

LUNG CANCER RISK IN PAINTERS: RESULTS FROM THE SYNERGY POOLED ANALYSIS

Neela Guha,¹ Ann Olsson,¹ Hans Kromhout,² Roel Vermeulen,² Thomas Brüning,³ Beate Pesch,³ Benjamin Kendzia,³ Heinz-Erich Wichmann,⁴ Irene Bröske,⁴ Isabelle Stücker,⁵ Sara De Matteis,⁶ Maria Teresa Landi,⁷ Neil Caporaso,⁷ Jack Siemiatycki,⁸ Per Gustavsson,⁹ Nils Plato,⁹ Franco Merletti,¹⁰ Dario Mirabelli,¹⁰ Lorenzo Richiardi,¹⁰ Wolfgang Ahrens,¹¹ Hermann Pohlabein,¹¹ Karl-Heinz Jöckel,¹² David Zaridze,¹³ Adrian Cassidy,¹⁴ Jolanta Lissowska,¹⁵ Neonila Szeszenia-Dabrowska,¹⁶ Simone Benhamou,¹⁷ Alena Slamova,¹⁸ Lenka Foretova,¹⁹ Vladimir Janout,²⁰ Peter Rudnai,²¹ Eleonora Fabianova,²² Rodica Stanescu Dumitru,²³ Francesco Forastiere,²⁴ Bas Bueno-de-Mesquita,²⁵ Susan Peters,² Paolo Boffetta,²⁶ Veronique Benhaim-Luzon,¹ Kurt Straif¹ ¹IARC, Lyon, France; ²Utrecht University, Utrecht, The Netherlands; ³IPA, Bochum, Germany; ⁴Institut für Epidemiologie, Neuherberg, Germany; ⁵INSERM U 754 - IFR69, Villejuif, France; ⁶Università degli Studi di Milano, Milan, Italy; ⁷NCI, Bethesda, USA; ⁸University of Montreal Hospital, Montreal, Canada; ⁹Karolinska Institute, Stockholm, Sweden; ¹⁰University of Turin, Turin, Italy; ¹¹Bremen Institute for Prevention Research and Social Medicine, Bremen, Germany; ¹²University of Duisburg-Essen, Duisburg-Essen, Germany; ¹³Russian Cancer Research Centre, Moscow, Russia; ¹⁴University of Liverpool, Liverpool, UK; ¹⁵Cancer Center and Institute of Oncology, Warsaw, Poland; ¹⁶Nofer Institute, Lodz, Poland; ¹⁷INSERM U 946, Paris, France; ¹⁸Charles University, Prague, Czech Republic; ¹⁹Masaryk Memorial Cancer Institute, Brno, Czech Republic; ²⁰Palacky University, Olomouc, Czech Republic; ²¹National Institute of Environment Health, Budapest, Hungary; ²²Regional Authority of Public Health, Banská Bystrica, Slovakia; ²³Institute of Public Health, Bucharest, Romania; ²⁴Department of Epidemiology, ASL RomaE, Rome, Italy; ²⁵NIVM, Bilthoven, The Netherlands; ²⁶Tisch Cancer Institute, New York, USA

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Objectives The International Agency for Research on Cancer identified “occupational exposure as a painter” as a cause of lung cancer. Identifying the specific causative agent(s) has been difficult since painters are exposed to mixtures of known and suspected carcinogens that change over time. Using a large pooled dataset, we evaluated the risk of lung cancer among painters by duration of employment and painting activity.

Methods Detailed individual data on smoking were available for 16258 lung cancer cases (605 painters, 3.7%) and 19922 age- and sex-matched controls (473 painters, 2.4%) from SYNERGY, a pooled effort of 12 case-control studies in Europe and Canada. Painting activity was classified from job titles using ISCO 1968 and ISIC Revision 2 codes. Multivariable logistic regression models were adjusted for age, gender, centre, smoking habits and previous employment in high-risk occupations.

Results An OR of 1.38 (95% CI 1.20 to 1.59) was found for ever working as a painter; the excess risk of lung cancer increased with increasing years of employment (p-trend<0.0001). In never smokers, the OR was 1.75 (95% CI 1.01 to 3.02). The highest lung cancer risks with significant exposure-response trends were observed for construction (p-trend<0.0001), spray (p-trend=0.01) and repair painters (p-trend=0.03). Results were similar by histological type.

Conclusions These findings support the evidence of an increased risk of lung cancer among painters. Analyses by painting activity may help to identify causative agents.