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## Wellnhofer Ernst

*German Heart Center, Germany**Charité University Medicine Berlin, Germany*

### **Cost-effectiveness of DCMR guided management of patients with stable coronary artery disease-combining data mining of the early adoption phases of new technologies with long-term outcomes**

**D**obutamine stress CMR (DCMR) is an accurate and safe non-invasive test for coronary artery disease (CAD) with high negative predictive value. Direct catheterization (CA) is still an alternative approach that is incentivized by the current reimbursement policy in many countries. Since long-term outcome and cost data from randomized controlled prospective trials are rarely available when new health technologies emerge, evidence based reimbursement policy requires retrospective data mining and lags behind medical and technical evolution. This paper presents level 5 HTA data on DCMR based on a long term follow-up of patients with suspected stable CAD (sCAD) who underwent DCMR and controls with direct CA. We expected that a DCMR guided approach would be at least as effective as direct CA with respect to survival and more patient friendly in terms of fewer hospitalizations during follow-up by avoiding direct CA. Generally, we suggest data mining digital documentation of early adoption phases of new technologies as source of evidence. This study was a single center retrospective cohort trial that compares two different pathways for managing patients with sCAD and intermediate event risk. Groups (CMR: 209 pts. CA: 293 pts) were matched by propensity scores. Clinical data were collected from institutional quality assurance and research databases. Median patient follow-up was 7.9 years. Primary clinical endpoints were death and cardiac re-hospitalizations. The cost data were calculated per patient and hospital stay from original resource utilization data provided to the German federal InEK/G-DRG database. We chose cost contribution accounting as method to compare both approaches.

### **Biography**

Wellnhofer Ernst has completed his MD in 1984 from Technical University in Munich and his PhD in 2010 from Charité University Medicine Berlin in the field of Modeling and simulation in cardiac imaging. He has done studies in Informatics and Statistics as well as Health Economy. He is a Clinical Cardiologist, Scientist and University Teacher. His current fields of work are Cardiac Imaging in particular of coronary atherosclerosis, biomedical informatics and statistics, regulatory issues regarding software as medical device and health technology assessment. He has published more than 90 papers in reputed journals and holds several patents. His h-index is 23.

[ernst.wellnhofer@charite.de](mailto:ernst.wellnhofer@charite.de)

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