

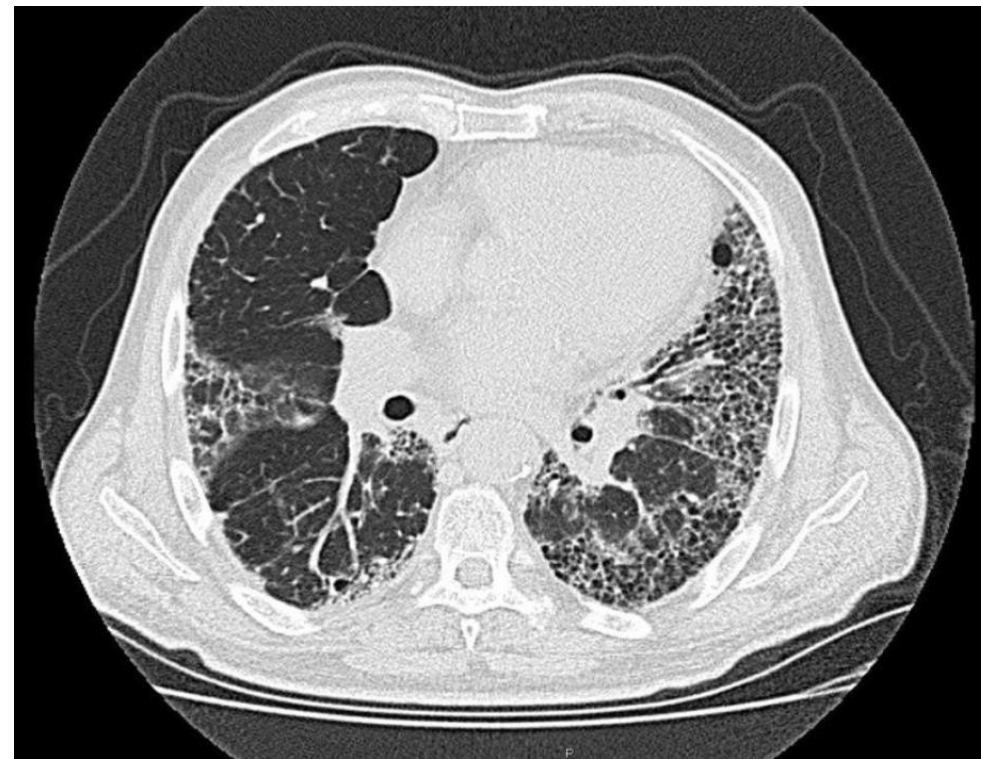


ziritaxestat

for idiopathic pulmonary fibrosis
(IPF)

Progressive lung fibrosis leading to death

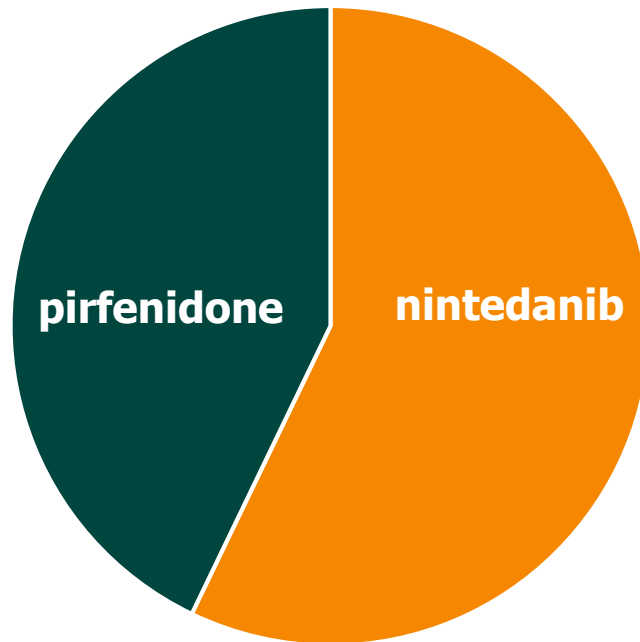
- 250k cases in US & EU
- 75k new cases every year
- median survival 2-5 years





IPF \$2.8B market with large unmet needs

2019 DRUG SALES: \$2.8B



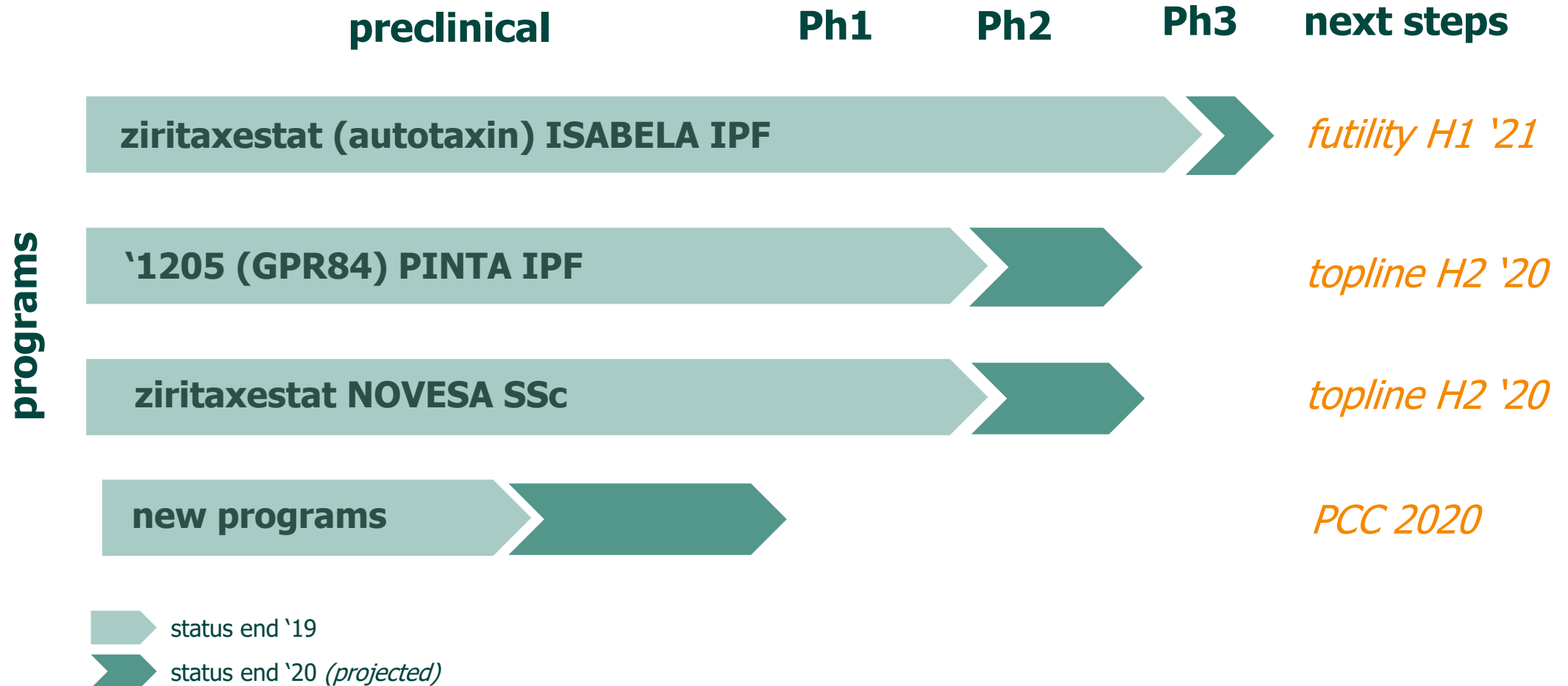
nintedanib & pirfenidone have limitations

- slow FVC decline
- poor tolerability for patients
- ~25% annual discontinuations

Sources: Global Data, Maher et al. BMC Pulmonary Medicine (2017) 17:124, sales figures from Roche (pirfenidone; Esbriet®) and Boehringer Ingelheim (nintedanib; Ofev®)
FVC: Forced vital capacity



IPF & fibrosis portfolio



FLORA in *The Lancet Respir Med*

Articles

Safety, tolerability, pharmacokinetics, and pharmacodynamics of GLPG1690, a novel autotaxin inhibitor, to treat idiopathic pulmonary fibrosis (FLORA): a phase 2a randomised placebo-controlled trial



Toby M Maher, Ellen M van der Aar, Olivier Van de Steen, Lisa Allamassey, Julie Desrivot, Sonia Dupont, Liesbeth Fagard, Paul Ford, Ann Fieuw, Wim Wuyts

Summary

Background Idiopathic pulmonary fibrosis (IPF) causes irreversible loss of lung function. People with IPF have increased concentrations of autotaxin in lung tissue and lysophosphatidic acid (LPA) in bronchoalveolar lavage fluid and exhaled condensate. GLPG1690 (Galapagos, Mechelen, Belgium) is a novel, potent, selective autotaxin inhibitor with good oral exposure. We explored the effects of GLPG1690 in patients with IPF.

Lancet Respir Med 2018

Published Online

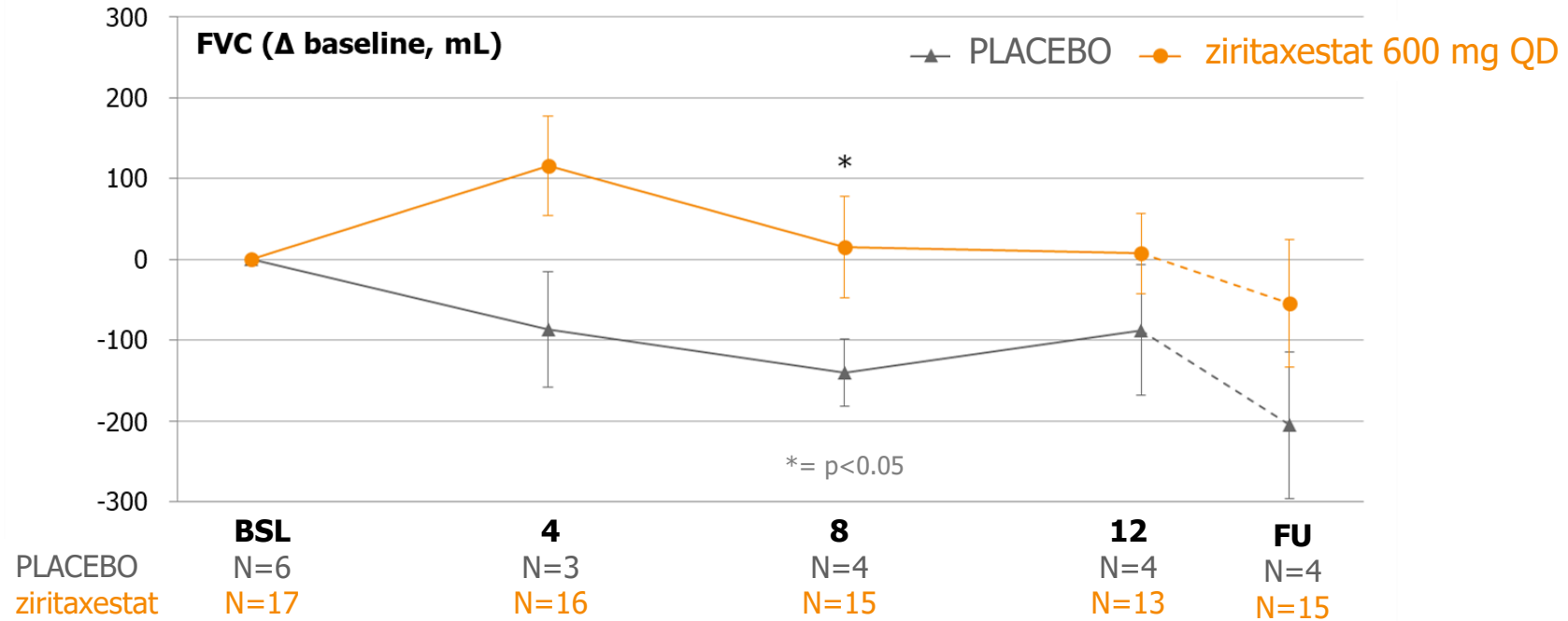
May 20, 2018

[http://dx.doi.org/10.1016/](http://dx.doi.org/10.1016/S2213-2600(18)30181-4)

S2213-2600(18)30181-4



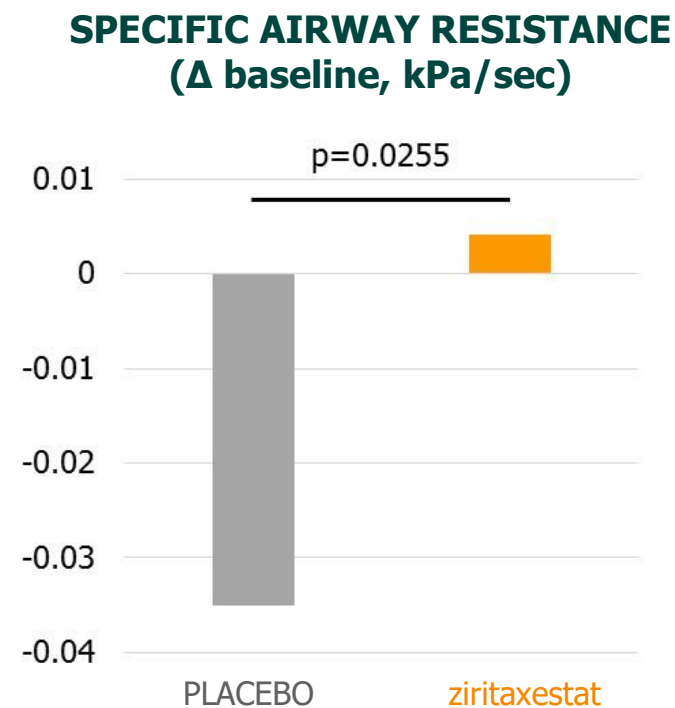
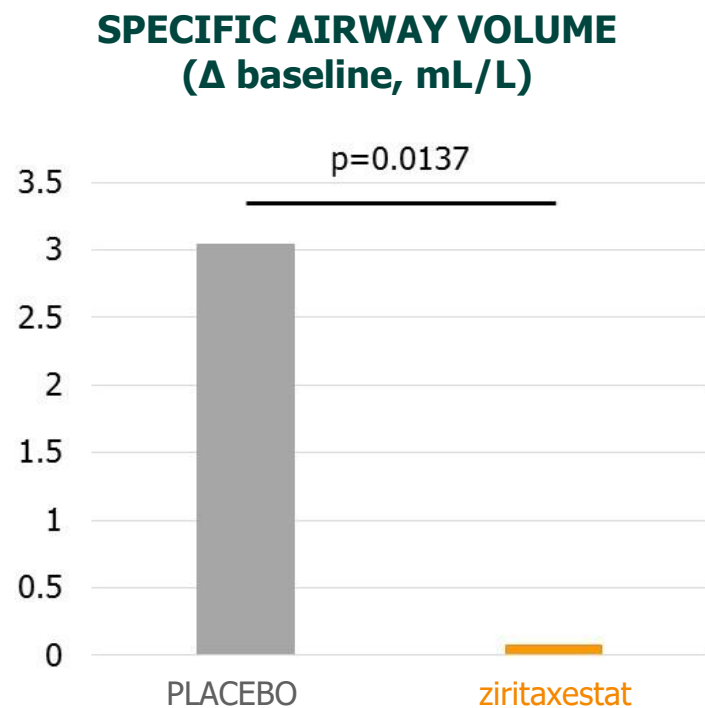
Positive ziritaxestat data in patients



FVC (Δ baseline, mL)	Wk4		Wk8		Wk12		Follow-up	
	Placebo	'1690	Placebo	'1690	Placebo	'1690	Placebo	'1690
	-87	+116	-140	+15	-87	+8	-205	-55

FVC stabilization over 12-week period

FRI indicates disease stabilization

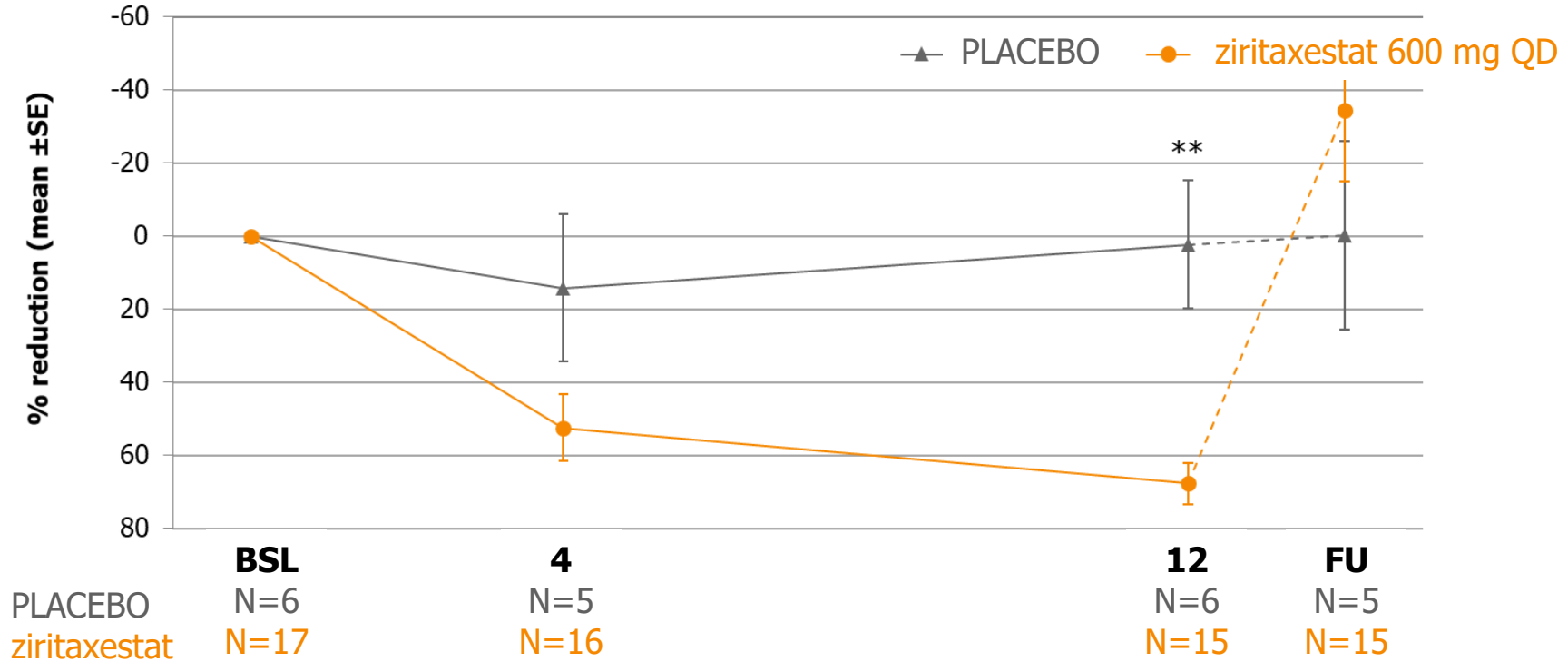


Functional respiratory imaging tracks ahead of FVC



Strong biomarker reduction

REDUCTION OF LPA18:2 IN BLOOD PLASMA



**= p<0.01

Biomarker reduction = target engagement

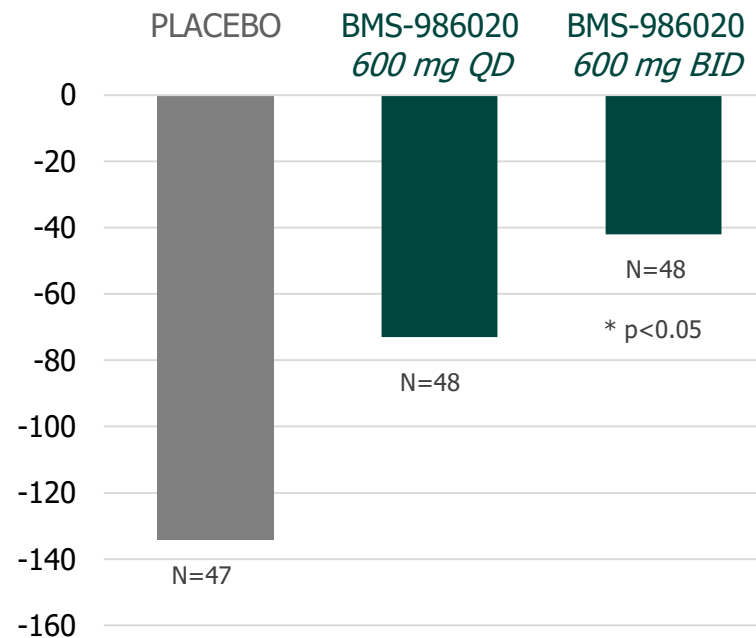


ziritaxestat pathway clinically validated

LPA1 inhibition has impact

- BMS-986020 reduced FVC decline
- Trial stopped due to off-target cholecystitis
- BMS-986020 inhibits LPA1
- `1690, an autotaxin inhibitor, markedly reduces LPA1 levels

SLOPE ESTIMATE OVER 26 WEEKS (mL)



Source: Chest. 2018 Sep 7. pii: S0012-3692(18)32411-5



Phase 3 program ISABELA 1&2

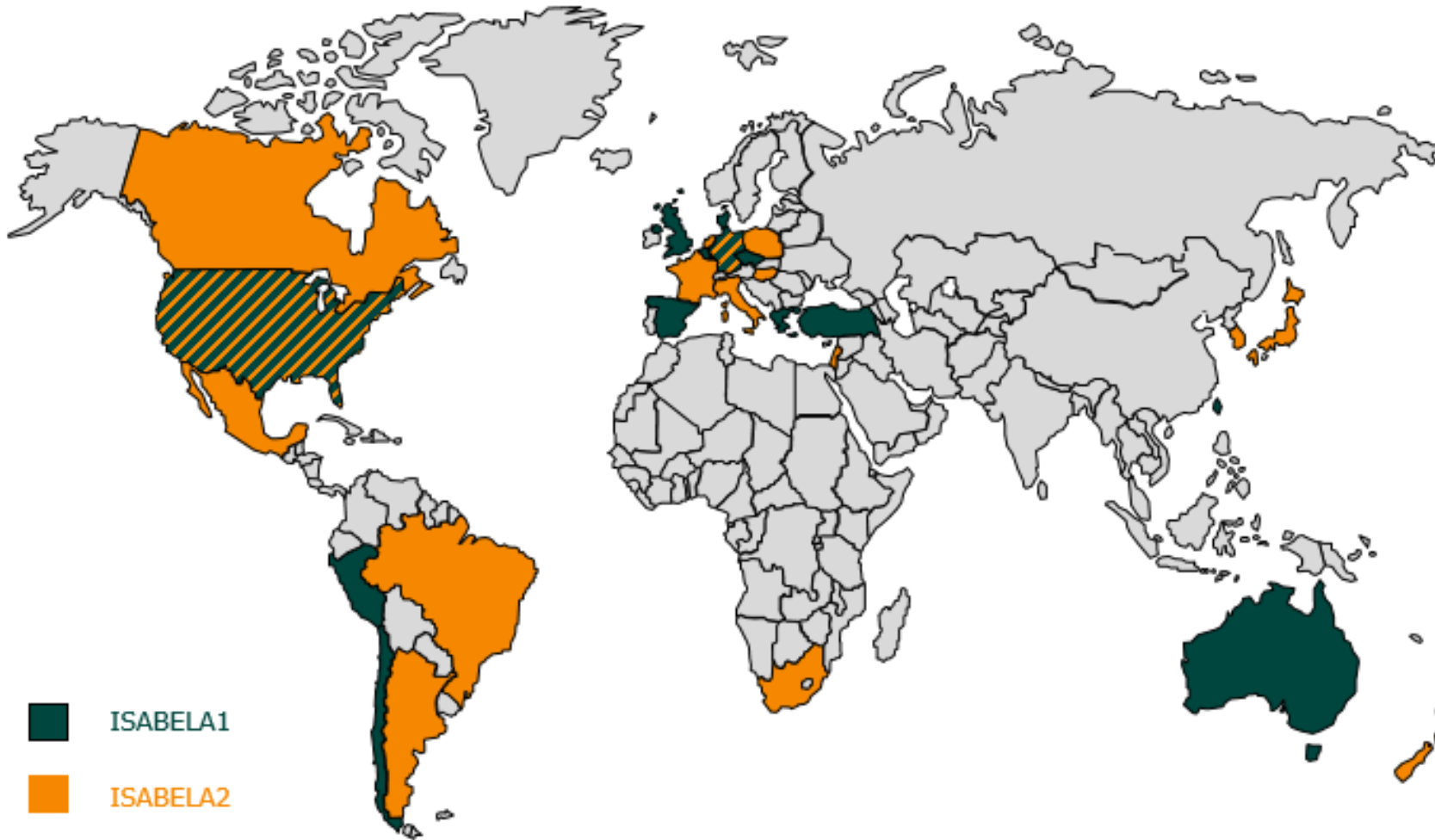


- 1500 IPF patients total in two identical Phase 3 studies
- Patients remain on standard of care throughout
- Global program with US & EU component
- Primary endpoint: FVC decline at 52 weeks
- Secondary: hospitalizations, mortality, quality of life, safety/tolerability

ziritaxestat has orphan status in IPF in US and EC



ISABELA participating countries



APAC

ISABELA1: Australia, Taiwan
ISABELA2: Japan, New Zealand, South Korea



EMEA

ISABELA1: Belgium, Czech Republic, Denmark, Germany, Greece, Spain, Turkey, UK
ISABELA2: France, Germany, Hungary, Israel, Italy, Netherlands, Poland, South Africa



LATAM

ISABELA1: Chile, Peru
ISABELA2: Argentina, Brazil, Mexico



North America

ISABELA1: USA
ISABELA2: Canada, USA

* As of Nov 8, 2019



ISABELA, innovative program in IPF

Largest IPF
program thus far

Assesses efficacy & safety
in **real-world setting**



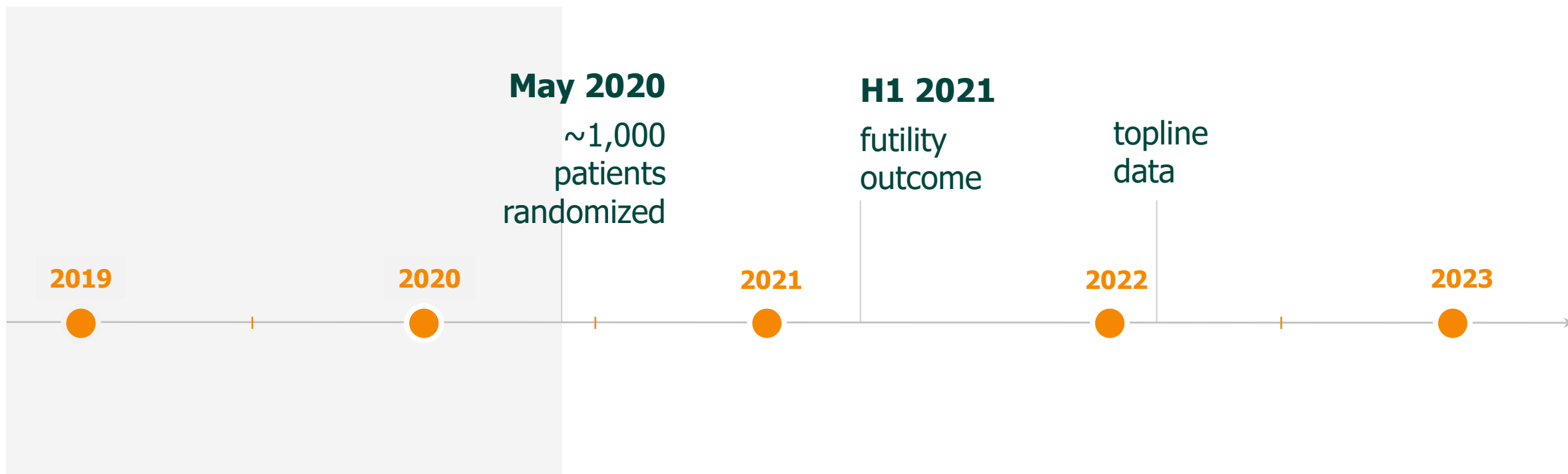
Controlled data on
medically-relevant, hard endpoints like changes in FVC, mortality rates, respiratory-related hospitalizations and PROs

Large safety dataset
in 1,500 patients
over 52 weeks or longer



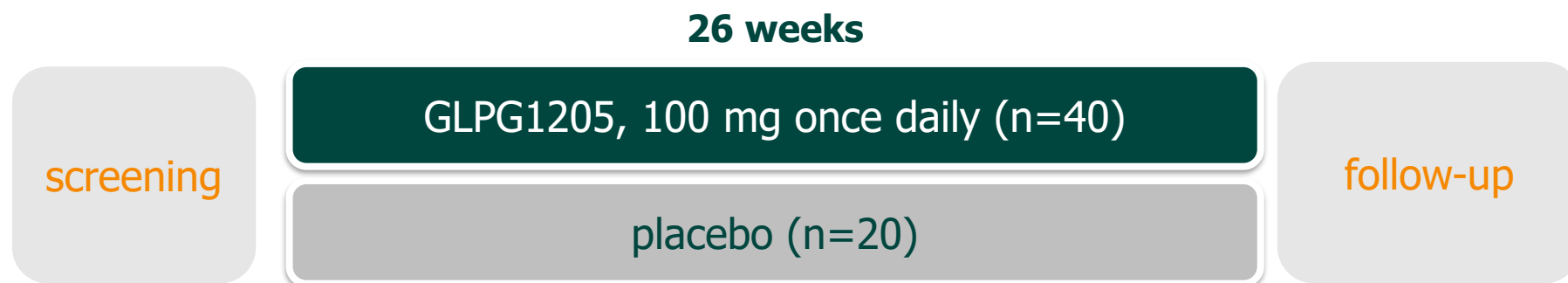
ISABELA

timeline





PINTA Phase 2 in IPF



- 60 IPF patients on local standard of care
- Primary endpoint: forced vital capacity (FVC) at 26 weeks
- Secondary: safety, tolerability, broad range of measurements, incl. functional respiratory imaging (FRI)
- Recruitment in 9 countries in Europe, North Africa, & Middle East

Fully recruited, topline data expected in H2



Systemic sclerosis (SSc)

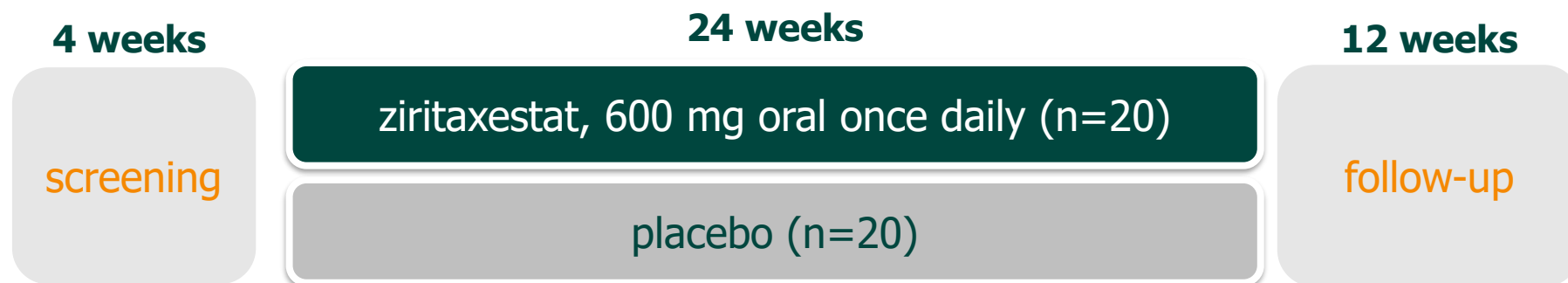
- Multi-organ (“systemic”) fibrosis
- Rare disease: ~95k patients¹
- Among the highest mortality of all autoimmune/rheumatic diseases²
- No approved anti-fibrotic drugs³



¹ Global Data 2014; ² Nikpour et al Curr Opin Rheumatol. 2014; ³ Denton et al Lancet 2017



NOVESA Phase 2 in SSc



- 30 patients with progressive diffuse (multi-organ) SSc
- Recruitment in US & 5 EU countries
- Primary endpoint: mRSS at 24 weeks
- Secondary & exploratory endpoints: safety, tolerability, broad range of measures (FVC, quality of life, CRISS)

Fully recruited, topline data expected in H2,
orphan status in SSc in US and EC

CRISS: Composite Response Index in Systemic Sclerosis; FVC: forced vital capacity; mRSS: modified Rodnan Skin Score