

编号: YY004-20190916001

**标题: Final 5-Year Results in Unselected Patients Implanted With a Thin-Strut, Platinum-Chromium, Everolimus-Eluting Stent (from the PROMUS Element Plus US Post-Approval Study)**

简介: PROMUS Element (PE) Plus post-approval study was a large prospective, observational, all-comers study designed to evaluate the safety and performance of a thin-strut platinum chromium everolimus-eluting PE Plus stent in everyday clinical practice. A total of 2,683 “real-world” patients with limited clinical or anatomic exclusion criteria were enrolled at 52 clinical sites in the United States. The study met its primary end point of 12-month cardiac death or myocardial infarction (CD/MI) compared with a prespecified performance goal ( $p < 0.0001$ ). Five-year clinical outcomes were evaluated in overall PE Plus post-approval study patients and high-risk subgroups. During the 5-year follow-up period, CD/MI and stent thrombosis related to the PE Plus stent occurred in 9% and 2.2% overall patients, respectively. The reported all-cause mortality rate was 15%, with 7% classified as cardiac-related. A total of 18% patients underwent target vessel revascularization, and 11% were reported as target lesion revascularization. The rates of PE Plus stent-related CD/MI remained low in patients with medically treated diabetes (13%), small vessels (9%), and long stents (10%). PE Plus stent-related thrombosis through 5 years in patients with diabetes, small vessels and long stents was 4.2%, 2.2%, and 2.6%, respectively. The occurrence of target lesion revascularization was numerically higher in patients with diabetes (16%) and long lesions (18%) than the small vessels subgroup (11%). In conclusion, the final 5-year results establish the long-term safety and efficacy of the PE Plus stent in a broad, unselected patient population representative of “real-world” clinical practice.

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**标题: Usefulness of Predischarge Cardiac Testing in Low Risk Women and Men for Safe, Rapid Discharge from a Chest Pain Unit**

简介: Predischarge cardiac testing (PDT) in low-risk patients evaluated for acute coronary syndrome in a chest pain unit (CPU) remains a challenge. It is unclear whether PDT varies by gender. We analyzed consecutive low-risk women and men evaluated in our CPU over a 2-year period and compared the utilization of PDT (exercise treadmill test, myocardial stress perfusion scintigraphy, exercise stress echocardiography, invasive coronary angiography, or no test), and incidence of major adverse cardiac events (MACE) at 30 days and 6 months. The study group comprised 619 patients (54% women). A large proportion of both genders did not undergo PDT, although this finding was more frequent in women (50% women vs 40% men,  $p = 0.01$ ). At 30 days, there were no MACE in either gender. After 6 months of follow-up, MACE remained very low in both women and men (2 [1%] vs 2 [1%]), and in patients who did and did not receive PDT (2 [1%] vs 2 [1%]). Mean length of stay in the CPU was 5.4 hours in patients without PDT and 9.8 hours in those with PDT ( $p < 0.0001$ ) without altering postdischarge MACE. When referred for PDT, women more often underwent myocardial stress perfusion scintigraphy than men (22% vs 14%,  $p = 0.005$ ) and less often received exercise treadmill test (20% vs 39%,  $p < 0.0001$ ). Yield of abnormal PDT was low in both women and men although it was lower in women (1% vs 5%,  $p = 0.02$ ). In conclusion,

many low-risk women and men evaluated in a CPU for acute coronary syndrome can be safely and rapidly discharged without PDT and with low risk for MACE at 30 days and at 6 months. Exclusion of PDT was associated with significantly reduced length of stay while maintaining safety in terms of postdischarge MACE.

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**标题: Ratio of Transmitral Early Filling Velocity to Early Diastolic Strain Rate as a Predictor of Cardiovascular Morbidity and Mortality Following Acute Coronary Syndrome**

简介: The ratio of early mitral inflow velocity (E) to early diastolic strain rate (E/e'sr) is a significant predictor of cardiac outcomes in various patient populations. This study aims to evaluate the predictive value of E/e'sr for heart failure, acute myocardial infarction, and death due to cardiovascular disease following acute coronary syndrome (ACS). In total, 432 ACS patients underwent echocardiography following percutaneous coronary intervention. The end point was the composite of heart failure, acute myocardial infarction, and death due to cardiovascular disease. Median follow-up was 4.4 (interquartile range 0.2 to 6.3) years. During the follow-up period, 199 (46.1%) met the composite outcome. Mean value of E/e'sr in patients was  $0.70 \pm 0.37$  m. In univariable Cox regression, E/e'sr was a predictor of the composite outcome (hazard ratio [HR] 1.05 95% confidence interval [CI] 1.03 to 1.07,  $p < 0.001$ , per 0.10 m increase). After multivariable adjustment for demographic and clinical parameters, E/e'sr remained an independent predictor (HR 1.03; 95% CI 1.01 to 1.06;  $p = 0.013$ , per 0.10 m increase). Global longitudinal strain (GLS) modified the relation between E/e'sr and outcome ( $p$  value for interaction = 0.011). In ACS patients with a relatively preserved systolic function assessed by GLS (GLS  $\geq 13.2\%$ ), E/e'sr showed to be a significant predictor (HR 1.20; 95% CI 1.06 to 1.36;  $p = 0.005$ , per 0.10 m increase). In contrast, E/e'sr was not a significant predictor in ACS patients with impaired systolic function (GLS  $< 13.2\%$ ; HR 1.02; 95% CI 0.99 to 1.04;  $p = 0.28$ ). In conclusion, E/e'sr provides important prognostic information regarding cardiovascular morbidity and mortality in ACS patients. However, E/e'sr was not an independent predictor over that of echocardiographic parameters. Furthermore, E/e'sr is a stronger prognosticator in patients with relatively preserved systolic function as opposed to patients with impaired systolic function.

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**标题: Risk Factors, Imaging Findings, and Sex Differences in Spontaneous Coronary Artery Dissection**

简介: Spontaneous coronary artery dissection (SCAD) is increasingly being recognized. However, data supporting diagnosis and management are scarce. We analyze a contemporary and comprehensive SCAD registry to advance the understanding of SCAD risk factors, angiographic appearance, and gender differences. This is a retrospective analysis of a prospectively populated database of SCAD patients seen at the Massachusetts General Hospital (MGH) between June 2013 and October 2017. Core laboratory analysis of both coronary angiograms and computerized tomographic (CT)

angiography of the extracoronary vessels was performed. Of the 113 patients, 87% were female and mean age was  $47 \pm 10$  years. Traditional cardiovascular risk factors including hypertension, hyperlipidemia, and smoking were present in 27%, 14%, and 22% of patients. Among females, 14%, 8%, and 9% had a history of gestational hypertension, pre-eclampsia, and gestational diabetes, respectively. Fifteen percent had used fertility treatment and 47% of postmenopausal women had used hormone replacement therapy. Angiography showed multivessel SCAD in 42%, severe coronary artery tortuosity in 59%, and extracoronary vascular abnormalities in 100% of patients with complete CT angiographic imaging. Gender differences revealed a self-reported depression and anxiety prevalence of 20% and 32%, respectively, in women compared with 0% in men. Type 1 SCAD was more commonly diagnosed in men than women (71% vs 29%,  $p < 0.01$ ). In conclusion, we highlight under-recognized features of SCAD including (1) relation with pregnancy complications and exposure to hormonal therapy; (2) diffuse, multivessel process in tortuous coronaries on a background of extracoronary arterial abnormalities; and (3) gender differences highlighting the role of mental health as well as potential underdiagnoses in men.

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**标题: Temporal Trends in Statin Prescriptions and Residual Cholesterol Risk in Patients With Stable Coronary Artery Disease Undergoing Percutaneous Coronary Intervention**

简介: Intensive low-density lipoprotein cholesterol (LDL-C) reduction with statins is recommended after elective percutaneous coronary intervention (PCI). We aimed to evaluate adherence to guideline-recommended statin therapy (GRST) and the rate of residual cholesterol risk (RCR) at follow-up after elective PCI. All patients who underwent elective PCI between January 2010 and May 2016 were prospectively included in this single-center study. GRST was defined as high-intensity statin (HIS) therapy for patients  $\leq 75$  years old and moderate-intensity statin (MIS) or HIS therapy for patients  $> 75$  years. RCR at follow-up was defined as  $< 50\%$  decrease in LDL-C with HIS or  $< 30\%$  with MIS for statin-naïve patients and as LDL-C  $> 70$  mg/dL for nonstatin-naïve patients. A total of 2,653 patients were included, with 1,304 (49.2%) discharged with GRST. There was a significant increase in the number of patients discharged with GRST over time from 44.2% in 2010 to 63.0% in 2016 ( $p < 0.001$ ). Conversely, RCR at follow-up was present in 1,120 patients (42.2%) overall and remained stable over time. Risk factors of RCR at follow-up were female gender (odds ratio [OR]: 1.38; 95% confidence interval [CI] 1.13 to 1.70), previous myocardial infarction (OR: 1.37; 95% CI 1.12 to 1.64), smoking (OR: 1.30; 95% CI 1.01 to 1.67), higher LDL-C level at baseline (OR: 1.22; 95% CI 1.18 to 1.25). The presence of RCR was associated with an increased adjusted risk of death within 1 year of the second LDL-C measurement (adjHR: 2.78; 95% CI 1.15 to 6.67). In conclusion, although the rate of GRST at discharge has improved significantly over time in patients who underwent elective PCI, the prevalence of RCR at follow-up has not changed appreciably suggesting that further implementation of guidelines as well as novel or more intensive pharmacotherapy may be warranted.

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