

**Supplementary Table 1:** Pathologic details of sequenced samples

Case	Site	Morphologic description (path report)	CD3	CD5	CD43	CD45RO	CD30
T02**	Lymph node	Diffuse large cells	NA	NA	NA	NA	NA
T04**	Inguinal lymph node	Diffuse mixed large and small cells	NA	NA	NA	NA	NA
T05	Cervical lymph node	Diffuse mixed large and small cells	NA	NA	+	+	-
T06	Inguinal lymph node	Interfollicular pattern, mid to large cells	NA	NA	+	-	-
T08	Cervical lymph node	Diffuse mixed large and small cells	NA	NA	-	+	+
T09	Inguinal lymph node	Diffuse large pleomorphic cells	NA	NA	+	+	+
T11	Liver	Diffuse mixed large and small cells	+	+	+	-	-
T26	Axillary lymph node	Mixed large and small cells, interfollicular pattern	-	+	+	+	-
T30	Skin (spread of nodal PTCL separately biopsied)	Malignant T-cell lymphoma, associated granulomatous reaction	+	-	+	-	-
T31	Cervical lymph node	Diffuse large cells	+	+	+	NA	+
T33	Spleen	Pleomorphic cells diffusely involving follicles and red pulp	+	+	+	+	-
T34*	Soft tissue (mid back)	Dense atypical lymphocytic infiltrate with admixed histiocyte	NA	NA	-	+	-
T37	Supraclavicular lymph node	Lymph node with partial involvement by T-cell lymphoma	+	+	-	+	NA
T38*	Inguinal lymph node	Diffuse large cells	-	-	+	+	+
T39*	Axillary lymph node	Diffuse large cells	+	+	+	+	NA
T46	Skin nodule	Malignant Large T-cell lymphoma	+	NA	NA	NA	-
T52	Lung	Diffuse large cells	+	+	-	+	-
T55	Soft tissue (left buttock)	Large cells with open chromatin and distinct nucleoli	+	+	NA	+	-
T56	Cervical lymph node	Diffuse large cells	+	+	+	+	-
T58*	Axillary lymph node	Atypical lymphoid infiltrate and numerous epithelioid histiocytes	+	+/-	+/-	+	+
T59	Lung	Peripheral T-cell lymphoma	+	-	NA	NA	-
T61	Cervical lymph node	Malignant lymphoma, peripheral T-cell type, unspecified	+	-	-	+	-
T65	Inguinal lymph node	Diffuse mixed large and small cells	+	+	+	+	NA
T69**	NA	Diffuse large cells	NA	NA	NA	NA	NA
T73**	NA	NA	NA	NA	NA	NA	NA
T81**	Lymph node	Diffuse mixed large and small cells	NA	NA	NA	NA	NA
T86**	NA	Diffuse mixed large and small cells	NA	NA	NA	NA	NA
T99	Muscle (left bicep)	Mixed large and small cells	+	+	+	+	-

\* Relapsed cases (prior systemic therapy)

\*\* Data extracted from clinic notes or other records (missing path reports)

NA Not Available