

S4-1.10

Information Analysis of Biochemical Parameters for Glucose Tolerance Tests

Y.I. Sokol¹, O.V. Chmykhova¹, V.V. Boyko², P.N. Zamyatin², and D.P. Zamiatin³

¹ Dept. "Industrial and biomedical electronics", National technical university "Kharkiv Politechnical institute", Kharkiv, Ukraine

² State Institution "V.T. Zaytsev Institute of General and Urgent Surgery of NAMS of Ukraine", Kharkiv, Ukraine

³ Department of surgery № 1 "Kharkiv national medical university", Kharkiv, Ukraine

In the vast majority of existing methods of obtaining parametric biomedical information, it is represented by a finite set of informative parameters (features). Their informational significance is always different and practically not evaluated for the tasks of parametric identification and diagnosis of diabetes mellitus.

In this paper, it is proposed to evaluate the informational significance of parameters (features) based on dispersion analysis of changes in their mathematical expectation with respect to residual noise. Fisher's F-statistics were used as a quantitative measure of the changes, with the subsequent conversion of the obtained data into the amount of information expected based on the equations of the information measurement theory.