SUPPLEMENTARY TABLE S2 Risk of bias in included studies

First author, year, [Ref]	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective reporting	Other bias	Overall risk of bias
Utz (2003) [11]	High risk No randomisation	High risk No concealment (open label)	High risk No blinding (open label)	High risk No blinding (open label)	Unclear risk No description of missing data or handling of missing data	Unclear risk No protocol available	High risk Study design limits conclusions: no control group	*High risk*
Baughman (2006) [12] (2015) [13]	Unclear risk No description of randomisation	Unclear risk No description of concealment	Unclear risk No description of blinding	Unclear risk No description of outcome assessment	Unclear risk Last observation carried forward method, but no further information	Unclear risk Missing follow-up 2 out 14 patients in infliximab group	Low risk No other causes of bias identified. RCT, balanced baseline characteristics	*Unclear risk*
Erckens (2012) [14]	High risk No randomisation	High risk No concealment (open label)	High risk No blinding (open label)	High risk No blinding (open label)	Unclear risk No description of missing data or handling of missing data	Unclear risk No protocol available	High risk Study design limits conclusions: no control group	*High risk*
Milman (2012) [15]	High risk No randomisation	High risk No concealment (open label)	High risk No blinding (open label)	High risk No blinding (open label)	Unclear risk No description of missing data or handling of	Unclear risk No protocol available	High risk Study design limits conclusions: no control group	*High risk*

					missing data			
Pariser (2013) [16]	*RCT phase:* Low risk Computer random number generation	*RCT phase:* Low risk External randomisation and allocation.	*RCT phase:* Low risk Adalimumab or identical vehicle solution in identical-appearing syringes.	*RCT phase:* Low risk External randomisation and allocation, blinded study drug	*RCT phase:* Unclear risk	*RCT and open label phase:* Low risk All outcomes reported	*RCT phase:* Low risk No other causes of bias identified.	*RCT phase:* *Low risk*
	Open label phase: High risk No randomisation	*Open label phase:* High risk No concealment (open label)	*Open label phase:* High risk No blinding (open label)	*Open label phase:* High risk No blinding (open label)	*Open label phase:* Unclear risk In group 1 n=2 lost to follow-up; unclear what happened with the data. No further description of missing data points or handling of missing data		*Open label:* High risk Study design limits conclusions: no control group	*Open label phase:* *High risk*

Judson (2014) [17]	Unclear risk No description of randomisation	Unclear risk No description of concealment	Unclear risk No description of blinding	Unclear risk No description of outcome assessment	Unclear risk No description of missing data or handling of missing data	Low risk All outcomes reported	Low risk No other causes of bias identified. RCT, balanced baseline characteristics	*Unclear risk*
Vorselaars (2015) [18]	High risk No randomisation	High risk No concealment (open label)	High risk No blinding (open label)	High risk No blinding (open label)	Unclear risk No description of missing data or handling of missing data	Unclear risk No protocol available	High risk Study design limits conclusions: no control group	*High risk*
Aggarwal (2016) [19]	High risk No randomisation	High risk No concealment (open label)	High risk No blinding (open label)	High risk No blinding (open label)	Unclear risk No description of missing data or handling of missing data	Unclear risk No protocol available	High risk Study design limits conclusions: no control group	*High risk*
Baughman (2017) [20]	Unclear risk No description of randomisation	High risk Single blind trial	High risk No blinding: single-blind trial with only investigators blinded	Unclear risk No description of blinding of investigators	Unclear risk No description of missing data or handling of missing data	Low risk All outcomes reported	High risk Study design limits conclusions: no placebo control group	*High risk*
Judson (2006)	High risk	High risk	High risk	High risk	Unclear risk	Unclear risk	High risk	*High risk*

[21]	No randomisation	No concealment (open label)	No blinding (open label)	No blinding (open label)	Only per protocol analysis of SF-36	No protocol available	Study design limits conclusions: no control group	
Heij (2012) [22]	Low risk Computer-generated randomisation code	Low risk Randomisation and drug dispensing performed by research pharmacist	Low risk Randomisation and drug dispensing performed by research pharmacist	Low risk Randomisation and drug dispensing performed by research pharmacist	Low risk Last observation carried forward, missing data points explained.	Low risk All outcomes reported	Unclear risk Potential baseline imbalance in SF-36 and FAS; no baseline data SF-36 PF and BP	*Low risk*
Drake (2013) [23]	High risk No randomisation	High risk No concealment (open label)	High risk No blinding (open label)	High risk No blinding (open label)	Unclear risk Only per protocol analysis of SGRQ	High risk HRQL outcome not pre-specified	High risk Only 8 of 15 enrolled patients completed intervention	*High risk*
Lower (2008) [24]	Low risk Random-sequence generator without blocking or stratification	Low risk Randomisation and drug dispensing performed by research pharmacist	Low risk Randomisation and drug dispensing performed by research pharmacist	Low risk Randomisation and drug dispensing performed by research pharmacist	Unclear risk Lost to follow-up n=0 in both arms, however no description of missing data points or handling of missing data	Low risk All outcomes reported	Low risk No other causes of bias identified. RCT with cross-over design.	*Low risk*
Lower (2013)	Unclear risk	Unclear risk	Unclear risk	Unclear risk	Unclear risk	Low risk	Low risk	*Unclear risk*

[25]	No description of randomisation. Unlikely to introduce bias, considering cross-over design	No description of concealment	No description of blinding	No description of blinding	No description of missing data or handling of missing data	All outcomes reported	No other causes of bias identified. RCT with cross-over design.