Introduction:
Cardiac arrest (CA) often requires intensive care unit (ICU) treatment, which is costly. While there are plenty of data regarding post-CA outcomes, knowledge of cardiac arrest associated healthcare costs is virtually non-existent.

Methods:
We performed a single-center registry-based study to determine expenditure data for ICU-treated CA patients between 2005 and 2013. Healthcare cost evaluation included costs from the initial hospital treatment, rehabilitation costs and social security costs up to one year post-CA. We calculated mean healthcare costs for one year survivors and for hospital survivors who died within the first year after cardiac arrest. We calculated effective costs per independent survivor (ECPIS) as an indicator of cost-effectiveness. We adjusted all costs according to consumer price index (CPI) in Finland as of 2013. All costs are presented as 2013 euros (€).

Results:
We identified 1,314 CA patients eligible for the analyses. At one year after CA 52% of the patients were alive and 40% were alive and independent in daily activities. One year survival stratified by cardiac arrest location group was 59% for out-of-hospital CA patients, 47% for in-hospital CA patients and 27% for in-ICU CA patients. For the whole study population, mean healthcare costs were 50,211€ per patient. Healthcare costs for hospital survivors were 67,928€ per patient and for hospital non-survivors 22,100€ per patient. Healthcare costs for those who survived to hospital discharge but died within the first year were 56,490€ per patient, while for one year survivors they were 70,148€ per patient. Healthcare costs stratified by CA location are presented in Figure 1.

Mean ECPIS were 65,684€.

Conclusion:
For ICU-treated cardiac arrest patients, the mean ECPIS were close to 65,000 €. The best prognosis and the lowest costs were observed for out-of-hospital CA patients.
Healthcare costs stratified by cardiac arrest location