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PESTICIDE EXPOSURE IN FARMING AND FORESTRY AND THE RISK OF UVEAL MELANOMA

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10.1136/oemed-2011-100382.121

Objectives Since pesticides are disputed risk factors for uveal melanoma, we studied the association between occupational pesticide exposure and uveal melanoma risk in a case-control study from nine European countries.

Methods Incident cases of uveal melanoma and population as well as hospital controls were included and frequency-matched

by country, 5-year age groups and sex. Self-reported exposure was quantified with respect to duration of exposure and pesticide application method. We calculated the exposure intensity level based on application method and use of personal protective equipment. ORs and 95% CIs were estimated by unconditional logistic regression analyses and adjusted for several potential confounders.

Results 293 case and 3198 control subjects were interviewed. We did not identify positive associations with activities in farming or forestry, pesticide application or pesticide mixing. No consistent positive associations were seen with exposure intensity level scores either. The only statistically significantly raised association in this study was for exposure to chemical fertilisers in forestry (OR=8.93; 95% CI 1.73 to 42.13), but this observation was based on only six exposed subjects. Results did not change when we restricted analyses to morphologically verified cases and excluded proxy interviews as well as cancer controls. We did not observe effect modification by sex or eye colour.

Conclusions Risk estimates for pesticide exposures and occupational activities in agriculture and forestry were not increased. The possible risk increase associated with exposure to chemical fertilisers should be reinvestigated in future studies.