

Welcome to the Integrated Research Application System

IRAS Project Filter

The integrated dataset required for your project will be created from the answers you give to the following questions. The system will generate only those questions and sections which (a) apply to your study type and (b) are required by the bodies reviewing your study. Please ensure you answer all the questions before proceeding with your applications.

Please complete the questions in order. If you change the response to a question, please select 'Save' and review all the questions as your change may have affected subsequent questions.

Please enter a short title for this project (maximum 70 characters)

INDIGO Community

1. Is your project research?

Yes No

2. Select one category from the list below:

- Ionising Radiation for combined review of clinical trial of an investigational medicinal product
- Ionising Radiation and Devices form for combined review of combined trial of an investigational medicinal product and an investigational medical device
- Clinical investigation or other study of a medical device
- Other clinical trial to study a novel intervention or randomised clinical trial to compare interventions in clinical practice
- Basic science study involving procedures with human participants
- Study administering questionnaires/interviews for quantitative analysis, or using mixed quantitative/qualitative methodology
- Study involving qualitative methods only
- Study limited to working with human tissue samples (or other human biological samples) and data (specific project only)
- Study limited to working with data (specific project only)
- Research tissue bank
- Research database

If your work does not fit any of these categories, select the option below:

Other study

2a. Please answer the following question(s):

- a) Does the study involve the use of any ionising radiation? Yes No
- b) Will you be taking new human tissue samples (or other human biological samples)? Yes No
- c) Will you be using existing human tissue samples (or other human biological samples)? Yes No

3. In which countries of the UK will the research sites be located? *(Tick all that apply)*

England

- Scotland
 Wales
 Northern Ireland

3a. In which country of the UK will the lead NHS R&D office be located:

- England
 Scotland
 Wales
 Northern Ireland
 This study does not involve the NHS

4. Which applications do you require?

- IRAS Form
 Confidentiality Advisory Group (CAG)
 HM Prison and Probation Service (HMPPS)

Most research projects require review by a REC within the UK Health Departments' Research Ethics Service. Is your study exempt from REC review?

- Yes No

5. Will any research sites in this study be NHS organisations?

- Yes No

5a. Are all the research costs and infrastructure costs (funding for the support and facilities needed to carry out the research e.g. NHS support costs) for this study provided by a NIHR Biomedical Research Centre (BRC), NIHR Applied Research Collaboration (ARC), NIHR Patient Safety Translational Research Centre (PSTRC), or an NIHR Medtech and In Vitro Diagnostic Co-operative (MIC) in all study sites?

Please see information button for further details.

- Yes No

Please see information button for further details.

5b. Do you wish to make an application for the study to be considered for NIHR Clinical Research Network (CRN) Support and inclusion in the NIHR Clinical Research Network Portfolio?

Please see information button for further details.

- Yes No

The NIHR Clinical Research Network (CRN) provides researchers with the practical support they need to make clinical studies happen in the NHS in England e.g. by providing access to the people and facilities needed to carry out research "on the ground".

*If you select yes to this question, information from your IRAS submission will automatically be shared with the NIHR CRN. **Submission of a Portfolio Application Form (PAF) is no longer required.***

6. Do you plan to include any participants who are children?

Yes No

7. Do you plan at any stage of the project to undertake intrusive research involving adults lacking capacity to consent for themselves?

Yes No

Answer Yes if you plan to recruit living participants aged 16 or over who lack capacity, or to retain them in the study following loss of capacity. Intrusive research means any research with the living requiring consent in law. This includes use of identifiable tissue samples or personal information, except where application is being made to the Confidentiality Advisory Group to set aside the common law duty of confidentiality in England and Wales. Please consult the guidance notes for further information on the legal frameworks for research involving adults lacking capacity in the UK.

8. Do you plan to include any participants who are prisoners or young offenders in the custody of HM Prison Service or who are offenders supervised by the probation service in England or Wales?

Yes No

9. Is the study or any part of it being undertaken as an educational project?

Yes No

10. Will this research be financially supported by the United States Department of Health and Human Services or any of its divisions, agencies or programs?

Yes No

11. Will identifiable patient data be accessed outside the care team without prior consent at any stage of the project (including identification of potential participants)?

Yes No

Integrated Research Application System
Application Form for Research administering questionnaires/interviews for quantitative analysis or mixed methodology study

IRAS Form (project information)

Please refer to the *E-Submission* and *Checklist* tabs for instructions on submitting this application.

The Chief Investigator should complete this form. Guidance on the questions is available wherever you see this symbol displayed. We recommend reading the guidance first. The complete guidance and a glossary are available by selecting [Help](#).

Please define any terms or acronyms that might not be familiar to lay reviewers of the application.

Short title and version number: (maximum 70 characters - this will be inserted as header on all forms)
INDIGO Community

Please complete these details after you have booked the REC application for review.

REC Name:
PR Committee

REC Reference Number:
23/PR/0405

Submission date:
03/04/2023

PART A: Core study information
1. ADMINISTRATIVE DETAILS
A1. Full title of the research:

INDIGO Community: Investigating DIGital Outcomes in a community setting for patients living with and beyond a diagnosis of cancer.

To understand more about the long-term outcomes and service use of patients living with and beyond a diagnosis of cancer

Phase II randomised feasibility research administering questionnaires in a mixed methods study.

A3-1. Chief Investigator:

	Title	Forename/Initials	Surname
	Dr	Matthew	Williams
Post	Consultant Clinical Oncologist		
Qualifications	MChB, FRCR, PhD		
ORCID ID	0000 0001 7096 0718		
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** This information is optional. It will not be placed in the public domain or disclosed to any other third party without prior consent.
A copy of a current CV (maximum 2 pages of A4) for the Chief Investigator must be submitted with the application.*

A4. Who is the contact on behalf of the sponsor for all correspondence relating to applications for this project?
This contact will receive copies of all correspondence from REC and HRA/R&D reviewers that is sent to the CI.

	Title	Forename/Initials	Surname
		Keith	Boland
Address	Head of Research Governance and Integrity Room 221, Level 2, Medical School Building Norfolk Place, London		
Post Code	W2 1PG		
E-mail	k.boland@imperial.ac.uk		
Telephone	02075949480		
Fax			

A5-1. Research reference numbers. *Please give any relevant references for your study:*

Applicant's/organisation's own reference number, e.g. R & D (if available):	23CX8221
Sponsor's/protocol number:	
Protocol Version:	1.2
Protocol Date:	28/02/2023
Funder's reference number (enter the reference number or state not applicable):	295895
Project website:	https://www.computationaloncology.net/indigo-community

Additional reference number(s):

Ref.Number	Description	Reference Number

Registration of research studies is encouraged wherever possible. You may be able to register your study through your NHS organisation or a register run by a medical research charity, or publish your protocol through an open access publisher. If you have registered your study please give details in the "Additional reference number(s)" section.

A5-2. Is this application linked to a previous study or another current application?

Yes No

Please give brief details and reference numbers.

2. OVERVIEW OF THE RESEARCH

To provide all the information required by review bodies and research information systems, we ask a number of

specific questions. This section invites you to give an overview using language comprehensible to lay reviewers and members of the public. Please read the guidance notes for advice on this section.

A6-1. Summary of the study. *Please provide a brief summary of the research (maximum 300 words) using language easily understood by lay reviewers and members of the public. Where the research is reviewed by a REC within the UK Health Departments' Research Ethics Service, this summary will be published on the Health Research Authority (HRA) website following the ethical review. Please refer to the question specific guidance for this question.*

We can use questionnaires to help us understand how a patient feels about their quality of life (QOL) and experiences of care. These surveys are called Patient-Reported Outcome Measures (PROMS).

PROMS have been used in research to understand patients quality of life. However, more needs to be done to understand the quality of life for patients in the long term following a diagnosis of cancer. To do this, we need to understand how to engage participants in this type of research so that we can deliver high volumes of PROMS responses. We will then be in a position to develop a greater understanding of quality of life in those living with and beyond cancer in the long term.

We also do not know what services patients use in the community to help them manage the long-term effects of their cancer or its treatment with the aim of improving their quality of life.

Using a digital survey tool, we hope we can run a project that will help us understand more about the lives of patients after treatment for cancer. We plan to see which PROM allow participants to express their quality of life as rated by the participants. We also want to study how we can keep the amount of time and effort needed to complete the questionnaires as low as possible.

All patients over the age of 16 who have had any type of cancer in the past can take part. Patients will access the survey at a time that suits them using a digital link. They can complete the survey once or if they chose, a second time 12 months later.

A6-2. Summary of main issues. *Please summarise the main ethical, legal, or management issues arising from your study and say how you have addressed them.*

Not all studies raise significant issues. Some studies may have straightforward ethical or other issues that can be identified and managed routinely. Others may present significant issues requiring further consideration by a REC, HRA, or other review body (as appropriate to the issue). Studies that present a minimal risk to participants may raise complex organisational or legal issues. You should try to consider all the types of issues that the different reviewers may need to consider.

We identified 6 main issues where we were unable to identify adequate solutions based on previously published literature and input from a wider group of experts.

1. There have been a lot of PROM studies conducted within cancer treatment trials but rarely during routine treatment or in the long-term. Thus, a gap in our knowledge exists regarding quality of life, when we look at the population of people who are long term cancer survivors and who are not utilising secondary care cancer services.

2. It is known that paper-based surveys do not capture all parts of the population equally. The trial we propose will also not capture all parts of the population equally due to issues relating to digital access. However, we feel that our proposed methodology will not be worse than traditional methods, rather we need explore how it may generate different selection bias than traditional methods. Where people wish to participate but cannot, due to digital literacy or digital poverty, the study team will make reasonable efforts to facilitate participation (e.g., providing details of locations that may offer free internet access - e.g., libraries, health providers).

3. We do not have any evidence on which to base assumptions regarding reach and inclusivity of using a digital platform to administer cancer related PROM in the community. Therefore, we will run the study in two phases as described in section A13.

4. We shall not monitor the patients who decide to enrol as we hope the questionnaire will triage patients automatically by asking relevant questions at the beginning. We think it is very unlikely that someone who lacks capacity will self-enrol into the study and complete the questionnaires. In the unlikely event that the study team was contacted and informed that a participant lacked capacity at the time they consented, the consent would be invalidated, and their data removed from the study.

5. We will only be utilising questions in English. Whilst translations of some PROMS exist there are not translations available for the entire question sets we wish to administer (e.g., Social Difficulties Inventory). This will be a barrier to

participation for people who do not have sufficient understanding of written English. Participants can receive help from friends and family, and we anticipate this will mitigate language as a barrier of participation.

6. There is a possibility that reflecting on the questions may trigger upsetting thoughts in patients. To mitigate against any distress that may inadvertently be caused, we will be providing 24-hour-a-day access to a patient support line. This will be administered by Tenovus Cancer Care, a cancer support charity, whose support line is delivered by qualified nursing staff, and who have agreed to support this project.

We feel the hazard with the greatest severity, data breach, has a very low likelihood due to the measures we will take, as explained in sections A27-3, A37, A38, and A45.

3. PURPOSE AND DESIGN OF THE RESEARCH

A7. Select the appropriate methodology description for this research. Please tick all that apply:

- Case series/ case note review
- Case control
- Cohort observation
- Controlled trial without randomisation
- Cross-sectional study
- Database analysis
- Epidemiology
- Feasibility/ pilot study
- Laboratory study
- Metanalysis
- Qualitative research
- Questionnaire, interview or observation study
- Randomised controlled trial
- Other (please specify)

Randomised sub-studies of consent to linkage, administration of additional Patient Reported Outcome Measures.

A10. What is the principal research question/objective? Please put this in language comprehensible to a lay person.

To assess the feasibility of mass recruitment to a community living with and beyond cancer study via a large-scale online platform which will utilise participant self-identification and self-enrolment.

A11. What are the secondary research questions/objectives if applicable? Please put this in language comprehensible to a lay person.

1. To assess participation rates and representativeness according to sociodemographic variables and clinical characteristics and mode of approach - self identified or via Primary Care Research Network (PCRN) prompt.
2. To assess the feasibility and acceptability of randomisation within a digital community based study of patient-reported measures.
3. To assess the willingness of participants to agree to linkage of their Patient Reported Outcome Measures responses to regional and national routinely collected cancer registries.
4. To assess sociodemographic, clinical and mode of approach variables against questionnaire completeness (completed questionnaire defined as all items answered including 'prefer not to answer' options.)
5. To explore missing data and median completion time for each PROM questionnaire.
6. To explore the impact of the positioning of a question regarding registry linkage within the questionnaire upon

participants consenting to linkage and questionnaire completeness.

7. Gain an understanding of service use by patients who have previously been treated for cancer.

8. Increase our understanding of the utility of different Patient Reported Outcome Measures as assessed by the participant.

9. An assessment of utility of different Patient Reported Outcome Measures as assessed by the trial Expert Advisory Group.

10. An assessment of the value of administering the EORTC QLQ-C30, the Social Difficulties Inventory (SDI) or Patient Generated Index (PGI) in addition to the EQ-5D-5L.

11. To assess the feasibility of administering the PGI digitally and whether the use of digital validation affects completion rates.

12. An assessment of using the EQ-5D-5L questionnaire to drive 'triage' and identification by participants of areas of their life that require further questioning in order to be able to provide a better understanding to clinical teams of their quality of life.

13. To explore the relationship between study uptake and acceptance of randomisation and patient characteristics (age, primary site, types of treatment).

14. To explore evidence for systematic variation in Patient Reported Outcome Measures collection rates and scores across patient characteristics (age, primary site, treatment modality).

15. To collect free-text additional comments from patients and utilise artificial intelligence to cluster them into themes.

16. Assess costs of administering a survey by this methodology to generate a cost per participant costing.

17. To assess the ability to scale a digital study from regional delivery to national delivery and the changes in completion rates and populations surveyed between regional and national questionnaire administration.

A12. What is the scientific justification for the research? *Please put this in language comprehensible to a lay person.*

Patient Reported Outcome Measures (PROMS) are tools which help to translate a patient's quality of life and results of their treatment into categories that clinical teams can measure and act upon. Most PROMS studies in cancer care have been part of clinical trials. Clinical trials do not include all 'types' of patients which means that they are limited in how much they can tell us about the 'real world' experiences of patients. Most PROMS collection has been at the time people are having treatment rather than no longer receiving treatment or under clinical follow up (differentiating this study from the NHS 18-month study). There have been studies looking at long term outcomes but reaching patients who are no longer receiving care for their cancer has been a barrier. There have been few large-scale studies which tried to find out which healthcare services patients use in the long term as they live beyond their cancer diagnosis and its treatment.

Historically PROMS studies involved paper-based questionnaires. Digital platforms are being increasingly used due to the benefits in terms of costs. They also offer an ability to edit and update questionnaires much more easily and cheaply.

INDIGO Community is an innovative pan-cancer trial, in line with NHS Digital plans to transform digital health data collection.

As we identified gaps in the literature, we intend to address these by exploring patients' behaviours when it comes to digital clinical trials. These behaviours will be captured under:

- The different approaches to accessing the study. This will change the way that future studies are performed, and the costs associated with such work which will improve our ability to understand real world patient outcomes.
- Patients' willingness to link their questionnaire answers to regional and national cancer registries. If participants are willing to provide identifiable data to support linkage, then the context of their PROMS can be explored more deeply. For example, variation by treatments, provider, etc. which can shape future research and service delivery. If we find evidence that participants agreement to linking their data to cancer registries is not affected by timing of the request within the questionnaire, future studies can reduce the burden on participants. It would be possible to use conditional questioning after asking for consent to linkage to cancer registries. Participants who agreed to linkage would not need to be asked questions regarding their cancer treatment as these could be obtained from the cancer registry so significantly reducing burden. Reducing the number of questions will reduce the burden to participants which may

increase participation and completion rates.

Our ambition is to develop a firm, applicable, pragmatic evidence base on how to collect patient reported data for people living in the community who have previously been treated for cancer.

A13. Please summarise your design and methodology. *It should be clear exactly what will happen to the research participant, how many times and in what order. Please complete this section in language comprehensible to the lay person. Do not simply reproduce or refer to the protocol. Further guidance is available in the guidance notes.*

Study Design

This is a cohort observational trial studying the feasibility of performing a pan-cancer community based randomised trial to explore and improve methodology around collecting long-term cancer outcome data and service use for people living with and beyond cancer.

This observational study contains randomised questions relating to both the methodology and to questionnaire content. It is a multi-phase feasibility study with regional and national components.

As this is a novel approach to capturing long-term quality of life outcomes in people diagnosed with cancer and now managed in the community, there is not a strong evidence base upon which to develop the trial. For that reason, we believe this is a series of feasibility trials. However, to maximise the utility of the study, we will have a core component which runs through the study to develop a large dataset whilst simultaneously randomising and exploring distinct aspects of quality of life assessment using a secure digital platform ("Qualtrics").

1. First stage: regional study in North-West London

In this first stage, we aim to focus on patients living and diagnosed in North-West London as this is where our Trust centre is located. This will help us to smooth the process of launching this study in the cancer community. This will allow us to check recruitment rates, using the regional cancer registry ("WSIC"), after getting aggregated data on number of people diagnosed with cancer with a breakdown by sex, ethnicity and primary diagnosis (when available). All patients will access a core questionnaire between the two main randomisations described below.

We aim to explore communication methods to self-identification and self-enrolment into the study and to understand the variation by demographic groups. The first main randomisation will be on the communication channels:

1. Recruitment via the Primary Care Clinical Research Networks.
2. Physical advertising in the community including community healthcare settings, free papers.
3. Social media – Facebook, Twitter, TikTok, Instagram, etc.

We also aim to randomise questions related to the content of the questionnaire ("second main randomisation").

- a) Does asking participants for consent to link their responses to regionally and nationally collected cancer registry data affect participation rates or questionnaire completion rates? Has the positioning of this request an effect?
- b) Does the choice of PROMs (in addition to EQ-5D-5L) affect participation and completion rates and participant satisfaction? The alternative questionnaires use during the randomisation will be EORTC QLQ-C30, Social Difficulties Inventory (SDI) and Patient Generated Index (PGI).
- c) PGI has never been implemented digitally and never done without a specialist to guide the patient in their answers. We have a randomisation on how much help and guidance patients have while answering the PGI. The clusters will be randomised by sequence (i.e., 1-2 or 2-1) then both will have social media (3) added simultaneously.

2. Second stage: national study

Outcome from the first stage's randomisation questions regarding linkage, PROMs content and triggers to enrol will be reviewed. The intention is to use the same questions and randomisations in the second stage of the study. However, the content of the questionnaires may be updated via the EAG to reduce participant burden. The EAG will consider removal of core questions which are felt to be of low utility either by completion rate or nature of responses. If there is clear evidence of a definitive answer to the randomisation questions, then the randomisation may cease. All amendments proposed by the EAG will be subject to the standard HRA / REC substantial amendments process. Once an assessment of feasibility, question utility and randomisation process has been made by the trial management group and any proposed amendments from the EAG considered, it is intended that if appropriate there will then immediately follow a national study (once HRA / REC substantial amendments process completed if appropriate). A secure digital platform enables the study to scale nationally via regional CRN, in addition to communication channels which have been found to be helpful in driving engagement.

Process from the enrolment to the follow-up questionnaire

Potential participants will be made aware about the INDIGO Community trial either via the PCRN, physical media in their GP or social media. A link to the secure online platform will be accessible to those considering participating so

they can review the Participant Information Sheet (PIS). It will include details of trial's staff to contact if they have any questions.

Once they have read the PIS if the individual would like to participate, given the low-risk nature of the study, in-line with HRA advice, patients may consent after they have read the PIS. They click on a button which takes them to the consent page where online consent is completed (see document "Block_Consent"). Where consent to participation is completed. There are further consent blocks within the questionnaire at appropriate points which are well sign posted to the participants.

It is acceptable to get help from people they trust (e.g., friends, family, or carers) to complete the questionnaire. The participant will be required to enter generic initial demographic data (e.g., age, ethnicity) then a core set of questions will follow and focus on their cancer diagnosis, treatment, service use, and quality of life. There is a further set of demographic questions later in the survey where more demographic questions are asked (e.g., sex, gender, sexual orientation, employment status).

There are three randomisations within the survey flow. These are handled automatically by the secure online platform. One randomisation relates to the timing of asking participants for their consent to linkage their survey responses to data in the regional and national cancer registries. This randomisation is delivered seamlessly with 50% of participants being asked early in the survey and 50% being asked towards the end of the survey. Participant will not be aware that the timing of the question has been randomised as that could contaminate the responses of the participants to the question knowing its positioning may be important (Null Hypothesis 1&2).

The second randomisation relates to the quality of life questionnaire the participant receives (see Null Hypothesis 3). The validated PROM questionnaire EQ-5D-5L is delivered to every participant. We shall use this as the basis of our analyses to capture if the second questionnaire is complementary of EQ-5D-5L. Then the participant is randomised to receive one of three validated PROMS - EORTC QLQ-C30, SDI or PGI. This randomisation is signposted to the participant as the different PROMs are all administered at the same point in the survey flow.

The third randomisation relates to how the PGI is delivered. This PROM has usually been delivered by a researcher in conversation with a participant as it involves giving numerical weights to aspects of the person's life (see Null Hypothesis 4). We wish to explore if presenting this PROM on a digital platform is possible. The digital platform allows validation measures (ensuring the numerical answers fall within the bounds of the PROM) to be embedded in the PROM which may help the participant. However, these same validation measures mean that a participant cannot skip a page if they wish and so there is a risk that validation increases the number of incomplete surveys as participants drop out as they cannot bypass the page. To explore this we will therefore randomise the participants who have been randomised to receive the PGI (33% of all participants) to receive a PGI with answer validation and a PGI without answer validation (50:50 split therefore 16.5% of total participants in each arm).

Toward the end of the questionnaire, participant will have a new consent split into three questions: their consent to be contacted in the future (i.e., would they like to hear the results of the study), their consent to receive a short follow-up questionnaire a week after the completion of the first survey (i.e., to check for any unintended consequences of completing the survey), and their consent to be contacted via email to participate in ongoing questionnaire studies (i.e., to compare how their answers evolved).

After the submission of their answers, participants will get a summary of all the questions and their answers either by email, if provided earlier, or directly on the "thank you" page. If they choose, they can bring the summary to their GP, keep a record of it, or send it to their healthcare professionals.

Null Hypotheses:

1. Asking participants for consent to link their responses to regionally and nationally collected cancer registry data does not affect participation or questionnaire completion rates.
 2. Within the questionnaire, the positioning of the request asking participants for consent to link their responses to regionally and nationally collected cancer registry data, does not affect participation or questionnaire completion rates.
 3. All questionnaires perform equally well when administered digitally with no difference in completion rates.
 4. Validation is not required for participants to be able to complete the PGI without the support of a researcher.
- To answer the third hypothesis, we shall assess which of three PROMS performs best in combination with EQ-5D-5L by looking at the completion rates of the three PROMS questionnaires and qualitative measure of participant satisfaction with the three PROMS (i.e., EORTC QLQ-C30, SDI, PGI).

Assessments

Participants will complete one series of questions at a time that suits them after enrolment. Patients will be free to withdraw from the study at any time by ceasing completion of the questionnaire.

At the end of the questionnaire the participants will be asked if they consent to receive a short questionnaire 7 days later. This is to assess if involvement in the research had triggered any unanticipated service use, whether it had triggered any conversations and how the participant felt about their involvement.

Participants will also be asked if they consent to being contacted in 12 months' time to receive a link to repeat the

same questionnaire to identify any changes over the 12-month period.

Participants will be able to withdraw at that time by not responding to the link to complete the follow up questionnaires. They can also contact the research team to withdraw their consent to ongoing involvement.

Recruitment Process

There are two triggers to self-enrolment on the survey platform. Different links or QR codes will be utilised to aid identification of the route into the study so that this can be assessed as an outcome.

1. Patients will self-identify as having previously been treated for cancer. We intend to reach patients in the community utilising a range of methods (i.e., Cancer charities and community support groups, social media, physical advertising in the community including community healthcare settings)
2. Recruitment will be supported by the Primary Care Clinical Research Networks. The network will identify patients with a diagnosis of cancer on the primary care database. Although the database is usually accurate with regards to death, the patient list will be screened against the NHS SPINE to minimise the risk that patients who are deceased will be approached. The network will then contact these patients via text message with a link to make them aware of the study and encourage participation.

Inclusion and Exclusion Criteria

INCLUSION CRITERIA

1. Anyone over the age of 16 who has been diagnosed and/or treated for any type of cancer in the past (> 12 months) can participate.
2. Participants who self-identify as having previously (time unlimited) received a diagnosis of cancer, based on histological, radiological, or clinical grounds (primary and/ or metastatic cancer). Currently receiving initial first line treatment is not a barrier to participation, but the emphasis is on patients who have completed their initial treatment and are either receiving no treatment or treatment for relapse.
3. They need to be able to access the secure online platform, using a mobile device or computer.
4. Have capacity and be able to provide informed consent.
5. To be able to understand, read and write English, with or without support from a trusted individual (e.g., friends, family, carer).

EXCLUSION CRITERIA

1. Participants recently diagnosed with cancer (less than 12 months ago).
2. Participants unable to access secure online platform.
3. Participants who do not have sufficiently good understanding of written English to complete the PROMs and are unable to be supported by a trusted individual to complete the questionnaire.
4. Participants lacking capacity and unable to give informed consent.

Consent Process

The Health Research Authority has produced some guidance for electronic consent(https://www.hra.nhs.uk/documents/1588/hra-mhra-econsent-s_tatement-sept-18.pdf). Following this guidance, INDIGO is using "Simple Electronic Signatures" to obtain consent at initial enrolment on the secure online platform. Participants will be able to see written information presented digitally, plus the ability to speak - either in person or via email to a member of the study team if they have any questions. Hard copy materials can be provided on request via these channels.

Methods

1. Participant made aware about the INDIGO Community trial either via the PCRN or via multi-channel media 'advertising' of the trial.
2. Participant uses a link to access the trial platform.
3. Participant shown Participant Information Sheet (PIS) to read, including details of trials staff to contact if questions. Given the low-risk nature of the study, in-line with HRA advice, patients may enrol either when they are given the PIS, or several days later.
4. If the participant wants to, they self-enrol into the study, using the secure online platform, and provide online informed consent. It is acceptable to use family, friends to help the participant sign-up, using computers etc.
5. Participant is required to enter demographic data on the secure platform which is not identifiable. They will complete a core question set relating to their cancer diagnosis, treatment, and current service use. There are 3 points of

randomisation which will vary the presentation or timing of questions to the participant, or the questionnaires administered.

6. Each assessment should take approximately 30 minutes to complete.

7. Participants will be asked if they consent to being contacted via email in 7 days and 12 months' time with a further link to repeat the questionnaires or a component of them. If this request is declined once this questionnaire is completed there will be no further contact with the participant unless they have requested an email update regarding the outcome of the research. If consent for a link in 12 months' time is given, then once this has been completed the participant will not be contacted again for any future participation.

8. The closing 'Thank you' page will have links to cancer care resources which have been curated with the PPI group

Data Analysis

This study will be NCRN-badged. Data will be collected directly from patients onto the secure platform ("Qualtrics"). Summarised data will be extracted at regular intervals, analysed locally, and discussed by the Trial Expert Advisory Group (this will not be identifiable).

For participants who agree to linkage a request will be made to WSIC for the regional cancer registry (when patients have been diagnosed in North-West London, see First Stage) and to NHS England (NHSE) for the national cancer registry data so linkage can be performed. This has been discussed with NHSE who have agreed in principal to this. Requests to NHSE for linkage may be made in a batched manner through the trial or at trial completion depending upon rate and total number of participants recruited.

Data will be handled in four organisations:

- 1) Qualtrics (using an Imperial College London license) will collect the data;
- 2) Imperial College Healthcare NHS Trust will convert the Patient Identifiable Data (PID) into pseudo-anonymised data which will then be analysed on ISO-27001:2013 certified research environment at Imperial College London and compliant with NHS Digital Data Security and Protection Toolkit (EE133887-BDAU).
- 3) NHS Digital will handle PID for the purposes of performing the linkage.
- 4) WSIC (in the North-West London launch) will handle PID for the purposes of performing the linkage.

Data flowcharts can be found in a separate document.

In the NW London launch data will be compared against aggregated data from WSIC to assess participation rates, demographics, etc. this will allow us to understand reach and participation prior to launching nationally.

All analyses and data-handling will be conducted between Imperial College London and Imperial College Healthcare NHS Trust (using HSCN - previously known as N3). Patient Identifiable Data (PID) will be securely transferred to cancer registries (e.g., NHS England) using a secure environment (HSCN and NHS.net). The cancer registries will handle PID for the purposes of performing the linkage. Data flowcharts can be found in a separate document.

All data will be handled in accordance with data protection and information governance guidance. Data and all appropriate documentation will be stored for a minimum of 10 years after the completion of the study, including participants who agree to a 12-month re-administration of the questionnaires.

As computational techniques improve, there is the potential to develop novel techniques to improve our analysis of such data. We expect such data to become increasingly important over the next 5 – 10 years, and therefore having a validated linked dataset is important for technical developments and further research in monitoring physical activity.

We will seek explicit consent to store the enrolment log, consent form and coded data for 10 years following completion of the study. The data will initially be analysed with conventional statistical methods (e.g., descriptive statistics and repeated measures multilevel modelling) which will inform machine learning methods to be employed.

A14-1. In which aspects of the research process have you actively involved, or will you involve, patients, service users, and/or their carers, or members of the public?

- Design of the research
- Management of the research
- Undertaking the research
- Analysis of results
- Dissemination of findings
- None of the above

Give details of involvement, or if none please justify the absence of involvement.

We have had extensive PPI as part of the development of this project, with two patients involved in the development of the INDIGO questionnaire.

We will continue to use ongoing PPI as the project progresses. There will be 3 PPI representatives on the Trial Expert Advisory Group which will be over seeing the trial and considering adapting the trial in response to its progress.

Patients and caregivers will be reimbursed appropriately and in line with the INVOLVE guidance for their time.

All involvement will be aligned to UK Standards for Public Involvement and we will also take into considerations how to adapt PPI sessions with COVID and its restrictions by using the GRIPP2 reporting checklists.

4. RISKS AND ETHICAL ISSUES

RESEARCH PARTICIPANTS

A15. What is the sample group or cohort to be studied in this research?

Select all that apply:

- Blood
- Cancer
- Cardiovascular
- Congenital Disorders
- Dementias and Neurodegenerative Diseases
- Diabetes
- Ear
- Eye
- Generic Health Relevance
- Infection
- Inflammatory and Immune System
- Injuries and Accidents
- Mental Health
- Metabolic and Endocrine
- Musculoskeletal
- Neurological
- Oral and Gastrointestinal
- Paediatrics
- Renal and Urogenital
- Reproductive Health and Childbirth
- Respiratory
- Skin
- Stroke

Gender: Male and female participants

Lower age limit: 16 Years

Upper age limit: No upper age limit

A17-1. Please list the principal inclusion criteria (list the most important, max 5000 characters).

The primary care CRN will send a link to patients on their database with a previous diagnosis of cancer and who have previously consented to be contacted to participate in research.
Direct patient self-enrolment having become aware of the study via one of the communication methods being used in the study (e.g., physical signage in healthcare providers, community centres, physical newsletters and community papers, social media, charities making their members aware of the study).

INCLUSION CRITERIA

1. Anyone who was over the age of 16 when they were diagnosed with any type of cancer who has completed their initial cancer treatment. If no treatment received then more than 12 months from diagnosis.
2. Participants who self-identify as having previously (time unlimited) received a diagnosis of cancer, based on histological, radiological, or clinical grounds (primary and/ or metastatic cancer). Current treatment is not a barrier to participation, but the emphasis is on patients who have completed treatment.
3. They need to be able to access the secure online platform, using a mobile device or computer.
4. Have capacity and be able to provide informed consent.
5. To be able to understand, read and write English.

A17-2. Please list the principal exclusion criteria (list the most important, max 5000 characters).

EXCLUSION CRITERIA

1. Participants recently diagnosed with cancer (less than 12 months ago).
2. Participants unable to access secure online platform.
3. Participants who do not have sufficiently good understanding of written English to complete the PROMs and are unable to be supported by a trusted individual to complete the questionnaire.
4. Participants lacking capacity and unable to give informed consent.

RESEARCH PROCEDURES, RISKS AND BENEFITS

A18. Give details of all non-clinical intervention(s) or procedure(s) that will be received by participants as part of the research protocol. These include seeking consent, interviews, non-clinical observations and use of questionnaires.

Please complete the columns for each intervention/procedure as follows:

1. Total number of interventions/procedures to be received by each participant as part of the research protocol.
2. If this intervention/procedure would be routinely given to participants as part of their care outside the research, how many of the total would be routine?
3. Average time taken per intervention/procedure (minutes, hours or days)
4. Details of who will conduct the intervention/procedure, and where it will take place.

Intervention or procedure	1	2	3	4
Completion of core survey: obtaining electronic informed consent	1	No	5 minutes	Patient (can have help from friend, family, carer). Completed online
Completion of core survey: demographics, EQ-5D-5L	1	No	3 minutes	Patient (can have help from friend, family, carer). Completed online
Completion of core survey: Patient-Reported cancer journey, co-morbidity and service use	1	No	10 minutes	Patient (can have help from friend, family,

				carer). Completed online
Completion of core survey: a subset of randomised questionnaires (i.e., SDI, PGI, QLQ-C30)	1	No	12 minutes	Patient (can have help from friend, family, carer). Completed online
Completion of core survey: consent to linkage to NHS Digital	1	No	5 minutes	Patient (can have help from friend, family, carer). Completed online
Completion of core survey: consent to future contact (e.g., a follow-up survey 7 days after participation, a follow-up survey 12 months after participation)	1	No	3 minutes	Patient (can have help from friend, family, carer). Completed online
If at the end of the core survey the participant consented to be contacted to receive a follow-up survey 7 days after participation - completion of follow up survey	1	No	5 minutes	Patient (can have help from friend, family, carer). Completed online
If at the end of the core survey the participant consented to be contacted 12 months later core survey readministered: obtaining electronic informed consent	1	No	3 minutes	Patient (can have help from friend, family, carer). Completed online
If at the end of the core survey the participant consented to be contacted 12 months later core survey re-administered:: Completion of one-year follow-up questionnaire: demographics, EQ-5	1	No	10 minutes	Patient (can have help from friend, family, carer). Completed online
If at the end of the core survey the participant consented to be contacted 12 months later core survey re-administered: Patient-Reported cancer journey, co-morbidity and service use	1	No	12 minutes	Patient (can have help from friend, family, carer). Completed online
If at the end of the core survey the participant consented to be contacted 12 months later core survey re-administered: Patient-Reported cancer journey, co-morbidity and service use	1	No	5 minutes	Patient (can have help from friend, family, carer). Completed online

If at the end of the core survey the participant consented to be contacted 12 months later on completion of core survey : Completion of follow-up survey	1	No	5 minutes	Patient (can have help from friend, family, carer). Completed online
If at the end of the core survey the participant consented to be contacted 12 months later core survey re-administered: linkage to NHS Digital	1	No	5 minutes	Patient (can have help from friend, family, carer). Completed online

A21. How long do you expect each participant to be in the study in total?

This is a one-time questionnaire administration study in which the participant completes at a time to suit them. Only if the participant consents to further involvement do they receive any further contact:

- If they consent to receive a short follow up questionnaire 7 days after participating - this is less than 5 minutes to complete.
- If they consent to receive a link via email to repeat the questionnaire in 12 months time via receiving a link to a follow up questionnaire 12 months after the initial questionnaire.

Therefore at minimum, involvement is a single time point study. Involvement may extend to 7 days following completion if participants consent to receive and complete the 5-minute follow-up questionnaire 7 days post initial questionnaire completion.

At maximum, involvement is 12 months where participants agree to receive a further questionnaire 12 months after completion of their initial questionnaire. This survey will be identical to the first survey unless any amendments have been made following a full HRA change process.

A22. What are the potential risks and burdens for research participants and how will you minimise them?

For all studies, describe any potential adverse effects, pain, discomfort, distress, intrusion, inconvenience or changes to lifestyle. Only describe risks or burdens that could occur as a result of participation in the research. Say what steps would be taken to minimise risks and burdens as far as possible.

BURDEN

We are mindful of the questionnaire burden. The questionnaire has been created with two PPI members who have been treated for cancer and have experience in cancer related PROM research. We have also piloted the survey through the Imperial College Healthcare NHS Trust cancer PPI group and the Cancer Research UK PPI network. We have not had any feedback suggesting that the questionnaire is too long or causes distress when completing it.

There is a possibility that reflecting on the questions may trigger upsetting thoughts. To mitigate against any distress that may inadvertently be caused, we will be providing 24-hour a day access to a patient support line. This will be administered by Tenovus, a cancer support charity in Wales, whose support line is delivered by qualified nursing staff.

RISKS

Given this is not an interventional study and participants are only required to fill in questionnaires, we do not expect any extra adverse events associated with trial entry.

This study is observational. There are no changes to routine care. Therefore the risk of this study causing a SAE are extremely small. At its most basic this is a single time point study and therefore we will not have follow up data on participants to know if they have any adverse events. If the participant consents to receive the 7-day follow-up questionnaire then this may provide information to allow us to capture any serious adverse events in the event that one occurs.

There is a risk that participating in the study may lead to increased utilisation of services. This may be beneficial for the participant but there is a risk of triggering unwarranted health seeking behaviour. To assess this, a follow-up questionnaire will be sent seven days after completion to identify if the study triggered use of medical services and, if so, which services were accessed. If the study appears to trigger significant unwarranted use of health services, this

would be an adverse event and would result in the CI discussing the trial with the trial management group.

Given the nature of the participants' diagnoses and age, there may be participants who die prior to receiving the 12-month questionnaire if they consented to receive this. There is a small risk that this contact could upset relatives of the deceased participant. Contact details of the study team will be on that email and so the relatives can contact us to inform us of this non-serious adverse event. However, given the non-interventional nature of the study, we do not believe any of these deaths will be related to the study. Unless informed by an external agency we will not be aware of patients who die in the 12 months following them completing the questionnaire. Unless there is evidence to the contrary we would not interpret death in the 12 months following completion of the questionnaire as being a serious adverse event and they will not be recorded as such unless the questionnaire is implicated in the death of the participant.

A23. Will interviews/ questionnaires or group discussions include topics that might be sensitive, embarrassing or upsetting, or is it possible that criminal or other disclosures requiring action could occur during the study?

Yes No

If Yes, please give details of procedures in place to deal with these issues:

Participants may find the core set of questions on quality of life distressing as it may pick up concerns that are not elicited by standard clinical practice. However, this is part of the observational aspect of the study.

As part of documentations provided to participants we will be signposting them to a 24-hour-a-day helpline provided by the cancer charity Tenovus based in Wales who have agreed to support the provide support for any participant who feels distressed after participation.

A24. What is the potential for benefit to research participants?

There is a small benefit for the participants in signposting to resources at the end of the study, it helps address aspects of QOL that they may reflect they would like to improve.

Ultimately we hope that the INDIGO Community will help develop a firm, applicable, pragmatic evidence base on how to collect PROMS, and service use on patients who are living with or beyond cancer in the long term.

It is hoped that utilising this novel approach we will be able to lower the barriers to community PROMS collection such that it can become a standard of care and that service provision can better reflect patients long term unmet needs.

By exploring willingness to link data it may be possible to reduce the questionnaire burden in future community PROMS studies.

Patients will get a summary of the questions and their answers at the end of the questionnaire, after submission. If they choose, they can bring a copy to their GP, keep a record of it, or send it to their healthcare professionals. There may be a value in facilitating conversations with friends, family, healthcare professionals about ongoing unmet needs and symptoms.

A26. What are the potential risks for the researchers themselves? (if any)

None

RECRUITMENT AND INFORMED CONSENT

In this section we ask you to describe the recruitment procedures for the study. Please give separate details for different study groups where appropriate.

A27-1. How will potential participants, records or samples be identified? Who will carry this out and what resources will be used? For example, identification may involve a disease register, computerised search of GP records, or review of medical records. Indicate whether this will be done by the direct healthcare team or by researchers acting under arrangements with the responsible care organisation(s).

Different links or QR codes will be utilised to aid identification of the route into the study so that this can be assessed as an outcome. There are two triggers to self-enrolment on the survey platform:

1. The primary care research network (PCRN) will send a link to patients identified on their database with a previous diagnosis of cancer and who have previously consented to be contacted by the PCRN to participate in research. The PCRN will use a text message sent to the patients' phone numbers that are recorded on the primary care database. The message does not contain any identifiable data. The message will contain a link that take the potential participant to the PIS.

2. Direct patient self-enrolment. Having become aware of the study via one of the communication methods being used in the study (e.g., physical signage in healthcare providers, community centres, physical newsletters and community papers, social media, charities making their members aware of the study). The potential participant will either follow a link, scan a QR code or type in a URL into a web browser which will take them to the first page of the questionnaire (i.e., PIS).

On the platform, digital data (e.g., cookies, IP addresses) will not be collected as we set the platform as being anonymous, thus collecting no further information than what the participants are willing to communicate with us.

A27-2. Will the identification of potential participants involve reviewing or screening the identifiable personal information of patients, service users or any other person?

Yes No

Please give details below:

Potential participants identified by the Primary Care Research Network (PCRN) will have already indicated a willingness to participate in research. The PCRN have governance arrangements covering how they utilise their database to identify suitable participants in research studies.

Participants who self identify as eligible for the study will not require any pre-screening of their medical records.

A27-3. Describe what measures will be taken to ensure there is no breach of any duty of confidentiality owed to patients, service users or any other person in the process of identifying potential participants. Indicate what steps have been or will be taken to inform patients and service users of the potential use of their records for this purpose. Describe the arrangements to ensure that the wishes of patients and service users regarding access to their records are respected. Please consult the guidance notes on this topic.

Identifiable and pseudo-anonymised data will be accessed and held electronically by the study team on Imperial College London servers and on Imperial College Healthcare NHS Trust computers using HSCN. All servers are protected as part of routine Information Governance. This includes restricted access inside the network, individual user accounts and back-up of network drives.

Data linked to cancer registries will be securely transferred to the Big Data Analytical Unit (BDAU) at Imperial College London for further analysis. The management system of BDAU has been approved by Alcumus ISOAQR and is compliant with the requirements of ISO 27001: 2013. The acquisition, handling, processing, storage and communication of information are secured with BDAU. BDAU provide a secure computing environment with storage and analysis, and meets all of the requirements for physical and electronic security.

A27-4. Will researchers or individuals other than the direct care team have access to identifiable personal information of any potential participants?

Yes No

A27-5. Has prior consent been obtained or will it be obtained for access to identifiable personal information?

Yes No

If Yes, please give details below.

We ask patients their consent for linkage to regional and national cancer registries (e.g., NCRAS held by NHS England). If they decline, their data will not be shared with third parties. If patients agree to having their survey answers linked to their data recorded in the cancer registries, we shall share these with NHS England (= national cancer registries) and relevant regional cancer registries (e.g., the Whole Systems Integrated Care (WSIC) registry for patients living and diagnosed in North-West London).

A28. Will any participants be recruited by publicity through posters, leaflets, adverts or websites?

Yes No

If Yes, please give details of how and where publicity will be conducted, and enclose copy of all advertising material (with version numbers and dates).

The intention is to utilise omnichannel methods of communication to ensure we maximise the breadth of participation, such as:

- Posters in healthcare facilities in the community.
- Dissemination of digital 'posters' via charities and community groups.
- Social media postings.

A29. How and by whom will potential participants first be approached?

There is no physical approach to potential participants.

Potential participants will become aware of the research via two methods

1. A text message from the primary care research network (PCRN) team with a link to the study platform.
2. Participants will self identify as eligible for the study having seen physical or social media and they will choose to engage with the study platform.

A30-1. Will you obtain informed consent from or on behalf of research participants?

Yes No

If you will be obtaining consent from adult participants, please give details of who will take consent and how it will be done, with details of any steps to provide information (a written information sheet, videos, or interactive material). Arrangements for adults unable to consent for themselves should be described separately in Part B Section 6, and for children in Part B Section 7.

If you plan to seek informed consent from vulnerable groups, say how you will ensure that consent is voluntary and fully informed.

Patients who meet the inclusion criteria when identified by the primary care research network (PCRN) or who self identify as eligible will be offered a link to the digital platform where they can access information on the trial and the digital platform.

Participants from either route will be asked to provide consent to participate in the study. If the participants are happy to participate in the study they self-enrol into the study, using the secure online platform, and provide online informed consent.

Given the low risk nature of this study, and our desire to not over-burden the subjects in line with our other observational studies, we will allow subjects to give consent and enrol on the same day. However, we are also happy for subjects to read the information and enrol later if they wish to.

We will obtain informed consent from all participants in the study.

There will be contact details for the trial study team if potential participants want to ask any questions or raise concerns prior to informed consent being obtained.

If you are not obtaining consent, please explain why not.

Please enclose a copy of the information sheet(s) and consent form(s).

A30-2. Will you record informed consent (or advice from consultees) in writing?

Yes No

If No, how will it be recorded?

Consent is indicated by completion of a tick box after every consent question. As this is a low risk study this is in line with MRC guidance for digital research studies.

The participant can withdraw at anytime by ceasing to respond to the questions and closing the link to the survey

platform.

A31. How long will you allow potential participants to decide whether or not to take part?

Potential participants determine how long they have to consider participation.

Upon landing on the study web page via a link the potential participant is shown the PIS. They can leave at that point and return or click through to a consent page. They can read the consent page and then leave or consent at that time. They are then able to proceed directly to complete the questionnaire or they can leave and return within a week.

Overall, participants are free to leave the study at any time point with the possibility to return within a week and start where they left the study. If they do not return after a week, their answers and consent will be recorded as incomplete.

A33-1. What arrangements have been made for persons who might not adequately understand verbal explanations or written information given in English, or who have special communication needs?(e.g. translation, use of interpreters)

As the study requires completion of multiple questionnaires only those with sufficient understanding of written English or who can access help to participate from family, friends and carers can participate.

Once we have been able to determine which questions perform well when delivered digitally, we will be in a position to consider multilingual offerings in subsequent projects.

Also, once we have demonstrated if the methodology is feasible then it would be our intention to increase accessibility options, not just language but also considering other impairments such as visual as well as increasing understanding by use of animations to explain the consent questions.

A35. What steps would you take if a participant, who has given informed consent, loses capacity to consent during the study? Tick one option only.

- The participant and all identifiable data or tissue collected would be withdrawn from the study. Data or tissue which is not identifiable to the research team may be retained.
- The participant would be withdrawn from the study. Identifiable data or tissue already collected with consent would be retained and used in the study. No further data or tissue would be collected or any other research procedures carried out on or in relation to the participant.
- The participant would continue to be included in the study.
- Not applicable – informed consent will not be sought from any participants in this research.
- Not applicable – it is not practicable for the research team to monitor capacity and continued capacity will be assumed.

Further details:

This is a single time point study unless a participant consents to contact 7 days and/or a year after initial participation.

It is unlikely that someone will lose capacity within 7 days of commencing the questionnaire.

There is a risk that capacity is lost within 12 months of initial completion of the questionnaire in participants who consent to being contacted a year later. However, our mode of contact is an email and participants will be re-consented and therefore we hope this will mitigate this small risk.

CONFIDENTIALITY

In this section, personal data means any data relating to a participant who could potentially be identified. It includes pseudonymised data capable of being linked to a participant through a unique code number.

Storage and use of personal data during the study

A36. Will you be undertaking any of the following activities at any stage (including in the identification of potential participants)?(Tick as appropriate)

- Access to medical records by those outside the direct healthcare team

- Access to social care records by those outside the direct social care team
- Electronic transfer by magnetic or optical media, email or computer networks
- Sharing of personal data with other organisations
- Export of personal data outside the EEA
- Use of personal addresses, postcodes, faxes, emails or telephone numbers
- Publication of direct quotations from respondents
- Publication of data that might allow identification of individuals
- Use of audio/visual recording devices
- Storage of personal data on any of the following:
 - Manual files (includes paper or film)
 - NHS computers
 - Social Care Service computers
 - Home or other personal computers
 - University computers
 - Private company computers
 - Laptop computers

Further details:

Where participants decline to consent to linkage of their questionnaire responses to NHS data, the data collected at its most granular will be age and outward postcode.

Where participants consent to data linkage, sufficient data will be required in order to uniquely identify that person (i.e., date of birth, first name, surname, gender, full postcode).

The participant will be entering data directly onto the secure online platform.

Data will be analysed using secure computing facilities at Imperial College London and Imperial College Healthcare NHS Trust. Identifiable data will only be shared with NHSD.

A37. Please describe the physical security arrangements for storage of personal data during the study?

Identifiable data will be accessed and held electronically by the study team on Imperial College Healthcare NHS Trust computers within HSCN (previously know as N3). All servers are protected as part of routine Information Governance. This includes restricted access inside the network, individual user accounts and back-up of network drives.

Pseudo-anonymised data will be securely transferred, accessed and held electronically by the study team on Imperial College London servers (using the Big Data Analytical Unit - see below). All servers are protected as part of routine Information Governance. This includes restricted access inside the network, individual user accounts and back-up of network drives.

Data linked to cancer registries will be pseudo-anonymised and securely transferred to the Big Data Analytical Unit (BDAU) at Imperial College London for further analysis. The management system of BDAU has been approved by Alcumus ISOAQR and is compliant with the requirements of ISO 27001: 2013. The acquisition, handling, processing, storage and communication of information are secured with BDAU. BDAU provide a secure computing environment with storage and analysis, and meets all of the requirements for physical and electronic security.

A38. How will you ensure the confidentiality of personal data? Please provide a general statement of the policy and procedures for ensuring confidentiality, e.g. anonymisation or pseudonymisation of data.

Identifiable data will be accessed and held electronically by the study team on Imperial College Healthcare NHS Trust computers within HSCN (previously know as N3). All servers are protected as part of routine Information Governance. This includes restricted access inside the network, individual user accounts and back-up of network drives.

Pseudo-anonymised data will be securely transferred, accessed and held electronically by the study team on Imperial College London servers (using the Big Data Analytical Unit - see below). All servers are protected as part of routine Information Governance. This includes restricted access inside the network, individual user accounts and back-up of

network drives.

Data linked to cancer registries will be pseudo-anonymised and securely transferred to the Big Data Analytical Unit (BDAU) at Imperial College London for further analysis. The management system of BDAU has been approved by Alcumus ISOAQR and is compliant with the requirements of ISO 27001: 2013. The acquisition, handling, processing, storage and communication of information are secured with BDAU. BDAU provide a secure computing environment with storage and analysis, and meets all of the requirements for physical and electronic security.

A40. Who will have access to participants' personal data during the study? Where access is by individuals outside the direct care team, please justify and say whether consent will be sought.

CI and Co-investigators will have access to patient identifiable information:

For the purposes of monitoring and delivering the study the following people may have access to participants identifiable data.

- CI: Dr Matthew Williams (Clinical Oncologist and Senior Research Fellow Imperial College NHS Trust / Imperial College),
- Co-investigators:
 - Dr Jonathan Gregory (Orthopaedic Oncologist and Honorary Research Fellow Imperial College),
 - Kerlann Le Calvez, pre-doctoral Research Assistant (RA) in the Computational Oncology group (Imperial College Healthcare NHS Trust), (over 5 years of experience working on national healthcare and cancer data),
 - Lillie Pakzad-Shahabi (Clinical Research Practitioner),

The NCRN Badged research nurses will have access via their own PCRN database.

The following people may have access to aggregated data or pseudo-anonymised data only:

- Research staff (= analytical team) at Imperial College London.

Storage and use of data after the end of the study

A41. Where will the data generated by the study be analysed and by whom?

Please see the attached data flow chart.

Data will be generated by the participants as they complete the survey. Participants will remain non-identifiable from this data, unless they consent to linkage to national cancer registries.

If the participant consents to link their data to national NHS data, they will be asked for identifiable data and it will be possible for them to then be identified. The identifiable data will be held securely within HSCN on Imperial College Healthcare NHS Trust computers.

The research team will generate a pseudonymised participant ID that will be shared with NHS Digital (and other regional cancer registry, when applicable) in addition to data fields that will allow extraction of the relevant data from the NHS (i.e., first name, surname, date of birth, postcode). The pseudo-anonymised NHS data generated by NHS Digital will be securely transferred to Imperial College London's Big Data & Analytical Unit (BDAU). This will be linked to the pseudo-anonymised participant responses.

If participants decline linkage to NHS Digital, their data will be held securely within HSCN on Imperial College Healthcare NHS Trust computers. The research team will generate a pseudonymised participant ID and their pseudo-anonymised data will simply be transferred to Imperial College London's Big Data & Analytical Unit (BDAU).

Overall, all identifiable data will be removed and pseudo-anonymised data transferred to Imperial College London's Big Data & Analytical Unit (BDAU) for analyses undertaken by the research team.

A42. Who will have control of and act as the custodian for the data generated by the study?

	Title Forename/Initials Surname
	Dr Matthew Williams
Post	Consultant Clinical Oncologist
Qualifications	MBChB MRCP FRCR PhD

Work Address	Dept. Clinical Oncology - Charing Cross Hospital Fulham Palace Road London
Post Code	W6 8RF
Work Email	matt.williams3@nhs.net
Work Telephone	02033111733
Fax	02033111603

A43. How long will personal data be stored or accessed after the study has ended?

- Less than 3 months
 3 – 6 months
 6 – 12 months
 12 months – 3 years
 Over 3 years

If longer than 12 months, please justify:

The study will continue to accrue patients for up to 24 months, and preliminary analysis may well take several months. Study data will be kept for 10 years following completion of enrolment of the final participant to allow time for analysis, publication and subsequent validation of the study in light of response to the published work.

In addition, as computational techniques improve, there is the potential to develop novel techniques to improve our analysis of such data. We expect such data to become increasingly important over the next 5 - 10 years, and therefore having an anonymised dataset is important. We therefore inform the patient by explicitly stating this in the PIS, and include a special clause on the consent form to store consent form and coded data for 10 years following completion of the study.

A44. For how long will you store research data generated by the study?

Years: 12

Months:

A45. Please give details of the long term arrangements for storage of research data after the study has ended. Say where data will be stored, who will have access and the arrangements to ensure security.

The study will be finished after the completion of all the analyses and the release of final summary data (after Year 5). Data will be retained for the duration of the study and for up to 5 years afterwards (10 years from completion but 12 years for participants who sign up at the start of the 24 month recruitment period) in order to complete the analysis, have the results, publish peer-reviewed article and conference presentations.

Personal identifiable data will be stored in the secure environment of Imperial College Healthcare NHS Trust, using networked storage within HSCN.

Pseudo-anonymised data will be stored in the secure environment of Imperial College London, using networked storage within Imperial College London.

The data will only be accessed by members of the study team and their successors.
The study data will be archived at Imperial College London facility.

INCENTIVES AND PAYMENTS**A46. Will research participants receive any payments, reimbursement of expenses or any other benefits or incentives for taking part in this research?**

Yes No

A47. Will individual researchers receive any personal payment over and above normal salary, or any other benefits or incentives, for taking part in this research?

Yes No

A48. Does the Chief Investigator or any other investigator/collaborator have any direct personal involvement (e.g. financial, share holding, personal relationship etc.) in the organisations sponsoring or funding the research that may give rise to a possible conflict of interest?

Yes No

NOTIFICATION OF OTHER PROFESSIONALS

A49-1. Will you inform the participants' General Practitioners (and/or any other health or care professional responsible for their care) that they are taking part in the study?

Yes No

If Yes, please enclose a copy of the information sheet/letter for the GP/health professional with a version number and date.

PUBLICATION AND DISSEMINATION

A50. Will the research be registered on a public database?

Yes No

Please give details, or justify if not registering the research.

This study will be registered on clinicaltrials.gov after ethics approval. It will also be registered on the NCRI trials database, and we anticipate NCRN portfolio badging.

Registration of research studies is encouraged wherever possible.

You may be able to register your study through your NHS organisation or a register run by a medical research charity, or publish your protocol through an open access publisher. If you are aware of a suitable register or other method of publication, please give details. If not, you may indicate that no suitable register exists. Please ensure that you have entered registry reference number(s) in question A5-1.

A51. How do you intend to report and disseminate the results of the study? Tick as appropriate:

- Peer reviewed scientific journals
- Internal report
- Conference presentation
- Publication on website
- Other publication
- Submission to regulatory authorities
- Access to raw data and right to publish freely by all investigators in study or by Independent Steering Committee on behalf of all investigators
- No plans to report or disseminate the results
- Other (please specify)

A52. If you will be using identifiable personal data, how will you ensure that anonymity will be maintained when publishing the results?

Only pseudonymised data will be analysed, and all data will be presented in aggregate form, thereby preserving anonymity. No identifiable information will be included in publications.

A53. How and when will you inform participants of the study results?

If there will be no arrangements in place to inform participants please justify this.

Participants will be asked if they wish to be informed of the study outcomes. If they consent to contact for this, they will be asked to provide an email address. We will then send them a short summary of the findings in plain English with links to more in-depth analysis.

We will publish and disseminate the results in local, national and international meetings, and in peer-reviewed journals. We expect this work to result in significant, novel findings, and to act as the basis for significant further grant applications.

5. Scientific and Statistical Review**A54. How has the scientific quality of the research been assessed? Tick as appropriate:**

- Independent external review
- Review within a company
- Review within a multi-centre research group
- Review within the Chief Investigator's institution or host organisation
- Review within the research team
- Review by educational supervisor
- Other

Justify and describe the review process and outcome. If the review has been undertaken but not seen by the researcher, give details of the body which has undertaken the review:

Research has been co-produced by Patient Public contributors, the research team and the Expert Advisory Group. The questionnaires have been piloted within local and national Cancer Research UK PPI groups.

For all studies except non-doctoral student research, please enclose a copy of any available scientific critique reports, together with any related correspondence.

For non-doctoral student research, please enclose a copy of the assessment from your educational supervisor/ institution.

A56. How have the statistical aspects of the research been reviewed? Tick as appropriate:

- Review by independent statistician commissioned by funder or sponsor
- Other review by independent statistician
- Review by company statistician
- Review by a statistician within the Chief Investigator's institution
- Review by a statistician within the research team or multi-centre group
- Review by educational supervisor
- Other review by individual with relevant statistical expertise
- No review necessary as only frequencies and associations will be assessed – details of statistical input not required

In all cases please give details below of the individual responsible for reviewing the statistical aspects. If advice has

been provided in confidence, give details of the department and institution concerned.

Title Forename/Initials Surname

- Department
- Institution
- Work Address

- Post Code
- Telephone
- Fax
- Mobile
- E-mail

Please enclose a copy of any available comments or reports from a statistician.

A57. What is the primary outcome measure for the study?

- There are two co-primary research objectives.
- a. To assess the feasibility of recruiting to a community digital PROM study via the primary care research network.
 - b. To assess the feasibility of linking participants' PROMs responses to regional and national cancer registries.

A58. What are the secondary outcome measures?(if any)

Secondary outcome measures

- a. To assess the different methods of communication to trigger participant self-identification and self-enrolment to a digital community cancer PROMs study.
 - i. Participation rates and survey completion rates as proportion of the denominator of all people over the age of 16 diagnosed and treated for cancer.
 - ii. Recruitment and completion rates from different communication channels for demographic groups.
 - iii. Number and type of communication channels used until recruitment plateaus. The digital platform provides real time recruitment rates. These will be reviewed weekly by the trial management group (TMG). When the TMG determine that recruitment has plateaued the next communication channel will be opened.
- b. To assess which of three PROMS performs best in combination with EQ-5D-5L.
 - i. Completion rates of the three PROMs questionnaires
 - ii. Qualitative measure of participant satisfaction with the three PROMS (EORTC QLQ-C30, SDI, PGI).

Tertiary outcome measures

- a. To assess the feasibility of collecting, filtering, grouping, and interpreting free text responses in the context of a digital community-based PROMs study.
 - i. Completion rate of free text responses.
 - ii. Ability to group responses into categories.
 - iii. Ability to undertake an analysis on the responses.
 - iv. Link those to demographic or cancer type / treatment details.
- b. To assess the feasibility of developing a national cohort of people living with and beyond cancer linked to their cancer registry records and who can be followed longitudinally with repeat sampling.
 - i. Number of participants who agreed to be contacted for future sampling.
 - ii. Number of participants who responded to a follow-up survey 12 months after completion of the initial survey.

A59. What is the sample size for the research? How many participants/samples/data records do you plan to study in total? If there is more than one group, please give further details below.

Total UK sample size: 2400000
 Total international sample size (including UK): 2400000
 Total in European Economic Area: 240000

Further details:

There is a paucity of evidence in this area on which to base statistical calculations. There are very few digital PROMs studies, and we are not aware of any self-identification / self-enrolment community PROMs studies.

Therefore, our recruitment is based upon the following considerations.

There are over 2.4 million people living with or beyond a diagnosis of cancer in the UK. There are 65,000 people in North-West London with a coded diagnosis of cancer in their primary care records.

To show a 20% difference between arms of the trial 80% (+/- 3%) vs 60% (+/- 3%) in terms of agreement to linkage to cancer registry data or completion of questions, we will require 600-1000 subjects per randomisation.

Therefore, to allow for drop out of completed questionnaires we will aim for 1000 participants as a minimum before any interim analysis is undertaken into the utility and performance of the different randomisation questions.

Given the paucity of literature in this area we do not have robust data on which to base participant recruitment rates. Many cancer studies have good recruitment rates and the recent 18-month PROM study conducted by NHSE had a 45-55% completion rate but only 18 months after diagnosis.

Therefore we have assumed worst case scenarios.

The phase 1 of the study will only run in North-West London. A 100% participation rate will yield 65,000 participants. Using the NHS England figure of 50% participation rate we would have approximately 35,000 participants. If we have a very low participation rate, as low as 5%, we would recruit 3000-5000 participants.

Nationally there are over 2.4 million people with a previous diagnosis of cancer. Therefore our sample size will vary from 2.4 million with 100% participation, to 1.2 million with a 50% participation rate or approximately 125,000 participants with a 5% participation rate.

We believe that recruitment rates will very likely be above these worst case scenarios. The questionnaire was tested in Imperial PPI and CRUK and no concerns raised therefore no reason to anticipate poor uptake but this is a novel methodology and therefore we cannot be certain.

If the worst case scenario recruitment rate occurred, this will still be the largest real world cancer patient PROMS study in a community setting and, as such, will yield data on what worked and didn't work with the study methodology. The data on service use can be shared to help design and deliver services for those living with and beyond cancer.

A60. How was the sample size decided upon? *If a formal sample size calculation was used, indicate how this was done, giving sufficient information to justify and reproduce the calculation.*

The main aim of INDIGO Community is to assess feasibility. There are therefore no formal power calculations. We are using the data to both estimate numbers and proportions of participants who sign up, but also to develop the best way of encouraging participants to sign up and complete the questions.

Our recruitment is based upon the following considerations.

To show a 20% difference between arms of the trial 80% (+/- 3%) vs 60% (+/- 3%) in terms of agreement to linkage to cancer registry data or completion of questions, we will require 600-1000 subjects per randomisation.

Therefore, to allow for drop out of completed questionnaires we will aim for 1000 participants as a minimum before any interim analysis is undertaken into the utility and performance of the different randomisation questions.

A61. Will participants be allocated to groups at random?

Yes No

If yes, please give details of the intended method of randomisation:

There are four randomisations within the study, three relate to methodology and one to content.

Randomisation 1:

There is cluster randomisation with regards the sequence of trigger to participate - physical media vs PCRN contact

with cross over occurring and then social media channels being added.

Randomisation 2:

The positioning of the question relating to acceptance of linking the participants to their NHS data is randomised between asking early in the questionnaire and asking at the end.

The aim of this questions is to answer "does requesting linkage to datasets affect participation and completion rates? Does the timing of request for participation affect participation and completions rates?"

Randomisation 3:

Participants will be randomised equally between three PROMS tools. All participants will complete the EQ-5D-5L and then the randomisation will determine the second PROM they receive (either EORTC QLQ-C30, SDI, PGI).

Randomisation 4:

For technical reasons, the PGI questionnaire will be randomised into a questionnaire with validation, requirements and help from the secure online platform and in a questionnaire with no requirements from the platform. The questions will not change nor will the display of the answers.

A62. Please describe the methods of analysis (statistical or other appropriate methods, e.g. for qualitative research) by which the data will be evaluated to meet the study objectives.

We will define futility as less than 1% enrolment.

Most of the measures will be presented in descriptive format (e.g. "50% of participants agreed to linkage of data", "completion rate was 80% for the EQ5D5L" rather than using statistical tests.)

6. MANAGEMENT OF THE RESEARCH

A63. Other key investigators/collaborators. Please include all grant co-applicants, protocol co-authors and other key members of the Chief Investigator's team, including non-doctoral student researchers.

	Title Forename/Initials Surname
	Dr Jonathan Gregory
Post	Honorary Research Fellow
Qualifications	BSC MB ChB FRCS
Employer	Imperial College London
Work Address	Department of Surgery & Cancer Fulham Palace Road
Post Code	W6 8RF
Telephone	
Fax	
Mobile	07832164741
Work Email	j.gregory@imperial.ac.uk

	Title Forename/Initials Surname
	Ms. Kerlann Le Calvez
Post	Data analyst
Qualifications	
Employer	Imperial College Healthcare NHS Trust
Work Address	Dept. Clinical Oncology - Charing Cross Hospital Fulham Palace Road London

Post Code W6 8RF
 Telephone 02033115307
 Fax
 Mobile
 Work Email kerlann.lecalvez@nhs.net

Title Forename/Initials Surname
 Miss Lillie Pakzad-Shahabi
 Post Neuro-Oncology Clinical Research Practitioner
 Qualifications
 Employer Imperial College London
 Work Address Department of Surgery & Cancer
 Fulham Palace Road
 London

Post Code W6 8RF
 Telephone
 Fax
 Mobile
 Work Email lillie.shahabi@nhs.net

Title Forename/Initials Surname
 Miss Radvile Mauricaite
 Post Data analyst
 Qualifications BSc
 Employer Imperial College Healthcare NHS Trust
 Work Address Department of Surgery & Cancer
 Fulham Palace Road
 London

Post Code W6 8RF
 Telephone
 Fax
 Mobile
 Work Email radvile.mauricaite@nhs.net

Title Forename/Initials Surname
 Mrs Jacqui Gath
 Post Patient and Public Involvement representative
 Qualifications
 Employer
 Work Address

Post Code
 Telephone
 Fax
 Mobile
 Work Email jgath@blueyonder.co.uk

Title Forename/Initials Surname	Mr Pete Wheatstone
Post	Patient and Public Involvement representative
Qualifications	
Employer	
Work Address	
Post Code	
Telephone	
Fax	
Mobile	
Work Email	wheatpd@yahoo.co.uk

A64. Details of research sponsor(s)

A64-1. Sponsor

Lead Sponsor

Status: NHS or HSC care organisation Commercial status: Non-Commercial
 Academic Commercial
 Pharmaceutical industry
 Medical device industry
 Local Authority
 Other social care provider (including voluntary sector or private organisation)
 Other

If Other, please specify:

Contact person

Name of organisation Imperial College London, Head of Research Governance and Integrity
 Given name Keith
 Family name Boland
 Address Room 221 Level 2, Medical School Building, Norfolk Place
 Town/city London
 Post code W2 1PG
 Country United Kingdom
 Telephone 02075949480
 Fax
 E-mail k.boland@imperial.ac.uk

Legal representative for clinical investigation of medical device (studies involving Northern Ireland only)
Clinical Investigations of Medical Devices that take place in Northern Ireland must have a legal representative of the sponsor that is based in Northern Ireland or the EU

Contact person

Name of organisation

Given name

Family name

Address

Town/city

Post code

Country

Telephone

Fax

E-mail

A65. Has external funding for the research been secured?*Please tick at least one check box.*

- Funding secured from one or more funders
- External funding application to one or more funders in progress
- No application for external funding will be made

What type of research project is this?

- Standalone project
- Project that is part of a programme grant
- Project that is part of a Centre grant
- Project that is part of a fellowship/ personal award/ research training award
- Other

Other – please state:

Please give details of funding applications.

Organisation Brain Tumour Research Campaign
 Address 1st floor, 12-15 Hanger Green
 London

Post Code W5 3EL
 Telephone 020 8601 2402
 Fax
 Mobile
 Email wendy@btrc-charity.org

Funding Application Status: Secured In progress

Amount: 500

Duration

Years:

Months:

If applicable, please specify the programme/ funding stream:

What is the funding stream/ programme for this research project?

A66. Has responsibility for any specific research activities or procedures been delegated to a subcontractor (other than a co-sponsor listed in A64-1) ? Please give details of subcontractors if applicable. Yes No**A67. Has this or a similar application been previously rejected by a Research Ethics Committee in the UK or another country?** Yes No*Please provide a copy of the unfavourable opinion letter(s). You should explain in your answer to question A6-2 how the reasons for the unfavourable opinion have been addressed in this application.***A68-1. Give details of the lead NHS R&D contact for this research:**

	Title	Forename/Initials	Surname
		Keith	Boland
Organisation	Imperial College London		
Address	Head of Research Governance and Integrity Room 221, Level 2, Medical School Building Norfolk Place, London		
Post Code	W2 1PG		
Work Email	k.boland@imperial.ac.uk		
Telephone	02075949480		
Fax			
Mobile			

*Details can be obtained from the NHS R&D Forum website: <http://www.rdforum.nhs.uk>***A68-2. Select Local Clinical Research Network for NHS Organisation identified in A68-1:**

North West London

*For more information, please refer to the question specific guidance.***A69-1. How long do you expect the study to last in the UK?**

Planned start date: 01/06/2023

Planned end date: 01/06/2026

Total duration:

Years: 3 Months: 0 Days: 1

A71-1. Is this study?

- Single centre
 Multicentre

A71-2. Where will the research take place? (Tick as appropriate)

- England
 Scotland
 Wales
 Northern Ireland
 Other countries in European Economic Area

Total UK sites in study

Does this trial involve countries outside the EU?

- Yes No

A72. Which organisations in the UK will host the research? Please indicate the type of organisation by ticking the box and give approximate numbers if known:

- NHS organisations in England 1
 NHS organisations in Wales
 NHS organisations in Scotland
 HSC organisations in Northern Ireland
 GP practices in England
 GP practices in Wales
 GP practices in Scotland
 GP practices in Northern Ireland
 Joint health and social care agencies (eg community mental health teams)
 Local authorities
 Phase 1 trial units
 Prison establishments
 Probation areas
 Independent (private or voluntary sector) organisations
 Educational establishments
 Independent research units
 Other (give details)

Total UK sites in study: 1

A73-1. Will potential participants be identified through any organisations other than the research sites listed above?

Yes No

A74. What arrangements are in place for monitoring and auditing the conduct of the research?

Central trial management will be directed by Dr Matt Williams and the supporting trial analysts, based at Imperial College. The study will be overseen by the trial Expert Advisory Group.

The study shall be subject to inspection and audit by Imperial College London under their remit as sponsor and other regulatory bodies to ensure adherence to GCP and the NHS Research Governance Framework for Health and Social Care (2nd edition).

The study team will also report to the R&D office at Imperial College London. The RGIT may audit the study in line with the Research Governance requirements.

A76. Insurance/ indemnity to meet potential legal liabilities

Note: in this question to NHS indemnity schemes include equivalent schemes provided by Health and Social Care (HSC) in Northern Ireland

A76-1. What arrangements will be made for insurance and/or indemnity to meet the potential legal liability of the sponsor(s) for harm to participants arising from the management of the research? Please tick box(es) as applicable.

Note: Where a NHS organisation has agreed to act as sponsor or co-sponsor, indemnity is provided through NHS schemes. Indicate if this applies (there is no need to provide documentary evidence). For all other sponsors, please describe the arrangements and provide evidence.

- NHS indemnity scheme will apply (NHS sponsors only)
- Other insurance or indemnity arrangements will apply (give details below)

Imperial College London negligent and non-negligent insurance applies.

The study shall be subject to inspection and audit by Imperial College London under their remit as sponsor and other regulatory bodies to ensure adherence to GCP and the NHS Research Governance Framework for Health and Social Care (2nd edition).

Please enclose a copy of relevant documents.

A76-2. What arrangements will be made for insurance and/ or indemnity to meet the potential legal liability of the sponsor(s) or employer(s) for harm to participants arising from the design of the research? Please tick box(es) as applicable.

Note: Where researchers with substantive NHS employment contracts have designed the research, indemnity is provided through NHS schemes. Indicate if this applies (there is no need to provide documentary evidence). For other protocol authors (e.g. company employees, university members), please describe the arrangements and provide evidence.

- NHS indemnity scheme will apply (protocol authors with NHS contracts only)
- Other insurance or indemnity arrangements will apply (give details below)

Imperial College London negligent and non-negligent insurance applies.

The study shall be subject to inspection and audit by Imperial College London under their remit as sponsor and other regulatory bodies to ensure adherence to GCP and the NHS Research Governance Framework for Health and Social Care (2nd edition).

Please enclose a copy of relevant documents.

A76-3. What arrangements will be made for insurance and/ or indemnity to meet the potential legal liability of investigators/collaborators arising from harm to participants in the conduct of the research?

Note: Where the participants are NHS patients, indemnity is provided through the NHS schemes or through professional indemnity. Indicate if this applies to the whole study (there is no need to provide documentary evidence). Where non-NHS sites are to be included in the research, including private practices, please describe the arrangements which will be made at these sites and provide evidence.

- NHS indemnity scheme or professional indemnity will apply (participants recruited at NHS sites only)
- Research includes non-NHS sites (give details of insurance/ indemnity arrangements for these sites below)

Imperial College London negligent and non-negligent insurance applies.

The study shall be subject to inspection and audit by Imperial College London under their remit as sponsor and other regulatory bodies to ensure adherence to GCP and the NHS Research Governance Framework for Health and Social Care (2nd edition).

Please enclose a copy of relevant documents.

A78. Could the research lead to the development of a new product/process or the generation of intellectual property?

Yes No Not sure

PART D: Declarations**D1. Declaration by Chief Investigator**

1. The information in this form is accurate to the best of my knowledge and belief and I take full responsibility for it.
2. I undertake to fulfil the responsibilities of the chief investigator for this study as set out in the UK Policy Framework for Health and Social Care Research.
3. I undertake to abide by the ethical principles underlying the Declaration of Helsinki and good practice guidelines on the proper conduct of research.
4. If the research is approved I undertake to adhere to the study protocol, the terms of the full application as approved and any conditions set out by review bodies in giving approval.
5. I undertake to notify review bodies of substantial amendments to the protocol or the terms of the approved application, and to seek a favourable opinion from the main REC before implementing the amendment.
6. I undertake to submit annual progress reports setting out the progress of the research, as required by review bodies.
7. I am aware of my responsibility to be up to date and comply with the requirements of the law and relevant guidelines relating to security and confidentiality of patient or other personal data, including the need to register when necessary with the appropriate Data Protection Officer. I understand that I am not permitted to disclose identifiable data to third parties unless the disclosure has the consent of the data subject or, in the case of patient data in England and Wales, the disclosure is covered by the terms of an approval under Section 251 of the NHS Act 2006.
8. I understand that research records/data may be subject to inspection by review bodies for audit purposes if required.
9. I understand that any personal data in this application will be held by review bodies and their operational managers and that this will be managed according to the principles established in the Data Protection Act 2018.
10. I understand that the information contained in this application, any supporting documentation and all correspondence with review bodies or their operational managers relating to the application:
 - ◊ Will be held by the REC (where applicable) until at least 3 years after the end of the study; and by NHS R&D offices (where the research requires NHS management permission) in accordance with the NHS Code of Practice on Records Management.
 - ◊ May be disclosed to the operational managers of review bodies, or the appointing authority for the REC (where applicable), in order to check that the application has been processed correctly or to investigate any complaint.
 - ◊ May be seen by auditors appointed to undertake accreditation of RECs (where applicable).
 - ◊ Will be subject to the provisions of the Freedom of Information Acts and may be disclosed in response to requests made under the Acts except where statutory exemptions apply.
 - ◊ May be sent by email to REC members.
11. I understand that information relating to this research, including the contact details on this application, may be held on national research information systems, and that this will be managed according to the principles established in the Data Protection Act 2018.
12. Where the research is reviewed by a REC within the UK Health Departments Research Ethics Service, I understand that the summary of this study will be published on the website of the Health Research Authority (HRA) together with the contact point for enquiries named below. Publication will take place no earlier than 3 months after the issue of the ethics committee's final opinion or the withdrawal of the application.

Contact point for publication*(Not applicable for R&D Forms)*

HRA would like to include a contact point with the published summary of the study for those wishing to seek further

information. We would be grateful if you would indicate one of the contact points below.

- Chief Investigator
- Sponsor
- Study co-ordinator
- Student
- Other – please give details
- None

Access to application for training purposes (Not applicable for R&D Forms)

Optional – please tick as appropriate:

I would be content for members of other RECs to have access to the information in the application in confidence for training purposes. All personal identifiers and references to sponsors, funders and research units would be removed.

This section was signed electronically by Dr. Matt Williams on 31/03/2023 16:33.

Job Title/Post: Consultant Clinical Oncologist
Organisation: Imperial College Healthcare Trust
Email: matthew.williams@imperial.ac.uk

D2. Declaration by the sponsor's representative

If there is more than one sponsor, this declaration should be signed on behalf of the co-sponsors by a representative of the lead sponsor named at A64-1.

I confirm that:

1. This research proposal has been discussed with the Chief Investigator and agreement in principle to sponsor the research is in place.
2. An appropriate process of scientific critique has demonstrated that this research proposal is worthwhile and of high scientific quality.
3. Any necessary indemnity or insurance arrangements, as described in question A76, will be in place before this research starts. Insurance or indemnity policies will be renewed for the duration of the study where necessary.
4. Arrangements will be in place before the study starts for the research team to access resources and support to deliver the research as proposed.
5. Arrangements to allocate responsibilities for the management, monitoring and reporting of the research will be in place before the research starts.
6. The responsibilities of sponsors set out in the UK Policy Framework for Health and Social Care Research will be fulfilled in relation to this research.

Please note: The declarations below do not form part of the application for approval above. They will not be considered by the Research Ethics Committee.

7. Where the research is reviewed by a REC within the UK Health Departments Research Ethics Service, I understand that the summary of this study will be published on the website of the National Research Ethics Service (NRES), together with the contact point for enquiries named in this application. Publication will take place no earlier than 3 months after issue of the ethics committee's final opinion or the withdrawal of the application.
8. Specifically, for submissions to the Research Ethics Committees (RECs) I declare that any and all clinical trials approved by the HRA since 30th September 2013 (as defined on IRAS categories as clinical trials of medicines, devices, combination of medicines and devices or other clinical trials) have been registered on a publically accessible register in compliance with the HRA registration requirements for the UK, or that any deferral granted by the HRA still applies.

This section was signed electronically by Mr Keith Boland on 03/04/2023 13:17.

Job Title/Post: Clinical Trials Manager
Organisation: Imperial College London
Email: k.boland@imperial.ac.uk