

numares launches next generation GFR-measurement

***AXINON® Clearance Check* offers GFR determination with an accuracy close to plasma clearance measurements but with the simplicity of a serum sample**

Regensburg, March 14 2019. numares today announced the global launch of its latest test in the AXINON® family, the “Clearance Check” as a groundbreaking method for the accurate assessment of glomerular filtration rate (GFR). It is the first test available offering a simple serum test with the accuracy of tracer-based plasma clearance methods. The new test is based on a metabolite constellation analyzed by *Magnetic Group Signaling (MGS®)* empowered nuclear magnetic resonance (NMR) spectroscopy.

“Our vision was to obtain a glomerular filtration rate (GFR) value from a simple blood sample that is comparable to the much more involved plasma clearance method. With single biomarkers such as serum creatinine or cystatin C this remains especially challenging for patients with reduced kidney function. We overcame this hurdle by using a metabolic constellation of several biomarkers”, says Dr. Volker Pfahlert, Chief Executive Officer of *numares*.

Fifteen percent of U.S. citizens (i.e. 30 million people) are estimated to suffer from impaired renal function. Therefore, ascertainment of kidney function is important in many different medical conditions, e.g. patients with late complications in diabetes management, patients with chronic congestive heart failure or in dosing of nephrotoxic drugs. “However, estimating GFR with serum creatinine was considered to be the weak link in the diagnosis of renal dysfunction because of a lack of accuracy, mainly concerning stages 2 and 5 in CKD”, explains Prof. em. Jochen H.H. Ehrich from Hannover Medical School and Principal Investigator of the “RENUM” (Renal Function Assessment by Nuclear Magnetic Resonance based Metabolomics) clinical study.

The new test was successfully validated in the “RENUM” clinical trial, a European multi-center study with more than 200 patients in cooperation with Hôpital Edouard Herriot (Lyon, France), Sahlgrenska University Hospital (Gothenburg, Sweden) and University Medicine Charité (Berlin, Germany). As reference the time consuming gold standard method of measuring GFR by tracer infusion was applied. Last year, intermediate results were already presented at the American Society of Nephrology | Kidney Week in San Diego. The clinical data of the validation study will be published as a scientific paper.

Deeper insight of kidney function

The metabolites used in the newly identified metabolic constellation reflect different aspects of underlying kidney pathology, such as metabolic acidosis or oxidative stress. By taking these markers into account, in addition to filtration rate (GFR), physicians gain a much deeper insight into kidney function. This molecular phenotyping will allow a more precise and truly individualized treatment. “The diagnostic of different stages of chronic kidney disease (CKD) is often considered in isolation from the extent and prognostic significance of the associated extra-renal metabolic comorbidities“, says Dr. Claus Botzler, Chief Operating Officer of *numares*. *AXINON® Clearance Check* is adding a new dimension to precision medicine which until now was the domain of genetic testing.

About *numares*

numares AG, based in Regensburg, Germany, is a fast-growing innovative diagnostics company that applies machine learning to metabolomics data to develop advanced analytical tests for high-throughput use in clinical diagnostics and life science research. The *AXINON® System* employs nuclear magnetic resonance (NMR) spectroscopy to create a “numeric” spectrum to evaluate metabolic constellations. *Magnetic Group Signaling (MGS®)* is a proprietary technology that enables NMR for highly standardized and rapid throughput testing. Metabolic tests stand as an important pillar in precision medicine to address unmet needs in cardiovascular diseases, nephrology, oncology and neurology. You will find more information at <https://www.numares.com/>

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