Carcino-gens	Agricul-ture	Mining	Manu-facturing	Electrical	Construc-tion	Trade	Trans-porta-tion	Services
Silica	0.004	0.230	0.023	0.014	0.189	0.000	0.005	0.001
Cadmium	0.000	0.000	0.005	0.003	0.003	0.000	0.001	0.000
Nickel	0.000	0.020	0.017	0.004	0.000	0.000	0.000	0.000
Arsenic	0.001	0.001	0.004	0.001	0.001	0.000	0.000	0.000
Chro-mium	0.000	0.003	0.021	0.004	0.002	0.000	0.004	0.002
Diesel Fumes	0.006	0.220	0.011	0.034	0.058	0.005	0.134	0.009
Beryllium	0.000	0.001	0.002	0.001	0.000	0.000	0.000	0.000
Asbestos	0.012	0.102	0.006	0.017	0.052	0.003	0.007	0.003

Table 3: Proportion of workers exposed to lung carcinogens, by industry based on the CAREX estimates (FIOH, 1998).

Conclusion: The incidence of lung cancer due to occupational exposure is low in our country and as it is the case for other populations, there is more lung cancer due to occupational exposure among male compared to female.

B4-03 **Prevention & Early Detection + Epidemiology, Tue, 13:45 - 15:30**

Small cell cancer with an unknown primary site had a better prognosis than advanced small cell lung cancer

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Background: The aim of this study is to compare the clinical outcomes of patients diagnosed with small cell cancer of unknown primary (CUP) origin to those diagnosed with metastatic small cell cancer of known origin.

Methods: All persons diagnosed with cancer in New South Wales, Australia, from 1980 to 2004 were studied using a population based cancer registry. Patients classified as small cell CUP were documented and survival outcome compared to those with initial small cell metastatic presentations with a known primary site, for the same period. This register collects degrees of cancer spread at diagnosis as localised, regional and metastatic but does not use a clinical staging system.

Results: There were 65,239 histologically or cytologically confirmed metastatic cancers identified at initial presentation of which 14,502 were CUP. Further classification into histological subsets showed that 3,713 (5.7%) of metastatic presentation were small cell cancer. Of those diagnosed with small cell histology, 516 (14%) were CUP and the rest were classified as advanced small cell with a known primary site. CUP had a significantly higher proportion of females and older individuals compared to metastatic cancer of known primary site. Logistic regression analysis controlling for age and sex revealed that small cell CUP had significantly better survival than advanced small cell cancer of the lung and other primary sites (hazard ratio 0.77, 95% confidence intervals 0.71-0.85, p<0.0001). At 6 years 15% of small cell CUP remained alive compared to only 4% for other metastatic small cell patients with a known primary site almost all from the lung.

Conclusions: Some histological subsets of CUP have a better prognosis than metastatic cancer at presentation. Small cell CUP has significantly better long term survival than metastatic small cell cancer of known primary site predominantly from the lung which suggests a need for genetic profiling and more specific treatment strategies.

B4-04 **Prevention & Early Detection + Epidemiology, Tue, 13:45 - 15:30**

Detection of peripheral lung cancer in the bronchial washing specimen using MAGE A1-6 RT-PCR

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Background: With increase of peripherally located lung cancers, clinical need for percutaneous needle biopsy become high but could cause chest wall inoculation of cancer cells. We evaluated the expression of melanoma antigen gene(MAGE) A1-6 common primers from bronchoscopic washing fluid whether it could replace needle biopsy.

Materials and Methods: Twenty-nine patients with bronchoscopically invisible peripheral lung nodules were studied. Tumor locations were categorized by 5.8 mm fiberoptic bronchoscopy(Olympus, Tokyo, Japan). Bronchoscopic washing specimens were collected by instillation of 20ml normal saline to the tumor bearing segment and retrieved. Samples were divided, one for MAGE RT-PCR and the other for conventional cytology. After surgery, 19 patients were diagnosed as lung cancer(11 squamous cell carcinoma and 8 adenocarcinoma) and 10 were benign lung diseases. For MAGE specimens, RNA preservation solutions were added immediately and blindly sent to the laboratory. RNA extraction was performed using mRNA extraction kit and MAGE and GAPD were amplified using MAGE A1-6 common primers and sequence specific primer. We evaluated the positive rates according to the cell types and T stages, and compared the results with conventional cytology findings.

Results: From bronchial washes, positive rates of MAGE and cytology tests showed 63.2 and 21.4% in cancer group and 10.0 and 0% in benign diseases group. According to cell types, positive rates of MAGE and cytology test were 63.6 and 28.6 % in squamous cell carcinoma, 62.5 and 14.3 % in adenocarcinoma. According to T stages, positive rates of MAGE and cytology test were 71.4 and 20.0 % in T1 stage (N=7), 44.4 and 16.7 % in T2 stage (N=9), 100 and 33.3 % in T4 stage (N=3). For 11 patients with tumor size smaller than 3cm, positive rate of MAGE and cytology were 54.5% and 9.1%.

Conclusions: Compared with conventional cytology test, MAGE A1-6 RT-PCR showed high detection rates in the bronchial washes of peripheral lung cancer patients. This method is simple and robust, thus it could be effectively utilized as a peripheral lung cancer detection tool in the clinical laboratory.