CORPORATE PRESENTATION

January 2021

NASDAQ:ATNX

www.athenex.com

Forward Looking Statements

Except for historical information, all of the statements, expectations, and assumptions contained in this presentation constitute forward-looking statements. These statements include descriptions regarding the intent, belief or current expectations of Athenex, Inc. (the "Company"), its officers or its management with respect to the consolidated results of operations and financial condition of the Company. These statements can be recognized by the use of words such as "anticipate," "believe," "consider," "continue," "could," "estimate," "expect," "explore," "foresee," "guidance," "intend," "likely," "may," "opportunity," "plan," "potential," "predict," "preliminary," "probable," "project," "promising," "seek," "should," "will," or words of similar expressions. Such forward-looking statements are not guarantees of future performance and involve risks and uncertainties. Actual results might differ materially from those explicit or implicit in the forward-looking statements. Important factors that could cause actual results to differ materially include: the development stage of our primary clinical candidates and related risks involved in drug development, clinical trials, regulation, manufacturing and commercialization; our ability to obtain and maintain regulatory approvals for our product candidates; our reliance on third parties for success in certain areas of Athenex's business; our history of operating losses and need to raise additional capital to continue as a going concern; our ability to service our existing and any future debt obligations and comply with financial and restrictive covenants contained in the agreements governing our indebtedness; risks and uncertainties related to the COVID-19 pandemic and its potential impact on our operations, cash flow and financial condition; our ability to integrate acquired assets and businesses into our existing operations; competition; intellectual property risks; risks relating to doing business internationally and in China; the risk of production slowdowns or stoppages or other interruptions at our Chongqing facilities; and the other risk factors set forth from time to time in the Company's public filings with the U.S. Securities and Exchange Commission (the "SEC"), copies of which are available for free in the Investor Relations section of the Company's website at https://ir.athenex.com/financial-information/sec-filings or upon request from the Company's Investor Relations Department. Information about the Company and any forward-looking statements contained in this presentation are provided and made only as of 11 January 2021 and should not be relied upon as predictions of future events. The Company assumes no obligation and does not undertake to revise or update forward-looking statements to reflect future events or circumstances, except as required by law.

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Our historical results are not necessarily indicative of results to be expected for any future period. The financial data contained in this presentation for the periods and as of the dates indicated are qualified by reference to and should be read in conjunction with our financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our public filings with the SEC.

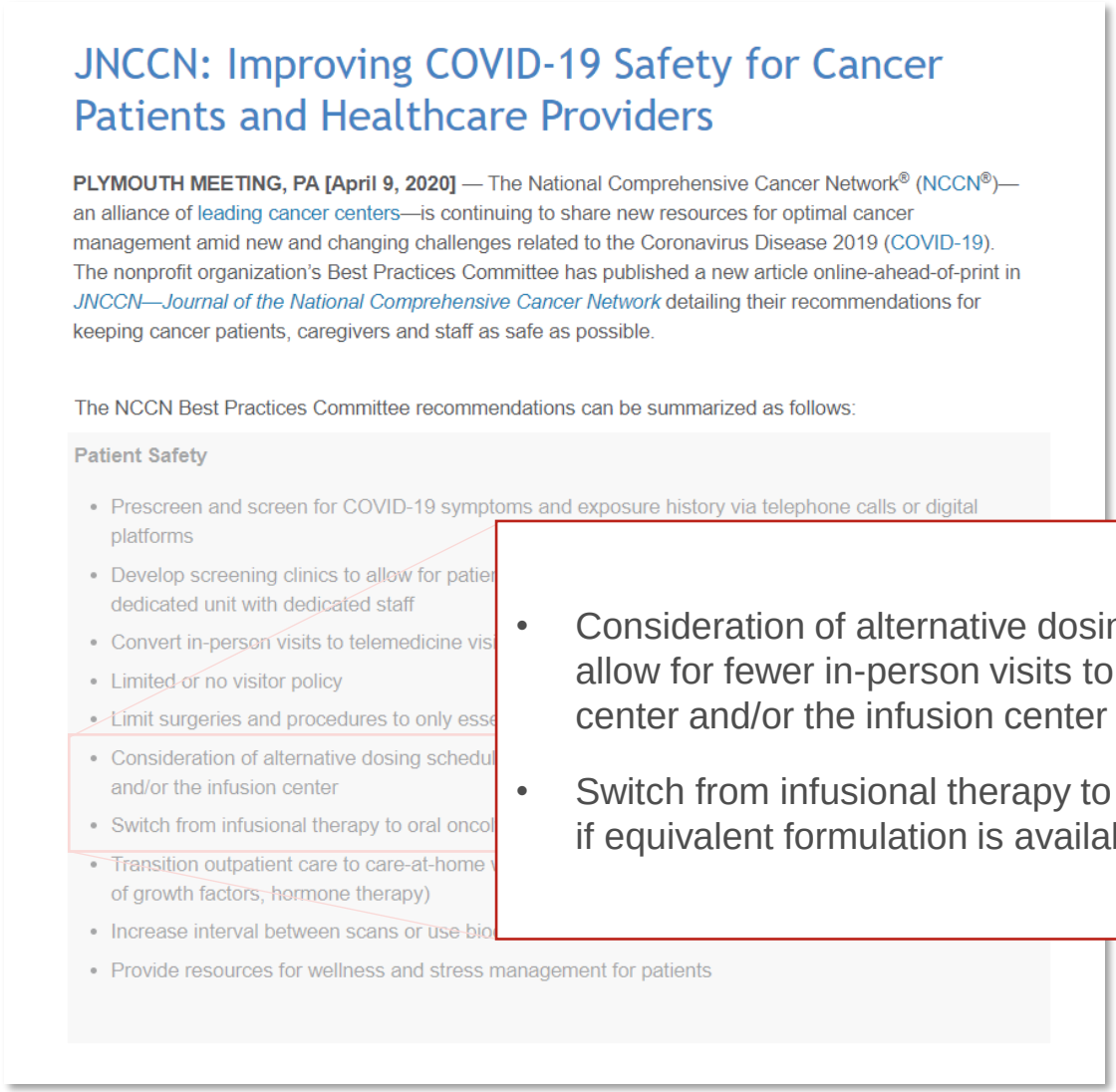
Global Oncology-Focused Biopharmaceutical Company

Improving the lives of cancer patients everywhere

Late-Stage Oncology Company	• **Oral paclitaxel and encequidar** for metastatic breast cancer: **PDUFA date - Feb. 28, 2021**; **Priority Review granted** • **Klisyri® (tirbanibulin)** for actinic keratosis received FDA approval in Dec. 2020
Orascovery Platform	• Building oral chemotherapy backbone for IO and targeted therapies • Differentiated by safety, efficacy, as well as convenience
Orascovery Opportunity	• Oral Paclitaxel in mBC addresses HR+/HER2- and TNBC • Growth through: (1) label expansion, (2) combo trials, and (3) new indications • **Pipeline growth opportunities expand initial 70,000 addressable patient opportunity to 500,000+ addressable patient opportunity**
Pipeline	• Oral Paclitaxel plus pembrolizumab • TCR-T Immunotherapy (TCRT-ESO-A2) – multiple tumor types
Vertically Integrated	• Commercial infrastructure in place to support proprietary product launch* • Global clinical development operations
Financials	• Cash runway through 2023

* If approved

Increasing Importance of Oral Chemotherapy Options



JNCCN: Improving COVID-19 Safety for Cancer Patients and Healthcare Providers

PLYMOUTH MEETING, PA [April 9, 2020] — The National Comprehensive Cancer Network® (NCCN®)—an alliance of leading cancer centers—is continuing to share new resources for optimal cancer management amid new and changing challenges related to the Coronavirus Disease 2019 (COVID-19). The nonprofit organization's Best Practices Committee has published a new article online-ahead-of-print in *JNCCN—Journal of the National Comprehensive Cancer Network* detailing their recommendations for keeping cancer patients, caregivers and staff as safe as possible.

The NCCN Best Practices Committee recommendations can be summarized as follows:

Patient Safety

- Prescreen and screen for COVID-19 symptoms and exposure history via telephone calls or digital platforms
- Develop screening clinics to allow for patien
  dedicated unit with dedicated staff
- Convert in-person visits to telemedicine visi
- Limited or no visitor policy
- Limit surgeries and procedures to only esse
- Consideration of alternative dosing schedul
  and/or the infusion center
- Switch from infusional therapy to oral oncol
- Transition outpatient care to care-at-home v
  of growth factors, hormone therapy)
- Increase interval between scans or use bio
- Provide resources for wellness and stress management for patients

- Consideration of alternative dosing schedule to allow for fewer in-person visits to the cancer center and/or the infusion center
- Switch from infusional therapy to oral oncolytics if equivalent formulation is available

Source: https://www.nccn.org/about/news/newsinfo.aspx?NewsID=2025

Orascovery Platform: Encequidar, a Novel P-gp Pump Inhibitor

Designed to Enable Oral Absorption of Chemotherapy Agents

CHEMOTHERAPY BIOAVAILABILITY

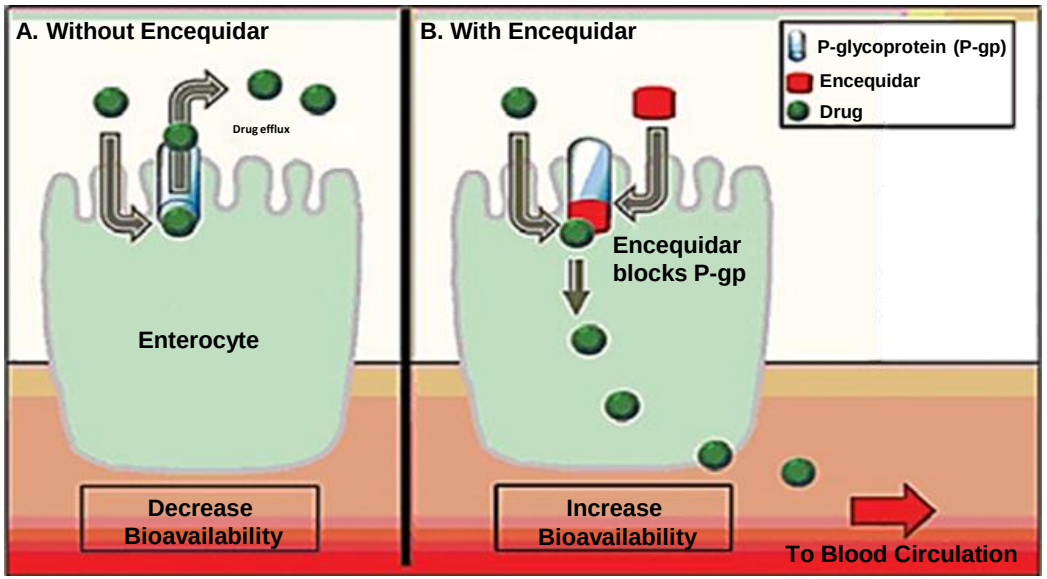
Many chemotherapies are P-gp substrates, and can only be given intravenously

ENCEQUIDAR

- Selective inhibitor of P-gp
- Minimal systemic bioavailability

ORAL CHEMOTHERAPY + ENCEQUIDAR

Encequidar is designed to allow for oral absorption of chemotherapy agents such as paclitaxel, irinotecan, docetaxel, topotecan and eribulin



POTENTIAL ADVANTAGES OF ENCEQUIDAR[1]

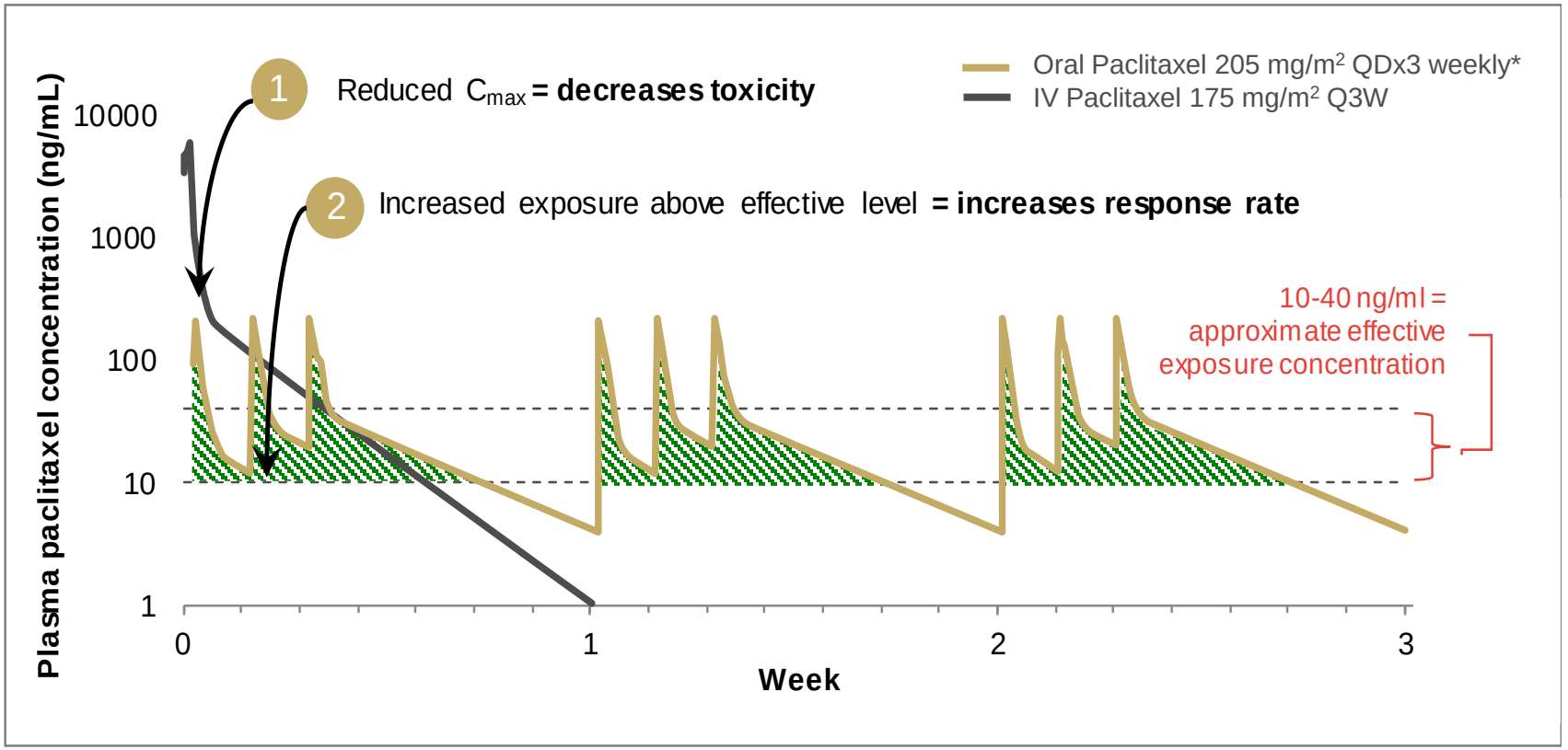
- Minimal systemic absorption
- Localized P-gp inhibitory activity in GI tract
- No significant systemic side effects to other organs & cells seen in clinical studies
- Expect lower incidence of severe toxicities associated with IV chemotherapy agents

[1] Based on research and clinical studies to date

Pharmacokinetic Model of Oral Paclitaxel

P-gp Pump Inhibition Resulted in Higher Drug Exposure and Better Tolerability Than IV

Oral Paclitaxel 205 mg/m^2 QDx3 weekly* vs. IV Paclitaxel 175 mg/m^2 Q3W

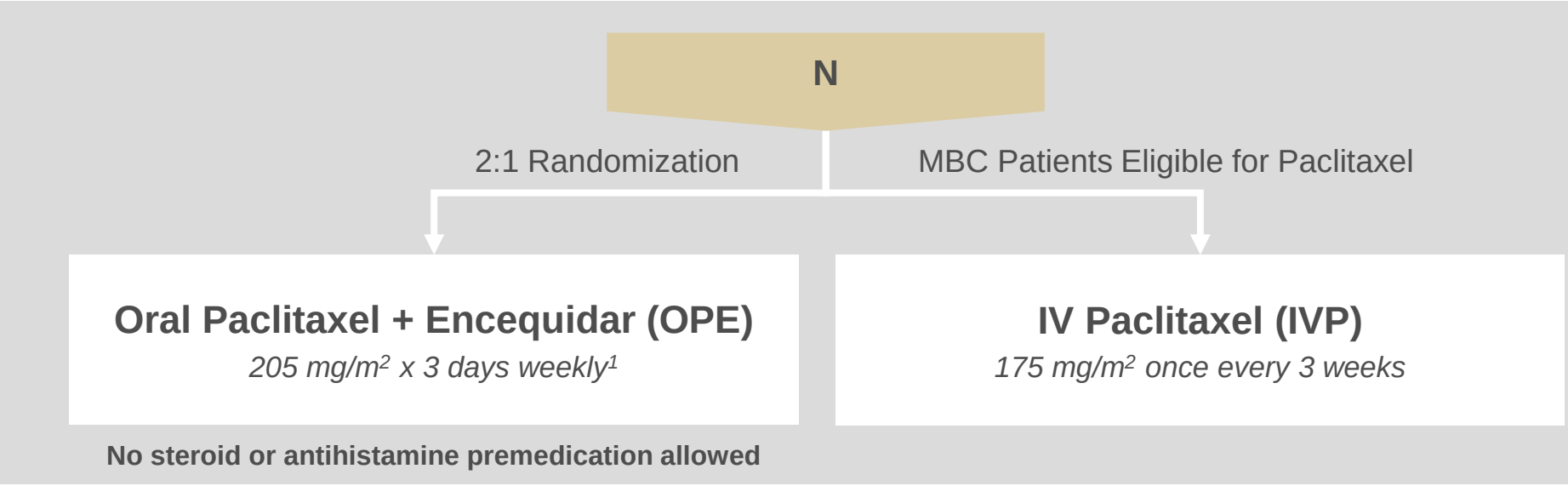


* Dosing regimen is 15mg encequidar and 205mg/m^2 oral paclitaxel for 3 consecutive days per week

Phase III Study of Oral Paclitaxel in Metastatic Breast Cancer

Clinical Trial Designed to Support Registration in the U.S.

(Presented at 2019 SABCS)



Primary Endpoint: ORR

- Radiologically confirmed overall response rates at two consecutive timepoints (RECIST v1.1)
- Blinded assessments by 2 independent radiologists, independent adjudicator
- Scans at weeks 10, 16, 19 / 22

Secondary Endpoints: PFS, OS

Population	OPE	IVP
ITT[2] (N=402)	265	137
Safety[3] (N=399)	264	135
Prespecified mITT[4] (N=360)	235	125

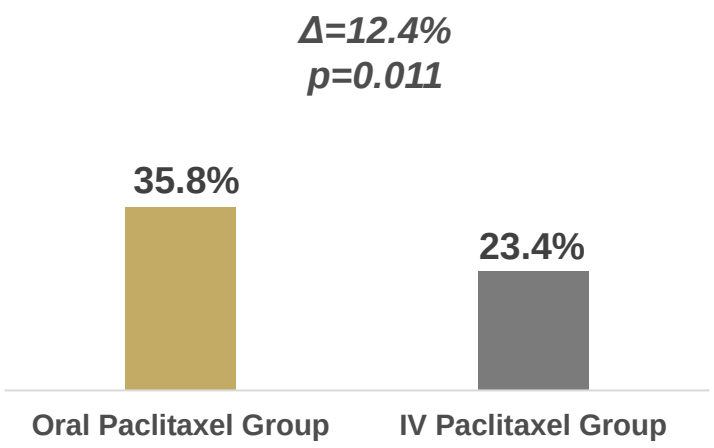
[1] Dosing regimen of the oral paclitaxel and encequidar arm is 15mg encequidar and 205mg/m^2 oral paclitaxel for 3 consecutive days per week
[2] Intent-to-treat population includes all randomized subjects
[3] All patients who received ≥1 dose of OPE or IVP
[4] Baseline evaluable scan: patients with metastatic RECIST lesion on central review; all patients who received at least 7 doses of OPE or one dose of IVP

Phase III Study of Oral Paclitaxel Met Primary ORR Endpoint

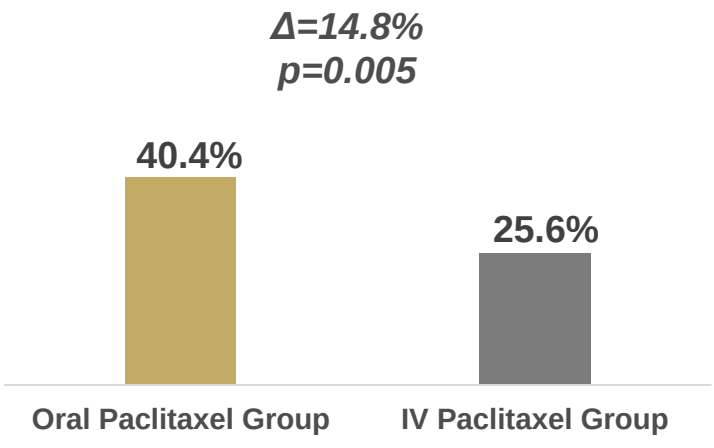
Statistically Significant Improvement in ORR Compared to IV Paclitaxel

(Presented at 2019 SABCS)

Confirmed Response Rate (ITT Population)



Confirmed Response Rate (Prespecified mITT Population)

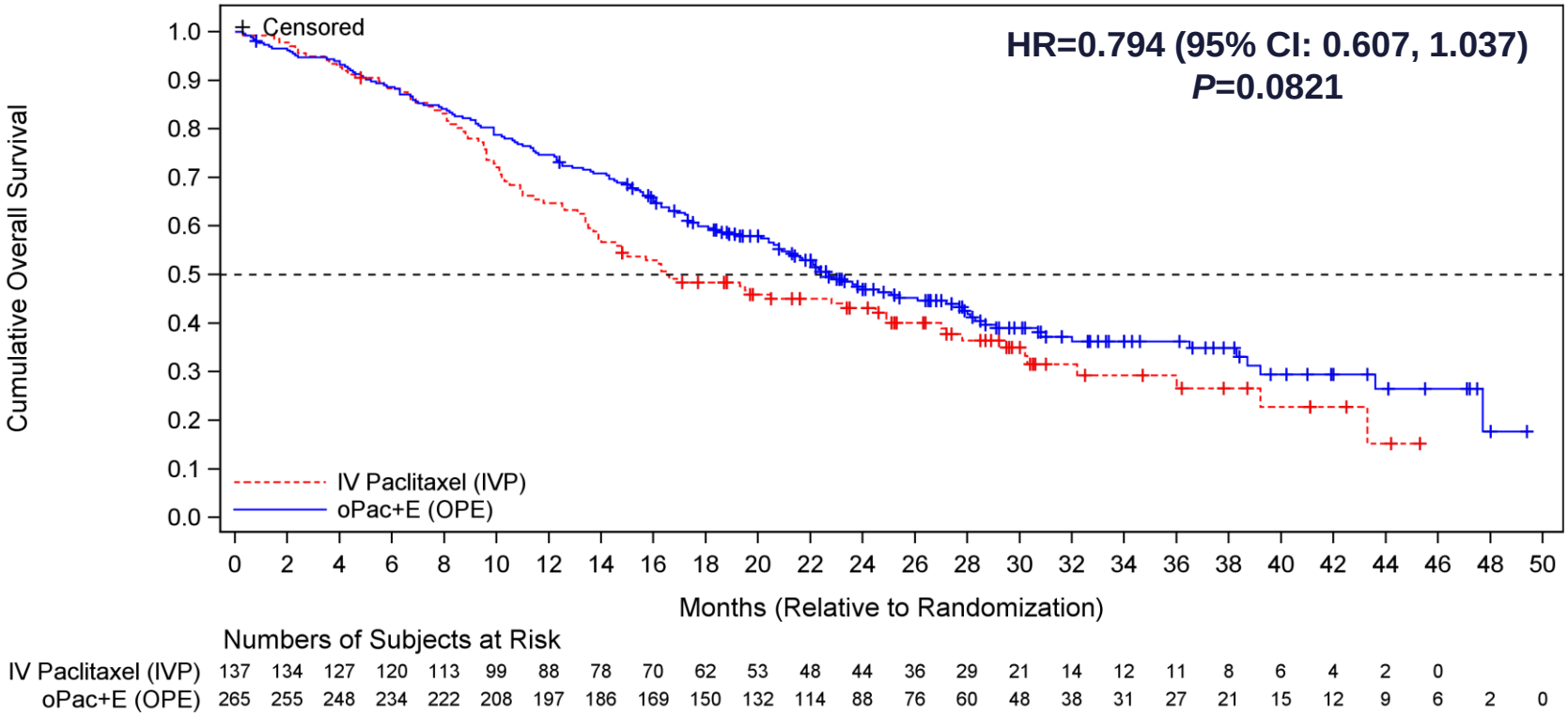


ITT, intent-to-treat population (N=402); mITT, modified intent-to-treat population (N=360)

Overall Survival in ITT Population

(Data cut: September 2020)

(Presented at 2020 SABCS)



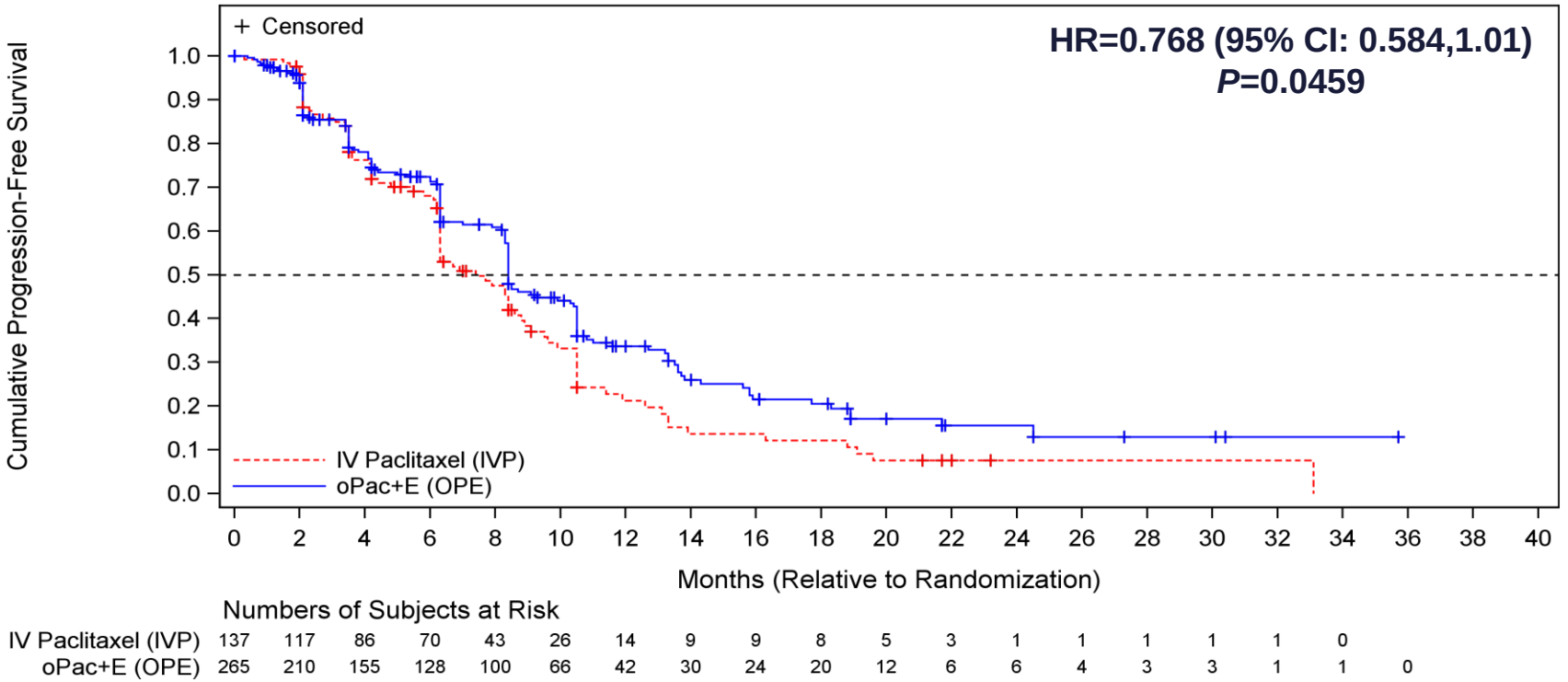
OS, ITT (N=402)	Median Estimate, mo	Censored Summary, %	Patient deaths (events), %
OPE (n=265)	**22.7**	**42**	**58**
IVP (n=137)	16.5	35	65

OPE, Oral Paclitaxel Group; IVP, IV Paclitaxel Group; mITT, modified intent-to-treat population; CI, confidence interval; HR, hazard ratio

Progression-Free Survival in ITT Population

Trend in Favor of Oral Paclitaxel (Data cut: September 2020)

(Presented at 2020 SABCS)



PFS, ITT (N=402)	Median Estimate, mo	Censored Summary, %	Patients with event[1], %
OPE (n=265)	**8.4**	**43**	**53**
IVP (n=137)	7.4	30	64

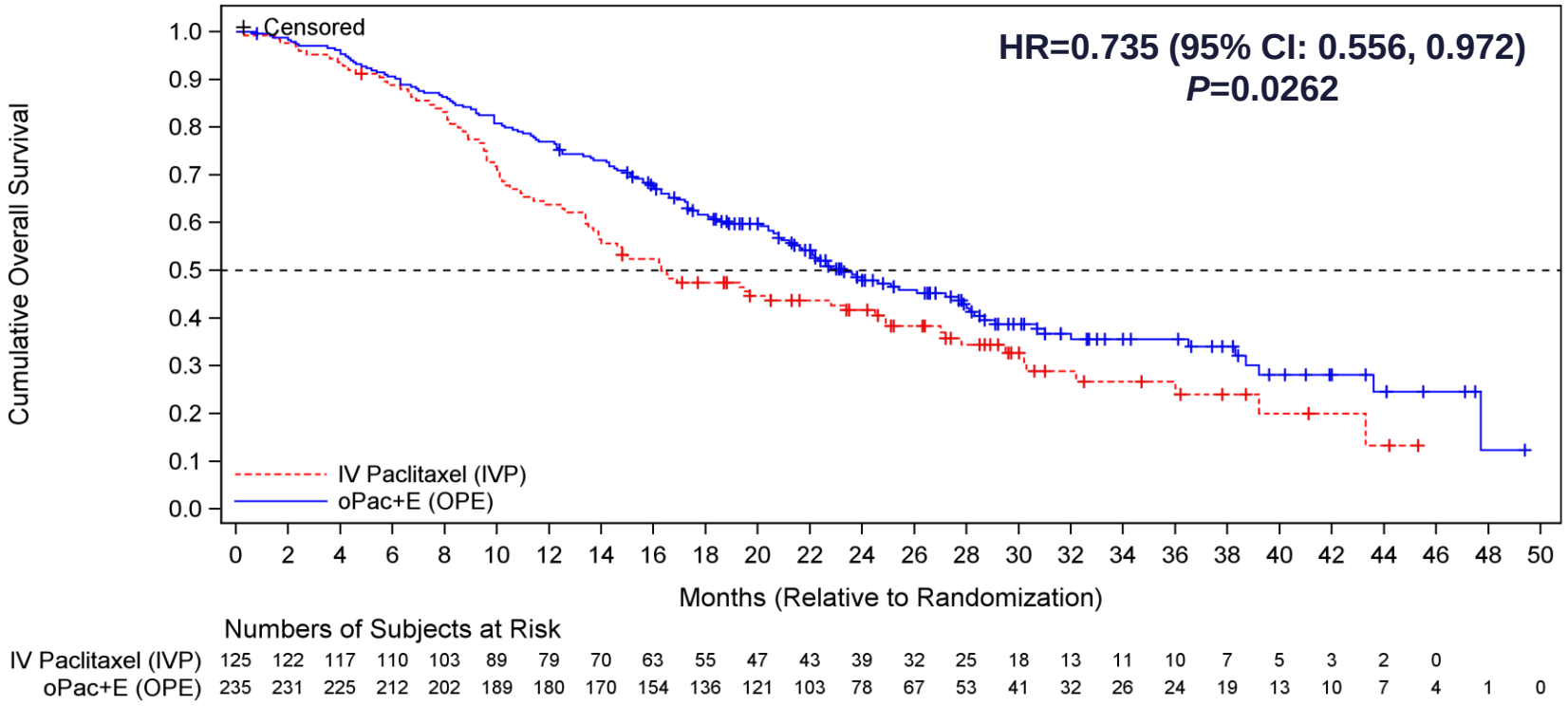
OPE, Oral Paclitaxel Group; IVP, IV Paclitaxel Group; mITT, modified intent-to-treat population; CI, confidence interval; HR, hazard ratio

[1] Event is defined as radiological disease progression by central review or death collected in eDC within 90 days of the last tumor assessment

Overall Survival in Prespecified mITT Population

Demonstrated Survival Benefit (Data cut: September 2020)

(Presented at 2020 SABCS)



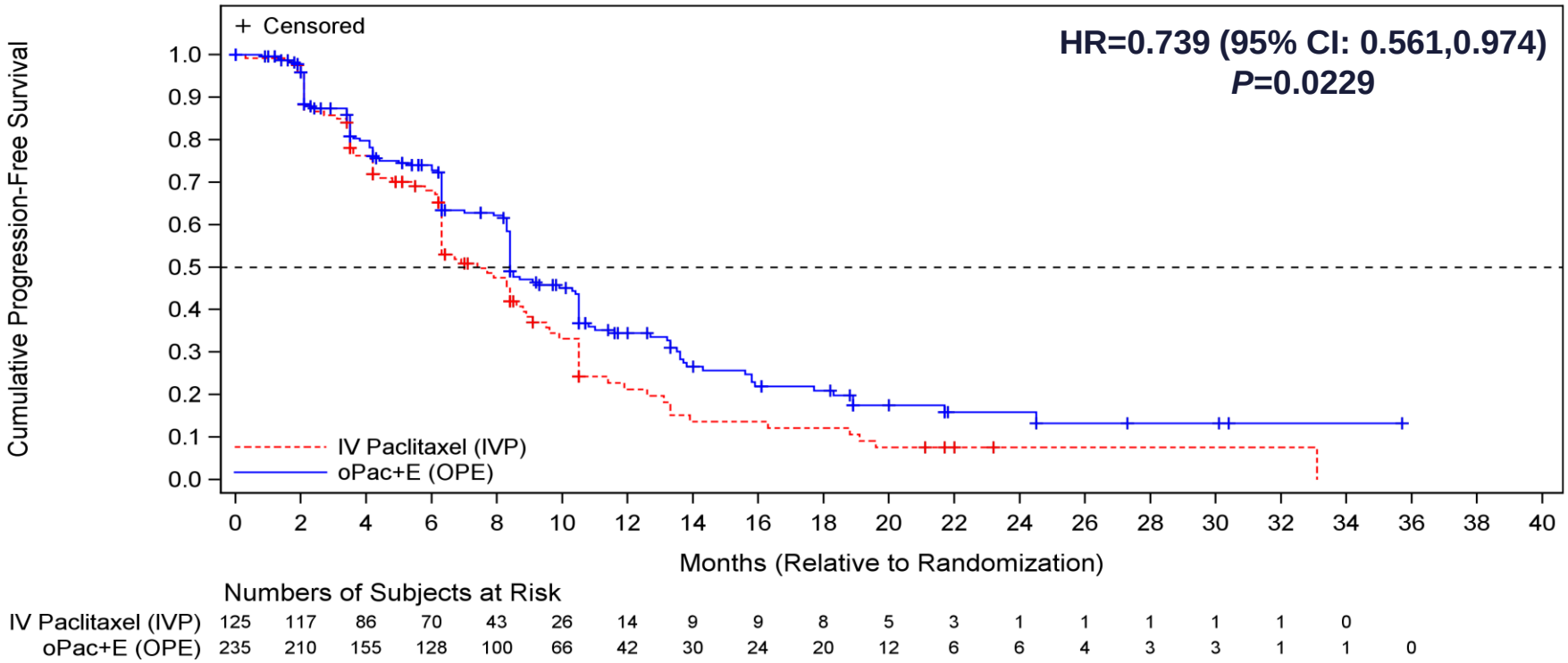
OS, mITT (N=360)	Median Estimate, mo	Censored Summary, %	Patient deaths (events), %
OPE (n=235)	**23.3**	**42**	**58**
IVP (n=125)	16.3	33	67

OPE, Oral Paclitaxel Group; IVP, IV Paclitaxel Group; mITT, modified intent-to-treat population; CI, confidence interval; HR, hazard ratio

Progression-Free Survival in Prespecified mITT Population

Trend in Favor of Oral Paclitaxel (Data cut: September 2020)

(Presented at 2020 SABCS)



PFS, mITT (N=360)	Median Estimate, mo	Censored Summary, %	Patients with event[1], %
OPE (n=235)	**8.4**	**43**	**57**
IVP (n=125)	7.4	30	70

OPE, Oral Paclitaxel Group; IVP, IV Paclitaxel Group; mITT, modified intent-to-treat population; CI, confidence interval; HR, hazard ratio

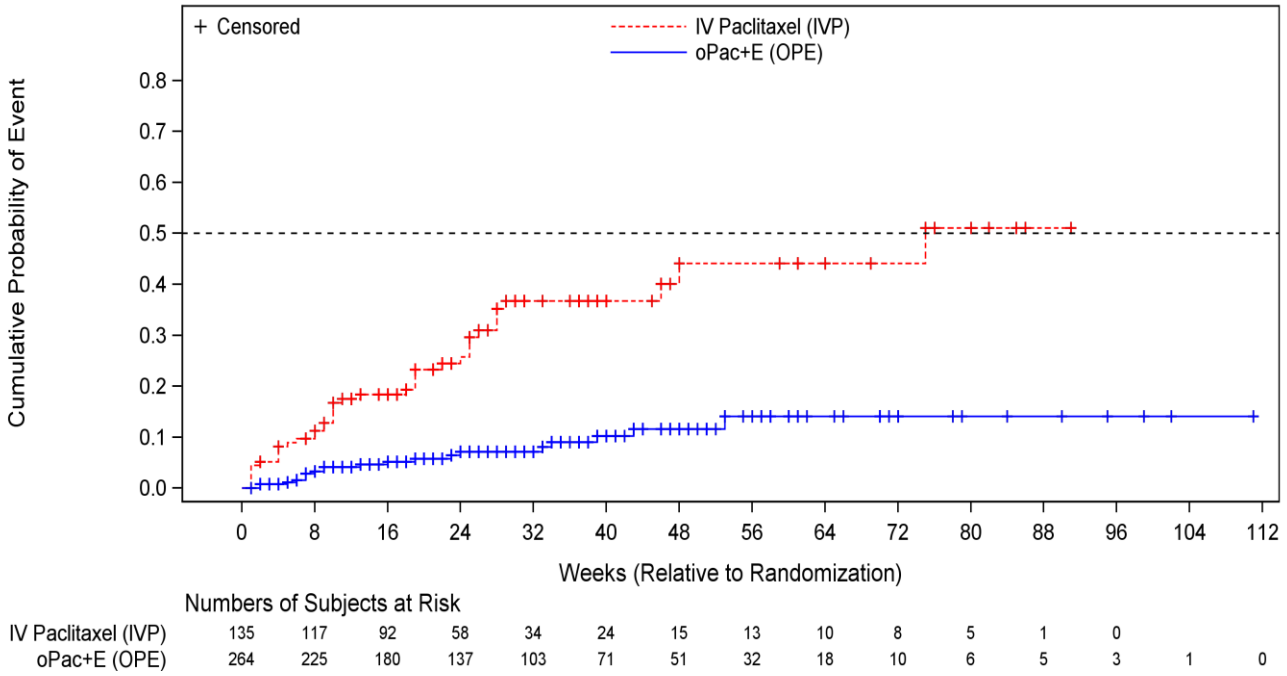
[1] Event is defined as radiological disease progression by central review or death collected in eDC within 90 days of the last tumor assessment

Treatment-emergent Adverse Events of Interest (TEAEs)

Safety Population (N=399)

(Presented at 2020 SABCS)

Cumulative Risk of Neuropathy Relevant[1] with CTCAE Grade ≥2



Neuropathy TEAEs (% of population)	OPE (n=264)	IVP (n=135)
Neuropathy relevant[1] with CTCAE grade ≥2	8.0%	31.0%
Neuropathy relevant[1] with CTCAE all grades	22.0%	64.0%

Incidence of Vomiting and Diarrhea (% of Population)	Pre-Amendment (n=75)	Post Amendment (n=189)
Incidence of Vomiting (OPE) grades ≥2	31.0%	11.0%
Incidence of Diarrhea (OPE) grades ≥2	36.0%	19.5%

OPE, Oral Paclitaxel Group; IVP, IV Paclitaxel Group

[1] Includes burning sensation, dysesthesia, hypoesthesia, hyporeflexia, neuralgia, neuropathy peripheral, neurotoxicity, paresthesia, peripheral motor neuropathy, peripheral sensory neuropathy, and polyneuropathy

Market Opportunity for Oral Paclitaxel in MBC in the U.S.

Metastatic Breast Cancer Represents 160,000 to 170,000 Patients

	HER2+ Incidence Rate: ~14%[1]	HR+/HER2- Incidence Rate: ~68%[1]	TNBC Incidence Rate: ~10%[1]	Unknown Incidence Rate: ~8%[1]
	Common regimens • Herceptin in combination with paclitaxel • Herceptin monotherapy • Kadcyla monotherapy • Perjeta in combination with Herceptin and docetaxel	Endocrine therapy +/- CDK 4 & 6 inhibitor	**Oral Paclitaxel and Encequidar**	
1L				
2L		**Oral Paclitaxel and Encequidar**		
3L		**Oral Paclitaxel and Encequidar**		

Oral Paclitaxel Initial Target Addressable Market of ~70,000 in MBC[2]

[1] National Cancer Institute (SEER 2013-2017)
[2] Estimated target patients that would be eligible for chemotherapy (various sources, Breast Cancer, United States, 2019).
Forecast figures and/or estimates are not guarantees of future performance and involve risks and uncertainties. Actual results might differ materially from the forecast figures and/or estimates

Commercial Preparations on Track

MEDICAL AFFAIRS

- ✓ Established scientific communication platform
- ✓ Key data generation and publication plans in process
- ✓ Initiated health economics studies
- ✓ Hired MSL team, staffed and engaging with thought leaders
- ✓ Hired oncology nurse educator team

MARKET ACCESS

- ✓ Defined trade and distribution strategy
- ✓ Developed payer value proposition
- ✓ Completed pricing and contracting
- ✓ Developed patient support strategies
- ✓ Hired director of payor team
- ✓ Hiring payor account team

MARKETING

- ✓ Launched “Facing MBC Together” campaign
- ✓ Established brand positioning and customer segmentation
- ✓ Identified go-to-market tactical plan
- ✓ Launched HCP unbranded campaign to elevate CIPN

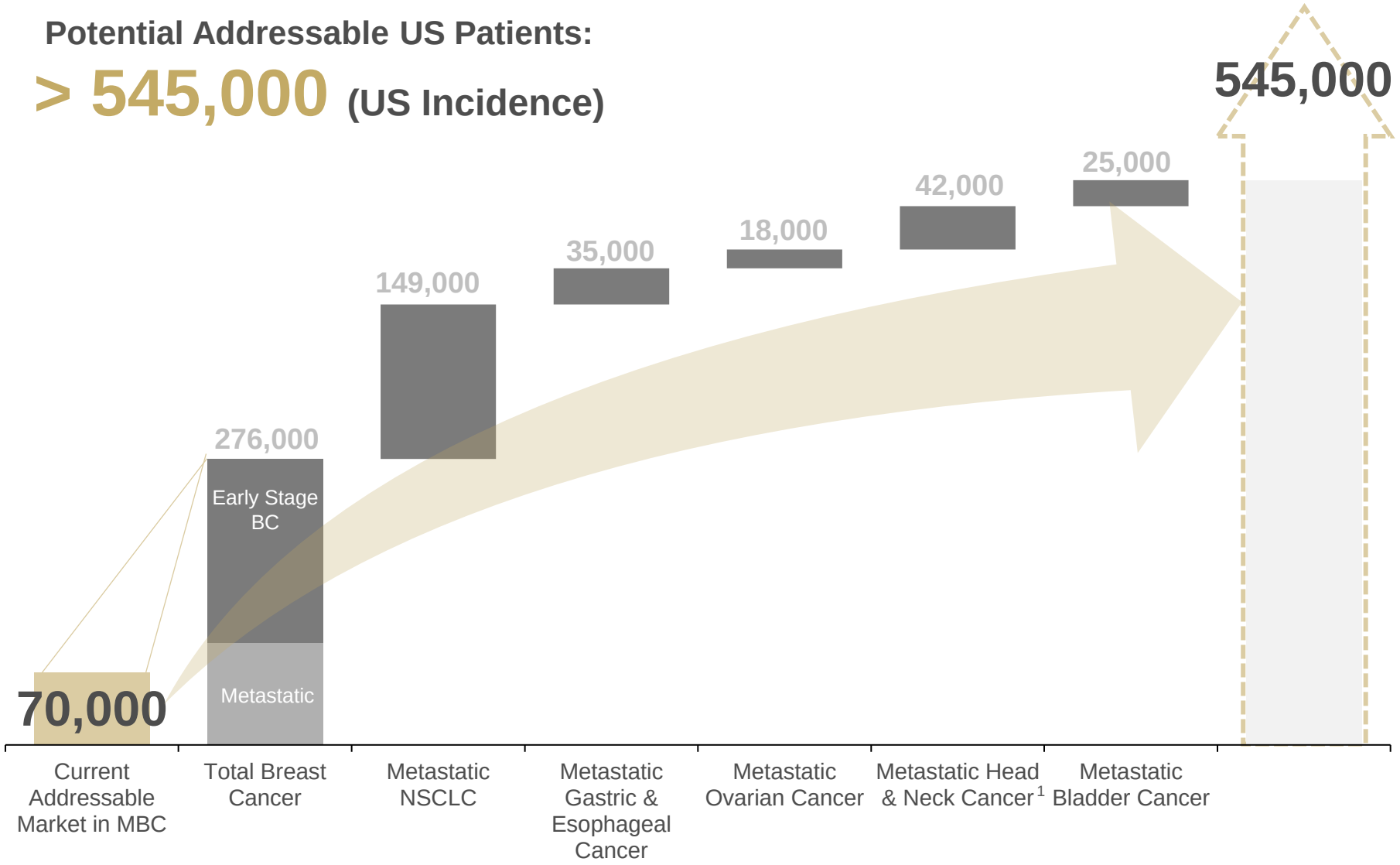
SALES

- ✓ Completed account targeting
- ✓ Building data infrastructure
- ✓ Building CRM platform
- ❑ Target team of 50-55 sales reps
- ❑ Hiring 25 territory reps upon approval to cover 70% of the highest prescribers

Opportunity to Expand Oral Paclitaxel's Addressable Market

Potential Addressable US Patients:

> 545,000 (US Incidence)



Source: New cases in 2020 estimated based on SEER by National Cancer Institute
Note: The graph is for illustrative purpose only. It may not reflect the actual scale and the selected diseases do not represent our comprehensive list of targeted indications
[1] Including laryngeal, oral cavity and pharyngeal cancers

Potential Areas of Interest

Pursue opportunities where paclitaxel is standard of care

Expanding into indications where Paclitaxel is SOC

- Early-stage breast cancer
- Ovarian cancer
- Lung cancer
- Gastric cancer

Pursue emerging combination opportunities

- Lung cancer
- Gastroesophageal (GE) cancer
- Genitourinary (GU) cancer
- TNBC

Indications with ongoing studies

I-SPY 2 Trial Overview

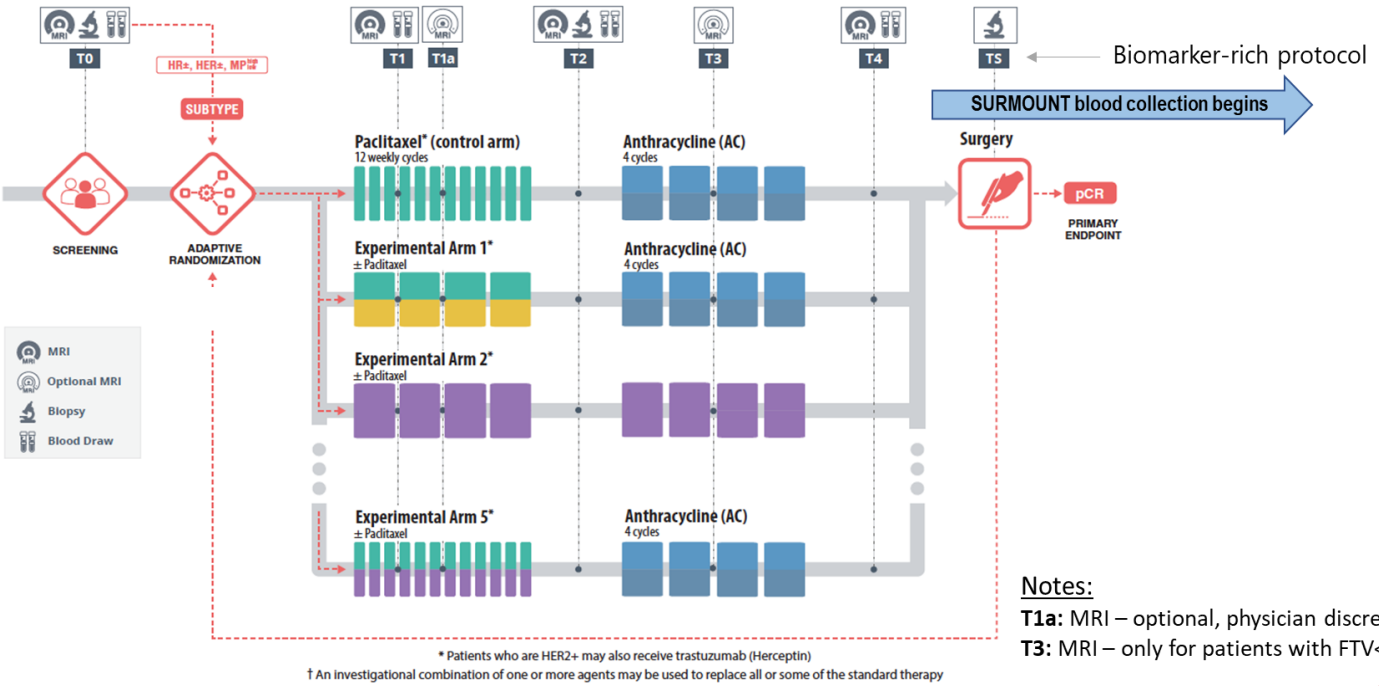
A Phase II trial designed to screen novel agents in the neoadjuvant setting

- Patients are randomized to chemotherapy + / - a novel agent
- Endpoint is pathologic complete response (pCR)
- Graduation: 85% probability of success in a Phase 3

Over 20 leading cancer centers in the U.S.

Adaptive Overall Study Schema

I-SPY 2 employs an innovative adaptive randomization trial model



* Patients who are HER2+ may also receive trastuzumab (Herceptin)

† An investigational combination of one or more agents may be used to replace all or some of the standard therapy

Notes:

T1a: MRI – optional, physician discretion

T3: MRI – only for patients with FTV<80%

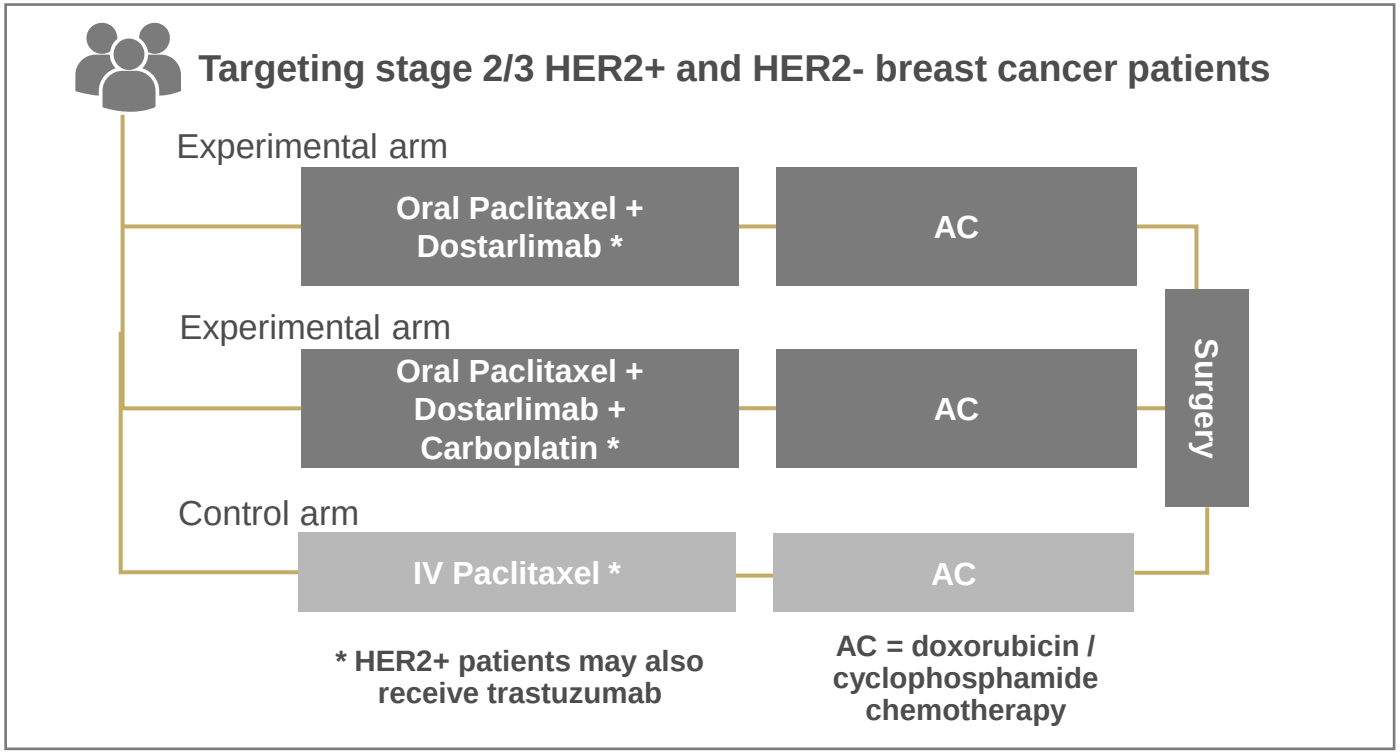
Source: Quantum Leap Healthcare Collaborative

I-SPY 2 Launches New Study Arm with Oral Paclitaxel

In Combination with GSK's dostarlimab (PD-1 Antibody)

Goal of Study: Evaluate the safety and efficacy of Oral Paclitaxel in combination with dostarlimab +/- carboplatin in the neoadjuvant breast cancer setting

Primary Objective: Determine whether this regimen increases the probability of pathologic complete response (pCR) over standard neoadjuvant chemotherapy alone in specific biomarker signatures



Expanding Portfolio of Novel Cancer Therapeutics

TCR-T Immunotherapy **TCRT-ESO-A2**	Being developed by Axis Therapeutics, a joint venture between Athenex and Xiangxue Life Sciences (XLifeSc) FDA allowed the U.S. IND for TCRT-ESO-A2*, targeting solid tumors that are NY-ESO-1 positive in HLA-A*02:01 positive patients Preliminary results from China pilot studies for TAEST16001* (binding affinity against HLA-A*02:01 restricted antigen NY-ESO-1) • Encouraging positive clinical efficacy and safety signals • TCR-expression detected on patients' T-cells with improved binding affinity and introduced TCR-genes persisted in circulation XLifeSc initiated a Phase I trial of TAEST16001* in China
Arginine Deprivation Therapy **PT01 (Pegtomarginase)**	Arginine depletion for ASS1/OTC deficient cancers U.S. IND allowed for PT01 for advanced malignancies Planning for Phase I study ongoing Potential to combine with other Athenex pipeline therapeutics
Src Kinase Inhibition **KX2-361 Oral**	Closely related structural analog of tirbanibulin capable of crossing the blood-brain barrier Phase I study in China initiated by partner, Xiangxue Pharmaceutical

* TCRT-ESO-A2 is similar to TAEST16001, an autologous cell-based therapy being developed simultaneously by XLifeSc for clinical application in China in that both therapies express the same affinity-enhanced TCR

Klisyri for Actinic Keratosis

Two Phase III Pivotal Studies in the U.S. Completed

- Double-blind, vehicle-controlled, randomized, parallel group, multicenter
- Enrolled 351 subjects in 31 U.S. sites per study (N=702)

Efficacy Results

% of Subjects in ITT population (# of Subjects)	KX01-AK-003			KX01-AK-004		
	Tirbanibulin N=175	**Vehicle N=176**	**p-value**	**Tirbanibulin N=178**	**Vehicle N=173**	**p-value**
100% AK Clearance **(primary endpoint)**	**44%** (N=77)	5% (N=8)	**<0.0001**	**54%** (N=97)	13% (N=22)	**<0.0001**

Safety Results

- **Compliance** to 5-day of self-treatment was **over 99%** for both studies
- **Local skin reactions** were mostly **mild to moderate**
- Treatment-related adverse events were mild to moderate application site symptoms, e.g. pruritus or pain
- No serious adverse events or early discontinuations due to study drug related adverse events

Actinic Keratosis (AK) Market Opportunity Is Significant

Actinic Keratosis Market Opportunity

- Common pre-cancerous skin condition characterized by scaly crusty skin lesions due to over exposure to the sun
- An estimated 10-15% of AK cases progress to cancer if left untreated[1]
- Estimates suggest more than 40 million Americans develop AKs each year.[2]
- AK represents the second most common diagnosis made by dermatologists in the U.S.[3]
- Klisyri is a first-in-class microtubule inhibitor indicated for the treatment of Actinic Keratosis of the face or scalp
- Differentiated clinical and safety profile with a short duration five-day treatment

License agreement with Almirall	
Upfront Fee / Near Term Payments	$55 million
Milestones	$65 million aggregate associated with launch and additional indications Eligible for additional sales milestones
Royalties	Tiered royalties starting at 15% based on annual net sales with incremental increases in royalty rates with increased sales
Territories	U.S. and all of Europe including Russia and Turkey

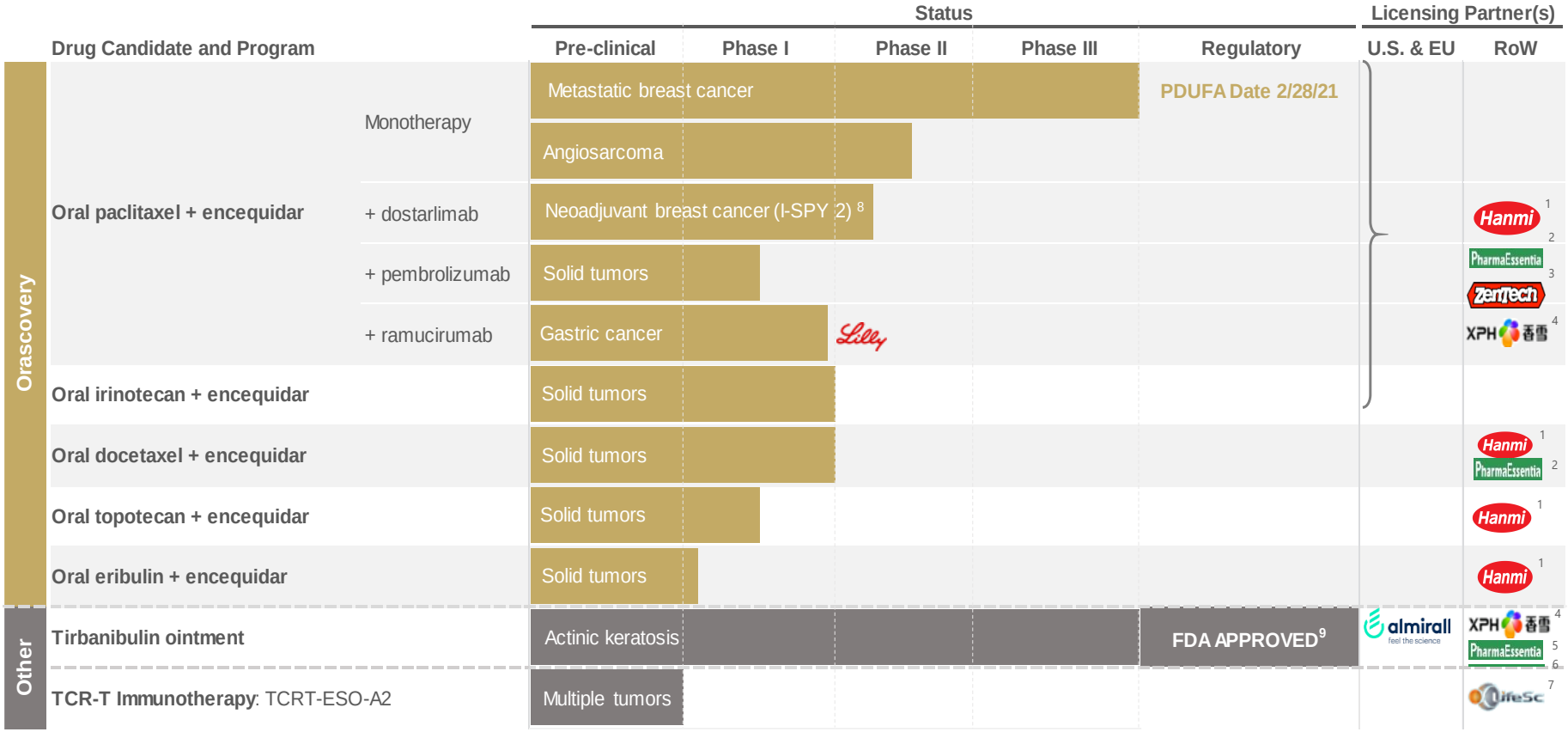
1. American Osteopathic College of Dermatology. https://www.aocd.org/page/ActinicKeratosis
2. American Academy of Dermatology Association (AAD). https://www.aad.org/public/diseases/skin-cancer/actinic-keratosis-overview
3. Wilmer EN, Gustafson CJ, Ahn CS, Davis SA, Feldman SR, Huan WW. Most common dermatologic conditions encountered by dermatologists and non-dermatologists. Cutis. 2014 Dec; 95(6):285-92.

Financial Snapshot

Revenue for the nine-month period ended September 30, 2020	**$122.6 million**
• *Product sales, net*	*$83.5 million*
• *License and other revenue*	*$39.1 million*
Cash, cash equivalents, restricted cash and short-term investments as of September 30, 2020	**$242.1 million**
Potential gross proceeds from the financing agreements with Oaktree and Sagard Healthcare (June and August 2020)	**$275.0 million**
• *Amount drawn down as of September 30, 2020*	*$125.0 million*
• *Term Loan Facility available contingent upon future milestones*	*$100.0 million*
• *RIF Facility available contingent upon future milestones*	*$50.0 million*
Shares outstanding (basic) as of September 30, 2020	**93.3 million**
Shares outstanding (fully diluted) as of September 30, 2020	**106.4 million**

Deep Pipeline of Potentially Transformative Therapies

Athenex's Pipeline (as of Jan. 11, 2021)



[1] Rights in Korea
[2] Sub-licensed in Taiwan, Singapore and Vietnam
[3] Sub-licensed in New Zealand and Australia
[4] Sub-licensed / licensed in Mainland China, Hong Kong and Macao
[5] Licensed in Taiwan
[6] Licensed in Taiwan, Mainland China, Hong Kong, Macau, Singapore and Malaysia
[7] Rights in Mainland China
[8] In collaboration with Quantum Leap Healthcare Collaborative and GSK
[9] The FDA approved Klisyri® (tirbanibulin) for actinic keratosis of the face or scalp in December 2020.

Management Team with Deep Pharma & Biotech Experience

Led the Development of Many Global Drugs

Johnson Lau MBBS, MD, FRCP
Chief Executive Officer, Chairman
25+ years experience

Jeff Yordon
Chief Operating Officer
45+ years experience

Rudolf Kwan MBBS, MRCP
Chief Medical Officer
30+ years experience

Simon Pedder PhD
Chief Business & Strategy Officer
30+ years experience

Randoll Sze
Chief Financial Officer
10+ years experience

Timothy Cook
Senior Vice President,
Global Commercial Oncology
25+ years experience

Daniel Lang MD
President, Axis Therapeutics Limited
Senior Director, Corporate Development
25+ years experience

Wing Kai Chan MBBS, MD, FRACP
Deputy Chief Medical Officer
35+ years experience

William Zuo PhD
President, China
20+ years experience

Prior Experience

Schering-Plough · Ribapharm · MERCK · SAGENT · Abraxis BioScience · ICN Pharmaceuticals, Inc. · Lilly · APP · Bristol-Myers Squibb · Roche · CHELSEA THERAPEUTICS · gsk · CELLECTAR BIOSCIENCES · FARMITALIA · CHIRON · GensiaSicor

Selected Drugs Developed / Marketed

Herceptin trastuzumab · Xeloda Capecitabine 500 mg · PEGASYS (Peginterferon alfa-2a) · CYRAMZA ramucirumab injection 10 mg/mL solution · PEGINTRON COMBINATION THERAPY · REBETOL · Temodar temozolomide · REQUIP ropinirole 21 tablets 2 mg · Faulding · Suboxone (buprenorphine HCl/naloxone HCl dihydrate) · Rituxan Rituximab · Northera (droxidopa) Capsules · Verzenio abemaciclib · ERBITUX CETUXIMAB INJECTION FOR INTRAVENOUS INFUSION

Our goal is to become a global leader in bringing innovative cancer treatments to the market and improving health outcomes

NASDAQ:ATNX

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