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Faculty members from the Faculty of Medicine participate in an international study on cardiovascular prevention

The research, published in *Nature Medicine*, validates the PREVENT and SCORE2 algorithms using data from more than 6.4 million people worldwide.

Dr. José Manuel Valdivielso, Professor of Vascular Pathology in the Bachelor's Degree in Biomedical Sciences at the Faculty of Medicine of the University of Lleida and researcher at IRBLleida, has led an international study published this week in *Nature Medicine* validating two of the main tools used worldwide to predict cardiovascular risk: the PREVENT and SCORE2 algorithms.

The research analyzed data from more than 6.4 million people from 44 observational cohorts and 18 randomized clinical trials, becoming one of the largest validation studies conducted in this field to date.



Cardiovascular diseases remain the leading cause of death worldwide. In this context, tools such as PREVENT and SCORE2 make it possible to identify people at higher risk of heart attacks, strokes, or heart failure, and facilitate the early implementation of preventive measures.

The study demonstrates that these algorithms maintain good predictive capacity across highly diverse populations in Europe, North America, Australia, and other regions of the world, reinforcing their global clinical usefulness.

“The great value of this work is that it demonstrates that these tools maintain solid and consistent performance across very different populations,” explains Dr. Valdivielso. “This reinforces their usefulness in the early identification of people at high cardiovascular risk and helps move toward more personalized and precise prevention.”

The research also shows that incorporating a renal health marker, such as albuminuria, further improves the predictive capacity of the models, especially in people with chronic kidney disease.

According to the Faculty of Medicine professor, these tools may have a particularly relevant impact on patients with intermediate cardiovascular risk: “This group accounts for nearly half of cardiovascular events and often remains in a gray area. PREVENT and SCORE2 make it possible to better identify which people truly need preventive measures.”

The study was carried out within the framework of the *Chronic Kidney Disease Prognosis Consortium* (CKD-PC), an international network that brings together more than one hundred cohorts and clinical trials from around the world.

The UdL Faculty of Medicine thus continues to strengthen the link between teaching, biomedical research, and knowledge transfer, with faculty members involved in internationally impactful studies in the field of cardiovascular health.

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<https://www.irbllleida.org/ca/noticies/2089/un-estudi-internacional-valida-en-mes-de-6-4-milions-de-person>
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Article [<https://www.nature.com/articles/s41591-026-04437-z>]