OPTIMAL ECG LEAD SYSTEM FOR ARRHYTHMIA ASSESSMENT
WITH USE OF TCRT PARAMETER

Michał Kania¹, Małgorzata Fereniec¹, Dariusz Janusek¹, Anna Zbieć¹, Roman Kępski²,
Grzegorz Karpiński³, Roman Maniewski¹

¹Institute of Biocybernetics and Biomedical Engineering, Polish Academy of Sciences,
Warsaw, Poland
²National Institute of Cardiology, Warsaw, Poland
³Department of Cardiology, Central Teaching Hospital, Warsaw, Poland

Abstract:
The aim of the study was to evaluate diagnostic value of TCRT (spatial QRS-T angle)
parameter in different sets of ECG leads and to select the ECG lead set, for which the TCRT
parameter would have the best sensitivity and specificity in identifying patients threatened by
ventricular tachycardia (VT pts). Two groups of patients after myocardial infarction were
studied: 13 non VT pts and 30 VT pts. The TCRT parameter values differentiated VT pts
group from non VT pts group for all analyzed sets of ECG leads. Considering sensitivity of
the TCRT parameter in identifying VT patients the best set of ECG leads was selected.

Keywords: arrhythmia, vectorcardiography, ñsk factors