The terrorist attack on 9/11/2001, and subsequent rescue, recovery, and service restoration of the World Trade Centre disaster site in New York City, created an unprecedented and unique occupational and environmental exposure that affected a large and diverse group of rescue workers and volunteers. The workers were exposed to a mixture of poorly characterised inhaled toxicants. A variety of acute and chronic respiratory illnesses have been reported among all exposed workers, which are the subject of large scale ongoing investigation and follow up. Our group created the WTC Chest Imaging Archive as a repository for more than 3500 chest CT scan studies in about 1700 WTC workers. We systematically assessed imaging abnormalities by means of the International CT Classification of Occupational and Environmental Respiratory Diseases. An examination of the first available chest CT scan for each subject (n=1453) with complete available data, a median of 6.8 years after September 11, 2001 revealed that the most frequent recorded abnormalities were pleural abnormalities (parietal in 7.9% of the workers, and visceral in 12.8% of them), inhomogeneous attenuation (13.2%), irregular/linear opacities (12.9%), and emphysema (12.0%). With regards to pleural abnormalities, although we found them across all 5 broad occupational groups, they were more frequent among construction labourers/asbestos handlers/building cleaners, most of whom were first-generation immigrants. Many of those abnormalities were not reported by clinical radiological readings. Visceral, but not parietal pleural changes were associated with mild pulmonary function impairment. Future studies will examine the evolution of imaging abnormalities, and add computerised quantitative CT scan to their assessment.

1677c GERMAN EXPERIENCE USING ILO AND ICOERD-CODING IN THE SURVEILLANCE OF ASBESTOS- AND QUARTZ-EXPOSED WORKERS

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Currently, there are about 60 to 70 000 individuals on the surveillance program per year out of >500 000 registered asbestos exposed persons, 240 000 of them get an offer for medical examination, lung function and a chest X-ray every 3 years. Ca. 90% of the data (results of examination, lung function and conventional ILO-coding sheet) are transferred online.

Approximately 10% of the examined candidates gets a Low Dose Volume-HRCT. Lung cancer screening examinations in a high risk group have been started. Depending on the knowledge using the ILO International Classification of Radiographs of Pneumoconioses as universal standard for screening and health surveillance of individuals occupationally exposed to dusts, a standardised coding system has been demanded as obligatory not only for epidemiological purposes, but also as diagnostic criteria for occupational diseases.

The ILO classification is a standard surveillance tool, in use for more than 50 years in Germany. In 2005, a monograph 'International Classification of HRCT for Occupational and Environmental Respiratory Diseases – ICOERD' has been published. The work represented a consensus of international experts from Belgium, Finland, France, Germany, Great Britain, Japan and United States on a principal coding system

along with reference films and imaging parameters. The reference films include examples with 5 and 1 mm slice thickness (incremental CT) for typical pleural and parenchymal findings.

Experienced radiologists will make the classification, or a CD-ROM with subjects' images will be sent to a B-Reader for classification. For coding purposes the reference-films are part of the classification. The reading results will be stored online at the Online-Portal-GVS-Server, which is provided by GVS – Health Prophylaxis – a joint facility of the German Statutory Accident Insurance.

ILO-criteria for diagnosing asbestos related diseases are as follows: s, t, u irregular densities, more or equal 1/1 without and 1/0 with inspiratory crackles or impairment of vital capacity, pleural thickening (plaque also unilateral at least 3 mm thickness, length 2 cm, diffuse pleural thickening 2a both middle and lower field). ICOERD criteria for diagnosing asbestos related diseases are as follows: irregular and/or linear opacities in both lower and/or middle fields, sum profusion of at least 4, any visible pleural thickening, visceral or pleural at least 1a, with or without calcification, after exclusion of other causes. Similar criteria for silicosis will be presented.

Conclusion

- Taking into account the German experience with the coding system as part of guidelines for coding asbestosis, asbestos–related pleural findings, silicosis and other occupational lung diseases, the HRCT–reference films are part of the standardised classification system (ICOERD).
- The documentation of reading and general surveillance data of dust exposed workers at a Online–Server meets the demand for displaying, reading and classifying subject data. Our German experiences with using the ILO and ICOERD–classification will be presented.
- HRCT–findings of occupational respiratory lung diseases should be classified using a standardised coding and scoring system. Reference films are provided to harmonise the description and documentation to achieve a reproducible score of the disease.

21 ASSESSMENT OF JOB-RELATED ASTHMA CASES: OUR THREE-YEAR EXPERIENCE

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Introduction Work-related asthma (WRA) is one of the most common occupational diseases. There is no reliable statistical data for WRA in Turkey. In this study, we aimed to review diagnosing procedures and the characteristics of patients who were diagnosed with WRA at our clinic.

Methods Global Initiative for Asthma guideline was used to establish the diagnosis of asthma. Spirometric measurement, reversibility test and BPT were performed according to ATS criteria.Detailed occupational history was gained with questioning the job(s) starting from the first job, used material(s), duration, time, place properties chronologically and extensively. The relation of the complaints with job was defined. PEF measurements were performed for at least four times, for at least two weeks in working environment and at least two weeks during resting period. A graphic was createdusing the Microsoft Office Excel program taking the highest measurement of daily four sessions into account separately for resting