Systematic review and meta-analysis of the efficacy of biologic and targeted synthetic therapies in sarcoidosis

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Background: Infliximab is an established treatment for sarcoidosis. Trials have explored other biological and targeted synthetic therapies, but their clinical effectiveness is not clear.

Aim: To evaluate the role of biologic and targeted synthetic therapies in multi-system sarcoidosis

Methods: Meta-analyses were performed across multi-system outcomes, including lung function, skin scores, extrapulmonary organ severity tool (ePOST) and patient reported outcome measures (PROMs). A vote counting method was used to summarise estimates.

Meta-analyses also examined % predicted forced vital capacity (FVC), as mean change from baseline

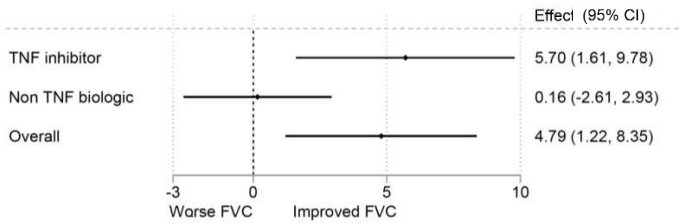
Results:

Trial outcome data summarised using a traffic light matrix

	Study Type	Pulmonary	Cutaneous	Cardiac/Ocular	ePOST	Steroid Dose	PET-CT	PROM
Infliximab	RCT							
	RCT							
	Single arm							
	Single arm							
Adalimumab	Single arm							
	RCT							
Etanercept	Single arm							
	RCT							
Golimumab	RCT							
Rituximab	RCT							
Ustekinumab	RCT							
Sarilumab	RCT							
Anakinra	Single arm							
Efzofitimod	RCT							
Tofacitinib	RCT							
	Single arm							

Green: Supportive
Yellow: Uncertain
Red: Unsupportive

TNF inhibitors are associated with a modest improvement in FVC



Key Messages: Evidence supports modest efficacy of infliximab for pulmonary sarcoidosis and promising but limited evidence for adalimumab, tofacitinib, efzofitimod. Larger, standardised trials are needed to refine treatment guidelines.

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