PRESS RELEASE

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Harnessing AI for Cancer Care:

Opportunities and Challenges

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18 November, Brussels – Artificial intelligence (AI) is rapidly transforming virtually every aspect of cancer care – from prevention and diagnosis to treatment and survivorship. Europe can become a global leader in AI and cancer if the technology is properly harnessed. But a Wild West scenario must be avoided.

That's why the European Cancer Organisation and its Digital Health Network are releasing ***Harnessing AI for Cancer Care in Europe.***

This report provides concrete advice, guidance and policy recommendations for European institutions and national governments to help unlock AI's competitive advantages while minimising possible risks.

The report explores how AI could make a profound difference across the full cancer pathway.

1) **Primary cancer prevention**
   AI can analyse genetic, environmental and lifestyle data together. It can provide guidance to prevent cancer long before symptoms appear.

2) **Earlier detection**
   AI can speed up screening results from days to hours while improving accuracy and reducing missed cancers, ensuring consistent, high-quality screening performance across all regions of Europe.

3) **Diagnostic precision**
   Deep-learning models train on hundreds of thousands of scans to detect lesions as tiny as a grain of sand. They can highlight suspicious areas, triage cases, and provide faster, more accurate diagnoses.

4) **Personalised treatment**
   AI has the potential to integrate tumour genomics, imaging, and real-world outcomes to build tailored treatment plans for each patient. It can help clinicians select the best treatment regimen and strategies with greater speed and precision.

5) **Rapid medicine development**
AI can identify the most promising compounds and targets for specific cancers, cutting months or years from traditional development cycles. It also uncovers new uses for existing medicines.

But with these unique benefits of AI come new risks, including:

A. **Lack of a flexible and quick evolving regulatory framework**
AI tools in cancer care are developing faster than the rules that govern them. Without standards that keep up with the innovation it is difficult to guarantee accuracy, accountability or patient safety.

B. **Clinical performance**
Many AI systems require further testing in real clinical settings. If hospitals adopt tools that are not fully validated, misdiagnoses and unsafe decisions become real risks.

C. **Bias and inequality in care**
If AI is trained on unrepresentative datasets, it can produce biased results. This risks giving some groups less accurate diagnoses or poorer treatment recommendations.

D. **Implementation barriers in hospitals**
Many health systems face challenges related to staff training and technical infrastructure needed to use AI effectively, leaving clinicians to struggle with interpreting AI outputs or integrating them reliably into care.

E. **Low trust from patients and clinicians**
People may hesitate to accept an AI-assisted diagnosis or treatment plan if they do not understand how the system works. Low confidence could delay treatment decisions or reduce adherence to medical advice.

So how do we best proceed?

As AI becomes integral to cancer care, the report says it is incumbent upon hospitals, policymakers, and industry to ensure adoption is safe, trustworthy and equitable.

The report calls for urgent action to keep Europe up to speed with global competitors and avoid losing ground to the US and China. It also stresses that the upcoming EU **Multi-Annual Financial Framework** for 2028-34 should prioritise AI investment in healthcare.

Key recommendations include:

1. **Establish clear national standards for AI in cancer care**, including specialty-specific validation frameworks and post-market monitoring developed jointly with oncology professionals and patient advocates.
2. **Invest in pan-European AI training initiatives** and set EU-level literacy targets—aiming for at least 50% of oncology professionals to be confident in AI use by 2030.

3. **Provide EU-wide guidance and independent reporting on GDPR and AI Act implementation**, ensuring continuous improvement through strong clinical and patient involvement.
4. **Leverage the European Health Data Space** to harmonise data infrastructures, modernise cancer registries and help Member States build robust and representative datasets.

Wim Oyen, Co-Chair of the ECO Digital Network and a member of the European Association of Nuclear Medicine, said: 'Institutional support from both the EU and its member states is key. We're calling for an EU budget that recognises the potential of artificial intelligence in healthcare and that allocates appropriate funding to address the challenges of its implementation, such as access and education. This is the only way to ensure competitive European health systems.'

Annemiek Snoeckx, Co-Chair of the ECO Digital Network and a member of the European Society of Radiology, said: 'We need new technologies that can save lives. But it is our responsibility to ensure this excitement does not blind us to the challenges ahead. Rushing AI could cost lives instead of saving them. It is up to all of us to ensure safe delivery.'

Alex Eniu, Co-Chair of the ECO Digital Network and a member of the European School of Oncology, said: 'Training for healthcare professionals must keep pace with AI's rapid evolution. Otherwise, we risk missing out on great possibilities and leaving professionals to deliver care without the necessary support.'

To explore this issue in greater detail, please join us this week at the European Cancer Summit and this dedicated session:

Artificial Intelligence and Cancer Care: A Paradigm Shift in Progress

Wednesday, 19 November, 16:20-17:35

Radisson Collection Hotel, Grand Place Brussels

And online

The report is available under embargo via this link. To arrange a telephone interview with the lead authors, please contact:

Alvaro Jimber,
Communication Officer
Alvaro.jimber@europeancancer.org
+32 465 64 25 73

About the European Cancer Organisation

The European Cancer Organisation (ECO) is the largest non-profit, multi-professional federation in Europe. It brings together hundreds of different professional societies and patient groups to advocate for more effective, efficient, and equitable cancer care.