and limiting disease progression. STRs represent important advancements in the formulation of safe and effective ARVs for long-term therapy that improve adherence largely as a function of improved tolerability and better toxicity profiles. Several clinical trials have shown that initiating treatment with STRs or switching to STRs from other ARV treatment regimens resulted in improvements in safety parameters such as lipids and risk of coronary heart disease.

14.5.1 Treatment-naive Studies

The EVG/COBI/FTC/TDF STR demonstrated improvements in safety parameters compared with the EFV/FTC/TDF STR and ATV + RTV + FTC/TDF through 48 weeks in the Phase 3 Studies 102 and 103, respectively.[30,31] In Study 102, among adverse events (AEs) of any grade occurring in ≥10% of patients, fewer patients in the EVG/COBI/FTC/TDF arm experienced dizziness (7% *versus* 24%; $p<0.001$), abnormal dreams (15% *versus* 27%; $p<0.001$), insomnia (9% *versus* 14%; $p=0.031$) and rash (6% *versus* 12%; $p=0.009$) compared with patients in the EFV/FTC/TDF arm. Discontinuation rates due to AEs were similar between EVG/COBI/FTC/TDF and EFV/FTC/TDF (4% and 5%, respectively). Laboratory abnormalities in liver function tests for alanine aminotransferase (ALT) and aspartate aminotransferase (AST) increased in fewer patients in the EVG/COBI/FTC/TDF group (ALT, 15% *versus* 34%; AST, 18% *versus* 31%; $p<0.001$ for both). In addition, median increases from baseline in lipid parameters were significantly lower for patients on EVG/COBI/FTC/TDF than EFV/FTC/TDF [total cholesterol (TC), 10 *versus* 19 mg dL^{-1}, $p<0.001$; low-density lipoprotein (LDL) cholesterol, 10 *versus* 17 mg dL^{-1}, $p=0.001$; high-density lipoprotein (HDL) cholesterol, 5 *versus* 8 mg dL^{-1}, $p=0.001$]. Triglycerides (TGs) increased similarly in both arms (7 *versus* 7 mg dL^{-1}; $p=0.44$).[30] In Study 103, rates of AEs (all grades) occurring in ≥10% of patients were similar for both EVG/COBI/FTC/TDF and ATV + RTV + FTC/TDF, with the exception of a significantly lower occurrence of ocular icterus in the EVG/COBI/FTC/TDF arm (1% *versus* 14%; $p<0.001$). Discontinuation rates due to AEs were also similar between arms, 4% occurring in the EVG/COBI/FTC/TDF arm and 5% in the ATV + RTV + FTC/TDF arm. The proportion of patients experiencing laboratory abnormalities in total bilirubin was significantly lower for EVG/COBI/FTC/TDF than ATV + RTV + FTC/TDF (3.1% *versus* 96.3%; $p<0.001$). Median increases in TGs were lower in the EVG/COBI/FTC/TDF arm (8 *versus* 23 mg dL^{-1}; $p=0.006$) whereas all other lipid parameters increased similarly in both arms.[31]

14.5.2 Switch Studies

Switching to EFV/FTC/TDF led to a significant improvement in lipid parameters in the ROCKET 1 study. This Phase 4 prospective, randomized, open-label, 24-week study in virologically suppressed HIV-1-infected patients