

# THE ASSESSMENT OF CARDIOVASCULAR RISK USING QRISK2 PROCAM SCORE RCRI SCALES IN RENAL TRANSPLANT RECIPIENTS

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## OBJECTIVES

Cardiovascular diseases (CV) are the leading cause of death among patients with chronic kidney disease (CKD), including patients on dialysis and after kidney transplantation.

Separation of recipients with increased risk of cardiovascular (CV) allows adequate preparation of the patient for renal transplantation, and then continuing specialized care in the period following transplantation. The aim of the study was to assess CV risk among renal transplant recipients, using four scales: QRISK2, PROCAM, SCORE and RCRI.

## METHODS

Evaluation of CV risk was made using four scales: QRISK2, PROCAM, SCORE and RCRI index. The QRISK2 score estimates risk of myocardial infarction (MI) or stroke over the next ten years, the PROCAM risk score estimates the risk of MI or dying from an acute coronary event within the next 10 years, the SCORE scale is used to estimate the individual risk of death due to CV events (such as heart attack, stroke, aneurysm rupture) in the next 10 years, and RCRI index is used to assess the risk of major cardiac events - MI, pulmonary edema, ventricular fibrillation, cardiac arrest, complete heart block- in patients undergoing non-cardiac surgery. 100 kidney transplant recipients (65m/35f) in middle-age 49,9 years were enrolled to the study. They were treated with renal replacement therapy for (average time) 29,5 months (67% HD, 13% PD, 7% HD+PD, 13% preemptive). Hypertension was present in 98% of patients, diabetes in 15%, hyperlipidemia in 34%, coronary artery disease in 20%.

## RESULTS

The assessment of CV according to the scale used is shown in table 1. During the 5-year follow-up period, 11 renal transplant recipients experienced a total of 13 incidents CV (5 MI, 7 stroke, 1 TIA). 100 (100%) of the 11 patients, who underwent incident CV after transplantation had a high/very high CV risk only in RCRI index and 36,4% of them were at high risk according to QRISK2 scale.

Table 1 Assessment of cardiovascular risk according to the scales.

SCALE	Low Risk	Medium Risk	High/very high Risk
QRISK2	36(36%)	22(22%)	42(42%)
PROCAM	60(60%)	32(32%)	8(8%)
SCORE	30(30%)	51(51%)	19(19%)
RCRI	0	0	100(100%)

## CONCLUSIONS

Patients, who are qualified for a transplant are at significant risks of CV incident in peri-and postoperative periods. RCRI and QRISK seem to be the most predictive scales in the assessment of CV risk in the study population.

