First Quarter 2024 Financial Results

May 13, 2024

Nasdaq:INO

1st Quarter 2024 Financial Results & Recent Business Highlights

Welcome and Overview

- Jacqueline Shea, PhD, President and CEO

Regulatory & Medical Affairs Update

- Michael Sumner, MBBS, MBA, Chief Medical Officer

Commercial Update

- Mark Twyman, MBA, Chief Commercial Officer

Financial Update

- Peter Kies, Chief Financial Officer

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Welcome & Overview

Key Objectives for 2024

Prepare for Commercialization of INO-3107

- **Initiate confirmatory trial** – Believe we're aligned with FDA on trial design and moving forward; focused on delivering key competitive advantages in U.S. & ROW
- **File BLA 2H24** – Anticipate requesting rolling submission & priority review
- **Advance commercial plans for launch** – Relationships being established with logistics, distribution and supply partners, ad & brand agencies, conducting additional market research

Advance Pipeline

- **Finalize trial design for INO-3112** – Believe we're aligned with FDA on trial design and moving forward; next steps to discuss design with European regulators
- **Finalize plans for INO-4201 & decide next steps for INO-5401** – Expect to submit Phase 2 study protocol for 4201 to FDA in 2Q24; working on plans with partners for 5401
- **Publish first clinical data from next-gen DMAb targeting SARS-CoV-2**

Strengthen Business

- **Financial discipline -** $106M cash & cash resources as of 03/31/24, no debt; $33M net underwritten offering of common stock & pre-funded warrants completed in April 2024
- **Cash runway until 3Q25**
- **Focus on operational excellence** to meet milestones

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Regulatory & Medical Affairs Update

Recent Highlights for Lead Candidate INO-3107
Potential Treatment for Recurrent Respiratory Papillomatosis (RRP)

- BLA submission on track for 2H24 under accelerated approval program
- Moving forward with proposed design of confirmatory trial based on FDA feedback
  - Randomized, placebo-controlled, ~100 RRP patients with history of ≥2 surgeries per year, with treatment option for placebo arm at trial end
  - Leveraging clinical results to date, immunology data & strengths of the platform
  - Supports expansion plans into global marketplace
  - Focuses on what matters most to patients and HCPs: overall reduction of surgery as primary endpoint
- Immunological data highlighting mechanism of action: planning submission to peer-reviewed publications/scientific conferences in 2H24

We stress, however, that even among patients who have had less than 5 surgeries…44% of these patients still incurred permanent iatrogenic injury…the cumulative risk for injury increases with every surgery, but ultimately it only takes 1 surgical misadventure to permanently damage the larynx.”

- Factors Associated with Iatrogenic Laryngeal Injury in RRP
- *Otolaryngology,* 2024 Apr;170(4):1091-1098. doi: 10.1002/ohn.629. Epub 2023 Dec 20

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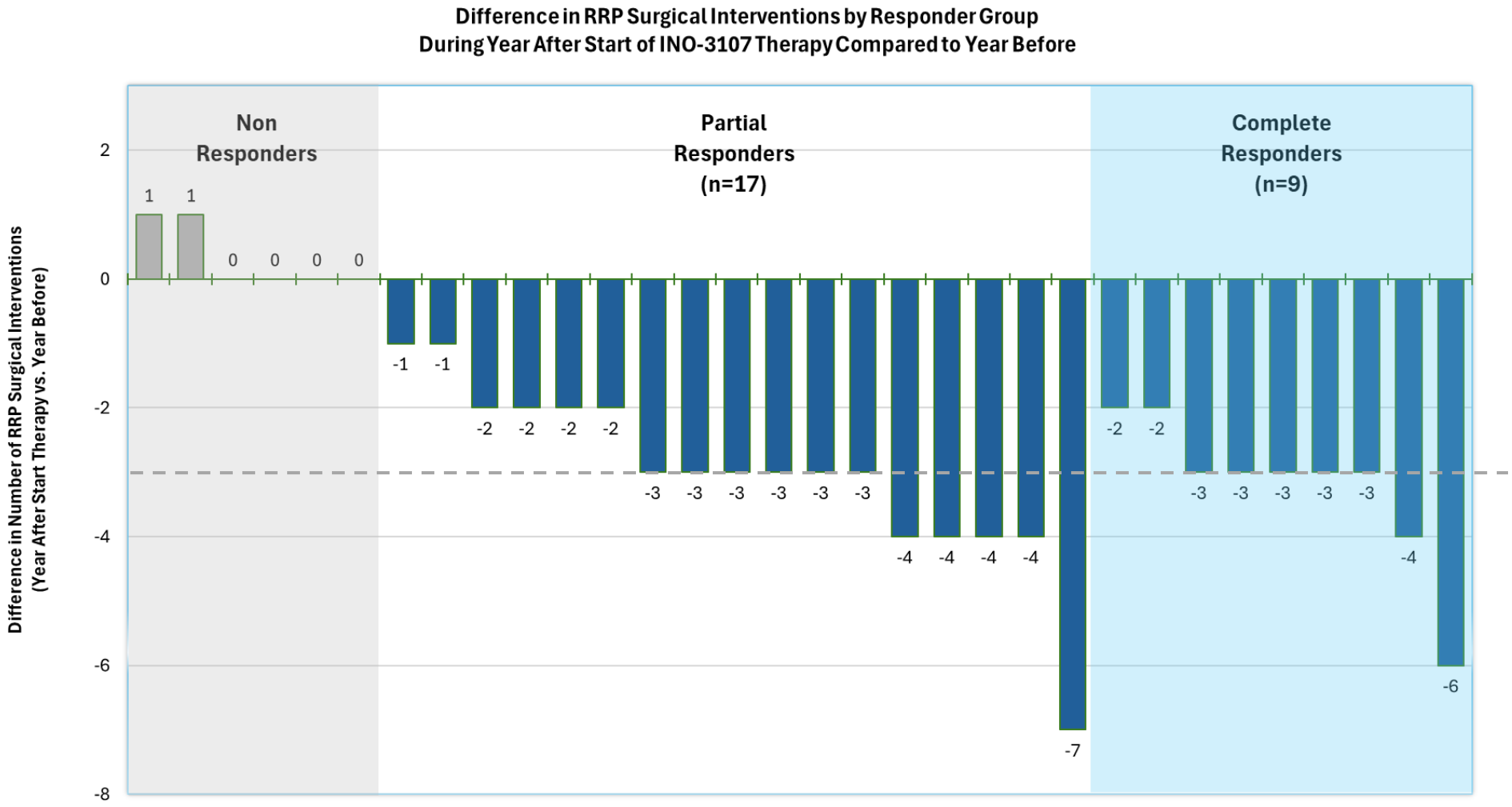
INO-3107: Addresses Key Aspects of RRP

RRP	INO-3107
Rare disease characterized by papillomas in respiratory tract caused by HPV-6 and HPV-11	Generates cytotoxic CD8 T cells targeting both HPV-6 and HPV-11
Inability of patient's immune system to prevent infection	• Teaches immune system to mount effective response • Optimally delivered into cells (CELLECTRA) without chemical adjuvants, lipid nanoparticles or viral vectors
Surgery is standard of care; causes damage that can be worse than RRP disease	• 81.3% of patients had a reduction in surgeries (Ph1/2 trial); 28.1% required no additional surgeries • Well tolerated

INO-3107: In Phase 1/2 trial 81.3% of participants had a decrease in surgeries



Median decrease of 3 surgeries

Note. Year After surgical interventions includes those performed during the dosing window.

Source: RRP-01 Trial Data Set.

Patients had a median range of 4 surgeries (2-8) in the year prior to dosing.

Future Development Plans for INO-3107

Redosing

- **Strength of DNA medicine technology**
- **Investigating redosing strategies to optimize patient benefit –** focus on maintaining and enhancing efficacy; planning to submit Phase 2 redosing trial to FDA in 3Q24

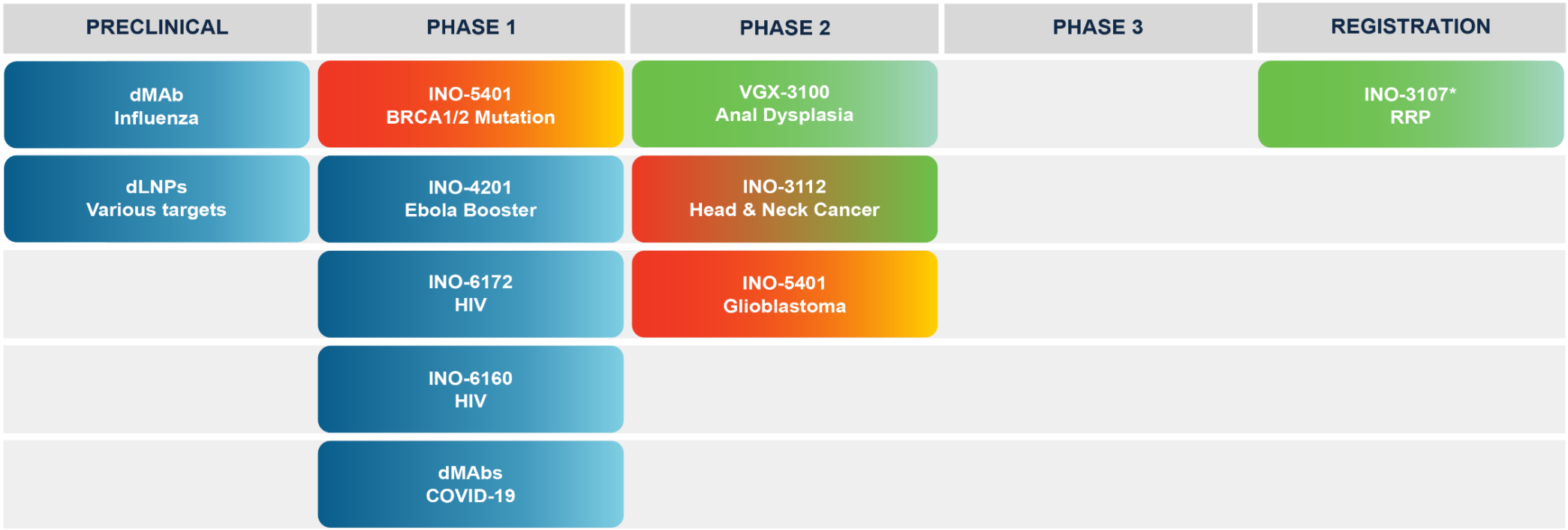
Europe/ROW Markets

- **Conversations with regulators in European Union helping to frame next clinical development steps for ROW markets** – Regulators stated placebo-controlled trial required for European licensure
- **Orphan Drug Designation granted by EU in 2023**
- **CE mark for CELLECTRA in Europe**

INO-3112: Recent Progress

- Announced clinical collaboration and supply agreement with Coherus Biosciences – 1Q24
  - Investigate INO-3112 as potential treatment for HPV-related locoregionally advanced, high risk, HPV-16/HPV-18 positive, throat cancer when used in combination with LOQTORZI™
  - LOQTORZI™ is an approved anti-PD-1 monoclonal antibody developed by Coherus Biosciences for treatment of nasopharyngeal carcinoma (NPC)
- Submitted study package to FDA – 1Q24
- FDA provided feedback – 2Q24
  - Study designed to show improvement in event-free survival
  - Moving forward with Phase 3 trial
  - Targeting multi-center study in North America and Europe
- Next Steps: discuss design with European regulatory agencies

INOVIO Pipeline



OUT-LICENSED**

HPV-RELATED DISEASES IMMUNO-ONCOLOGY INFECTIOUS DISEASES

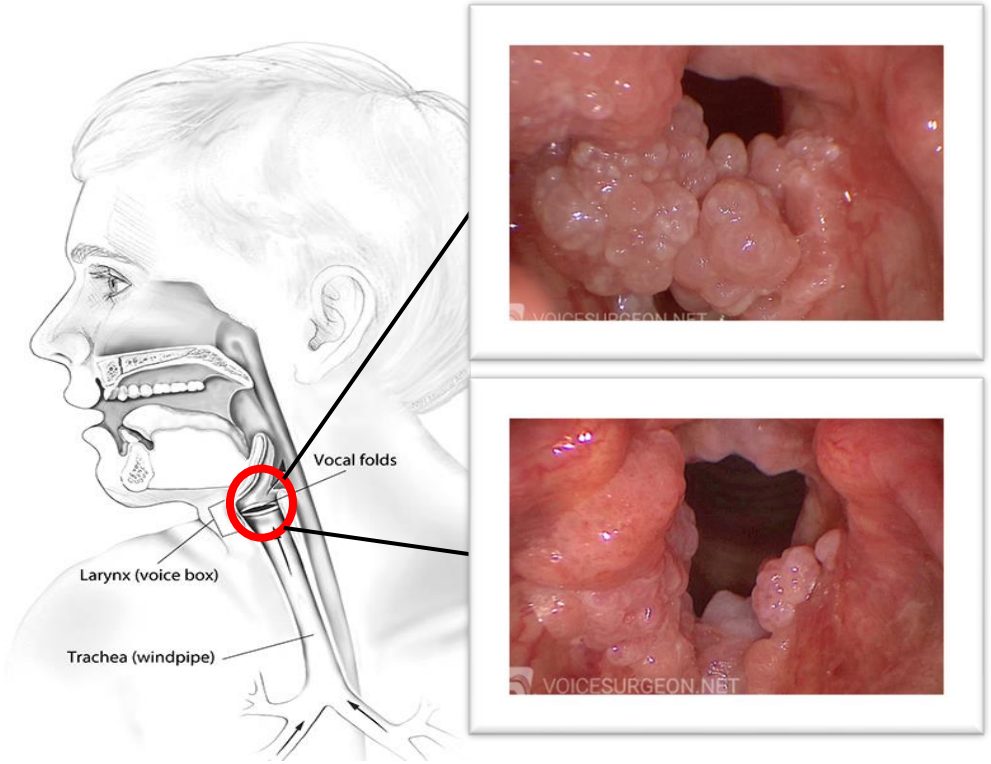
* Preparing BLA submission under accelerated approval program ** VGX-3100 to ApolloBio for China; INO-4800 to Advaccine for China

Commercial Update

Significant Unmet Need for RRP Patients

"It rules my life, and it has since I was young. I've missed a lot of life events because for many years I was travelling to get to the right doctors or facilities."

"It's on my mind 24-7, and every time I wake up with a hoarse voice or feel something in my throat, the anxiety sets in again."

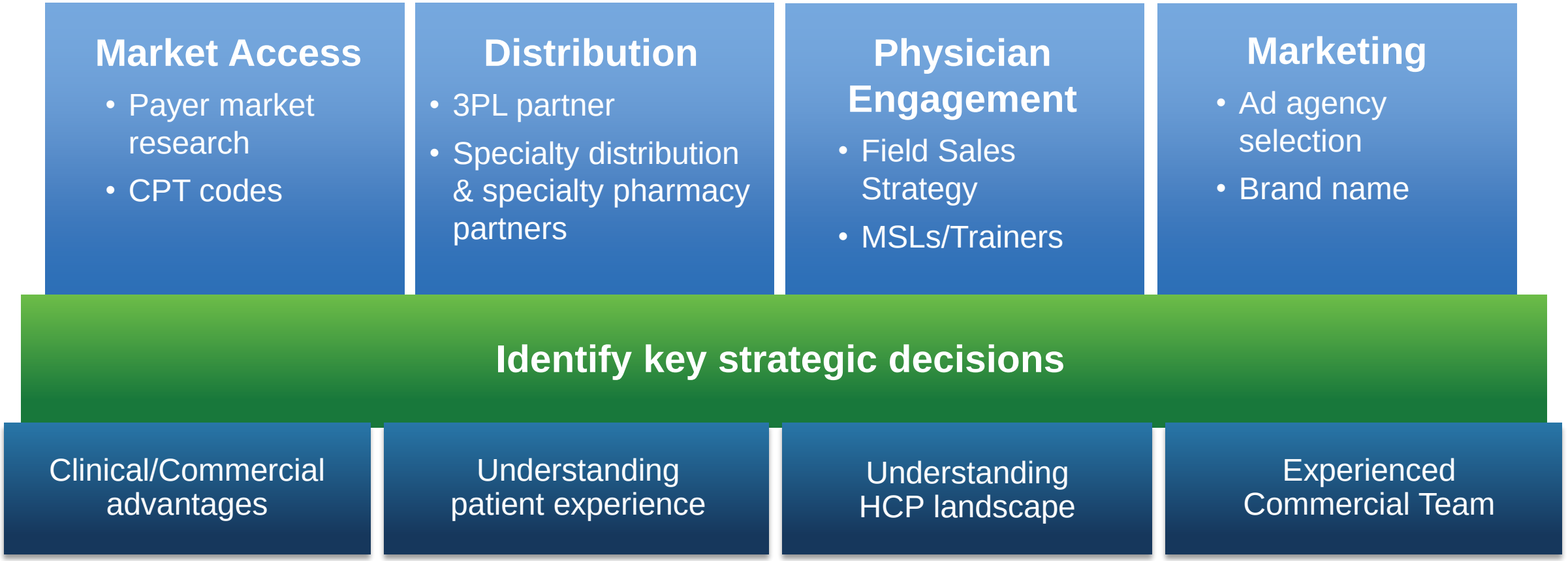


"I don't know how to manage it…you know, surgery every 3-4 months, and it takes me longer now after 350 surgeries to get a voice back."

"I like being around people, but it's too much work now, talking, trying to shove enough air [through] so that you have a voice."

Image Source: National Institute on Deafness and Other Communication Disorders; Available at www.nidcd.nih.gov/health/recurrent-respiratory-papillomatosis; accessed July 27, 2022;
Photographs courtesy Aaron Friedman MD, University of Cincinnati College of Medicine (https://voicesurgeon.net/voice-disorders/recurrent-respiratory-papillomatosis-rrp/). Used with permission.

Building Blocks for Successful Commercial Launch



Desmoid Tumor Analog Demonstrates Need for Therapeutic Options for Recurring, Non-Cancerous Growths Impacting QoL

	INO-3107	Nirogacestat
Target Indication	• RRP: papilloma in respiratory tract • Rarely malignant/fatal; can progress to lungs; impairs ability to breathe & speak • Reduces QoL	• Desmoid tumors: non-cancerous growths in connective tissue • Rarely fatal; can be painful & lead to tissue loss/amputation • Reduces QoL
Standard of Care	• Surgery • High risk of recurrence and damage caused to airway & vocal cords	• Surgery • High risk of recurrence • Health challenges occur after tumor removal
Clinical Results	• 81.3% overall reduction in surgeries • CR = 28.1%	• Lowered risk of disease progression by 71% • CR = 7%
U.S. Market: Prevalence	Estimated 14,000	30,000
Orphan Drug Indication	Yes	Yes; FDA approved Nov 2023

Financial Update

Ongoing Commitment to Financial Discipline

- Strengthened balance sheet in 2Q24
  - Common stock offering with prefunded warrants
  - Net proceeds ~$33.2M
- Retired $17M in convertible notes due March 1, 2024
  - No additional debt
- Cash runway projected to 3Q25

	March 31, 2024 (unaudited)	March 31, 2023 (unaudited)	% Change
Revenue	-	$0.1	-
Operating expense	$31.5	$44.1	(29%)
Net loss	($30.5)	($40.6)	(25%)
Net loss per share	($1.31)	($1.89)	(31%)

Select Financial Results. Amounts presented in millions ($US) except per share amounts, which reflect the 1-for-12 reverse stock split effected in January 2024 on a retroactive basis for all periods presented.

Q&A

2024 Key Catalysts

1H2024

- ✓ Finalize trial design for INO-3112 in throat cancer
- Determine next steps for INO-5401 in GBM
- Finalize plans for INO-4201 Ebola booster based on FDA feedback, discuss with collaborators and potential partners

2H2024

- INO-3107:
  - Initiate confirmatory trial
  - Submit BLA
  - Publish immunology data
- First clinical data from Phase 1 dMAb trial (anti-SARS-CoV-2)

Thank you.