### Introduction

**LDV/SOF** is safe and highly effective interferon- and ribavirin (RBV)-free.

Stable CD4 counts during and after treatment.

The 1 patient with virologic failure experienced relapse at posttreatment.

To evaluate efficacy and safety of LDV/SOF + RBV for 24 weeks for.

No patient discontinued study drugs; 4 patients had RBV dose.

6 of 7 patients (86%) with NS5A RAVs at virologic.

Safety

LDV/SOF + RBV for 24 weeks was safe and well.

No patient had HIV virologic rebound.

Sofosbuvir

No clinically significant change in renal function was observed.

Ledipasvir

Primary efficacy endpoint: SVR12

**Methods**

**Study Design**

<table>
<thead>
<tr>
<th>LDV/SOF Failure N=5</th>
<th>LDV/SOF + RBV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wk 3</td>
<td>Wk 12</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Endpoints**

- Primary efficacy endpoint: SVR12
  - HCV RNA > lower limit of quantification (LLOQ) at posttreatment Week 12
  - Analyzed by COBAS Taqman HCV Test v2.0 HCV Test (Roche Diagnostics, Indianapolis, IN); LLOQ=25 IU/mL
- Safety
  - Adverse events (AEs) and discontinuations
  - Laboratory abnormalities
  - HCV virologic rebound
- Full-length, deep sequencing of NS5A and NS5B genes using MiSeq platform (Illumina, Inc., San Diego, CA).

**Results**

**Demographics and Baseline Characteristics Prior to Retreatment**

| Mean, app. years (range) | LDV/SOF + RBV 24 wk sof+ | ns
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, n (%)</td>
<td>7 (78)</td>
</tr>
<tr>
<td>Black, n (%)</td>
<td>8 (100)</td>
</tr>
<tr>
<td>Mean BMI, kg/m² (range)</td>
<td>29 (23–44)</td>
</tr>
<tr>
<td>Mean HCV RNA, log10 IU/mL SD</td>
<td>6.4 ± 0.8</td>
</tr>
<tr>
<td>IL28B, n (%)</td>
<td>32 (36)</td>
</tr>
<tr>
<td>CT</td>
<td>3 (33)</td>
</tr>
<tr>
<td>TT</td>
<td>6 (67)</td>
</tr>
<tr>
<td>HCV GT, n (%)</td>
<td>7 (78)</td>
</tr>
<tr>
<td>HCV RNA, log10 IU/mL SD</td>
<td>6.9 ± 3.8</td>
</tr>
<tr>
<td>CT</td>
<td>2 (22)</td>
</tr>
<tr>
<td>Common, n (%)</td>
<td>7 (72)</td>
</tr>
<tr>
<td>Median CD4 cell count, cells/µL (range)</td>
<td>785 (158–1625)</td>
</tr>
<tr>
<td>HIV ART regimen, n (%)</td>
<td>0</td>
</tr>
<tr>
<td>Failure</td>
<td>1 (11)</td>
</tr>
<tr>
<td>Resistant</td>
<td>1 (11)</td>
</tr>
<tr>
<td>Fatal</td>
<td>1 (11)</td>
</tr>
<tr>
<td>No change</td>
<td>1 (11)</td>
</tr>
</tbody>
</table>

Mean time from failure to retreatment, days (range) 43 (34–70).

**Virology in Patient With Relapse**

<table>
<thead>
<tr>
<th>N</th>
<th>NS5A RAVs Before Primary Study</th>
<th>NS5A RAVs After Primary Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>None</td>
<td>Y (93)</td>
</tr>
<tr>
<td>N</td>
<td>L31M (&gt;99), H58D (92)</td>
<td>Y (93)</td>
</tr>
<tr>
<td>N</td>
<td>L31M (&gt;99), Y93N (&gt;25)</td>
<td>Y (93)</td>
</tr>
<tr>
<td>N</td>
<td>None</td>
<td>L31I/F/M/V, P32L, P58D, A92K, M289L/I, L320V/I/F, and V321A/I</td>
</tr>
<tr>
<td>N</td>
<td>None</td>
<td>Y93H (&gt;99)</td>
</tr>
</tbody>
</table>

**Conclusions**

- 8 of 9 patients (89%) with HCV/HIV coinfection who failed prior treatment with LDV/SOF for 12 weeks achieved SVR12 when retreated with LDV/SOF + RBV for 24 weeks.
- 6 of 7 patients (86%) with NS5A RAVs at virologic relapse after the primary study achieved SVR12 after retreatment.
- No adverse effect on HIV disease or its treatment.

- No patient had HIV virologic rebound.

**Safety**

- No clinically significant change in renal function was observed.
- Stable creatinine clearance on treatment.
- No patient had ≥0.4-mg/dL change in serum creatinine.
- No patient discontinued study drugs; 4 patients had RBV dose modified or interrupted.
- Stable CD4 counts during and after treatment.

**Study**

- Primary endpoint: SVR12
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