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Title: The effect of radiographic abnormalities on mental health of former workers and residents of Wittenoom in Western Australia

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Body: Introduction: Exposure to asbestos causes radiographic abnormalities such as pleural plaque (PP), diffuse pleural thickening (DPT) and asbestosis. Knowledge of presence of these radiographic abnormalities may affect individuals' mental health (MH). Aim: The aim of this study is to examine the effect radiographic abnormalities on the MH of people exposed to crocidolite. Method: Subjects were former workers and residents of Wittenoom, a crocidolite mining town in Western Australia, who had participated in an Asbestos Review Program. The diagnosis of PP, DPT or asbestosis was determined from plain chest x-rays. In 2007, participant had completed a questionnaire that included questions on mental health status (SF-12) and sense of personal control (SOPC). Generalised linear modelling was used to relate the presence of PP, DPT and asbestosis to MH scores and SOPC scores controlling for asbestos exposure measurements, smoking status, other cancers, general physical health and demographic variables. Results: A diagnosis of asbestosis was significantly associated with worse MH status (β = -0.04; 95% CI: -0.079 -0.004; p=0.031) but not SOPC. The presence of PP and DPT were not related to either poor mental health or reduced SOPC. Conclusion: The presence of PP or DPT, in the absence of other disease, do not seem to affect the mental health of crocidolite exposed subjects from Wittenoom compared to exposed persons without radiographic abnormalities. However, patients with asbestosis have evidence of worse MH compared to other asbestos exposed individuals.