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The Cathepsin D as a Potential Biomarker for Survival Rate in Polytrauma. Pilot Research

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Trauma represents a major problem affecting the younger part of humanity as shown in several studies. It represents the main cause of deaths or disabilities that could be prevented in children, teenagers and adults younger than 44 years. In Republic of Moldova, trauma has the fourth place after gastrointestinal tract diseases in list of death causes. One of the most complicated and hard to explore domain of trauma is the polytrauma. Except tardive consequences regarding recovery period and other clinical, economic, and social burden aspects of polytraumatized persons, the immediate effects on the patient have a crucial role on patient's life. This is why numerous researches are trying to reveal the key moments and factors in pathogenesis and clinical management of polytrauma patients. Scientists are looking for some predictive models that could estimate the death/survival rate of traumatized/polytraumatized population of patients. Some of these models seem to be based on concentration dynamics of different biomarkers in posttraumatic period. Cathepsin D is one of this enzymes studied in this trial. Using logistic regression technique, it was created a predictive model estimating polytraumatized patients' survival probability based on plasma Cathepsin D concentration (CDEA) at 3 and 48 h after traumatic injury.