Over the past 20 years, cardiovascular mortality has decreased in developed countries, as there were taken the preventive measures to reduce the prevalence of the coronary heart disease (CHD). Despite these encouraging results, cardiovascular disease is the leading cause of death of approximately 17 million people per year worldwide.

The prognostic value of premature ventricular contraction (PVC) currently remains poorly studied. Thus, according to a recently published meta-analysis, in patients without structural heart disease in the presence of frequent premature ventricular contraction, an increase of the risk of cardiovascular complications was observed.

One of the new, non-invasive, advanced methods of prognosis of sudden death in patients with CHD with ventricular arrhythmias after old myocardial infarction may be an assessment of heart rate turbulence. The heart rhythm turbulence (HRT) is a change in heart rate that is developed in response to emerging ventricular arrhythmias and manifested in short-term fluctuations of the heart rate, which follow the PVC. After the premature ventricular contraction, there occurs the cycle of a short initial acceleration, followed by deceleration of the heart rate. The heart rhythm turbulence is a physiological, biphasic response of a sinoatrial node to the premature ventricular contraction.

In this latter days there have been actively explored the possibilities of HRT in prediction of adverse outcomes in patients with heart failure, dilated cardiomyopathy, hyperthyroidism, mitral valve prolapse, metabolic syndrome and other clinical situations. Thus, in all studies the HRT in patients with old myocardial infarction, was a strong and independent predictor of adverse events, including cardiac and sudden death. Measurement of the heart rate turbulence, being simple and easily reproducible method, can be routinely used at daily the Holter monitoring ECG. In the future it is necessary to conduct researches, based on the evaluation of heart rate turbulence in order to determine the effectiveness of the prevention of fatal arrhythmias in patients with myocardial infarction.