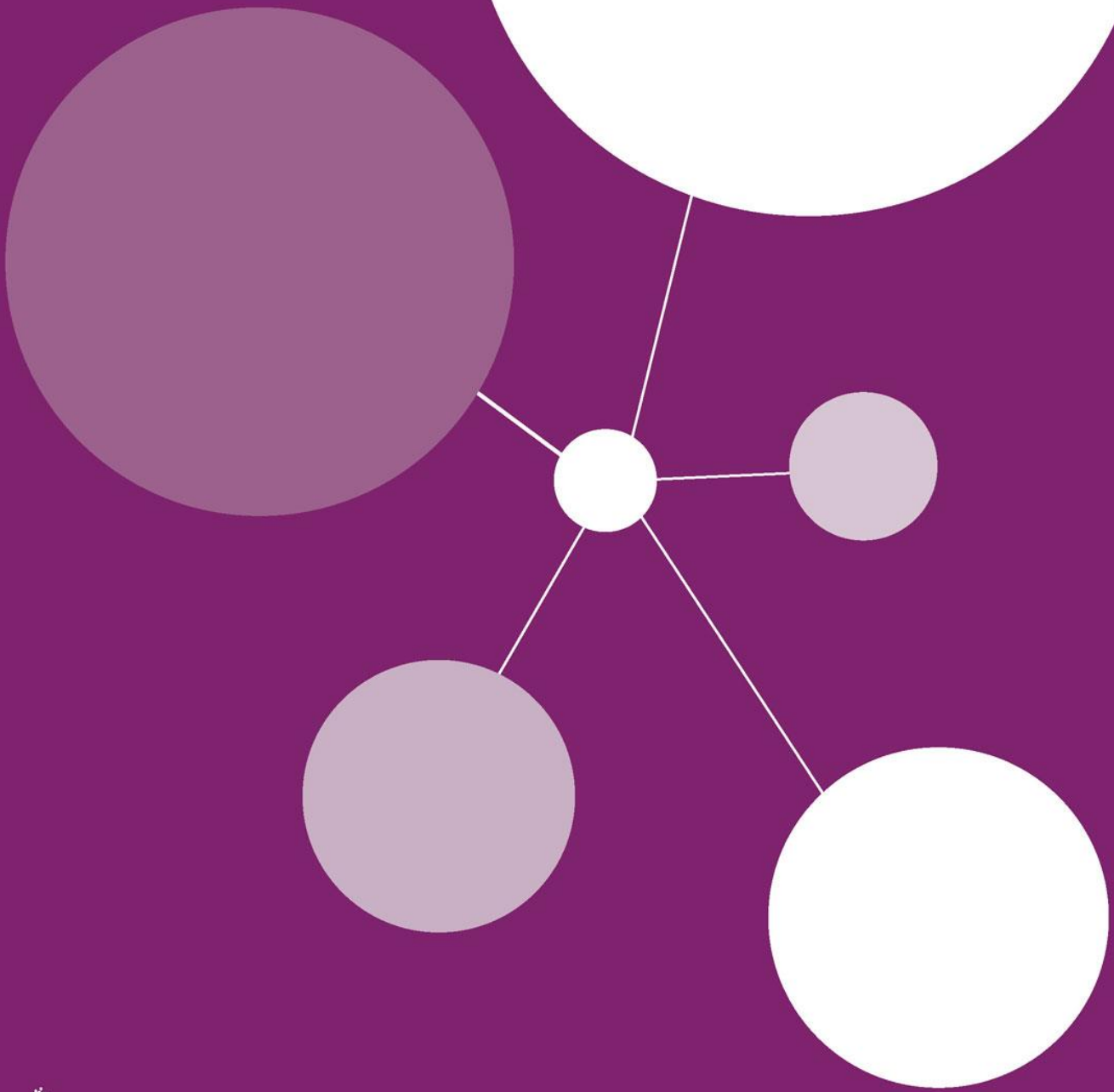
NCRI
National
Cancer
Research
Institute

NCRI Colorectal Group

Annual Report 2018-19



Partners in cancer research

NCRI Colorectal Group
Annual Report 2018-19

1. Top 3 achievements in the reporting year

Achievement 1

There has been a marked and continuing improvement in recruitment of colorectal cancer patients to NIHR portfolio trials over the past two years. For interventional studies 1544 patients were recruited in 2016-17 compared to 13672 in 2018-19 (3.8% vs. 32.7% of cancer patients relative to incidence respectively). For non-interventional studies 2031 patients were recruited in 2016-17 compared to 6092 in 2018-19 (5.0% vs. 14.6% of cancer patients relative to incidence respectively).

Achievement 2

Publication is expected in 2019 for three major surgical colorectal cancer trials that completed follow-up and analysis in 2018 and presented initial results in 2018-19. Each trial evaluates an important new strategic approach in patient care:

- Stenting as a bridge to surgery for obstructing left-sided bowel cancer in **CReST**
- Neoadjuvant chemotherapy for preoperative downstaging of colon cancer in **FOxTROT**
- Multimodality approach to treatment of early rectal cancer aimed at organ preservation in **TREC.**

The first presentations of the mature results from FOxTROT and TREC were delivered confidentially at the NCRI Colorectal Cancer CSG Trials Meeting on 22.3.19.

Achievement 3

Increasing development of UK infrastructure for platform clinical studies (e.g. PLATO, FOCUS4, ADD ASPIRIN), together with increasing linkage with preclinical and translational teams. For example, a think tank in Glasgow in October 2018 explored future collaborative studies based on the funded of aCRCelerate colorectal preclinical platform. Discovery data emerging from the S:CORT consortium will feed into currently-planned validation studies. There is now increased scientific representation on the Colorectal CSG, aimed at facilitating translational trial input and review.

2. Structure of the Group

The Colorectal Cancer CSG continues with the same structure as for recent years. There are currently 26 members on the Colorectal CSG (see Appendix 1). Our membership represents a broad balance of specialties with three clinical oncologists, six medical oncologists, five surgeons (one of whom is also a translational scientist), one gastroenterologist, two consumer representatives, two pathologists, two radiologists, one research nurse, one statistician, one translational scientist and two trainees. There is representation from all four UK devolved nations.
Four members rotated off the group in the reporting period: Dr Jane Winter, Mr Simon Bach, Ms Susan Moug, and Prof Gina Brown. The following new members were welcomed to the group: Dr Andrew Beggs, Dr Tony Dhillon, Dr Philip Dunne, Dr Manuel Rodriguez-Justo, Ms Nicola Fearnhead, Prof Vicky Goh. In addition, two new trainees joined the group following a very competitive application process: Dr Catherine Hana and Dr Colin Steele.

Professor Richard Adams rotates off his leadership of the Anorectal Subgroup in April 2019 and will be replaced by Dr Sheela Rao. We extend deep gratitude to Richard for his many years of successful work in this role.

3. Group & Subgroup strategies

Colorectal Group

1. Addressing the translational gap (converting discovery science into patient benefit)

a. **Increase engagement and networking with key preclinical discovery and translational scientists, plus increased preclinical and clinical collaborations with pharma. Establish dialogue with key stakeholders from the earliest stage including funders.**

Clinical trials are being designed to maximise and embed hypothesis-driven translational research from the earliest stage, based on strong science. We have increased clinical interaction with scientific groups (e.g. via preclinical aCRCelerator, translational S:CORT) and established areas of mutual interest. The aim is to work up a UK trial from bench to bedside via aCRCelerator. We aim to increase links with ECMC bioinformatics hub. There have been grant application success via the ECMC Combinations Alliance (e.g. PRIME RT).

b. **Develop key platform studies across the portfolio, including a stratified medicine approach.**

The invited full application for the ARTEMIS platform trial examining organ preservation in rectal cancer using intensified chemoradiation, will be submitted to CRUK in June 2019.

c. **Develop strategies to increase the quality of colorectal sample collection and biobanking in standard clinical practice and in clinical trials.**

Although the COLO-SPEED Catalyst Award application to CRUK was not successful in the past year (CI: Prof Colin Rees), other avenues for funding of this initiative are being very actively explored currently. Amongst other aims, this is designed to be a national initiative (with international collaboration) to increase the quality of biopsy sample collection in routine clinical practice, approaching patients at the earliest stage. Microbiome will also be collected. Another aim is to establish exemplar UK biobanks including collaboration with CM-Path, with a central database with tightly linked clinical data. On a smaller scale, an initiative funded by BDRF (CI Mr Dale Vimalachandran), is also aiming to define standards for optimum biopsy collection in routine clinical practice. The challenging area of post mortem sample collection continues to be pursued in the ground-breaking GIFT study in Leeds. There will be increasing opportunities to collaborate with the 100,000 Genomes Project and interact with GCIP and GEL to maximise the use of stored clinical and genomic data.

2. Increase new trial funding success:

a. **Encourage skill mix including translational scientists, methodology and statistics.**
We are maintaining diverse membership of CSG and Subgroups on rotation of members. Collaboration and interaction with the ECMCs and ECMC Network has developed through the FOCUS4 trial and the ECMC Combinations Alliance. There has been grant application success via the ECMC Combinations Alliance (e.g. PRIME RT). Involvement of CTRad has occurred through formal presentation of radiotherapy trials to the regular CTRad Proposals Guidance Meeting for review and feedback, interaction on specific trials and on methodology development. Interaction with the Supportive & Palliative Care CSG and the Psychosocial Oncology & Survivorship CSG have occurred via presentations and attendance at main CSG and subgroup meetings and relevant trial development input. Interaction on the Upper GI CSG on studies in colorectal cancer liver metastases and small bowel cancer continues.

b. **Target application to appropriate funders.**
The Surgical Subgroup have led the way in proactively influencing commissioned funding calls, and the aim is for other Subgroups to follow this lead. The variety of funders applied to is being increased including international funding. We are developing studies which probably fit with HTA funding e.g. DPD Deficiency and CT DNA (Advanced and Adjuvant Subgroup).

c. **Achieve balanced portfolio.**
The 2018 Gut gap analysis was useful in highlighting areas for future development. The CSG strives to achieve a balanced portfolio including screening, prevention (primary and secondary) and treatment of established cancer, plus living with and beyond cancer, by discussion of all new study proposals.

d. **Mandatory CSG peer review of all proposals wanting CSG endorsement.**

We have established 3-monthly CSG peer review of all proposals, timed to the main funding calls.

e. **Increase CSG profile to engage research community and patients/public.**
We aim to develop our website, including a description of who we are, what we do, logo, generic email addresses, list of open funding rounds and deadlines. We will aim to ensure acknowledgement of the CSG in all publications and increase dialogue with CTUs. We will host links to the public relations sections of other relevant initiatives such as aCRCelerator.

3. Increasing patient centred themes:

a. **Increase patient involvement in decision making, 'integration not involvement'.**
We include patients and public from the earliest stage of study development. We are committed to increasing the opportunities for patients and public to influence research direction, including participation in events such as the 'Dragon's Den' at the NCRI conference. We will increase interaction with third sector partners to increase opportunities for communication with the public. We will continue the drive to use patient-reported outcome measures as an important part of our trial methodology.

b. **Answer questions relevant to patients.**
We will ensure survivorship and health economic outcomes are included in all studies where relevant. We will also ensure trial design incorporates assessment of PPI views of trade -off of efficacy vs. morbidity, where appropriate. We will expand the successful surgical Delphi/CREATE cycle to other disciplines to involve consumers as far as possible. We will continue to build links with Psychosocial and Survivorship CSG including living with and beyond cancer.

c. **Maximise the use of patient data and practice-changing trial findings.**
Ensure data collection is relevant for outcomes that matter to patients, and of high quality. Make trial design as efficient as possible e.g. through MAMS design. We will maximise the opportunities of digital health data. We will increasingly harness the power of 'Big Data' from sources such as Public Health England and the National Cancer Registration and Analysis Service (NCRAS), to inform about treatment and outcomes occurring in the 'real world', to help in designing patient-relevant trials. Trial design will be increasingly aimed at individualised, stratified treatment. We will promote the implementation into routine clinical practice, of practice-changing findings, and demonstrate the clinical impact of such findings.

4. Increase patient recruitment:

a. **Communicating effectively with patients.**
We continue to ensure that patient-facing information is concise and straightforward, with patients and public fundamentally involved in its generation, particularly the patient information sheet. We aim to maintain engagement through the trial lifecycle and to maximise opportunities provided by digital platforms, the internet and social media. We held a successful Trials Meeting in March 2019 which saw our consumer representatives

at Group and Subgroup level presenting at the meeting and sharing their thoughts and ideas.

b. **Communicate effectively with the research community.**
We will maximise opportunities for disseminating trial information and clinician engagement, including reinstating the Annual Trials Meeting, which was staged successfully in London on 22.3.19, with 160 delegates.

c. **Ensure a trial portfolio which facilitates maintaining improved 2017/18 intervention trial recruitment figures.**
We will continue to strive to provide an attractive balanced portfolio of clinical trials covering all subspecialty areas, which will be proactively managed and monitored during the course of recruitment. We will continue to engage with leads of trials in which the CSG has no involvement, and with NCRNs and to strive to link research into healthcare pathways.

d. **Rationalise study-associated burden of work, make the most of limited resources.**
We will continue to maximise efficiency by playing to the strengths of recruiting centres, ensuring trials are fully costed at the outset, and rationalising follow-up.

5. Workforce:

a. **Build the colorectal cancer research workforce including widening multidisciplinary research engagement.**
We will continue to support, mentor and encourage the development of colorectal research-orientated clinicians, scientists, data scientists and pathologists, linking with other CSGs and Subgroups when appropriate (e.g. CM-Path, Primary Care).

b. **Support trainees**
We will continue mentorship and training of the next generation of junior researchers, including representation on the CSG and subgroups and inclusion on grant applications. We aim to expand the successful surgical initiatives in junior-led clinical trial development and recruitment. We aim to highlight training schemes via inclusion on our website in the future and will continue to expand successful Associate PI schemes. The trial unit fellowship system has been successful in recent years, and further applications will follow. Trainees with projects relevant to colorectal cancer research were also given the opportunity to present at the Colorectal Trials Meeting.

Advanced & Adjuvant Disease Subgroup (Chair, Dr Janet Graham)

Advanced and Adjuvant Disease Subgroup 3 main achievements (2018-2019)

1. Linkage with preclinical and translational teams e.g. funding of aCRCelerate colorectal preclinical platform. Think tank in Glasgow October 2018. Data emerging from S CORT consortium which should help shape future slides.
2. Platform trials:
    a. FOCUS 4c recruiting well and DMEC is imminent.
    b. ADD ASPIRIN– set up of infrastructure around the UK to deliver large complex platform studies.
3. Emerging group of immunotherapy studies; POLE M has recently opened and other neo-adjuvant studies are submitted for funding

Continue to develop early phase studies to feed through to our future phase II and III RCTs. Ongoing Accelerator submission was successfully awarded by CRUK to Sansom et al which will aim to link preclinical work with early phase colorectal trials in a more coordinated manner.
Extend our links with the ECMC network and with the pharmaceutical and biotechnology industries to increase the number of early phase trials in our portfolio The Subgroup held a very successful brain storming event with basic scientists in October 2018.
Develop trials to cover all our disease settings, and in particular: ○ A large pragmatic adjuvant study (in addition to Add-Aspirin), probably CT DNA based and perhaps in collaboration with European colleagues (stage II) and the IDEA consortium (stage III) ○ A large pragmatic 1st line study (for once FOCUS4 closes) ○ Studies in second-line, third-line and beyond third-line metastatic disease ○ Studies on tissue/tumour heterogeneity
Explore the development of studies for different subgroups of patients and at different stages of the patient journey, particularly focusing on translationally rich small studies which build on UK preclinical science We currently have an adjuvant study and a first line maintenance study. We are keen to have a study for every patient – and in every part of the UK. We are very keen to increase links with cancer charities to deliver on the previously identified “key research gaps”.

Develop studies on biomarkers that will help us to define which patients do and do not benefit from therapy in the neo-adjuvant, adjuvant and advanced disease settings

Vicky Coyle and Janet Graham are developing a CT DNA study in the neo-adjuvant and adjuvant setting and Jenny Seligmann is developing studies using biomarkers to expand the group of patients who are likely to benefit from EGFRi. Jenny and Janet are working up investigator lead studies in the neoadjuvant space eg BRAF mutant disease, based on the pilot data published re BEACON and Tony Dhillon and Kai Keen Shiu have submitted trials re neoadjuvant IO in MSI patients.

Anorectal Subgroup (outgoing Chair, Professor Richard Adams)

Develop seamless portfolio of trials

Locally advanced Rectal Cancer:

This has proved complex with the subgroup spending some time in developing a phase III trial design to proceed at the completion of the ARISTOTLE phase III trial in locally advanced rectal cancer. The TRIGGER feasibility trial, evaluating the role of MRI tumour regression grade as a mechanism to select patients for a non-surgical approach has achieved its feasibility endpoint and has been submitted for funding in order to progress to phase III. Recently the ARTEMIS platform phase II study has been accepted to proceed to a full CRUK funding application.

Early Rectal Cancer:

The TREC trial assessed feasibility in early rectal cancer and progressed to the STAR TREC trial as an international feasibility, which is being submitted for funding for a phase III study.

Anal Cancer:

- **Localised disease:**
  The PLATO trial including ACT3, 4 and 5 has reached its first milestone safety analysis in ACT5 and will re-start after passing this stage in the spring of 2019. The CORINTH phase I trial will commence in the Spring of 2019 as an international study and will ensure the portfolio maintains a forward-looking approach for future trial development
- **Advanced disease:**
  The International IRCI metastatic anal cancer trial has accrued and whilst the group had established a plan to move rapidly on to a global phase III with pharma integration, this has been complicated by the inability of the key pharma partner to engage effectively at the twelfth hour. The group are proactively looking at alternatives and hope to maintain and expand the international partnership established during the InterAACT trial

Use complex design in the delivery of future trials

The PLATO trial has established an efficient platform building upon the UKs ability to recruit patients with localised anal cancer to clinical trials. This umbrella trial incorporates ACT3, 4 and 5 to effectively deliver. The CORINTH trial establishes a novel approach to integrating novel therapies into combination radiotherapy studies for curable disease. The ARTEMIS trial will attempt to deliver a platform-based study to evaluate a range of approaches to optimising the definitive treatment of rectal cancer without the need for surgery

Collaboration with other CSGs and international groups to develop studies

The PLATO group have collaborated with the AGITG Australasian group in relation to the ACT5 trial and are awaiting outcomes from their funding application, similarly the US have been interested in our approach in the ACT4 study and have collaborated in the development of their next trial.
The CSG has been very proactive within IRCI in developing and delivering the InterAACT trial and the development of InterAACT 2 as a phase III study.
The ARTEMIS study has been discussed with international colleagues in its development.
The PLATO, CORINTH and ARTEMIS studies have been reviewed by CTRad.
The CORMAC study has established with international engagement a core data set for studies of patients with anal cancer

Develop trials for organ preservation in rectal cancer

The TRIGGER feasibility study in rectal cancer has accrued and is seeking funding for a phase III international trial. The ARTEMIS trial is in development as a platform study with key endpoints relating to clinical complete response

Develop trials which test the effectiveness of systemic treatments replacing resection in resectable rectal cancer

The PRIME RT trial has identified partial funding evaluating novel immunotherapeutic approaches in combination with radiotherapy in rectal cancer

Explore the options for a trial in synchronous resectable metastatic disease from rectal cancer

This work is ongoing

Develop a study which focuses on improving toxicity and PROM assessment

Both PLATO and CORINTH plan to incorporate this work

Continue to develop combination trials of radiotherapy and novel agents

CORINTH in anal cancer, PRIME-RT and ARTEMIS in rectal cancer plan to explore this area significantly.

Link with other CSGs on understanding the biology of and advancing trial development in HPV-driven cancers

The re-opening of the ACT5 trial will see the beginning of the now funded sample collection and initial translational work in relation to HPV driven anal cancer

Link with pre-clinical and translational scientists to improve our understanding of biology to identify optimised prognostic and predictive markers.

The Anorectal Subgroup has been significantly engaged in the SCORT translational study (Maughan) with a focus on rectal cancer response to therapy, this has included the development of a collaboration relating to samples from the phase III ARISTOTLE trial. Separately there are new opportunities in linking with the international ACRCelerate programme (Sansom) with the group being represented at both the launch and initial meetings to date in 2018 and Jan 2019.

Screening & Prevention Subgroup (Chair, Professor Colin Rees)

Development of COLO-SPEED collaboration across UK and Netherlands

- COLO-SPEED collaboration developed and refined and has been presented to multi funders on 1st April for potential funding consideration.
- 3 COLO-SPEED adopted studies funded
    - COLOCOHORT – risk stratification study
    - VODECA – VOCs for CRC screening
    - Circulating DNA for CRC screening
- COLOPREVENT submitted for funding

Endocuff Vision: Device attached to distal end of colonoscope to improve detection of polyps at colonoscopy

- ADENOMA trial published in GUT demonstrating enhanced detection with Endocuff Vision – fast tracked for NHSE implementation and NICE draft support
- BADENOMA trial complete – publication pending

Delivery of Seafood trial: Aspirin and EPA for high risk patients in bowel cancer screening programme

- SeAFOod trial complete and published in Lancet October 2018
- SeAFOod mechanistic study application to EME funded March 2019 pending contracts

Surgical Subgroup (Chair, Ms Nicola Fearnhead)

The Surgical Subgroup of the NCRI Colorectal CSG maintains strong links with the Royal College of Surgeons Research Lead and Associate Leads in Coloproctology, the Research & Audit Committee of the Association of Coloproctology of Great Britain and Ireland (ACPGBI), and the Bowel Disease Research Foundation (BDRF) which has provided pump priming funding for our Delphi research prioritisation and several colorectal surgical studies that have gone on to succeed in major grant applications.

Surgical Subgroup top 3 achievements:

1. Publication is expected in 2019 for three major surgical colorectal cancer trials that completed follow-up and analysis in 2018 and presented initial results in 2018-19. Each trial evaluates an important new strategic approach in patient care.
2. We have seen several newly funded trials open in the past 12 months and continue to build on our thriving portfolio of actively recruiting surgical trials.
3. We continue to work with the Association of Coloproctology of Great Britain and Ireland (ACPGBI) and Royal College of Surgeons (RCSE) to deliver the **Colorectal Research and Trial Engagement (CReaTE)** programme to promote colorectal surgical research through regional roadshows (https://www.acpgbi.org.uk/news/create-roadshow/).

The Subgroup utilises IDEAL Collaboration methodology in developing trial ideas and is fortunate in having strong links with several clinical trials units who provide methodological and statistical support.

Improve perioperative outcomes

Improving perioperative outcomes is a key focus area for our subgroup, having supported national audits on small bowel obstruction (**NASBO**) and postoperative ileus (**IMAGINE**). We have brought together expertise to develop a core outcome set in postoperative gastrointestinal recovery with trainee leads.

The Elderly Laparotomy Frailty (**ELF**) audit reported in 2018 and the group is supporting proposals to look at preoperative and perioperative interventions to improve outcomes in this patient group who are at risk of high rates of morbidity and mortality.

Improve collaboration

Members of the subgroup continue to collaborate with RCSE, NHS England and NIHR to develop a commissioning brief to evaluate robotic assisted surgery in the NHS. A strong patient focus has been included in this proposal.

Our patient representatives have strongly supported research in the field of stomas. The subgroup supported a sandpit event to bring together ideas and expertise in ileostomy research in November 2018, ahead of a focused funding call from BDRF in 2019.

Develop a new study in organ preservation

Following successful completion of its feasibility phase, the **STAR-TREC** phase 3 application was submitted to Cancer Research UK in January 2019. Patient involvement has directly influenced a major change in trial design with evaluation planned to compare the organ preservation strategies against the patient choice surgical registry control arm. A strong translational component has been built in to the **STAR-TREC** protocol.

POLCA DOT has been developed to evaluate organ sparing treatment for colon polyp cancers but is not yet funded.

Develop international colorectal surgical studies

Development of a new international colorectal surgical research prioritization to increase engagement and collaboration among the six surgical societies affiliated to the Tripartite colorectal organization (ACPGBI, ASCRS, CSSANZ, ESCP, RACS section of Colon & Rectum Surgery and RSM Section of Coloproctology) in preparation for the Tripartite colorectal meeting in Auckland 2020. We are working with the Bowel Disease Research Foundation to ensure pump-priming funding for peer-reviewed **Tripartite 2020 Vision** collaborative projects. Tripartite 2020 Vision collaborations are already established looking at Low Anterior Resection Syndrome (functional consequences of rectal cancer resection), diverticular abscess (DAMASCUS), impact of personality on surgical decision-making (PLATO) and retrorectal tumours (RETRO).

Recognition of failure to recruit to several national and international trials of surgical interventions in metastatic colorectal malignancy has led to a change in focus by exploring new methodologies that would introduce goal directed therapy endpoints for the evaluation of surgical interventions in patients with advanced disease. The ACPGBI IMPACT (Improving Management of Patients with Advanced Colorectal Tumours) initiative was developed from the Delphi prioritization exercise and now delivers a national programme of regional multidisciplinary IMPACT meetings in collaboration with the Pelican Cancer Foundation.

The Subgroup remains supportive of the NIHR Global Health Research Unit on Global Surgery which has completed three international collaborative cohort studies (Global Surgery 1, 2 and 3) and is now setting up global surgery trials FALCON, CRANE and CHEETAH.

Develop interventions to reduce SSI

Surgical site infection (SSI) continues to be a major source of morbidity in colorectal surgery. Subgroup members support two recently opened trials (**SUNRRISE** and **ROSSINI2**) looking at interventions to reduce SSI. The CReaTE roadshows also promote these trials.

4. Task groups/Working parties

The Colorectal Group had no task groups or working parties during the reporting year.

5. Funding applications in last year

Table 2 Funding submissions in the reporting year

Cancer Research UK Clinical Research Committee (CRUK CRC)					
Study	**Application type**	**CI**	**Outcome**	**Level of CSG input**	**Funding amount**
May 2018					
POLEM: Avelumab plus fluoropyrimidine-based chemotherapy as adjuvant treatment for stage III dMMR or POLE exonuclease domain mutant colon cancer: A phase III randomised study. Translational research sample collection	Sample Collection	Dr Perminder Tony Dhillon	Not Supported (Preliminary)	CSG/Subgroup developed	NA
November 2018					
FOCUS 4 extension - Molecular selection of therapy in metastatic colorectal cancer: a molecularly stratified randomised controlled trial programme	Extension	Professor Tim Maughan	Conditionally Supported	CSG/Subgroup developed	
POLEM: Avelumab plus fluoropyrimidine-based chemotherapy as adjuvant treatment for stage III dMMR or POLE exonuclease domain mutant colon cancer: A phase III randomised study. Translational research sample collection	Sample Collection Award	Dr Perminder Tony Dhillon	Not supported	CSG/Subgroup developed	NA
Prime RT - Priming the Tumour MicroEnvironment for effective treatment with immunotherapy in locally advanced rectal cancer. A	Clinical Trial Award	Dr Campbell Roxburgh	Not supported	CSG/Subgroup developed	NA

phase II trial of Durvalumab in combination with extended neoadjuvant regimens in rectal cancer.					
Use of hypothesis-led candidate biomarkers to identify patients who benefit from neoadjuvant panitumumab plus chemotherapy in a phase 3 randomised controlled trial in high risk operable colon cancer	Biomarker Project Award	Dr Jenny Seligmann	Not Supported	CSG/Subgroup consulted	NA
COLO-PREVENT; A platform for developing COLOrectal cancer PREVENTion therapies	Clinical Trial Award	Professor Karen Brown	Invited to full	CSG/Subgroup consulted	TBC
Augmenting RadioTherapy in Rectal Cancer to Minimise Invasive Surgery (ARTEMIS)	Clinical Trial Award	Professor Simon Gollins	Invited to full	CSG/Subgroup developed	TBC
Other committees					
Study	**Committee & application type**	**CI**	**Outcome**	**Level of CSG input**	**Funding amount**
My Fellowship includes a proposal to work on POLEM and TransSCOT and so could be viewed as arising in part from the CSG:	Cancer Research UK Advanced Clinician Scientist Fellowship	**David Church**		CSG/Subgroup consulted	**£1.58M**
POLEM: Avelumab plus fluoropyrimidine-based chemotherapy as adjuvant treatment for stage III dMMR or POLE exonuclease domain mutant colon cancer: A phase III randomised study.	Merck	Tony Dhillon	Supported	CSG/Subgroup consulted	

6. Consumer involvement

Sandra Irvine

Sandra Irvine is a member of the Northern Ireland Cancer Consumer Forum and its Bowel Cancer Interest Subgroup. She is also a member of UseMYData, the All Ireland Hospice and Palliative Care group and the NCRI Adjuvant and Advanced Disease subgroup. She is the PPI representative for the S-CORT Belfast centre.

Sandra has reviewed five grant applications during the year. In addition, she has provided input for four proposals being prepared for submission and provided a letter of support for another. She is a co-applicant on a grant submission currently under review and has agreed to be a co-applicant on a grant currently in preparation. She has reviewed literature for a project which was funded by Macmillan last year and with which she continues to be involved.

She contributed to a presentation on PPI at the Colorectal CSG Trials day in March. She acted as facilitator for three courses on Building Research Partnerships hosted by the Public Health Agency, Northern Ireland.

Monica Jefford

Monica Jefford is an integral member of the Colorectal Cancer CSG and makes valid contributions to the main meeting, the Anorectal Subgroup and the APHRODITE & ARTEMIS TMGs. She has also availed herself of the opportunity to comment, electronically, on individual CSG colleague's work.

These are enhanced by other aspects of her eclectic PPI portfolio and likewise feed into the wider research picture. Underpinned by an ethos of 'research for patient benefit' her provision of written or verbal comments ensures the CSG documents are user friendly and support research delivery.

Monica is also a member of the TRACC and several radiotherapy and imaging TMGs and is also a patient advisor to the London Research Design Service and a REC member. She has recently presented at the Colorectal CSG Trials Meeting.

She provides the patient view for NHS England Bowel Screening Programme and the London Regional FIT Implementation Group.

Volunteering with Bowel Cancer UK provides the opportunity for her to speak to various community groups about CR cancer. Research Network membership has increased her involvement with CRC research and she was asked to speak at a recent training Day.

At all times she has felt supported in her role by all members of the Group.

7. Priorities and challenges for the forthcoming year

Priority 1

Develop more Pragmatic/ conceptual trials as part of a balanced portfolio: the UK have a track record in pragmatic trials e.g. 3 versus 6/12, continuous versus intermittent chemotherapy for metastatic CRC, chemotherapy in elderly patients, more recently exercise (CHALLENGE) and ADD ASPIRIN. Continue to design such studies like this that may fit with HTA funding e.g. DPD Deficiency (PR) and CT DNA (VC).

Priority 2

Integrate translational work into trial proposals based on the strongest science: Sample collection and translational work will be important aspects of funding applications currently being developed e.g. in the arena of neoadjuvant colorectal liver metastasis treatment or neoadjuvant stage II and III colorectal cancer treatment following on from FOxTROT (results will hopefully be LBA at ASCO 2019). However, this will need to be based on strong scientific evidence/discovery data to achieve funding in the current highly competitive environment.

Priority 3

Align funding ideals to available funding streams: Make trials attractive to funders, learn from what we do well; learn from others who are particularly successful at targeting certain funders.

Challenge 1

Trials infrastructure: Many trials units are very short staffed particularly in terms of trials nurse support. Many units are over capacity and struggling to take on trials, particularly ones with a long maintenance period. The administration burden has risen with time. Trials set-up is taking longer.

Challenge 2

Excess treatment costs: Currently picked up by local commissioning groups or trusts but following the current review, if t this comes under remit of CRN's, then it will become essential that all costs are properly included in grant submissions e.g. RECIST reporting or biopsy processing.

Challenge 3

With forthcoming proposed platforms trials, 'cutting edge' arms, possibly based on scientific stratification, will involve crucial and often delicate interaction and negotiation with pharma to enable drug supply and funding. However, a mix with 'pragmatic' arms will ensure viability of the platform, at least in the initial stages. The challenge is to strike a compromise between the two, to generate ultimately clinically relevant trials that will be attractive trial to funders.

8. Collaborative partnership studies with industry

InterAACT 2: after significant engagement with one industrial partner to take forward the international phase III trial in metastatic canal cancer, unfortunately the industrial partner withdrew. There are however a number of alternative options which are being actively pursued with industry.

CORINTH: This trial has successfully established a relationship with Merck Sharpe Dohme in a combination radiotherapy immunotherapy study in anal cancer

ARTEMIS: The ARTEMIS study is engaging with industry to give a wide breadth of opportunities for engagement in this platform-based approach, including integration of immunotherapy into chemoradiation intensification strategies in rectal cancer organ preservation.

9. Appendices

Appendix 1 - Membership of the Colorectal Group and subgroups

Appendix 2 – Group and Subgroup strategies
- A – Colorectal Group Strategy
- B – Advanced & Adjuvant Disease Subgroup Strategy
- C – Anorectal Disease Subgroup Strategy
- D – Screening & Prevention Subgroup Strategy
- E – Surgical Disease Subgroup Strategy

Appendix 3 - Portfolio Maps

Appendix 4 – Top 5 publications in reporting year

Appendix 5 – Recruitment to the NIHR portfolio in the reporting year

Professor Simon Gollins (Colorectal Group Chair)

Appendix 1

Membership of the Colorectal Cancer Group

Name	Specialism	Location
Dr Colin Steele*	Clinical Lecturer	Glasgow
Professor Richard Adams	Clinical Oncologist	Cardiff
Professor Simon Gollins (Chair)	Clinical Oncologist	Denbighshire
Dr Catherine Hanna*	Clinical Oncologist	Glasgow
Dr Sandra Irvine	Consumer	Belfast
Ms Monica Jefford	Consumer	Surrey
Professor Colin Rees	Gastroenterologist	Newcastle
Dr Tony Dhillon	Medical Oncologist	Surrey
Dr Michael Braun	Medical Oncologist	Manchester
Dr Vicky Coyle	Medical Oncologist	Belfast
Dr Janet Graham	Medical Oncologist	Glasgow
Dr Sheela Rao	Medical Oncologist	London
Professor Anne Thomas	Medical Oncologist	Leicester
Dr Manuel Rodriguez-Justo	Pathologist	UCL
Dr Nick West	Pathologist	Leeds
Professor Vicky Goh	Radiologist	London
Dr Rohit Kochhar	Radiologist	Manchester
Dr Jane Winter	Research Nurse	Southampton
Dr Philip Dunne	Scientist	Belfast
Dr Louise Brown	Statistician	London
Mr Simon Bach	Surgeon	Birmingham
Ms Nicola Fearnhead	Surgeon	Cambridge
Mr Stephen Fenwick	Surgeon	Liverpool
Dr Andrew Beggs	Surgeon & translational scientist	Birmingham
Professor James Hill	Surgeon	Manchester
Ms Susan Moug	Surgeon	Glasgow

* denotes trainee member

Membership of the Subgroups

Advanced & Adjuvant Disease Subgroup		
Name	**Specialism**	**Location**
Dr Leslie Samuel	Clinical Oncologist	Aberdeen
Dr Mark Saunders	Clinical Oncologist	Manchester
Professor Richard Wilson	Clinical Oncologist	Belfast
Mrs Ann Russell	Consumer	Eaton Ford
Dr John Bridgewater	Medical Oncologist	London
Dr Ian Chau	Medical Oncologist	London
Dr Janet Graham (Chair)	Medical Oncologist	Glasgow
Dr Tim Iveson**	Medical Oncologist	Southampton
Professor Gary Middleton**	Medical Oncologist	Birmingham
Dr Paul Ross**	Medical Oncologist	London
Jenny Seligmann**	Medical Oncologist	Leeds
Professor Anne Thomas	Medical Oncologist	Leicester
Professor Phil Quirke	Pathologist	Leeds
Dr Louise Brown**	Statistician	London
Mr Hassan Malik**	Surgeon	Liverpool
Professor John Primrose	Surgeon	Southampton

Anorectal Subgroup		
Name	**Specialism**	**Location**
Professor Richard Adams (Chair)	Clinical Oncologist	Cardiff
Dr Duncan Gilbert	Clinical Oncologist	Brighton
Professor Simon Gollins	Clinical Oncologist	Denbighshire
Dr Catherine Hanna*	Clinical Oncologist	Glasgow
Dr Mark Harrison	Clinical Oncologist	Watford
Dr Leslie Samuel	Clinical Oncologist	Aberdeen
Ms Monica Jefford	Consumer	Surrey
Dr Sheela Rao	Medical Oncologist	London
Dr Susan Richman	Pathologist	Leeds
Professor Gina Brown	Radiologist	London
Professor Andrew Renehan	Surgeon	Manchester

Screening & Prevention Subgroup		
Name	**Specialism**	**Location**
Professor Ian Tomlinson	Consultant in Genetics and Molecular Pathology	Birmingham
Mrs Lindy Berkman	Consumer	London
Professor Roger Blanks	Epidemiologist	Oxford
Professor John Burn	Epidemiologist	Newcastle
Professor Linda Sharp	Epidemiologist	Newcastle
Dr Christian von Wagner**	Epidemiologist	London
Dr Laura Neilson	Gastroenterologist	Newcastle
Professor Colin Rees (Chair)	Gastroenterologist	Newcastle
Professor Matt Rutter**	Gastroenterologist	Middlesbrough
Professor Diana Eccles**	Geneticist	Southampton
Professor John Saxton	Scientist	Northumbria
Professor Karen Brown	Scientist	London
Mr Simon Bach**	Surgeon	Birmingham

Surgical Subgroup		
Name	**Specialism**	**Location**
Mrs Ann Russell	Consumer	Eaton Ford
Mr Simon Bach	Surgeon	Birmingham
Mr Aneel Bhangu**	Surgeon	Birmingham
Ms Nicola Fearnhead (Chair)	Surgeon	Cambridge
Ms Deena Harji**	Surgeon	Leeds
Mr James Hernon	Surgeon	Norwich
Mr James Hill	Surgeon	Manchester
Mr Matt Lee* **	Surgeon	Sheffield
Professor Dion Morton**	Surgeon	Birmingham
Ms Susan Moug	Surgeon	Glasgow
Mr Tom Pinkney**	Surgeon	Birmingham
Mr Doug Speake	Surgeon	Edinburgh
Mr Jared Torkington	Surgeon	Cardiff
Ms Abigail Vallance	Surgeon	London
Mr Dale Vimalchandran	Surgeon	Chester
Mr Nicholas West	Surgeon	Leeds

* denotes trainee member
**denotes non-core member

Appendix 2

Group & Subgroup Strategies

A – Colorectal Group Strategy 2019-2024

A formal Strategy Meeting took place on 11th May 2018 using an external facilitator (Dr Pippa Corrie). The strategy document was then revised following several rounds of comments to arrive at the current version below.

NCRI Colorectal CSG Mission Statement:

To ensure that patients and public are placed at the centre of our work. To reduce colorectal cancer deaths through prevention and early diagnosis and to maximise the quantity and quality of life for individuals diagnosed with colorectal cancer. To develop and maintain a broad portfolio of impactful collaborative clinical studies, including translationally-driven early and late phase clinical trials, cohort studies, genetic studies, epidemiological, big data and qualitative research.

1. Addressing the translational gap (converting discovery science into patient benefit)

a. **Increase engagement and networking with key preclinical discovery and translational scientists, plus increased preclinical and clinical collaborations with pharma. Establish dialogue with key stakeholders from the earliest stage including funders.**

Design clinical trials to maximise and embed hypothesis-driven translational research from the earliest stage, based on strong science. Establish forums to interact with pharma with regard to drug pipelines and opportunities for collaboration. Increase clinical interaction with scientific groups (e.g. via preclinical aCRCelerator, translational S:CORT) and establish database of areas of interest. Work up a UK trial from bench to bedside via aCRCelerator. Develop links with ECMC bioinformatics hub.

b. **Develop key platform studies across the portfolio, including a stratified medicine approach.**
Develop and submit for funding at least two national platform trials.

c. **Develop strategies to increase the quality of colorectal sample collection and biobanking in standard clinical practice and in clinical trials.**

Submit for funding a national initiative aimed at increasing the quality of biopsy sample collection in routine clinical practice, approaching patients at the earliest stage. Develop UK initiatives aimed at defining and storing optimum biopsy and other samples, including microbiome. Establish exemplar UK biobanks fed by approved clinicians and pathology labs, including collaboration with CM-Path. Develop central database with tightly linked clinical data. Success will be for these initiatives to feed into future studies.

2. Increase new trial funding success:

a. **Encourage skill mix including translational scientists, methodology and statistics.**
Maintain diverse membership of CSG and Subgroups. Establish network-wide cross-specialty collaboration with project-based groups and work streams where appropriate, expand membership as needed.

b. **Target application to appropriate funders.**
Proactively influence commissioned funding calls. Increase variety of funders, including international funding.

c. **Achieve balanced portfolio.**
Gap analysis, including the 2018 Gut analysis. Horizon scan. Emphasis on balanced portfolio including screening, prevention (primary and secondary) and treatment of established cancer. Living with and beyond cancer.

d. **Mandatory CSG peer review of all proposals wanting CSG endorsement.**
3-monthly CSG peer review of all proposals, timed to funding calls. Traffic light rating. Follow through and review funder feedback of all proposals.

e. **Increase CSG profile to engage research community and patients/public.**
Website development including who we are, what we do, logo, generic email addresses, list of open funding rounds and deadlines. Ensure acknowledgement of CSG in all publications. Increase dialogue with CTUs. Host links to public relations sections of other relative initiatives such as aCRCelerator.

3. Increasing patient centred themes:

a. **Increase patient involvement in decision making, 'integration not involvement'.**
Include patients and public from the earliest stage of study development. Increase the opportunities for patients and public to influence research direction. Increase interaction with third sector partners to increase opportunities for communication with public. Support involved patient representatives when trial applications fail.

b. **Answer questions relevant to patients.**
Ensure survivorship and health economic outcome are included in all studies where relevant. Ensure trial design incorporates assessment of PPI views of trade-off of efficacy vs. morbidity, where appropriate. Extend the successful Delphi process. Continue to build links with Psychosocial and Survivorship CSG including living with and beyond cancer.

c. **Maximise the use of patient data and practice-changing trial findings.**
Ensure data collection is relevant for outcomes that matter to patients, and of high quality. Make trial design as efficient as possible e.g. through MAMS design. Maximise the opportunities of digital health data sharing and of Big Data. Trial design to aim at personalised, stratified treatment. Promote the implementation into routine clinical practice, of practice-changing findings, and demonstrate the clinical impact of such findings.

4. Increase patient recruitment:

a. **Communicating effectively with patients.**
Ensure patient-facing information is concise and straightforward, with patients and public fundamentally involved in its generation, particularly the patient information sheet. Maintain engagement through the trial lifecycle. Maximise opportunities provided by digital platforms, the internet and social media. Engage with CTUs to help achieve this aim.

b. Communicate effectively with the research community.
Maximise opportunities for disseminating trial information and clinician engagement, including reinstating the annual Trials Meeting and expanding multidisciplinary road shows. Early engagement with R+D departments.

c. **Ensure a trial portfolio which facilitates maintaining improved 2017/18 intervention trial recruitment figures.**
Provide an attractive balanced portfolio of large, pragmatic trials plus niche studies, including screening and prevention, and for established cancers, treatment beyond first line, and adjuvant studies. Proactively manage the portfolio. Engage with leads of trials in which the CSG has no involvement. Continue engagement with NCRNs. Link research into healthcare pathways.

d. **Rationalise study-associated burden of work, make the most of limited resources.**
Maximise efficiency by playing to the strengths of recruiting centres. Ensure trials are fully costed at the outset. Rationalise follow-up: Which visits are necessary? Can telephone/skype be used? Can some follow-up data be obtained from national datasets? Avoid trial overload in recruiting centres. Participate in UK-wide development of trial finder databases

5. Workforce:

a. **Build the colorectal cancer research workforce including widening multidisciplinary research engagement.**
Support, mentor and encourage the development of colorectal research-orientated clinicians, scientists, data scientists and pathologists, linking with other CSGs and Subgroups when appropriate (e.g. CM-Path, Primary Care).

b. **Support trainees**
Mentorship and training of the next generation of junior researchers. Mentorship of developing projects where expertise is needed. Include juniors in grant applications and encourage representation on the CSG and Subgroups. Expand successful initiatives in junior-led clinical trial development and recruitment. Highlight training schemes including on website. Continue to expand successful Associate PI schemes. Increase successful trial unit fellowship applications

B – Advanced & Adjuvant Disease Subgroup Strategy

Advanced and Adjuvant Disease Subgroup priorities:

1. Align funding ideals to available funding streams: How to make trials attractive to funders, learn from what we do well; learn from others who are particularly successful at targeting certain funders.
2. Develop more Pragmatic/ conceptual trials: The UK have a track record in pragmatic trials e.g. 3 versus 6/12, cont versus intermittent, elderly, more recently exercise (CHALLENGE) and ADD ASPIRIN. Continue to design studies like this that probably fit with HTA funding e.g. DPD Deficiency (PR) and CT DNA (VC).
3. Reinvigorate early phase work: At other end of development spectrum: Around 4-5 large lab groups in UK who are focused on colon (Glasgow, Birmingham, Oxford and others). Aim to formalise a group of leaders, early phase colorectal cancer CRC researchers around the UK who could brainstorm and share ideas. Integrate more with S-CORT.
4. Mentorship: Continue to support and develop trainees and new consultants with an academic interest.
5. Patient involvement and engagement: Ensure trials are patient centred and available to as many patients as possible. Aim to integrate PROMS, new technology etc into studies.
6. Third sector collaborations**:** Work more closely with Beating Bowel Cancer/ Bowel Cancer UK to raise the profile of CRC research in the UK.

C – Anorectal Subgroup Strategy

Anorectal Subgroup priorities:

1. Develop the follow-on trials to ARISTOTLE, integrating biological understanding in a more effective manner and working up robust proposals with a broad range of expertise
2. Working to deliver trials to time and with broader reach with international colleagues
3. Delivery of the anal cancer radiotherapy trials and development of a phase III metastatic anal cancer trial
4. Ensuring we are answering the questions most relevant to our patients

D – Screening & Prevention Subgroup Strategy

Strategy

- Development of COLO-SPEED collaboration across UK and Netherlands
- Endocuff Vision: Device attached to distal end of colonoscope to improve detection of polyps at colonoscopy
- Delivery of Seafood trial: Aspirin and EPA for high risk patients in bowel cancer screening programme

E – Surgical Subgroup Strategy

Surgical Subgroup top 3 achievements (2018 -2019):

1. Publication is expected in 2019 for three major surgical colorectal cancer trials that completed follow-up and analysis in 2018 and presented initial results in 2018-19. Each trial evaluates an important new strategic approach in patient care:

- Stenting as a bridge to surgery for obstructing left-sided bowel cancer in **CReST**
- Neoadjuvant chemotherapy for preoperative downstaging of colon cancer in **FOxTROT**
- Multimodality approach to treatment of early rectal cancer aimed at organ preservation in **TREC**.

2. We have seen several newly funded trials open in the past 12 months and continue to build on our thriving portfolio of actively recruiting surgical trials evaluating:

- Patient optimization prior to colorectal cancer surgery (a key aspect of our 2014-2018 strategy) in **PREPARE-ABC**
- Surgical technique in resectional rectal cancer surgery without anastomosis in **HiP**
- Organ preservation through use of neoadjuvant radiotherapy and chemoradiotherapy in **STAR-TREC**
- Reduction of postoperative ileus using intravenous lidocaine in **ALLEGRO**
- Prevention of parastomal hernia in **CIPHER**
- Type of colonic stent used in patients with left-sided cancer managed with palliative intent due to metastatic disease or frailty in **CReST2**.

Importantly, **PREPARE-ABC** and **HiP** were the direct outputs from our 2013 Surgical Sandpit event in Sheffield. **STAR-TREC**, **ALLEGRO** and **CIPHER** were all developed through the **Delphi prioritization** of research questions carried out with clinicians and patients in 2014-2017, and all integrated patient views from conception onwards. The **Delphi** programme has successfully and dramatically increased participation in surgical research among patients and clinicians.

3. We continue to work with the Association of Coloproctology of Great Britain and Ireland (ACPGBI) and Royal College of Surgeons (RCSE) to deliver the **Colorectal Research and Trial Engagement (CReaTE)** programme to promote colorectal surgical research through regional roadshows (https://www.acpgbi.org.uk/news/create-roadshow/). **CReaTE** incorporates local Clinical Research Networks and showcases portfolio surgical trials in set-up and during recruitment. As with all our initiatives, it has a strong patient focus with patient representatives from the various trials giving their perspective in person. **CReaTE** includes a mini-GRANULE (Generating Recruiters for Randomised Trials) practical trial recruitment training course previously developed within the subgroup (https://publishing.rcseng.ac.uk/doi/pdf/10.1308/rcsbull.2017.260) and now adopted by NIHR. We have held **CReaTE** roadshows in the North West, Scotland, the West Midlands, and the South East over the past year, with the next two planned for Wales and East of England.

All key surgical strategic objectives for the period of 2013-2018 have been met and surpassed:

1. Enhance the portfolio of surgical trials including the development of two new surgical trials by the end of 2015 (see summary below).
2. Develop a study for patient optimisation prior to surgery (**PREPARE-ABC**).
3. Develop a new study in organ preservation (**STAR-TREC**).

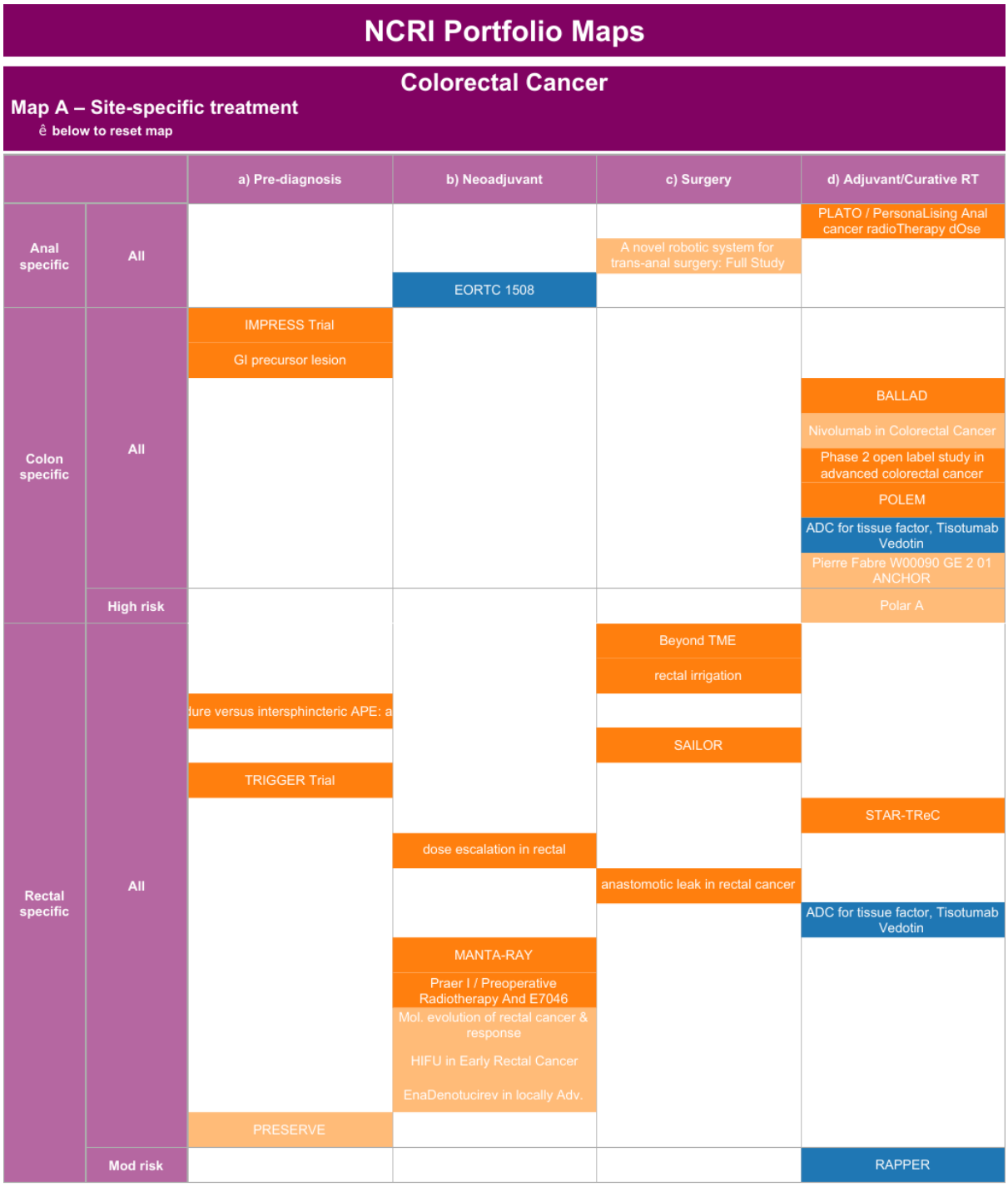
The Subgroup utilises IDEAL Collaboration methodology in developing trial ideas and is fortunate in having strong links with several clinical trials units who provide methodological and statistical support.

Objectives

- Improve perioperative outcomes
- Improve collaboration
- Develop a new study in organ preservation
- Develop international colorectal surgical studies
- Develop interventions to reduce SSI

Appendix 3

Portfolio maps

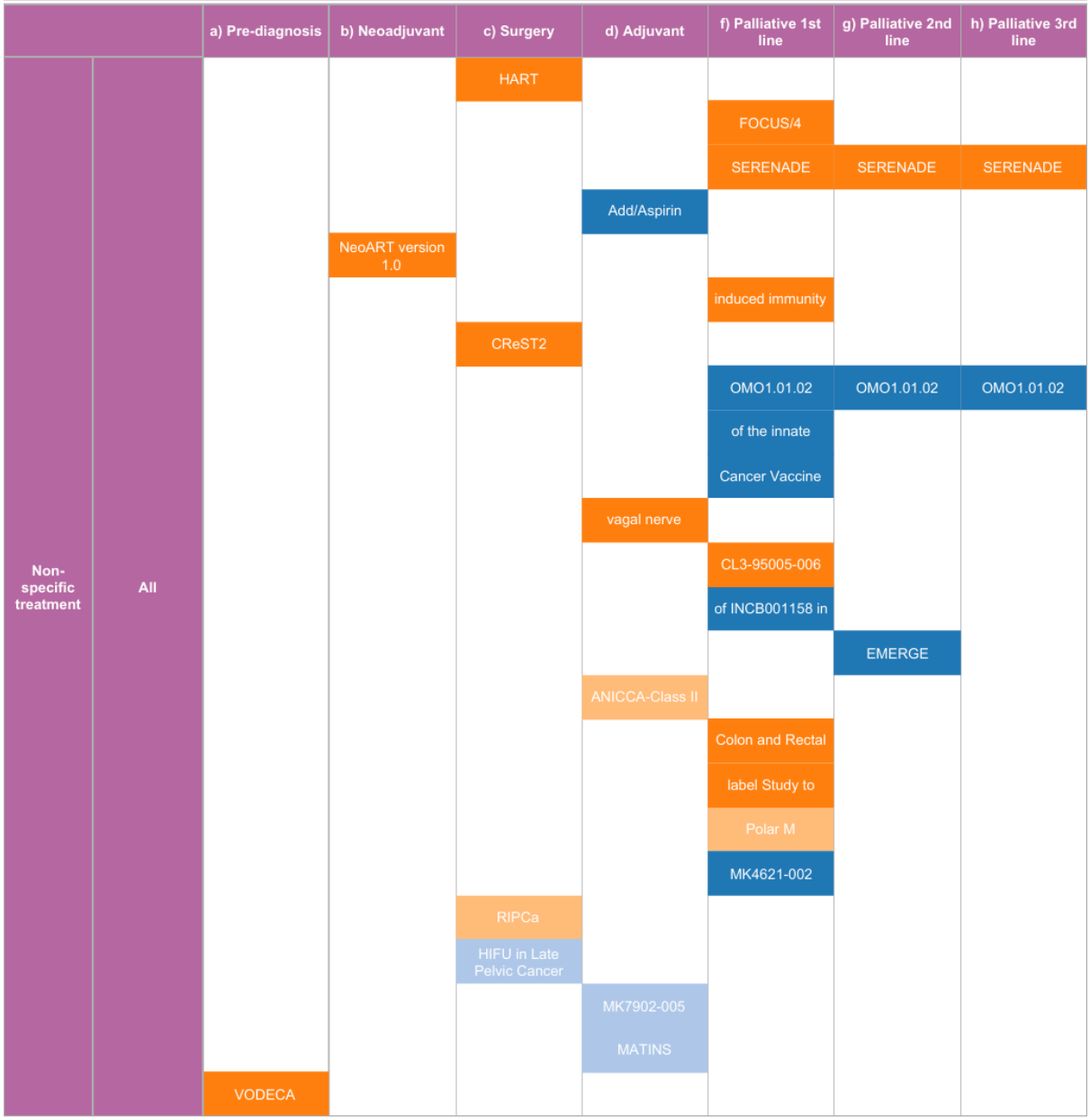


NCRI Portfolio Maps

Colorectal Cancer

Map B – Non-specific treatment

ê below to reset map



Filters Used:
Active Status: All, **CSG Involvement**: All, **Funding Type**: All, **Phase**: All, **LCRN**: None

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In Setup / single re.. Open / single rese..

Designed and maintained by **NCRI Clinical Research Groups (CRGs)** & **NIHR**

Developed by **Mayden®** Analytics

NCRI Portfolio Maps

Colorectal Cancer

Map C – Non-treatment, translational

ê below to reset map

		a) Pre-diagnosis	b) Diagnosis / screening / prevention	c) Neoadjuvant	d) Surgery	e) Adjuvant	f) Palliative 1st line	g) Therapeutic / translational
Biomarkers	All	Tumour Angiogen	Tumour Angiogen	Tumour Angiogen	Tumour Angiogen	Tumour Angiogen	Tumour Angiogen	Tumour Angiogen
			ctDNA v6.0					
			TRACCr					
		nel lymph node biop						
			MECANO study V1					
		NICE FIT						
			DISCOVER v.1					
Diagnostics / imaging	All		for CT colonograph					
			ion of Human Colore					
			out colorectal cance					
		EDICT DISEASE R						
			al breath analysis (C					
			COMET					
		ctroscopy and colore						
			MATCH					
			ctroscopy and colore					
			AFFINITY					
			D version 2 (23-Jan					
		on of colorectal can						
Genetics / mechanisms	All			NSCCG	NSCCG	NSCCG	NSCCG	NSCCG
				Molecular patho	Molecular patho	Molecular patho	Molecular patho	Molecular patho
		COGS2						
		Pop. DNA collxns						
		SOCCS3						
		Vitamin D and C						
		RAFV600E immuno						
					tic system for trans/			
					IDEAL-PM			
			CORGI 2					
			rised 13C-Pyruvate					
		DEterminants of AI						
								Nrf2 pathway in tumo
								ICI Genetics
			ELFIN					
				ct chemoradiotherap				

Filters Used:
Active Status: All, **CSG Involvement**: All, **Funding Type**: All, **Phase**: All, **LCRN**: None

In Setup / multi res.. Open / multi resea.. Suspended / singl..
In Setup / single re.. Open / single rese..

Designed and maintained by **NCRI Clinical Research Groups (CRGs)** & **NIHR**

Developed by **Mayden®** Analytics

NCRI Portfolio Maps

Colorectal Cancer

Map D – Non-treatment, supportive care, primary care

ê below to reset map

		a) Pre-diagnosis	b) Diagnosis / screening / prevention	d) Surgery	e) Adjuvant	f) Palliative 1st and 2nd line	g) Other
Lifestyle / psychoso cial onc..	All		FIT-East Study	Prepare/ABC	immune response in	PARiS Challenge Perspectives on	validation of the OnCoRe ASyMS Screening CPR Workstream 5: PROMs Physical Activity and Stoma Study NACASY
Primary care / data collection / Services	All	colorectal precursor	The SCOTTY Study Lynch Syndrome (UP	EMT2: EPA for Metastasis Trial 2 COALS: Coagulation in Liver Surgery colorectal cancer			Research Bowel Microbiome of bowel cancer under 50 CLiFF Study HBB-SABR (version 1.0) Mutographs

Filters Used:
Active Status: All, **CSG Involvement**: All, **Funding Type**: All, **Phase**: All, **LCRN**: None

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Open / multi resea..

Appendix 4

Top 5 publications in the reporting year

Trial name & publication reference	Impact of the trial	CSG involvement in the trial
1. Fish R, Renehan AG et al. A core outcome set for clinical trials of chemoradiotherapy interventions for anal cancer (CORMAC): a patient and health-care professional consensus. Lancet Gastroenterol Hepatol. 2018 Dec;3(12):865-873. doi: 10.1016/S2468-1253(18)30264-4.	Implementation of the Core Outcome Research Measures in Anal Cancer (CORMAC) set in future trials will serve as a framework to achieve standardisation, facilitate selection of health-area-specific evaluation tools, reduce redundancy of outcome lists, allow between-study comparisons, and ultimately enhance the relevance of trial findings to health-care professionals, trialists, and patients.	The authors of this study included members of the Anorectal Subgroup.
2. Alderdice M, Gollins S, Stewart JP, Hurt C, Adams R, McCorry AM, Roddy AC, Vimalachandran D, Isella C, Medico E, Maughan T, McArt DG, Lawler M, Dunne PD. Prospective patient stratification into robust cancer-cell intrinsic subtypes from colorectal cancer biopsies.J Pathol. 2018 May;245(1):19-28. doi: 10.1002/path.5051. Epub 2018 Mar 25.	The findings have potential to inform ongoing biopsy-based patient stratification in CRC, enabling robust and stable assignment of patients into clinically-informative arms of prospective multi-arm, multi-stage clinical trials.	Authors included members of the Anorectal Subgroup and the S:CORT consortium.
3. Cross W, Kovac M, Mustonen V, Temko D, Davis H, Baker AM, Biswas S, Arnold R, Chegwidden L, Gatenbee C, Anderson AR, Koelzer VH, Martinez P, Jiang X, Domingo E,	Showed that adenomas evolve across an undulating fitness landscape, whereas carcinomas occupy a sharper fitness peak, probably owing to stabilizing selection.	Involvement of the S:CORT consortium.

Woodcock DJ, Feng Y, Kovacova M, Maughan T, **S:CORT Consortium**, Jansen M, Rodriguez-Justo M, Ashraf S, Guy R, Cunningham C, East JE, Wedge DC, Wang LM, Palles C, Heinimann K, Sottoriva A, Leedham SJ, Graham TA, Tomlinson IPM. The evolutionary landscape of colorectal tumorigenesis. Nature Ecology and Evolution October 2018; 2 (10): 1661-1672.		
4. Adams R, Brown E, Brown L, Butler R, Falk S, Fisher D, Kaplan R, Quirke P, Richman S, Samuel L, Seligmann J, Seymour M, Shiu KK, Wasan H, **Wilson RH**, Maughan T on behalf of the FOCUS4 Trial Investigators. HER1-3 inhibition in patients with colorectal cancer that is wild-type for BRAF, PIK3CA, KRAS, and NRAS mutations (FOCUS-4D): first results from the multi-arm multi-stage phase II/III FOCUS-4 randomised trial. Lancet Gastroenterology and Hepatology. March 2018; 3: 162–71.	Proved the usefulness of the FOCUS-4 platform in eliminating regimes at an early stage, which are unlikely to be effective.	FOCUS-4 trial was developed through the Advanced and Adjuvant Disease Subgroup.
5. Salem ME, Yin J, Weinberg BA, Renfro LA, Pederson LD, Maughan TS, Adams RA, Van Cutsem E, Falcone A, Tebbutt NC, Seymour MT, Díaz-Rubio E, Aranda E, Bokemeyer C, Heinemann V, Wasan H, de Gramont A, Grothey A, Shi Q, Sargent DJ, Marshall JL. . Clinicopathological differences and survival outcomes with first-line therapy in patients with left-sided colon cancer and rectal cancer:	Showed that the site of tumour origin within the left side (colon vs. rectum) was not prognostic of outcomes	Involved data derived from trials generated by the CSG and Advanced and Adjuvant Disease Subgroup.

Pooled analysis of 2879 patients from AGITG (MAX), COIN, FOCUS2, OPUS, CRYSTAL and COIN-B trials in the ARCAD database. Eur J Cancer. 2018 Nov;103:205-213. doi: 10.1016/j.ejca.2018.08.020. Epub 2018 Sep 27		

Appendix 5

Recruitment to the NIHR portfolio in the reporting year

In the Colorectal Cancer Group portfolio, 18 trials closed to recruitment and 34 opened.

Summary of patient recruitment by Interventional/Non-interventional

Year	All participants		Cancer patients only		% of cancer patients relative to incidence	
	Non-interventional	Interventional	Non-interventional	Interventional	Non-interventional	Interventional
2014/2015	4825	1081	4728	1020	11.7	2.5
2015/2016	4679	1765	4651	1213	11.52	3.00
2016/2017	2044	1772	2031	1544	5.03	3.82
2017/2018	3226	5232	3144	5058	7.79	12.53
2018/2019	7379	13703	6092	13672	14.57	32.71