

# The role of ultrasound in systemic sclerosis: On the cutting edge to foster clinical and research advancement

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[Michael Hughes](#) , [Cosimo Bruni](#), [Giovanna Cuomo](#), ...

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## Abstract

Ultrasound has been widely explored in systemic sclerosis in the clinical and research settings. Ultrasound allows a non-invasive and ionising radiation-free ‘window’ into this complex disease and is well-suited to repeated examinations. Ultrasound provides novel insights into the pathogenesis and measurement of disease in systemic sclerosis, including early (preclinical) internal organ involvement. The purpose of this review is to describe the role of ultrasound to foster clinical and research advancements in systemic sclerosis relating to (1) musculoskeletal, (2) digital ulcer, (3) lung disease and (4) skin disease. We also highlight unmet needs which much be addressed for ultrasound to assume a central role in systemic sclerosis clinical care and research.