ELEVAIR™ Endobronchial Coil System

U.S. Food & Drug Administration
Anesthesiology and Respiratory Therapy Devices Panel of the Medical Devices Advisory Committee
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ELEVAIR™ Endobronchial Coil System
Introduction

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PneumRx, Inc., a BTG International group company
Unmet Need for Management of Severe Emphysema

• Emphysema is a progressive disease that results in significant debilitation
  – Approximately 3.5 million adults diagnosed in the US\textsuperscript{a}
    • 1.2 million estimated to have severe emphysema\textsuperscript{b}

• Patients with emphysema have increasing lack of mobility and limitations in activities of daily living

• The ELEVAIR™ System is intended for patients with significant symptom burden despite optimal medical therapy

ELEVAIR™ Endobronchial Coil System Overview

- Designed to treat the specific pathophysiology of emphysema
  - Reduce lung hyperinflation, relieve breathlessness, and improve quality of life
- Device consists of Coils and a Delivery System
  - Coils: nitinol shape-memory implants
  - Delivery System: Minimally invasive, bronchoscopic
**ELEVAIR™ System Clinical Development Program**

- **CLN0006**
  - Multi-Center Pilot Study
  - 36 subjects
  - EU

- **CLN0008 RESET**
  - Randomized Controlled Trial
  - 45 subjects randomized
  - EU

- **CLN0009 RENEW**
  - Randomized Controlled IDE Pivotal Trial
  - 315 subjects randomized
  - 46 subjects roll-in
  - US + EU + Canada

- **CLN0014**
  - European Registry
  - 2000 patients
  - EU

- **CLN0008 CLN0011**
  - Multi-Center Feasibility Study
  - 60 subjects
  - EU

- **CLN0012**
  - Single-Center Mechanism of Action Study
  - 10 subjects
  - EU

- **REVOLENS**
  - Control Subjects from RENEW Study
  - 102 subjects
  - US + EU + Canada

- **CE Mark**
  - Oct 2010

- **CLN0016 IDE Crossover Study**
  - Randomized Controlled Trial (French Ministry of Health sponsored)
  - 100 subjects randomized
  - EU

**Key Points:**
- 7 years of post-market clinical and commercial experience
- ~4,000 patients
- 19 countries
Overview of IDE Clinical Program

RENEW
Randomized controlled trial
Treatment vs optimal medical therapy
12-month primary endpoint

RENEW Roll-in
First 2 subjects at newly trained clinical sites

Crossover
Eligible RENEW control subjects receive Coil treatment

Long-term clinical follow-up

1 2 3 4 5
up to 5 years post-procedure for all Coil-treated subjects
Preclinical Development and Feasibility Studies

Pre-IDE Meeting Mar 2010

FDA IDE Approval 2012

RENEW Trial Enrollment Initiated Dec 2012

RENEW Trial Enrollment Concluded N=315 Oct 2014

Primary Endpoint Nov 2015

Submission of PMA P170004 Feb 2017

Pre-PMA Meeting with FDA Feb 2016

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RENEW Protocol Amendment to Lower RV Threshold

Initial OUS feasibility data (N=23)
Shows baseline RV ≥225% increased benefit

Additional data available from OUS patients (N=140)
shows baseline RV ≥175% likely to benefit

FDA approves initial IDE pivotal study
0% enrollment

RV inclusion criterion

FDA approves IDE amendment
54% enrollment

RV ≥225% predicted

FDA approves initial IDE pivotal study

100% enrollment

RV ≥175% predicted
Key Conclusions From Clinical Experience

- RENEW met all primary and secondary endpoints based on ITT population
- Greater clinical improvement seen across all endpoints in originally defined population with RV ≥225% predicted
- Totality of evidence demonstrates ELEVAIR™ System safety and effectiveness
  - Improves quality of life, exercise capacity, and lung function in patients with severe emphysema (heterogeneous or homogeneous) and severe hyperinflation (RV ≥225% predicted)
  - Manageable safety profile through 24 months after implantation
- Data demonstrate a favorable overall benefit-risk profile in the population with severe hyperinflation
Proposed Indications for Use

- The ELEVAIR™ Endobronchial Coil System is indicated for bronchoscopic placement of ELEVAIR Coils in patients with severe emphysema (homogeneous and/or heterogeneous) and severe hyperinflation to improve quality of life, lung function, and exercise capacity.
<table>
<thead>
<tr>
<th>Agenda</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emphysema Disease Background</strong></td>
<td>James Donohue, MD</td>
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<tr>
<td></td>
<td>UNC School of Medicine</td>
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<tr>
<td><strong>RENEW Trial Design</strong></td>
<td>Claire Daugherty, MS</td>
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<td>Director, Biostatistics, BTG International, Inc.</td>
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<td><strong>Development and Effectiveness</strong></td>
<td>Gerard J. Criner, MD</td>
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<td>Founding Chair of Thoracic Medicine and Surgery, Temple University</td>
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<td><strong>Safety Profile</strong></td>
<td>David Hahn, MD</td>
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<td>Head, PneumRx, Inc.</td>
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<td>University of Chicago, Pritzker School of Medicine</td>
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<td><strong>Post-Market Plan</strong></td>
<td>Julia Anastas, MPH</td>
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<td>Vice President, Regulatory Affairs, PneumRx, Inc.</td>
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<td><strong>Patient Preference</strong></td>
<td>A. Brett Hauber, PhD</td>
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<td>Vice President, Health Preference Assessment, RTI Health Solutions</td>
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<td></td>
<td>University of Washington, School of Pharmacy</td>
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<td><strong>Clinical Context</strong></td>
<td>Frank Sciurba, MD</td>
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<td>University of Pittsburgh Medical Center</td>
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</tbody>
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