

A microscopic view of various bacteria, including rod-shaped and spherical forms, set against a teal and blue background. The bacteria are rendered in a semi-transparent, wireframe-like style, showing their internal structures. The background is a gradient of teal and blue, with a white curved shape in the bottom left corner.

Clinical Stage Programs Addressing Urgent Need for Overcoming Antibiotic Resistance

**Corporate Presentation
November 2025**

BiomX

NYSE American: PHGE

SAFE HARBOR STATEMENT

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Antimicrobial Resistance: Rising concerns and limited treatment options underscore the urgent need for novel therapies



35%



Resistance Rate of
S. Aureus to antibiotic
*Methicillin*¹



70%



Increase in Death Associated
with Antimicrobial Resistance
Expected by 2050²



>2x



Increase in Death Associated
with Antibiotic Resistant *S.*
aureus from 1990 to 2021²

10M

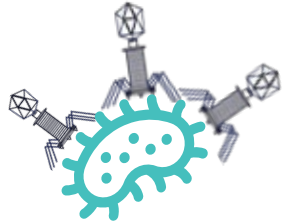
Annual Deaths by 2050
WHO projected Antimicrobial
Resistance Mortality³

\$100T

**Drug Resistant Infection
Cumulative Economic
Loss by 2050⁴**

Phage Therapy: A century-old solution with renewed promise

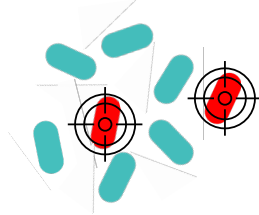
Key Advantages



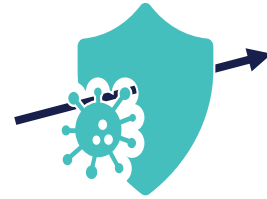
Active against
Antibiotic
Resistant Strains



Safe Modality,
Inert to Human
Cells



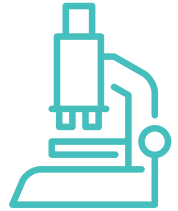
Targets Only
Harmful Bacteria
– No Disruption
to Microbiome



Penetrates and
Disrupts Biofilm



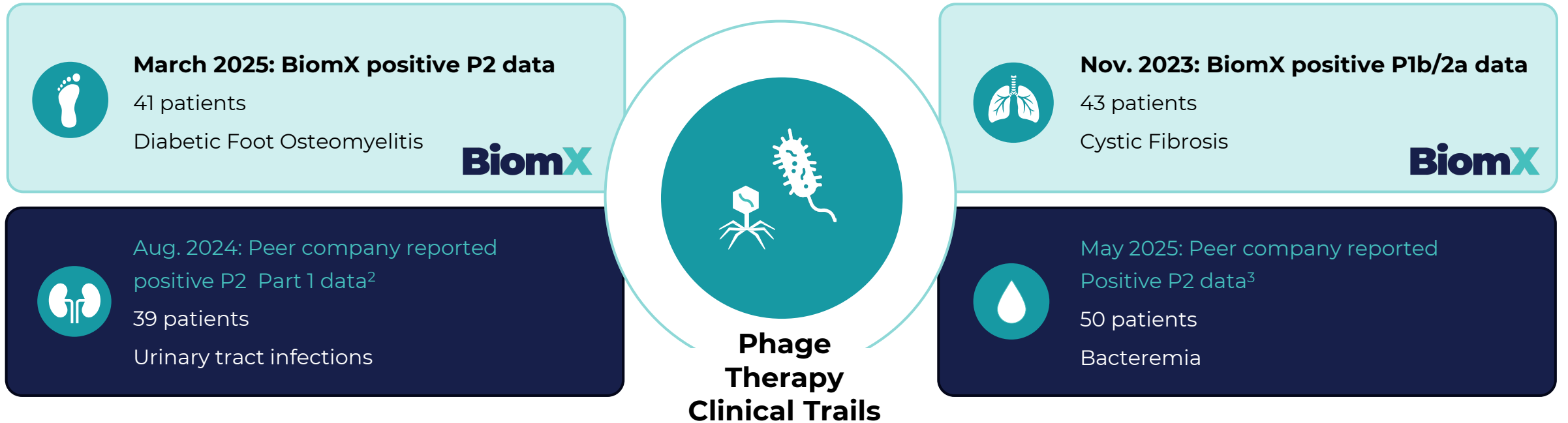
Self-Amplifying
Phages Increase
Efficacy of Each
Dose



Ability to Launch
Straight into
Early/Mid Clinical
Development

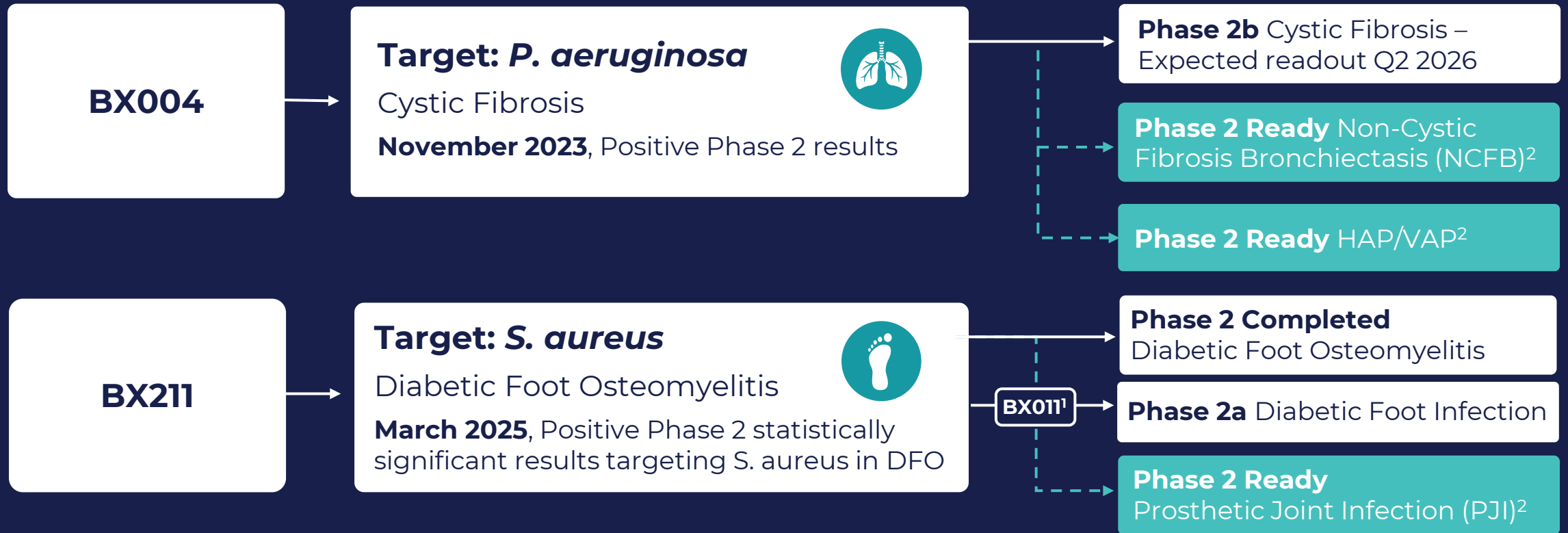
Though first discovered >100 years ago, phage therapy struggled to gain traction—now, with rising antibiotic resistance and recent positive clinical data, we believe that its breakthrough moment has finally arrived

Phage Therapy Momentum: Growing clinical data signal a pivotal moment ahead¹



- ❖ Emergence of first well-controlled, double-blind, placebo-controlled phage therapy trials
- ❖ BiomX – the first to show statistically significant clinical efficacy in a chronic bacterial infection
- ❖ Phage therapy – added benefits on top of standard-of-care, including antibiotics
- ❖ Phage therapeutics targeting high-need indications - some with no approved treatments

Shared Targets, Expanded Potential: Clinical efficacy opens the door to potential additional Phase 2 studies across related infections



Validated Targets

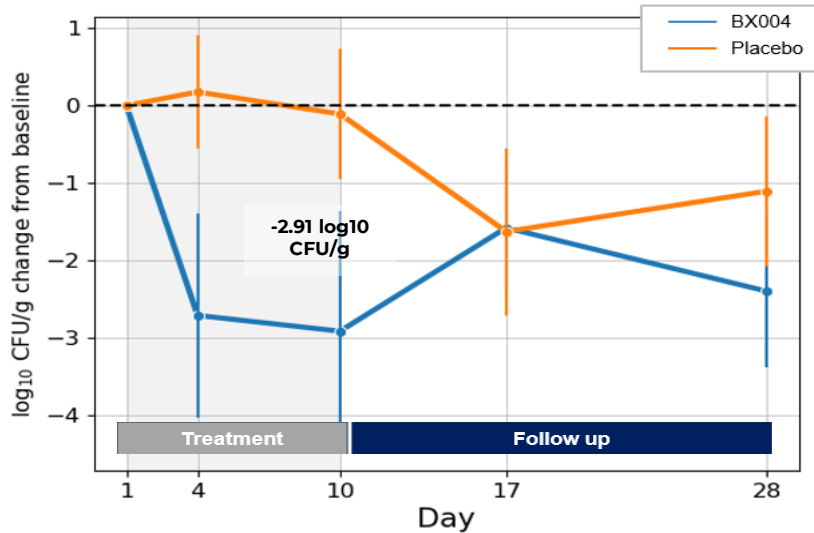
Unlocks Direct Phase 2 Expansion Opportunities

Additional Potential Indications with Shared Target Pathogenic Bacteria <---

BiomX's Groundbreaking Phase 2 Results

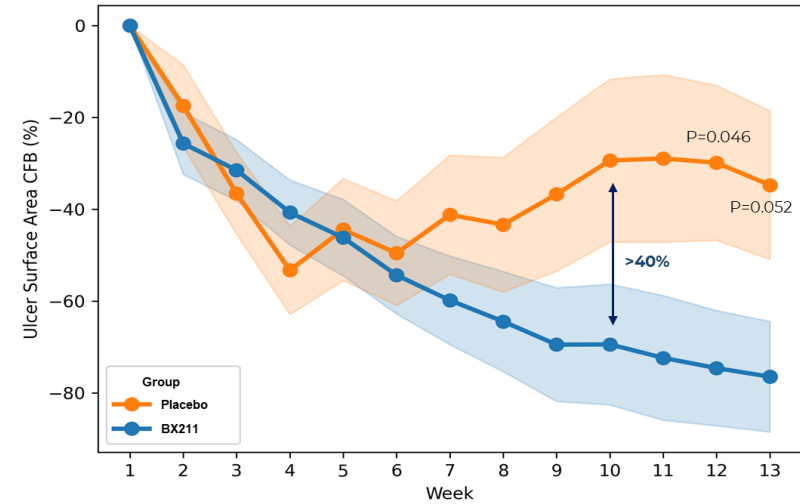
Efficacy of phage therapy across indications

Cystic Fibrosis (BX004): On top of antibiotic SoC



Demonstration of ability of phage to convert chronic lung infections (13-35 yrs, >10⁷ PFU/g) to sputum culture negative with 10 days of phage treatment & signals of improvement vs placebo in pulmonary function and PROs

Diabetic Foot Osteomyelitis (BX211): On top of antibiotic SoC



The 1st multi-center, double-blind, placebo-controlled clinical study to demonstrate statistically significant efficacy of a phage therapy in a clinical endpoint for a chronic bacterial infection



Two positive phase 2 trials in separate indications



Two different bacterial targets



Two routes of administration

BiomX—Built on a Strong Foundation: Backed by leaders in science, industry, and capital

Strong Science & Scientific Founders



nature **Cell**
Science nature reviews
immunology

Prof. Rotem Sorek

Head of microbial genomics group at Weizmann Institute
Phage genomics and CRISPR research



nature **medicine** **Cell**
npj | biofilms and microbiomes

Prof. Eran Elinav

Principal investigator at Weizmann Institute
Immune system and intestinal microbiome interactions



nature nature biotechnology
Cell **Cell Genomics**
Host & Microbe

Prof. Timothy K. Lu

Associate professor leading synthetic biology group, MIT
Synthetic biology, biochemical engineering



nature WILEY
AMERICAN SOCIETY FOR MICROBIOLOGY Journal of Bacteriology **PNAS**

Dr. Carl Merrill

National Institutes of Health, Adaptive Phage Therapeutics

Trusted by top biotech and healthcare investors

DEERFIELD[®]
Advancing Healthcare[®]



≥ \$215 M Raised¹

Working with mission-aligned global leaders



WRAIR

~\$40 M Non-diluted Funding from U.S. Navy

Notable Scientific Publications

nature communications

Phage therapy with nebulized cocktail BX004-A for chronic *Pseudomonas aeruginosa* infections in cystic fibrosis: a randomized first-in-human trial



Targeted suppression of human IBD-associated gut microbiota commensals by phage consortia for treatment of intestinal inflammation

nature communications

Bacteriophage therapy against pathological *Klebsiella pneumoniae* ameliorates the course of primary sclerosing cholangitis

BX004

**Cystic Fibrosis and
NCFB**

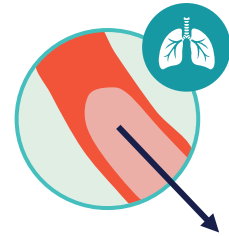


BiomX

Cystic Fibrosis: Chronic pulmonary infections and the inflammatory response are primary causes of death in CF

Cystic Fibrosis

Thick mucus promotes chronic bacteria infections



Clear Airway



Thickened Mucus



Airway with CF

Thick, sticky mucus traps bacteria and hinders normal airway clearance, fostering **chronic lung infections, often driven by *Pseudomonas aeruginosa***

Standard of Care

Antibiotic resistance is associated with worse outcomes

Chronic management: Inhaled antibiotics, CFTR¹ modulators, airway clearance therapies, azithromycin

Drug-resistance: After prolonged and repeated antibiotic courses, increased resistance to antibiotics lowers efficacy and drives lung function decline and mortality in CF

Large Unmet Need

A significant number of CF patients suffer from chronic PsA infections



Prevalent CF Patients, Worldwide²

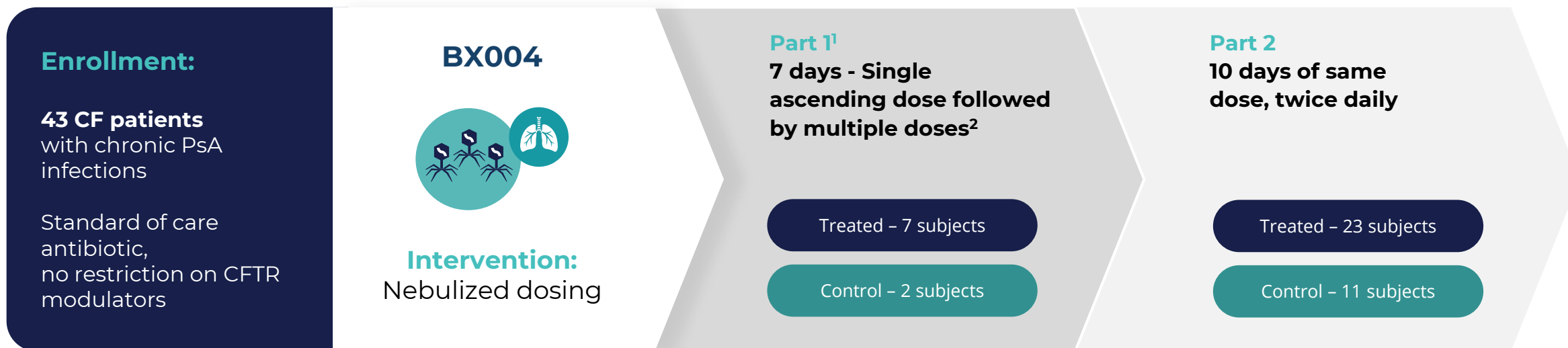


Prevalent CF Patients, US²



CF Patients Suffering from Chronic PsA infections, US and Western EU³

Phase 1b/2a Study Design: Multicentered, double blind, placebo-controlled study to assess safety, reduction of PsA burden and improvement in clinical outcomes



Key Endpoints:

- Safety and tolerability
- Decrease in PsA burden
- FEV1 (forced expiratory volume)
- CFQ-R (CF Questionnaire-Revised) and CRISS

Topline results from Part 1 and 2 available

Results Highlight: Phase 1b/2a cystic fibrosis (Part 1 and 2)

Study drug was well-tolerated

Reduction in bacterial load

Part 1, at Day 15: 2.7 log₁₀ CFU/g treatment effect (represents approximately a 500-fold, or 99.8% , greater bacterial reduction with BX004 versus placebo)

In Part 2, in a prespecified subgroup of patients on SOC inhaled antibiotics on continuous regimen, BX004 vs. placebo showed bacterial reduction of 2.8 log₁₀ CFU/g at EOT, exceeding Part 1 results

Culture conversion

Part 2, in the BX004 arm, 3 of 21 (14.3%) patients converted to sputum culture negative for PsA after 10 days of treatment compared to 0 out of 10 (0%) in the placebo arm¹

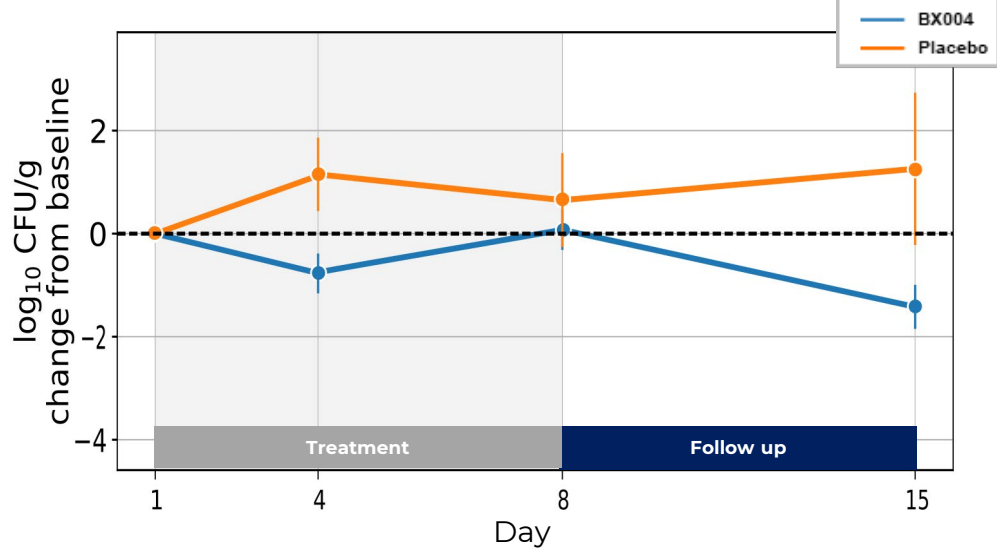
In Part 1, 1 of 7 (14.3%) treated patients also had converted based on physician report

Clinical efficacy

BX004 showed signals of improvement in pulmonary function vs. placebo: Relative FEV1² improvement (5.67%) and CF Questionnaire-Revised respiratory² (8.87 points) at Day 17 (1 week after EOT) in subgroup of patients with reduced lung function³

Efficacy (1): BX004 demonstrated greater reduction in PsA levels compared to placebo

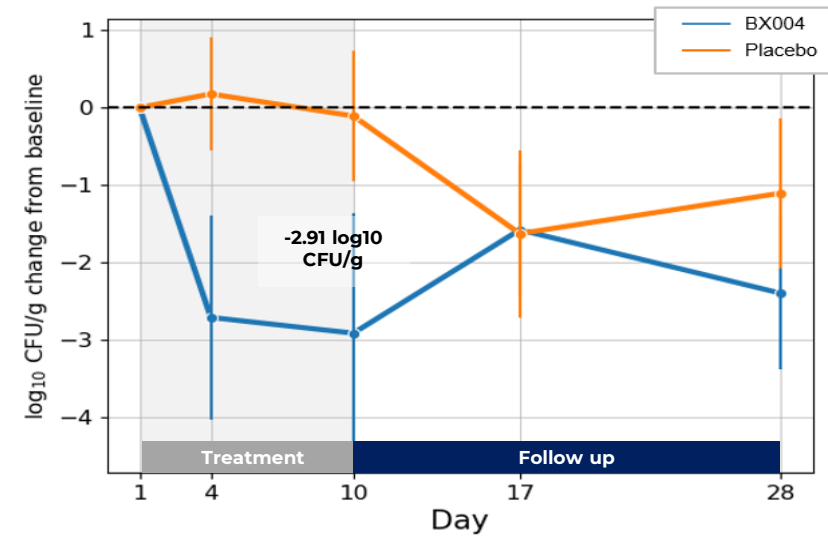
PART 1 (on top of antibiotic SoC):



CFU/g log change from Baseline: Mean (SE)

	BX004 (N=7)	Placebo (N=2)	Difference
D4	-0.77 (0.32)	1.15 (0.47)	-1.9
D8	0.08 (0.33)	0.65 (0.62)	-0.57
D15	-1.42 (0.36)	1.26 (1.02)	-2.7

PART 2 (on top of antibiotic SoC, continuous subgroup):



CFU/g log change from Baseline: Mean (SE)

	BX004 (N=7)¹	Placebo (N=5)	Difference
D4	-2.71 (1.21)	0.18 (0.64)	-2.89
D10	-2.91 (1.4)	-0.11 (0.73)	-2.8
D17	-1.58 (0.77)	-1.63 (0.95)	0.05
D28	-2.4 (0.9)	-1.1 (0.85)	-1.3

Efficacy (2): BX004 showed greater conversion (bacterial culture turned negative) in treatment over placebo

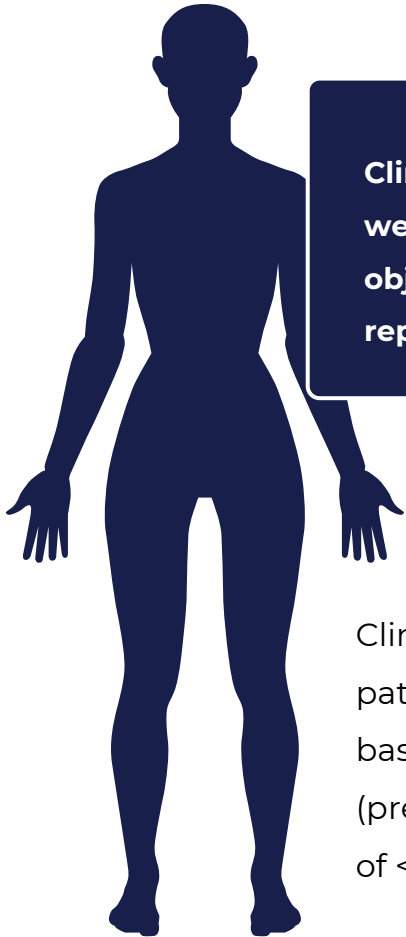
In the BX004 arm 3 out of 21 (14.3%) patients converted to sputum culture negative for *P. aeruginosa* after 10 days of treatment (2 already after 4 days)². In the placebo arm 0 out of 10 (0%)²

Patients which were converted:

Patient	Duration of PsA infection (years)	Baseline PsA ¹ in sputum (CFU/g)
1	18	2.40x10 ³
2	13	5.60x10 ⁷
3	35	1.09x10 ⁷

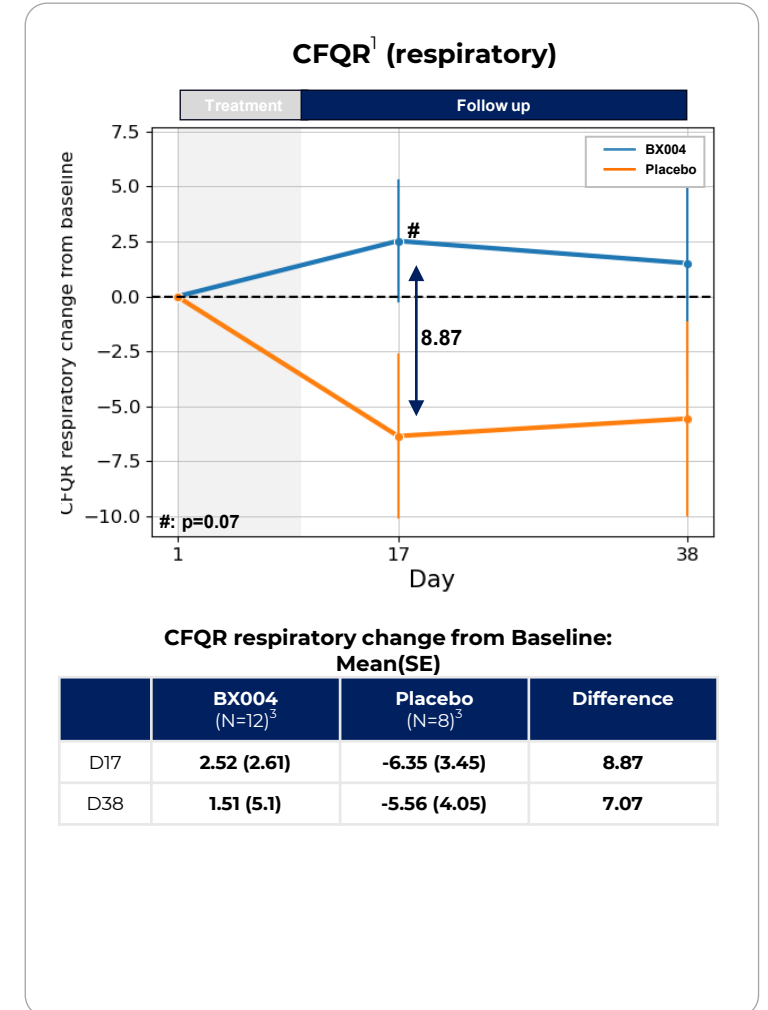
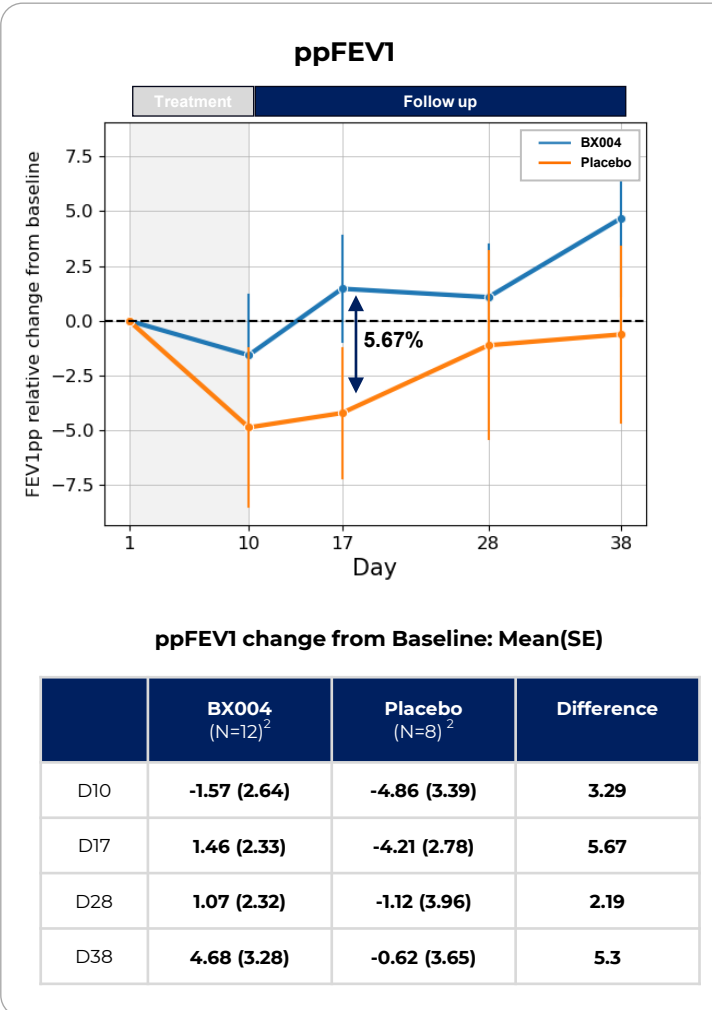
In addition, in Part 1 of the study, one subject in the BX004 arm (1/7: 14.3%) who was persistently positive for PsA for at least 13 years had a 3.3 log reduction at D15 later converted to sputum negative

Efficacy (3): BX004 shows meaningful clinical improvement after 10 days of treatment in multiple clinical readouts



Clinical improvements were observed on both objective & patient reported outcomes

Clinical readouts in patients with reduced baseline lung function (predefined group, ppFEV1 of <70%)



Phase 2b Study: Study design

International, multicenter, double blind, placebo-controlled study to assess reduction of PsA burden and improvement in clinical outcome



Key Endpoints:

- Decrease in PsA burden (incl. Culture conversion/eradication)
- FEV1 (forced expiratory volume)
- CFQ-R (CF Questionnaire-Revised) and CRISS
- Safety and tolerability

Topline results expected in Q2 2026

Non-Cystic Fibrosis Bronchiectasis: Market Expansion Potential



CF and NCFB have similar lung structural abnormalities

These structural abnormalities predispose patients to *Pseudomonas aeruginosa* infections¹



~25% of NCFB patients have chronic *P. aeruginosa* infections



Physicians treat both CF and NCFB the same way

With no approved anti-bacterial, NCFB patients are treated off-label with CF anti-bacterial therapies



10x

NCFB patient population is approximately ten times larger than CF

- CF: ~100,000 patients worldwide²
- NCFB: ~1,000,000+ patients worldwide³



BX004 Ability to Address NCFB

Common bacteria



Similar patient populations



Common organ



Same delivery method



Phase 2 validation



NCFB Phase 2 ready



BX211

**Diabetic Foot
Infections & Diabetic
Foot Osteomyelitis
(DFI & DFO)**

BiomX



Disease Burden: DFI & DFO drive diabetic amputations, burdening the healthcare system

DFI to DFO

Bacterial infection spreading from soft tissue to bone



Superficial ulcer



DFI



DFO

Staphylococcus aureus is the most common bacteria present in DFI / DFO

Standard of Care

Suboptimal efficacy leading to high rate of amputation

Moderate-to-severe DFI & DFO SoC: 4 – 6 weeks of IV/oral antibiotics / debridement / offloading

Approved Therapy: Last drug approved for DFI in 2005 with no approved drugs for DFO in the US

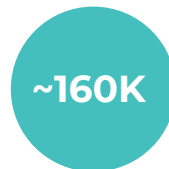
Poor Prognosis: 20-40% of cases result in amputation, increasing 5-year mortality rate up to 50%

Economic Burden

Significant burden on both patients and healthcare system



Diagnosed diabetes, US 2024¹



Lower limb amputations due to DFI/DFO²



Annual cost to US healthcare system (~\$50K direct cost per patient)

Phase 2 Study Design: Multicenter, double blind, placebo-controlled study to assess improvement of clinical outcomes

Primary Endpoint:

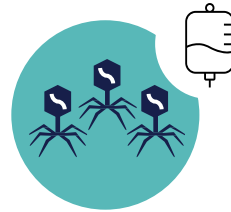
Percent area reduction of study ulcer through Week 13

Enrollment:

41 patients with Diabetic Foot Osteomyelitis positive for *S. aureus*

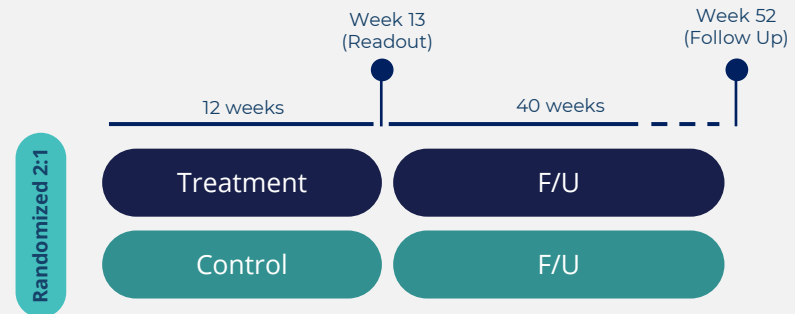
Background standard of care antibiotic

BX211



Intervention:
IV & topical

Duration: 12 weeks of once weekly treatment
IV in week 1, topical for 12 weeks



Primary Endpoints:

- Percent area reduction of study ulcer through Week 13

BX211:

- Phage originating from a 'phage-bank', personally matched for each patient's *S. aureus*

**Topline results from
week 13 available**

Results Highlight: Phase 2 diabetic foot osteomyelitis



Safe and **well-tolerated**



Sustained and statistically significant **PAR ulcer size reduction**¹

- ✓ Separation from placebo starting at week 7 with a difference greater than 40% by week 10



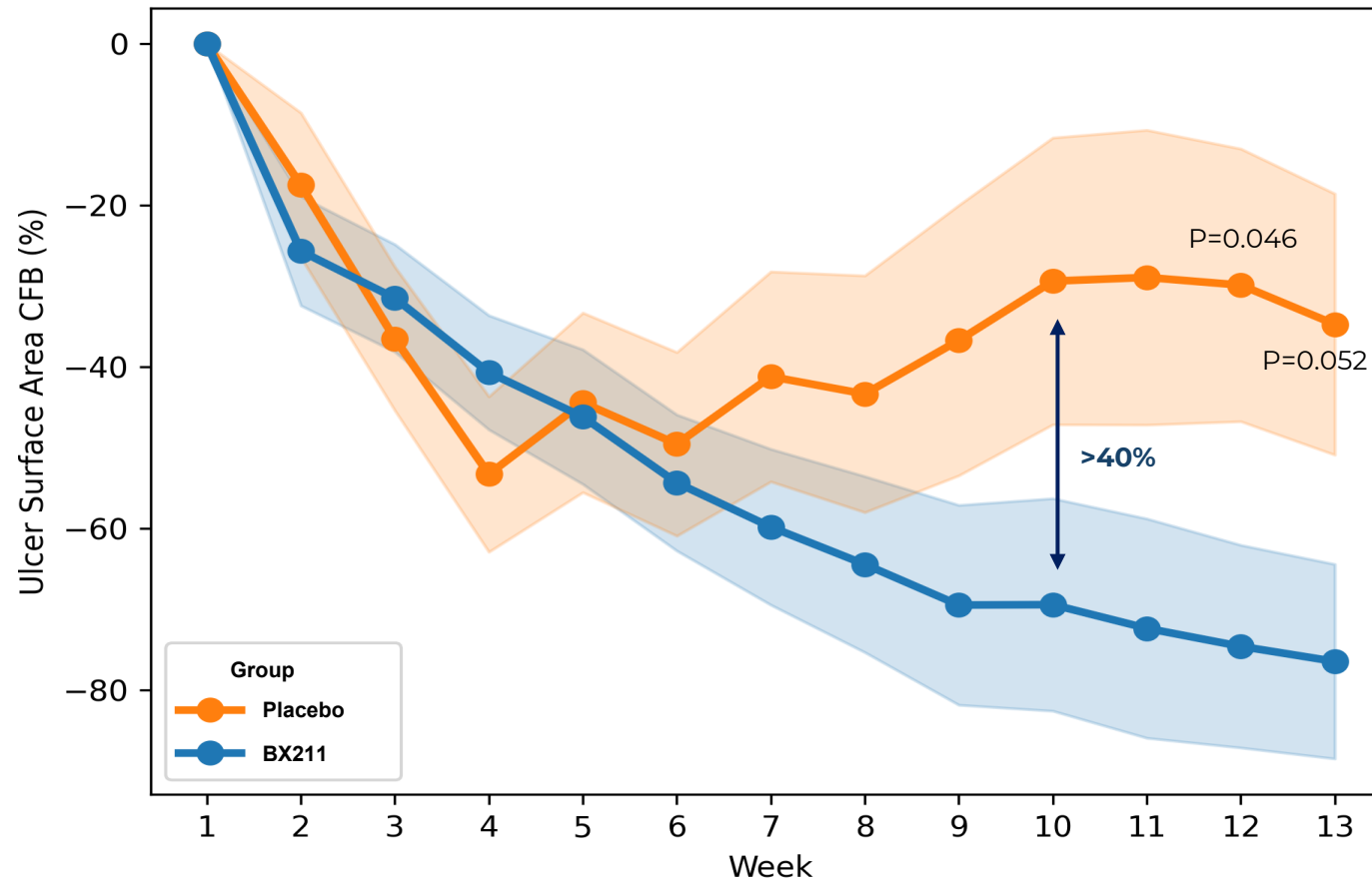
Statistically significant **improvements in ulcer depth** in patients with ulcers at **bone depth**



Favorable trends compared to placebo across **several additional clinical parameters**

Efficacy (1): BX211 showed clinically relevant, statistically significant¹, reduction in ulcer surface area

Percent Area Reduction (PAR) from baseline of ulcer surface area (LS Mean \pm SE)²
(See detailed data in next slide)



Efficacy (2): BX211 showed clinically relevant, statistically significant², reduction in ulcer surface area

Percent Area Reduction (PAR) from baseline of ulcer surface area (LS Mean ± SE)¹

(Detailed data from previous slide)

PAR at week:	BX211		Placebo		Difference (95% CI)	P-value ²
	N (%)	Mean (95% CI)	N (%)	Mean (95% CI)		
Week 12	22 (84.6%)	-74.57% (-100.78, -48.35)	12 (80.0%)	-29.85% (-65.08, 5.38)	-44.72% (-88.65, -0.78)	0.046
Week 13	20 (76.9%)	-76.43% (-101.56, -51.30)	12 (80.0%)	-34.70% (-68.42, -0.99)	-41.73% (-83.80, 0.34)	0.052

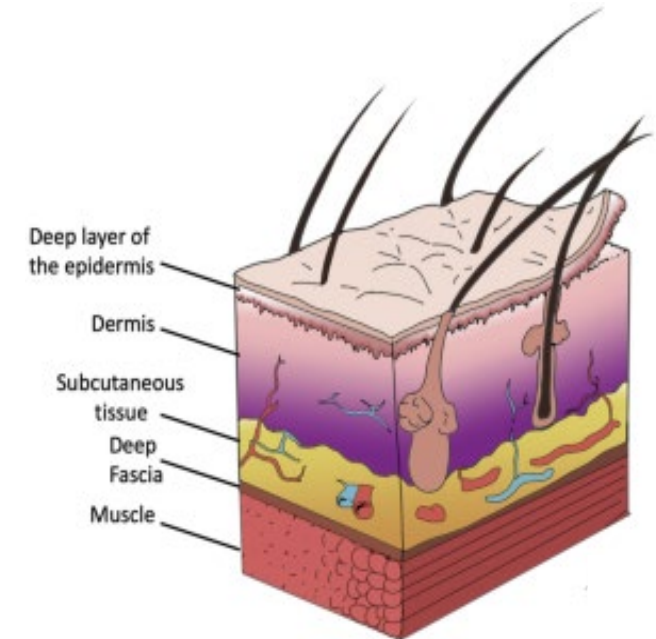
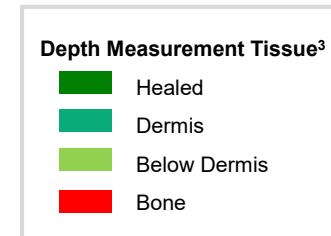
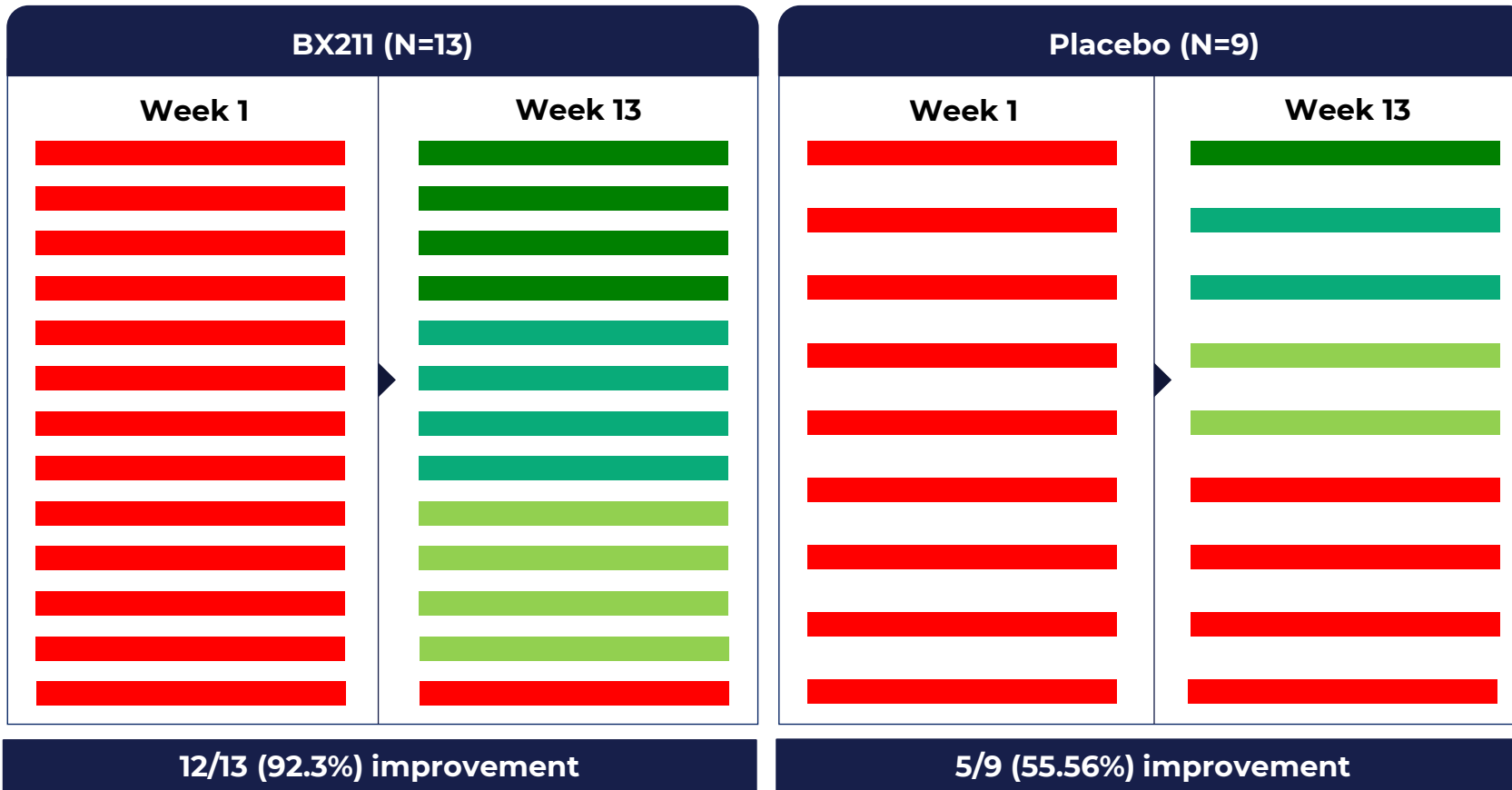
	BX211		Placebo		Difference (95% CI)	P-value
	N, e (%)	Mean (95% CI)	N, e (%)	Mean (95% CI)		
Through weeks 1 to 13³:	N=26, e=264 (90.5%)	-57.05% (-39.07, -75.04)	N=15, e=164 (84.1%)	-37.09% (-12.91, -61.27)	-19.96% (10.20, -50.12)	0.186

N = Number of patients, e = Number of events

Week	1	2	3	4	5	6	7	8	9	10	11	12	13
BX211 (N)	26	23	23	25	24	23	22	19	23	23	22	22	20
Placebo (N)	14	14	13	12	14	12	12	12	12	12	12	12	12

Efficacy (3): Patients with ulcers at bone depth¹ displayed statistically significant² better recovery in the BX211 group

Change in tissue involvement of the ulcer for weeks 1 and 13¹



Summary

BiomX



BiomX



Reputable Investors & Partners

DEERFIELD[®]
Advancing Healthcare™



OrbiMed
Healthcare Fund Management



**2 Phase
Therapy
Programs**

**2 Phase 2
Studies**



**≥ \$4 B Addressable
Market World-wide**

**≥ \$215 M
Raised**

**~\$40M
Non-Dilutive**



**3 Patent
Families**

**Robust Scientific
Expertise**

≥ 50% PhDs in Leadership



**Strong
Manufacturing
Capabilities**