Switching from TDF To TAF in HIV-Infected Adults With Low BMD: A Pooled Analysis

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Background

- Studies have demonstrated that some antiretroviral therapies (ART) may contribute to osteopenia and fracture risk in HIV-infected individuals.
- With ART initiation, use of tenofovir disoproxil fumarate (TDF) compared to non-TDF regimens leads to greater increases in bone mineral density (BMD), associated with a marked increase in bone turnover.
- The mechanisms underlying TDF-related BMD loss are not clear, but may include the effects of renal phosphate wasting.

Methods

- This analysis consisted of pooled data from two prospective Phase 3 studies (Studies 109 and 112) of HIV-adjusted adults who met two key criteria.
- A TDF-containing regimen and switch to elvitegravir, cabotegravir, and oncedaily emtricitabine co-formulated with TAF (E/C/F/TAF).
- Presence of clinically significant low BMD (as defined by a T-score ≤ -2.0 at the lumbar spine, total hip, and femoral neck).

Results (cont’d)

- Bone mineral density was assessed by Dual Energy X-ray Absorptiometry at baseline and week 96.
- DEKAR baseline (Week 48) and Week 96 were analyzed centrally by two TDF-naive readers.
- T-score of the lumbar spine, total hip, femoral neck, and hand were measured at baseline and week 96.

Conclusions

- Compared with TDF, E/C/F/TAF was associated with a trend toward an increase in bone mineral density at the lumbar spine and total hip.
- Further studies are needed to confirm this finding.

References


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