

HEAL ITALIA

Health Extended Alliance for Innovative Therapies, Advanced Lab-research,
and Integrated Approaches of Precision Medicine (PE_00000019)

Bando a cascata Partenariato Esteso “Health Extended Alliance for Innovative Therapies, Advanced Lab-research, and Integrated Approaches of Precision Medicine - HEAL ITALIA, a valere delle risorse del Piano Nazionale di Ripresa e Resilienza (PNRR) Missione 4 “Istruzione e Ricerca” – Componente 2 “Dalla Ricerca all’Impresa” – Investimento 1.3, finanziato dall’Unione europea – NextGenerationUE, a valere sull’Avviso pubblico del Ministero dell’Università e della Ricerca (MUR) n. 341 del 15.03.2022

SPOKE N. 7 – UNIVERSITÀ POLITECNICA DELLE MARCHE

**PREVENTION STRATEGIES – INTEGRATED AND GENDER MEDICINE APPROACHES
FOR PREVENTION STRATEGIES BASED ON ENVIRONMENTAL, LIFESTYLE AND
CLINICAL BIOMETRIC DATA**

ALLEGATO A **Approfondimento Tema 3**

ENGLISH VERSION:

For detailed information on the Research and Innovation Themes of Spoke 7, please refer to Annex 2 of the call for proposals.

Topic 3. Support to activities related to AI and Machine Learning

The focus of this Research TEMA is the Artificial Intelligence and Machine Learning Services required by Tasks 1.4 in WP1 and Task 4.3 in WP4. Task 1.4 “Head and neck oncological predictive medicine by artificial intelligence omic analysis” will require AI services in order to correlate single-cell transcriptomic data and next generation sequencing data obtained from HNSCC samples, in order to define specific phenotypes. Task 4.3 “Multi-omics and AI approach in rare diseases: implementing an innovative diagnostic pathway and precision medicine tool for fibrotic diseases” will require AI services in order to integrate novel single cell data, conventional laboratory data, imaging data and clinical data from each patient into new algorithm models enabling stratification of risk of developing fibrosis and progression to severe forms of fibrosis.

Also, other WPs of SPOKE 7 may require AI and Machine Learning approaches to refine novel algorithms enabling prediction of disease onset and progression, and/or subsequent definition of novel disease prevention strategies.

Upon this background, successful application will have to demonstrate the ability to positively support most of these activities, in a “fee for service” fashion, interacting with the different scientific groups, e.g. the scientific group dedicated to task 4.3 and task 1.4 and eventual other tasks, which will provide their data to the successful applicant in order to obtain novel algorithm prototypes useful for the development of new prevention tools.