



July 8, 2019

R&D UPDATE CALL

(NASDAQ:AZRX)

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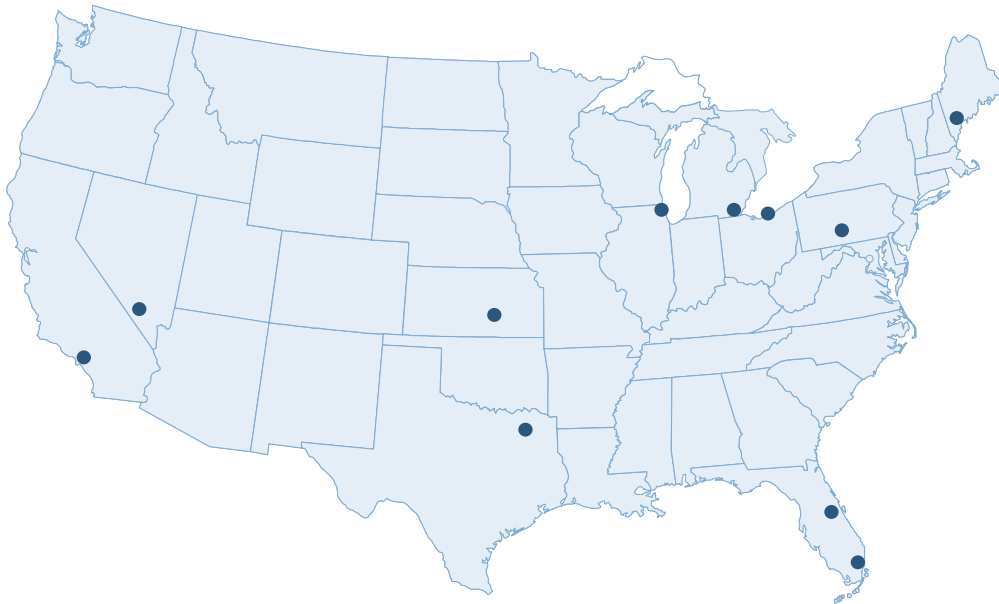
R&D Update – MS1819

- Phase 2 Cystic Fibrosis (CF) Study Status
- Phase 2 Combination Trial in Cystic Fibrosis Patients with Severe Exocrine Pancreatic Insufficiency
- Phase 2 Chronic Pancreatitis Study Results Recap

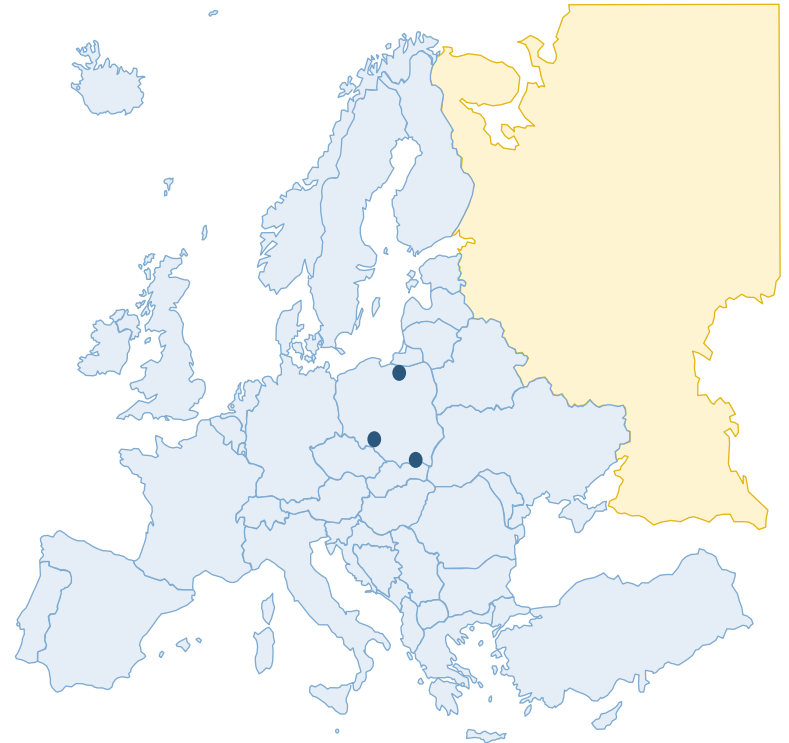
Phase 2 Cystic Fibrosis (CF) Study Update

- All 14 sites have participated in enrollment
- Serious protocol deviations have been rare, attesting to excellent site conduct
- Safety has been excellent, with no serious adverse events related to MS1819
- Withdrawal rates have been low, compatible with, or below, other trials of synthetic enzymes
- Final data analysis is planned for September release

Study Sites for Phase 2 OPTION Study of MS1819



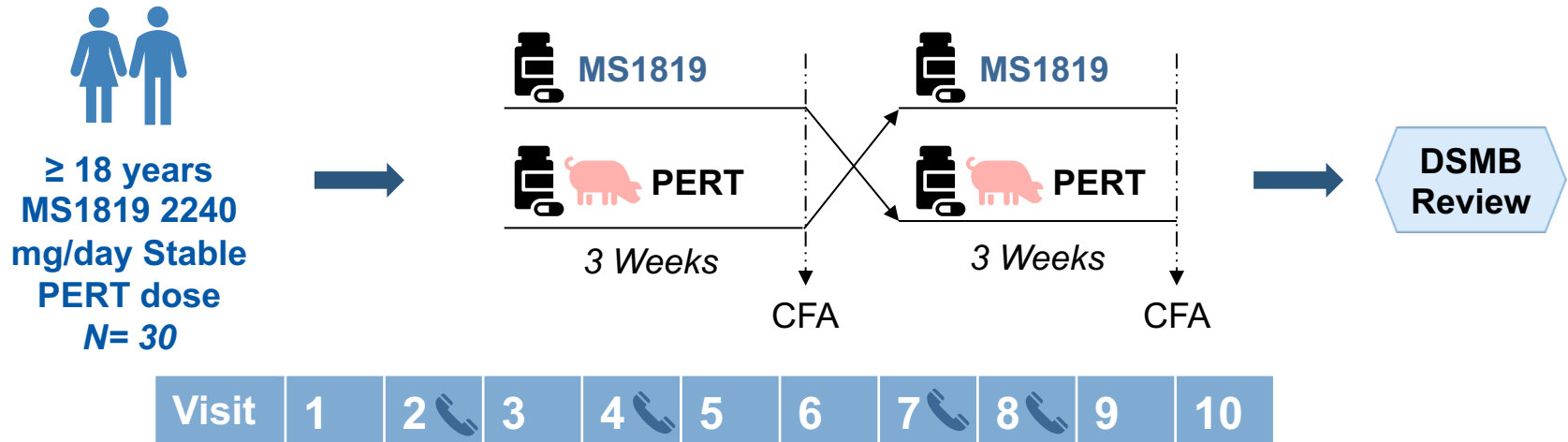
US sites



Polish sites

Phase 2 U.S. and E.U. Study in Cystic Fibrosis Has Completed Enrollment

A Phase 2 Open-Label, Multicenter, 2x2 Crossover Trial to assess the Safety and Efficacy of MS1819-SD in Patients with Exocrine Pancreatic Insufficiency due to Cystic Fibrosis



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Combination Trial of MS1819 and PERT in CF Patients with Severe EPI

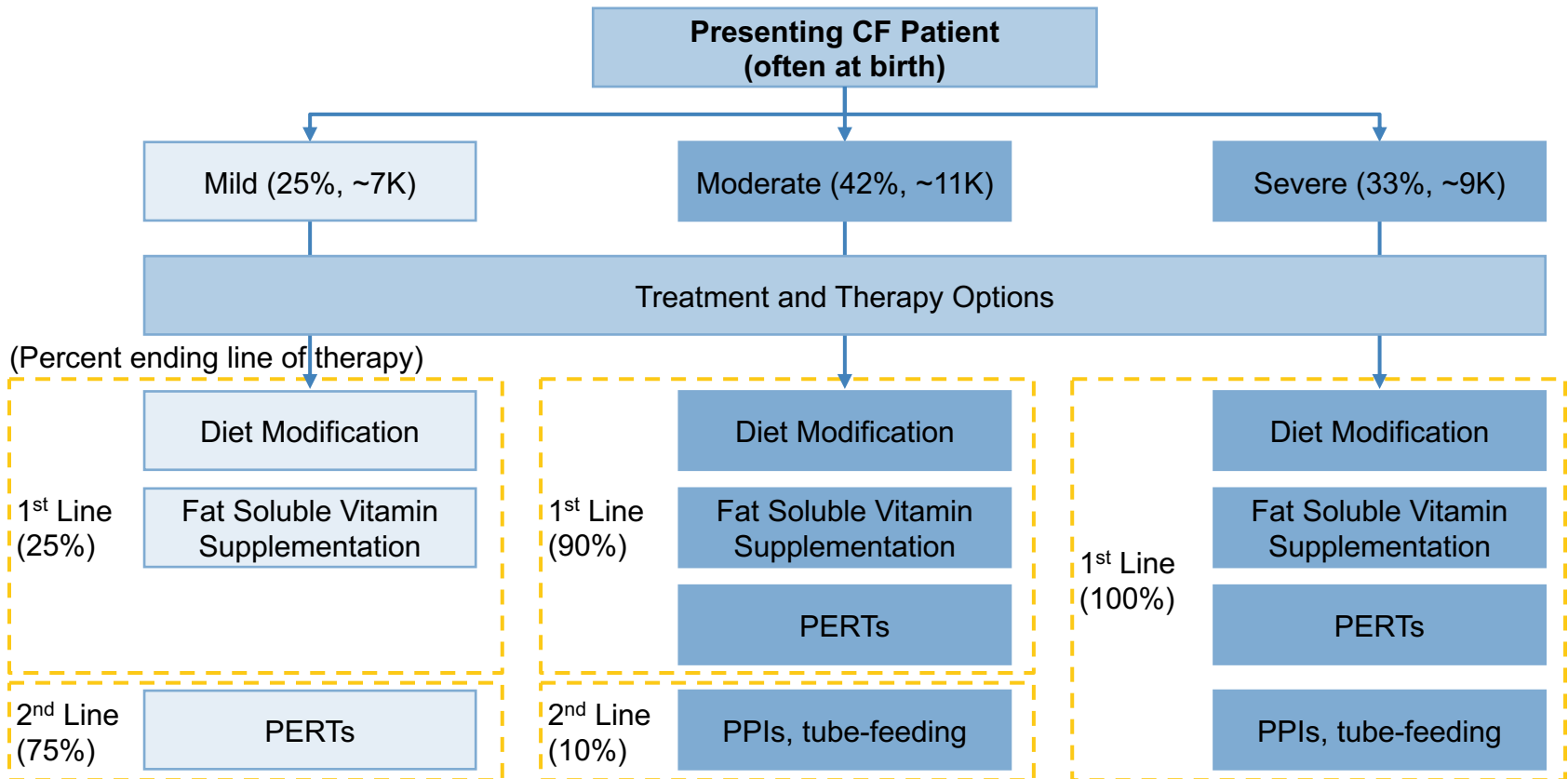
- Satisfactory PERT should enable the patient to eat a normal to high-fat diet and abolish unpleasant gastrointestinal symptoms
- Control of fat and protein malabsorption can be achieved in many patients¹
- These aims should be possible in many patients with CF, using present-day enzyme preparations however there is a dose limit of up to 10,000 IU lipase/kg/day.
- In practice, a substantial number of CF patients do not achieve entirely normal fat absorption within these guidelines
- Even at specialist CF centers where there is a particular interest in the gastroenterological aspects of CF treatment, a third of CF patients achieved CFA's less than 80%²

1 Freedman S.D., *American Journal of Managed Care*, 2017; 23:S220-S2228

2 Littlewood, J.M. et al., *Pediatric Pulmonology*, 2006, 41:35-49

CF Digestive Problems – Treatment Approach

CF EPI patients progress through different lines of therapy. Progressive EPI requires enzyme replacement therapy to treat the underlying deficiency.



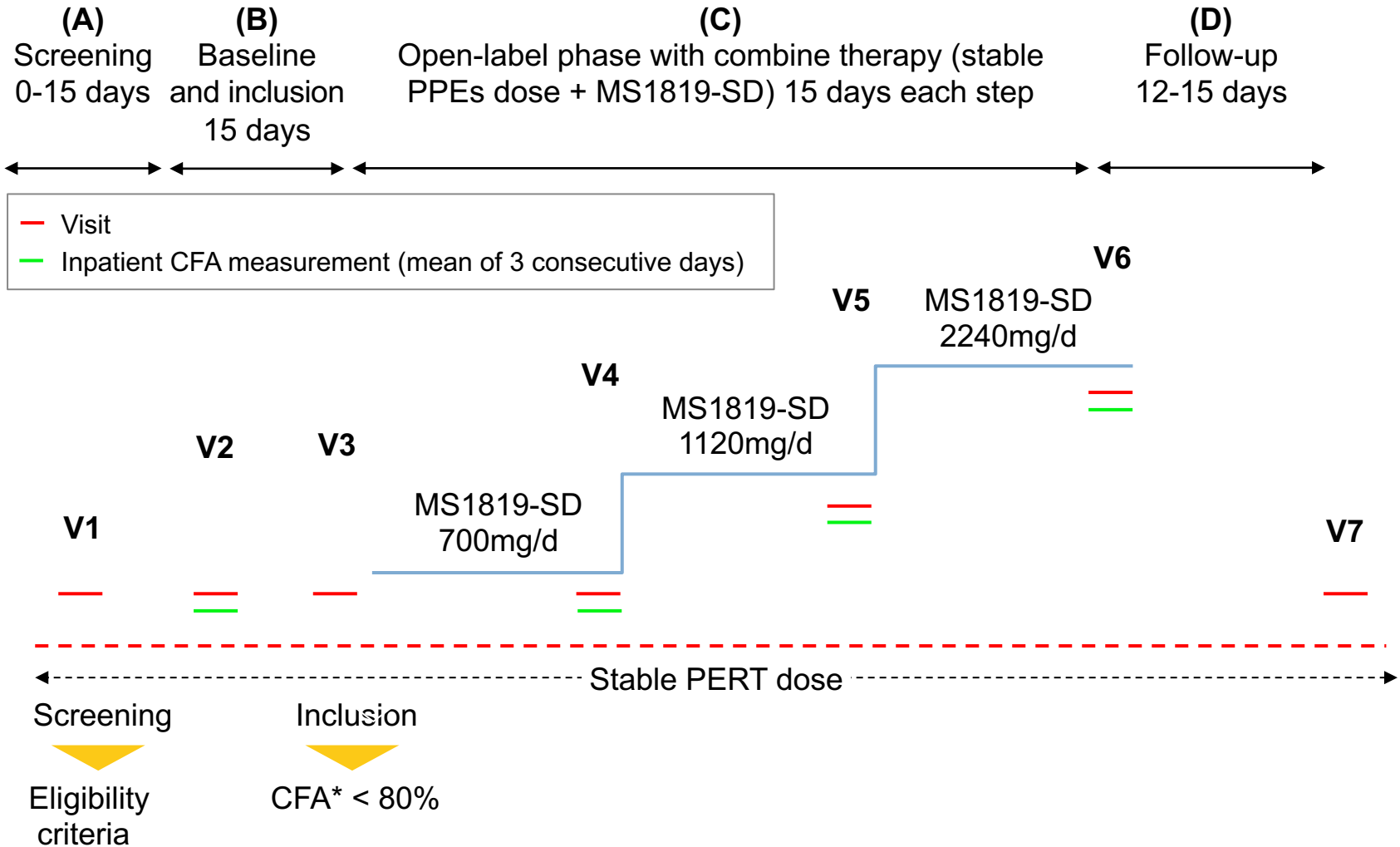
PPI: Proton-pump inhibitors

Source: Results of interviews of 10 pulmonologists, The CorStar Group 5/2019, and 10 gastroenterologists, Campbell Alliance 8/2014

Combination Trial (MS1819 & PERT) in CF Patients with Severe EPI

- Patients on *maximum* PERT therapy will receive increasing doses MS1819 as per the following: 700mg/day, 1120mg/day and 2240mg/day
- The total study duration will be approximately 100 days
- Enrollment target of 28 patients, with 24 patients expected to complete all dosing periods
- Trial will be conducted at six sites in Hungary
- Primary endpoints are safety and coefficient fat absorption (CFA)
- Expect preliminary data in early 2020

Phase II Clinical Study Overview: Combination Study (PERT & MS1819) Has Been Initiated



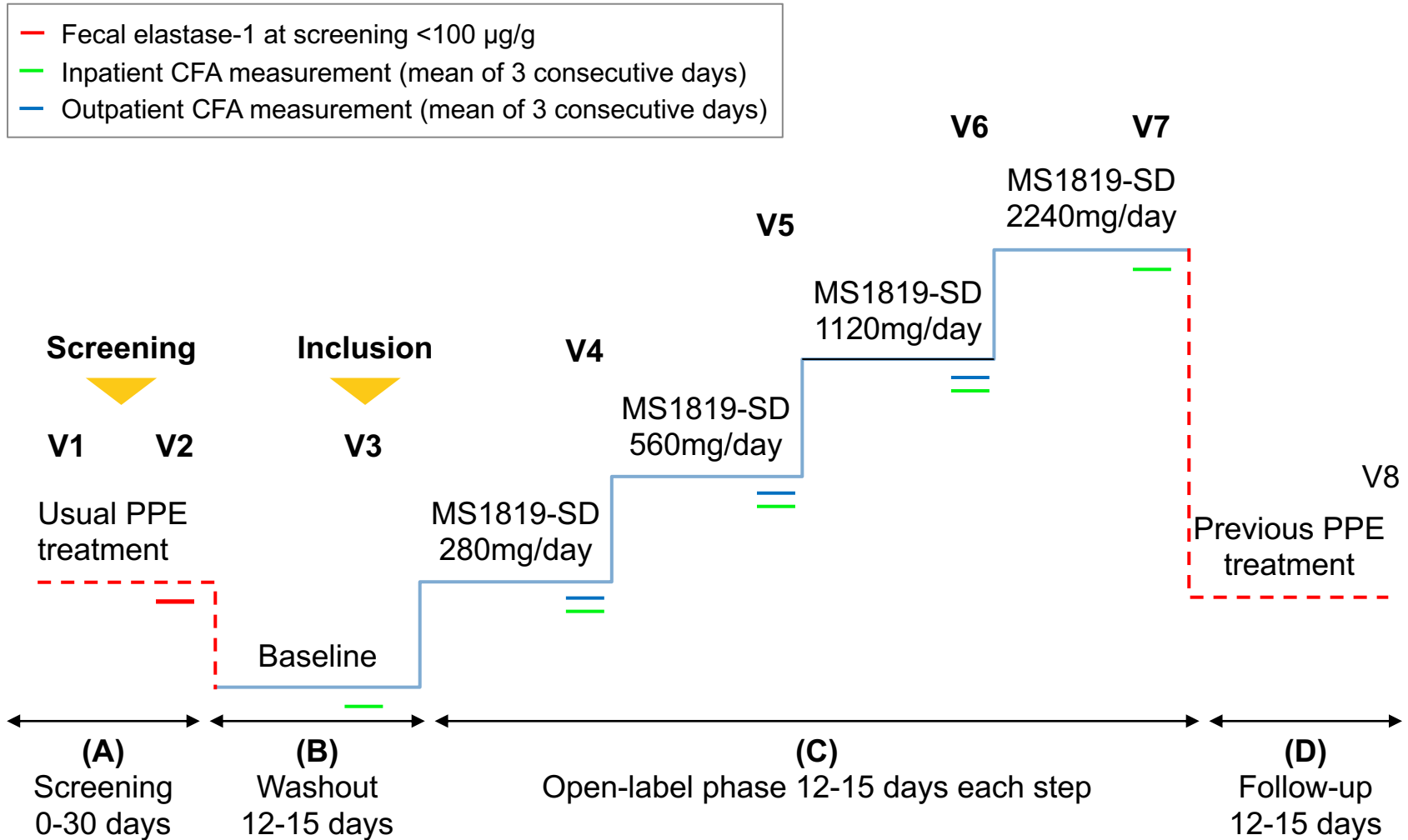
* Baseline CFA < 80% with a maximum daily dose of 10,000 lipase units/kg/day

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Clinical Trial Design for MS1819 Phase 2a in Chronic Pancreatitis

Trial conducted in France, Australia and New Zealand; 11 patients enrolled



Phase 2 Chronic Pancreatitis Study Recap

- 11 chronic pancreatitis patients underwent a wash-out period and then ascending doses of MS1819, with the highest daily dose being 2.2 grams per day.
- The primary efficacy endpoint was CFA change from baseline, while safety was the study's primary endpoint.
- Statistically significant improvements in CFA on an ITT and PP basis.
- Key secondary endpoints, number of bowel movements, stool consistency and steatorrhea, also showing statistically significant and clinically meaningful improvements with MS1819 treatment.
- MS1819 was shown to have a favorable safety profile with no problematic drug related adverse events.

MS1819-SD Phase 2 Study in Chronic Pancreatitis: Secondary Efficacy Endpoints

	Baseline	@ Highest Dose of MS1819-SD (2240 mg)	Mean Change	p value
Coefficient of Fat Absorption (CFA)			21.8%	0.002
Stool Consistency (Bristol Scale)	5.1	4.1	-19.6%	0.006
Bowel Movements	2.8	1.9	-32%	0.006
Steatorrhea	12.3	10.1	-18%	0.008
Abdominal Discomfort (Visual Analog Scale)	21.0	14.5	-31%	0.148

1. University of Adelaide, Adelaide, Australia; 2. AzurRx, Langlade, France; 3. Syneos Health, London, UK; 4. AzurRx, New York, NY, USA

Source: **Nam Q Nguyen**,¹ Luc Lebreton,² Gary Smith,³ Philippe Jais,² Mathieu Schue,² and Thijs Spoor⁴ "Impact of a spray dried recombinant lipase, MS1819, For the treatment of exocrine pancreatic insufficiency in patients with chronic pancreatitis: Results of a multicenter, Phase II, open-label, non-randomized study". Presented by Dr. Nam Q. Nguyen, et al., at Digestive Disease Week on May 20, 2019.

GI Therapeutic Product Pipeline

Current Status
 Expected progress through 2019

Product	Description	Indication	Development Phase				
			Discovery	Pre-Clinical	Phase 1	Phase 2	Phase 3
MS1819	Yeast recombinant lipase (<i>Yarrowia lipolytica</i> LIP2)	Treatment of EPI in CP patients					
		Treatment of EPI in CF patients ¹ OPTION Cross-Over Study					
		Treatment of severe EPI in CF patients ¹ Combination PERT-MS1819 Study					
AZX1103	Synthetic β -Lactamase	Prevention of nosocomial infections and antibiotic associated diarrhea					
MTAN	Bacterial enzyme inhibition	Treatment of <i>h.pylori</i> infections					