

# European Respiratory Society Annual Congress 2013

**Abstract Number:** 238

**Publication Number:** P3100

**Abstract Group:** 1.4. Interventional Pulmonology

**Keyword 1:** Pleura **Keyword 2:** Imaging **Keyword 3:** No keyword

**Title:** An image-guided diagnostic pathway for undiagnosed pleural exudates

Prof. Coenraad 1885 Koegelenberg coeniefn@sun.ac.za MD<sup>1</sup>, Dr. Florian 1886 von Groote-Bidlingmaier florianv@sun.ac.za MD<sup>1</sup>, Dr. Johannes 1887 Bruwer williebruwer@telkomsa.net MD<sup>1</sup>, Dr. Enas 1888 Batubara ebatubara@gmail.com MD<sup>1</sup>, Prof. Chris 1889 Bolliger (Deceased) coeniefn@sun.ac.za MD<sup>1</sup>, Prof. Elvis 1890 Irusen eirusen@sun.ac.za MD<sup>1</sup> and Prof. Andreas 1891 Diacon ahd@sun.ac.za MD<sup>1</sup>.<sup>1</sup> Medicine (Pulmonology), Stellenbosch University, Cape Town, South Africa .

**Body:** Background: We assessed the efficiency and safety of an image-guided diagnostic pathway with ultrasound (US)-assisted closed pleural biopsy as an alternative to thoracoscopy as first-line investigation in undiagnosed pleural exudates. Methods: Patients with non-diagnostic thoracentesis were prospectively stratified on imaging as having (A) an associated mass lesion (>10mm) abutting the chest wall; (B) diffuse pleural thickening (>10mm) and/or nodularity or (C) insignificant/no pleural thickening. US-assisted repeat thoracentesis and transthoracic fine-needle aspiration were performed on patients stratified to (A), and if non-diagnostic on on-site analysis, a Tru-Cut biopsy was performed in the same session. US-assisted thoracentesis and Abrams needle biopsies were performed on all others aiming at the region(s) of interest (B) or low supra-diaphragmatic pleura (C). Thoracoscopy was reserved for cases not diagnosed by repeat thoracentesis and biopsy. Results: Final diagnoses in 78 consecutive patients included malignancy (n=42), TB (n=30), and other causes (n=6). Accurate diagnoses were obtained in 69 (88.5%) with US-assisted thoracentesis and biopsy. The yield was high for TB (93.3%) and malignancy (88.1%). Complications included mild haemoptysis (n=1) and pneumothorax (n=1, no intervention required). Thoracoscopy was performed in 13 cases (16.7%), including all 4 cases correctly diagnosed on closed biopsy as non-specific pleuritis, and yielded diagnoses in 12. Conclusion: A diagnostic algorithm based on pleural morphology, US-assisted thoracentesis and biopsy has a high diagnostic yield and offers an efficient and safe alternative to thoracoscopy as a first-line investigation in undiagnosed exudates.