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Missed Opportunities: HIV Screening Deficits in Japanese Syphilis Patients

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BACKGROUND

The rising incidence of STIs and HIV in Japan necessitates comprehensive testing strategies. This study analyzed syphilis testing, subsequent HIV screening, and HIV diagnosis patterns across age groups using a **sampling dataset** from the **National Database of Health Insurance Claims (NDB)**, which represents 1% of all outpatient Japanese health insurance claims, and AIDS Surveillance Committee data.

METHODS

NDB sampling data (2011-2020) was used for syphilis and HIV testing analysis, focusing on patients who received antibiotic treatment for syphilis. AIDS Surveillance Committee data (2012-2020) provided HIV diagnosis and AIDS case information, stratified by age.

RESULTS

Of **295,853** patients tested for syphilis, only **13,353 (4.5%)** underwent HIV screening. Among 251,692 syphilis-tested patients, HIV screening rates varied by age: Under 20 (8.25%), 20-29 (7.44%), 30-39 (7.08%), decreasing to Over 70 (4.68%) (Fig.1). The Over 70 group had the **highest number of syphilis tests (102,580)** but the **lowest HIV screening rate**.

Of the **16,270** patients who received **antibiotic treatment for syphilis**, only **1,012 (6.22%)** received HIV screening. Age-specific HIV screening rates among treated patients were: Under 20 (9.01%, 62/688), 20-29 (9.34%, 97/1,038), 30-39 (6.75%, 97/1,438), 40-49 (6.09%, 118/1,939), 50-59 (6.30%, 120/1,906), 60-69 (5.44%, 173/3,181), and Over 70 (5.67%, 345/6,080) (Fig.2).

Japan's national health insurance data uncovered an **alarming disparity** between **syphilis testing frequency** and subsequent **HIV screening rates**, with only 4.5% of syphilis-tested patients receiving recommended HIV testing.

Figure 1. Trends in Syphilis Tests and HIV Test Rates by Age Group

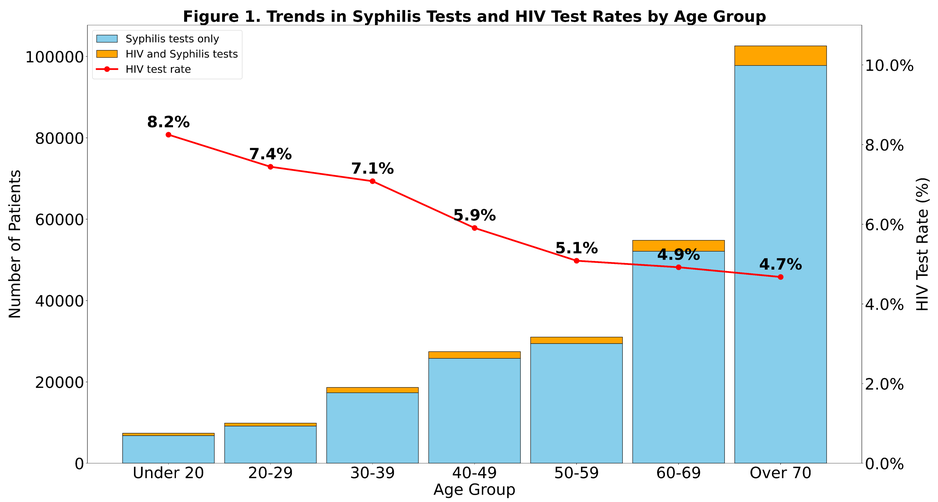


Figure 2. Trends in Syphilis Tests and HIV Test Rates by Age Group (STI Treated Patients)

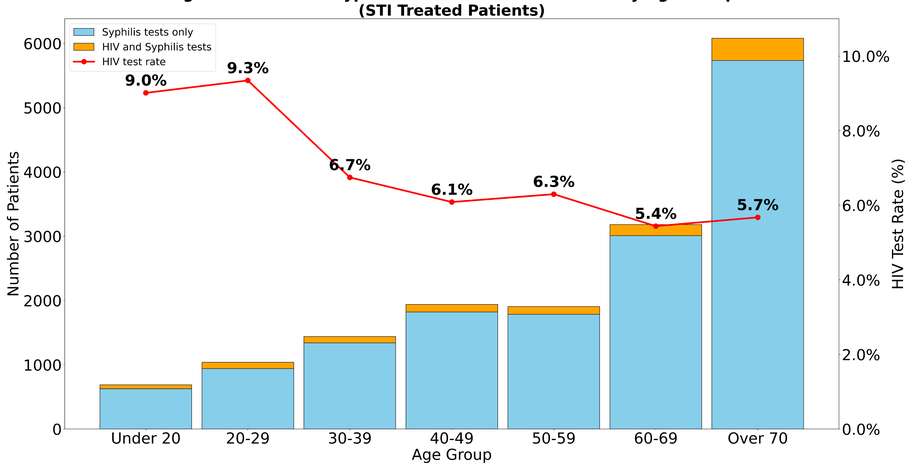
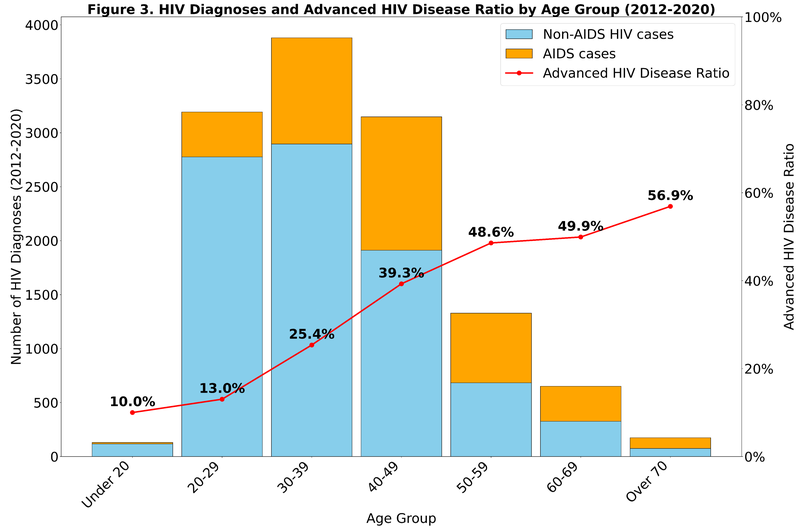


Figure 3. HIV Diagnoses and Advanced HIV Disease Ratio by Age Group (2012-2020)



RESULTS (cont.)

HIV diagnosis data showed the highest number of cases in the 30-39 age group. **The Advanced HIV Disease Ratio** increased with age: Under 20 (10.0%), 20-29 (13.0%), 30-39 (25.4%), rising to Over 70 (**56.9%**) (Fig.3).

CONCLUSIONS

This study reveals **alarmingly low HIV screening rates among syphilis-tested and treated patients** across all age groups in Japan, with particularly concerning trends in older populations. **The high rate of advanced HIV disease at diagnosis in older groups**, coupled with their low HIV screening rates, underscores a critical public health issue. These findings emphasize **the urgent need to significantly increase HIV testing rates for all patients undergoing syphilis testing and treatment, regardless of age**.

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