

Acknowledgements

This report draws on input from experts across Europe and beyond. It was developed through key presentations, contributions and recommendations shared at the European Cancer Organisation (ECO) Community 365^a Roundtable Meeting 'Ensuring equitable access to precision cancer medicine in Europe' which was held online on Thursday 9 October 2025^b.

We thank all speakers who contributed their perspectives and expertise to help illuminate challenges and promote solutions to improve access to precision cancer medicine for European cancer patients. We also thank those who provided contributions via the online roundtable's chat function during the meeting and provided supplementary commentary after the meeting. Finally, we also express our gratitude to all those who took the time to review and comment on this report and its recommendations during its wider review, as part of ECO's Policy Approval Pathway process^c.

Leads

Rui Medeiros, Deputy Director at the Research Centre, Instituto Português de Oncologia (IPO Porto)

Bettina Ryll, Lead of Work Package 6 (WP6) 'Social Innovation for Access to PCM (Precision Cancer Medicine)' in the PRIME-ROSE project

Drafting Team

Richard Price, Policy Director, European Cancer Organisation

Ştefania Cebuc, Policy Officer, European Cancer Organisation

Louis Accou, Junior Policy Officer, European Cancer Organisation

- a. Community 365 is a group of charity, philanthropy, and industry contributors to the Focused Topic Networks of the European Cancer Organisation. Community 365 provides ideas, guidance, practical support, and resources for our work in convening stakeholders and building consensus in the European cancer community. Community 365 contributors do not have a decision-making role in our policy work. Rather, policies of the European Cancer Organisation, such as those represented in this document, are agreed by our Board after consultation with our Member Societies and Patient Advisory Committee, via our Policy Pathway process. More information here: www.europeancancer.org/community-365
- b. Find more information concerning the report here: www.europeancancer.org/events/368:community365-personalised-medicines
- c. European Cancer Organisation's Policy Decision Making Process: www.europeancancer.org/content/policy-decision-making



© European Cancer Organisation, 2026.

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0).

To view a copy of this license, visit: <https://creativecommons.org/licenses/by/4.0/>
You are free to share and adapt the material, provided appropriate credit is given.

Suggested citation

Medeiros R, Ryll B (2026). Delivering Precision Cancer Medicine at Scale: An ECO Policy Action Report; European Cancer Organisation; Brussels.

Contributors

Elizabeth Cartwright, Consultant Medical Oncologist, The Royal Marsden Hospital

Leonie de Visser, EMEA Disease Team Leader (Bladder), Johnson & Johnson Innovative Medicines

Vera Deneer, Chair of the Dutch Pharmacogenetics Working Group

Marco Di Donato, Policy and Projects Manager, EUREGHA

Pierluigi Fracasso, Member of UEG Public Affairs Group

Ebba Hallersjö Hult, Co-founder & Head, Vision Zero Cancer

Dima Hamadeh, Global Policy Strategy Director, Bristol Myers Squibb

Peter Kapitein, Patient Advocate, Inspire2Live

Júlio Oliveira, Coordinator of the Precision Oncology Program & Board Member, IPO Porto

Roberta Savli, Executive Director Public Affairs, EFPIA

Jan-Willem van de Loo, Senior Expert Cancer Research and Innovation, European Commission

Contents

Executive Summary of Recommendations	5
Introduction	6
Working towards new Essential Requirements for Quality Cancer Care: Precision Cancer Medicine.....	7
The precision cancer medicine eco-system	7
Building on European investment in precision cancer medicine. Quo Vadis?	11
Delivering quality and value for precision medicine at scale.....	16
Glossary	22

Executive Summary of Recommendations

On improving the precision cancer medicine eco-system

- **Health systems across Europe need to adapt more fully to the realities of the precision cancer medicine era.** This includes strengthening modern knowledge-transfer processes through more closely networked cancer centres and coordinated data collection. Outcome data should be used more systematically thereafter to support evidence-based decision-making.
- **This transformation should also be accompanied by greater consideration of value-based approaches to cancer care and innovation uptake.** However, such approaches depend upon robust data, outcome measurement, and strong evidence-generating infrastructures.
- **The emerging national Cancer Mission Hubs across Europe present an important opportunity to strengthen integrated data and evidence infrastructures.** By supporting greater connectivity between cancer centres and facilitating evidence-informed uptake of precision cancer medicine, these hubs could play a significant role in accelerating progress across Europe.

On building on EU investment in precision cancer medicine

- **The European Union is already playing an important role in strengthening the pan-European response to challenges relating to access to precision cancer medicine.** This includes significant support for cooperation between national agencies, targeted initiatives in specific areas of oncology, and efforts to improve the use of real-world data. Speakers and panellists consistently identified real-world data utilisation as an area where continued EU support can deliver high added value.
- **Initiatives under Europe's Beating Cancer Plan and the EU Cancer Mission were also recognised as highly relevant to improving access to precision cancer medicine, and calls were made for further support for the networking of Comprehensive Cancer**

Centres in Europe. Greater use of these networks to support cooperation, knowledge exchange, and more standardised approaches could help reduce data fragmentation and unlock the full potential of high-quality real-world data use across Europe.

- **At the same time, there is a need for more systematic lesson-learning and greater attention to areas where existing EU support mechanisms may not yet be operating at optimal effectiveness.** EU projects that do not achieve sustainability or effective follow-through limit long-term impact and reduce the value of investments made. The development of future EU-funded programmes under the next Multiannual Financial Framework could provide an opportunity to address these concerns and support more durable, strategic implementation.

On delivering quality and value for precision medicine at scale

- **Achieving faster and more equitable patient access to precision cancer medicine will require sustained political ambition and long-term strategic commitment.** This objective should be clearly reflected within the future EU health policy agenda and broader cancer policy frameworks.
- **Successful case studies demonstrate that barriers to access can be reduced through the development of dedicated national or regional strategies for precision cancer medicine.** Key enabling factors include stronger networking between cancer centres, coordinated delivery models, and greater standardisation of approaches and clinical practices across institutions.
- **Multi-stakeholder expert groups that encompass contributions from patients and their caregivers can play an important role in addressing evidence and implementation challenges.** They can support the development of shared standards and protocols, facilitate the design of appropriate access arrangements, and strengthen education and awareness of precision cancer medicine needs across the wider health system.

Introduction

Europe stands at a pivotal moment in the evolution of cancer care. Scientific advances in genomics, molecular diagnostics, biomarker-driven therapies, and data-enabled clinical decision-making are transforming how cancer is understood and treated. Precision cancer medicine is no longer a future ambition – it is reshaping standards of care across multiple tumour types and redefining what effective, personalised treatment can achieve. The European Union has demonstrated a strong political commitment to this transformation. Through initiatives such as Europe's Beating Cancer Plan and the EU Mission on Cancer under Horizon Europe, significant investment has been directed towards research, infrastructure, citizen engagement, data sharing, and innovation. These programmes reflect a shared ambition: to ensure that scientific breakthroughs translate into meaningful improvements in cancer prevention and patient outcomes across all member states.

Yet despite this progress, access to precision cancer medicine remains uneven across Europe. A patient's ability to benefit from molecular testing, biomarker-informed treatment decisions, and innovative targeted therapies too often depends on geography, infrastructure capacity, reimbursement pathways, or workforce expertise. Variability in diagnostic availability, data interoperability, regulatory alignment, and health system readiness risks widening inequalities rather than reducing them. Precision cancer medicine is not solely about innovative therapies; it depends on a functioning ecosystem. High-quality diagnostics, laboratory standards, digital infrastructure, data governance, multidisciplinary collaboration, reimbursement frameworks, and sustainable financing models must operate coherently and at scale. Without this systemic coordination, the promise of precision medicine cannot be fully realised.

At the same time, Europe faces pressing questions about value, affordability and sustainability. As precision oncology becomes more complex and resource-intensive, health systems must ensure that investment delivers measurable improvements in outcomes, efficiency, and equity. This report builds on discussions from a multi-stakeholder roundtable focused on three central priorities: strengthening the precision cancer medicine ecosystem; maximising the impact of EU investment; and delivering quality and value at scale. It argues that Europe's challenge is no longer whether precision cancer medicine works, but how to ensure that it works for everyone. Ensuring equitable access to precision cancer medicine is not simply a question of innovation policy. It is a test of Europe's commitment to solidarity, health equity, and high-quality care for all cancer patients. The opportunity now is to move from scientific leadership to systemic implementation, embedding precision medicine as a standard – not a privilege – across Europe's cancer care landscape. The full recording of the roundtable is available [on the roundtable webpage](#). A summary of the roundtable discussion, and arising policy recommendations follows.

What do we mean by 'Precision Cancer Medicine'?

Precision cancer medicine is an approach to cancer care that uses clinical, molecular, genomic, imaging and other patient-specific information to guide prevention, diagnosis, treatment and follow-up, with the aim of delivering the most appropriate intervention to the right patient at the right time. It encompasses not only biomarker-driven and targeted therapies, but also the integration of advanced diagnostics, imaging, image-guided local treatments, systemic therapies, multidisciplinary decision-making, and data-driven care pathways. Precision cancer medicine therefore seeks to personalise the entire cancer journey, ensuring that treatment strategies are tailored to the characteristics of both the patient and their disease while maximising outcomes, quality of life and healthcare value.

Working towards new Essential Requirements for Quality Cancer Care: Precision Cancer Medicine

Roundtable Co-chair **Rui Medeiros** began by explaining that the event was part of the European Cancer Organisation's (ECO) ongoing development of a future 'Essential Requirements for Quality Cancer: Precision Cancer Medicine'. This publication is the latest in a series of ECO papers to set out system-level recommendations to improve specific areas of cancer care. See more on the 'Essential Requirements' series [here](#). Roundtable Co-chair **Bettina Ryll** highlighted the depth of her personal interest in addressing the persistent equity challenge of accessing precision cancer medicine. Her entry point was the experience of supporting her late husband throughout his journey as a late-stage melanoma patient.

The precision cancer medicine eco-system

Co-chaired by **Rui Medeiros**, Deputy Director at the Research Centre, Instituto Português de Oncologia (IPO Porto) and **Leonie de Visser**, EMEA Disease Team Leader (Bladder), Johnson & Johnson Innovative Medicines.



The session opened with a presentation by **Bettina Ryll**, who shared her reflections about eco-systems for precision cancer medicine.

She emphasised that precision cancer medicine represents a profound socio-technical transformation rather than a purely scientific breakthrough. While commonly described as delivering ‘the right treatment to the right patient at the right time,’ this framing obscures the systemic reorganisation required to make it operational. Traditional health systems optimise for average outcomes in defined patient groups. **Precision medicine, by contrast, optimises for individual outcomes, challenging established regulatory, reimbursement and clinical decision-making structures.** This misalignment generates friction at every level of implementation.

Ms Ryll highlighted the ‘implementation-before-evidence’ paradox: health systems require strong evidence before reimbursing interventions, yet precision approaches often require broad implementation to generate the necessary real-world data. Current financing structures are ill-equipped to support this inversion.

Drawing on DRUP-inspired models, Ms Ryll described how structured implementation platforms can act as ‘system attractors’, aligning research, clinical practice, payers and policymakers. Successful examples show that implementation momentum often emerges when health policy intersects with industrial and research strategy.

Ministries of finance, economic affairs and innovation therefore represent critical but frequently overlooked stakeholders.

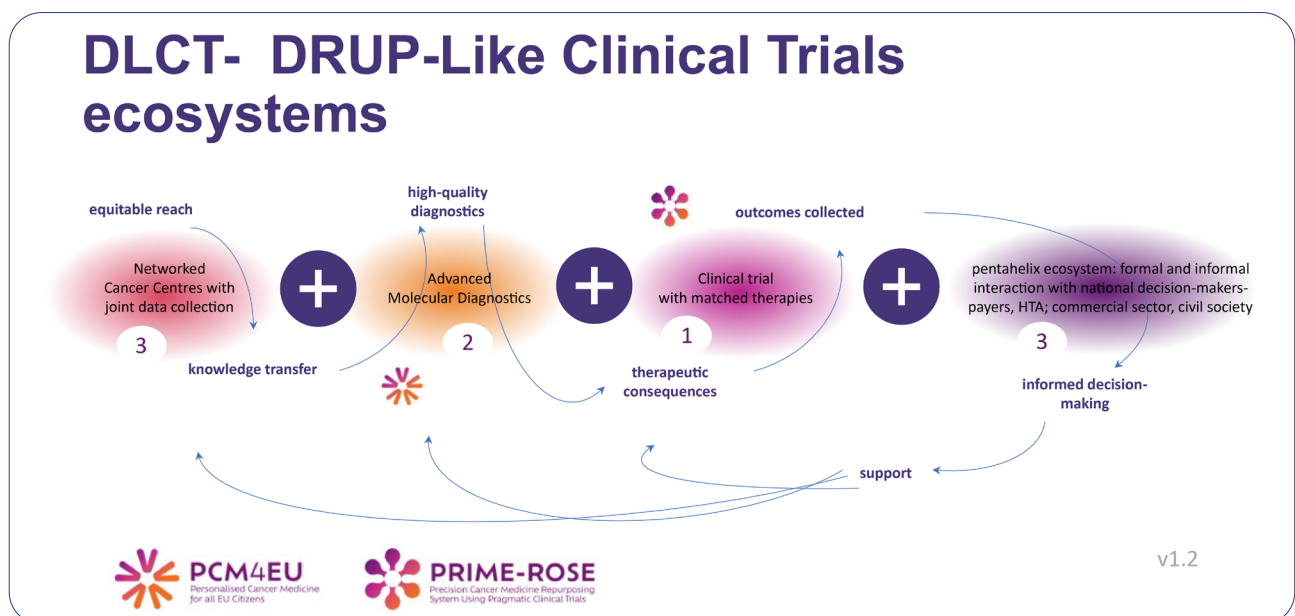
“**‘It’s not just about access; it’s about better outcomes. Access is an important piece, but we have to learn from every patient. In an ideal setting, every patient would contribute to our knowledge. For that you need a data capture system, but you also need supportive and collaborative decision-makers.’**

Bettina Ryll

A country-level perspective: A view from Vision Zero Cancer in Sweden

Ebba Hallersjö Hult

Ms Hallersjö Hult then shared some government and stakeholder perspectives on the introduction of precision cancer medicine in Sweden. She emphasised the importance of shared learning networks, national testbeds, and DRUP-like implementation studies as instruments for system learning. The future implementation of national



cancer mission hubs, as part of the EU Cancer Research Mission, can be an important instigator for improvement in this regard, emphasising the need to strengthen the links between the latest breakthroughs in treatment, and what national systems require to bring those innovations to the patient. She called for turning silos in evidence and data into systems of evidence and data, through higher-performing integrated data infrastructures.



'In Sweden, we really think that innovation only becomes meaningful when it is embedded in a system ready to absorb it.'

Ebba Hallersjö Hult

Experiences from the gastroenterology-sector: The Lynch syndrome case study

Prof Pierluigi Fracasso

In continuation, Prof Fracasso illustrated a precision cancer medicine implementation gap using the example of Lynch syndrome and microsatellite instability (MSI).

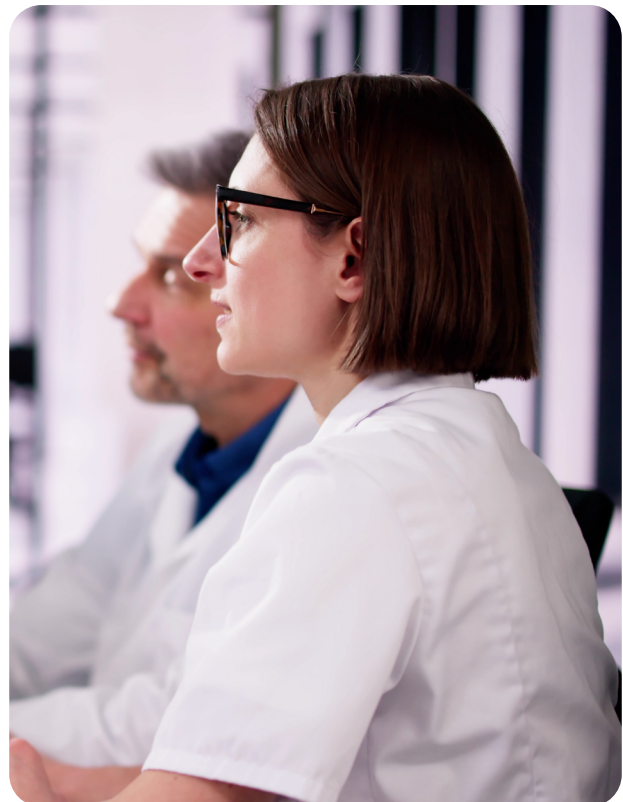
Patients with MSI-positive tumours show exceptionally strong responses to immunotherapy, including complete response rates approaching 60% in some studies. MSI/dMMR status is a predictive biomarker for checkpoint-inhibitor therapy.

Patients whose tumours are not tested may miss effective, sometimes practice-changing therapies.

Despite the relative simplicity of MSI testing, its routine adoption remains inconsistent across Europe. Prof Fracasso pointed to multiple barriers, including:

- Limited diagnostic capacity outside specialised centres
- Workforce shortages in pathology and molecular diagnostics
- Insufficient awareness among clinicians
- Cultural inertia within established treatment paradigms

This case exemplifies how precision cancer medicine can fail to meet its potential, not due to scientific uncertainty but due to structural under-implementation. Expanding access to molecular testing is therefore both a technical and organisational challenge.



Delivering in the regions – the role of European Regional and Local Health Authorities

Marco Di Donato

Mr Di Donato outlined an important shared goal for all stakeholders: making access to precision cancer medicine a standard of care for all and preventing such access from being a privilege of where a person lives. EUREGHA's viewpoint focuses on how to meet the complexity of implementing precision medicine in decentralised health systems. In many member states, regional authorities bear the responsibility for healthcare delivery, leading to heterogeneous adoption patterns.

He underscored several systemic challenges:

- Fragmented introduction of molecular diagnostics across regions
- Disconnect between therapy approval and biomarker reimbursement
- Budgetary pressures at regional level
- Limited coordination between governance layers

Mr Di Donato emphasised that precision cancer medicine does not align easily with traditional volume-based reimbursement systems. Instead, it demands value-based approaches and coordinated funding models that account for long-term patient benefit and system sustainability.

He also encouraged understanding that regional ecosystems can act as innovation laboratories, but to fully achieve this stronger cross-regional knowledge exchange and governance alignment is required. In concluding the session, Co-chair **Leonie de Visser** reflected on the panel's key messages and shared a message of hope: the number of cases using precision cancer medicine across Europe is growing steadily.

From the comments section

Exchanges with the roundtable audience before and after the event highlighted additional suggestions and recommendations, including:

'Lung cancer, particularly non-small cell lung cancer, illustrates both the promise and the access challenges of precision cancer medicine. Biomarker testing can guide access to targeted therapies; however, across Europe, patients may still experience delays, inconsistent testing pathways, and unequal access to treatments and clinical trials.'

'Reimbursement and implementation planning for precision oncology medicines should include the associated biomarker or companion diagnostic pathway from launch, so eligible patients can be identified without avoidable delay'

RECOMMENDATIONS

ON IMPROVING THE PRECISION CANCER MEDICINE ECOSYSTEM

- Health systems across Europe need to adapt more fully to the realities of the precision cancer medicine era. This includes strengthening modern knowledge-transfer processes through more closely networked cancer centres, coordinated data collection, and systematic use of outcome data to support evidence-based decision-making.
- This transformation should also be accompanied by greater consideration of value-based approaches to cancer care and innovation uptake. Such approaches depend on robust data, outcome measurement, and strong evidence-generating infrastructures.
- The emerging national Cancer Mission Hubs across Europe present an important opportunity to strengthen integrated data and evidence infrastructures. By supporting greater connectivity between cancer centres and facilitating evidence-informed uptake of precision cancer medicine, these hubs could play a significant role in accelerating progress across Europe.



Building on European investment in precision cancer medicine. Quo Vadis?

Co-chaired by **Bettina Ryll**, Lead of Work Package 6 (WP6) 'Social Innovation for Access to PCM (Precision Cancer Medicine)' in the PRIME-ROSE project, and **Dima Hamadeh**, Global Policy Strategy Director, Bristol Myers Squibb.

Jan-Willem van de Loo

The scene-setting opening presentation for the session was provided by **Jan-Willem van de Loo**. He outlined the comprehensive EU framework supporting precision oncology, anchored in the EU Beating Cancer Plan and the EU Cancer Mission, established under the EU4Health programme and Horizon Europe (2021–2027), respectively. He highlighted that the mission approach aims to deliver concrete, scalable outcomes rather than isolated research projects. Relevant investments that the EU has supported include:

- [The Joint Action on Personalised Cancer Medicine](#)
- [The network of Comprehensive Cancer Infrastructures](#)
- [The European Cancer Imaging Initiative](#)
- [The Innovative Health Initiative](#) public-private partnership

In outlining these investments, Mr. van de Loo explained how they foster integration between stakeholders and projects in the research, digital infrastructure, regulatory development, and implementation sectors.

However, he also cautioned that EU-level investment can only achieve lasting impact if member states commit to scaling project results into sustained national strategies. The conversion of EU guidelines and Council recommendations on cancer screening into concrete implemented programmes at country level is a good example.



EU Cancer Mission

Challenges

- 2.7 million people in the EU are **diagnosed** each year (↑)
- 1.3 million people **die** from cancer each year (↑)
- **Total cost of cancer** in Europe in 2018: €199 billion (↑)
- **Impact of COVID-19 pandemic** and war in Ukraine

Four Mission objectives

1. Understanding cancer
2. Prevention & early detection
3. Diagnosis and treatment
4. Quality of life

19 R&I priority areas, 5 transversal priorities:

equity, innovation, childhood cancer, personalised medicine, citizen engagement

Timeline: 2021-2030

EU-funding to date: EUR 480M

GOAL

Improve the lives of more than 3 million people by 2030, through prevention, cure and for those affected by cancer including their families, to live longer and better (jointly with the Europe's Beating Cancer Plan)*

Concrete actions

- governance
- **UNCAN.eu data platform*** – blueprint published
- **European Cancer Prevention Centre** – concept rejected
- **Network of Comprehensive Cancer Infrastructures*** - started
- **Cancer Patient Digital Centre*** – blueprint published
- **R&I and coordination support** – 62 projects launched
- **Synergies** – at EU, national, regional, and local level

EU Cancer Mission

Building synergies with EU and national initiatives

Europe's Beating Cancer Plan

EU Cancer Mission links R&I with health policy at EU and national level by:

- ✓ **EU4Health programme:** e.g. parallel topics on young cancer survivors
- ✓ **generating scientific evidence** around prevention, screening, early detection diagnosis, treatment, and quality of life;
- ✓ promoting **citizen engagement activities**;
- ✓ supporting creation of **Network of National Cancer Mission Hubs** in Member States and Associated Countries
- ✓ Creating links with **SAMIRA Action Plan**
- ✓ Creating links with **HE partnerships**

Horizon Europe

Horizon Europe builds synergies with other funding instruments and leverages private funding, e.g.:

- ✓ **EIC:** Accelerator (2023), Pathfinder (2025)
- ✓ **EIT-Health:** early detection
- ✓ **Partnerships:** co-creation topics with Innovative Health Initiative, cooperation EP PerMed and JA PCM, EP THCS
- ✓ **EU missions:** topic with Cities Mission to boost prevention (2025)
- ✓ **Cancer funders:** nat'l, regional, charities

Digital Europe

EUCAIM cancer imaging infrastructure, 1+MG initiative, Human Virtual Twins

Euratom

Radiation protection, health applications ionising radiation

National activities/investments

- ✓ **CZ** oncology institute - prevention centre and research institute (~EUR 400M)
- ✓ **HR** equipment for prevention, diagnosis, and treatment (EUR 85M)
- ✓ **GR** radiotherapy centre (EUR 30M)
- ✓ **BE** cancer plan
- ✓ **NL** cancer plan, PALLAS medical radioisotopes facility
- ✓ **DE** national cancer prevention centre
- ✓ **SE** mission approach to cancer
- ✓ **LV** comprehensive cancer centre

European Investment Bank:

Financial advisory services to support a network of comprehensive cancer infrastructures in widening countries

Driving improvements in the affordability and sustainability of innovative health technologies – the ASCERTAIN project

Peter Kapitein

Mr Kapitein built upon the presentation of Mr van de Loo by outlining the role of [the ASCERTAIN project](#). Funded by the European Union through the European Commission's Horizon Europe research and innovation programme, the project is part of the EU's wider effort to support:

- sustainable healthcare systems,
- equitable access to innovation,
- improved health technology assessment and reimbursement policy across Europe.

The project is coordinated by Erasmus University Rotterdam, with participation from a multinational consortium of universities, policy experts, healthcare economists, HTA specialists, patient representatives, and other stakeholders. ASCERTAIN is designed to improve patient access to precision cancer medicines by improving the way Europe evaluates, prices, reimburses, and pays for innovative health technologies (IHTs). Affordability and sustainability of precision cancer medicine are critical principles guiding the ASCERTAIN project.

Mr Kapitein related a similar challenge that the project faces as that described by Ms Ryll in the first session: to be able to securely achieve fair reimbursement systems, there needs to be proof that the treatments work. However, for this to be proven, the treatment needs to be used. This paradox needs to be broken, and the effective use of real-world data could play an important part in this solution.

An additional challenge impacting access to precision cancer medicines is the significant delay between the approval of a new medicine by the European Medicines Agency and its availability decision at national level. Despite clear enthusiasm for these treatments from patients and clinicians, the delays can range from 500 days (the Netherlands) to 900 days or more (Romania).



ASCERTAIN is aiming to assist in tackling this issue, including by reviewing different international pricing models, identifying good examples, and developing general principle conclusions. The consortium has been making the case for pricing models that better reflect affordability, uncertainty, real-world outcomes, and differences between health systems. ASCERTAIN has also been promoting lifecycle reassessment, adaptive reimbursement and outcome-linked payment models. Commentary in the event live chat highlighted France as a useful case study for the provision of early access schemes while further real-world evidence is gathered.



Improving precision cancer medicine access within the current EU political context

Roberta Savli

In 10 years, cancer will be the leading cause of death in Europe. This is the alarm sounded by Ms Savli in her opening remarks. Furthermore, with increasing incidence rates in working-age populations, the cost of cancer to national economies is also growing. For these and many other reasons, it is of utmost importance that the EU sustains its attention to strong cross-border cancer policy and maintains the commitments of Europe's Beating Cancer Plan and the EU Research Mission on Cancer into the future.

Responding to the previous contributions of the roundtable about the need to go much further and faster in the effective deployment of real-world data, Ms Savli highlighted the critical role the EU can play in this regard. A good example of this has been the EU-supported project HARMONY. It was created to solve a major European healthcare

problem: valuable patient data existed in many separate national registries, hospitals, clinical trials, and databases, but these datasets were fragmented and difficult to combine. The project set out to harmonise and analyse these data at scale to generate better evidence for treatment, research, and policymaking.

However, the full effectiveness of such efforts is greatly limited by the time-limited nature of EU support for such projects, which compromises their sustainability and reduces their long-term impact. Roberta recommended that the debate over the EU's next 7-year budget be an opportunity to address some of these inherent system weaknesses.

In summarising, Roberta recommended that the EU should play a crucial role in both shaping a positive ecosystem for access to precision cancer medicine and creating a less fragmented and more vibrant market than other regions of the world.

RECOMMENDATIONS

ON THE FUTURE OF EU SUPPORT FOR PRECISION CANCER MEDICINE ACCESS

- The European Union is already playing an important role in strengthening the pan-European response to challenges relating to access to precision cancer medicine. This includes significant support for cooperation between national agencies, as well as targeted initiatives in specific areas of oncology, including efforts to improve the use of real-world data. Speakers and panelists consistently identified real-world data utilisation as an area where continued EU support can deliver high added value.
- Initiatives under Europe's Beating Cancer Plan and the EU Cancer Mission were also recognised as highly relevant to improving access to precision cancer medicine, including further support for the networking of Comprehensive Cancer Centres in Europe. Greater use of these networks to support cooperation, knowledge exchange, and more standardised approaches could help reduce data fragmentation and unlock the full potential of high-quality real-world data use across Europe.
- At the same time, there is a need for more systematic lesson-learning and greater attention to areas where existing EU support mechanisms may not yet be operating at optimal effectiveness. Short-term projects that are not sustained or effectively followed through can limit long-term impact and reduce the value of investments made. The development of future EU-funded programmes under the next Multiannual Financial Framework could provide an opportunity to address these concerns and support more durable, strategic implementation.

Delivering quality and value for precision medicine at scale

Chaired by **Rui Medeiros**, Deputy Director at the Research Centre, Instituto Português de Oncologia (IPO Porto) & Board Member of the European Cancer Organisation.

Seán Kelly MEP

The session was opened via a recorded address by Seán Kelly MEP (EPP, Ireland). He underlined his political commitment to help achieve more equitable access across Europe to new and life-saving forms of treatment. He also promoted the need for sustained EU attention to cancer policy, including in the next EU multiannual financial framework period (2028-34).

He recommended that not only should Europe's Beating Cancer Plan and the EU Research Mission be continued, but also that fresh EU goals in this area be set, including access to precision cancer medicine.

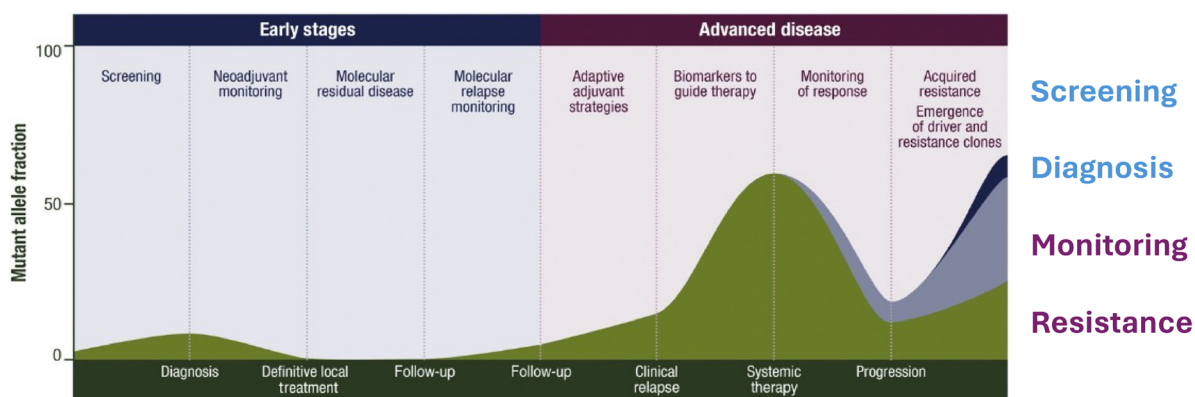
ctDNA-based diagnostics: precision cancer medicine at scale

Dr Elizabeth Cartwright

Dr Cartwright provided the case study of liquid biopsy access in the United Kingdom. A liquid biopsy is a broad term for tests that use bodily fluids (usually blood) to obtain information about a cancer without needing a surgical tissue biopsy. A liquid biopsy enables assessment of ctDNA (circulating tumour DNA). ctDNA has become especially important because it can provide detailed genomic information about a tumour from a simple blood sample.

This testing can be used for cancer diagnosis, setting well-attuned adaptive adjuvant strategies for treatment, providing biomarkers for guided therapy, monitoring response to treatment, and being better able to respond to acquired resistance and resistance clones.

ctDNA as a precision medicine tool



ctDNA, circulating tumour DNA.
Pascual J et al. *Ann Oncol* 2022;33(8):750-768.

The National Health Service (NHS) in England has made improved access to personalised medicine a priority in its current 5-year plan, and demands on its genomic medicine service are growing. A primary task in this regard is to provide consistent and equitable access to genomic medicine at population level. A dedicated genotyping infrastructure then delivers this service at scale. Seven genomic laboratory hubs (GLHs), operating under a common set of standards, give coverage to all NHS regions of England.

Within this framework, NHS England is supporting the roll-out of genomic medicine with a 'Circulating Biomarkers Network of Excellence'. The network takes an active role in assessing use cases of need, clinical validity and cost effectiveness of new blood-based/liquid genomic tests. It presents its results to NHS England for reimbursement consideration.

Dr Cartwright highlighted the value of biomarker testing for the treatment of cancers such as non-small cell lung cancer (NSCLC). A range of targeted therapies has now been approved in response to the known genomic biomarkers of these cancers.

Presenting a timeline of the typical non-small cell lung cancer patient journey, Dr Cartwright emphasised the need to reduce delays between the many diagnostic steps as much as possible.

NHS England's efforts to optimise genomic testing, especially ctDNA testing, are reducing the time from results to treatment. Findings suggest that ctDNA identifies more patients treatable with targeted therapies than tissue-based tests.

The Royal Marsden Hospital partnered with Guardant Health to develop the Marsden360 approach, an NHS-industry collaboration to advance ctDNA/liquid biopsy testing within routine cancer care and research. The assay analyses 74 genes within a biopsy and within a 10-day turnaround time.

This technology provides patients with better treatment timelines by avoiding repeated biopsies and related complications, reducing exposure to ineffective chemo-immunotherapy, and shortening pathway length. Importantly, the Marsden360 approach is not an isolated example: similar collaborations with Guardant Health have supported localised ctDNA testing models at Vall d'Hebron Institute of Oncology in Barcelona, through VHIO360, and Policlinico Universitario Agostino Gemelli in Rome, through FPG360. These examples illustrate how governed public-private partnerships can help scale timely, quality-assured liquid biopsy testing across different European health systems.

NHS England Genotyping Infrastructure



<https://www.england.nhs.uk/wp-content/uploads/2016/09/improving-outcomes-personalised-medicine.pdf>, <https://www.england.nhs.uk/wp-content/uploads/2022/10/B1627-Accelerating-Genomic-Medicine-October-2022.pdf>

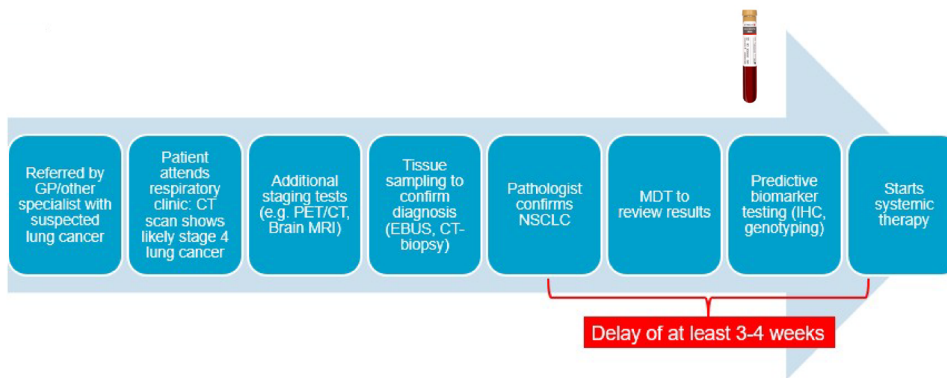
NHSE Circulating Biomarkers Network of Excellence

- Need** Patients, clinicians, clinical trials
- Providers** Pharmaceutical companies, diagnostics, universities/institutes
- Cost Benefit** Health economists
- Delivery** Genomic laboratory hubs, diagnostic labs, pathology, hospitals

Use Cases

- Non small cell lung cancer - gene panel
- Breast cancer - gene panel/ddPCR
- Hepatobiliary cancer - gene panel

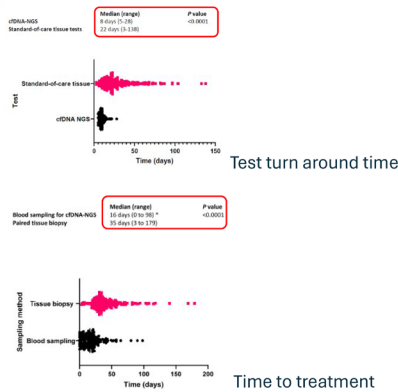
Genomic biomarkers for consideration of therapy in non small cell lung cancer (NSCLC)



Cui et al. EJC (2022)

*EMA not MHRA approved

ctDNA testing speeds up time to genotyping result & time to treatment

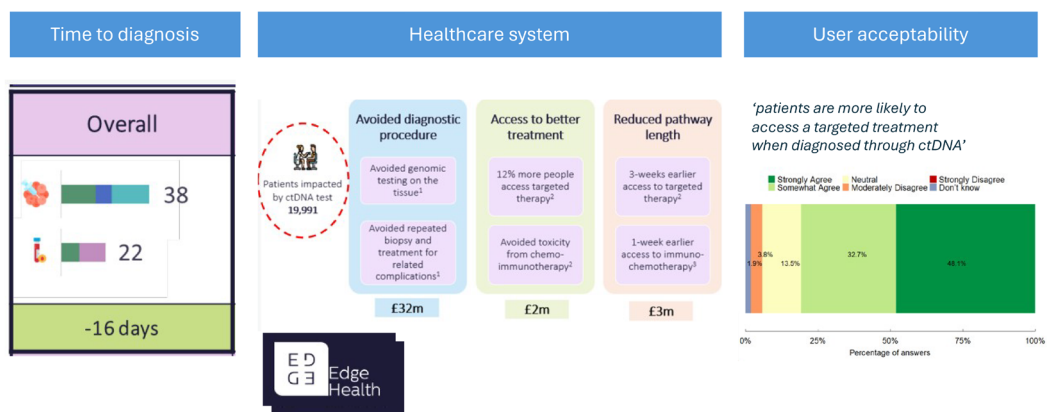


ctDNA NGS identified more patients druggable with targeted therapies than tissue NGS

		Tier-1 detection by tissue molecular tests		
		Yes	No	Total
Tier-1 detection by ctDNA-NGS	Yes	64 (75%)	39 (25%)	103
	No	21 (25%)	119 (75%)	140
	Total	85	158	243

Cui et al. EJC (2022)

NHSE GMSA transformation ctDNA pilot: impact



*Edge Health was commissioned by NHS North Thames Genomic Medicine Service in June 2023

These tests have now expanded to include ER+ advanced breast cancer with ESR1 mutation.

The Royal Marsden NHS Foundation Trust is also working with other hospital sites in the Greater London region to evaluate the addition of liquid biopsy into the diagnostic pathway for pancreatic cancer.

There is also hope for better guided treatment through the use of ctDNA for many other cancer types, including cancer of unknown primary, head and neck cancer, and prostate cancer.



From the comments section

Exchanges with the roundtable audience before and after the event provided additional suggestions and recommendations, including:

'National cancer strategies should ensure eligible patients have timely, quality-assured and reimbursed molecular testing, including comprehensive genomic profiling and validated tissue- or blood-based approaches where clinically appropriate, before treatment decisions'

'Access to biomarker testing and access to targeted treatment must be planned in tandem. Approving or reimbursing a therapy without ensuring timely access to the corresponding diagnostic test risks creating access in theory, but not in practice.'

Precision cancer medicine at scale: the Dutch experience

Professor Vera Deneer

Prof Deneer gave a brief overview of the global, European, and Dutch approach of the past 20 years in facilitating evidence-based introduction of precision cancer medicine. Like Spain and Canada, the Netherlands has developed a model of using multi-stakeholder expert groups to assess and consider evidence, and develop national guidelines in response. Such guidelines should encompass detailed dosing and therapeutic recommendations for specific gene-drug combinations.

She emphasised the need to ensure the right pharmacogenomic advice is available at the right point in a cancer patient's pathway, and the importance of integrating the pharmacist's expertise in treatment decisions and delivery. To aid shared decision-making and support the best interactions between patients and clinicians about treatment strategies, Prof Deneer also urged attention to the transportability of patient pharmacogenetic information and the standardisation of laboratory quality.

Precision cancer medicine at scale: a Portuguese example

Dr Júlio Oliveira

Dr Oliveira presented the case of IPO Porto, which treats around 10,000 new patients a year and follows more than 50,000 patients after initial treatment. It represents around a third of the cancer cases in the northern part of Portugal. Recognising the responsibility to ensure access to precision cancer medicine as part of patient care, IPO Porto developed its own precision cancer medicine programme.

Dr Oliveira's remarks resonated with other presentations and interventions in the roundtable, clarifying that delivering access to precision cancer medicine to patients at IPO Porto inevitably involves achieving good collaboration with other cancer centres and hospitals in the region and the country. This way, shared challenges can be tackled together, such as gaining agreement on standardised practices for biomarker testing. This

is not always quick or easy to achieve, but year-by-year improvement can be seen.

IPO Porto's precision cancer medicine access programme includes arrangements that enable centres beyond IPO Porto to access its molecular tumour board infrastructures by referring cases to it. This aligns with the centre's ambitions to be the heart of a high-performing comprehensive cancer care infrastructure for northern Portugal, and to play a leading role in boosting Portuguese national activity in clinical trial research.

As the roundtable moved towards summary and conclusions, Ms Ryll emphasised how the building and utilisation of networks of cancer centres can be seen as a fundamental part of creating a strong precision cancer medicine ecosystem. Additionally, to achieve scale on access, it needs to be easily replicable and not overly dependent on anything specific to a particular site or institution. Overall, access must be the driving goal for all stakeholders.



RECOMMENDATIONS

ON DELIVERING PRECISION CANCER MEDICINE AT SCALE

- Making faster progress in securing patient access to precision cancer medicine will require ongoing political ambition. This should be reflected in the future long-term EU health agenda.
- Case studies show how access barriers to precision cancer medicine can be overcome through dedicated and agreed-upon strategies that include the networking of cancer centres for joint delivery of solutions and greater standardisation in approach between centres.
- Multi-stakeholder expert groups can help in navigating the evidence challenges, implementing access arrangements according to shared standards and protocols, and improving education and understanding of precision cancer medicine access needs across the health system.

Glossary

Biomarker = An objective and quantifiable measure of a physiological process, pathological process, or response to a treatment.

Circulating tumour DNA (ctDNA) = DNA that comes from cancerous cells and tumours, found in the bloodstream.

Deficient mismatch repair (dMMR) = Mismatch repair (MMR) is the process where errors occurring during DNA replication are recognised and fixed. If cells have mutations in certain genes involved in MMR, dMMR occurs. dMMR cells usually have many DNA mutations, which may lead to cancer.

Genomics = The study of the complete set of genes (the genome) of organisms, of the way genes work, and of the way they interact with each other and with the environment.

Liquid biopsy = Liquid genomic tests = Tests that use bodily fluids (usually blood) to obtain information about a cancer without needing a surgical tissue biopsy, enabling the assessment of ctDNA. They are a type of molecular diagnostics.

Microsatellite instability (MSI) = Condition of genetic predisposition to mutations that results from impaired MMR.

Molecular diagnostics = Molecular testing = Laboratory methods used to identify a disease or the risk of developing a disease, such as cancer, by studying molecules (e.g. DNA, RNA) and proteins, in a tissue or fluid sample.

Personalised medicine = Precision cancer medicine = An approach to cancer care that uses clinical, molecular, genomic, imaging and other patient-specific information to guide prevention, diagnosis, treatment and follow-up, with the aim of delivering the most appropriate intervention to the right patient at the right time.

Targeted therapies = Drugs that specifically attack cancer cells by targeting their abnormalities, thus sparing healthy cells.

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.

Publication: June 2026



**Rue de la Science 41
1040 Brussels, Belgium**

+32 2 775 02 00

europcancer.org

Follow us:

