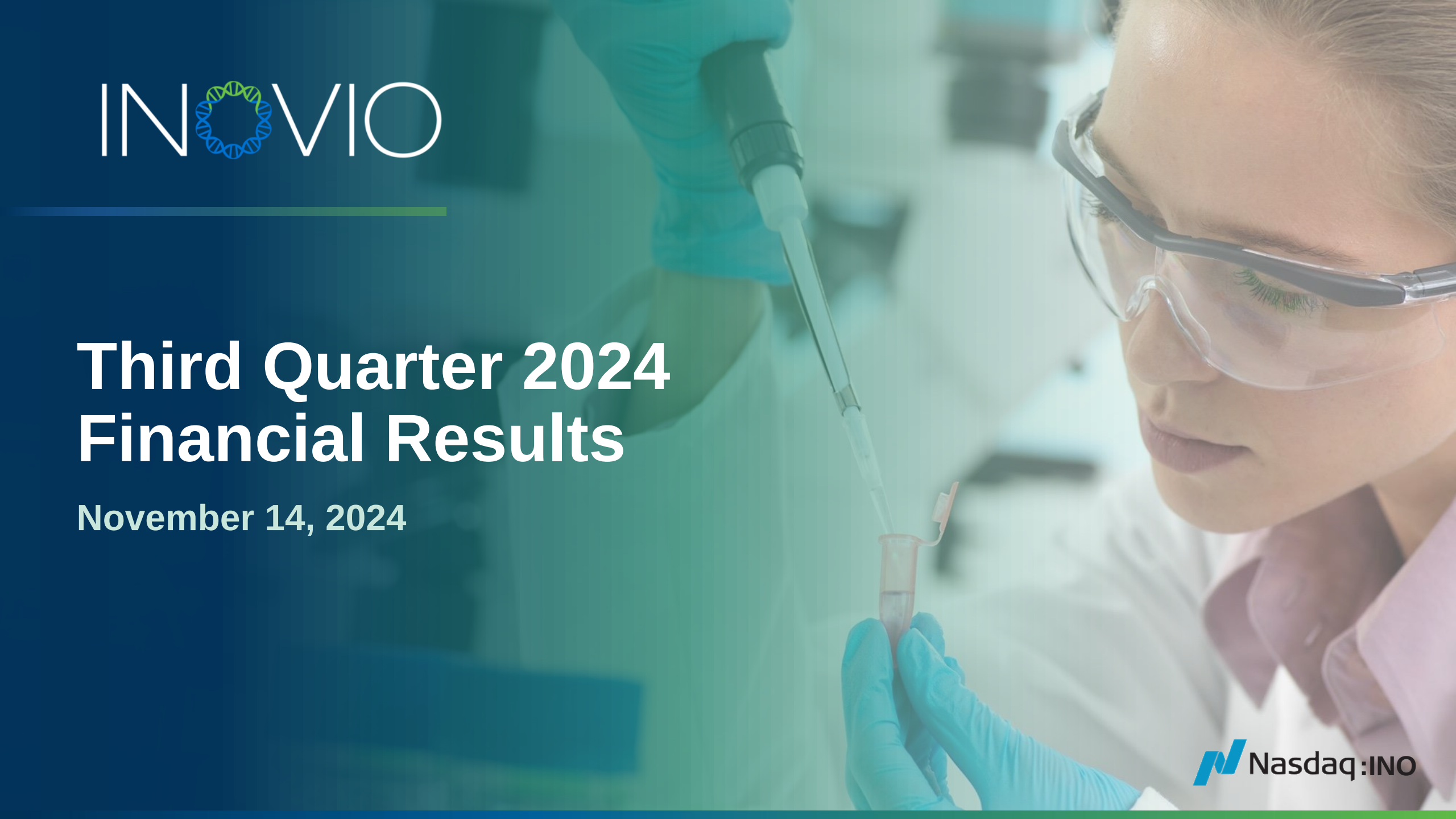

Third Quarter 2024 Financial Results

November 14, 2024

Nasdaq:INO

Agenda

- **Introduction**
  - *Thomas Hong, Manager, IR*
- **CEO Perspective & Corporate Progress**
  - *Jacqueline Shea, PhD, President & Chief Executive Officer*
- **INO-3107 Update**
  - *Michael Sumner, MBBS, MBA, Chief Medical Officer*
  - *Steve Egge, Chief Commercial Officer*
- **Financial Results**
  - *Peter Kies, Chief Financial Officer*

Forward-Looking Statements

This presentation includes statements that are, or may be deemed, “forward-looking statements,”” within the meaning of Section 27A of the Securities Act of 1933, as amended. All statements, other than statements of historical facts, included in this presentation regarding our strategy, future operations, future financial position, projected costs, prospects, plans and objectives of management are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as “may,” “might,” “will,” “objective,” “intend,” “should,” “could,” “can,” “would,” “expect,” “believe,” “anticipate,” “project,” “target,” “design,” “estimate,” “predict,” “opportunity,” “proposition,” “strategy,” “potential,” “plan” or the negative of these terms and similar expressions intended to identify forward-looking statements.

You should not place undue reliance on these forward-looking statements. Forward-looking statements include, but are not limited to, statements about: the timing and success of preclinical studies and clinical trials; availability and timing of data from our clinical trials; the planned submission of a BLA towards the middle of 2025; plans for discussions with regulatory authorities; the planned commercial launch of INO-3107 if regulatory approval is obtained; the ability to obtain and maintain regulatory approval of our product candidates; the scope, progress, expansion and costs of developing and commercializing our product candidates; our expectations regarding the amount and timing of our expenses; expectations with respect to our cash resources into the third quarter of 2025 and expected cash burn for the fourth quarter of 2024; our ability to adequately manufacture our product candidates; our ability to obtain and maintain intellectual property protection for our product candidates; our expectations regarding competition; the size and growth of the potential markets for our product candidates and the ability to serve those markets; the rate and degree of market acceptance of any of our product candidates; our anticipated growth strategies; the anticipated trends and challenges in our business and the market in which we operate; our ability to establish and maintain development partnerships; our ability to attract or retain key personnel; our expectations regarding federal, state and foreign regulatory requirements; regulatory developments in the United States and foreign countries and other factors that are described in the “Risk Factors” and “Management's Discussion and Analysis of Financial Condition and Results of Operations” sections of our Annual Report on Form 10-K for the year ended December 31, 2023 and our Quarterly Report on Form 10-Q for the quarter ended September 30, 2024, which have been filed with the Securities and Exchange Commission (SEC) and are available on the SEC's website at www.sec.gov.

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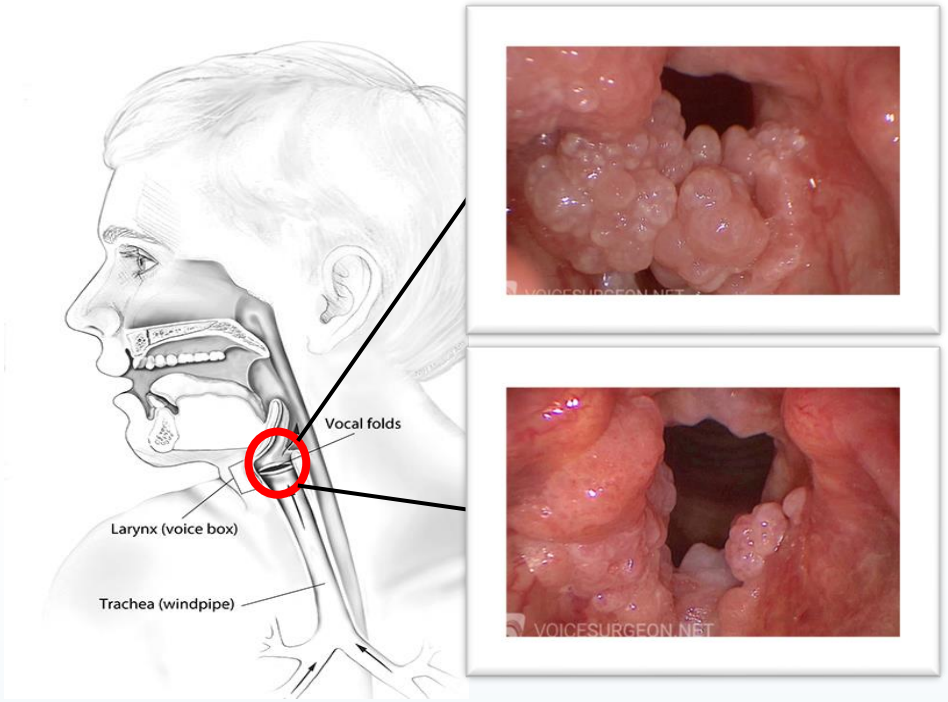
CEO Perspective & Corporate Progress

INOVIO continues to make progress on key objectives for the near, mid and longer-term to deliver value to stakeholders

- **Prepare for Commercialization of INO-3107**
  - New immunology data presented at scientific conferences
  - Positive pre-BLA meeting with FDA in August
    - All modules, other than device-related, expected to be complete by YE24
    - Resolving manufacturing issue for single use device component for BLA submission, targeted for mid-2025
  - Achieved ROW regulatory progress – Innovation Passport granted by UK; ATMP certification received by EU
  - Focusing majority of capital resources on advancing INO-3107
- **Advance Pipeline**
  - Working on next-level development plans with regulators & partners for INO-3112 (Ph3 in OPSSC), INO-4201 (Ph2 in Ebola Booster Vaccine) and INO-5401 (Ph2 in GBM, BRCA study ongoing)
  - First clinical data from ongoing Ph1 study with DMAbs expect to be submitted to peer-reviewed publication by YE24
- **Strengthen Business**
  - Financial discipline – $84.4M cash, cash equivalents and short-term investments as of 09/30/24
  - No debt

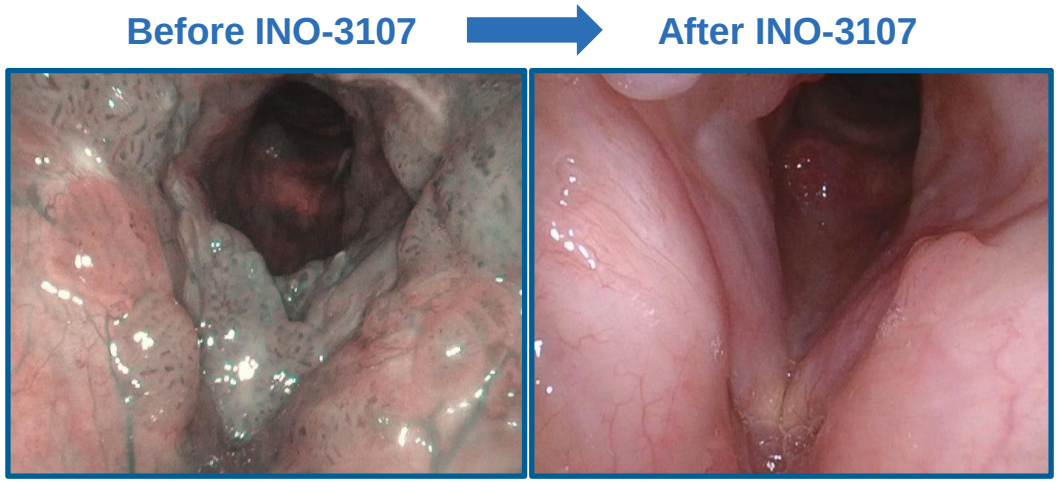
Recurrent Respiratory Papillomatosis (RRP)



- **Rare disease characterized by small, wart-like growths (papillomas) in the respiratory tract**
  - Can form anywhere but primarily affect larynx & vocal cords
  - Can cause difficulty speaking or complete voice loss, difficulty swallowing, shortness of breath and choking episodes
  - In rare cases, can spread to lungs or become malignant
- **Insufficient immune response that fails to prevent and clear HPV-6 and -11 infection leads to RRP**
- **Surgery is current standard of care**
  - Papillomas grow back since underlying infection remains
  - Average 4 surgeries per year
  - Severe RRP may require hundreds of surgeries over a lifetime
  - Surgery can irreversibly damage vocal cords

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.

Potential Novel, Effective Non-Surgical Treatment for RRP



HPV-11 - Reduction of 6 surgeries - CR

INO-3107 is a DNA medicine that generates antigen-specific cytotoxic CD8 T cells targeting both HPV-6 and HPV-11 with the potential to treat the underlying infection in patients with RRP

- Compelling combination of tolerability and clinical benefit across disease spectrum observed in Phase 1/2 trial
- Significant immune response that supports mechanism of action and clinical benefit for patients
- Potential to be preferred choice by patients, HCPs and payors, if approved

FDA has granted Breakthrough Therapy and Orphan Drug Designation to INO-3107
Planning to submit BLA under Accelerated Approval Pathway

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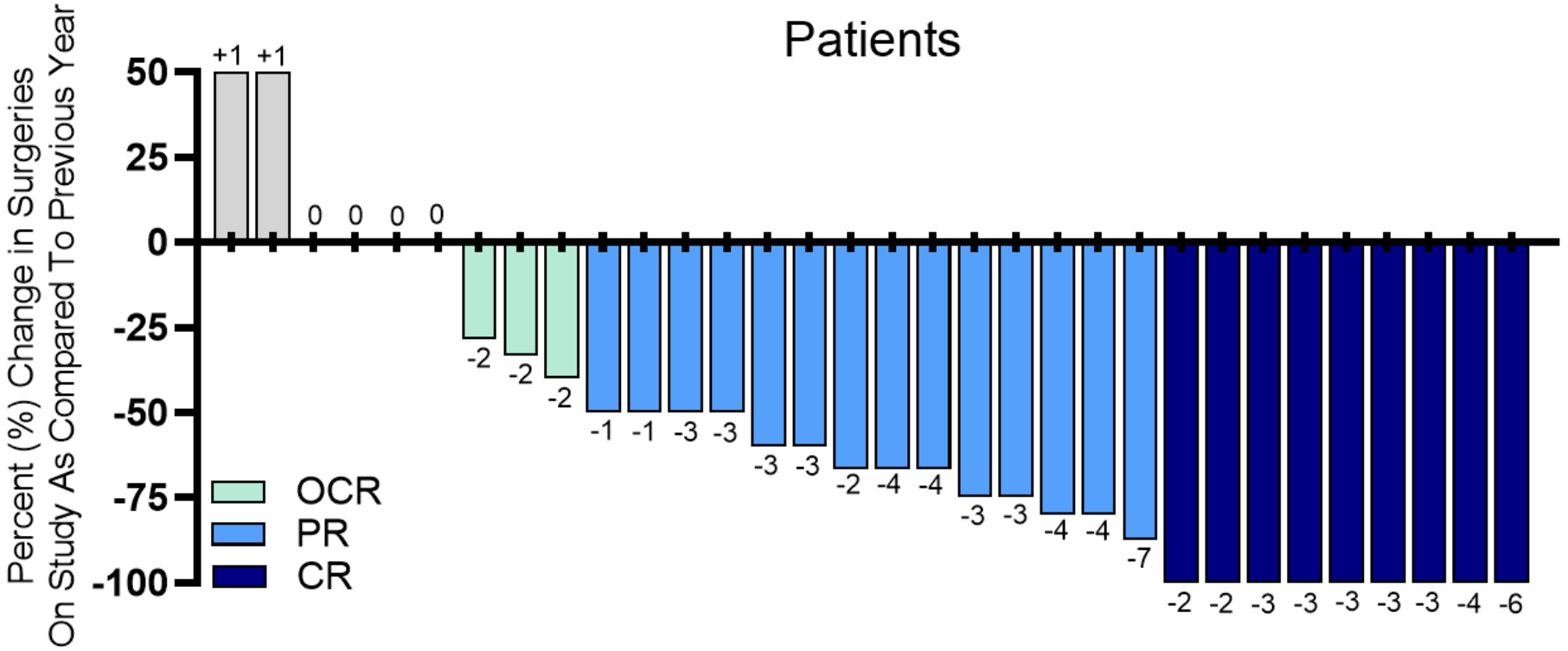
Promising Clinical Benefit Observed in RRP Patients

RRP-001 Study



Parameter
Complete Response (CR): no surgeries during a 52-week treatment phase
Partial Response (PR): a ≥ 50% reduction and less than 100% in surgeries compared to previous year
Overall Response Rate (ORR)=CR+PR: Patients with complete or partial response to treatment
Overall Clinical Response (OCR): reduction of ≥ 1 surgery compared to previous year

INO-3107 Efficacy Results

Complete Response	Partial Response	Overall Response	Overall Clinical Response
28% (9/32)	44% (14/32)	72% (23/32)	81% (26/32)

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Overall safety (primary endpoint)

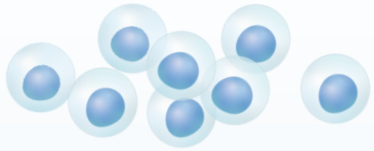
Adverse Event	Patients (N=32), n (%)
Any pretreatment AE	5 (15.6)
Any TEAE	20 (62.5)
Any treatment-related TEAE	13 (40.6)
Any SAE	2 (6.3)
Any treatment-related SAE	0 (0)
Any TEAE by severity	
Any Grade 1	15 (46.9)
Any Grade 2	9 (28.1)
Any Grade 3	4 (12.5)
Any treatment-related Grade 3	0 (0)
Any Grade ≥4	0 (0)
Any TEAE leading to treatment discontinuation	0 (0)
Any TEAE leading to death	0 (0)

- Most commonly reported AEs were injection site pain (31%) and fatigue (9%)
- Electroporation device well tolerated by patients and easy to use by HCPs

AE, adverse event; SAE, serious adverse event; TEAE, treatment-emergent adverse event.

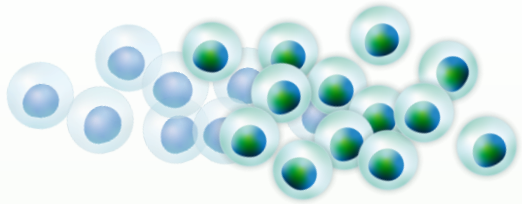
Proposed Mechanism of Action

Induce HPV antigen-specific T cell responses in blood, travel to/infiltrate papilloma/airway tissue, eradicate HPV infected cells to reduce/eliminate need for surgery



Pre-existing T cells in blood

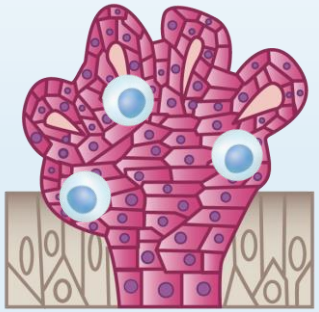
CIRCULATION



Expansion of pre-existing T cells and induction of new T cells in blood

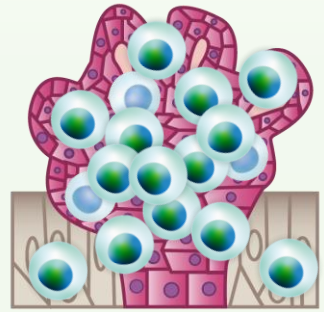
Treatment with INO-3107 Immunotherapy

Low T cell trafficking



PAPILLOMAS

Mass trafficking by INO-3107 induced T Cells



- Poorly infiltrated papillomas
- Low Inflammatory signatures
- Low cytokine and chemokine production
- **Uncontrolled and/or progressive disease**

- Increased Inflammatory signatures
- Increased cytokine and chemokine production
- **Elimination of HPV-infected cells = Controlled disease, reduction/elimination of surgical interventions**

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New Immunology Data
Presented at AACR (October 19) & IPVC (November 14)

- **INOVIO conducted an immunology assessment of INO-3107**
  - 32 patients in Phase 1/2 trial (RRP-001)
  - Blood samples taken throughout trial. Paired airway tissue biopsies taken prior to treatment and at trial end assessed for immune activity
- **Goal: evaluate whether INO-3107 can induce HPV antigen specific T cell responses in blood that travel to/infiltrate papilloma, eradicate HPV 6/11 infected cells to reduce or eliminate need for surgery**
- **Immunological testing conducted:**
  - Evaluation of peripheral blood samples to confirm induction, activation and expansion of cytotoxic T cells with antigen specificity to HPV-6 and HPV-11
  - Evaluation of airway tissues to assess immunological changes, T cell infiltration/profiling, and potential impact of papilloma microenvironment

Key Takeaways: Immunological Evaluation of INO-3107

Right kind of immune responses generated to fight HPV in all 32 patients

T cells get where they need to go – into the papilloma/airway tissue

Create an immune response in papilloma/airway tissue that reduces or eliminates the need for surgery

Immune responses in clinical responders are different than for non-responders

Papilloma microenvironment doesn't appear to restrict clinical benefit

Why is the immunology data important for INO-3107?

- Supports mechanism of action and is an important component of regulatory filings
- Confirms the targeting of HPV-6 and HPV-11, the strains that cause disease
- Confirms the expansion of existing populations of T cells and induction of new T cells that travel to the airway tissues to reduce or eliminate the need for surgery
- Supports clinical benefit across the disease spectrum

We believe these data provide compelling evidence that INO-3107 could be a game changer for RRP patients, if approved, by reducing their need for repeat surgeries to treat their disease

INO-3107: Advancing Plans to be Launch Ready by YE2025*

- Refining go-to-market strategy: focused on patient needs
- Conducting additional market research to develop thorough market understanding: every surgery matters
- Driving key strategic choices:
  - Pricing and access
  - Channel strategy
  - Targeting and segmentation
  - Product positioning to ensure strong differentiation
  - Strategic imperatives with metrics
- Mapping adoption pathways to ensure optimal customer experience
- Finalizing forecasting and gross-to-net assumptions
- Planning further build-out of commercial organization in 2025

*Assuming regulatory approval received

Financial Update

Ongoing Commitment to Financial Discipline

	Three Months Ended Sept 30, 2024 (unaudited)	Three Months Ended Sept 30, 2023 (unaudited)	% Change
Operating expenses	$27.3	$35.9	(24.0%)
Net loss	($25.2)	($33.9)	(25.7%)
Net loss per share	($0.89)	($1.52)	(41.4%)

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.

- $84.8M in cash, cash equivalents and short-term investments at September 30, 2024
- No debt
- Cash runway projected into 3Q25

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Q&A

Upcoming Milestones

2024

- INO-3107:
  - Present new immunology data
  - Announce results from durability study
- INO-4201 (Ebola booster): Submit Phase 2 trial design based on FDA feedback
- First clinical data from Phase 1 DMAb trial (anti-SARS-CoV-2)

2025

- INO-3107:
  - Submit IND
  - Initiate confirmatory trial
  - Submit BLA
  - Advance commercial activities to be launch ready by year end if approved
  - Submit a re-dosing study to FDA
  - Present/publish immunology, durability, full efficacy and tolerability data
- INO-3112: Gain alignment with EU on Phase 3 design

Thank you.