



**Global Cancer Update Programme**Strategy and Plans (2022–2025)



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World Cancer Research Fund International examines how diet, nutrition, physical activity and weight affect the risk of developing and surviving cancer.

As part of an international network of charities, we have been funding life-saving research, influencing global public health policy and educating the public since 1982.

While society continues to search for a cure, our prevention and survival work is helping people to live longer, happier and healthier lives – free from the devastating effects of cancer.

## Introduction

World Cancer Research Fund International's Global Cancer Update Programme is the flagship research programme of the World Cancer Research Fund network and provides a global analysis of scientific research into the link between diet, physical activity, weight and cancer. It is produced in partnership with American Institute for Cancer Research, World Cancer Research Fund in the UK and Wereld Kanker Onderzoek Fonds in The Netherlands.

The Global Cancer Update Programme (CUP Global) was originally established as the Continuous Update Project (CUP) following the launch of the Second Expert Report in 2007. The aim was to develop a process for continuously updating the evidence, streamlining the complex process that had underpinned the Second Expert Report. To this end a CUP database was established to bring together all of the scientific literature in the Second Expert Report. It is housed at Imperial College London, where it is still managed by a specialist scientific team. Since then it has become the largest global cancer prevention database in the world, trusted by oncology experts, researchers and health professionals worldwide. It contains over 12,000 papers on cancer prevention and survival, and over 140 scientists from 17 different countries have contributed to updating the evidence reviews.

The CUP underpinned the development of the ground-breaking Third Expect Report. This was published in May 2018, assessing the evidence across 17 cancer types and updating the World Cancer Research Fund network's Cancer Prevention Recommendations. Our analyses indicate that these Recommendations are strongly evidence based and are now unlikely to change significantly in the future. In this respect, in a little over a decade, the CUP accomplished its primary purpose – as well as providing significant potential future research directions.

This secure groundwork was an excellent basis from which the CUP could further evolve, by providing a far deeper understanding of the cancer process. As the science evolves, and our understanding of cancer itself has improved, it has been vital to consider how best to adapt our research programme to address the future challenges in cancer prevention and survival. New ways of studying the evidence and exploring potential risk factors for cancer are in constant development. A CUP Transition Panel and process was therefore established in 2020. Its aim was to assess the current and future opportunities that the WCRF network is uniquely well-equipped to address, and which could ultimately result in an even greater ability to prevent, treat and manage cancer.

This document sets out the key strategic aims and areas of research through to 2025, as part of this next phase of work and under the new name of Global Cancer Update Programme (CUP Global). The new name itself is designed to demonstrate the global context and approach, the on-going focus on continuing to update the research in this area of cancer and the overarching thematic nature of the work, while still linking back to the original aims and name.

This document provides an overview of the reasons and the processes involved in transitioning to this next new phase of research and development. I hope you find it stimulating and helpful in discovering more about this important area of work.



Marilyn Gentry
President
World Cancer Research
Fund network

# 1. Research programme transition

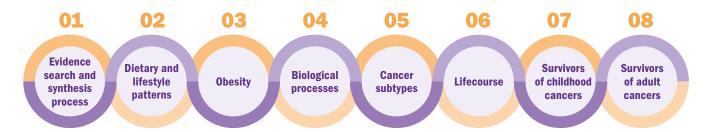
During 2020–2021, the Continuous Update Project (CUP) went through a major transition process. The aim was to identify how best to position the CUP so as to address the next generation of enquiry in reducing cancer risk and improving outcomes after a cancer diagnosis. This process involved a 360 degree review of all aspects of the CUP and was guided by an expert independent CUP Transition Panel. Panel members, supported by a Secretariat, led eight subject specific workstreams. The results of these were synthesised to provide a blueprint for the future as the Global Cancer Update Programme (CUP Global).

### **Overarching goals of transition**

- 1. For the World Cancer Research Fund network's flagship research programme to stay at the cutting edge of its field.
- 2. To continue to deliver a globally acknowledged benefit to the scientific, policy and clinical communities.
- 3. To continue to provide Cancer Prevention Recommendations, through a more efficient process that removes the need for continual updating of the evidence.
- 4. For future work to focus on addressing critical gaps in existing knowledge and advancing new knowledge. This approach will maximise impact, make efficient use of funds and provide new and innovative dimensions to our work.

### **Research programme transition workstreams**

The CUP Transition Panel identified eight key topic areas of interest, based on previous CUP work and other new areas judged to be relevant and important for advancing knowledge and public health in the field of cancer and nutrition.



- Evidence search and synthesis process: Evaluating the processes and methodologies
  underpinning the CUP to date, with the aim of increasing efficiencies and facilitating precise
  targeting of work.
- 2. Dietary and lifestyle patterns: Identifying specific dietary and lifestyle patterns which have a significant impact on cancer risk.
- 3. Obesity: More precise understanding of the risk factors for obesity across the lifecourse.
- **4. Biological processes (mechanisms):** Identifying the biological processes underpinning changes in cancer risk seen in epidemiological studies.
- **5. Cancer subtypes:** Identifying why and how different subtypes of specific cancers respond differently to dietary, nutritional, physical activity and weight exposures.
- 6. **Lifecourse:** Identifying how different life stages influence cancer risk, including critical windows of time that may be particularly amenable to lifestyle interventions.
- 7. Survivors of childhood cancers: Determining the impact of food, nutrition and physical activity on children with cancer from the point of diagnosis into adult life.
- **8. Survivors of adult cancers:** Identifying the impact of food, nutrition and physical activity from the point of diagnosis.

Each of the workstream areas was explored by a small group of leading international subject-specific experts, which included the CUP Transition Panel and the CUP Secretariat. They developed guidance on how practically to take each area forward and implement it as part of the next phase of the CUP.

#### Guiding prioritisation criteria

The CUP Secretariat consolidated all of this guidance and reviewed it against a set of key criteria to assess the relative value, priority and timeframe for each workstream area and for specific elements within workstreams. These criteria were: value to the research community; scientific feasibility; resource and capacity; funding; prerequisites for the project to proceed; co-dependencies between workstreams; key timelines and timeframes, and the value to the WCRF network.

# 2.1 Key aims and benefits

The transition period in 2020/21 enabled WCRF International to develop seven key aims for the new programme of research under the new name of the Global Cancer Update Programme (CUP Global):



The development of population or disease-specific guidance and recommendations – for specific stages of life (eg children, young adults, older adults), specific populations (eg childhood and adult cancer survivors), and specific cancer subtypes (eg ER, PR positive and triple-negative breast cancer, Lynch syndrome, colon or uterine cancer vs sporadic).



More clarification of existing knowledge to develop greater understanding of cancer prevention and survivorship – eg the role and impact of specific dietary patterns, the biological mechanisms that cause or prevent cancer.



More efficient and targeted approaches and keeping the evidence current – eg through the application of automated approaches and analytical tools and the use of a dedicated scanning exercise and data prioritisation (including rapid reviews) to target or trigger an evidence update.



More collaborations and input from experts and external stakeholders – utilising experts from across the world, as well as continuing to work in collaboration with the team at Imperial College London.



**More varied and targeted outputs** – to enable greater reach and scope within the scientific community (through academic papers), as well as targeted communications for other audiences (including dissemination events).



Globally representative research – most epidemiological studies are conducted in high-income countries such as those in Europe, the US and Australia, with limited or no data from other countries, especially low- and middle-income countries. Cancer incidence and prevalence vary considerably according to geographical region, making the case for future CUP Global studies to address the limited data from low- and middle-income countries.



**Stronger public involvement** – we recognise the importance of user involvement at all stages of the work, from identifying research priorities, promoting involvement in funded research and selecting successful applications, to making recommendations and disseminating findings.

# 2.2 Areas of research focus

World Cancer Research Fund International organised the outputs from the eight workstreams into four key areas of research focus for CUP Global:

### **Area 1: Cancer incidence**

Reviewing diet, nutrition, physical activity, weight and cancer incidence will continue to be a core element of the work. But rather than reviewing all exposures for every cancer, there will be an increasing focus on systematic scanning of the evidence. This will help us to identify which topics are likely to be fruitful areas of detailed study. In addition, reviews will be more nuanced, with outcomes examined by cancer subtype, where data allow, rather than considering each cancer as a single disease. There will also be several collaborative projects to expand the work into new areas, including the impact of different dietary and lifestyle patterns and of diet, nutrition, physical activity and weight exposures over the lifecourse.

#### **Area 2: Cancer survivors**

We want to focus on the impact of diet, nutrition, physical activity and weight on long-term health after a cancer diagnosis. This will begin with a series of reviews for breast cancer, and reviews on colorectal cancer and prostate cancer will follow. There will also be specific reviews to determine the impact of diet, nutrition, physical activity and weight on children from cancer diagnosis and into adult life. The first review will be on paediatric acute leukaemia.

#### **Area 3: Cancer mechanisms**

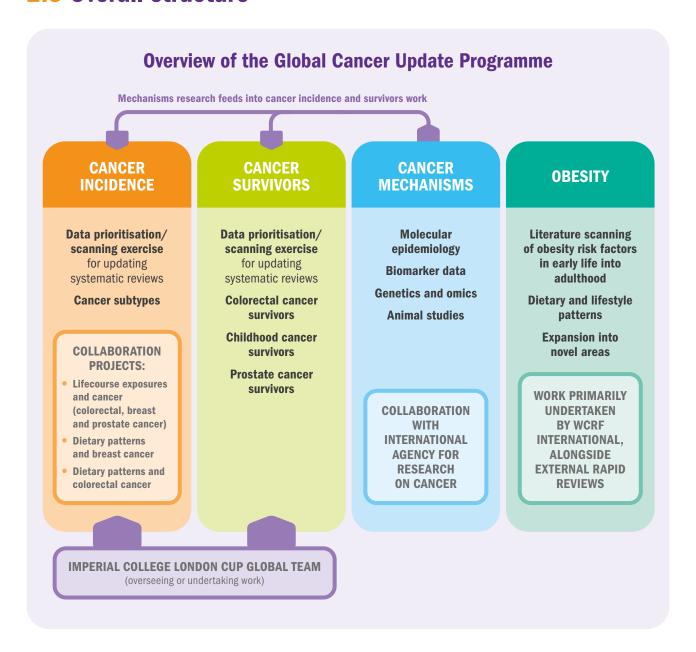
We aim to develop a clearer understanding of the biological processes that underpin associations between diet, nutrition, physical activity, weight and cancer. This will be done by reviewing both human and experimental data and will support both the cancer incidence and cancer survivor reviews.

# Area 4: Obesity

Obesity was identified as a key risk factor for cancer in the Third Expert Report, increasing the risk of numerous cancers. This work aims to ensure that our Cancer Prevention Recommendations relating to obesity remain up to date, with the potential to develop more specific recommendations.

We recognise that smoking is established as the most important preventable cause of cancer. Our work focuses on diet, nutrition, physical activity and weight, which are less well recognised as the major factors involved in cancer development and prevention after smoking, and the most important for non-smokers. We reinforce the importance of not smoking in our Cancer Prevention Recommendations.

## 2.3 Overall structure



# 2.4 Key approaches

Three key methodological developments (identified by the Evidence Search & Synthesis Process workstream) that will improve and enhance our research programme process in terms of efficiency and value for money and are foundational to the development of CUP Global. They are:

# 1. Data prioritisation

This involves the team at Imperial College London implementing a monitoring system – across the areas of cancer incidence and cancer survival – of newly published studies relevant to previous CUP systematic literature reviews. This will involve performing literature searches and study selection, followed by minimal data extraction into the CUP Global database (a so-called "scanning exercise").

This process will be conducted every 2–3 years. The criteria for performing a new full meta-analysis will depend on expert opinion coupled with statistical measures to identify which type and how many additional studies are needed to change the result of previous CUP meta-analyses. Special attention will be given to new study designs not available in previous reviews (eg Mendelian randomisation, analyses using omics, molecular and other cancer subtypes).

At annual CUP Global Panel meetings, we will assess whether the scanning exercise should be brought forward for any reason, (eg in light of a significant increase in volume of studies around a particular cancer type or exposure).

Using this approach, the analyses will be more likely to identify new knowledge that will contribute to novel developments in the field, and reduce any repetition of existing knowledge. It will enable us to determine when to update our current Cancer Prevention Recommendations, judge more accurately when to undertake analyses connected with population specific recommendations, such as childhood cancer survivors, and when to update previous individual cancer reviews.

### 2. Rapid reviews

This is part of a wider data prioritisation strategy (described above) to be conducted on new topics. The results could stand alone or inform further work within one or more of the four new research areas. Again, at annual CUP Global Panel meetings, we will assess whether specific rapid reviews should be considered.

#### 3. Automation

This work aims to improve efficiency, incorporating existing technologies and building in-house applications, either alongside or integrated into the CUP Global database.

The current systematic reviews are time consuming and labour intensive. Several different tools and software programmes are already in use and there is scope for integrating these more effectively and for automating stages of the review process.

The aim of this work is twofold: 1. Integrate the current tools to create a better and more streamlined user interface (Time-saving and Efficient Applications for the CUP (TEACUP)) and 2. Develop methods for automating the screening of studies in the reviews, extracting study information, and assessing study quality.

This work is novel and potentially ground-breaking, with the possibility of improving the literature review process in CUP Global and beyond. TEACUP will provide savings in time and cost in the short-term. The automation of tasks in the systematic review process will potentially bring the same benefits in the mid-term to CUP Global as well as for other researchers doing systematic reviews.

This work will be delivered via a collaboration with Dr Pau Erola at the University of Bristol working with the CUP Global team at Imperial College London.

# **3.1** Work area 1: Cancer incidence

The cancer incidence area encompasses two main components: the data prioritisation exercise and several collaboration projects. As highlighted above, every 2–3 years a data prioritisation exercise will determine when evidence could be/needs to be updated. This will include the evidence around specific cancer types (eg any of the 17 cancer types covered previously in the CUP), as well as updating the Cancer Prevention Recommendations (if needed). It could also include evidence around specific exposures (eg around dairy or meat).

There will also be projects focusing on specific areas (highlighted below). Some of these projects will be carried out in collaboration with external groups, supported by the CUP Global team at Imperial College London.

### **Cancer subtypes**

Identifying why and how different subtypes of specific cancers relate differently to diet, nutrition, physical activity and weight exposures

#### Benefits of approach

 Development of more targeted advice to specific populations with distinct risk factor profiles of susceptibilities and to those who have had a cancer diagnosis

The CUP has previously shown that subtypes of some cancers respond very differently to the same exposures. However, it has not been possible to identify in detail how many cancers this applies to or the underpinning factors causing these differences.

The cancer subtypes workstream reviewed previous work carried out for the CUP and developed a framework for characteristics of various subtypes of cancers and their potential associations with diet, nutrition, physical activity and weight. As part of CUP Global, an approach, protocols, and a strategy for interpretation that can be applied to cancer subtypes will be developed. These methods, along with the framework developed by the workstream, will enable cancer subtypes to be integrated into future CUP Global systematic reviews.

Ultimately this work raises the possibility of defining risk factors for specific cancer subtypes to guide prevention strategies (paralleling advances in targeted or precision therapy), enabling targeting advice to specific populations with distinct risk factor profiles or susceptibilities.

### **Dietary and lifestyle patterns**

# Identifying specific dietary and lifestyle patterns which significantly impact cancer risk

#### Benefits of approach:

- Strengthened existing and future Cancer Prevention Recommendations
- Improved research methodology
- Identification of topics to pursue in future research eg around specific dietary patterns in cancer prevention and survival

In recent years it has become clear that an integrated lifestyle pattern of a healthy balanced diet, nutrition, physical activity and healthy weight has a greater impact on cancer risk than the sum of the individual parts. Previous CUP work identified the importance of dietary patterns in influencing cancer risk but it was not possible to review the evidence systematically and the Panel judged that the evidence was largely inconclusive.

It became clear that improved methodological approaches were needed for reviewing and synthesising evidence on dietary patterns and for its extension to overall lifestyle patterns in order to capture the growing body of research on patterns of diet and lifestyle characteristics.

To this end, the dietary and lifestyle patterns workstream developed a dietary and lifestyle patterns protocol to enable these systematic reviews to be conducted in CUP Global. They also developed a specialised narrative synthesis approach for analysing the evidence on dietary and lifestyle patterns when meta-analyses are not possible.

#### **Collaborators**

This work comprises two commissioned research projects working with the CUP Global team at Imperial College London; breast and colorectal cancers have been prioritised as they are the most common cancers influenced by dietary and lifestyle patterns. The breast cancer review is currently underway, led by Dr Dora Romaguera's group at the Health Research Institute of the Balearic Islands in Spain. This is being followed by a review on colorectal cancer, led by Professor Ed Giovannucci at The Harvard T.H. Chan School of Public Health in the US.

#### Lifecourse

Identifying how different life stages influence cancer risk, including critical windows of time that may be particularly amenable to lifestyle interventions

#### Benefits of approach:

- Development of specific Cancer Prevention Recommendations for different life stages
- Improved research methodology eg development of new pilot protocol for the systematic review of diet, nutrition, physical activity and weight exposures from preconception to age 30
- Identification of topics to pursue in future research eg age related risk and cancer across the lifecourse

Previous CUP work touched on the fact that different life stages could influence cancer risk, but did not explicitly seek to gather data on exposures and cancer risk through a lifecourse lens. It was therefore not possible to explore in detail the impact of critical windows of time, particularly earlier in life, that may be amenable to lifestyle interventions.

As part of CUP Global, a better understanding of the impact of specific exposures on risk (both at chronological age and developmental biological life stage) will significantly enhance the evidence-base, allowing us to better identify critical periods for prevention and intervention and potentially for the development of more tailored recommendations across age groups.

#### **Collaborators**

This work comprises a commissioned research project led by Dr Trudy Voortman and her team, from Erasmus Medical Center in the Netherlands, working with the CUP Global team at Imperial College London. The work involves developing a protocol and applying this to a systematic literature review of diet, nutrition, physical activity and weight exposures from preconception to age 30 years (incorporating learnings from a project already undertaken as part of the CUP Transition work) in three of the most common cancers (breast, colorectal, prostate).

# 3.2 Work area 2: Cancer survivors

The cancer survivors work encompasses reviews of adult cancer survivors and childhood cancer survivors. As highlighted above, every 2–3 years a data prioritisation exercise will determine when evidence could be/needs to be updated in the area of cancer survivorship (both for medical outcomes such as mortality and quality of life outcomes, covering evidence around specific exposures, eg physical activity, body weight).

#### Survivors of childhood cancers

Determining the impact of diet, nutrition, physical activity and weight on children from diagnosis and into adult life

#### Benefits of approach

- Development of evidence-based recommendations for survivors of childhood cancers that maximise treatment efficacy, minimise treatment-related toxicity and promote long and healthy survivorship
- Improved research methods eg developing a paediatric acute leukaemia systematic review protocol and criteria for judging the evidence on medical and quality of life outcomes for childhood cancer survivors
- Ability to address critical research questions eg evaluating the role of diet, nutrition, physical activity and weight across the spectrum of childhood cancer types

This is a new area for WCRF and was identified by the CUP Transition Panel as of particular importance as the CUP Global process offers a unique and efficient approach to synthesising available evidence and establishing evidence-based conclusions/ recommendations for survivors of childhood cancer. Survival for those diagnosed with cancer in childhood (<21 years of age) has improved dramatically in recent decades, but survivors of childhood cancer are at risk of developing an array of adverse health-related complications from aggressive, yet increasingly successful, curative therapy.

There is demand from clinicians, families, and patients for evidence-based advice on the role of diet, nutrition, physical activity and weight to enhance the efficacy of therapy and reduce the severity of treatment-related toxicity, over both the short- and long-term. A comprehensive analysis of the existing published literature on diet, nutrition, physical activity and weight in childhood cancer survivors, using rigorous methodology, has not yet been done. Such an analysis would provide a foundation for diet, nutrition, physical activity and weight recommendations that can be integrated into current care. It will also define critical gaps in research and knowledge, suggesting opportunities for research on these topics and incentivising incorporation of diet, nutrition, physical activity and weight assessment into ongoing and future clinical therapeutic trials.

Developing a paediatric acute leukaemia systematic review protocol and criteria for judging the evidence for medical outcomes (including mortality) and quality of life outcomes for childhood cancer survivors will form part of our CUP Global work. Paediatric acute leukaemia has been prioritised as it is the most common childhood cancer, with the most evidence to date.

#### **Survivors of adult cancers**

Identifying the impact of diet, nutrition, physical activity and weight following a cancer diagnosis

#### Benefits of approach

- More specific and stronger recommendations for cancer survivors
- Improved research methods eg development of systematic review protocols for prostate and colorectal cancer (medical outcomes), and for assessment of quality of life outcomes
- Identification of topics to pursue in future research eg evaluating role of diet, nutrition, physical activity and weight in survivors of different cancer types

The aspiration to build the knowledge-base for cancer survivors started in the CUP, with breast cancer survivors the first population reviewed. Despite the enormous demand for reliable estimates and advice from the lay, medical and research perspectives, the availability and quality of evidence has so far been insufficient to support robust, evidence-based diet, nutrition, physical activity and weight recommendations that are specific for cancer survivors overall, or for survivors of specific types of cancer.

In recent years, there has been a substantial growth in the volume of research among survivors of breast and other common cancers, especially colorectal and prostate cancers. This provides an opportunity to augment the previous analyses for breast cancer survivors by applying a similar approach to prostate and colorectal cancer survivors.

The workstream developed detailed protocols to allow for systematic analysis of colorectal and prostate cancer studies in the first instance. These systematic reviews, being implemented as part of CUP Global, will provide our first evidence conclusions and recommendations based on comprehensive syntheses of evidence concerning the role of diet, nutrition, physical activity and weight on medical outcomes in prostate and colorectal cancer survivorship. Additionally, quality of life and other measures of wellbeing will be evaluated, building on the pilot work done in this area for breast cancer survivors and providing additional novel and important contributions to the field of survivorship research.

# 3.3 Work area 3: Cancer mechanisms

Identifying the biological processes and mechanisms underpinning differences in cancer risk seen in epidemiological studies

#### Benefits of approach

- Strengthened underpinning of our Cancer Prevention Recommendations
- Improved research methods eg new targeted prioritisation process and framework for collating and synthesising mechanistic evidence

Previous CUP work involved identifying mechanisms that underpin associations seen in epidemiology, but not in a systematic way. Systematic synthesis of mechanistic evidence is enormously challenging due to the nature and breadth of the evidence. However, it is also critically important for the strength of our Cancer Prevention Recommendations that we develop better ways of identifying cancer causing or preventing biological mechanisms.

The biological processes workstream developed a prioritisation process and a framework for collating mechanistic evidence, allowing more precise targeting of future mechanistic work. This process and framework will be tested and further developed as part of the new CUP Global work, and will then be integrated and applied more widely, both within CUP Global and beyond.

#### There are two elements of the mechanisms work in CUP Global:

#### 1. Project specific

Mechanistic evidence will be developed to support the cancer incidence and survivors reviews during the first three years as follows:

- Dietary and lifestyle patterns and breast and colorectal cancer
- Diet, nutrition, physical activity and weight and colorectal cancer survivors
- Lifecourse exposures and colorectal cancer (and breast and prostate)
- Diet, nutrition, physical activity and weight and childhood cancer survivors (paediatric acute leukaemia)
- Diet, nutrition, physical activity, weight and prostate cancer survivors

This mechanistic work will be done in parallel with the epidemiology work outlined above.

#### 2. Strengthening the Cancer Prevention Recommendations from a mechanistic perspective

Providing evidence that there are mechanisms underpinning an association between a risk factor (related to diet, nutrition, physical activity and weight) and a cancer outcome supports the inference

of causality - that the risk factor directly contributes to the outcome occurring. Within CUP Global, in order for a strong evidence conclusion to be drawn, there needs to be strong and plausible evidence (from either human or animal studies) of underlying mechanisms that suggest biological plausibility. This evidence can then be used to support and strengthen the development of Cancer Prevention Recommendations.

#### Collaborator

For both elements of the mechanistic work, The International Agency for Research on Cancer (IARC) are leading the evaluation of mechanistic data (comprising molecular epidemiology studies, genetic and experimental data) drawing upon the framework developed by the biological processes workstream. Dr Marc Gunter serves as the focal point, working in conjunction with IARC Monographs, consulting with the IARC expert committee on mechanisms to assist in the evaluations where necessary.

The mechanisms work will be conducted in close collaboration with the Imperial College London CUP Global team and will use a systematic approach to review mechanistic evidence.

# 3.4 Work area 4: Obesity

# More precise understanding of the risk factors for obesity across the lifecourse

#### Benefits of approach

- Strengthened underpinning of our Cancer Prevention Recommendations which are related to energy balance
- **Improved research methods** eg further development of optimal methodology to evaluate the evidence for supporting exposure and cancer links as they relate to obesity

The importance of overweight and obesity in driving cancer risk was highlighted in previous CUP work and our Cancer Prevention Recommendations includes a recommendation to maintain a healthy weight. However, it has not been possible to provide more detailed guidance, for example on the best options for a healthy diet and physical activity pattern across the lifecourse to support: healthy growth during childhood; maintenance of a healthy weight during adulthood; avoidance of excess weight gain throughout life.

#### There are two elements of the obestiy work in CUP Global:

- 1. Systematic scanning of the literature to ensure that the existing WCRF/AICR 2018 Energy Balance and Body Fatness Report and Panel conclusions remain up to date and are based on the latest evidence. The scanning exercise will cover dietary, nutrition, physical activity and weight exposures across the lifecourse and examine how these impact body weight. This will also be used to indicate when there is enough evidence to warrant an updated systematic review of primary studies. This work will be carried out internally within WCRF International.
- 2. Expansion of the work into novel areas by commissioning new rapid systematic reviews of primary studies examining, for example, dietary and lifestyle patterns on weight outcomes across the life course. We will also explore other research directions this work area could take in order to increase impact.

### **Cross cutting issues**

In addition to the four main areas highlighted above, a number of cross cutting themes apply throughout the CUP Global work. Consideration of health inequalities, disparities in cancer outcomes and a representative global perspective is central to effective cancer prevention and control. Below we outline our plans for addressing these areas, in order for our work to offer benefits to all.

There have been great improvements in early detection, diagnosis and treatment for certain types of cancer and a greater awareness of environmental risk factors, especially dietary factors. This is in part due to the pioneering work of WCRF's First, Second and Third Expert Reports. However, there are substantial differences within and between countries in individuals' likelihood of receiving a cancer diagnosis and surviving the disease. Typically the most disadvantaged have the poorest health outcomes, with differential exposure to risk factors and access to effective screening and treatment services contributing.

CUP Global strives to make globally relevant Recommendations for Cancer Prevention and survivorship, but has been hampered by limited data availability, especially in low- and middle-income countries (LMIC). This has prevented the synthesis of inequalities related data and limited analysis by country. Going forwards, our ambition is for our work to have both a strong global perspective and focus on inequalities via the following approaches:

- Exploring how to capture relevant data in CUP Global or commissioning projects to specifically explore these factors.
- Stronger global representation on the CUP Global Panel with potential of developing
  a global representation advisory group to discuss conclusions and recommendations
  within a global context. This will help to ensure that conclusions and recommendations
  are relevant worldwide and in different contexts through bringing an inequalities lens
  and strong global representation to Panel meetings.
- Advocating for increased research in LMIC and for research to examine and report socio-economic status outcomes.
- Working with WCRF International's Policy Team to understand the policy implications of CUP Global outputs and develop policy recommendations.
- Working with WCRF International's Research Funding Team to identify research gaps and continue to support research and build capacity in LMIC via the Grant Programme and our Academy activities.

# 4. Outputs and timeline

The various elements of CUP Global are outlined below by the four work areas. Plans for years 6–10 will be developed according to the findings from the data prioritisation work.

# Overall timeline for next stage of the Global Cancer Update Programme

YEAR	<b>YEAR 1</b> 2021–2022	<b>YEAR 2</b> 2022–2023	<b>YEARS 3-4</b> 2023-2025	
CANCER	Dietary patterns colorectal, breast cancer) Lifecourse (colorectal cancer)	Lifecourse (breast cancer) Data prioritisation	Dietary patterns Colorectal cancer survivors Lifecourse	
CANCER SURVIVORS	Colorectal cancer Childhood cancer	Childhood cancer Prostate cancer Data prioritisation	Colorectal cancer Childhood cancer	
CANCER MECHANISMS	Dietary patterns Colorectal cancer survivors Lifecourse	Lifecourse Dietary patterns Childhood cancer survivors	Lifecourse Prostate cancer survivors	
OBESITY	Adulthood Adolescent/childhood exposures	Early life exposures Rapid review: diet and lifestyle patterns	твс	
OVERARCHING	Conceptual papers Automation project	Automation project	Automation project	

# **5. Programme outputs**

### **Scientific outputs**

There will be a variety of outputs from CUP Global:

- Scientific papers describing the conceptual approaches developed for specific novel areas of work – eg integration of cancer subtypes into systematic reviews, lifecourse research, mechanistic reviews
- Protocols outlining the methods used will continue to be made available, either through formal scientific publication or other routes – eg Open Science Framework, AMRC Gateway
- Scientific papers describing the findings from CUP Global systematic reviews, these will include the evidence conclusions judged by the CUP Global Panel
- Scientific papers summarising Recommendations for Cancer Prevention and survivorship
- Conference abstracts
- Accessible executive summaries of our work will be produced for all key scientific outputs
- Other public facing outputs will be developed to make the findings accessible to all audiences

### **Policy outputs**

Ensuring that the scientific findings of CUP Global inform and are translated into policy to help create healthy environments is an important consideration. This will apply both to scientific outputs and to stand alone policy outputs arising from CUP Global work.

#### Recommendations

For the cancer survivors work, the CUP Global Panel will judge the evidence and draw conclusions and recommendations after each systematic review, providing recommendations for breast, colorectal, prostate and childhood cancer survivors within the next five years.

For cancer incidence, all cancer sites will need to be reviewed together, therefore recommendations will occur at a later stage.

# **Expert input into the Global Cancer Update Programme**

The CUP Global Panel comprises eight members, including a Chair, Deputy Chair and an expert lead for each of the four work areas. There is also a global representative – to help provide a stronger focus to a low- and middle-income country perspective, and a public representative. There are a number of formal observers to the Panel, representing key organisations in the field. The CUP Global Secretariat will oversee and provide support for all aspects of the Panel's work.

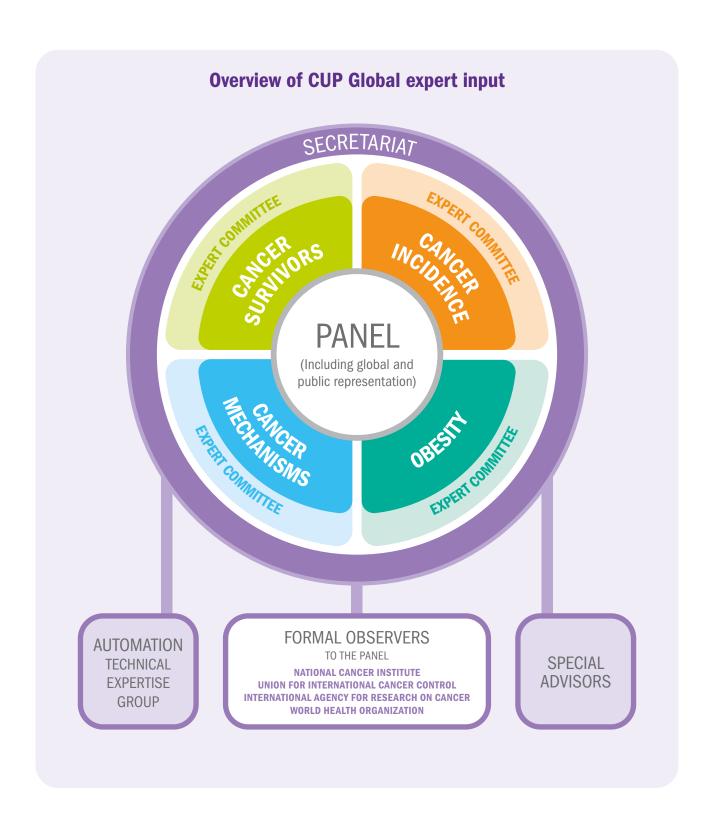
The new and innovative aspects of CUP Global will involve additional expertise, provided by subject experts who will contribute via four Expert Committees, representing the four main work areas. These have been drawn partly from the group of nearly 40 leading external experts that were convened as part of the CUP Transition workstream process during 2020–2021, along with other experts in the field. The Chair of each of the four Expert Committees is part of the CUP Global Panel and is the lead for that work area.

The CUP Global Panel will meet face-to-face (should circumstances allow) once a year, with ad hoc calls taking place as needed. The Expert Committees will primarily meet virtually.

At CUP Global Panel meetings, in addition to formally judging the evidence and making conclusions and/or recommendations, the Panel will advise on the following:

- Whether the scanning exercise should be brought forward or remain as planned (as part of a data prioritisation strategy)
- Whether any rapid reviews are needed (as part of a data prioritisation strategy)
- Whether (as part of our overall surveillance activities) any guidelines or recommendations have been developed by other organisations that should or could be supported or endorsed

We will also have Special Advisors to the CUP Global Panel who will contribute expertise on specialist areas to support CUP Global in achieving its aims. Sir Michael Marmot will provide expert advice on health inequalities, and we may in future expand our Special Advisors to cover other areas, such as biostatistics.



# **Global Cancer Update Programme members**

Full details and biographies of the Global Cancer Update Programme (CUP Global) Panel and Expert Committee members are available on the WCRF International website: **wcrf.org** 

#### **CUP Global Panel**



Chair
Professor Lord John Krebs
University of Oxford, UK

Lord John Krebs is Emeritus Professor of Zoology in the University of Oxford.



Chair of the Expert Committee on Cancer Incidence Professor Monica Baskin University of Pittsburgh, US

Monica L. Baskin is

a Professor of Medicine in the Division of Hematology/Oncology, Associate Director of Community Outreach and Engagement and Associate Director of Health Equity at the Hillman Cancer Center.



Chair of the Expert Committee on Cancer Survivors
Dr Ellen Copson
University of Southampton, UK

Dr Copson is Associate

Professor and honorary consultant in Medical Oncology at the University of Southampton, where she treats patients with early and advanced breast cancer.



**Global Representative Professor Rajiv Chowdhury**Florida International University,
US

Professor Rajiv Chowdhury is chair of Global Health at the Robert Stempel College of Public Health at Florida International University.



**Deputy Chair Professor Matty Weijenberg**Maastricht University, NL

Matty Weijenberg is Professor of Molecular Epidemiology

of Cancer and Chair of Department of Epidemiology at Maastricht University.



Chair of the Expert Committee on Cancer Mechanisms
Professor Sarah Lewis
University of Bristol, UK

Sarah Lewis is a Professor of Molecular Epidemiology in the Department of Population Health Sciences within the Medical School at the University of Bristol.



Chair of the Expert Committee on Obesity
Professor Jaap Seidell
VU University, NL

Professor Jacob C. Seidell was appointed as full professor (2002–present) and head of the Institute for Health Sciences (2003–2013) at the VU University in Amsterdam. He is also co-director of Sarphati Amsterdam, a multidisciplinary research institute.



**Public Representative Lynette Hill**, UK

Since leaving the Civil Service, Lynette has worked in various support roles and has had the

privilege of working alongside people from all walks of life, including those who have a range of cancers and other chronic long term physical and mental health conditions which benefit from the cancer prevention research outcomes.

#### Formal observers

**Dr Carolina Espina** 

International Agency for Research

on Cancer, FR

**Dr Jason Montez** 

World Health Organization, CH

**Dr Mathilde Touvier** 

French National Institute of Health and Medical, Research (INSERM), FR

Shalini Jayasekar Zürn

Union for International Cancer Control (UICC), CH

**Dr Emily Tonorezos** 

National Cancer Institute (NCI), US

### **Expert committees**

**Expert Committee on Cancer Incidence** 

Chair

**Professor Monica Baskin** 

University of Pittsburgh, US

**Deputy Chair** 

Dr Yikyung Park

Washington University, US

**Professor Michael Leitzmann** 

University of Regensburg, DE

**Dr Jennifer Baker** 

Frederiksberg Hospital, DK

**Professor Elisa Bandera** 

Rutgers Cancer Institute of New Jersey, US

**Professor Ken Ong** 

University of Cambridge, UK

**Dr Mark Sherman** 

Mayo Clinic, US

**Dr Steven Clinton** 

The Ohio State University, US

**Dr Paul Brennan** 

International Agency for Research on Cancer, FR

**Expert Committee on Cancer Survivors** 

Chair

**Dr Ellen Copson** 

University of Southampton, UK

**Deputy Chair** 

**Professor Andrew Renehan** 

University of Manchester, UK

**Professor Anne May** 

University Medical Centre Utrecht, NL

**Professor Anne Tjonneland** 

Danish Cancer Society Research Centre, DK

**Professor Galina Velikova** 

University of Leeds, UK

**Professor Karen Steindorf** 

DKFZ and NCT. DE

**Dr Martijn Bours** 

Maastricht University, NL

**Dr Melissa Hudson** 

St. Jude Children's Research Hospital, US

**Professor Rod Skinner** 

Newcastle University, UK

**Professor Wendy Demark-Wahnefried** 

University of Alabama, US

**Professor Folakemi Odedina** 

Mayo Clinic, US

#### **Expert Committee on Cancer Mechanisms**

Chair

**Professor Sarah Lewis** 

University of Bristol, UK

**Deputy Chair** 

**Professor Stephen Hursting** 

University of North Carolina, US

Dr. Dieuwertje Kok

Wageningen University, NL

**Dr Fred Tabung** 

The Ohio State University, US

**Expert Committee on Obesity** 

Chair

**Professor Jaap Seidell** 

VU University, NL

**Deputy Chair** 

**Dr Michael Pollak** 

McGill University, Montreal, US

**Dr Tanya Agurs-Collins** 

National Cancer Institute (NCI), US

**Professor Suzanne Turner** 

University of Cambridge, UK

**Dr Zdenko Herceg** 

IARC, FR

**Dr Lee Jones** 

Memorial Sloan Kettering Cancer Center, US

**Dr Richard Simpson** 

University of Arizona, US

**Professor John Reilly** 

University of Strathclyde, UK

**Professor Annie Anderson** 

University of Dundee, UK

**Dr Paul Chadwick** 

University College London, UK

**Professor Tobias Pischon** 

Max Delbrück Center for Molecular Medicine, DE

# **Global Cancer Update Programme Secretariat**

#### Dr Helen Croker

Head of Research Interpretation and Head of CUP Global Secretariat WCRF International

#### **Dr Kate Alllen**

Executive Director of Science and Public Affairs WCRF International

#### **Dr Giota Mitrou**

Director of Research and Innovation WCRF International

#### **Professor Martin Wiseman**

Scientific and Medical Advisor WCRF International

#### Dr Vanessa Gordon-Dseagu

Research Interpretation Manager WCRF International

#### Nicole Musuwo

Senior Research Interpretation Officer WCRF International

#### **Deirdre McGinley-Gieser**

Executive Vice President
American Institute for Cancer Research (AICR)

#### **Dr Nigel Brockton**

Vice President of Research American Institute for Cancer Research (AICR)

# **Global Cancer Update Programme team at Imperial College London**

### **Principal Investigators**

#### **Dr Kostas Tsilidis**

Reader in Cancer Epidemiology and Prevention School of Public Health, Imperial College London

#### **Dr Doris Chan**

Acting Senior Research Fellow School of Public Health, Imperial College London

# **CUP Transition Panel members**

The experts below contributed to the CUP transition and were instrumental in guiding the development of the Global Cancer Update Programme.

#### **Professor Alan Jackson**

University of Southampton, UK

#### **Professor Ed Giovannucci**

Harvard T.H. Chan School of Public Health, US

#### **Dr Anne McTiernan**

Fred Hutchinson Cancer Research Center, US

#### **Professor Ellen Kampman**

Wageningen University, NL

#### **Dr Marc Gunter**

International Agency for Research on Cancer, FR

#### **Dr Kostas Tsilidis**

Imperial College London, UK

#### **Professor Steven Clinton**

Ohio State University, US

#### **Professor Elio Riboli**

Imperial College London, UK

#### **Dr Vivien Lund**

UK

## **Our Cancer Prevention Recommendations**

#### Be a healthy weight

Keep your weight within the healthy range and avoid weight gain in adult life

#### Be physically active

Be physically active as part of everyday life - walk more and sit less

#### Eat a diet rich in wholegrains, vegetables, fruit and beans

Make wholegrains, vegetables, fruit, and pulses (legumes) such as beans and lentils a major part of your usual daily diet

# Limit consumption of 'fast foods' and other processed foods high in fat, starches or sugars

Limiting these foods helps control calorie intake and maintain a healthy weight

#### Limit consumption of red and processed meat

Eat no more than moderate amounts of red meat, such as beef, pork and lamb. Eat little, if any, processed meat

#### Limit consumption of sugar sweetened drinks

Drink mostly water and unsweetened drinks

#### **Limit alcohol consumption**

For cancer prevention, it's best not to drink alcohol

#### Do not use supplements for cancer prevention

Aim to meet nutritional needs through diet alone

#### For mothers: breastfeed your baby, if you can

Breastfeeding is good for both mother and baby

#### After a cancer diagnosis: follow our Recommendations, if you can

Check with your health professional what is right for you

Not smoking and avoiding other exposure to tobacco and excess sun are also important in reducing cancer risk.

Following these Recommendations is likely to reduce intakes of salt, saturated and trans fats, which together will help prevent other non-communicable diseases.











World Cancer Research Fund International's **Global Cancer Update Programme** is a global analysis of scientific research into the link between diet, nutrition, physical activity, weight and cancer. It is produced in partnership with American Institute for Cancer Research, World Cancer Research Fund in the UK and Wereld Kanker Onderzoek Fonds in The Netherlands.