The overestimation of GFR with equations dependent on cr, Ccr, EPIcysC and, to a lesser extent, EPIcr/cysC, was marked in patients with abnormally low cr. Conversely, with EPIcysC equation, which depends on cysC, a biomarker independent of muscle mass, GFR was underestimated. This may be due to factors that increase cysC, without renal function impairment, such as hypertension, corticosteroid therapy and malignancy, all common in hospitalized patients, but poor data did not allow to explore this association.

The differences in the GFR estimates were clinically relevant on dosing adequacy, being suggestive that in the presence of abnormally low cr, equations with cysC are preferred. Studies are needed to identify the variables responsible for the observed variability, in order to previously select the most appropriate equation for each case.