Exercise Test Interpretation (XTI)

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An exercise test delivers a large number of measurements that are valuable in predicting morbidity/mortality, in detecting coronary artery disease and in describing the functional exercise response of a patient. However, it is very difficult to have a comprehensive knowledge of all measurements and their thresholds.

The Exercise Test Interpretation (XTI) program compares the exercise measurements against established thresholds and provides statements and reasoning texts, respectively explanation of the statements, when thresholds are exceeded. Therewith a short, clear, and accurate overview of an exercise test is provided.

XTI creates statements on risk prediction, statements on functional response, and statements on ischemia and coronary artery disease

Example: Ischemia, probably caused by coronary artery disease because ST/HR hysteresis > 0.02 mV in [V5] and HR reserve used $< 70\%$

In addition, an overall statement is created, namely: normal exercise test response, or borderline exercise test response, or abnormal exercise test response

For validation the FINCAVAS database (Tampere University, Finland), containing mortality (ICD-10 code) and angiographic data, have been used. Results: Overall mortality prediction: Hazard ratio 4, $p < 0.0001$ Cardiovascular death prediction: Hazard ratio 6, $p < 0.0001$ Ischemia (CAD) detection (upper level): Sensitivity 58%, Specificity 94%