

Supplementary Table 1A (ST1A): Clinical features of CTCL (MF and SS) patients used in Figure 1B and Figure 4E (denoted with *). Stage 1B and IIB are MF samples and Stage III/IV are SS samples.

Sample ID	Sex	Age	Race	Stage	%CD4+	Treatment Status
PT#1	F	40	W	IB	NA	Untreated
PT#2	M	64	W	IB	NA	Untreated
PT#3	M	61	W	IB	NA	Untreated
PT#4	M	28	W	IIB	NA	Untreated
PT#5	M	54	W	IIB	NA	Untreated
*PT#6	M	60	W	IIB	NA	Untreated
*PT#7	F	87	AA	III	12%	Untreated
*PT#8	M	61	W	IV	NA	Bexarotene, IFN and PUVA
*PT#9	M	62	W	IV	NA	Untreated

Supplementary Table 1B (ST1B): Clinical features of SS patients whose CD4+ T cells were used in Figure 1C

Sample ID	Sex Age	TCRV β Family	Percent of CD3 ⁺ CD4 ⁺	Percent of TCRV β ⁺ within CD3 ⁺ CD4 ⁺ [□]	Percent of clonal CD3 ⁺ cells	CD4 ⁺ /CD8 ⁺ ratio	Time of Disease (mo) [†]	Therapy before blood withdrawal	Status
P11	M/48	17	96%	80%	77.14%	38.1	45.2	30 ECP + IFN	CR
P15	F/58	7.2	96%	95%	90.99%	22.7	0.2	None	CR
P22	M/73	null [§]	88%	96%	84.00%	48.0	16.9	5 ECP + IFN	DD
P30	F/47	13.1	96%	88%	84.89%	27.6	37.3	None	AD
P32	F/82	5.1	77%	90%	54.69%	3.4	7.7	1 ECP + IFN	DD
P39	M/62	null [§]	98%	95%	92.94%	52.7	0.6	1 ECP + IFN	DD
P45	M/79	null [§]	95%	92%	84.25%	17.4	19.5	1 ECP + Steroids syst	DD
P62	M/80	6.7	94%	90%	n.d.	47.1	6.73	IFN+Steroids top	DUD
P65	M/77	5.3	73%	85%	n.d	14.9	0.73	Steroids syst+ Bexarotene	AD

Supplementary Table 1C (ST1C): Clinical features of SS patients whose CD4+ T cells were used in Figure 5B and Supplementary Figure 1D-F (denoted with #)

Sample ID	Sex	Age	Race	Stage	%CD4+	CD4/CD8 ratio	Therapy	status
03-563	F	66	W	III-IV	91%	21	Ontak	Relapse
03-670	F	81	W	III-IV	87%	32	Bexarotene	Relapse
# 04-011	F	63	W	III-IV	93%	52	Steroids	Relapse
04-669	F	48	W	III-IV	91%	44	Untreated	New diagnosis
06-0144	F	83	W	III-IV	94%	67	Bexarotene	Relapse
# 07-0214	M	66	W	III-IV	90%	34	Vorinostat	Relapse
# 09-1233	M	74	W	III-IV	95%	89	Interferon	Relapse
09-1282	M	79	W	III-IV	91%	78	Ontak	Relapse
10-0210	M	80	W	III-IV	89%	55	Bexarotene	Relapse
12-0558	F	68	W	III-IV	91%	86	Bexarotene	Relapse

Supplementary Table 1D (ST1D): Clinical features of SS patients whose CD4+ T cells were used in Figure 4D and 5A

Sample ID	Sex	Age	Race	Stage	%CD4+	CD4/CD8 ratio	Therapy	status
PT01	M	65	AA	III-IV	98%	196	Bexarotene	Relapse