industry (difference: 9 jobs). The use of MRS allowed us to identify job characteristics that are associated with lower agreement between experts and to quantify the potential benefit of using multiple raters.

Poster Presentation
Cancer

**0304** TEMPORO-SPATIAL ANALYSIS OF MORTALITY FROM PLEURAL MESOTHELIOMA FROM 1975 TO 2012 IN ÎLE-DE-FRANCE

Philippe Bouvet de la Maisonneuve*, Florian Pontin, Adrien Saunal, Maylis Telle-Lamberton, Observatoire Régional de Santé d’Île-de-France, Paris, France; Université Pierre et Marie Curie, Paris, France

Objectives This study presents an analysis of mortality in Île-de-France region from pleural mesothelioma from 1975 to 2012, by sex, district and "canton-villes" residence.

Material and methods Pleural mesothelioma deaths from 1975 to 2012 were provided by the CepiDc and the corresponding population numbers by INSEE. Mortality rates stratified by age were reported for the region and its districts. Standardised mortality ratios were calculated using the Île-de-France population as a reference at "canton-villes" level. A ranking algorithm to order the mortality by "canton-ville" over the period was developed and applied.

Results The epidemic peaked in the mid-90s. Among men the lowest standardised rate was observed for Paris (3.4 per 100,000) and the highest in Seine-et-Marne and Seine-Saint-Denis (5.1 per 100,000). Among women the lowest mortality was observed in Paris and in the Val d’Oise (1.3 per 100,000) and the higher in the Seine-Saint-Denis (1.8 per 100,000). The temporo-spatial representation shows high mortality areas consisting of neighbouring "canton-villes" in Seine-et-Marne (Peithes) and Seine-Saint-Denis (Aulnay-sous-Bois), in contrast with areas of low mortality localised mainly in Paris and the Val-d’Oise. The epidemic timeline differed among "canton-ville".

Conclusion Epidermic of pleural mesothelioma can be characterised at a fine scale over a long period. This territorial knowledge can be an aid to targeted education of health professionals and the populations concerned.

Oral Presentation
Cardiovascular Disease

**0305** OCCUPATIONAL EXPOSURE TO RESPIRABLE QUARTZ AND RADON AND THE RISK OF ACUTE MYOCARDIAL INFARCTION

Johannes Gellissen, Dagmar Pattloch, Norbert Kerten, Matthias Möhner*. Federal Institute for Occupational Safety and Health, Berlin, Germany

Objectives The aim of this study is to investigate the effect of occupational exposure to radon and respirable quartz (RQ) on the risk of acute myocardial infarction.

Methods This individually matched case-control-study is nested into the Wismut cohort of former uranium miners. Acute myocardial infarction (AMI) was ascertained from hospital discharge diagnoses coded in ICD-10 and validated according to WHO criteria (1979) by patient records. Exposure to RQ, radon, long-lived radionuclides, Gamma-radiation, and arsenic was estimated by a corresponding job-exposure-matrix. Information on silicosis was included in the dataset to reduce a possible Healthy-worker-effect. To exclude effects of possible exposures before hire in uranium mining, a second analysis was performed limited to miners born after 1930. Conditional logistic regression was used for risk modelling.

Results In total, 467 cases of AMI and 467 controls, matched by year of birth, were ascertained. The analysis of the full dataset shows only a weak increase of AMI-risk with increasing exposure to RQ. But the second analysis, based on 126 matched pairs, revealed a positive dose-response relationship with RQ. The odds ratio for the highest quintile (>15 mg/m³·year) was 4.91 (95%CI: 1.43–16.8). Including RQ as a linear term yields OR=1.05 per mg/m³·year. The analysis of the cumulative radon exposure produced similar findings.

Conclusions This study shows elevated risk of AMI due to radon and RQ exposure. Because of the high correlation between both exposures, a differentiation between the corresponding effects is not possible.

Oral Presentation
Exposure Assessment

**0306** USING DATA FROM EXPOSURE DATABANKS: COMPARING MEASUREMENT LEVELS IN LIMS (QUEBEC, CANADA) AND IMIS (USA)

Philippe Sarazin*, France Labrèche, Jacques Lesage, Jérôme Lavoué, Institut de recherche Robert-Sauvé en santé et en sécurité du travail, Montréal, Québec, Canada; Université de Montréal, Montréal, Québec, Canada

Objectives To assess the quality of exposure data from exposure databases.

Methods This study compared exposure data from LIMS (Quebec, Canada) and IMIS (USA) using similar databases for uranium miners. The analysis was performed limited to miners born after 1930. Conditional logistic regression was used for risk modelling.

Results In total, 467 cases of AMI and 467 controls, matched by year of birth, were ascertained. The analysis of the full dataset shows only a weak increase of AMI-risk with increasing exposure to RQ. But the second analysis, based on 126 matched pairs, revealed a positive dose-response relationship with RQ. The odds ratio for the highest quintile (>15 mg/m³·year) was 4.91 (95%CI: 1.43–16.8). Including RQ as a linear term yields OR=1.05 per mg/m³·year. The analysis of the cumulative radon exposure produced similar findings.

Conclusions This study shows elevated risk of AMI due to radon and RQ exposure. Because of the high correlation between both exposures, a differentiation between the corresponding effects is not possible.
Objective: The IMIS database stores all occupational exposure measurements collected by public health teams in Quebec. The IMIS database contains exposure measurements collected by the U.S. Occupational Safety and Health Administration inspectors to verify compliance. We investigated differences/similarities between both databases.

Methods: Personal exposure measurements from 1994–2011 were abstracted, and industry from both databases was recoded according to the Canadian Standard Industrial Classification. Logistic regression was used to explore differences between exposure levels in both databases for 27 chemicals in common industries, taking into account the type of exposure (short-term or long-term), year, and industry. Ratios of the predicted odds of exposure above the threshold limit value (OER) for IMIS compared to LIMS were calculated for each chemical for years 1997 and 2008.

Results: Our analysis was based on 64,938 LIMS and 53,078 IMIS measurements. Exposure levels were significantly lower in IMIS compared to LIMS for metals (OER estimated in 1997: 0.43 across agents, 95% CI: 0.30–0.62; OER 2008: 0.57, 95% CI: 0.42–0.77), and they became similar in recent years for solvents (OER 1997: 1.47, 95% CI: 0.91–2.38; OER 2008: 0.99, 95% CI: 0.58–1.69). Short-term exposure levels were on average 3 times higher than long-term exposure levels across the two databases. Results were unchanged when industry from both databases was recoded according to the U.S. Standard Industrial Classification or the North American Industry Classification System.

Conclusions: Differences between exposure levels in the two databases may reflect distinct sampling strategies or prevention policies between the two countries.

Poster Presentation
Musculoskeletal

0307 DETERMINANTS OF MODIFIED WORK AS PART OF THE RETURN-TO-WORK PROCESS FOR INJURED WORKERS WITH MUSCULOSKELETAL INJURIES IN BRITISH COLUMBIA, CANADA

Mieke Koehoorn*, Christopher B McLeod, Lillian Tamburic, Esther Maas. University of British Columbia, Vancouver, British Columbia, Canada

10.1136/oemed-2017-104636.250

Introduction: The longer an injured worker is off work, the less likely they are to return to work and modified work is associated with shorter recovery durations. However, low rates of modified work have been found in Canadian compensation jurisdictions. This study investigated the determinants of modified work among workers with musculoskeletal injury compensation claims in British Columbia.

Methods: Three cohorts of injured workers were identified from compensation claims for back strain, limb fractures and connective tissue injuries. The effect of age, sex, occupation, wage quintile and prior claim on at least one modified day (yes/no) within the first four weeks of claim was analysed using Poisson regression.

Results: In multivariable models, female gender was associated with an increased likelihood of modified work (back strains: IRR 1.15 [95%CI 1.06, 1.25]; limb fractures: 1.22 [0.91, 1.64]; connective tissue injuries: 1.14 [0.85, 1.52]), while older age (e.g. 55 to 65 years) was associated with a decreased likelihood (back strains: IRR 0.69 [95%CI 0.63, 0.76]; limb fractures; connective tissue injuries: 0.59 [0.43, 0.81]). Higher income was associated with an increased likelihood of modified work for limb fractures (highest quintile: IRR 1.84 [1.27, 2.67]). The effect of occupation was variable on modified work by injury type.

Discussion: Unmeasured injury severity may have resulted in residual confounding of disability duration by gender and age. The offer of modified work may be dependent on occupation and the flexibility of higher paying occupations. The overall low rate of modified work for musculoskeletal injuries (<30%) warrants further investigation.