OTONOMY®

Targeted Medicines *for the* Ear

Corporate Presentation

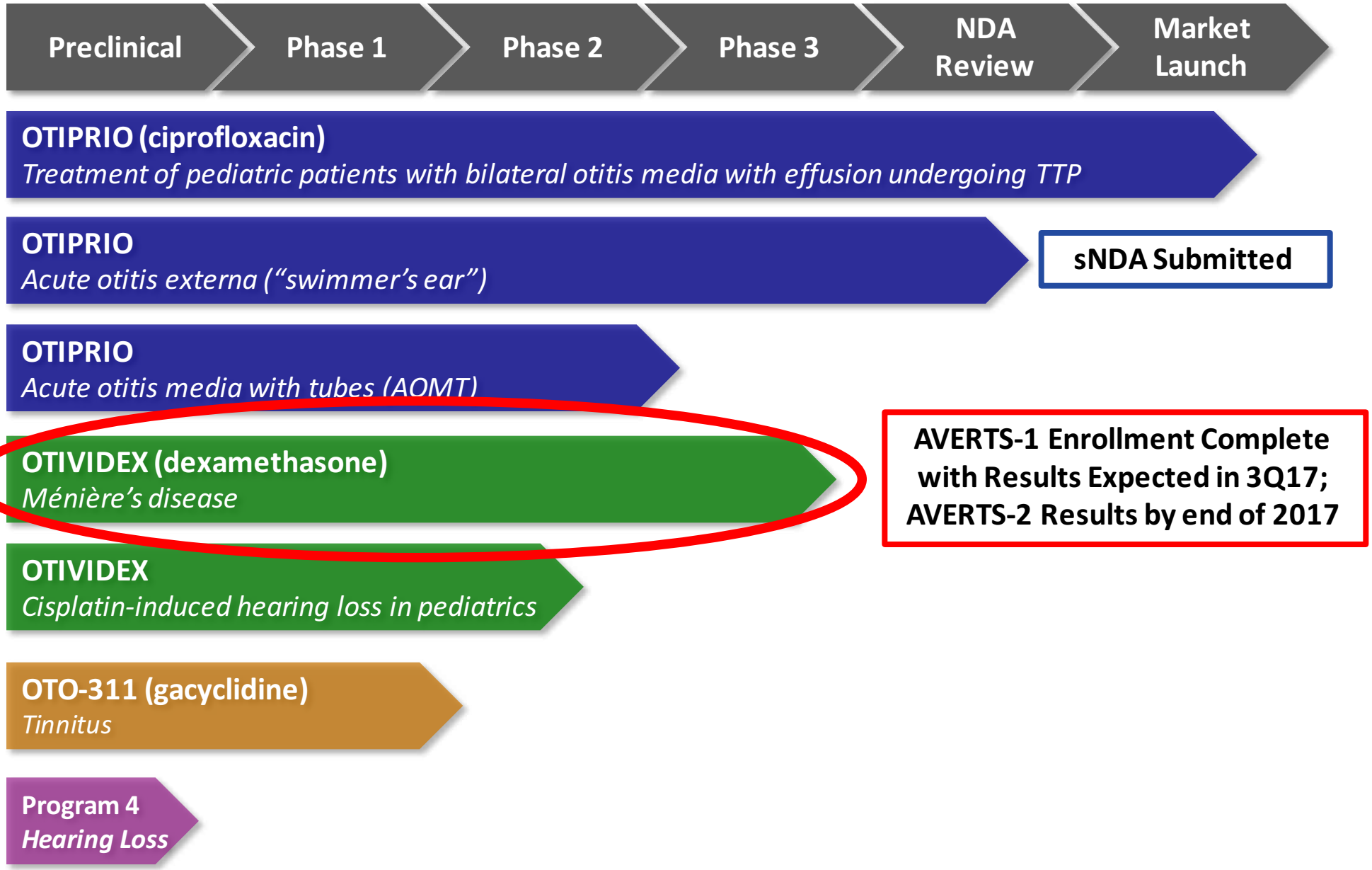
May 4, 2017

Forward-Looking Statements

Safe Harbor Statement

These slides and the accompanying oral presentation (the "Presentation") contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements generally relate to future events or future financial or operating performance of Otonomy, Inc. (the "Company"). Forward-looking statements in this Presentation include, but are not limited to, size of market for OTIPRIO®, the increased OTIPRIO revenue in 2017, Otonomy's expectations regarding potential coverage and reimbursement relating to OTIPRIO, the advancement of OTIPRIO to Phase 3 in AOMT and related discussions with the FDA, the timing, duration, design and expectations regarding the two Phase 3 clinical trials for OTIVIDEX™ in Ménière's disease, the number of patients expected to participate in the Phase 2 clinical trial for OTIVIDEX in cisplatin-induced hearing loss, the market size and pricing for OTIVIDEX, the timing of the Company's NDA submission for OTIVIDEX, potential expansion indications for OTIVIDEX, the timing of a Phase 2 clinical trial for OTO-311 and the estimated non-GAAP operating expenses for 2017. Otonomy's expectations regarding these matters may not materialize, and actual results in future periods are subject to risks and uncertainties. Actual results may differ materially from those indicated by these forward-looking statements as a result of these risks and uncertainties, including but not limited to: Otonomy's limited operating history and its expectation that it will incur significant losses for the foreseeable future; Otonomy's ability to obtain additional financing; Otonomy's dependence on the commercial success of OTIPRIO and the regulatory success and advancement of additional product candidates, such as OTIVIDEX and OTO-311, and label expansion indications for OTIPRIO; the uncertainties inherent in the drug development process, including, without limitation, Otonomy's ability to adequately demonstrate the safety and efficacy of its product candidates, the nonclinical and clinical results for its product candidates, which may not support further development, and challenges related to patient enrollment in clinical trials; Otonomy's ability to obtain regulatory approval for its product candidates; side effects or adverse events associated with Otonomy's product candidates; competition in the biopharmaceutical industry; Otonomy's dependence on third parties to conduct nonclinical studies and clinical trials; the timing and outcome of hospital pharmacy and therapeutics reviews and other facility reviews; the impact of coverage and reimbursement decisions by third-party payors on the pricing and market acceptance of OTIPRIO; Otonomy's dependence on third parties for the manufacture of OTIPRIO and product candidates; Otonomy's dependence on a small number of suppliers for raw materials; Otonomy's ability to protect its intellectual property related to OTIPRIO and its product candidates in the United States and throughout the world; expectations regarding potential market size, opportunity and growth; Otonomy's ability to manage operating expenses; implementation of Otonomy's business model and strategic plans for its business, products and technology; and other risks. Information regarding the foregoing and additional risks may be found in the section entitled "Risk Factors" in Otonomy's Annual Report on Form 10-Q filed with the Securities and Exchange Commission (the "SEC") on May 4, 2017, and Otonomy's future reports to be filed with the SEC. This Presentation is dated as of May 4, 2017, and the Company undertakes no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

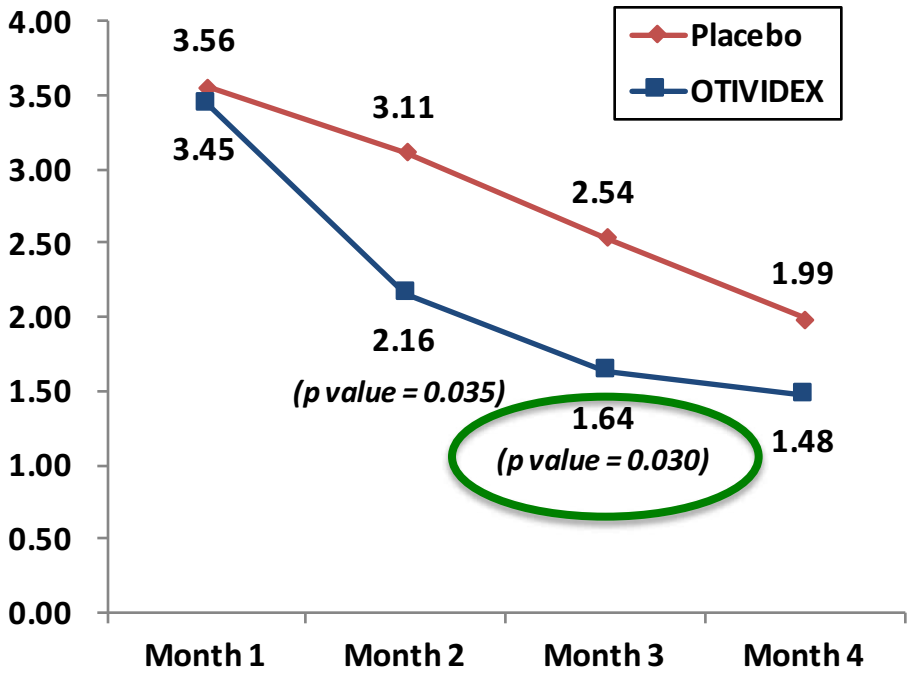
2017 is "Year of Ménière's Disease"



Phase 2b Results Support Phase 3 Program

- OTIVIDEX treatment benefit shown across multiple endpoints:
  - Primary: reduction in vertigo frequency from baseline to Month 3 (p=0.067); from 8 vertigo days to 3
  - Reduction in vertigo severity
  - Reduction in avg daily vertigo count
  - Improvement in QoL instrument
- DVD was **prospectively defined**, statistically significant secondary endpoint
- Phase 2b trial also supported raising minimum number of vertigo days and adding maximum for entry
- FDA agreed to DVD as primary endpoint for Phase 3 in EOP2

Count of Definitive Vertigo Days (DVD)



Source: Lambert et al., Otology & Neurotology (2016)

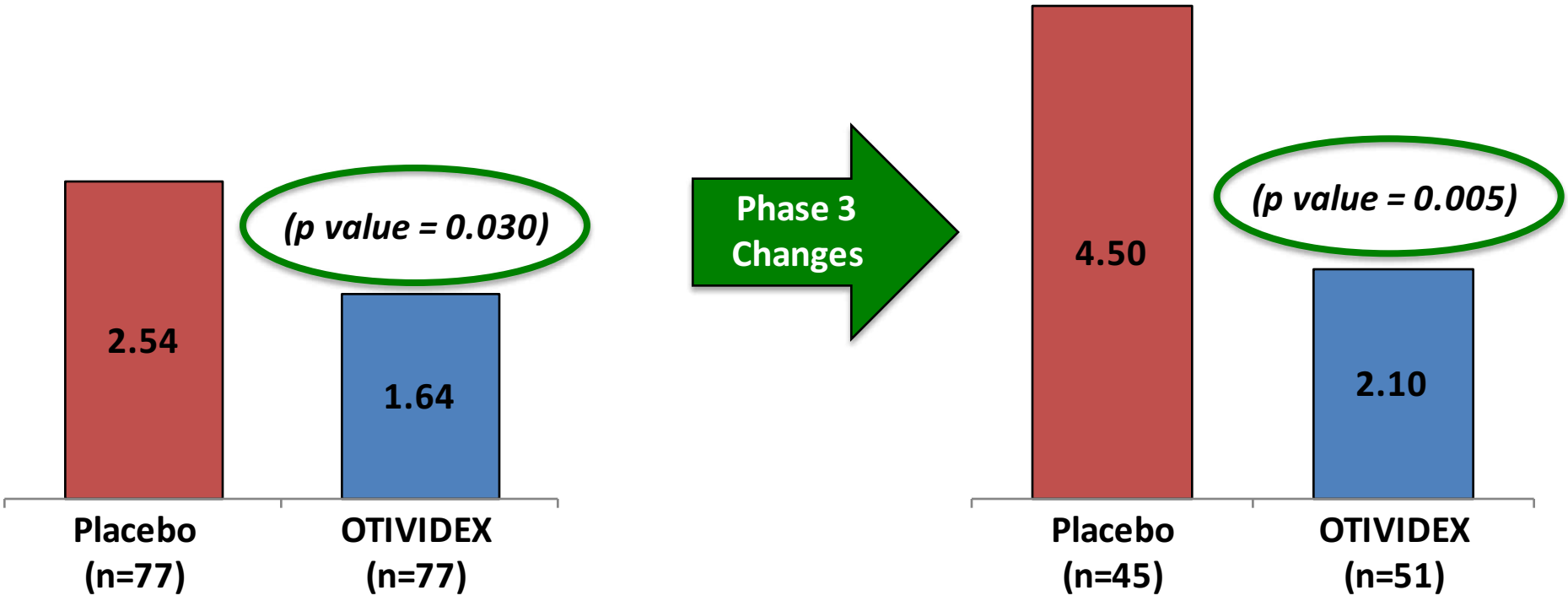
Changes Strengthen Phase 2b DVD Result

DVD Result from Phase 2b Trial

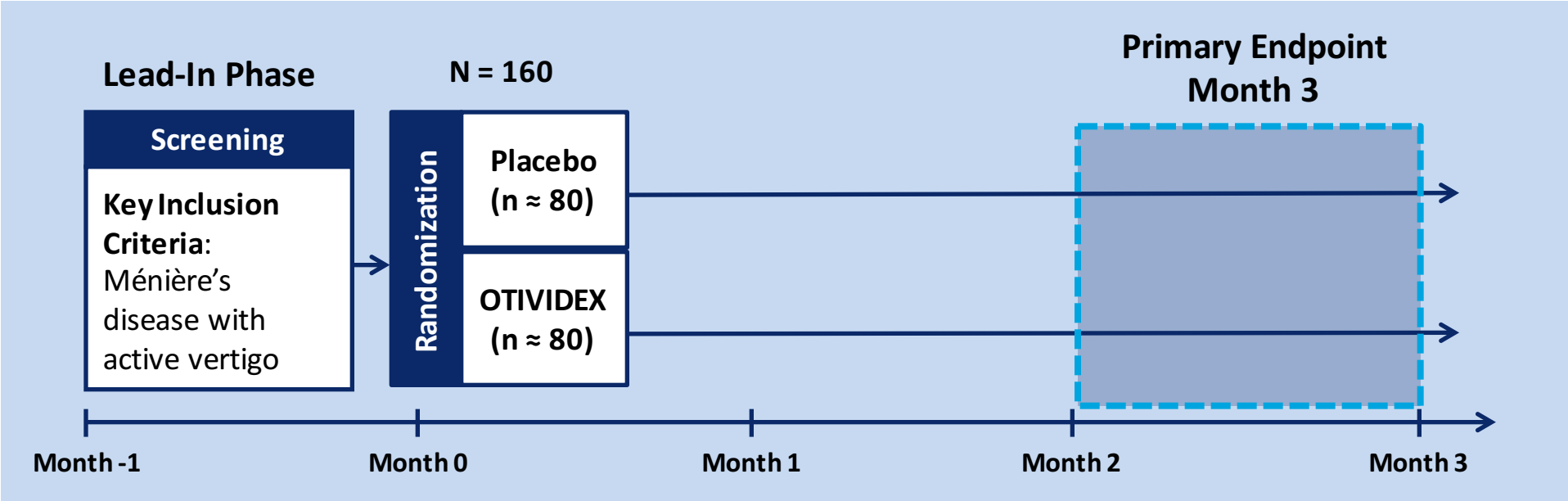
- Full patient range (low floor, no ceiling)
- Poisson regression analysis of Month 3 (prospectively defined secondary endpoint)

Phase 2b DVD Result with Changes

- Raise floor and add ceiling
- Poisson regression analysis of Month 3



Phase 3 Ménière's Trial Design and Status



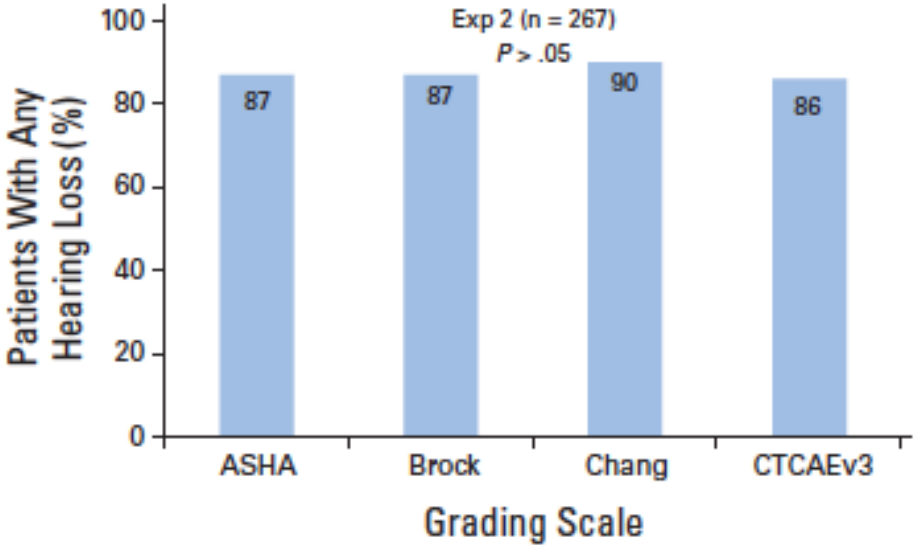
- Identical trial design for AVERTS-1 in U.S. and AVERTS-2 in Europe
- 160 patients in each trial provides > 90% power at $\alpha = 0.05$
- AVERTS-1 is fully enrolled (N = 165) with results expected in 3Q17; AVERTS-2 enrollment is ongoing, results expected by end of 2017
- If positive results, then expect to submit NDA in 1H18
- Granted Fast Track designation for Ménière's disease

AVERTS = Alleviation of Vertigo Episodes Study

Cisplatin-Induced Hearing Loss Protection

- CIHL is well-documented with up to 90% of children impacted
- Adversely affects speech, language development and socialization
- Preclinical study shows hearing loss protection with OTIVIDEX
- Phase 2 feasibility trial initiated in patients at-risk for CIHL
  - ~ 60 children and young adults
  - Patients will receive OTIVIDEX prior to first 3 cisplatin treatment cycles
  - Untreated ear serves as control
  - 5-10 leading cancer centers in U.S.

High Prevalence of Hearing Loss in Pediatric Patients Undergoing Chemo-therapy with Platinum-Base Agents



Patients received cisplatin 400 mg/m^2 and carboplatin 1,700 mg/m^2

Landier et al., J Clin Oncol (2014)

OTIVIDEX Commercial Opportunity in U.S.

Ménière's Disease

- U.S. population > 600,000
- High level of patient disability
- Currently no FDA-approved drug treatment
- Chronic disorder => need for retreatment

+

Cisplatin-Induced Hearing Loss (CIHL)

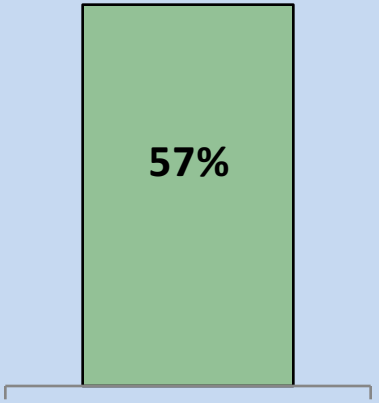
- ~ 500,000 patients treated with platinum-based chemotherapy each year in U.S. (2,000 children)
- No treatment available for hearing protection

+

Additional Potential Expansion Indications

- Acute sensorineural hearing loss
- Non-Ménière's balance disorders
- Other (including tinnitus)

% of ENTs Expressing Strong Interest in Using OTIVIDEX[1,2]

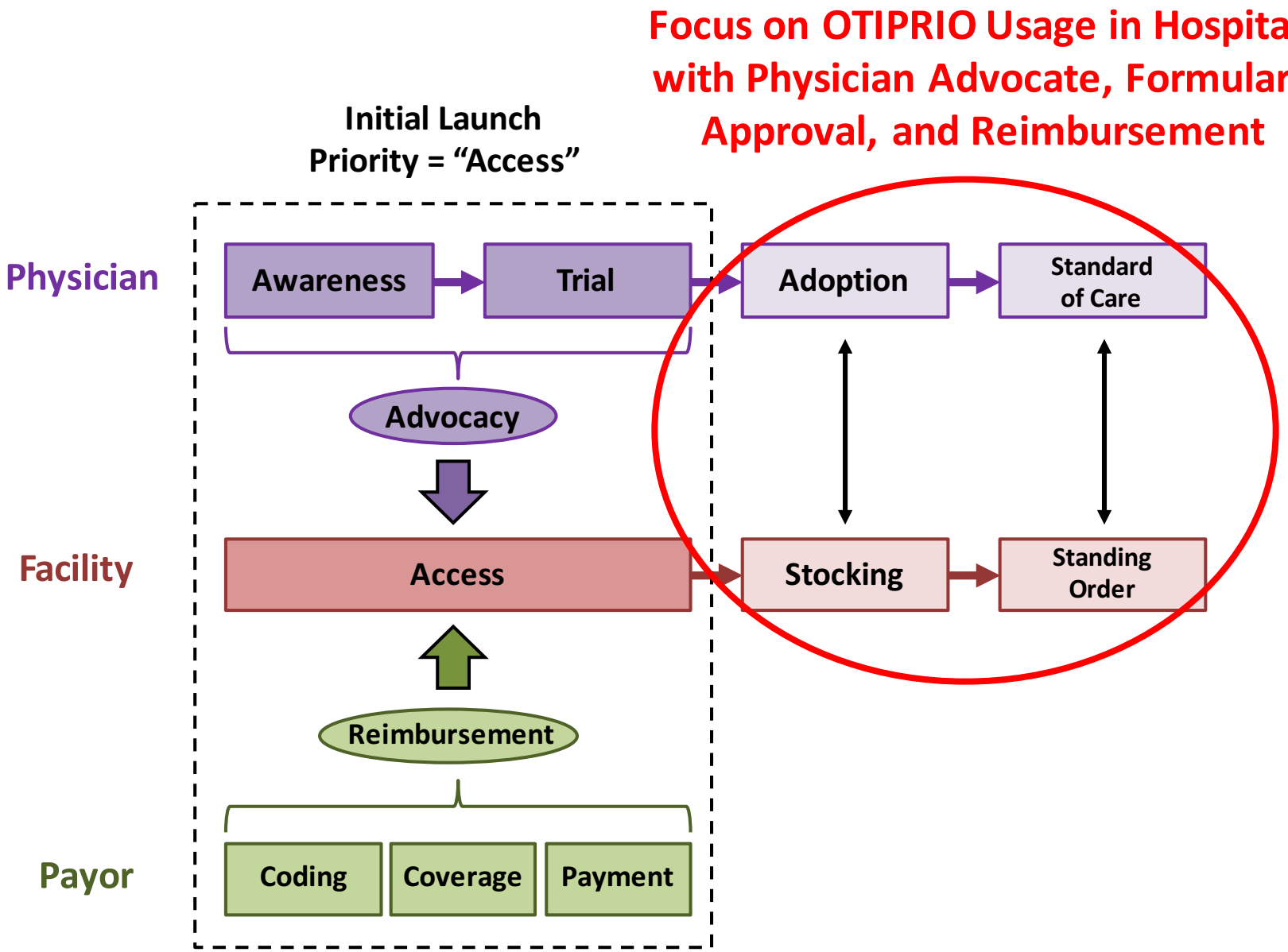


Preliminary Pricing Estimate > $1,000 per Treatment

[1]Source: third-party market research firm commissioned in 2014 by Otonomy with 100 ENTs surveyed

[2]On a scale of 1 to 10, where 10 means "extremely likely" and 1 means "not at all likely," strong interest considered a ranking of 8, 9 or 10

OTIPRIO Commercial Priority is Utilization

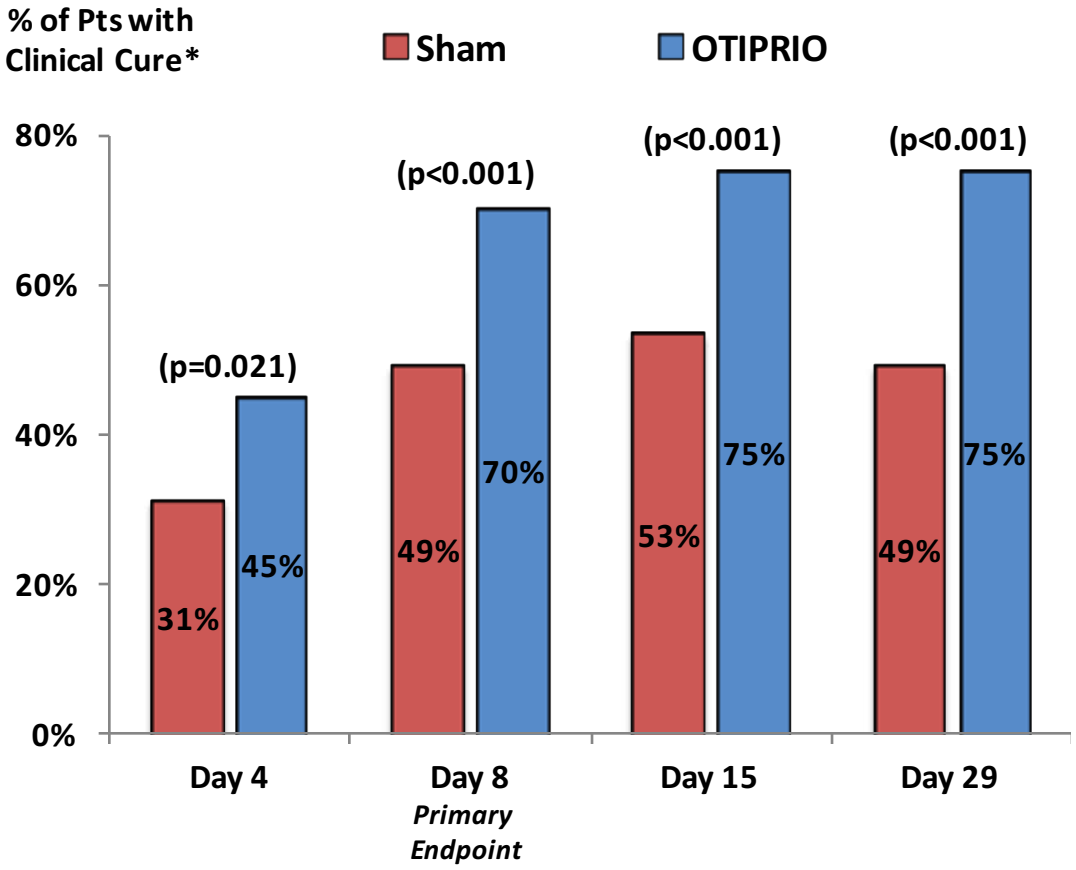


OTIPRIO Commercial Update (as of March 31)

- Initiated organizational changes to improve sales performance
  - Hired David Kaplan as VP Sales (ex-Pacira VP Sales)
  - Commercial leadership team reports to CEO
  - Realigned to 20 sales territories: reps with existing ENT relationships, experience in hospital OR, and understand medical benefit reimbursement
- Current focus on 400 priority accounts that comprise about one-third of TTP market
- More than 220 facilities have purchased OTIPRIO and over 60% of these accounts have placed repeat orders
- 14% increase in user demand in 1Q17 vs. 4Q16
- Demonstrated reimbursement by commercial payors & Medicaid

sNDA Submitted to FDA for OTIPRIO in AOE

Phase 3 Results for ITT Population



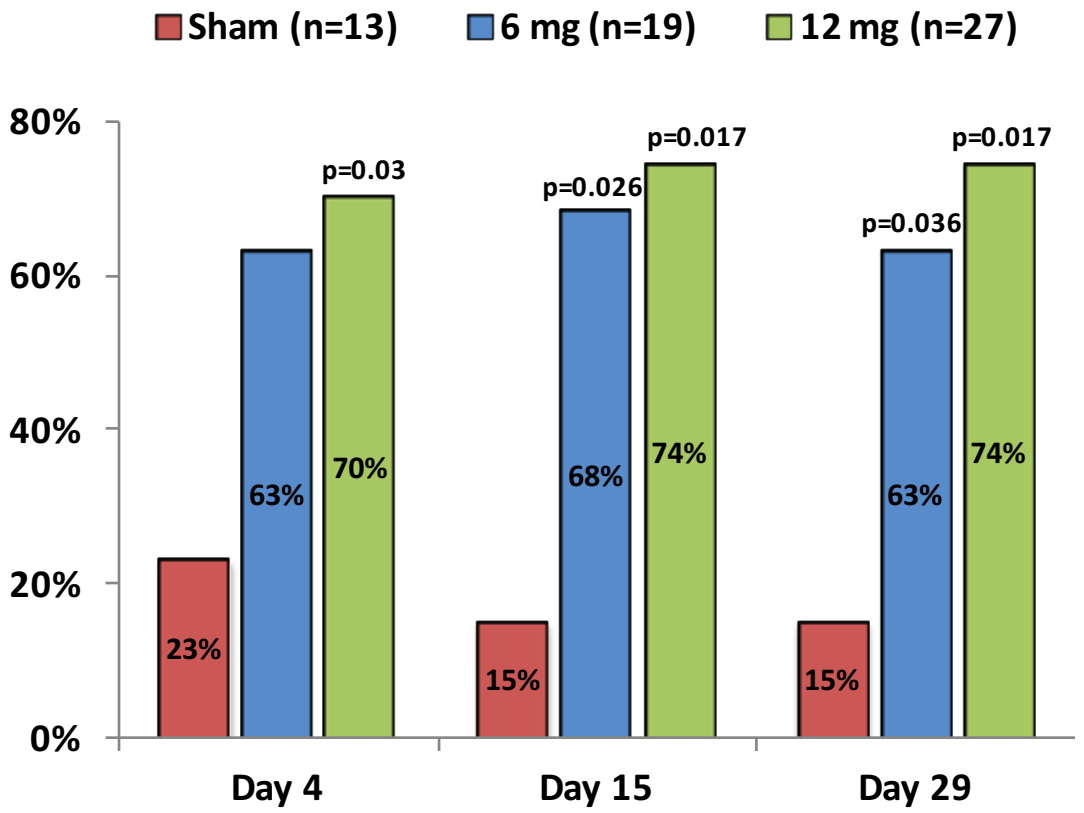
- 262 pediatric and adult patients
- Single administration of 12mg OTIPRIO or sham (no treatment)
- OTIPRIO demonstrated statistically significant superiority at all time points assessed; well-tolerated
- Clinical cure rates comparable to ITT results with ear drops that require 2-3 doses/day for 7 days
- Utility in broader market since non-ENTs treated 70% of patients
- If approved, timing supports launch in 2018 peak summer season

*Clinical cure rate defined as complete resolution of the signs and symptoms related to acute otitis externa (i.e., tenderness, erythema, and edema) as determined by a blinded clinical assessor

EOP2 Meeting for AOMT by End of 2Q17

- Statistical significance shown for OTIPRIO vs. sham in Phase 2
- Well tolerated with no evidence of OTIPRIO occluding the tube
- Higher clinical cure rate at all study visits supports selection of 12 mg (0.2 mL) dose
- Clear treatment effect enables powering in registration trial
- EOP2: discuss acceptability of a single registration trial

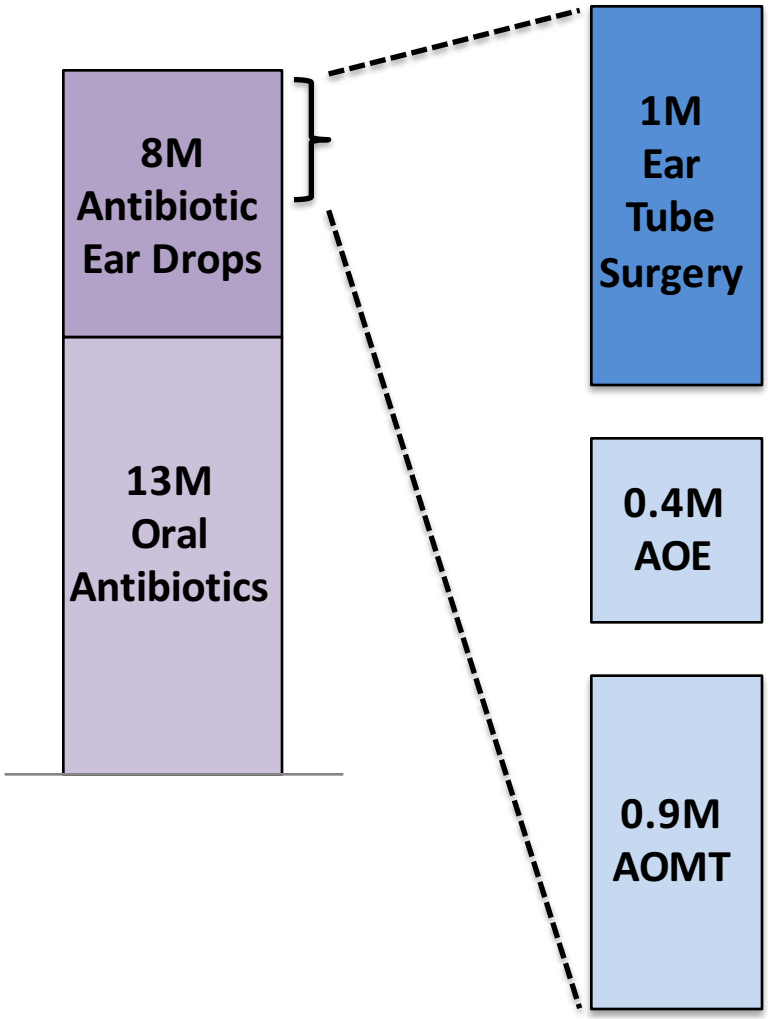
Cumulative Clinical Cure*: Per Protocol



*Clinical cure rate defined as resolution of otorrhea as determined by physician based on otoscopic examination

OTIPRIO Commercial Opportunity in U.S.

> 20M Antibiotic Units for Otic Uses



OTIPRIO Potential Market ≈ 2.3M Units per Year in U.S.[1]

1M Ear Tube Surgery

- Antibiotic ear drops used routinely off-label
- ~75% of patients are ≤ 5 years of age
- Multi-dose, multi-day regimen is challenging
- OTIPRIO's single-use treatment by ENT in OR eliminates patient compliance risk

0.4M AOE

- ENTs treat ~ 10% of 4M AOE episodes per year
- Office-based (J code) and broad patient age range
- Market upside with use outside ENT audience

0.9M AOMT

- Supports ENT interest in providing continuum of care for ear tube surgery patients
- Addresses parent concerns about antibiotic ear drop administration and compliance

[1]Company estimates

Note: Company does not promote for off-label uses, but market research indicates physicians may use OTIPRIO for additional uses

OTO-311 for Tinnitus

- Tinnitus = hearing noise when there is no sound
- Debilitating condition with currently no FDA-approved drug treatment
- Approximately 16 million patients in the U.S. have symptoms severe enough to seek medical attention[1]
- Most prevalent service-related disability in the U.S. military[2]
- Gacyclidine is a potent and selective NMDA receptor antagonist
- Sustained drug exposure provides additional competitive advantage
- Completed Phase 1 trial in healthy subjects and selected dose
- Expect to initiate Phase 2 trial in tinnitus patients in 2H17

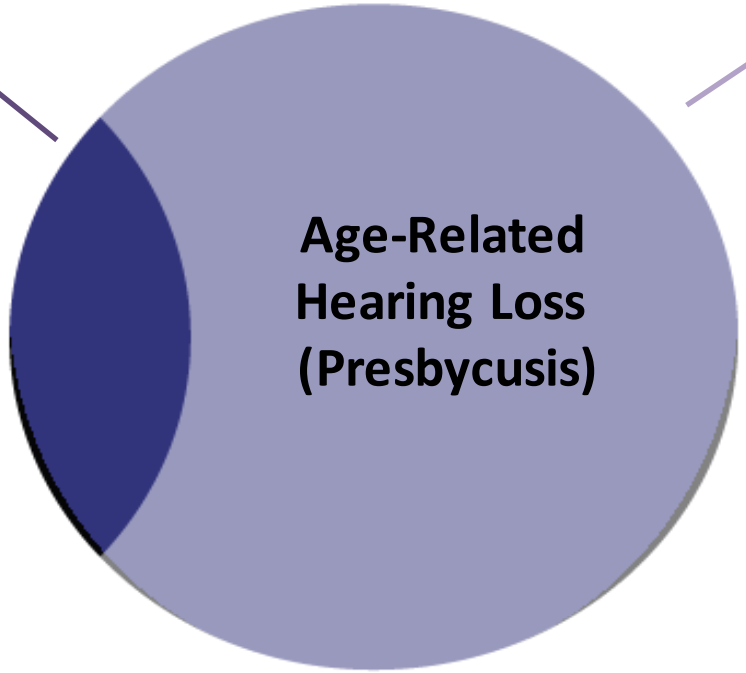
[1]Source: American Tinnitus Association
[2]Source: United States Department of Defense

Program 4 for Age-Related Hearing Loss

Sensorineural Hearing Loss

OTIVIDEX

- Acute Onset HL
  - Noise-induced
  - Cisplatin-induced
  - Sudden idiopathic
  - Cochlear implants
- HL in Ménière's
- Autoimmune inner ear disease (AIED)



OTIC Program 4

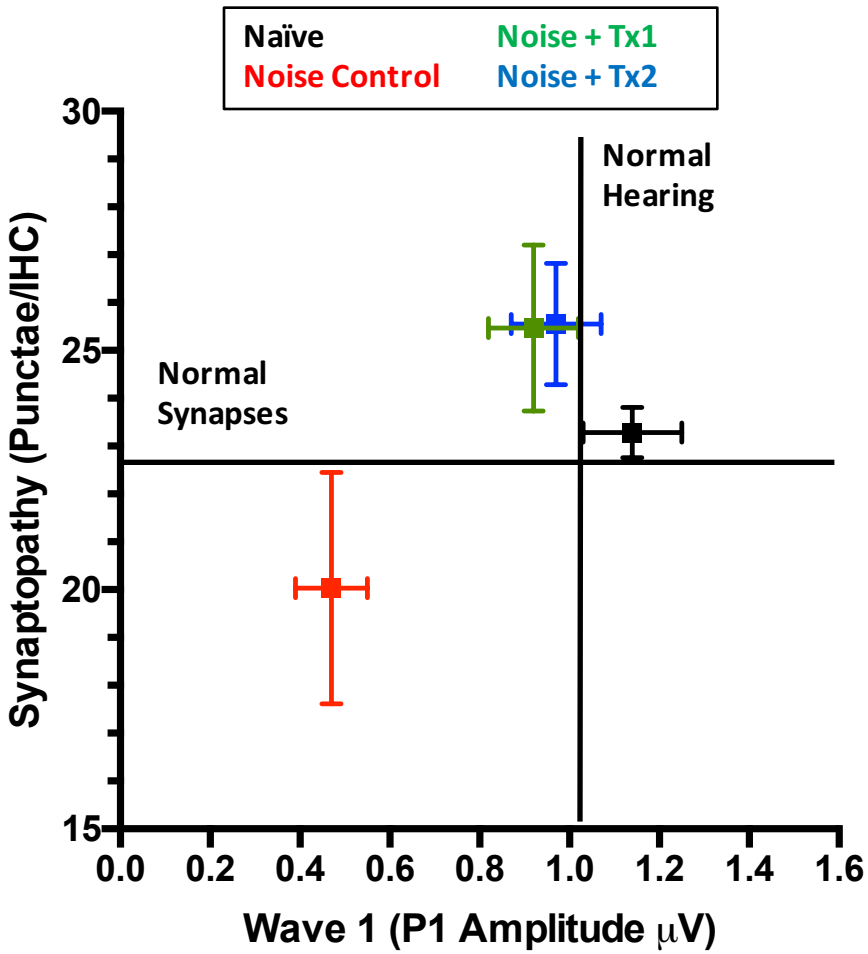
- Largest otology disorder: 36M adults in U.S. report hearing loss[1]
- Approaches of interest:
  - Repair of ribbon synapses (to address "hidden hearing loss" pathophysiology[2-4])
  - Hair cell regeneration

[1]NIDCD
[2]Liberman, Scientific American (2015)
[3]Moser & Starr, Nat. Rev. Neurol. (2016)
[4]Suzuki et al., Nature Scientific Reports (2016)

POC for Repair of Ribbon Synapses

- Targeting neurotrophic pathways
- In-licensed exclusive rights to multiple product candidates
- Broad set of molecules covered in IP
- Sustained-exposure demonstrated using small molecules, proteins and biologicals
- *In vivo* demonstration of synapto-pathy reversal in noise injury model
- Expect to select product candidate for clinical development in 2017

Proof-of-Concept Preclinical Study



Numerous Recent and Upcoming Milestones

☑	OTIPRIO Phase 3 results in AOE
☑	Initiate OTIVIDEX Phase 2 trial in CIHL
☑	Submission of OTIPRIO sNDA to FDA for AOE
2Q17	OTIPRIO FDA EOP2 meeting for AOMT
3Q17	OTIVIDEX AVERTS-1 results in Ménière's Disease
YE17	OTIVIDEX AVERTS-2 results
2H17	Initiate OTO-311 Phase 2 trial in tinnitus patients
2017	Select product candidate for hearing loss program

Financial Update and 2017 Expense Guidance

- Cash and equivalents as of March 31, 2017 = $168 million
- Net sales totaled $0.4 million for 1Q17
- GAAP operating expense for 1Q17 totaled $27.3 million (R&D totaled $13.2 million, SG&A totaled $14.1 million)
- Non-GAAP operating expenses for 1Q17 totaled $22.9 million
- Expect GAAP operating expenses of $103-108 million and Non-GAAP operating expenses of $80-$85 million for 2017

Key Messages to Take-Away

- OTIVIDEX is undervalued: Phase 3 trials in Ménière's based on solid Phase 2b results and multiple label expansion indications
- Expect changes to commercial organization will improve OTIPRIO sales; label expansion indications to maximize opportunity
- OTO-311 is attractive third clinical-stage program: high unmet medical need and large patient population
- Program 4 targets largest market opportunity in otology field
- Untapped value of pipeline commercialization in ex-U.S. markets
- Strong balance sheet and able to manage expenses
- Scarcity value in otology field with Otonomy in leading position