

Poster-discussion: Lung cancer

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SYNERGY EPIDEMIOLOGICAL DATABASE AND SOME RESULTS ON SMOKING BY MAJOR HISTOLOGICAL SUBTYPES OF LUNG CANCER

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Objectives SYNERGY's primary scope is the investigation of joint effects of occupational lung carcinogens. Smoking will be explored as potential confounder and effect modifier.

Methods The SYNERGY database has been developed as platform for pooling studies with detailed occupational and smoking information. Occupations and industries were coded according to international classifications. Smoking-status definitions were harmonised. We present lung cancer risk estimates for smoking for 13 169 cases and 16 010 controls.

Results The database comprises 16 830 cases (13 397 men, 3 433 women) and 20 975 controls (16 309 men, 4666 women) from 13 studies (54 centres, 13 countries, recruitment 1985–2007). Among cases, 2% of men and 24% of women were never smokers. Adenocarcinoma (AdCa) was the most prevalent subtype in never smokers and women but squamous cell carcinoma (SqCC) in male smokers. Current smoking was associated with an OR of 23.6 (95% CI 20.4 to 27.2) in men and 7.8 (95% CI 6.8 to 9.0) in women. ORs increased by intensity or duration of cigarette smoking more pronounced for SqCC and small cell lung cancer (SCLC) than for AdCa. Smoking cessation reduced the risks already shortly after quitting but risk in heavy smokers did not fully return to the baseline risk of never smokers.

Conclusions The SYNERGY project is the largest collection of cases and controls with detailed occupational and smoking information. This database allows precise risk estimates for pulmonary carcinogens and in-depth analyses, for example, in never smokers or for the subtypes of lung cancer. Smoking exerted a steeper risk gradient on SqCC and SCLC than on AdCa.