

**Update on
T-Cell Lymphomas**



Welcome and Introductions

**Update on
T-Cell Lymphomas**



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Disclosures

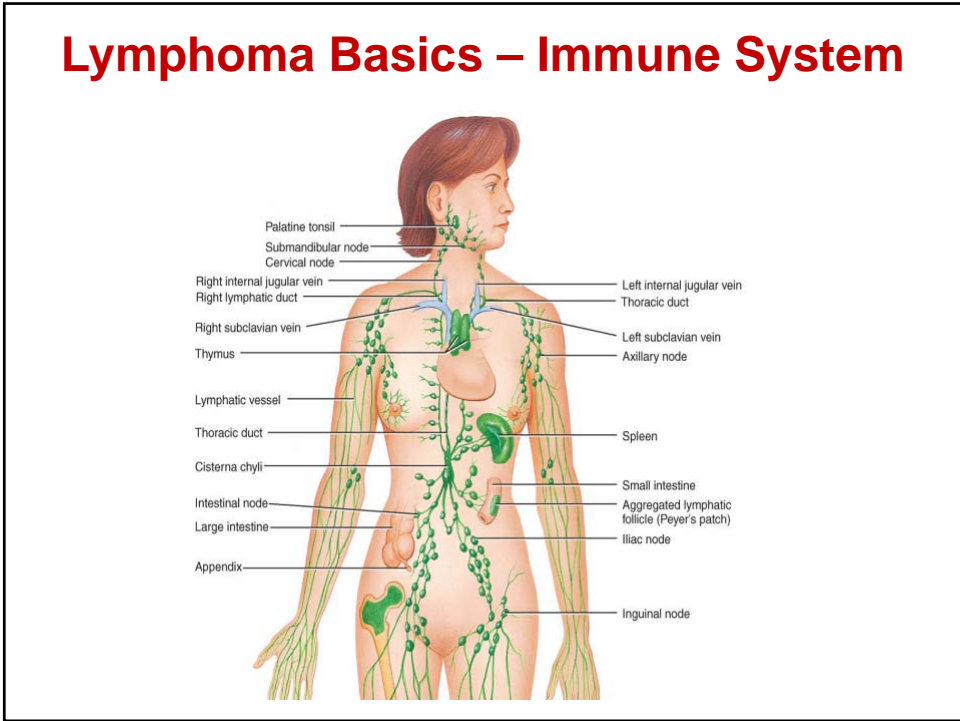


- Consulting
– Celgene

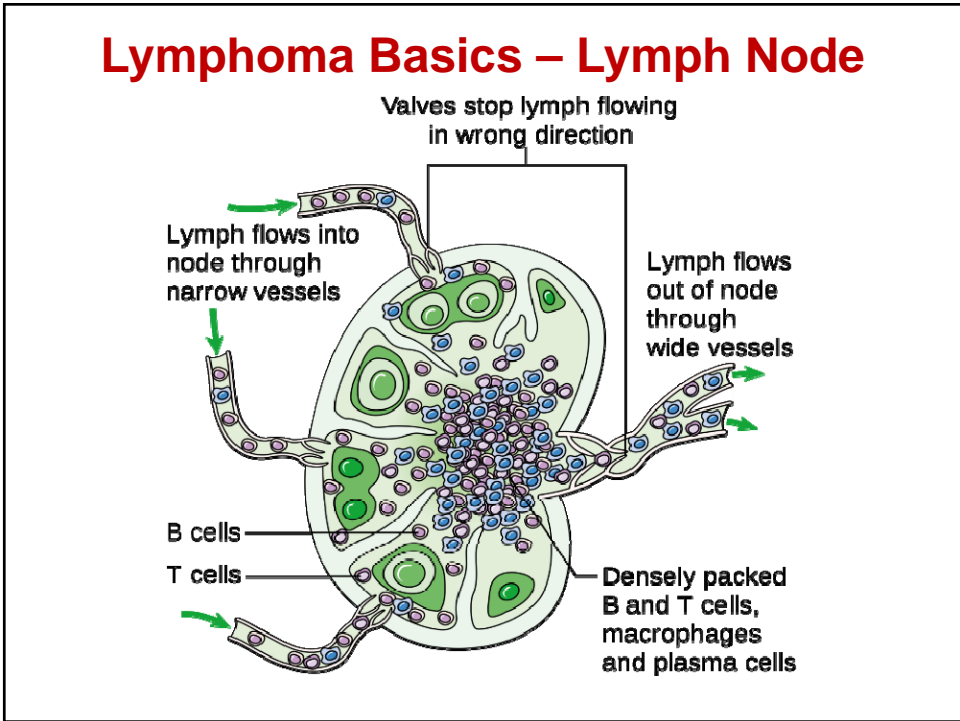
T-Cell Lymphomas: Overview

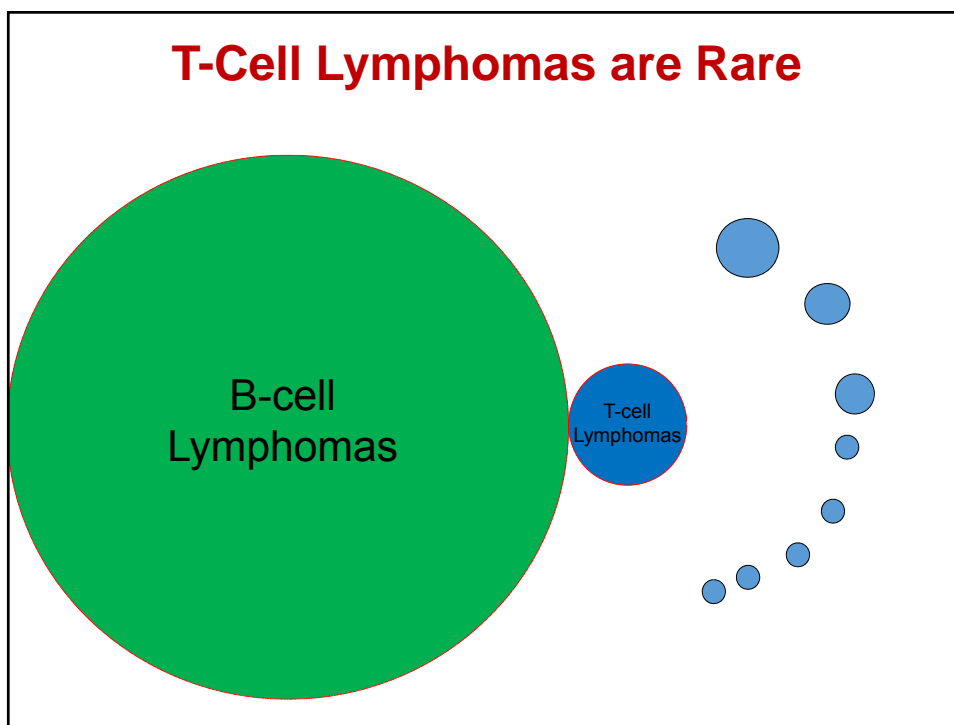
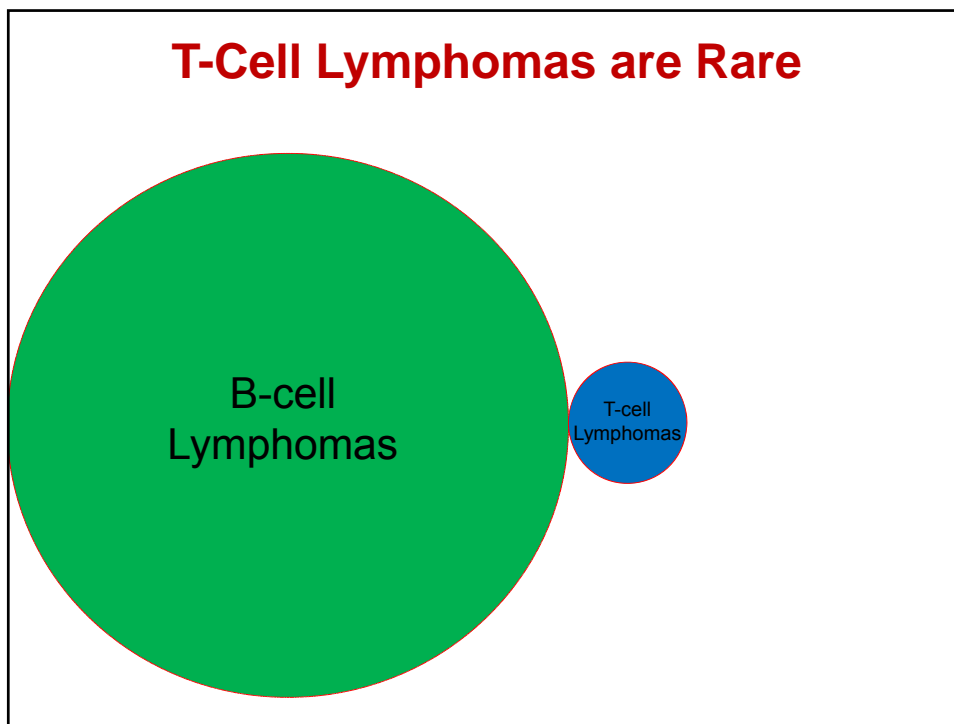
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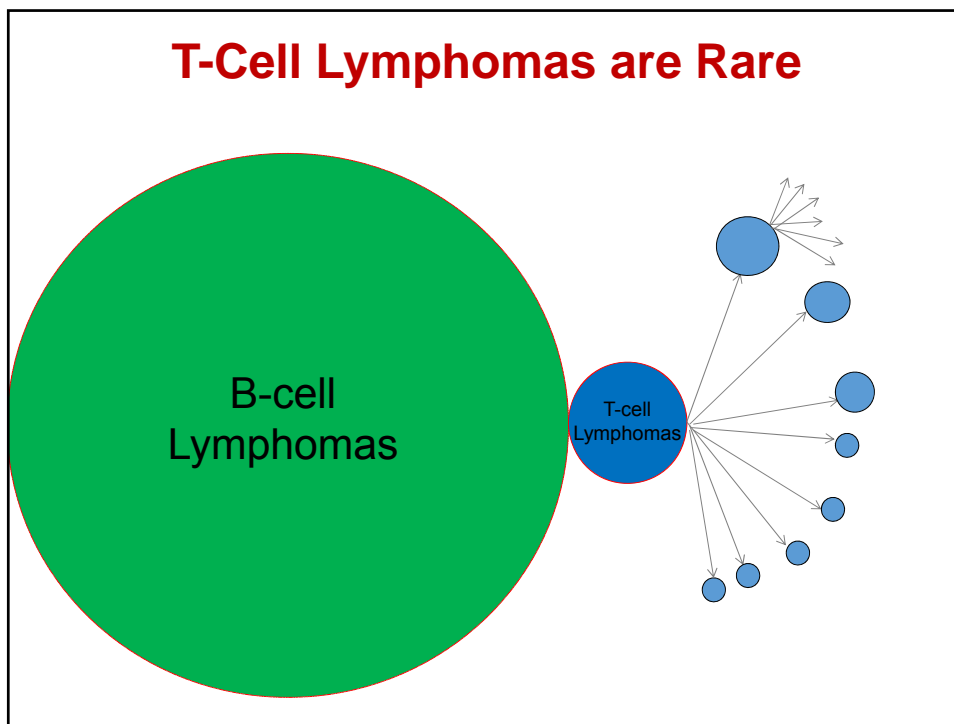
Lymphoma Basics – Immune System



Lymphoma Basics – Lymph Node







Many Types of T-Cell Lymphomas

T-/NK-Cell Lymphomas

CTCL	Extranodal	Nodal	Leukemic
Mycosis Fungoides (MF)	NK/TCL Nasal Type	Peripheral TCL-NOS	Adult T-Cell Leukemia/ Lymphoma
Transformed MF	Enteropathy- associated TCL	Anaplastic Large Cell Lymphoma (ALK +/-)	Aggressive NK-Cell Leukemia
Sézary Syndrome	Hepatosplenic TCL	Angioimmunoblastic TCL	T-Cell Prolymphocytic Leukemia
Primary Cutaneous CD30+ T-Cell Disorders	Subcutaneous Panniculitis-like TCL		T-Cell Large Granular Lymphocytic Leukemia
Primary Cutaneous Gamma/Delta TCL			

■ Aggressive

Diagnosis/Staging

- Disease history/physical examination
- Biopsy of the lymph node (excisional!)
- Whole body CT-PET scan
 - CT – anatomical assessment
 - PET – metabolic assessment
- Bone marrow biopsy
- Lumbar puncture (spinal tap)
- Brain MRI – only if symptoms are present

Clinical Symptoms I

- Constitutional symptoms
 - Unexplained fevers
 - Unexplained weight loss
 - Drenching night sweats
 - Fatigue, lack of appetite
- Localized symptoms
 - Pain, pressure, early satiety, visible tumors/nodules

Clinical Symptoms II

- Symptoms/signs related to organ involvement
 - Obstruction of urine flow – kidney failure
 - Obstruction of bile flow – biliary colic
 - Obstruction of GI tract – bowel obstruction
 - Obstruction of bronchi – shortness of breath
 - Invasion/pressure on spinal cord – paralysis
 - Invasion of the stomach/intestines – pain/bleeding
 - Invasion of the brain – stroke like symptoms

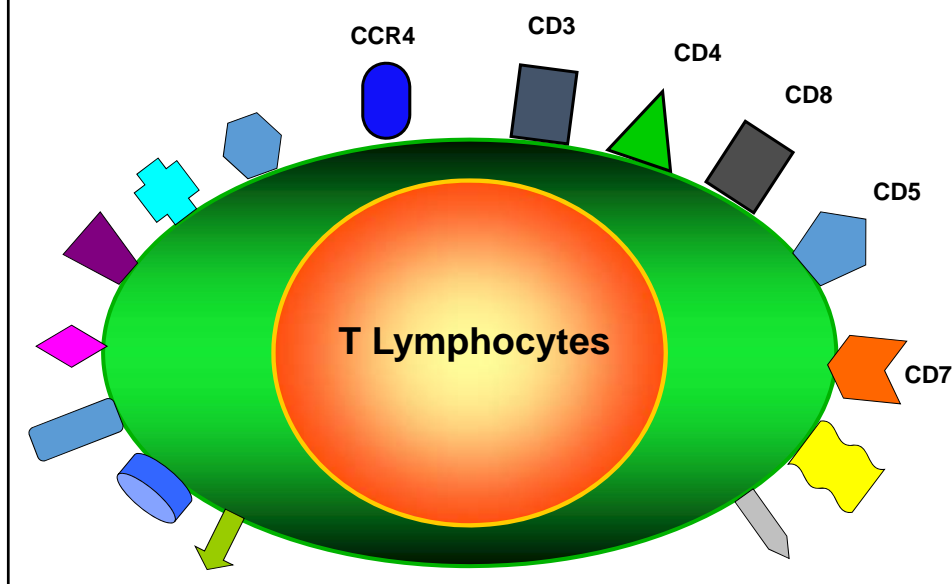
Clinical Symptoms III

- Symptoms related to bone marrow involvement
 - Low blood counts:
 - Low platelets – risk of bleeding and bruising
 - Low red blood cells – shortness of breath/fatigue
 - Low white blood cells – risk of infections

Clinical Symptoms IV

- Angioimmunoblastic T-cell lymphoma
 - Joint pain and stiffness
 - Skin rash, hives, itching
 - Fluid in the chest or stomach
- Nasal NK-cell lymphoma
 - Nose/sinus pain and discharge; nose bleeds
- T-cell pro-lymphocytic leukemia
 - Pain/pressure in the spleen area

Diagnosis: Antigens on T-Cells

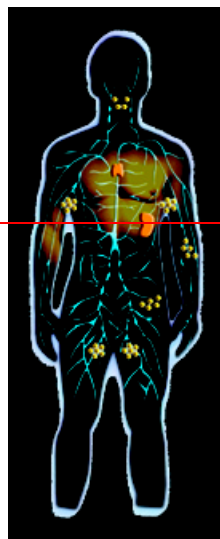


CT-PET Imaging



Staging

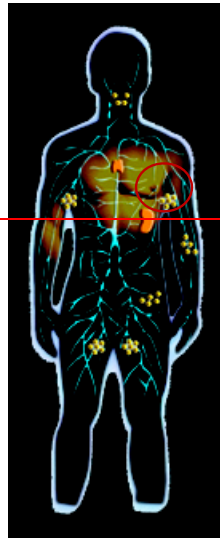
- Stage I } Early
 - Stage II } Early
 - Stage III } Advanced
 - Stage IV } Advanced
- A
- B



Staging

- Stage I
- Stage II
- Stage III
- Stage IV

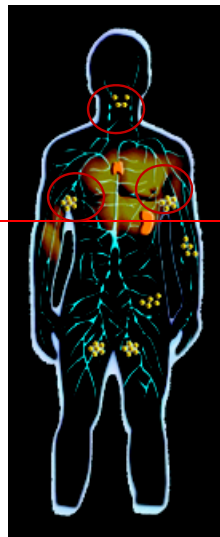
- A
- B



Staging

- Stage I
- Stage II
- Stage III
- Stage IV

- A
- B



Staging

- Stage I
- Stage II
- Stage III
- Stage IV

- A
- B



Staging

- Stage I
- Stage II
- Stage III
- Stage IV

- A
- B



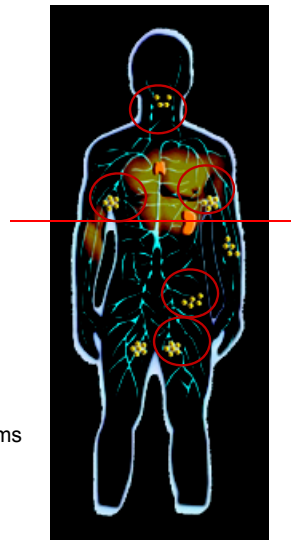
+ Bone marrow or inner organs

Staging

- Stage I
- Stage II

- Stage III
- Stage IV

- A no symptoms
- B constitutional symptoms



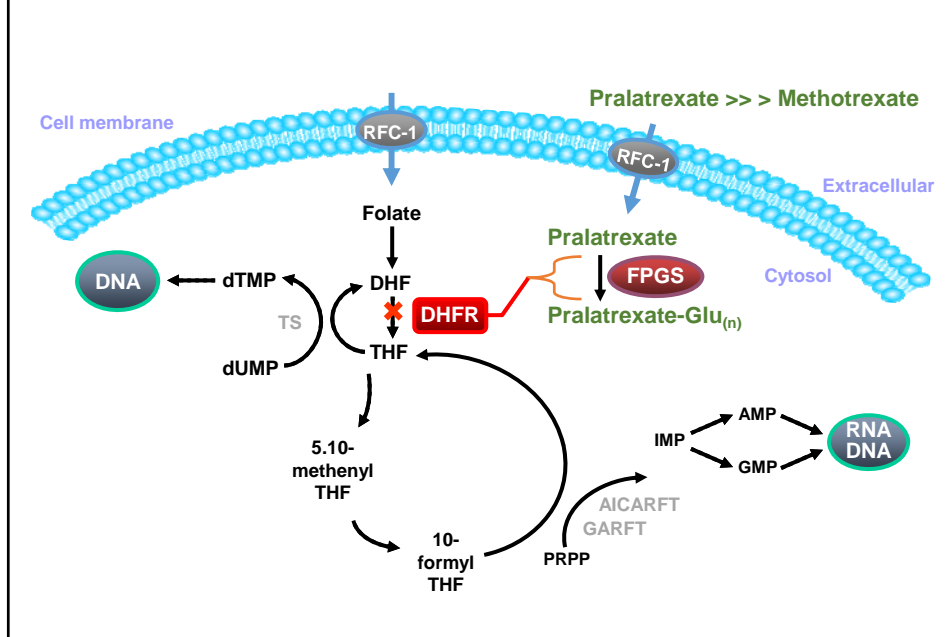
+ Bone marrow or inner organs

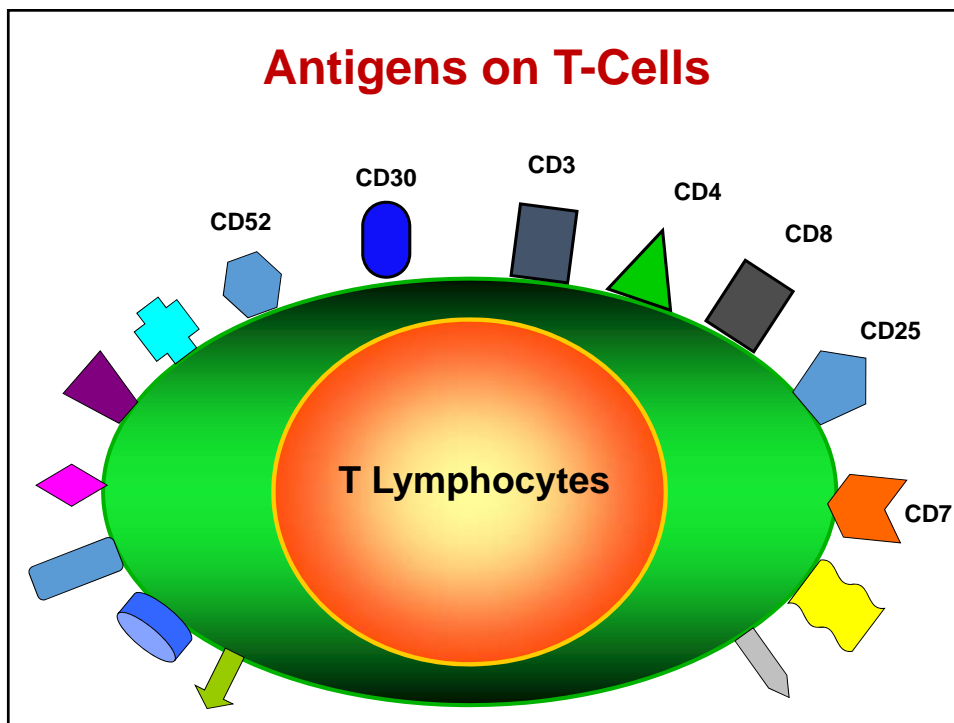
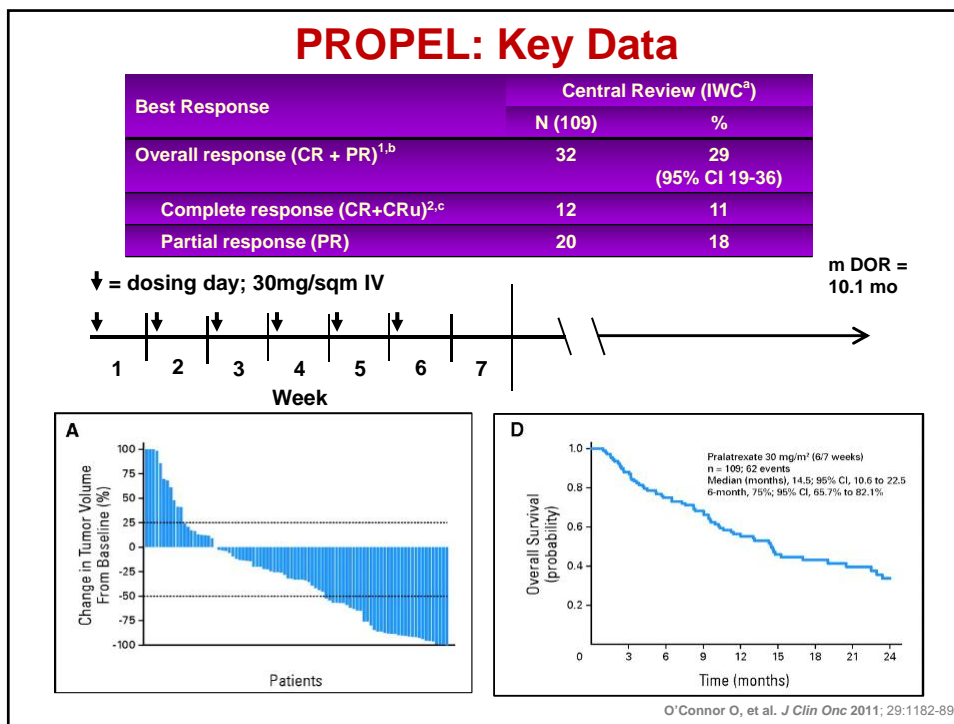
T-Cell Lymphomas: Therapy

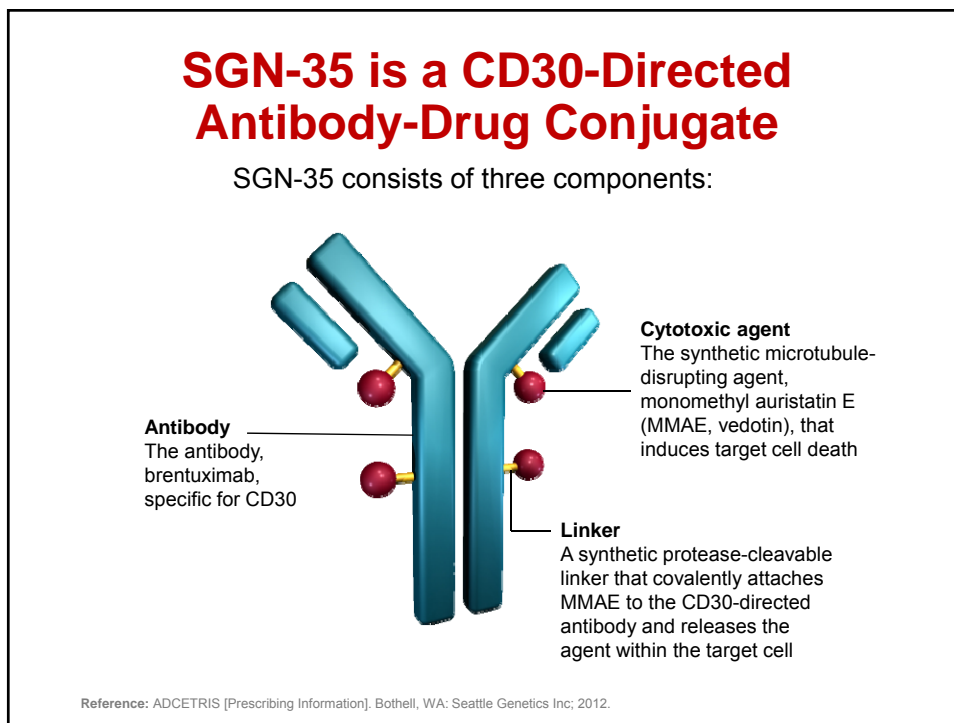
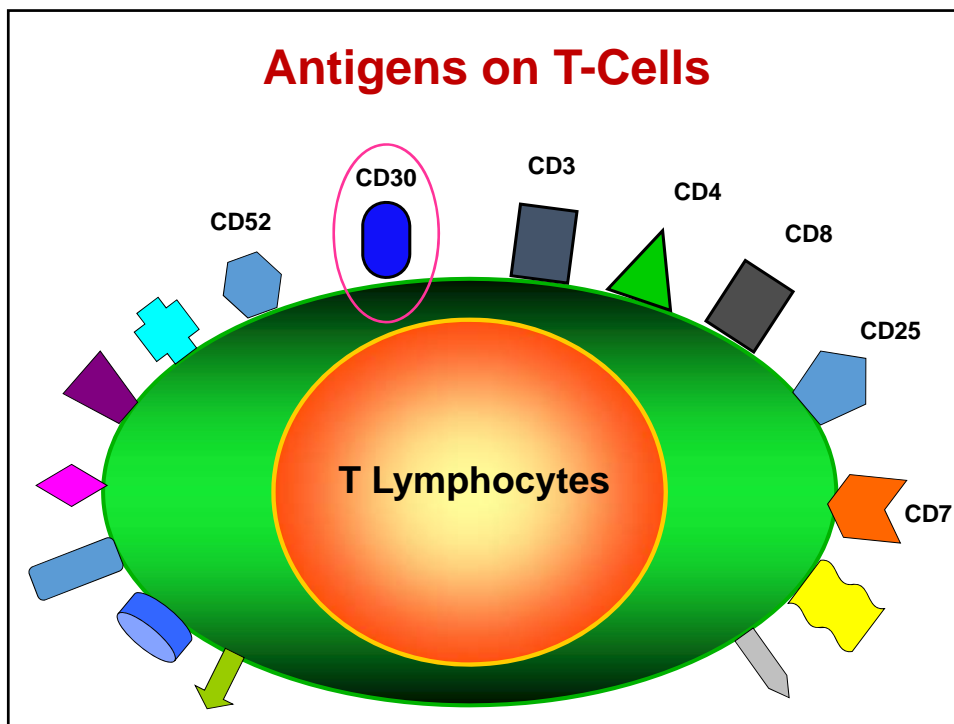
New FDA-Approved Agents in PTCL

- Pralatrexate
- Romidepsin
- Belinostat
- Brentuximab Vedotin

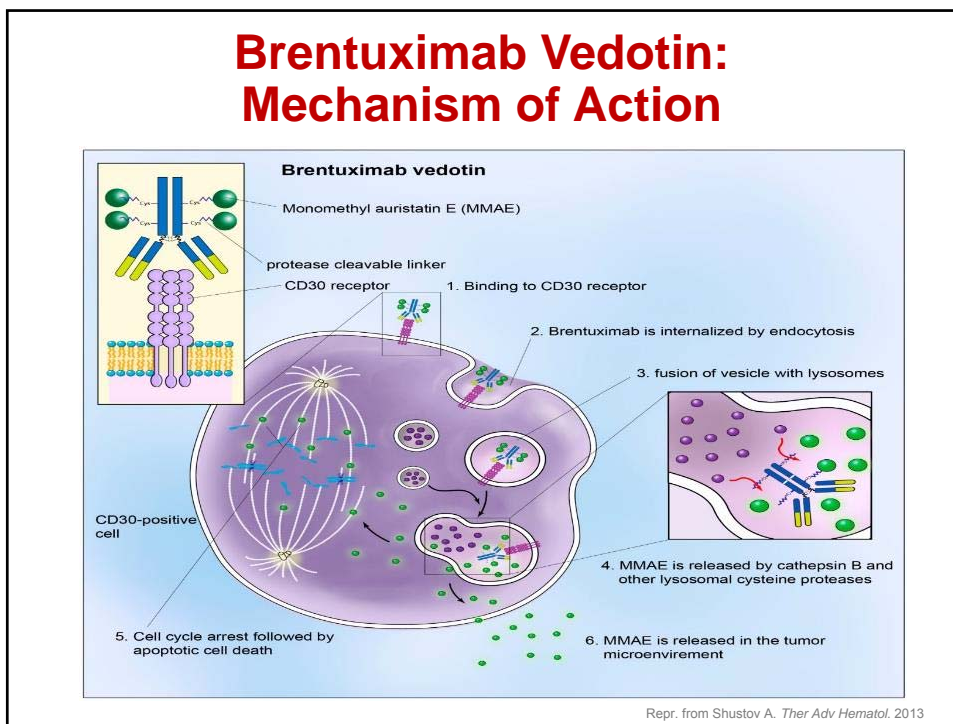
Pralatrexate: Mechanism of Action







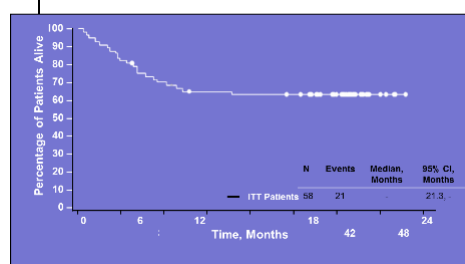
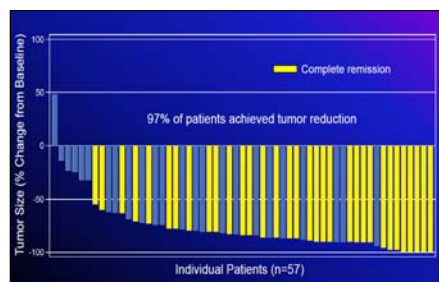
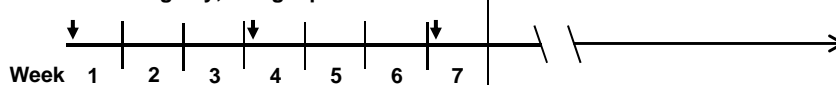
Brentuximab Vedotin: Mechanism of Action



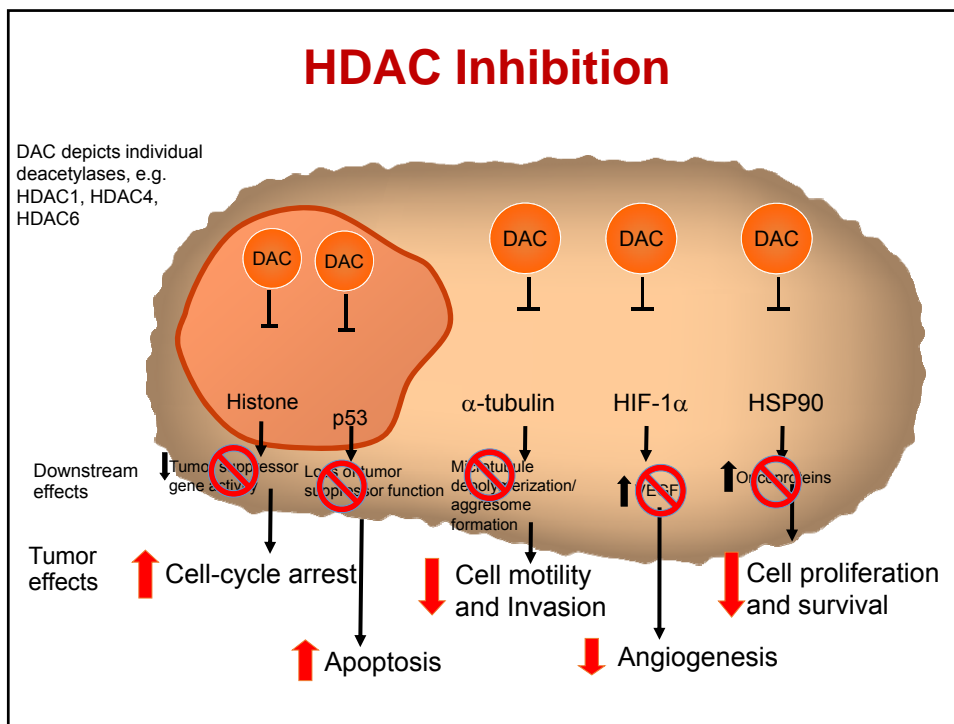
B-Vedotin in Relapsed/Refractory ALCL

Best Response	Central Review (IWC ^a)	
	N=58	% (95% CI)
Overall response (CR + PR) ^{1,b}	50	86 (75-94)
Complete response (CR+CRu) ^{2,c}	33	57 (43-70)
Partial response (PR)	17	29

↓ = dosing day; 30mg/sqm IV

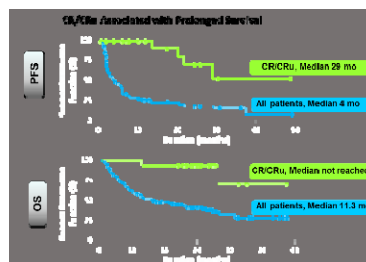
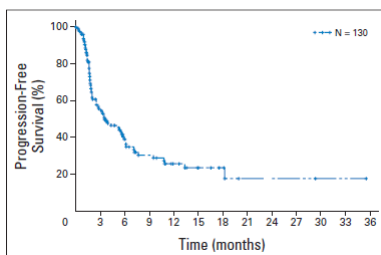
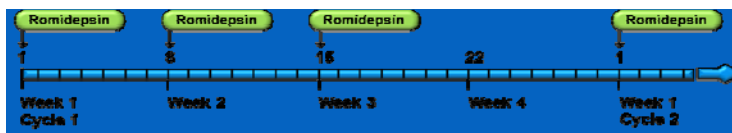


Pro B et al. *JCO* 2012;30(18):2190-96



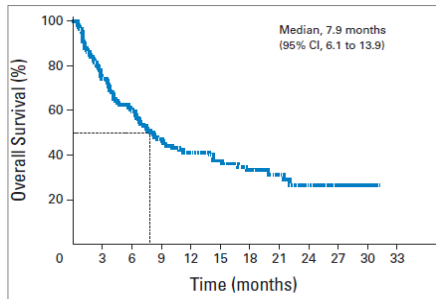
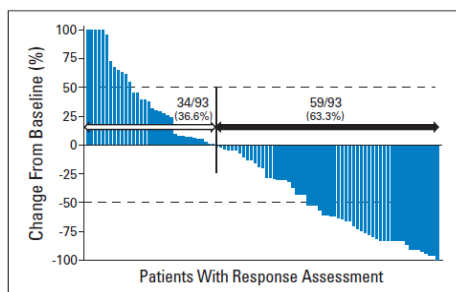
Romidepsin in Relapsed/Refractory PTCL

Best Response	Central Review (IWC ^a)	
	N (130)	%
Overall response (CR + PR) ^{1,b}	33	25%
Complete response (CR+CRu) ^{2,c}	19	15%
Partial response (PR)	14	11%



Belinostat in PTCL

Best Response	Central Review (IWC ^a)	
	N (120)	%
Overall response (CR + PR)	31	26%
Complete response (CR+CRu)	13	11%
Partial response (PR)	18	15%
Median DOR, mo (95% CI)	13.6	4.5 – 29.4
Median PFS, mo (95% CI)	1.6	1.4 – 2.7
Median OS, mo (95% CI)	7.9	6.1 – 13.9



O. A. O'Connor et al., JCO, 2015; 33(23): 2492-99

Recently FDA Approved Drugs T-Cell Lymphoma

Criteria	Pralatrexate	Romidepsin	Brentuximab vedotin	Belinostat
Overall Response Rate (N)	29%	25%	86%	26%
Complete Response Rate	11%	13%	57%	11%
Dominant Toxicity	Mucositis Thrombocytopenia	Fatigue Dysgeusia	Neuropathy Neutropenia	Nausea Fatigue
DOR	12.4 months	12 months	13.2 months	13.6 months
Indication	PTCL	PTCL and CTCL	Anaplastic Large Cell Lymphoma	PTCL

***Treating a disease is science,
treating a patient is art.***

**T-Cell Lymphomas:
Clinical Trials**

Clinical Trials: Enroll or Not Enroll

- Advantages:
 - Receive therapy that potentially is better than standard of care
 - Access to agents that are not yet available
 - Enhanced monitoring
- Risks
 - Receive therapy that is not effective
 - Unexpected side effects
 - Leak of personal information

**Update on
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Question & Answer Session

The speaker's slides are available for download at
www.LLS.org/programs

Update on T-Cell Lymphomas



The Leukemia & Lymphoma Society (LLS) offers:

- Live, weekly Online Chats are moderated by an oncology social worker and provide a friendly forum to share experiences.

➤ **WEBSITE:** www.LLS.org/chat

- What to ask: For a list of suggested questions to ask about certain topics, download and print any of the following guides.

➤ **WEBSITE:** www.LLS.org/whattoask

- Free publications are available ranging from disease specific information to health insurance options and resources to help patients and their families cope with the financial aspects of cancer.

➤ **WEBSITE:** www.LLS.org/publications

- For more information about blood cancers and other LLS programs, please contact an LLS Information Specialist.

➤ **TOLL-FREE PHONE:** (800) 955-4572

➤ **EMAIL:** infocenter@LLS.org