

Neoplastic Hematopathology

Huntington Beach, California

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Case Seminar

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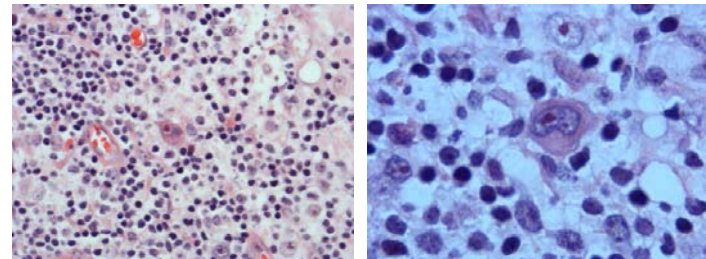
Clinical History

- 49 year-old woman, previously healthy
- Night sweats, right axillary lymphadenopathy
- 3 months

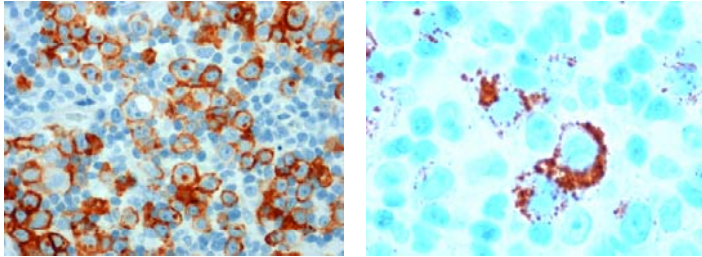
Physical Examination

- Good clinical appearance; no distress
- Normal skin
- Right axillary lymphadenopathy
 - No other lymphadenopathy
- No organomegaly

Incisional Biopsy: 2000



Immunohistochemistry



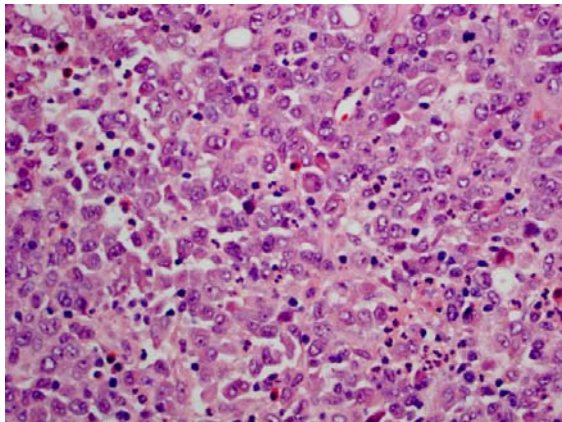
CD30

CD15

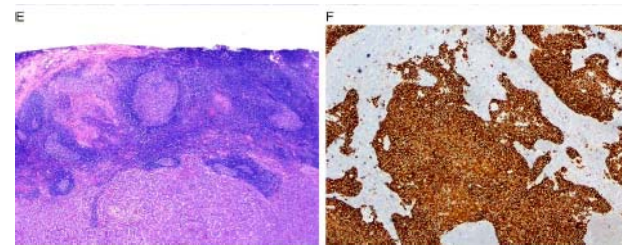
Therapy and Follow up

- Patient was diagnosed with interfollicular mixed cellularity Hodgkin lymphoma (HL)
- Patient received ABVD, and achieved complete remission
- Two years later returned with right large supraclavicular lymphadenopathy

R Supraclavicular LN: 2002



Immunohistochemistry

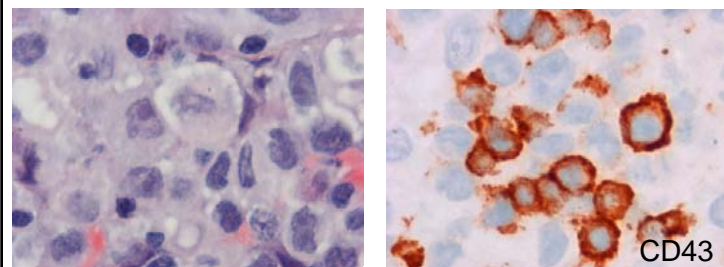


CD30

Therapy and Follow up

- Patient diagnosed with ALK- ALCL
- Patient received therapy with ESHAP
- Allogeneic stem cell transplant
- Achieved complete remission
- 4 months later returned with right breast mass

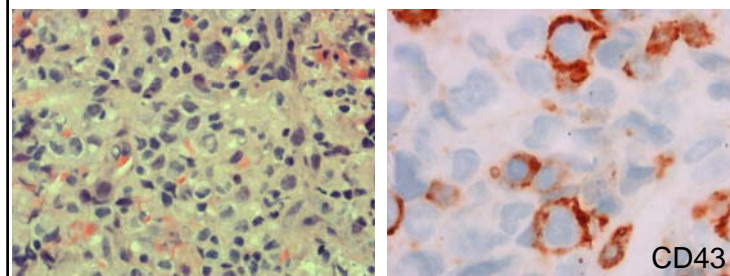
Excisional Biopsy: 2003



Therapy and Follow up: 2003

- Patient was recommended salvage chemotherapy
- Patient received 2/6 cycles chemotherapy
- Patient was recommended hospice
- Patient had mastectomy at her local hospital

Complete Capsulectomy: 2003

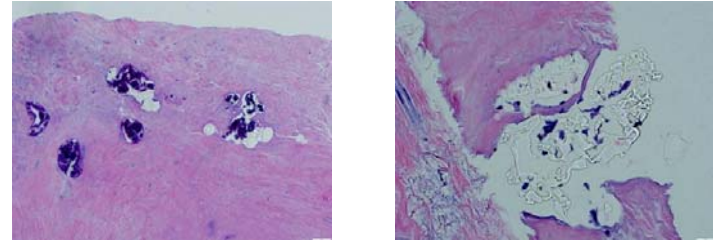


Follow up: 2003 - 2015

- Patient received complete capsulectomy with mastectomy
- Did receive 2/6 cycles chemotherapy
- Patient has been in complete remission for 12 years and is convinced that “implants caused her cancer”

Breast lump in 2015

Incisional Biopsy



Proposed Diagnosis

Breast Implant-Associated Anaplastic Large Cell Lymphoma (BI-ALCL)

Discussion

- What is BI ALCL? New entity (Provisional WHO 2016)
 - Clinical, pathologic, management, etiology
- Prognostic factors
 - Extent of disease: Within vs outside capsule
 - Significance of Lymphadenopathy
 - Is LAD synonymous of systemic disease?

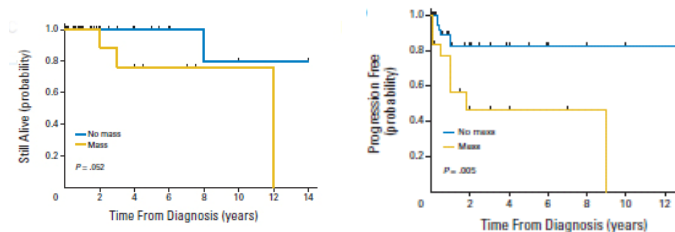
I. What is BI ALCL?

- ALCL associated with breast implants ... surrounding it
- Present as effusion (Not seroma!): ~70%
 - What is seroma?
- Presents as mass: ~30%
- Can be cured if resected completely
- Can progress to mass: chest wall, pleura, regional lymph nodes; rarely systemic

II. What are the prognostic factors in BI ALCL?

- Mass vs no-mass
 - What is mass?
- Lymphadenopathy
 - Yes worst than No
- Delayed diagnosis and therapy

Prognostic Factors: Mass vs No-Mass



Patients who present with a mass have worse progression-free survival as compared with patients without a mass

Miranda et al. J Clin Oncol 2014; 32: 114

Clinicopathologic Features and Prognostic Impact of Lymph Node Involvement in Patients With Breast Implant-associated Anaplastic Large Cell Lymphoma

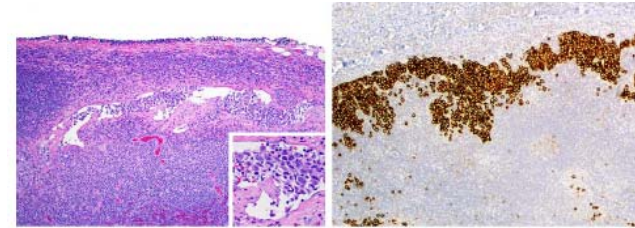
Maria C. Ferrufino-Schmidt, MD,† L. J. Medeiros MD,* Hui Liu, MD, PhD,‡
 Mark W. Clemens, MD,§ Kelly K. Hunt, MD,|| Camille Laurent, MD, PhD,¶ Julian Lofts, MD,#
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 Jeff Hosry, MD,***** Ken H. Young, MD, PhD,* and Roberto N. Miranda, MD**

Ferrufino-Schmidt MC, et al, *Am J Surg Pathol* in press

Is LAD part of BI ALCL?

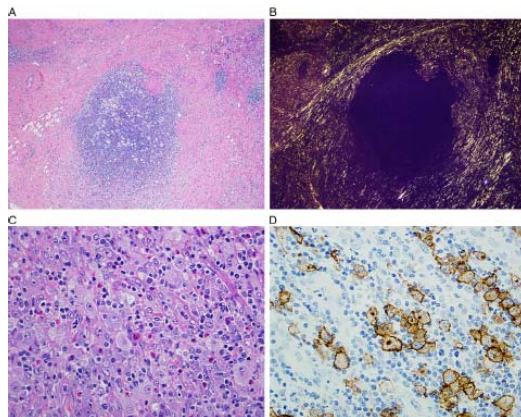
- Analysis of 70 patients with data (LAD, yes/no) available and follow up
- 14 patients had LAD
- 56 patients did not have LAD

Lymph Node Involvement in BI-ALCL



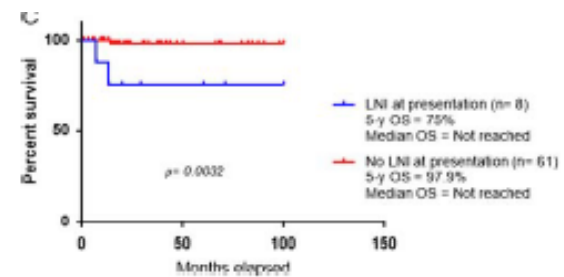
Sinusoidal pattern

LNI in BI-ALCL



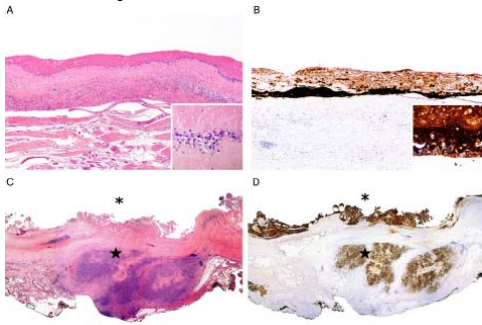
Hodgkin lymphoma-like pattern

OS LNI in BI-ALCL



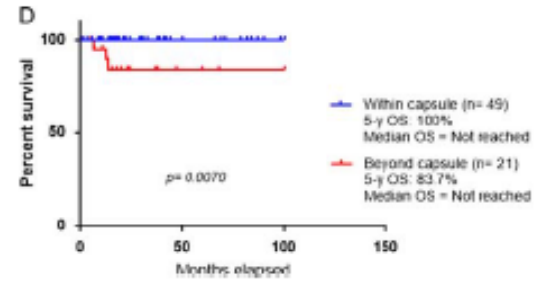
LNI at presentation

Degree of infiltration in capsules BI-ALCL



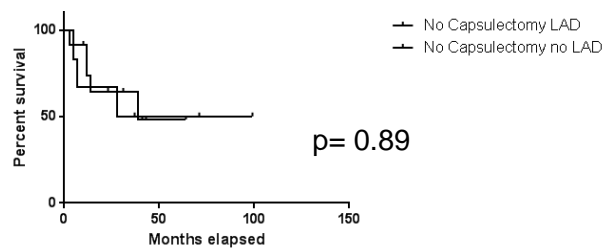
Within (A & B)
Beyond (C & D)

LNI in BI-ALCL

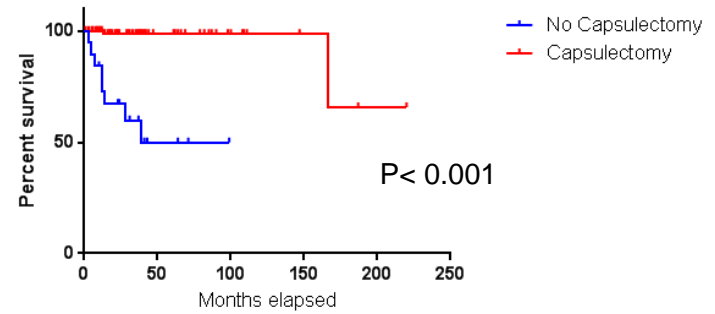


Within vs Beyond Capsule

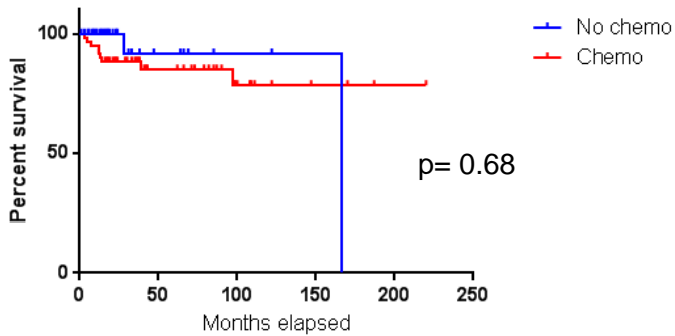
No Capsulectomy vs LAD



Capsulectomy and BI ALCL: OS



Chemotherapy vs LAD



Is LAD part of BI ALCL?

- LAD is worse than no LAD
- Conclusion: Regional LAD is part of BI ALCL
 - Most cases with regional LAD
 - Rarely becomes systemic
 - Significance depends on
 - Degree of capsular involvement
 - Therapy with complete capsulectomy

What does it look LN with BI ALCL?

- ALK- ALCL:
 - Sinusoidal pattern
 - Diffuse pattern
- Hodgkin lymphoma: Interfollicular
- Follicular hyperplasia

Ferrufino-Schmidt M. et al. Am J Surg Pathol, in press

Why was BI ALCL diagnosed as HL?

- Hodgkin lymphoma: Interfollicular
- CD30+
- CD15+/-
- CD45-
- PAX5?
- CD2, CD3, CD4?

Conclusions

- LAD is part of the spectrum of BI-ALCL and occurs in ~20%
- LAD patients have worst OS than patients without LAD
- LAD prognosis is related to surgical excision; maybe chemotherapy
- LAD of BI-ALCL can mimic HL or systemic ALCL and become underdiagnosed
 - Clinical history is crucial

Thank you