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## Serum cystatin c as a determinant of glomerular filtration rate in patients with chronic kidney disease

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Chronic Kidney Disease (CKD) is a major public health problem, it can occur at any age and has specific features whose management must take into account not only the disorders caused by the pathology, but also the many extrarenal manifestations that influence the vital prognosis of patients. Therefore, international expert committees recommend that the estimation of Glomerular Filtration Rate (GFR), which is the basis for diagnosis, treatment, follow-up and prognosis of CKD, should be as accurate as possible to ensure proper management of patients.

However, serum creatinine is not a reliable marker since it varies with age, height, weight, and changes in muscle mass; which has motivated the search for new plasma markers, notably blood Cystatin C (CysC). Indeed, CysC is an endogenous low molecular weight marker produced by all nucleated cells of the body independently of the age, sex or diet, and whose positive charge allows it to be freely filtered by the glomerulus. Thus, its concentration depends only on the GFR. CysC assay uses nephelometric or turbidimetric methods whose automation allows simple, rapid, repeated, reproducible and relatively inexpensive assays. This marker represents a high diagnostic sensitivity and a high negative predictive value as well as fewer pre-analytical and analytical interferences.

Several studies have confirmed and demonstrated the superiority of CysC over serum creatinine when looking for early signs of glomerular renal failure. In conclusion, international recommendations suggest using a GFR estimate based on CysC as a confirmatory test given that serum creatinine is less reliable.

### Biography

Alaoui Mdarhri Hiba has obtained her doctorate in General Medicine from the Faculty of Medicine and of the Hassan II University of Casablanca, Morocco, and is currently doing her residency in Medical Biology at the Faculty of Medicine of the Mohammed VI University of Health Sciences in Casablanca.

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