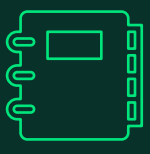


The Impact of Systemic Sclerosis Manifestations on Survival, Humanistic Burden, and Economic Burden: A Targeted Literature Review

Vanessa Smith¹, Zoe Marienberg², Elizabeth Volkmann³

1. Internal Medicine, Ghent University, Ghent, Belgium; Rheumatology, Ghent University Hospital, Ghent, Belgium; VIB Inflammation Research Center (IRC), Unit for Molecular Immunology and Inflammation, Ghent, Belgium;
2. Mavexer Ltd, Newcastle-upon-Tyne, UK;
3. Department of Medicine, Division of Rheumatology, University of California, Los Angeles, USA.



Background

- Systemic sclerosis (SSc) is a rare autoimmune disease characterized by widespread vascular dysfunction and progressive fibrosis of the skin and internal organs.
- Key organ systems impacted by SSc are the skin, gastrointestinal (GI) tract and lungs.
- The severity and type of organ involvement in SSc varies between patients which poses a challenge for assessment of the impact of organ manifestations on mortality, health-related quality of life (HRQoL), and economic burden.
- Given the systemic nature of SSc, an understanding of how individual manifestations contribute to mortality, humanistic and economic burden is critical.



Objective

To understand the overall additional mortality risk, humanistic burdens, and economic burdens of eight organ manifestations in patients with SSc: **Pulmonary hypertension (PH) and/or interstitial lung disease (ILD), skin, peripheral vascular, musculoskeletal, gastrointestinal (GI), cardiac, and renal involvement.**



Methods

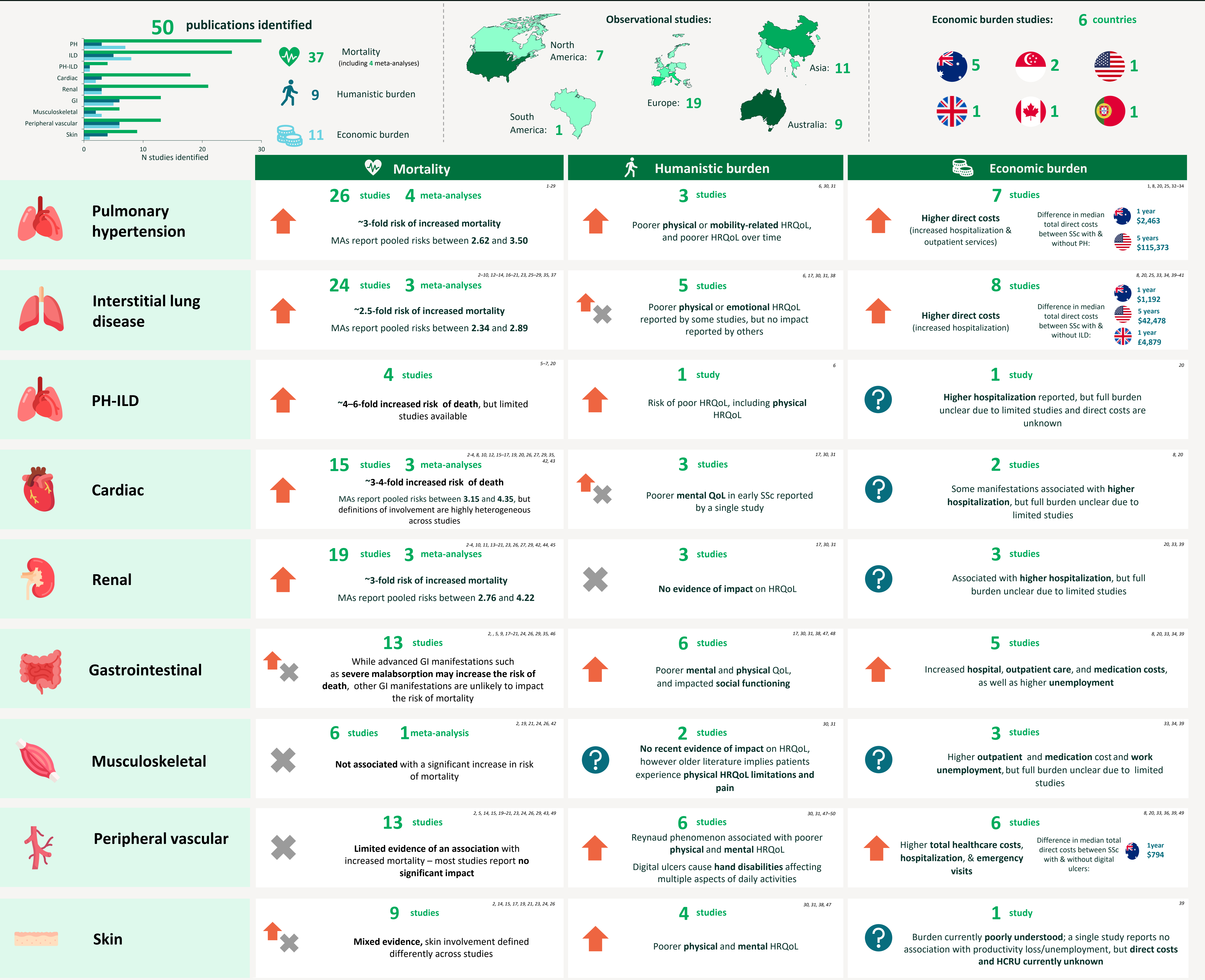
A semi-systematic literature review approach was used to identify relevant studies, combining electronic searches of Ovid MEDLINE and EMBASE, PubMed, and NHS Economic Evaluation Database. Searches were run in August 2023. Hand-searching was also performed.

Population	Patients with SSc
Comparison	SSc patients with one of eight organ manifestations vs. SSc patients without the manifestation
Outcomes	Mortality: Association (hazard ratios or odds ratios) with mortality, Kaplan-Meier survival estimates Humanistic burden: patient HRQoL and patient-reported outcome or experience measures Economic burden: direct and indirect healthcare-related costs, healthcare resource use (HCRU), productivity/employment losses
Study design	Non-interventional (observational) studies, systematic literature reviews (SLRs) & meta-analyses (MAs)
Dates published	Mortality & humanistic burden: 2018-2023; Economic burden: 2013-2023 <i>SLRs and meta-analyses: no limitations</i>

Data from identified studies were extracted and synthesized narratively by manifestation & outcome.



Findings



Conclusions

The burden of SSc manifestations is high and varied across organs. Pulmonary, cardiac, and renal manifestations are associated with significantly higher mortality, while gastrointestinal, skin, and peripheral vascular manifestations often have a significant impact on physical and mental HRQoL.



The economic burden of many organ manifestations of SSc is currently poorly understood, and further research is needed to quantify their direct and indirect costs.

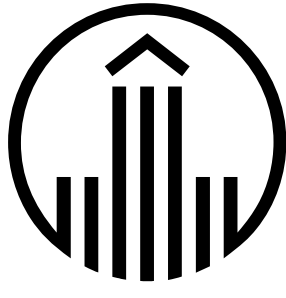


New therapies to target organ involvement in SSc may reduce the burdens associated with manifestations.

Conflict of interest
The authors meet criteria for authorship as recommended by the International Committee of Medical Journal Editors (ICMJE). VS has received speaker fees from BI, Janssen-Cilag and Galapagos, and has received consultancy fees from BI, Janssen-Cilag, Argene BV and WebMD Global LLC. VS has also received a research grant from the Belgian Fund for Scientific Research in Rheumatic Diseases, research support from BI and an educational chair from Janssen-Cilag. VS did not receive payment related to the development of the review. EV has received consultancy fees from Abbvie, BI and GSK, and has received financial grants from BI, Prometheus, Horizon, GSK and Kadmon (all grant payments made to institution). EV did not receive payment related to the development of the review. ZM of Mavexer Ltd provided consulting services related to this review, which was contracted and funded by BI. BI was given the opportunity to review the poster for medical and scientific accuracy as well as intellectual property considerations. The study was supported and funded by BI.

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