

# European Respiratory Society Annual Congress 2012

**Abstract Number:** 4629

**Publication Number:** P1699

**Abstract Group:** 1.3. Imaging

**Keyword 1:** Sarcoidosis **Keyword 2:** Extrapulmonary impact **Keyword 3:** No keyword

**Title:** Cardiac magnetic resonance imaging versus echocardiography for assessment of cardiac involvement in pulmonary sarcoidosis

Ms. Teresa 28371 Fandl [teresa.fandl@gmx.at](mailto:teresa.fandl@gmx.at)<sup>1</sup>, Dr. Stefan 28372 Pfaffenberger [stefan.pfaffenberger@meduniwien.ac.at](mailto:stefan.pfaffenberger@meduniwien.ac.at) MD<sup>1</sup>, Dr. Karin 28373 Vonbank [karin.vonbank@meduniwien.ac.at](mailto:karin.vonbank@meduniwien.ac.at) MD<sup>2</sup>, Dr. Beatrice 28374 Marzluf [beatrice.marzluf@meduniwien.ac.at](mailto:beatrice.marzluf@meduniwien.ac.at) MD<sup>2</sup>, Prof. Dr Julia 28375 Mascherbauer [julia.mascherbauer@meduniwien.ac.at](mailto:julia.mascherbauer@meduniwien.ac.at) MD<sup>1</sup> and Prof. Dr Thomas 28382 Binder [thomas.binder@meduniwien.ac.at](mailto:thomas.binder@meduniwien.ac.at) MD<sup>1</sup>. <sup>1</sup> Department of Internal Medicine II, Division of Cardiology, Medical University of Vienna, Austria and <sup>2</sup> Department of Internal Medicine II, Division of Pulmology, Medical University of Vienna, Austria .

**Body:** Study objectives: Data on the prevalence of cardiac involvement in sarcoidosis patients vary depending on the patient population and diagnostic modality studied. We aimed to compare cardiac involvement diagnosed by cardiac magnetic resonance imaging (CMR) with standard echocardiography and speckle tracking echocardiography for detection of cardiac sarcoidosis in patients with pulmonary sarcoidosis. Methods: 41 patients (mean 47 years) with biopsy-proven pulmonary sarcoidosis underwent echocardiography and CMR imaging. Cardiac involvement was diagnosed if a positive late gadolinium enhancement (LE) pattern not typical for coronary artery disease on CMR was found. LE was compared to regional wall motion abnormalities on standard echocardiography and to global longitudinal peak systolic strain (GLPSS) on speckle tracking echocardiography. NT-proBNP was evaluated. Results: No (0%) patient revealed cardiac involvement by echocardiography while 14 (34%) patients showed a positive LE on CMR ( $p < 0.001$ ). Four (10,5%) patients with positive LE showed a reduced GLPSS compared to 3 (7,9%) patients without LE ( $p = 0.245$ ). Mean NT-proBNP was higher in patients with positive LE (127 pg/ml), when compared to subjects without LE (87 pg/ml). Conclusion: Cardiac involvement in pulmonary sarcoidosis patients was detected in more cases by CMR than by standard echocardiography. Speckle tracking echocardiography was also more sensitive than standard echocardiography. However, cardiac involvement in a caucasian population was rare compared to previously published data based on a predominantly afro-american population.