

**PUBLISHED ABSTRACT**

# Assessment of Rates of Osteoporosis Screening in Geriatric HIV Patients in Primary Care Setting: A Quality Assurance Study

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## Background

Osteoporosis has emerged as a significant comorbidity in patients with HIV after antiretroviral treatment (ART) development and increased life expectancy. The prevalence of osteoporosis is higher in individuals treated with Protease Inhibitors (PI) and Tenofovir-containing regimens when compared with their respective controls. Aim of our project was to assess compliance rates and identify potential barriers in osteoporosis screening in geriatric HIV patients in a tertiary care outpatient clinic.

## Methods

We included 123 HIV patients of age >65 years, who were on ART and the rates of screening for osteoporosis were assessed by medical chart review and clinic provider notes. Criteria for osteoporosis screening included history of pathologic fractures, hypothyroidism, treatment with steroids, documentation of previous osteoporosis in chart, previous treatment with calcium-vit D-bisphosphonate, history of falls and treatment with tenofovir containing regimens.

## Results

46 out of 123 patients (37.3%) met at least one of the above mentioned criteria for screening. 22 out of 123 patients (17.8%) were screened with DEXA. 68 out of 123 patients (55.2%) were treated with calcium-vit D-bisphosphonate in the absence of screening, while 4 out of 22 patients (18.2%) were screened and subsequently treated (**Table 1**). Potential barriers for screening were the absence of clear guidelines for osteoporosis screening in HIV patients, the lack of osteoporosis screening reminders on routine health maintenance checklists in the electronic medical records, and patient non-compliance with ordered screening DEXA.

## Conclusions

Geriatric HIV patients are at high risk for osteoporosis due to ART regimens and frailty. Screening for osteoporosis followed by appropriate treatment can reduce pathologic fractures and improve patient morbidity, mortality and quality of life. Important steps towards this direction are the education of providers about the risk factors for osteoporosis, implementation of diagram screening algorithms and FRAX assessment and electronic reminders in medical records for osteoporosis screening in high risk geriatric patients with HIV.

**Table 1:** Results and percentages of screening parameters and treatment.

Screened with DEXA	22/123 (17.8%)
Treatment with calcium-vitamin D	68/123 (55.2%)
Screened and Treated	4/22 (18.2%)
*Met at least one of the screening criteria	46/123 (37.3%)
*Screening Criteria	– Fractures – Hypothyroidism – Treatment with steroids – History of osteoporosis – Previous treatment with calcium and vitamin D or bisphosphonates – Falls – Treatment with Tenofovir Disoproxil Fumarate

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