Primary Care Concerns for the Aging Population

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Financial Relationships With Ineligible Companies

Dr Johnson has served on an advisory board for and received consultation fees paid to his institution from ViiV Healthcare. (Updated 6/11/21)

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Learning Objectives

After attending this presentation, learners will be able to:

- Recognize the common comorbidities in older people with HIV
- Apply age-related recommendations for USPSTF- and IDSA-recommended primary care screenings in people with HIV
- Identify opportunities for boosters of ACIP-recommended immunizations in older people with HIV

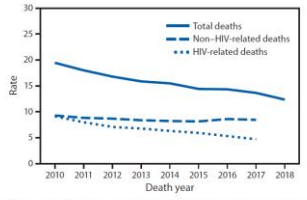
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Understanding the Causes of Morbidity and Mortality in Older People with HIV

IAS–USA

Deaths Among People with Diagnosed HIV, U.S., 2010–2018

FIGURE 1. Age-adjusted rates* of total deaths,† human immunodeficiency virus (HIV)–related deaths,§ and non–HIV-related deaths among persons aged ≥13 years with diagnosed HIV infection — United States, 2010–2018¶



* Rates per 1,000 persons with diagnosed HIV infection.

† Deaths among persons with HIV infection regardless of cause.

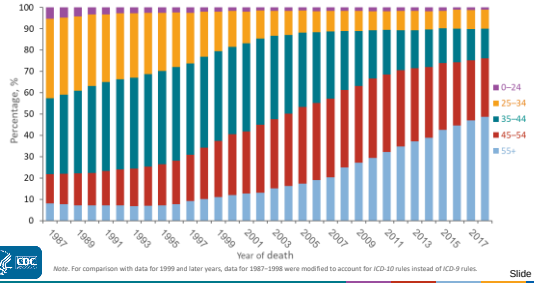
§ HIV-related deaths include deaths with an underlying cause with an ICD-10 code of B20-B24, O98.7, or R75.

¶ Deaths by cause available through 2017 because of reporting delays.

Bosh K, et al. MMWR 11/20/20. Vol 69 Number 46. 1717-1724

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Trends in the Percentage Distribution of Deaths with HIV Infection as the Underlying Cause, by Age Group, 1987–2018—United States



Note. For comparison with data for 1999 and later years, data for 1987–1998 were modified to account for *ICD-10* rules instead of *ICD-9* rules.

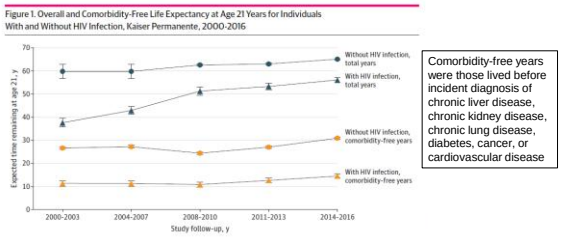
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Common Comorbidities in HIV Infection

- Depression
- Bipolar Disease
- Alcohol use
- Tobacco use
- Other Drug use
- Human papillomavirus infection
- Hepatitis B
- Hepatitis C
- Syphilis
- Other STIs
- Tuberculosis
- Hyperlipidemia
- Diabetes mellitus
- Hypertension
- Heart disease
- Osteoporosis
- Non-AIDS cancers

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Improvements in Life Expectancy

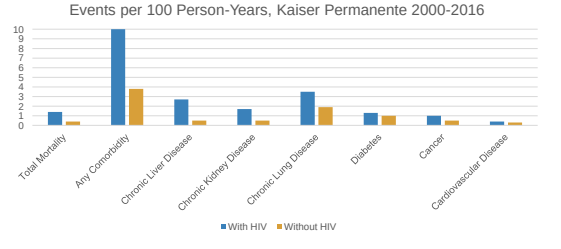


Comorbidity-free years were those lived before incident diagnosis of chronic liver disease, chronic kidney disease, chronic lung disease, diabetes, cancer, or cardiovascular disease

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Marcus J, et al. JAMA Network Open. 2020;3(6):e207954. doi:10.1001/jamanetworkopen.2020.7954.

Mortality/Incidence of Comorbidities, HIV+ vs HIV-



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Marcus J, et al. JAMA Network Open. 2020;3(6):e207954. doi:10.1001/jamanetworkopen.2020.7954.

Primary care screenings for Older Adults with HIV

IAS–USA

Resources for Primary Care Screenings in People with HIV

- U.S. Preventive Services Task Force
  - Home page | United States Preventive Services Taskforce (uspreventiveservicestaskforce.org)
- Primary Care Guidance for Persons with HIV
  - Primary Care Guidance for Persons With Human Immunodeficiency Virus: 2020 Update by the HIV Medicine Association of the Infectious Diseases Society of America (idsociety.org)

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U.S. Preventive Services Task Force A/B Recommendations

Grade	Definition	Suggestions for Practice
A	The USPSTF recommends this service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF recommends this service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.

- 53 recommendations currently have A or B ratings
- A portion of these recommendations target older individuals

Home page | United States Preventive Services Taskforce (uspreventiveservicestaskforce.org)

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USPSTF Recommendations for Older People

Topic	Description	Grade
AAA screening	Ultrasound one time in men aged 65-75 who ever smoked	B
Diabetes mellitus screening	Adults aged 40-70 who are overweight or obese…	B
ASA use to prevent CVD and colorectal cancer	Low dose ASA in adults aged 50-59 ho have a 10% or greater risk of CVD, are not at risk of increased bleeding, and a life expectancy at least 10 years	B
Breast cancer screening	Biennial screening mammography for women aged 50-74 years	B
Cervical cancer screening	Detailed recommendations regarding use of cytology, HPV testing, or both in women up to 65 years	A

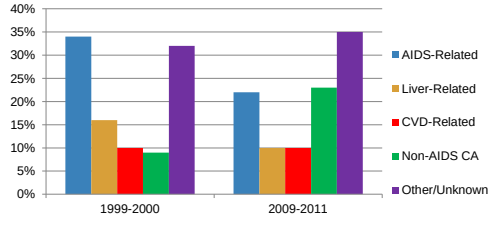
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USPSTF Recommendations for Older People

Topic	Description	Grade
Colorectal Screening	All adults aged 50-75 years	A
Colorectal screening	All adults aged 40-49 years	B
Falls prevention	Exercise interventions to prevent falls in community-dwelling adults aged 65 or older at increased risk	B
Hepatitis C screening	In adults aged 18-79 years	B
CT Lung cancer screening	Adults aged 50-80 who have a 20 pack-year history and currently smoke or quit within the past 15 years	B
Osteoporosis screening	Bone measurement testing in post-menopausal women less than 65 years at increased risk as well as all women 65 years and older	B

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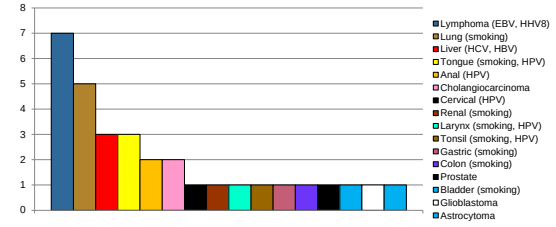
Trends in Causes of Death in Persons with HIV, 1999-2011 in D:A:D



Smith C, et al. Lancet 2014;384:241-248

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University of Colorado: Malignancy as a Cause of Death, 2010-2015; 32 cancer deaths out of 100 total deaths



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Cancer as a cause of death among people with AIDS in the United States

- Evaluation of cancer deaths in a U.S. cohort of 83,282 persons with AIDS
- NHL was the most common cause of cancer death
- Lung cancer was the most common non-AIDS cancer



Simard E and Engels E. CID 2010;51:957-962

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CT Lung Cancer Screening

- 2021 update of the 2013 recommendation
- Applies to adults aged 50-80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years
- Annual screening with low dose chest CT
- Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability/willingness to have curative lung surgery

US Preventive Services Task Force. . JAMA . 2021;325(10):962-970. doi:10.1001/jama.2021.1117.

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Relative Risk of Cancer, HIV vs Non-HIV

Type of Cancer	Standardized Rate Ratio	95% CI
Anal Cancer	42.9	34.1 - 53.3
Vaginal Cancer	21	11.2 - 35.9
Hodgkin Lymphoma	14.7	11.6 – 18.2
Liver Cancer	7.7	5.7 – 10.1
Lung Cancer	3.3	2.8 – 3.9
Melanoma	2.6	1.9 – 3.6
Oropharyngeal Cancer	2.6	1.9 - 3.4
Leukemia	2.5	1.6 - 3.8
Colorectal Cancer	2.3	1.8 – 2.9
Renal Cancer	1.8	0.4 – 0.8

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Patel P, et al. Ann Intern Med 2008;148:728-736

Colorectal Cancer Screening

- 2021 update of the 2016 recommendation
- Recommends colorectal screening in all adults 50-75 years (A recommendation) and 45-49 years (B recommendation)
- Screening may be offered to selected individuals aged 76-85 years based on overall health, prior screening, and preferences (C recommendation)
- Screening methods can include stool-based tests (FOBT, FIT) or direct visualization methods (CT colonography, flexible sigmoidoscopy, or colonoscopy)

US Preventive Services Task Force. JAMA . 2021;325(19):1965-1977. doi:10.1001/jama.2021.6238.

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Strategies For Cancer Screening and Prevention in an HIV Program

Type of Cancer	Prevention Strategy
Lung cancer	Tobacco counseling, low dose chest CT scanning
Oral cancers	Oral exams
Anal cancer	Rectal exam, anal cytology (?)
Prostate cancer	Rectal exam, PSA testing discussion
Cervical cancer	Pelvic exam, cervical cytology, HPV testing
Colorectal cancer	Rectal exam, fecal occult blood testing, colonoscopy
Melanoma	Periodic skin exam, sun exposure counseling
Liver cancer	Hepatitis B vaccine, Hepatitis B and C treatment, abdominal ultrasound or CT scan for surveillance

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Recommendations for Immunizations in Older Adults Living with HIV

IAS–USA

HIV Adult Immunization Schedule by Vaccine and Age Group, December 2019*

Vaccine	19-26 years	27-59 years	60-64 yrs	≥ 65 yrs
Influenza	1 dose annually			Consider high dose
Td/Tdap	Substitute Tdap for Td once, then Td of Tdap booster every 10 years.			
Varicella	2 doses 3 months apart (if CD4 ≥ 200 and no immunity to Varicella)			
HPV	3 doses (0, 2 and 6 months)	27-45 (Discuss)		
Zoster Recombinant			RZV: 2 doses at 0 and 2-6 months ≥ 50 yrs	
Zoster Live			ZVL: 1 dose of ZVL > 60 (CD4 ≥ 200)	
MMR	1 or 2 doses (if CD4 ≥ 200 and no immunity)			
PCV-13	1 dose, preferably prior to PPSV-23			
PPSV-23	2 doses 5 years apart, at least 8 weeks after PCV-13			1 dose
Hepatitis A	2 or 3 doses depending on the vaccine. 0 and 6-18 months). Check HAVAB after.			
Hepatitis B	2 or 3 doses depending on the vaccine. Check HBsAb after.			
Meningococcal Conjugate	If no prior vaccine, 2 doses of either MenACWY-D or MenACWY-CRM 8-12 weeks apart. Boost every 5 years.			
COVID-19 Vaccine	2 doses of Pfizer, 2 doses of Moderna, or 1 dose of Johnson & Johnson (CDC states no preference)			

* After assessing age, presence of immunity, and CD4 count. High dose flu vaccine is my recommendation. Recombinant zoster vaccine is preferred over the live zoster vaccine. Live vaccines (MMR, Varicella, Zoster Live, and Yellow Fever) should not be given if CD4 < 200 cells mm^3. The oral typhoid and live influenza vaccines are contraindicated in HIV.

High Dose Influenza Vaccine

- The vaccine is more immunogenic in individuals 65 years or older.[1]
- The vaccine is more immunogenic in persons living with HIV infection.[2]
- The vaccine has been shown to provide better protection against laboratory-confirmed influenza than standard dose vaccine.[3]
- A study demonstrated a mortality benefit of high dose vaccine in the 2012-2013 season but not in 2013-2014.[4]

1. Falsey A, et al. J Infect Dis 2009;200:172-80
2. McKittrick N, et al. Ann Intern Med 2013;158:19-26
3. DiazGrandos C, et al. N Engl J Med 2014;371:635-645
4. Shay D, et al. J infect Dis 2017;0000:1-8

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Immunizations in Older Adults

- Consider high dose influenza vaccine in persons 65 and older
- Recombinant zoster vaccine is preferred over the live zoster vaccine
- Repeat the pneumococcal polysaccharide vaccine at age 65 if 5 years have elapsed since the last dose
- Continue to boost Td/Tdap and the meningococcal conjugate vaccines at appropriate intervals

Advisory Committee on Immunization Practices ACIP Vaccine Recommendations and Schedules | CDC

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COVID-19 Vaccines in HIV

- Large cohort studies report a higher risk of mortality in people with HIV who develop COVID-19
- CDC has recognized HIV infection as one of the medical conditions that increase risk for severe illness with COVID-19
- People with HIV often have other comorbidities associated with risk for severe COVID-19
- ACIP currently does not express a preference with regards to the 3 COVID-19 vaccines available through EUA

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Factors Associated with risk of Severe Disease in COVID-19 are Common in People with HIV

- Older age: ~50% of people with HIV are over 50
- Obesity: common in HIV, weight gain with ART
- Cardiovascular disease: HIV is a risk factor
- Lung disease: increased tobacco use in HIV
- Hypertension
- Diabetes mellitus
- Cancer: increased non-AIDS cancers in HIV
- Gender: HIV more common in men in the U.S.
- Immunocompromising diseases and medications

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COVID-19 Vaccination in People with HIV: Talking Points

- People with HIV who were well-controlled on ART were included in the Phase 3 trials of the Moderna, Pfizer, and Johnson & Johnson vaccines
- Complete data on immunogenicity, efficacy, and safety from these trials in people with HIV are not yet available
- None of the COVID-19 vaccines currently available by EUA are live vaccines
- People with HIV on ART with a normal CD4 count respond well to licensed vaccines so we might see the same with COVID-19 vaccines
- People with HIV who have advanced disease may have a reduced response to vaccines but are also at greater risk for severe COVID-19

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Summary

- Life expectancy continues to improve for people with HIV
- Comorbidities continue to play a large role in morbidity and mortality
- Many of the USPSTF recommendations are particularly important for older people with HIV
- In 2021, new guidelines for lung cancer and colorectal cancer screening were released
- A number of immunizations are important in older people with HIV. The role of COVID-19 vaccination continues to evolve

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Question-and-Answer Session

