Improvement in FAST and FIB-4 Composite Biomarker Scores in Phenotypic MASH Patients Treated for 12 Weeks with Once-monthly or Bi-weekly Dosing of BOS-580, a Long-acting FGF21 Analogue

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A Randomized, Double-blind, Placebo-controlled Trial of Once-monthly or Bi-weekly BOS-580 in Patients with Phenotypic MASH

Phase 2a, Part A Study Design

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>300 mg Q4W BOS-580</td>
</tr>
<tr>
<td>A2</td>
<td>150 mg Q2W</td>
</tr>
<tr>
<td>A3</td>
<td>75 mg Q2W</td>
</tr>
<tr>
<td>A4</td>
<td>75 mg Q4W</td>
</tr>
<tr>
<td>A1–A4</td>
<td>Placebo</td>
</tr>
</tbody>
</table>

Aim

Evaluate BOS-580 treatment effect over 12 weeks on biomarker composite scores (FAST, FIB-4, APRI, ADAPT).

Baseline Composite Biomarker Scores

<table>
<thead>
<tr>
<th>Composite Biomarker Scores (Mean)</th>
<th>Placebo (N=33)</th>
<th>Pooled BOS-580 (N=56)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIB-4a</td>
<td>1.15</td>
<td>1.29</td>
</tr>
<tr>
<td>FASTb</td>
<td>0.32</td>
<td>0.42</td>
</tr>
<tr>
<td>APRIc</td>
<td>0.34</td>
<td>0.42</td>
</tr>
<tr>
<td>ADAPTd</td>
<td>5.87</td>
<td>5.79</td>
</tr>
</tbody>
</table>

Source: Modified full analysis set (Dosed subjects with valid baseline and Week 6 or Week 12 HFF results)

1FIB-4 (age, AST, platelet count and ALT) <1.3 low probability of F3/F4 pts

2FAST (fibroscan LSM and AST)<0.35 low risk of disease progression, >0.67 high risk for progression

3APRI (AST/Platelet ratio) <0.57 absence of advanced fibrosis

4ADAPT (age, pro-C3, platelets, presence of diabetes) >6.3 advanced fibrosis

Randomized Key Inclusion Criteria

N=102

- BMI 30–45 kg/m²
- Liver fat MRI-PDFF ≥10%
- AST >20 IU/L
- LSM 7.0–9.9 kPa

Exploratory Objectives

- Liver fat (MRI-PDFF)
- Liver injury (ALT, AST)
- Liver fibrosis (VCTE, PRO-C3)
- Lipids (LDL-C, HDL-C, triglycerides)
- Metabolic and glycemic biomarkers (adiponectin, insulin, C-peptide, HbA1c)

Baseline Composite Biomarker Scores

- FIB-4 (age, AST, platelet count and ALT) <1.3 low probability of F3/F4 pts
- FAST (fibroscan LSM and AST)<0.35 low risk of disease progression, >0.67 high risk for progression
- APRI (AST/Platelet ratio) <0.57 absence of advanced fibrosis
- ADAPT (age, pro-C3, platelets, presence of diabetes) >6.3 advanced fibrosis

Once-monthly BOS-580 treatment over 12 weeks resulted in significant reductions in liver fat content, markers of liver injury and fibrosis, and numerically improved markers of metabolic health in patients with phenotypic MASH.¹
BOS-580 Treatment Results in Significant Reduction of Composite Biomarker Scores at 12 Weeks

Percent Change From Baseline

**FIB-4**

- Placebo: -12.4%
- 75mg Q2W: -13.8%
- 150mg Q4W: -22.3%
- 300mg Q4W: -32.1%

**FAST**

- Placebo: -17.7%
- 75mg Q4W: -48.7%
- 150mg Q2W: -39.4%
- 150mg Q4W: -74.5%
- 300mg Q4W: -69.9%

**APRI**

- Placebo: -22.7%
- 75mg Q2W: -29%
- 150mg Q2W: -49.4%
- 300mg Q4W: -45.4%

**ADAPT**

- Placebo: -6.5%
- 75mg Q2W: -8.2%
- 150mg Q2W: -14.1%
- 300mg Q4W: -15.4%

* p-value <0.05; ** p-value <0.01; *** p-value <0.001

Based on LS means with treatment and baseline value effects in the model on the modified full analysis set.
BOS-580 Treatment Results in Rapid and Persistent Decrease of Composite Biomarker Scores Over 12 Weeks

- **FIB-4**
- **APRI**
- **ADAPT**

* p-value <0.05; ** p-value <0.01; *** p-value <0.001

Based on LS means with treatment and baseline value effects in the model on the modified full analysis set. FAST scores were determined only at baseline and 12 weeks, so no time course presented here.
Most Patients had Improved FIB-4 and FAST Risk Classification After 12 Weeks Treatment with BOS-580

FIB-4

(Percent of Patients with Baseline Category Low that Worsened, and Baseline Category Elevated that Improved)

<table>
<thead>
<tr>
<th></th>
<th>Worsened</th>
<th>Improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>High</td>
<td>10</td>
<td>50</td>
</tr>
</tbody>
</table>

Worsened: Patients who had FIB-4 <1.3 at baseline and ≥1.3 at Week 12
Improved: Patients who had FIB-4 ≥1.3 at baseline and <1.3 at Week 12

FAST

(Percent of Patients with Baseline Risk Category Low that Worsened, and Baseline Risk Category Elevated that Improved)

<table>
<thead>
<tr>
<th></th>
<th>Worsened</th>
<th>Improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>High</td>
<td>38</td>
<td>96</td>
</tr>
</tbody>
</table>

Worsened: Patients who had FAST <0.35 at baseline and ≥0.35 at Week 12
Improved: Patients who had FAST ≥0.35 at baseline and <0.35 at Week 12

1 Shah AG et al., CGH, 2009; 2 Newsome PN et al., Lancet Gastroenterol Hepatol, 2020
Summary and Conclusion

- BOS-580 leads to significant reductions in FIB-4, FAST, APRI and ADAPT scores in patients with phenotypic MASH after 12 weeks treatment with once-monthly or bi-weekly dosing compared to placebo.

- There is a rapid and significant decrease in composite biomarker scores that is sustained throughout the 12 week BOS-580 treatment course.

- BOS-580 treatment improves FIB-4 and FAST risk classification in most patients at 12 weeks.

- These results suggest that BOS-580 treatment may lead to clinical benefit in MASH patients.

- Once-monthly dosing of BOS-580 over 24 weeks is currently being evaluated for safety and efficacy in patients with biopsy-proven F2 or F3 MASH (NCT04880031).