Evaluation of three commercially available ELISA kits for the determination of chromogranin A

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Chromogranin A (CgA), mainly produced by (neuro-)endocrine cells, is the most valuable biomarker for prognosis and follow-up of neuroendocrine tumors (NET). Determination of CgA by different techniques leads to significant differences in results, with varying sensitivity and specificity.

The aim of our study was to compare 3 different commercially available ELISA kits for the determination of CgA and to evaluate their analytical and clinical performance.

CgA was measured with 3 different commercially available ELISA kits on 40 leftover sera: Chromoa CGA-ELISA assay (Cisbio) (Cis), Hu chromogranin A ELISA (Diasource) (Dia) and Neolisa chromogranin A (Euro Diagnostica) (Euro).

In our study analytical performance, that was evaluated by measuring CV%, was comparable for the 3 evaluated CgA ELISA's. Clinical performance studied by a ROC analysis showed comparable area under the curve for all ELISA's, but differences were not statistically significant. Further, our data showed that CgA results obtained with different ELISA's are not interchangeable.