## SMOKING DENIAL IN CARDIOVASCULAR DISEASE STUDIES

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**Background:** Assessment of self-reported smoking behavior in cardiovascular studies may lead to inaccurate measures of nicotine exposure. A more objective measurement of nicotine exposure can be done by measurement of plasma cotinine levels. Aim of the present study was to define the rate of discordance between self-reported smoking behavior and biochemically defined smoking status. **Methods and results:** Data from 3.316 patients hospitalized for coronary angiography, who completed a questionnaire on smoking behaviour, were analysed. As a biochemical assessment of smoking status we used a cut off serum cotinine level of 15 µg/l. Smoking denial, defined as a discrepance between high cotinin levels and self-reported never- or ex-smoking status, was observed 3.7% of the study participants. In a logistic regression analysis with step-wise inclusion of sex, age, CAD, previous MI and educational level, only male sex (odds ratio male/female: 2.00, 95% CI 1.22 - 3.33; p = 0.007) and age (odds ratio per year: 0.79, 95% confidence interval 0.66 - 0.94, p = 0.008) were associated with smoking denial. **Conclusions:** A mis-classification rate of 3.7% in the evaluation of such an important risk factor may lead to blurred effects and favor false negative results. The results of the present study substantiate the importance of biochemical markers for smoking assessment in cardiovascular studies.