Electrical impedance tomography for chest imaging in acute respiratory failure

Inéz Frerichs[1] and Zhanqi Zhao[2,3]

Affiliations: [1]Dept of Anaesthesiology and Intensive Care Medicine, University Medical Centre Schleswig-Holstein, Campus Kiel, Kiel, Germany. [2]Dept of Biomedical Engineering, Fourth Military Medical University, Xi'an, China. [3]Institute of Technical Medicine, Furtwangen University, Villingen-Schwenningen, Germany.

Correspondence: Inéz Frerichs, Dept of Anaesthesiology and Intensive Care Medicine, University Medical Centre Schleswig-Holstein, Campus Kiel, Arnold-Heller-Str. 3, 24105 Kiel, Germany. E-mail: frerichs@anaesthesie.uni-kiel.de

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Electrical impedance tomography is a functional imaging method that can continuously monitor respiratory function of critically ill and mechanically ventilated patients at the bedside http://bit.ly/2Kt1jF5

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To the Editor:

Electrical impedance tomography (EIT) is a functional imaging method that can continuously monitor respiratory function at the bedside. Different measures can be generated from EIT patient examinations allowing the assessment of ventilation distribution, regional lung volume changes and respiratory mechanics, as well as lung perfusion, stroke volume or regional oxygen uptake. In a clinical setting, EIT has mainly been applied in patients undergoing mechanical ventilation as summarised in a systematic review published in 2016 [1] and the most recent international consensus statement on EIT chest imaging published in 2017 [2]. EIT has been applied: to detect regional lung overinflation, alveolar collapse and tidal recruitment, and air-leak; to assess patients' responses to changes in ventilator settings and mode, different recruitment manoeuvres or suctioning; and for setting optimum positive end-expiratory pressure. The use of EIT in critical care medicine is increasing.