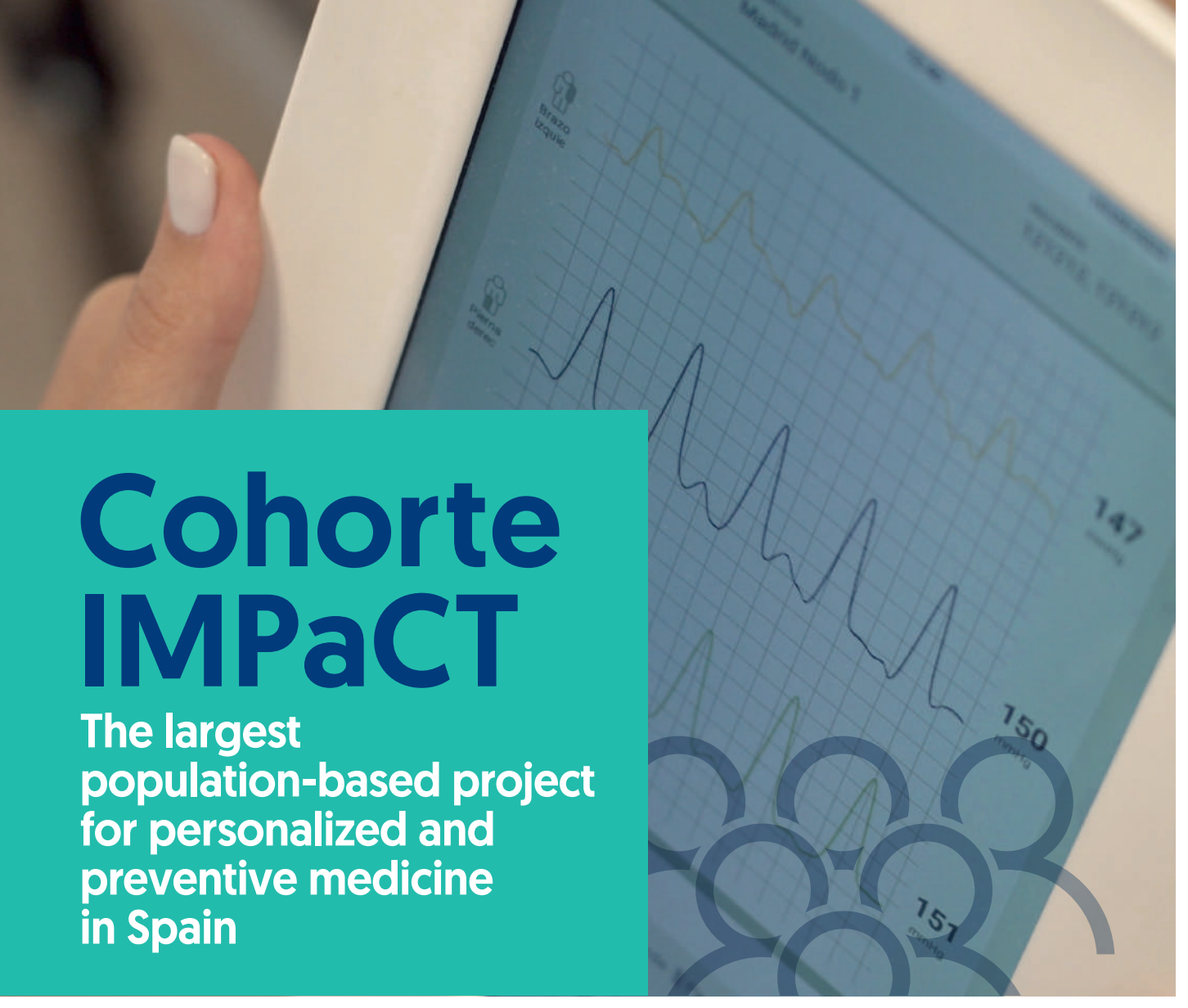


Cohorte IMPaCT

The largest population-based project for personalized and preventive medicine in Spain

MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

Instituto de Salud Carlos III

ciber CENTRO DE INVESTIGACIÓN BIOMÉDICA EN RED

IMPaCT Cohorte



The Spanish project Cohorte IMPaCT will monitor participants by **integrating their lifestyle habits with physical assessments, genetic information, and clinical data**. In this way, we will gain a better understanding of the role of personal, environmental, contextual, and genetic factors—and the interactions among them—in the development and progression of diseases. Our goal is to enable **personalized prediction and prevention strategies** in the future.



Cohorte IMPaCT

Cohorte IMPaCT is the Spain's large-scale population cohort: a **national infrastructure** that brings together clinical, epidemiological, physical assessment, and biological sample data from **200,000 persons** representative of the entire Spanish population, who will be followed over time to better understand the causes of disease.

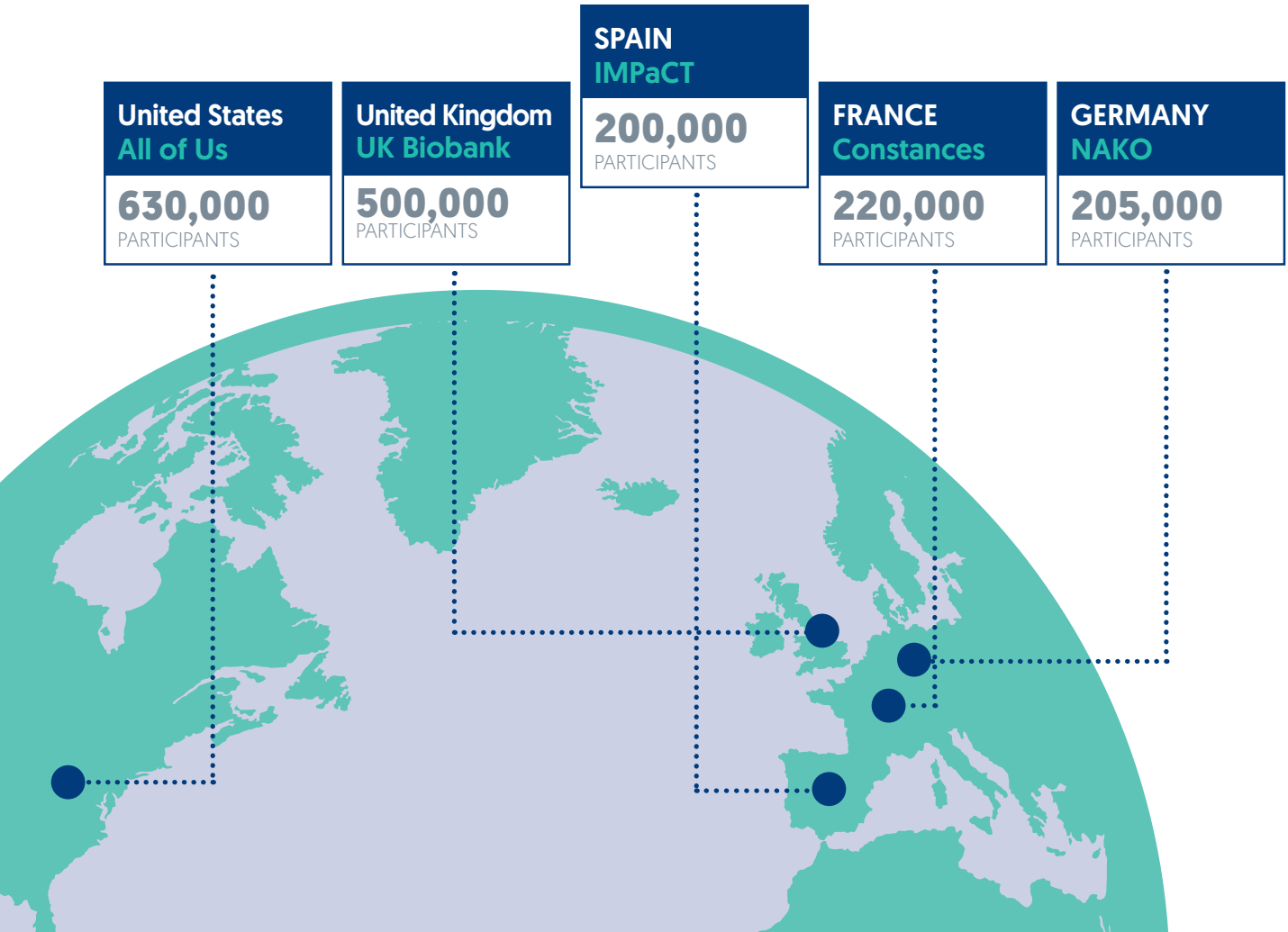
Its goal is to **improve prevention and advance personalized medicine**, positioning Spain at the forefront of international research while connecting science, technology, and society.

The project will provide a unique opportunity to understand how **genetic susceptibility** and the **specific characteristics** of the Spanish population and environment, including **lifestyle habits**, dietary patterns, environmental exposures, socioeconomic conditions, and healthcare experiences, contribute to the development of **major diseases and health conditions**.

At the same time, the Cohorte IMPaCT will deliver a representative picture of **Spain's genetic diversity**. It will contribute genomic data to major European initiatives such as **1+ Million Genomes (1+MG)** and **Genome of Europe (GoE)**, strengthen links with leading international cohorts and genomic initiatives, and opening new opportunities for global research.

Its findings will help design more effective prevention strategies, reduce the burden of disease, and improve health outcomes for future generations in Spain and beyond.

As one of Europe's largest population-based research infrastructures, the Cohorte IMPaCT will strength Spain's contribution to global biomedical research and provides an essential resource for addressing future health challenges.



A Paradigm shift: Precision Preventive Medicine

Preventing disease requires **knowing its causes** in the broadest sense: biological factors, including genetics, but also **lifestyle habits**, environmental exposures, social determinants, and, especially, the interaction of all these factors throughout the lifetime.

Understanding why people develop disease, and why some individuals remain healthy under similar conditions, is one of the biggest scientific challenges of our time. The Cohorte IMPaCT will provide the knowledge needed to move from treating disease to prevent it.

Access to information from many people will make it possible to account for the **diversity of exposures and lifestyles** to develop personalized models that estimate disease risk at the individual level.

Thanks to the Cohorte IMPaCT, Spain will have a **major public health research infrastructure open to researchers from Spain and abroad**. This resource will allow the scientific community to better understand how to prevent major diseases, age-related decline, injuries, and disability, with findings directly applicable to our population.

> This represents a major leap forward for Spanish preventive medicine, whose impact will be reflected in improved population health in the years to come.

Objectives

The Cohorte IMPaCT is a key instrument for improving our understanding of the causes of **major diseases and health conditions**. It will:



1 Help **monitor the health status** of people living in Spain, with particular attention to health inequalities (**precision public health**).

2 **Predict the risk of disease** and other health conditions (**precision preventive medicine**).

3 Facilitate the **identification of biomarkers** of subclinical or early-stage disease, as well as biomarkers of specific phenotypes useful in clinical practice (**precision clinical medicine**).

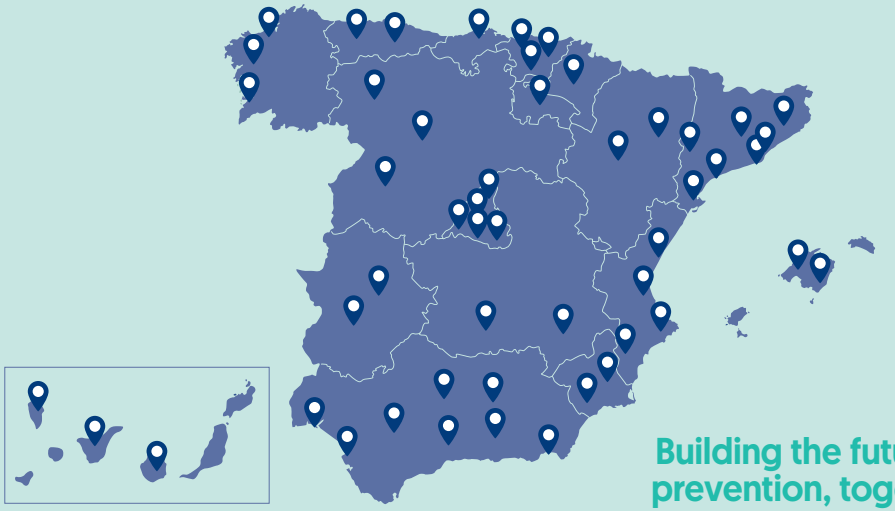
A project for the whole Spanish Country

The IMPaCT Cohort is one of the largest citizen participation initiatives in Spanish health research. The voluntary contribution of **200,000 participants** will create a unique scientific resource benefiting all citizens.

All Spanish Autonomous Communities participate through their Regional Health Services, together with the Spain's National Statistics Institute (INE) and more than 20 collaborating organizations, including health research institutes and foundations.

The study is conducted through **51 nodes** across rural and urban areas nationwide. At each center, 4,000 individuals aged 16 to 79 are randomly selected and invited to participate.

The Cohorte IMPaCT has been developed through the coordinated efforts of **59 research groups** contributing their expertise and scientific knowledge.



Building the future of prevention, together.

17 Autonomous Communities

51 nodes

59 research groups

23 partner organizations

200,000 participants

The crucial role of Primary Care

Primary care is at the heart of the Cohorte IMPaCT project.

IMPaCT nodes are integrated into **primary care centers**, where the project's technical staff work alongside healthcare professionals to recruit and follow-up participants.

Thanks to its close relationship and trust with citizens, primary care ensures **rigorous, representative, and high-quality data collection**, integrating clinical, social, and environmental information.

In the Cohorte IMPaCT, primary care multiplies the value of the project by **bringing science closer to society** and making preventive and personalized medicine possible—for everyone.



Primary care thus becomes a key player in the largest population health research initiative ever conducted in Spain. Researchers in primary care and public health provide scientific leadership that drives the project forward.

What information does the Cohorte IMPaCT collect?

Each participant completes a **comprehensive epidemiological questionnaire** covering nearly every aspect of life, including sleep, mental health, nutrition, employment conditions, and many other factors. Participants also undergo a **physical examination** as part of the study.

Anthropometric Assessment

- Height and weight
- Bioelectrical impedance
- Hand strength
- Muscular and adipose tissue ultrasound measurement

Cardiovascular Assessment

- Electrocardiogram (ECG)
- Ankle-brachial index
- Ambulatory blood pressure monitoring
- Echocardiography

Biological samples

Blood, urine, and nail samples stored in the ISCIII Biobank.

Physical Activity and Physical Function

- Accelerometry
- Cardiorespiratory capacity (cycle ergometry)
- Lower limb function (Short Physical Performance Battery) in >65 years old participants
- Handgrip (>65)

Cognitive assessment battery

- Phototest
- Mini-Cog
- Symbol-Digit Modalities Test
- Finger Tapping Test

Audiometry and visual exam

Diabetes risk screening

Spirometry

Information on environmental exposures and social context is collected.

The study also includes **genomic information**, including **whole-genome sequencing** for **18,000 participants**.

The study also collects longitudinal data from **participants' electronic health** records.

Our Driving Force: participation from the whole of society

Attaining a high participation is essential for the success of the project. Cohorte IMPaCT nodes are already contacting randomly selected individuals to ensure a representative sample of the population.

Participants not only benefit from learning more about their own health status but also help enhance the health of future generations. Their contribution will support research that may improve disease prevention, early detection, and public health policies for decades to come.

The preventive medicine of the future is already here, and we can all be part of the change.

If we call you, please, come!
#SiTeLlamanVen



“

Participating in Cohorte IMPaCT benefits me, benefits you, and benefits everyone who comes after us.

Collaborate with Cohorte IMPaCT

The Cohorte IMPaCT is a strategic national scientific infrastructure designed to generate knowledge that will transform the understanding, prevention, and management of disease in Spain. It represents a major **step forward for scientific research** in our country and will contribute to improving the health of future generations.

Contributing to the Cohorte IMPaCT means helping drive the progress of Spanish science. Continued engagement from all stakeholders is essential to expand the project and maximize its impact.

Our results will help:



Researchers: Access high-quality integrated data for more robust and precise studies within an infrastructure that will be compatible with international projects.



Healthcare and Technology companies: Unique opportunities for innovation, product and service development, and technology transfer.



Public administrations: Tools for **precision public health** policies, monitoring health inequalities, and evidence-based decision-making.



Citizens: Opportunities for participation, direct health and prevention benefits, and contribution to a healthier and more equitable society.

We are looking for allies, investors, and visionaries to help transform the future of prevention.

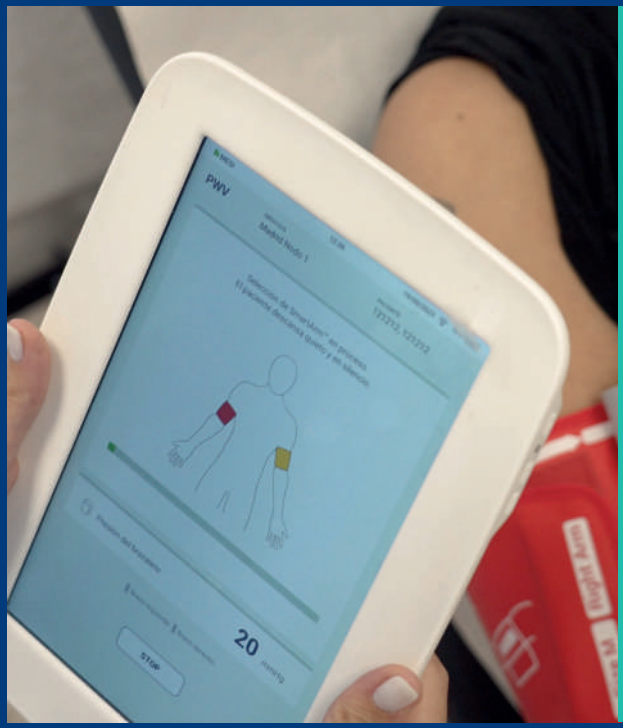
IMPaCT Cohorte

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If we call you, please, come!



Cohorte IMPaCT is now a reality thanks to the joint efforts of a large number of primary care and public health professionals, research teams, technical staff, and participants.

Cohorte IMPaCT demonstrates Spain's commitment to collaborative, citizen-centered science and to generate knowledge capable of improving the health of present and future generations.

The Cohorte IMPaCT is an initiative of the **Instituto de Salud Carlos III**, managed through the **CIBER (Biomedical Research Networking Centre)**, with scientific coordination provided by researchers from the **National Centre for Epidemiology (ISCIII)**.

PMP24/00005 PROJECT

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