Prostate-Specific Antigen Testing Among Males with HIV From 2006-2020 in the United States

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BACKGROUND

Prostate cancer incidence is lower comparing males with versus without HIV; however, studies indicate males with HIV are diagnosed with more advanced stage prostate cancer and have poorer prognoses relative to males without HIV in the United States.

PSA testing in males with HIV may be affected by secular changes in clinical guidelines, even if guidelines are not impacted by HIV status, including:

- 2012 USPSTF Grade D recommendation against PSA for screening
- 2018 USPSTF Grade C recommendation

PSA utilization may also be informed by the inception for treat-all policies for entry into HIV care.

We examined age-specific PSA testing over time and if trends differed by when MWH initiated ART. from 2006-2020 in the US

METHODS

Study population

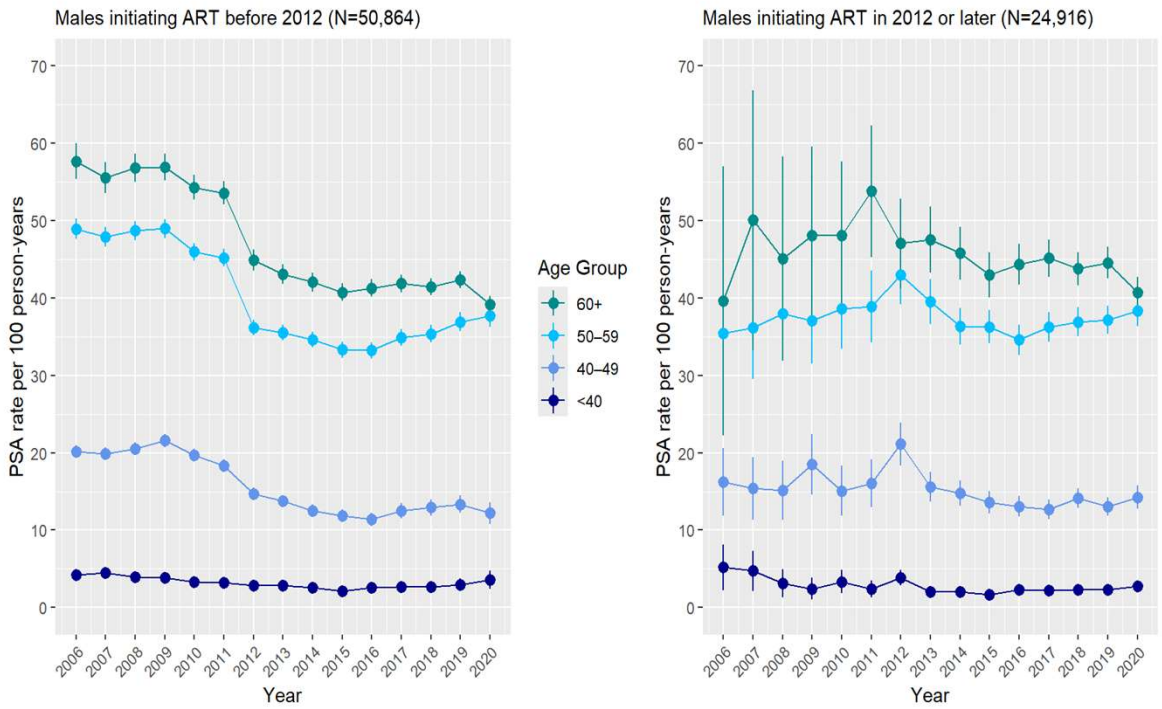
- Males with HIV ≥ 18 years old participating in the North American AIDS Cohort Collaboration on Research & Design: 1) no history of prostate cancer, 2) known ART initiation date
- Under observation from 2006 or later in a US cohort contributing validated cancer diagnoses and PSA data (11 cohorts).

Statistical Analyses

- Estimated annual PSA testing rates per 100 person-years (PY) with 95% confidence intervals
- Only the first PSA within a year per patient was included
- Annual testing rates were stratified by age group and era of ART initiation (before 2012 vs. 2012 or later [during the treat-all era]).

Changing PSA rates around 2012 indicate temporal trends in PSA utilization may be informed by clinical guidelines for cancer screening and/or ART initiation. PSA rates stagnate from 2012 onward, across age groups and era of ART initiation, indicating the need to evaluate parallel trends in incidence of later stage cancer.

Figure 1. Annual age-specific PSA testing rates among males with HIV from 2006-2020 by era of ART initiation



RESULTS

- Study included 75,780 males with HIV (627,759 PY)
- 39% Black, 43% White, 12% Hispanic; median age at entry was 46 years.
- Fifty-six percent of males ever had a PSA test while under observation
- For males initiating ART prior to 2012:
  - PSA testing declines for ages ≥40
  - Large decline from 2011-2012 in males 50+
- For males initiating ART 2012+:
  - Rates were generally stable with a spike in 2012 for males 40-49 and 50-59.
  - Spike in 2012 may be attributed to males entering HIV and primary care simultaneously
- By 2020, PSA rates in patients initiating ART prior to 2012 versus 2012+ converge.

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