

APPLICATION OF FLUORESCENT FLOW CYTOMETRY METHOD TO ASSESS URINARY TRACT INFECTIONS..

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Urine as a product of plasma ultrafiltrate enables urinalysis for investigation and monitoring of whole body hemostasis. It concerns primarily to changes that are associated with the occurrence of metabolic, neurological and other diseases. The fully automated flow cytometry method provides information on number of cells and formed elements in a urine sample in a short time (about 15 minutes). The study attempts to assess parameters related to urinary tract infection: bacteria and leukocytes, with particular regard to the number of bacteria found in urine samples. 1131 urine samples from patients treated at WIM were used for the analysis. In 69.1% of the surveyed population were women, 30.9% men, the average age was 51 years.

The number of bacteria and leukocytes in the samples was analyzed based on literature and manufacturer data for adults (cut-off value for BACT:300 cells/ μ l and WBC:25 cells/ μ l). The prevalence of bacteria and WBC above cut off value in all samples analyzed was respectively 32% and 31 %. This two parameters can be used routinely to predict urinary tract infections earlier. Additionally, the analysis shows that for 68% of patients, cytometric determination number of bacteria and leukocytes allows reporting the negative results within 1-2 hours without the need for routine microbiological diagnostics which take at least 24 hours. Thanks to the cytometric method, it's possible for the doctor to analyze the case faster and probably to implement the correct treatment sooner.