SUPPLEMENTAL MATERIAL
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Supplemental Table 1: Adverse Events Reported for ≥5% of Subjects in Either Treatment Group

| **Adverse Events** | **TAF (n = 103) n (%)** | **TDF (n = 50) n (%)** |
|---|---|---|
| Diarrhea | 22 (21.4) | 13 (26.0) |
| Nausea | 13 (12.6) | 5 (10.0) |
| Flatulence | 5 (4.9) | 6 (12.0) |
| Abdominal pain | 6 (5.8) | 3 (6.0) |
| Vomiting | 4 (3.9) | 5 (10.0) |
| Hemorrhoids | 3 (2.9) | 4 (8.0) |
| Fatigue | 14 (13.6) | 9 (18.0) |
| Pyrexia | 7 (6.8) | 2 (4.0) |
| Upper respiratory tract infection | 16 (15.5) | 7 (14.0) |
| Bronchitis | 9 (8.7) | 2 (4.0) |
| Sinusitis | 7 (6.8) | 4 (8.0) |
| Nasopharyngitis | 5 (4.9) | 3 (6.0) |
| Folliculitis | 3 (2.9) | 4 (8.0) |
| Influenza | 2 (1.9) | 3 (6.0) |
| Pharyngitis | 1 (1.0) | 3 (6.0) |
| Tooth abscess | 0 | 3 (6.0) |
| Decreased appetite | 4 ( 3.9) | 3 ( 6.0) |
| Vitamin D deficiency | 2 ( 1.9) | 5 ( 10.0) |
| Pain in extremity | 8 ( 7.8) | 5 ( 10.0) |
| Arthralgia | 9 ( 8.7) | 0 |
| Back pain | 1 ( 1.0) | 3 ( 6.0) |
| Anogenital warts | 3 ( 2.9) | 3 ( 6.0) |
| Headache | 7 ( 6.8) | 4 ( 8.0) |
| Insomnia | 6 ( 5.8) | 2 ( 4.0) |
| Cough | 7 ( 6.8) | 3 ( 6.0) |
| Oropharyngeal pain | 5 ( 4.9) | 4 ( 8.0) |
| Sinus congestion | 6 ( 5.8) | 3 ( 6.0) |
| Rash | 12 ( 11.7) | 4 ( 8.0) |
| Hypertension | 2 ( 1.9) | 3 ( 6.0) |

TAF: Tenofovir alafenamide

TDF: Tenofovir disoproxil fumarate

**Supplemental Table 2: Pharmacokinetic Parameters of darunavir (DRV), cobicistat (COBI), and emtricitabine (FTC)**

| | $AUC_{tau}$ (ng.h/mL) Mean (%CV) | $C_{max}$ (ng/mL) Mean (%CV) | $C_{tau}$ (ng/mL) Mean (%CV) | $T_{max}$ (h) Median (Q1, Q3) | $T_{½}$ (h) Median (Q1, Q3) |
|---|---|---|---|---|---|
| DRV | 99301.8 (45.3) | 8826.2 (33.3) | 1651.0 (108.0) | 3.00 (2.00, 4.00) | 9.42 (6.31, 13.87) |
| COBI | 8744.5 (43.9) | 1128.7 (35.3) | 30.5 (135.1). | 3.03 (3.00, 4.00) | 3.16 (2.77, 3.70) |
| FTC | 11918.0 (35.9) | 2056.4 (25.3) | 93.1 (58.3) | 1.52 (1.50, 2.00) | 7.51 (6.40, 8.79) |

**Supplemental Table 3: Plasma Tenofovir (TFV) Pharmacokinetic Parameters**

| Parameter (Mean, %CV) | Units | TAF (n = 21) | TDF (n = 11) |
|---|---|---|---|
| $AUC_{tau}$ | ng·h/mL | 339.0 (37.1) | 3737.0 (26.8) |
| $C_{max}$ | ng/mL | 18.8 (37.6) | 413.2 (28.3) |
| $T_{max}$ [a] | h | 2.0 (1.5, 3.1) | 1.0 (1.0, 3.0) |
| $C_{tau}$ | ng/mL | 11.7 (39.3) | 75.4 (30.9) |
| $t_{½}$ [a] | h | 43.8 (32.0, 59.2) | 11.9 (11.4, 16.2) |

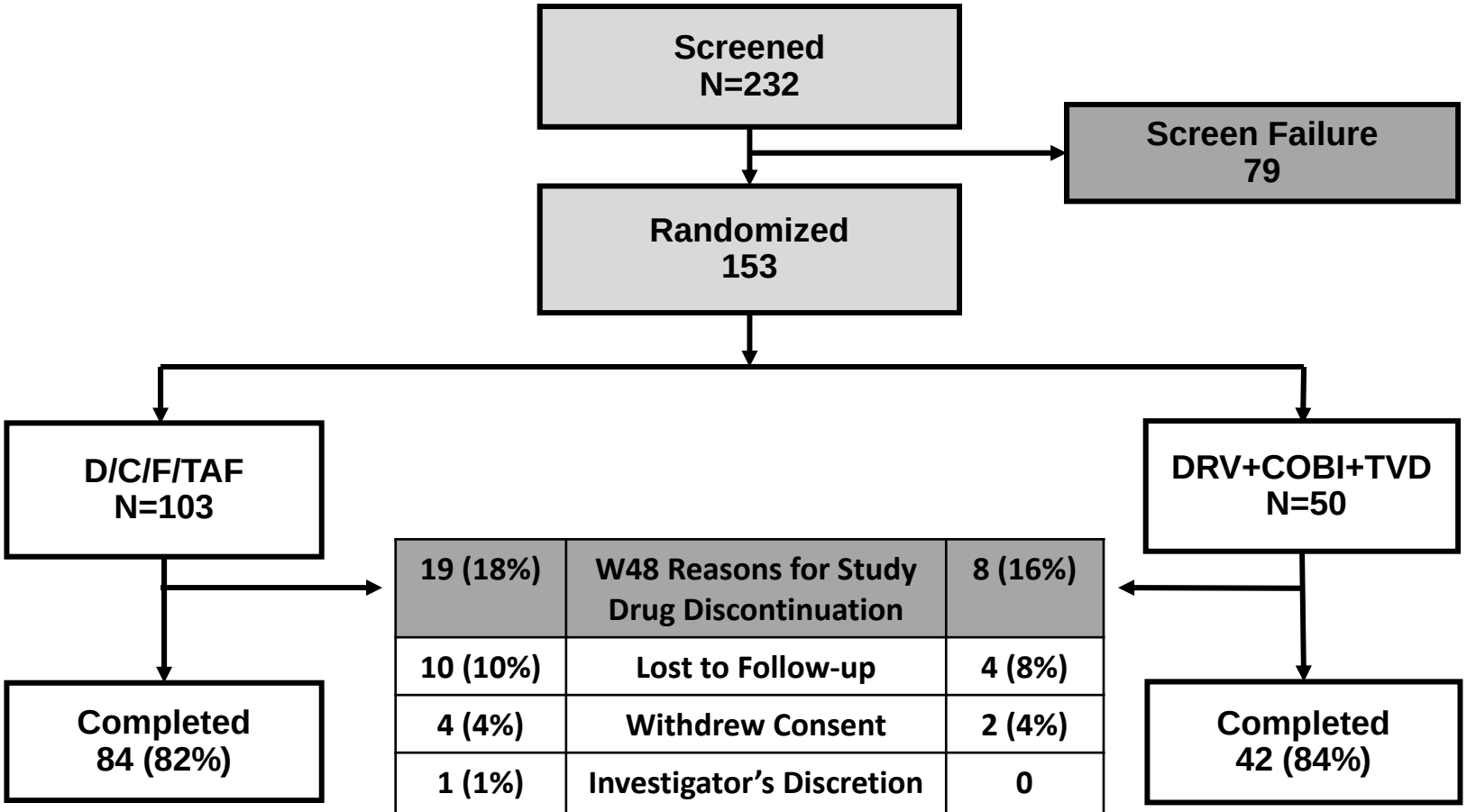
[a] Values are listed as mean (%CV) except $T_{max}$ and $t_{1/2,}$ which are listed as median (Q1, Q3)

**Supplemental Table 4: Renal Parameters**

| Renal Parameters | TAF (n=103) | TDF (n=50) | p-value |
|---|---|---|---|
| Estimated Glomerular Filtration Rate (mL/min; Cockcroft Gault) | -2.9 mL/min | -10.6 mL/min | 0.017 |
| Treatment Emergent Dipstick Proteinuria** | 33, (32%) | 17, (34%) | 0.98 |
| Urinary Albumin/Creatinine (mg/g)+ | -13.1% | -22.6% | 0.17 |
| Urinary Protein/Creatinine (mg/g)+ | -8.22% | -27.52% | 0.19 |
| Fractional Excretion of Phosphate (%)^ | 2.4 | 1.8 | 0.85 |
| Fractional Excretion of Uric Acid (%)^ | 0.2 | -0.2 | 0.79 |

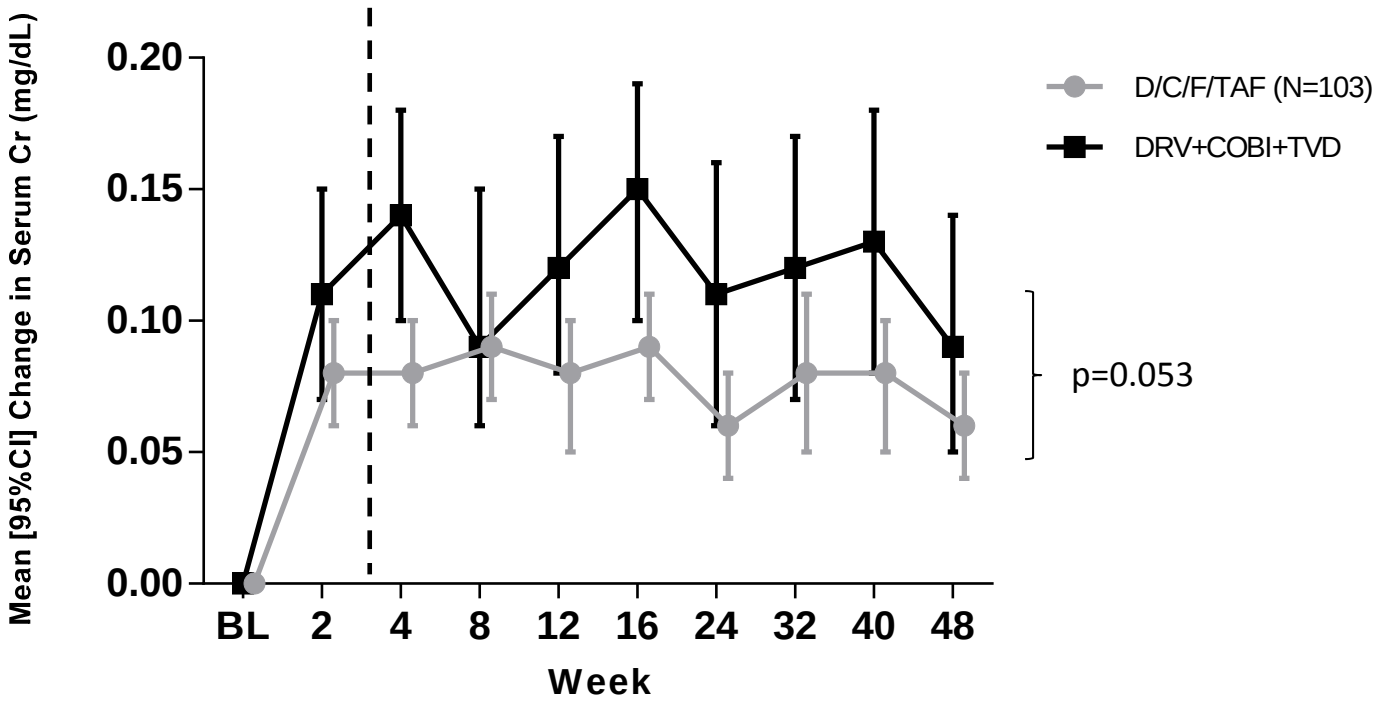
2-sided Wilcoxon rank sum test to compare % change in median from baseline between the 2 treatment groups.
**ANCOVA adjusting for baseline toxicity grade of proteinuria
+ Median % change
^Median change;

**Supplemental Figure 1: Participant Flow Diagram and Week 48 Reasons for Study Drug Discontinuation**




| 19 (18%) | W48 Reasons for Study Drug Discontinuation | 8 (16%) |
|---|---|---|
| 10 (10%) | Lost to Follow-up | 4 (8%) |
| 4 (4%) | Withdrew Consent | 2 (4%) |
| 1 (1%) | Investigator's Discretion | 0 |
| 2 (2%) | Subject Non-Compliance | 0 |
| 2 (2%) | Adverse Event | 2 (4%) |

**Supplemental Figure 2: Changes in Serum Creatinine**



**Supplemental Figure 3: Median Percent Change (Q1, Q3) from Baseline in Renal Tubular Proteinuria: Retinol Binding Protein (RBP)/Cr and Beta-2 Microglobulin (β-2M)/Cr**