Rilpivirine-Tenofovir alafenamide-Emtricitabine (Odefsey)

Prepared by:
Brian R. Wood, MD
David H. Spach, MD

Last Updated: December 04, 2022
Rilpivirine-Tenofovir alafenamide-Emtricitabine

Dose: 1 tablet once daily with a meal

Rilpivirine-Tenofovir alafenamide-Emtricitabine

- 25 mg (NNRTI)
- 25 mg (NRTI)
- 200 mg (NRTI)

Dose: 1 tablet once daily with a meal
Rilpivirine-Tenofovir alafenamide-Emtricitabine

• **Indications**
  - Complete regimen for the treatment of HIV-1 for individuals who weigh at least 35 kg
  - Option for treatment-naïve individuals who have HIV RNA ≤100,000 copies/mL
  - Option to replace a stable regimen for individuals with HIV RNA <50 copies/mL for ≥6 months, with no history of treatment failure or resistance to the components
  - Acceptable for use during pregnancy if above criteria met, though HIV RNA should be measured every 1-2 months due to possible reduction in rilpivirine exposure

• **Contraindications**
  - Not recommended if creatinine clearance ≤30 mL/min
  - Contraindicated with proton pump inhibitors (PPIs) and with rifamycins
  - Dosing must be separated from H2 blockers and other antacids, or therapy modified
  - Caution advised if history of prolonged QT interval or taking meds that prolong the QT

• **Common Adverse Effects** (≥2%)
  - Headache, sleep disturbance
## Rilpivirine-Tenofovir alafenamide-Emtricitabine
### Summary of Key Phase 3 Studies

**Trials in Treatment-Naïve Adults**
- STUDY 1160: Switch to RPV-TAF-FTC from EFV-TDF-FTC
- STUDY 1216: Switch to RPV-TAF-FTC from RPV-TDF-FTC

**Abbreviations:** RPV-TAF-FTC = rilpivirine-tenofovir alafenamide-emtricitabine; EFV-TDF-FTC = efavirenz-tenofovir DF-emtricitabine; RPV-TDF-FTC = rilpivirine-tenofovir DF-emtricitabine;
Rilpivirine-Tenofovir alafenamide-Emtricitabine

Switch Studies in Adults with Virologic Suppression
Switch to RPV-TAF-FTC from EFV-TDF-FTC

Study GS-366-1160
**Switch to RPV-TAF-FTC from EFV-TDF-FTC**

**Study GS-366-1160: Design**

**Background:** Phase 3b, multinational, randomized, double-blind, placebo-controlled, noninferiority trial investigating the tolerability of switching to the single-tablet regimen rilpivirine-tenofovir alafenamide-emtricitabine (RPV-TAF-FTC)

**Inclusion Criteria (n = 881 randomized)**
- HIV-1-infected adults
- HIV RNA <50 copies/mL for ≥6 months on EFV-TDF-FTC
- Creatinine clearance at least 50 mL/min
- No resistance to EFV, RPV, TDF, or FTC

**Treatment Arms**
- Switch to RPV-TAF-FTC (Switch group)
- Remain on EFV-TDF-FTC (No switch group)

*NOTE:* of 881 participants randomized, 6 were never treated (875 individuals treated)

Switch to RPV-TAF-FTC from EFV-TDF-FTC
Study GS-366-1160: Results

Week 48 Virologic Response (FDA Snapshot Analysis)

Switch to RPV-TAF-FTC from EFV-TDF-FTC
Study GS-366-1160: Results

Week 48: Changes in Bone Mineral Density (BMD)

<table>
<thead>
<tr>
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<th>Hip</th>
<th>Spine</th>
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</thead>
<tbody>
<tr>
<td>RPV-TAF-FTC (Switch)</td>
<td>1.65</td>
<td>-0.05</td>
</tr>
<tr>
<td>EFV-TDF-FTC (No Switch)</td>
<td>1.28</td>
<td>-0.13</td>
</tr>
</tbody>
</table>

Switch to RPV-TAF-FTC from EFV-TDF-FTC
Study GS-366-1160: Results

Week 48: Changes in Markers of Proximal Tubulopathy

Switch to RPV-TAF-FTC from EFV-TDF-FTC
Study GS-366-1160: Results

Week 48: Change in Plasma Lipids from Baseline

<table>
<thead>
<tr>
<th></th>
<th>Total Cholesterol</th>
<th>LDL</th>
<th>HDL</th>
<th>Triglycerides</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Change in Median Value (mg/dL)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RPV-TAF-FTC (Switch)</strong></td>
<td>-9</td>
<td>-3</td>
<td>-2</td>
<td>-4</td>
</tr>
<tr>
<td><strong>EFV-TDF-FTC (No Switch)</strong></td>
<td>-4</td>
<td>-5</td>
<td>-1</td>
<td>-2</td>
</tr>
</tbody>
</table>

Switch to RPV-TAF-FTC from EFV-TDF-FTC
Study GS-366-1160: Conclusion

**Interpretation:** “Switching to rilpivirine, emtricitabine, and tenofovir alafenamide from efavirenz, emtricitabine, and tenofovir disoproxil fumarate was non-inferior in maintaining viral suppression and was well tolerated at 48 weeks. These findings support guidelines recommending tenofovir alafenamide-based regimens, including coformulation with rilpivirine and emtricitabine, as initial and ongoing treatment for HIV-1 infection.”

Switching to TAF from TDF, each with RPV and FTC

Study GS-366-1216
Switch from TDF to TAF, each with RPV and FTC
Study GS-366-1216: Design

• **Background**: Phase 3b, multinational, randomized, double-blind, placebo-controlled, noninferiority trial to investigate safety and tolerability of switching to the single-tablet regimen rilpivirine-tenofovir alafenamide-emtricitabine (RPV-TAF-FTC)

• **Inclusion Criteria** (n = 632 randomized)
  - HIV-1-infected adults
  - HIV RNA <50 copies/mL ≥6 months on RPV-TDF-FTC
  - Creatinine clearance at least 50 mL/min
  - No resistance to RPV, TDF, or FTC

• **Treatment Arms**
  - Switch to RPV-TAF-FTC (Switch group)
  - Remain on RPV-TDF-FTC (No switch group)

*NOTE*: of 632 participants randomized, 2 were never treated (630 individuals treated)

Switch to TAF from TDF, each with RPV and FTC

Study GS-366-1216: Design

Week 48 Virologic Response (FDA Snapshot Analysis)

Switch to TAF from TDF, each with RPV and FTC
Study GS-366-1216: Results

Week 48: Changes in Bone Mineral Density (BMD)

Mean Change in BMD (%)

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<tr>
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<tbody>
<tr>
<td>RPV-TAF-FTC (Switch)</td>
<td>1.04</td>
<td>1.61</td>
</tr>
<tr>
<td>RPV-TDF-FTC (No Switch)</td>
<td>-0.25</td>
<td>0.08</td>
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</table>

Switch to TAF from TDF, each with RPV and FTC
Study GS-366-1216: Results

Week 48: Changes in Markers of Proximal Tubulopathy

Switch to TAF from TDF, each with RPV and FTC
Study GS-366-1216: Results

Week 48: Change in Plasma Lipids from Baseline

<table>
<thead>
<tr>
<th>Lipid</th>
<th>RPV-TAF-FTC (Switch)</th>
<th>RPV-TDF-FTC (No Switch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cholesterol</td>
<td>16</td>
<td>-2</td>
</tr>
<tr>
<td>LDL</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>HDL</td>
<td>2</td>
<td>-1</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>5</td>
<td>-6</td>
</tr>
</tbody>
</table>

Interpretation: “Switching to rilpivirine, emtricitabine, and tenofovir alafenamide was non-inferior to continuing rilpivirine, emtricitabine, tenofovir disoproxil fumarate in maintaining viral suppression and was well tolerated at 48 weeks. These findings support guidelines recommending tenofovir alafenamide-based regimens, including coformulation with rilpivirine and emtricitabine, as initial and ongoing treatment for HIV-1 infection.”
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