ASPEN-1: A Phase 3 Trial Evaluating the Efficacy, Duration of Effect, and Safety of DaxibotulinumtoxinA for Injection in the Treatment of Cervical Dystonia

Joseph Jankovic,1 Cynthia Correll,2 Robert A. Hauser,3 Atul T. Patel,4 Todd M. Gross,5 Roman G. Rubio,6 Domenico Vitarelli6
1Parkinson's Disease Center and Movement Disorders Clinic, Department of Neurology, Baylor College of Medicine, Houston, TX; 2Rush University Medical Center, Chicago, IL; 3University of South Florida, Tampa, FL; 4Kansas City Bone & Joint Center, Overland Park, KS; 5Revance Therapeutics, Inc, Nashville, TN

Introduction and Methods

• DaxibotulinumtoxinA for injection (DAXI) is a novel, long-acting formulation of botulinum toxin type A with development for the treatment of cervical dystonia (CD)

• ASPEN-1 was a Phase 3, single-blind, randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of 2 doses of DAXI for the treatment of CD over 36 weeks across 60 sites in the US, Canada, and the EU

Demographics and Baseline Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Placebo (n=156)</th>
<th>DAXI 125U (n=130)</th>
<th>DAXI 250U (n=130)</th>
<th>All Subjects (n=416)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years (%)</td>
<td>36 (23.1)</td>
<td>31 (23.8)</td>
<td>34 (26.2)</td>
<td>33.4 (25.4)</td>
</tr>
<tr>
<td>Age, median [IQR]</td>
<td>67 (65-70)</td>
<td>65 (63-70)</td>
<td>66 (64-70)</td>
<td>66 (65-70)</td>
</tr>
<tr>
<td>% female (%)</td>
<td>87 (56.1)</td>
<td>70 (52.2)</td>
<td>70 (53.8)</td>
<td>58 (54.6)</td>
</tr>
<tr>
<td>White/African American</td>
<td>43 (28.0)</td>
<td>52 (24.1)</td>
<td>53 (24.6)</td>
<td>49 (23.6)</td>
</tr>
<tr>
<td>Range, years</td>
<td>18-80</td>
<td>18-80</td>
<td>18-80</td>
<td>18-80</td>
</tr>
<tr>
<td>Range, IQR</td>
<td>30-79</td>
<td>30-79</td>
<td>30-79</td>
<td>30-79</td>
</tr>
<tr>
<td>Total TWSTRS</td>
<td>56 (41.0)</td>
<td>57 (41.3)</td>
<td>56 (41.0)</td>
<td>57 (41.0)</td>
</tr>
<tr>
<td>Total TWSTRS, median [IQR]</td>
<td>70.0 [66.0-73.0]</td>
<td>72.0 [69.0-75.0]</td>
<td>69.0 [66.0-72.0]</td>
<td>70.0 [69.0-73.0]</td>
</tr>
</tbody>
</table>

Results

Primary Endpoint

- **Change From Baseline in TWSTRS Total Score Over Weeks 4 and 6**
- **Secondary Endpoint: Median Time to Loss of ≥80% of Peak Treatment Effect**

Clinical and Patient Global Impression of Change Consistent at Week 4 or 6

- **Clinical Global Improvement of Change**
- **Patient Global Improvement of Change**

Conclusions

- **DAXI, at either 125U or 250U, was an effective, well-tolerated, long-acting treatment for reducing the signs and symptoms of CD**

- **Highly statistically significant results achieved on TWSTRS total score primary endpoint at Weeks 4 and 6 (p<0.0001, 125U vs placebo; p=0.0006, 250U vs placebo)**

- **Median duration of effect (time to loss of ≥80% peak treatment effect) was 24 weeks for the 125U dose and 20 weeks for the 250U dose**

- **Most DAXI-treated subjects were somewhat satisfied 56% vs placebo (49%) on week 4; 59% vs 54% on week 6 (DAXI 125U, 59.8% vs DAXI 250U, 55.2%)**

- **Most DAXI-treated subjects were somewhat satisfied 56% vs placebo (49%) on week 4; 59% vs 54% on week 6 (DAXI 125U, 59.8% vs DAXI 250U, 55.2%)**

- **DAXI appeared to be a generally safe and well-tolerated, with adverse event rates similar to, or lower than, other botulinum toxin products for the treatment of CD**

- **Incidence of dysphagia and muscular weakness were low**

- **No new safety signals observed**

- **The ASPEN findings strongly reinforce the scientific validity and clinical benefit of a long-acting neuromodulator**