



Verona Pharma



Breathtaking science

Developing respiratory drugs for
better quality of life



November 2019

Nasdaq: VRNA

AIM: VRP

www.veronapharma.com



Forward-looking statements

This presentation contains “forward-looking” statements that are based on the beliefs and assumptions and on information currently available to management of Verona Pharma plc (together with its consolidated subsidiaries, the “Company”). All statements other than statements of historical fact contained in this presentation are forward-looking statements. Forward-looking statements include information concerning the initiation, timing, progress and results of clinical trials of the Company’s product candidate, the timing or likelihood of regulatory filings and approvals for of its product candidate, and estimates regarding the Company’s expenses, future revenues and future capital requirements. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other comparable terminology.

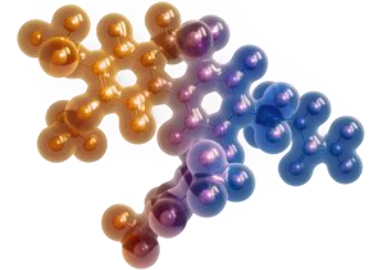
Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the Company’s actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These risks, uncertainties and other factors include those under “Risk Factors” in the Company’s annual report on Form 20-F filed with the Securities and Exchange Commission (the “SEC”) on March 19, 2019, and in its other reports filed with the SEC. Forward-looking statements represent the Company’s beliefs and assumptions only as of the date of this presentation. Although the Company believes that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee future results, levels of activity, performance or achievements. Except as required by law, the Company assumes no obligation to publicly update any forward-looking statements for any reason after the date of this presentation, or to conform any of the forward-looking statements to actual results or to changes in its expectations.

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Ensifentrine is a first-in-class candidate for respiratory disease

Unique PDE3 and 4 inhibitor for COPD – plan to enter Ph3 in 2020



Investment highlights

- Both bronchodilator and anti-inflammatory activity in single compound; well tolerated in >850 subjects
- Phase 2b data for nebulized ensifentrine expected late 2019/early 2020
- Successful Phase 2 study with DPI formulation in 2019
- Phase 2 data for MDI formulation expected Q1 2020
- Experienced management team; successful COPD and asthma developments
- Capitalized to deliver on key clinical milestones; partnering opportunities

Large US COPD market - A very significant commercial opportunity



COPD: A silent epidemic



**3rd
leading
cause of
death**

worldwide by 2030

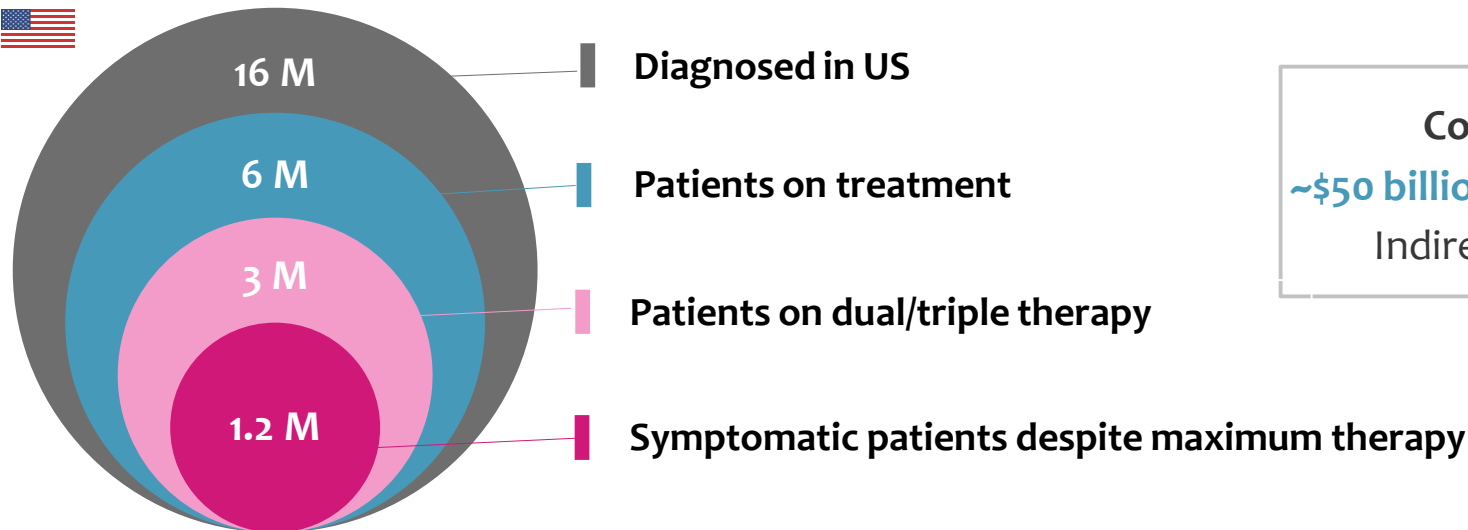
**384 million
patients
worldwide**

Breathless

Millions of
patients remain
symptomatic
despite maximum
treatment

**Progressive
deterioration**

Loss of lung
function, leading
to hospitalizations
and death



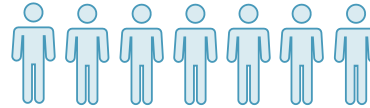
Cost in US

~\$50 billion/year by 2020

Indirect & direct

China: Large and growing COPD market

~70 million patients in China
(>2x US COPD population)



~7M
Treated
patients

Forecast to rise to
~16 million treated patients by 2030

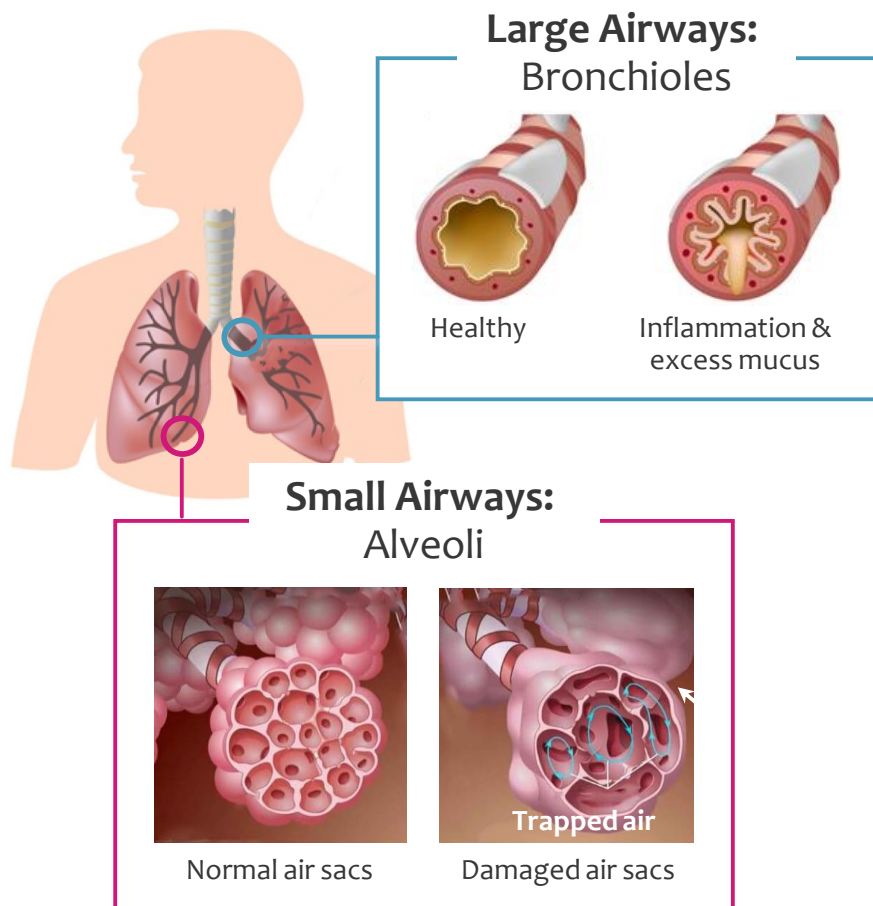
Sales partly driven by nebulizer
rooms in Tier 1-4 city hospitals
>15,000 established by AstraZeneca

\$2 billion respiratory sales* -
forecast to grow
~40% of sales from
nebulized products

COPD Maintenance Treatment
~30% of physicians report they used
nebulized drugs for maintenance

Strategic opportunity for ensifentrine

COPD: a significant unmet need



Consequences and symptoms

- Debilitating breathlessness
- Coughing, sputum
- Poor lung function
- Fatigue / struggle with daily tasks
- Exacerbations / flare-ups / death

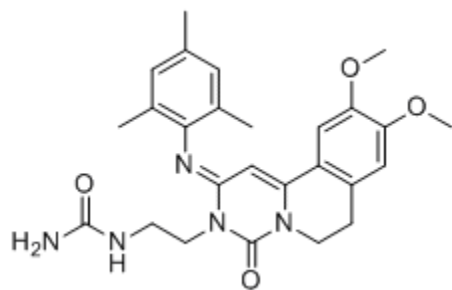
“When I bend over, I can’t breathe. I can’t unload the dishwasher, or make a bed ... I wake up but I can’t move. I am so short of breath.”

John Linnell, Living with COPD

Ensifentrine: first-in-class candidate with dual bronchodilator and anti-inflammatory effects

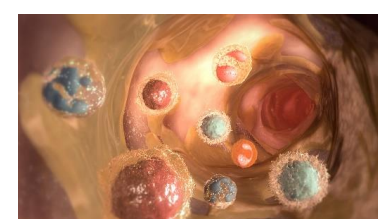


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Ensifentrine impacts 3 key mechanisms in respiratory disease

Ensifentrine (RPL554): Dual PDE3 and PDE4 enzyme inhibitor



Airway Smooth Muscle^{1,4}



PDE3, PDE4

Relaxation



Increased bronchodilation

Inflammatory Cells^{5,6}



Neutrophils
PDE4



Epithelial cells
PDE3, PDE4



Macrophages
PDE3, PDE4



Eosinophils
PDE4



Lymphocytes
PDE3, PDE4



Fibroblasts
PDE4



Increased anti-inflammatory effects

Epithelial Cells^{7,8}



PDE3, PDE4

CFTR Activation

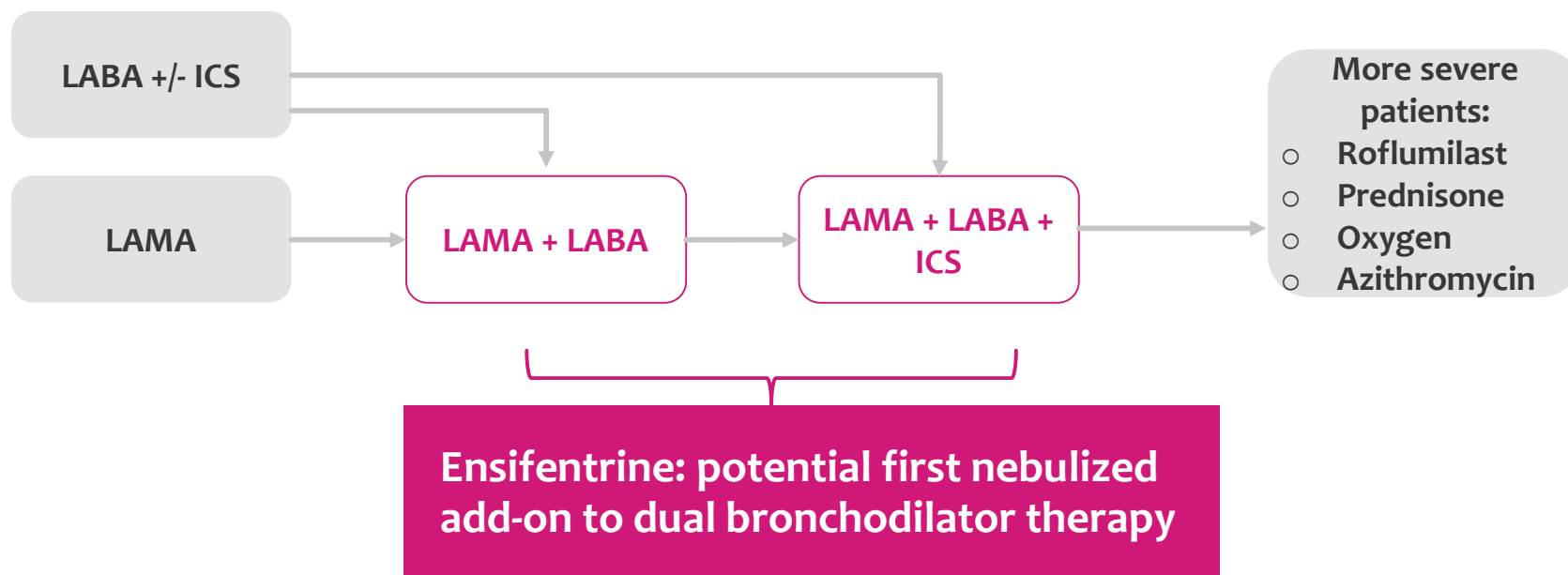


Increased mucociliary clearance

→ Leads to symptom improvement

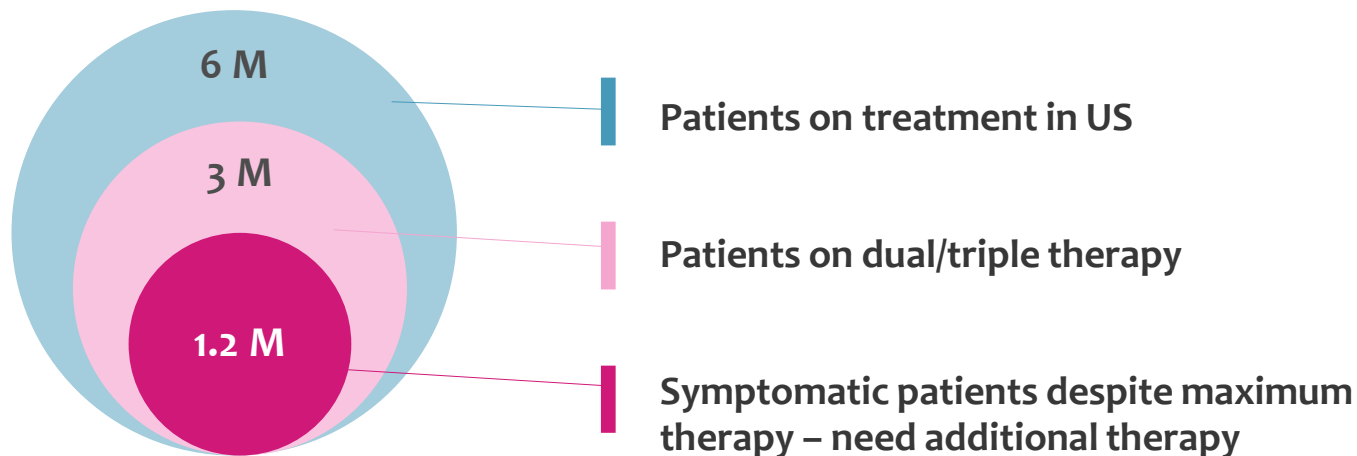
Opportunity for nebulized ensifentrine as add-on for dual/ triple treated patients

COPD treatment pathway



~40% of COPD patients on dual/triple therapy are uncontrolled and continue to experience debilitating symptoms of breathlessness and exacerbations^{1, 2, 3}

Compelling US market opportunity for nebulized ensifentrine



Current market data	Potential patient population
About 1/3 of symptomatic patients on maximum therapy use nebulizers	>400,000
Avg. Annual WAC Price of existing nebulized COPD drugs	\$12,000

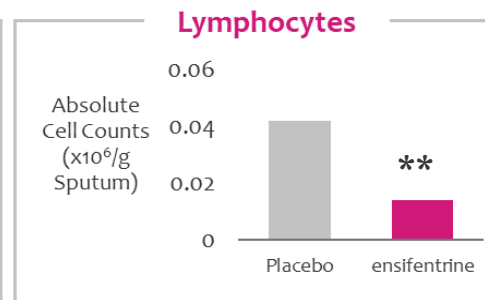
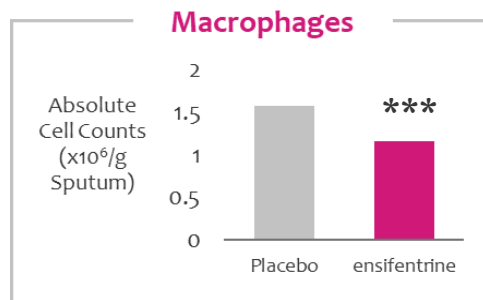
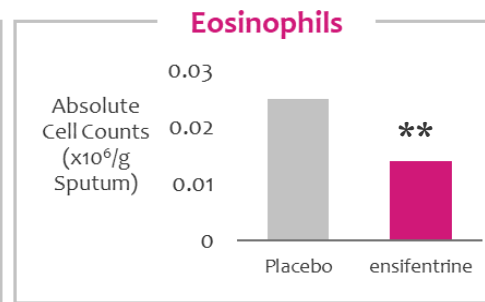
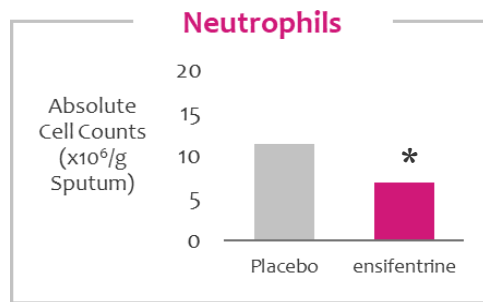
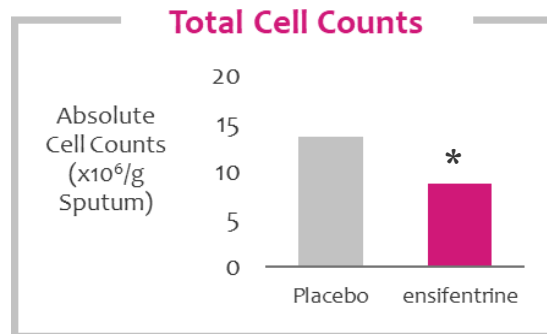
Attractive Medicare Part B Reimbursement

Top-prescribing physicians can be reached with focused salesforce

1 week treatment: Significant anti-inflammatory effect

Reduction in inflammatory cells

N=21



Phase 1 trial in 21 healthy subjects[†]

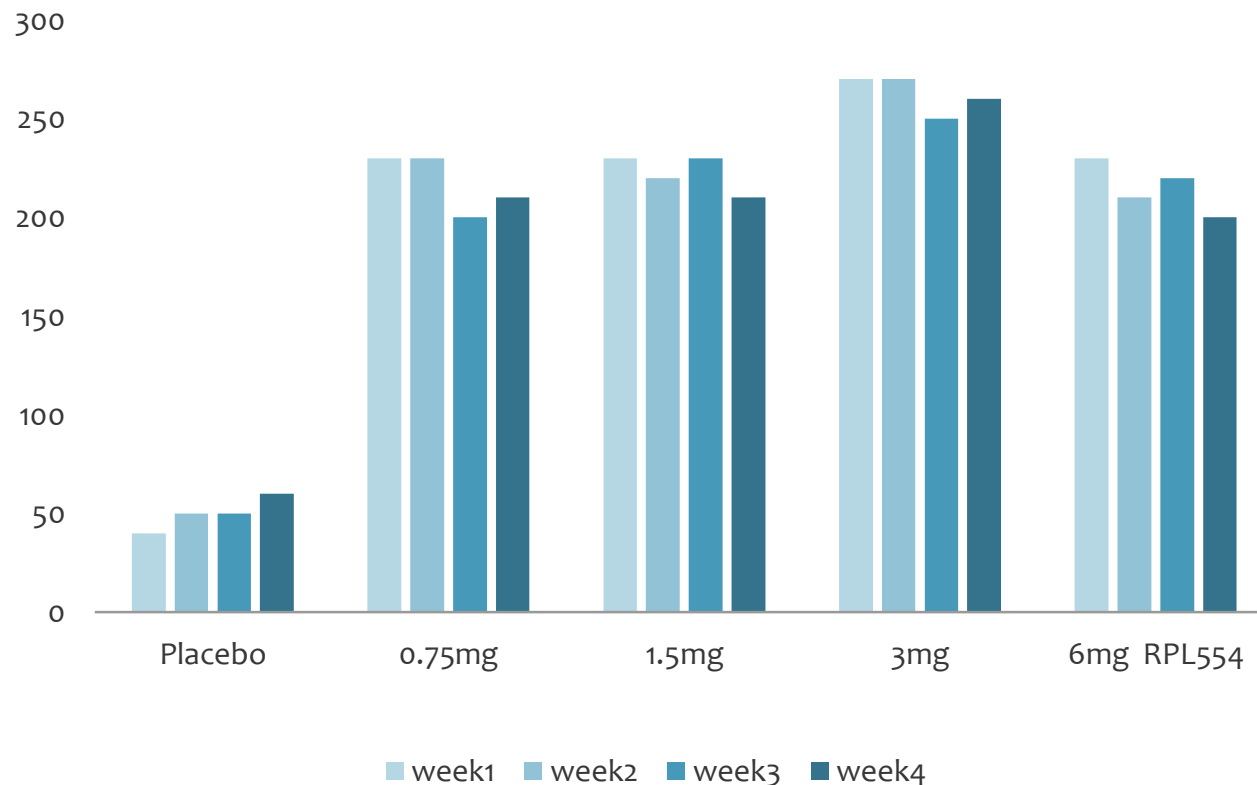
Cell count in induced sputum * p= 0.002; ** p=0.001; ***p = 0.044

[†] Franciosi et al, *Lancet Respir Med.* 2013 Nov;1(9):714-27.

4 week Phase 2b: Rapid, Significant and Clinically Meaningful Bronchodilator Response (N=403)

Lung function

Peak Change FEV₁ (mL), p<0.001*

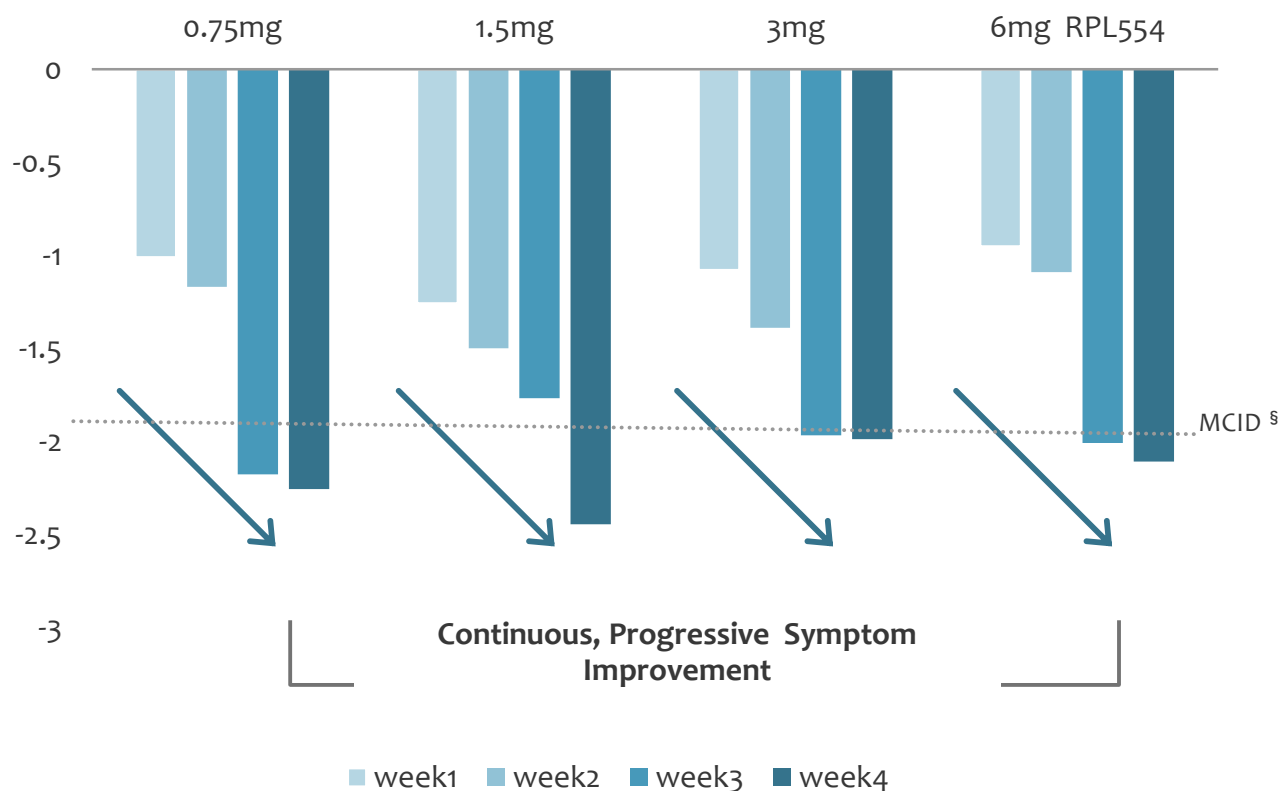


*Peak Change from Day 1 in Baseline in FEV₁ (mL) on Day 28, Week 4, Primary endpoint was met

4 Week Phase 2b: Progressive symptom relief

Symptom relief (N=403)

Total Score E-RS: COPD by Week, $p < 0.02^{**}$



** Placebo corrected

§ Minimal clinically important difference

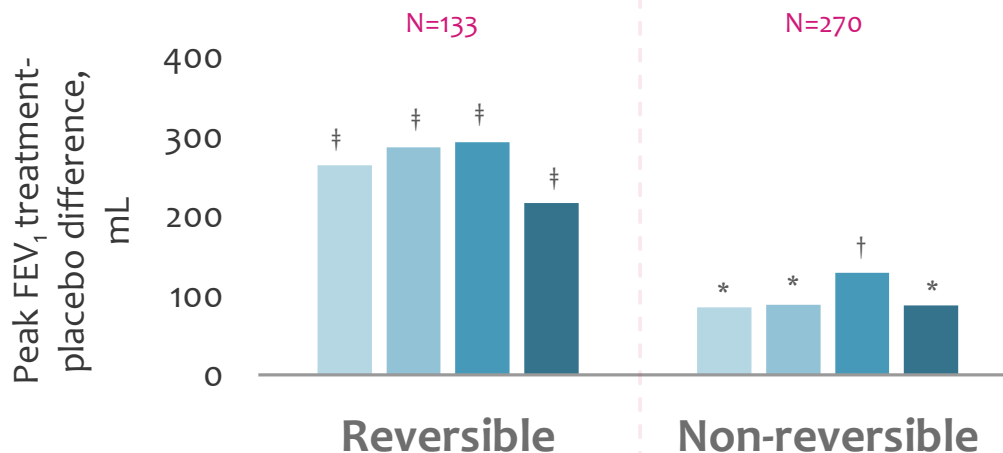
Bronchodilator + anti-inflammatory = Potential to reduce symptoms and exacerbations*

* Symptoms are a precursor to exacerbations;
Müllerová H, et al. PLoS One 2014;9:e85540

Effective symptom improvement in both reversible and non-reversible patients with COPD

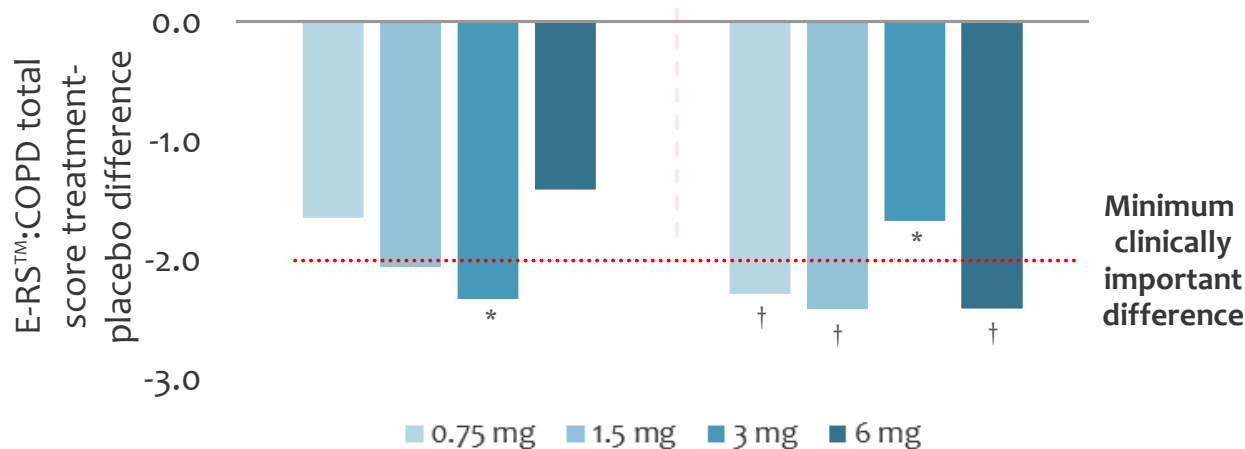
Symptom improvement appears unrelated to magnitude of bronchodilation

Lung function Peak FEV₁ at Week 4

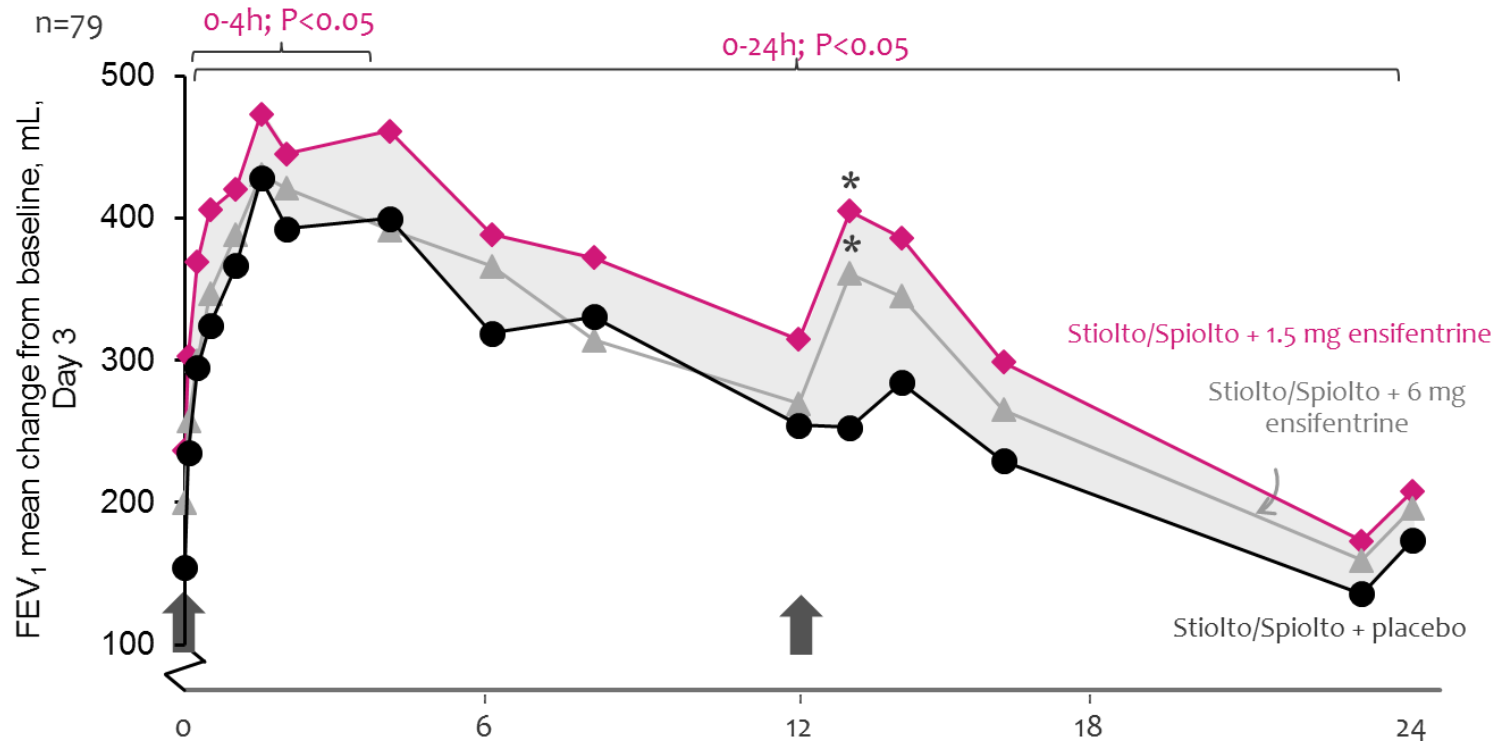


Reversibility defined as pre- to post-salbutamol change in FEV₁ at screening of ≥ 200 mL and $\geq 12\%$.

Symptom relief (E-RS™:COPD total score at Week 4)



24h lung function improvement as add-on to dual and triple COPD therapy



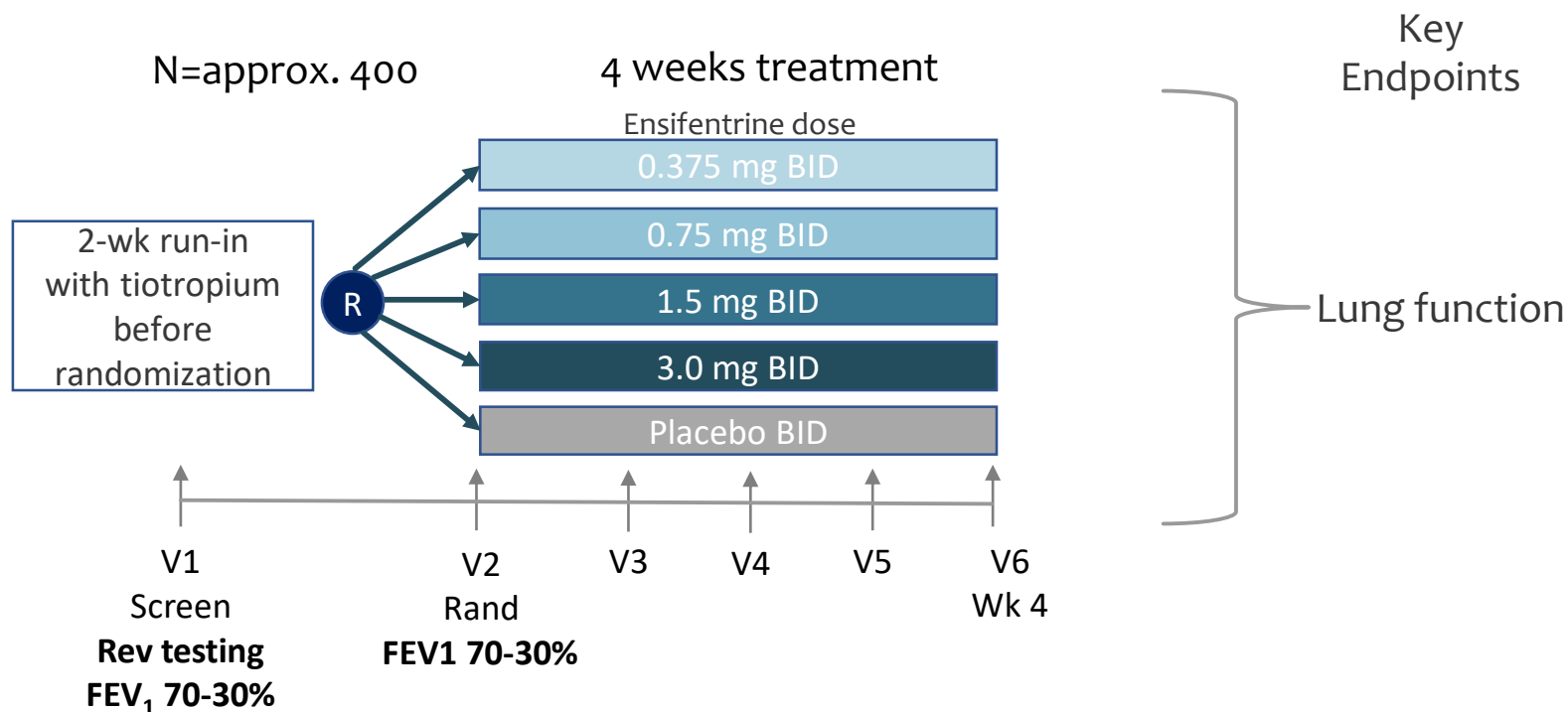
Additional significant bronchodilation throughout 24h

Significant reduction in hyperinflation (= reduced breathlessness)

Well tolerated

Ongoing Phase 2b trial to inform Ph3 dose selection

Purpose: Investigate the dose response of ensifentrine in patients with moderate to severe COPD and on tiotropium medication



Fully enrolled – data expected around year end

Nebulized ensifentrine: Plan to enter Phase 3 with differentiated profile



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Phase 2: Establish activity + profile

Proposed Phase 3 design and endpoints

A. Regulatory studies:

2 trials of 6 month duration,
one with 6 month safety extension

-
None or single bronchodilator
Background ①+②

-
FEV₁ and symptom improvement,
explore exacerbations in pooled
data

B. Positioning study: Inform physicians and payors

Add-on treatment to
dual bronchodilators

↑
End of Phase 2 Meeting
with FDA, target H1 2020

①

Monotherapy
(Dose Ranging)
~400 pts

Bronchodilator + anti-inflammatory
Completed 2018

**Add-on to
Double/Triple
Therapy**

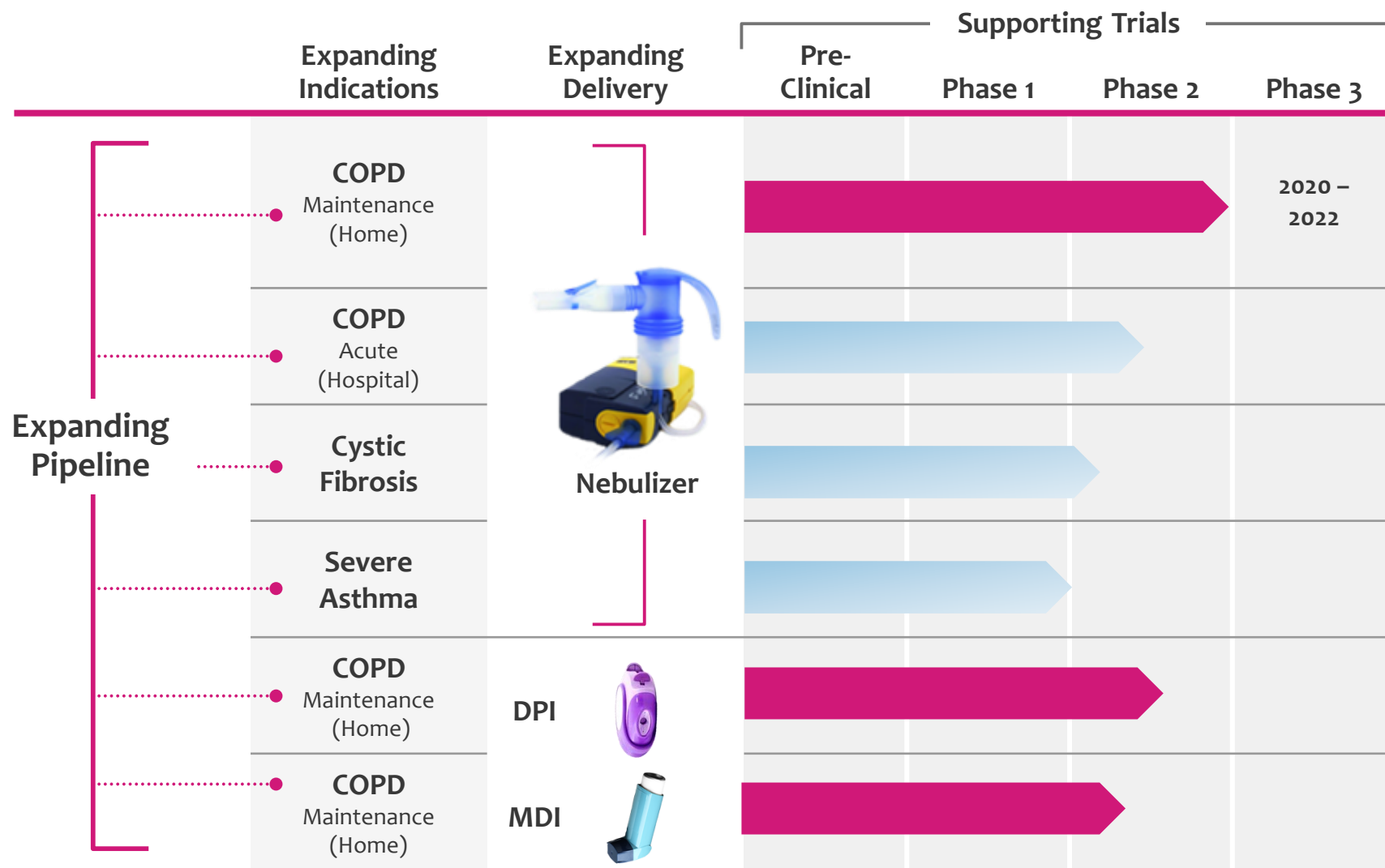
Bronchodilator
Completed Jan 2019

②

**Add-on to
Single Therapy**
(Dose Ranging)*

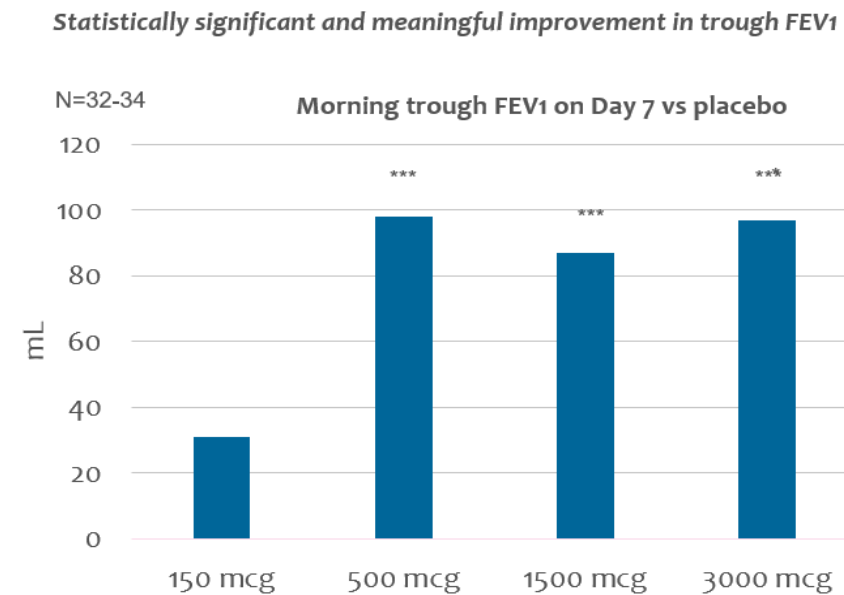
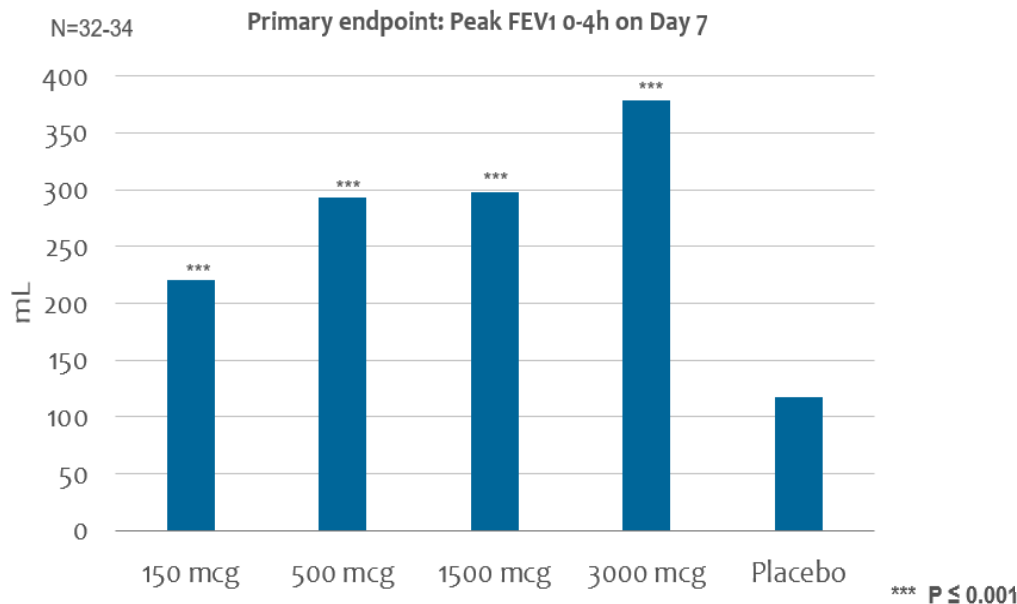
Bronchodilator +
anti-inflammatory*

Ensifentrine: Pipeline of indications and formulations



DPI formulation delivers positive Ph2 COPD results

Clinically meaningful, statistically significant & dose-dependent bronchodilation



DPI/ MDI partnering opportunity could significantly expand commercial potential

Blue chip shareholder base with long-term focus

Financial overview Sep 30, 2019

Cash and cash equivalents	\$50.5M ¹
Operating expenses 9M19	\$41.5M ¹
Market cap	\$62.4M ²

¹Exchange rate used (US dollars per pound sterling): September 30, 2019: \$1.2305

Cash and cash equivalents comprises cash + cash deposits > 3 months maturity

Cash and equivalents at September 30, 2019 amounted to £41.1M (\$50.5M)

²Current issued 105.3M shares or 13.2m ADSs, share price £0.46, exchange rate of \$1.2885

As disclosed to the Company in accordance with AIM Rule 26, or through s80 notices and 13F and 13G filings

VIVO
CAPITAL



OrbiMed
Healthcare Fund Management

NEA



Life Science Investing
ABINGWORTH

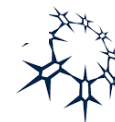
venBio



TEKLA
Capital Management LLC

novo
holdings

andera
PARTNERS



POLAR
CAPITAL

AISLING
CAPITAL

ARTHURIAN
LIFE SCIENCES

Ensifentrine: multiple opportunities for value-creation



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In COPD

Nebulized formulation in US

- 1.2 million symptomatic patients on dual bronchodilator/triple therapy need additional treatment

Nebulized formulation in China

- Prevalence ~70 million COPD patients; potential large market for nebulized drugs as about 90% of drug sales are in the hospital

DPI or MDI formulation for COPD

- Large market, >5 million patients in US; partnering opportunity

In other indications

Cystic fibrosis

- Potential first anti-inflammatory drug, independent of CF mutation status

Severe Asthma

- Bronchodilator and anti-inflammatory agent, possibly before initiating more restrictive biologics treatments

Chronic cough

- Anti-inflammatory mechanism reduces cough and improves mucociliary clearance

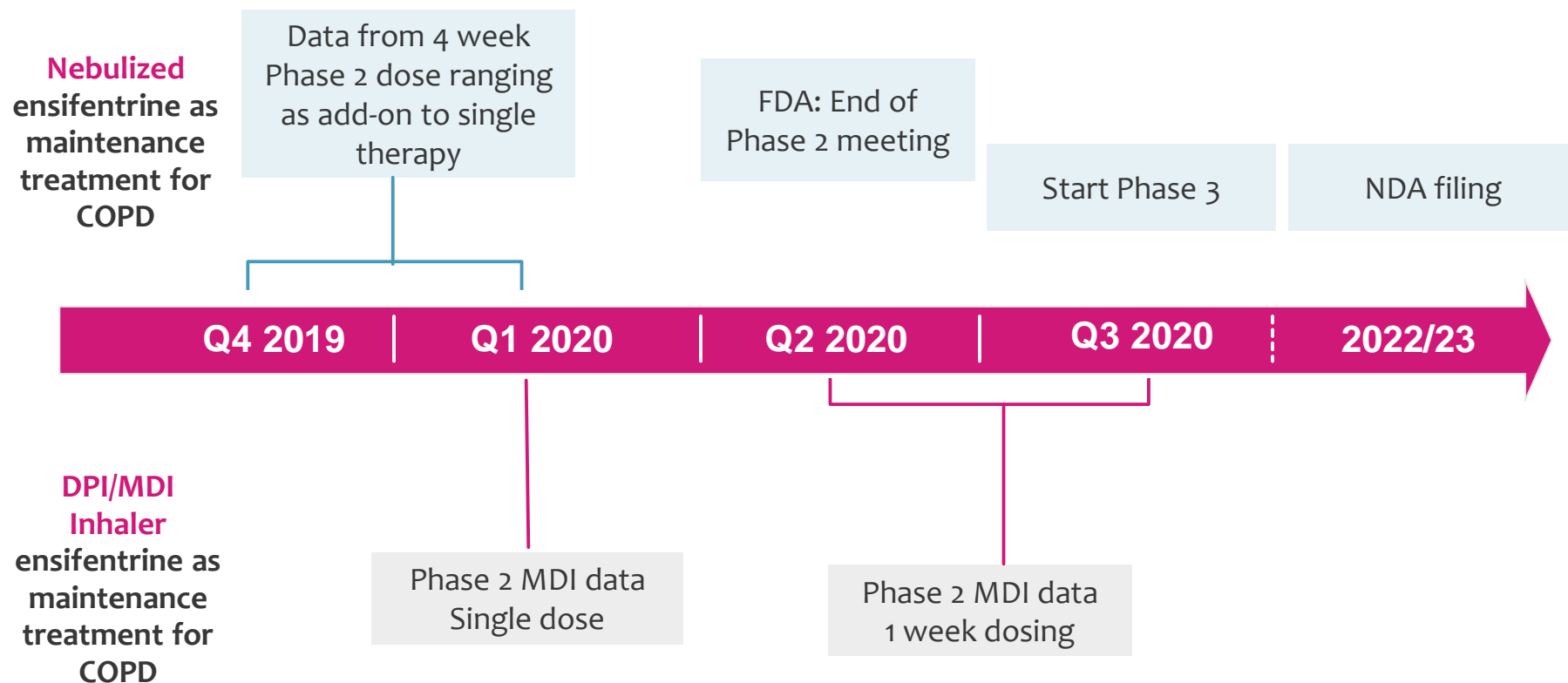
Nebulizer Phase 3 planned to start in US in 2020

Upside potential: China, DPI/MDI formulations and additional indications

Anticipated milestones as ensifentrine advances towards Phase 3 in 2020



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**Phase 3 trial design similar to Phase 2b
to increase likelihood of regulatory success**

Ensifentrine: promising novel therapy for patients with COPD

Unique product profile

- Bronchodilator and anti-inflammatory, rapid onset of action
- Improves symptoms in moderate to severe, symptomatic COPD
- Well tolerated in >850 subjects to date
- Additive benefit on top of existing therapies

Significant commercial opportunity

- >1 million symptomatic COPD patients in the US, despite max treatment
- Direct sales in US + partnering opportunities
- Upside potential in China and additional indications and formulations

Plan to enter Phase 3 in 2020



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Thank you





IP estate for ensifentrine

Verona Pharma owns global rights

Robust patent portfolio

>200 issued patents in key countries; >50 applications to potentially extend protection

- Polymorph patent – granted US, EU, Japan, other; expires 2031
- Suspension formulation – granted US, EU, other; expires 2035
- Manufacturing/API, use, salt forms, and combination patents: granted and pending in US, EU, and other territories; expires 2031 – 2037
- Composition of matter – granted US, EU, Japan, other; expires 2020
- Proprietary know-how and IP opportunities to expand IP

New chemical entity (NCE) protections

- US: Market exclusivity up to 5 years post NDA approval
- EU: Market & data exclusivity up to 10 years post approval



Execution-driven leadership team

Management

Jan-Anders Karlsson, PhD Chief Executive Officer	   
Piers Morgan, MA, ACA Chief Financial Officer	   
Kathy Rickard, MD Chief Medical Officer	 
Richard Hennings, BSc Commercial Director	  
Peter Spargo, PhD SVP CMC	  
Claire Poll, LLB Legal Counsel	 
Desiree Luthman, DDS VP Regulatory Affairs	  
Tara Rheault, PhD VP R&D Ops & Global Proj Mgmt	 

Verona's executives highly experienced in developing /commercializing many COPD drugs including:

ADVAIR

ANORO ELLIPTA

BREO

Flovent

 **flutiform**
fluticasone propionate/formoterol

INCRUSE ELLIPTA

Serevent

Symbicort

Tudorza Pressair

Ventolin

Maintenance COPD: Substantial Market with Premium Pricing in Nebulized Segment

US Sales of common bronchodilators	Administration	Class	Avg monthly \$ WAC price ¹	US only sales \$M ²
Brovana (Sunovion)	Nebulizer - open	LABA	1,030	457
Perforomist (Mylan)	Nebulizer - open	LABA	972	210
Lonhala (Sunovion)	Nebulizer - closed	LAMA	1,133	-
Yupelri (Mylan/Theravance) ³	Nebulizer - open	LAMA	1,030	>1,000 ³
Advair (GSK)	Inhaler	LABA / ICS	394	1,561
Spiriva (Boehringer)	Inhaler	LAMA	429	2,453
Anoro (GSK)	Inhaler	LAMA / LABA	410	870
Trelegy (GSK)	Inhaler	LAMA / LABA / ICS	546	337
Breo (GSK)	Inhaler	LABA/ICS	351	895
Symbicort (AZ)	Inhaler	LABA/ICS	346	1,271

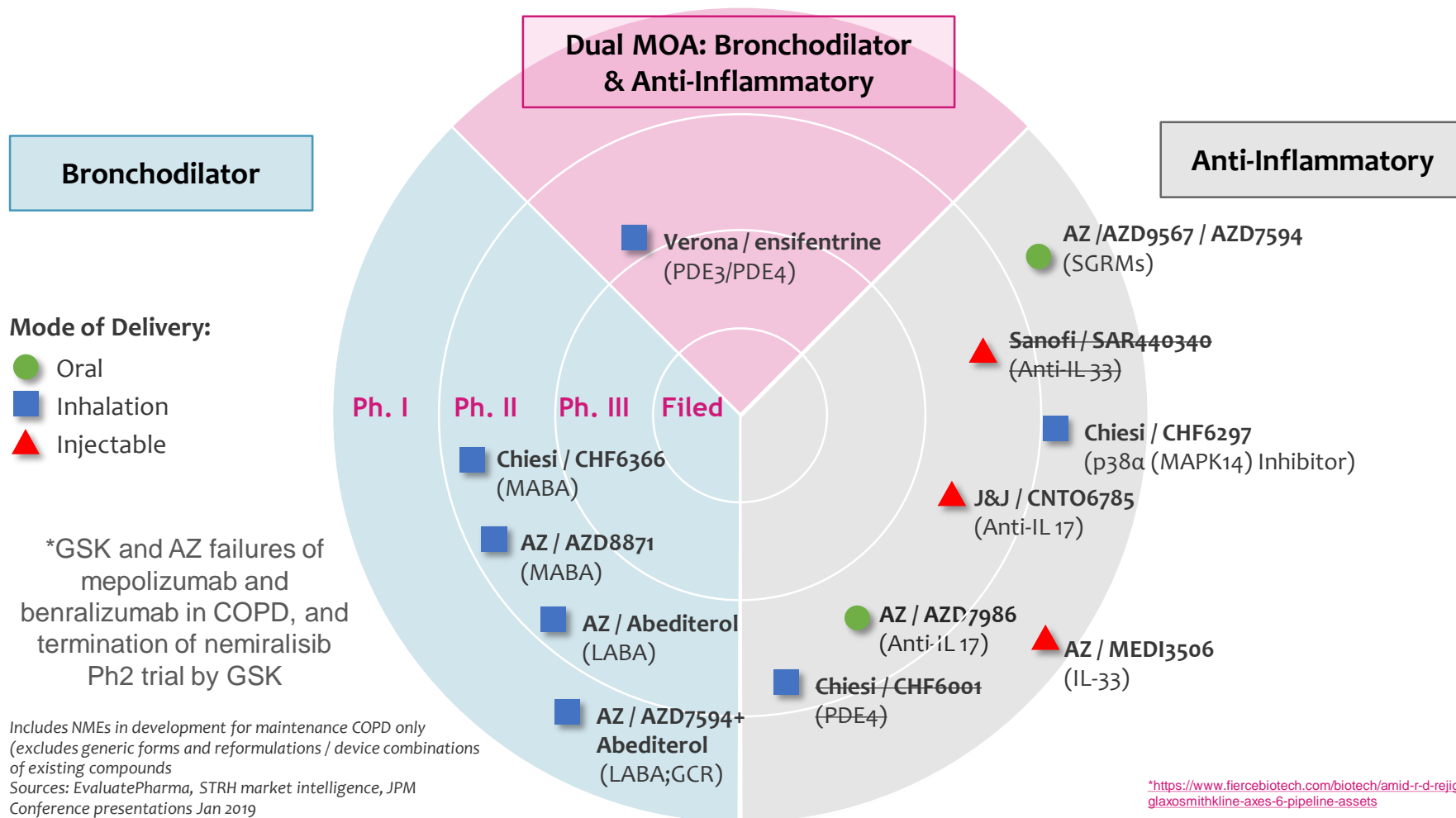
1. PriceRx; accessed April 2019

2. January 2018 – December 2018; COPD diagnosis only

3. Launched December 2018; analyst estimate of potential peak sales

Compelling need for therapy with new mode of action for COPD

... but few such drugs in development for COPD, and high rate of failure*



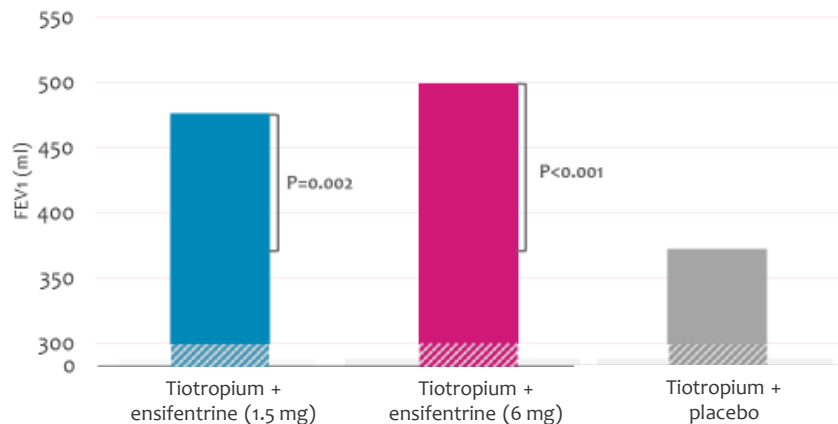
Ensifentrine improved lung function as add-on to LAMA (tiotropium / Spiriva®) (Reported Sep 2017)



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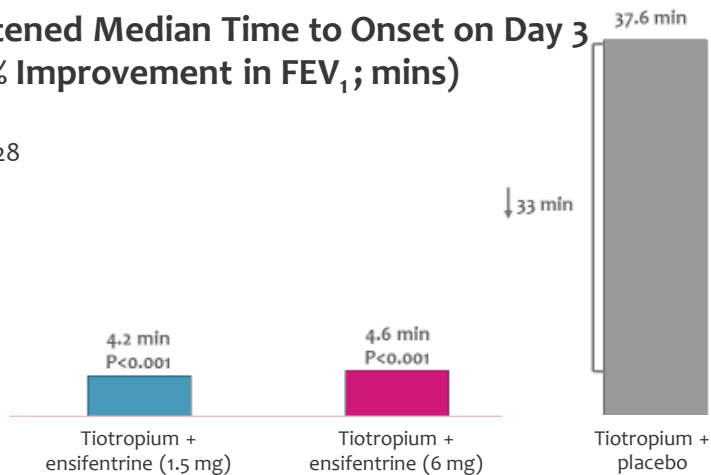
Change in Morning Peak FEV₁ from Baseline (mL), Day 3

N=27-28



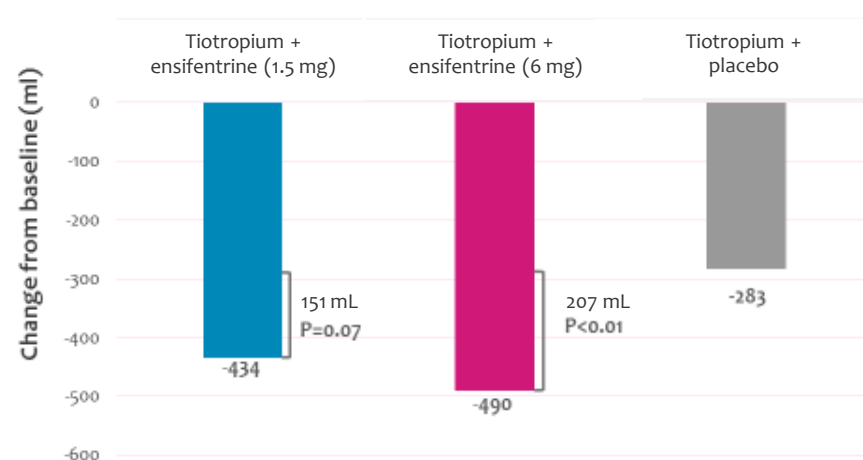
Shortened Median Time to Onset on Day 3 (≥ 10% Improvement in FEV₁; mins)

N=27-28



Reduced Hyperinflation (mL) on Day 2 (Morning)

N=27-28

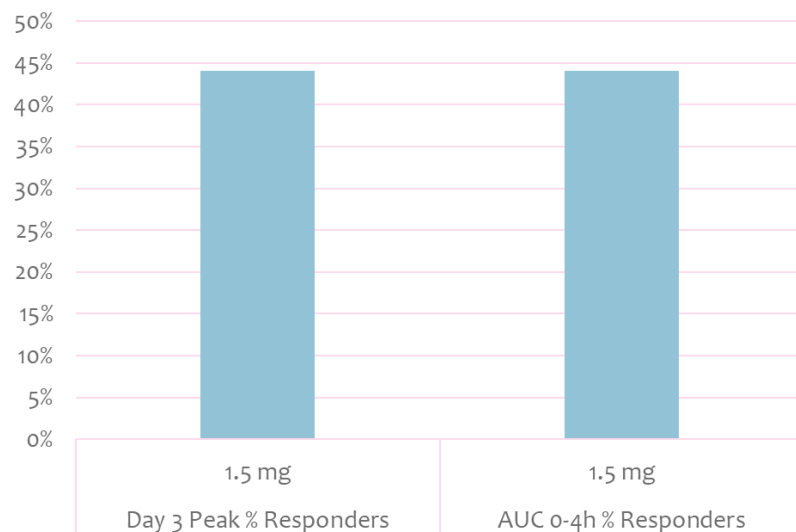


- Additional improvement in peak FEV₁
- Reduction of hyperinflation - typically correlated with improvement in symptoms
- Rapid onset of action
- Well tolerated

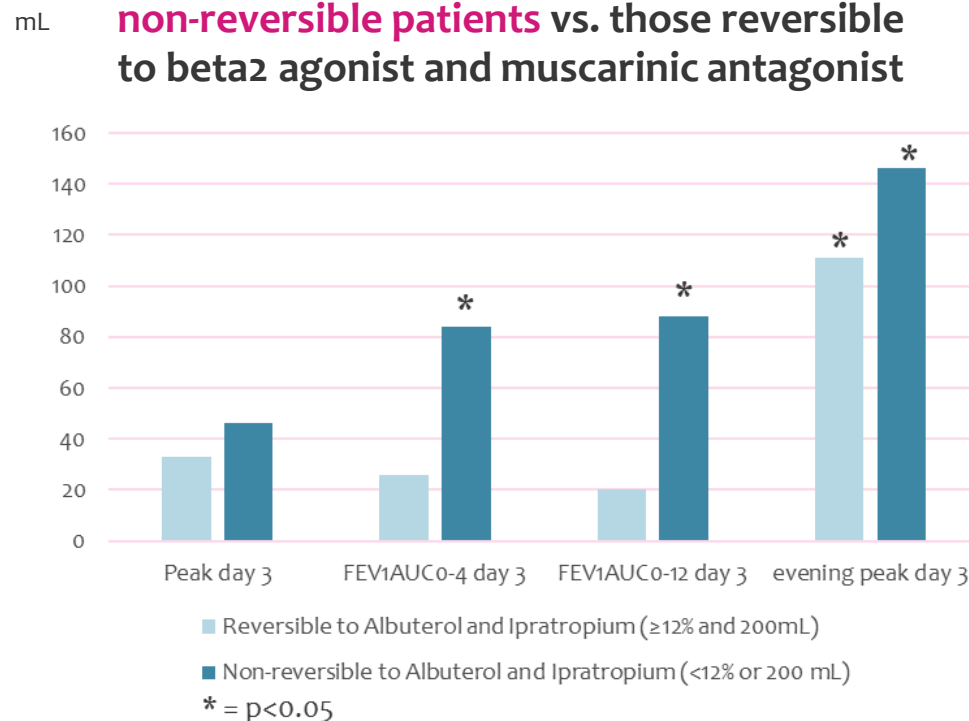
Post hoc analysis informs Ph3 clinical study

Substantial group of patients show significant response, >100mL improvement in Peak FEV₁
Greater response seen in patients who are less responsive to existing classes of bronchodilators

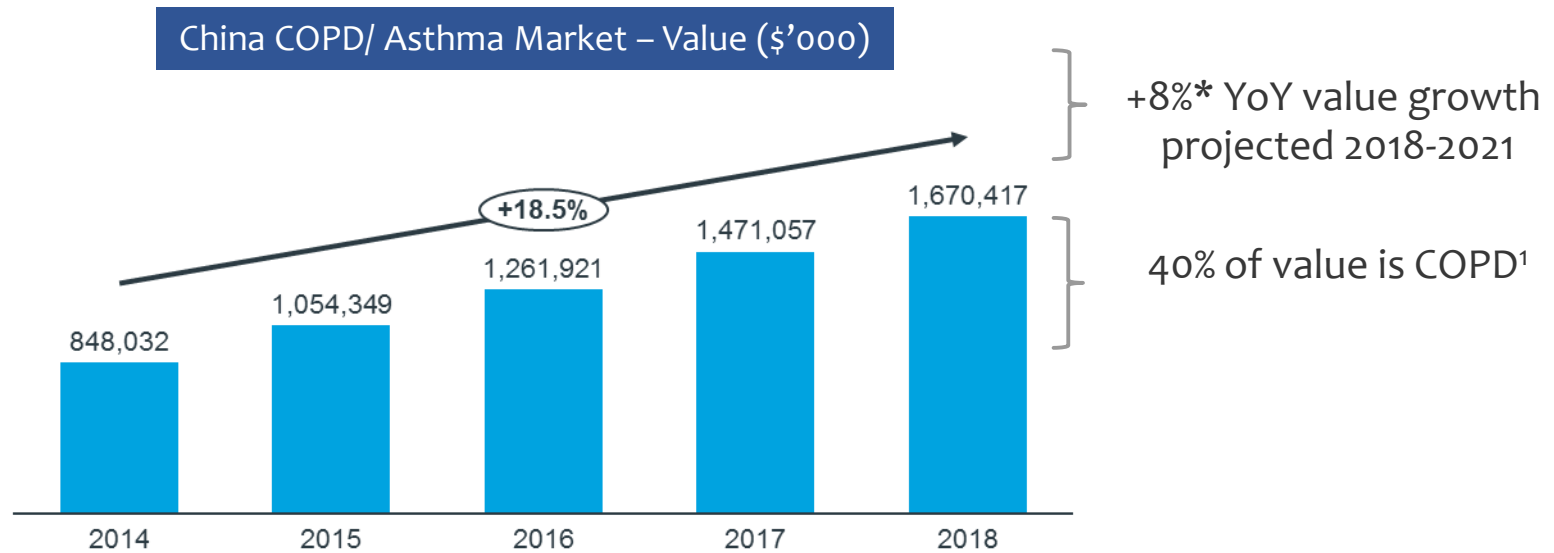
>40% of patients had ≥ 100 mL increase in peak FEV₁ vs placebo



1.5 mg ensifentrine: **additional response in non-reversible patients** vs. those reversible to beta2 agonist and muscarinic antagonist



China: Large and Fast Growing COPD Market



- Treated COPD population: ~8 million (vs US 6M) cigarette smoking and air pollution leading causes
- Hospital driven market ~90% of sales in terms of value (vs. US ~80% in retail channel)
- ~15,000 hospital 'nebulizer rooms' supporting annual ~\$500M Pulmicort nebulized market