negative impact on clinical IBD Research that continues to be felt across the portfolio. It is anticipated that it will take until the end of 2021 for recovery of the portfolio to pre-COVID-19 levels.

Three randomised controlled studies with substantive funding in IBD were interrupted over the last 12 months and will not continue. The Autologous Stem Cell Transplantation In refractory Crohn's disease – Low Intensity Therapy Evaluation (ASTIC-lite) study (Chief Investigator: James Lindsay) was set up to test a modified stem cell transplant regimen in patients with refractory Crohn's disease. It was discontinued due to unresolvable safety concerns in 2020. The STOP-Colitis study (Chief Investigator: Tariq Iqbal and Ailsa Hart) of Faecal Microbial Transplantation in Ulcerative Colitis had a successful pilot but will not progress to a full randomised controlled trial as originally intended. The Interleukin 1 (IL-1) blockade in Acute Severe Colitis (IASO) study (Chief Investigator: Tim Raine) of anakinra in acute severe ulcerative colitis (ASUC) was stopped due to futility on a planned interim analysis of the first 100 randomised participants.

CRG RESPONSE TO COVID-19 PANDEMIC

The CRG played a leading role (along with the IBD Section) in developing rapid guidance for the management of IBD during the pandemic, risk stratification of IBD patients (that informed shielding), management of acute severe colitis and vaccination against SARS-CoV2.

With the IBD Registry and Crohn's Colitis UK the CRG contributed to the development of a web risk tool that to date has been accessed by over 35,000 patients.

A number of large collaborative efforts have looked at various factors to do with IBD and COVID-19. These include IBD PREPARE and PROTECT, a [UK Bioresource](#) study of COVID-19 outcomes and a NIHR Immune Mediated Inflammatory Disease (IMID) collaborative study using the [OpenSafely](#) platform to study the impact of immune modifying therapy on severe COVID-19 outcomes.

[CLARITY](#) is an Urgent Public Health (UPH-1) Study led by Tariq Ahmad, Nick Powell, Nick Kennedy and James Goodhand. It is examining the impact of anti-TNF therapy on the immune response to SARS-CoV2 infection and vaccination. The Study recruited over 7000 patients on infliximab and vedolizumab from 92 recruiting sites in the 10 weeks leading up to Christmas 2020. This recruitment effort was masterminded by project manager Claire Bewshea from the Exeter IBD Team and called on 595 healthcare professionals from across the sites.

To date CLARITY has resulted in two publications. The first paper demonstrated that, despite the numbers of confirmed cases of COVID-19 being the same, patients on infliximab had attenuated serological responses to infection with SARS-CoV2 ([Kennedy et al 2021](#)). This was further modified when patients were on combination therapy with an immunomodulator. The second paper showed that after one dose of vaccine patients on infliximab had low levels of anti-Spike antibodies consistent with inadequate protection against COVID-19 ([Kennedy et al 2021 - available in pre-print](#)). This effect was seen with both the Oxford/Astra Zeneca and Pfizer/BioNTech vaccines. However, when patients on infliximab had second exposure to antigen, either prior COVID-19 and one dose of vaccine OR two doses of vaccine, a normal serological response was observed. Further work from the CLARITY study is looking at long-term outcomes from vaccines, the effect on T-cells following vaccination and the impact of the pandemic and shielding on mental health, notably anxiety and depression.



AIMS OF THE IBD CRG FOR 2021 TO 2024

Over the next few years, the IBD CRG will work to continue to fully support investigators to deliver the now extensive non-commercial and commercial research portfolios.

This will aim to ensure existing studies successfully complete on time and that new studies have the necessary support through set up. We will help to support this as best possible given the substantial challenges faced by non-COVID-19 research across the UK. The IBD CRG is fully committed to equality, diversity and inclusivity in line with the wider BSG ambitions. We will aim to address uneven representation of UK society in cohort studies and population-based research.

The IBD CRG is also committed to inspiring and giving opportunities to the next generation of clinical and non-clinical researchers across the full spectrum of IBD. To this end, the number of trainees represented on the CRG will be increased from one to three trainees. In addition, we will continue to ensure there is research nurse representation on the committee.

Objective 1: Providing peer support. The CRG group will maximise success with funding application and supporting patient recruitment to funded studies. This will be underpinned by the highly successful annual IBD Investigator Meeting.

Objective 2: Collaborative working with scientists. Providing a platform for scientists and clinicians to work together innovatively.

Objective 3: Broadening the reach of IBD research. Broadening the reach of IBD research, both in terms of the involvement of specialty trainees and new investigators and also by specifically supporting new centres in getting involved in IBD research.

Objective 4: Fostering new links with primary care. The CRG will develop further plans on primary care engagement in 2021 and 2022.

Objective 5: Further develop relationships with Crohn's and Colitis UK. Crohn's and Colitis UK continues to be a key partner for IBD research. The annual PPI event hosted by the organisation will continue to be fully supported by the CRG. The CRG will further establish close workings with cross-representation on the committees, inviting a Crohn's and Colitis representative to join the CRG.

CLINICAL RESEARCH GROUP: FOOD AND FUNCTION

The BSG Food and Function Clinical Research Group brings together a wide range of professionals with interest in nutrition research and research in the area of functional gastroenterology, including conditions such as Irritable Bowel Syndrome (IBS). The group includes gastroenterologists, dieticians, primary care clinicians and physiologists.

The field of 'Food and Function' covers a wide range of research opportunities and uncertainties that require investigation, both in terms of pre-clinical and clinical research. For example, the field of nutrition, covers areas such as: nutrition and health and disease; molecular and cellular nutrition (nutrition and immunology; biological rhythms and nutritional response; nutrition and epigenetics); personalised medicine and nutrition; nutrition and ageing.

In the area of functional nutrition, IBS is a common condition that affects as many as one in five people at some point in their life. Significant uncertainties remain about the optimal treatment of IBS (see [NICE Clinical Guideline CG61](#)) and, despite

the significant disease burden, funding for non-commercial research in these areas has been relatively low. In particular, the successful execution of research studies remains a challenge, due to the lack of appropriate participant databases.

The 2018 BSG Research Strategy set out a set of priorities for the Food and Function CRG, including: increasing funding opportunities, delivery of a Priority Setting Partnership for IBS, development of a systematic review and supporting members with funding applications. The achievement of other priorities and the general development of the CRG was hampered by COVID-19 during 2020 and by logistical and operational challenges that the CRG experienced during that time.

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PATIENT QUOTE: Lara has Irritable Bowel Syndrome

“ We need long term management plans to help us work out how to live with IBS. Medication works for some but I think a more holistic approach would be much more beneficial in the long run. How can we work together towards a better support network across the different areas of research? We are all working towards the same goal, aren't we?

Having unanswered questions is really frustrating. Makes me feel like my condition is not being taken seriously. When I was first diagnosed with IBS, I had no idea how to manage it.

Setting research priorities for IBS would be amazing. To feel part of the conversation would make me feel much more supported and better understood. Working together to set priorities for research would enable patients to have their voices heard and not just make us feel like we are a problem. But we can be part of the solution! **”**



AIMS OF THE FOOD AND FUNCTION CRG 2021 TO 2024

The Food and Function CRG cover a diverse range of areas of research interest and is made up of a wide range of people with differing research and clinical portfolios.

Therefore, the main aim of this CRG is to build a supportive infrastructure for research, rather than focus on particular research priorities (especially as those might change with an ever-changing membership). To achieve this the group will create subgroups to understand and drive forward the strategic interests of these areas and support BSG members in undertaking F&F research in the UK. The subgroups will report to the CRG.

Objective 1: Deliver a successful IBS Research Priority Setting Partnership by December 2022. This project is jointly funded by the BSG and Guts UK. The CRG will ensure that the delivery of this project is fully supported. The outcome of the project will be an agreed and published list of priorities for research, which will ensure potential funders can design grants to meet those needs.

Objective 2: Enhance the ability to rapidly recruit large numbers of patients to functional gastroenterology studies, for example by developing appropriate registries of patients and enhancing the ability to recruit patients via digital processes. This will build on existing registries that have been developed for this purpose (e.g., [ContactMe-IBS](#)).

Objective 3: Develop funding streams for nutrition and functional research. The CRG will deliver 'sandpit' events, including academics, clinicians and patients to explore innovative approaches to overcoming the main barrier to research in this field. These events will identify how to support researchers with patient and public involvement and engagement in these areas, identify 2 to 3 priority questions to guide UK researchers in a wide variety of Food and Function research.

Objective 4: The CRG will deliver its work via appropriate sub-groups or partnerships that will take forward specific requirements in the following areas: IBS, enteric dysmotility, bile acid diarrhoea, parenteral and enteral nutrition and nutrition in other diseases. Existing groups, charities and companies will be part of a network of stakeholders, ensuring that there is no duplication of effort and enhancement of opportunity. The CRG will develop an annual Food and Function research day where interested parties can present prospective trials and registry opportunities and facilitate networking with like-minded colleagues who may wish to be involved in supporting delivery for those trials. In this way, the CRG intends to support UK researchers across the broad research area of food and function.

CLINICAL RESEARCH GROUP: PANCREAS

The Pancreas CRG was newly formed in 2019 following a proposal by the BSG Pancreas Section to strengthen the representation of the specialty in the Research Committee.

The initial focus of the newly formed Clinical Research Group (CRG) was to get up-and-running, identify initial key priorities and deliver regular meeting with key stakeholders. The group works in close collaboration with [Guts UK](#) and with the [Pancreatic Society of Great Britain and Ireland \(PSGBI\)](#).

The CRG has discussed a variety of projects and has been focusing on supporting two key projects in the past 18 months:

BAC-PAC Study ('Best Analgesia Control in Pancreatic Adenocarcinoma') is a NIHR funded observational study; initiated by Norfolk and Norwich University Hospitals NHS Foundation Trust with a view to involving other centres; recruitment of patients in Norwich has been challenging during COVID-19. Recruitment of other centres has been difficult during COVID-19 as most research units have had to prioritise COVID-19-related projects.

Prospective multi-centre study to measure the incidence of **pancreatitis following Endoscopic Ultrasound (EUS) biopsy**. This project was initiated by The Newcastle Upon Tyne Hospitals NHS Foundation Trust. This study is awaiting ethics approval.

PATIENT QUOTE:

“ I was ill for 6 years before I was finally diagnosed with chronic pancreatitis. Once I had a diagnosis, I started using online pancreatitis support groups and I was horrified to discover that many chronic pancreatitis patients had very similar stories to my own. I am tremendously excited about the prioritisation partnership. It is a valuable, rare and very much needed opportunity for patients to be listened to and have their experiences taken into account in creating a research strategy. ”

PATIENT QUOTE:

“ I have been asked what the Prioritisation Partnership means to me. I actually feel very emotional because CP has had a devastating effect on my life. I became too ill to work when I was 34, I am too unwell to be pregnant or care for children, I have been tube fed for 6 years and walking to the corner shop is a major achievement. I was eventually found to have a common bile-duct and gallbladder full of micro-stones. Had this been found and treated 6 years earlier, I would probably be completely well. The PSP holds the hope that research will vastly improve the diagnosis and treatment of CP and that no one else will have to go through the same things that I have. ”

AIMS OF THE PANCREAS CRG 2021 TO 2024

The CRG is keen to develop and support a coordinated pan-UK approach to deliver multiple research projects focussing on both benign and malignant pancreatic disease.

Initially, the process may include establishing networks across the UK and carry out carefully planned database studies which will inform and support future randomised controlled trials. The CRG is very keen to work together with other partner organisations (like the PSGBI and Guts UK) and develop and design these data-based studies going forward (for example, EUS guided drainage of biliary duct and pancreatic fluid collections). This will be a very important exercise and the aim is to start the process in early 2021 with a view of completing this by the end of 2022.

The CRG aims to support and deliver on the following research projects.

Objective 1: Providing clear research priorities for the future. The CRG aims to develop and deliver a Priority Setting Partnership (PSP) on pancreatitis. This project is funded by Guts UK (50%), BSG (25%) and PSGBI (25%). The PSP will help us to gain understanding of the research priorities that patients and clinicians would like to explore. The process will be supported by the [James Lind Alliance](#) with a plan of starting the project at the beginning of September 2021 and completing the project in December 2022. The PSP will allow the CRG to identify the gaps in research in pancreatitis and prioritise research studies around those gaps with application of funding going forward from December 2022 to December 2024.

Objective 2: The CRG will work together to support the 'BAG-PAC' study (EUS guided coeliac plexus block and pancreatic duct stenting), by promoting participation of other centres. This is a NIHR funded observational study to answer unknowns to firstly justify and secondly plan a future trial of endoscopic treatment (versus strong opioid analgesics when abdominal pain first occurs in patients with inoperable pancreatic cancer. The study was originally planned for completion in August 2021, but recruitment has been slow with plans for extension of the study period. A future randomised controlled trial is expected to be designed once the initial study is completed.

Objective 3: The CRG will facilitate the recruitment of patients into the prospective study on "The incidence of pancreatitis following EUS biopsy of pancreatic lesions" in mid-2021 by supporting partner organisations to participate in the study. Data collection will be completed by the end of 2022 and findings published by the middle of 2023. The post-EUS biopsy study has been designed to determine risk factors for pancreatitis to enable design of a randomised controlled trial with an aim to look at interventions that can reduce the risk of post EUS biopsy related pancreatitis in future.

Objective 4: Acute pancreatitis can be induced by numerous causes. Gallstone disease (approximately 50%) and alcohol (approximately 20%) are the most frequent causes, although the prevalence of aetiologies of acute pancreatitis is dependent on other factors such as age and geographical factors. However, in 20% of patients no aetiology can be found after routine diagnostic work-up (medical history, laboratory investigations and trans-abdominal ultrasound). These patients are presumed to have idiopathic acute pancreatitis (IAP). The CRG aims to support a prospective multi-centre randomised controlled trial (currently being developed in Oxford with a plan to roll out across multiple centres in the UK) looking at the role of EUS in idiopathic pancreatitis in absence of stones or sludge on adequate previous investigations. The subjects of this study have had a first or subsequent episode of acute pancreatitis, as defined by the 2012 Revised Atlanta criteria with an unknown origin after standard diagnostic work-up, according to the 2013 International Association of Pancreatology/American Pancreatic Association (IAP/ APA) evidence-based guidelines on management of acute pancreatitis. The participating centres will be acute surgical and gastroenterology units managing patients with acute pancreatitis and will have access to EUS and MRCP.

Objective 5: The CRG aims to promote and support more people to participate in pancreas research across the UK. The BSG aims to have regular representation in the research champion section at the BSG annual meeting, highlight any new research under the pancreas section on the BSG website to encourage more active participation, include a research section to widely advertise pancreas research in the Pancreas Education Symposium & the BSG annual meeting and link in with the Guts UK charity (for the Guts UK Amelie Waring Fellowship) and PSGBI (for annual pump priming grants for new researchers) at the time of advertisement of their respective research fellowships. In the future, the CRG may want to organise a dedicated pancreas research day (once every 2 years) to invite interested individuals and experienced researchers on a common platform to facilitate networking and promote research.

ARTIFICIAL INTELLIGENCE TASK FORCE

One key development since the previously published BSG Research Strategy in 2018 is the growth in research opportunities around artificial intelligence, including technologies such as natural language processing, machine learning and image processing.

A new Task Force was set up during 2020 to ensure that BSG members are able to harness the opportunities arising from this technology. Whilst this task force is under the remit of the Research Committee, its remit extends beyond research and also looks at opportunities in the implementation of artificial intelligence technologies, such as the need for training, guidelines or changes to policy.

The Task Force will spend the early parts of 2021 refining its remit and strategic priorities, as well as fully establishing its membership and operation of any sub-groups.

A survey of BSG members was carried out in late 2020 and results from this survey will feed into the future work of the group.

The following aims have so far been explored:

- Set research priorities
- Produce guidelines
- Inform and influence development of a syllabus
- Develop Research Networks
- Support high quality study design
- Provide peer support
- Facilitate delivery of AI Research in Gastroenterology
- Produce position statements

The Task Force will publish a full strategy by the end of 2021.



GUT MICROBIOTA FOR HEALTH EXPERT PANEL

The Gut Microbiota for Health Expert Panel was formed in 2013 and represents a group of around 50 multi-disciplinary members (including primary and secondary care clinicians, microbiologists, dietitians and research scientists) with expertise and interest in the gut microbiota and its role in health and disease.

As the Group has grown, it is now organised into Special Interest Groups (SIGs) but maintains the over-arching meetings to ensure continuity and sharing of expertise and interest.

The goals of the Expert Panel are: to increase awareness and understanding among clinicians of the gut microbiota and its impact on health; to be a 'go-to' address for clinicians for defining what is currently reliably known in this field; and to drive scientific and academic interest in the gut microbiota primarily in gastrointestinal and liver disease.

PATIENT QUOTE: Paula has gastric motility issues:

“ I was interested in understanding more about how microbiome health could benefit me. Lots of TV programmes also featured testing as part of the get healthy programme for participants. I was prepared to pay for a test. But only if it was value for money in terms of what the results would show and then what I could do to improve.

I did a Google search and found Guts UK was a charity, involved in validated research therefore I felt the information (by Guts UK and GMfH) could be trusted and impartial. After reading the information, I decided not to buy a test because having read the information on the Guts UK site, I felt that I wasn't going to get any additional information from testing that could benefit my health. The test would then be purely for interest.

I was very grateful for the information. I felt relieved and much better informed about micro biome and the commercial tests. The impartial nature of the information was also fantastic.

”

PROGRESS IN THE LAST THREE YEARS

- Contribution to the BSG and the Healthcare Infection Society (HIS) guidelines for Faecal Microbiota Transplant (FMT) treatment for recurrent or refractory *Clostridioides difficile* infection ([Mullish et al 2018](#))
- Two workshops:
 - Second National BSG FMT workshop 16 Sept 2019, University of Birmingham.
 - The Microbiome in Paediatric Health and Disease. 16 April 2020, Great Ormond Street Institute of Child Health, London
- Two [information leaflets](#) explaining gut microbiome (poo) testing for the general public in collaboration with [Guts UK](#).
- Twice yearly meetings to drive research in this field and updating of the website with current key papers
- The 2017 review ([Marchesi et al](#)), which was supported by the Expert Panel, has become a very highly cited paper.

AIM OF THE PANEL 2021 TO 2024

The group continues to evolve and the following priorities will be delivered in the next three years:

Objective 1: Publish review papers for clinicians explaining methods used in commercial gut microbiome tests, the supporting scientific evidence for any claims or advice and explaining how the gut microbiota influences drug efficacy and defining standard methodology for microbiota testing for use in clinical practice

Objective 2: Explore (by collaborative research or identification of research needs):

- The optimisation of pre-surgery regimes (e.g., antibiotics, diet, probiotics) to reduce surgical site infections and promote recovery
- The involvement of the gut microbiota in antimicrobial resistance
- The diagnostic potential of gut microbiota biomarkers
- The paediatric gut microbiome

Objective 3: Adapt and maintain the safety of FMT protocols by SARS-Cov-2 detection

Objective 4: Develop and publish educational material for public and healthcare professionals. Provide educational material: Advise and collaborate on educational modules for GPs about the gut microbiome; hold further educational or research workshops; distribute the 'short poo testing leaflet' to primary care healthcare professionals.

Objective 5: Our three-year strategy is to promote the understanding and to exploit the potential of the link between the gut microbiota with health and disease by:

- Identifying research needs, sharing research insights and driving the eventual resumption of current non-COVID-19 research. One future focus may be the relevance of the gut microbiome to long Covid
- Establishing microbial biomarkers for diagnosis and monitoring effectiveness of any microbiota-based therapy, as well as advancing novel treatment strategies aimed at the accession, reduction or indirect modulation of the microbiota
- Enhancing current understanding of and helping to establish guidelines for gut microbiome manipulation therapies such as faecal microbiota transplantation (FMT)
- Promoting education and public engagement by clinicians and the general public by producing relevant educational material and holding workshops.

ACKNOWLEDGEMENTS

The development of this strategy has been the work of many contributors and we would like to thank everyone in the BSG community who kindly contributed their reflections, ambitions and visions for the future. This strategy was put together during the second wave of the COVID-19 pandemic and unprecedented pressure on the health service, including everyone involved in health research.

We also thank the patients who kindly contributed their thoughts on past, present and future opportunities for the BSG research community. And we thank our partner charity Guts UK for supporting the collation of that patient feedback.

Appendices

1. ENDOSCOPY CRG:

Successful funding bids and selection of publications

CONSCOP2:

A randomised controlled trial of contrast enhanced colonoscopy in the reduction of right sided bowel cancer. Led by Cardiff University. Grant value: £2.2m.

DISCARD3:

Implementation of Optical Diagnosis of Diminutive Colorectal Polyps in Real Life Clinical Practice. Led by London North West Healthcare NHS Trust.

COLODETECT:

Randomised control trial that will evaluate whether colonoscopy assisted with the GI Genius™ Intelligent Endoscopy Module improves the detection of abnormalities such as polyps and cancer compared to standard colonoscopy. Led by Newcastle University.

OPTIMA:

The trial uses confocal laser endomicroscopy to detect a number of labelled antibodies in patients with Inflammatory Bowel Disease, which acts as a reliable indicator for how well patients will respond to treatment, particularly in the early stages. The results from OPTIMA are also leading to better genotypic (genetic information) and phenotypic (physical characteristics) information. Led by University of Birmingham.

NED-APRIQOT – National Endoscopy Database:

Automated Performance Reports to Improve Quality Outcomes Trial: The National Endoscopy Database, overseen by the Joint Advisory Group on Gastrointestinal Endoscopy, captures real-time clinical data from each UK hospital's Endoscopy Reporting System. This project will use the database to determine the optimal key performance indicators for colonoscopy pathology detection.

COLOCOHORT – Colorectal Cancer Cohort Study:

This study aims to develop a risk stratification tool to help determine which patients are at highest risk of having polyps or cancer; this tool will be able to be used in the future to work out which patients need to be referred to endoscopy for investigation. It will also explore whether bacteria in the bowel (microbiome) are different in people with and without colorectal polyps/cancer; if so, this information would also be used to help better target endoscopy services to those who most need it. Led by Newcastle University.

B-ADENOMA

(BowelScope: Accuracy of Detection Using ENdocuff Optimisation of Mucosal Abnormalities) – Colin J Rees, Andrew Brand, Wee Sing Ngu, Clive Stokes, Zoe Hoare, Nicola Totton, Pradeep Bhandari, Linda Sharp, Alexandra Bastable, Matthew Rutter, Ajay M Verma, Tom Lee, Martin Walls. BowelScope – Accuracy of Detection using ENdocuff Optimisation of Mucosal Abnormalities (The B-ADENOMA Study): A multicentre, randomised controlled flexible sigmoidoscopy trial. Gut. Published Online First: 3 April 2020; DOI: 10.1136/gutjnl-2019-319621

WASH

Rutter MD, Evans R, Hoare Z On behalf of the WASH trial team, et al. WASH multicentre randomised controlled trial: water-assisted sigmoidoscopy in English NHS bowel scope screening. Gut Published Online First: 07 September 2020. DOI: 10.1136/gutjnl-2020-321918

HALT-IT

(Haemorrhage alleviation with tranexamic acid-intestinal system) – major UK lower GI bleeding trial. Roberts I, Shakur-Still H, Afolabi A, et al. Effects of a high-dose 24-h infusion of tranexamic acid on death and thromboembolic events in patients with acute gastrointestinal bleeding (HALT-IT): an international randomised, double-blind, placebo-controlled trial The Lancet. 2020; 395(10241):1927-1936. DOI: [10.1016/S0140-6736\(20\)30848-5](https://doi.org/10.1016/S0140-6736(20)30848-5) [NCT01713101](https://www.clinicaltrials.gov/ct2/show/study/NCT01713101)

VIRTUOSO

Kandiah K, Subramaniam S, Thayalasekaran S, et al. Multicentre randomised controlled trial on virtual chromoendoscopy in the detection of neoplasia during colitis surveillance high-definition colonoscopy (the VIRTUOSO trial) Gut Published Online First: 19 November 2020. doi: 10.1136/gutjnl-2020-320980

2. ENDOSCOPY CRG:

COVID-19 response

WORKING GROUP 1 - COVID-19 Testing and Safety:

The following articles were published in 2020:

Hayee B, Thoufееq M, Rees CJ, Penman I, East J. Safely restarting GI endoscopy in the era of COVID-19. Gut. Published online June 5, 2020;gutjnl-2020-321688. doi:10.1136/gutjnl-2020-321688

Colin Rees, Matt Rutter, Linda Sharp, Bu Hayee, James East, Pradeep Bhandari, & Ian Penman. COVID-19 as a barrier to attending for gastrointestinal endoscopy: weighing up the risks. The Lancet Gastroenterology & Hepatology. September 2020; DOI 10.1016/S2468-1253(20)30268-5.

Rees CJ, East JE, Oppong K, et al. Restarting gastrointestinal endoscopy in the deceleration and early recovery phases of COVID-19 pandemic: Guidance from the British Society of Gastroenterology. Clin Med (Northfield Il). 2020;20(4):352 LP - 358. doi:10.7861/clinmed.2020-0296

WORKING GROUP 2 - Clinical Pathways:

The working group developed a RAND panel for FIT based LGI referral pathways and validation of Glasgow dysphagia score. This work is now being progressed with the aim of developing guidelines for clinical pathways for post-COVID-19 care.

WORKING GROUP 3 - Patient Experience:

Endoscopy Uptake in the COVID-19 pandemic: understanding barriers to uptake and patient experiences. This is funded as part of the ongoing COLOCOHORT study and is called COLO-ICE. Led by Prof Linda Sharp, Dr Christina Dobson and Prof Colin Rees.

COVID-19 and Colorectal Cancer: project funded by the British Academy. Led by Prof Linda Sharp, Dr Christina Dobson and Prof Colin Rees.

Will COVID-19 exacerbate inequalities in colorectal cancer screening uptake? Funding application is ongoing.

WORKING GROUP 4 - Data:

Rutter MD, Brookes M, Lee TJ, Rogers P, Sharp L. Impact of the COVID-19 pandemic on UK endoscopic activity and cancer detection: a National Endoscopy Database Analysis. Gut. Published online July 19, 2020;gutjnl-2020-322179. doi:10.1136/gutjnl-2020-322179

WORKING GROUP 5 - Novel Technologies:

Use of Cytosponge for Two-Week-Wait referrals – [Project Delta](#) extension

Use of Cytosponge for Barrett's Oesophagus – in progress

Aerosol Generating Procedures estimation – submitted UK Urgent Public Health funding

Colon Capsule Endoscopy for Faecal Immunochemical Test (FIT) positive patients – in development

3. INFLAMMATORY BOWEL DISEASE CRG:

Selection of key clinical studies and publications

PRED4: Predicting Serious Drug Side Effects in Gastroenterology (Chief Investigator: Tariq Ahmad): this was the first major attempt to translate the gene discovery experiments from the UKIBDGC to clinical practice. The research questions centred around uncovering gene associations with adverse drug reactions associated with commonly used therapies for IBD. The team set up an extensive network of recruiting sites across England, Wales, Scotland and N Ireland to ensure collection of sufficient numbers of cases of rare events. ([Heap et al. 2014](#); [Heap et al. 2016](#); [Walker et al. 2019](#))

PANTS: Personalising Anti-TNF Therapy in Crohns Disease (Chief Investigator: Tariq Ahmad): the follow-on to PRED4, this study recruited 1500 bionative patients from across the UK as they started on anti-TNF therapy. Along with a number of key clinical observations the study demonstrated a striking association with HLA-DQA1*05 and immunogenicity to anti-TNF therapy. ([Sazonovs et al. 2020](#); [Kennedy et al. 2019](#))

IBD Bioresource (Chief Investigator: Miles Parkes): <https://www.ibdbioresource.nihr.ac.uk/>: funding was secured to massively expand the UKIBDGC into a database of patients recallable for future research by genotype and phenotype. This has recruited 35000 individuals from across the UK to date and has successfully facilitated a number of phase 2 studies within the CRG. ([Stourmaras et al. 2020](#); [Parkes and IBD BioResource](#))

GUT Reaction (Chief Investigators: John Bradbury and Miles Parkes): <https://www.hdruk.ac.uk/helping-with-health-data/our-hubs-across-the-uk/gut-reaction/>: HDR-UK hub for integrated research that brings together genomics, EHR data, laboratory, pathology, endoscopy and imaging data assets from consented participants in the IBD Bioresource. "Gut Reaction will harness the power of health data to help identify the best treatments for each person with IBD. Working with patients, academia and industry, it will unite high-quality health data sets from trusted partners and support their use for research."

PREdiCC: The PRognostic effect of Environmental factors in Crohn's and Colitis (Chief Investigator: Charlie Lees); <https://www.predicct.co.uk/>: the study has recruited over 2500 patients in clinical remission from 49 UK sites and collected a detailed baseline dataset consisting of clinical, lifestyle, psycho-social, environmental, microbiome, dietary and genetic factors. These patients are each being followed longitudinally for a minimum of 2 years to explore causes of disease flare.

IBD-BOOST (Chief Investigators: Christine Norton and Ailsa Hart); <https://www.ibd-boost.org/>: The IBD-BOOST Survey aims to describe the inter-relationship of the symptoms associated with Inflammatory Bowel Disease (IBD) of urgency, fatigue and pain, their prevalence and associations with quality of life, depression, anxiety, disease activity, disease history and demographic and lifestyle factors. The research programme focuses on the development and evaluation of management interventions to improve the well-being of people with IBD by relieving these most common and troublesome chronic symptoms and enhancing quality of life.

PROFILE (Chief Investigator: Miles Parkes); <http://www.crohnsprofiletrial.com/> is the first large-scale biomarker stratified study in IBD. Profile is in the last phase of recruiting ~400 patients with newly diagnosed Crohn's disease from multiple sites across the UK. (Parkes et al. 2018)

IBD RESPONSE (Chief Investigator: Chris Lamb): in set-up currently a major study of the microbiome as a predictor of response to advanced therapies in IBD

Alexander, James L., Gordon W. Moran, Daniel R. Gaya, Tim Raine, Ailsa Hart, Nicholas A. Kennedy, James O. Lindsay, et al. 2021. "SARS-CoV-2 Vaccination for Patients with Inflammatory Bowel Disease: A British Society of Gastroenterology Inflammatory Bowel Disease Section and IBD Clinical Research Group Position Statement." *The Lancet. Gastroenterology & Hepatology*, January. [https://doi.org/10.1016/S2468-1253\(21\)00024-8](https://doi.org/10.1016/S2468-1253(21)00024-8).

Din, Shahida, Alexandra Kent, Richard C. Pollok, Susanna Meade, Nicholas A. Kennedy, Ian Arnott, R. Mark Beattie, et al. 2020. "Adaptations to the British Society of Gastroenterology Guidelines on the Management of Acute Severe UC in the Context of the COVID-19 Pandemic: A RAND Appropriateness Panel." *Gut*, June. <https://doi.org/10.1136/gutjnl-2020-321927>.

Geldof, Jeroen, Jean-Frédéric LeBlanc, Laura Lucaciu, Jonathan Segal, Charlie W. Lees, and Ailsa Hart. 2020. "Are We Addressing the Top 10 Research Priorities in IBD?" *Frontline Gastroenterology*, November. <https://doi.org/10.1136/flgastro-2020-101579>.

Hart, Ailsa L., Miranda Lomer, Azmina Verjee, Karen Kemp, Omar Faiz, Ann Daly, Julie Solomon, and John McLaughlin. 2017. "What Are the Top 10 Research Questions in the Treatment of Inflammatory Bowel Disease? A Priority Setting Partnership with the James Lind Alliance." *Journal of Crohn's & Colitis* 11 (2): 204–11.

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