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Title: Shear Wave imaging (SVI): A potential tool for analyzing early fibrotic changes in the subpleural space

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Body: Purpose: Elastography can provide information about tissue's mechanical property. The new variant of shear wave imaging (SVI) enables a quick examination not only of breast tumours but also of tendons and liver stiffness.

Purpose of this study is to evaluate its feasibility for depicting subpleural parenchymal lung disease. Material and Methods: 25 patients with normal lung and 22 patients with subpleural fibrotic changes proved by CT were correlated with the results of SVI (S3000 Siemens). Elastographic and displacement maps are compared with HRCT. Results: A good quality of the displacement map was seen in 21/25 healthy patients. 20/25 had a clear delineation between normal lung and pleura. 18/22 patients with fibrotic changes had a focal or general reduced displacement in the subpleural space correlating with CT.

Conclusion: Although measurements of SVI in the subpleural space showed a great variation, semiquatitative analysis of the displacement map of subpleural lung parenchyma could be a useful tool for diagnosing and noninvasive follow-up controls of early stages of lung fibrosis. Factors that should be standardized are discussed.