UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): August 08, 2023

RELAY THERAPEUTICS, INC.

(Exact name of Registrant as Specified in Its Charter)

Delaware	**001-39385**	**47-3923475**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

399 Binney Street **Cambridge, Massachusetts**	**02139**
(Address of Principal Executive Offices)	**(Zip Code)**

Registrant's Telephone Number, Including Area Code: (617) 370-8837

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Trading Symbol(s)**	**Name of each exchange on which registered**
Common Stock, par value $0.001 per share	RLAY	Nasdaq Global Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 2.02 Results of Operations and Financial Condition.

On August 8, 2023, Relay Therapeutics, Inc. (the "Company") announced its financial results for the quarter ended June 30, 2023. A copy of the press release is being furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information in this Current Report on Form 8-K and Exhibit 99.1 attached hereto is intended to be furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such filing.

Item 7.01 Regulation FD Disclosure.

On August 8, 2023, the Company released an updated corporate presentation, a copy of which is being furnished as Exhibit 99.2 to this Current Report on Form 8-K. The presentation will also be made available in the "Investors & Media" section on the Company's website at www.relaytx.com.

The information in this Item 7.01, including Exhibit 99.2 attached hereto, is intended to be furnished and shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such filing.

Item 9.01 Financial Statements and Exhibits.

99.1	Press release issued by Relay Therapeutics, Inc. on August 8, 2023, furnished herewith.
99.2	Corporate presentation, dated August 8, 2023, furnished herewith.
104	Cover Page Interactive Data File (embedded within Inline XBRL document).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

RELAY THERAPEUTICS, INC.

Date: August 8, 2023

By: /s/ Brian Adams
Brian Adams
Chief Legal Officer

Relay Therapeutics Reports Second Quarter 2023 Financial Results and Corporate Highlights

Initiated dose expansion cohort for RLY-2608 600mg BID + fulvestrant in patients with PI3Kα-mutated, HR+/HER2- metastatic breast cancer

Updated RLY-2608 600mg BID + fulvestrant data: interim clinical benefit rate of 86% (6 of 7 evaluable patients) & 1 of 5 patients with measurable disease achieved a partial response

Clinical benefit, including partial responses, observed across PI3Kα mutations and dose levels

Approximately $872 million in cash, cash equivalents and investments at end of Q2 2023, expected to fund operations into second half of 2025

Cambridge, Mass. – August 8, 2023 – Relay Therapeutics, Inc. (Nasdaq: RLAY), a clinical-stage precision medicine company transforming the drug discovery process by combining leading-edge computational and experimental technologies, today reported second quarter 2023 financial results and corporate highlights.

“In the second quarter of 2023, we continued to advance our pipeline and progress our breast cancer portfolio,” said Sanjiv Patel, M.D., president and chief executive officer of Relay Therapeutics. “In July, we initiated the first RLY-2608 + fulvestrant dose expansion cohort. The additional RLY-2608 data supporting this decision, and the breadth of our breast cancer franchise, continue to drive our confidence that we are building a comprehensive solution for the more than 100,000 patients diagnosed with PI3Kα-mutated breast cancer in the U.S. each year.”

RLY-2608 Update

In July 2023, initiated dose expansion cohort with RLY-2608 600mg BID + fulvestrant in patients with PI3Kα-mutant, HR+, HER2– locally advanced or metastatic breast cancer

- Selection of 600mg BID dose supported by updated data from 17 breast cancer patients treated with RLY-2608 600mg BID + fulvestrant (cut-off date of July 24, 2023)
    - Interim clinical benefit rate (CBR) of 86 percent (6 of 7 CBR-evaluable patients) (CBR defined as the proportion of patients with stable disease, complete response, or partial response for at least 24 weeks)
    - Fifteen of 17 patients remain on treatment as of the cut-off date
    - One of five efficacy-evaluable patients with measurable disease achieved a confirmed partial response (PR) and remains on treatment as of the cut-off date (helical mutation)
    - Interim safety data compelling for use in metastatic breast cancer combinations
- Overall, updated data strengthen the RLY-2608 profile and continue to support selective target engagement across doses and mutation types with favorable interim safety and tolerability data. As of the July 24th data cut-off, 43 total breast cancer patients had received RLY-2608 monotherapy (n=4) or RLY-2608 + fulvestrant (n=39)

    - Four of 24 efficacy-evaluable patients with measurable disease achieved PRs, including three confirmed (400mg BID mono with double mutation; 100mg BID combo with kinase mutation; 600mg BID combo with helical mutation) and one unconfirmed (800mg BID combo with helical mutation)
    - The interim safety profile of RLY-2608 remains consistent with safety data previously reported at AACR
        - No adverse event-related discontinuations
        - No Grade 3+ hyperglycemia or diarrhea
- Data from ongoing dose escalation arms could support decision to bring an additional dose into dose expansion in the future
- Next data update expected in 2024

Additional Recent Corporate Highlights

RLY-4008

- Presented full dose escalation data from the ReFocus study at 2023 American Society of Clinical Oncology Annual Meeting

Anticipated Upcoming Milestones

- RLY-4008
    - Complete enrollment of pivotal cohort in the second half of 2023
    - Data from non-CCA expansion cohorts in the second half of 2023
- RLY-2608
    - Next data update expected in 2024
- ERα degrader: development candidate nomination in 2023
- RLY-2139 (selective CDK2 inhibitor): clinical start in early 2024, pending regulatory authorization

Second Quarter 2023 Financial Results

Cash, Cash Equivalents and Investments: As of June 30, 2023, cash, cash equivalents and investments totaled $871.6 million compared to approximately $1 billion as of December 31, 2022. Relay Therapeutics expects its current cash, cash equivalents and investments will be sufficient to fund its current operating plan into the second half of 2025.

R&D Expenses: Research and development expenses were $88.2 million for the second quarter of 2023, as compared to $60.5 million for the second quarter of 2022. The increase was primarily due to $13.6 million of additional clinical trial expenses and $9.3 million of additional employee-related costs, which include $5.0 million of additional stock-based compensation expense.

G&A Expenses: General and administrative expenses were $20.1 million for the second quarter of 2023, as compared to $17.5 million for the second quarter of 2022. The increase was primarily due to additional employee-related costs, which include $3.3 million of additional stock-based compensation expense.

Net Loss: Net loss was $98.5 million for the second quarter of 2023, or a net loss per share of $0.81, as compared to a net loss of $76.8 million for the second quarter of 2022, or a net loss per share of $0.71.

About Relay Therapeutics

Relay Therapeutics (Nasdaq: RLAY) is a clinical-stage precision medicine company transforming the drug discovery process by combining leading-edge computational and experimental technologies with the goal of bringing life-changing therapies to patients. As the first of a new breed of biotech created at the intersection of complementary techniques and technologies, Relay Therapeutics aims to push the boundaries of what's possible in drug discovery. Its Dynamo™ platform integrates an array of leading-edge computational and experimental approaches designed to drug protein targets that have previously been intractable or inadequately addressed. Relay Therapeutics' initial focus is on enhancing small molecule therapeutic discovery in targeted oncology and genetic disease indications. For more information, please visit www.relaytx.com or follow us on Twitter.

Cautionary Note Regarding Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, implied and express statements regarding Relay Therapeutics' strategy, business plans and focus; the progress and timing of the clinical development of the programs across Relay Therapeutics' portfolio, including the expected therapeutic benefits of its programs, timing of enrollment completion, potential efficacy and tolerability, and the timing and success of interactions with and approval of regulatory authorities; the timing of a clinical data update for RLY-2608, the initiation of an additional expansion cohort for RLY-2608, the timing of a clinical data update for RLY-4008, the completion of the pivotal cohort enrollment for RLY-4008, the clinical initiation of RLY-2139, and the nomination of a development candidate for Relay Therapeutics' ERα degrader program; expectations regarding Relay Therapeutics' pipeline, operating plan, use of capital, expenses and other financial results; and Relay Therapeutics' cash runway projection. The words "may," "might," "will," "could," "would," "should," "plan," "anticipate," "intend," "believe," "expect," "estimate," "seek," "predict," "future," "project," "potential," "continue," "target" and similar words or expressions, or the negative thereof, are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

Any forward-looking statements in this press release are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, risks associated with: the impact of global economic uncertainty, geopolitical instability, or public health epidemics or outbreaks of an infectious disease, such as COVID-19, on countries or regions in which Relay Therapeutics has operations or does business, as well as on the timing and anticipated results of its clinical trials, strategy, future operations and profitability; the delay of any current or planned clinical trials or the development of Relay Therapeutics' drug candidates; the risk that the preliminary results of its preclinical or clinical trials may not be predictive of future or final results in connection with future clinical trials of its product candidates; Relay Therapeutics' ability to successfully demonstrate the safety and efficacy of its drug candidates; the timing and outcome of its planned interactions with regulatory authorities; and obtaining, maintaining and protecting its intellectual property. These and other risks and uncertainties are described in greater detail in the section entitled "Risk Factors" in Relay Therapeutics' most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q, as well as any subsequent filings with

the Securities and Exchange Commission. In addition, any forward-looking statements represent Relay Therapeutics' views only as of today and should not be relied upon as representing its views as of any subsequent date. Relay Therapeutics explicitly disclaims any obligation to update any forward-looking statements. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

Contact:
Megan Goulart
617-545-5526
mgoulart@relaytx.com

Media:
Dan Budwick
1AB
973-271-6085
dan@1abmedia.com

Relay Therapeutics, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(In thousands, except share and per share data)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Revenue:				
License and other revenue	$ 119	$ 365	$ 345	$ 784
Total revenue	119	365	345	784
Operating expenses:				
Research and development expenses	$ 88,201	$ 60,511	$ 171,028	$ 112,178
Change in fair value of contingent consideration liability	(2,152)	200	(3,155)	(4,395)
General and administrative expenses	20,120	17,465	39,699	33,533
Total operating expenses	106,169	78,176	207,572	141,316
Loss from operations	(106,050)	(77,811)	(207,227)	(140,532)
Other income:				
Interest income	7,559	1,005	14,500	1,701
Other (expense) income	(14)	18	(17)	(3)
Total other income, net	7,545	1,023	14,483	1,698
Net loss	$ (98,505)	$ (76,788)	$ (192,744)	$ (138,834)
Net loss per share, basic and diluted	$ (0.81)	$ (0.71)	$ (1.59)	$ (1.28)
Weighted average shares of common stock, basic and diluted	121,680,844	108,644,329	121,501,849	108,469,760
Other comprehensive loss:				
Unrealized holding (loss) gain	(279)	(2,688)	4,339	(10,818)
Total other comprehensive (loss) gain	(279)	(2,688)	4,339	(10,818)
Total comprehensive loss	$ (98,784)	$ (79,476)	$ (188,405)	$ (149,652)

Relay Therapeutics, Inc.
Selected Condensed Consolidated Balance Sheet Data
(In thousands)
(Unaudited)

	June 30, 2023	December 31, 2022
Cash, cash equivalents and investments	$ 871,573	$ 998,917
Working capital (1)	812,765	955,796
Total assets	962,016	1,099,771
Total liabilities	151,897	149,553
Total stockholders' equity	810,119	950,218
Restricted cash	2,707	2,578

(1) Working capital is defined as current assets less current liabilities.

Exhibit 99.2

RELAY®
THERAPEUTICS

Corporate Presentation

As of August 08, 2023

Disclaimer

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, implied and express statements regarding our strategy, business plans and focus; the progress and timing of the clinical development of the programs across our portfolio, including the expected therapeutic benefits of our programs, timing of enrollment completion, and potential efficacy and tolerability, and the timing and success of interactions with and approval of regulatory authorities; the timing of clinical data updates for RLY-2608 and RLY-4008, the initiation of expansion cohorts for RLY-2608, the completion of the pivotal cohort enrollment for RLY-4008, the clinical initiation of RLY-2139, and the nomination of a development candidate for our ERα degrader program; our expectations with respect to the potential pivotal dose for RLY-4008, including potential regulatory filings and interactions; expectations regarding our pipeline, operating plan, use of capital, expenses and other financial results; our cash runway projection; the competitive landscape and potential market opportunities for our product candidates; the expected strategic benefits under our collaborations; our ability to successfully establish or maintain collaborations or strategic relationships for our product candidates; expectations regarding current and future interactions with the U.S. Food and Drug Administration (FDA); our ability to manufacture our product candidates in conformity with the FDA's requirements; the capabilities and development of our Dynamo™ platform; our plans to develop, manufacture and commercialize our current product candidates and any future product candidates; and the implementation of our business model and strategic plans for our business, current product candidates and any future product candidates. The words "may," "might," "will," "could," "would," "should," "plan," "anticipate," "intend," "believe," "expect," "estimate," "seek," "predict," "future," "project," "potential," "continue," "target" and similar words or expressions, or the negative thereof, are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

Any forward-looking statements in this presentation are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this presentation, including, without limitation, risks associated with: the impact of global economic uncertainty, geopolitical instability, or public health epidemics or outbreaks of an infectious disease, such as COVID-19, on countries or regions in which we have operations or do business, as well as on the timing and anticipated results of our clinical trials, strategy, future operations and profitability; the delay of any current or planned clinical trials or the development of our drug candidates; the risk that the preliminary results of our preclinical or clinical trials may not be predictive of future or final results in connection with future clinical trials of our product candidates; our ability to successfully demonstrate the safety and efficacy of our drug candidates; the timing and outcome of our planned interactions with regulatory authorities; and obtaining, maintaining and protecting our intellectual property. These and other risks and uncertainties are described in greater detail in the section entitled "Risk Factors" in our most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q, as well as any subsequent filings with the Securities and Exchange Commission. Any forward-looking statements represent our views only as of the date of this presentation and we undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, the occurrence of certain events or otherwise. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

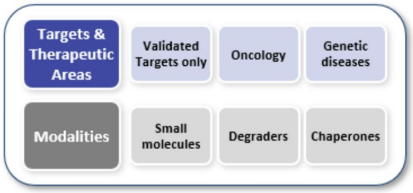
Certain information contained in this presentation relates to or is based on studies, publications, surveys and other data obtained from third-party sources and our own internal estimates and research. While we believe these third-party studies, publications, surveys and other data to be reliable as 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. In addition, no independent source has evaluated the reasonableness or accuracy of our internal estimates or research and no reliance should be made on any information or statements made in this presentation relating to or based on such internal estimates and research.

This presentation contains trademarks, trade names and service marks of other companies, which are the property of their respective owners.

Relay Tx – Patient-Driven

New Breed of Biotech

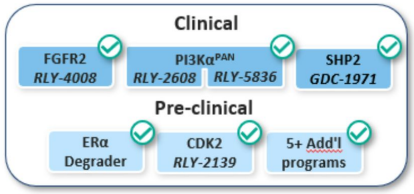
Clear Focus



~$872M

Cash, cash equivalents and investments as of the end of 2Q 2023

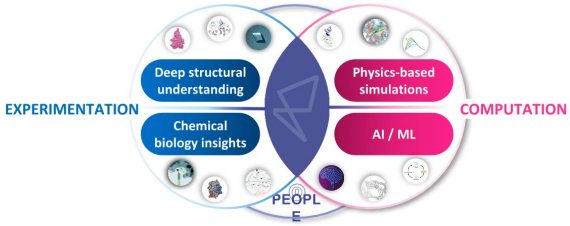
Validated Approach



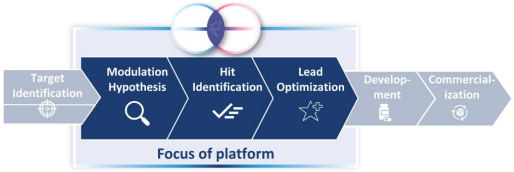
Execution-Focused

Relay Tx – Dynamo™ Platform

1 Dynamo™ Platform…

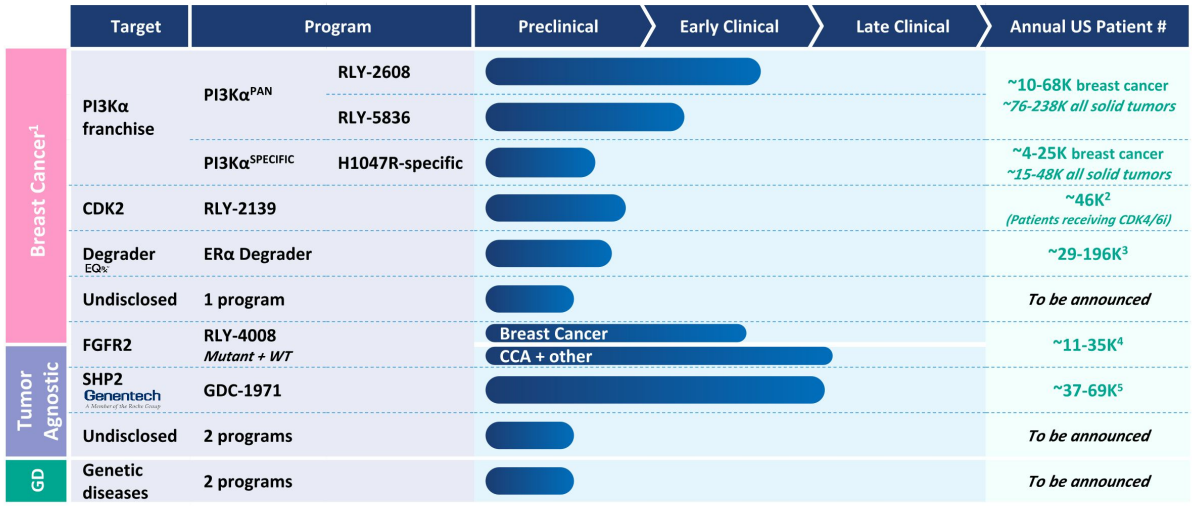


2 …is focused on making medicines



3 …aims to address selectivity on validated targets

Relay Tx – Extensive Precision Medicine Pipeline



Note: Unless otherwise indicated, patient #'s refer to total annual number of US patients with late-line cancers compared to comprehensive annual incidence that may be amenable to treatment with our programs

1. Unless otherwise indicated, all breast cancer patient numbers refer to HR+/HER2- breast cancer tumors; 2. ~46K HR+/HER2- breast cancer patients expected to receive CDK 4/6 inhibitors in adjuvant setting, first-line setting, and second-line setting in 2023, per Decision Resources Breast Cancer Market Forecast report dated June 2022; 3. HR+/HER2- US late-line breast cancer patients compared to HR+/HER2- US incident breast cancer patients; 4. FGFR2 altered late-line solid tumors compared to comprehensive annual FGFR2 altered incident solid tumors including additional FGFR gene fusions and rearrangements resulting from truncation of the protein at exon 18 and all breast cancer patients with FGFR2 alterations; 5. SHP2 combo only includes KRAS G12C in lung and colorectal, EGFR mutations in lung, and ALK fusions in lung

Relay Tx – Capital, Team & Execution Focus to Deliver on Key Milestones

RELAY THERAPEUTICS

Breast Cancer Franchise

PI3Kα^{PAN}

- ✓ Initial RLY-2608 data in 1H 2023
- ✓ RLY-5836 clinical start in 2Q 2023
- ✓ RLY-2608 expansion cohorts initiated in 2H 2023
- Additional data update in 2024

RLY-2139 (Selective CDK2)

Clinical start in early 2024

ERα Degrader

Development candidate nomination in 2023

Tumor Agnostic

RLY-4008 (Selective FGFR2)

- ✓ Full dose escalation data in 1H 2023 (2023 ASCO)
- Non-CCA expansion cohorts data in 2H 2023
- Pivotal cohort full enrollment in 2H 2023

GDC-1971 (SHP2)

Ongoing combo trials; Genentech controls data disclosures

Undisclosed

To be announced

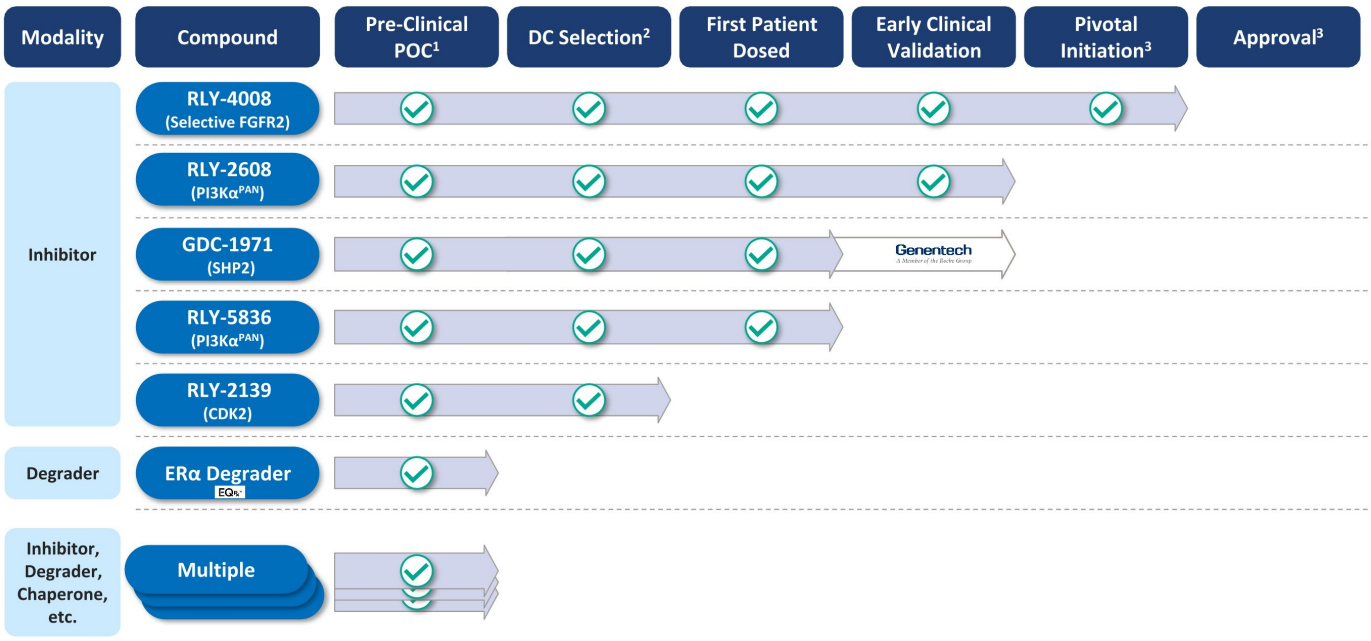
5+ undisclosed programs in preclinical development and additional early-stage efforts across platform

~$872M

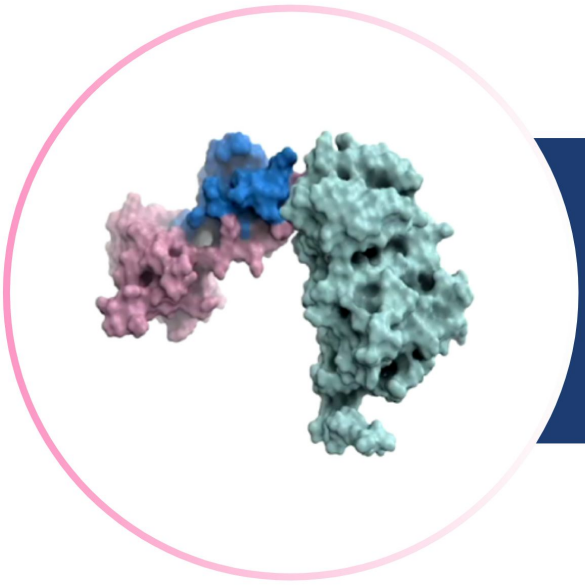
Cash, cash equivalents and investments as of the end of 2Q 2023

Current cash, cash equivalents and investments are expected to be sufficient to fund current operating plan into 2H 2025

Relay Tx – Continued Dynamo™ Platform Validation

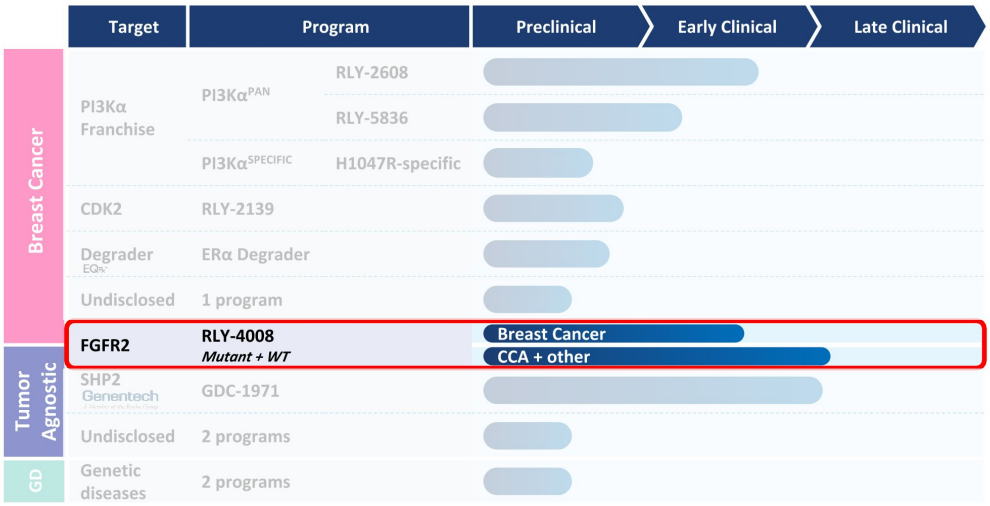


1. POC - proof-of-concept. 2. DC - development candidate. 3. Subject to alignment with regulatory authorities



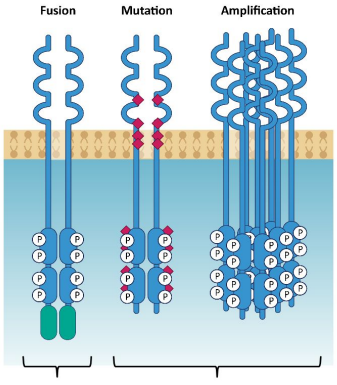
Relay Tx Programs

Relay Tx – Extensive Precision Medicine Pipeline



FGFR2 – Validated Target Present in Several Tumor Types

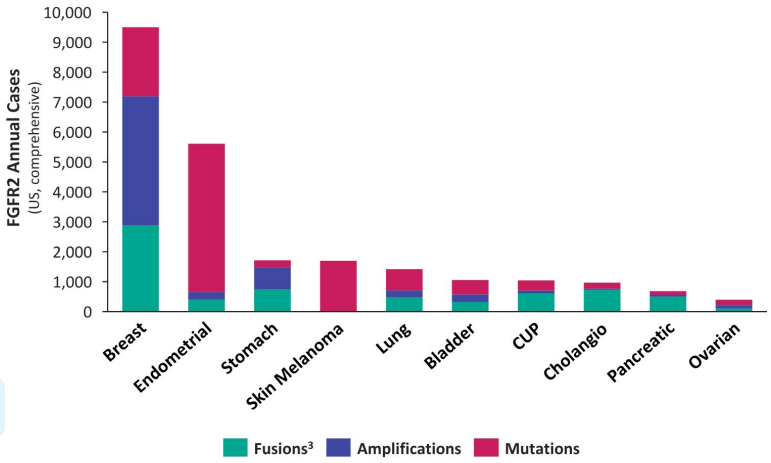
Three classes of driver alterations in FGFR2



Annual US Patient Count[1]

Total FGFR2 alterations[1]: ~11-35K patients

FGFR2 alterations are observed across multiple tumor types[2]



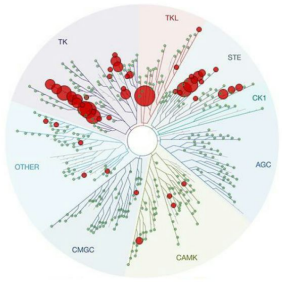
Sources: Image adapted from Babina IS, Turner NC. Nat Rev Cancer 2017;17: 318-332; Internal analysis based on third party industry data

1. All patient #'s refer to total annual number of US patients with late-line cancers vs. comprehensive annual incidence that may be amenable to treatment with our programs including additional FGFR gene fusions and rearrangements resulting from truncation of the protein at exon 18; 2. Cholangio, cholangiocarcinoma (CCA); CUP, carcinoma unknown primary; 3. FGFR2 fusion estimates include del18 truncations;

FGFR2 – Limitations of Current FGFR Inhibitor Landscape

Limited Selectivity

Approved Pan-FGFRis are non-specific across FGFR family



Limited Tolerability

High rates of off-target toxicity (esp. FGFR1,4)

FDA Approved Compound	% of Patients with Hyperphosphatemia	% of Patients with Diarrhea
Pemigatinib	94%	47%
Futibatinib	88%	39%
Erdafitinib	76%	47%

Limited Target Inhibition

Pemigatinib 13.5mg QD achieves 76% inhibition of FGFR2 at trough[1]

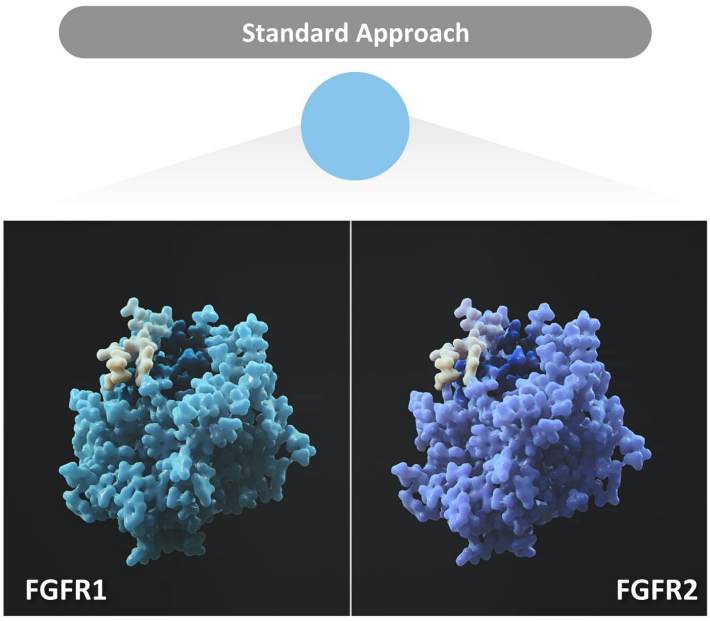
Limited Efficacy

36-42% **Objective Response Rate** in Fusion+ CCA FGFRi-naïve pts

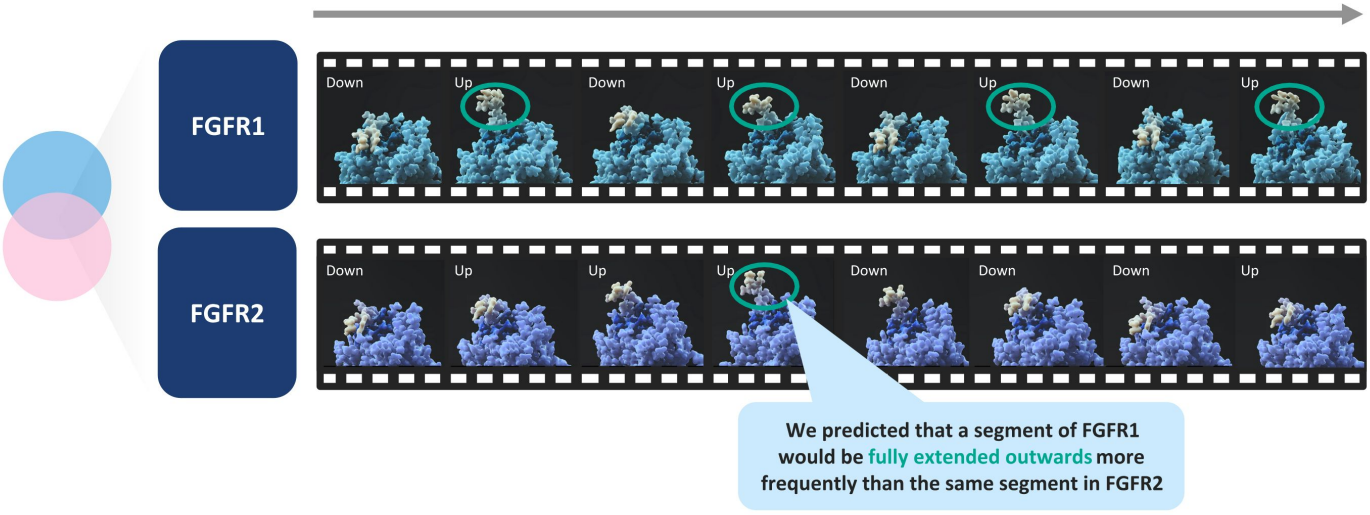
Sources: Pemigatinib – prescribing information; futibatinib – prescribing Information; erdafitinib – prescribing information

1. From pemigatinib NDA review documents: "Pemigatinib 13.5 mg daily provided 76% inhibition of ex vivo phosphorylated FGFR2α at trough"

FGFR2 – Standard Approach to Discovery Has Had Limited Success



FGFR2 – Increasing Resolution Reveals New Opportunities

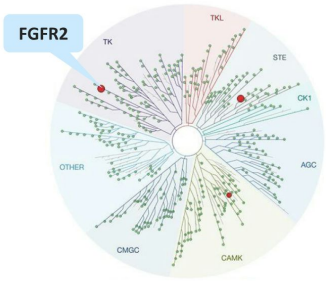


We predicted that a segment of FGFR1 would be fully extended outwards more frequently than the same segment in FGFR2

Exploiting the dynamic difference between FGFR1 and FGFR2 enabled Relay Tx to design a selective FGFR2 inhibitor

RLY-4008 – Is A Highly Selective and Irreversible Inhibitor

RLY-4008

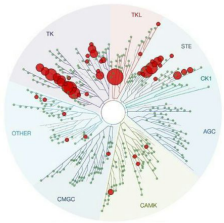


Percent Control

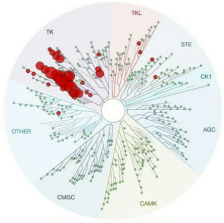
- 0%
- 0.1%
- 0.1-1%
- 1-5%
- 5-10%
- 10-35%
- > 35%

Pan-FGFR Inhibitors

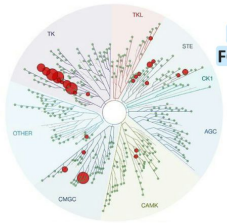
AZD4547



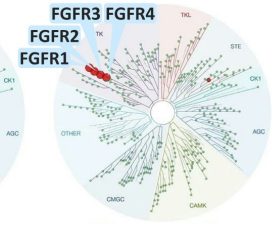
Erdafitinib



Pemigatinib



Futibatinib



Percent Control

- 0%
- 0.1%
- 0.1-1%
- 1-5%
- 5-10%
- 10-35%
- > 35%

Note: Single experiment that tested each compound run at 500nM against 468 targets in the absence of ATP and without preincubation
Source: KINOMEscan™ by Eurofins DiscoverX

RLY-4008 – ReFocus Trial Design

Part 1: Dose Escalation

Unresectable or metastatic solid tumors

FGFR2 alterations per local assessment

Both FGFRi-naïve & FGFRi-treated allowed

RLY-4008
RP2D:
70 mg QD

Part 2: Dose Expansion

Cholangiocarcinoma (CCA)

Pivotal cohort

FGFR2-fusion+ CCA without prior FGFRi *(N=100)*

Pivotal supportive

- FGFR2-fusion+ CCA with prior FGFRi *(N=50)*
- FGFR2-fusion+ CCA with no prior treatment *(N=20)*
- Any FGFR2-mutant/amplified CCA *(N=20)*

Non-CCA advanced, solid tumors with FGFR2 alterations

- FGFR2-fusion+ non-CCA solid tumors *(N=50)*
- FGFR2-amplified non-CCA solid tumors *(N=50)*
- FGFR2-mutant non-CCA solid tumors *(N=50)*

RLY-4008 – Patient Characteristics

Parameter	Fusion+ CCA FGFRi-Naïve[1]		Total (N=195)[2]
	70 mg QD (N=17)	All doses (N=38)	
Age (years), median (range)	57 (36-81)	58 (33-81)	59 (23-87)
Female, %	59%	58%	62%
Race, %			
White / Asian / Black / Unknown	41% / 24% / 0% / 35%	58% / 21% / 3% / 18%	63% / 15% / 4% / 18%
ECOG PS[3], %			
0	53%	50%	38%
1	47%	50%	58%
2	0%	0%	3%
Prior lines of systemic therapy, %			
0	0%	0%	2%
1	41%	47%	20%
2	47%	32%	29%
3+	12%	21%	49%
Baseline sum of target lesions (RECIST 1.1, mm), median (range)	57 (10-157)	63 (10-216)	79 (10-274)

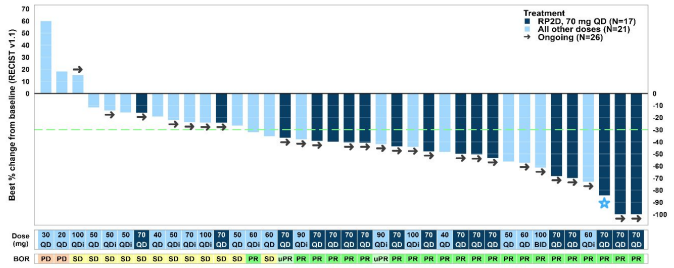
1. Efficacy analysis includes patients with previously treated, FGFR2i-naïve CCA treated at the RP2D. Patients with measurable disease who had opportunity for ≥2 tumor assessments to confirm response or discontinued treatment with <2 tumor assessments
2. Patients in safety population who received ≥1 dose of RLY-4008 at any dose level
3. ECOG PS = Eastern Cooperative Oncology Group Performance Scale

Data cut-off: August 01, 2022; efficacy analysis includes patients with measurable disease who had opportunity for ≥2 tumor assessments or discontinued treatment with <2 tumor assessments

RLY-4008 – Interim Response Data

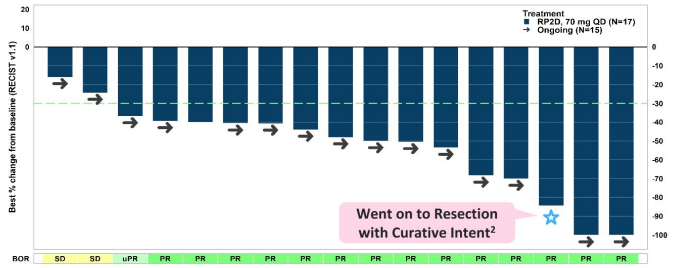
FGFRi-Naïve Fusion+ CCA Patients

All Doses (N=38)



63% ORR
(24 of 38 patients)[1]

70 mg QD (RP2D, N=17)



88% ORR
(15 of 17 patients)[1]

BOR = Best Overall Response:

SD	Stable Disease
uPR	Unconfirmed Partial Response
PR	Confirmed Partial Response
PD	Progressive Disease

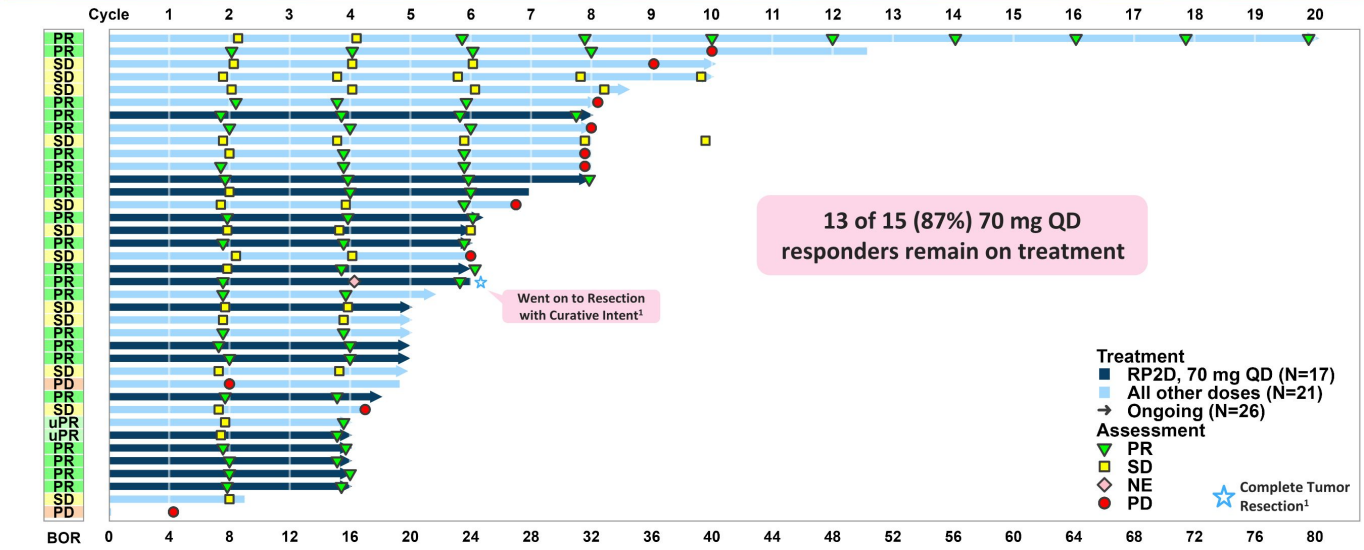
Approved Pan-FGFR Inhibitors Demonstrate 36-42% ORR in This Population[3]

1. For 70 mg QD: Confirmed ORR = 82%: 14 confirmed PRs, 1 unconfirmed PR in an ongoing patient; For all doses: Confirmed ORR = 58%: 22 confirmed PRs, 2 unconfirmed PR; 2. Complete tumor resection: R0 resection performed in curative intent, patient remains no evidence of disease as of 31 May 2022; 3. Based on pemigatinib, erdafitinib, and futibatinib prescribing information. These data are derived from different clinical trials at different points in time, with differences in trial design and patient populations. As a result, cross-trial comparisons cannot be made, and no head-to-head clinical trials have been conducted.

Note: QDi = once daily dosing on an intermittent schedule (3 weeks on drug, 1 week off); BID = twice daily dosing

Data cut-off: August 01, 2022; efficacy analysis includes patients with measurable disease who had opportunity for ≥2 tumor assessments or discontinued treatment with <2 tumor assessments

RLY-4008 – Time on Treatment for Fusion+ CCA FGFRi-Naïve Patients (All Doses)



BOR = Best Overall Response:
- SD Stable Disease
- uPR Unconfirmed Partial Response
- PR Confirmed Partial Response
- PD Progressive Disease

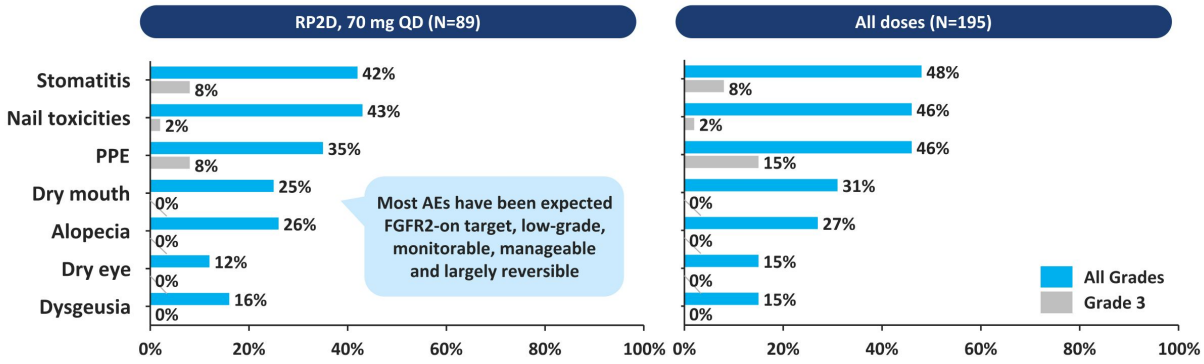
- Median duration of exposure: 5.5 months (range: <0.1 to 18.5 months)
- Median time to response: 1.8 months
- 12/38 (32%) Discontinued - 1 resection with curative intent, 8 PD, 1 AE, 2 withdrawal of consent

1. Complete tumor resection: R0 resection performed in curative intent, patient remains no evidence of disease as of 31 May 2022

Data cut-off: August 01, 2022; efficacy analysis includes patients with measurable disease who had opportunity for ≥2 tumor assessments or discontinued treatment with <2 tumor assessments

RLY-4008 – Treatment-Related Adverse Events (TRAEs) Interim Profile

TRAEs ≥ 15%



Most AEs have been expected FGFR2-on target, low-grade, monitorable, manageable and largely reversible

TRAE Dose Modification	RP2D, 70 mg QD (N=89)	All Doses (N=195)
Dose interruption (%)	42%	47%
Dose reduction (%)	27%	33%
Dose discontinuation (%)	1%	1%*

Doses at ≥40 mg QD result in 90%+ target inhibition

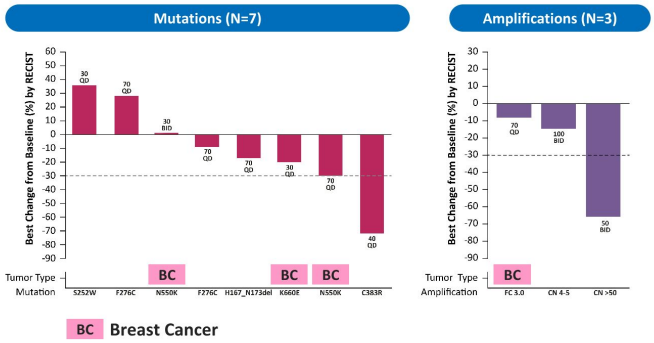
Clinically Insignificant Off-Target Hyperphosphatemia (12%, all Gr 1-2) and Diarrhea (4%, all Gr 1-2) Allow for Optimization of FGFR2 Inhibition

* 1 hypersensitivity, 1 retinal pigment epithelial detachment, both resolved

Data cut-off: August 01, 2022; efficacy analysis includes patients with measurable disease who had opportunity for ≥2 tumor assessments or discontinued treatment with <2 tumor assessments

RLY-4008 Poised for Tumor Agnostic Validation Across FGFR2 Alterations

Tumor regression observed across FGFR2 mutations and amplifications in ReFocus Part 1 Dose Escalation Data



Continue to actively enroll tumor agnostic cohorts

Non-CCA advanced, solid tumors with FGFR2 alterations

- FGFR2-fusion+ non-CCA solid tumors *(N=50)*
- FGFR2-amplified non-CCA solid tumors *(N=50)*
- FGFR2-mutant non-CCA solid tumors *(N=50)*

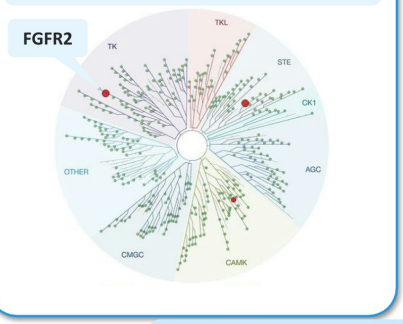
Data Disclosure From Tumor Agnostic Cohorts Anticipated in 2H 2023

Data presented at 2021 ENA Meeting (data as of 09 September 2021)

Relay Tx Solution – Addressing Unmet Need Through Greater Selectivity

Favorable Selectivity[1]

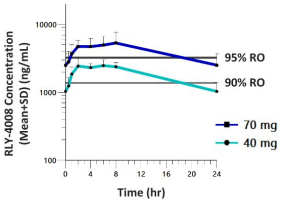
~200x selective for FGFR2 over FGFR1, ~5000x selective over FGFR4[2]



Most AEs have been expected FGFR2-on target, low-grade, monitorable, manageable and largely reversible

Favorable Target Inhibition[1]

Doses at ≥40 mg QD result in 90%+ target inhibition



Favorable Interim Tolerability[1]

Minimized key off-target toxicities[3]

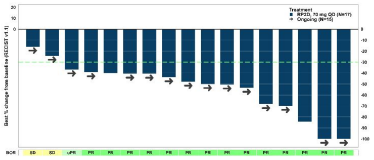
Hyper-phosphatemia[1]	Diarrhea	Discontinuation
12%	4%	1%

All Gr1-2

Favorable Interim Efficacy[1]

FGFR2 driven tumor shrinkage:

88% ORR in fusion+, FGFRi-naïve CCA
15 of 17 pts at 70mg QD pivotal dose
(based on interim data)

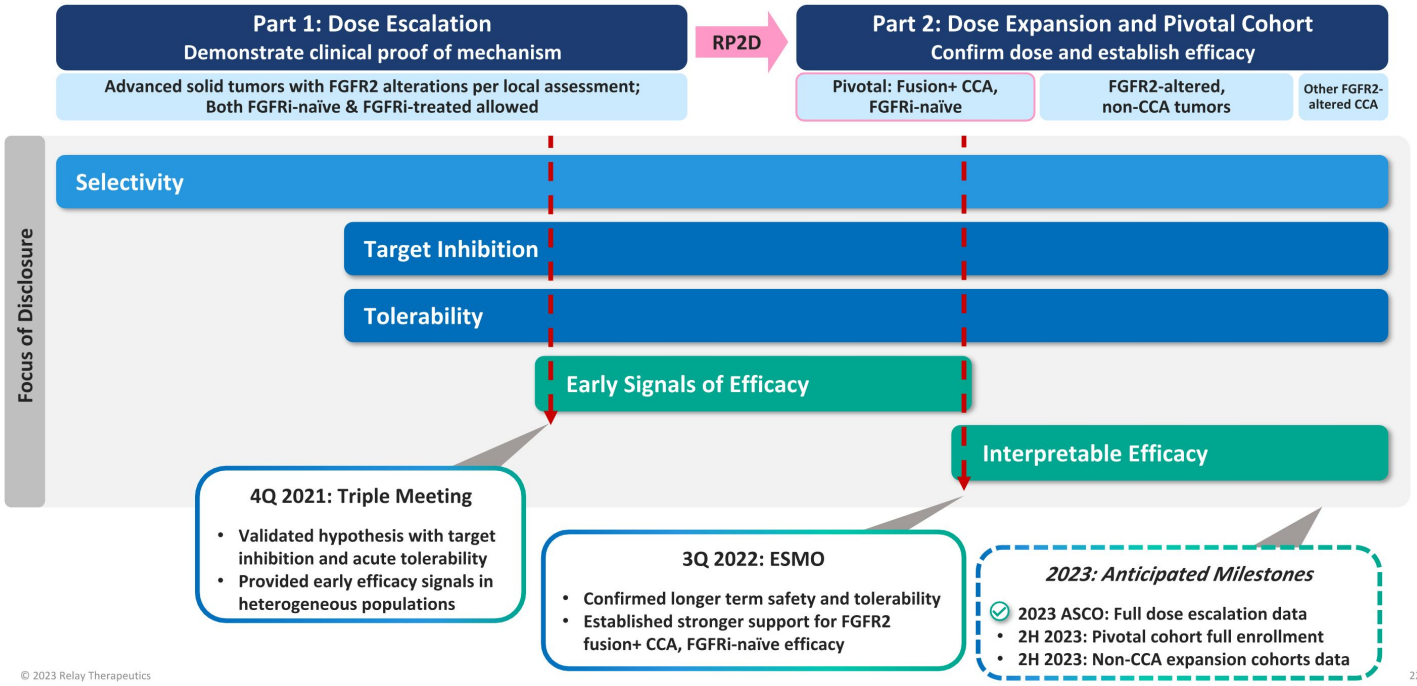


63% interim ORR for fusion+, FGFRi-naïve CCA across all doses

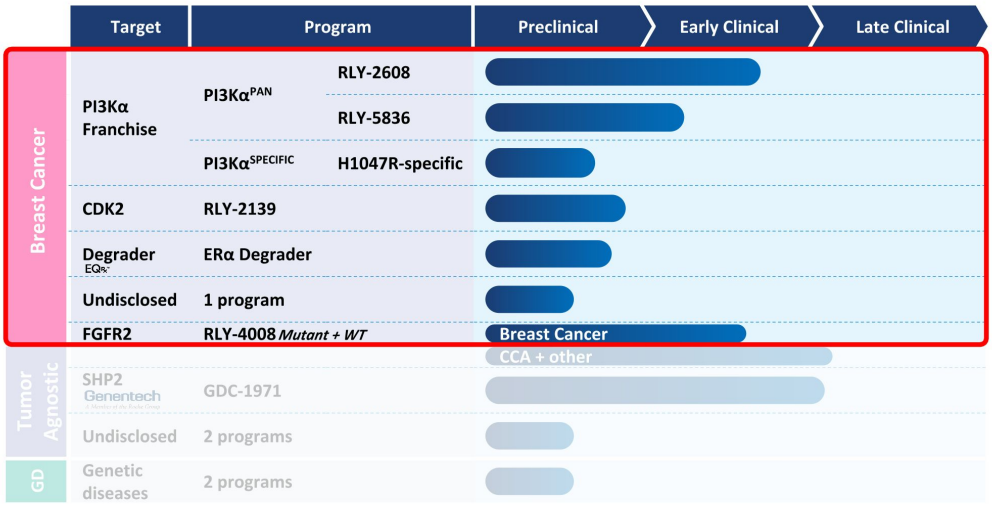
Sources: KINOMEscan™ by Eurofins DiscoverX; RLY-4008 data as presented at ESMO Congress 2022

1. Interim data as of 01 August 2022; 2. Single experiment that tested each compound run at 500nM against 468 targets in the absence of ATP and without preincubation; 3. Toxicity rates across all doses, n=195 patients

RLY-4008 – ReFocus Trial



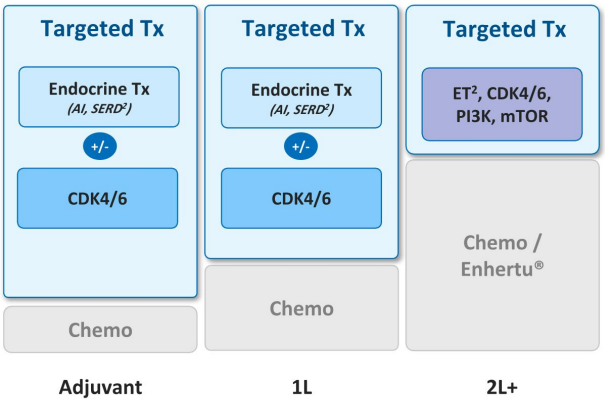
Relay Tx – Extensive Precision Medicine Pipeline



Breast Cancer – Limitations of Current Standard of Care

~196k annual HR+/HER2- breast cancer patients in US, of whom ~50k advance to later lines of treatment

HR+/HER2- breast cancer standard of care[1]…



…is limited by efficacy of available treatments

Source: Internal analysis based on third party industry data
1. Standard of care for HR+/HER2- breast cancer is illustrative; 2. AI = Aromatase Inhibitor; SERD: Selective Estrogen Receptor Degrader; ET = Endocrine Therapy

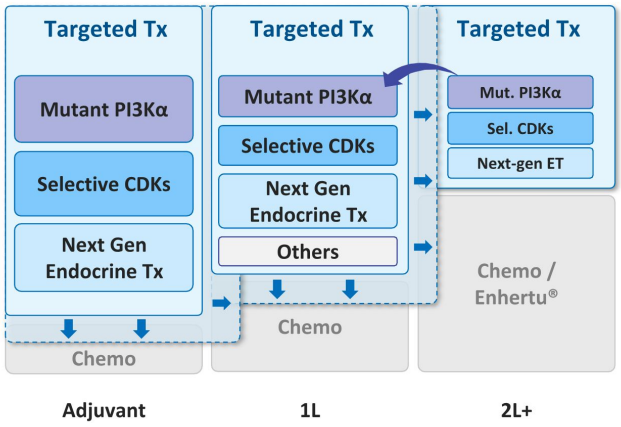
Relay Tx Solution – Highly Selective Breast Cancer Franchise

Relay Tx Solution

Relay Tx Breast Cancer Portfolio

- PI3Kα Franchise
  - RLY-2608 *(pan-mutant)*
  - RLY-5836 *(pan-mutant)*
  - H1047R *(mutant-specific)*
- Selective CDK2 Inhibitor
- ERα Degrader
- *Other Undisclosed Programs*

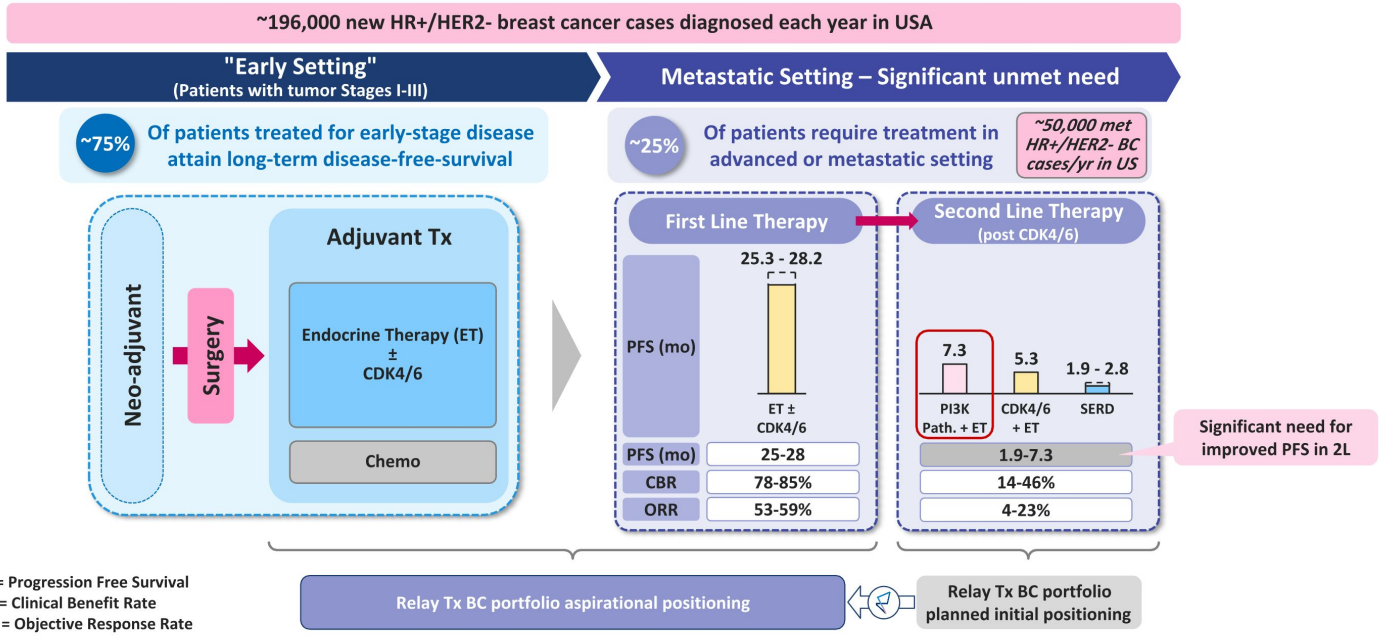
Aspirational future state standard of care (HR+/HER2- BC)[1]



Relay Tx aims to transform the standard of care for HR+/HER2- breast cancer

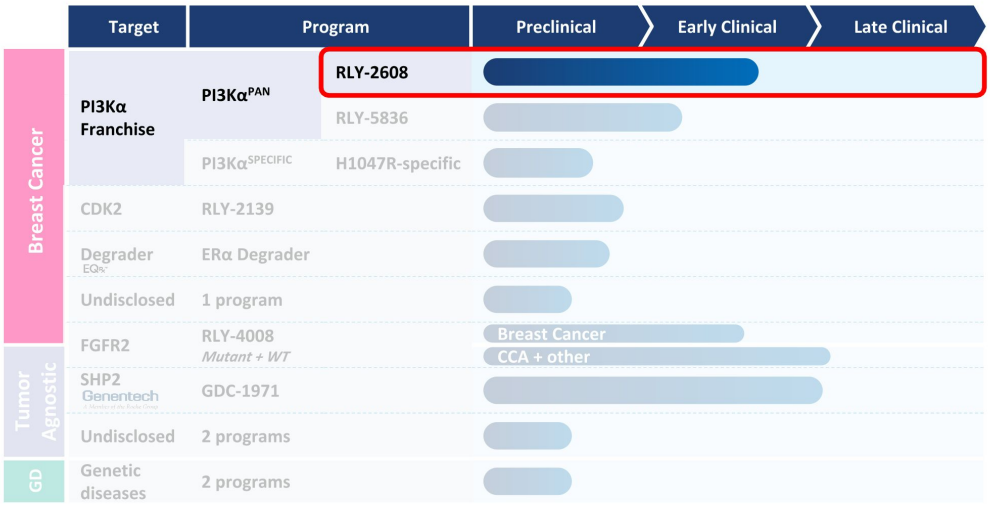
1. Aspirational future state standard of care for HR+/HER2- breast cancer is illustrative

Breast Cancer – Significant Unmet Need



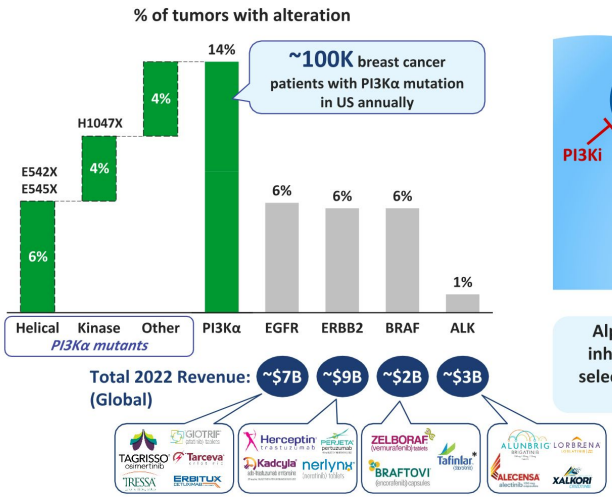
Figures generated based on publicly available data for both approved and investigational products (alpelisib, ribociclib, elacastrant (investigatonal), fulvestrant (investigatonal), palbociclib, ribociclib, abemaciclib, capivasertib (investigational)).
Sources: SEER, Metastatic Breast Cancer Network (MBCN), Johnston 2019 NPJ Breast Cancer 5:5, Goetz 2017 JCO 35:3638, Rugo 2019 Breast Cancer Res Treat 174:719, Ibrance Label, Finn 2016 N Engl J Med 375:1925, Hortobagyi 2018 Ann Oncol 29:1541, Kisqali label, SABCS 2021 #P1-18-03, SABCS 2022 #GS3-04, ASCO 2022 #LBA1004, Bardia 2022 Cancer Research 82, ASCO 2022 LBA3, ASCO 2022 LBA1001, Wander 2021 J NCCN 24:1, ASCO 2022 #1055, Xi J 2019 J NCCN 17:141

Relay Tx – Extensive Precision Medicine Pipeline

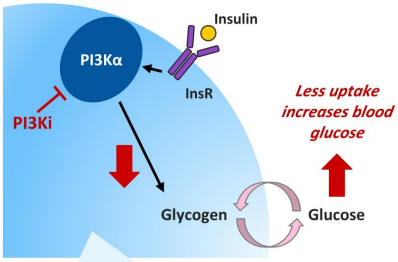


PI3Kα – A Validated Target with Significant Unrealized Therapeutic Potential

PI3Kα is the most frequently mutated kinase in solid tumors



PI3Kα regulates glucose homeostasis



Alpelisib, the only FDA-approved PI3Kα inhibitor for solid tumors, is not mutant-selective and disrupts glucose metabolism, causing hyperglycemia

WT PI3Kα and off-isoform toxicity limit the clinical benefit of alpelisib

AEs frequently leading to treatment discontinuation for alpelisib

AE	All Gr (Gr3+)
Hyperglycemia	65% (37%)
Diarrhea	60% (7%)
Rash	36% (10%)

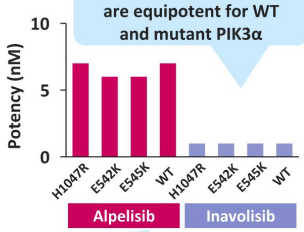
*Tafinlar + Mekinist

Sources: Internal analysis based on third party industry data; Alpelisib data: SOLAR-1 (long-term follow up): Andre 2021 Ann Oncol 32:208

PI3Kα – Existing Inhibitors Have Limited Therapeutic Window

Limited Selectivity

Alpelisib and inavolisib are equipotent for WT and mutant PIK3α



Both also retain nM potency against other PI3K isoforms

Alpelisib: Observed coverage (based on IC_{80}) at median dose intensity 9-13hr[7]

Limited Tolerability

Compound	All Gr3+ Tox	Hyperglycemia		GI Tox (all Gr)	Rash (all Gr)
		All Gr	Gr3+		
Alpelisib[1-7]	44-78%	33-65%	13-37%	33-60%	20-36%
Inavolisib[8-12]	33-54%	55-70%	5-22%	27-50%	7-27%
Capivasertib[14-18]	21-62%	16-43%	2-20%	64-82%	22-53%

AKT inhibitor

Limited Target Inhibition

Regimen	Interruption	Reduction	Discont.
Alpelisib[6,7]	58%	38%	15%
Alpelisib + fulv[1]	74%	64%	25%
Inavolisib + fulv[8]	41%	18%	2%
Capivasertib+fulv[18]	35%	20%	13%

Limited Efficacy

Regimen	ORR	CBR	PFS (mo)
Alpelisib Mono Ph 1a[7]	4%	17%	5.5
Alpelisib + fulv Ph 2[4]	19%	46%	7.3
Inavolisib + fulv Ph 1b[13]	19%	48%	7.1
Capivasertib + fulv Ph 3[18]	29%	*NR**	7.3

Data from RP2D of alpelisib, inavolisib, and capivasertib

* NR = Not Recorded

Note: fulv = fulvestrant; all referenced studies are for their patient populations which are analogous to ongoing breast cancer pt populations within RLY-2608 clinical trials; Alpelisib and fulvestrant are FDA approved, inavolisib and capivasertib are in Phase 3 clinical trials

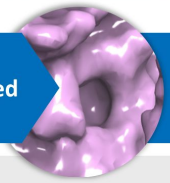
Sources: Alpelisib – 1. SOLAR-1: Andre 2019 N Engl J Med 380:1929, 2. Ph 1b: SABCS 2013 P2-16-14, 3. Ph 1b: SABCS 2014 PD5-5, 4. Ph 2 ByLIEVE: Rugo 2021 Lancet Oncol 22:489, SABCS 2021 #P1-18-03, 5. Ph 1b mono: Annals of Oncol 25 2014 (suppl 4), 6. Ph 2 mono: Savas Cancer Discov 2022 Sep 12:2058, 7. Ph 1a mono: Juric 2018 J Clin Oncol 36:1291 ; Inavolisib – 8. ASCO 2022 #1052 (note: pooled rates across cohorts), 9. SABCS 2020 #PS11-11, 10. AACR 2020 CT109, 11. SABCS 2019 OT1-08-04; 12. SABCS 2019 P1-19-46, 13. SABCS 2021 #P5-17-05; Capivasertib – 14. Ph 1 mono: Banerji 2018 Clin Cancer Res 24:2050, ASCO 2015 #2500; 15. Ph 2 mono: SABCS 2019 P1-19-14; 16. Ph 1 combo: Smyth 2020 Clin Cancer Res 26:3947; 17. Ph 2 FAKTION: ASCO 2022 #1005; 18. Ph 3 CAPItello-291: SABCS 2022 #GS3-04

Note: These data are derived from different clinical trials at different points in time, with differences in trial design and patient populations. As a result, cross-trial comparisons cannot be made, and no head-to-head clinical trials have been conducted.

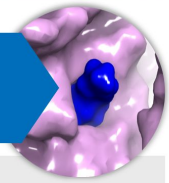
PI3Kα – Proprietary Insights Unlock Novel Approaches

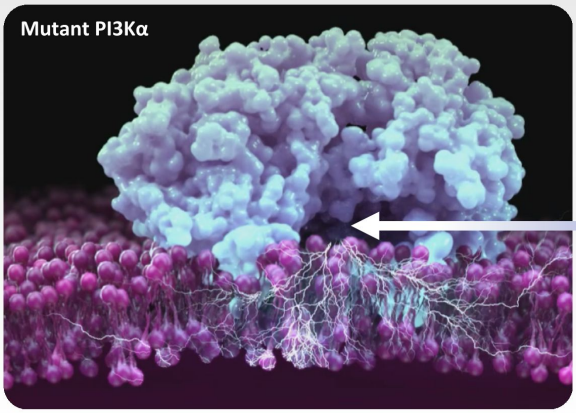
Solved first full-length structures of PI3Kα (mutant and wild-type)

Discovered novel allosteric pocket favored in mutant protein



Designed pan-mutant selective PI3Kα inhibitor ($PI3K\alpha^{PAN}$)





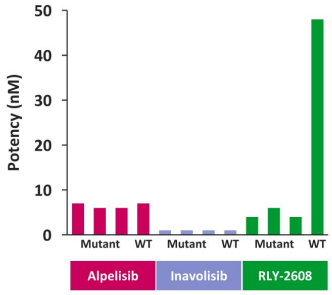
A differentiated understanding of the structure of PI3Kα and its relationship to function equips Relay Tx to design optimal mutant-selective inhibitors of PI3Kα

RLY-2608 – First Mutant Selective Inhibitor to Enter the Clinic

All Data Shown is Preclinical

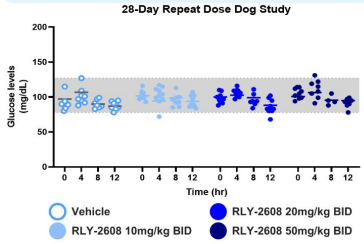
Favorable Selectivity

Limited potency against WT PI3Kα and other PI3K isoforms



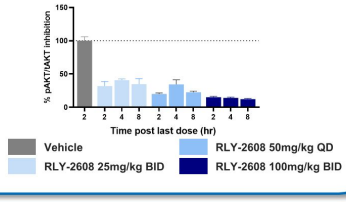
Favorable Tolerability

Manageable key toxicities, especially hyperglycemia shown in dog study



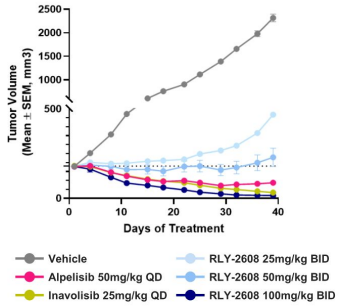
Favorable Target Inhibition

Maintains approx. 80% mutant PI3Kα inhibition in mouse model

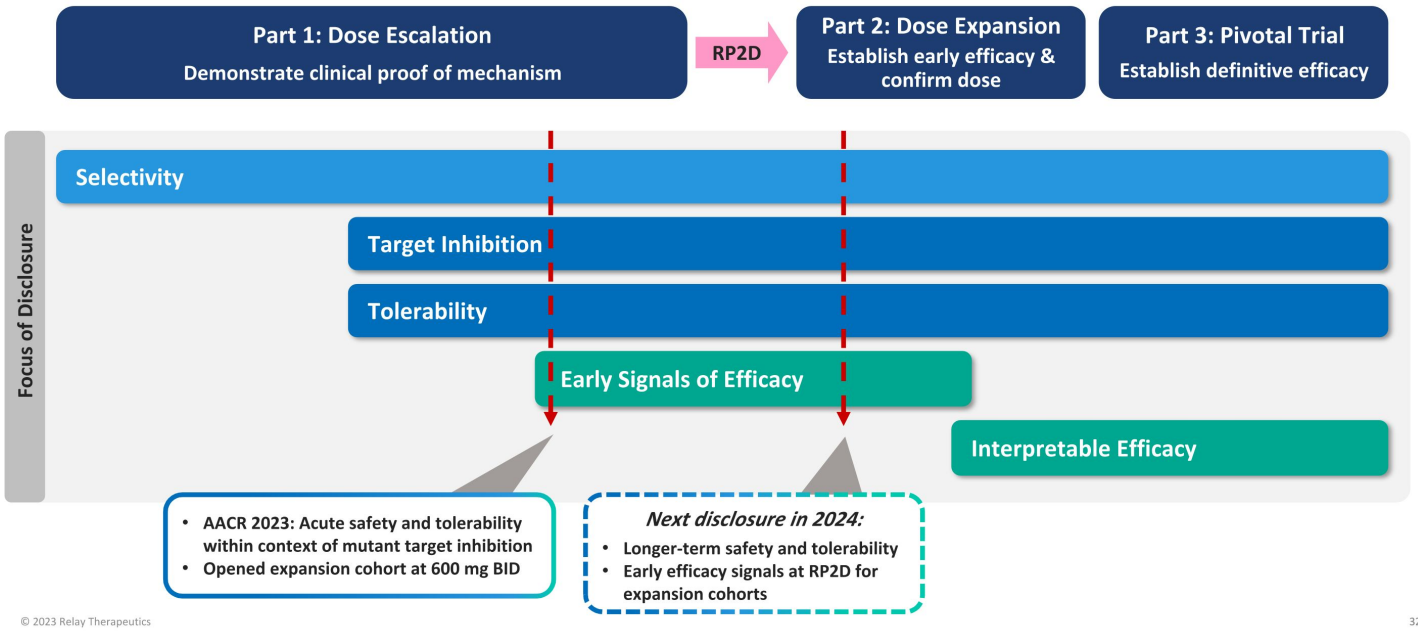


Favorable Efficacy

Robust tumor regression at tolerable doses in mouse model



RLY-2608 – Data Disclosure Goals



RLY-2608 – Initial Data Support Selective Targeting of Mutant PI3Kα

Initial Clinical Proof of Mechanism

Initial anti-tumor activity observed across range of doses

- At 600mg BID combo dose:
  - 86% interim CBR (6 of 7 patients with CR, PR, or SD for ≥6mo)
  - 1 cPR out of 5 evaluable[1] patients with measurable disease
- Overall, 4 PRs* (of 24 evaluable[1] breast cancer pts) observed across mono and combo, dose levels and PI3Kα genotypes

Favorable safety profile at therapeutically active doses

- Low rates of hyperglycemia, rash and diarrhea
- No DLTs and no AEs leading to treatment discontinuation
- Safety profile at 600mg BID compelling for use in mBC combinations

Selective target inhibition over IC_{80}

- Continuous pAKT inhibition ~80%+ achieved at ≥400mg BID
- Limited observed impact on glucose homeostasis
- No grade 3 hyperglycemia observed[2]

* Includes 3 confirmed partial responses and 1 unconfirmed partial response

First expansion cohort initiated at 600 mg BID dose

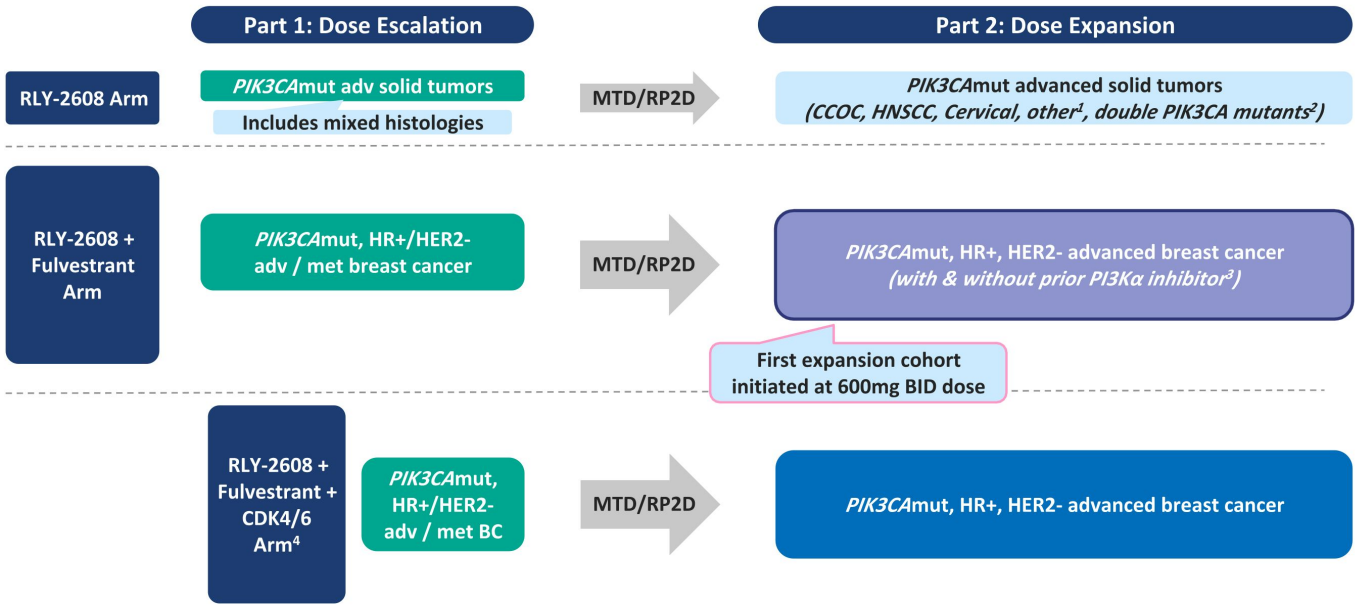
Goal for Expansion Cohorts

- Interpretable Efficacy (CBR, ORR)
- Longer-Term Tolerability

DLTs = dose limiting toxicities; CBR: Clinical Benefit defined as all patients with confirmed complete response or partial response or stable disease ≥24 weeks; evaluable patients started treatment ≥24 weeks prior to the data cutoff

1. Efficacy analysis includes patients with measurable disease who had opportunity for ≥1 tumor assessment or discontinued treatment with <1 tumor assessment; 2. per CTCAE v5.0

RLY-2608 –Trial Design

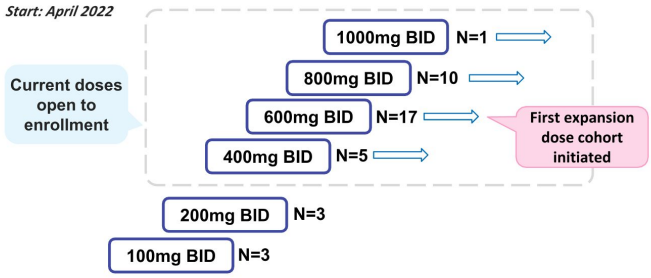


1. Excludes PIK3CAmut clear cell OvCA, HNSCC, Cervical cancer, and colorectal patients; 2. Double mutation defined as one major PIK3CA mutation (E542X, E545X, H1047X) + ≥1 additional PIK3CA mutation per local assessment; 3. Patients with previous PI3Kα inhibitor include those with intolerance to PI3Kαi defined as treatment discontinuation due to treatment-related AE (e.g., hyperglycemia, rash, diarrhea, stomatitis) other than severe hypersensitivity reaction and/or life-threatening reactions, such as anaphylaxis and Stevens-Johnson syndrome; 4. RLY-2608 + fulvestrant + CDK4/6 arm expected to be added in a protocol amendment

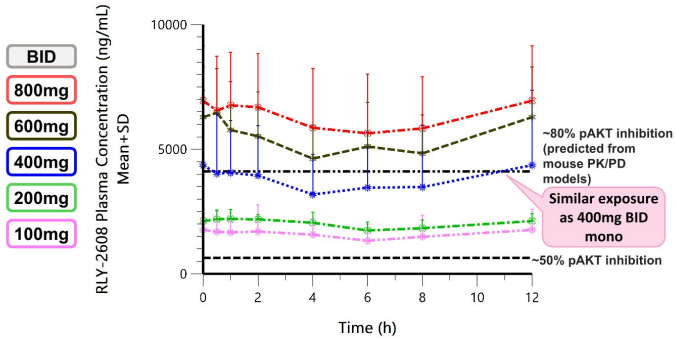
RLY-2608 – ReDiscoverTrial Interim Part 1 Results

RLY-2608 + fulvestrant

Dose Escalation:
PIK3CA-mutant, HR+, HER2– advanced / metastatic breast cancer (N=39)



Favorable PK Profile Across Dose Levels



No DLTs and MTD has yet to be defined
Dose-dependent increase in exposure and low peak to trough fluctuations across dose levels
Continuous coverage at ~IC80+ across dosing interval at 400mg BID combo and above

RLY-2608 – ReDiscover Trial Breast Cancer Baseline Demographics and Genotype

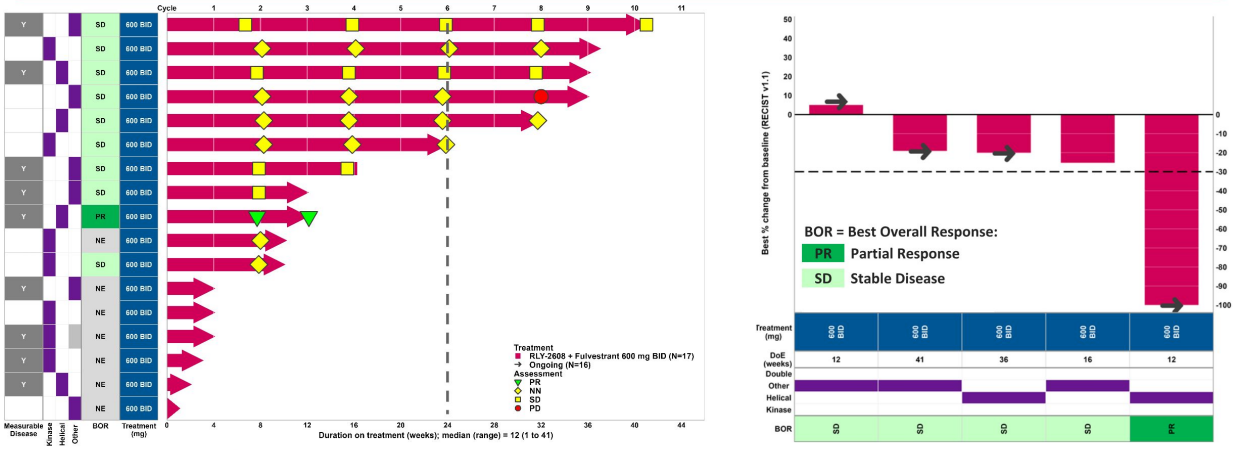
	RLY-2608 + fulvestrant (N=39)	RLY-2608 + fulvestrant 600 mg BID (N=17)	RLY-2608 Monotherapy (N=4)
Age, median (range), years	59 (40-82)	60 (49-80)	64 (58, 85)
Female, n (%)	39 (100%)	17 (100%)	4 (100%)
Ethnicity, %			
White / Asian / American Indian / Black / Unknown	67% / 3% / 3% / 3% / 23%	59% / 0% / 0% / 0% / 41%	100% / 0% / 0% / 0% / 0%
ECOG, n (%)			
0	21 (54%)	8 (47%)	2 (50%)
1	18 (46%)	9 (53%)	2 (50%)
BMI, kg/m^2, median (range)	25 (18-41)	23 (19-36)	26 (18, 44)
<30, n (%)	29 (74%)	14 (82%)	3 (75%)
≥30, n (%)	10 (26%)	3 (18%)	1 (25%)
Prior regimens of therapy in metastatic setting, median (range)	1 (1,6)	2 (1,6)	5 (1, 12)
Pending data entry	2 (5%)	1 (6%)	0 (0%)
1	19 (49%)	6 (35%)	1 (25%)
2	10 (26%)	6 (35%)	0 (0%)
3+	8 (21%)	4 (24%)	3 (75%)

Preliminary data as of 07/24/23

RLY-2608 – 600 mg BID Dose Selected for Expansion Cohort

17 Breast Cancer Patients Treated with RLY-2608 600 mg BID Dose + Fulvestrant

Breast Cancer Patients 600 mg BID RLY-2608 + Fulvestrant (N=17)



RLY 2608 + Fulvestrant 600mg BID:

- 86% (6/7) CBR in patients with at least 6 months follow up
- Confirmed PR achieved in 1 of 5 efficacy evaluable[1] patients with measurable disease
- 17 patients treated, 15 remain on treatment*
- mDoT: 12wk (range: 1-41wk)

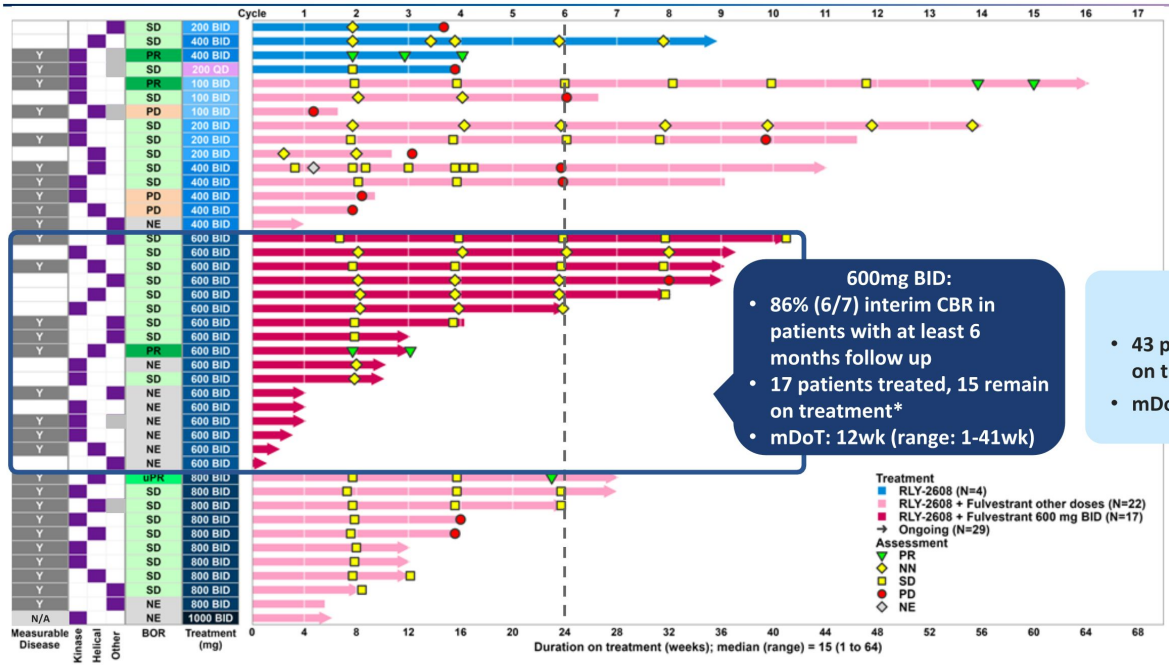
CBR: Clinical Benefit defined as all patients with confirmed complete response or partial response or stable disease ≥24 weeks; evaluable patients started treatment ≥24 weeks prior to the data cutoff

* Note: one additional pt at 600mg BID dose remains on treatment after PD assessment; 1. Efficacy analysis includes patients with measurable disease who had opportunity for ≥1 tumor assessment or discontinued treatment with <1 tumor assessment

Preliminary data as of 07/24/2023

RLY-2608 – Breast Cancer Disease Control Across Dose Levels

43 Breast Cancer Patients – Measurable and Non-Measurable Disease



600mg BID:

- 86% (6/7) interim CBR in patients with at least 6 months follow up
- 17 patients treated, 15 remain on treatment*
- mDoT: 12wk (range: 1-41wk)

Across all doses:

- 43 patients treated, 28 remain on treatment*
- mDoT: 15wk (range: 1-64wk)

***PIK3CA* Mutation Key:**

- Primary *PIK3CA* mutation type
- 2nd *PIK3CA* mutation in double mutation

CBR: Clinical Benefit defined as all patients with confirmed complete response or partial response or stable disease ≥24 weeks; evaluable patients started treatment ≥24 weeks prior to the data cutoff; N/A: not available as of data cut off, pending data entry

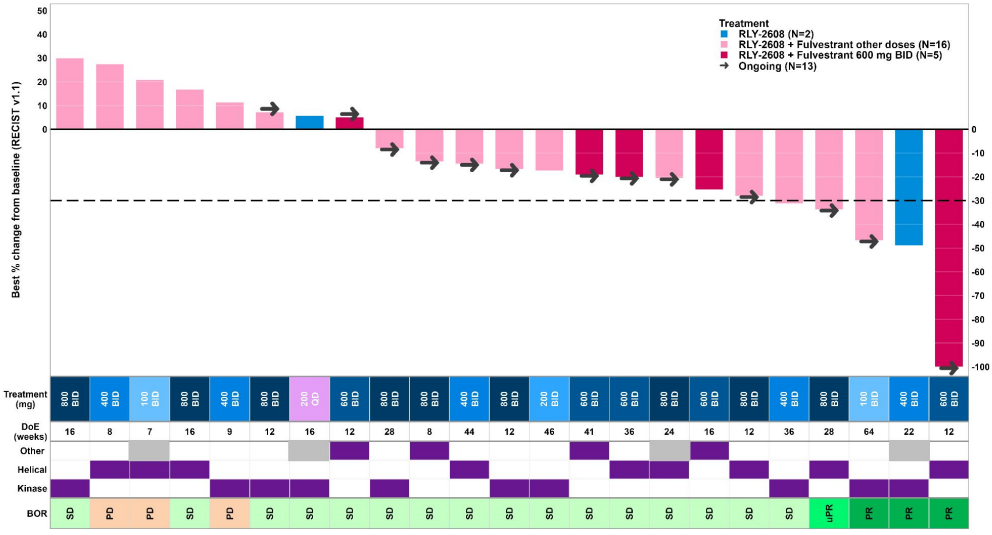
* Note: one additional pt at 600mg BID dose remains on treatment after PD assessment

Preliminary data as of 07/24/2023

RLY-2608 – Evidence of Anti-Tumor Activity Supports Selective Target Engagement

24 Breast Cancer Patients – Measurable Disease Only*

Breast Cancer Patients (RECIST Measurable Disease) N=24*



- At 600mg BID combo, 80% of patients (4/5) exhibited radiographic tumor reductions
  - 1 pt experienced a partial response and remains on treatment
- Overall, 63% of patients (15/24) exhibited radiographic tumor reductions; 13/24 patients ongoing
- 4 partial responses observed across mono and combo, dose levels and PI3Kα genotypes

BOR = Best Overall Response:

PR	Partial Response
uPR	Unconfirmed Partial Response
SD	Stable Disease
PD	Progressive Disease

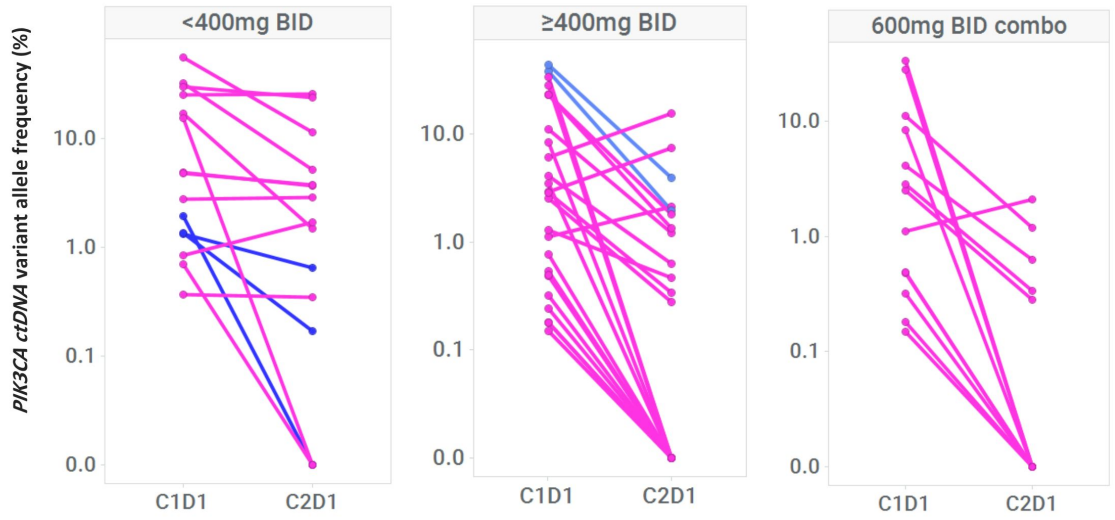
PIK3CA Mutation Key:

- Primary *PIK3CA* mutation type
- 2nd *PIK3CA* mutation in double mutation

* one patient discontinued prior to first scan and is not shown on waterfall plot

Preliminary data as of 07/24/2023

RLY-2608 – Mutant PIK3CA Decline Supports Dose Dependent Target Inhibition



- 30 Breast cancer patients with evaluable paired C1D1-C2D1 ctDNA Sample
  - Mono: 3 pt; combo: 27 pt
- 6 patients have ≥2 PIK3CA mutation
- 26 patients had decline in PIK3CA ctDNA
- 13 patients completely cleared PIK3CA ctDNA by C2D1

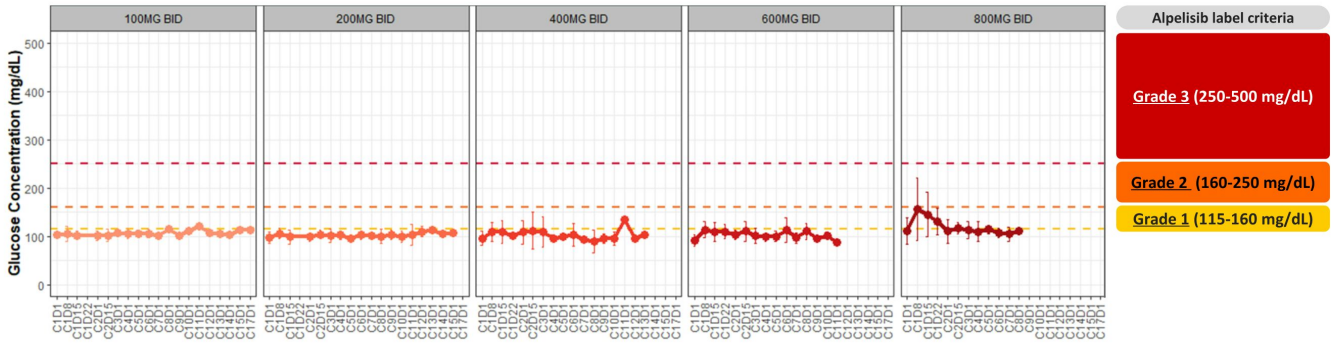
Patients with paired evaluable ctDNA	<400mg BID	≥400mg BID	600mg BID combo
	Mono: n=2	Mono: n= 1	Mono: n= 0
	Combo: n=10	Combo: n=17	Combo: n=8

Note: data points at zero are below limits of detection
Source: Central lab analysis

Preliminary data as of 07/24/2023

RLY-2608 – Limited Observed Impact on Glucose Homeostasis Supports Selectivity

RLY-2608 + Fulvestrant Combination

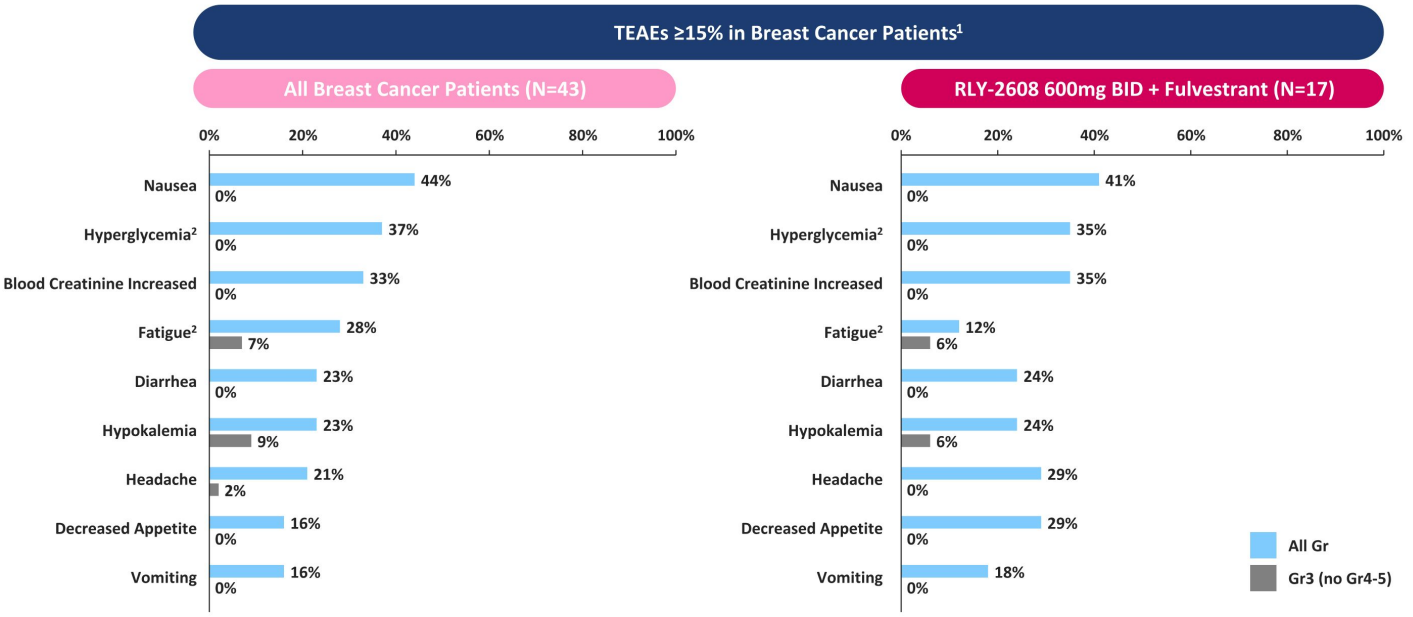


No Grade 3 hyperglycemia per CTCAE v5.0

Note: one 1000mg BID combo pt not shown; pt had Gr2 glucose elevation per alpelisib label criteria; Data represent mean per cohort +/- standard deviation
Source: Central lab analysis

Preliminary data as of 07/24/2023

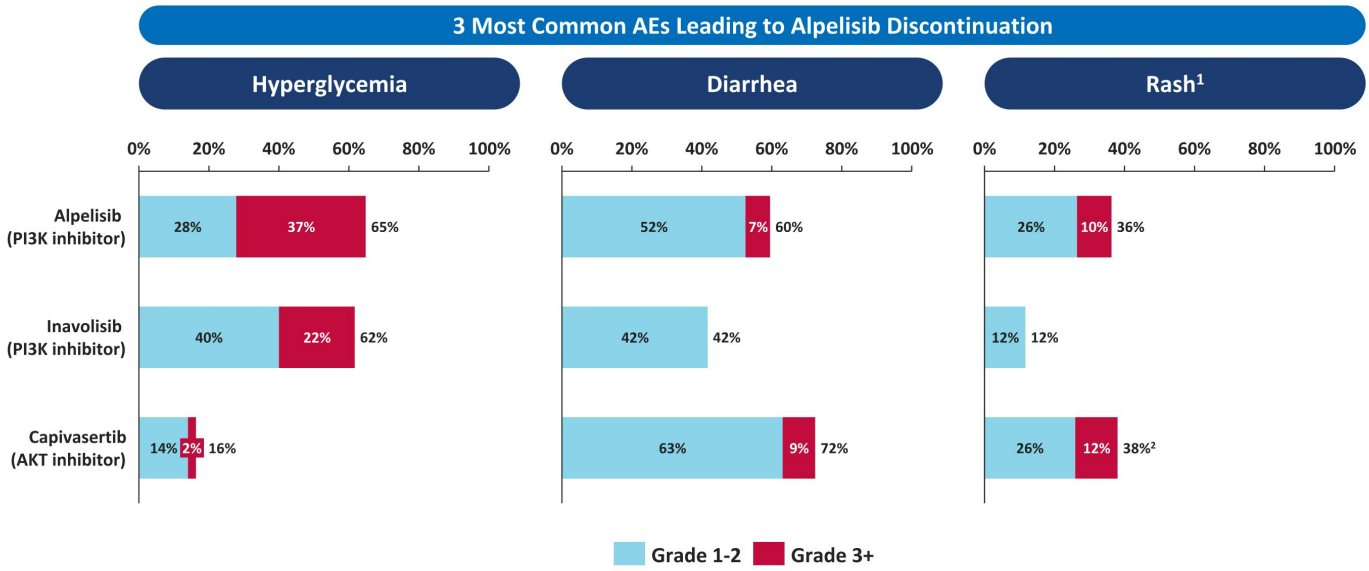
RLY-2608 – TEAEs Generally Consistent with Mutant-Selective Inhibition



1. TEAEs that occurred in >=15% of the Breast Cancer Safety Set (N=43) are shown for both populations; 2. Hyperglycemia includes the MedDRA v26.0 Preferred Terms (PT): Hyperglycemia and Blood Glucose Increased, Fatigue includes the PTs: Fatigue and Asthenia.

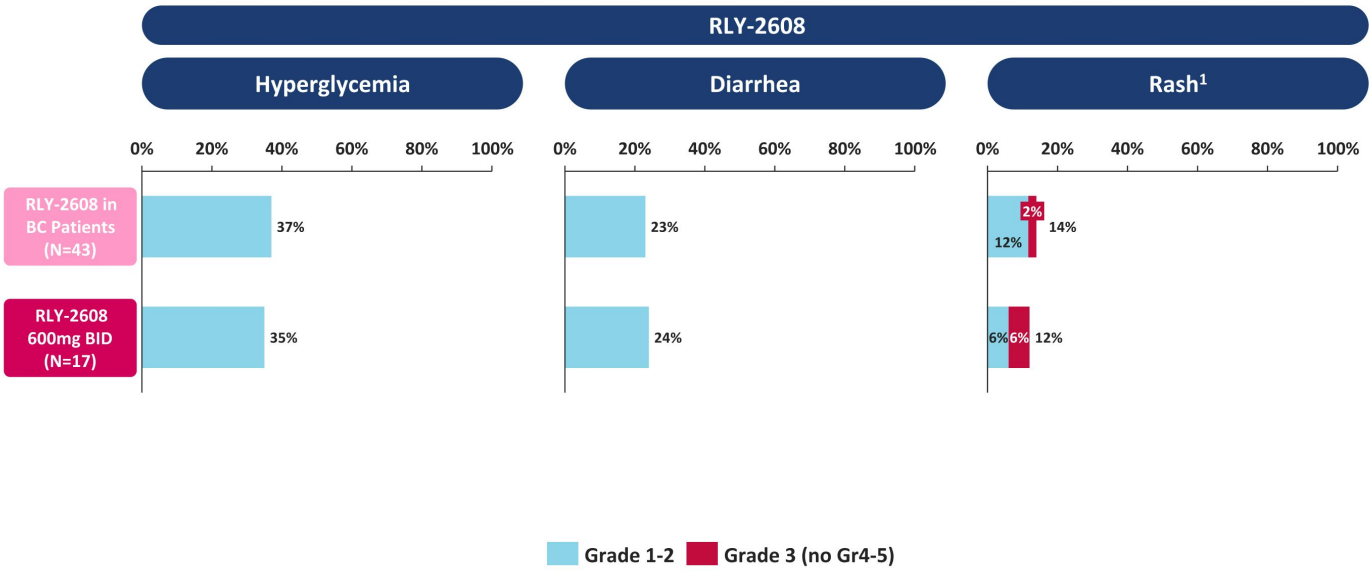
Preliminary data as of 07/24/2023

Relevant Off-Target Toxicities for Non-Selective Inhibitors



1. Grouped term: rash and rash maculo-papular; 2. Capivasertib rash includes events related to rash including: rash, rash macular, maculo papular rash, rash papular and rash pruritic;
Sources: alpelisib: SOLAR-1 (initial publication): Andre 2019 N Engl J Med 380:1929, inavolisib: ASCO 2022 #1052 (note: reported rates are for invavolisib-related AEs pooled across study cohorts including monotherapy and combinations with letrozole, fulvestrant, and palbociclib), capivasertib: CAPItello-291: SABCS 2022 #GS3-04
Note: These data are derived from different clinical trials at different points in time, with differences in trial design and patient populations. As a result, cross-trial comparisons cannot be made, and no head-to-head clinical trials have been conducted.

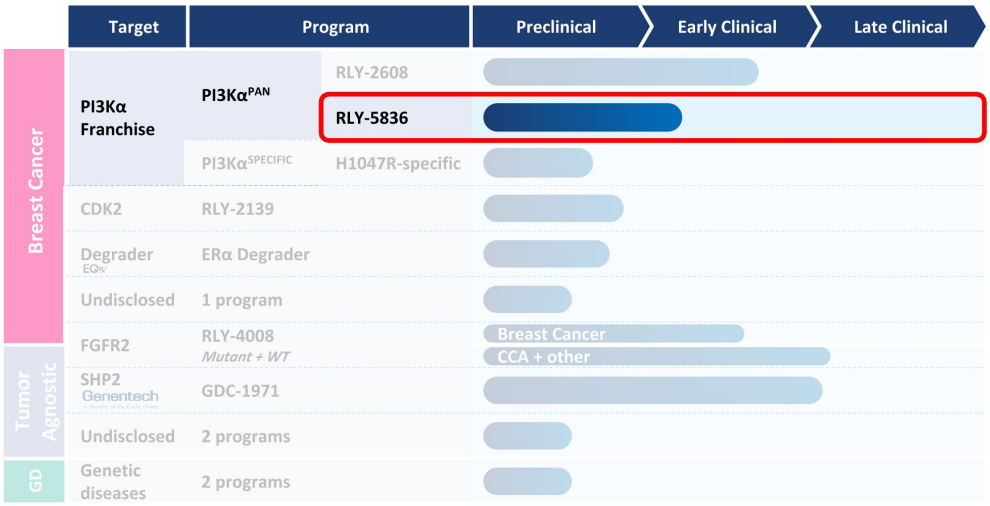
RLY-2608 – Low Rates of Hyperglycemia, Rash and Diarrhea



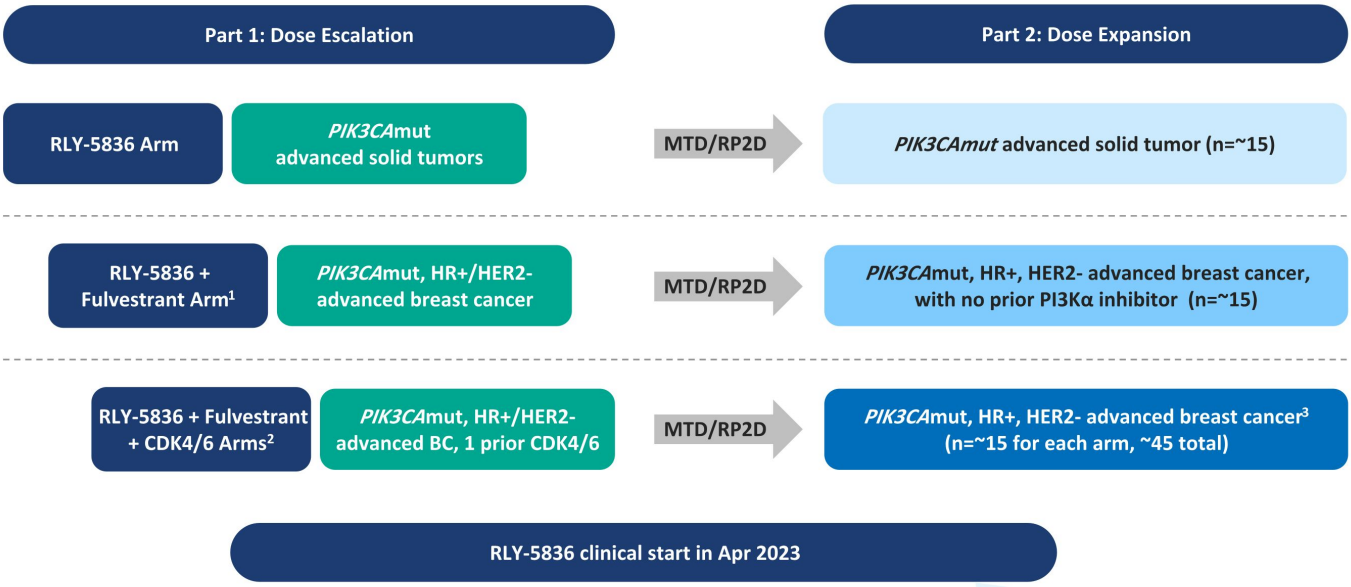
1. Rash includes the MedDRA v26.0 Preferred Terms (PT): Rash maculo-papular, Rash

Preliminary data as of 07/24/2023

Relay Tx – Extensive Precision Medicine Pipeline



RLY-5836 –Trial Design



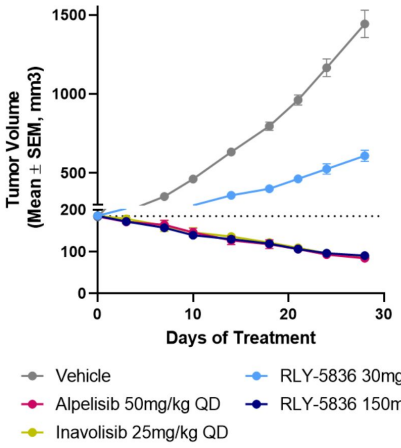
RLY-5836 clinical start in Apr 2023

- **BOIN design with molecular enrichment**
- ***PIK3CA* mutation status per local assessment**
- **RLY-5836 PO BID or QD**

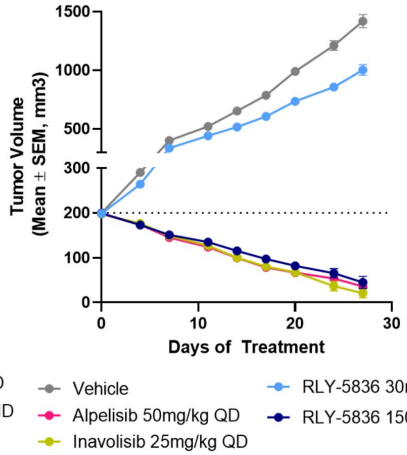
1. RLY-5836 + Fulvestrant combination arm may start after one dose level higher of RLY-5836 single agent is cleared and determined tolerable
2. RLY-5836 + CDK4/6i + ET combination arms may start after one dose level higher of RLY-5836 + Fulvestrant combination is cleared and determined tolerable. Three separate CDK4/6 arms, one for each of the following CDK4/6 agents: pablociclib, abemaciclib, ribociclib
3. One or more of the RLY-5836 + CDK4/6i + Fulvestrant arms may open at Sponsor discretion and SRC agreement

RLY-5836 – Similar Pre-clinical Profile, Different Chemical Properties from RLY-2608

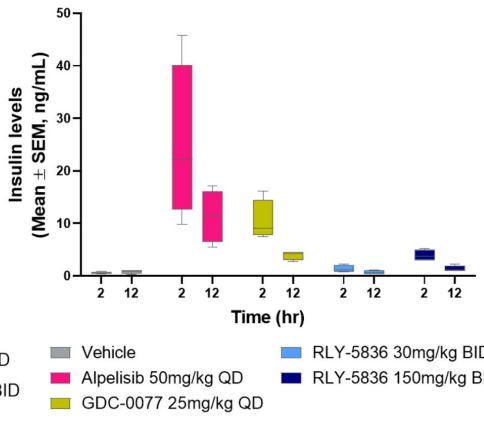
H1047R mutant (HCC1954) (mouse)



E545K mutant (MDAMB361) (mouse)[1]

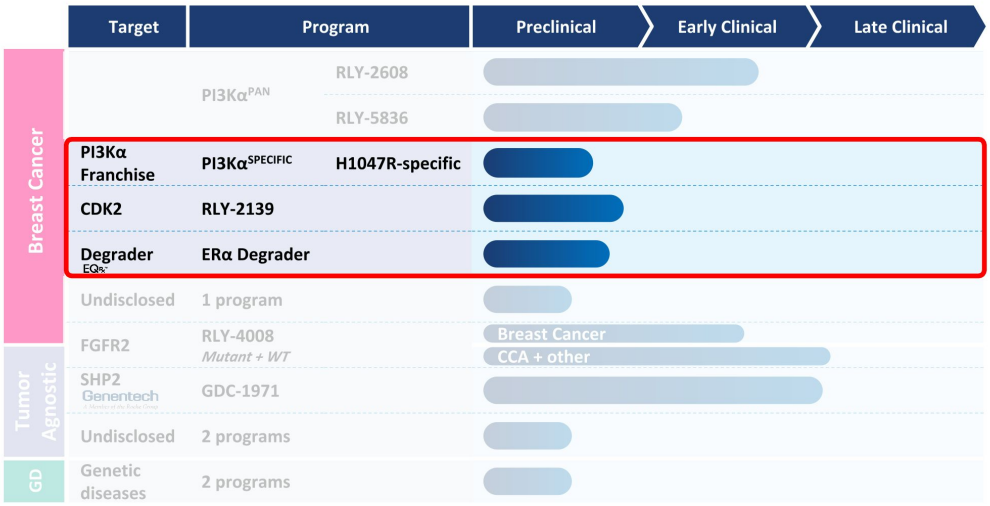


RLY-5836 achieved active doses with less insulin than orthosteric inhibitors



Source: Internal RLY-5836 data
1. This model also carries a second mutation at K567R

Relay Tx – Extensive Precision Medicine Pipeline



CDK2 – Highly Selective Development Candidate Identified

CDK2 is important in ER+ breast cancer

Patients receiving adjuvant CDK 4/6i ~23K

Patients receiving 1L CDK 4/6i ~18K

Patients receiving 2L CDK 4/6i ~5K

Higher CDK2 activity associated with worse response to CDK4/6 inhibition in ER+ breast cancer

Computational modeling enabled breakthrough speed

Collect MD frames

Extract features

Cluster frames & assign cluster populations

Predict selectivity

Novel workflow leverages MD and ML to predict selectivity without bias or intervention

First compound synthesized to identification of lead compounds in <1 year

Relay Tx's Development Candidate observed to be highly selective

		RLY-2139	Benchmark
Biochemical Potency	CDK2/CycE IC_{50} (μM)	0.004	0.017
Biochemical selectivity (fold over)	CDK1/CycB	100x	99x
	CDK6/CycD3	320x	270x
	CDK9/CycT1	2400x	2400x
	GSK3β	68000x	12000x

Clinical start expected in early 2024

Source: Internal analysis based on third party industry data

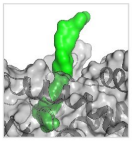
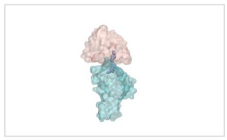
ERα Degrader – Rapidly Obtained Potent Compounds

Endocrine therapies are used in every line of therapy in HR+/HER2- Breast Cancer

Line of Therapy	Endocrine Tx
Adjuvant	Use of Endocrine Therapies
First Line	
Second Line +	

195k annual US patients with HR+/HER2- breast cancer

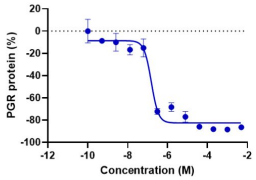
Relay Tx is leveraging rational design…

Traditional Approach	Relay Tx Approach
	

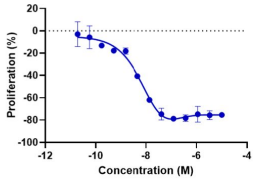
Multiple experimental tools deployed to develop conformational models that enable effective triage of degrader design ideas

…to obtain potent ERα degraders

Pathway suppression



Cellular proliferation

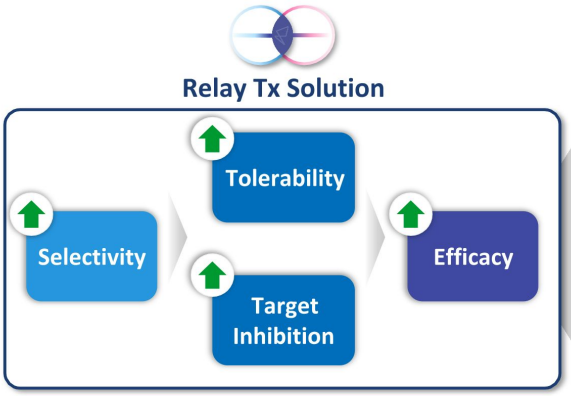


Development Candidate nomination expected in 2023

Source: Internal analysis based on third party industry data

Relay Tx Solution – Highly Selective Breast Cancer Franchise

The Relay Tx Solution…



…aims to address selectivity on validated targets for breast cancer

Breast Cancer

Target	Program		Preclinical / Early Clin. / Late Clin.
PI3Kα franchise	PI3Kα^{PAN}	RLY-2608	
		RLY-5836	
	PI3Kα^{SPECIFIC}	H1047R-specific	
CDK2	RLY-2139		
Degrader EQx	ERα Degrader		
Undisclosed	1 program		
FGFR2	RLY-4008 *Mutant + WT*		

Breast Cancer Franchise Continues to Progress

RLY-2608 Evolution of Data

Initial Data Supporting Selective Targeting of Mutant PI3Kα → **Goal for Expansion Cohorts**

Initial Clinical Proof of Mechanism

- Clinical benefit observed across doses & mutations
- Favorable safety profile
- Selective target inhibition

First expansion cohort initiated at 600 mg BID dose

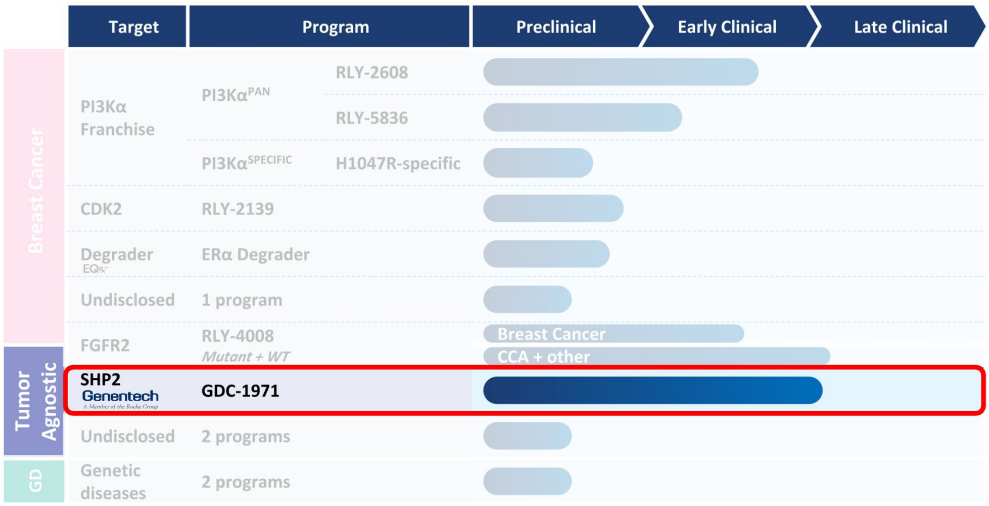
- Interpretable Efficacy (CBR, ORR)
- Longer-Term Tolerability

Relay Tx Breast Cancer Portfolio

- PI3Kα Franchise
  - RLY-2608
  - RLY-5836
  - H1047R-specific
- RLY-2139 (CDK2)
- ERα Degrader
- *Other Undisclosed Programs*

Next milestone: additional RLY-2608 clinical data in 2024

Relay Tx – Extensive Precision Medicine Pipeline



SHP2 – Genentech Global Collaboration for GDC-1971 (Formerly RLY-1971)

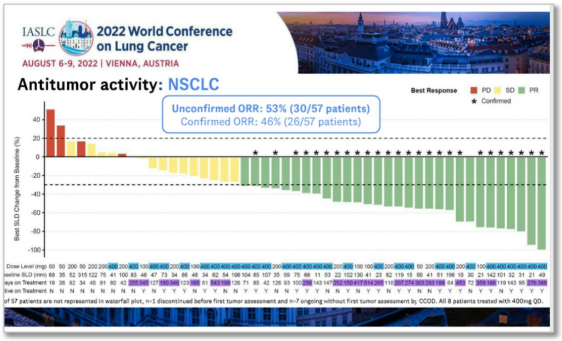
Three ongoing trials with GDC-1971:

GDC-1971
+
GDC-6036 (KRAS G12Ci)
initiated July 2021

GDC-1971
+
Atezolizumab (PD-L1 Ab)
initiated August 2022

GDC-1971
+
Osimertinib/Cetuximab (EGFRi)
initiated July 2023

Clinical Update for GDC-6036 Monotherapy at World Lung 2022



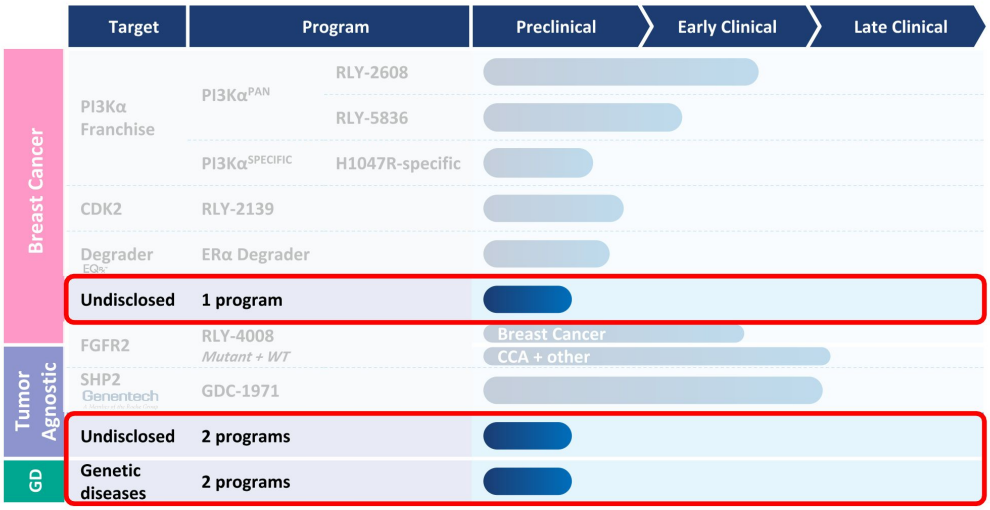
Unconfirmed ORR: 53% (30/57 patients)
Confirmed ORR: 46% (26/57 patients)

Collaboration provides meaningful economics to Relay Tx[1]

Source: World Lung 2022 #OA03.04

1. As of June 30, 2023: $110 million in upfront & milestone payments received, plus an opt-in option for 50/50 profit share and up to $685M in potential additional total milestones, low-to-mid teen royalties on global net sales plus eligible to receive additional royalties upon approval of GDC-1971 and GDC-6036 in combination

Relay Tx – Extensive Precision Medicine Pipeline

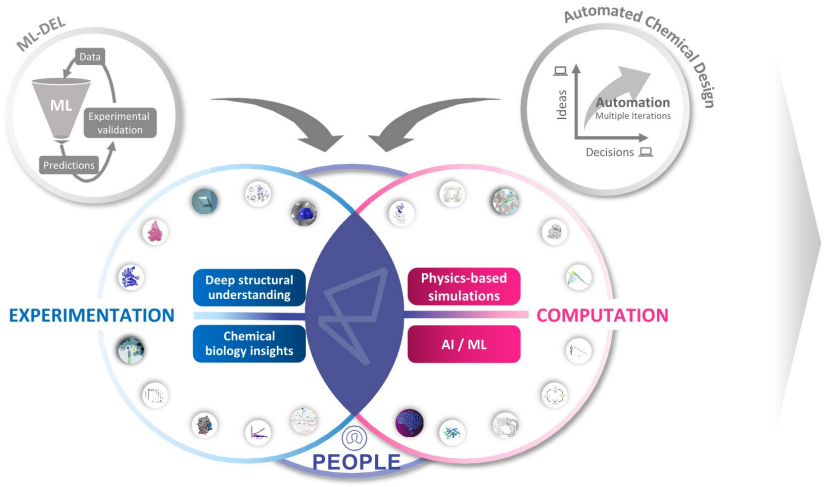


Relay Tx – The Dynamo™ Platform

Platform capabilities and expertise continue to expand

Growing Platform
E.g., ML-DEL

Growing Automation
E.g., Automated Chemical Design (ACD)

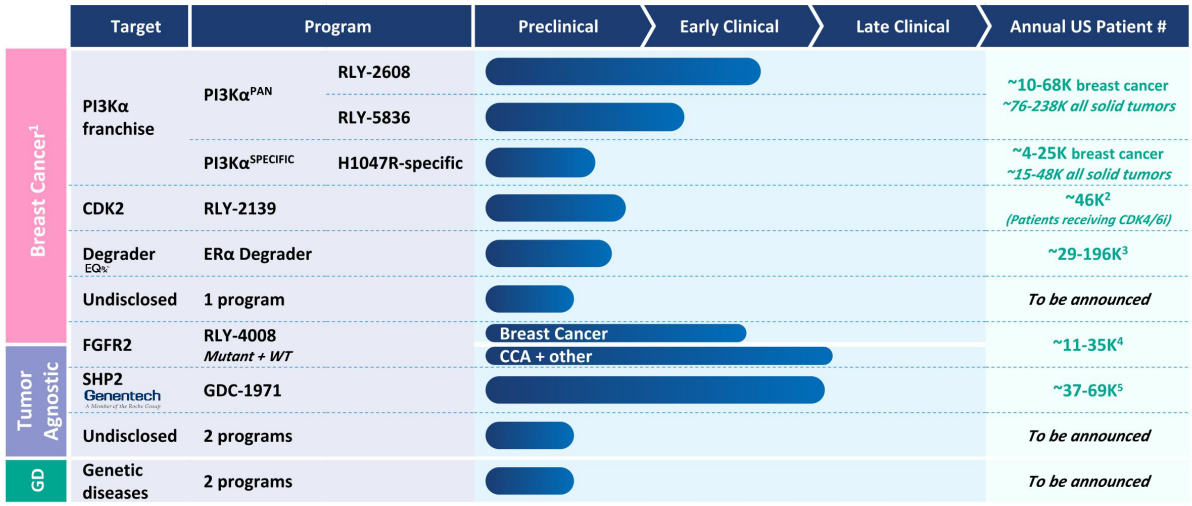


Enabling deep and diversified early pipeline

5+ Undisclosed Programs

- Inhibitors
- Degraders
- Chaperones
- New Modalities

Relay Tx – Extensive Precision Medicine Pipeline



Note: Unless otherwise indicated, patient #'s refer to total annual number of US patients with late-line cancers compared to comprehensive annual incidence that may be amenable to treatment with our programs

1. Unless otherwise indicated, all breast cancer patient numbers refer to HR+/HER2- breast cancer tumors; 2. ~46K HR+/HER2- breast cancer patients expected to receive CDK 4/6 inhibitors in adjuvant setting, first-line setting, and second-line setting in 2023, per Decision Resources Breast Cancer Market Forecast report dated June 2022; 3. HR+/HER2- US late-line breast cancer patients compared to HR+/HER2- US incident breast cancer patients; 4. FGFR2 altered late-line solid tumors compared to comprehensive annual FGFR2 altered incident solid tumors including additional FGFR gene fusions and rearrangements resulting from truncation of the protein at exon 18 and all breast cancer patients with FGFR2 alterations; 5. SHP2 combo only includes KRAS G12C in lung and colorectal, EGFR mutations in lung, and ALK fusions in lung

Relay Tx – Capital, Team & Execution Focus to Deliver on Key Milestones

RELAY THERAPEUTICS

Breast Cancer Franchise

PI3Kα^{PAN}

- ✓ Initial RLY-2608 data in 1H 2023
- ✓ RLY-5836 clinical start in 2Q 2023
- ✓ RLY-2608 expansion cohorts initiated in 2H 2023
- Additional data update in 2024

RLY-2139 (Selective CDK2)

Clinical start in early 2024

ERα Degrader

Development candidate nomination in 2023

Tumor Agnostic

RLY-4008 (Selective FGFR2)

- ✓ Full dose escalation data in 1H 2023 (2023 ASCO)
- Non-CCA expansion cohorts data in 2H 2023
- Pivotal cohort full enrollment in 2H 2023

GDC-1971 (SHP2)

Ongoing combo trials; Genentech controls data disclosures

Undisclosed

To be announced

5+ undisclosed programs in preclinical development and additional early-stage efforts across platform

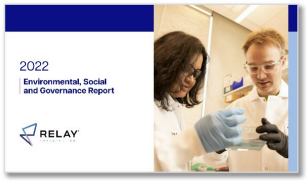
~$872M

Cash, cash equivalents and investments as of the end of 2Q 2023

Current cash, cash equivalents and investments are expected to be sufficient to fund current operating plan into 2H 2025

Relay Tx 2022 ESG Report – Continuing Our ESG Journey

Relay Tx's 2nd ESG Annual Report



VALUE REPORTING FOUNDATION
SASB STANDARDS

SUSTAINABLE DEVELOPMENT GOALS

Patients

- 4 clinical programs
- Committed to clinical trial patient safety
- Committed to product safety and quality

Note: Relay Tx is a development stage company

Community

- Our patients / future patients
- Our community in Cambridge and the broader Boston area
- The next generation of scientists

People

- 93% of employee respondents "would recommend Relay Tx as a great place to work"
- Turnover below industry average rates
- Diversity & inclusion advisory group
- Training and development opportunities
- Equitable compensation

Environment

- Responsible energy consumption*
- Reducing water consumption
- Hazardous and lab waste management
- Non-hazardous waste management

*Efforts to reduce energy consumption lend to our ambitions to limit carbon emissions

Governance

- 8 Directors Total*
- The Nom/Gov and Audit Committees oversee ESG efforts, with the full BOD getting ~quarterly updates

38% Racial/Ethnic Diversity	38% Women
5yrs Average Tenure	88% Independence (Separate CEO and Chair Role)

*As of December 2022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THERAPEUTICS