

Supplementary Table 1: CyTOF staining panel

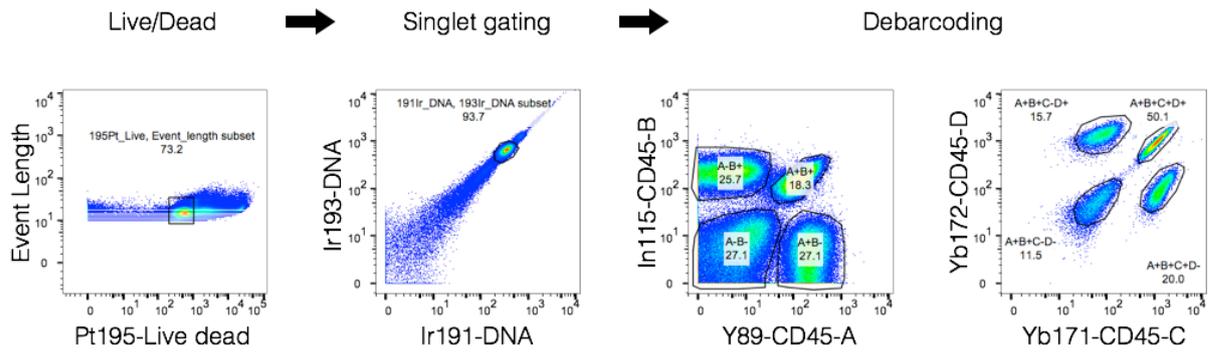
Metal	Antibody	Clone	Vendor
89	CD45A	HI30	Fluidigm
112/114	CD14	TuK4	Lifetechnologies
115	CD45B	HI30	Biolegend
139	HLA-DR	L-243	Biolegend
141	CD39	A1	Biolegend
142	CD45RO	UCHL1	Biolegend
143	CD3	UCHT1	Biolegend
144	CD8	SK1	Biolegend
145	IL-4	8D4-8	Biolegend
146	CD28	CD28.2	Biolegend
147	PD-1	EH12.2H7	Biolegend
148	CD4	SK3	Biolegend
149	CCR10	6588-5	Biolegend
150	CD25	2A3	Biolegend
151	CD56	HCD56	Biolegend
152	TNF-a	Mab11	Biolegend
153	TGF-b	TW4-2F8	Biolegend
154	CD27	O323	Biolegend
155	CD152	BN13	BD Pharmingen
156	CD127	A019D5	Biolegend
157	CCR4	L291H4	Biolegend
158	CD154	24-31	Biolegend
159	CXCR5	J252D4	Biolegend
160	CD161	HP-3G10	Biolegend
161	CCR7	G043H7	Biolegend
162	FoxP3	PCH101	eBioscience
163	CXCR3	G025H7	Biolegend
164	GITR	621	Biolegend
165	IL11R	EPR5446	Biolegend
166	Ki67	20Raj1	eBioscience
167	ICOS	2D3	Biolegend
168	IFN-y	B27	Biolegend
169	IL-17A	BL168	Biolegend

Metal	Antibody	Clone	Vendor
170	CCR6	G034E3	Biolegend
171	CD45C	HI30	Biolegend
172	CD45D	HI30	Biolegend
173	GranzymeB	CLB-GB11	Abcam
174	CD19	HIB19	Biolegend
175	Va7.2	3C10	Biolegend
176	CD69	FN50	Biolegend
191/193	DNA		
195	Live/Dead		

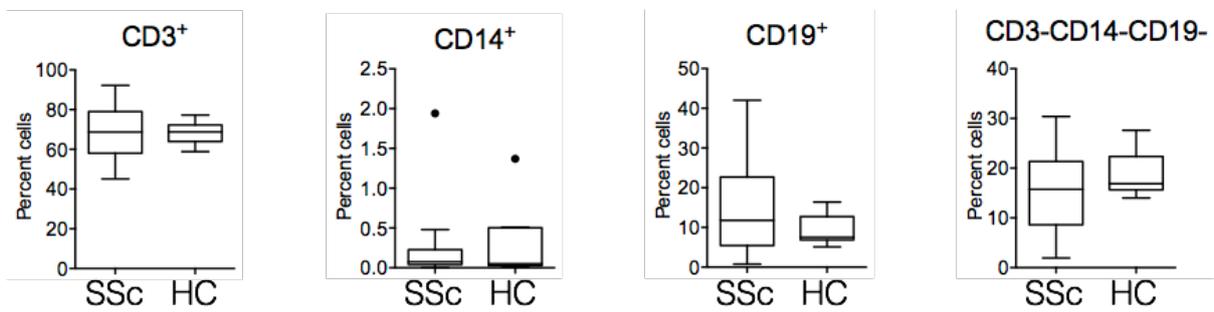
Supplementary Table 2 : Network properties

Network property	Non stimulated		Stimulated	
	SSc	HC	SSc	HC
Modularity Score	0.26	0.047	0.191	0.037
Network centralization	0.19	0.031	0.334	0.039
Network density	0.065	0.24	0.070	0.232
Avg. no. of neighbours	9.2	34.59	8.72	28.8
Negatively correlated edges	13	659	4	480
Positively correlated edges	566	1503	541	1320
% negatively correlated edges	2.24	30.4	0.73	26.6

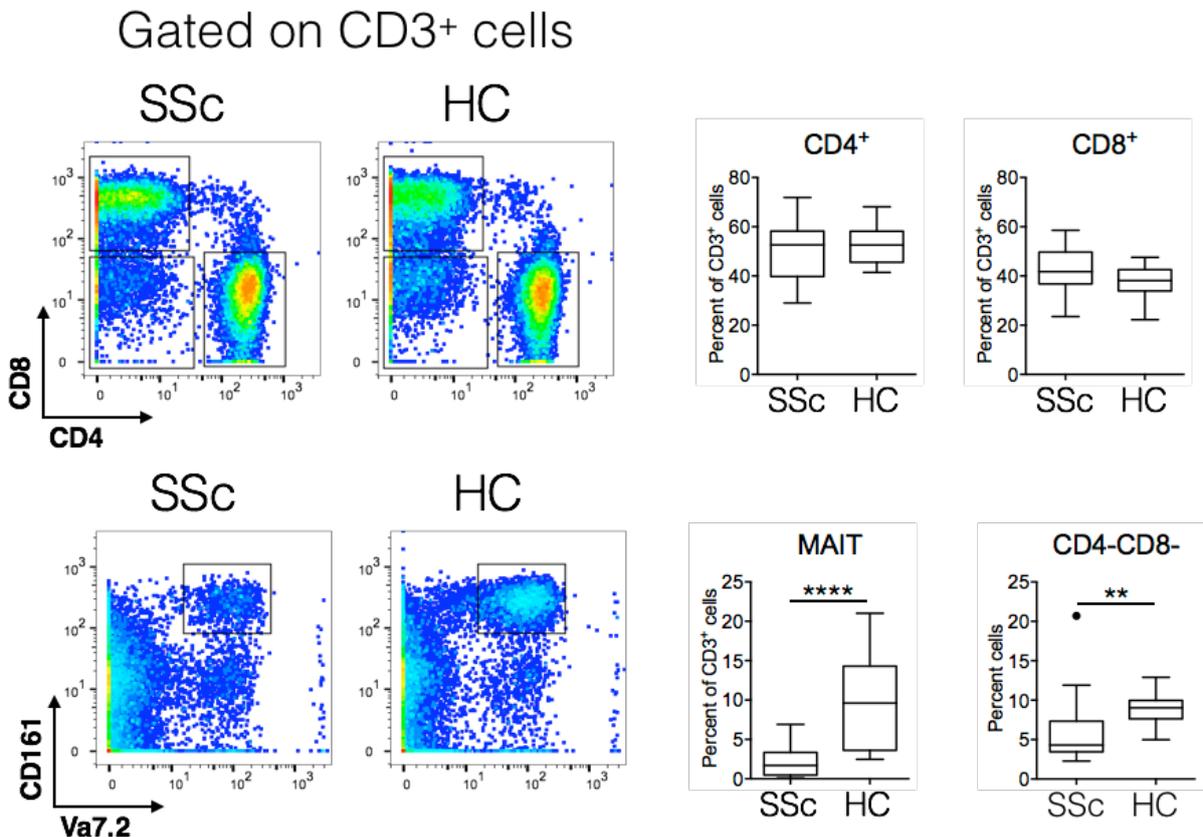
Supplementary Figure 1: Gating strategy employed



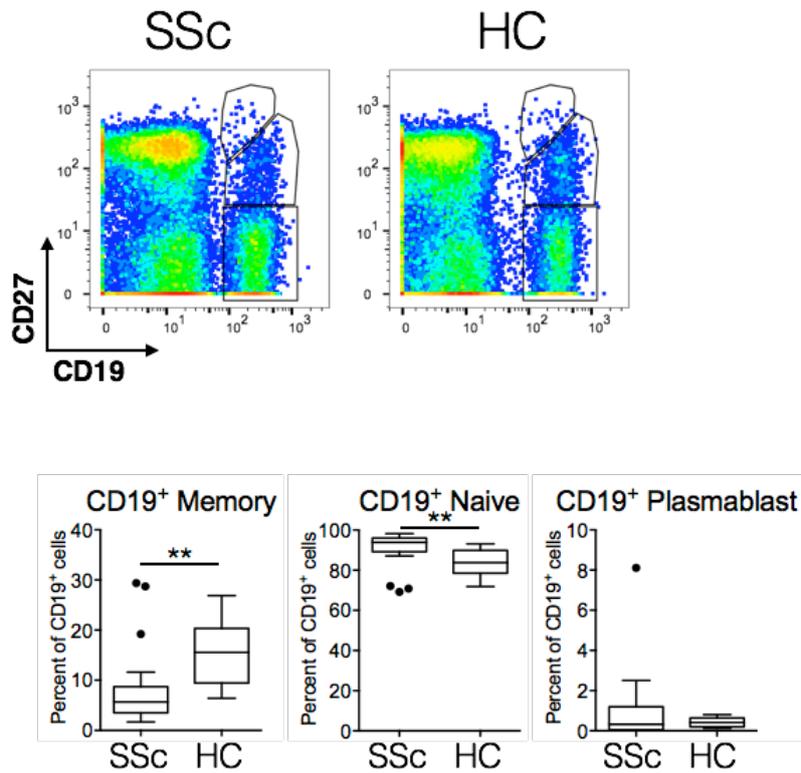
Supplementary Figure 2: Percentages of major immune cell lineages in peripheral blood



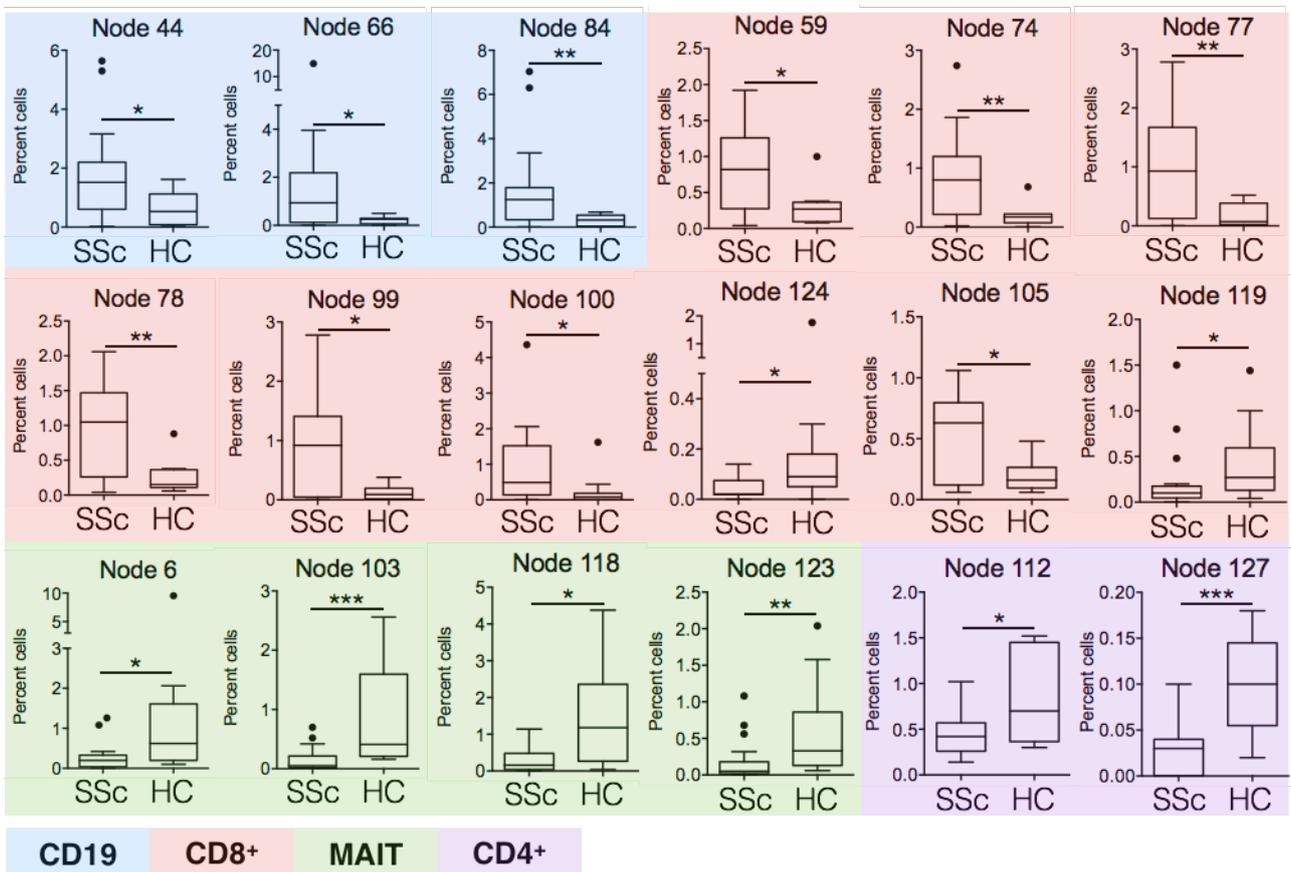
Supplementary Figure 3: Percentages of T cell subsets



Supplementary Figure 4: Percentages of B cell subsets



Supplementary Figure 5: Differentially expressed nodes in SSc patients



Supplementary Figure 6: Frequency of differential nodes in DcSSc vs LcSSc patients

