

# Webinars Cutaneous Lymphoma

EuroBloodNet  Topic on Focus

Patients' Organizations

## Cutaneous Lymphoma: New therapeutic developments

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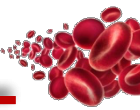
19. July 2020



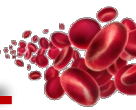
Co-funded by  
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 Network  
Hematological  
Diseases (ERN EuroBloodNet)



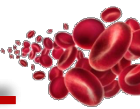
Takeda, Kyowa Kirin, Innate pharma, 4Sc, Stemline, miRagen Therapeutics, Inc. ,  
Recordati, Galderma, Hoffmann La Roche, Novartis, Abbvie, Janssen, L



**1. Therapeutic concepts**

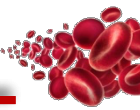
**2. New therapeutics**

**3. Future directions**



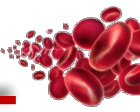
# Therapy concept: Key points

- ❖ Early-stage mycosis fungoides should be treated with skin-directed therapy.
- ❖ In early-stage mycosis fungoides there may be periods of 'expectant therapy' when no treatment is preferred.
- ❖ In patients with advanced stage mycosis fungoides or Sézary syndrome, systemic treatments may be considered first line.
- ❖ In advanced stage disease where life expectancy may be severely reduced allogeneic haematopoietic stem cell transplantation may be considered
- ❖ A holistic approach to patient care with consideration of health-related quality of life is essential, and symptomatic relief for pain, itch, insomnia and depression may be needed.



# Therapy concept: basic principles

- Avoid cytotoxic therapies as long as possible
- Give skin care with emollients, reducing bacterial colonization!
- Treat additional symptoms  
e.g. pruritus
- Use standard treatments correctly! E.g. PUVA and systemic therapies
- Think about maintenance treatment
- Keep in close contact with your physician!



# Treatment strategies depend on the diagnosis and the stage of the disease

MF	MF	MF	MF	SS
Stage 1A-IIA	Stage IIB	Stage III	Stage IV	Stage IVA1
Expectant policy Topical steroids Nb –UVB, PUVA <b>Chlormethine gel</b> <b>Bexarotene gel<sup>a</sup></b> Imiquimod <sup>b</sup> Local RT	SDT + local RT, retinoids, IFN $\alpha$ , TSEBT	SDT + retinoids, IFN $\alpha$ ; ECP $\pm$ IFN $\alpha$ , retinoids Low dose MTX	Gemcitabine Liposomal encapsulated doxorubicin Brentuximab vedotin	ECP $\pm$ IFN $\alpha$ , Retinoids Prednisone + chlorambucil Low-dose MTX <b>Mogamulizumab</b>
SDT + retinoids, IFN $\alpha$ ; TSEBT	Gemcitabine, Liposomal doxorubicin <b>Brentuximab vedotin</b> Combination Cht, AlloSCT	TSEBT <b>Mogamulizumab</b>	Combination Cht AlloSCT	Low dose alemtuzumab Gemcitabine Liposomal doxorubicin Combination Cht AlloSCT

**Avoid progression of the disease!**

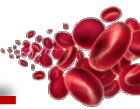
<sup>a</sup> Not approved in Europe but FDA approved in CTCL; <sup>b</sup> Not approved in CTCL

AlloSCT, allogeneic stem cell therapy; Cht, chemotherapy; ECP, extracorporeal photochemotherapy; IFN, interferon;

SDT, skin-directed therapy; RT, radiotherapy; TSEBT, total skin electron beam therapy.

Trautinger F, et al. Eur J Cancer. 2017;77:57-74. Willemze R, et al. Ann Oncol. 2018;29:iv30-iv40.

Bagot M, Stadler R. Cutaneous lymphoma. In: Kang S, et al. editors. Fitzpatrick's Dermatology. 9th ed. USA: McGraw Hill; 2019. Ch.119.



## Skin directed treatment responses to topical therapies in CTCL

Treatment	Study (N)	Study design	Stage	Response Rate
Topical steroids Class I-III	Zackheim et al 1998 (n = 79)		T1 and T2 Patch/plaque	<b>T1:</b> ORR 94%, CR 63%, PR 31% <b>T2:</b> ORR 82%, CR 25%, PR 57%
Chlormethine solution	Vonderheid et al 1989 (n = 331)	Retrospective	I-IV or Sézary syndrome	<b>T1:</b> CR 80% <b>T2:</b> CR 62%
Chlormethine Gel	Lessin et al 2013 (n = 260)	Randomized controlled trial	IA –IIA	ORR 58.5% vs 47.7% CR 13.8% vs 11.5% PR 44.6% vs 36.2%
Bexarotene Gel	Heald et al 2003 (n = 50)	Multinational, open-label, Phase III	IA-IIA	ORR 54%, CR 10%, PR 44%
Resiquimod	Rook et al 2015 (n = 12)	Open Label Phase I	IA-IIA	ORR 75%, CR 33%, PR 42%



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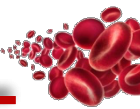
for rare or low prevalence  
complex diseases

Management of chlormethine gel treatment in mycosis fungoides patients in two German skin lymphoma centers Ulrike Wehkamp<sup>1</sup>, Marion Jost<sup>1</sup>, Janika Gosmann<sup>2</sup>, Uta Grote<sup>1</sup>, Michaela Bernard<sup>2</sup>, Rudolf Stadler<sup>2</sup> JDDG 2021

- Zackheim HS, et al. Arch Dermatol. 1998;134:949-54. Lessin SR, et al. JAMA Dermatol. 2013;149:25-32.
- Heald P, et al. J Am Acad Dermatol. 2003;49:801-15. Rook AH, et al. Blood. 2015;126:1452-61. Vonderheid EC, et al. J Am Acad Dermatol. 1989;20:416-28.

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# Current systemic treatments in advanced MF/SS

## ➤ Immunomodulators

- ❖ Reginoid, Bexarotene; Retinoids Acitretin
- ❖ Interferon, peg. Interferon
- ❖ Extracorporeal Photopheresis

## ➤ Radiotherapy

- ❖ TSEB and local

## ➤ Antibody based therapeutics

- ❖ Brentuximab vedotin
- ❖ Mogamulizumab

## ➤ HDAC inhibitors

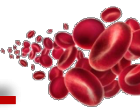


## ➤ Chemotherapy

- ❖ Gemcitabine
- ❖ PEG Doxorubicine
- ❖ CHOP and CHOP-like

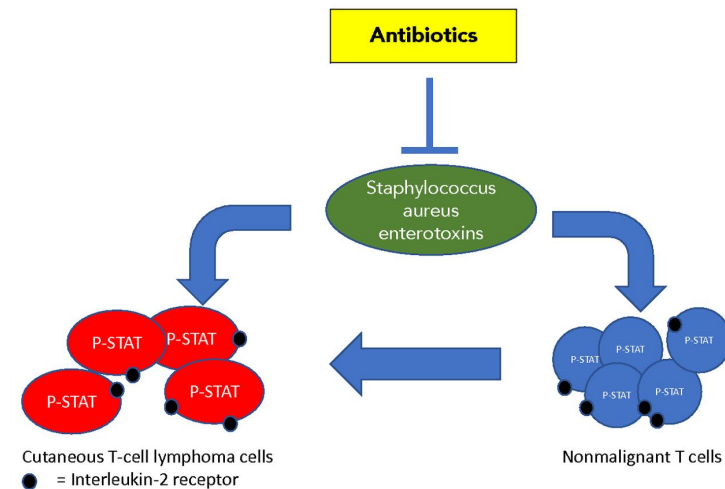
## ➤ Allogeneic stem cell transplantation





# Antibiotics inhibit tumour and disease activity in cutaneous T-cell lymphoma

Lindahl et al , Blood 2019



## Cutaneous T-cell Lymphoma n=8

**Therapy with Cefuroxim (1.5 g) und Metronidazol (0.5 g) 3 x / day for 10 days**  
**Followed by oral Amoxicillin und Clavulansäure**  
**(500/125 mg) 3 x /day for 14 days**



Reference Network

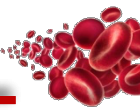
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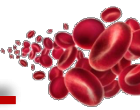
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## Antibody-based Therapies

Functional Classification of Antibody-based Therapies	
Funktion	Target
Tumorcell-„Killing“	CD2, CD3, CD4, CD25, CD30, CD47, CD52, CCR4, KIR3DL2
T-cell-activation	PD-1, PD-L1, CTLA-4, CD137, OX40
Tumor-Micromilieu	CD25, PD-1, PD-L1, CD137, OX40, STAT3
Immunpriming	CD40, CD137



# Antibody (modified) based therapies for cutaneous T-cell-Lymphoma

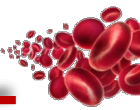
**Brentuximab  
Vedotin**

**Mogamulizumab**

**Alemtuzumab**

**Lacutamab  
(KIR3DL2)**

**Atezolizumab**



# Final data from the phase 3 ALCANZA study: brentuximab vedotin versus physician's choice in patients with CD30-positive cutaneous T-cell lymphoma

Julia Scarisbrick,<sup>1</sup> Steven M. Horwitz,<sup>2</sup> Reinhard Dummer,<sup>3</sup> Sean Whittaker,<sup>4</sup> Madeleine Duvic,<sup>5</sup> Youn H. Kim,<sup>6</sup> Pietro Quaglino,<sup>7</sup> Pier Luigi Zinzani,<sup>8</sup> Oliver Bechter,<sup>9</sup> Herbert Eradat,<sup>10</sup> Lauren Pinter-Brown,<sup>11</sup> Oleg Akilov,<sup>12</sup> Larisa Geskin,<sup>13</sup> Jose Sanches,<sup>14</sup> Pablo Ortiz-Romero,<sup>15</sup> Michael Weichenthal,<sup>16</sup> David Fisher,<sup>17</sup> Jan Walewski,<sup>18</sup> Judith Trotman,<sup>19</sup> Kerry Taylor,<sup>20</sup> Stephane Dalle,<sup>21</sup> Rudolph Stadler,<sup>22</sup> Julie Lisano,<sup>23</sup> Lisa Brown,<sup>23</sup> Maria Corinna Palanca-Wessels,<sup>23</sup> Veronica Bunn,<sup>24</sup> Meredith Little,<sup>24</sup> H. Miles Prince<sup>25</sup>

<sup>1</sup>Department of Dermatology, University Hospital Birmingham, Birmingham, UK; <sup>2</sup>Department of Medicine, Memorial Sloan Kettering Cancer Center, New York, NY, USA; <sup>3</sup>Department of Dermatology, University Hospital Zürich, Zürich, Switzerland; <sup>4</sup>St John's Institute of Dermatology, Guys and St Thomas NHS Foundation Trust, London, UK; <sup>5</sup>The University of Texas MD Anderson Cancer Center, Houston, TX, USA; <sup>6</sup>Department of Dermatology, Stanford University School of Medicine and Stanford Cancer Institute, Stanford, CA, USA; <sup>7</sup>Department of Medical Sciences, Dermatologic Clinic, University of Turin, Turin, Italy; <sup>8</sup>Institute of Haematology, University of Bologna, Bologna, Italy; <sup>9</sup>Department of General Medical Oncology, University Hospitals Leuven, KU Leuven, Belgium; <sup>10</sup>Division of Hematology-Oncology, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA; <sup>11</sup>Chao Family Comprehensive Cancer Center, University of California, Irvine, CA, USA; <sup>12</sup>Department of Dermatology, University of Pittsburgh, Pittsburgh, PA, USA; <sup>13</sup>Department of Dermatology, Columbia University, New York, NY, USA; <sup>14</sup>Department of Dermatology, University of São Paulo Medical School, São Paulo, Brazil; <sup>15</sup>Department of Dermatology, University Hospital 12 de Octubre, Institute I+12 Medical School, University Complutense, Madrid, Spain; <sup>16</sup>Department of Dermatology, University Hospital of Schleswig-Holstein, Kiel, Germany; <sup>17</sup>Department of Medical Oncology, Dana-Farber Cancer Institute, Boston, MA, USA; <sup>18</sup>Maria Skłodowska-Curie Institute and Oncology Centre, Warsaw, Poland; <sup>19</sup>Department of Haematology, Concord Repatriation General Hospital, University of Sydney, Concord, NSW, Australia; <sup>20</sup>ICON Cancer Care, South Brisbane, QLD, Australia; <sup>21</sup>Department of Dermatology, Hospices Civils de Lyon, Claude Bernard Lyon 1 University, Lyon, France; <sup>22</sup>University Clinic for Dermatology, Johannes Wesling Medical Centre, Minden, Germany; <sup>23</sup>Seattle Genetics, Inc., Bothell, WA, USA; <sup>24</sup>Millennium Pharmaceuticals, Inc., Cambridge, MA, USA, a wholly owned subsidiary of Takeda Pharmaceutical Company Limited; <sup>25</sup>Division of Cancer Medicine, Peter MacCallum Cancer Centre and Sir Peter MacCallum Department of Oncology, The University of Melbourne, Victoria, Australia.

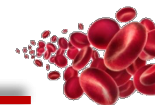
## Brentuximab vedotin or physician's choice in CD30-positive cutaneous T-cell lymphoma (ALCANZA): an international, open-label, randomised, phase 3, multicentre trial

*H Miles Prince\*, Youn H Kim\*, Steven M Horwitz, Reinhard Dummer, Julia Scarisbrick, Pietro Quaglino, Pier Luigi Zinzani, Pascal Wolter, Jose A Sanches, Pablo L Ortiz-Romero, Oleg E Akilov, Larisa Geskin, Judith Trotman, Kerry Taylor, Stephane Dalle, Michael Weichenthal, Jan Walewski, David Fisher, Brigitte Dréno, Rudolf Stadler, Tatyana Feldman, Timothy M Kuzel, Yinghui Wang, Maria Corinna Palanca-Wessels, Erin Zagadolov, William L Trepicchio, Wenwen Zhang, Hui-Min Lin, Yi Liu, Dirk Huebner, Meredith Little, Sean Whittaker†, Madeleine Duvic†, on behalf of the ALCANZA study group‡*

Prince HM, et al. *Lancet*. 2017;390:555-66.

Response to brentuximab vedotin versus physician's choice by CD30 expression and large cell transformation status in patients with mycosis fungoides: An ALCANZA sub-analysis

Youn H. Kim et al *European Journal of Cancer* 148 (2021) 411e421



# ORR4, best response to treatment, PFS and OS (ITT population)

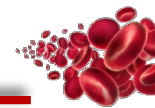
	Brentuximab vedotin (n=64)	Physician's choice (n=64)	p-value
<b>ORR4 per IRF, n (%)</b>	<b>35 (54.7)*</b>	<b>8 (12.5)</b>	<b>&lt;0.001</b>
Best response to treatment per IRF, n (%)			
Overall response (CR + PR)	42 (65.6)	13 (20.3)	<0.001
CR	11 (17.2)	1 (1.6)	0.002
PR	31 (48.4)	12 (18.8)	
SD	10 (15.6)	18 (28.1)	
PD	5 (7.8)	22 (34.4)	
<b>Median PFS per IRF, months<sup>†</sup></b>	<b>16.7</b>	<b>3.5</b>	<b>&lt;0.001</b>
3-year OS estimates, % (95% CI)	64.4 (50.7–75.2) <sup>†</sup>	61.9 (47.3–73.6) <sup>‡</sup>	
	<b>(HR=0.745; 95% CI: 0.421–1.318)</b>		<b>0.310</b>

\*Based on additional information provided to the IRF after the May 31, 2016 data cut-off, the IRF determined that 1 patient had not achieved ORR4 as was originally reported; the change in status was determined through a standard IRF adjudication process.

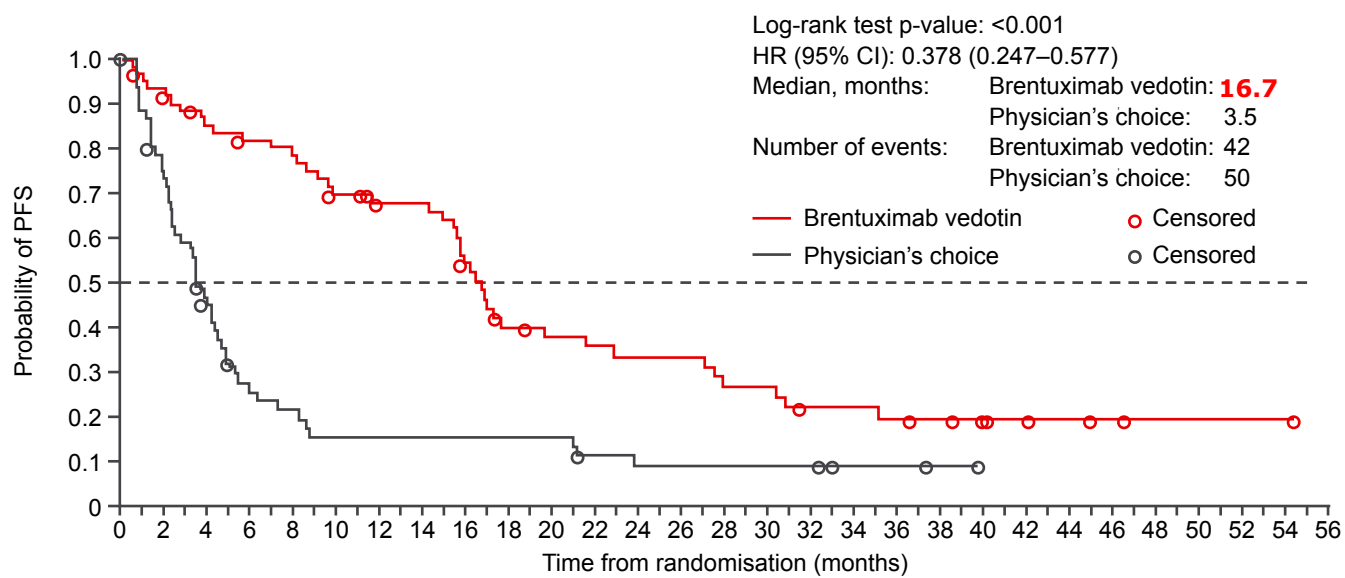
<sup>†</sup>Median OS follow-up for brentuximab vedotin arm: 48.4 months.

<sup>‡</sup>Median OS follow-up for PC arm: 42.9 months.

CI, confidence interval; CR, complete response; HR, hazard ratio; IRF, independent review facility; ITT, intent-to-treat; ORR4, objective response rate lasting ≥4 months; OS, overall survival; PC: physician's choice; PD, progressive disease; PFS, progression-free survival; PR, partial response; SD, stable disease.



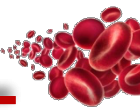
# PFS per IRF (ITT population)



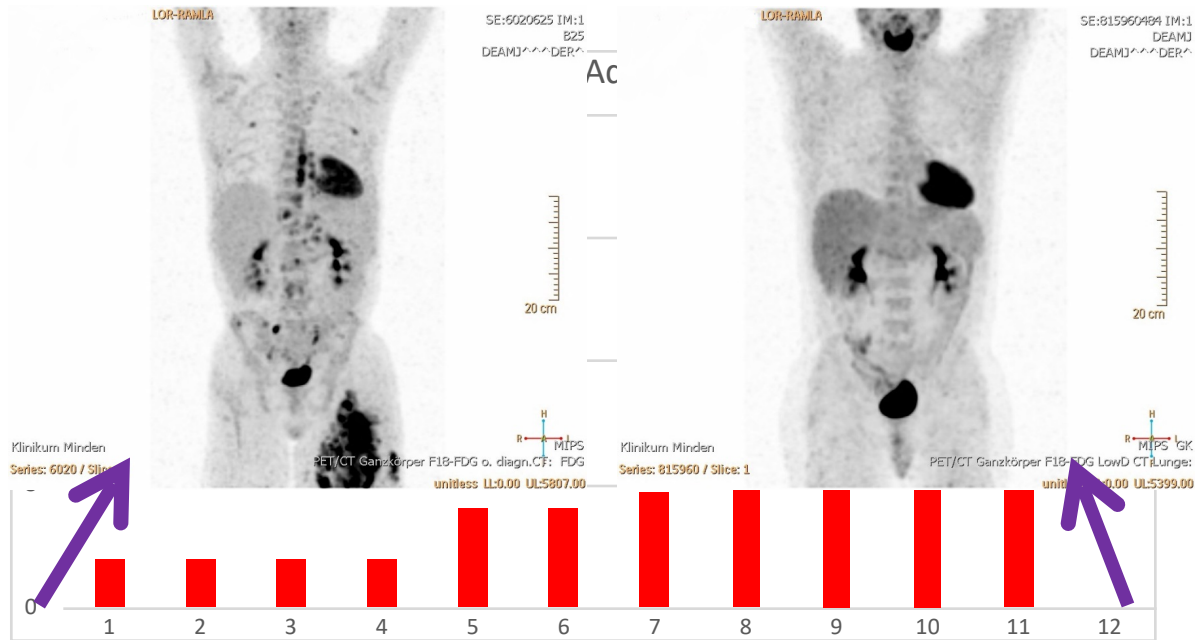
Number of patients at risk:

Brentuximab vedotin	64	59	58	54	51	50	48	47	46	44	44	40	40	36	35	35	33	27	22	19	18	17	17	16	15	15	15	15	15	12	12	12	10	9	9	9	9	8	7	7	6	6	4	4	3	3	3	2	1	1	1	1	1	1	1	1		
Physician's choice	64	54	42	34	24	17	13	12	11	8	8	8	8	8	8	8	8	8	8	8	8	8	7	5	5	4	4	4	4	4	4	4	4	4	4	4	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

CI, confidence interval; HR, hazard ratio; IRF, independent review facility; ITT, intent-to-treat; PFS, progression-free survival.



# CD30-positive, granulomatous Mycosis fungoides



Adcetris®-Infusionen



European Reference Network

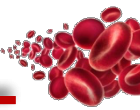
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Brentuximab a novel antibody therapy:real-world use confirms efficacy and tolerability for CD30-positive cutaneous lymphoma

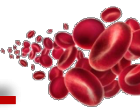
S. Engellina ID , M. Saggiu, J. Yoo, F. Shah, A. Stevens, C. Irwin, S. Chaganti and J.J. Scarisbrick BJD 2020 182, 788-818

Patient, sex, age at diagnosis	Diagnosis	Stage prior to BV	BV cycles, n	Weeks, n	CD30%	Response	Previous systemics, n
1, F, 57	MF	IIB	4	12	10	SD	3
2, M, 60	MF	IIB	9	27	30	CR	3
3, M, 60	MF	IIB	13	39	27	PR	3
4, F, 57	MF	IIIB	7	21	10	CR	4
5, M, 76	MF	IIIB	16	48	100	CR	3
6, M, 47	MF	IVA2	5	15	5	PR	4
7, M, 43	MF	IVA2	9	27	10	PD	4
8, M, 48	MF	IVA2	10	30	100	CR	2
9, F, 50	MF	IVA2	16	48	1-5	PR	1
10, M, 59	pcALCL	T3N0M1	4	12	100	PD	2
11, M, 39	pcALCL	T2cN1M0	6	18	100	CR	1
12, M, 41	pcALCL	T3aN2M0	8	24	100	CR	2

F, female; MF, mycosis fungoides; SD, stable disease; M, male; CR, complete response; PR, partial response; PD, disease progression; pcALCL, primary anaplastic large-cell lymphoma.

Patient characteristics, CD30 status, number of cycles of brentuximab vedotin (BV) received and response achieved





# Combination therapy out of 26 patients , median age 67 years,

## Identified:

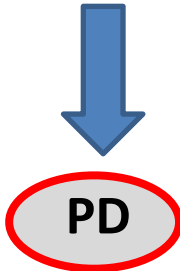
5 patients received due to progression under BV skin directed therapies

MF

(n=4)

PC-CD4+ SM-PTL

Brentuximab vedotin  
• 1,8 or 1,2 mg/kg  
• Every 3 week (extension of the intervals possible)

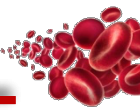


Skin directed Therapies:  
• Tumorexzision  
• Lokale Radiation  
• PUVA

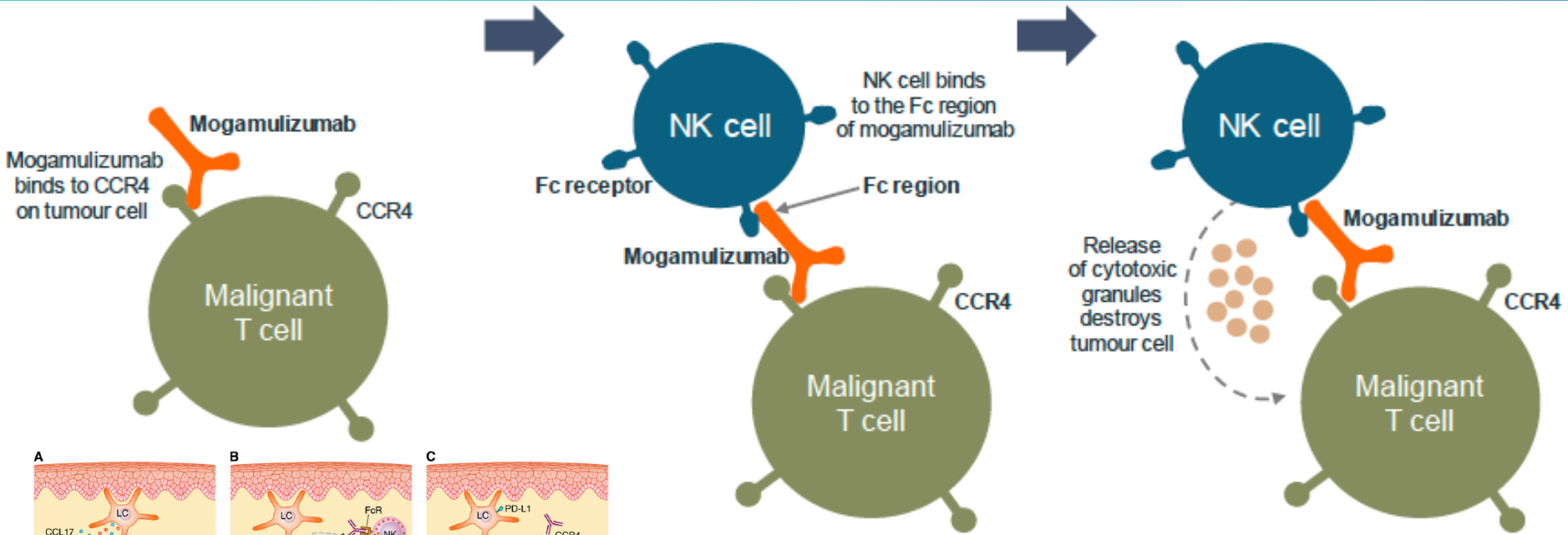


SD / PR (median 7 month)  
(without additional toxicity)

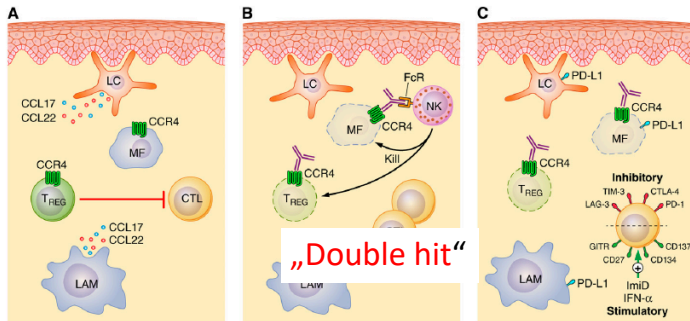
Response	n	%
ORR	22/26	84,6
CR	6/26	30,8
PR	14/26	53,8
SD	4/26	11,5
PD	1/26	3,8



# Mogamulizumab: a humanized anti-CCR4 antibody with a defucosylated Fc region



**Targets receptor CCR4**



„Double hit“

Mogamulizumab induces ADCC by binding to CCR4 on tumour cells

NK cells bind to Fc region of mogamulizumab on tumour cells inducing the release of cytotoxic granules and tumour-cell lysis



**Reference Network**

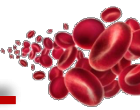
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# Mogamulizumab

## Response outcomes

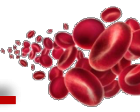
	Mogamulizumab	Vorinostat
→ ORR <sup>a,b</sup> , n/N (%)	52/186 (28)	9/186 (5)
MF <sup>c</sup>	22/105 (21)	7/99 (7)
SS <sup>b</sup>	30/81 (37)	2/87 (2)
Stage IB/IIA	7/36 (19)	5/49 (10)
Stage IIB	5/32 (16)	1/23 (4)
Stage III	5/22 (23)	0/16 (0)
Stage IV	35/96 (36)	3/98 (3)
<b>DOR, median, months</b>	<b>14</b>	<b>9</b>
MF	13 (n=22)	9 (n=7)
SS	17 (n=30)	7 (n=2)
<b>ORR<sup>a</sup> n/N (%) mogamulizumab after crossover</b>	<b>41/136 (30)</b>	

<sup>a</sup>ORR is the percentage of patients with confirmed CR or confirmed PR; <sup>b</sup>P<0.001; <sup>c</sup>P=0.004.

- Median relative dose intensities for mogamulizumab were 97.5% and for vorinostat was 95.1%

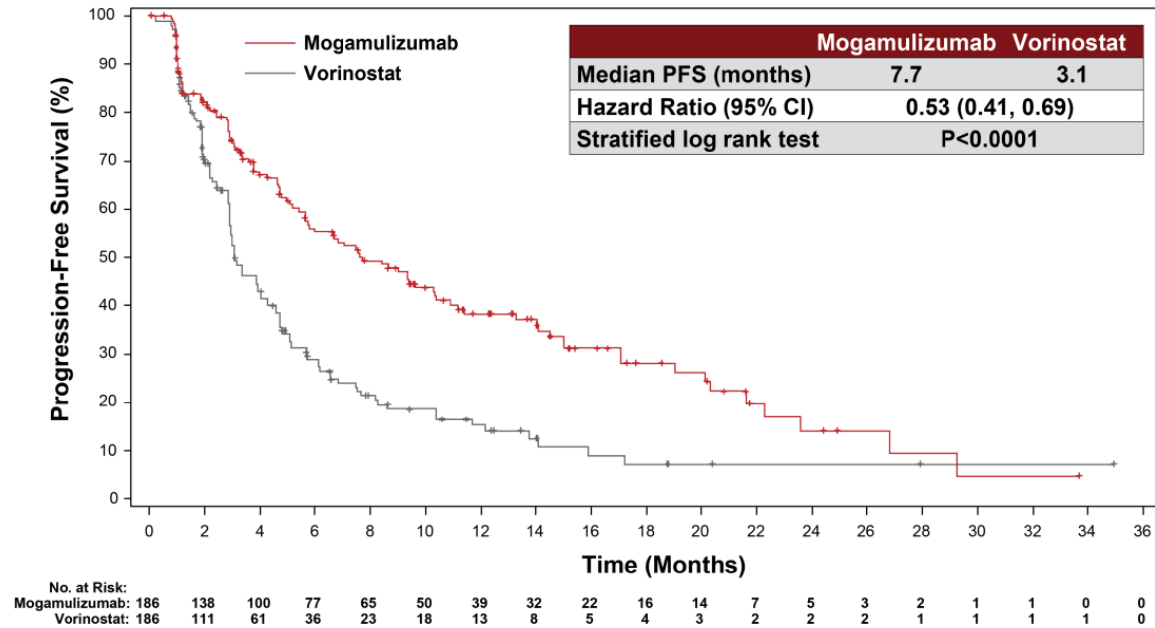
ORR=overall response rate; DOR=duration of response.

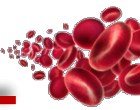
**Dose:** The recommended Dose is 1 mg/kg Mogamulizumab as intravenous infusion over at least 60 minutes  
Application on day 1, 8, 15 und 22 for the first 28-day cycle.  
Followed every two weeks on day 1 and 15 for the following 28-day cycle.



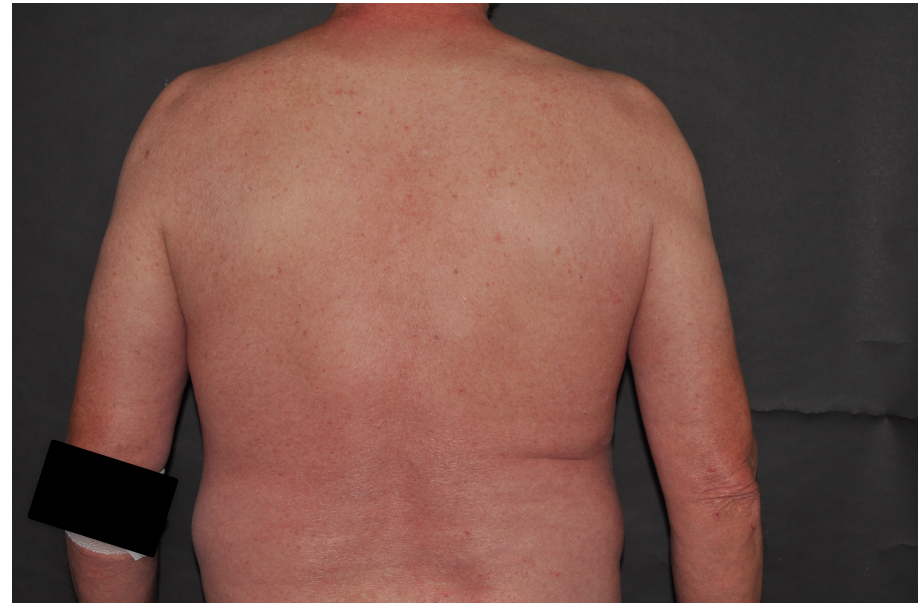
# Mogamulizumab

## Primary endpoint: Progression-free survival (PFS)





# Sézary syndrome



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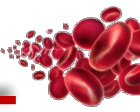
for rare or low prevalence  
complex diseases

Network  
Hematological  
Diseases (ERN EuroBloodNet)

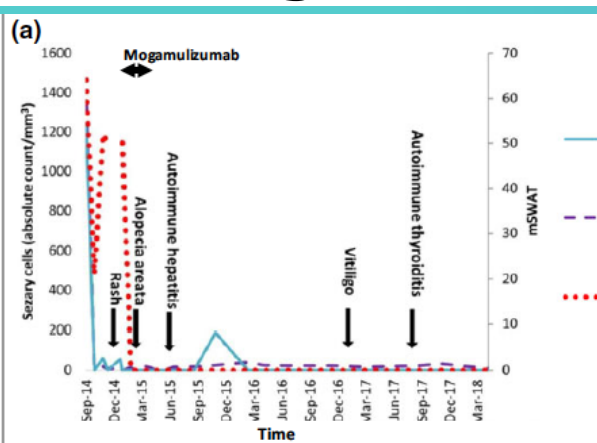
Webinars  
**Cutaneous Lymphoma**

EuroBloodNet  Topic on Focus

Patients' Organizations



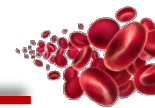
# Mogamulizumab can induce autoimmunity with long lasting effects



- 2 out of 21 patients treated at Saint-Louis Hospital developed autoimmunity
- Both patients were treated long-term either with alemtuzumab or gemcitabine and then progressed
- Patient 1 cleared in the blood compartment but not in the skin and received additional doxorubicin, is now three years free of disease
- Patient 2 developed autoimmune haemolytic anaemia, is now 2 years free of disease
- **The depletion of CCR4-expressing Tregs is believed to activate cytotoxic T lymphocytes**



Association of autoimmunity and long-term remission in patients with Sézary Syndrome treated with mogamulizumab P. Bonnet *Br J Dermatol* 2019



Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

ScienceDirect

journal homepage: [www.ejancer.com](http://www.ejancer.com)



## Review

# Maintenance therapy in patients with mycosis fungoides or Sézary syndrome: A neglected topic



Rudolf Stadler <sup>a,\*</sup>, Julia J. Scarisbrick <sup>b</sup>

<sup>a</sup> *University Clinic for Dermatology, Johannes Wesling Medical Centre, Minden, Germany*

<sup>b</sup> *University Hospital Birmingham, Birmingham, United Kingdom*

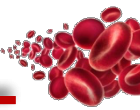
Received 2 August 2020; received in revised form 28 September 2020; accepted 2 October 2020



Cutaneous Lymphoma

EuroBloodNet Topic on Focus

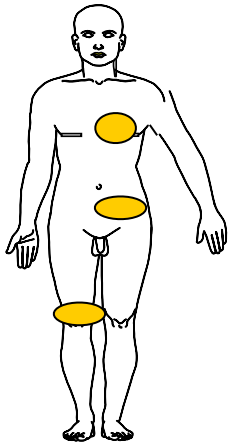




# Concept: Maintenance Therapy

## Stage IA

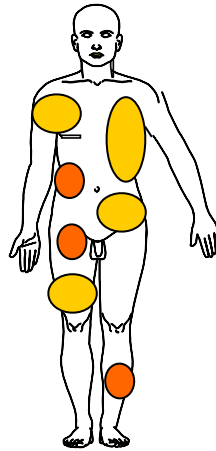
I UVB 311; PUVA  
Chlormethine Gel  
Steroids



**Remission**  
Observation

## Stage IB

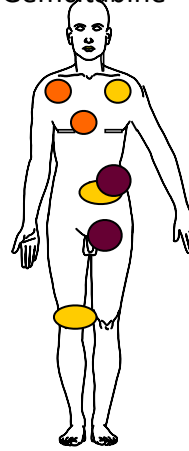
PUVA  
+ Interferon  $\alpha$   
Bexarotene  
TSEB



**Remission**  
e.g. PUVA-  
Interval Therapy,  
or Bexarotene  
or Chlormethin Gel  
Resminostat???

## Stage IIB

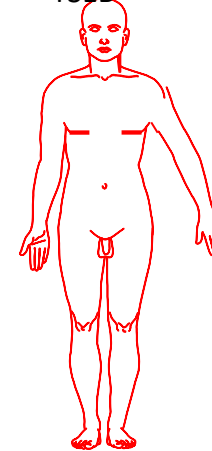
as IB +  
Radiatio or  
Brentuximab  
Vedotin  
TSEB  
Gemcitabine



**Remission**  
e.g. PUVA-  
Interval Therapy  
or Bexarotene  
or Interferon  
*Resminostat?*

## Stage III

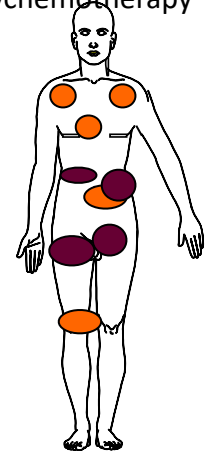
PUVA  
Photophereses  
+/- IFN  $\alpha$   
Bexarotene  
Mogamulizumab  
TSEB



**Remission**  
Bexarotene, IFN- $\alpha$   
Photopheresis  
*Resminostat?*

## Stage IV

Photophereses  
Mogamulizumab  
Brentuximab Vedotin  
TSEB  
AlloTransplant  
Polychemotherapy



**Remission**  
Bexarotene,  
Interferon,  
*Resminostat??*

● Patch ● Plaques ● Tumor

Webinars

Cutaneous Lymphoma

EuroBloodNet Topic on Focus

Patients' Organizations

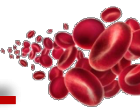


European  
Reference  
Network

for rare or low prevalence  
complex diseases

Network  
Hematological  
Diseases (ERN EuroBloodNet)





# Study Design

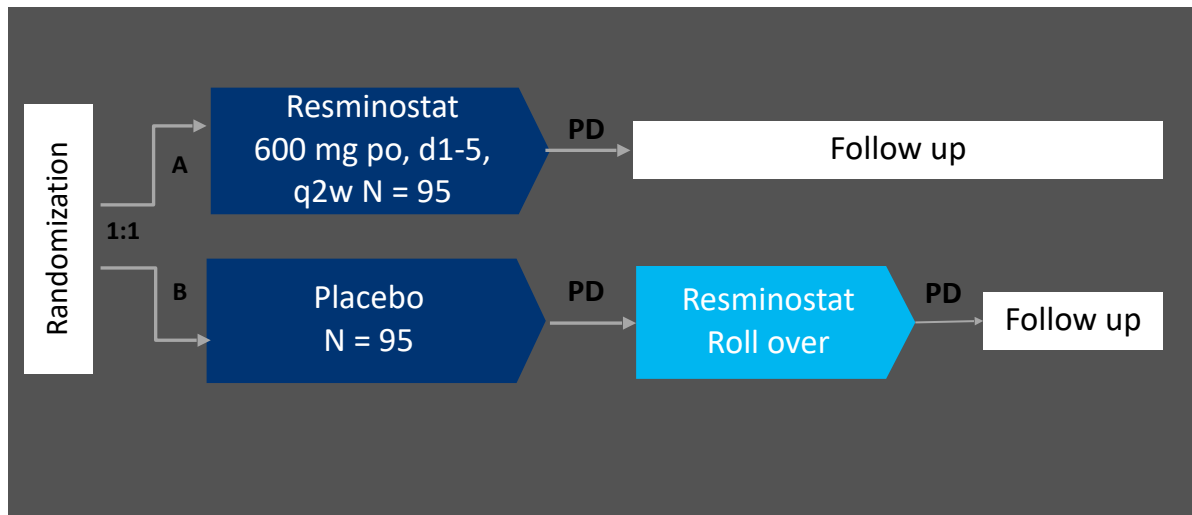
# RESMAIN

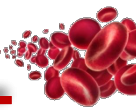
## Patients:

- Mycosis fungoides (Stage IIB-IVB) or Sézary Syndrome
- In disease control (CR;PR;SD) 2-12 weeks after systemic therapy
- Target N = **190** patients

## Endpoints:

- Primary: PFS
- Key secondary: Time to symptom worsening (VAS itching)
- Secondary: TTP, TTNT, PFS2, PFS3, ORR, DOR, OS, HrQoL, Safety

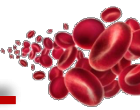




# Cutaneous Lymphoma: New therapeutic developments

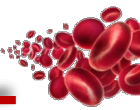
## EuroBlood Net Talk

19/07/2021



# Agenda

- EORTC/ CTLF Studies : Sponsor: EORTC
  - Completed study
    - 1652 (PARCT) ClinicalTrials.gov : NCT03357224
  - Upcoming studies
    - 1754 (REACH) ClinicalTrials.gov : NCT04218825
    - 1820 (MOGAT) ClinicalTrials.gov : NCT04128072
    - 1636 (PROMPT) ClinicalTrials.gov : open



# Completed EORTC/CLTF study

1652-PARCT ClinicaTrials.gov: NCT03357224 Sponsor: EORTC

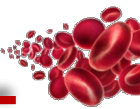
Phase II trial of atezolizumab (anti-PD-L1) in the treatment of stage IIb-IV mycosis fungoides/Sézary syndrome patients relapsed/refractory after a previous systemic treatment

- Primary objective

To determine the antitumor activity of atezolizumab for patients with refractory or relapsed advanced stages of mycosis fungoides and Sézary syndrome, assessed in terms of the overall response rate, according to EORTC-ISCL-USCLC criteria

- Translational research

Effect of atezolizumab on PD-1/PD-L1 expression, the tumor infiltrating lymphocyte populations and its activation in the skin.



# Upcoming EORTC CLTF studies

## 1754 REACH

**ClinicalTrials.gov : NCT04218825 Sponsor: EORTC**

Study to determine the aetiology of chlormethine gel induced-skin drug reaction in early stage mycosis fungoides cutaneous T cell lymphoma (MF-CTCL)

- **Primary objective**

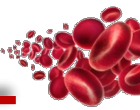
To determine activity of the drug as measured by response rate in patients treated with CL gel without skin drug reaction

To determine activity of the drug as measured by response rate in patients treated with CL gel with skin drug reactions and subsequent reduced CL gel application frequency

- **Translational research**

To discriminate between irritant and allergic contact dermatitis as a side effect to CL gel so that guided management of the skin reaction can occur

To assess malignant T-cell behaviour in case of skin reaction to CL gel



# Upcoming EORTC/CLTF studies

## **1820 MOGAT**    **ClinicalTrials.gov : NCT04128072**    **Sponsor: EORTC**

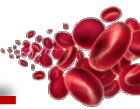
Open-Label, phase II, Multi-Center, study of Anti-CCR4 Monoclonal Antibody (mogamulizumab) Plus Total Skin Electron Beam therapy (TSEB) in patients with stage IB-IIB Cutaneous T-Cell Lymphoma

- **Primary objective**

To evaluate the progression free survival rate at 48 weeks (according to EORTC-ISCL-USCLC criteria) of anti-CCR4 monoclonal antibody (mogamulizumab) and TSEB in IB-IIB cutaneous T-cell lymphoma

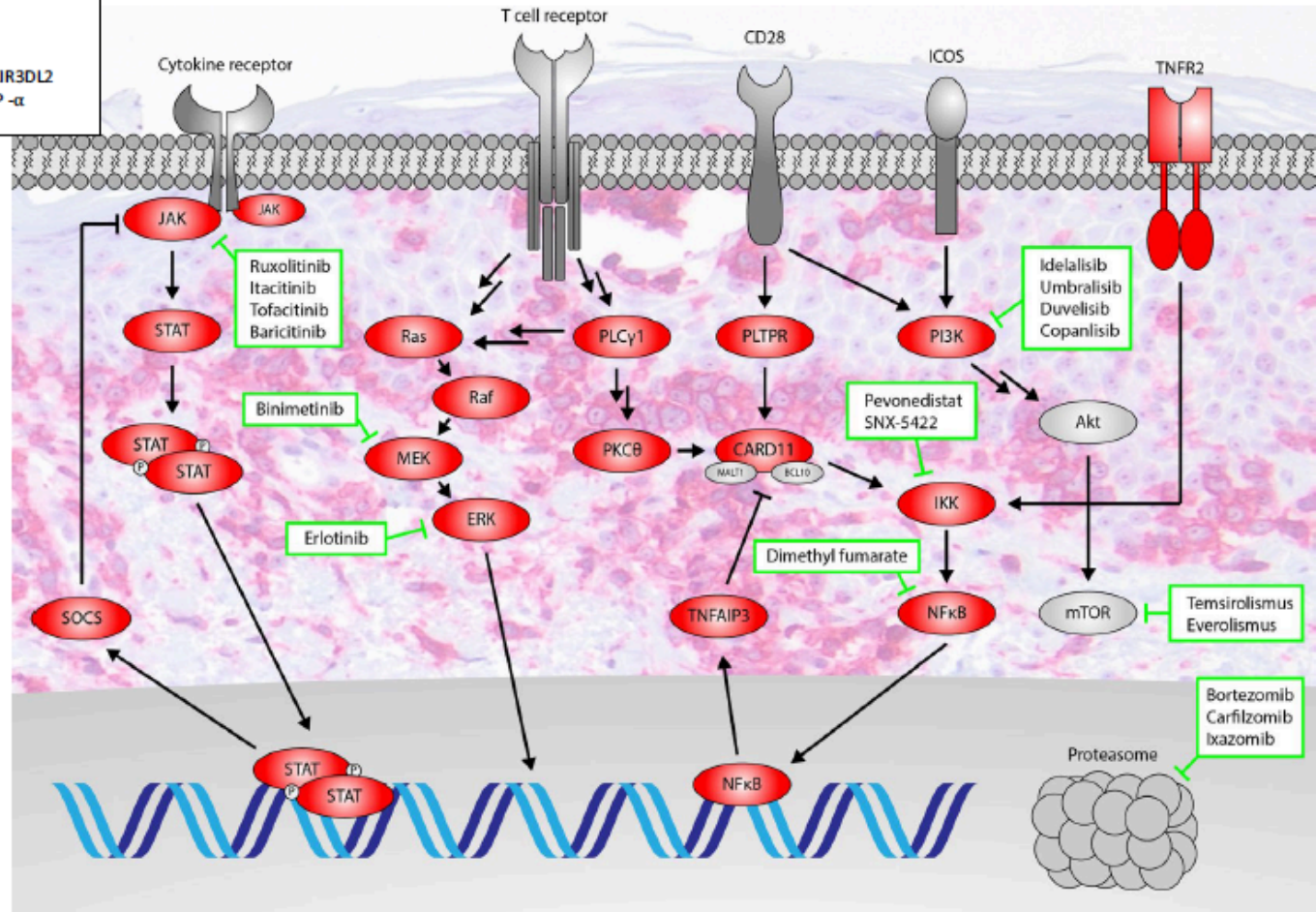
- **Translational research**

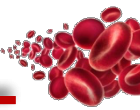
To identify factors in the skin and/or blood that can predict response or resistance to mogamulizumab treatment alone or the combination of mogamulizumab + TSEB



# Future Directions

- AB against surface molecules:**
- Brentuximab vedotin -> CD30
  - Mogamulizumab -> CCR4
  - IPH410 -> CD158k/KIR3DL2
  - e.g. Hu5F9-G4 -> CD47-SIRP- $\alpha$
  - Avelumab -> PD-L1



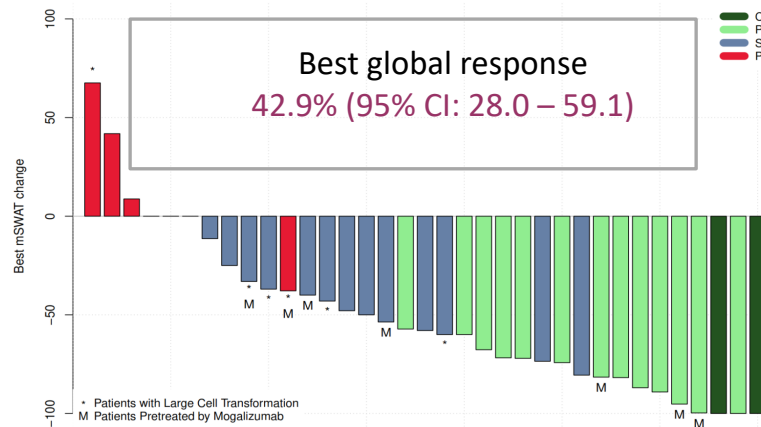


# IPH4102, a first-in-class anti-KIR3DL2 monoclonal antibody, in patients with relapsed or refractory cutaneous T-cell lymphoma: an international, first-in-human, open-label, phase 1 trial



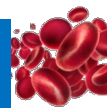
Martine Bagot, Pierluigi Porcu, Anne Marie-Cardine, Maxime Battistella, Basem M William, Maarten Vermeer, Sean Whittaker, Federico Rotolo, Caroline Ram-Wolff, Michael S Khodadoust, Armand Bensussan, Carine Paturel, Cecile Bonnafous, Helene Sicard, Hatem A Azim Jr, Youn H Kim

Lancet Oncol 2019





# Enhancing antitumor immunity through checkpoint blockade as therapeutic strategy in T-cell lymphomas



PD-1 inhibition in MF/SS : OR 15-38%, CR 0-8%, 1 year PFS 65%

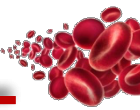
## Pembrolizumab in Relapsed and Refractory Mycosis Fungoides and Sézary Syndrome: A Multicenter Phase II Study

Check for update

JCO 2019

Michael S. Khodadoust, MD, PhD<sup>1</sup>; Alain H. Rook, MD<sup>2</sup>; Pierluigi Porcu, MD<sup>3</sup>; Francine Foss, MD<sup>4</sup>; Alison J. Moskowitz, MD<sup>5</sup>; Andrei Shustov, MD<sup>6</sup>; Satish Shanbhag, MBBS, MPH<sup>7</sup>; Lubomir Sokol, MD, PhD<sup>8</sup>; Steven P. Fling, PhD<sup>9</sup>; Nirasha Ramchurren, PhD<sup>9</sup>; Robert Pierce, MD<sup>9</sup>; Asa Davis, PhD<sup>9</sup>; Richard Shine, PharmD, BCPS<sup>9</sup>; Shufeng Li, MS<sup>1</sup>; Sophia Fong<sup>1</sup>; Jinah Kim, MD, PhD<sup>1</sup>; Yi Yang, MS<sup>9</sup>; Wendy M. Blumenschein<sup>10</sup>; Jennifer H. Yearley, DVM, PhD, DACVP<sup>10</sup>; Biswajit Das, PhD<sup>11</sup>; Rajesh Patidar, MS<sup>11</sup>; Vivekananda Datta, MD, PhD<sup>11</sup>; Erin Cantu<sup>11</sup>; Justine N. McCutcheon<sup>11</sup>; Chris Karlovich, PhD<sup>11</sup>; P. Mickey Williams, PhD<sup>11</sup>; Priyanka B. Subrahmanyam, PhD<sup>1</sup>; Holden T. Maecker, PhD<sup>1</sup>; Steven M. Horwitz, MD<sup>5</sup>; Elad Sharon, MD, MPH<sup>12</sup>; Holbrook E. Kohrt, MD, PhD<sup>1†</sup>; Martin A. Cheever, MD<sup>9</sup>; and Youn H. Kim, MD<sup>1</sup>

- Treatment responses did not correlate with expression of PD-L1, total mutation burden, or an interferon-g gene expression signature.
- Pembrolizumab demonstrated significant antitumor activity with durable responses and a favorable safety



- 1. Stage adapted therapy in close contact with the patient**
- 2. Antibody based therapies improve CTCL therapy**
- 3. Maintenance therapy as an important concept**
- 4. A holistic approach to patient care**
- 5. Clinical studies to improve the field**

# + Lymphoma: a 21 year “affair”

- 2000 Delayed Diagnostic
- Chemo, Radio, Interferon....
- 2003 Autologous transplant
- 2005, Allogeneic Transplant
- Life after a transplant: A different Story
  - 10 years + of cGVHD
    - Scleroderma, Fasciitis, eyes dryness
    - Side effects from prior treatments: cardio (5 stents...)

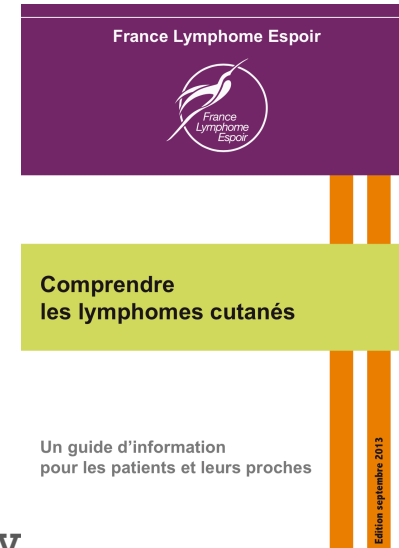


# + Patients Advocacy

- Founded a Non profit organisation, born in 2006
- Born for observation: No Info in France and ignorance
- Our missions are:
  - Information, education et communication for:
  - Provide any type of support during and after treatments in order to facilitate life with Lymphoma
  - Research
  - Advocate for patients with authorities and regulators
- Board member of the Lymphoma Coalition and LC Europe
  - Organization network, experience sharing (CLF, ...)
  - International collaborative work (EBMT, EHA, EORTC...)

# + CL: Support and challenges

- Support for patients via:
  - Dedicated phone line
  - Forum
  - Meetings
  - Website information
  - brochures
- Challenges:
  - Clearly Cutaneous lymphomas are underserved
    - Knowledge of the disease
    - Diagnostic process (can take years)
    - Hematology or dermatology?
    - Treatment options and burden
    - Clinical trials
- Social/professional stigmatization



# + Merger

- We recently merged with the French CLL organization SILLC
- We are now known as ELLyE

