

# HEAL Italia “Health Extended Alliance for Innovative Therapies, Advanced Lab-research, and Integrated Approaches of Precision Medicine.”

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## Partnership

- Fondazione Heal Italia – *HUB*
- Università degli studi di Pisa – *Leader Spoke 8*
- University of Pittsburgh Medical Center Italy – *Affiliate Spoke 8*

**Total cost of Intervention € 1,550,000.00**

**NRRP contribution € 1,007,500.00**

The HEAL ITALIA partnership aims to establish a broad health care alliance focused on innovative therapies, advanced laboratory research, and integrated precision medicine approaches. HEAL ITALIA is built upon a multidisciplinary network of laboratories, clinical research centers and enterprises sharing knowledge and technology to achieve fast results and improve the quality of health care. This program combines basic and translational research with technology transfer, leveraging the expertise of key stakeholders in the academic, clinical, and private sectors.

The overall objective of the project is to provide new, economically viable, predictive, and non-invasive diagnostic pathways to enable faster, earlier, and more accurate diagnoses, facilitating new innovative and effective therapeutic approaches. The project is committed to establishing permanent thematic networks to support research in the field of precision medicine.

HEAL ITALIA is structured in distinct sectors highly interconnected on both a technical and translational level: Holistic Nosology, Intelligent Health, Prediction models, 4D Precision Diagnostics, Next-Gen Therapeutics, Healthy Toolbox, Prevention Strategies, Clinical Exploitation.

UPMC is actively involved in Spoke 8: Clinical Exploitation, focusing on the clinical validation and implementation of innovative predictive, preventive, diagnostic, and therapeutic precision medicine approaches based on established or emerging clinical phenotyping and AI-driven decision protocols. This part of the project aims to validate and implement in the clinical setting innovative predictive, preventive, diagnostic, and therapeutic solutions, as well as precision medicine approaches. The specific goals include:

1. **Provide demonstrable evidence of the clinical utility of new strategies supported by a robust preclinical background.**
2. **Enhance prognostic and risk stratification capabilities to enable early and necessary interventions while avoiding unnecessary treatments.**
3. **Optimize the use of available resources to prevent treatment-related toxicity, while expanding the expected benefits in appropriately selected patients.**

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## HEAL Italia “Health Extended Alliance for Innovative Therapies, Advanced Lab-research, and Integrated Approaches of Precision Medicine.” *continued*

UPMC has engaged some of its top researchers to achieve the strategic goals outlined in the project. Researchers are conducting important clinical studies on the target population, focusing on risk management and the chronic care of vulnerable patients, such as solid organ transplant recipients. Prospective studies will include innovative laboratory aspects aimed at enabling rapid translation into clinical practice.

The studies include:

- **MetabOLiKT, Impact of metabolic syndrome in a large cohort of liver and kidney transplant recipients.** The primary goal of this study is to assess, in a large cohort of liver and kidney transplant recipients, the impact of cardiovascular risk factors and metabolic disorders on patient and graft survival. The secondary goal is to identify a group of high-risk patients for cardiovascular events and metabolic disorders, in order to design specific nutritional programs immediately after transplantation.
- **METHEORIT - Metabolic Hepatitis Over-Risk associated with Immunosuppressive Therapy.** The objective is to detect steatosis and/or liver fibrosis in transplant patients with diabetes or prediabetes using transient elastography and testing serum biomarkers indicating chronic inflammation and/or a prefibrotic state, in order to evaluate whether the combination of diabetes mellitus and immunosuppressive medications increase the risk of developing liver metabolic diseases (NAFLD/NASH) in transplant recipients.
- **KIND study:** The role of the Kidney-brain axis and Dysmetabolism In Neurodegeneration. The study aims to test the hypothesis that reduced kidney function triggers cognitive impairment through a dysregulation of the systemic metabolism of  $\beta$ -amyloid and a decrease in the production of antiaging factor Klotho.