

EuroSCORE /TAVR Risk Calculator for Big Databases

Introduction

EuroSCORE is the European system for the evaluation of cardiac surgery mortality risk. The calculation is based on the results of heart surgeries of more than 20,000 patients from 128 hospitals in 8 European countries.

Last models developed, such as the logistic EuroSCORE version and EuroSCORE II, allow to estimate the risk of perioperative mortality with greater precision than the previous one.

Additionally, another risk calculator has lately been developed for Transcatheter Aortic Valve Replacement procedures (TAVR), a new and less invasive heart surgery approach.

Invention

Currently there are tools that only allow calculating the cardiac surgery risk for one patient at a time.

The present tool is a Logistic and EuroSCORE II, as well as a TAVR Risk Calculator, designed for the automatic risk calculation in large databases.

Therefore, this calculator simplifies the work of cardiology researchers with large patient databases. It allows directly copying and pasting the columns of data into the calculator and immediately obtaining the calculation for up to 1000 records.

FEMALE	AGE	NYHA	CSA	DDI	VASC	PULM	NEUROL	REDO	RENAL	PAP	LVEF	E	CRITICAL	URGENCY	MI	INTERVENTION	ROOT	SCOP	rupture	EUROSCORE	EUROSCORE
0=Female																				II	LOG
1	45	2	0	1	0	0	0	0	45	c	19	1	1	2	0	2	1	0		75.82	92.71
0	81	1	1	1	1	1	1	1	45	c	19	1	1	2	0	2	1	0		97.64	99.93
1	81	3	1	1	1	1	1	1	45	c	19	1	1	0	0	2	1	0		97.16	99.89
1	81	3	1	1	1	1	1	1	45	c	19	1	1	2	0	2	1	0		96.58	99.95
1	81	3	1	1	1	1	1	1	45	c	19	1	1	2	0	2	1	0		96.58	99.95

State of development

The functional Logistic, EuroSCORE II and TAVR calculator is available for non-profit use.

Advantages

- Ability to analyze data quantities up to 1000 records at the same time.
- The EuroSCORE system has been widely distributed and tested by European hospitals, so it is a well-known and effective system.

Application

The invention has application in cardiology research, allowing to analyse a large amount of data at the same time, predicting the risk of mortality in a cardiac surgery for a large number of patients. This tool is a great help for cardiologists, surgeons and researchers in cardiovascular diseases.

Market Potential

The invention has a worldwide market potential. According to WHO data, cardiovascular diseases are the leading cause of death worldwide. In the last decade, EuroSCORE has been used in more than 300 scientific articles published each year.

IPR Position

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Opportunity

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