

SUPPLEMENTARY MATERIALS

CD4/CD8 double-negative mycosis fungoides: a review

Khalid Nabil Nagshabandi,¹ Abdulrahman Shadid,² Asem Shadid,³ Nouf K. Almuhanna³

¹Department of Dermatology, King Saud University and King Saud University Medical City, Riyadh;

²College of Medicine, King Saud University, Riyadh; ³Department of Dermatology, King Fahad Medical City, Riyadh, Saudi Arabia

Correspondence: Khalid Nabil Nagshabandi, Department of Dermatology, King Saud University and King Saud University Medical City, Riyadh, Saudi Arabia.

E-mail: khaloed23@gmail.com

Key words: mycosis fungoides; cutaneous T-cell lymphomas; double-negative; CD4/CD8 negative.

Conflict of interest: The authors declare no potential conflict of interest.

Ethics approval and consent to participate: Not applicable.

Consent for publication: Not applicable.

Availability of data and materials: Data and materials used in this review are available from the corresponding author upon request.

Supplementary Table 1. Summary of the clinical data.

Study	Case	Age (Y)/ Gender	Duration of disease	Clinical subtype	Stage at diagnosis	Treatment	Other organ involvement	Prognosis and survival (Y)
<i>Fierro MT Et al.</i> ¹²	1	72/M	NA	NA	Plaque	PUVA, etretinate and chemotherapy	NA	CR
	2	77/F	NA	NA	Tumor	PUVA, X-ray and chemotherapy	Lymph node/ bone marrow	Death
	3	52/F	NA	NA	Tumor	PUVA	NA	PR
	4	82/F	NA	NA	Tumor	PUVA, X-ray and chemotherapy	Liver	Death
	5	NA	NA	NA	IIB	Chemotherapy	Large Cell Transformation (LCT)	Death
	6	NA	NA	NA	IA/IB	PUVA/X-ray /IFN α	NA	Indolent course

	7	NA	NA	NA	IA/IB	PUVA/X-ray /IFN α	NA	Indolent course
	8	NA	NA	NA	IA/IB	PUVA/X-ray /IFN α	NA	Indolent course
	9	NA	NA	NA	IA/IB	PUVA/X-ray /IFN α	NA	Indolent course
	10	NA	NA	NA	IA/IB	PUVA/X-ray /IFN α	NA	Indolent course
	11	NA	NA	NA	IA/IB	PUVA/X-ray /IFN α	NA	Indolent course
	12	NA	NA	NA	IA/IB	PUVA/X-ray /IFN α	NA	Indolent course
<i>Hodak Et al.</i> ¹¹	13	77/ M	3 years	Classic	IB	Skin target therapy	NA	Indolent course
	14	12/ M	5 years	Hypopigmen ted	IB	Skin target therapy	NA	Indolent course
	15	38/F	4 years	Hypopigmen ted	IB	Skin target therapy	NA	Indolent course

	16	11/M	9 years	Hypopigmented	IB	Skin target therapy	NA	Indolent course
	17	45/M	4 years	Localized/Unilesional	Patch	Skin target therapy	NA	Indolent course
	18	72/M	15 years	Classic	IA	Skin target therapy	NA	Indolent course
	19	71/F	0.5 years	Classic	IB	Skin target therapy	NA	Indolent course
	20	61/F	10 years	Classic	IA	Skin target therapy	NA	Indolent course
	21	28/M	2 years	Classic	IB	Skin target therapy	NA	Indolent course
	22	55/M	10 years	Classic	IB	Skin target therapy	NA	Indolent course
	23	47/M	20 years	Classic	IA	Skin target therapy	NA	Indolent course
	24	73/F	10 years	Localized/Unilesional	Plaque	Skin target therapy	NA	Indolent course

	25	14/F	10 years	Hypopigmented	IA	Skin target therapy	NA	Indolent course
	26	27/M	9 years	Classic	IB	Skin target therapy	NA	Indolent course
	27	14/M	12 years	Hypopigmented	IB	Skin target therapy	NA	Indolent course
	28	14/M	8 years	Ichthyosiform	IB	Skin target therapy	NA	Indolent course
	29	34/F	1 year	Localized/Pagetoid reticulosis	Plaque	Skin target therapy	NA	Indolent course
	30	34/M	2 years	Classic and Purpuric	IB	Skin target therapy	NA	Indolent course
<i>Massone C Et al.</i> ¹³	31	23/F	NA	NA	NA	NA	NA	NA
	32	45/F	NA	NA	NA	NA	NA	NA
<i>Cho-vega JH Et al.</i> ¹⁴	33	84/M	Few weeks	Classic	NA	Skin target therapy	Primary cutaneous follicular center	PR

							lymphoma	
<i>Kempf W Et al.¹⁵</i>	34	70/F	5 years	Hypopigmented	IB	NBUVB	NA	PR
<i>Nagase K Et al.¹⁶</i>	35	73/M	10 years	Erythema gyratum repens-like	IB	PUVA	NA	PR
<i>Ito A Et al.¹⁷</i>	36	55/F	30 years	Hypopigmented	II B	NBUVB	NA	Indolent course
<i>Shon U Et al.¹⁸</i>	37	41/M	3 years	Classic	NA	Refused treatment	NA	Indolent course
<i>Haghayeghi K Et al.¹⁹</i>	38	43/F	15 years	Classic	IIB	CHOEP/ Radiation therapy/ Total skin electron beam	Frontal dural invasion	PR

						therapy		
<i>Alnasser MA Et al.</i> ²⁰	39	60/ M	5 years	Erythrodermic	IIIA	Oral prednisolone & cyclosporine	NA	Death
<i>Kasinathan G Et al.</i> ²¹	40	46/ M	1 year	Folliculotropic	NA	local radical radiotherapy/ CHOEP and IFN α	Pleura/Lungs/Lymph nodes	Death
<i>Ballano Ruiz A Et al.</i> ²²	41	42/ M	2 years	Pagetoid reticulosis	NA	Methotrexate/ NBUVB/ phototherapy	NA	Indolent course
<i>Wilmas KM Et al.</i> ²³	42	71/F	22 years	Folliculotropic	IVB	Skin target therapy/PUVA/phototherapy/ Local radiation	Lungs/Leptomeninges/ Large Cell Transformation (LCT)	Indolent course

Abbreviations used: CHOEP, cyclophosphamide, hydroxydaunorubicin, oncovin, etoposide, prednisone; CR, complete response; F, female; IFN, interferon; M, male; MF, mycosis fungoides; NA, not applicable; NBUVB, narrow-band ultraviolet B; PR, partial response; PUVA, psoralen ultraviolet A; Y, years.

Supplementary Table 2. Immunophenotype of intraepidermal atypical lymphocytes.

Study	Case	CD3	CD4	CD8	CD7	CD45RO	TIA-1	CD56	CD30	TCR- β	TCR- δ
<i>Fierro MT Et al.</i> ¹²	1	+	-	-	NA	NA	NA	NA	+	+	-
	2	+	-	-	+	NA	NA	NA	-	+	-
	3	+	-	-	-	NA	NA	NA	-	+	-
	4	+	-	-	-	NA	NA	NA	-	-	+
	5	3+	-	-	2+	-	NA	2+	-	3+	-
	6	3+	-	-	-	2+	NA	-	-	3+	-
	7	3+	-	-	-	-	NA	-	2+	-	3+
	8	-	-	-	-	2+	NA	-	2+	3+	-
	9	3+	-	-	2+	-	NA	2+	2+	-	-
	10	3+	-	-	-	-	NA	-	-	-	3+
	11	3+	-	-	2+	-	NA	-	2+	-	3+

	12	3+	-	-	2+	-	NA	-	-	3+	-
<i>Hodak Et al.</i> ¹¹	13	3+	-	-	-	3+	3+	-	-	2+	-
	14	3+	-	-	-	3+	3+	3+	-	2+	-
	15	3+	-	-	-	3+	-	-	-	-	-
	16	3+	-	-	-	-	3+	-	-	NA	NA
	17	3+	-	-	-	3+	NA	-	-	-	-
	18	3+	-	-	-	3+	-	-	-	-	1+
	19	3+	-	-	-	3+	-	-	-	3+	-
	20	3+	-	-	-	3+	3+	-	-	-	-
	21	3+	-	-	-	3+	3+	-	-	2+	-
	22	3+	-	-	-	3+	3+	-	-	-	-
	23	3+	-	-	-	3+	NA	-	-	2+	1+
	24	3+	-	-	-	3+	3+	-	1+	-	3+

	25	3+	-	-	-	3+	3+	-	-	NA	NA
	26	3+	-	-	-	3+	3+	-	2+	-	-
	27	3+	-	-	-	3+	3+	-	-	-	1+
	28	3+	-	-	NA	NA	NA	NA	NA	1+	-
	29	3+	-	-	-	NA	NA	NA	NA	3+	-
	30	3+	-	-	-	3+	1+	-	-	3+	-
<i>Massone C Et al.</i> ¹³	31	NA	-	-	NA	NA	-	-	NA	+	NA
	32	NA	-	-	NA	NA	-	-	NA	+	NA
<i>Cho-vega JH Et al.</i> ¹⁴	33	+	-	-	-	NA	-	-	NA	NA	NA
<i>Kempf W Et al.</i> ¹⁵	34	3+	-	-	3+	-	-	-	-	-	-
<i>Nagase K Et al.</i> ¹⁶	35	+	-	-	NA	+	NA	NA	NA	NA	NA
<i>Ito A Et al.</i> ¹⁷	36	3+	-	-	-	3+	-	-	-	+	NA
<i>Shon U Et al.</i> ¹⁸	37	+	-	-	-	+	-	-	+	NA	NA

<i>Haghayeghi K Et al.</i> ¹⁹	38	+	-	-	+	NA	NA	-	-	-/+	-
<i>Alnasser MA Et al.</i> ²⁰	39	+	-	-	-	+	NA	NA	NA	NA	NA
<i>Kasinathan G Et al.</i> ²¹	40	+	-	-	+	NA	-	-	-	+	-
<i>Ballano Ruiz A Et al.</i> ²²	41	+	-	-	-	-	+	-	-	-	NA
<i>Wilmas KM Et al.</i> ²³	42	+	-	-	-	NA	NA	NA	-	NA	NA

Abbreviations used: NA, not applicable; TCR, T-cell receptor; TIA-1, T-cell-restricted intracellular antigen; w, weak staining; (-) , < 10% cells positive; (1+), < 25% cells positive; (2+), < 50%cells positive; (3+), > 50% cells positive.