

CardioRenal and Grenoble Alpes University Hospital herald world-first use of blood potassium self-tests by patients

Device allows patients to measure potassium levels autonomously and accurately

Grenoble, France, December 19, 2023 - CardioRenal and CHU Grenoble Alpes announce today a major innovation that allows chronically ill patients to measure their blood potassium levels autonomously and accurately. The TENOR device enables patients to measure their blood potassium levels at home, similar to how diabetic patients have conducted blood sugar self-tests for many years.

"TENOR will represent a considerable improvement in treating patients living with chronic renal failure. Thanks to TENOR, patients will be able to take potassium measurements much more frequently at home," said Dr. Pierre-Louis Carron, principal investigator in the [Gamma clinical trial](#), "In this way, doctors will have the means to influence treatment and better regulate potassium levels, one of the vital parameters for cardiac function."

Currently under clinical development, TENOR is designed for home use by patients with renal or cardiac insufficiency. Within a few minutes, TENOR performs a precise potassium measurement and transmits the values to the CardioRenal web platform, to which attending physicians have access. This enables them to make informed decisions on therapeutic adjustments.

Years of research into this first-of-a-kind innovation

The TENOR device is the result of a multi-year research collaboration between CardioRenal and the CEA in Grenoble. In 2023, TENOR received the 'Breakthrough Designation Device' label from the FDA.

"In current practice, blood potassium measurement is invasive and requires venipuncture, which prevents it from being carried out as often as necessary. In certain phases of treatment for chronic patients, potassium values need to be available frequently to optimize treatment. With TENOR, the patient will be able to take this measurement as often as necessary," said Pr Patrick Rossignol, co-founder of CardioRenal.



The TENOR device in its patient case



New hope for kidney disease patients

For patients with the most advanced stages of kidney disease, the risk of adverse cardiovascular events is strongly linked to potassium variations outside normal ranges. Patients measuring their potassium levels should help limit this risk. Specifically, dialysis patients can easily check their levels on Sunday when the risk of hyperkalemia is highest. Clinical studies will be carried out over the coming years to demonstrate the benefits of the TENOR device.

About kidney disease

Chronic kidney disease (CKD) is a long-term illness in which the kidneys progressively lose their function. Common causes of chronic kidney disease include:

- Diabetes: Over time, high blood sugar levels can damage the kidneys
- Hypertension: Prolonged high blood pressure can put a strain on the blood vessels in the kidneys

Chronic kidney disease affects [>800 million individuals](#). It has emerged as one of the leading causes of mortality worldwide.

About Grenoble Alpes University Hospital

With its 11,500 professionals, Grenoble Alpes University Hospital offers a comprehensive range of local and referral services. Every year, it welcomes many patients and provides routine and highly specialized medical and surgical care.

The nephrology department provides care for patients with kidney diseases, from diagnosis to management of end-stage renal failure (dialysis, kidney transplantation).

It monitors patients in the Grenoble area with kidney disease and, in the Alpine region, acts as a referral center for complex renal pathologies, particularly kidney transplants.

www.chu-grenoble.fr

About CardioRenal

CardioRenal is a French company dedicated to improving the care of chronic patients at home. It was founded by Professors Faiez Zannad and Patrick Rossignol (Nancy University Hospital) following their work on optimizing the treatment of heart failure and renal disease. CardioRenal's mission is to save the lives of patients living with severe chronic kidney and heart failure.

Professors Faiez Zannad and Patrick Rossignol are world-renowned experts in potassium-related disorders in heart failure and chronic renal failure.

Maurice Bérenger, (ENS Paris Saclay, MBA INSEAD) CEO, and Guilhem Henrion, (Polytechnique, PhD) CTO, joined CardioRenal in 2017 and drove the strategic shift in the company's focus towards the enormous unmet clinical need for home blood potassium measurement.

www.cardio-renal.com

Media and analysts contact

Andrew Lloyd & Associates

Johanna Quast – Carol Leslie

johanna@ala.associates – carol@ala.associates

Tel: +44 1273 952 481

@ALA_Group
