

**Maganda, B., Kavuraya, B., Mutagonda, R., et. al (2021). Immunological and Virological Outcomes among Treatment Experienced HIV-Infected Patients on Dolutegravir Regimen in Tanzania. Tanzania Medical Journal. Vol.32 (4):28-39.**

## **ABSTRACT**

**Introduction:** The integrase inhibitor dolutegravir (DTG) has recently replaced the non-nucleoside reverse transcriptase inhibitors (efavirenz and nevirapine) in several Sub-Saharan African countries, including Tanzania. Since this change, there is scarce data on the current treatment outcomes focusing on treatment-experienced HIV-infected patients switched to DTG based regimens in Tanzania. **Objectives:** This study aimed to investigate immunological and virological outcomes among treatment-experienced HIV-infected patients who were switched to DTG based regimen in Tanzania. **Results:** We enrolled 397 patients, majority (65%) were female patients with mean age of 42.7 (95% CI; 40.7 – 44.7) years. The mean baseline CD4+ cell count was 457.1 (95% CI; 426.6 – 489.8) cells/mm<sup>3</sup> with 8.3% of patients with CD4+ cell count <200 cells/mm<sup>3</sup>. The mean baseline viral load (VL) was 169.8 (95% CI; 128.8 – 223.9) copies/ml, whereby 20.6% had VL ≥ 1000 copies/ml. After the use of a new fixed dose combination of Tenofovir (TDF) 300 mg + Lamivudine (3TC) 300 mg + DTG 50 mg (TLD) for at least 24 weeks, the overall rate of virological suppression (<50 copies/ml) was 89.9% (95%CI 86.7% - 92.7%). The significant predictors of virological failure were overall duration on ART use (p = 0.004), duration on TDF + 3TC, and Efavirenz (EFV) (TLE) (p = 0.007), and baseline VL (p < 0.001). **Conclusion:** TLD regimen has provided favorable preliminary results among patients who previously used TLE in HIV/AIDS treatment by showing good virological and immunological outcomes. The long-term treatment outcomes require further investigation.