CARDIATEAM

CARdiomyopathy in type 2 DIAbetes mellitus

Coordinator

Institut National de la Sante Et de la Recherche Médicale (INSERM)

France

Hospices Civils de Lyon Investigator

Dr. Cyrille BERGEROT

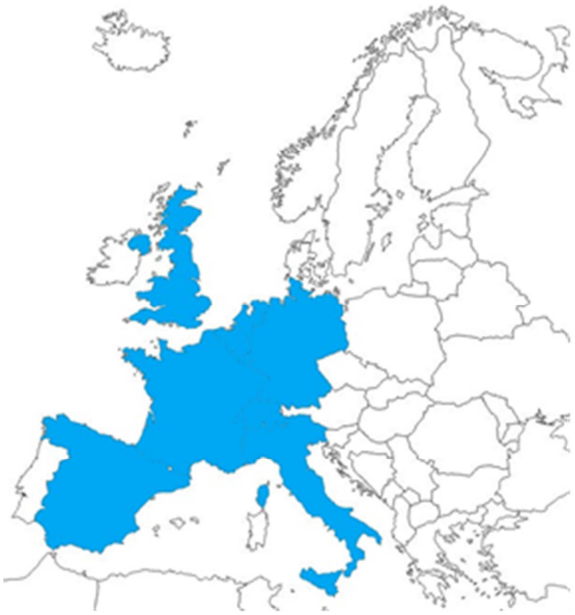
Hôpital Louis Pradel
Hôpital de jour cardiovasculaire

Total Budget

7,29 M€

Hospices Civils de Lyon Budget

202,708.75€



A better understanding of the link between Type 2 Diabetes and "diabetic cardiomyopathy" for a better treatment.

Type 2 Diabetes (T2DM) becomes endemic in the population and includes serious comorbidities such as heart diseases. One of the most common cardiovascular diseases in T2DM patients is heart failure. The aim of CARDIATEAM is to determine whether T2DM represents a central mechanism contributing to the pathogenesis and progression of a specific cardiomyopathy, called "diabetic cardiomyopathy" (DCM), assessing whether DCM is unique and distinct from the other forms of heart failure.

To achieve this aim CARDIATEAM will build up a deeply phenotyped cohort, including an innovative imaging protocol, based on privileged access within the CARDIATEAM to already existing highly pertinent cohorts of diabetes and heart failure patients and control groups. Central biobanking of the cohort samples will allow detailed comics analysis that will feed together with the phenotype and imaging data into the central CARDIATEAM database.

The data gathered will enable unsupervised machine-learning for clustering this heterogeneous population on phenotypic differences beyond diabetes. State-of-the-art big-data processing techniques and disease modelling will allow for controlling for common confounders such as BMI, smoking, age and blood pressure and will finally lead to the identification of new imaging and molecular biomarkers as well as understanding the taxonomy of the development and progression of DCM. Tailored preclinical models will be developed to explore the identified pathways revealing new therapeutic targets.

The results of CARDIATEAM will be able to impact clinical care with the stratification of patients into risk groups of developing DCM, earlier diagnosis of DCM and an improvement of therapy thanks to better assessment of underlying pathophysiology and identification of new biomarkers.

Timeline of the project

1st March 2019 — **60 months** — **22 beneficiaries** — 29th February **2024**