



Corporate Presentation

May 2024

Real Challenges. Real Solutions.

Precision therapies for genetically defined diseases

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Any data pertaining to Cogent product candidates is interim data and may include investigator-reported interim data for which Cogent has not yet independently reviewed the source data. The interim data may not be representative of the final results that may be obtained in the corresponding trials and results from earlier trials may not be representative of results obtained in later trial or pivotal trials.

Building a Fully Integrated Precision Therapy Company with an Expanding Pipeline of Genetically Validated Targets

- **Bezuclastinib, a potent cKIT exon 17/18 inhibitor**
 - Exciting clinical data in systemic mastocytosis (SM), driven by potency for KIT D816V, selectivity against other TKI targets and favorable emerging safety profile
 - Promising clinical activity and safety data in combination with sunitinib in imatinib-resistant gastrointestinal stromal tumor (GIST) patients
- **Research pipeline of novel, small-molecule targeted therapies for cancer and rare diseases including an FGFR1-sparing, pan-mutant FGFR2, CNS-penetrant ErbB2 and a H1047R mutant selective PI3K α inhibitor**
- **Experienced leadership and world class research team**
- **Cash runway expected to fund operations into 2027**



Leadership with Deep Scientific Expertise in Precision Medicine



Andrew Robbins
President &
Chief Executive Officer



Jessica Sachs, MD
Chief Medical Officer



John Robinson, PhD
Chief Scientific Officer



Brad Barnett
Chief Technology Officer



Evan Kearns, JD
Chief Legal Officer



John Green
Chief Financial Officer



Erin Schellhammer
Chief People Officer

Multiple Clinical and Preclinical Programs with Upcoming Catalysts

Program	Indication	Early Stage Development	Late Stage Development	Regulatory Submission	Approval
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Clinical Programs

Bezuclastinib (KIT inhibitor)	Advanced Systemic Mastocytosis				
	Nonadvanced Systemic Mastocytosis				
	Gastrointestinal Stromal Tumors				

- **APEX Part 2 (Registration-Directed)**
 - Top-line results expected mid-2025
- **SUMMIT Part 2 (Registration-Directed)**
 - Top-line results expected YE 2025
- **PEAK Part 2 (Global Phase 3 trial)**
 - Top-line results expected YE 2025

Research Programs

Indication	Hit ID	Lead Generation	Lead Optimization	Candidate Selected	IND Submission
ErbB2 mut					
FGFR2					
PI3Kα					
Target 4					
Target 5					
Target 6					



\$435.7M as of March 31, 2024; expected to fund operations into 2027

Bezuclastinib: A Highly Selective and Potent KIT Mutant Inhibitor with Potential to Demonstrate Best-in-Class Clinical Profile

Bezuclastinib

- Specifically targets KIT mutations including exon 17 D816V
- Selective versus other targets including PDGFR α , PDGFR β , VEGFR2, FLT3, CSF1R and KDR
- Molecularly designed to avoid CNS penetration
- Worldwide rights to compound exclusively licensed from Plexxikon¹
- Potential patent protection through at least 2043²

Encouraging Clinical Activity

Promising initial data across all three ongoing studies: APEX in AdvSM patients, SUMMIT in NonAdvSM patients, and PEAK in GIST patients

Attractive Emerging Safety Profile

Well-tolerated with encouraging safety profile across 300+ patients in single agent & combination dosing including data from our ongoing APEX, SUMMIT and PEAK studies

Potential Best-in-Class KIT mutant inhibitor

KIT D816V inhibition supports studies in systemic mastocytosis and GIST; safety results support potential for broad use

KIT MUTANT COMPETITIVE LANDSCAPE

Minimal Late-Stage Competitive Activity with Clear Path to Best-in-Class Position

Gastrointestinal Stromal Tumors (GIST)

	sunitinib	ripretinib	bezuclastinib + sunitinib
Exon 13/14 potent:	✓	✗	✓
Exon 17/18 potent:	✗	✓	✓
2nd-line status:	Approved	Negative Phase 3	Phase 3 ongoing
Active trials	Late-stage:	None	Exon 11+ 17/18 only
	Early-stage:	IDRX-42 both in first-in-human clinical studies	

Systemic Mastocytosis

	avapritinib	elenestinib	bezuclastinib
D816V potent:	✓	✓	✓
CNS sparing:	✗	✓	✓
PDGFR selective:	✗	✗	✓
FLT3/CSF1R selective:	✗	✗	✓
ASM:	Approved	Phase 1/2	Phase 2
NonAdvSM:	Approved	Phase 2/3	Phase 2
Early-Stage Trials:	None		

Bezuclastinib Offers Best-in-Class KIT Inhibitor Opportunity



Registration-directed study in NonAdvSM
 bezuclastinib vs. placebo
 n=159, 24-week MS2D2 primary endpoint¹



Phase 3 study in 2nd-line GIST
 bezuclastinib +/- sunitinib
 n=388, mPFS primary endpoint



Registration-directed study in AdvSM
 bezuclastinib monotherapy
 n=65, ORR primary endpoint

← 2024 → ← 2025 →



\$1.5 billion US annual market opportunity; SUMMIT Part 1b results provide path to market leadership

\$700 million US annual market opportunity, no competition for broad 2nd-line GIST population

\$300 million US annual market opportunity; avapritinib safety/tolerability concerns provides path to market leadership

Aggregate US annual sales opportunity \$2.5 billion with limited competition
 As of March 31, 2024, \$435.7M cash on hand expected to fund all top-line readouts and into 2027



LPFV: Projected last patient, first visit signifies end of enrollment period
 TLR: Projected top-line results from primary endpoint of trial
¹PROM to measure endpoints subject to final FDA validation

Unmet Need Remains for Systemic Mastocytosis Patients

Disease Overview: Systemic mastocytosis (SM) is primarily driven by KIT D816V mutation and leads to uncontrolled proliferation of mast cells (MC)¹

- ~90% of patients present with indolent, or non-advanced systemic mastocytosis (NonAdvSM)
- ~10% of patients present with advanced systemic mastocytosis (AdvSM)
 - Aggressive SM (ASM); SM with associated hematologic neoplasm (SM-AHN); mast cell leukemia (MCL)¹
 - Based on subtype, the median overall survival ranges from <6 months to 3-4 years^{2,3}

Unmet need remains for new therapies, effective at targeting overactive mast cells, while delivering a well tolerated patient experience

- Reported toxicities for marketed therapies in AdvSM include, but are not limited to,; nausea, vomiting, diarrhea, edema, intracranial bleeding, cognitive effects^{4,5}
- Tolerability-limited dosing of marketed therapy for NonAdvSM may preclude optimal efficacy

Neurological

Headache, brain fog, cognitive dysfunction, anxiety, depression

Systemic

Anaphylaxis

Cutaneous (skin)

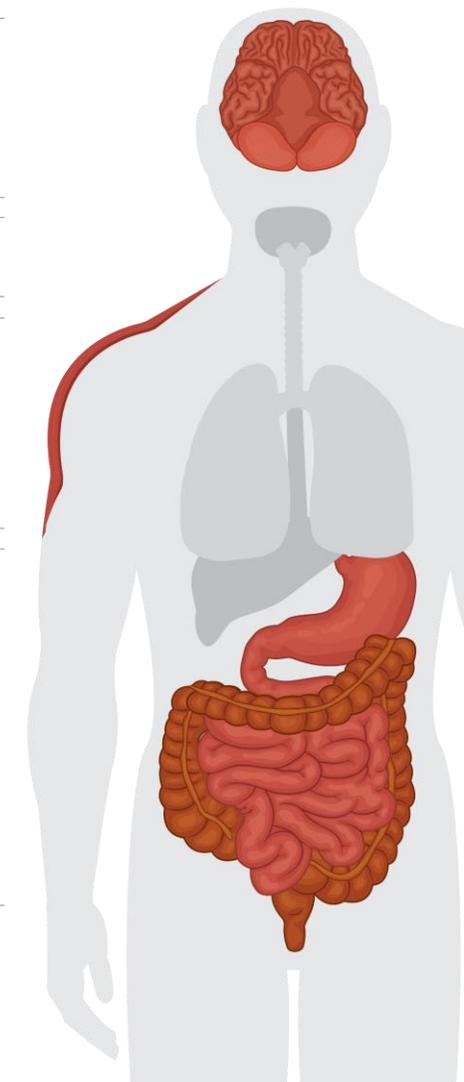
Flushing of the face/neck/chest, hives, skin rashes, itching with or without rash

Gastrointestinal

Diarrhea, nausea, vomiting, abdominal pain, bloating, gastroesophageal reflux disease (GERD)

Other

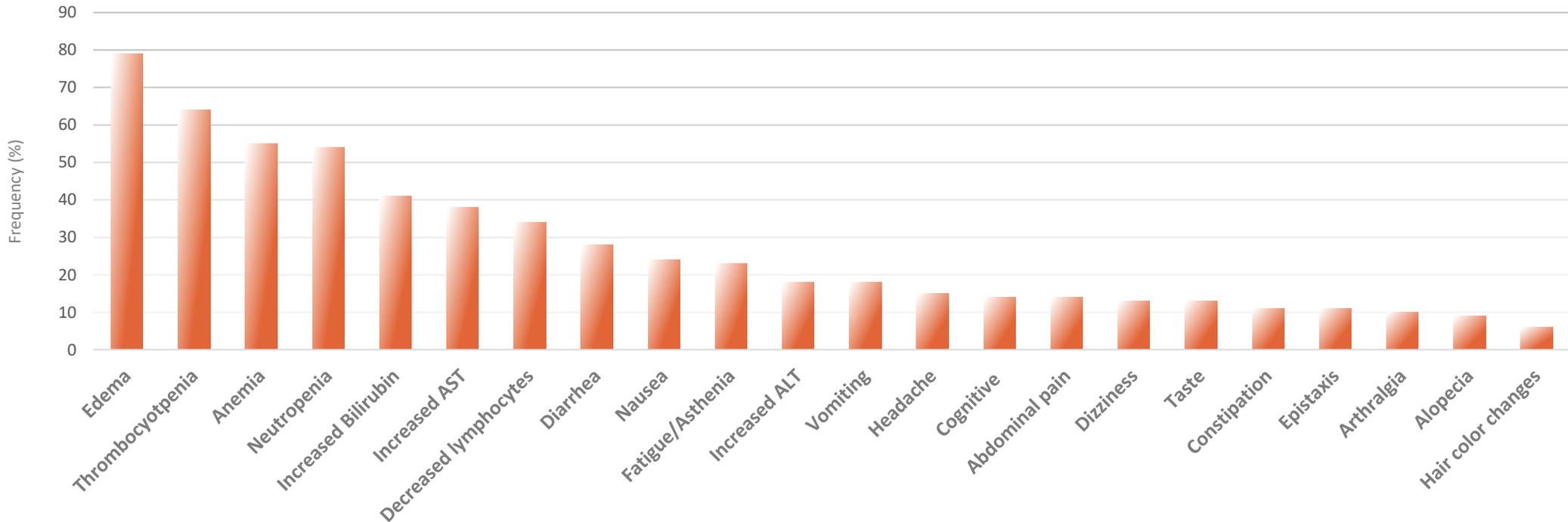
Cardiovascular
Ear/Nose/Throat/Respiratory
Skeletal
Gynecological
Urinary



AdvSM Avapritinib Safety & Tolerability

	Median duration of exposure	Gr3+ AE	SAE	Reductions due to AEs	Discontinuations due to AE	Intracranial Bleeding	AEs leading to Death
Avapritinib (n=80) <i>(Recommended dose 200mg)</i>	7.5 months	72%	34%	68%	10%	3 patients	3 patients
Avapritinib (n=148) <i>(All doses)</i>	10.3 months	81%	49%	70%	15%	11 patients	9 patients

Avapritinib ASM USPI

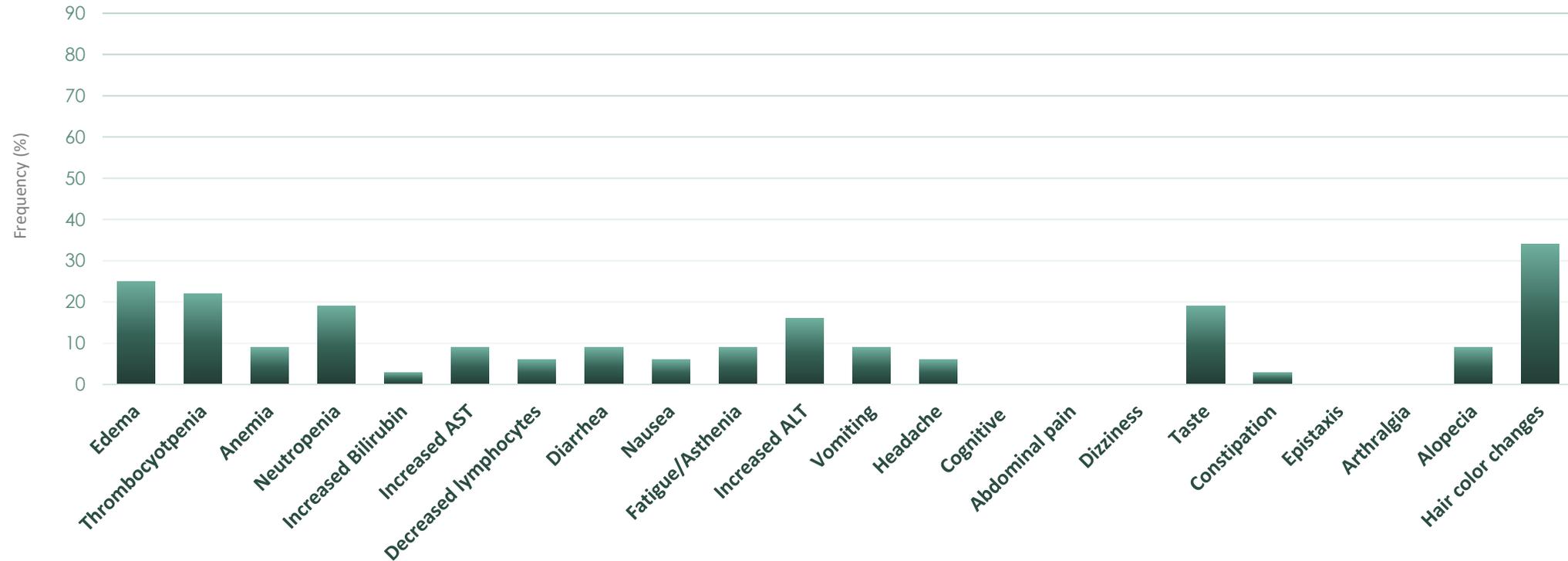


• AYVAKIT® (avapritinib) [US package insert]; AYVAKIT® FDA Medical Review
 • Lab abnormalities terms in AVA USPI are based on lab worsening from baseline

AdvSM Bezuclostinib APEX ASH Safety & Tolerability

	Median duration of exposure ¹	Gr3+ AE	SAE	Reductions due to AEs	Discontinuations due to AE	Intracranial Bleeding	AEs leading to Death
Bezuclostinib (n=32) <i>(All doses)</i>	7.2 months	63%	28%	28%	9%	0 patients	0 patients

Bezuclostinib ASH APEX TRAEs



BEZUCLASTINIB IN ADVANCED SYSTEMIC MASTOCYTOSIS





**Safety and Efficacy of Bezuclastinib (CGT9486), a Novel,
Highly Selective, Potent KIT D816V Tyrosine Kinase Inhibitor,
in Patients with Advanced Systemic Mastocytosis (AdvSM):**

Results From Part 1 of the Phase 2 Apex Trial

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Precision therapies for genetically defined diseases

APEX (NCT04996875): A Phase 2 Open-Label, Multicenter Clinical Study of Bezuclastinib in Patients with Advanced Systemic Mastocytosis



KEY ENTRY CRITERIA

- ASM, SM-AHN, or MCL per WHO 2022 Classification
- Confirmed measurable disease per mIWG-MRT-ECNM (mIWG)
- No restrictions on prior therapy
- Platelet count $\geq 50 \times 10^9/L$

PART 1: DOSE OPTIMIZATION FORMULATION A

- 50 mg BID
- 100 mg BID
- 200 mg BID
- 400 mg QD

Selected Exposure/Dose

PART 2: EXPANSION OPTIMIZED FORMULATION B[†]

~65 patients @ 150mg QD*

~10 patients @ 300 mg QD**

PART 2: ADDITIONAL COHORTS

~15 patients w/o measurable C-findings @ 150mg QD

~20 high-risk AHN patients @ 150mg QD w/concomitant AHN therapies

Other patient sub-groups under consideration

Primary Endpoint

- **Part 1:** Incidence of AEs/SAEs, laboratory changes, PK, biomarkers, ORR
- **Part 2:** ORR (confirmed CR, CRh, PR and CI) per mIWG-MRT-ECNM and assessed by Central Response Review Committee

Other Endpoints

- Safety/Tolerability: Incidence of AEs leading to dose modification, changes in Patient Reported Outcomes (PROs)
- Efficacy: DOR, TTR, PFS, OS, pure pathologic response
- PK/PD: plasma concentration of bezuclastinib, serum tryptase, KIT D816V burden, BM mast cells

[†]Formulation B is an optimized formulation with improved bioavailability

* Part 2 specifics subject to regulatory authority feedback

** Designed to explore the effect of exceeding IC90 KIT D816V engagement in AdvSM patients.



Bezuclastinib Continues to Demonstrate a Differentiated Safety Profile



- The majority of adverse events were of low grade and reversible.
- No related cognitive impairment or bleeding events reported.
- The majority of hematological adverse events were of low grade, reversible and did not require dose reduction.
- Related SAEs reported in 4 patients including Gr4 Thrombocytopenia, Gr3 Hypersensitivity (mediator flare), Gr3 Leishmaniasis, and Gr3 DILI (presented with late onset [day 488] and mixed cholestatic pattern of injury and subject was subsequently found to have biliary outflow tract obstruction).
- 9/32 patients required dose reduction due to adverse events, 6 of whom were at 400 mg; 3/32 patients discontinued due to adverse events.

Treatment Related Adverse Events in > 10% Patients

Preferred Term	Total (n=32) n (%)		50 mg BID (n=8) n (%)	100 mg BID (n=7) n (%)	200 mg BID (n=8) n (%)	400 mg QD (n=9) n (%)
	All grade	Grade ≥3	All grade	All grade	All grade	All grade
Hair color changes	11 (34)	0	0	4 (57)	3 (38)	4 (44)
Thrombocytopenia*	7 (22)	2 (6)	0	4 (57)	1 (13)	2 (22)
Transaminase increased*	7 (22)	1 (3)	3 (38)	2 (29)	1 (13)	1 (11)
Neutropenia*	6 (19)	3 (9)	1 (13)	2 (29)	1 (13)	2 (22)
Taste disorder*	6 (19)	0	1 (13)	1 (14)	1 (13)	3 (33)
Peripheral edema	4 (13)	0	0	1 (14)	1 (13)	2 (22)
Periorbital edema	4 (13)	1 (3)	0	0	3 (38)	1 (11)

*Includes pooled preferred terms



DILI – Drug Induced Liver Injury
Data as of: 25Sep2023

Vachhani P., et al. American Society of Hematology (ASH) 2023; San Diego, CA, 11 Dec 2023: Publication Number: 4567

APEX in AdvSM: Rapid & Deep Reductions in Biomarkers Leading to Impressive ORR



- 56% ORR by mIWG and 86% ORR by PPR in 1st-line patients
 - 100% ORR by mIWG for patients receiving 200mg daily dose
- 94% of patients achieved >50% reduction in serum tryptase
- 97% of patients achieved >50% reduction in mast cell burden

Table 3. Apex Part 1: Responses Observed by mIWG-MRT-ECNM

Best Response, n (%) ^a	Total* Confirmed and unconfirmed mIWG-MRT-ECNM Responses per CRRC Assessment (n=27)	Confirmed mIWG-MRT-ECNM Responses per CRRC Assessment (n=27)	mIWG-MRT-ECNM per CRRC Assessment* (TKI [†] Therapy Naïve) (n=18)	mIWG-MRT-ECNM per CRRC Assessment* (Prior TKI [†] Exposure) (n=9)
Overall response rate				
CR + CRh + PR + CI [†]	15 (56)	12 (44)	11 (61)	4 (44)
CR + CRh + PR	14 (52)	10 (37)	10 (56)	4 (44)
Complete Response (CR + CRh)	6 (22)	6 (22)	6 (33)	0 (0)
Partial Response (PR)	8 (30)	4 (15)	4 (22)	4 (44)
Clinical Improvement (CI)	1 (4)	2 (7)	1 (6)	0 (0)
Stable Disease (SD)	9 (33)	12 (44)	6 (33)	3 (33)
Not evaluable	3 (11)	3 (11)	1 (6)	2 (22)

^a5 patients without measurable C-finding at baseline were Not mIWG-MRT-ECNM Evaluable (NE) and therefore are excluded; one additional patient was excluded due to discontinuation prior to first dose (Not Dosed [ND]).
^{*}4 patients who remain on therapy but have not yet reached the 12-week confirmation duration for partial response (PR) are included
[†] SM-directed therapy with midostaurin and/or avapritinib
[‡] Primary endpoint of Apex study

Data as of: 25Sep2023

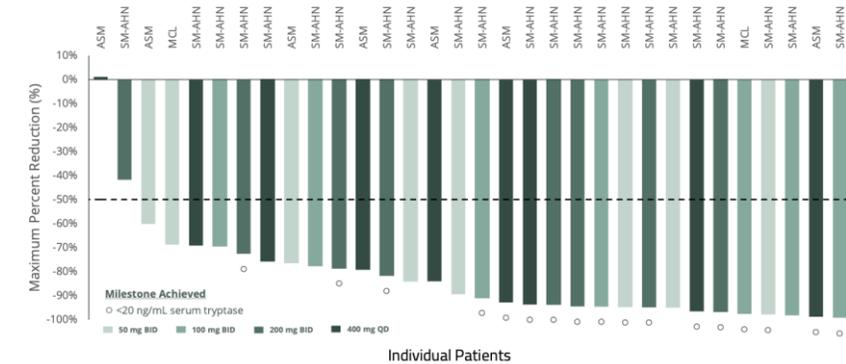
Table 4. Apex Part 1: Responses Observed by PPR Criteria

Best Response, n (%) ^a	Total (n=32)	PPR per Investigator Assessment (TKI [†] Therapy Naïve) (n=22)	PPR per Investigator Assessment (Prior TKI [†] Therapy) (n=10)
Overall response rate (CR + PR)	24 (75)	19 (86)	5 (50)
Complete Response (CR)	13 (41)	12 (55)	2 (20)
Partial Response (PR)	11 (34)	7 (32)	3 (33)
Stable Disease (SD)	5 (16)	2 (9)	3 (33)
Not Evaluable	3 (9)	1 (5)	2 (20)

^a One patient was excluded due to discontinuation prior to first dose (Not Dosed [ND]).
[†] SM-directed therapy with midostaurin and/or avapritinib

Data as of: 25Sep2023

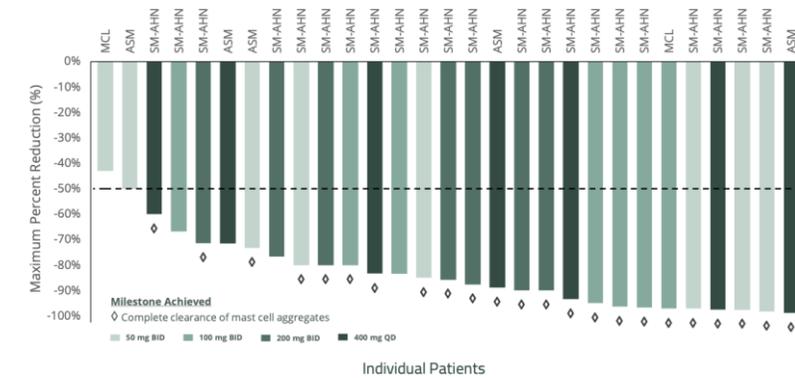
Figure 4. Deep Reductions in Serum Tryptase, (n=32^a)



^aOne patient without post-baseline data was excluded. Data as of: 25Sep2023

- 94% (30/32) of patients achieved a ≥ 50% reduction
- 100% (29/29) of patients with at least 2 cycles of treatment achieved a ≥ 50% reduction
- 53% (17/32) achieved below 20 ng/mL
- Median time to first serum tryptase <20 ng/mL was 4.0 weeks (range: 1.1-66.9)

Figure 6. Deep Reductions in Mast Cell Burden, (n=29^a)



^aFour patients without post-baseline data were excluded. Data as of: 25Sep2023

- 97% (28/29) of patients with baseline and at least 1 post-baseline assessment achieved a ≥ 50% reduction
- 79% (23/29) achieved complete clearance of mast cell aggregates by central review
- Median time to first clearance of mast cell aggregates was 9.0 weeks (range: 7.3-34.3)



BEZUCLASTINIB IN NONADVANCED SYSTEMIC MASTOCYTOSIS



Development of MS2D2 Total Symptom Score

- Rigorous process, in accordance with FDA guidelines, was followed for the development of a novel patient reported outcomes measure (PROM)
- Literature review, patient and physician interviews, and data from SUMMIT Part 1 were used to design a reliable, valid and fit-for-purpose PROM
- Pending alignment with FDA, a comparison of week 24 mean absolute change from baseline in MS2D2 TSS between bezuclastinib and placebo will serve as the primary endpoint of SUMMIT Part 2

MS2D2 TSS Additions based on:

- Literature review
- Patient interviews
- SUMMIT Part 1 psychometric analysis

MS2D2 TSS

Itching
Flushing
Spots
Skin redness
Difficulty Concentrating
Difficulty Remembering
Nausea
Abdominal Pain
Headache
Bone Pain
Feeling Tiredness

MS2D2 TSS Exclusions based on:

- FDA feedback
- KOL advice
- SUMMIT Part 1 psychometric analysis

Brain Fog

Dizziness

Diarrhea Severity

Each of these items are being collected as part of MS2D2 secondary analyses in SUMMIT Part 2

MS2D2 TSS comprised of 11 items scored on 0-110 scale

Initial Results from Summit: An Ongoing, 3-Part, Multi-Center, Randomized, Double-Blind, Placebo-Controlled Phase 2 Clinical Study of Bezuclastinib in Adult Patients with NonAdvanced Systemic Mastocytosis (NonAdvSM)

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American Academy of Allergy, Asthma & Immunology (AAAAI) Annual Meeting
Washington D.C.
25 Feb 2024
Poster #694.

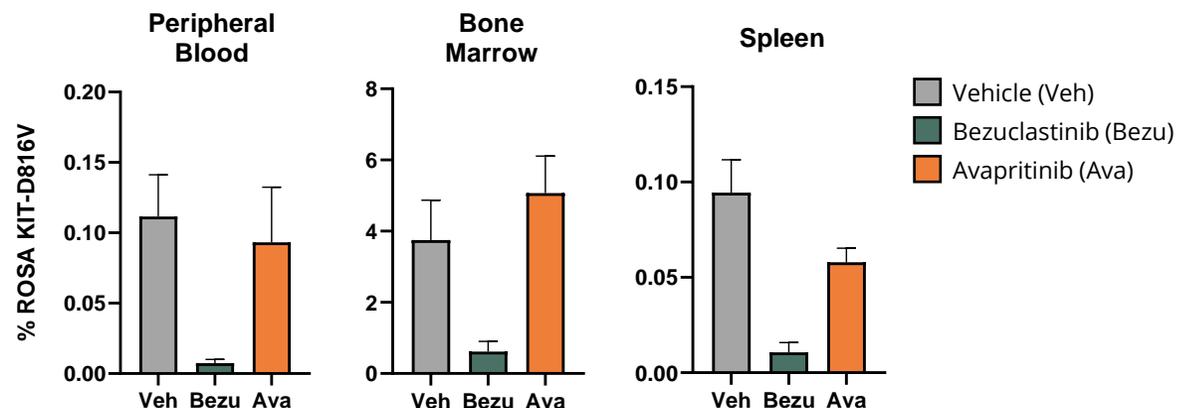
Nonclinical Data Suggests Optimal Activity Against Mastocytosis May Require Higher Exposures Than Clinically Tolerable With Available Therapy

- Mice engrafted with SCF-independent human ROSA^{KIT D816V} cells⁸ were treated daily for 8 weeks with a KIT inhibitor at doses matching clinical exposures observed in NonAdvSM patients
- Only bezuclastinib led to statistically significant decreases ($p < 0.05$) in mutant MC burden compared to vehicle
- At exposures comparable to those achieved in NonAdvSM patients, bezuclastinib led to statistically significant decreases ($P < 0.05$) in bone marrow and spleen compared to avapritinib

Total Drug Exposure Ratio Measured in SM Mouse Model

	Mouse Plasma AUC ₀₋₂₄ (ng·hr/mL) ^a	NonAdvSM Clinical Plasma AUC ₀₋₂₄ (ng·hr/mL) ^b	Total Drug Exposure Ratio (mouse/clinic)
Bezuclastinib	11775	16900	0.7X
Avapritinib	2118	1548	1.4X

MC Burden in SM Mouse Model



SUMMIT: Phase 2 Clinical Study Evaluating Bezuclastinib in NonAdvSM

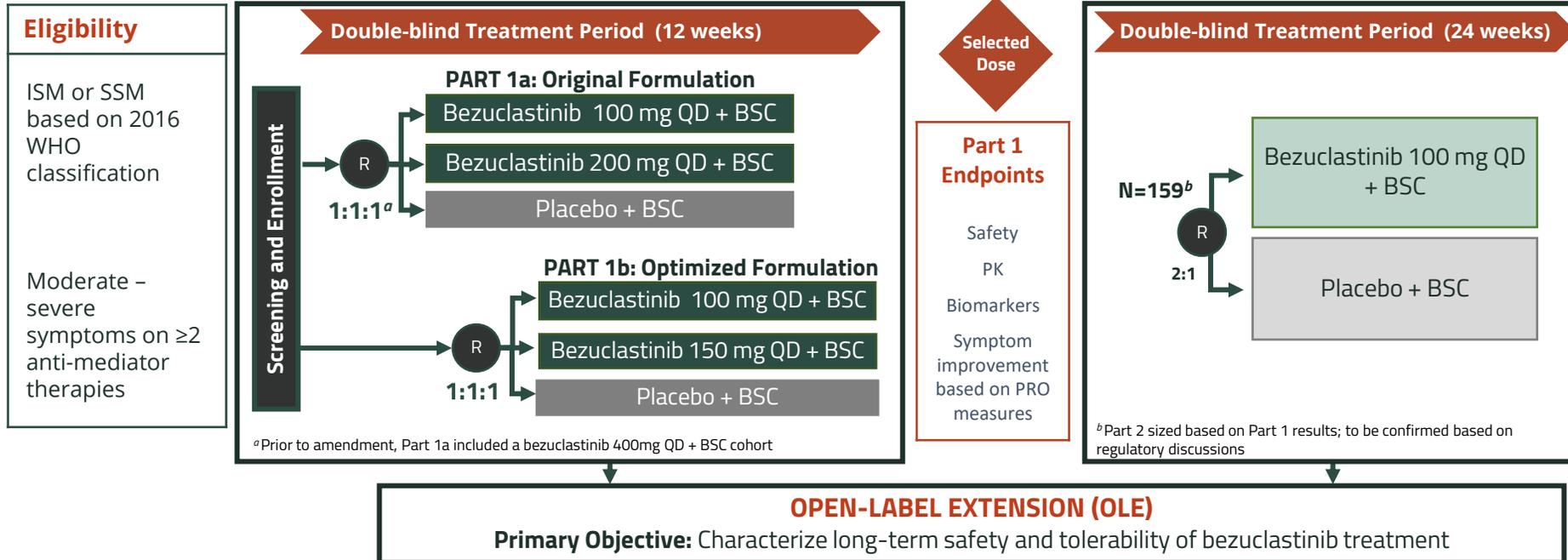


PART 1: DOSE OPTIMIZATION (enrollment complete)

Primary Objective: Determine recommended dose of bezuclastinib

PART 2: EXPANSION (actively enrolling)

Primary Objective: Determine efficacy of bezuclastinib



BSC: Best supportive care

SUMMIT Part 1 Enrolled NonAdvSM Patients with Moderate to Severe Disease

Patient Demographics, Characteristics, and Disposition

Patient Demographics	Part 1a (N=20)	Part 1b (N=34)
Female, n (%)	15 (75)	21 (61.8)
Median Age in years, n (range)	50.5 (38 – 75)	52.0 (27-76)
ECOG PS, n (%)		
0	3 (15)	16 (47.1)
1	15 (75)	17 (50.0)
2	2 (10)	1 (2.9)
Clinical Characteristics	Part 1a (N=20)	Part 1b (N=34)
NonAdv Subtype per PI, n (%)		
Indolent SM (ISM)	18 (90)	33 (97)
Smoldering SM (SSM)	2 (10)	1 (3)
Median (range) MAS Total Score at Eligibility	45.56 (26.3 – 71.6)	43.44 (28.6 – 65.4)
Mast Cell Burden	Part 1a (N=20)	Part 1b (N=34)
KIT D816V in Whole Blood, Positive, n (%)	15 (75)	28 (82.4)
Median KIT D816V VAF, % (range)	0.49 (BLD – 32.48)	0.085 (BLD - 19.58)
Median Bone Marrow MC Burden, % (range)	22.5 (1 – 80)	15 (2 – 50)
Median Serum Tryptase, ng/mL (range)	74.35 (10.2- 592.0)	37.15 (9.2 - 206.0)
<20 ng/mL, n (%)	3 (15)	7 (20.6)
≥20 ng/mL, n (%)	17 (85)	27 (79.4)

SM Therapy	Part 1a (N=20)	Part 1b (N=34)
Prior avapritinib, n (%)	1 (5.0)	1 (2.9)
Baseline Supportive Care Medications, Median (range)	3 (2-7)	2.5 (2 – 9)
H1 blockers, n (%)	19 (95)	30 (88.2)
H2 blockers, n (%)	18 (90)	27 (79.4)
Leukotriene receptor antagonists, n (%)	8 (40)	14 (41.2)
Proton pump inhibitors, n (%)	7 (35)	9 (26.5)
Cromolyn sodium, n (%)	4 (20)	3 (8.8)
Omalizumab, n (%)	3 (15)	1 (2.9)
Corticosteroids, n (%)	1 (5)	1 (2.9)
Patient Disposition	Part 1a (n=20)	Part 1b (N=34)
Months on Study (Part 1 + OLE), median (range)	7.03 (2.8 – 16.0)	4.09 (2.7-6.6)
Completed Part 1 (a or b), n (%)	20 (100)	34 (100)
On Study as of Data Cut-off, n (%)	18 (90)	33 (97.1)
Discontinued study, n (%)	2 (10)	1 (2.9)
AE, n (%)	1 (5)	1 (2.9)
Patient Decision, n (%)	1 (5)	0

Bezuclastinib 100 mg QD Optimized Formulation Selected as Summit Part 2 Dose Based on Part 1 Safety, PK, Biomarker and Efficacy Results



Encouraging Safety and Tolerability Profile for Bezuclastinib 100 mg Dose in Part 1b

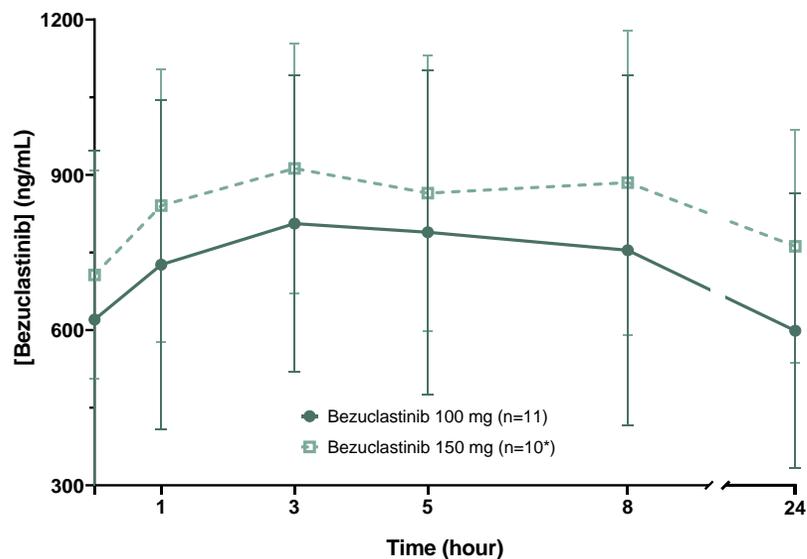
- The majority of TEAEs were low grade and reversible without dose modification
- No bleeding or cognitive impairment events reported across bezuclastinib cohorts
- No dose reductions at 100mg cohort; two dose reductions at 150mg: Gr1 ALT, Gr2 abdominal pain
- Only one SAE reported in bezuclastinib cohorts (150mg patient experienced ALT/AST increase that led to discontinuation)

All TEAEs Occurring >1 Patient in Any Cohort in Part 1b

Preferred Term	Placebo (n=12)		Bezuclastinib			
	Gr 1/2	Gr 3+	100mg QD (n=11)		150mg QD (n=11)	
	Gr 1/2	Gr 3+	Gr 1/2	Gr 3+	Gr 1/2	Gr 3+
Hair color changes	-	-	3	-	7	-
Diarrhea	2	-	2	-	2	-
Nausea	3	-	3	-	1	-
Taste disorder[#]	-	-	1	-	2	-
Dizziness	2	-	-	-	2	-
Fatigue	1	-	-	-	2	-
Noncardiac chest pain	1	-	-	-	2	-
ALT/AST increased[#]	1	-	-	-	1	1*
Neutropenia[#]	-	-	-	-	1	1*
COVID-19	3	-	1	-	-	-
Insomnia	2	-	-	-	-	-
Decreased appetite	2	-	-	-	-	-
Vomiting	2	-	-	-	-	-
Urticaria	2	-	-	-	-	-
Palpitations	2	-	-	-	-	-

Bezuclastinib Demonstrated Dose Dependent Increase in Mean Steady State Exposure

Summit Part 1b: Mean (\pm SD) Concentration on C2D1 (Steady State)



Comparable Exposures for Low and High Dose Across Part 1a and 1b

	Dose (mg), Study Part	N	Mean S.S. AUC _{0-24h} (ng.h/mL)
Low Dose	100, 1a	7	16900
	100, 1b	11	16900
High Dose	200, 1a	5	19200
	150, 1b	10*	19700

Bezuclastinib Elicited Deep Reductions Across Markers of Mast Cell Burden Within 12 Weeks

Serum Tryptase

- Of patients with baseline tryptase $\geq 20\text{ng/mL}$, nearly all patients treated with bezuclastinib achieved $< 20\text{ng/mL}$ (100% on 100 mg, 89% on 150 mg, 0% on placebo)
 - Overall, mean time to tryptase $< 20\text{ng/mL}$ was 4.5 weeks for patients treated with bezuclastinib
- Of patients with baseline tryptase $\geq 11.4\text{ng/mL}$: 70% on 100mg, 90% on 150mg and 0% on placebo achieved $< 11.4\text{ng/mL}$

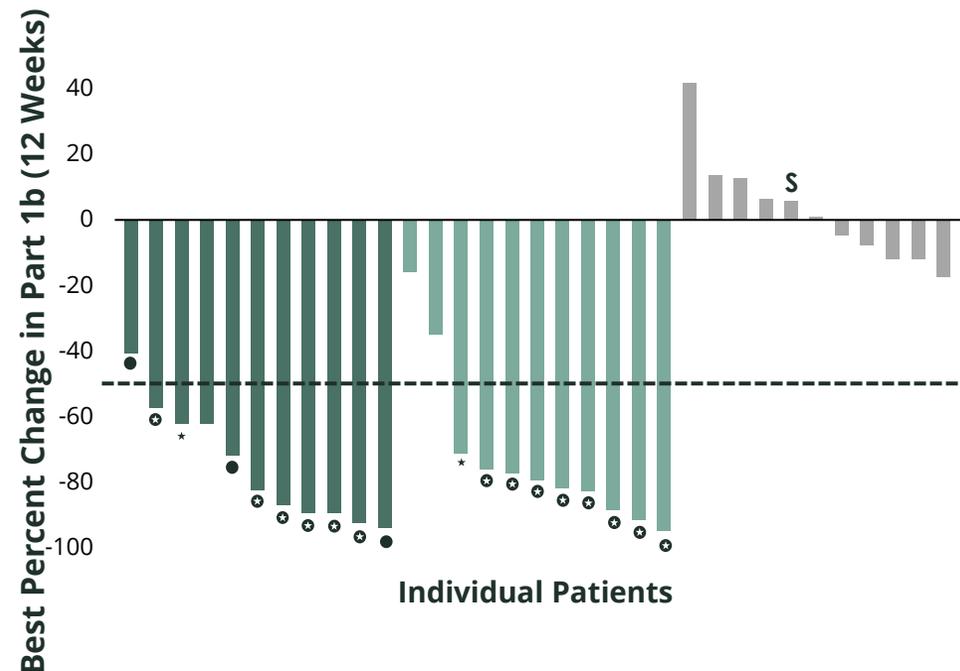
KIT D816V VAF

- Among patients with detectable KIT D816V at baseline: 100% on 100mg, 89% on 150mg and 0% on placebo achieved at least 50% reduction or undetectable KIT D816V at Week 12

Bone Marrow Mast Cells (BM MC)

- Among patients with evaluable BM: 86% on 100mg, 78% on 150mg and 40% on placebo achieved $\geq 50\%$ reduction in BM MC at Week 12
 - Mean % change from baseline in BM MC at Week 12 for patients treated with bezuclastinib 100mg was -70% vs -30% on placebo

Serum Tryptase (n=34)



- Bezuclastinib 100 mg
- Bezuclastinib 150 mg
- Placebo
- S Smoldering SM

Serum Tryptase Outcomes

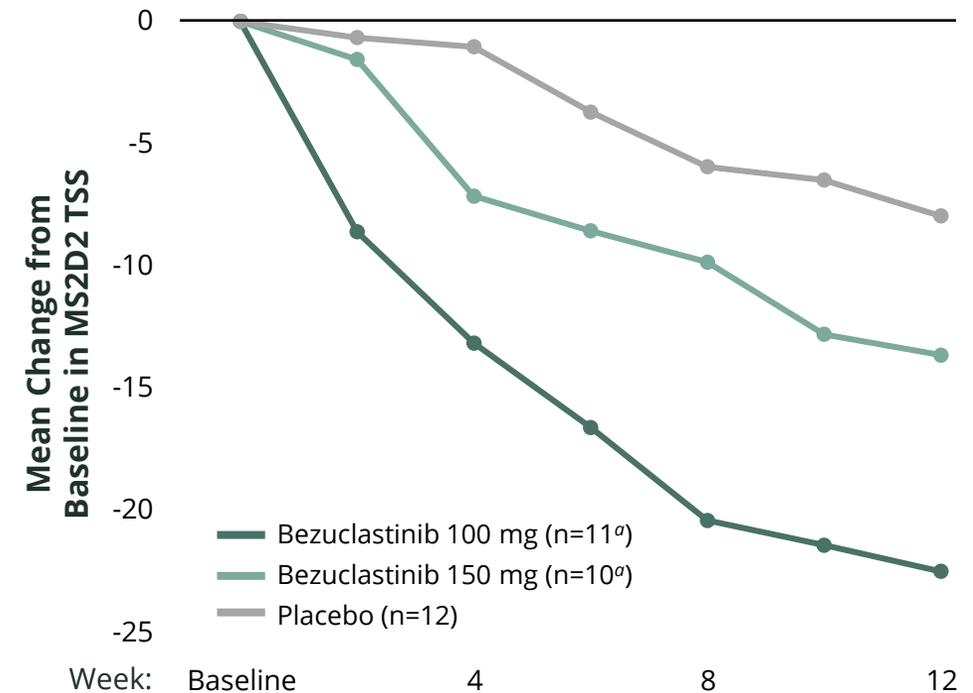
- Achieved $< 20\text{ng/mL}^{\text{†}}$
- ★ Achieved $< 11.4\text{ng/mL}^{\text{†}}$
- ⊛ Achieved both[†]

[†]In order to achieve, serum tryptase must have been above the threshold at baseline

Patients Treated With Bezuclastinib 100 mg Reported Rapid and Significant Improvement in Symptom Severity

- 51% mean improvement in overall symptom severity (MS2D2 TSS) from baseline at Week 12 for patients receiving 100 mg bezuclastinib vs. 18% improvement for placebo patients
- Patients treated with 100 mg bezuclastinib reported a significant reduction in total symptom severity vs. placebo at Week 12 (-23.78 vs. -9.03; $p=0.0003$)
- 70% of patients treated with 100 mg bezuclastinib achieved $\geq 50\%$ reduction in MS2D2 TSS at Week 12 vs. 8% placebo patients

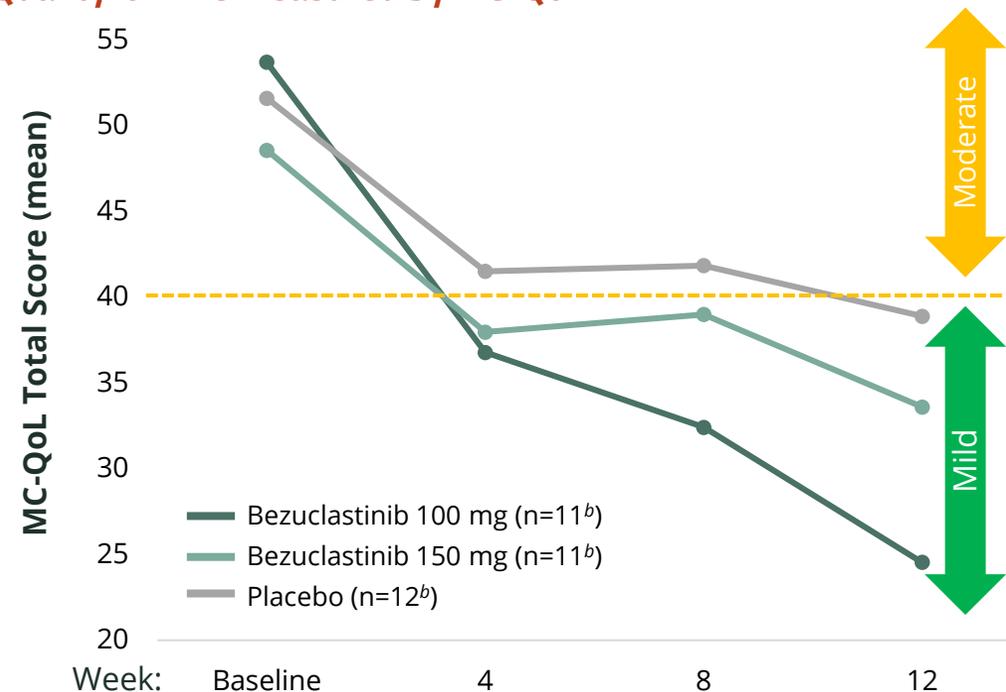
Symptom Severity Measured by MS2D2



Patients Treated With Bezuclastinib 100 mg Reported Rapid and Significant Improvement in Quality of Life

- 49% mean improvement in quality of life (MC-QoL) from baseline at Week 12 in patients treated with 100 mg bezuclastinib vs 24% for placebo
- Patients reported a significant improvement in quality of life after 12 weeks of bezuclastinib 100mg QD compared to placebo (-24.86 vs. -12.39, p=0.046)

Quality-of-Life Measured by MC-QoL^a

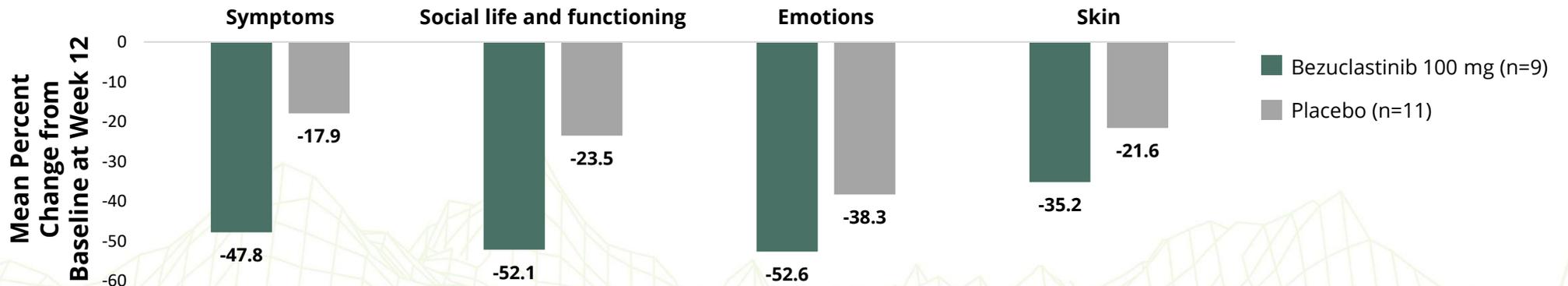


Bezuclastinib 100mg Demonstrated Improvement Compared to Placebo Across Symptoms of SM

Greater Improvement Observed in the MS2D2 TSS With 12 Weeks of Bezuclastinib 100 mg vs Placebo



Health-Related QoL Across All MC-QoL^a Domains Improved With 12 Weeks of Bezuclastinib 100mg vs Placebo

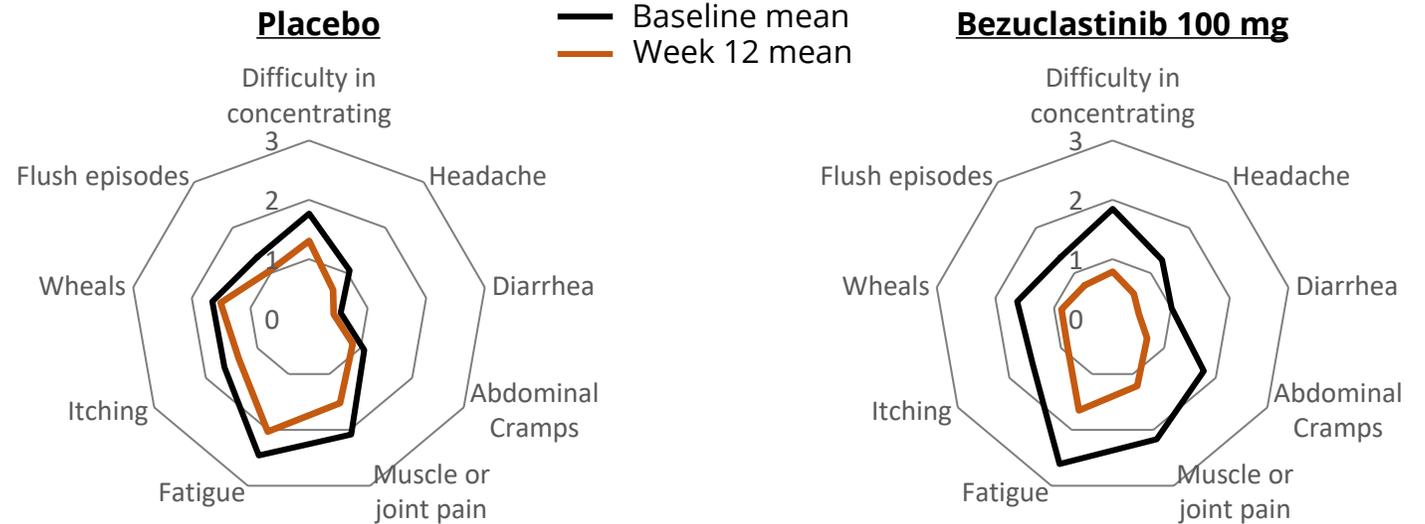


Bezuclastinib 100 mg Demonstrated Improvement Compared to Placebo Across Symptoms of SM



Bezuclastinib 100 mg Improved Symptom Severity, As Measured by the Mastocytosis Activity Score^a (MAS), Compared to Placebo

- 41% mean improvement from baseline in MAS at Week 12 for patients receiving 100 mg bezuclastinib vs. 21% improvement for placebo
- 50% of patients treated with 100 mg bezuclastinib achieved $\geq 50\%$ improvement in MAS at week 12 vs. 0% placebo patients



^aMAS is a disease-specific PROM used to assess symptom severity and consists of 9 items.¹⁰ Severity of each item is rated from not at all (0) to very severe (4). For the Week 12 assessment, items are scored daily for 14 consecutive days prior to the end of the 12-week treatment period. The scores shown here are a mean for subjects in the 100mg cohort (N=10) versus the placebo cohort (N=12).
 10. Siebenhaar F, Sander B, Tram H, Ellrich A, Maurer M, Weller K. Development and validation of the mastocytosis activity score. Allergy. 2018;00:1–8.

Conclusions: Totality of Results from Summit Part 1 Support 100 mg QD as the Optimal Dose of Bezuclastinib for Patients With NonAdvSM



In Part 1b, bezuclastinib 100mg QD resulted in:

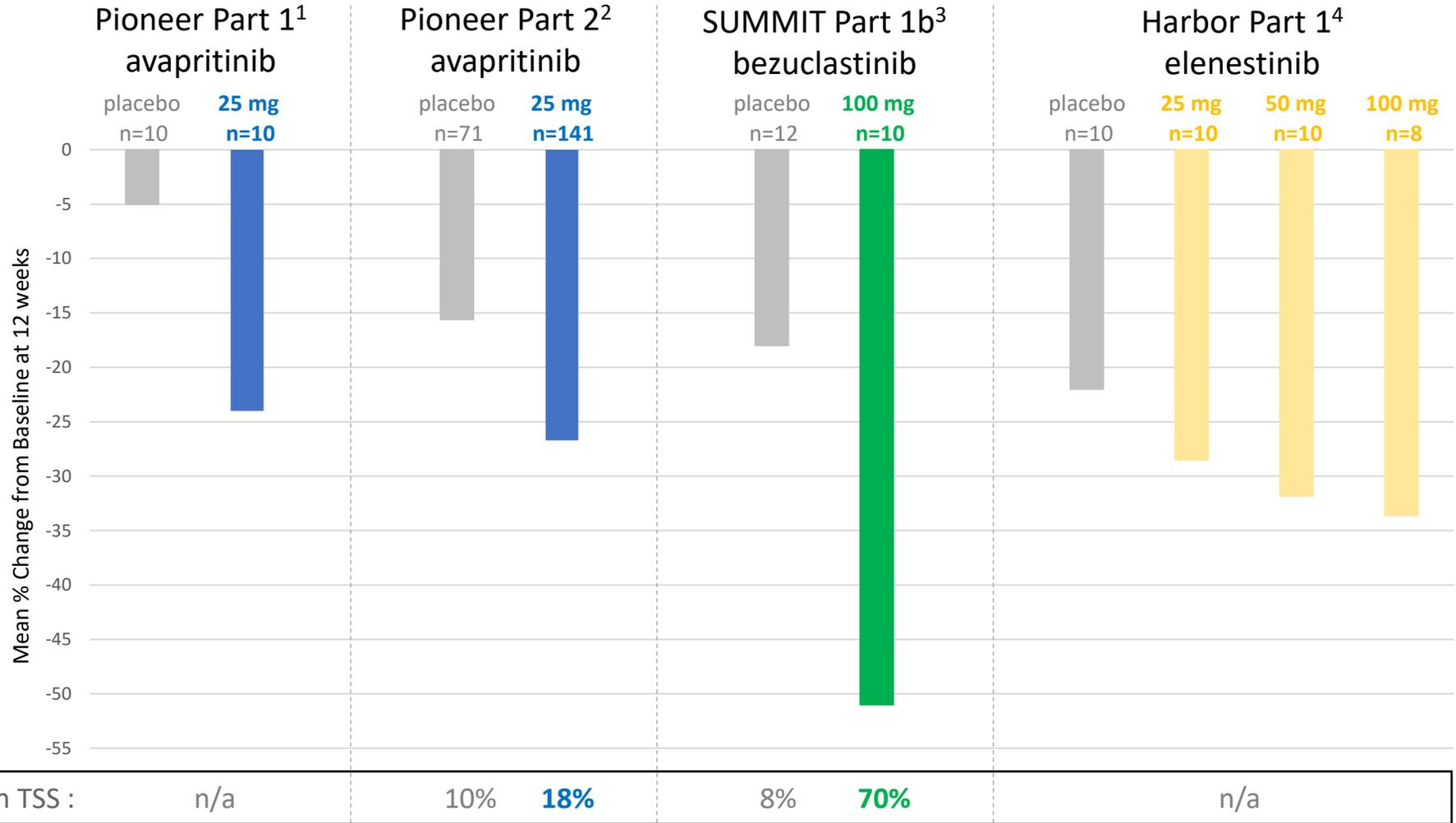
- Safety and tolerability profile generally consistent with placebo results
 - No bleeding, cognitive impairment, or edema AEs reported
 - No dose reductions or discontinuations due to AEs
- Rapid reductions across markers of mast cell burden, supported by KIT D816V mechanism and exposure evidence from nonclinical studies
- Significant improvement versus placebo at 12 weeks in both symptom severity and quality of life, based on mean change from baseline in MS2D2 and MC-QoL total scores which corresponds to:
 - 51% reduction in symptom severity (measured by MS2D2)
 - 49% improvement in health-related quality-of-life (measured by MC-QoL)
- 70% of patients achieving $\geq 50\%$ improvement in symptom severity versus 8% on placebo, as measured by MS2D2

Summit Part 2 is expected to include 159 patients and is actively enrolling



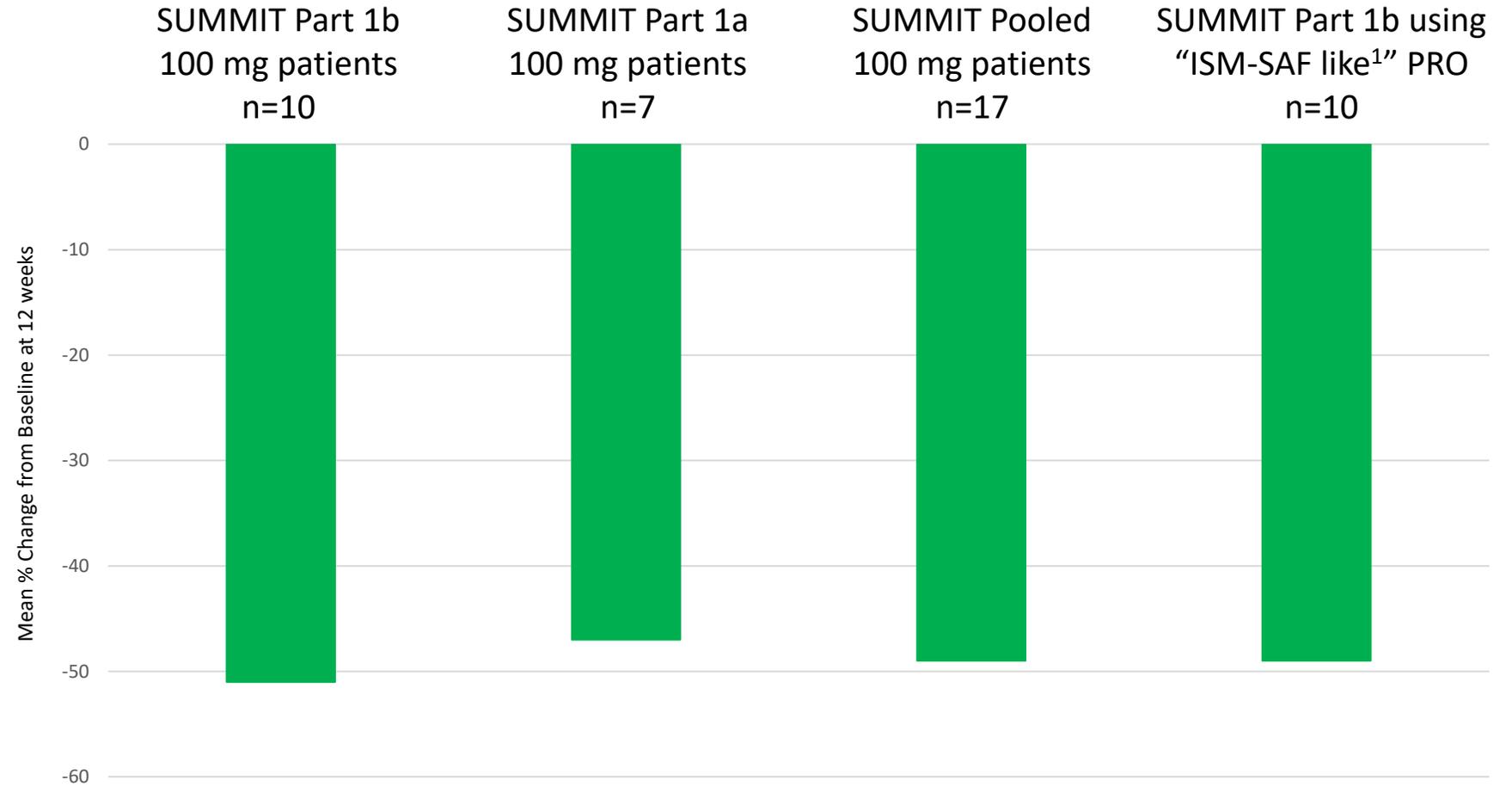
Cross-trial Efficacy Comparison of KIT D816V Inhibitors in NonAdvSM

- Results shown from RP2D for avapritinib and bezuclastinib; elenestinib RP2D yet to be announced
- Symptomatic severity assessed using ISM-SAF (avapritinib & elenestinib) and MS2D2 (bezuclastinib), each fit-for-purpose PROMs designed to measure NonAdvSM symptoms
- Pioneer 2, SUMMIT and Harbor Part 1 conducted with patients blinded to laboratory values (eg. serum tryptase) – placebo effect reported appears consistent across studies



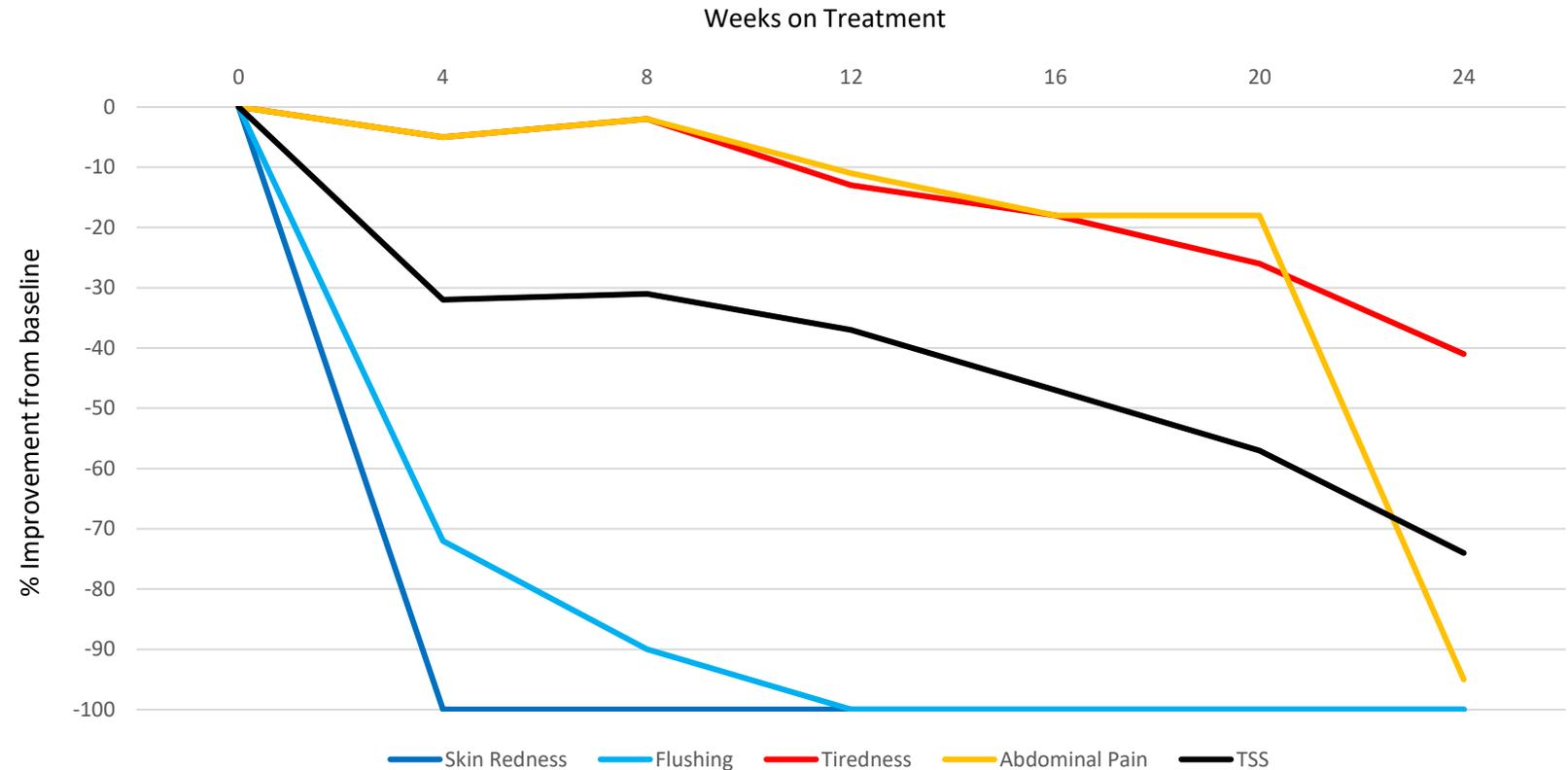
Consistent Magnitude of Symptomatic Improvement for Patients Receiving 100 mg Bezuclostinib

- 100 mg bezuclostinib patients reported very similar symptomatic improvement (week 12 mean change TSS) across SUMMIT 1a and 1b
- Constructing a scoring system using the same symptoms as ISM-SAF results in consistent week 12 mean change in TSS vs. MS2D2
- Improvements across domains in SUMMIT Part 1 support finding that magnitude of effect is not sensitive to item selection in TSS



Optimizing Dose in NonAdvSM is Critical as Adverse Events May Confound TSS

- 52yr old patient receiving 150 mg bezuclastinib in Part 1b
- Serum tryptase reduced from 74.1 ng/ml baseline to 8.6 ng/ml at week 12
- Skin symptoms resolved quickly, but TSS at week 12 only -37% due to persistent tiredness and Gr 2 abdominal pain
- Dose reduced to 100 mg at week 20. Following dose reduction, rapid elimination of abdominal pain, improvement in tiredness and resulting TSS of -73% by week 24



BEZUCLASTINIB IN GASTROINTESTINAL STROMAL TUMORS



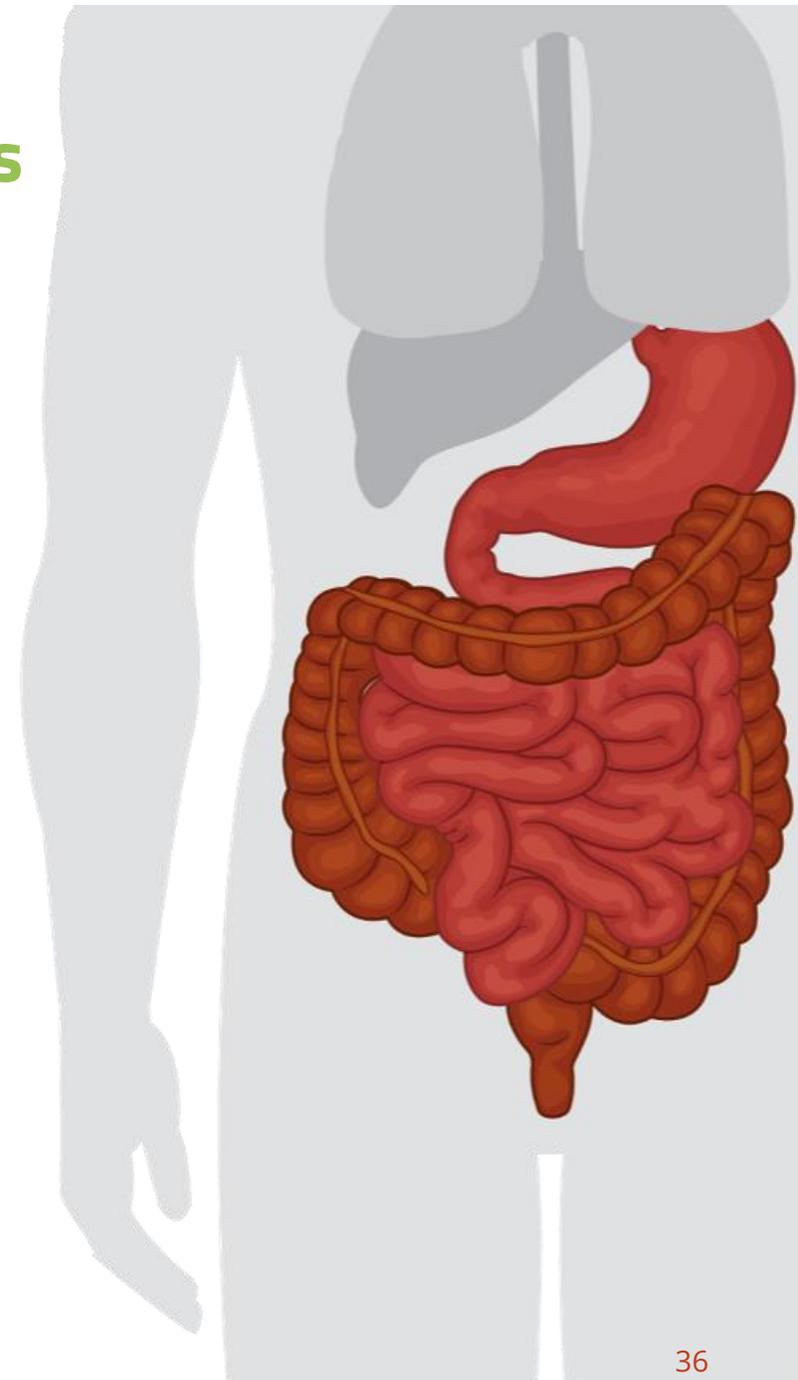
Significant Unmet Need Remains for GIST Patients

Gastrointestinal Stromal Tumor (GIST)

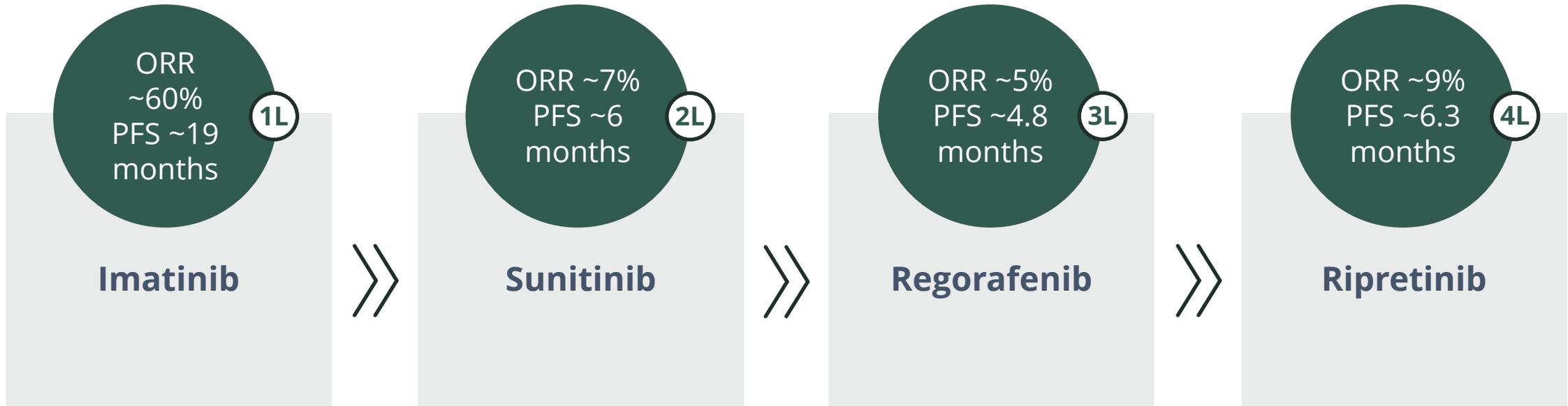
- Between 4,000 to 6,000 GIST cases diagnosed each year in the United States¹
- Tumors can start anywhere in the GI tract, but they occur most often in the stomach (about 60%) or the small intestine (about 35%)²
- Current FDA approved therapies include imatinib, sunitinib, regorafenib, and ripretinib
- 60% of GIST patients develop resistance to imatinib within 2 years (10% primary, 50% secondary resistance)¹

Symptoms³

Diarrhea, Nausea,
Vomiting, Abdominal
Pain, Bloating,
Gastroesophageal reflux
disease, GI bleeding, Loss
of appetite, Weight loss



Mutations in KIT Exon 13 and KIT Exon 17 are Key Drivers of Resistance



60% of GIST patients develop resistance to Imatinib within two years.¹



Resistance mutations driven by KIT exon 13 and KIT exon 17



2,000-3,500 imatinib-resistant, annual treatable GIST patients.¹

ORR/PFS for all approved agents was obtained from labeled information from those agents

Rationale for Treatment of GIST with Bezuclastinib in Combination with Sunitinib

- Global standard for 1st-line therapy of advanced KIT-mutant GIST is treatment with imatinib, which targets primary KIT mutations in exons 9 and 11.
- Secondary resistance mutations in the KIT ATP-binding domain (exons 13, 14), activation loop (exons 17, 18), or both can develop and result in loss of imatinib-sensitivity¹⁻⁴
- While no single tyrosine kinase inhibitor (TKI) inhibits all mutations, the combination of bezuclastinib (targeting exons 9, 11, **17**, and **18**) and sunitinib (targeting exons 9, 11, **13**, and **14**) targets the full spectrum of primary and **secondary resistance mutations**.⁵
- Phase 1/2 Bezuclastinib + Sunitinib: 12-month mPFS in heavily pre-treated GIST patients

Bezuclastinib + Sunitinib Combination Targets the Full Spectrum of Primary and Secondary Mutations

	Primary		Secondary				Broad Coverage of Spectrum of Mutations
	9	11	13	14	17	18	
Imatinib	√	√	-	-	-	-	-
Ripretinib	~	√	~	√	√	√	~
Sunitinib	√	√	√	√	-	-	-
Bezuclastinib	√	√	~	-	√	√	-
Bezuclastinib + Sunitinib	√	√	√	√	√	√	√

√ = strong inhibition

~ = moderate inhibition

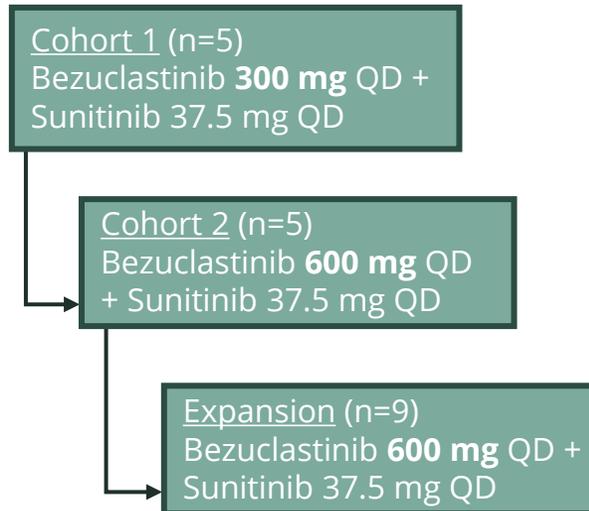
- = no inhibition

PEAK: Global Phase 3 Pivotal Trial in 2nd Line GIST Patients

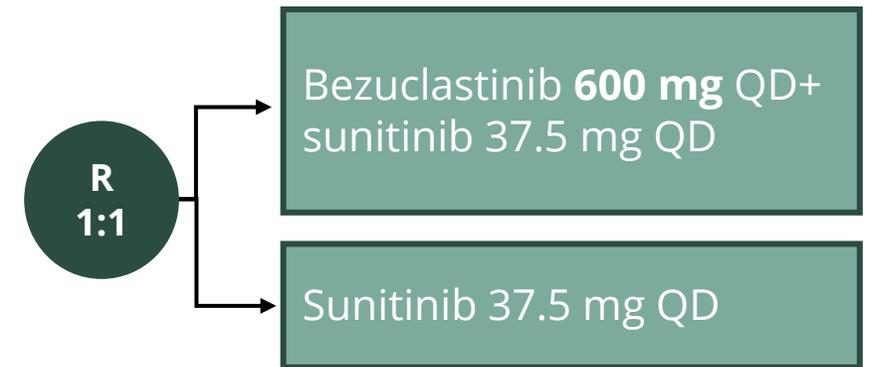
KEY ENTRY CRITERIA

- Histologically confirmed Gastrointestinal Stromal Tumors (GIST) w/at least 1 measurable lesion per mRECIST v1.1
- Locally Advanced, unresectable or metastatic
- Documented disease progression on or intolerance to imatinib
- ECOG Performance Status 0-2

PART 1A LEAD-IN N=19



PART 2 RANDOMIZED STUDY N=388



**Primary endpoint: mPFS
(median Progression Free Survival)**

Expected Part 2 Enrollment Complete by YE 2024 and Topline Results YE 2025

Demographic and Baseline Characteristics in Peak Lead-In



- 39 patients enrolled in Part 1; median age 58 years (range: 33-77)

Baseline Characteristics	Part 1a N=19 (%)	Part 1b N=20 (%)	Total N=39 (%)
Male, n (%)	13 (68.4)	18 (90.0)	31 (79.5)
ECOG Performance Status (baseline)			
0	12 (63.2)	10 (50.0)	22 (56.4)
1	6 (31.6)	10 (50.0)	16 (41.0)
2	1 (5.3)	0 (0)	1 (2.6)
Total number of prior TKI therapies			
0	0 (0)	0 (0)	0 (0)
1	7 (36.8)	0 (0)	7 (17.9)
2	7 (36.8)	4 (20.0)	11 (28.2)
≥3	5 (26.3)	16 (80.0)	21 (53.8)

As of 29-Mar-2023 Data-cut
Safety Analysis Set: All treated pts

Baseline Characteristics	Part 1a N=19 (%)	Part 1b N=20 (%)	Total N=39 (%)
Primary Tumor Location at Diagnosis			
Stomach	4 (21.1)	4 (20.0)	8 (20.5)
Small Intestine	8 (42.1)	14 (70.0)	22 (56.4)
Other abdominal locations	7 (36.8)	2 (10.0)	9 (23.1)
Primary Mutation[‡]			
Exon 9 [^]	2 (10.5)	7 (35.0)	9 (23.1)
Exon 11 [^]	13 (68.4)	14 (70.0)	27 (69.2)
Other/unknown	4 (21.1)	0	4 (10.3)
Prior Radiotherapy	4 (21.1)	5 (25.0)	9 (23.1)
Prior anti-cancer surgery	15 (78.9)	19 (95.0)	34 (87.2)

[‡]Per archival samples taken any time from primary diagnosis to screening

[^]One patient in Part 1b with both exon 9 and exon 11 appears twice in the Part 1b and Total column



Bezuclastinib + Sunitinib Combination Well Tolerated in Peak Lead-In Trial



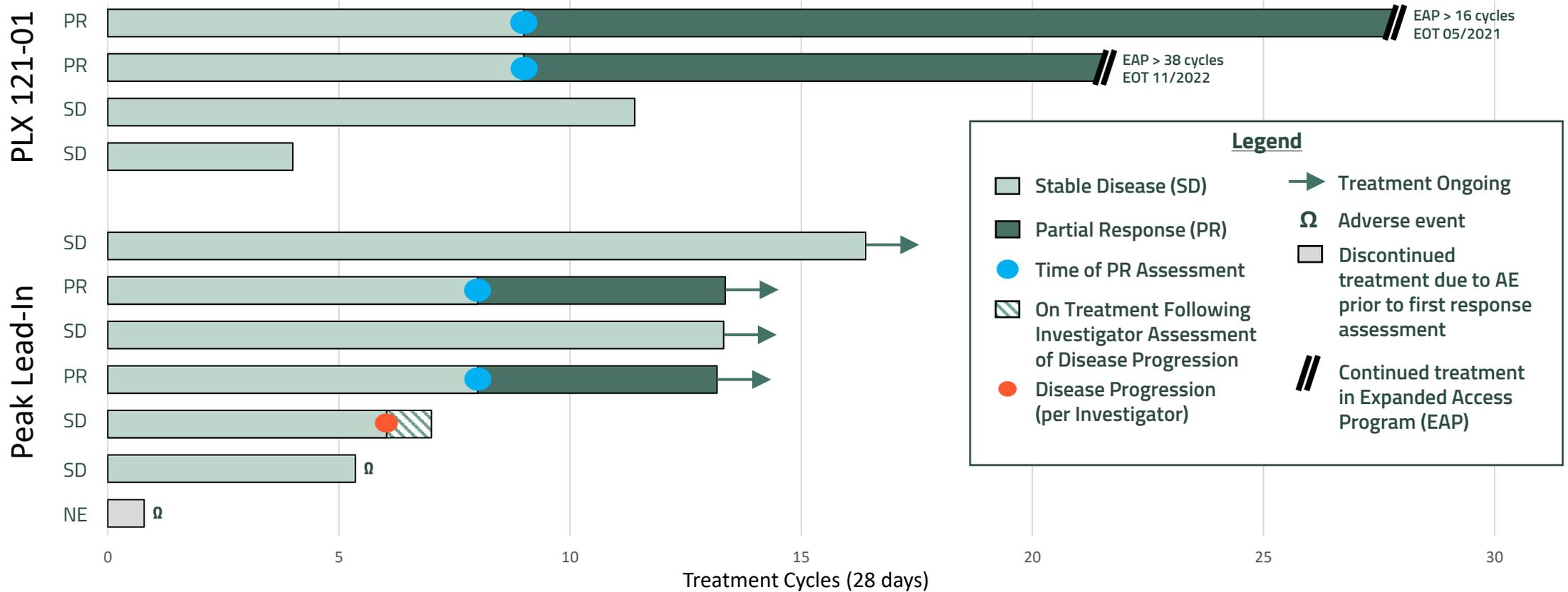
- Majority of TEAEs were of low CTCAE grade and reversible
- Low rate of Grade 3+ events
- Only three patients experienced serious adverse events possibly associated with study medications:
 - Gr 2 neutrophil count decrease and pyrexia and Gr 3 platelet count decrease
 - Gr 2 bacterial peritonitis and Gr 3 febrile neutropenia
 - Gr 3 anemia, asthenia, and edema peripheral
- Limited (24%) dose reductions of any study medications due to TEAEs
- Infrequent (n=2) discontinuations due to TEAEs
 - Gr 2 Rash; Gr 1 abdominal pain and Gr 3 diarrhea

TEAEs >15%	Total (n=42)	
	All Grade (%)	Grade 3/4 (%)
Diarrhea	52	5
Fatigue	43	-
Nausea	33	-
Hair Color Changes	31	-
Hypertension	31	14
Taste disorder	29	-
GERD	19	-
ALT/AST increased	19	5
Neutropenia	17	5
Rash	17	-

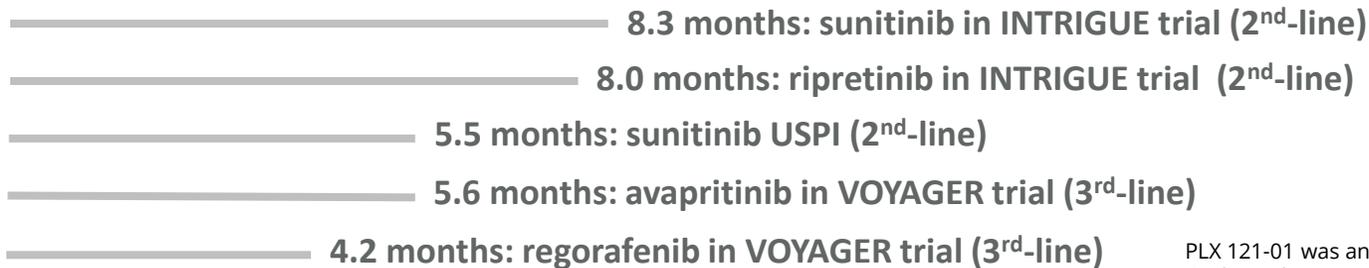
The safety and tolerability profile appears generally consistent with published sunitinib monotherapy experience



Bezuclastinib + Sunitinib in 2nd-line GIST: Encouraging ORR & Durability



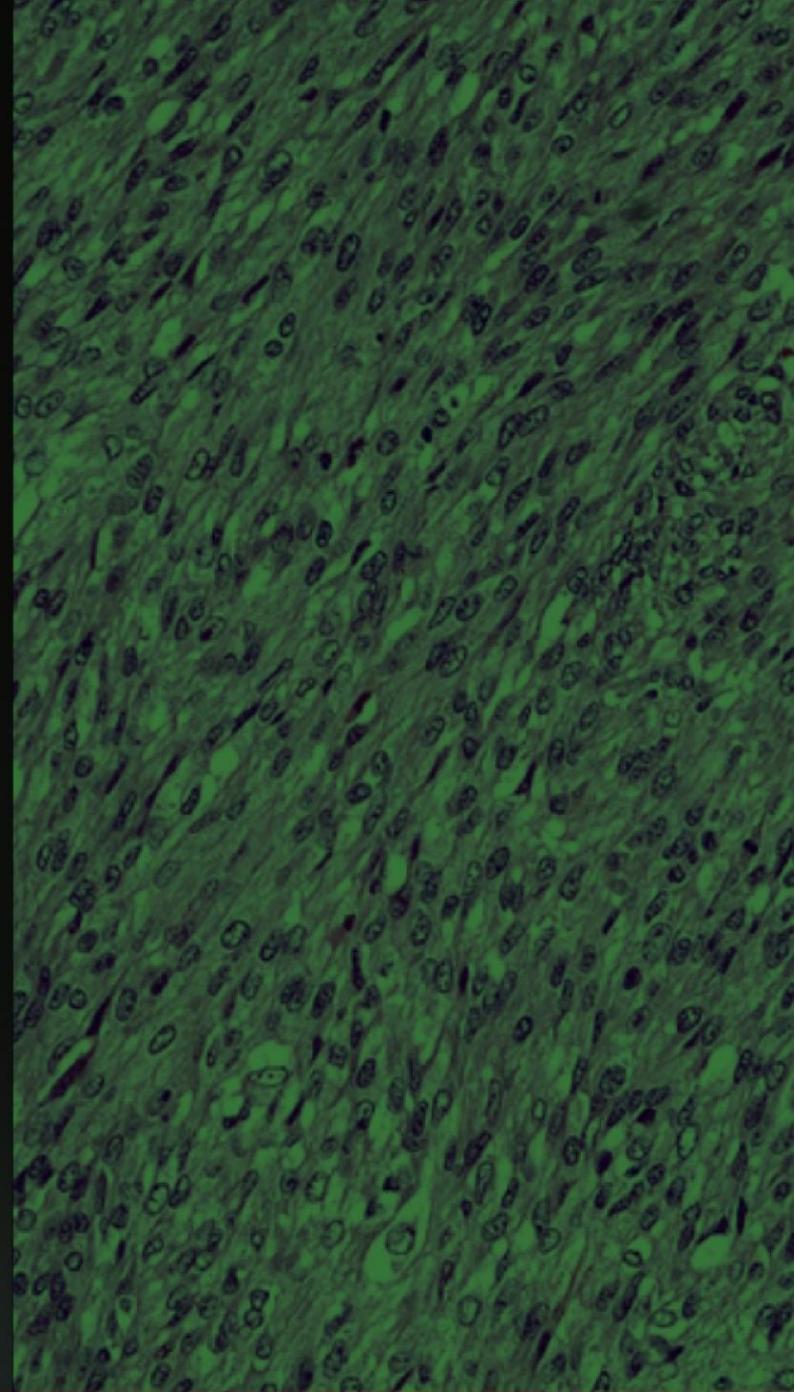
GIST mPFS benchmarks



PLX 121-01 was an 18-patient study in heavily pretreated GIST population
Peak Lead-In was a 42-patient study in the combination of Sutent and Bezuclastinib



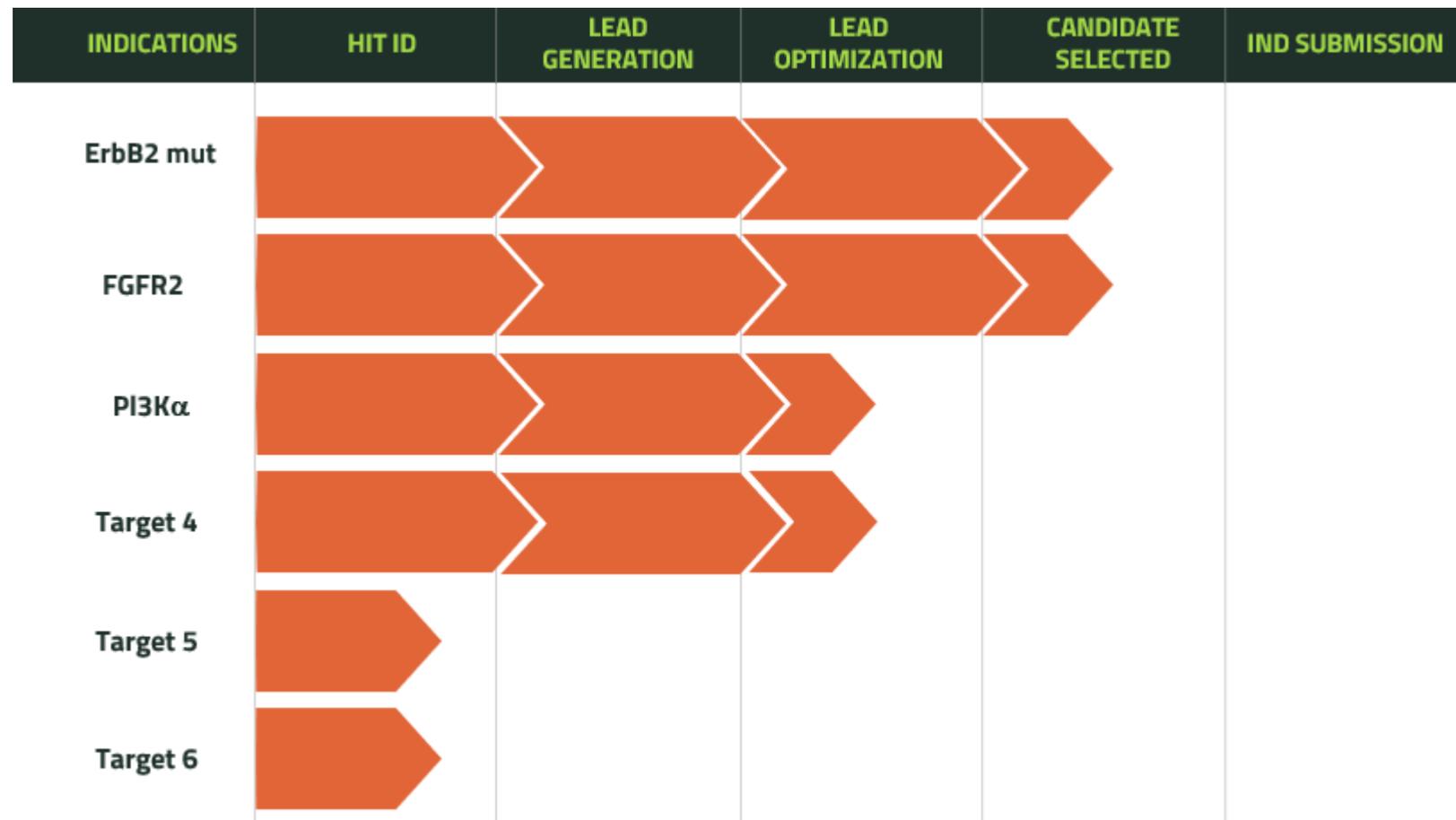
**PRECLINICAL PIPELINE
OF POTENTIALLY
BEST-IN-CLASS SMALL
MOLECULE KINASE
INHIBITORS**



Building a Portfolio of Discovery Stage Programs

Creating potential best-in-class small molecule kinase inhibitors for genetically defined oncology and rare disease

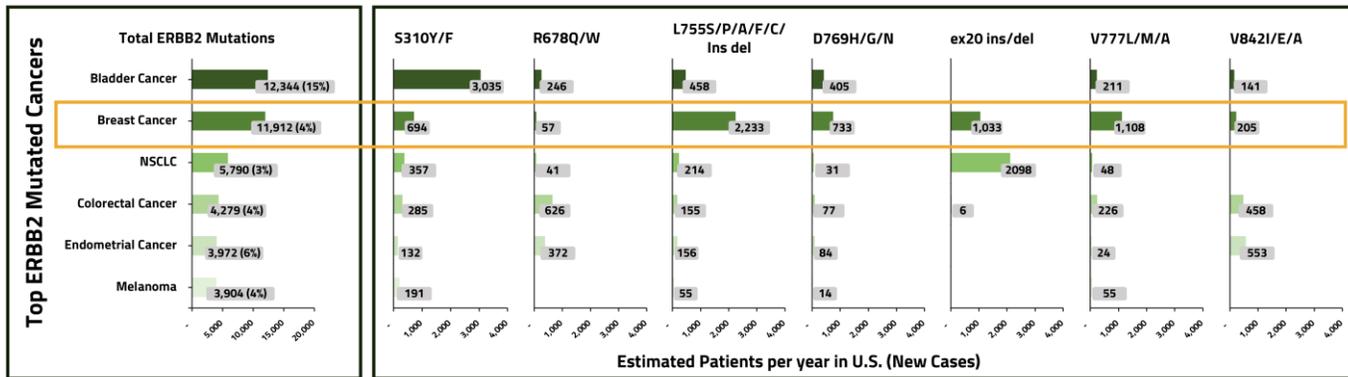
- Novel EGFR-sparing, brain-penetrant ErbB2 inhibitor active against key oncogenic ErbB2 mutations
- Next-generation FGFR2 program retains potency across all primary, gatekeeper and molecular brake resistance mutations
- WT-sparing PI3K α inhibitor provides coverage for the H1047R mutation



Creating a Best-in-Class EGFR-sparing, pan-mutant ErbB2 Inhibitor

CGT4255 is a highly potent and selective ErbB2 inhibitor targeting resistance (YVMA), kinase, and extracellular domain mutations, with best-in-class potential performance in multiple underserved patient populations

Prevalence of Oncogenic Mutations of ErbB2^{4,5}



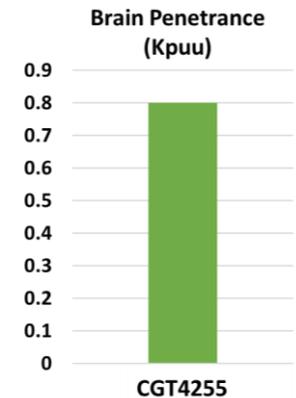
CGT4255	ErbB2 Cellular IC ₅₀ Inhibition of pErbB2				
	ErbB2 WT	L755S	YVMA	S310F	V842I
	8 nM	9 nM	3 nM	7 nM	15 nM

Adjusted for FBS-binding



Outperform:

- Minimal shift across all relevant mutations, YVMA and ErbB2 wt isoforms
- Best in class potential CNS exposure
- Superior whole blood stability across ErbB2-covalent MOA/drug class
- Superior *in vitro* and *in vivo* performance vs. SOC- ex.~Tucatinib
- Ability to combine therapeutically with ADC, other TKIs and mAbs



Observed Kpuu when dosed at 100 mg/kg; 1h time point in mice



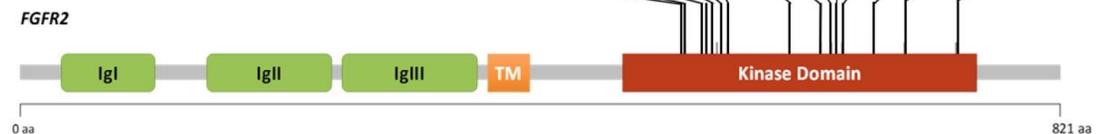
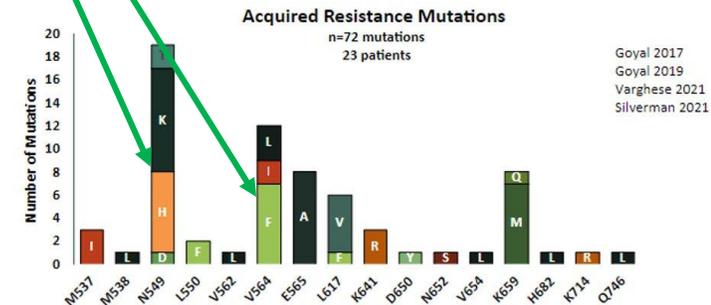
Optimizing Best-in-Class FGFR1-sparing, pan-mutant FGFR2 Inhibitor

CGT4859 demonstrates potent cellular inhibition of key gatekeeper and molecular brake mutations (V564I, N549K) that have been shown as main mechanisms of resistance to existing FGFR-directed therapies

Target	Pemigatinib	Erdafitinib	Futibatinib	RLY-4008	CGT4859
Cellular pFGFR Inhibition IC₅₀					
FGFR2-WT	2nM	2nM	2nM	4nM	2nM
Fold Shift vs FGFR2 Cellular IC₅₀					
FGFR1-WT	7x	4x	2x	250x	140x
FGFR2-V564F	>500x	>500x	64x	<1x	3x
FGFR2-V564I	38x	1x	1x	11x	4x
FGFR2-N549K	165x	40x	3x	7x	3x
FGFR3-V555M	>500x	75x	112x	48x	4x
chemotype	reversible	reversible	covalent	covalent	reversible

This series of analogs are the first publicly disclosed FGFR1 sparing, reversible FGFR2 inhibitors that address all the major activating and resistance mutations

Fig. 1b FGFR2 Resistance Mutations in Cholangiocarcinoma occur in the kinase domain in response to pan-FGFR inhibition



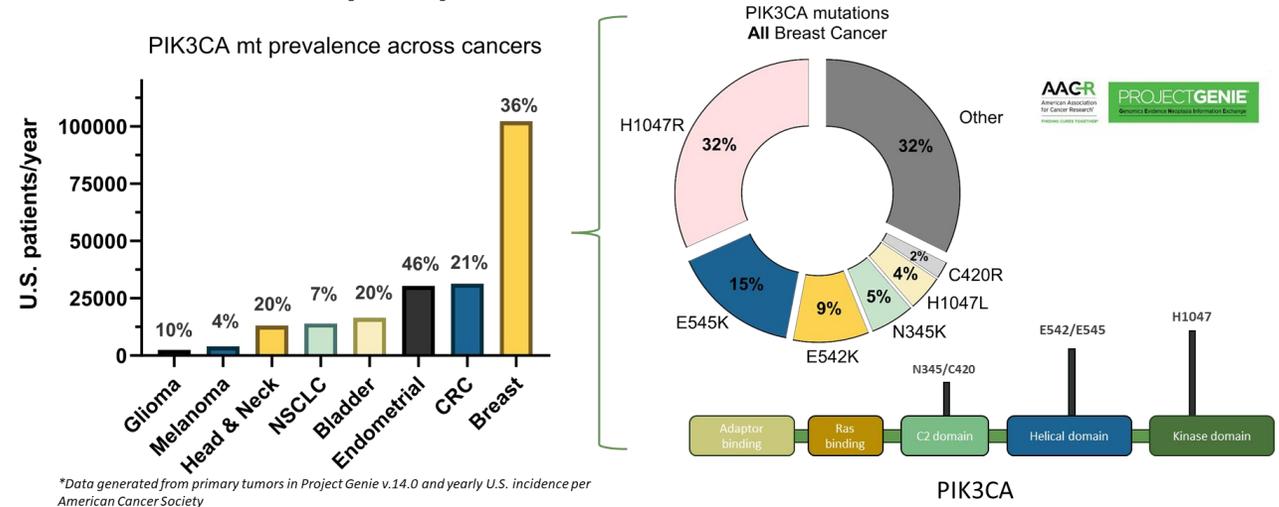
- Resistance mutations detected in patients through ctDNA analysis after treatment with pan-FGFR inhibitors (Pemigatinib, Infigratinib)
- FGFR2-N549K/D/H/S/T also occur as a common primary mutation in Cholangiocarcinoma (5.2% of primary FGFR2 mutations)

Creating a Selective PI3K α Kinase Domain Mutant Inhibitor

Cogent lead series demonstrates selectivity for PI3K α H1047R over WT, with opportunity to treat H1047R mutant across tumor type

Assay	CGT4824	CGT5450	CGT5580	Apelisib
H1047R Mutant Cell Line IC ₅₀ *				
T47D Cellular IC ₅₀	21 nM	14 nM	8 nM	78 nM
Selectivity window over Pi3Ka wild type	15x	28x	35x	0.7 x

PI3K Mutational Frequency in Solid Tumors and Distribution in Breast Cancer

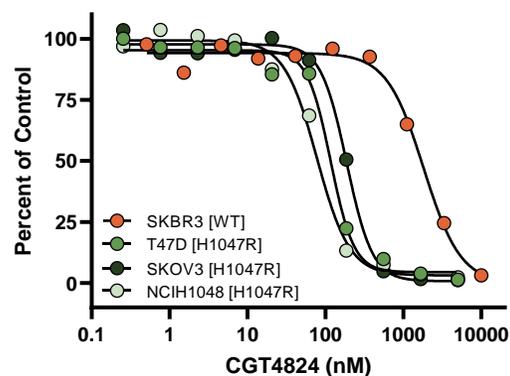


- PI3K α mutations are highly prevalent in many solid tumors including bladder, endometrial, colorectal, and breast cancer^{2,3}
- H1047R is the most common PI3K α mutation encompassing ~32% of all PI3K α mutations in breast cancer
- On-target inhibition of Wild Type PI3K α by approved inhibitors, such as Apelisib, has led to tolerability issues including hyperglycemia, gastrointestinal issues, and skin reactions
- Potential best-in-class, wild-type-sparing, PI3K α inhibitor provides coverage for the H1047R mutation

CGT4824 Demonstrates *in vivo* POC for our H1047R selective lead series

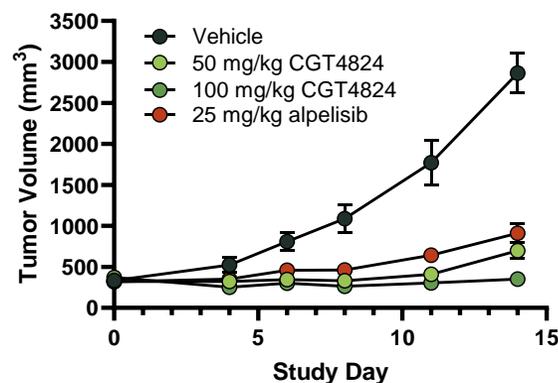
Cogent lead series demonstrates selectivity for PI3K α H1047R over WT identified

CGT4824 shows robust inhibition of H1047 mutant cell lines



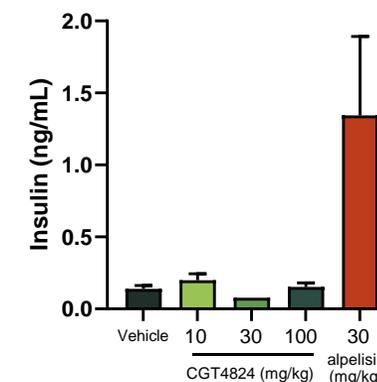
- CGT4824 was profiled in four cell lines measuring inhibition of pAKT
- CGT4824 shows 15x mutant selectivity compared to WT PI3K SKBR3 line

CGT4824 Showed Superior Efficacy Compared to Alpelisib in an NCI-H1048 Tumor Model



- CGT4824, in a dose response fashion, achieved maximal tumor growth inhibition compared to a clinically-relevant alpelisib dose
- Well tolerated with $\leq 5\%$ body weight loss and no deaths observed at any of the doses

CGT4824 shows >95% inhibition of pAKT with no increase in insulin or C-peptide in a H1047R PD model



- At maximally efficacious concentrations CGT4824 does not show increases in insulin or C-peptide

- CGT4824 demonstrates superior efficacy compared to a clinically-relevant dose of alpelisib in the NCI H1048 mouse tumor growth inhibition model
- CGT4824 was well tolerated in the TGI efficacy models
- Next Gen Cogent compounds are continuing to show increased potency (<10 nM) and selectivity (>35-fold) to enable high clinical target engagement without metabolic dysfunction caused by inhibition of WT PI3K

Cogent Biosciences: Anticipated Upcoming Catalysts

Clinical Milestones

- ✓ Present results from SUMMIT Part 1 at AAAAI in Q1 2024
- ✓ Initiate global, registration-directed SUMMIT Part 2 trial in 1H 2024
- Complete Phase 3 PEAK (2L GIST) enrollment by YE 2024; topline results YE 2025
- Complete APEX Part 2 (AdvSM) enrollment by YE 2024; topline results mid-2025
- Complete SUMMIT Part 2 (NonAdvSM) enrollment in 2Q 2025; topline results YE 2025

Research Milestones

- Initiate Phase 1 trial of CGT4859, a potential best-in-class FGFR2 inhibitor, in 2H 2024
- Initiate IND-enabling studies for CNS-penetrant, potent ErbB2 inhibitor
- Select clinical candidate and initiate IND-enabling studies for a novel H1047R PI3K α inhibitor

\$435.7M as of March 31, 2024; expected to fund operations into 2027



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Precision therapies for genetically defined diseases