

Irish-led FAITH Project team heads EU-wide ‘Cancer Survivorship – AI for Well-being’ cluster

- Breast cancer patients at UPMC Whitfield Hospital will be participating in the study**

Internationally-renowned researchers at Waterford’s Walton Institute have now teamed up with a cluster of experts with a similar focus to further progress work on a ground-breaking research project which uses artificial intelligence (AI) to predict depression in cancer patients and ultimately improve their quality of life post treatment.

The FAITH project, coordinated by Walton, aims to monitor a range of established depression markers via survivors’ smartphones e.g. activity, nutrition, sleep, voice. The goal is to develop a model that leverages these markers to predict depression, ultimately improving their quality of life and aftercare.

As many as one in five cancer sufferers experiences depression and mood change post diagnosis. Researchers at the Walton Institute coordinating the ‘Cancer Survivorship – AI for Wellbeing’ cluster formerly headed up the **Federated Artificial Intelligence solution for monitoring mental Health status after cancer treatment (FAITH)** project which completed much of the project groundwork.

A partner of the FAITH consortium, TFC Research and Innovation Limited, is coordinating the ‘Cancer Survivorship – AI for Wellbeing’ cluster. This brings together the FAITH team and four other EU-funded teams focused on healthcare and well-being. Working together, they are helping each other to collect, share, and understand early feedback from end-users on the solutions they are developing.

Walton Institute, formerly the Telecommunications, Software and Systems Group (TSSG), is the principal coordinator leading all management and technical oversight of the project’s delivery. They are partnering with medics at the nearby UPMC Whitfield and cooperating with breast and lung cancer patients at the Waterford hospital to see how their work can benefit patients who have undergone treatment.

As part of the FAITH project, UPMC Whitfield Hospital will actively support the trial and testing phase of the project. The hospital will be the main Irish pilot test trial site and it will actively participate in the initial requirements gathering phase.

The FAITH project will boost the adoption of best practices of participatory research in Artificial Intelligence for healthcare and well-being for the benefit of EU citizens. Tom Flynn (TFC Research and Innovation Limited) who leads the 'Cancer Survivorship – AI for Well-being' cluster said: "We have a motto - We don't work in silos!. The Cluster was formed to share ideas and understanding amongst the engaging projects. They were brought together by common interest in the issues of mental health, well-being, depression and patient support. Collectively, the Cluster shares knowledge and understanding through the adaptation of a highly user-centric approach. Thus, in particular the beneficiary will be the patient," he said.

FAITH's Technical Manager, Phillip O'Brien, said: "At the kick-off meeting for FAITH I repeated a famous Henry Ford quote: 'Coming together is a beginning. Keeping together is progress. Working together is success.' This ethos is at the core of the project and is evidenced in the creation of this cluster. Collaboration, rather than just a buzzword, is the catalyst for real impact."

The cluster is engaging external stakeholders and end-users to obtain their views, and to verify and validate the ongoing work of the engaging projects. It is organising a series of "Meetings of Minds" events, two of which will take place later in 2021, to have research projects meet key stakeholders.

In addition, it aims to run an industry-focused event in 2021 to showcase the ongoing projects' work and obtain early feedback on it. Furthermore, the cluster intends to strengthen the wider take up and interest in the outcomes of the participating projects. Finally, the projects will also explore together possibilities for industrial uptake of their outcomes.

The cluster team also includes MENHIR, Mental health monitoring through interactive conversations MENHIR; ONCORELIEF a digital guardian angel enhancing cancer patient's wellbeing and health status improvement following treatment and LifeChamps: A Collective Intelligence Platform to Support Cancer Champions.

The other partner is QUALITOP: Monitoring multidimensional aspects of QUALity of Life after cancer ImmunoTherapy, an Open smart digital Platform for personalized prevention and patient management.

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About the Cluster Partners:

- FAITH (h2020-faith.eu) is aiming to create an innovative solution supporting cancer patients' quality of life. To this end, the project uses Artificial Intelligence based technologies to track targeted depression markers. By monitoring downward trajectories in these markers, FAITH can ultimately alert cancer survivors' point of care of these declines, allowing them to provide adequate support to cancer survivors.
- **MENHIR:** The MENHIR project (menhir-project.eu) aims to explore the possibilities of conversational technologies (chatbots) to understand, promote and protect mental health and assist people with anxiety and mild depression manage their condition. MENHIR chatbot technology will provide symptom and mood management, personalized support and motivation, coping strategies, mental health education, signposting to online resources and complementing the support received by local services.
- **ONCORELIEF: A digital guardian angel enhancing cancer patient's wellbeing and health status improvement following treatment** Advances in early diagnosis and cancer therapy have greatly improved chances of cancer survival. A big challenge is to ensure survivors have the best possible quality of life. ONCORELIEF (oncorelief.eu) is bringing together the latest technological advances and occupational psychology/health sciences to develop a user-centred artificial intelligence (AI) system to create an intuitive smart digital assistant called Guardian Angel that will help cancer survivors remain engaged on their wellness journey.
- **LifeChamps: A Collective Intelligence Platform to Support Cancer Champions.** LifeChamps (lifechamps.eu) aims to provide support to middle aged and older (pre-frail and frail) cancer patients. It has developed a big data-driven solution with an artificial intelligence (AI) and analytics engine that can offer timely and accurate clinical decision support. This new tool can identify the factors that affect quality of life of a patient, offering personalised healthcare services as regards symptoms monitoring, treatment, and rehabilitation.
- **QUALITOP: Monitoring multidimensional aspects of QUALITY of Life after cancer ImmunoTherapy an Open smart digital Platform for personalized prevention and patient management.** QUALITOP (h2020qualitop.liris.cnrs.fr) aims at developing a European immunotherapy-specific open Smart Digital Platform and using big data analysis, artificial intelligence, and simulation modelling approaches. This will enable collecting and aggregating efficiently real-world data to monitor health status and quality of life of cancer patients given immunotherapy, in the end providing "real-time" recommendations stemming from patient profiles and feedbacks via the Smart Digital Platform.
- About UPMC in Ireland - A \$23 billion healthcare provider and insurer, Pittsburgh, Pennsylvania-based UPMC is inventing new models of patient-centred, cost-effective, accountable care. Providing high-quality healthcare in the South East since 2006, UPMC's operations in Ireland now include UPMC Whitfield Hospital in Waterford, UPMC Kildare Hospital in Clane and UPMC Aut Even Hospital in Kilkenny. Outpatient care is available at the UPMC Carlow Outreach Centre, UPMC Hillman Cancer Centre radiotherapy locations at UPMC Whitfield and in Cork, the UPMC Sports Medicine Clinic at WIT Arena

and the UPMC Concussion Network. UPMC is the Official Healthcare Partner of the GAA and GPA.