Efficacy and safety of ticagrelor versus prasugrel in smokers and nonsmokers with acute coronary syndromes

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Funding Acknowledgement: Type of funding sources: Public grant(s) – National budget only. Main funding source(s): German Centre for Cardiovascular Research; Deutsches Herzzentrum München, Germany

Background: The efficacy and safety of ticagrelor versus prasugrel according to smoking status in patients with acute coronary syndromes (ACS) are not known.

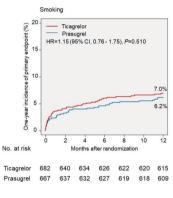
Purpose: The aim of this study was to assess the efficacy and safety of ticagrelor versus prasugrel according to smoking status in patients with ACS undergoing invasive evaluation.

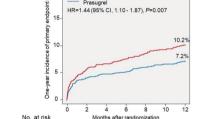
Methods: This pre-specified analysis of the ISAR-REACT 5 trial included 1349 smokers and 2652 nonsmokers randomised to receive ticagrelor or prasugrel. The primary endpoint was the incidence of death, myocardial infarction, or stroke; the secondary endpoint was the incidence of Bleeding Academic Research Consortium (BARC) type 3 to 5 bleeding. Both endpoints were assessed at 12 months after randomisation.

Results: There was no significant treatment arm-by-smoking status inter-

action regarding the efficacy outcome. The primary endpoint occurred in 47 patients (7.0%) in the ticagrelor group and 41 patients (6.2%) in the prasugrel group in smokers (hazard ratio [HR]=1.15; 95% confidence interval [CI] 0.76–1.75; P=0.510) and in 133 patients (10.2%) in the ticagrelor group and 94 patients (7.2%) in the prasugrel group in nonsmokers (HR=1.44 [1.10–1.87], P=0.007; Pint=0.378). The secondary endpoint occurred in 27 patients (4.6%) in the ticagrelor group and 33 patients (5.6%) in the prasugrel group in smokers (HR=0.81 [0.49–1.35]; P=0.412) and in 66 patients (6.0%) in the ticagrelor group and 46 patients (4.4%) in the prasugrel group in nonsmokers (HR=1.38 [0.94–2.01]; P=0.097).

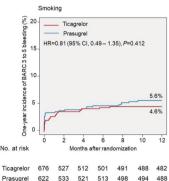
Conlusions: Although there was no significant interaction between smoking and treatment effect, the present findings suggest a greater advantage of prasugrel over ticagrelor in nonsmoker vs. smoker patients with ACS.

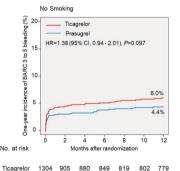




Ticagrelo

Ticagrelor 1320 1229 1216 1202 1184 1173 1149
Prasugrel 1332 1249 1240 1231 1215 1206 1189





1144 927 901 874 854 830

Prasugrel