







Special Issue Reprint

# **Lung Ultrasound: A Leading Diagnostic Tool**

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Since the time I met Dr. Soldati, we have never stopped investigating LUS (lung ultrasound) vertical artifacts and the latter have slowly revealed their physical nature. Acoustic traps exist in pathological conditions that trap part of the energy of US pulses and gradually return it over time. Ultrasound scanners interpret what comes next as echoes of more distant structures, and this simple fact explains the nature of vertical signs: they are the visible representation of acoustic energy emitted from isolated, non-aerated spaces located beneath the pleura. In short, a vertical sign is a bit like the signature of an acoustic trap that generates it, similar to footprints left by animals in the woods—we just have to learn to recognize these signs. When we began our collaboration, lung ultrasound was a tool with limited application by pulmonary physicians. Today, the application of LUS is widespread, and medical and nonmedical doctors are collaborating to provide scientific answers to many questions that still arise when observing the aforementioned phenomenon. We must never get tired of reiterating the importance of collaboration between medical and nonmedical doctors in the development of new diagnostic devices.





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