MATER – MONITORING MENTAL HEALTH IN BREAST CANCER

MSCA matchmaking webinars

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Luxembourg
LUXEMBOURG INSTITUTE OF HEALTH

- Public biomedical translational research organisation (≈ 500 staff members)

- Aiming to develop **new diagnostics, preventive strategies, innovative therapies** and **clinical applications** to improve the healthcare of European citizens

- 3 research departments:
  - Infection and Immunity
  - Cancer research
  - **Precision Health**
The Department of Precision Health (DOPH) is an interdisciplinary research centre focusing on clinical, epidemiological and public health research across a wide range of areas including digital health, lifestyle, nutrition, biomarkers, socioeconomic inequalities and human biomonitoring.

By the evidence we generate, we aim at tackling the major causes of morbidity and mortality, improving quality of life and informing clinical and public health guidelines.
Digital Health As A Systemic, Transversal Research Axis

11 research units on real-world evidence, epidemiology, public health & prevention

Use of digital technologies to develop digital biomarkers & digital endpoints

Tools development & validation
Setting up e-cohorts & e-clinical studies
Patient & population monitoring
Disease prevention
Prediction of disease evolution
Healthcare & patient support
Decision making

Cancer
Immune-related Diseases
Cardiometabolic Health
Neurodegenerative disorders
Mental Health
COVID-19 & Long COVID
Orthopaedic Conditions
OUR TEAM

A complementary team (epidemiology, digital health, AI, audio signal processing, communication, business development)
RECENT PUBLICATIONS

Methodological framework & pipeline to discover and validate vocal biomarkers

Vocal biomarker for monitoring symptoms in patients with COVID-19

Voice and cough-based screening tool for COVID-19

**Voice for Health: The Use of Vocal Biomarkers from Research to Clinical Practice**

Guy Fagherazzi, Aurélie Fischer, Muhamad Ismael, Vladimir Despotovic

Recommendations for Successful Implementation of the Use of Vocal Biomarkers for Remote Monitoring of COVID-19 and Long COVID in Clinical Practice and Research

**PLOS DIGITAL HEALTH**

A voice-based biomarker for monitoring symptom resolution in adults with COVID-19: Findings from the prospective Predi-COVID cohort study

Guy Fagherazzi, Lu Zhang, Abir Elbeji, Eduardo Higa, Vladimir Despotovic, Markus Oberthaler, Gioia A. Agwu, Petr V. Nazarov, Aurélie Fischer

**Detection of COVID-19 from voice, cough and breathing patterns: Dataset and preliminary results**

Vladimir Despotovic, Muhamad Ismael, Mael Cornil, Roderick Mc Call, Guy Fagherazzi
Main aim: improve the detection and monitoring of mental health in women with breast cancer using vocal biomarkers

Objectives:
- Identify the most important symptoms in the deterioration of the mental health of these women
- Automatically estimating these symptoms using voice descriptors extracted from real-life recordings and machine learning pipelines will make it easier to monitor them in the patients' homes

What are we looking for?
- Skills in one of the following fields: health data science, AI, biostatistics, audio signal processing, epidemiology

Remark: these are open for modification (co-design principle with the selected candidate)
A worldwide, multi-lingual, screening platform for vocal biomarker with annotated clinical and health data Diabetes, Cancer, Cardiovascular Disease, COVID-19, Mental Health...

www.colivevoice.org
THANK YOU

More about us here

https://www.lih.lu/

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