

NCRI Bladder and Renal Group Priorities 2023 – 2026



NCRI Partners

NCRI is a UK-wide partnership between research funders working together to maximise the value and benefits of cancer research for the benefit of patients and the public. A key strength of NCRI is our broad membership with representation across both charity and government funders as well as across all four nations in the United Kingdom.



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Introduction

The NCRI Groups bring the cancer research community together to develop practice-changing research, from basic to clinical research and across all cancer types, supporting NCRI's strategy. The NCRI Bladder and Renal Group is a multi-disciplinary community of researchers and consumers focused on developing research to improve outcomes for bladder and renal cancer patients.

Each NCRI Group engages in a prioritisation process to identify the priority areas in its area of research (Appendix A). This process dictates the work of the group as well as providing an assessment of the state of research for the wider research community.

The NCRI Bladder and Renal Group has identified its research priorities working with members of the research community, NCRI Partners and other funders. Full details of the meetings held can be found in Appendix B and a list of participants can be found in Appendix C.

Within the Bladder and Renal Group is the Penile Study Group. Study groups are permanent groups that have an overarching remit to deliver a number of strategic priority areas in their respective disease or cross cutting areas. An overview of the NCRI Bladder and Renal Group structure can be found on page 6.

There are multiple areas the NCRI Bladder and Renal Group has identified as priorities, an overview can be found below with full details on pages 7-10 of this document. The Bladder and Renal Group will initially focus on priorities 1-6, forming time-limited working groups to address these priorities. When one working group finishes, capacity will be transferred to address the next priority. The Penile Study Group will work to deliver all priorities identified through concurrent projects.

Three key themes emerged during the strategy setting process, each of which will form part of each working group's considerations when addressing their priority:

- **Standardisation of sample acquisition and storage across all sites and studies**
Key to the success of the priorities outlined in this document is the standardisation of tissue and liquid sample collection for use in future research. More basic research to understand bladder cancer is needed and so a national system to collect material and evaluate different biomarkers in parallel, for example, would aid research across the board. Related to this is the need for standardisation of clinical trials in order to facilitate the delivery of studies that will work at every hospital in the UK. Considerations and plans to address these areas, for example the development of standard protocols, will be factored into the development of all trials resulting from the priorities outlined in this document.
- **Consideration of under-served populations**
This is a cross-cutting consideration across all NCRI disease groups: the spectrum of clinical research participants rarely reflects the true spectrum of the population in clinical need. Indeed, there are some groups, for example the extreme elderly (where, for example, bladder cancer is particularly common) who have specific needs which may need specific solutions derived from specific research. Therefore, every effort must be made to consider minority and under-researched populations as we develop every new study.
- **Consideration of the effects of cancer and its treatment on quality of life**
The consequences of bladder and renal cancers and their treatments on a patient's ability to live with and beyond cancer will be considered in all work of the NCRI Bladder and Renal Group. When developing trials, for example, considerations of the effects of treatments on quality of life should be built into the project from inception, measuring these effects where appropriate. The Bladder and Renal Group will also consider undertaking work into the services people need for symptom management and wellbeing when undergoing treatment and after

its conclusion. This will likely be in collaboration with the NCRI Living With and Beyond Cancer (LWBC) Group.

The strategies of NCRI Groups will be refreshed every three years. In addition, the research landscape will continue to be routinely assessed by NCRI to ensure the most pressing questions in the research landscape are addressed over the course of this three-year strategy.

NCRI Bladder and Renal Group strategic priorities at a glance

1. Early detection and precision prevention with a view to early intervention in urothelial cancer
2. Pre-operative systemic treatment study for kidney cancer
3. Risk-adapted follow-up in early stage cancers of the bladder and kidney
4. Radiotherapy trial in bladder cancer
5. Screening options for patients with small renal masses to inform risk stratification and treatment selection
6. Workshop to develop our approach in advanced cancers of the kidneys and bladder building on the work of the group to date

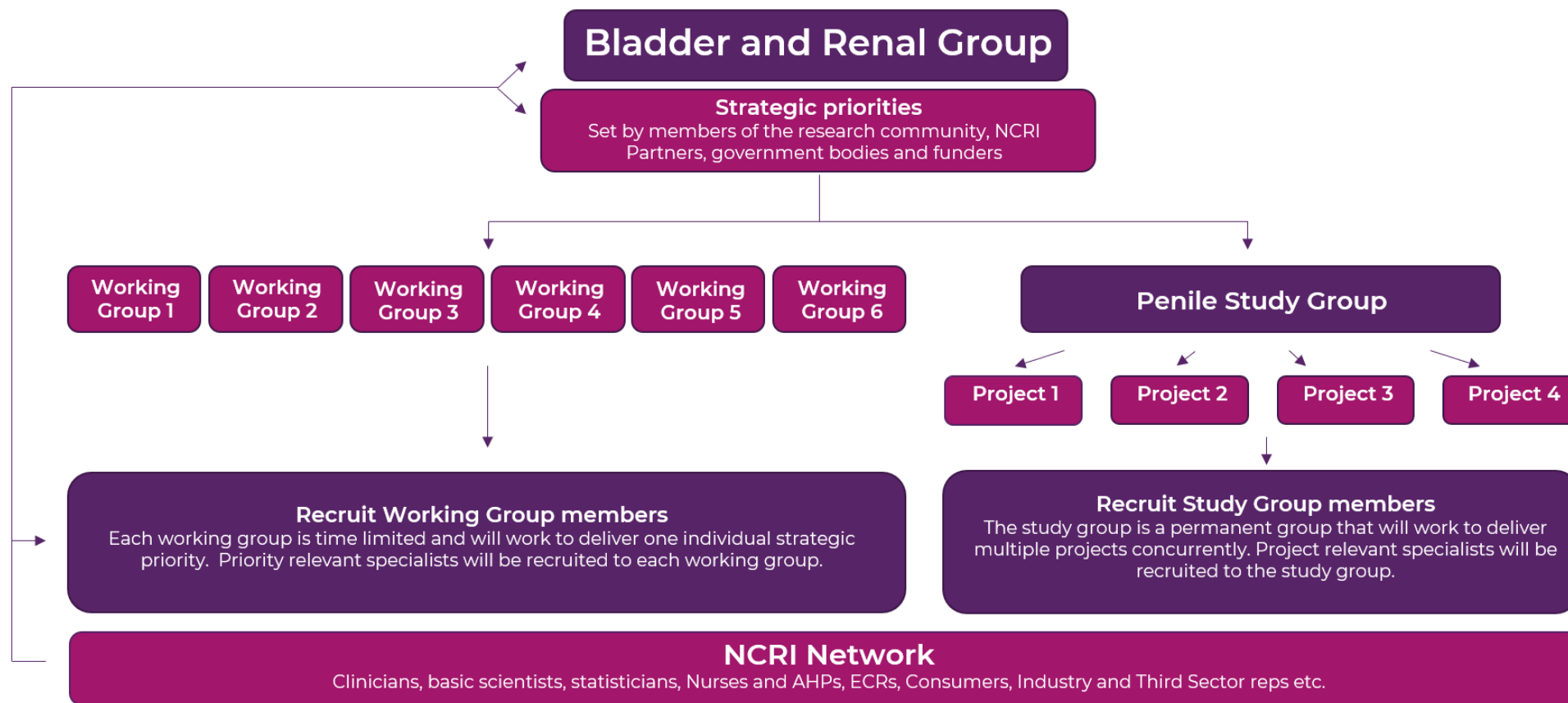
Note: the NCRI Penile Study Group priorities will be published separately.



“Bladder and renal cancers remain diseases of great unmet need, and the UK-NCRI group and its predecessors have been strong global players as we’ve strived to improve outcomes for our patients. Multidisciplinarity, broad outreach to people affected by cancer beyond the group’s immediate membership, and a strong emphasis on nurturing new investigators has underpinned much of our recent success. New ways of working now present the opportunity to broaden this reach further so that, collectively, we can identify and impact on areas where we can make a difference. In reading this document I hope that you will be excited by the future prospects for research into these diseases in the UK.”

Professor Robert Jones, Chair of the NCRI Bladder and Renal Group

NCRI Bladder and Renal Group structure at a glance



Note: the NCRI Penile Study Group priorities will be published separately.

NCRI Bladder and Renal Working Groups and Projects

Initial NCRI Bladder and Renal working groups in set up

The NCRI Bladder and Renal Group has identified 8 strategic priorities, full details of which can be found on pages 8-10 of this document. Time-limited working groups will be set up to address the first six priorities for the NCRI Bladder and Renal Group, each of which are outlined below. Once one working group reaches completion, capacity will be transferred to the next priority.

Working Group 1 - Early detection and precision prevention with a view to early intervention in urothelial cancer

Working Group 2 - Develop a pre-operative systemic treatment study for kidney cancer

Working Group 3 - Risk-adapted follow-up in early stage cancers of the bladder and kidney

Working Group 4 - Develop a radiotherapy trial in bladder cancer

Working Group 5 – Improve screening options for patients with small renal masses to inform risk stratification and treatment selection

Working Group 6 - Hold a workshop to develop our approach in advanced cancers of the kidneys and bladder building on the work of the group to date

NCRI Bladder and Renal Group strategic priorities in full

Priority 1: Early detection and precision prevention with a view to early intervention in urothelial cancer.

Early detection: There are strong links between urinary carcinogen exposure and urothelial bladder cancer which allows us to identify high risk populations. Despite this, curative treatment outcomes are frequently compromised by late presentation and delayed diagnosis. This presents a major opportunity to identify tools which could enable early identification in targeted populations with a view to tailored interventions which may prevent progression to lethal forms of the disease.

The working group will develop a framework which identifies specific research needs across a spectrum of domains which will need to be met as we progress towards an early identification and intervention trial in the UK. Whilst such a trial is a very long-term objective of the group, by breaking down the knowledge gaps required to inform such a trial, we can begin to prepare the ground and identify specific research opportunities to address such gaps. These domains will include (but may not be restricted to):

- Use of routinely collected data to identify high-risk individuals.
- Optimal biomarkers for use in early detection.
- Use of biomarkers/ molecular classifiers to stratify patients by molecular subtypes to identify those patients who may benefit from specific early interventions. This will include urinary, blood-based and tissue-based biomarkers among others.
- Use of genomic medicine.
- Understanding the risk posed by polyomavirus infections to urothelial carcinoma in 'at risk' populations.

The success of this working group will be made feasible by standardisation of tissue acquisition and storage across all sites and all studies (where feasible). Having a national system to collect material and evaluate different biomarkers in parallel will help us reach the end point more quickly.

In focusing on 'at risk' populations, this priority also ensures focus on underserved cohorts of patients and increases equality, diversity and inclusion in the work of the NCRI Bladder and Renal Group.

Priority 2: Develop a pre-operative systemic treatment study for kidney cancer.

The WIRE study showed a neoadjuvant approach is possible, and NAXIVA demonstrated the feasibility of systemic therapy in surgical downstaging. However, treatments in this area haven't progressed optimally in the last decade. Work in this area meets many of the themes currently being worked on in renal cancer research community: target discovery and mechanisms of treatment response and resistance. A new pre-operative treatment could downstage advanced disease or an inoperable tumour. Considerations when developing a study in this area include:

- Use of new combinations of drugs.
- Developing a network of centres with the capability for study delivery.
- Optimising biomarkers discovered in the metastatic setting.

Priority 3: Risk-adapted follow-up in early stage cancers of the bladder and kidney.

Non-muscle-invasive bladder cancer (NMIBC) is one of the most of expensive cancers to treat because of the rigorous surveillance routines following diagnosis. These follow-up regimes can also greatly impact on the quality of life of patients, for example inducing anxiety and causing a financial burden due to the need for regular hospital visits. Therefore, finding ways to optimise follow-up in NMIBC is of critical importance. The group will work towards developing a prospective study which develops novel follow up pathways.

Similarly muscle-invasive bladder cancer (MIBC) treatment has evolved significantly in recent years and the optimal scheduling of follow up is ill-defined, even in subgroups with very high risk of relapse.

Consideration will also be given to follow up in early stage renal cancer in both the surveillance and postoperative settings.

This working group should consider the following:

- Optimisation of patient stratification to minimise burden of follow up in those with least to gain, whilst ensuring clinically significant progression is avoided in others.
- Utilise available routinely collected data and mine registry and outcomes to come to conclusions about patients' characteristics (frailty etc.) and risk factors for recurrence.
- How we deliver our tests that reduce the burden on patients and to the NHS.
- The risks/benefits of discharging low risk/early cancer patients following biopsy or Transurothelial Resection of Bladder Cancer (TURBT).
- The use of urinary biomarkers to reduce invasive investigations.

Priority 4: Develop a radiotherapy trial in bladder cancer.

Radiotherapy research and treatment in bladder cancer is known internationally to be an area of strength in the UK. We intend to build on the success of previous radiotherapy trials in the UK and develop a world-leading radiotherapy study. The exact area of focus needs to be defined taking into account results of current trials. Therefore, the aim of this priority is to bring together experts in the field and hold a workshop to assess the current radiotherapy trial landscape and develop a clinical trial in the area of most need.

Priority 5: Improve screening options for patients with small renal masses to inform risk stratification and treatment selection.

Not dissimilar to urothelial bladder cancer, the prospect of an early detection and intervention trial is a very long-term objective of the group. Similarly, there are significant knowledge gaps which need to be filled before such a trial could be mounted. This working group will create a framework for knowledge acquisition as we build towards a major prevention trial in renal cancer considering, among others, the following domains:

- Ways to risk stratify small renal masses. Which groups to target for screening is poorly understood in renal cancer. It is possible to make an impact with existing knowledge.
- Risk of overdiagnosis.
- The potential to undertake modelling to assess which elements are important to help guide us to target areas of research and minimise uncertainty.
- Understanding the biology of small renal masses which may enable better risk stratification

Priority 6: Hold a workshop to develop our approach in advanced cancers of the kidneys and bladder building on the work of the group to date.

The work on advanced disease to date by the group has had significant impact. To further this, this group will hold a workshop to bring together the advanced disease community and put plans in place to build on what has already been achieved.

Priority 7: Overcome BCG failure in non-muscle-invasive bladder cancer.

BCG treatment fails in a high proportion of patients with NMIBC, either due to recurrence and progression or due to intolerance. Despite this, around 30% of patients do respond the second time around. The mechanism of this failure and why some patients subsequently respond is unknown. This working group will develop a translational project which aims to understand why some patients remain BCG sensitive and why others fail. This work will inform intelligent implementation of emerging new treatments in this group (in particular immunotherapy and radiotherapy) to avoid over-treatment in patients for whom BCG alone provides optimal outcomes, but to identify those who benefit from treatment intensification or alternative forms of treatment.

Priority 8: Research into why patients with upper urinary tract urothelial cancer often develop bladder cancer.

This group will develop a package of translational research which aims to discover the mechanisms by which this development of bladder cancer in patients with upper urinary tract urothelial cancer (UTUC) happens and, in so doing, identify new ways of preventing lethal bladder cancer in patients who are cured from their UTUC.

NCRI Cross-cutting priority

Identify barriers resulting in a lack of diversity in clinical trials and propose solutions to improve equality, diversity, and inclusion.

Barriers resulting in a lack of diversity in clinical trials across cancer types has been raised as an issue in many of NCRI's discussions with researchers. For this reason, this priority will be addressed collaboratively in a working group comprising experts from across NCRI Groups. This priority aims to establish the reasons behind a lack of diversity in clinical trials and provide solutions to increase participation of a diverse cohort of patients in future studies. A working group will address the common issues across the board, as well as identifying cancer-type specific barriers, and produce guidelines on the steps to take to improve the inclusion of patients from a range of backgrounds into clinical trials from their inception. More details on this working group will be decided in due course.

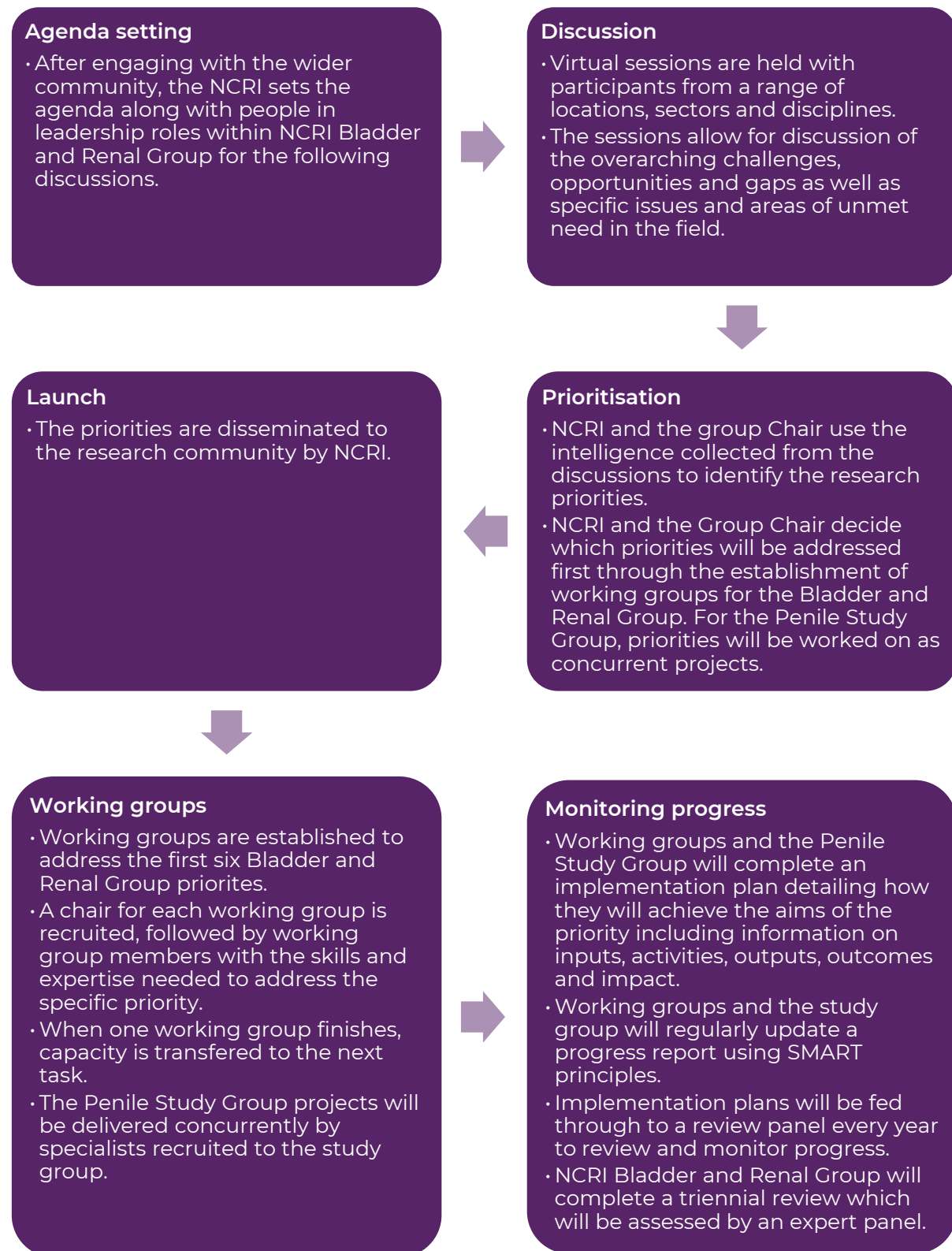
Next Steps

Working groups addressing the highlighted bladder and renal priorities are currently being formed. These groups will be made up of the experts needed to address each research question. To be the first to hear about opportunities to join these working groups and the Penile Study Group please sign up to the [NCRI Bladder and Renal Network](#). The progress of these working groups and projects will be published in the annual reports and triennial review of NCRI Bladder and Renal Group. These can be found on the [NCRI website](#). Members of the NCRI Bladder and Renal Network will also be updated periodically on the progress of the group.

Please [get in touch](#) if you have any questions or comments regarding this report or if you are interested in joining one of the [NCRI Networks](#), the [NCRI Consumer Forum](#) or our [NCRI Early Career Researcher Forum](#).

Appendix A

NCRI Bladder and Renal Group priority setting process



Appendix B

NCRI Bladder and Renal Group strategy sessions 2022

The NCRI Bladder and Renal strategy sessions, held in April and May 2022, attracted over 80 participants from a range of sectors and disciplines, including NCRI Consumer Forum members, early career researchers and NCRI Partners. The introductory presentations allowed for discussion of the current landscape and the overarching challenges, opportunities, and gaps in research into bladder and renal cancers, whilst the subsequent breakout sessions gave experts the opportunity to exchange ideas on priorities areas of future research in this field, with each group involving researchers from wide ranging disciplines encouraging cross-cutting collaboration to meet the most pressing needs in research into bladder and renal cancers today.

Tuesday 19th April 2022

Chair: Professor Robert Jones

Session 1: Translational medicine and treatment selection

Speakers:

- Introduction to bladder cancer – **Dr Simon Crabb**, University of Southampton
- Introduction to renal cancer – **Dr Samra Turajlic**, Francis Crick Institute

Tuesday 26th April 2022

Chair: Professor Robert Jones

Co-Chairs: Professor John Kelly and Professor Grant Stewart

Session 2: Screening, Prevention and Early Diagnosis (SPED)

Speakers:

- Overview of the NCRI SPED Group – **Dr Peter Sasieni**, King's College London
- SPED in bladder cancer – **Professor John Kelly**, University College London
- SPED in renal cancer – **Professor Grant Stewart**, University of Cambridge

Wednesday 4th May 2022

Chair: Professor Robert Jones

Co-Chair: Dr Sally Appleyard

Session 3: Living With and Beyond Cancer (LWBC)

Speakers:

- Overview of the NCRI LWBC Group – **Dr Gillian Prue**, Queen's University Belfast
- LWBC in bladder cancer from the patient perspective – **Mr Phil Kelly**, Action Bladder Cancer UK
- LWBC in renal cancer from the patient perspective – **Ms Alison Fielding**, Kidney Cancer Support Network
- LWBC in bladder cancer – **Dr Sally Appleyard**, Brighton and Sussex University Hospitals NHS Trust

Appendix C

Strategy sessions and NCRI Bladder and Renal Group contributors

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Action Bladder Cancer
UK

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Professor Ananya

Choudhury

The Christie NHS
Foundation Trust

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Cancer Research UK
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Cambridge University
Hospitals NHS
Foundation Trust

Professor Anne Kiltie

University of Aberdeen

Dr Anthony Cunliffe

Macmillan Cancer
Support

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Barts and The London
School of Medicine and
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Yorkshire Cancer
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Southampton

NCRI Bladder and Renal Group and Subgroup contributors

The following Bladder & Renal Group and Subgroup members were unable to attend the Bladder & Renal Strategic Priority Sessions but have contributed to the direction of the Group's strategic priorities through their involvement within the Group and Subgroups.

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