



P I C T U R E

Design-based Data-Driven Decision-support Tools: Producing Improved Cancer Outcomes Through User-centred Research

“My dream is to improve healthcare systems all around Europe, with patients at the heart of all care. This requires thinking big. I am so happy to be involved in a dedicated team of researchers, designers, clinicians and patient advocates. A team that knows how to use Big Data and that has drafted a solid plan, targeting a web-based, user-friendly, open-source method and manual of MetroMapping, that includes support for decision making, and is freely accessible for all European hospitals and (future) patients.”

Ingeborg Griffioen (Cancer patient and Designer)

The central aim of the 4D PICTURE project is to transform cancer care delivery decision-making processes by redesigning care pathways and integrating evidence-based decision-support tools. Patients with cancer often have to make difficult decisions based on the risk profiles of their treatment options affecting quality of life and survival. There is much complex information that needs to be obtained and understood quickly. Data-driven decision support tools have the potential to assist patients in decision-making and improve personalised care and health outcomes. The EU funded 4D PICTURE project will further develop the novel Metro Mapping methodology (see MetroMapping.org/en/) to redesign care paths. To facilitate treatment decision-making, decision support tools (such as innovative predictive algorithms and AI-based models incorporating patient experiences and preferences) will be developed and incorporated in Metro Mapping. The methodology, including the decision support tools, will be developed for patients with breast cancer, prostate cancer and melanoma. They will be evaluated to ensure their ability to address medical, social and ethical issues.

4D PICTURE has a dedicated multi-disciplinary consortium, integrating health care research, data science, epidemiology, biostatistics, innovation and design research, health economics, implementation science, social sciences and humanities. The team is based in nine countries (Austria, Belgium, Denmark, Germany, the Netherlands, Slovenia, Spain, Sweden, and the UK). The involvement of patient representatives, clinicians and policymakers will lead to sustainable data-driven innovation.





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The table below gives an overview of all partners.

Participant organisation name	Country	Type of organisation
Erasmus University Medical Center Rotterdam	Netherlands	Research, clinic
Universidad de Zaragoza	Spain	Design, Research
Umit- Private Universität für Gesundheitswissenschaften, Medizinische Informatik und Technik GmbH	Austria	Research
Technische Universität Muenchen	Germany	Research
Leiden University Medical Center	Netherlands	Research, Clinic
Institute of Oncology Ljubljana	Slovenia	Research, Clinic
Region Hovedstaden	Denmark	Research, Clinic
Panton BV	Netherlands	Design, SME
Region of Southern Denmark	Denmark	Research, Clinic
Fractal Strategy Sociedad Limitada	Spain	Design, SME
Region Stockholm	Sweden	Research, Clinic
Charite - Universitaetsmedizin Berlin	Germany	Research, Clinic
European Cancer Organisation	Belgium	Policy; Patient Organisation
Kolding Design School	Denmark	Design, Education
Health Research Institute of Aragon	Spain	Clinic
University of Lancaster (Associated partner)	UK	Research

