HIV and Non Hodgkin Lymphoma

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AIDS-Defining Malignancies

• Kaposi sarcoma
• NHL – now has a higher incidence than Kaposi Sarcoma in the US
• Primary central nervous system lymphoma
• Invasive cervical cancer
Non-AIDS-Defining Malignancies

- Anal cancer (120 fold ↑↑)
- Hodgkin lymphoma (20 fold ↑↑)
- Hepatocellular cancer (5 fold ↑↑)
- Lung cancer (2 fold ↑↑)

Note: Risk of breast cancer, prostate cancer, colon cancer is not increased in HIV (+) people in comparison to HIV (-) people
Kaposi Sarcoma

![Kaposi sarcoma chart](chart.png)

No. of US Cases

Year

Cases with AIDS
Cases without AIDS


JAMA 305:1450, 2011
Diffuse Large B-Cell Lymphoma
Burkitt Lymphoma

![Bar chart showing the number of US cases of Burkitt lymphoma from 1980 to 2005. The number of cases increases significantly from 1980 to 2005.]
• In the US, approximately 6% of all patients with diffuse large B cell lymphoma, and approximately 25% of patients with Burkitt lymphoma are HIV (+).
• These % vary by demographic group.
Malignancy and HIV

• In the HAART era, non AIDS-defining malignancies comprise 50% of the cancers in people living with HIV
• We should offer age-appropriate cancer screening to our HIV (+) patients
• Since 20% of HIV (+) people in the US don’t know their HIV status, recommend HIV testing in patients with anal cancer, NHL, Hodgkin lymphoma, or ITP
Lymphoma in HIV-Positive People

• 50-100 fold increased incidence of aggressive NHL (in comparison to HIV-negative people)
• Some increased incidence of Hodgkin lymphoma
• Primary central nervous system lymphoma – CD4 cells < 50/µl (and often < 10/µl)
HIV-Associated NHL: Practical Approach

- Diffuse large B cell (most common)
- Burkitt lymphoma
- Primary CNS lymphoma (rare today)
- Plasmablastic lymphoma (rare)
- Primary effusion lymphoma (rare)
HIV-Associated NHL

- B symptoms common
- Often extra nodal (liver, gastric, rectum, kidney, skin involvement)
- Clinically aggressive
- Stage similarly to HIV (-) NHL
AIDS Malignancy Consortium
Clinical Trials

• We are a core site for AMC clinical trials
• AMC 075 R-EPOCH ± vorinostat for HIV (+) people with diffuse large B-cell lymphoma and CD4≥50/µl

Corey Casper, Manoj Menon, Ann Woolfrey, SCCA
Ginny Broudy, Bob Harrington, HMC
David Aboulafia, VMMC
HIV-Associated DLBCL

- Multiple studies of CHOP or EPOCH variants ± Rituximab
- EPOCH with concurrent or sequential rituximab (AMC 034)
  - concurrent better, OAS 70% at 2 years*
- Short course EPOCH with dose-dense rituximab (NCI)
  - OAS 68% at 5 years
- * 23/106 patients had Burkitt lymphoma

Blood 115:3008, 2010
Blood 115:3017, 2010
Short Course EPOCH with Dose-Dense Rituximab

% Surviving

CD4 > 100/µl

CD4 ≤ 100/µl

P = .001
Treatment of HIV-Associated Diffuse Large B Cell Lymphoma

- Dose-adjusted R-EPOCH (preferred) or R-CHOP
- Consider not using rituximab in patients with CD4 < 50/ml
- HAART
- Avoid zidovudine (more cytopenias)
- Supportive care with peg-filgrastim, pneumocystis, candida, HSV-2 prophylaxis
Effective Lymphoma Treatment vs Risk of Infection
Prognosis

- As HAART improves, prognosis is defined mainly by lymphoma-related features, and less by HIV
HIV-Associated Burkitt Lymphoma

- About 1/3 as common as DLBCL
- Occurs at a higher CD4 count
- Clinically very aggressive
- Often involves extra nodal sites
HIV-Associated Burkitt Lymphoma

- Treated 29 patients with DA-EPOCH-R, plus intrathecal therapy
- 10 were HIV (+), 19 were HIV(-)
- All in CR, median follow up of 4-5 years
Plasmablastic Lymphoma

- Rare (~3% of HIV-associated NHL)
- Mass lesion in gums/palate, but can be elsewhere (liver, GI tract, lungs, muscle)
- Often diagnosed by dentists
- Poor outcome (median survival 11 months; 5 year survival 24%), most deaths due to lymphoma
Summary

• People living with HIV have a long expected survival on HAART
• As the HIV (+) population ages, ~50% of the cancers are non AIDS-defining malignancies so think about age appropriate cancer screening.
• As HAART improves, prognosis is defined more by tumor-related features and less by HIV
• It is key to have these patients on HAART