# Preventive Health


Gordon Liu MD, AAHIVS

HIV Primary Care Physician, Maple Leaf Medical Clinic

Adjunct Clinical Faculty, Department of Infectious Diseases, University of the Philippines

Jeff Reinhart, RN, BScN, BA

Registered Nurse, Sherbourne Health

# Conflict of Interest

- Jeff Reinhart
  - No personal relationships with industry partners
  - Canadian Association of Nurses in HIV/AIDS Care receives educational grants from multiple industry partners to fund our annual conference

# Cancer Screening

- Higher incidence of HPV-related cancers in PHAs, particularly with low CD4
- Other Cancers:

***Table 2.*** Crude Cancer Type-Specific Incidence Rates and All-Cause Death Rates, by HIV Infection Status, NA-ACCORD, 1996–2009

| Event | Persons With HIV | | Uninfected Persons | |
|---|---|---|---|---|
| | Persons, *n* | Incidence Rate per 100 000 Person-Years | Persons, *n* | Incidence Rate per 100 000 Person-Years |
| Kaposi sarcoma | 612 | 130.4 | 3 | 0.2 |
| Non-Hodgkin lymphoma | 725 | 153.5 | 233 | 12.6 |
| Lung cancer | 614 | 129.3 | 839 | 45.4 |
| Anal cancer | 285 | 60.1 | 22 | 1.2 |
| Colorectal cancer | 173 | 36.4 | 510 | 27.7 |
| Liver cancer | 220 | 46.3 | 201 | 10.9 |
| Hodgkin lymphoma | 159 | 33.5 | 36 | 1.9 |
| Melanoma | 78 | 16.4 | 268 | 14.5 |
| Oral cavity/pharyngeal cancer | 163 | 34.3 | 340 | 18.4 |
| Death | 17 534 | 3686.0 | 15 400 | 833.0 |

NA-ACCORD = North American AIDS Cohort Collaboration on Research and Design.

# Cancer Screening

- Cervical
  - Annually
  - Consider q3yrs after 3 normal PAP tests
- Anal Cancer
  - limited guidance on anal cancer screening currently
- Breast & Colon Cancer
  - Per provincial guidelines

# Health Screening

- Tuberculosis
  - and globally, TB is the leading cause of death in people with HIV
- TB Skin Test
  - At baseline, repeat if ongoing risks

# Health Screening

- Tuberculosis
  - and globally, TB is the leading cause of death in people with HIV
- TB Skin Test
  - At baseline, repeat if ongoing risks
  - 5mm or greater is a positive TBST

# Health Screening

- Bone Density
  - FRAX
    - Men age 40-49, Women pre-menopause
    - HIV counts as “secondary osteoporosis” factor
  - BMD
    - Men >50, post-menopausal women, FRAX >10%, hx of fragility #, glucocorticoids, falls risk

# Adult Vaccines

- Any Questions from the Video?

# Opportunistic Infections Prophylaxis

Gordon Liu MD, AAHIVS

HIV Primary Care Physician, Maple Leaf Medical Clinic
Adjunct Clinical Faculty, Department of Infectious Diseases
University of the Philippines

Jeff Reinhart, RN, BScN, BA
Registered Nurse, Sherbourne Health

# Guidelines for the Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents

# Case #1 (Poll)

27 year old male with a PMHx of HIV has a CD4 count of 121 and a viral load of 78,925. Given his low CD4 count, you decide to start him on PJP prophylaxis. Patient has an allergy to sulfa drugs and his G6PD test was negative. What medication would you prescribe for PJP Prophylaxis?

a) Septra (Bactrim)

b) Rifampin

c) Azithromycin

d) Dapsone

e) Doxycycline

# Case #1

27 year old male with a PMHx of HIV has a CD4 count of 121 and a viral load of 78,925. Given his low CD4 count, you decide to start him on PJP prophylaxis. Patient has an allergy to sulfa drugs and his G6PD test was negative. What medication would you prescribe for PJP Prophylaxis?

a) Septra (Bactrim)

b) Rifampin

c) Azithromycin

**d) Dapsone**

e) Doxycycline

# Case #2 (Poll)

24 year old male is started on Septra (Bactrim) for PJP Prophylaxis. His CD4 count is 133 and viral load is 44,913. The patient knows that he has to be on ART for life, however, he asks you when can he stop taking the Bactrim?

a) Once his CD4 count is above 200 once

b) Once his CD4 count is above 200 twice in a span of 1 month

c) Once his CD4 count is above 200 twice in a span of 3 months

d) Once his CD4 count is above 200 twice in a span of 6 months

e) Once his CD4 count is above 200 three times in a span of 6 months

# Case #2

24 year old male is started on Septra (Bactrim) for PJP Prophylaxis. His CD4 count is 133 and viral load is 44,913. The patient knows that he has to be on ART for life, however, he asks you when can he stop taking the Bactrim?

a) Once his CD4 count is above 200 once

b) Once his CD4 count is above 200 twice in a span of 1 month

**c) Once his CD4 count is above 200 twice in a span of 3 months**

d) Once his CD4 count is above 200 twice in a span of 6 months

e) Once his CD4 count is above 200 three times in a span of 6 months

# Opportunistic Infection Prophylaxis

- CD4 <200 (AI) or Oropharnygeal candidiasis (AII) or CD4% <14% (BII) or CD4 count >200 but <250 and if CD4 cell count monitoring is not possible (e.g. every 3 months) (BII)

https://aidsinfo.nih.gov/guidelines/html/4/adult-and-adolescent-oi-prevention-and-treatment-guidelines/0

# Opportunistic Infection Prophylaxis

- Start patient on PCP prophylaxis
  - Bactrim DS daily or Bactrim SS daily – both (AI)

  Alternatives:

  - Bactrim DS M,W,F (BI)
  - Dapsone (BI)
  - Aerolized Pentamidine - Respirgard II (BI)
  - Atovaquone (BI)
  - Prophylaxis until 2 documented CD4 > 200 or CD4% > 14% after 3 months. (AI)

https://aidsinfo.nih.gov/guidelines/html/4/adult-and-adolescent-oi-prevention-and-treatment-guidelines/0

# Opportunistic Infection Prophylaxis

- CD4 <100 (AII)
  - Toxoplasmosis Prophylaxis
    - Bactrim DS daily (AII)

    Alternatives:
    - Bactrim DS M,W,F or SS Daily (BIII)
    - Dapsone-pyrimethamine plus leucovorin (BI)
    - Atovaquone with or without pyrimethamine/leucovorin (CIII)

https://aidsinfo.nih.gov/guidelines/html/4/adult-and-adolescent-oi-prevention-and-treatment-guidelines/0

# Opportunistic Infection Prophylaxis

Prophylaxis until 2 documented CD4 > 200 or CD4% > 14%.
Also if CD4 > 200 after 3 months (AI)

https://aidsinfo.nih.gov/guidelines/html/4/adult-and-adolescent-oi-prevention-and-treatment-guidelines/0

# Opportunistic Infection Prophylaxis

- CD4 <50 (AI)
  - MAC – Not recommended for those who immediately initiate ART
  - MAC – after ruling out disease
    - Azithromycin 1200mg PO weekly or Clarithromycin 500mg PO BID (AI)

    Alternatives
    - Azithromycin 600mg PO twice weekly (BI)
    - Rifabutin 300mg PO daily – TB should be ruled out before starting this medication (BI)

# Opportunistic Infection Prophylaxis

Prophylaxis until 2 documented CD4 > 100 for > or = to 3 months. (AI)

https://aidsinfo.nih.gov/guidelines/html/4/adult-and-adolescent-oi-prevention-and-treatment-guidelines/0

# Drug Coverage Programs

- Patient assistance programs are run by many pharmaceutical companies to help with medication costs
- They can change at any time, without notice
- The following list is not meant to endorse one product over another, or one company over another; it is presented for practical patient care purposes only

- Patient Assistance Programs

| ***DRUG*** | ***REIMBURSEMENT*** |
|---|---|
| BIKTARVY | 100% |
| COMPLERA | 100% |
| [redacted] | |
| DOVATO | 100% |
| EDURANT | COMPASSIONATE (TAKES 2-3 WEEKS) |
| GENERIC TRUVADA | COMPASSIONATE (TAKES 2-3 WEEKS)- 1 TIME ONLY |
| GENVOYA | 100% |
| JULUCA | 100% |
| ODEFSEY | 100% |
| PREZCOBIX | 50% |
| PREZISTA | COMPASSIONATE (TAKES 2-3 WEEKS) |
| ISENTRESS | COMPASSIONATE (TAKES 2-3 WEEKS) |
| STRIBILD | 100% |
| TIVICAY | 100% |
| TIVICAY/TRUVADA | 100% (FOR 2 MONTHS + 1 MONTH TRIUMEQ) |
| TRIUMEQ | 100% |

- Non-residents can import medications

# Questions?

1. US Department of Health and Human Services (DHHS). *Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV.* (2019).
2. British Columbia Centre for Excellence in HIV/AIDS (BC-CfE). *Primary Care Guidelines for the Management of HIV/AIDS in British Columbia.* (2015).
3. Provider consensus, Sherbourne Health Centre. (2020).
4. Yoong, Deborah, Mark Naccarato, Kevin Gough, Jordan Lewis, and Ahmed M. Bayoumi. *Use of Compassionate Supply of Antiretroviral Drugs to Avoid Treatment Interruptions or Delayed Treatment Initiation among HIV-Positive Patients Living in Ontario: A Retrospective Review*. Health Policy, 2015 Feb, 10(3). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4748343/ (Accessed Jan 31, 2020).
5. Frisch M, Biggar RJ, Goedert JJ. *Human papillomavirus-associated cancers in patients with human immunodeficiency virus infection and acquired immunodeficiency syndrome*. J Natl Cancer Inst. 2000 Sep 20;92(18):1500-10.
6. J Thomas Cox, MD, Joel M Palefsky, MD. *Human papillomavirus vaccination - UpToDate*. (2020).
7. William R Robinson, MD. *Preinvasive and invasive cervical neoplasia in patients with HIV infection* - UpToDate (2020).
8. Stan Houston, MD, DTM&H, FRCPC, Thomas Wong, MD, MPH, FRCPC. *Chapter 10: Canadian Tuberculosis Standards 7th Edition: 2014 –Tuberculosis and Human Immunodeficiency Virus - Canada.ca*. (2014).
9. The Lung Association Ontario. *Tuberculosis Information for Health Care Providers.* (2015).
10. FRAX Assessment Tool https://www.sheffield.ac.uk/FRAX/tool.aspx?country=19
11. Canada Border Services Agency. *The Administration of Health Canada Acts and Regulations Relating to Certain Controlled, Prohibited or Regulated Goods. Memorandum. D19-9-1* (2017). https://www.cbsa-asfc.gc.ca/publications/dm-md/d19/d19-9-1-eng.html
12. Brown, Todd T., Jennifer Hoy, Marco Borderi, Giovanni Guaraldi, Boris Renjifo, Fabio Vescini, Michael T. Yin, and William G. Powderly. *Recommendations for Evaluation and Management of Bone Disease in HIV*. Clinical Infectious Diseases, April 2015, 60(8). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4400413/ (Accessed Jan 31, 2020).
13. Anal Cancer HSIL Outcomes Research (ANCHOR) Study. https://anchorstudy.org/ (Accessed Feb 24, 2021).
14. Silverberg, M et al. *Cumulative Incidence of Cancer Among Persons With HIV in North America.* Ann Intern Med. 2015;163:507-518.
15. New York State Department of Health AIDS Institute. *Screening for Anal Dysplasia and Cancer in Patients with HIV*. (2020).
16. Canadian Agency for Drugs and Technologies in Health (CADTH). *Anal Cancer Screening in High-Risk Populations: A Review of the Clinical Utility, Diagnostic Accuracy, Cost-Effectiveness, and Guidelines*. Ottawa: 2019 Oct. (CADTH rapid response report: summary with critical appraisal).
17. Baden, L. et al. *Efficacy and Safety of the mRNA-1273 SARS-CoV-2 Vaccine*. N Engl J Med 2021; 384:403-416
18. Polack, F. et al. *Safety and Efficacy of the BNT162b2 mRNA Covid-19 Vaccine*. N Engl J Med 2020; 383:2603-2615