RADIOMETER

Sanchez *et al*: Analytical evaluation of **ABL**90 FLEX PLUS blood gas analyzer for Urea and Creatinine

This scientific insight paper captures the main findings in the 2020 publication by Sanchez *et al.* from La Paz University Hospital, Madrid, Spain: "Analytical evaluation of ABL90 FLEX PLUS blood gas analyzer for Urea and Creatinine" published in Point of Care [1].

Interchangeable urea and creatinine results

The authors state "this study demonstrates that ABL90 Flex Plus as POCT for creatinine and urea results are interchangeable with these 3 central laboratory methods, with an estimated difference that does not exceed the allowable difference at different clinical decision levels for both parameters, ensuring that there will be no impact on patient care using any analyzer."

In addition, the authors note that according to the literature the ABL90 FLEX PLUS has far less interferents than other methods used by routine laboratories.

The conclusion is based on a study following the Clinical and Laboratory Standards Institute protocol EP09-A2-IR where at least 40 whole blood heparinized patient samples were randomly selected and prospectively included in 3 hospitals. The total sum was 129 blood samples for both creatinine and urea. The samples were first measured on the ABL90 FLEX PLUS, and then centrifuged and analyzed using 3 different central laboratory methods.

With high prevalence of AKI in hospitalized patients, the need for good screening methods to rapidly identify patients at risk is becoming important.

The authors argue that excellent results are fundamental in clinical practice, as differences between routine analyzers and POC devices can lead to erroneous decision making. POC devices with a good analytical performance can potentially lead to early recognition and treatment that may lead to a better prognosis for patients.

Furthermore, the authors find that despite the shortcomings of both urea and creatinine as markers of kidney function, they are still useful in classification of AKI, estimation of urea/creatinine ratio, etc., and discrepancies in a rise of both can help in the management of several medical conditions. What's more, the authors state, "use of POC devices is increasing in clinical environments because of its easy handling and rapid results to facilitate the patient management" and "the ABL90 Flex Plus blood gas analyzer seems to fulfill these requirements."

References

1. Sánchez CP, Sáez PO, Fernandez-Calle P, Giménez MS *et al.* Analytical evaluation of ABL90 FLEX PLUS blood gas analyzer for Urea and Creatinine. Point of Care 2020; Vol 19, 2: 37-42.