

Coronary artery disease is the main cause of death in both genders worldwide. Many preclinical and clinical studies present the concept of modifiable and non-modifiable cardiovascular risk factors. The basic management of the coronary artery disease is medical, but the prognosis in many patients can be improved by potentially invasive procedures, such as the percutaneous coronary intervention (PCI) and the coronary artery bypass grafting (CABG). The cardiovascular risk scores may help cardiologists and cardiac surgeons alike to individualize the risk profile of patients in order to better define the revascularization strategy and to appropriately counsel the patient, in same time reducing the morbidity and mortality.

The first part of the thesis evaluates the validity of both forms of the most used cardiovascular tool in the present day, the European System for Cardiac Operative Risk Evaluation (EuroSCORE).

The second part of the thesis concentrates on the prevalence of stress-induced myocardial stunning (Tako-Tsubo syndrome) among patients undergoing urgent coronary angiography for suspected acute myocardial infarction.

The third part of the thesis obtains a realistic contemporary picture of how patients with STElevation myocardial infarction (STEMI) are treated in different European countries.