



summit 2020

REPORT

Working Together Against Cancer: Breaking Down Barriers and Saving Lives



Live chat 312 Viewers →

Prof. Mark Lawler
Thank you for the fantastic key notes!
19 minutes ago

Mr. Stefan Gijssels
Great discussion!
18 minutes ago

Ms. Gilly Spurrier
Thanks all!
18 minutes ago

Mrs. Kathy Oliver (IBTA)
@Stefan. Great point!
18 minutes ago

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Foreword

This year has been a difficult one for all citizens and affected enormously the whole of the healthcare spectrum, with cancer care in all countries of Europe and the world experiencing enormous upheaval and challenge. Yet, 2020 has also offered a chance to reflect anew on the delivery of care and the opportunities for redesign and innovation.

The European Cancer Organisation is no exception to that. In June 2020, we established a Special Network on the impact of COVID-19 on cancer care, which has developed a seven-point plan to address the impact of the pandemic and how to rebuild cancer services.[1]

Our work has also continued elsewhere to realise our mission of reducing the burden of cancer and improving outcomes and the quality of care for cancer patients, through multidisciplinary and multiprofessionalism. This includes timely action reports on a four-step plan for eliminating HPV cancers in Europe,[2] beating inequalities in cancer care,[3] and achieving quality of life for all cancer patients and survivors,[4] among others.

In September, we published the European Code of Cancer Practice,[5] a new tool for empowering citizens and cancer patients with ten key overarching rights, signposting what cancer patients should expect from their health system. The work on ensuring that they are implemented across Europe, for all patients, is already underway.

Now, as ever, patient advocates are at the heart of the European Cancer Organisation. Twenty patient advocacy groups are involved in our policy-making and initiatives, and help steer our activities to ensure their voice is heard as we reach for the goal of truly personalised medicine, guided by patient needs.

This year's Summit, held virtually on 18 & 19 November 2020, was an opportunity to bring together all that valuable work and examine how to take it forward, under the motto Working Together Against Cancer: Breaking Down Barriers and Saving Lives.

As well as a session on the impact of COVID-19 on cancer, we discussed health systems and treatment optimisation, implementation of quality cancer care, disparities and inequalities in cancer care, achieving earlier detection of cancer, cancer survivorship, the development of a resilient oncology workforce, the elimination of HPV-related cancers in Europe, and the digital transformation of cancer care.

This year has also been an important one for cancer policy at the European Union (EU) level. While the COVID-19 pandemic diverted attention and resources away from key areas such as cancer prevention, early diagnosis and treatment, it highlighted how a truly European approach is needed to level-up care more than ever.

The EU will soon launch Europe's Beating Cancer Plan and initiatives related to the EU Cancer Mission, and we were able to bring together key figures from both of those important developments, including the relevant EU Commissioners, to discuss their implementation. The Commissioner for Jobs and Social Rights also joined us to highlight their work on strengthening the oncology workforce.

Finally, we dedicated a session to examining cancer issues worldwide, with relevant contributions that widened our focus out from Europe and demonstrated how the link between social disadvantage and poorer cancer outcomes is universal.

All of this exciting work, highlighting the efforts of patient organisations, clinicians, researchers, EU Commissioners, MEPs, National Governments, the World Health Organization, Union for International Cancer Control, the American Society of Clinical Oncology, and other leading bodies is summarised in this report, alongside eight high-level Resolutions on key areas of cancer policy that were voted on during the sessions.

What the Summit, and this report, highlights is the importance of cooperation, not only nationally and internationally, but also between disciplines to make the advances necessary to drive innovation and improve cancer care in cooperation with patients.

The COVID-19 pandemic has forced health and healthcare to the top of the EU agenda, and the time is now to ensure cancer is at the heart of efforts with equity of care for all. We must seize the day and leave no one behind in our mission.



Matti Aapro

President,
European Cancer Organisation



Isabel Rubio

Co-Chair,
European Cancer Summit 2020



Stefan Gijssels

Co-Chair,
European Cancer Summit 2020

Save the Date

The European Cancer Summit 2021 will take place on 17 & 18 November in Brussels.



summit 2021

The European Cancer Summit 2020 in Numbers

The 2020 edition of the European Cancer Summit was unique in the history of the European Cancer Organisation, as it was the first time that it had been held virtually.

However, that did not stop it being a resounding success, with an extremely high level of engagement among the more than 500 delegates from over thirty countries who attended across the two days of the Summit.

On the first day, the average amount of time delegates spent viewing sessions was a staggering 4 hours and 29 minutes. During that time, they commented on the wide-ranging topics more than 1070 times and sent 657 direct messages.

Delegates were just as engaged on the second day of the Summit, when they spent an average of 4

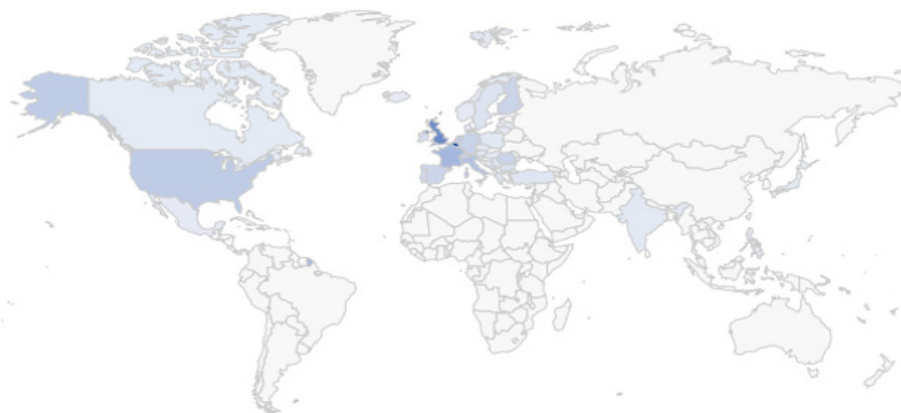
hours and 25 minutes watching the sessions, made 632 comments and sent 294 direct messages.

Overall, 48% of delegates posted a comment or question in the live chat function, while 35% used the site to connect with other delegates.

Perhaps unsurprisingly due to their potential to impact cancer care delivery and the lives of patients and their families, the most well-attended sessions were *Europe's Beating Cancer Plan* and *Mission-Driven Cancer Research: All Together as One*, which focused on the EU Cancer Mission. However, the rest of the sessions were not far behind, with each delegate watching an average of 4.7 sessions.

Top 10 Countries

- » Belgium
- » United Kingdom
- » France
- » Italy
- » United States of America
- » The Netherlands
- » Switzerland
- » Germany
- » Spain
- » Finland



Impact of COVID-19 on Cancer

Commencing the Opening session of the European Cancer Summit, Dr Mirjam Crul, Co-Chair of the Special Network on the Impact of COVID-19 on Cancer, emphasised the dramatic impact that the COVID-19 pandemic had on all areas of cancer care, which she witnessed herself at first hand as a hospital pharmacist in the Netherlands.

Against this background, the European Cancer Organisation quickly realised that a collaborative effort was needed to combine knowledge and address the urgency required.

This led to the establishment of a Special Network on the Impact of COVID-19 on Cancer, bringing together healthcare professionals, patients, researchers, academics and Community 365 Members, to collectively delineate and tackle the challenges posed by the pandemic on all areas of cancer care across Europe. The aim was to gather intelligence on the Europe-wide experience of the pandemic by the cancer community, identify shortages, knowledge gaps and organisational issues affecting cancer care, and define practical solutions. The Network also aimed to prepare healthcare services for the second wave of the pandemic and develop policy recommendations to redesign cancer services.

The Call to Action had an overwhelming response from the European cancer community, leading to the development of a 7-Point Plan to mitigate the impact of COVID-19 and cancer which was launched during this opening session,^[1] as well as a Resolution, voted on at the end of the session.

The Need for Real-Time Data

Professor Mark Lawler, Co-Chair of the European Cancer Organisation's Special Network on the Impact of COVID-19 on Cancer, explained how it was clear early on that the pandemic was having a huge impact on cancer services. Indeed, anecdotal evidence suggested that "people were starting to fear a COVID-19 diagnosis more than a cancer diagnosis".^[6] But no-one had the data to either support or refute this statement.

To investigate further, a collaboration between DATACAN, the UK's Health Data Research Hub for Cancer, of which Lawler is Scientific Director, and University College London was launched to analyse real-time data from hospitals across the UK.

The findings showed urgent two-week referrals for suspected cancer and chemotherapy attendance dropped significantly between March and June 2020, with over 70% of citizens with a suspicion of cancer not being referred to specialist services,



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Row 1 – Mirjam Crul (European Cancer Organisation's Special Network on the Impact of COVID-19 on Cancer); Kathy Oliver (European Cancer Organisation's Patient Advisory Committee); Véronique Trillet-Lenoir MEP (European Parliament's Special Committee on Beating Cancer; MEPs Against Cancer Group). Row 2 – Mark Lawler (European Cancer Organisation's Special Network on the Impact of COVID-19 on Cancer); Bente Mikkelsen (World Health Organization); John Ryan (DG Sante). Row 3 – Nicoletta Luppi (MSD Italia); Jens Spahn (Federal Minister of Health, Germany).

and 40% of cancer patients not getting access to their chemotherapy treatment in a timely fashion. [7] Moreover, potentially 7000–18,000 of patients with cancer were at excess risk of death.

These findings, and others that Prof Lawler presented, indicated that while there has been significant progress in improving cancer outcomes over the last decade, the impact of COVID could mean that the advances of the last 10 years may have been lost in the last 10 months, unless we act rapidly and decisively.

The results Lawler presented underscored the absolute importance of near real-time data, demonstrating that rapid access to data provides the crucial cancer intelligence that can inform timely care for cancer patients.

Partially in response to the findings, which were the first to show the adverse impact of COVID-19 on cancer patients and cancer services in the UK, the UK government declared on 31 July cancer to be the “first priority” in the recovery of healthcare services following the pandemic.[8]

While the latest data suggest that urgent referrals are approaching normal for many cancers (although for cancers like lung cancer they still lag behind), Lawler said it is not enough. The ‘new normal’ cannot be the ‘old normal’ and we may need to be working at 130% of normal to help clear the backlog and find the ‘lost’ cancer diagnoses that have occurred during the pandemic lockdown. Unlocking the power of real time data is key. Otherwise, Lawlor said, he is having to fight cancer, and COVID-19, with one hand tied behind his back.

The Benefits of Spare Capacity

Not all countries were affected equally, however. Jens Spahn, Federal Health Minister in Germany, said, while COVID-19 was a challenge in all countries, there were only a few isolated problems in Germany.

The numbers of people undergoing cancer screening dipped significantly during the pandemic, which is only acceptable for a very limited amount of time. However, the healthcare system in Germany has spare capacity and it adapted well and acted quickly to protect patients and healthcare professionals. Their testing strategy has also meant that everyone has access, and there has been a focus on care pathways to shield patients.

A Stress Test for Healthcare Systems

Véronique Trillet-Lenoir MEP, Rapporteur for the European Parliament’s Special Committee on Beating Cancer and Co-Chair of the MEPs Against Cancer, who is also an oncologist, said that the COVID-19 pandemic nevertheless has had and continues to have a severe impact.

Alongside delays in prevention, screening, treatment, rehabilitation and follow-up, there has been a shortage of medical supplies and reduced communication with patients.

Consequently, COVID-19 constituted a stress test for healthcare systems. While provisions need to be made in national cancer control plans for emergency strategies to respond to such crises, the aim must be to look at how to prevent the impact on patients with all non-communicable diseases (NCDs).

Trillet-Lenoir is recommending that the European Parliament plan healthcare better and reduce health inequalities. For the EU4Health programme,[9] she is advocating global prevention measures for patients with cancer patients and other NCDs, alongside a global strategy on medicine acquisition.

Magnifying Patient Fear and Uncertainty

Kathy Oliver, Vice Chair of the European Cancer Organisation’s Patient Advisory Committee, and founding Co-Director and Chair of the International Brain Tumour Alliance (IBTA), stressed the impact of COVID-19 on patients, saying that fear and uncertainty have always been a part of the cancer journey, but that was magnified when the WHO declared a pandemic.

IBTA survey data suggests, early on, the majority of patients were afraid of visiting the hospital, while caregivers were worried about passing on the virus. Nevertheless, patients rated their doctors and nurses as the most trusted source on COVID-19.

Oliver believes, where healthcare systems are less resilient, such as in Eastern Europe, there is a danger the pandemic will make already existing inequalities profoundly worse. It is therefore all the more important that patient experiences are carefully catalogued and acted on.

Failing Patients with NCDs

Bente Mikkelsen, Director for Non-communicable Diseases at the World Health Organization, told the audience that the COVID-19 pandemic has laid bare how healthcare services have failed all patients living with NCDs.

Recent survey results suggest 42% of countries had disruption to cancer treatment, 40% had a lack of essential medicines, and 48% experienced disruption to palliative care.[10]

National COVID-19 response plans do not generally include NCD management. However, the WHO offers operational guidance to modify services and has a number of ongoing initiatives to improve cancer care.

The pandemic will nevertheless have lasting consequences for societies as a whole. Investing in preventing NCDs has to be part of the recovery, particularly as it offers strong return on investment, as long as high-impact interventions are adequately implemented.

Learning Lessons to Build Resilience

John Ryan, Director of Public Health, Country Knowledge and Crisis Management at DG for Health and Food Safety, said that, until COVID-19, the main priority in the Directorate was Europe's Beating Cancer Plan.[11] The pandemic significantly affected the entire cancer pathway, and it is important to learn lessons from this crisis to build more resilient

cancer care systems, with the initial focus on the cancer care backlog.

Indeed, Ryan hopes much of the seven-year EU4Health budget will be focused on strengthening healthcare and improve outcomes, as well as improving the medicines supply chain. Alongside this, a digital revolution for healthcare will include the European Health Data Space with different types of data readily available and mobilising patient data more actively, as well as an upgraded knowledge centre on cancer.

No One Should Be Left Behind

Finally, Nicoletta Luppi, Senior Vice President and Managing Director at MSD Italia, reiterated how the COVID-19 pandemic has revealed the fragility of health systems, adding that they have not had enough time to prepare before the second lockdown.

While institutions find it hard to implement solutions in a timely and well-resourced manner, no one should be left behind and rapid decision-making is critical, while innovations such as alternative settings for vaccinations and screening hubs will be essential.

Europe needs to incorporate the WHO cancer programmes into Europe's Beating Cancer Plan, and requires a greater focus on cancer prevention through vaccination, she said.

Resolution on COVID-19 and Cancer Care

Simply returning to pre COVID-19 cancer systems is not an option. We must urgently address the COVID-19 induced backlog in all aspects of cancer control and build back better cancer care delivery systems for European citizens and patients.

European Cancer's New Normal must deliver more resilient cancer systems that:

1. Urgently address the cancer backlog
2. Restore confidence of European citizens and patients in cancer health services
3. Tackle medicines, products and equipment shortages
4. Address cancer workforce gaps across the European continent
5. Employ innovative technologies to strengthen cancer systems and provide optimal care to cancer patients
6. Embed data collection and the rapid deployment of cancer intelligence to enhance policy delivery
7. Secure deeper pan-European health cooperation

Cancer must not become the Forgotten "C" in the Fight against COVID-19.

Health Systems and Treatment Optimisation

Yolande Lievens and Denis Lacombe, Co-Chairs of the Health Systems and Treatment Optimisation Network, highlighted the Network's aims of optimising cancer treatment for the benefit of the patient, and cancer care delivery for the benefit of the healthcare system.

Optimising cancer care for patients means achieving the best clinical outcome with minimal toxicity, and lowering the burden of the disease, while optimising cancer care delivery relies on the inclusion of other disciplines beyond oncology. This throws up a number of challenges around identifying, measuring and accessing innovation and the integration of multidisciplinary treatment strategies.

The clinically relevant question is how to use innovations, particularly when there is a lack of supportive data. Lacombe believes the answer lies in re-engineering the innovation process via a reserve continuum approach. Too many treatment pathways are drug-centric and a better approach would be to start with the needs of the healthcare system and work retrospectively.

This would naturally raise research questions over the head-to-head performance of treatments and how to combine and optimise biomarkers. Another unaddressed pragmatic research gap is how to decommission treatments.

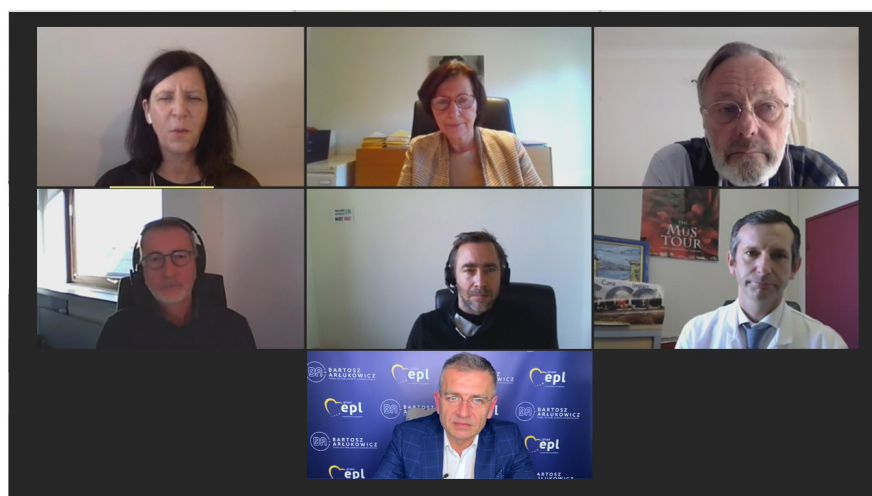
Above all, the patient should be at the centre of cancer care. The Network supports accelerated access to innovation but attention needs to be paid to how the process is controlled. Key to that is the proposed Resolution, voted on at the end of the session.

Paradigm Shifts in Care

The first speaker was Benjamin Besse, Head of the Medical Oncology Department, at Institut Gustave Roussy. He said, twenty years ago, the treatment paradigm for non-small cell lung cancer (NSCLC) consisted of computed tomography staging, biopsy to confirm the tumour pathology, then systemic treatment. The only option was platinum chemotherapy, and median survival was around eight months.

Now, the treatment landscape has changed entirely, with chemotherapy just one of several treatment options, the selection of which depends on the phenotype and genetic profile of the cancer. Targeted immunotherapy can offer survival of up to 60 months, or 18 months with chemotherapy plus immunotherapy, but the workflow now consists of imaging, biopsy, molecular profiling and then treatment.

European Society for Medical Oncology guidelines stipulate that five biomarkers need to be tested to adequately profile a tumour,[12] but recent data



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Row 1 - Yolande Lievens (European Cancer Organisation's Health Systems and Treatment Optimisation Network); Lydie Meheus (Anticancer Fund); Bengt Jönsson (Stockholm School of Economics). Row 2 - Denis Lacombe (European Cancer Organisation's Health Systems and Treatment Optimisation Network); Jan Geissler (EU Cancer Mission Board; European Cancer Organisation's Patient Advisory Committee); Benjamin Besse (Institut Gustave Roussy). Row 3 - Bartosz Arłukowicz MEP (European Parliament's Special Committee for Beating Cancer).

suggests 25% of NSCLC patients are not tested for epidermal growth factor receptor mutations in Europe and only 18% in the USA have a full molecular profile.

Besse said that the solution could lie in initiatives such as the SPECTA trial,[13] in which patients treated at 166 centres across Europe will have a broad molecular profile offered for free, and then guided to routine treatment in clinical trials. However, the trial is limited by the lack of Europe-wide grants.

Another issue is how Europe can reduce the cost of immunotherapy. Besse will run a trial to determine whether the immunotherapy pembrolizumab can be given every six weeks rather than the three weeks stipulated in the indication.

While this kind of therapy de-escalation approach, if validated, could save €1 billion every year in France alone, it is not possible to conduct the trial across Europe due to variations in the way drug treatment is paid for in trials.

Overhauling Pricing and Reimbursement

Fatima Cardoso, MD, Director Breast Unit at the Champalimaud Clinical Center, Lisbon, Portugal, commented that the price of drugs should be linked to their benefit, even if that means different prices for each indication. To those ends, the European Society for Medical Oncology Magnitude of Clinical Benefit Scale[14] could be used to classify the benefits of new treatments, and some regulators are already using it to prioritise access.

Another issue is the outdated reimbursement rules in Europe slowing the implementation of high quality care. Cardoso said radiotherapy is still paid by session in many countries, which reduces the incentive for hypofractionation regimens, while some pay for treatments only if in-hospital facilities are used, which favours intravenous over oral treatments.

Besse's response was that more publicly funded research is needed, as the data that is relevant to those questions is of low value to industry. He noted there is no direct relationship between the dose of a drug and its benefit, suggesting a per-patient price would be more appropriate.

More and Tougher Economic Choices

Next, Bengt Jönsson, Professor Emeritus of Health Economics, Stockholm School of Economics, said, while cancer care has improved and there has been an explosion in the number of treatments, the increasing cost of care has created tensions around the need for economic choices.

The data suggests that, while the direct costs have doubled over the past two decades, they have remained stable as a percentage of overall healthcare expenditure, and indirect costs have reduced. Nevertheless, more and tougher choices will be needed on how to use healthcare resources, as the range of innovations and technologies is increasing faster than the resources to pay for them.

This will require data on total cancer spending and how this is allocated, and evidence on the effectiveness and value of treatment, which is not readily provided by regulatory trials. Moreover, clinical and translational research should address the needs of patients and society to make informed choices on the value of different options.

Common Goals to Optimise Cancer Care

Bartosz Arłukowicz MEP, Chair of the European Parliament's Special Committee on Beating Cancer, said the Committee has goals around common basic healthcare standards, reducing inequalities and supporting the early and rapid diagnosis of patients.

He said the common purchase of the most important medicines is needed to avoid shortages, alongside a greater focus on rare and paediatric cancers. Personalised medicine should be more widely available, and common standards and protocols for drugs are needed, including the sequencing, combination and duration of drugs. Importantly, the EU already has the tools to support a lot of these aims, but what is required is common datasets.

Only Accessible Treatments Work

In the panel discussion, Jan Geissler, CML Advocates Network and European Cancer Organisation's Patient Advisory Committee member, said the key issue is access to optimal treatment, as only the treatment that is accessible is the one that works.

Only academia is interested in over-treatment and de-escalation, and such data is not routinely collected and reported. There is also not enough real-world data on drug performance, nor enough focus on patient-related outcomes. Industry and academic data needs to be pooled to identify signals and evolve cancer care. Geissler believes data protection is also not often implemented in the interests of patients.

Independent International Research

Lydie Meheus, Managing Director of the Anticancer Fund, echoed many by saying that Europe should invest in independent international research to fill gaps that are outside the scope of the industry but that can benefit patients.

There needs to be greater support for combination trials, alongside regulatory reforms to better serve patients and society. Market approval should be conditional if the data is immature and quality of life data is lacking, to offer an incentive to optimise treatment, and identifying novel indications for pre-existing therapies should be made easier.

Resolution on Health Systems and Treatment Optimisation

Research in cancer care should address questions relevant and meaningful for patients and public health. Such research should follow an independent process to support optimal access for patients to evidence-based multidisciplinary cancer treatment.

To achieve this, a reorientation of health systems and research approaches in cancer is needed. This requires addressing gaps in clinical and health services research applied to cancer through a reverse engineering approach, starting with better definition of the important clinical and public health questions.

How to Implement Quality Cancer Care in Europe

Philip Poortmans, Co-Chair of the Quality Cancer Care Network, opened the session, subtitled From good intentions to patients' benefit.

He said that it is obvious what is required to implement quality cancer care in Europe, but the issue is how to make it available for the benefit of all patients. To those ends, the Network has developed, with members and patient advocacy groups, a series of Essential Requirements of Quality Cancer Care.[15] They are also developing Essential Requirements for Pancreatic Cancer, Ovarian Cancer and Glioma, while that for Lung Cancer was published in late November.[16]

Simon Oberst, Co-Chair of the Quality Cancer Care Network, also pointed delegates to the new European Quality Cancer Care Catalogue,[17] which amplifies the work of Network participants, including European Cancer Organisation's Member Societies, to improve patient care. However, he underlined the focus of the session was to move from nice ideas to real implementation.

Many Challenges Remain

Sema Erdem, Co-Chair of the European Cancer Organisation's Patient Advisory Committee, said a recent survey by Europa Donna[18] showed that progress has been made in breast cancer services over the past ten years, with more countries having cancer plans, registries and specialist services. The

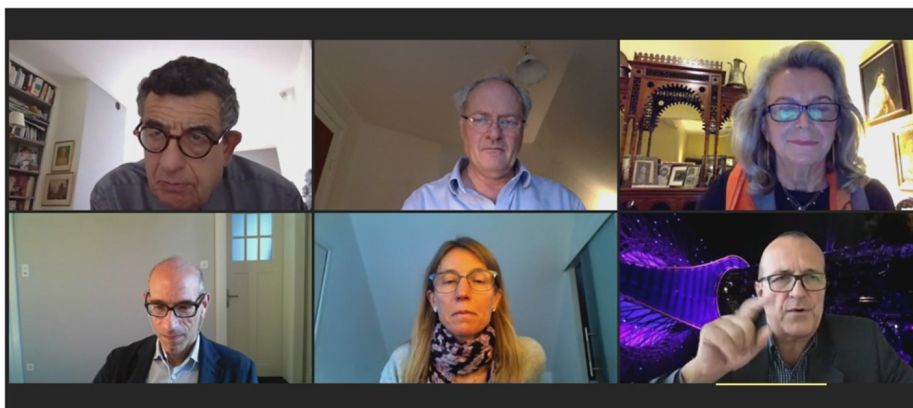
result is many more women are receiving breast cancer screening and the vast majority are treated in a reasonable timeframe.

However, there remain a number of challenges, as many countries do not have a breast cancer plan, registry or parliamentary group. Even if screening is available, the guidelines are not always followed and specialised services are often available only in large cities. All of these issues need to be tackled at a European level if improvements are to be made.

Networks of Comprehensive Cancer Centres

Thierry Philip, EU Cancer Mission Assembly member and President of OECD, said that the infrastructure required to implement comprehensive cancer care already partially exists. The OECD has accredited 40 CCCs and large clinical centres in seventeen European countries in Europe, which together have treated more than a million patients since accreditation. Of the remaining ten countries, two are developing at least one CCC.

However, achieving the goal of comprehensive cancer care requires that it moves from an organ-centric approach towards precision medicine based on tumour genomics and immunology. Moreover, interdisciplinarity is the only way to link fundamental and clinical research, and achieve better patient outcomes.



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Row 1 – Thierry Philip (EU Cancer Mission Assembly; OECD); Simon Oberst (European Cancer Organisation's Quality Cancer Care Network); Sema Erdem (European Cancer Organisation's Patient Advisory Committee). Row 2 – Peter Lühns (Bayer); Francesca Colombo (Organisation for Economic Co-operation and Development); Philip Poortmans (European Cancer Organisation's Quality Cancer Care Network).

Philip noted that Recommendation 10 of the EU Cancer Mission^[19] stipulates the setting up a network of Comprehensive Cancer Infrastructures (CCIs) to increase the quality of research and care. These can be based on standalone CCCs or within university hospitals, but he pointed out that CCCs will not be able to see all patients, which means also setting up local networks, guidelines, infrastructure and access to clinical trials.

Achieving this will require collaboration between expert organisations and EU Member States to decide on what a CCI should look like in their country and then map it down to a given locality. A fund should also be established for hospitals and cancer centres/networks to bid for consultancy services so they can form themselves into a CCC/CCI within a local framework.

All accreditation programmes for CCCs should follow a set of principles, including that it is voluntary, regarded as best practice, and be a bottom-up process in which centres request and pay for it. Accreditation should also be transparent, enable benchmarking and be seen by patients as improving outcomes.

Kathy Oliver, Vice Chair of the European Cancer Organisation's Patient Advisory Committee, commented that CCCs should also offer patients written, detailed survivorship plans, as well as referrals to the relevant cancer patient advocacy organisation for additional information and support, which is included in right 9 of the European Code of Cancer Practice.^[5]

Tackling the Barriers to Quality Care

Peter Lühns, Therapeutic Area Head Oncology, Bayer, said he welcomes and supports the goal of a network of CCCs, and agrees with the idea of moving away from organ-centric cancer care.

When bringing novel treatments to patients, any standardisation, whether via algorithms or guidelines, will level up outcomes, and a coordinated Europe-wide approach may iron out national and subnational fragmentation. He also emphasised that the barriers to high quality care for patients are the same barriers that get in the way of developing innovations.

Asked what data would be useful, Lühns said there is a lack of widespread and consistent genetic

profiling of tumours, while clinical trials designed for regulatory purposes often do not reflect the real world. A better and more consistent way of examining treatment durations and sequencing is needed, which would help in developing new indications and treatments. Moreover, the rules around data privacy are fragmented. Anything that irons out these issues would help the development of more relevant trials.

Measuring the Right Things

Francesca Colombo, Head of the Organisation for Economic Co-operation and Development (OECD) Health Division, took up the theme of data and results driving efficacy in cancer care, underlining the key issue is to measure the right things, using international standards, and collating the data to make informed choices.

While there has been progress in data collection on cancer risk factors, screening, hospital stays and discharges, and survival rates, there are many areas, such as patient reported outcomes (PROs), that are lagging behind. There is also a lack of cancer registries in some countries or incomplete coverage of the population, and missing information on, for example, cancer stage.

Colombo said that granular data and cancer dashboards that bring together multiple datasets would offer further insights into cancer care services, but the individual datasets need to improve, and it is important to be able to disaggregate the information to make more sophisticated analyses. Bridging data gaps will require stronger stakeholder involvement, in addition to which there are a number of important data privacy issues to be addressed.

In the panel discussion, Colombo said, while cancer dashboards are welcome, the devil is in the detail, especially around comparability. There needs to be a way of assessing access and the quality of support for patients, alongside care, each with their own indicator.

While there remains a long way to go, cancer dashboards are a good way of pushing quality care up the healthcare agenda, she said, as they get a reaction and start the conversation. However, the limitations around what can be inferred need to be clearly understood.

Standardising PROs

Lührs added there is a lot of data available from clinical trials but they have a narrow focus and do not necessarily answer the questions raised by Colombo. However, it could be valuable to take one cancer in particular and see what can be achieved by aggregating all the available data to the point where it can offer insights.

He then asked Colombo whether PROs are sufficiently included in health technology

assessments (HTAs) when considering the effectiveness of novel treatments. Her belief is they are to a certain extent but they are far from being standardised. Current PROs were developed based on clinical impetus but in very different ways, she said. Consequently, using them beyond the particular context in which they were designed is difficult. More work is therefore needed, and the OECD is trying to accelerate the process of using and standardising PROs.

Inequalities: Disparities and Discrimination in Cancer Care

Nicolò Battisti, Co-Chair of the Inequalities Network, opened the session by observing there are many potential sources of inequalities and are among the major reasons for variations in cancer care and outcomes. This is no longer acceptable and beating inequalities should be a priority for policymakers. However, any advocacy should involve concrete action, and to those ends he introduced the Resolution to be voted on at the end.

Hendrik Van Poppel, Co-Chair of the Network, said they have identified a number of immediate priorities in tackling inequalities, the most remarkable being the East-West divide in Europe, but also those relating age, ethnicity, gender, sex, education, socioeconomic status and disabilities. Age and the East-West divide were the subject of a special Community 365 Roundtable Meeting on Inequalities on 14 October 2020, which led to the launch of an action report: It Can Be Done – Beating Inequalities in Cancer Care.[3]

Every Patient, Every Day, Everywhere

Lori J. Pierce, President of ASCO, highlighted that every country has disparities in cancer outcomes. Examples in the USA include black males having the highest incidence and death rates from cancer, and black females having a 40% higher rate of breast cancer deaths than white women.

These inequalities are highly dependent on the social determinants of health and shaped by the distribution of money, power and resource. These can be addressed through initiatives such as reducing smoking rates and improving access, and via the prevention, early detection and treatment of cancer, and improved survivorship.

The scope needs to be broader than biological factors and include community-omics, as well as examining the intersectionality of interdependent factors. All factors need addressing together, otherwise there may be no change at all.

Pierce's theme for her ASCO presidency is every patient, every day, everywhere, and now is the time to focus on equity of care. It is easy to say but complicated to achieve, however. The forces holding back equity need to be addressed. Biases need examining and bold action is required. ASCO has done this since the start through outreach programmes, care initiatives in older adults and grants focused on health disparities, among others.

The Delaware Cancer Treatment Program showed that when black and white colorectal cancer patients had equal access to care, their survival rates were almost the same, and care was cheaper because everyone was treated appropriately and in a timely fashion. ASCO is looking at how to apply



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Row 1 - Kateřina Konečná MEP (European Parliament's Special Committee for Beating Cancer); Nicolò Battisti (European Cancer Organisation's Inequalities Network); Robert Greene (European Cancer Organisation's Patient Advisory Committee). Row 2 - Hendrik Van Poppel (European Cancer Organisation's Inequalities Network); Richard Sullivan (Journal of Cancer Policy; Institute of Cancer Policy, King's College London); Katie Reeder-Hayes (American Society of Clinical Oncology). Row 3 - Lori J. Pierce (American Society of Clinical Oncology); Masum Hossain (Pfizer).

these lessons more broadly, and is launching new initiatives to include minorities and offer practical solutions, as well as an oncologist training programme in social determinants and asking patients about them.

It is important to break down silos to fuel discussion and to embed equity. To those ends, ASCO has changed its mission statement to: Conquering cancer through research, education, and promotion of the highest quality and equitable patient care.

Inequalities Will Only Increase

Richard Sullivan, Editor-in-Chief of the Journal of Cancer Policy, and Director of the Institute of Cancer Policy at the King's College London, said inequalities drive many policy changes and lead to fundamental declines in patient outcomes.

There will be appalling increases in inequality in the coming years that will not meet the values of social justice, and the impact will be felt directly on cancer outcomes. Looking around the world, it is clear some countries have seen huge increases in gross domestic product, but development has been extremely unequal. Crucially, there is no model for transitioning cancer services, and many patients have to make huge journeys to obtain care.

The Time is Now

Robert Greene, Member of the European Cancer Organisation's Patient Advisory Committee, said the time to combat disparities and discrimination across all areas is now. It is not enough to understand them but to look at how individuals live their lives in terms of social support, work and comorbidities.

Yet how well are they represented in discussions? The only way to achieve change is to not only talk about people dealing with disparities but also talk with them. Collaboration is key for the development and execution of plans, and the European Code of Cancer Practice is the perfect tool for that.[5]

Focusing on Preventable Inequalities

Kateřina Konečn MEP, Member of the European Parliament's Special Committee on Beating Cancer, said the common features of the cancer strategies in Europe are early detection, affordable and effective treatments and working with patients.

Cancer risk factors are often discussed but there

must be more focus on these to prevent cancer. Interventions to reduce exposure to cigarettes, alcohol and other carcinogens are needed to slow the growth of new cases.

Coordinated action is needed and behavioural modification interventions should be available to all healthcare disciplines, not just oncologists. Konečn said addiction is a clear sign of inequality in a society. As complete abstinence is almost impossible, however, the focus should be on risk reduction.

Another major issue is the lack of an EU-wide HTA. The devolution of HTAs to member states is a source of disparities between countries that causes huge delays in access to cancer care.

The Power of the Cancer Dashboard

Masum Hossain, President of International Developed Markets at Pfizer, highlighted the growing inequality between Central and Eastern Europe and the rest of Europe, which could be made worse by the COVID-19 pandemic.

Pfizer has collaborated with a range of stakeholders over the development and implementation of national cancer control plans (NCCPs). While there has been some progress, notably in Poland, Ukraine and Croatia, more than half of Eastern European countries still do not have an NCCP.

Building on the importance of collating evidence for change and organising data to gain insights and make better quality decisions, Pfizer is helping develop country cancer control dashboards. These are designed to enable policy and decision makers identify gaps and areas for improvement, and provide a benchmark to monitor policy development.

The dashboards are developed in collaboration with a range of experts, and this highlights the importance of multi-stakeholder engagement. Pfizer has held meetings across the region, but translating that into actionable solutions to improve cancer outcomes is crucial.

This was underlined by the Community 365 Roundtable Meeting on Inequalities and its subsequent action report,[3] which emphasised how partnership is fundamental to understanding inequalities and develop policy action to narrow the divide.

The Universal Impact on Inequality on Outcomes

In the following discussion, Katie Reeder-Hayes, Chair of the Health Equity Committee of ASCO, said the exact mechanisms by which social disadvantage is connected to cancer outcomes vary between countries and regions but the link itself is universal. And the way that link is broken can be common to different settings, and be shared.

The levers affecting this include being aware of biases, and examining how providers who serve the most disadvantaged patients are themselves served by the healthcare system and society, which affect care delivery everywhere.

Sullivan added that welfare and employment policies need updating to stop the so-called 'brain drain', where nurses and other oncology professionals migrate to Western Europe due to a poor remuneration and a lack of career progression in their home countries.

The Time for a Pan-European Health Policy is Now

Konečná said a common health policy at a European level could be achieved if patient and cancer organisations create enough impetus. Before COVID-19, there was a lack of interest in health but this focus should be used to push agenda.

She believes the biggest barrier is the national governments, but the European Parliament supports these efforts. The time to make the change is now.

Resolution on Inequalities in Cancer Care

Europe's Beating Cancer Plan must address huge inequalities across Europe, between and within countries.

A powerful means to raise the bar is a European Cancer Dashboard, including the European Code of Cancer Practice, to report key metrics and ensure quality cancer care.

Early Detection Saves Lives

Isabel Rubio and Jan Van Meerbeeck, Co-Chairs of the European Cancer Organisation's Prevention Network, opened the session, subtitled Taking European Cooperation on Cancer Screening to the Next Level.

Rubio highlighted that while screening and other prevention policies can help improve cancer outcomes and reduce mortality, they can be controversial. There is also huge room for improvement and novel screening programmes are required.

The Network is therefore working with participating organisations to implement prevention more widely as the most effective long-term strategy for cancer control. To those ends it also developed a resolution, voted on at the end of the session.

Creating Benefits at All Levels

Stefan Gijssels, Co-Chair of the European Cancer Organisation's Patient Advisory Committee, said good screening leads to better cancer treatment, and better survival and quality of life for patients. It also incurs less costs, less disruption, fewer complications and less financial hardship.

In all cases, it is better to diagnosed with cancer at an early than late stage. For example, stage I colorectal cancer (CRC) is associated with 90% survival versus 10% for stage IV disease, and

treatment costs are ten times lower. However, only 13% of CRC cases in Europe are diagnosed in stage I, despite it being easy to detect and very common.

The exception is the Netherlands, where the proportion of CRC patients diagnosed in stage I is 48%. Achieving that is not a pipe dream but is possible with available technology. If it were repeated Europe-wide, 130,000 lives would be saved each year. The direct healthcare savings would reach €3 billion, while a UK analysis including indirect costs put the total at €9 billion.

However, achieving this requires better investment in early stage detection and management, and doctors need to ask patients more often about their family history.

Quality Assurance is Key to Successful Screening

Tit Albreht, Coordinator of the Joint Action, Innovative Partnership for Action Against Cancer (IPAAC), said that there have been three joint actions on cancer prevention: EPAAC,[20] covering quality assurance of screening programmes; CanCon,[21] which assessed the three recommended screening programmes and proposed four others; and now IPAAC,[22] which is focused on the European Code Against Cancer and reviewing existing and potential screening programmes.



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Row 1 – Jan Van Meerbeeck (European Cancer Organisation's Prevention Network) Harry De Koning (Erasmus MC University) Padraic Ward (Roche). Row 2 – Isabel Rubio (European Cancer Organisation's Prevention Network); Stefan Gijssels (European Cancer Organisation's Patient Advisory Committee); Frances Fitzgerald MEP. Row 3 – Tit Albreht (Innovative Partnership for Action Against Cancer); Partha Basu (World Health Organization).

As the science develops, guidelines around screening and early detection will need updating more frequently, and there remain many quality assurance challenges. Crucially, early detection is a necessary complement to screening, as not all cancers can be screened but they may all be detected early.

For existing programmes, information needs to be shared and implementation challenges understood. Crucially, one size does not fit all, and programmes should undergo HTAs. Better implementation requires a stepwise approach, with continuous measurement of success, and linkage to population registries. Behavioural issues around participation also should be emphasised.

New screening programmes should follow a jointly developed recommendation on the screening criteria, supported by protocols. Again, there should be an emphasis on behavioural issues related to participation, and careful consideration of the risks and potential harms to healthy individuals, as well as an economic evaluation and assessment.

Minimising Harms, Maximising Benefits

Partha Basu, Head of the Screening Group at IARC, said that all screening programmes do harm, but some do more good than harm, at a reasonable cost. The best way to minimise harms and maximise benefits is to implement screening via a population-based approach with quality assurance, all within a defined framework. In addition, data should be collected in a systematic manner and compared with current standards.

He pointed to the 2017 Report on the implementation of the Council Recommendation on cancer screening,^[23] which showed 72% of people aged 50–69 years in 20 EU Member States had access to CRC screening, far higher than in the first report in 2007. However, there remain large gaps in the datasets around screening that can impede analysis of their performance.

Across breast, cervical and colorectal cancer screening, only 25% of countries could provide an adequate dataset, with up to 20% providing information on further assessment and cancer detection rates. Moreover, the data gap was far wider for cervical than breast cancer.

Basu said a third report on screening implementation is clearly needed. The 2017 report encouraged countries to collect, harmonise and report data, but the third should dive deeper to understand the underlying issues, and ensure more men and women are saved.

Screening Version 3.0

Harry De Koning, Professor of Public Health and Screening Evaluation at the Erasmus MC University, believes that screening in Europe needs to go to 'Version 3.0', using well validated tools to quantify harms and benefits and assess costs. For that, high quality data on long-term outcomes is needed, with programmes interacting locally, regionally, nationally and on the EU level to reduce inequalities.

He said every country should follow the example of Slovenia and publish an optimal protocol for cervical cancer screening, based on cost effectiveness. The example of breast screening should also be used so programmes learn from each other.

While breast and cervical screening programmes are extremely cost effective, De Koning said prostate and lung screening are a little less cost effective but can still have more benefits than harms, and potentially more so than cervical screening. However, prostate and lung screening will need properly quality assurance and upper age limits, as well as risk-based selection in the case of lung cancer.

There is also a need for large scale prevention cohorts, stratifying individuals by their initial test result. As smoking is linked to both cancer and cardiovascular disease, they could be combined into one prevention programme, representing a paradigm shift in disease prevention.

Personalised Healthcare for All

Padraic Ward, Head of Commercial Operations at Roche, said cancer care is better than ever before but needs to be much better. Better therapies, better access and better screening could add up to personalised healthcare, in which everyone has the right intervention at the right time, even if that means no medical therapy.

There are currently a number of advances in molecular technologies, including liquid biopsies,

that are helping to understand tumour biology and, if used in a coordinated fashion, could improve outcomes. However, meaningful data at scale is necessary to achieve this, which requires a common EU data space.

A Pivotal Time

Frances Fitzgerald MEP said the European Cancer Summit 2020 is happening at a pivotal time, as cancer is struggling against priorities not only around health and COVID-19 but also a number of other pressing issues. During the pandemic, cancer screening was seen as non-essential and it is important this does not happen again. Key to that is translating what experts say into understandable language and clear messages to reduce confusion.

Nevertheless, COVID-19 has given a new awareness at a political level of health issues and their impact on economies. That needs to be built on at a European level, especially via the numerous groups and committees with a focus on cancer, as cancer screening and prevention is an example of how inequalities across EU Member States can be tackled.

In the following discussion, Albrecht said that artificial intelligence can help with modelling and optimising screening programmes, while Gijssels underlined that we need to reach out to vulnerable communities, and address patients' fears over cancer and screening.

Resolution on Cancer Screening

It's time to take European cooperation on cancer screening to the next level. The European Cancer community recommends:

- An evidence-led update to the 2003 EU Screening recommendations including dedicated consideration of screening policies for tumour types such as lung & prostate cancer.
- A European Cancer Dashboard that monitors screening coverage and quality performance.
- A European Platform for screening agencies to facilitate rapid best practice-sharing.
- EU research initiatives supporting screening related policy needs, such as new behavioural research insights, impact assessment, the application of risk stratification approaches, and how to examine and assess new screening options.

Europe's Beating Cancer Plan

Matti Aapro, President of the European Cancer Organisation, opened the session by underlining that Europe's Beating Cancer Plan^[1] must be ambitious but must not reinvent the wheel. This means using pre-existing projects and improving on them to increase coordination between countries in combatting cancer. He also announced a Resolution, to be voted on at the end.

More Europe in Public Health

Stella Kyriakides, EU Commissioner for Health and Food Safety, who is responsible for the Plan, thanked the European Cancer Organisation for its longstanding commitment to the field and the support it has shown since the beginning of her mandate. The Organisation has given a voice to patients and helped guide EU policy in a way that is inclusive, cohesive and transparent.

She highlighted the European Code of Cancer Practice as the perfect example of the Organisation's efforts,^[5] as it illustrates the power and potential of effective partnerships and will empower cancer patients.

Nevertheless, 2020 has been difficult year and continues to be. The severe disruption of services along the entire cancer pathway will have far reaching consequences. Since the beginning of the COVID-19 pandemic, the number of cancer diagnoses has decreased, which points to more

late diagnoses and lives lost.

It is clear that more 'Europe' is needed in the area of public health. The EU's role will be strengthened, despite health continuing to be a member state competence. There is an opportunity for the EU to be more active in working with its Member States and key stakeholders, and achieve change across Europe.

Cancer needs to be addressed in a holistic way, all along the patient journey. There will be more action to prevent cancer. Early diagnosis and treatment should not be hampered by unequal access to the needed experts. Survivor numbers have increased but that has created a new set of challenges to ensure those who live with cancer not only live long but also well.

Europe's Beating Cancer Plan is founded on partnerships and this will be key to its success. COVID-19 has reminded everyone of the vital importance of solidarity and unity of purpose. Public health authorities cannot address the challenges of cancer alone. It is important to break down barriers and save lives. We can change the realities of cancer in Europe if we work together.

This was echoed in the comments, where the importance of working together was underlined, while recognising that the challenge will be to translate policy into practice.



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From left: Stella Kyriakides (EU Commissioner for Health and Food Safety) and Matti Aapro (European Cancer Organisation; EU Cancer Mission Assembly).

Championing European Solidarity

Jens Spahn, Federal Health Minister in Germany, said cancer screening and treatment are a top priority and are contributing to improved survival rates.

Germany welcomes Europe's Beating Cancer Plan, and his country has made cancer a specific focus for its Presidency of the Council of the European Union. Moreover, the Plan offers a chance to champion European solidarity and eliminate inequalities.

Its success will require a pragmatic approach, using available resources in an intelligent manner, and efficient mechanisms and structures for its implementation. Detailed discussions will be needed on a workable monitoring tool. While it is important the Plan covers all aspects of cancer care, EU Member States must be able to prioritise specific areas for implementation. But above all, the Plan can count on German support.

Mobilising Resources to Halve Cancer Deaths

Manuel Heitor, Minister for Science, Technology and Higher Education in Portugal, said 75% cancer survival at ten years is possible across Europe with a comprehensive, translational approach. By focusing along the whole cancer care continuum, cancer deaths could be reduced by 50%. However, this is a huge challenge.

Resources and infrastructure, alongside Horizon Europe and other programmes, will need to be mobilised, and research structures will need to be diversified and specialised. This includes improving

access to cancer research in Central, Eastern and Southern Europe, as well as transnational research. Collaboration across different disciplines will also need to be developed, as well as between the public and private sector.

More outcomes-based research is needed, and a deeper understanding of cancer processes and tumour heterogeneity. This is critical for early detection and diagnosis. Moreover, it is crucial that what is preventable is prevented.

Beyond cancer diagnosis and treatment, health-related quality of life for survivors is a key issue and there are disparities across EU Member States. It will be crucial to improve social inclusion and cohesion across the region, and to extend networks.

Cancer research will be a key theme of the upcoming Portuguese Presidency of the European Union. Portugal will organise a European Cancer Research Summit in June 2021, with the ultimate aim of mobilising national and European organisations, research organisations, clinicians, academia and patient organisations towards the common goal of decreasing cancer deaths.

Asked about the compulsory publication of research and data sharing, Heitor said this has been a topic of discussion. There are several areas of consideration, central to which is that everyone participates. This means not just publishers or institutions but a range of institutions, including hospitals, care units and patient organisations. It is critical to have relevant data that is peer reviewed. This will require a collective effort from physicians, researchers and institutions, and is a complex social issue.



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From left: Manuel Heitor (Minister for Science, Technology and Higher Education, Portugal); Anja Karliczek (Federal Minister of Education and Research, Germany); Simona Kustec (Minister of Education, Science and Sport, Slovenia); Jens Spahn (Federal Minister of Health, Germany).

Patient Involvement in Research

Anja Karliczek, Federal Minister of Education and Research in Germany, said a Europe united against cancer was their hope and demand at their cancer research conference in October, and she was pleased to see so many at the European Cancer Summit 2020 striving for the same goal.

Germany launched a national decade against cancer last year, and her Ministry is working with numerous partners to make significant advances and ensure patients are closely involved in improving the chances of recovery and further enhance patient prospects.

New possibilities need to be explored to improve early detection, diagnosis, treatment and after-care. Research must move quickly from the bench to the bedside. However, all of Europe is needed, as no country can succeed on its own in the fight against cancer.

Through initiatives such as Europe's Beating Cancer Plan, and by bringing fresh impetus from the success of projects in Germany, more can be achieved together. There also needs to be more patient involvement in research, and greater alignment with the needs and priorities of patients and their families.

United Against Cancer

Simona Kustec, Minister of Education, Science and Sport in Slovenia, emphasised that strengthening and directing the research agenda to what is needed most is key to improving cancer care and outcomes, and patients lives.

To those ends, the Trio Presidency of the Council of the European Union signed the declaration on effective cancer research 'Europe: Unite against Cancer' in October 2020.[24] This comes at the most crucial of times, and coincides with the Plan. Together with Horizon Europe and other initiatives, it will help turn the odds in the battle against cancer.

However, support and collaboration at national and EU levels, including cancer governance, patients, citizens, experts researchers and policymakers, is key. A governance and monitoring framework is also needed, with a focus on inclusiveness, political ownership and commitment, coherence and agility.

Stefan Gijssels, Co-Chair of the European Cancer Organisation's Patient Advisory Committee, commented that progress continues on the technological aspects of care is also important to help understand the large differences in cancer outcomes between and within countries, and then extrapolate those out across the region.

Resolution on Europe's Beating Cancer Plan

The European Cancer Community awaits the publication of Europe's Beating Cancer Plan with eager anticipation, and in the time remaining before its publication, reminds of the need to:

- Set inspiring goals and ambitions
- Monitor the implementation and the impact of the Plan with the support of Member States and the Cancer Community
- Ensure attention within the Plan pillars on matters such as: inequalities, the oncology workforce, the research landscape, co-morbidities, patient empowerment and health literacy
- Avoid "reinventing the wheel" by working together with all cancer stakeholders across the EU for a successful implementation of Europe's Beating Cancer Plan

Mission-Driven Cancer Research

Matti Aapro, President of the European Cancer Organisation and Member of the EU Cancer Mission Assembly, opened the session on the EU Cancer Mission,[19] subtitled All Together as One. He indicated that the Mission has as one of its priorities the joining of forces between basic research and clinic to achieve the goal of preventing cancer and treating it the best way possible, with each patient seen as a human and not an anonymous entity.

A Mission Founded on Three Pillars

Walter Ricciardi, Chair of the EU Cancer Mission Board, explained the Mission was inspired by John F. Kennedy's launch of the mission to the moon in 1961, and it is an ambitious but feasible project set out over seven years.

Cancer is one of Europe's major societal challenges, and it is estimated half of all cancer cases will be in Europe by 2035. The goals of the Mission are therefore to direct research and innovation to achieve tangible results for European citizens and stakeholders, making sure everyone will have equal access.

The Mission has had 15 Board meetings and published a report,[25] and is now working on its governance and implementation. It contains three pillars—prevention; diagnostics and treatment; and quality of life—capped by equitable access and underpinned by understanding. Within that, thirteen bold actions focus on aspects such as the advanced implementation of personalised medicine and the greater use of minimally invasive technologies.

It is also recommended that there be a digital centre to deposit data for personalised care. Every single cancer patient in Europe will own their data but be able to share it to improve research. This may be important for smaller countries and those lagging behind to improve inequities within and across all EU Member States, as where research is carried out, treatment is better.

Another focus is childhood cancer, which must be cured as a priority with better patient outcomes, as well as stronger public-private initiatives. The aim is to transform the cancer culture among professionals, managers, politicians and patients.



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Row 1 - Caroline Dive (European Association for Cancer Research); Nathalie Moll (European Federation of Pharmaceutical Industries and Associations); Walter Ricciardi (Chair, EU Cancer Mission Board). Row 2 - Christine Chomienne (Vice-Chair, EU Cancer Mission Board); Manfred Weber MEP (EPP Group); Bettina Ryll (EU Cancer Mission Board; European Cancer Organisation's Patient Advisory Committee). Row 3 - Mariya Gabriel (EU Commissioner for Innovation, Research, Culture, Education and Youth); Matti Aapro (European Cancer Organisation; EU Cancer Mission Assembly).

More than Technological Research

Stefan Gijssels, Co-Chair of the European Cancer Organisation's Patient Advisory Committee, commented that research is needed to identify what organisational and information aspects lead to the best outcomes. These include shared-decision-making, health literacy, social initiatives, patient organisation membership, nutrition and physical activity. New technology is needed, but not only technology can solve the issues that patients face.

Another critical area, little studied, is behavioural research into participation in lifestyle interventions and screening programmes, and follow-up after positive screening tests.

European Nations Working Together

Manfred Weber MEP, Chairman of the EPP Group in the European Parliament, said COVID-19 has been a big game changer. It is now clear health has to be tackled on a European level, with Member States not in competition but working together.

The European Parliament has voted to increase the Horizon Europe by €5 billion and to raise the EU4Health budget back up to the originally proposed €9.4 billion,[26] demonstrating the unity of parliamentarians in the fight for an ambitious approach to health. He agreed that data access is a crucial element of strengthening research but may be limited by the interpretation of present data protection rules. However, a middle way has to be found and a firm basis for data sharing created.

The strong East–West divide, highlighted in the European Cancer Organisation's recent Action Report,[3] is unacceptable. The same level of knowledge and access to the state-of-the-art care is needed across Europe, and there is a strong political will to tackle this issue. These opportunities need to be seized to ensure health and cancer remain at the heart of Europe.

Harnessing New Discoveries

Mariya Gabriel, EU Commissioner for Innovation, Research, Culture, Education and Youth, said stakeholders all over Europe will join forces to tackle cancer, and the EU Cancer Mission is key to that. It sets clear and ambitious targets to translate ideas into action, a process that will be accelerated by Europe's Beating Cancer Plan.

But it goes beyond that. There is policy support to cope with the effects of the environment, food production, climate and lifestyles, and the Mission will generate evidence-based knowledge to decrease cancer risk, working with patients to involve them in the decision-making process and tailored care to their needs and wants.

Solutions must be available to all patients across Europe, and the challenges faced by cancer survivors must be addressed, including quality of life, late treatment effects, comorbidities and mental and reproductive health.

Much has been achieved but more must be done. A more coherent approach is needed, building links with a coalition of implementers, including civil society organisations, general practitioners and nurses. Actions must be combined at a national and European level, and the link between the EU Cancer Mission and Europe's Beating Cancer Plan includes citizen engagement.

Bridging the Research Gap

Caroline Dive, President of the European Association for Cancer Research, said well-supported basic science is central to tackling cancer in Europe, with researchers from all backgrounds, working in conjunction with translational scientists, included in curiosity-driven basic research.

COVID-19 has shown how knowledge can be disseminated and shared to less well resourced areas of Europe, and was a graphic illustration of how to bridge the gap between basic science and clinical research. Patient and public involvement will be needed to achieve personalised treatment, and it is crucial that basic scientists embrace discussion and inclusion.

A New Way of Thinking

Bettina Ryll, Member of the EU Cancer Mission Board and Founder of MPNE, said the Mission is helping to move research thinking away from a silo approach towards a systems approach, where researchers seek interaction and collaboration. However, the hard part is the implementation.

She believes a continuous feedback loop is required so basic researchers see the fruits of their labours. That requires data and access, which means the ownership of data needs to be examined. Once this can be overcome, it will be possible to learn what

patients actually want. When a level playing field can be created and the system can take advantage of brilliant people, true progress will be achieved.

The Need for Solidarity and Trust

Nathalie Moll, Director General at EFPIA, said it is important the EU Cancer Mission has a structured and integrated approach that includes the whole treatment pathway. Moreover, the three pillars are a sensitive way of achieving the overall objective, and the focus on patient outcomes is crucial.

Although cancer treatment has improved, there is much more to do around advancing quality of life and survival. However, spending on cancer remains fairly static and reflects neither the burden of the disease nor patients' expectations. Stronger political support is needed and all funding mechanisms, not just the Mission and related programmes, should be explored at national and international level.

Through the COVID-19 pandemic, we have learned the need for solidarity but also to trust each other, as we achieve more when we work together. Patients also need to be involved from the beginning of the research continuum, which is already a focus in industry, to incorporate their

needs and develop personalised care solutions for today and tomorrow.

It was also suggested in the comments that patients be included in debates over cancer care budgets, with engagement at the highest level in Europe to ensure that decisions are more precise and directed towards relevant action.

Simultaneous and Ambitious Research

Christine Chomienne, Vice-Chair of the EU Cancer Mission Board said the Mission offers a guarantee to be able to make an impact, but underlined that a multidisciplinary approach to science is key.

It is crucial to begin with the needs of citizens. Research projects must be conducted simultaneously and with clear and ambitious objectives and well-supported actions to ensure rapid results. Another key aspect is capacity building and communication to ensure that actions and their implementation are seen by each citizen. The Mission will be adapted to them and flexibility in delivering the solutions is an important part of its work.

Cancer Survivorship – The Physical and Psycho-Social Legacies

The session was introduced by Csaba Dégi, Co-Chair of the European Cancer Organisation's Survivorship and Quality of Life Network. He announced the launch of the Network's new report *Free from Cancer: Achieving Quality of Life for All Cancer Patients and Survivors*,^[4] with the aim of helping more cancer patients and survivors achieve a life free from cancer and its impacts.

The Iceberg Phenomenon

Andrew Davies, Co-Chair of the Survivorship and Quality of Life Network, said that, with the increase in cancer incidence and improvements in treatment, there are more and more long-term cancer survivors.

Some patients have no issues once they finish treatment but many do, and patients are not prepared for what can happen. Unfortunately, a lack of training and research means there is an 'iceberg' phenomenon of physical symptoms in which some patients speak about their issues but many have multiple problems for which they do not seek help.

Longstanding dry mouth, for example, is often dismissed but can have a significant physical and psychological impact. Saliva has many functions and dry mouth affects appetite, taste, chewing and speaking. It also affects mouth hygiene and a

lack of it can cause dental problems. Patients may withdraw and no longer eat with their family, and problems can persist throughout their lives.

Not enough attention has been paid to these issues, and a focus on improving and maintaining the quality of life of patients, not just on improving survival, is needed. There also should be investment in specialist services and greater education for healthcare professionals.

Survivorship Begins with the Cancer Diagnosis

Anja Mehnert, Head of Psychosocial Oncology, Department of Medical Psychology and Medical Sociology, University Medical Center Leipzig, said psychosocial and behavioural issues in cancer survivorship are very important for patients, their families and society. The ageing population and increasing urbanisation will only increase these issues further, especially in the context of limited healthcare resources.

Survivorship has been defined as beginning from the moment a patient is diagnosed. While this may not fit with progressive disease, it raises awareness that it should be considered from the beginning of the cancer journey.



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Row 1 - Andrew Davies (European Cancer Organisation's Survivorship and Quality of Life Network); Anja Mehnert (University Medical Center Leipzig); Sarunas Narbutas (Youth Cancer Europe). Row 2 - Csaba Dégi (European Cancer Organisation's Survivorship and Quality of Life Network); Alexander Zehnder (Sanofi); Dolòrs Montserrat MEP (European Parliament's Special Committee on Cancer). Row 3 - Françoise Meunier (Federation of European Academies of Medicine).

Patients ask themselves what will become of their lives, and whether they will survive treatment, or have long term consequences. They experience anxiety, fatigue, depression, demoralisation, loss of meaning and purpose, anger, decreased quality of life, impaired body image, sexual problems, decreased ability to perform daily activities, financial problems and issues around work participation. More than half of patients experience cancer-related distress, which is associated with fatigue, sleep problems and sadness.

It is important to highlight these problems but also provide health education and improve health literacy to empower survivors, as well as offer effective interventions to decrease stress and improve quality of life.

Listening to Patients

Alexander Zehnder, Global Head of Oncology at Sanofi, said it is important to go beyond treatments and listen to the cancer community to understand their real needs and offer appropriate solutions. This means collaboration, working with all stakeholders to elevate patients voices and factor their needs and expectations into the medical journey.

This includes examining the challenges faced by elderly cancer patients and how that can influence research, treatment and policy. This is pertinent as the number of people with cancer aged over 70 years will double over the next twenty years.

However, the desire to grow old is the same for all people with cancer, including younger people, who may face work issues and discrimination. Sanofi is collaborating with the EU to further this agenda with societies and stakeholders, and is exploring policy frameworks to quantify the scope of the research needed to improve lives. Through this, real improvements to quality of life beyond medicines can be achieved to provide the best possible outcomes.

Taking Into Account the Financial Impact

Dolors Montserrat MEP, Member of the European Parliament's Special Committee on Beating Cancer, said survivorship and families is a key focus of Europe's Beating Cancer Plan, with emphasis on psychological support across the cancer environment. Yet only half of EU hospitals can offer

adequate mental healthcare to cancer patients and survivors.

To better support patients and survivors, disability and dependence assessments should include cancer, and employers should receive help to support survivors and families in a similar way to less able people. Most families experience a substantial increase in costs due to cancer and health systems need to consider the financial impact of cancer care alongside the medical plan to determine the overall risk-benefit ratio.

Patients and families must be at the centre of cancer policies and Europe's Beating Cancer Plan will be a great opportunity to realise that aim.

Cancer's Impact on Younger Survivors

Sarunas Narbutas, Chairman of the Youth Cancer Europe, reminded the audience survivorship issues affect both younger and older patients, with up to 70,000 new cancer diagnoses every year in Europe in individuals aged 15-39 years.

He has been receiving treatment for 14 years and is still not in remission. That affects his entire life but above all his mental health. Yet cancer remains stigmatised among younger people, and they do not know how to broach the subject with each other.

Young cancer survivors face fertility issues, but many countries do not have standards to enable best approaches to the topic of fertility, and often there is a rush to start therapy without explaining its fertility impact. Not being able to have children can lead to anxiety, distress, divorce and suicide.

The European Society for Medical Oncology has produced guidelines on fertility preservation,^[27] and lots of advocacy groups raise the issue, but there is a lack of coordination and the guidelines are not reaching patients.

Younger patients also experience isolation and a lack of physical exercise, while treatment changes can cause anxiety. Younger patients do not know if they will graduate and go to university, and their diagnosis has an impact on job interviews. Moreover, they face discrimination throughout their lives in obtaining credit and other financial support.

Regular Updates to Survivorship Plans

In the following discussion, Narbutas said survivorship plans are crucial. They should not be a one-off, but every follow-up visit from around the first year after diagnosis should include discussions about plans, so patients can have something to live for.

Kathy Oliver, Vice Chair of the European Cancer Organisation's Patient Advisory Committee, agreed, saying plans need to be reviewed regularly, taking into account changing perspectives and the needs of the patient as they go through their journey. Healthcare professionals should ask the patient whether their survivorship plan is still relevant and helpful, or needs reviewing and updating.

The Right to Be Forgotten

Françoise Meunier, Vice President of the Federation of European Academies of Medicine discussed the right for survivors to be forgotten and not have to declare their cancer when accessing financial services.

Meunier said progress has been made since the Resolution on Financial Discrimination was passed at the European Cancer Summit in 2018,[28] and the 'right to be forgotten' has already been adopted by France, Belgium, and Luxembourg, and is to be adopted in the Netherlands in 2021.

However, there are 14 million cancer survivors and financial toxicity is reality. Those countries have paved the way but it is not fair that other EU citizens do not have access to the right to be forgotten. Meunier is now working with the European Cancer Patient Coalition to create a map of the current situation in Europe, with the aim of developing a pan-European legislative framework.

The right to be forgotten is also expected to be introduced into Europe's Beating Cancer Plan and is a recommendation in the EU Cancer Mission, which is extremely encouraging.

Preparing a Resilient Oncology Workforce for the Present and Future

Andreas Charalambous, Co-Chair of the European Cancer Organisation's Workforce Network, and President-Elect of the European Cancer Organisation, opened the session with Network Co-Chair Geerard Beets.

The concept of the oncology workforce is broad. There are inequalities in education and training across Europe and staff shortages, so the field must be made attractive to people. Moreover, the COVID-19 pandemic showed that the oncology workforce should be taken care of, and that safety and life-work balance concerns are crucial. A resolution, to be voted on at the end, was announced.

Protecting Healthcare Workers

In an interview by Andreas Charalambous with Nicolas Schmit, European Commissioner for Jobs and Social Rights, the Commissioner said that Europe's Beating Cancer Plan will take a comprehensive approach and that the European Commission's Directorate-General for Employment, Social Affairs and Inclusion (DG Employment) has been closely involved, as the workplace is a potential source of exposure to carcinogens.

The first aim is to reduce exposure to dangerous substances and improve and adapt current EU

directives on carcinogens. This includes healthcare worker protection, as dealing with cancer treatments involves risks, often exposing nurses and doctors to hazardous materials such as cytotoxins.

The second aim is to invest in workforce training, to promote skilling, re-skilling and up-skilling, and lifelong learning. This needs to be strengthened for all healthcare professionals but especially nurses.

The third is access to the labour market for people who have had cancer and recovered. They may have lost their job or have problems with re-integration into the labour market. They may need support for re-entry into the workplace as they do not always have the capacity for a full-time job. Retraining and re-skilling, as well as social protection, are important, and inequalities across Europe need to be tackled as health systems and social protections are not all the same.

Charalambous then asked whether there will be a specific emphasis on younger people. Schmit replied that careers in the oncology professions need to be made more attractive and young people motivated to choose these jobs. For many, their work is not sufficiently appreciated. Working conditions can also be tough, and many face stressful situations. Healthcare professionals are



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Row 1 - Andreas Charalambous (European Cancer Organisation's Workforce Network); Geerard Beets (European Cancer Organisation's Workforce Network); Alexandru Eniu (College of the European School of Oncology). Row 2 - Lynda Wyld (Surgical Oncology at the University of Sheffield); Mirjam Crul (European Cancer Organisation's Workforce Network); Kathi Apostolidis (European Cancer Patient Coalition). Row 3 - Nicolás González Casares MEP; Nicolas Schmit (European Commissioner for Employment, Social Affairs and Inclusion).

often underpaid and it is not seen as a key job by society.

The safety of the workforce is paramount. Occupational safety and health should be included more in designing working practices, alongside greater awareness of stress. To those ends, DG Employment is preparing a new strategy for occupational health and safety.

The COVID-19 pandemic starkly illustrated how healthcare professionals are on the frontline, with many doctors and nurses dying due to a lack of protective equipment. This must end, and healthcare systems must be improved to integrate the health conditions of workers.

For too long, health has been seen as a cost, and the approach of emphasising only cost-effectiveness has brought us to a critical situation.

Recognising Specialist Surgery

Lynda Wyld, Professor of Surgical Oncology at the University of Sheffield, said cancer surgery has advanced in recent decades, with improvements in cure rates and postoperative quality of life. However, there are wide variations across Europe, and surgical training remains static.

Surgery is regulated at two timepoints: medical graduation; and at the completion of training in a field, which is limited by not recognising subspecialty qualification. Surgeons can train in any aspect of surgery and they are given the same weight on paper, such that a general surgeon can set up to treat any cancer without any expertise.

Examinations have been developed in specialist areas but uptake is currently low. Breast surgery, however, is an example of the evolution of specialist surgery, and it is hoped it will soon be recognised in the UK.

A number of societies have also joined forces to launch the European Breast Surgical Oncology Certification, with a certification both for trainees and for fully trained surgeons. The hope is it can serve as a model and potentially allow patients to determine whether a surgeon is trained in a specialist field.

European Cancer Summit 2020 Co-Chair Isabel Rubio agreed with the need to recognise subspecialties, adding that surgical oncology, as

well as oncology nursing, needs to be recognised in EU Member States.

Eleonora Varntoumian, from the European Oncology Nursing Society, noted that cancer nurses administer chemotherapy without training or guidelines to follow. She believes that education is therefore key to improve quality care standards for cancer patients everywhere.

Broadening the Scope of Education

Kathi Apostolidis, President of the European Cancer Patient Coalition, noted that the European Code of Cancer Practice enshrines the right to equal access to affordable and optimal cancer care,^[5] which has been a key priority for their organisation for many years.

The best treatment requires several specialists, and innovation is not just about new medicines but also advances in surgery, radiotherapy, pathology, biomarkers and nursing. The EU Cancer Mission highlights education as key but it also is crucial to create a culture of education across Europe that incorporates all aspects of medicine, including the arts and philosophy.

Moving CME Online

Alexandru Eniu, Chair of the College of the European School of Oncology (ESO), said advances in oncology are so rapid that the quality of education is essential. Many things are changing from one month to the next, and continuous medical education has taken on a new meaning. Training also needs to be improved to close the East–West divide.

The COVID-19 pandemic has shown virtual training is possible. In response, ESO more than doubled the number of their online events and created online pathways for cancelled events. Modules were moved online, as were final examinations. The result was that the Breast Cancer in Young Women Symposium 5 (BCY5) had four times the number of participants, at 30% of the cost of the in-person event.

A crucial aspect, however, is CME accreditation for distance learning. The European School of Oncology has supported the development of a distance-learning accreditation, and BCY5 was the first event to receive it.

A Shortage of Nurses

Nicolás González Casares MEP, Member of the European Parliament's Special Committee on Beating Cancer, and himself a nurse, said Europe may be fighting a virus but it is time to reflect on the future of cancer care. Unexpected problems always arise and the best-qualified oncology healthcare professionals are needed.

Also important are shared standards and multidisciplinary care, and a framework to allow the recognition and movement of doctors, nurses and researchers for both work and training. There is a shortage of nurses in Europe, and inequalities between Member States that are fueled by low wages. The lack of oncology nurses requires training and continuing education to allow for specialisation.

Referring to the COVID-19 pandemic, he said that telemedicine is important but nothing can replace

contact with patients. That means more time with patients, which means more staff, to allow everyone more time during the course of the disease, as well as at the end of their lives.

Lifelong Learning for Nurses

Returning to the interview, Schmit said DG Employment is hoping to tackle job shortages but beyond that the healthcare ecosystem needs to be addressed to ensure that the right skills are supplied at the right quality.

Lifelong learning needs to be organised for nurses, who need opportunities to up-skill. We have to appreciate the work done by those in fighting cancer who are on the frontline in the fight against the pandemic. Their extremely valuable work has to be recognised not only by applauding but also by society and in how we treat them.

Resolution on Workforce

Ensuring the access of cancer patients to specialised multi-professional care should be as high a priority for countries, and international organisations such as the EU and WHO, as ensuring patient access to products and technologies.

Therefore, a fundamental tool for the delivery of EU ambitions on improving cancer care should be the Professional Qualifications Directive. The Directive should be proactively deployed to support specialisms in cancer care in harmonising education and training requirements and increasing the mobility of vital skills and experience in cancer care across Europe.

Viral Protection: Achieving the Possible

Rui Medeiros and Daniel Kelly, Co-Chairs of the European Cancer Organisation's HPV Action Network, introduced the session, subtitled The elimination of HPV cancers in Europe. The Network was launched a year ago with the aim of promoting the implementation of effective strategies to eliminate cancers caused by HPV by 2030.

The Network recently published a four-point plan to help Europe lead the world in eliminating HPV-related cancers.[2] It calls for the possible to be achieved, and its chief recommendation is the EU should commit to matching and exceeding the WHO Global Strategy to Accelerate the Elimination of Cervical Cancer by targeting the elimination of ALL cancers caused by HPV.[29] Two Resolutions were also announced for the end of the session.

Compliance with HPV Vaccination Remains Low

Andrea Ammon, Director General of the European Centre for Disease Prevention and Control said HPV accounts for 39% of all cancers attributable to infections, and is the primary cause of cervical cancer.

Those EU Member States that have introduced a comprehensive HPV vaccination programme have seen large reductions in cervical cancer. If preventing cervical cancer is the primary goal of

the programme, it is highly cost effective if it targets girls and coverage is maintained. If the aim is to eliminate all HPV-related disease, it is cost effective when both boys and girls are vaccinated.

However, the reality is coverage is persistently below 60% and barriers to vaccination are around compliance, access and provision. For compliance, the issue is the basic acceptance of vaccines, with a decline in vaccine confidence due to misinformation and disinformation. Vaccine hesitancy a bigger barrier than access.

The infrastructure and funding must be in place to deliver the vaccine, but an important factor is healthcare professional training. The quantity and quality of information is an issue, as well as concerns over adverse effects and mistrust of the healthcare system. Healthcare workers are strong influencers of public opinion but they may have concerns that need addressing. In April, the ECDC launched the European Vaccination Information Portal,[30] which has a section on HPV vaccination.

It is important that equity of access is achieved and programme effectiveness is improved. Moreover, gender-neutral vaccination should remain a priority and form part of all national cancer plans. The pandemic will have ongoing effects on vaccination programmes in general, but HPV vaccination must stay on the agenda.



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Row 1 – Cobi Reisman (European Society for Sexual Medicine); Tristan Almada, (HPV and Anal Cancer Foundation and the Noman Is an Island: Race to End HPV Campaign); Andrea Ammon (European Centre for Disease Prevention and Control). Row 2 – Emilie Karafillakis (London School of Hygiene and Tropical Medicine); Rui Medeiros (European Cancer Organisation's HPV Action Network); Daniel Kelly (European Cancer Organisation's HPV Action Network). Row 3 – Alessandra Moretti MEP (European Parliament's Special Committee on Beating Cancer); Margaret Stanley (International Papillomavirus Society).

Challenging Anti-Vaccine Sentiment

Margaret Stanley, President of the International Papillomavirus Society, said she has a simple message: vaccines prevent infection, and they work. If enough girls and boys are vaccinated, HPV circulation drops by 80%–90% within five years, and the number of cervical cancer cases in women aged under 30 years can drop by up to 90%.

The challenge is to vaccinate enough boys and girls, and the biggest danger is anti-vaccine sentiment. The goal of eliminating HPV-related cancers by 2030 may not happen but they could disappear over time. It requires cooperation, adequate resources, sufficient organisation and sharing best practice. Then cervical, anal and pharyngeal cancer could go the way of tetanus and polio.

A Collaborative Response to Fake News

Emilie Karafillakis, European Research Lead at the Vaccine Confidence Project, London School of Hygiene and Tropical Medicine, said we live in a world of multiple realities and ‘fake news’ appears in a variety of contexts. However, ‘misinformation’ is preferred as it is broader and less political.

The issue is there is no singular truth. Information corresponding to an individual’s beliefs and their social world is their reality. Consequently, vaccination information reaches only those who already believe in it. There are also people simply posing questions that require answering.

While social media platforms are starting to tackle these issues, questions remain their objectivity and transparency, and users can simply migrate to other platforms. It is more than just social media, however, as word of mouth also plays a role. A collaborative response with platforms is required, as well as empowering individuals to make informed choices. There are plenty of fact-checking websites but they may reinforce myths.

Crucially, ‘Dr Google’ must not be blamed, rather the interaction between patients and healthcare professionals must change. This starts at school, where the quality of information needs to be assessed. Individuals’ concerns need to be understood and they should be engaged in decision making. There is no magic bullet and no one issue with vaccines. The key is to rebuild trust.

A Powerful Story Motivates the Most

Tristan Almada is Co-Founder of the HPV and Anal Cancer Foundation and the NOMAN Is An Island: Race to End HPV Campaign.[31] His journey started when he lost his mother to stage IV anal cancer, aged 53 years. With his sisters, he made a resolution to do everything in his power to stop this happening to other people.

They discovered there is a mass of people who need support because they are afraid to tell their story, but when it is explained HPV can be eradicated, it is very captivating. Progress has been quick. They campaigned for boys to be vaccinated in the USA and the government listened. They took their story to the UK and had a positive reaction there too.

However, HPV is not like COVID-19, as contracting the virus does not necessarily lead to cancer. Key to communicating with people is not statistics, as they do not motivate people, but a narrative and a story about the risks. That is powerful.

A Tremendous Opportunity

Cobi Reisman, Past President of the European Society for Sexual Medicine, said there are three crucial elements to a vaccination programme: it should be safe and effective; healthcare professionals and organisations should be trained and motivated; and the public needs to accept the intervention.

The HPV vaccine represents a tremendous opportunity, as it is arguably the first time in the history of medicine that there is an intervention that prevents cancer. Healthcare professionals need to be educated to help increase uptake, alongside different materials to allow people to find information.

An Unexploited Opportunity

Alessandra Moretti MEP, Member of the European Parliament’s Special Committee on Beating Cancer, agreed HPV vaccination represents a unique opportunity but it is not fully exploited. Vaccination is not available for girls in Poland and is available for boys in less than half of European countries. There needs to be a push for policies in each member state to achieve concrete results.

Fake news is very worrying but it is the same for every other vaccine. Science is bent and distorted to confuse people, which is unacceptable when it comes to human health and safety.

HPV-related cancers could be eliminated by the end of the century with vaccination and screening.

The WHO estimates that, together, they could lead to 72 million fewer cases of cancer each year. Surveys indicate only 37% of people in Italy would accept a COVID-19 vaccine, and it is terrifying to see public trust in science so low. This is a political and cultural battle and we have the chance to change the course history.

Resolution on HPV Cancer Elimination – Screening

Immediate and urgent action should be taken to ensure that cervical cancer screening programmes are not interrupted by COVID-19, especially in countries with the lowest screening rates. The adoption of HPV self-sampling must be accelerated in order to improve uptake.

Resolution on HPV Cancer Elimination – Vaccination

HPV-associated cancers are preventable by universal vaccination. Anti-vaccination misinformation is putting programmes at serious risk and all European health authorities must act now to improve public confidence in HPV vaccination.

The Digital Transformation of Cancer Care

Wim Oyen, Co-Chair of the European Cancer Organisation's Digital Health Network, opened the next session with fellow Co-Chair Regina Beets-Tan.

As well as being a Co-Chair of the European Cancer Organisation's Digital Health Network, Regina Beets-Tan has been an active member of the EU Cancer Mission Board since 2019. She highlighted Recommendation 8 from the Mission,^[25] which calls for the creation of a European Cancer Patient Digital Centre, where cancer patients and survivors can deposit and share their data for personalised care. Patients, she said, should be in the driving seat, with a health passport containing guideline-led information on their cancer, optimal treatment and lifestyle recommendations, and that includes them in shared decision-making.

A roadmap on patient-driven governance is needed, in which patients feel safe and do not have to beg for their own data, and their needs are taken into account. The data should be used to build artificial intelligence-led predictors of outcomes and make a real difference to cancer treatment.

An Avalanche of Increasingly Complex Data

Fred Prior, Professor and Chair of the Department of Biomedical Informatics, University of Arkansas, said biomedicine has been inundated with an avalanche of more and more complex data that

is too much for humans to process. Smartphones gathering data for tracking health and disease only adds to the deluge.

But with computing and mathematical modelling, it can be used to improve care in rural and underserved communities, and to improve therapeutics, precision health, care delivery and prevention, allowing clinicians to become proactive in disease management.

The huge pools of data from gene and population analyses can be examined, and predictive data modelling can turn data into actionable knowledge. The question is how to improve the delivery of healthcare for all. Personal medical histories can be leveraged to improve data quality and reduce errors, and perhaps the most valuable tool is artificial intelligence.

The tools used by healthcare professionals are becoming smarter, which is taking the labour out of diagnostics and leaving the decision-making to the expert. However, that presents challenges, the biggest being analytical models need huge amounts of data to represent the true variance of the human population. Diseases themselves and how they interact are also highly variable, and it is important to understand the way cancers adapt to the tumour microenvironment and alter following therapeutic challenges.



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Row 1 - Regina Beets-Tan (European Cancer Organisation's Digital Health Network); Gilliosa Spurrier-Bernard (European Cancer Organisation's Patient Advisory Committee); Anastassia Negrouk (MyData-TRUST). Row 2 - Wiro Niessen, (Erasmus MC/TU Delft); Wim Oyen (European Cancer Organisation's Digital Health Network); Sara Cerdas MEP (European Parliament's Special Committee on Beating Cancer). Row 3 - Fred Prior (University of Arkansas); Christian Stoeckigt (Hologic).

Figuring all of this out will require data pooled from millions of people, which presents a huge risk in terms of patient privacy. It is crucial it is protected and prevented from becoming a course of revenue, without putting roadblocks up in the way of research.

Combining Multiple Data Sources

Wiro Niessen, Professor in Biomedical Image Analysis at Erasmus MC/TU Delft, said these are interesting times in the field of medical imaging. Since 2012, artificial intelligence has been state-of-the-art in recognising images, which, despite concerns, has the potential to improve cancer care.

It is important to combine large datasets and use open data, which is possible with medical imaging. This means the images can not only be objectively analysed and quantified but also combined with genetic and environmental data and related to clinical outcomes to determine the optimal therapy for a particular patient. But beyond that, artificial intelligence needs to be able to stage a disease. For example, in low-grade glioma, an artificial intelligence image classifier could mean a patient could avoid having a biopsy. Certain tasks still require human intelligence, however, and it is important to understand where the line is drawn.

The future of data-driven health is to make all data available to deliver on the promise of personalised medicine. This will require investment in infrastructure, novel algorithms and validated techniques to create an ecosystem that optimises data use and implementation.

The Drawbacks of the General Data Protection Regulation

Anastassia Negrouk, Chief Operating Officer at MyData-TRUST, said the EU GDPR presents challenges in cancer care as it thinks data flow can be controlled and considers borders. This is an old-fashioned view of data and privacy, as data flow cannot be controlled with high precision to the end of its journey.

GDPR has been identified with negative impacts on life sciences with detractors suggesting its implementation is burdensome, that it confers heavy constraints with little proof of benefit, is a source of uncertainty and is a barrier to international cooperation. However, on the other

hand, it has required more organisations to define workflows, created greater clarification about stakeholders, stimulated debate and enshrined risk-based regulation.

The major pitfalls are the lack of harmonisation in implementation, an insufficient code of conduct, suboptimal support, a lack of appropriate instruments for implementation and no standard contractual clauses for data transfer.

While the European data strategy,[32] and the European Cloud Initiative,[33] are both welcome, data knows no borders and the region must not lock itself out from the rest of the world. Data needs to be harmonised, which requires the right instruments for compliance.

Flexible and Progressive Data Consent

Gilliosa Spurrier-Bernard, Member of the European Cancer Organisation's Patient Advisory Committee, Chair of WECAN, and Member of the Melanoma Patients Network Europe, said a European data centre is potentially very interesting and could provide some solutions. However, action is required, as data on even the best treatment are limited. Informed decision making would be improved, for example, by information on cellular function, lifestyle factors and expected response to treatment.

Patients need easy and compulsory access to their complete records, which should use standardised reporting and terminology. Data also needs to be shared safely, and processes put in place to ensure it does not expire or degrade. Consent should be flexible and progressive, so data is not left floundering for years.

For patients, this is a life or death issue. Accessible data would facilitate patient engagement and finally make research patient-centric, which is more valuable than a vague promise of scientific progress, and could give patients agency to initiate their own research.

AI Could Clear the COVID-19 Backlog

Christian Stoeckigt, Head of Scientific Affairs and Medical Education at Hologic, reminded the audience that breast cancer screening was stopped in many countries due to the COVID-19 pandemic, creating a huge backlog.

Artificial intelligence-based image guidance to assist clinicians is greatly needed to overcome this backlog and speed up diagnosis. There has been a great deal of progress since the introduction of analogue mammography and there is a huge chest of artificial intelligence tools now available.

However, the backlog will not be cleared soon due to data protection barriers. It is important to demonstrate patients are empowered by owning their own data. There are some issues to be addressed but they must be in control of their healthcare, and industry is onboard.

A Data Space to Boost Cancer Prevention

Sara Cerdas MEP, Vice Chair of the European Parliament's Special Committee on Beating Cancer, Shadow Rapporteur for the EU4Health programme, and Co-Chair of the ENVI Committee Health Working Group, said data has an important role to play in the fight against cancer, as it is multiple diseases, with multiple causes and multiple interventions.

She has called for the creation of a European data space that includes with a patient registry. This could help primary and secondary cancer

prevention by providing better data not only on risk factors but also indicating whether individuals have been vaccinated and helping to ensure their screening information is up to date.

The data should be provided to researchers for observational and cohort studies, which could offer answers for many of the outstanding questions. While that requires better connectivity and the enshrining of patients' right to a second opinion, the safety of data also needs to be guaranteed. Above all, we need to move on from talking and act on the data space, so that digitisation can fully contribute to the fight against cancer.

However, Prior emphasised in the following discussion that data needs to be carefully curated, and accurate from the beginning, as the further away you are from the entering the data the harder it is to clean up.

Negrouk added that the concept of ownership remains to be clarified, as one cannot sell human tissues but one can sell data. She nevertheless believes that private institutions, including drug and device developers can use data for good ends, which calls for a fair interaction based on a transparent relationship, framed by ethical values.

Cancer Issues Worldwide

In the final session of the European Cancer Summit 2020, Matti Aapro, President of the European Cancer Organisation, introduced a panel representing some of the most important Organisations and Societies in the area of oncology worldwide to discuss the most important issues in cancer facing everyone today, as well as a Resolution to be voted on at the end.

No Country and no Person Left Behind

Hans Kluge, Regional Director for Europe at the WHO, said there remain deep inequalities between countries in the European region and globally. Someone diagnosed with cancer is at greater risk of dying from the disease in Eastern Europe and Central Asia, but there are also differences within countries that stem from multiple causes.

The COVID-19 pandemic hit the most vulnerable, and central to Kluge's mandate at the WHO is tackling deep inequalities, by ensuring universal health coverage, reduction of risk factors and sharing a strategic focus.

Universal coverage includes early diagnosis and cervical cancer prevention, via increasing vaccine confidence and accessibility. Kluge wants the WHO's NCD office in Moscow to become a centre of excellence to close the gaps obstructing these

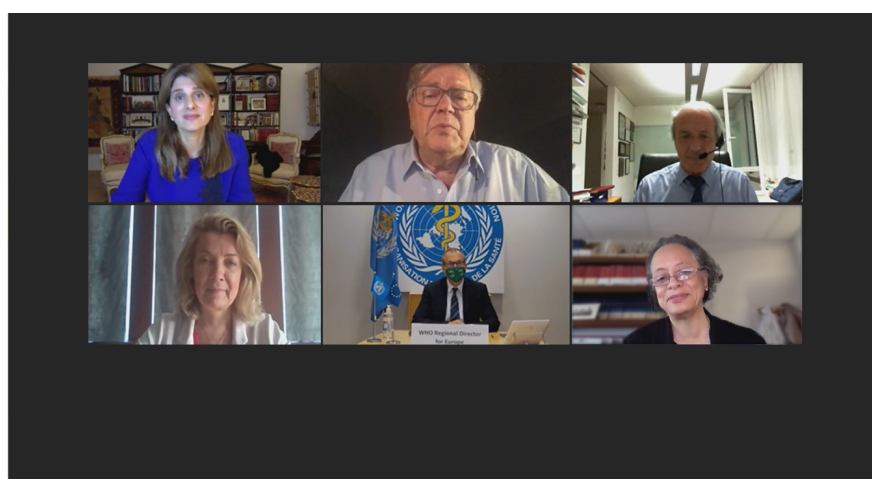
efforts. This requires productive solutions and innovations, and he applauds Europe's Beating Cancer Plan and the EU Cancer Mission, as well as the proposals from DG Employment to reduce exposure to hazardous chemicals.

A WHO ambassador for cancer control will be announced, to complement the WHO Global Strategy to Accelerate the Elimination of Cervical Cancer as a public health problem.[29] The brutal challenge of COVID-19 offers an opportunity to work together, through science, solutions and solidarity, to ensure no country and no person is left behind.

All in the Same Boat

HRH Princess Dina Mired, Past-President of Union for International Cancer Control (UICC), said the European Cancer Summit 2020 is timely as, despite progress in supporting countries around the world, cancer remains the second leading cause of death.

Moreover, any progress has been neither considerable nor timely enough, and many countries cannot handle the burden of the disease. The least developed countries have suffered the worse with COVID-19, with pressure piled on healthcare systems due to lockdowns and restrictions, supply chain interruptions and the economic impact of the crisis.



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Row 1 - HRH Princess Dina Mired (Union for International Cancer Control); Matti Aapro (European Cancer Organisation); Franco Cavalli (World Oncology Forum). Row 2 - Catherine Owen (Bristol-Myers Squibb); Hans Kluge (World Health Organization); Lori Pierce (American Society of Clinical Oncology).

Cancer does not wait for the pandemic to end. It thrives when the system is broken. The pandemic revealed too many uncomfortable truths about healthcare systems globally, and the devastating effect of COVID-19 was made worse by a lack of staff, equipment and of a unified political will and strategy.

Over nine million people die from cancer each year, and the poor and disadvantaged are disproportionately affected. Yet no one batted an eyelid. It took COVID-19 to equalise the misery suffered by so many around the world.

It also threw a renewed light on health. We must clean up our own house and reconfigure our health systems to deal with patients in an equitable manner. We are not islands, and we should triple our efforts to help those at the other end of the world and show our solidarity through strategic partnerships.

We need to embrace the elimination of cervical cancer, as that sends a clear message of hope to women. Everyone has given a Herculean effort to fight the COVID-19 pandemic but what is needed now is social cohesion, not social distancing. We may all come on different ships but we are all in the same boat.

Starting on the Road to Recovery

Lori Pierce, President of the American Society of Clinical Oncology (ASCO), said delays in cancer screening in the USA due to the pandemic will lead to worsening outcomes and more cancer deaths. The pandemic also changed relationships with patients, placed financial strains on institutions and widened disparities, with a disproportionate effect on ethnicities.

There have also been rapid policy changes in response to the pandemic, and the ASCO Road to Recovery^[34] produces recommendations on research and care by looking at the impacts on delivery systems and what policy changes have helped and should be made permanent. They have also developed a series of goals for cancer research and clinical trials, and for cancer care delivery.

The aim is to develop strategies and prioritise legislation to remove barriers to care, improve federally funded care and obtain COVID-19 relief, and work with the Biden–Harris healthcare reform platform when the next president of the USA is sworn in.

Be Active, but More Activist

Franco Cavalli, Chair of the World Oncology Forum, said that, playing devil's advocate, he questions whether things are getting better worldwide in terms of winning the war on cancer. Scientifically, we are winning but globally we are losing.

In 2013, an international appeal to stop cancer detailed ten measures to at least not lose the battle, and it is Cavalli's belief that the situation today, even before the COVID-19 pandemic, is not better but worse. The pandemic also revealed cancer is not the first priority in most healthcare systems.

The situation in developing countries was already unbearable but the looming financial crisis will make it worse. There is not a lot to be satisfied with, as although policymakers appear to support cancer prevention and screening, it is not happening in many parts of the world.

Cavalli welcomes the WHO's stance on cancer but says it is not enough. Cancer is more than simply a non-communicable disease in terms of its impact. Yet it is almost never discussed at, for example, the G7, as it would mean also discussing restructuring healthcare systems and introducing universal coverage.

We must continue to be active, but be more activist, like Greta Thunberg. The same effort is needed in cancer, otherwise we will continue to lose the war globally.

Focusing on What Patients Want Most

Catherine Owen, Senior Vice President of Major Markets at Bristol-Myers Squibb underlined the importance of innovation to improve cancer care in partnership with stakeholders. COVID-19 showed the need for access to real time and comparable data, and the EU can take the lead in driving the standardisation of data, as well as accelerating efforts to create a data space with clear governance.

For example, the EHDEN project, from the Innovative Medicines Initiative, aims to make the large-scale analysis of health data in Europe a reality by building a federated data network, allowing access to the data of 100 million EU citizens standardised to a common data model.^[35]

In the face of budget restrictions and increasing demand, healthcare professionals need to find

better ways of allocating resources and focus on what benefits patients most. Around a fifth of all healthcare spending is wasted on ineffective or obsolete care.[36] However, there are industry partnered initiatives to drive on-the-ground implementation and scale up good practice.

No value is derived from innovation if patients cannot access it. For example, Bristol-Myers Squibb is therefore carrying out initiatives to improve access in Africa and other regions of the world to contribute to the improvement of cancer care through multi-stakeholder collaboration.

Collaboration in Our DNA

Finally, Matti Aapro announced the signing of a Memorandum of Understanding between the UICC and European Cancer Organisation.

HRH Princess Dina said both organisations have collaboration in their DNA. By joining the global advocacy work of UICC, the Organisation will help support cancer organisations around the world, she said, adding, in the words of the Resolution: If you want to go fast, go alone. If you want to go further, go together.

Resolution on Cancer Issues Worldwide

If you want to go fast, go alone. If you want to go further, go together.

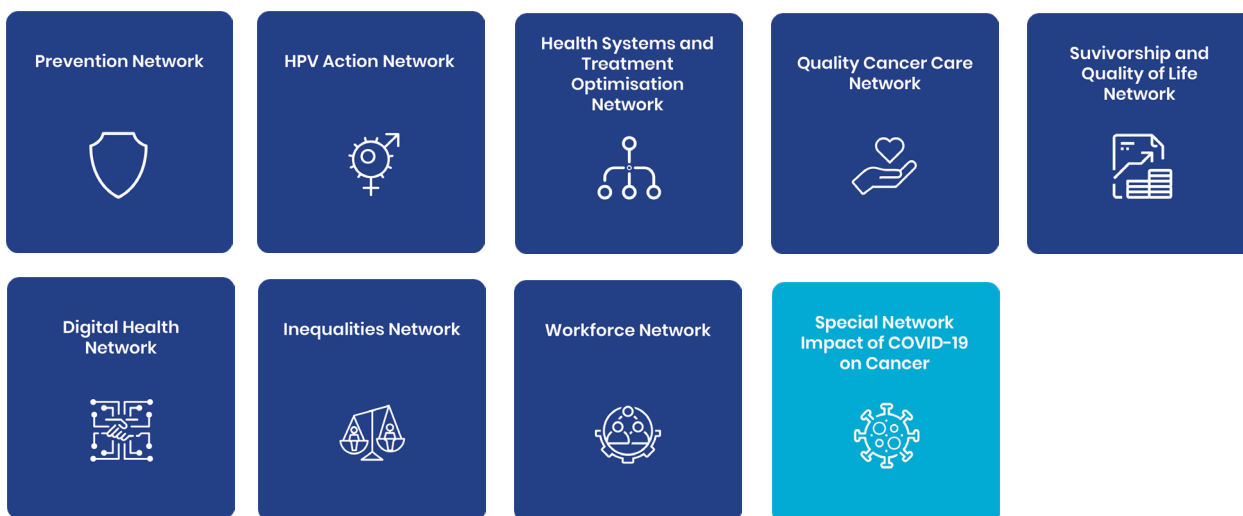
We, participants of the European Cancer Summit 2020, commit ourselves to working in an open collaborative way, knowing that it is teamwork that brings the best results for cancer patients. Our global community will stand together to face the challenges ahead in our mission of combating cancer.

Acknowledgements

We would like to thank the following organisations and companies for their support and fruitful cooperation which made the European Cancer Summit 2020 a success and look forward to continuing these partnerships to achieve our shared goals.



Our Focused Topic Networks



Our Member Societies


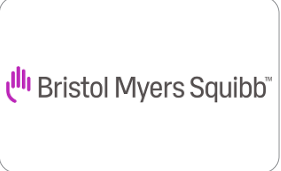



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As the not-for-profit federation of member organisations working in cancer at a European level, the European Cancer Organisation convenes oncology professionals and patients to agree policy, advocate for positive change and speak up for the European cancer community.

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