


17<sup>th</sup> Multidisciplinary Management of Cancers: A Case-based Approach

## Lymphoma Tumor Board 2017


Chair: Joseph Tuscano, MD  
deLeuze Endowed Professor of Medicine  
UC Davis Cancer Center



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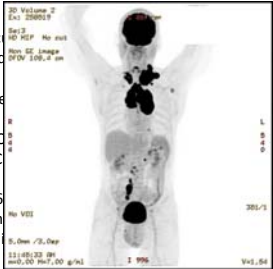

### Panel Members

- Lauren Maeda, MD – Clinical Assistant Professor, Hematology/Oncology, Stanford
- David Miklos, MD, PhD – Associate Professor of Medicine, Blood and Marrow Transplant, Stanford
- Richard Hoppe, MD – Henry. S Kaplan-Harry Lebeson Professor of Cancer Biology, Radiation Oncology, Stanford
- Ronald Lev, MD – Robert K. and Helen K. Summy Professor, Hematology/Oncology, Stanford
- Charalambos Andreadis, MD – Associate Professor of Clinical Medicine, Hematology and Blood and Marrow Transplant, UCSF
- Lawrence Kaplan, MD – Clinical Professor of Medicine, Hematology/Oncology; Director, Adult Lymphoma Program, UCSF
- Raj Krishnan, MD – Clinical Fellow, Hematology/Oncology, UC Davis



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- 65 yo male with BIC, mediastinal LAP and cervical and
- Examination revealed remarkable
- Labs showed a WBC of 15.5 g/dL and
- PET/CT revealed a 6 cm L pleural mass, para-aortic LAP and 4 cm kidney mass (m

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### Case 1

- Excisional Bx of the L cervical LAP was completed, showing CD20+, CD10-, MUM1+ DLBCL (high Ki67) with FISH revealing rearrangement of BCL6 and gain of BCL2 with no MYC rearrangement
- BMBx was completed and did not reveal evidence of disease
- Patient is diagnosed with Stage IVA, ABC-subtype DLBCL







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Case 1

Considering an ECOG of 0, what treatment options should be considered for this patient?

- A. R-CHOP
- B. DA-R-EPOCH
- C. R<sup>2</sup>-CHOP (Lenalidomide)
- D. R-GCVP
- E. R-CHOP/Ibrutinib










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Case 1


Does his disease warrant referral to transplant at this time?





- A. Yes
- B. No

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- Patient was started on [redacted] and having a clinical response
- PET/CT completed at [redacted]
- Patient completed 6 cycles of [redacted] on being Afib with RVR
- PET/CT completed 1 month later showing progression with increase in size/number/ FDG uptake in internal mammary, retroperitoneal, retroperitoneal, retroperitoneal, subcutaneous tissue












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Case 1

At this point, what next steps should be taken?

- A. Salvage chemotherapy
- B. Salvage chemotherapy followed by Auto-HCT
- C. Salvage chemotherapy followed by Allo-HCT










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Case 1

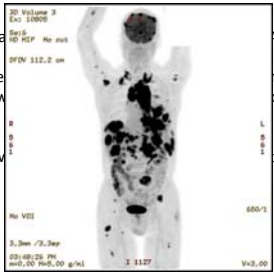
What salvage chemotherapy regimens would be considered at this time?

- A. R-ICE
- B. Rituximab/Bendamustine
- C. R-DHAP
- D. Rituximab/Lenalidomide
- E. R-GDP










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- Patient was then sta
- After C2 of R-ICE, re
- C3 was then given w
- Patient was then sw



Allo-HCT  
 mixed response overall;  
 wing continued  
 er one cycle










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Case 1

Considering his disease progression, what approach should be taken next?





- A. Hospice
- B. Blinatumumab
- C. Auto-HCT
- D. Ablative Allo-HCT, if donor found
- E. Clinical Trial

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Case 1

- Patient was then placed on clinical trial while search for URD allo-HCT was completed as well as work up for Haplo-HCT
- Patient continued to progress and eventually went home on Hospice

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**Case 1**

- ABC-subtype DLBCL are associated with a worse 5-year PFS and OS relative to GCB-DLBCL (Blood. 2005;105(5):1851.)
- As such, preferred frontline options include clinical trial, with showing activity.
  - R<sup>2</sup>-CHOP (J Clin Oncol. 2015;33(3):251, Lancet oncol 2014;15:730-3)
  - R-CHOP/ibrutinib (Lancet Oncol. 2014 Aug;15(9):1019-26.)
  - R-CHOP/Bortezomib (J Clin Oncol. 2011;29(6):690)
  - The role of DA-EPOCH remains unclear (Blood 2016;128:Ab# 469)
- With persistent/aggressive disease, allo-HCT may be the only

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END OF CASE 1

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- 50 yo female with n supraclavicular LN a
- Exam was remarkat other significant fin
- Labs showed a WBC Plt of 350 K/mm<sup>3</sup>; C
- PET/CT completed s mediastinal regions supraclavicular LN (

ment of the R LN on the R with no Hgb of 12.8 g/dL and al supraclavicular and 1.9x1.8 cm L 3.0x2.2 cm (SUV 9.7)

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**Case 2**

- Excisional Bx was taken from the R supraclavicular LN, revealing Classical Hodgkin Lymphoma, Nodular Sclerosing Subtype (CD15+, CD30+, PAX5-, CD20-)
- BMBx was completed and did not reveal evidence of disease
- Patient was diagnosed with Stage IIA Nodular Sclerosing Hodgkin Lymphoma
- She was started on ABVD

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- Patient was offered IFRT but decided to complete two further courses of ABVD
- Patient did not undergo further imaging and is now following with exam and H&P every 6 months
- She was advised of relapse, secondary malignancies and cardiovascular toxicity

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If the patient relapsed in 20 months with disease only found in the mediastinum, what regimen would be considered next?

- ABVD for 4-6 cycles
- IFRT alone
- Escalated BEACOPP or Stanford V for 4-6 cycles
- ICE followed by Auto-HCT
- ABVD + IFRT

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- The choice for initial therapy for favorable-risk Hodgkin Lymphoma is tailored to the individual, based on age, gender and tumor location(s)
  - Combined modality has higher disease-free survival compared to chemotherapy alone, however OS is similar
- EORTC H10 and UK RAPID trials are addressing PET/CT after 2-3 cycles of ABVD to help determine the next steps in treatment
- Must counsel patients on potential secondary malignancies and heart disease related to chemotherapy/radiation

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END OF CASE 2

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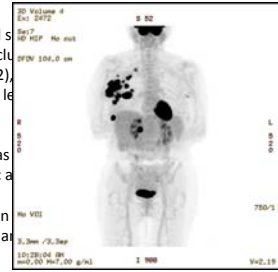
Case 3

- 62 yo female with no significant PMH presents with drenching night sweats, R breast and R arm pain and found to have a concerning breast mass with extension to the axilla
- Exam was remarkable for ill-defined, R Breast Mass (3 cm) along with enlarged (1x2 cm) R supraclavicular LN and R axillary LN (2x2 cm)
- Labs showed a WBC of 6.3 K/mm<sup>3</sup> with normal differential, Hgb of 12.4 g/dL and Plt of 357 K/mm<sup>3</sup>; CMP was unremarkable; LDH 134 U/L



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- PET/CT completed showing FDG avidity in the right breast (1.5 cm/SUV 13), clauvicular LN (2.4 cm/SUV 22), superficial axillary lymph node (2.6 cm/SUV 18), and a 1.4 cm SUV 15 lesion in the right axilla (SUV 15), deep R axillary LN (2.5 cm/SUV 19), R sub-pectoral lymph node (1.8 cm/SUV 18), R axillary lymph node (1.4 cm/SUV 15), and a 1.4 cm SUV 15 lesion in the right axilla (SUV 15).
- Core needle Bx was performed showing a 1.5 cm sized pleomorphic atypical lymphoid infiltrate consistent with large cell lymphoma.
- Expert consultation confirmed the diagnosis of CD15 positivity at the site of the lesion (Stage IIB).



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Case 3

What treatment regimen should be considered at this point?

- A. CHOP
- B. EPOCH
- C. CHOEP
- D. CHOP + XRT
- E. Clinical Trial



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Case 3

- Patient then initiated CHOP therapy
- Repeat PET/CT after C3 revealed that the patient had achieved a CR
- Patient completed 6 total cycles of CHOP, tolerating this generally well
- She was then referred to Radiation Oncology for consideration of consolidative XRT



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What is the role of radiation therapy for this patient?

- A. No role for XRT
- B. XRT should be completed as disease was localized and Stage II
- C. Unclear
- D. No role, she should be evaluated for Auto-HCT

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- After discussion with Radiation Oncology, patient decided to proceed with consolidative XRT
- Repeat PET/CT after completion of XRT shows a continued CR
- Auto-HCT was discussed with the patient at this time

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What is the role of transplant for this patient?

- A. No role for Auto-HCT as she achieved a CR with IPI score of 0
- B. Auto-HCT should be offered in CR1 considering Alk- and bulky disease
- C. Auto-HCT should be offered as response to salvage chemotherapy may not yield CR2
- D. Allo-HCT should be offered

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- Due to IPI of 0 and CR1, Auto-HCT was discussed but not offered at this time
- As her disease was Alk-, patient was advised to watch for symptoms of relapse and is evaluated every 6-12 months
- No further imaging surveillance completed (barring mammography)
- Patient remains in CR



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**Case 3**

- PTCL-NOS is the most common subtype of PTCL
  - 30% of PTCL and 4% of NHL (Ann Oncol. 2014 Nov;25(11):2211-7)
- Frontline treatment options include clinical trial, CHOP or EPOCH
  - For patients younger than 60, consider CHOEP (Blood. 2014 Sep;124(10):1570-7)
- Unless the patient has a low IPI and localized disease, auto-HCT should be considered in CR1 as 5-year OS is 20% or less (Br J Haematol. 2005;129(3):366)


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END OF CASE 3

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- 37 yo female with n weight loss
- Exam was remarkable inguinal LAP and wa
- Labs showed a WBC Plt of 322 K/mm<sup>3</sup>; B
- PET/CT revealed a la (4.3 x 5.2 cm/SUV 2 (3.5 x 4.4 cm/SUV 1



abdominal pain and

tenderness, bilateral





Hgb of 11.9 g/dL and

urmin 2.4, LDH 314 U/L

22), L adrenal mass

13), peripancreatic LN





20)

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**Case 4**

- Patient underwent L adrenal mass biopsy showing CD20+, CD10-, BCL6+, BCL2+, MUM1- DLBCL with a Ki67 of 80%; FISH did not reveal any translocations but MYC was overexpressed by IHC
- BMBx completed and showed no evidence of disease
- Patient also found to have a large pericardial effusion, not FDG-avid on PET/CT; no tamponade physiology by TTE; she then underwent pericardiocentesis with no evidence of disease on cytology

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What regimen should be considered for MYC/BCL6 overexpression GCB-subtype DLBCL?

- A. R-CHOP
- B. DA-R-EPOCH
- C. R-Hyper-CVAD
- D. R-CODOX-M/IVAC
- E. R-CHOP followed by Auto-HCT

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What characteristics of her disease would warrant the addition of IT prophylaxis?

- A. Disease on both sides of the diaphragm
- B. MYC/BCL6 overexpression
- C. Retroperitoneal involvement alone
- D. LDH above upper limit of normal with >1 extranodal site
- E. B and D

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- Patient then underwent DA-R-EPOCH with IT MTX
- PET/CT completed after 3 cycles shows a significant response with minimal disease activity
- Patient then completed 6 cycles of DA-R-EPOCH with IT MTX
- PET/CT after 6 cycles showed a CR

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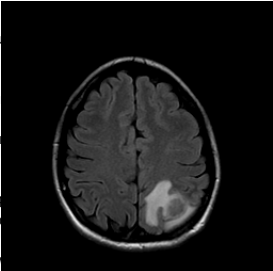
Should upfront Auto-HCT be offered for this patient?

- A. Yes, due to extent of disease
- B. No, due achieving CR
- C. Yes, due to MYC overexpression
- D. No, as the data is unclear
- E. Yes, as the data is unclear



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- Auto-HCT was discussed at this time
- She then started surgery
- Six months after completion of chemotherapy, she presented to an OSH ED with seizures
- MRI Brain was completed. MR Spectroscopy and Perfusion were also completed
- LP was completed



to forgo transplant at this time

ed to an OSH ED with seizures

MR Spectroscopy and Perfusion were also completed

completed

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Case 4

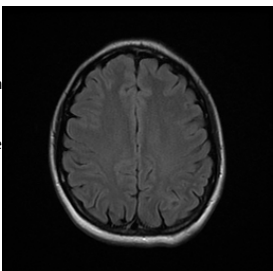
As further imaging did not reveal any other sites of disease, what regimen should the patient be offered next?

- HD MTX + Ara-c
- MTR
- MATRix
- MTR + WBRT
- HD MTX alone

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- Patient was started on chemotherapy
- After C3, patient underwent surgery to decrease the size of the mass
- After 6 cycles, patient underwent surgery
- She is overall doing well



decrease in the size of the mass

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Case 4

What is the role of transplant for this patient?

- No transplant is warranted
- Allo-HCT should be offered
- No available data
- Consolidative BEAM or Thiotepa-based Auto-HCT should be offered
- EA consolidation should be offered

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Is there a role for XRT for this patient?

- A. Yes, but only if she is not a transplant candidate
- B. No role for XRT at all
- C. Yes, but only as a palliative option
- D. Yes, namely to improve response

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- Patient was offered a consolidative Auto-HCT with Rituximab/Thiotepa/Busulfan/Cyclophosphamide preparative regimen

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- Patients with Double-hit DLBCL are known to have a poor prognosis; this is less clear of Double-expressor DLBCL but thought to be similar
- Response to R-CHOP is known to be poor; data for EPOCH is promising with CALGB/Alliance 50303 (subset) results still pending
- For CNS relapse, regimens with high-dose MTX or Cytarabine are reasonable with consideration of combinations (MTR, MATRix) as other options extrapolated from Primary CNS Lymphoma
- Due to poor long-term survival, high-dose chemotherapy followed by auto-HCT should be considered in young/fit patients (J Clin Oncol. 2015 Nov;33(33):3903-10)

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END OF CASE 4



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What treatment regimen should be offered to this patient considering her transformed lymphoma?

- A. R-CHOP
- B. DA-R-EPOCH
- C. R-ICE
- D. R-GDP
- E. R-CHOP + Auto-HCT

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- Patient was started on DA-R-EPOCH
- PET/CT was completed after C3 showing a CR
- She was then continued on DA-R-EPOCH and referred for consideration of Auto-HCT after 6 cycles
- PET/CT after C6 showed a continued CR

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Should Auto-HCT be offered in CR1?

- A. Yes, as she achieved a CR after C6
- B. No, as she achieved a CR after C3 and continued after C6
- C. Yes, as she has transformed disease
- D. No, as she had not previously received an anthracycline and achieved a CR

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- Patient was offered an Auto-HCT but after balanced discussed, this was deferred in CR1

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- Patients with isolated Marginal Zone Lymphoma and localized symptoms can be treated with single agent rituximab or splenectomy (Semin Haematol2010;47:143-7)
- After transformation, previously untreated patients should received R-CHOP or anthracycline-based regimen which can produce outcome similar to de novo DLBCL (JCO 2006 Oct;24(33):5231-41)
- Auto-HCT should be considered for patients with *relapsed* transformed indolent lymphoma who have chemo-sensitive disease (Blood. 2015 Aug;126(6):733-8)

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END OF CASE 5