INFLAMMATORY ANDATHEROGENESIS MARKERS
148 WEEKS POST-SWITCH TO DTG + RPV IN SWORD-1/-2

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The SWORD studies demonstrated non-inferiority of switching to the 2-drug regimen DTG + RPV vs continuing 3- or 4-drug current ART (CAR) at Week 48, and virologic suppression was maintained with DTG + RPV through Week 148\textsuperscript{1-2}.

Chronic inflammation is a hallmark of HIV despite treatment\textsuperscript{3}.

Non–AIDS-defining illnesses are an ongoing challenge, even with current improved regimens in PLHIV. Multiple causes may contribute to inflammation, including HIV and other concomitant factors\textsuperscript{3}.

Biomarkers of inflammation and atherogenesis were evaluated from Baseline to Week 48 for DTG + RPV and CAR and non-comparatively for DTG + RPV post-switch through Week 148 (analysis complete).

\begin{itemize}
  \item SWORD-1/-2 Are Ongoing, Identically Designed, Randomized, Multicenter, Open-label, Parallel-Group, Non-inferiority Studies

\end{itemize}
Controlled Early-Switch (ES) Phase: Change From Baseline to Week 48 Across Biomarkers

**Inflammatory biomarkers**

- **CRP**
  - Baseline: 1.3 (n=512)
  - Week 48: 1.3 (n=480)
  - Median change: -0.10 (P=0.1431)

- **sCD14**
  - Baseline: 363.7 (n=510)
  - Week 48: 1677.5 (n=479)
  - Median change: 374.42 (P<0.0001)

- **sCD163**
  - Baseline: 14.90 (n=509)
  - Week 48: 537.7 (n=477)
  - Median change: 528.8 (P<0.0001)

- **sVCAM-1**
  - Baseline: 15.00 (n=512)
  - Week 48: 21.5 (n=478)
  - Median change: 52.44 (P=0.2113)

**Atherogenesis biomarkers**

- **D-dimer**
  - Baseline: 0.0 (n=504)
  - Week 48: 1.15 (n=463)
  - Median change: 0.00 (P=0.1967)

- **FABP-2**
  - Baseline: 1.10 (n=495)
  - Week 48: 2.25 (n=465)
  - Median change: 1.46 (P=0.1165)

Graphs show pooled data from SWORD-1/-2 studies. Median treatment difference (DTG + RPV group − CAR group) and P-values on each graph were performed post hoc.

CRP, C-reactive protein; FABP-2, fatty acid binding protein-2; IL-6, interleukin-6; s, soluble; VCAM-1, vascular cell adhesion molecule-1.
No Consistent Pattern of Change Across Inflammatory Biomarkers Was Observed Post-Switch to DTG + RPV Up to Week 148

Plots represent absolute values for each biomarker. Error bars show variance from median or mean value. *P values that reached statistical significance for a longitudinal change from Baseline or LS Baseline are indicated with an asterisk.

CRP, C-reactive protein; ES, Early Switch; IL-6, interleukin-6; LS, Late Switch; s, soluble.

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No Consistent Pattern of Change in Atherogenesis Biomarkers Was Observed Post-Switch to DTG + RPV Up to Week 148

- The increase in D-dimer was not consistent with the other biomarkers of atherogenesis or across the 2 SWORD studies.
- Reductions consistently observed for FABP-2 post-switch across ES and LS groups in SWORD-1 and SWORD-2 suggest no impact on enterocyte integrity and fatty acid metabolism.
- Reduction in sVCAM-1 post-switch in SWORD-1 and SWORD-2 but timing differed in ES vs LS groups.
Conclusions

• In the randomized controlled ES phase, comparison of change from Baseline to Week 48 in the DTG + RPV group vs the CAR group revealed no consistent patterns for inflammatory or atherogenesis biomarkers.

• Longitudinally up to Week 148, no consistent pattern of change was observed after switch to DTG + RPV from CAR in:
  • Inflammatory biomarkers: no change was observed in CRP, and the pattern of change was generally inconsistent across sCD14, IL-6, and sCD163.
  • Atherogenesis biomarkers: FABP-2 and sVCAM-1 showed sustained reductions post-switch, and increases in D-dimer were inconsistent across both the ES and LS groups and across the 2 SWORD studies.

• Overall, these results from SWORD-1 and SWORD-2 illustrate the lack of a consistent pattern of change in biomarkers post-switch to the 2DR DTG + RPV and hence provide no evidence for an association of increased inflammation or atherogenesis with the 2DR while maintaining virologic suppression.

CRP, C-reactive protein; ES, Early Switch; FABP-2, fatty acid binding protein-2; IL-6, interleukin-6; LS, Late Switch; s, soluble; VCAM-1, vascular cell adhesion molecule-1.