**OBJECTIVES:** To measure cost of care in cardiologic departements for inpatients with decompensated, systolic heart failure and to study major cost drivers. **METHODS:** In 2000, a multicentric observational study was set up within 8 cardiology departments in France. Patients over 18, hospitalized with decompensated systolic heart failure (HF), and LVEF < 45% were prospectively included. Data were collected up to final discharge from the department. Cost of lab tests, procedures, blood products and pharmacy were extracted from official guidelines or public hospital sources. Other patients' stay fixed costs, including staff and overheads, were averaged from hospital sources. Factorial analysis was performed on patients' socio-demographic and clinical caracteristics. **RESULTS:** Two hundred twenty-one patients were included, with mean age 66 years, 62% male. Main diagnoses were coronary heart disease (CHD): 48%, and dilated cardiomyopathy: 28%. Average length of stay (LOS) in cardiologic departement was 12.4 days. Average total cost was €5770 (sd: €3975) for each patient. Factors linked to higher costs were: transfert from an other department, emergency admittance, new diagnosis, no previous treatment, and first hospitalization. Factorial analysis identified 3 clusters: one cluster of elderly patients, mean age 77 years, higher LVEF (36%), 60% previously known HF, two clusters with younger patients: mean age 64 years, mainly with CHD; patients in cluster 2 had 97% HF already known and 88% former hospitalization, lower LVEF (26%), whereas in cluster3 100% new diagnosis of HF, high proportion of ICU stay. Hospitalization costs were higher ($p < 0.01$) in cluster 3 (€6792) than in cluster 2 (€5692) or 1 (€5016), without difference in LOS. Main cost difference was linked to invasive cardio-vascular procedures (€1177 in cluster 3, versus €266 in other clusters, $p < 0.001$). **CONCLUSION:** Higher costs for patients with decompensated heart failure were related to first hospitalization and new diagnosis, intensive cardiac procedures, mainly for coronary artery disease. Hospitalization costs were lower for relapses.

**PCV33**

## THE COST-EFFECTIVENESS OF TARKA IN THE TREATMENT OF HEART FAILURE AFTER MYOCARDIAL INFARCTION IN THE US HEALTH CARE SETTING

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**OBJECTIVE:** To generate estimates of the cost-effectiveness of combined ACE-inhibitor and calcium antagonist therapy (Tarka) versus ACE-inhibitors (usual care) in patients with heart failure after myocardial infarction in the US health care setting. **METHODS:** Markov process analysis techniques were used to model the health economic outcomes. Data on probabilities of clinical events were derived from clinical trial data and other published literature; units of health care utilization were derived from the literature and the HCUP database; prices/tariffs were derived from official lists. Study perspective was that of the third party payer. **RESULTS:** An analysis over the Tarka trial period shows that Tarka decreases the costs from US$24,567 to US$19,907. The mortality for Tarka is at least equal to usual care (1.96% versus 2.04%) and consequently Tarka can be considered dominant over usual care. Tarka remains cost saving over a follow-up of 5 and 10 years. The cost saving are respectively US$5120 and US$3642. The use of Tarka also leads to substantial reductions in cumulative mortality, which are respectively 9.4% and 11.7% over 5 and 10 years. The lifetime model shows that the use of Tarka leads to an incremental cost-effectiveness ratio of US$1730 per life year gained. Probabilistic sensitivity analysis showed that the probability is 55% that the incremental cost effectiveness ratio of Tarka is less than US$5000 per life year gained, while the incremental cost effectiveness ratio will always be less than US$10,000. **CONCLUSION:** The results showed that the favourable clinical benefit of Tarka results in positive short and long-term health economic benefits.

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## COST-EFFECTIVENESS OF FRACTIONAL FLOW RESERVE TESTING TO GUIDE PERCUTANEOUS CORONARY INTERVENTION IN THE DRUG-ELUTING STENT ERA: A DECISION ANALYSIS

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**OBJECTIVE:** Pressure-based fractional flow reserve (FFR) is an invasive test for assessing the functional significance of intermediate coronary stenoses. Previous studies have found that FFR testing to guide percutaneous coronary intervention (PCI) is cost-effective. In this study we evaluate the impact of using drug-eluting stents (DES) on this decision. **METHODS:** We developed a Markov model to compare the long-term costs and outcomes of 2 strategies for patients with indeterminate coronary stenosis scheduled for PCI: 1) Universal PCI (UNIV) without FFR testing, and 2) FFR testing followed by PCI only for those with FFR < 0.75 (TEST). Base-case: 60-year-old man under the optimistic assumption (for UNIV) that relative mortality reduction with revascularization is independent of functional significance. Data: long-term clinical outcomes of PCI and medical management including recurrence rates, disease progression, and quality of life based on published literature. Based on fixed effects meta-analysis, we estimated that DES reduce clinical restenosis rates by 79% compared with bare metal stents (BMS). Perspective: societal. Discounting: 3% per year. **RESULTS:** For the case of BMS, UNIV increased costs by $2800/patient and improved outcome by 12 quality-adjusted life days (QALD), yielding an incremental cost-