

A unique European vision for Artificial Intelligence to fight Childhood Cancer

The consortium of UNICA4EU: Towards a UNIque approach for artificial intelligence data-driven solutions to fight Childhood cAncer FOR Europe is delighted to announce the start of this joint initiative, selected and granted by the European Commission.

Childhood Cancer represents the leading cause of death from disease for children and teenagers in Europe, with 35,000 children diagnosed every year and over 100 different cancer types to account for. The patient pathway in childhood cancer (from diagnosis to treatment and all through survivorship) is extremely complex and individualized:. although specific clinical and research frameworks addressing the needs of children and young people with cancer have already been addressed by health authorities and policy-makers at Member States and European level, the fact remains that childhood cancer is a rare disease and as such, there still exist profound issues around data scarcity, fragmentation and so-called "unconnected data silos".

Thus, the concept of a European Pediatric Cancer ecosystem must be built on collaboration and consider the role and unmet needs coming from key actors in the community: it must highlight patient benefit and seek to improve survivors' quality of life while protecting their fundamental rights, empower them and their families and caregivers to access standard and novel treatments, and foster the uptake of digital solutions among health practitioners. In this field, Artificial Intelligence (AI) techniques have the potential to become a game-changer for cancer care in the years to come. Still, they also bring critical





ethical and legal considerations that call for consensus among all stakeholders in the value chain of digital healthcare.

The vision of UNICA4EU is to set the basis of this ecosystem to facilitate the upscaling of Artificial Intelligence applications for pediatric cancer in the next ten years. This mission will be focused on how to bridge the current dichotomy between endorsing research and innovation in trustworthy and explainable AI, and advocating for best practices and strategic policy to boost its adoption in the healthcare sector.

Every healthcare interaction in the cancer patient journey generates precious, highly-sensitive data. UNICA4EU focuses on how AI interventions can effectively unlock hidden insights from all this data without losing sight of fundamental, ethical and legal rights. To successfully carry out this ambition UNICA4EU will:

- Strengthen the community around childhood cancer, integrating the clinical and technical perspectives and existing knowledge to create a solid foundation for accessing and sharing health data.
- Co-design a new EU-wide methodology to support secure AI-based interventions for childhood cancer under the highest medical standards.
- Identify a set of clinical use-cases that endorse trustworthy and reliable AI and address the inherent challenges in health data.
- Advocate for strategic policy contributions that expand on existing standards and guidelines to boost a roadmap for Al adoption in healthcare that caters to patients' and caregivers' needs and effectively protects their rights.

Collaboration is at the very core of UNICA4EU: it shines through the key institutions involved in this consortium and is further reinforced with the leadership of SIOP Europe—the European Society for Pediatric Oncology— and the participation of other European reference networks, like CCI Europe, ERN-PaedCan, ITCC and PanCare.

All in all, 15 partners from 8 European countries have come together to make UNICA4EU a reality – Join us in the fight against childhood cancer!

CONTACTS

Visit us at ww.unica4.eu



