



## 2016 CONFERENCE

Abstract Number: P1-107 | ID: 4598

### High risk of pleural plaques in the general population exposed to natural carcinogenic fibres: preliminary data

Caterina Ledda\*, Occupational Medicine, Department of Clinical and Experimental Medicine, University of Catania, Catania, Italy., Italy, cledda@unict.it; Dario Mangano, Occupational Medicine, Department of Clinical and Experimental Medicine, University of Catania, Catania, Italy., Italy, dariomangano@hotmail.it; Andrea Musumeci, Division of Radiology – University Hospital “Policlinico – Vittorio Emanuele”, University of Catania, Catania, Italy, Italy, andreagiovannimusumeci@gmail.com; Margherita Ferrante, Hygiene and Public Health, Department Medical Sciences, Surgical and Advanced Technologies “GF Ingrassia”, University of Catania, Catania, Italy., Italy, marfer@unict.it; Lucrezia Fago, Occupational Medicine, Department of Clinical and Experimental Medicine, University of Catania, Catania, Italy., Italy, lucreziafago@gmail.com; Andrea Marconi, Occupational Medicine, Department of Clinical and Experimental Medicine, University of Catania, Catania, Italy., Italy, andreinomar@yahoo.it; Valentina Costanzo, Occupational Medicine, Department of Clinical and Experimental Medicine, University of Catania, Catania, Italy., Italy, dottore.rapisarda@gmail.com; Vincenzo Ricceri, Division of Radiology - Hospital of Biancavilla “Maria SS. Addolorata” - ASP Catania, Biancavilla, Italy., Italy, vricceri@sirm.org; Venerando Rapisarda, Occupational Medicine, Department of Clinical and Experimental Medicine, University of Catania, Catania, Italy., Italy, vrapisarda@unict.it;

**Introduction.** Fluoro-edenite (FE) is a natural mineral species initially isolated in Biancavilla, Sicily. The fibres are similar in size and morphology to certain amphibolic asbestos fibres, the inhalation of which may cause chronic inflammation and cancer. Exposure to FE is known to be associated with pleural and lung diseases, including pleural plaques. The aim of this study is to report the pleural plaque (PP) risk in the general population exposed to FE.

**Methods.** Subjects were recruited from Biancavilla’s hospital Radiodiagnostics Operative Unit database. Namely, high-resolution computer tomography (HRCT) chest scans were studied between June 2009 and June 2015. Personal data (age, domicile, etc.) were also collected. Inclusion criterion was to be living in Biancavilla’s municipality. At the same time a non exposed group was recruited from a Radiodiagnostics Operative Unit database situated in a Hospital 30 km away from Biancavilla, in this instance exclusion criterion was to be living in Biancavilla’s municipality. Three independent radiologists, blinded about exposed and non exposed, analysed the HRCT chest scans. RR was calculate with interval of confidence at 95%.

**Results.** Over the six years analysed, following the application of inclusion and exclusion criteria we found in a total of 1,365 scans of exposed subject 218 with PP; in the non-resident population, after analyzing 1,454 HRCT, we found PP in 38 subjects. The RR is 7,07 CI 4,98-10,04 p<0,0001.

**Conclusions.** The present findings demonstrate the high risk of PP through residing in Biancavilla.

