

September 2021 Corporate Presentation



Forward- Looking Statements

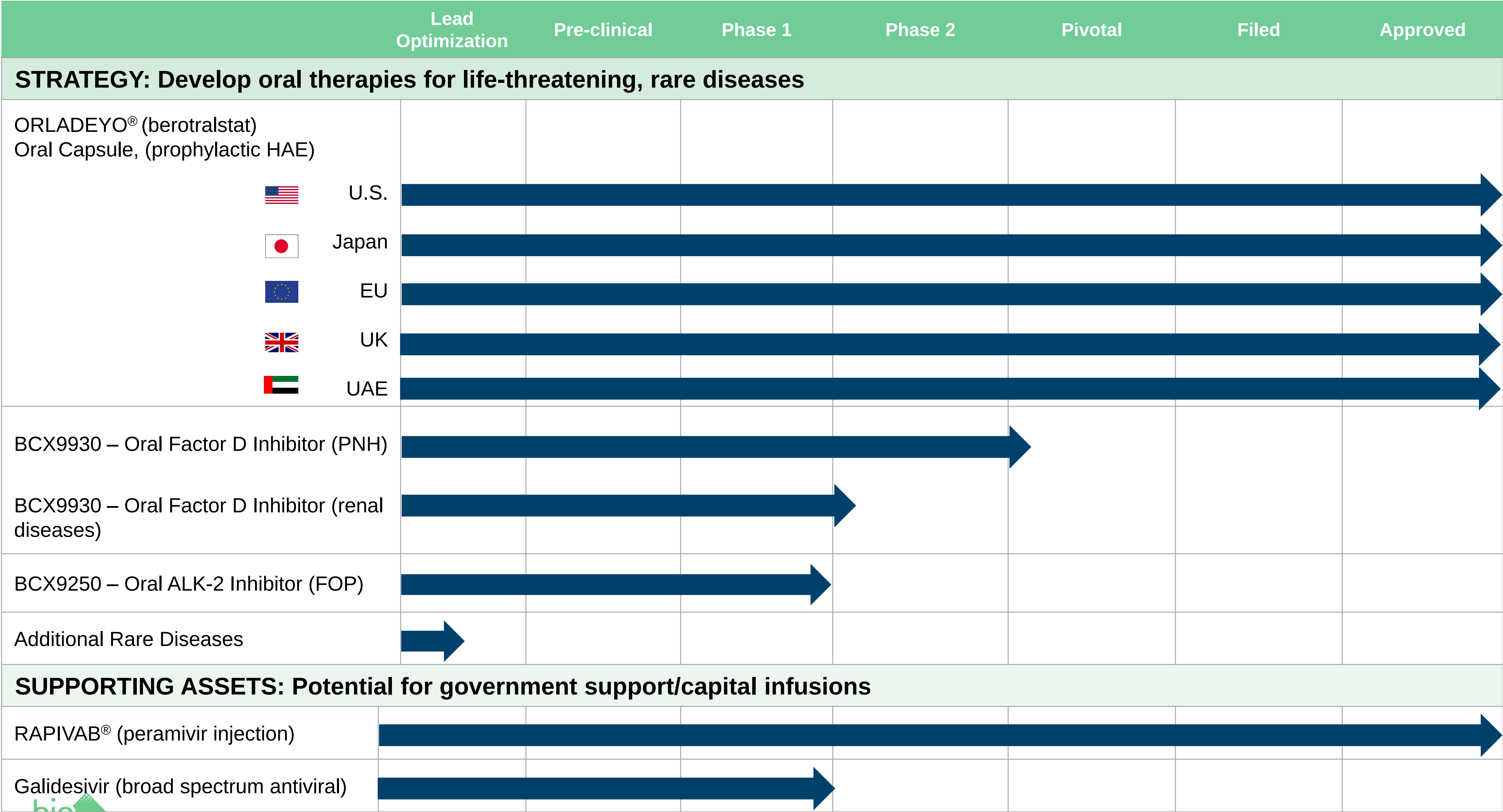
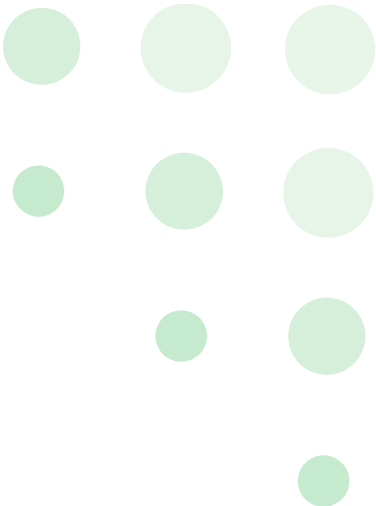
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A man with grey hair and a mustache, wearing a blue and white striped shirt and smart glasses, is looking at a computer monitor. The monitor displays a 3D molecular model with blue and red components. The background is dark and out of focus.

Delivering extraordinary Empowering ordinary

BioCryst develops novel oral medicines designed to treat rare disease to help patients experience a normal quality of life

BioCryst's Robust Pipeline



Significant Milestones in 2021

Q1 2021

- ✓ **Approval** decision on ORLADEYO in Japan
- ✓ **Data** from completed BCX9930 dose ranging study in PNH

Q2 2021

- ✓ **Approval** decision on ORLADEYO in EU
- ✓ **Revenues** reported from Q1/first full quarter of ORLADEYO sales in US
- ✓ **Launch** of ORLADEYO in Japan
- ✓ **Launch** of ORLADEYO in Germany

2H 2021

Begin Patient Enrollment in REDEEM-1 and REDEEM-2

Begin Patient Enrollment in BCX9930 Renal PoC Trial

Additional Global ORLADEYO Approvals/Launches

ORLADEYO REVENUES

Strong Start to U.S. Launch as HAE Patients Switch to ORLADEYO®

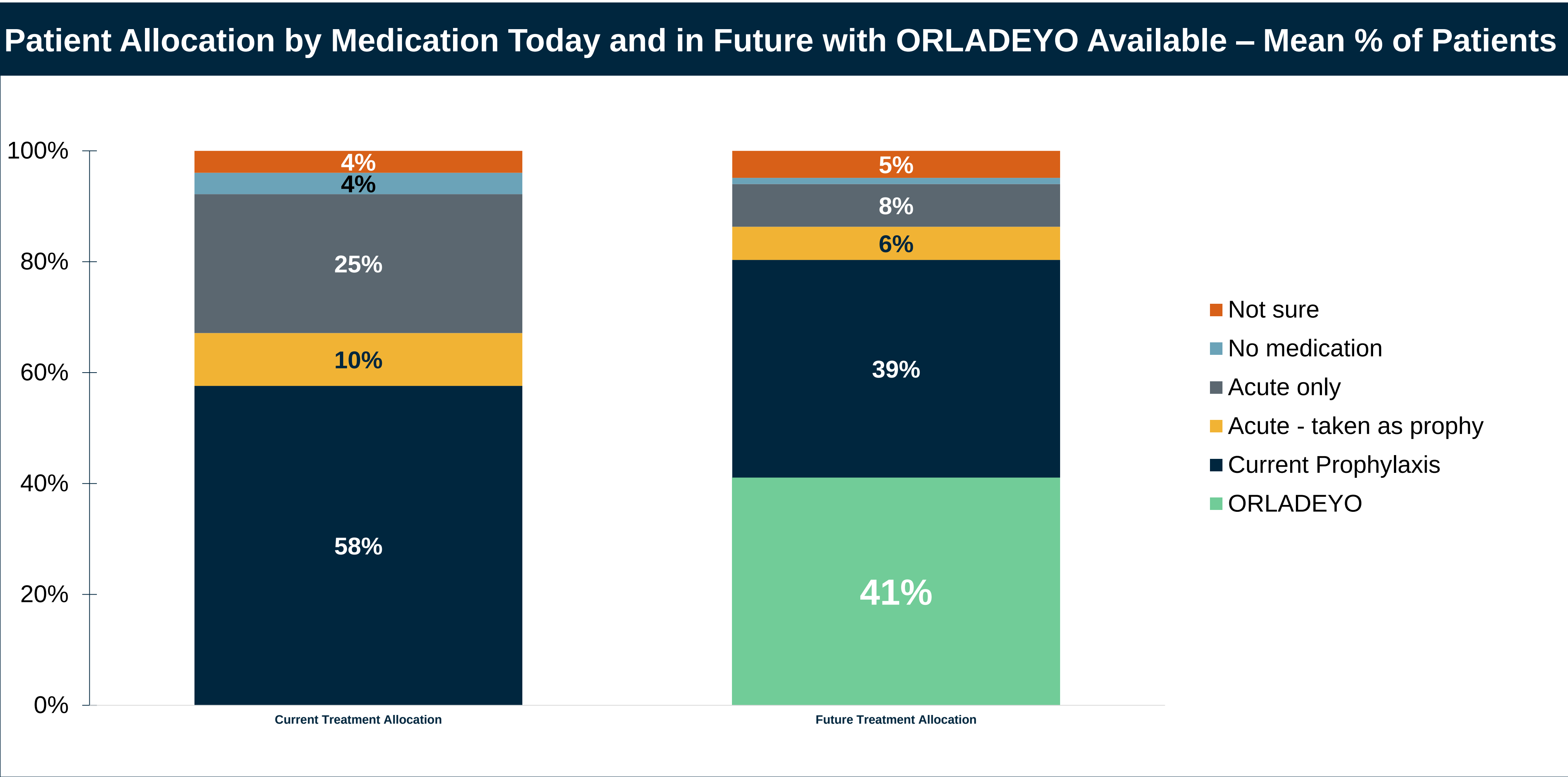
orladeyo®
(berotralstat) capsules 150 mg



- **\$28.5 million in Q2 2021 net ORLADEYO revenue**
 - 60% of patients new to ORLADEYO in 2Q 2021 switched from other prophylactic medicine and the remainder from acute-only treatment
 - The number of physicians prescribing ORLADEYO grew by approximately 50% in 2Q 2021
 - The majority (approximately 70%) of HAE patients in the U.S. now have access to ORLADEYO through insurance policies
 - Through the launch thus far, patient retention on therapy remains consistent with the one-year patient retention rate observed in APeX-2 trial

Physicians Expect to Prescribe ORLADEYO for Over 40% of HAE Patients

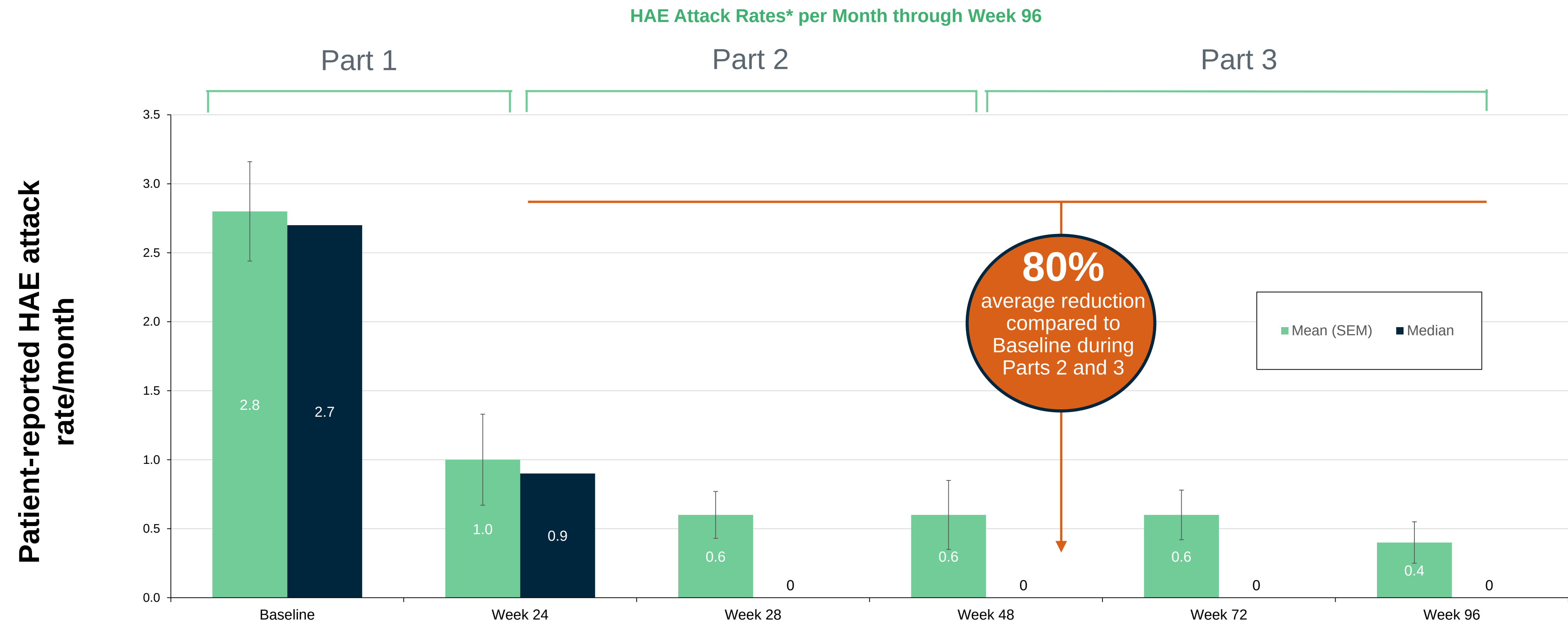
80% of HAE Patients Expected to be on Some Form of Prophylaxis



All Qualified Respondents (n=175)

96 Week Data Highlights Efficacy of ORLADEYO

- ◆ In the patients who completed 96 weeks of treatment with berotralstat 150 mg (n=21), an 80% average reduction from the mean baseline attack rate per month was observed during Parts 2 and 3
- ◆ Median attack rates decreased over time from 2.7 attacks/month at baseline to 0.0 attacks/month in 16 of 17 months during Parts 2 and 3 (median 1.0 attacks/month in 1 month)



*Due to study design, investigator-confirmed attack rates were reported only for Parts 1 and 2, while subject-reported attack rates were reported for Part 3. For consistency across the entire 96 weeks, only subject-reported attack rates are reported. For analysis purposes, 1 month was defined as 4 weeks of treatment. Reasons for discontinuation in Part 3 include: perceived lack of efficacy (n=1), pregnancy (n=1), laboratory abnormality or adverse event (n=1), subject withdrew consent (n=2). SD, standard deviation; SEM, standard error of the mean

8

Approved Label: ORLADEYO® (berotralstat) Safety

In APeX-2 (part 1), the most common^a treatment-emergent adverse reactions were abdominal pain, vomiting, diarrhea, back pain, and gastroesophageal reflux disease (GERD)

Adverse reactions	Placebo (n=39)	ORLADEYO 110 mg (n=41)	ORLADEYO 150 mg (n=40)
	n (%)	n (%)	n (%)
Abdominal pain ^b	4 (10)	4 (10)	9 (23)
Vomiting	1 (3)	4 (10)	6 (15)
Diarrhea ^c	0	4 (10)	6 (15)
Back pain	1 (3)	1 (2)	4 (10)
GERD	0	4 (10)	2 (5)

^a≥10% and higher than placebo. ^bIncludes abdominal pain, abdominal discomfort, abdominal tenderness, and upper abdominal pain. ^cIncludes diarrhea and frequent bowel movements.

Findings from the open-label, long-term safety study, APeX-S (interim safety population, n=227), support the data observed in APeX-2 (part 1)

ORLADEYO Launch Underway with Torii : *First approved prophylactic medicine for HAE in Japan*

- \$37 million in upfront and milestones
 - \$22 million upfront
 - \$15 million received 2Q 2021 following approval and NHI pricing
 - Royalties from mid-teens up to potentially 40%
- Proven, committed partner—2Q 2021 Launch
- Opportunity to build market with est prevalence of 2500 patients and only 500 currently diagnosed
- Active KOL base of treating physicians with strong interest in new therapies for patients
- Very engaged patient advocacy groups increasing awareness in HAE prophylaxis



Taking ORLADEYO to HAE Patients Around the World



*German launch
underway*

Q2 2021



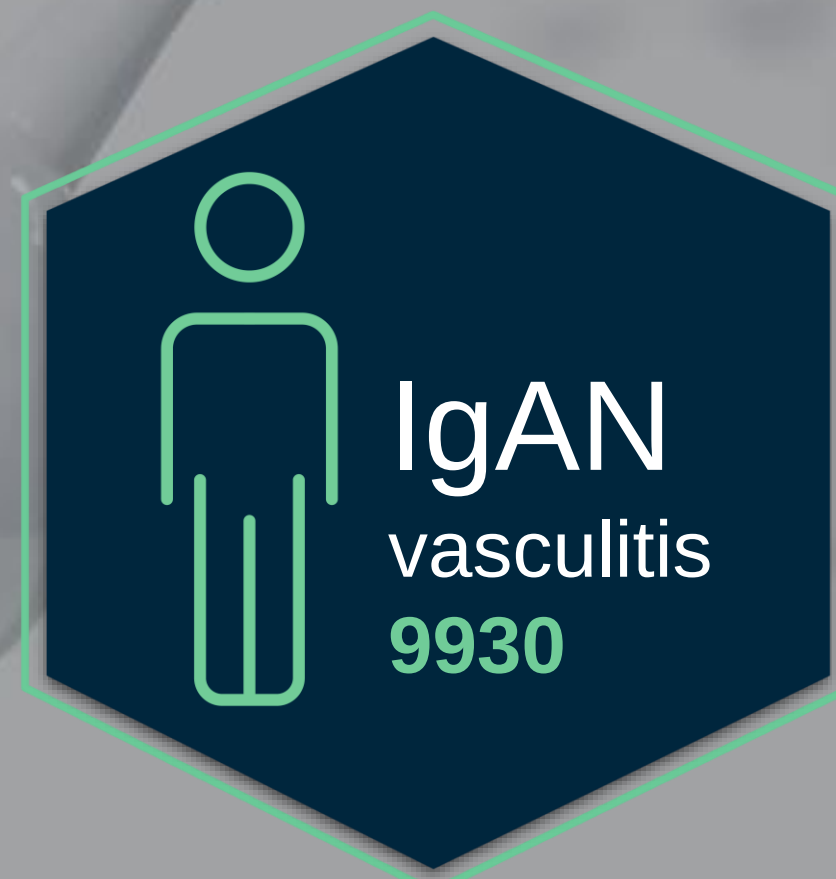
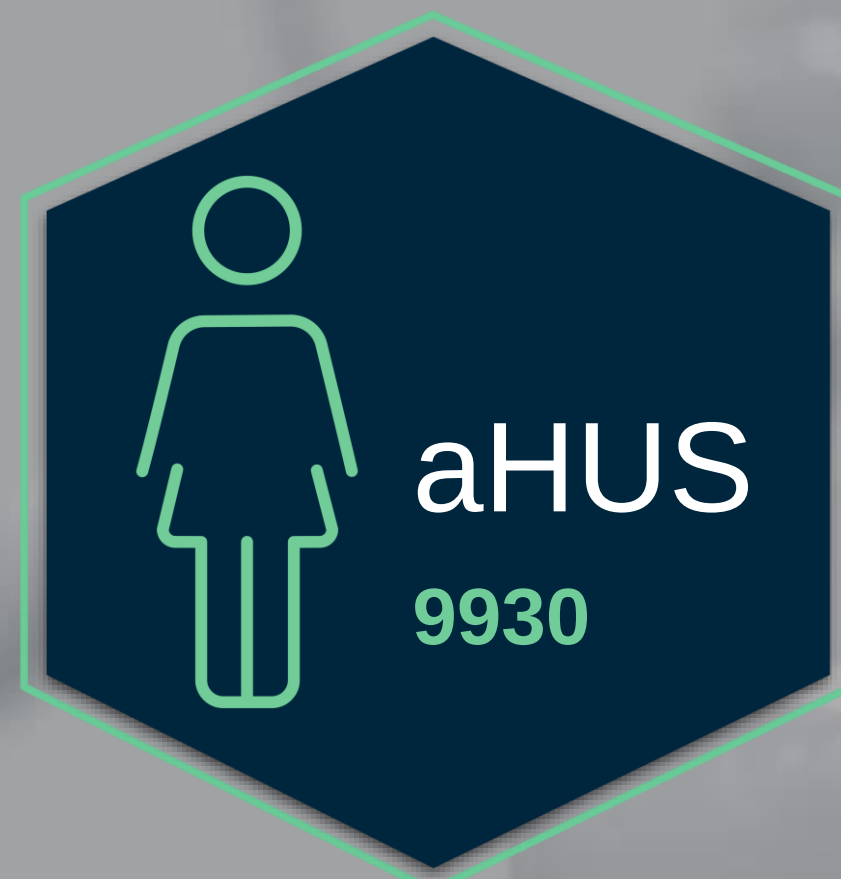
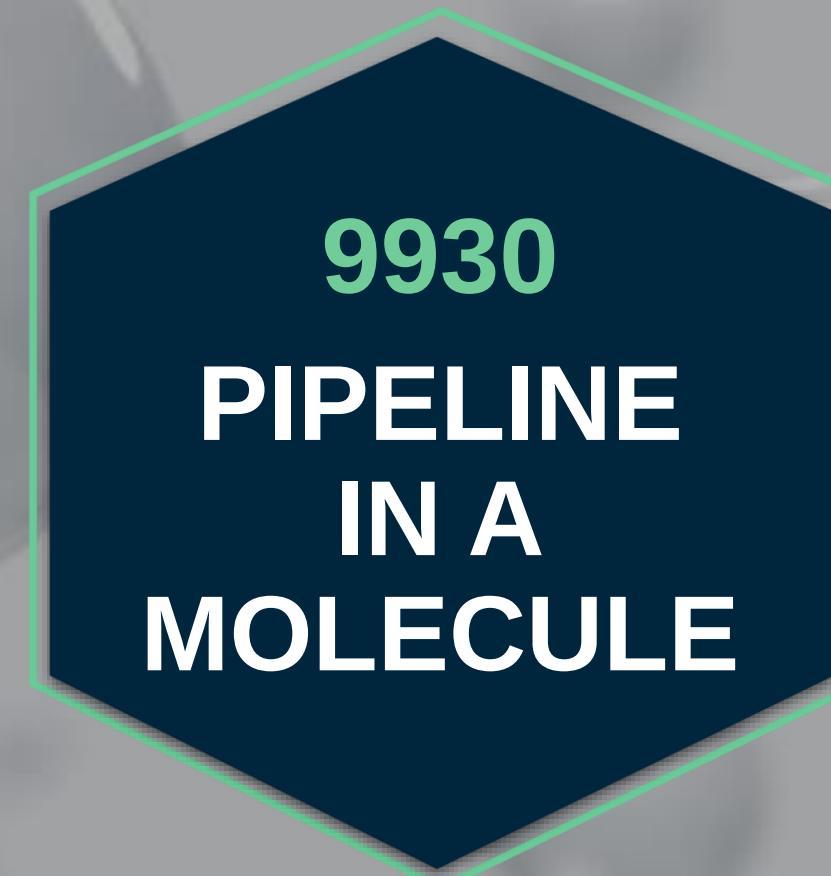
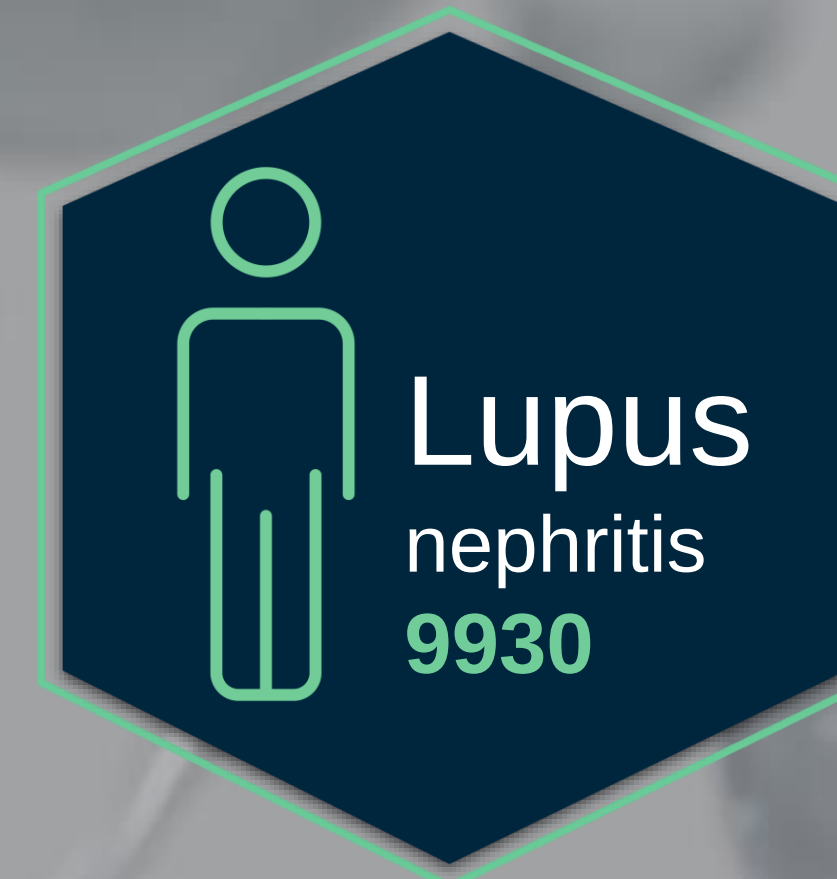
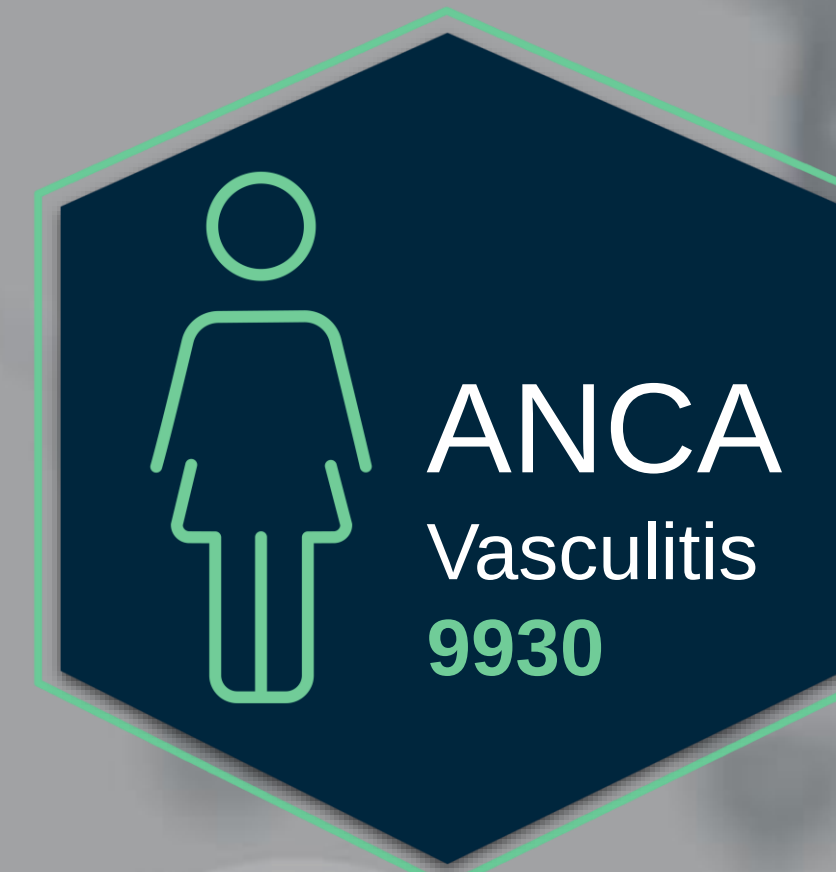
*Additional European
launches*

2H 2021



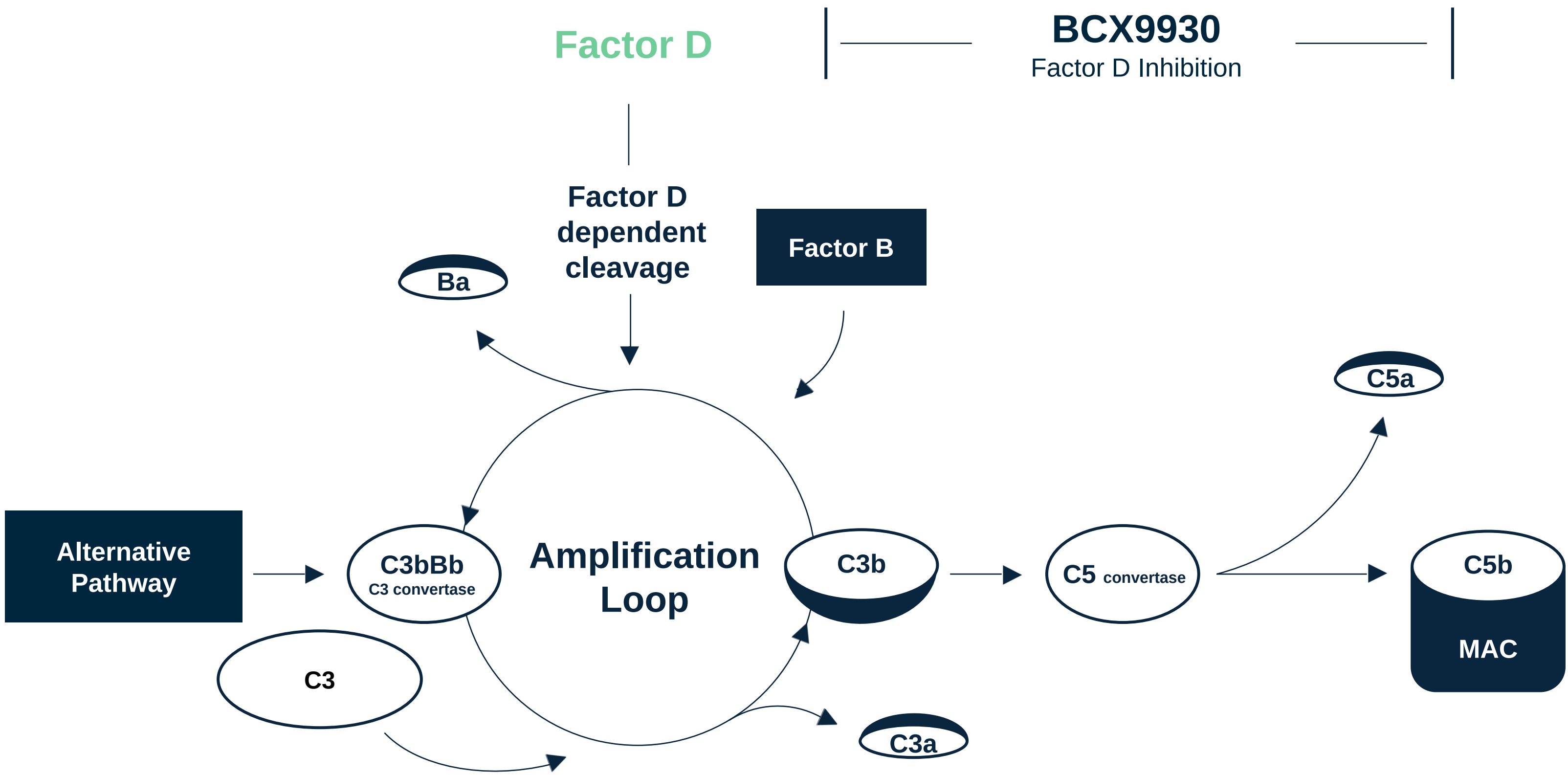
*Global filings,
approvals and
launches*

2021-22



Factor D: An Outstanding Drug Target for Complement-mediated Diseases

- Factor D is essential to initiate the Alternative Pathway
- Blocking Factor D blocks the Alternative Pathway and all downstream products



Spectrum of Alternative Pathway Dysregulation Diseases

HEMATOLOGY

PNH
*paroxysmal nocturnal
hemoglobinuria*

aHUS
*atypical hemolytic uremic
syndrome*

RHEUMATOLOGY

ANCA vasculitis
*antineutrophil cytoplasmic
antibody-associated vasculitis*

Lupus nephritis

IgAN vasculitis

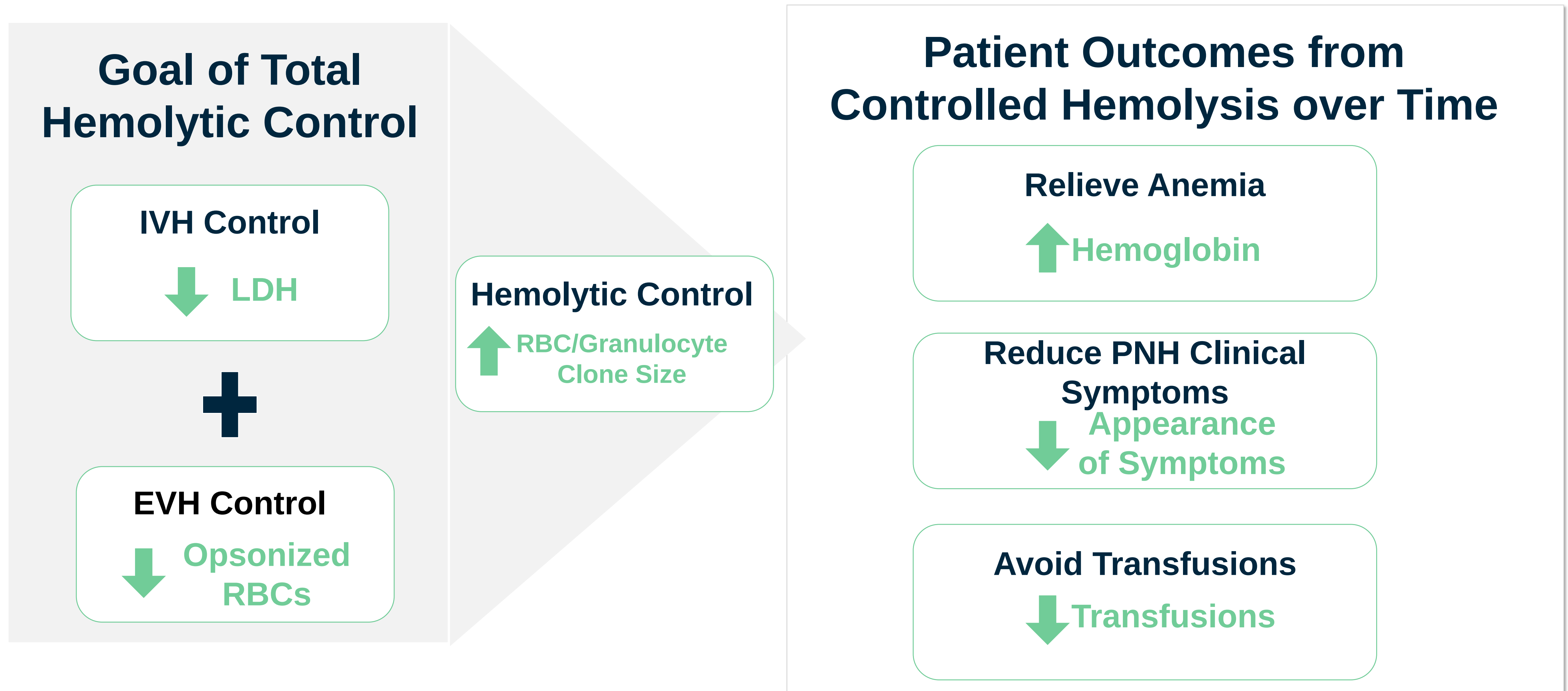
NEPHROLOGY

C3G
glomerulonephritis

PMN
*primary
membranous
nephropathy*

IgAN
IgA nephropathy

Oral Monotherapy w/BCX9930 Offers Advantage of Controlling Both Intravascular (IVH) and Extravascular (EVH) Hemolysis



PNH Proof of Concept Study Design

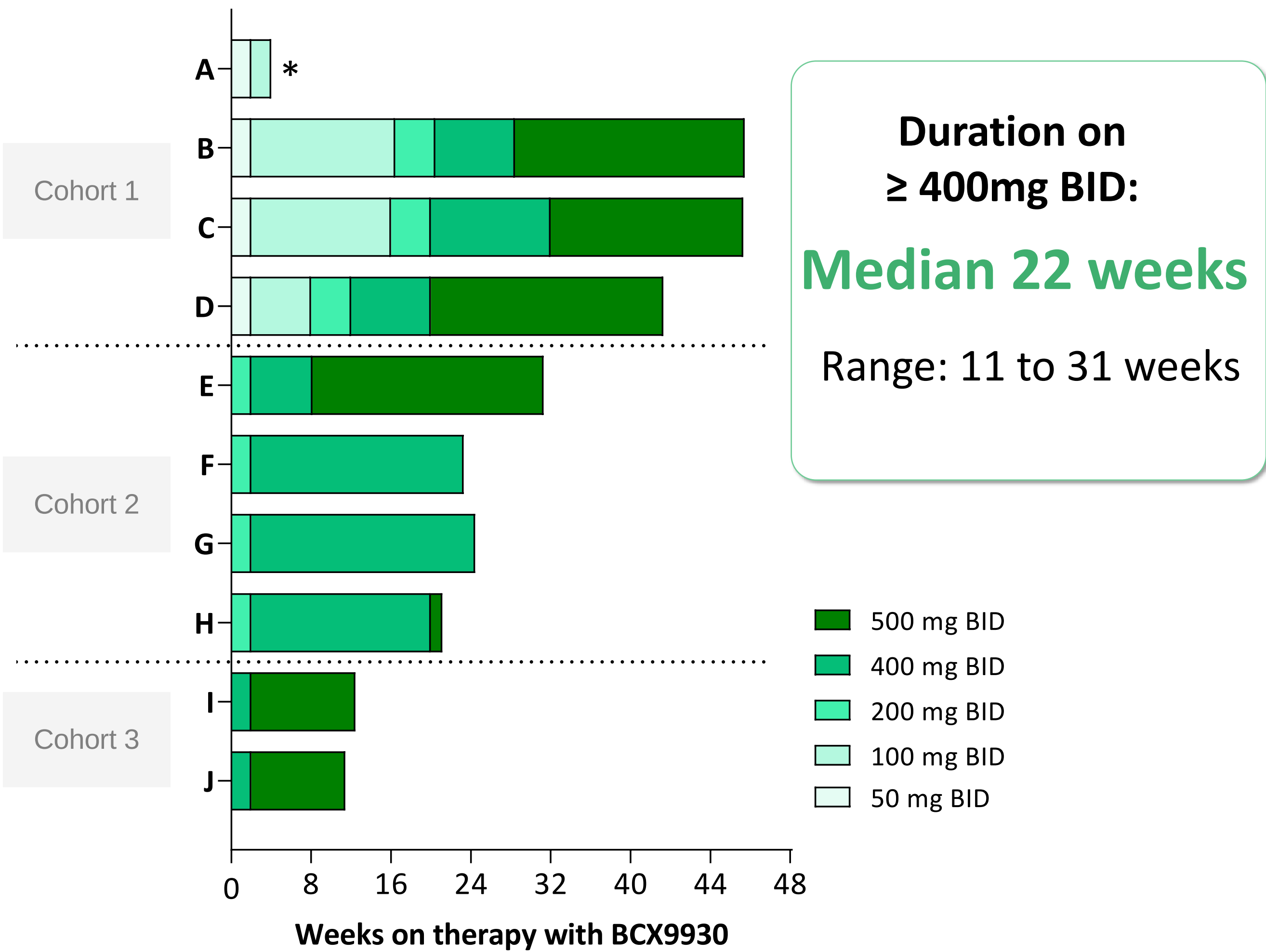
Patients Enrolled			Dose Escalation per Cohort		
Cohort	Naive	Inadequate Responders	Days 1 - 14	Days 15 - 28	Extension > 28 days
1	4	--	50 mg BID	100 mg BID	Patients benefitting on treatment may continue on BCX9930 and dose-escalate at physicians' discretion
2	4	2	200 mg BID	400 mg BID	
3	2	4	400 mg BID	500 mg BID	
Clinical Site Locations	South Africa	United Kingdom Austria			

- 10 Naïve patients enrolled w/ BCX9930 monotherapy treatment
- 6 Inadequate Response patients enrolled w/ BCX9930 + C5-inhibitor treatment

Naïve Patients Enrolled had Severe Disease Prior to Treatment

9 naïve patients remain in study with average overall treatment duration of 6 months

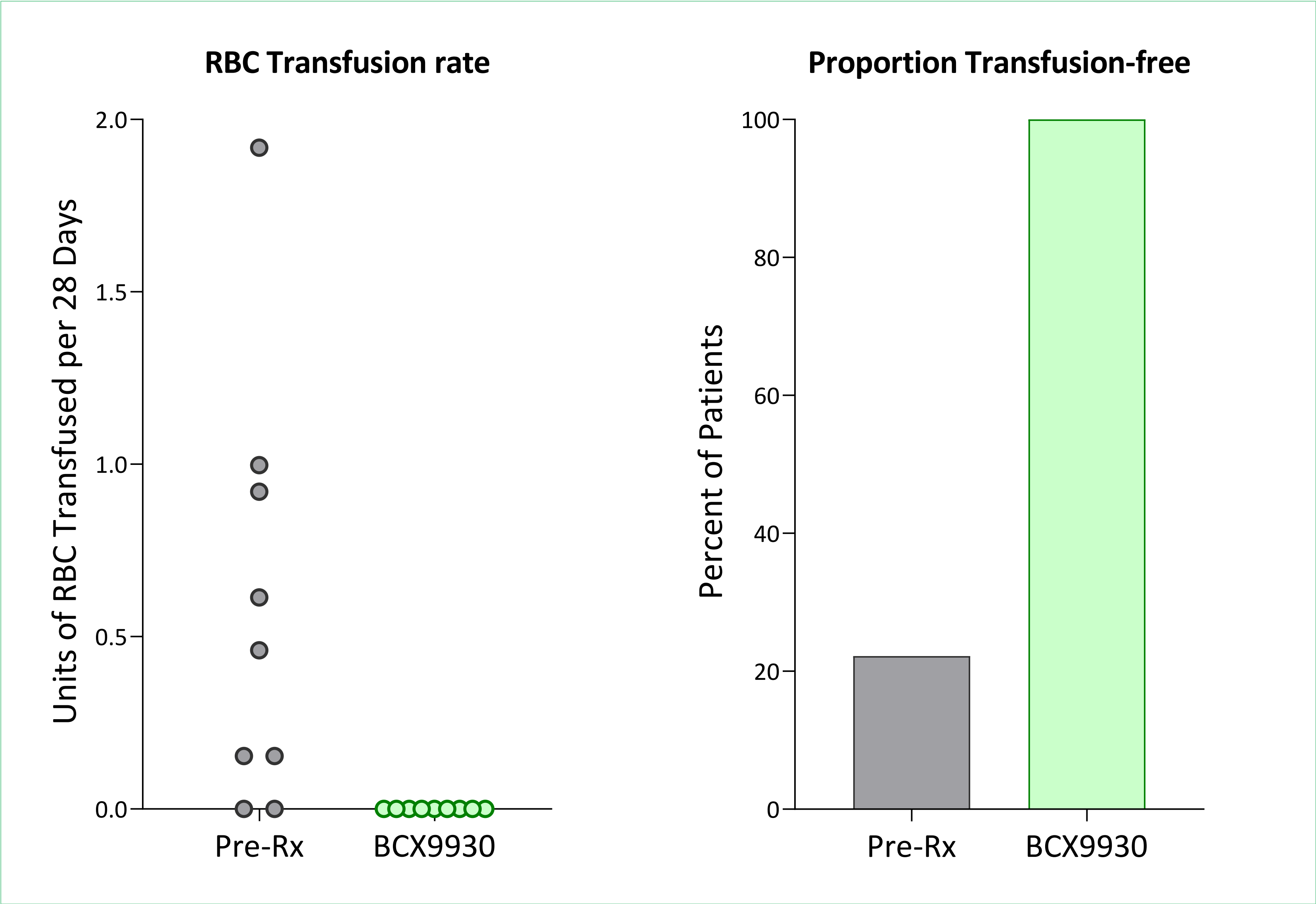
Parameter @ Baseline	N = 9 *
Age	29.2 years
Duration since Diagnosis	3.2 years
Gender	8 (89%) Male
Race:	
African	5 (56%)
Caucasian	3 (33%)
Other	1 (11%)
Bone Marrow Failure	4 (44%)
RBC transfusion-dependent (prior 12 months)	7 (78%)
RBC transfusions in prior 12 months, mean	7.6 units
Hb, mean g/dL (range)	8.3 (6 – 11)
Reticulocyte count, mean 10 ³ /μL (range)	176 (104 – 305)
LDH, mean x ULN (range)	7.5 (3.7 – 13.1)
AST, mean x ULN (range)	2.1 (0.8 – 3.8)



C5-inhibitor Naïve Patients had Significant Increase in Hemoglobin as a Result of Control of Hemolysis, with Reductions in Reticulocytes, LDH, Bilirubin, and AST

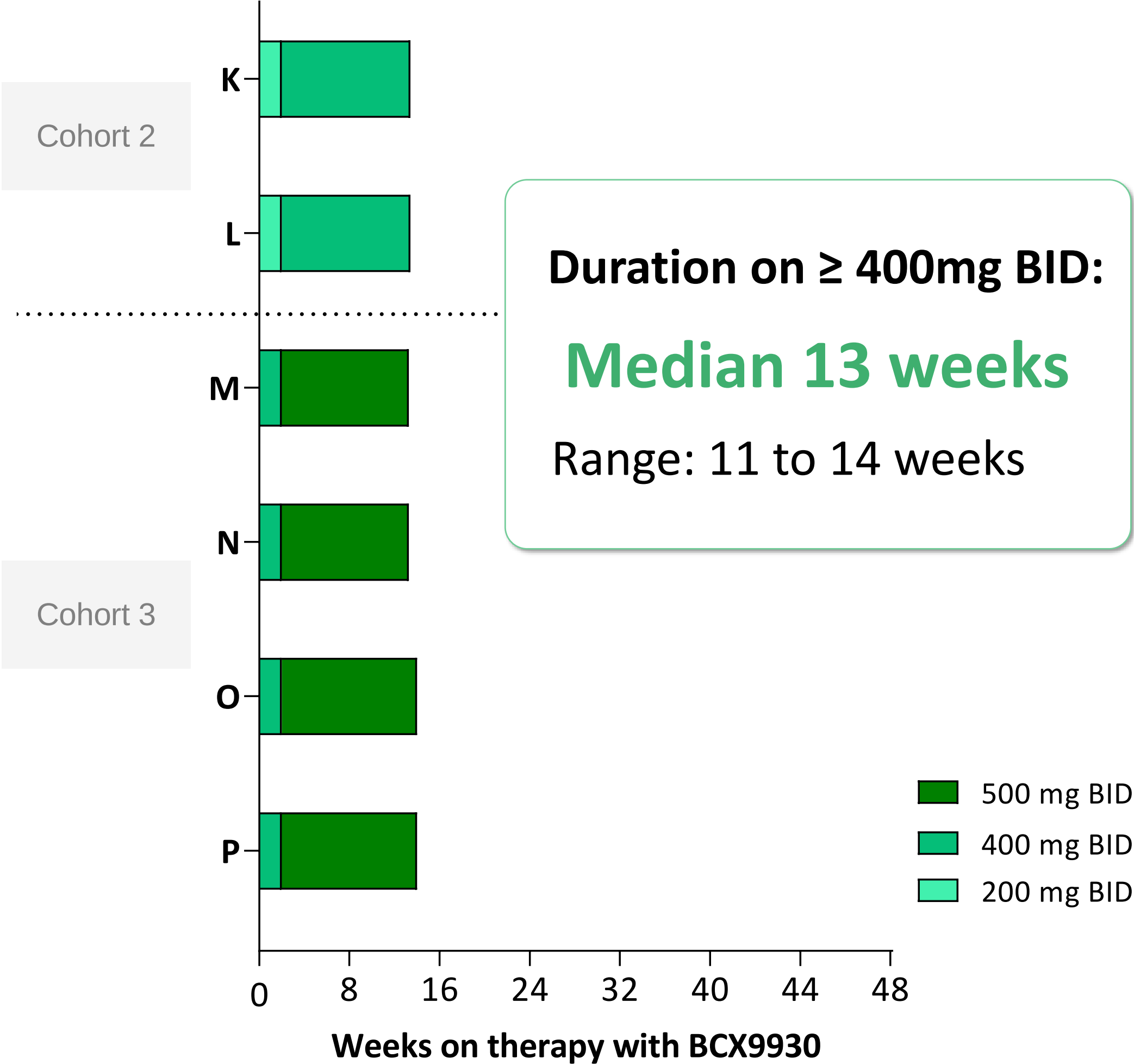
Response Parameter	Baseline N = 9	Last visit* N = 9	Change from Baseline
Hemoglobin g/dL, mean (SEM)	8.3 (0.6)	11.8 (0.6)	+3.5 (0.6)
Hemoglobin > 12 g/dL, n (%)	0	5 (56%)	+5 (56%)
Hemoglobin > 10 g/dL, n (%)	2 (22%)	7 (78%)	+5 (56%)
RBC clone size %, mean (SEM)	47% (5)	86% (4.2)	+40% (4.7)
Reticulocytes 10 ³ /μL, mean (SEM)	176 (21)	115 (8.5)	-60 (21)
Patients with reticulocytes ≤ 150,000/μL, n (%)	4 (44%)	8 (89%)	+4 (44%)
LDH U/L, mean (SEM)	1721 (264)	544 (104)	-1177 (281)
LDH xULN, mean (SEM)	7.5 (1.2)	2.0 (0.3)	-5.5 (1.1)
Total bilirubin mg/dL, mean (SEM)	1.24 (0.19)	0.59 (0.05)	-0.66 (0.19)
AST U/L, mean (SEM)	86 (14)	22 (4.8)	-64 (14)

Transfusion Burden in C5-inhibitor Naïve Subjects was Reduced to Zero at Doses of 400 mg or 500 mg BID – 100% of Patients were Free of Transfusions



Patients with Inadequate Response Represented a Severely Ill Patient Group with Persistent Anemia and Transfusion Dependence Despite Optimized C5 Inhibitor Treatment

Parameter @ Baseline	N = 6
Age /Years since Diagnosis	40.3 yrs / 12.5 yrs
Gender	4 (67%) Female
Race: African	2 (33%)
Caucasian	3 (50%)
Asian	1 (17%)
Bone Marrow Failure	3 (50%)
Thrombosis	3 (50%)
RBC Transfusion-dependent (prior 12 months)	5 (83%)
RBC Transfusions in prior 12 months, mean	13.7 units
Hb, mean g/dL* (range)	8.9 (7.5 – 10.2)
Reticulocyte count, mean 10 ³ /μL (range)	184 (125 – 235)
RBC C3 Opsonization, mean % (range)	15% (1% – 31%)
Total Bilirubin, mean mg/dL (range)	2.6 (0.8 – 5.3)
LDH x ULN (range)	0.9 (0.6 – 1.1)



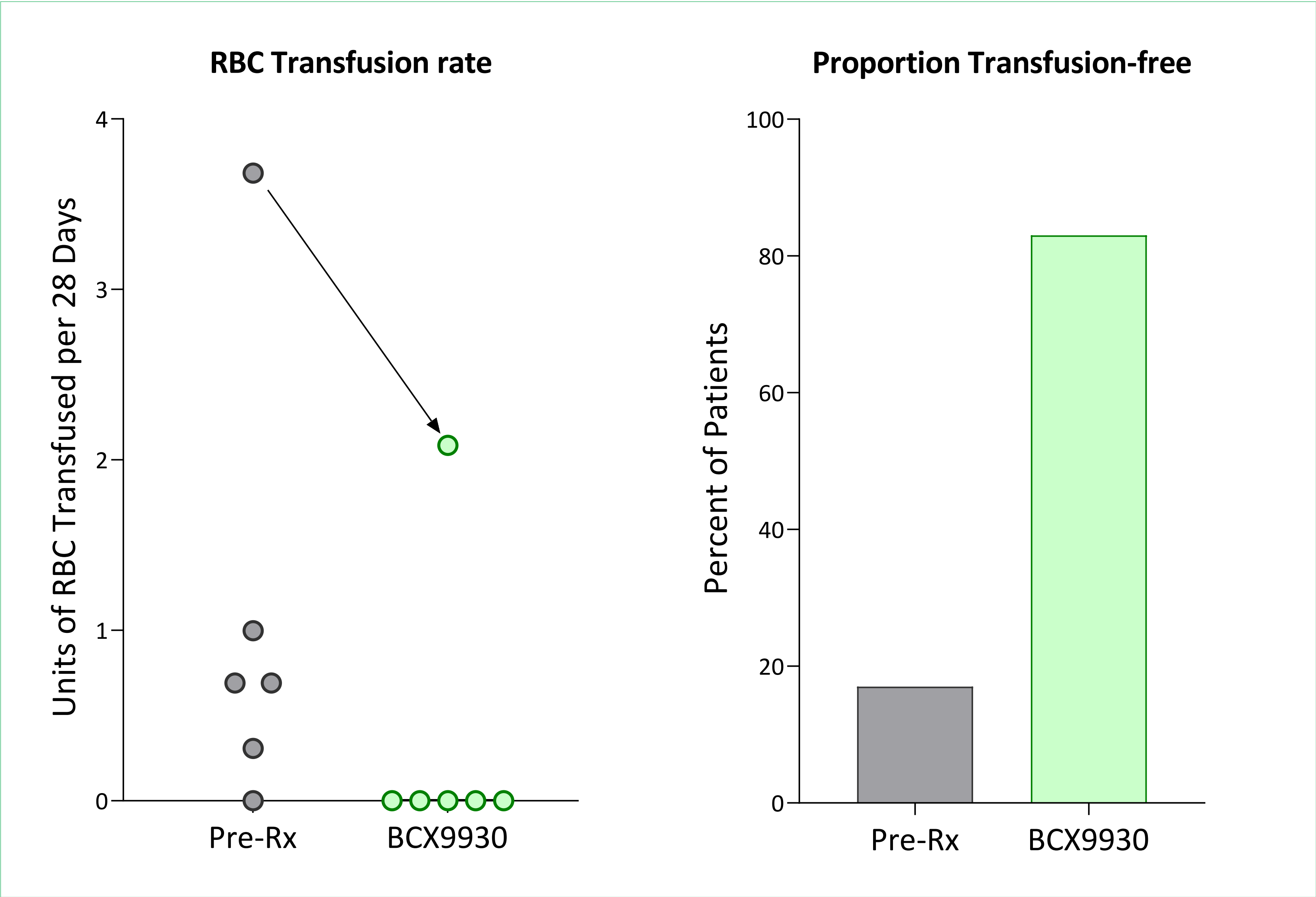
* Note, Hb data for one C5-INH-IR patient receiving transfusions was censored

Preliminary data, as presented at R&D Day March 2021

C5-inhibitor Inadequate Response Patients Experienced Significant Increase in Hemoglobin as a Result of Control of Hemolysis, with Reductions in C3 Opsonization, Bilirubin, and Reticulocytes

Response Parameter	Baseline N = 6	Last visit** N = 6	Change from Baseline
Hemoglobin g/dL, mean (SEM)*	8.9 (0.5)	12.2 (1.0)	+3.2 (0.6)
Hemoglobin > 12 g/dL, n (%)	0	3 (50%)	+3 (60%)
Hemoglobin > 10 g/dL, n (%)	2 (40%)	4 (80%)	+2 (40%)
RBC clone size %, mean (SEM)	48 (6)	77 (8)	+30 (7)
Reticulocytes 10 ³ /μL, mean (SEM)	184 (16)	139 (23)	-45 (18)
Patients with Reticulocytes ≤ 150,000/μL, n (%)	1 (17%)	4 (67%)	+3 (50%)
Total Bilirubin mg/dL, mean (SEM)	2.6 (0.7)	1.3 (0.3)	-1.3 (0.4)
RBC C3 Opsonization %, mean (SEM)	15 (4.9)	5 (4.4)	-10 (14)

Transfusion Burden in C5-inhibitor Inadequate Response Subjects was Reduced to Zero in 5 of 6 Subjects – 83% of Patients were Free of Transfusions



BCX9930 has been Safe and Well Tolerated in PNH Patients



Overall Safety

- No safety signals in routine monitoring of adverse events, vital signs, ECGs, or laboratory evaluations of hematology, clinical chemistry, coagulation, or urinalysis
- Treatment-emergent AEs of hemolysis occurred in 2/16, without changes to dosing
- No discontinuations or interruptions of dosing due to BCX9930-related treatment-emergent AEs

Related Adverse Events

- The most common BCX9930-related TEAE was mild-moderate headache in 8/10 C5-inhibitor naïve subjects and 2/6 C5-inhibitor inadequate response subjects, lasting 1-3 days, onset generally soon after commencing dosing – typical complement inhibition effect in PNH patients
- Mild or moderate drug rash observed in 6/16 subjects, onset generally in second week of dosing, lasting median of 10 days; all resolved without treatment interruption

BCX9930 Dose-ranging Proof-of-Concept Study in PNH: Conclusions

Overall outcomes seen in PNH patients on study at doses of 400 mg BID or 500 mg BID

- Hemoglobin increased, with relief of anemia
- Transfusions were avoided
- Intravascular and extravascular hemolysis were brought under control
- Consistent hematologic outcomes in both C5-inhibitor naïve and C5-inhibitor inadequate response patients

PK and PD profile

- Drug exposure and PD effects on complement activity in PNH patients were similar to that seen in healthy subjects

Dose-response and selection of dose for pivotal studies

- Optimized doses are in the range of 400-500 mg BID. Final selection of dose will be based on PK-PD modeling

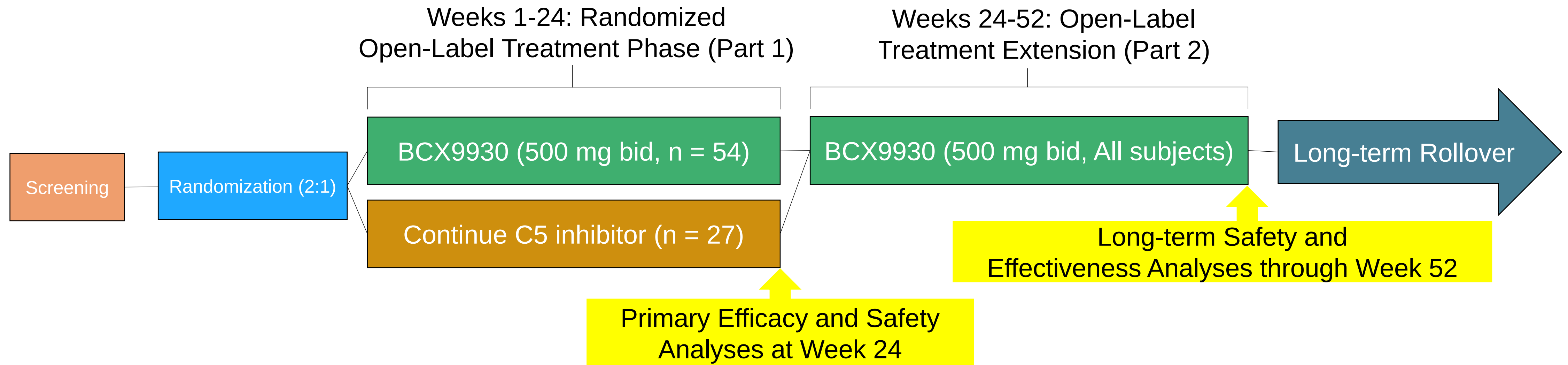
Safety and tolerability

- BCX9930 dosing BID has been generally safe and well tolerated for up to over 50 weeks
- No safety signals have been seen

Conclusions and next steps

- These results support initiation of pivotal trials in PNH
- Pivotal trials in PNH are initiating in 2H 2021

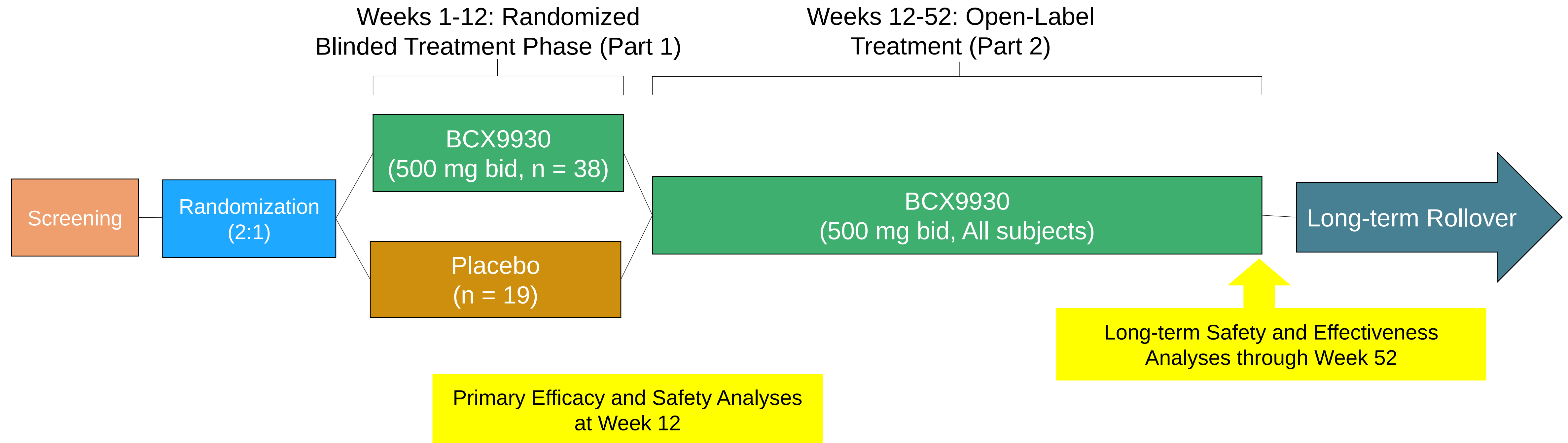
Pivotal Trial of BCX9930 as Oral Monotherapy in PNH Patients with Inadequate Response to C5-Inhibitor Therapy



- Key eligibility criteria include screening Hb $\leq$ 10.5 g/dL and reticulocyte count $\geq$ 100,000/ μ L on a stable regimen of eculizumab or ravulizumab
- Randomization is stratified by: C5 inhibitor (ravulizumab vs. eculizumab); and RBC transfusion (yes vs. no) within the 6 months prior to baseline
- REDEEM-1 is powered at 90% to detect a difference in mean change from baseline of hemoglobin of $\geq$ 2 g/dL

Goal for BCX9930 in PNH: Broad indication as oral monotherapy for all PNH patients

Pivotal Trial of BCX9930 as Oral Monotherapy in PNH Patients not Currently Receiving C5 Inhibitor Therapy



- Key eligibility criteria include screening Hb ≤ 10.5 g/dL, reticulocyte count $\geq 100,000/\mu\text{L}$, and LDH $\geq 2 \times$ upper limit of normal
- Randomization is stratified by RBC transfusion (yes vs. no) within the 6 months prior to baseline
- REDEEM-2 is powered at 90% to detect a difference in mean change from baseline of hemoglobin of ≥ 2.15 g/dL

Goal for BCX9930 in PNH: Broad indication as oral monotherapy for all PNH patients

Key Trial Endpoints and Statistical Analysis Approach



Primary Endpoint	Change from Baseline (CFB) in hemoglobin (Hb) [mean of Weeks 12, 16, 20, 24]	CFB in Hb [Week 12]
Key Secondary Endpoints	Proportion of subjects who are transfusion free [Day 14 to Week 24]	Proportion of subjects who are transfusion free [Day 14 to Week 12]
	Number of units of packed red blood cells (RBC) transfused [Day 14 to Week 24]	Number of packed RBC units transfused [Day 14 to Week 12]
	CFB in Functional Assessment of Chronic Illness Therapy (FACIT)-Fatigue scale score [mean of Weeks 12, 16, 20, 24]	Percent CFB in lactate dehydrogenase (LDH) [Week 12]
		CFB in FACIT-Fatigue scale score [Week 12]
ITT Analysis* of Primary Endpoint	Analysis of Covariance (ANCOVA)	ANCOVA

* In each trial, multiplicity is controlled by hierarchical testing of primary and then key secondary endpoints in the order listed in the table

PNH Proof-of-Concept Study Long-term Follow-up



- ◆ Data continues to support safety and tolerability of BCX9930, with no safety signals observed

- ◆ Patients naïve to C5-inhibitors , n=9
 - All 9 patients naïve to C5-inhibitors continue to benefit from BCX9930
 - Hb responses have been maintained
 - No RBC transfusions have been needed during dosing at 400 mg or 500 mg BID BCX9930
 - Improvement in biomarkers of hemolysis and PNH RBC clone size have been maintained
 - No discontinuations from the trial

- ◆ Patients with inadequate response to C5 inhibitors, n=6
 - 5 with high levels of C3 opsonization on PNH RBCs at baseline continue to benefit from BCX9930
 - So far, four patients have transitioned to BCX9930 monotherapy, including one patient who had previously received RBC transfusions during hemolysis following COVID-19 vaccination while being treated with both ravulizumab and BCX9930
 - 1 patient with very large transfusion burden pre-trial associated with pre-existing hypersplenism and other medical conditions complicating PNH has discontinued from the trial
 - This patient continued to need RBC transfusions, although at a reduced frequency
 - This patient had very low PNH RBC C3 opsonization at baseline, indicating that complement-mediated hemolysis was likely not a main factor in this individual's anemia

Proof-of-Concept Basket Trial of BCX9930 in Nephritis

- ◆ Trial will include 3 separate cohorts of patients
 - C3 Glomerulopathy
 - IgA Nephropathy
 - Primary Membranous Nephropathy
- ◆ Each cohort will enroll up to approximately 14 patients for a total of approximately 42 patients
- ◆ Diagnosis will be confirmed by percutaneous kidney biopsy
- ◆ Dose of BCX9930 will be 500 mg BID
- ◆ Treatment effects will be assessed by:
 - Repeat percutaneous kidney biopsy
 - Comprehensive evaluation of disease-related biomarkers
 - Comprehensive evaluation of complement biomarkers
- ◆ Safety will be assessed with clinical and laboratory monitoring and AEs
- ◆ Trial on track to initiate in 2H 2021

Fibrodysplasia Ossificans Progressiva (FOP)

Devastating Disease; No Treatments Available



Rare disease that **affects approximately 1 in 2 million people** worldwide



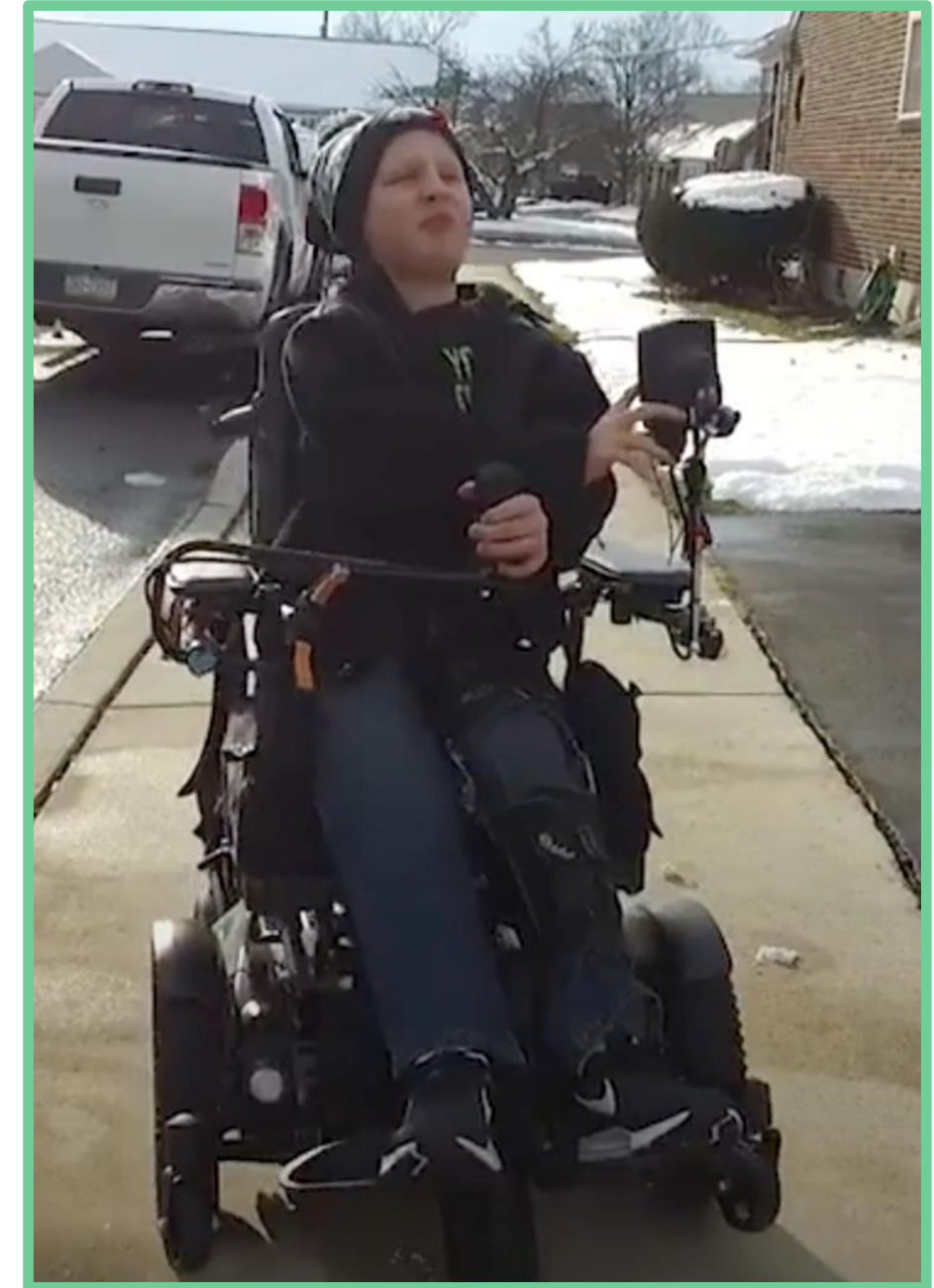
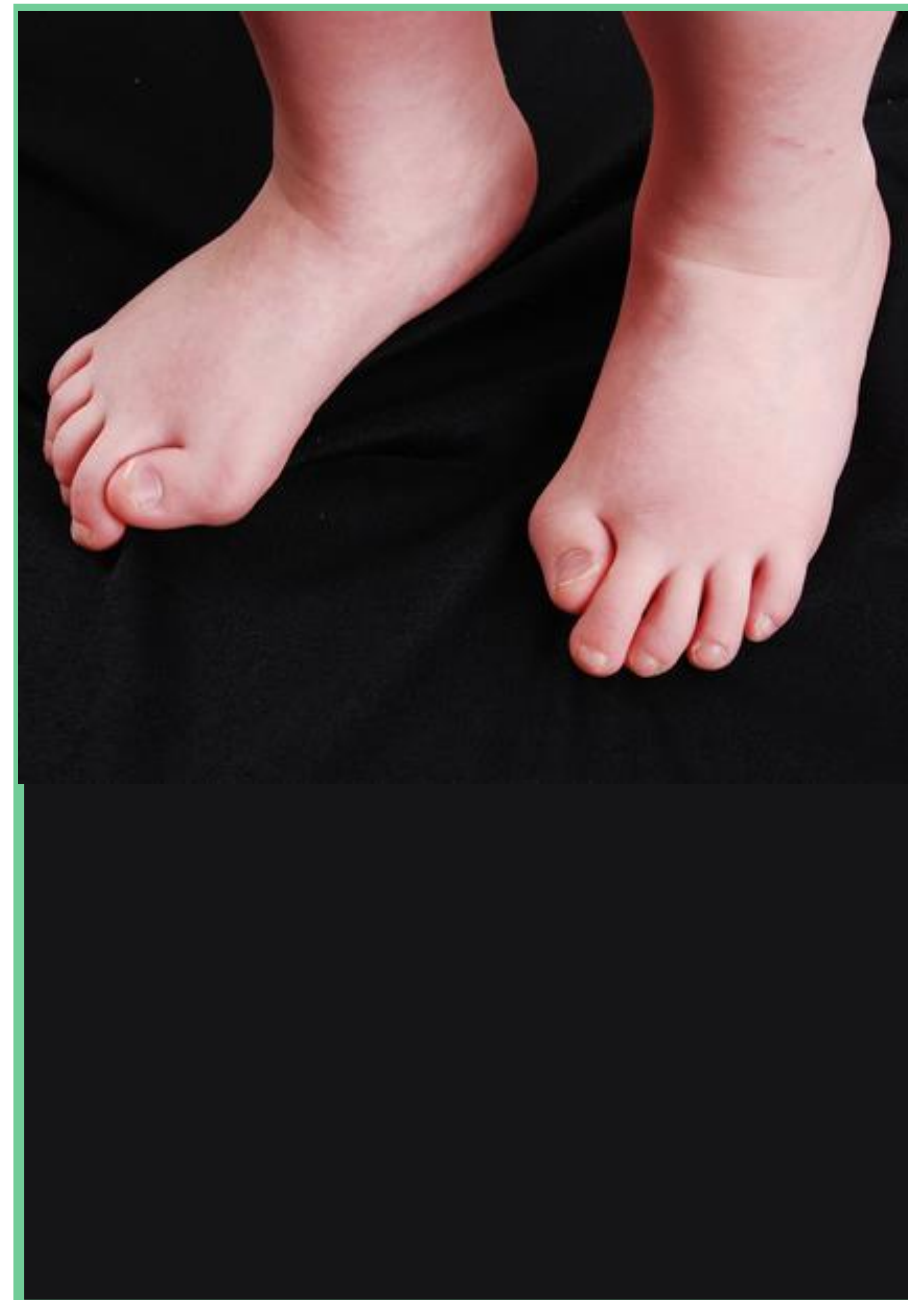
Irregular formation of bone or ossification in muscles, tendons or soft tissue



Currently no approved treatments for FOP



Results in loss of function, deformities and **a severely disabling condition**



ifopa.org

BCX9250 Phase 1 Healthy Subject Trial Design

Randomized, double-blind,
placebo-controlled, dose-ranging trial in
healthy volunteers

Objective: to evaluate safety, tolerability,
and pharmacokinetics of single
ascending doses (SAD) and multiple
ascending doses (MAD) of orally
administered BCX9250

Part 1

Single ascending dose

- 8 subjects per cohort
 - 6 active, 2 placebo

Dose levels evaluated:

- 5mg
- 10mg
- 15mg (fed and fasted)
- 25mg

Part 2

Multiple ascending dose, once daily (QD) for 7 days

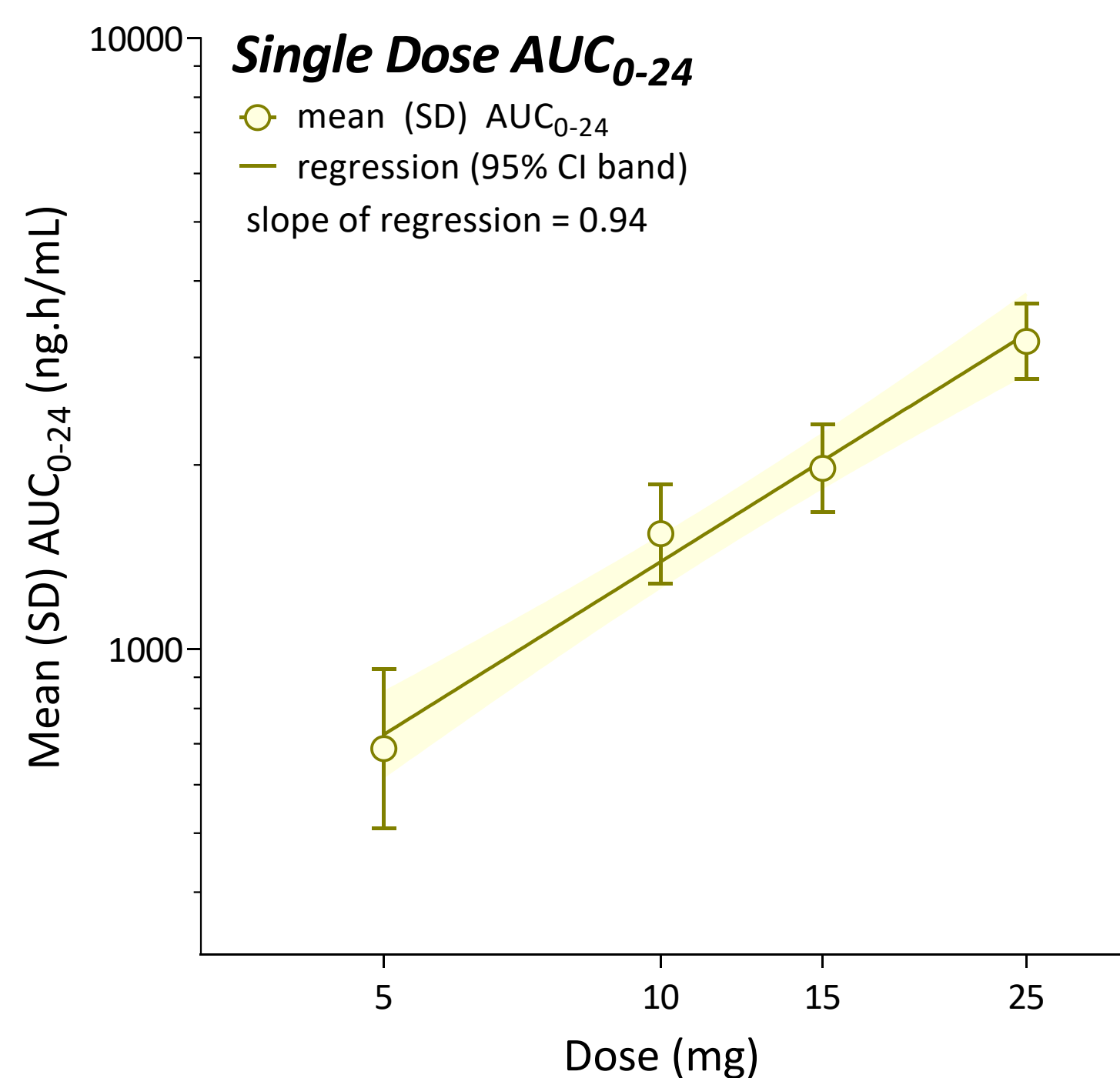
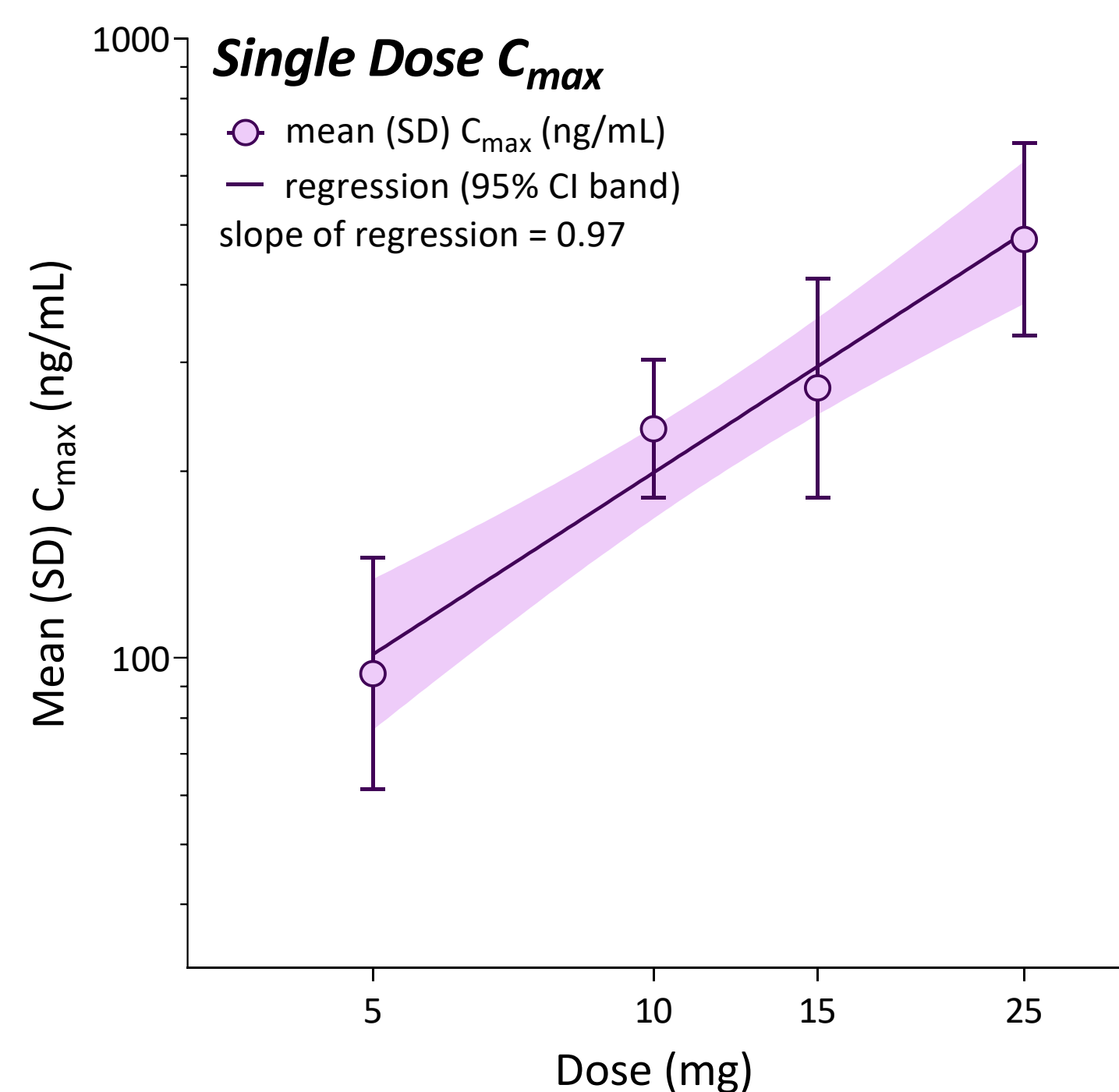
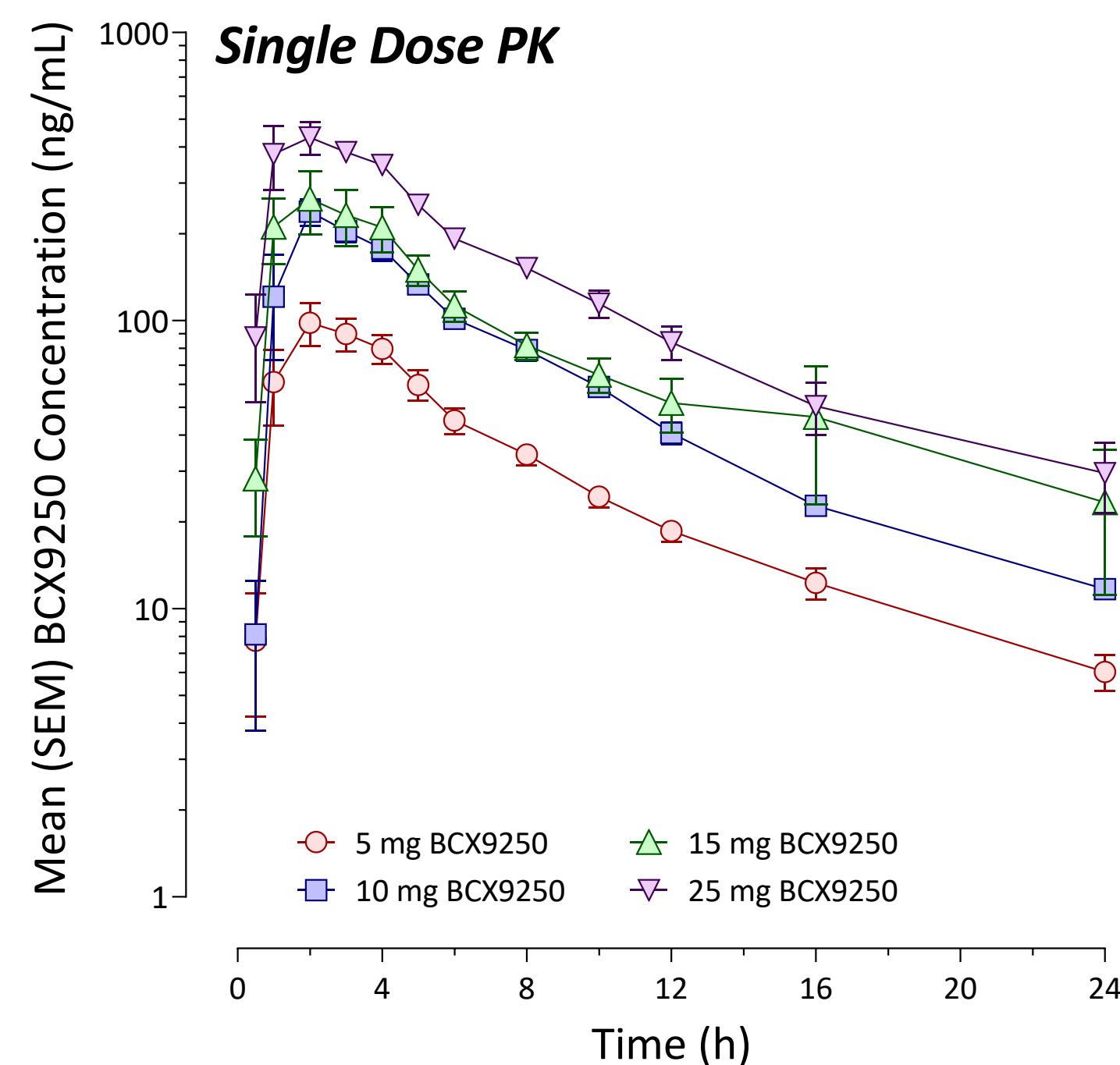
- 12 subjects per cohort
 - 10 active, 2 placebo

Dose levels evaluated:

- 5mg
- 10mg
- 15mg
- 20mg

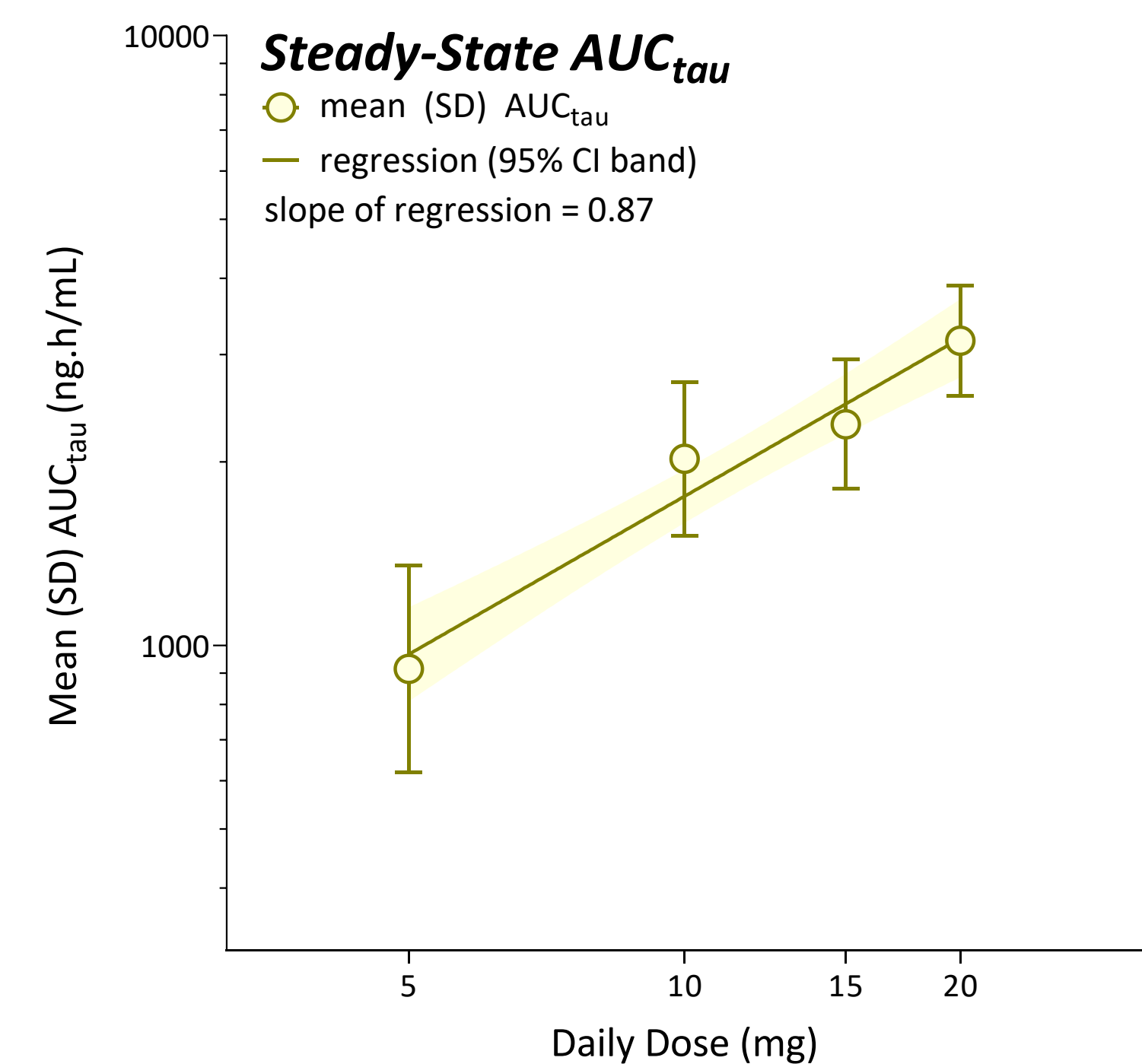
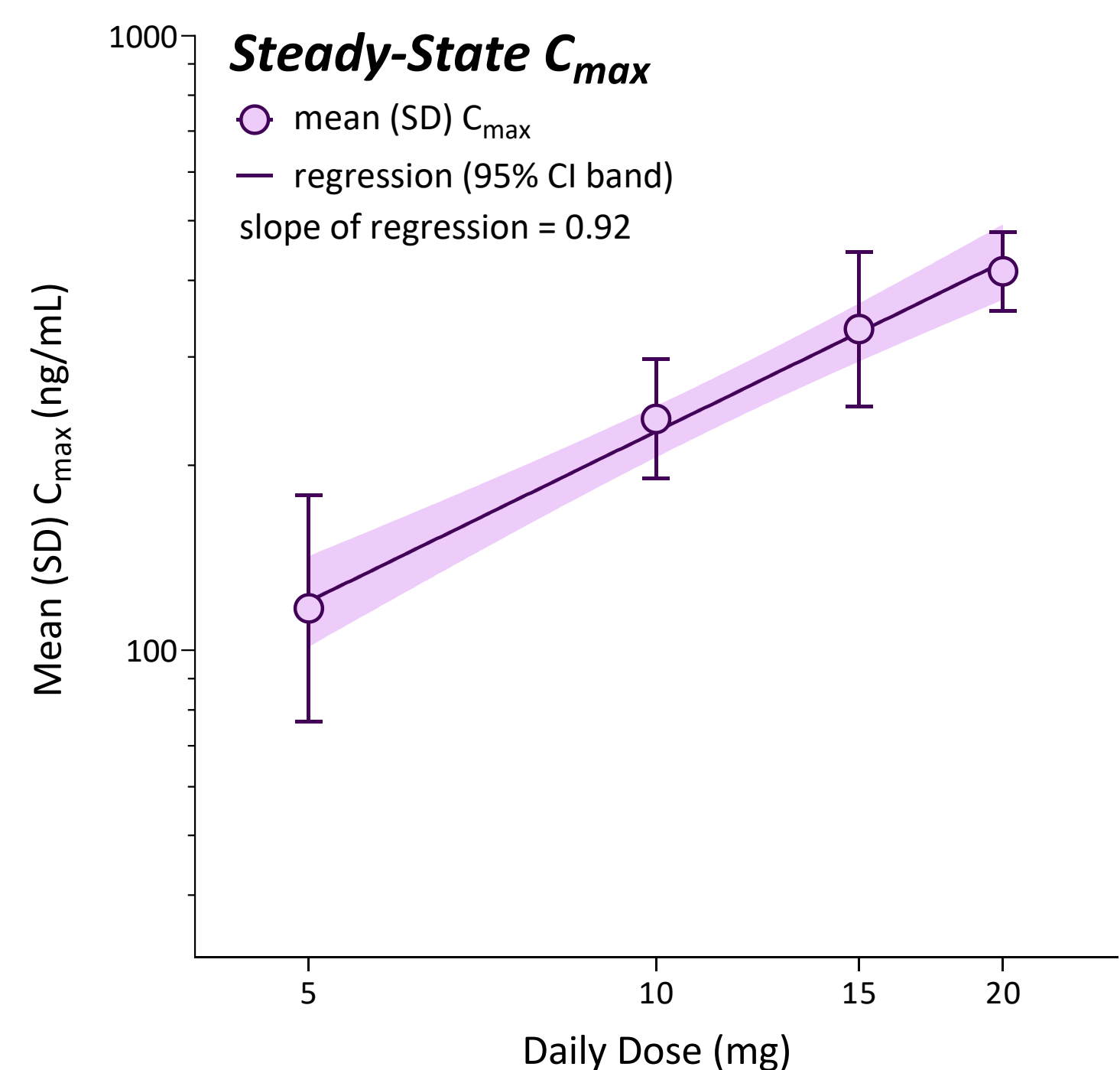
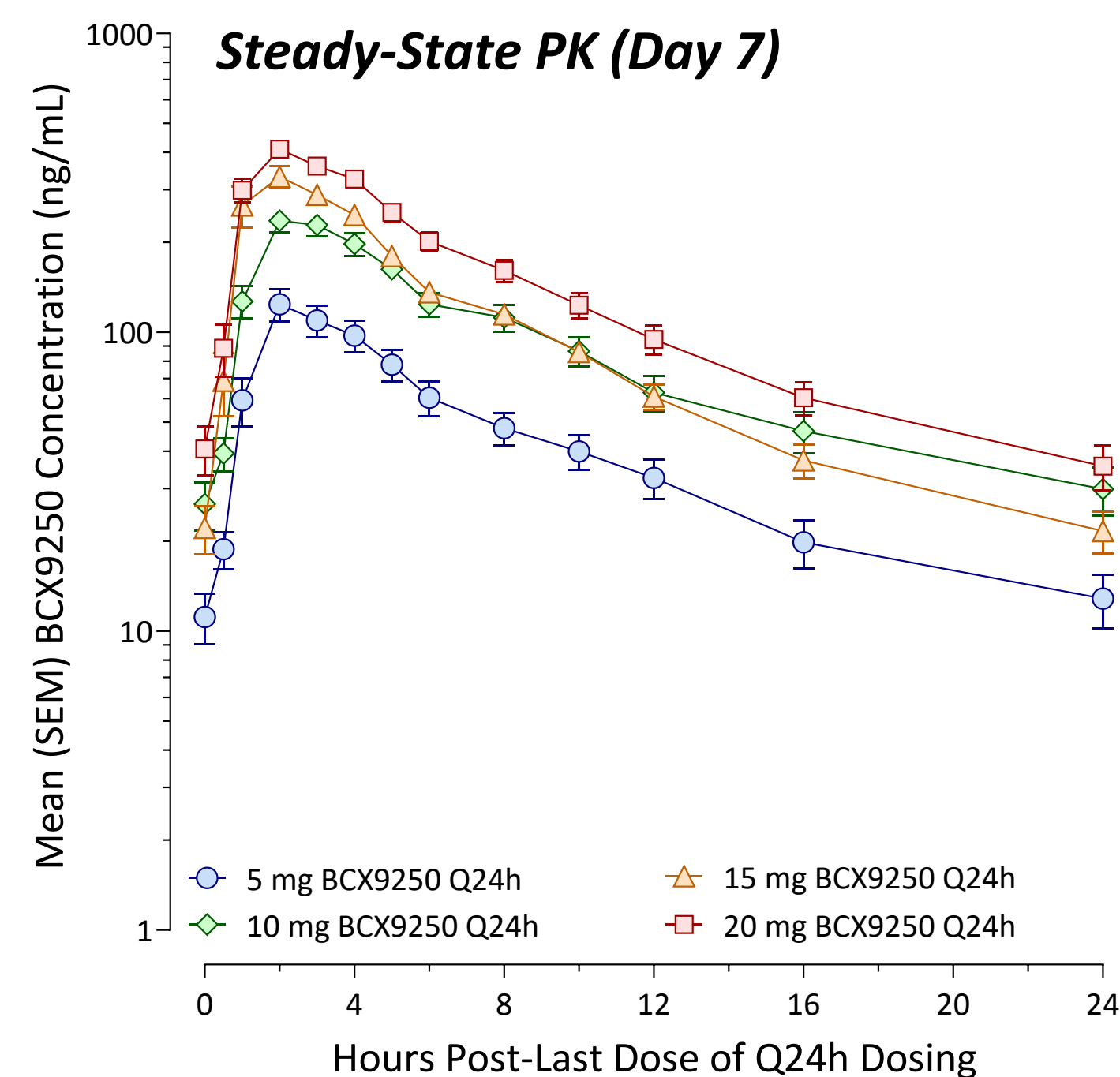
BCX9250 SAD PK Profile and Dose-exposure Analysis

BCX9250 exposure was approximately linear and dose proportional over the doses evaluated



BCX9250 MAD PK Profile and Dose-exposure Analysis

BCX9250 steady-state exposure was approximately linear and dose proportional over the doses evaluated, with minimal accumulation relative to the first dose



BCX9250 Phase 1 Trial: Summary of Adverse Events

Category of Treatment-Emergent Adverse Event (TEAE)	Single Ascending Doses (SAD)						Multiple Ascending Doses (MAD)				
All data is reported as subject incidence, n (%)	Placebo	BCX9250					Placebo	BCX9250			
	(n=8)	5 mg (n=6)	10 mg (n=6)	15 mg Fasted (n=6) ^a	15 mg Fed (n=6)	25 mg (n=6)	(n=7) ^b	5 mg (n=10)	10 mg (n=10)	15 mg (n=10)	20 mg (n=10)
At least one TEAE	4 (50.0)	0	0	4 (66.7)	3 (50.0)	0	5 (71.4)	6 (60.0)	3 (30.0)	6 (60.0)	6 (60.0)
Drug-related TEAEs	3 (37.5)	0	0	2 (33.3)	0	0	4 (57.1)	0	3 (30.0)	1 (10.0)	0
Grade 3 or 4 TEAEs	0	0	0	0	0	0	0	0	0	0	0
Serious TEAE	0	0	0	0	0	0	0	0	0	0	0
Drug-related serious TEAE	0	0	0	0	0	0	0	0	0	0	0
TEAE leading to study discontinuation	0	0	0	0	0	0	0	0	0	0	0
Drug-related TEAE leading to study discontinuation	0	0	0	0	0	0	0	0	0	0	0
<i>TEAEs reported by 2 or more subjects ^c</i>											
Medical device site reaction ^d	0	0	0	2 (33.3)	1 (16.7)	0	0	2 (20.0)	0	1 (10.0)	3 (30.0)
Headache	2 (25.0)	0	0	1 (16.7)	0	0	1 (14.3)	0	2 (20.0)	2 (20.0)	0
Vessel puncture site pain	1 (12.5)	0	0	0	0	0	1 (14.3)	1 (10.0)	0	0	2 (20.0)
Abdominal discomfort	2 (25.0)	0	0	0	0	0	0	0	1 (10.0)	0	0
Abdominal pain	1 (12.5)	0	0	0	0	0	0	0	1 (10.0)	0	1 (10.0)
Diarrhea	1 (12.5)	0	0	0	0	0	0	0	2 (20.0)	0	0
Constipation	0	0	0	0	0	0	1 (14.3)	0	0	1 (10.0)	0
Flatulence	0	0	0	0	0	0	1 (14.3)	0	1 (10.0)	0	0
Nausea	1 (12.5)	0	0	1 (16.7)	0	0	0	0	0	0	0
Cough	1 (12.5)	0	0	0	0	0	0	0	1 (10.0)	0	0

^a One subject discontinued from study after completing first dose (fasted) and was replaced for the second dose (fed).

^b Only one placebo subject was enrolled in MAD 20 mg cohort. The last subject was not enrolled due to impact of COVID-19 on screening.

^c All TEAEs were mild except for one event of moderate myalgia in the MAD 10 mg dose group, not related to study drug.

^d Reported event: electrode site (skin) irritation due to ECG lead placement

Cash position (in millions)



Cash, cash equivalents, restricted cash & investments at December 31, 2020	\$303
Cash, cash equivalents, restricted cash & investments at June 30, 2021	\$223
Senior credit facility ^A	\$132

A – From Athyrium Capital Management, term loan of \$125M interest-only for 5-year term, \$7.5M in interest payment-in-kind (PIK) has been added to principal since issuance

In the launch period for ORLADEYO, the company is not providing specific revenue or operating expense guidance. The company expects FY 2021 net ORLADEYO revenue of no less than \$100M and global peak ORLADEYO sales in excess of \$500 million.

Based on our expectations for revenue, operating expenses, and our option to access an additional \$75 million from our existing credit facility, we believe our current cash runway takes us into 2023.

September 2021 Corporate Presentation

