Investor Presentation

September 2019

insmed®

Forward-Looking Statements

This presentation contains forward-looking statements that involve substantial risks and uncertainties. "Forward-looking statements," as that term is defined in the Private Securities Litigation Reform Act of 1995, are statements that are not historical facts and involve a number of risks and uncertainties. Words herein such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "intends," "potential," "continues," and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) may identify forward-looking statements. The forward-looking statements in this presentation are based upon the Company's current expectations and beliefs, and involve known and unknown risks, uncertainties and other factors, which may cause the Company's actual results, performance and achievements and the timing of certain events to differ materially from the results, performance, achievements or timing discussed, projected, anticipated or indicated in any forward-looking statements. Such risks, uncertainties and other factors include, among others, the following: failure to successfully commercialize or maintain U.S. approval for ARIKAYCE, the Company's only approved product; uncertainties in the degree of market acceptance of ARIKAYCE by physicians, patients, third-party payers and others in the healthcare community; the Company's inability to obtain full approval of ARIKAYCE from the FDA, including the risk that the Company will not successfully develop and validate the patient reported outcome (PRO) tool and conduct and complete the confirmatory post-marketing study required for full approval; inability of the Company, PARI or the Company's other third party manufacturers to comply with regulatory requirements related to ARIKAYCE or the Lamira® Nebulizer System; the Company's inability to obtain adequate reimbursement from government or third-party payers for ARIKAYCE or acceptable prices for ARIKAYCE; development of unexpected safety or efficacy concerns related to ARIKAYCE; inaccuracies in the Company's estimates of the size of the potential markets for ARIKAYCE or in data the Company has used to identify physicians, the expected rates of patient uptake, the duration of expected treatment, or expected patient adherence or discontinuation rates; the Company's inability to create an effective direct sales and marketing infrastructure or to partner with third parties that offer such an infrastructure for distribution of ARIKAYCE; failure to obtain regulatory approval to expand ARIKAYCE's indication to a broader patient population; failure to successfully conduct future clinical trials for ARIKAYCE and the Company's product candidates, including due to the Company's limited experience in conducting preclinical development activities and clinical trials necessary for regulatory approval and the Company's inability to enroll or retain sufficient patients to conduct and complete the trials or generate data necessary for regulatory approval; risks that the Company's clinical studies will be delayed or that serious side effects will be identified during drug development; failure to obtain, or delays in obtaining, regulatory approvals for ARIKAYCE outside the U.S. or for the Company's product candidates in the U.S., Europe, Japan or other markets, including as a result of the United Kingdom's planned exit from the European Union; failure of third parties on which the Company is dependent to manufacture sufficient quantities of ARIKAYCE or the Company's product candidates for commercial or clinical needs, to conduct the Company's clinical trials, or to comply with laws and regulations that impact the Company's business or agreements with the Company; the Company's inability to attract and retain key personnel or to effectively manage the Company's growth; the Company's inability to adapt to its highly competitive and changing environment; the Company's inability to adequately protect its intellectual property rights or prevent disclosure of its trade secrets and other proprietary information and costs associated with litigation or other proceedings related to such matters; restrictions or other obligations imposed on the Company by its agreements related to ARIKAYCE or the Company's product candidates, including its license agreements with PARI and AstraZeneca AB, and failure of the Company to comply with its obligations under such agreements; the cost and potential reputational damage resulting from litigation to which the Company is or may become a party, including product liability claims; limited experience operating internationally; changes in laws and regulations applicable to the Company's business and failure to comply with such laws and regulations; inability to repay the Company's existing indebtedness and uncertainties with respect to the Company's ability to access future capital; and delays in the execution of plans to build out and move into the leased space at the Company's new headquarters and to build out an additional FDA-approved third-party manufacturing facility and unexpected expenses associated with those plans. The Company may not actually achieve the results, plans, intentions or expectations indicated by the Company's forward-looking statements because, by their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. For additional information about the risks and uncertainties that may affect the Company's business, please see the factors discussed in Item 1A, "Risk Factors," in the Company's Annual Report on Form 10-K for the year ended December 31, 2018 and any subsequent Company filings with the Securities and Exchange Commission. The Company cautions readers not to place undue reliance on any such forward-looking statements, which speak only as of the date of this presentation. The Company disclaims any obligation, except as specifically required by law and the rules of the Securities and Exchange Commission, to publicly update or revise any such statements to reflect any change in expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

Insmed: A Global Biopharmaceutical Company Focused on Rare Disease

What is MAC Lung Disease?

Mycobacterium avium complex (MAC) lung disease is a rare, progressive, and chronic condition that can cause severe, permanent damage to the lungs.

The disease is caused by bacteria in the environment and is more likely to affect those with a history of lung conditions, like bronchiectasis, chronic obstructive pulmonary disease (COPD), or asthma.

Prior to the approval of ARIKAYCE, there were no inhaled therapies approved specifically for the treatment of patients with MAC lung disease.

About ARIKAYCE

ARIKAYCE®
(amikacin liposome inhalation suspension)
590 mg/8.4 mL

Limited Population

ARIKAYCE Developed to Address Significant Unmet Need in MAC Lung Disease

An inhaled, innovative, once-daily formulation of liposomal amikacin

Uptake in the Lung Macrophage

Pulmovance™ liposomal technology delivers drug **directly to site of infection;** prolongs release of amikacin in the lungs while **limiting systemic exposure**

ARIKAYCE Indication and Use

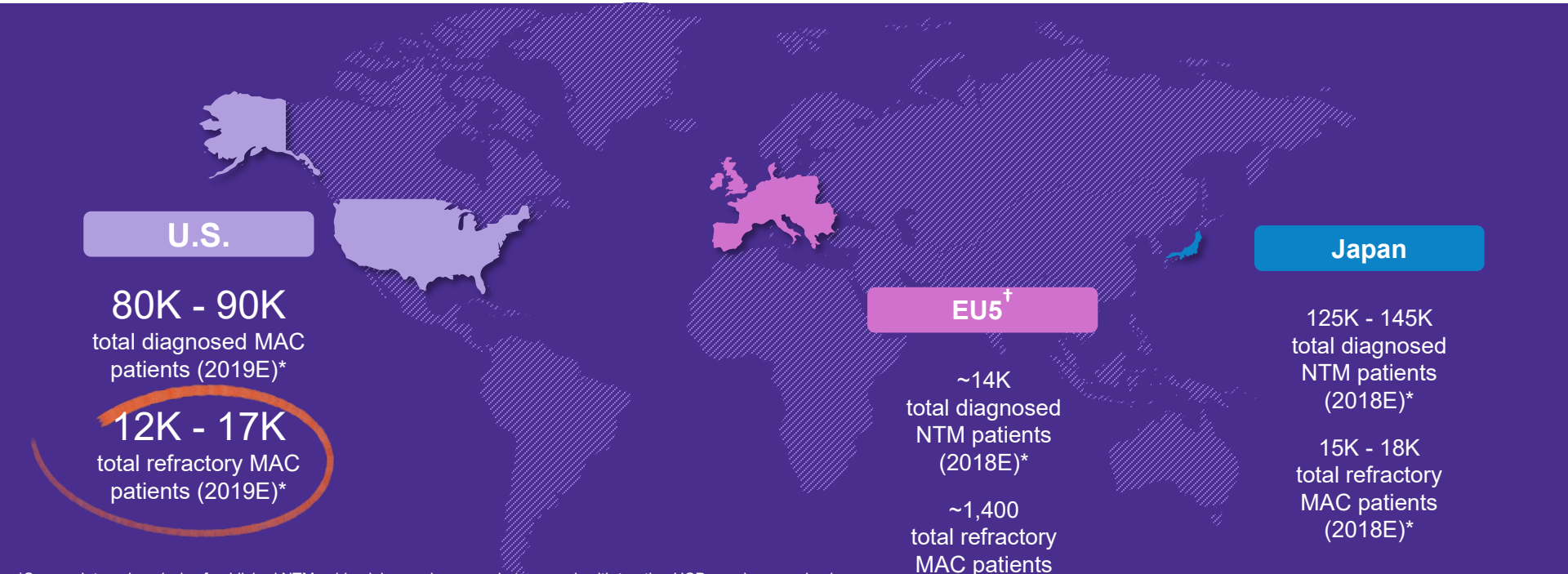
- LIMITED POPULATION: ARIKAYCE® is indicated in adults, who have limited or no alternative treatment options, for the treatment of *Mycobacterium avium* complex (MAC) lung disease as part of a combination antibacterial drug regimen in patients who do not achieve negative sputum cultures after a minimum of 6 consecutive months of a multidrug background regimen therapy. As only limited clinical safety and effectiveness data for ARIKAYCE are currently available, reserve ARIKAYCE for use in adults who have limited or no alternative treatment options. This drug is indicated for use in a limited and specific population of patients.

- This indication is approved under accelerated approval based on achieving sputum culture conversion (defined as 3 consecutive negative monthly sputum cultures) by Month 6. Clinical benefit has not yet been established. Continued approval for this indication may be contingent upon verification and description of clinical benefit in confirmatory trials.

- **Limitation of Use:** ARIKAYCE has only been studied in patients with refractory MAC lung disease defined as patients who did not achieve negative sputum cultures after a minimum of 6 consecutive months of a multidrug background regimen therapy. The use of ARIKAYCE is not recommended for patients with non-refractory MAC lung disease.

WARNING: RISK OF INCREASED RESPIRATORY ADVERSE REACTIONS
ARIKAYCE has been associated with an increased risk of respiratory adverse reactions, including hypersensitivity pneumonitis, hemoptysis, bronchospasm, and exacerbation of underlying pulmonary disease that have led to hospitalizations in some cases.

Commercial Approach: Near-Term Focus on U.S. Launch; Expansion to EU and Japan



U.S.

80K - 90K
total diagnosed MAC patients (2019E)*

12K - 17K
total refractory MAC patients (2019E)*

EU5†

~14K
total diagnosed NTM patients (2018E)*

~1,400
total refractory MAC patients (2018E)*

Japan

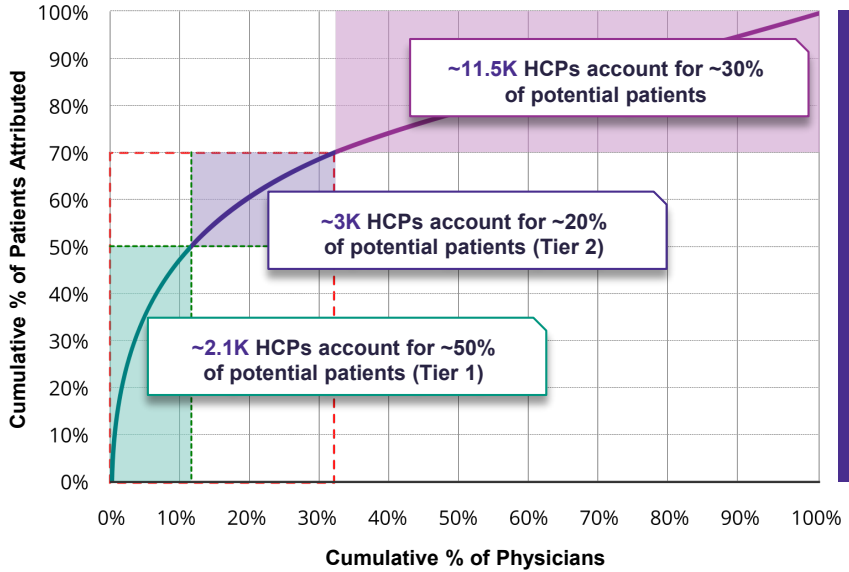
125K - 145K
total diagnosed NTM patients (2018E)*

15K - 18K
total refractory MAC patients (2018E)*

*Source: Internal analysis of published NTM epidemiology, primary market research with treating HCPs, and anonymized patient level claims data in US

† EU5 comprised of France, Germany, Italy, Spain and the United Kingdom

72 Therapeutic Specialists Deployed and Covering U.S. Market Based on Estimated Concentration of MAC Treatment Providers



- ~5K physicians manage 70% of diagnosed MAC patients
- 8 in 10 diagnosed MAC patients managed by Pulmonologist or Infectious Disease Specialist

Source: Symphony Health, PatientSource™ November 2013 – October 2016

Laying the Groundwork for a Successful U.S. Launch

Sales Force Deployment

72 therapeutic specialists deployed in U.S. market focused on key geographies with high patient concentrations

Awareness & Education

Disease awareness, HCP engagement, and advocacy group support

Patient Identification

Ongoing, innovative efforts to identify appropriate patients and enhance disease diagnosis

Access

Payer engagement to enable efficient patient access

Supportive payer environment recognizing significant unmet need of disease state

Support

Comprehensive patient support program intended to help with treatment introduction, compliance, and navigating the reimbursement landscape

U.S. Launch Update as of 6/30/19

Strong Initial Uptake

- $30M 2Q19 total net product sales
  - $29M in U.S. net sales
  - $1M in ex-U.S. net sales from French ATU program and German named patient program

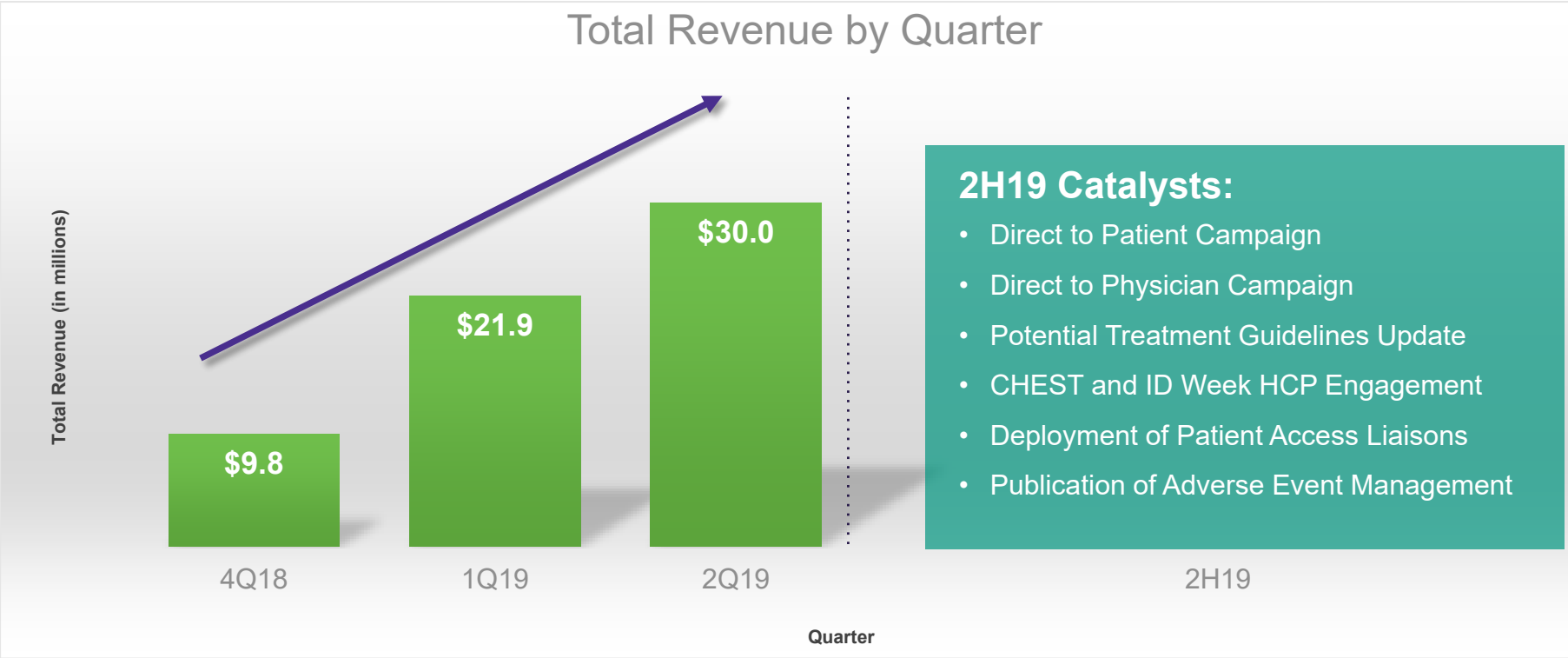
Engaged HCP and Patient Community

- Positive physician feedback
- Over 1,300 unique prescribers since launch
- 90% of patients who initiated therapy in 4th quarter and did not discontinue in first 3 months of treatment remain on ARIKAYCE

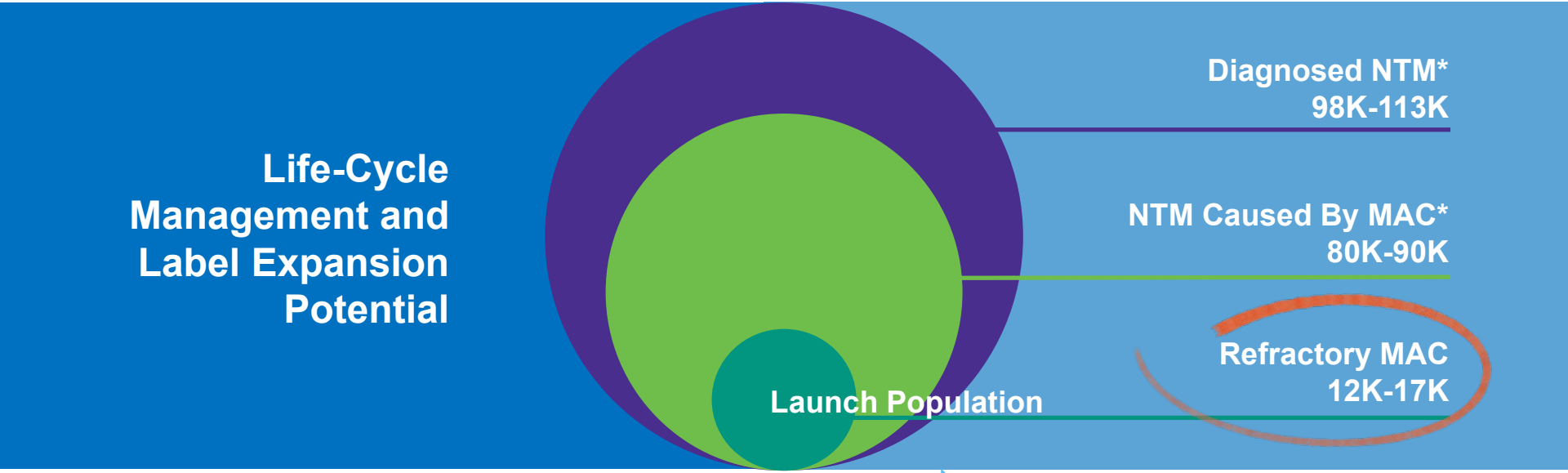
Supportive Payer Landscape

- Positive reimbursement trends
- Payer Mix - 55% Medicare, 36% Commercial, and 9% other

Revenue Ramp since ARIKAYCE Launch



Estimated 2019 U.S. Market Opportunity in NTM



*Insmed is evaluating ARIKAYCE for use in these populations, but has not received FDA approval for either indication.

Established Supply Chain

- Redundant drug supply chain
- Commercial-scale manufacturing capacity on-line and expansion under way

ALTHEA

50L

therapure BIOMANUFACTURING

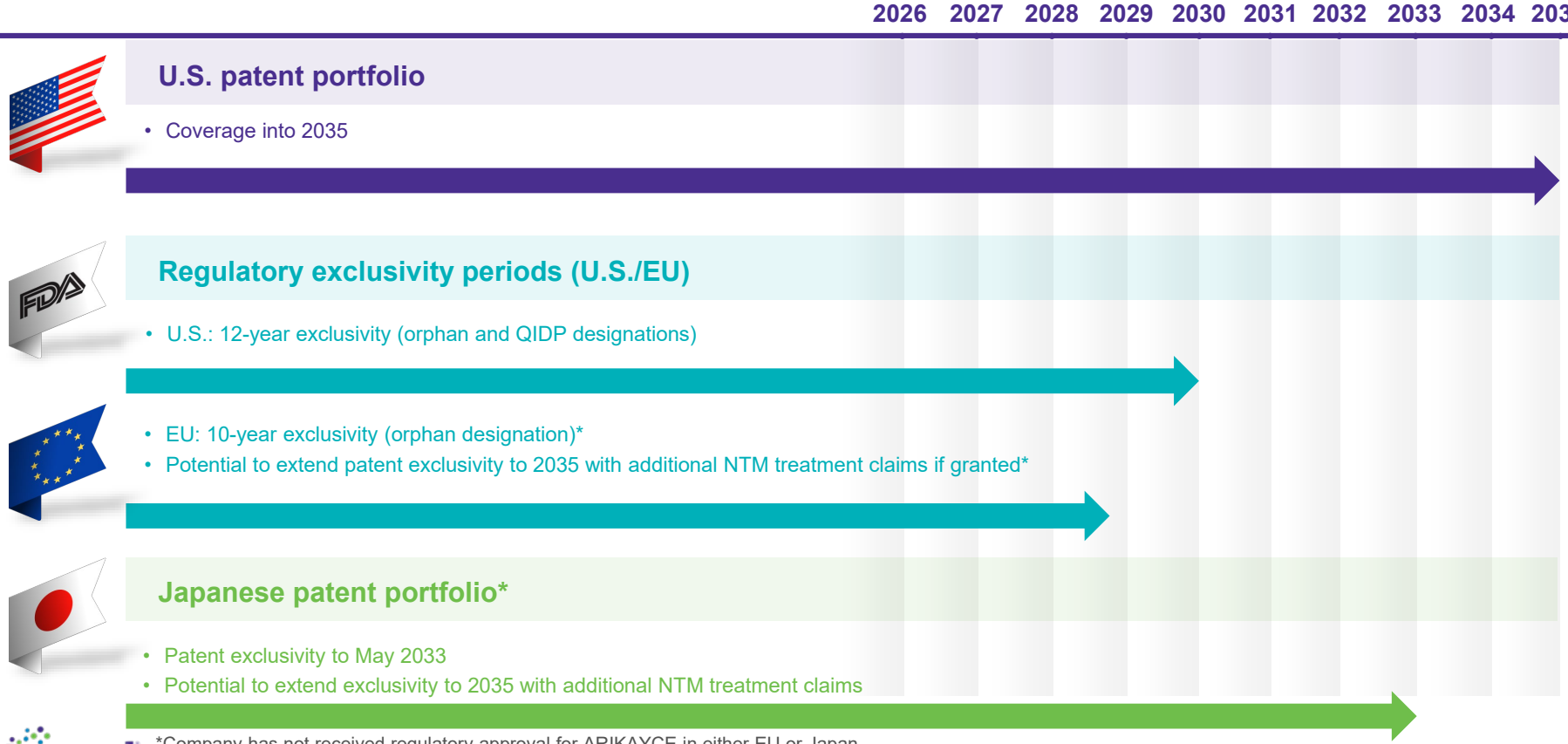
200L

Patheon part of Thermo Fisher Scientific

450L

*Patheon long term project initiated 4Q 2017 but not yet completed

ARIKAYCE: Multiple Layers of Market Exclusivity



*Company has not received regulatory approval for ARIKAYCE in either EU or Japan.

Growing Pipeline

* As a condition of accelerated approval, Insmed is collaborating with the FDA on the design of an additional clinical study to support full approval. The study design is currently under discussion with FDA and is proposed to be a randomized, double-blind, placebo-controlled clinical trial to assess and describe the clinical benefit of ARIKAYCE in patients with NTM lung disease caused by MAC.

Insmed: 2019 Strategic Priorities

Continue to execute successful U.S. launch of ARIKAYCE

ARIKAYCE confirmatory clinical study in a front-line setting of patients with MAC lung disease and a life-cycle management study in patients with NTM caused by *M. Abscessus*

Accelerate global expansion to support potential regulatory filings for ARIKAYCE in Europe and Japan

Reached enrollment target in WILLOW, our six-month Phase 2 trial of INS1007 in non-CF bronchiectasis