



*Creating precisely tuned medicines
so patients can breathe freely*

JEFFERIES VIRTUAL HEALTH CARE CONFERENCE

JUNE 4, 2020



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CERTAIN INFORMATION CONTAINED IN THIS PRESENTATION AND STATEMENTS MADE ORALLY DURING THIS PRESENTATION RELATE TO OR ARE BASED ON STUDIES, PUBLICATIONS, SURVEYS AND OTHER DATA OBTAINED FROM THIRD-PARTY SOURCES AND OUR OWN INTERNAL ESTIMATES AND RESEARCH. WHILE WE BELIEVE THESE THIRD-PARTY SOURCES TO BE RELIABLE AS OF THE DATE OF THIS PRESENTATION, WE HAVE NOT INDEPENDENTLY VERIFIED, AND MAKE NO REPRESENTATION AS TO THE ADEQUACY, FAIRNESS, ACCURACY OR COMPLETENESS OF, ANY INFORMATION OBTAINED FROM THIRD-PARTY SOURCES. WHILE WE BELIEVE OUR INTERNAL RESEARCH IS RELIABLE, SUCH RESEARCH HAS NOT BEEN VERIFIED BY ANY INDEPENDENT SOURCE. OUR ESTIMATES ARE DERIVED FROM PUBLICLY AVAILABLE INFORMATION, MANAGEMENT'S KNOWLEDGE OF OUR INDUSTRY AND MANAGEMENT'S ASSUMPTIONS BASED ON SUCH INFORMATION AND KNOWLEDGE, WHICH WE BELIEVE TO BE REASONABLE. THIS DATA INVOLVES A NUMBER OF ASSUMPTIONS AND LIMITATIONS WHICH ARE NECESSARILY SUBJECT TO A HIGH DEGREE OF UNCERTAINTY AND RISK DUE TO A VARIETY OF FACTORS.

LYRA – UNLOCKING THE ENT MARKET

Innovative Drug Delivery Platform for Continuous Multi-month Release



Differentiated Product Candidate Addressing Large Opportunity

Up to 6-months therapy with 1 administration
~14M Chronic Rhinosinusitis (CRS) patients
No FDA approved medicines for most CRS patients



Compelling Clinical Results

Rapid, clinically meaningful and durable improvement in symptom score observed in Phase 1
90% of CRS patients had improved symptoms at 24 weeks
Phase 2 trial underway in Europe, Australia, New Zealand



Expected Benefit to All Constituents

Effective, long lasting treatment for patients
Straightforward therapy that conforms to ENT practice and provides procedure growth
Strong pharmacoeconomic rationale for payers



Expansion Opportunities

Chronic diseases treatable with ENT delivery
Improve therapeutic properties of known APIs
Prolonged, local delivery for unmet needs

LYRA'S PLATFORM APPROACH PROVIDES:

Current ENT drug treatments...

- Limited ability to access the site of disease
- Exhibit fast clearance from site of delivery
- Have poor patient compliance



Noninvasive Access
To the site of disease



Prolonged Drug Treatment
Over several months

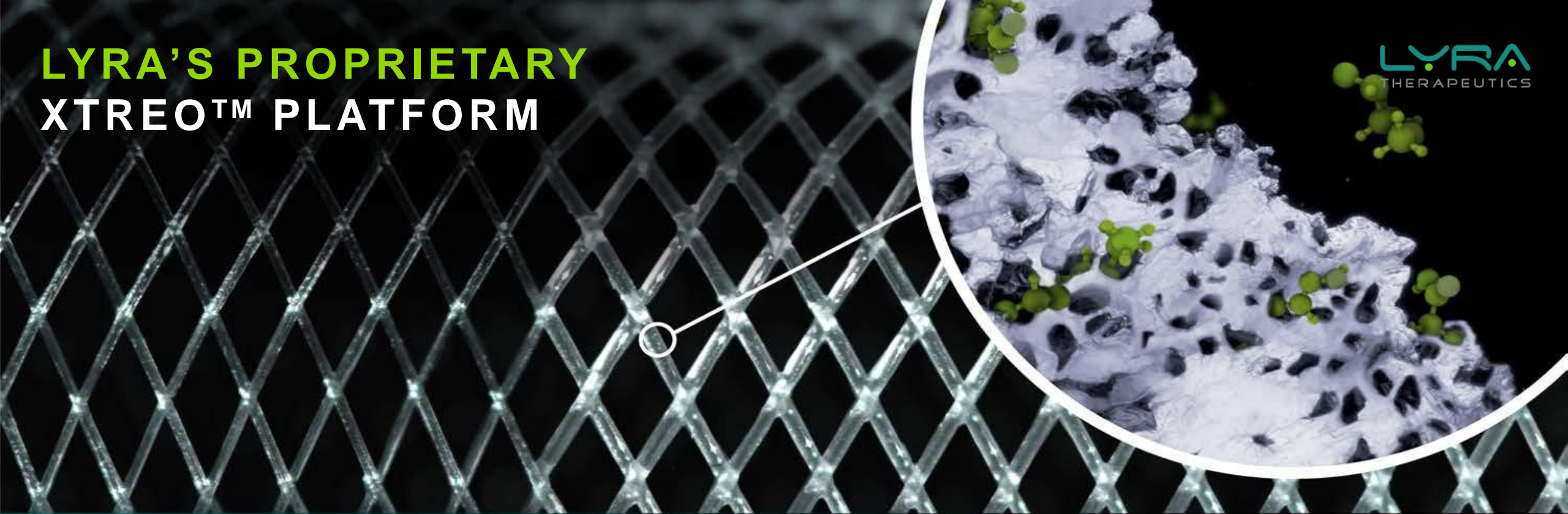


Consistent Daily Dosing
Does not require patient compliance



Biocompatible, Comfortable and Easy to Use

LYRA'S PROPRIETARY XTREO™ PLATFORM



**BIOCOMPATIBLE
MESH
SCAFFOLD**



**ENGINEERED
ELASTOMERIC
MATRIX**



**VERSATILE
POLYMER-DRUG
COMPLEX**



BIOCOMPATIBLE MESH SCAFFOLD

DESIGNED FOR EFFICIENT DRUG DELIVERY

- **Designed to optimize surface area for drug release**
- **Designed to maintain underlying tissue function through open cell design**
- **Pliable to maximize patient comfort**
- **Comprised of bioresorbable polymers**



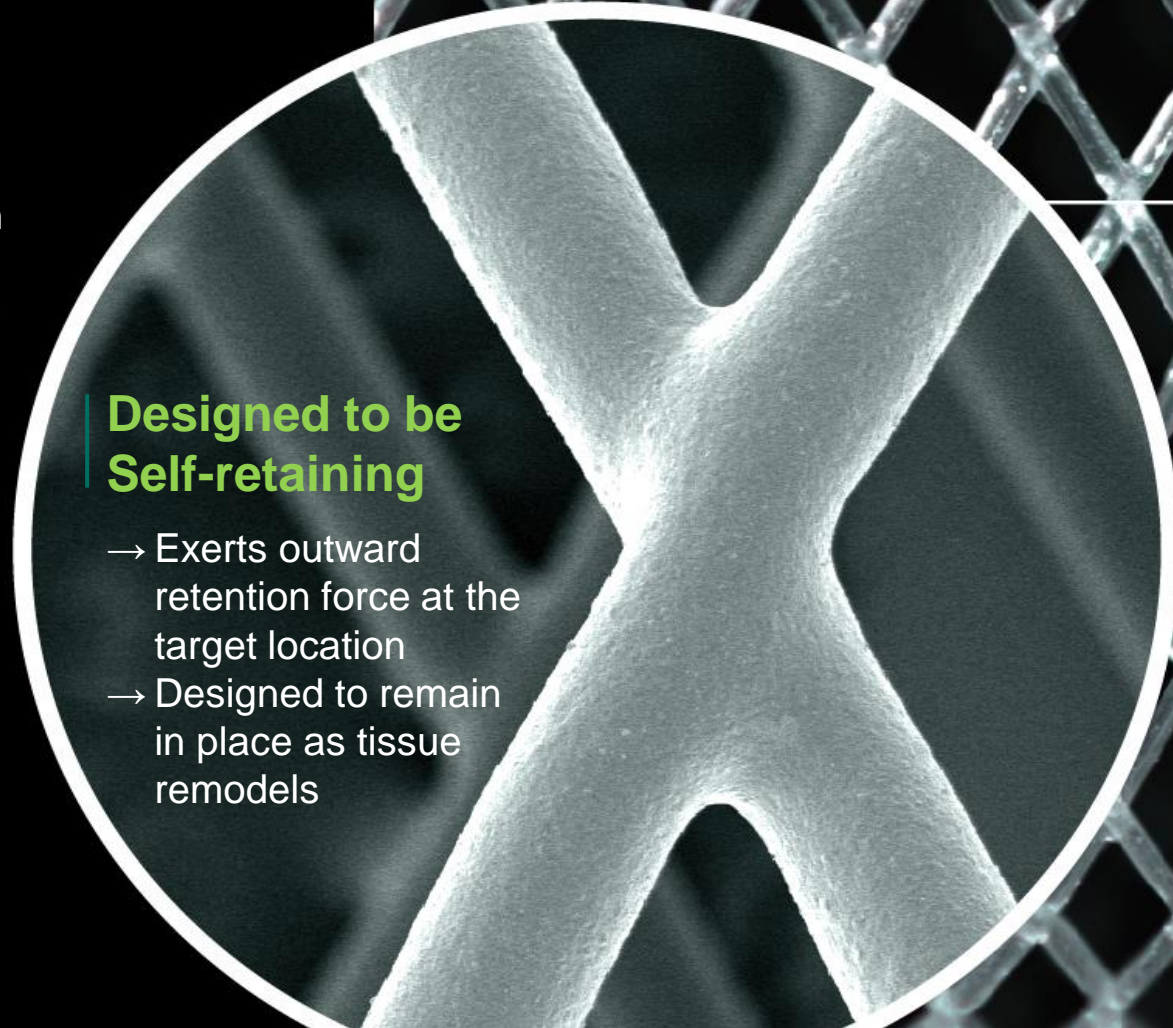
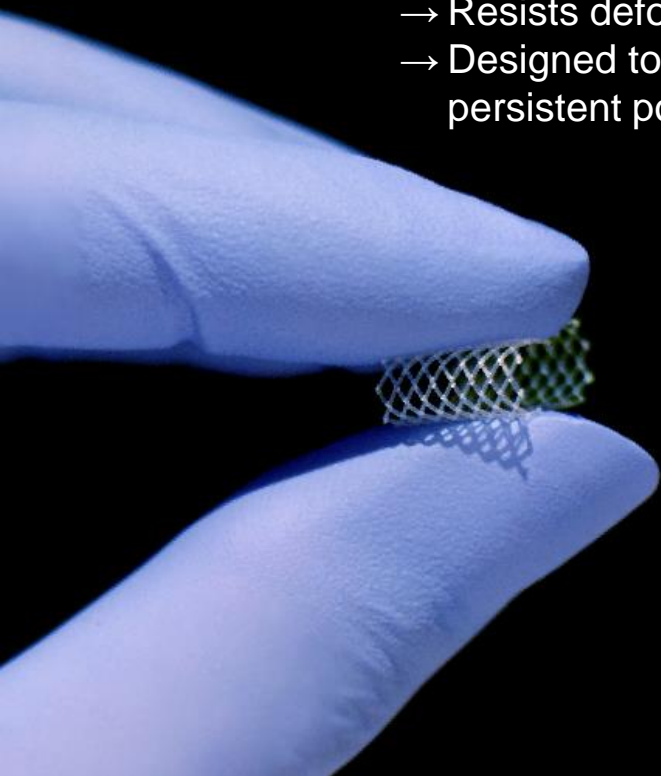
ENGINEERED ELASTOMERIC MATRIX ADAPTS TO NASAL ANATOMY

| Shape-memory

- Adaptive elastic tension
- Resists deformation
- Designed to maintain persistent positioning

| Designed to be Self-retaining

- Exerts outward retention force at the target location
- Designed to remain in place as tissue remodels





VERSATILE POLYMER-DRUG COMPLEX

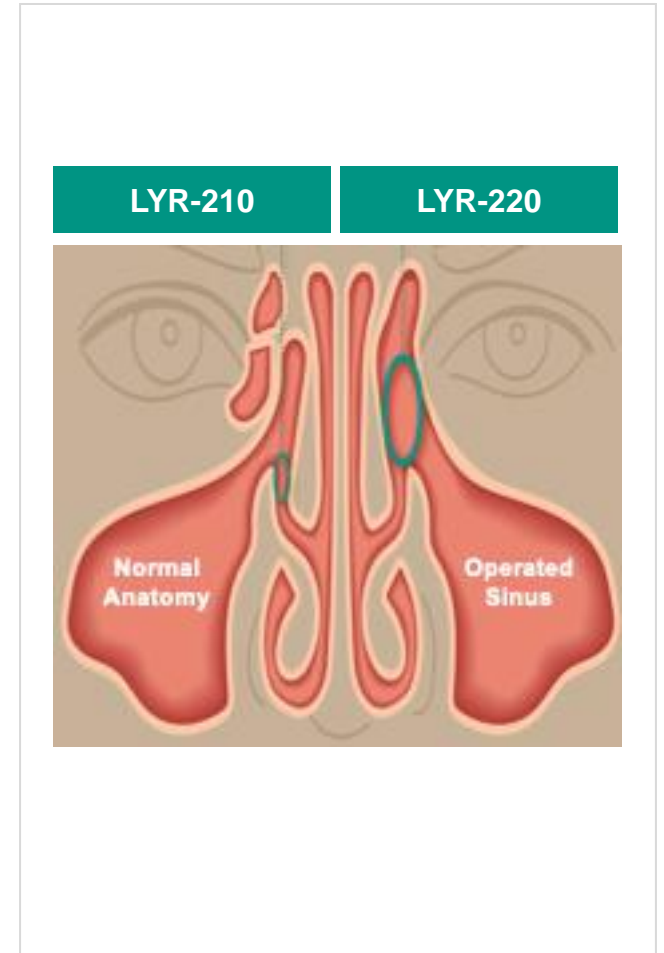
HAS POTENTIAL TO BE CUSTOMIZED FOR VARIOUS CHRONIC DISEASES

Tunable, Long-acting Drug Release

- Enabled by proprietary bioresorbable polymer-drug formulations
- Designed to deliver continuous multi-month drug release
- Potential for development with a wide range of drugs for different therapeutic applications

FOCUSED INITIAL DEVELOPMENT PIPELINE

Candidate	Pre-clinical	Phase 1	Phase 2	Phase 3	Next Milestone
LYR-210 Long-acting Mometasone Furoate	Chronic Rhinosinusitis Surgically Naïve Patients				Phase 2 Topline Data Readout Q4 2020
LYR-220 Long-acting Mometasone Furoate	Chronic Rhinosinusitis Operated Patients				Enter Clinic End 2021



Lyra's XTreo™ platform has potential applications to other indications where long-term delivery would improve local bioavailability and enhance efficacy or safety

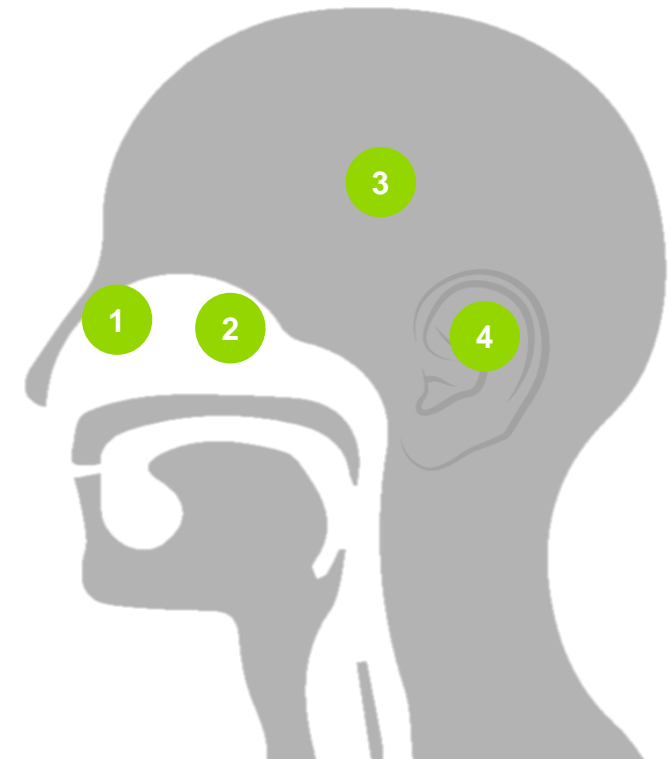
Potential Expansion Indications:

1 Chronic Rhinosinusitis
Allergic Rhinitis

2 Rare Disorders

3 Nasal Delivery for
CNS Disorders

4 Ear Conditions



WHAT IS CHRONIC RHINOSINUSITIS (CRS)?

Chronic Rhinosinusitis: The “Unrecognized Epidemic”¹



CRS Cardinal Symptoms¹



Nasal obstruction
and congestion



Nasal discharge



Facial pain and
pressure



Olfactory loss

United States

~14M CRS Prevalent Patients²

~8M CRS Patients Treated by Physicians Annually³

~4M CRS Patients Failing Medical Management Annually⁴

1) Tan BK et al. Am J Respir Crit Care Med, 2013;188(11):1275–7; 2) Battacharrya. Ann Otol Rhinol Laryngol, 2011; Jul;120(7):423-7; 3) Jang et al. Otolaryngol Head Neck Surg, 2018; 4) Baguley et al. Int Forum Allergy Rhinol, 2014;4(7):525-32

CHRONIC RHINOSINUSITIS

Current Treatment Paradigm



Topical steroid sprays and oral steroids

Topical Steroid Sprays

Do not reach nidus of disease deep in the sinuses¹

Have fast clearance¹

Poor compliance

Oral Steroids

Systemic complications limit use



Endoscopic sinus surgery, topical steroid sprays, and oral steroids

Does not address underlying inflammation²

Invasive with significant post-operative pain

Potential for severe complications²

Costly at an average of \$14K per surgery³

1) Emanuel, I. A., et al. American Journal of Rhinology & Allergy, 2014; 28(2), 117–121; 2) Bachert, C., Int Arch Allergy Immunol, 2011; 155(4): p. 309-21; 3) Velez FF et al. Value in Health , 2018; S13, S1-S68

CHRONIC RHINOSINUSITIS

Performance of Current Treatments



of patients fail
medical management¹

65%
have
recurrent
CRS²

20%
require
revision
surgery³

100%
require
ongoing
medical
management⁴

1) Young et al. Allergy Rhinol, 2012; 3:e8-e12; 2) Schaitkin et al. Laryngoscope, 1993; 103; 3) Stein et al. Laryngoscope, 2018; 128(1): 31–36; 4) Rosenfeld et al. Otolaryngology–Head and Neck Surgery, 2015; 152(2S)

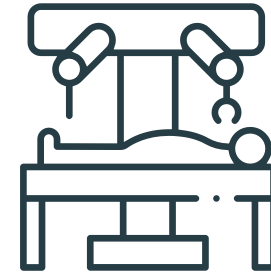
CHRONIC RHINOSINUSITIS

Unmet Need



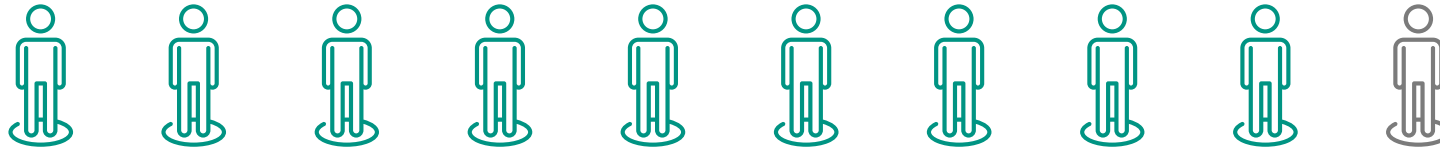
4M

fail medical
management



400K

get surgery¹



Up to 90%

of patients are left with suboptimal treatment options

1) Young, L. Cet al. Allergy & Rhinology, 2012; 3(1), 8–12

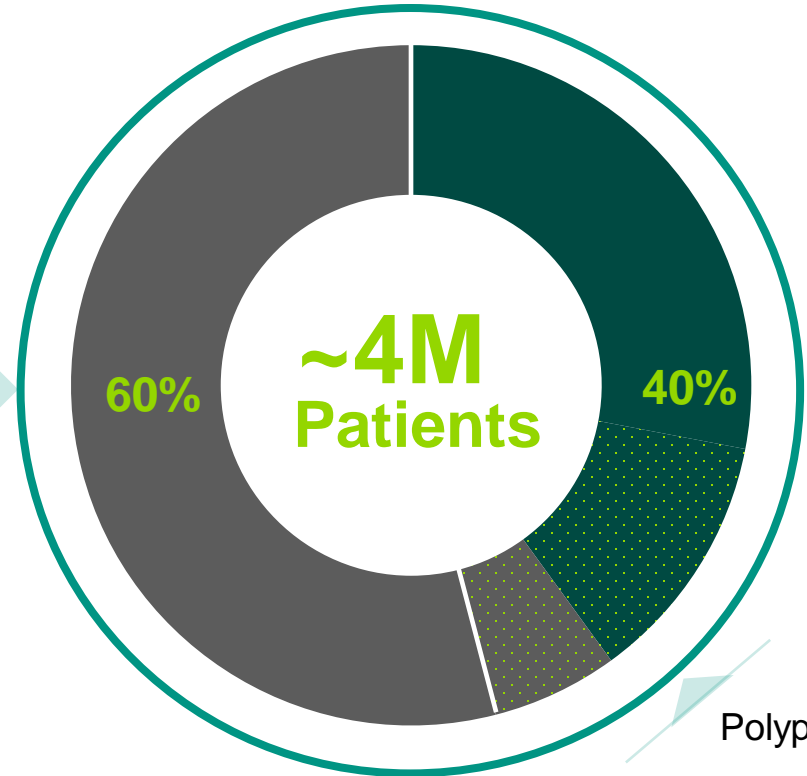
LYR-210 & LYR-220

Positioned to Address CRS Patients Treated by an ENT Regardless of Polyp Status

For Surgically Naïve CRS Patients



LYR-210
Mometasone Furoate



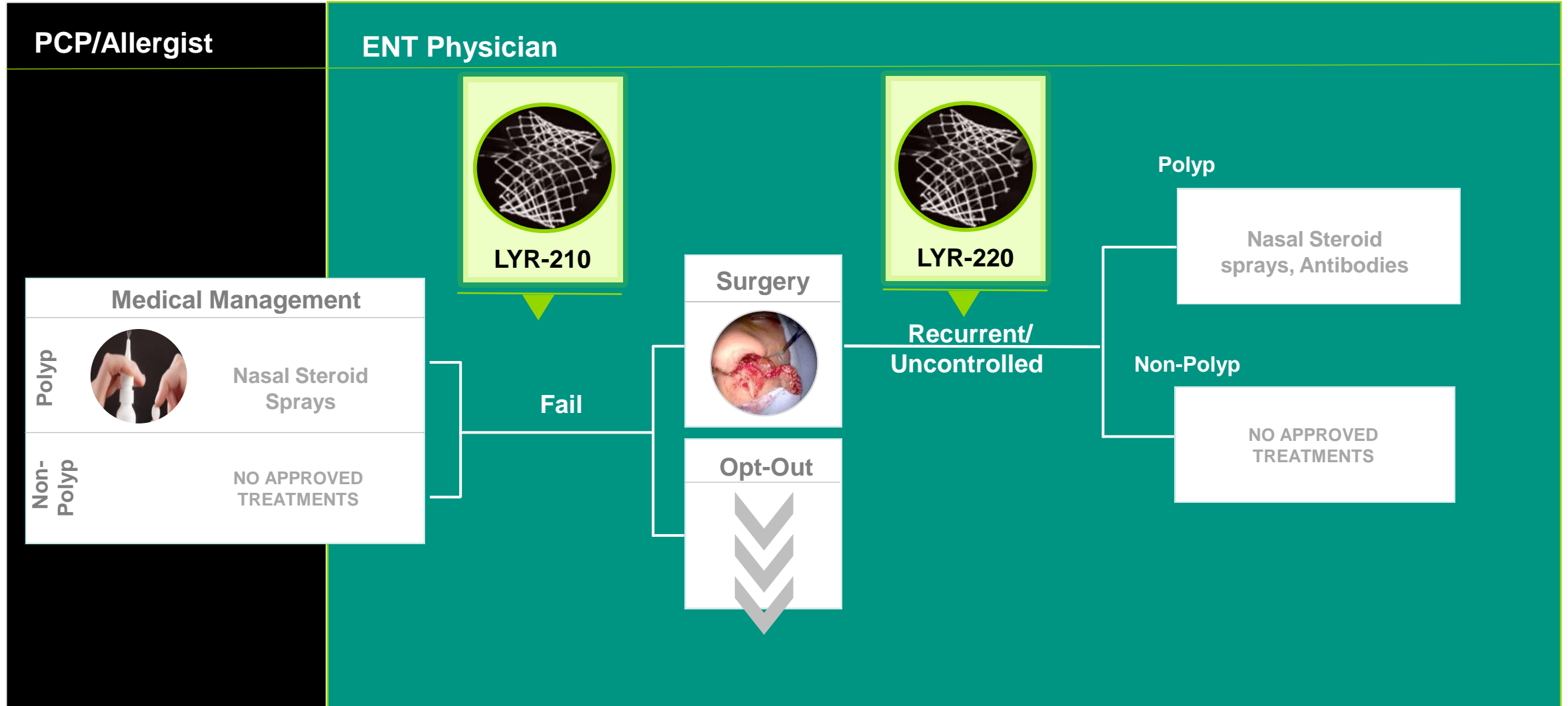
For Operated CRS Patients

LYR-220
XL
Mometasone Furoate



LYR-210 & LYR-220

Current Treatment Paradigm



LYR-210

Designed to Provide 6 Months of CRS Therapy from a Single Administration



FDA-approved API/steroid:
Mometasone furoate



Anti-inflammatory treatment for 6 months
as an alternative to surgery



Administered nasally via
a single-use applicator



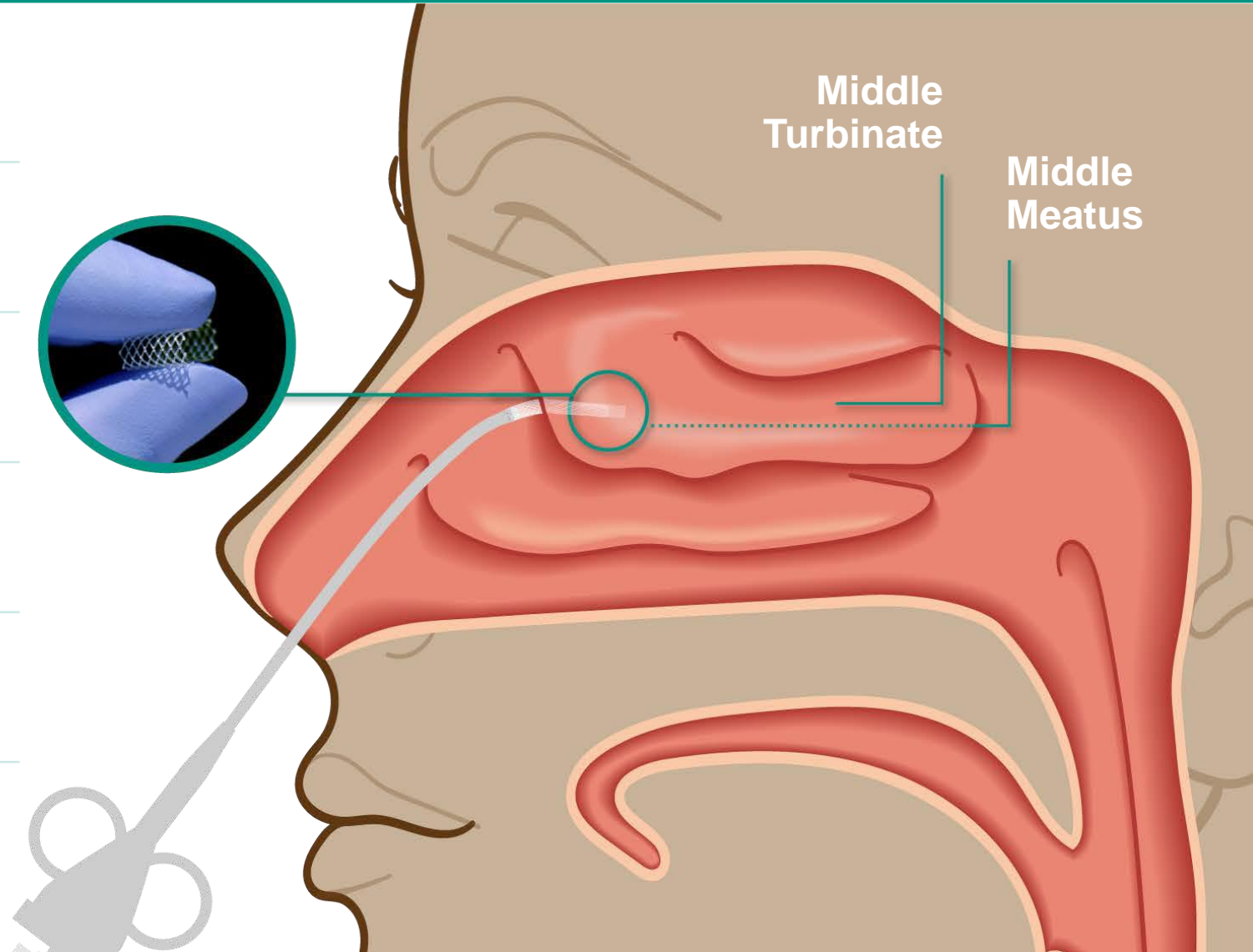
Office-based procedure
with topical anesthesia



Not detectable by patients



Replaced every 6 months



LYR-210 PHASE 1 STUDY

Study Design	Prospective, multi-center, non-randomized, single-arm, open-label clinical trial
Study Objectives	Safety and feasibility over 24 weeks of continuous anti-inflammatory treatment with a single administration of LYR-210 with an additional measurement taken one-week post-removal
Patient Population	Adult CRS patients who have failed medical management and have not had surgery
Number of Subjects	20 patients with CRS (40 LYR-210 matrices placed)
Number of Sites	5 study sites (New Zealand and Australia)
Dose	2,500 mcg bilaterally
Primary Endpoint	Product-related serious adverse events from baseline to 4 weeks post-procedure
Additional Data Collected	<ul style="list-style-type: none">• Morning serum cortisol• Intraocular pressure• Plasma PK• Quality of life by SNOT-22• Endoscopy and MRI

Data Presented at The American Rhinologic Society Annual Meeting 10/18

LYR-210

PHASE 1

Well-tolerated throughout the
24-week treatment period

PRIMARY SAFETY ENDPOINT ACHIEVED



No product-related SAEs



Systemic drug levels either unquantifiable or at the lower limit of quantification



No impact on morning serum cortisol or intraocular pressure



No reported local nasal AEs including:

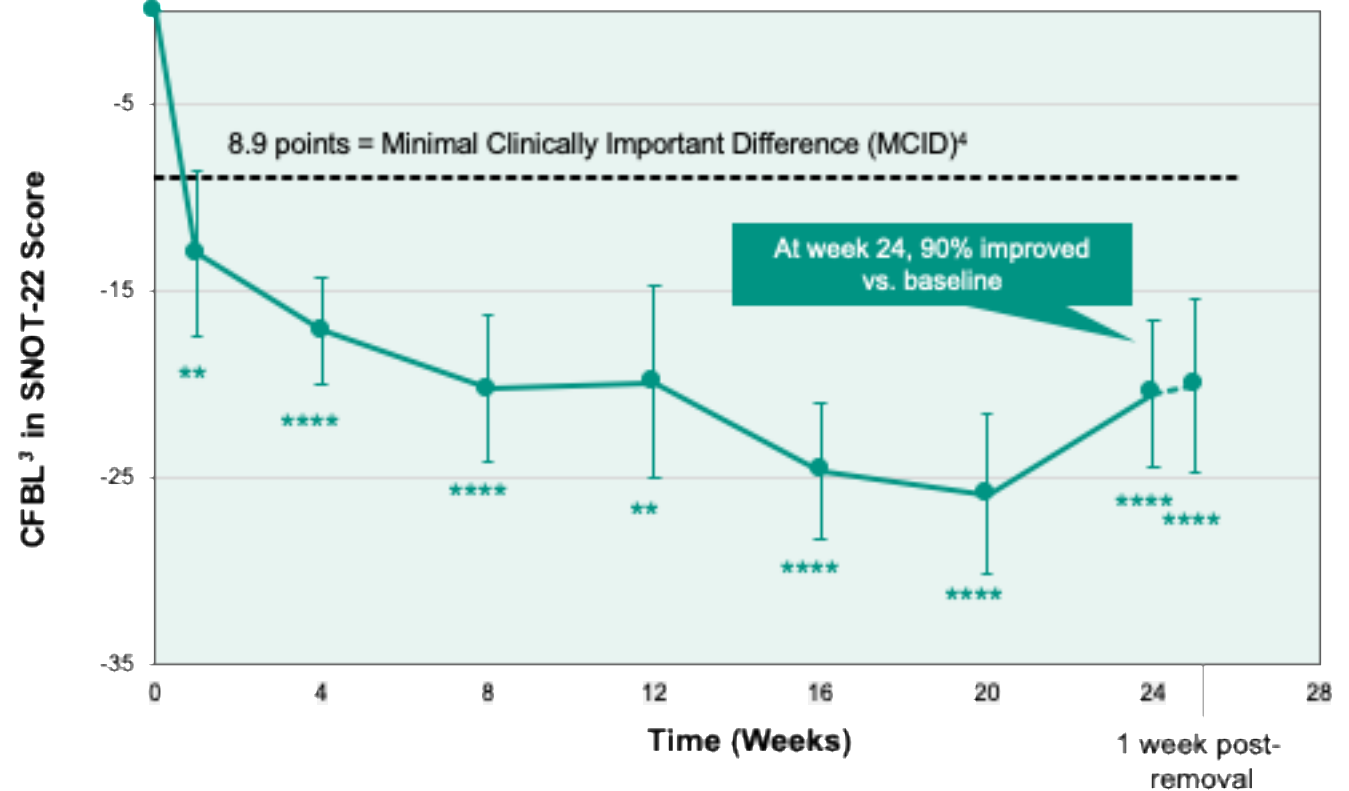
- Epistaxis
- Nasal burning
- Dryness
- Irritation
- Septal perforation

Total Symptom Improvement by Validated SNOT-22^{1,2}

LYR-210

PHASE 1

Rapid and durable improvements in patient symptom severity



1) SinoNasal Outcome Test; 2) SNOT22 is a patient reported score based on symptoms; 3) Change from Baseline; 4) Clin Otolaryngol. 2009 Oct;34(5):447-54

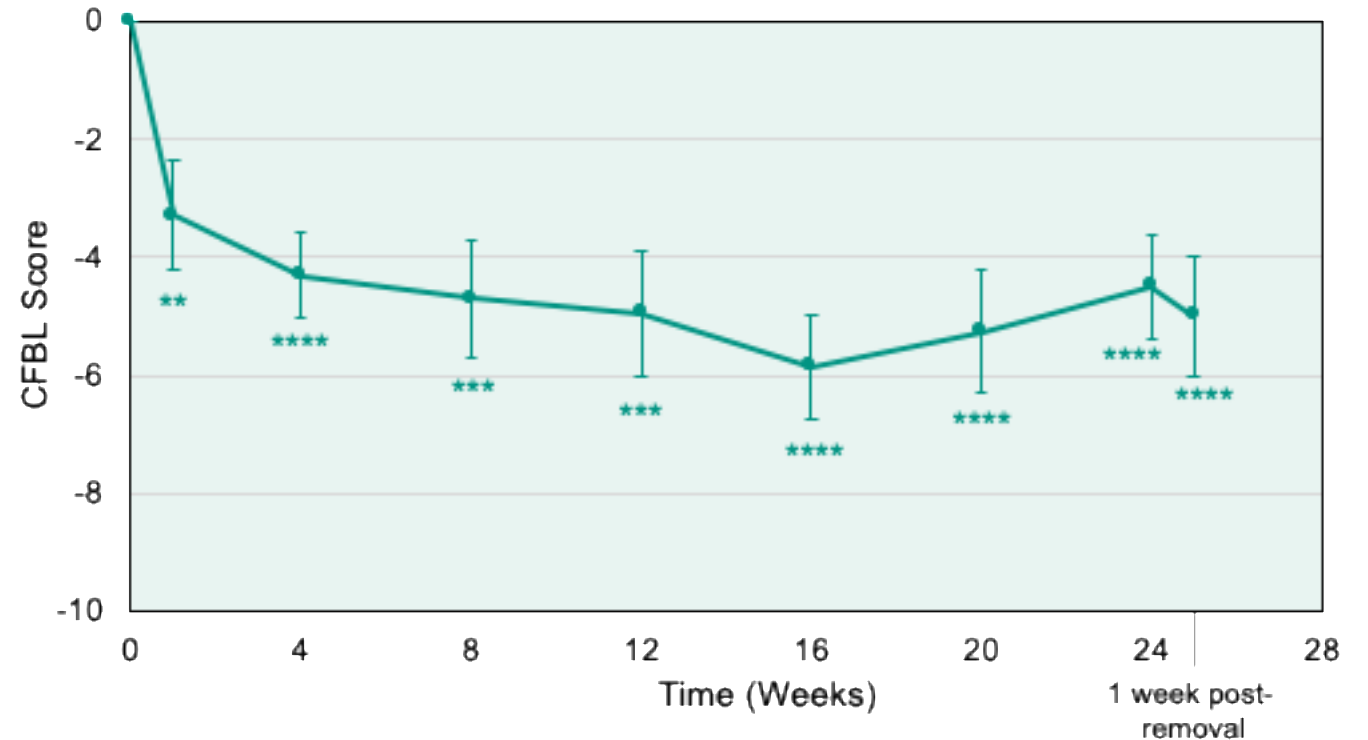
* P<0.05, **P<0.01, *** P<0.001, **** P<0.0001 to baseline by paired two tailed t-test

Total Symptom Improvement by the 4 Cardinal Symptoms¹

LYR-210

PHASE 1

Rapid and durable improvements in the four cardinal symptoms of CRS



1) 4 cardinal CS symptoms measured in SNOT-22: nasal blockage, facial pain/pressure, posterior nasal discharge, decreased sense of smell. Each symptom is assessed on a 0-5 scale

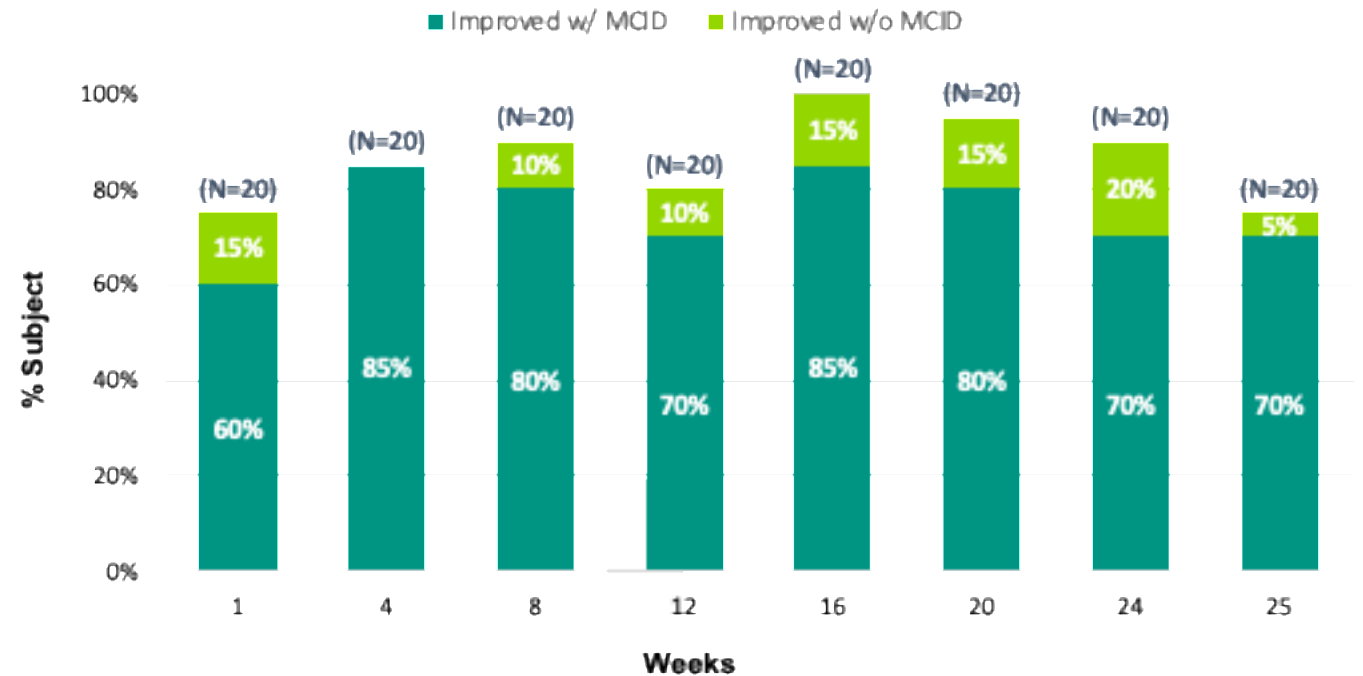
P<0.01, * P<0.001, **** P<0.0001 to baseline by paired two tailed t-test

LYR-210

PHASE 1

The majority of patients experienced clinically meaningful improvement through week 25

Percent of Patients with Symptom Improvement by SNOT-22 Score¹

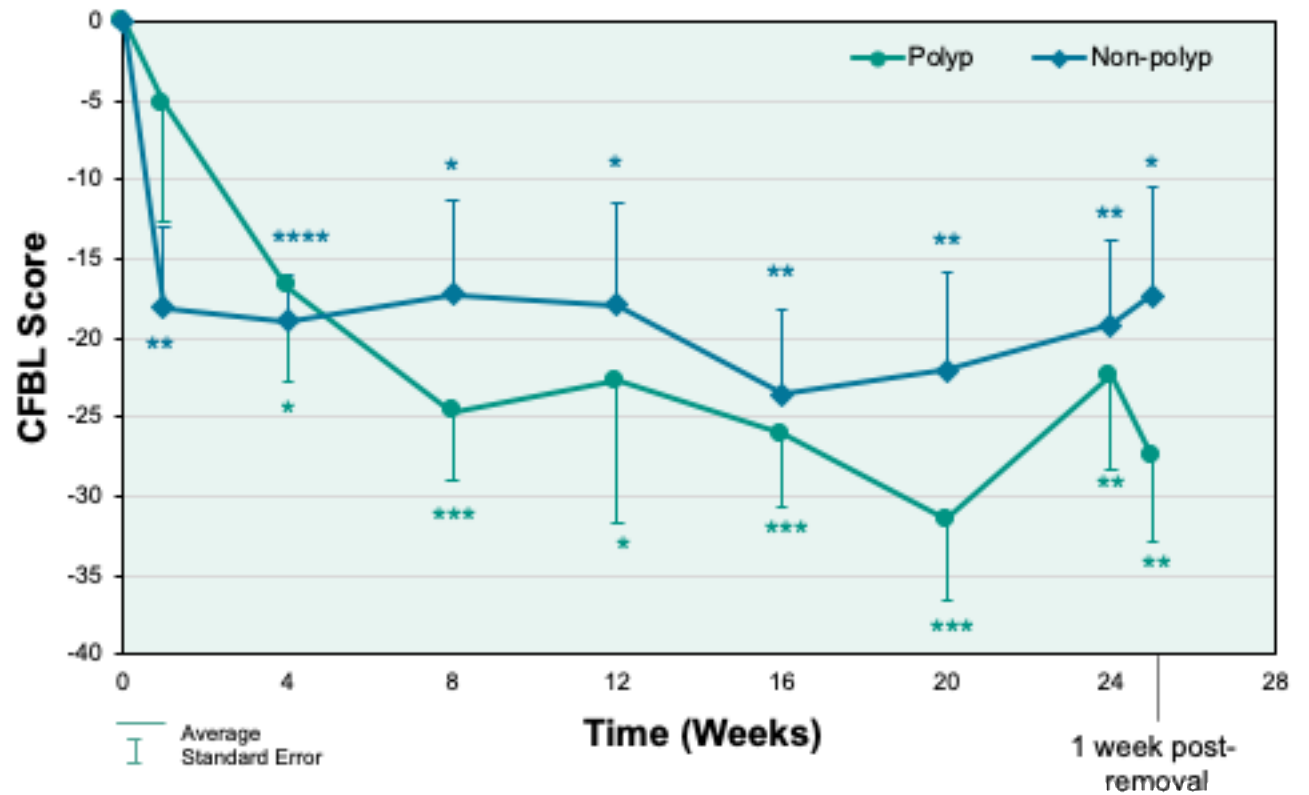


1) Intention-to-treat analysis. MCID defined in Hopkins, Clin Otolaryngol. 2009 Oct;34(5):447-54

LYR-210
PHASE 1

Similar efficacy observed in polyp and non-polyp patients

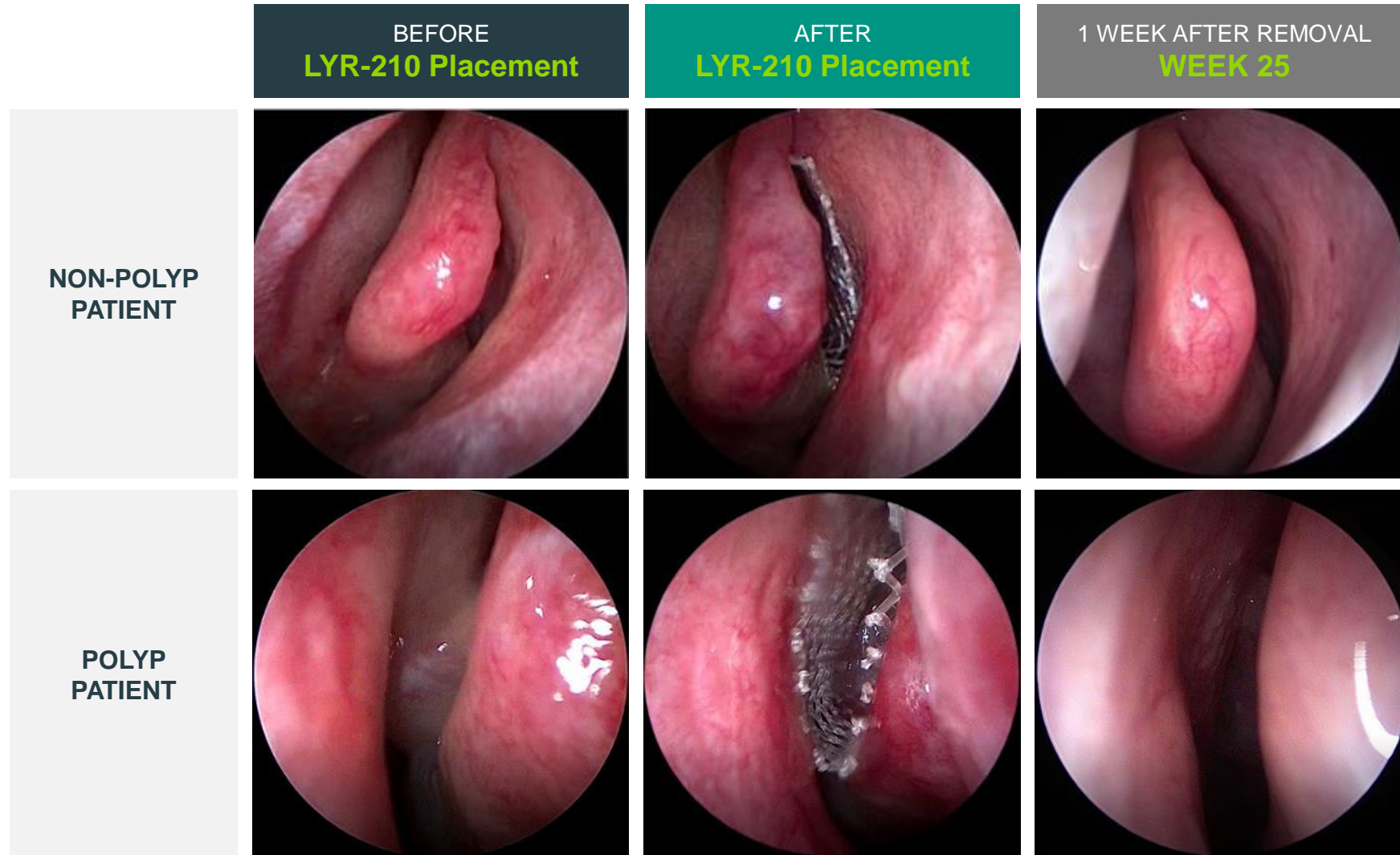
Symptom Improvement in Polyp and Non-Polyp Patients by Change from Baseline in SNOT-22 Score in Phase 1 Clinical Trial for LYR-210



* P<0.05, **P<0.01, *** P<0.001, **** P<0.0001 to baseline by paired two tailed t-test

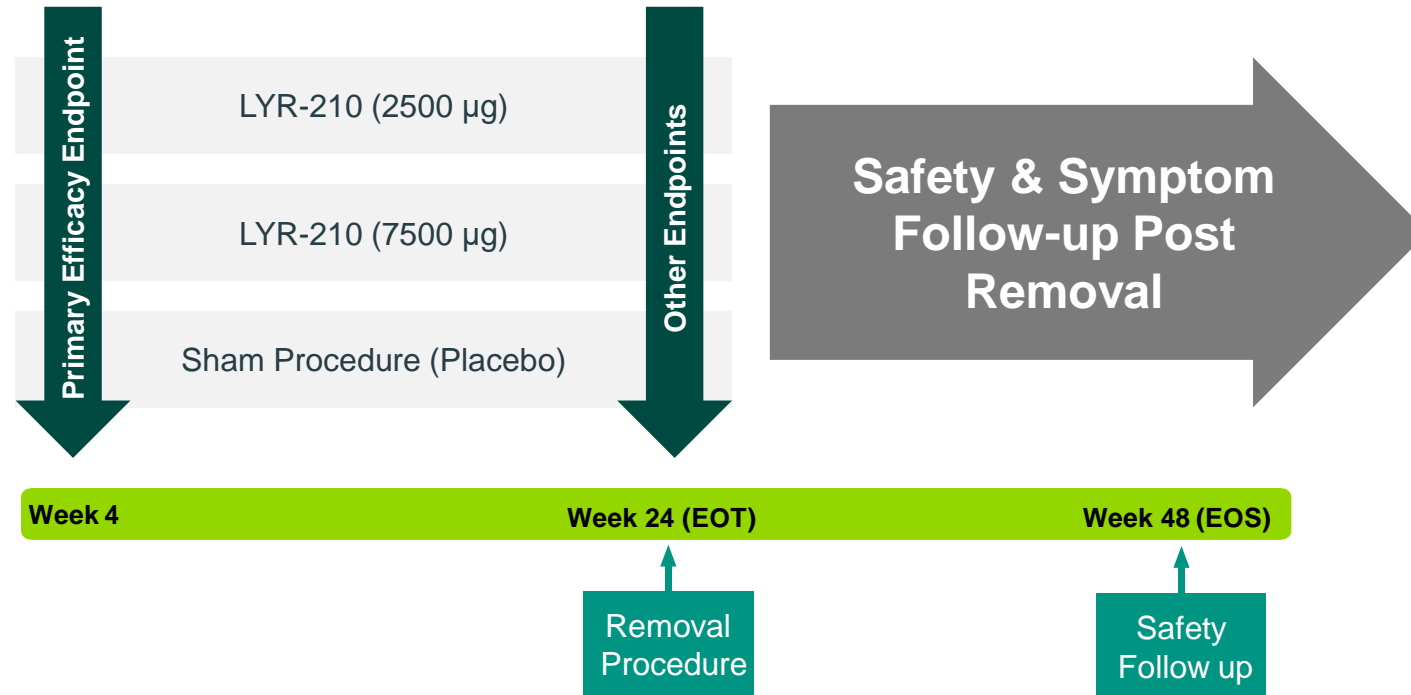
PHASE 1

Visual Evidence of Inflammation Reduction



THE LANTERN PHASE 2 STUDY DESIGN

Designed to evaluate efficacy in adult subjects with CRS who have failed previous medical management and have not undergone endoscopic sinus surgery

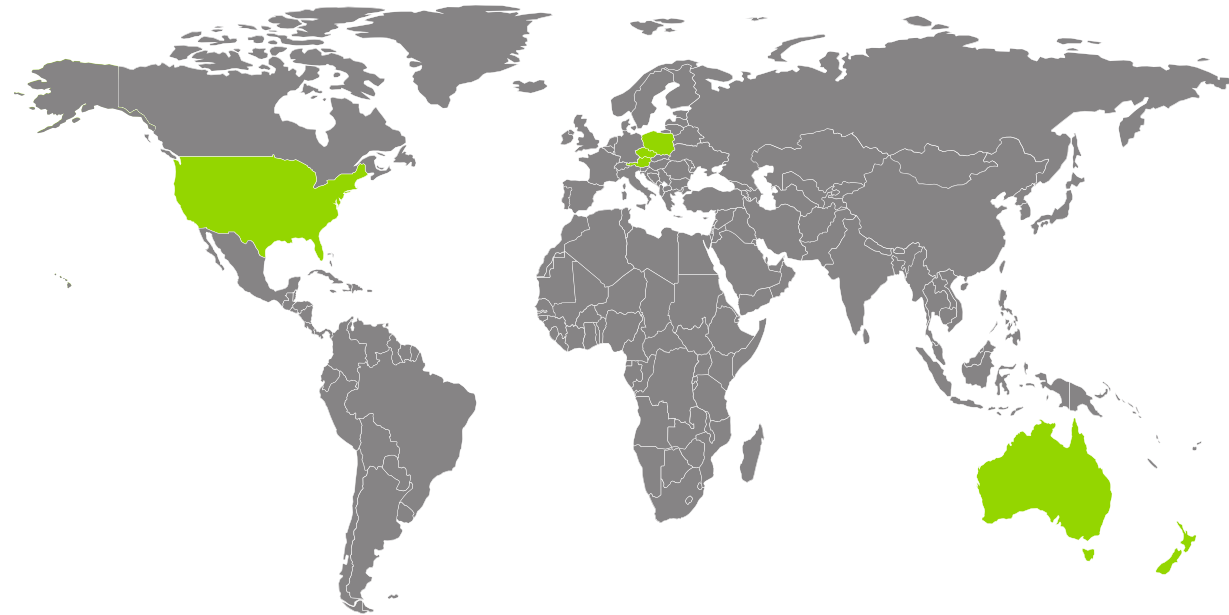


EOT = End of Treatment, EOS = End of Study

Randomized, Blinded, Sham-controlled, Dose-ranging

- ➔ 1:1:1 randomization
- ➔ Primary endpoint: change in 4 cardinal symptoms at week 4
- ➔ Secondary endpoints:
 - Symptom improvement over 48 weeks
 - SNOT-22
 - Time to treatment failure
 - Reduction in inflammation
 - Frequency of exacerbations
 - PK/PD
- ➔ Database lock at week 28

THE LANTERN PHASE 2 STUDY STATUS



Global study with sites in Poland, Czech Republic, New Zealand, Australia and Austria



U.S. IND cleared by FDA in December 2019

Phase 2 Status



Enrollment completed at 67 patients



Leveraging remote electronic data collection to enable completion of clinical assessments



Data will inform Ph 3 design

LYR-210 Expected Milestones



Phase 2 top-line data

6-mo safety follow-up

Phase 3 protocol submission to FDA



Superior Patient Experience

- Up to 6-months of treatment with a single administration
- New treatment alternative to surgery



Enhanced Physician Experience

- Repeatable in-office procedure
- Fits within existing practice
- Low physician “work”
- Broadens referral base



Value for Payers

- Strong rationale for pharmacoeconomic benefit
- Attractive option relative to biologics and surgery

LYR-210/220

Expected to fit well into ENT Reimbursement Models



Professional Fee

In-office procedure

Done in conjunction with a nasal endoscopy

Can leverage existing CPT codes
for placement and removal



Product Fee

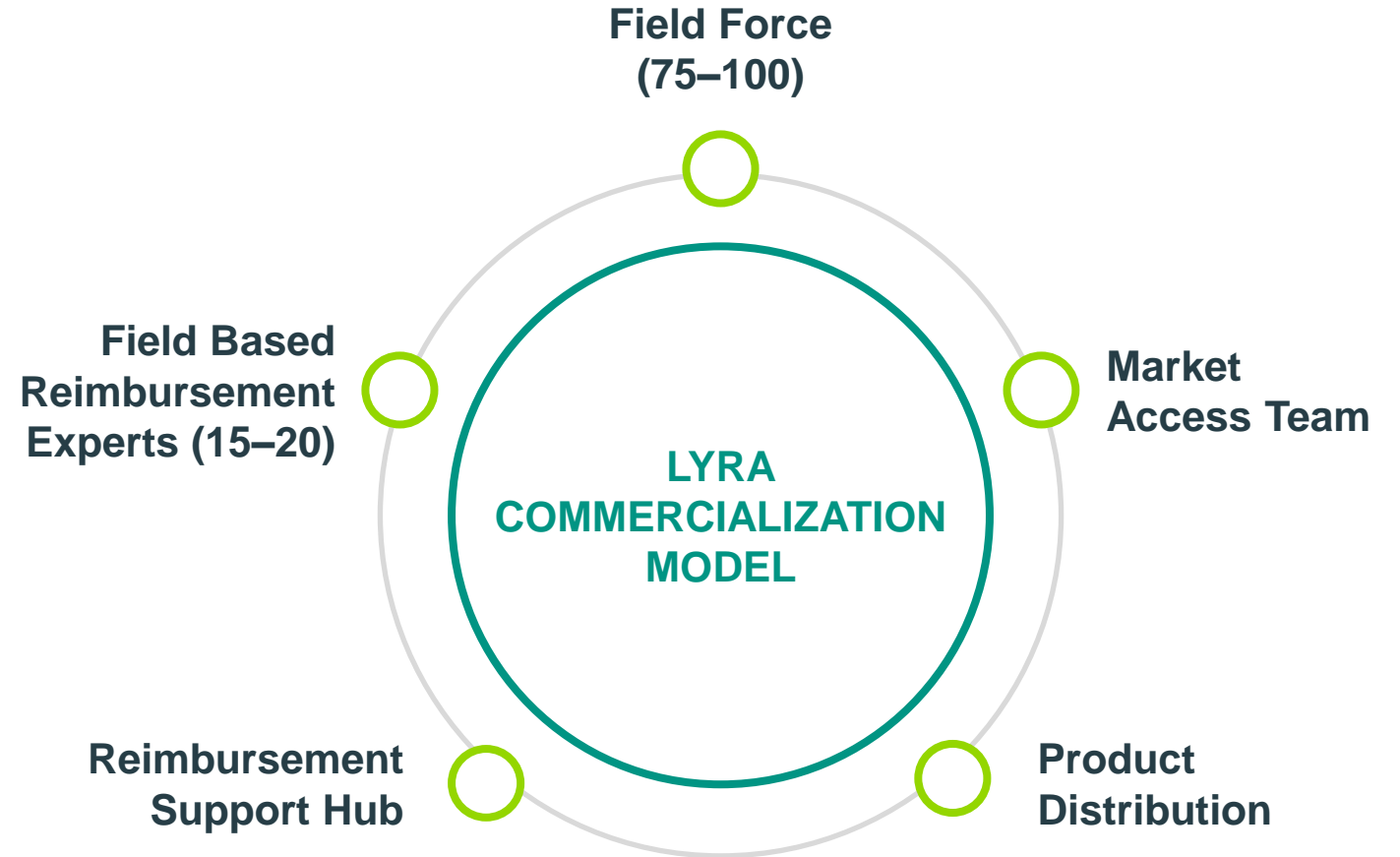
Reimbursed via a J-Code

Purchased through buy-and-bill or specialty pharmacy

Can receive a 5%–10% mark-up per unit

Commercialization Strategy

- Promote product awareness among ENTs and patients
- Secure broad payer coverage
- Ensure reimbursement confidence and facilitate processing of claims
- Limit product acquisition “hassle-factor”



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Chronic diseases treatable with ENT delivery
Improve therapeutic properties of known APIs
Prolonged, local delivery for unmet needs

The logo for LYRA THERAPEUTICS is centered on a dark teal background with a white diamond-patterned mesh. The word "LYRA" is rendered in a stylized, teal-colored font with rounded, futuristic characters. Two small, bright green circular dots are positioned below the 'Y' and 'A' respectively. Below "LYRA", the word "THERAPEUTICS" is written in a clean, white, uppercase sans-serif font.

LYRA
THERAPEUTICS