all-cause death and MACE showing no significative differences by comparison of ROC curves by Delong Z-test (Figure1b)

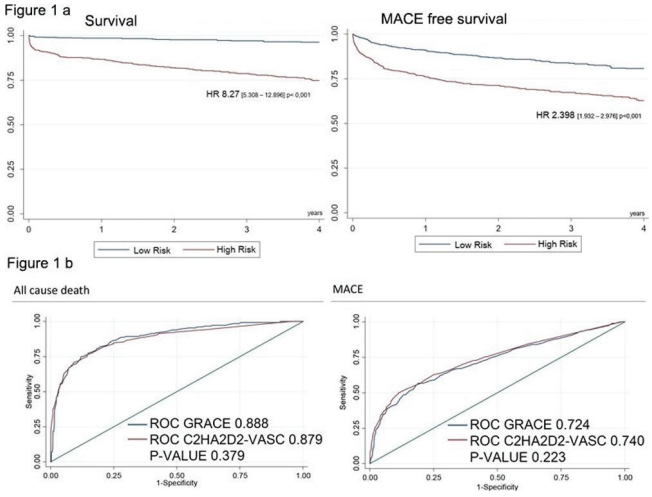

Figure 1

Conclusions: The C2HA2D2-VASC score is positively correlated with worse long-term prognosis in our STEMI registry. This new user-friendly score may be a useful test, with a similar discriminative ability predicting long-term outcomes compared to the GRACE score.
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P5543
Obstructive sleep apnea is associated with lower mortality and shorter length of stay with ST-segment elevation myocardial infarction and non ST-segment elevation myocardial infarction

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Background: Obstructive sleep apnea (OSA) is an independent risk factor of cardiovascular diseases including myocardial infarction (MI). Nevertheless, outcomes of cardiovascular diseases in individuals with OSA are unclear. Some studies indicate protective role of OSA in cardiac injury from non-fatal myocardial infarction (MI). Limited data are available about the association between the diagnosis of OSA and outcomes of different types of MI.
Methods: In a retrospective cohort study, using the 2014 Nationwide Inpatient Sample (NIS), we analyzed adult patients with Non ST-Segment Elevation Myocardial Infarction (NSTEMI) and ST-Segment Elevation Myocardial Infarction (STEMI), who had diagnosis of OSA. The goal of our study was to determine if OSA affects outcomes of different types of MI. We adjusted our results for potential confounders including age, sex, race, hospital location, hospital teaching status, insurance type, hospital bed size and the Charlson Comorbidity Index.
Results: We identified 175810 patients with diagnosis of STEMI and 418835 with diagnosis of NSTEMI, who were further divided into subgroups of patients with and without OSA. In the NSTEMI OSA group (n=31015) less patients were female (29%) than in non-OSA group (42%) and patients were younger (mean age 65 and 69 years respectively). Likewise, in the STEMI OSA group (n=7740) less patients were female (23%) than in non-OSA group (32%) and patient were younger (mean age 62 and 64 years respectively). In both groups OSA was associated with lower mortality, which was more pronounced in NSTEMI (OR= 0.68, 95% CI= 0.57–0.81) than in STEMI (OR= 0.79, 95% CI=0.64–0.99) as well as with a shorter length of stay in NSTEMI (Coef.= 0.29% CI=0.15–0.43) and in STEMI (Coef.=0.52, 95% CI= 0.23–0.83). The total charges from length of stay were lower in STEMI (Coef.= -4705.9, 95% CI= -8655.70- -756.10) but not in NSTEMI. As expected, patients with OSA were more likely to use Bilevel Positive Pressure ventilation in both STEMI (OR=4.3, 95% CI=3.18–5.83) and NSTEMI group (OR= 2.97, 95% CI= 2.64- 3.35). In both NSTEMI and STEMI, OSA was not associated with risk of shock, mechanical ventilation, dialysis due to acute kidney injury (AKI) and cardiac arrest.
Conclusion: The diagnosis of OSA is associated with lower mortality and shorter length of stay with NSTEMI and STEMI. Additionally, it is associated with lower cost of stay in patients with STEMI.

P5544
Hospital admissions and mortality from myocardial infarction in Berlin and surrounding Brandenburg State

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Background: Death rates from myocardial infarction (MI) in Germany display marked regional heterogeneity according to the German health reporting system (GHRS). Reasons may comprise misclassified death certificates, health-related and socio-economic population characteristics, pre-hospital care, and hospital care of patients with MI. Berlin-Brandenburg Myocardial Infarction Registry (B2HIR) is assessing hospital care and hospital mortality of MI patients in Berlin (since 1999) and in adjacent districts of Brandenburg State (since 2014).
Purpose: This study compares MI hospital admissions, total MI mortality and hospital mortality rates from MI in Berlin and Brandenburg according to data from B2HIR and GHRS.
Methods: Over 3 years data from 11743 pts (Berlin: 10289; Brandenburg: 1454) with acute MI (<24h from symptom onset) were recorded and monitored by B2HIR. For 2014 to 2016 hospital admissions and hospital mortality from MI were also recorded from the GHRS. For 2014/2015 population based MI mortality (according to death certificates) was assessed from GHRS for Berlin and Brandenburg State areas. Mortality rates from both sources were compared between Berlin and Brandenburg.
Results: Population-based age-adjusted MI mortality was consistently higher in Brandenburg (2014: n=2330, 83.7/100.000 2015: n=2415, 83.9/100.000) than in Berlin (2014: n=1533, 48.1/100.000 2015: n=1934, 59.1/100.000). Hospital admission for MI was more frequent by 12.6% in Brandenburg (2014: 260/100.000; 2015: 272/100.000; 2016: 286/100.000; on average: 273/100.000) compared to Berlin (2014: 242/100.000; 2015: 248/100.000; 2016: 236/100.000; on average: 242/100.000), whereas hospital mortality was comparable (GHRS: Brandenburg: 8.2 to 8.7%; Berlin 8.2 to 8.8%). B2HIR data showed identical hospital mortality rates for all acute MI (Brandenburg: 97/1054, 6.7%; Berlin: 689/10289, 6.7%; p=0.999), and no significant hospital mortality difference for acute STEMI (Brandenburg: 54/714, 7.6%; Berlin: 417/4790, 8.7%; p=0.336).
Conclusion: The overall reported mortality rates from MI and hospital admission rates for MI are higher in Brandenburg State compared to Berlin, whereas analyses from different data sources revealed no significant difference in hospital mortality of MI patients. Elevated pre-hospital MI mortality may explain the higher population death rates in Brandenburg. Further investigation of pre-hospital MI epidemiology, death certificate documentation, and pre-hospital MI care are warranted.

P5545
To heparin or not to heparin - That is the radial question

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Introduction: Although transradial approach is being increasingly used, radial artery occlusion (RAO) is still a concern. Following the heterogeneity in clinical evidence, anticoagulation strategies vary enormously in clinical practice. We hypothesize that anticoagulation use may not be mandatory in contemporary diagnostic radial catheterization when we follow a systematic hemostasis protocol. Therefore, we aim to assess the rate of RAO in pts undergoing diagnostic catheterization comparing a heparin vs no-heparin approach. A multivariate logistic regression analysis was performed for the study of variables associated with RAO.
Methods: We prospectively included 218 consecutive pts that underwent diagnostic transradial coronary angiography from January 2015, in a comparative prospective observational study. This proof of concept study was designed to include patients in 2:1 ratio (heparin vs no heparin) to better discriminate events in the heparin arm. One operator used a no-heparin strategy, two operators used 2500U and one used 5000U of heparin, as usually performed. A 6Fr sheath was used and hemostasis was achieved with a compression device assuring radial patency throughout. The primary endpoint of the study was RAO. Secondary outcome measures included pain, functional limitation, bleeding or hematoma. Radial artery patency was screened using a modified Barbeau's test followed by Doppler study in suspected cases of RAO for confirmation.
Results: In 75pts no heparin was used and it was used in 143pts (2500U in 118 pts and 5000U in 25pts). The mean age of patients was 66±11 in the no-heparin group vs 63±12 in the heparin group, p=0.65. There were no significant differences regarding prevalence of Diabetes Mellitus (21.3% vs 17.5%, p=0.58), smoking habits (12.0 vs 14.7%, p=0.44), dyslipidemia (60.0% vs 62.2%, p=0.77) and hypertension (76.0% vs 63.6%, p=0.06). Using the Barbeau's test, RAO occurred in 20 patients (9.2%). The occlusion was confirmed by dopller color in 15 pts (6.9%). The two groups did not differ regarding RAO rates: 4 (5.4%) in the no-heparin group and 11 (7.7%) in the heparin group, p=0.78. The differences remained non-significant (p=0.53) when patients were stratified by heparin dose. In multivariate analysis, the predictors of RAO were: smoking (OR: 2.3, 95% CI: 2.2 - 4.5, p=0.04) and procedure duration (OR: 2.5, 95% CI: 2.3 - 7.8, p=0.02). Importantly, absence of heparin was not a predictor of RAO. Rate of local access