Cancer risk in adherent users of polyurethane foam-containing CPAP devices for sleep apnoea

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Shareable abstract (@ERSpublications)
Sustained and adherent CPAP therapy of obstructive sleep apnoea using Philips Respironics devices containing polyester-based polyurethane foam, was not associated with an increased risk of cancer after a median follow-up time of 7.2 years https://bit.ly/3vBpUQE

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To the Editor:

On 14 June, 2021 Philipps Respironics (PR) emitted a voluntary recall notification for several sleep and respiratory care products, including continuous positive airway pressure (CPAP) devices used for obstructive sleep apnoea (OSA) therapy and ventilators. The polyester-based polyurethane (PE-PUR) sound abatement foam may break down into particles, which may enter the device's air tube and be inhaled or swallowed by the user. The volatile gas products (diethylene glycol, toluene di-isocyanate isomers, toluene diamine isomers) released during the degradation process have been suspected to present potential toxic and carcinogenic effects [1]. Whether prolonged exposure to these volatile compounds is associated with an increased risk of cancer in patients using PR devices for OSA is a crucial issue. Using clinical data from a retrospective longitudinal multicentre cohort linked with health administrative data, Kendzerska *et al.* [2] reported no increased all-cancer risk in 1220 patients treated for OSA with a PR device over a median follow-up time of 7.5 years. However, the lack of therapy adherence data did not make it possible to evaluate cancer risk in CPAP-adherent patients. Using propensity score matching within a nationwide study of patients with OSA, Palm *et al.* [3] reported an increased all-cancer and lung cancer incidence in counties prescribing ⩾80% of CPAP devices containing polyurethane foam (PUF-CPAP) compared to patients from counties prescribing <10% of PUF-CPAP. However, the association disappeared in the sensitivity analysis excluding a Swedish county with known higher smoking rates.