

## Occupational cancer in Australia and challenges in diagnosis

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According to GLOBOCAN 2008, there were over 312,000 cases of cancer and over 40,000 deaths in Australia. The 5 most common cancer sites are prostate, colorectum, breast, melanoma of skin and lung. The estimated proportion of cancers due to occupation was about 11% of incident cancers in males and 2% in females. This equates to about 5000 cancers a year. Using an estimate from the European Union (not consider the risk controls at workplace), approximately 1.5 million workers in Australia are potentially exposed to carcinogens at work.

Diesel exhaust has recently been classified as 'carcinogenic to humans' by the International Agency for Research on Cancers, and has been associated with increased risk of death from lung cancer (sufficient evidence) and bladder cancer (limited evidence). Hazardous levels of diesel exhaust can be found in occupations in Australia ranging from mining to driving diesel-fuelled trucks, graders, cranes or forklifts. Because of difficulties in proving causation, and the long lag time between occupational exposure and cancer, occupational cancer related to diesel exhaust exposure can be difficult to identify and diagnose. In addition, there are multiple substances existing in workplaces which do or may cause different types of cancer. In this paper, diesel exhaust will be used as an example and the challenges in diagnosis of occupational cancers will be discussed.

### Biography

Dr. Le Jian is a Senior Research Fellow at School of Public Health, WHO Collaborating Centre for Environmental Health Impact Assessment and Health Innovation Research Institute at Curtin University (Australia). She has a PhD in Public Health. She also holds a Doctor, a Master and a Bachelor degree in Medicine. She was a Senior Occupational Physician at a teaching hospital of ZMU (China). She has more than 70 publications in reputed journals and serves on more than 10 scientific professional bodies. Her current research interests include using multidisciplinary approach to assess ultrafine and nano-sized substances and their impacts on health.

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