ORIGINAL ARTICLE

Diverging Concentrations of Soluble Suppression of Tumorigenicity (sST2) Analyzed by two Different Assays - a Limitation for its use in Clinical Practice?

Moritz Mirna [*], Vera Paar [*], Sarah Gharibeh, Albert Topf, Uta C. Hoppe, Michael Lichtenauer

[*] *These authors contributed equally*
Department of Internal Medicine II, Division of Cardiology, Paracelsus Medical University of Salzburg, Austria

SUMMARY

Background: **Soluble suppression of tumorigenicity (sST2) constitutes a novel biomarker with diagnostic and prognostic implications in several diseases. However, recent evidence suggests that different enzyme-linked immunosorbent assay (ELISA) kits could result in diverging serum concentrations measured.**
Methods: **Serum concentrations of sST2 were measured in blood of 215 patients with aortic valve stenosis using two commercially available ELISA-assays (Presage® ST2 assay and R&D). Passing and Bablok regression analysis, Bland-Altman plot, and correlation analysis were conducted.**
Results: **Values obtained by Presage® were 1.9-fold higher than concentrations measured by R&D, with a mean bias of 14,489 pg/mL between both assays. The most extreme deviations were observed in values below the median of concentrations measured by the R&D assay (21.4%, p < 0.0001).**
Conclusions: **Our findings suggest a constant difference and a proportional bias between both investigated assays could be of special importance in circumstances where cutoffs with prognostic relevance have been calculated previously. In order to interpret sST2 concentrations correctly, the clinician should be aware of these deviations between different ELISA kits.**
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Correspondence:
Moritz Mirna, MD, PhD, FESC
Department of Internal Medicine II
Division of Cardiology
Universitatsklinikum der
Paracelsus Medizinischen Universitat
Mullner Hauptstrase 48
5020 Salzburg
Austria
Phone: +43 (0) 57255 - 58340
Email: m.mirna@salk.at
ORCID iD: https://orcid.org/0000-0001-5679-4872
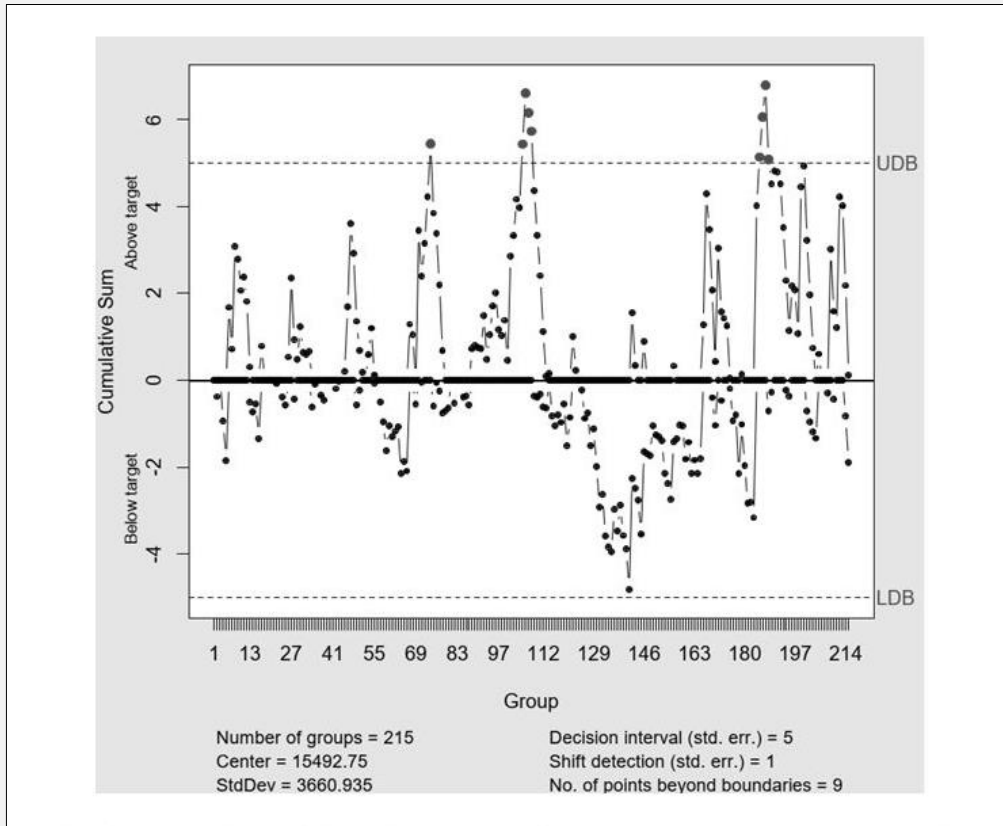

Supplementary Data

Figure S1. Cumulative sum (CUSUM) chart of regression analysis between serum concentrations of both assays depicting deviation from linearity.