While injectable ART are revolutionary in HIV care, clinicians should be aware of possible higher real-world failure rates due to nonstandard injection practices, smoking status, high BMI or unknown pre-existing resistance mutations. Ensuring appropriate training for injecting staff, use of longer needles and obtaining HIV-1 proviral DNA resistance assays may be considered prior to switching to CAB-RPV to further decrease the risk of VF.

75 undetectable patients (UD, VL <40 copies/ml) were switched to CAB-RPV. 10 received their injections at an independent infusion center (IC) with trained injectors. 65 received injections at our clinic. Two of ten patients at IC and 1 of 65 patients at our clinic developed VF (4%). At the time of HIV diagnosis, one patient (pt1) had an M184V, the second (pt2) had non-nucleoside reverse transcriptase inhibitor (NNRTI) resistance (K103N) while a genotype failed for the third patient (pt3). All three patients were UD on an integrase inhibitor (INI) based regimen; pt1 was also on rilpivirine at the time of switch. Patient characteristics are displayed in the table. The patients were UD for 8, 10 and 16 months respectively on CAB-RPV before VF. Genotypes at the time of VF revealed INI mutations in all three patients with pt1 also demonstrating NNRTI mutations. 1.5-inch needles were used in all three. The two IC patients raised concerns about irregular injection techniques. All three switched to a protease inhibitor-based regimen and were subsequently UD.