RELAY®
THERAPEUTICS

RLY-4008 (lirafugratinib) in FGFR2-Altered Solid Tumors

October 2023

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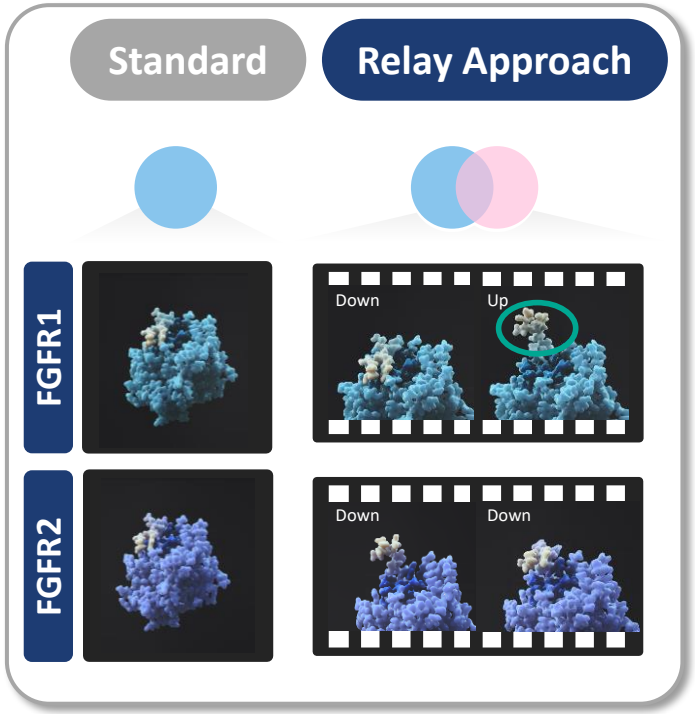
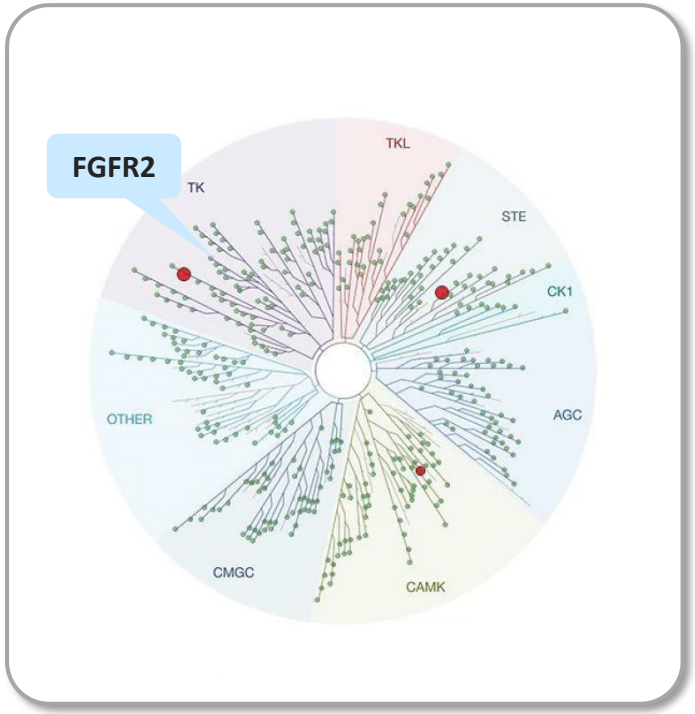
RLY-4008 – Embodies The Power of Our R&D Engine

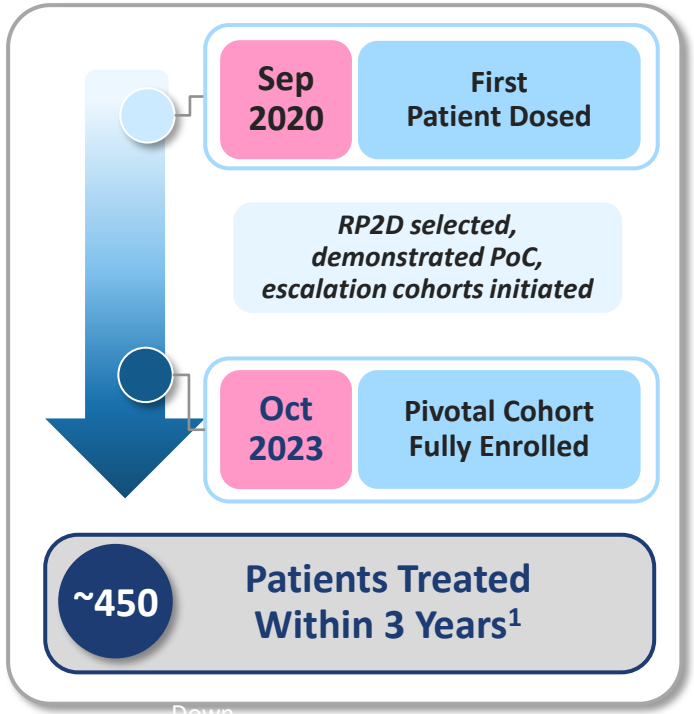
Motion Based Drug Design…



…Created First Known Selective FGFR2



Strong Clinical Execution Drives Rapid Pathway to Potential Registration



1. RLY-4008-101 treated patient total as of 29 Sept 2023

RLY-4008 (lirafugratinib) – Initial Clinical Efficacy Observed Across Tumor Types

Broad Activity Across Alteration and Tumor Types

24-40% cORR[1] in FGFR2-altered, non-CCA advanced solid tumors *at Triple Meeting 2023 interim readout*

Objective Response Rate

- **40%** HR+ Breast Cancer (all alts)
- **35%** All Fusions
- **24%** All Amplifications

Add'l signals (ORR) observed in:
- Gastric: 19% (5 of 26 pt)
- NSCLC: 50% (2 of 4 pt)
- Ovarian: 50% (2 of 4 pt)

Majority of responders with durability ≥ 6 months[3]

Global Patients[4] ~85k[5]

Cholangiocarcinoma Cohort Continues to Mature

58-82% cORR in fusion+, FGFRi-naïve CCA[2]

- Differentiated profile
- Pivotal cohort fully enrolled

Global Patients[4] ~6k

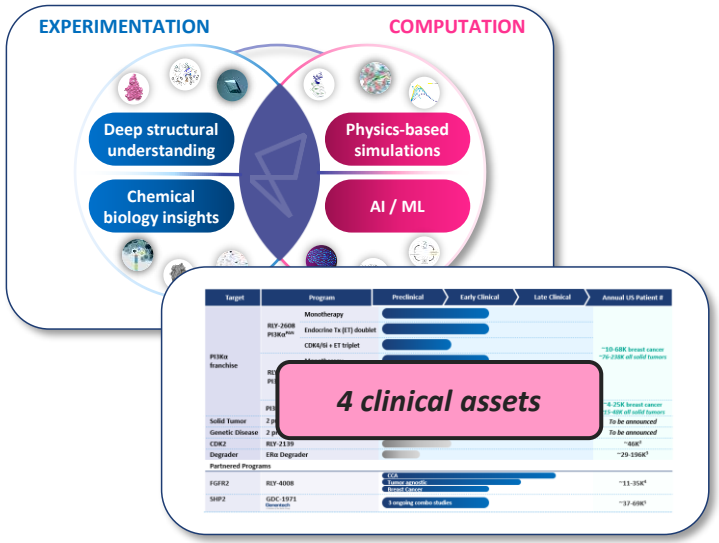
cORR = Confirmed Objective Response Rate; ORR = Objective Response Rate

Sources: ACS; SEER; Globocan; World Bank; 3rd party sources; 1. ORR includes 2 unconfirmed partial responses that confirmed post data cut off; 2. Range reflects all doses to 70mg QD RP2D, ESMO 2022 interim readout; 3. As of 23 Aug 2023; 4. Global patient totals reflect annual incidence; 5. 85K is inclusive of HR+ breast cancer (all FGFR2 alterations) and advanced solid tumors with FGFR2 amplifications or fusions (excluding breast cancer)

Preliminary data as of 23 Aug 2023

Relay Tx – Patient-Driven

Productive In-House R&D Engine…



…Focusing Investment…

RLY-4008 — Pause CCA commercial build & align with TA

Pre-clinical — Pause CDK2 at IND

Extend Cash Runway & Enable Execution Focus

…To Create Long Term Value

FGFR2

RLY-4008

Tumor agnostic (TA) focus

PI3Kα Mutant Selective Franchise

RLY-2608 | **RLY-5836** | **H1047R specific**

Addresses large patient population

HR+ /HER2- Breast Cancer[1] (US Patients)

2L	1L	(Neo) adjuvant
~14k	~18k	~120k

Continue Enrollment

Initiate CDK4/6 Triplet by YE 2023

~$872M

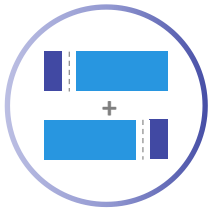
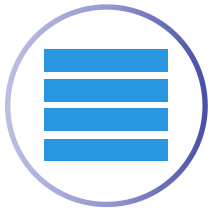
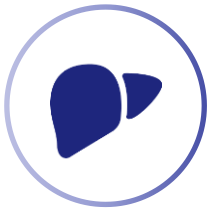
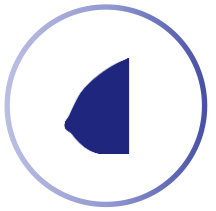
Cash, cash equivalents and investments as of the end of 2Q 2023

Current cash, cash equivalents and investments are expected to be sufficient to fund current operating plan into 2H 2026

Sources: Global Data product sales; Global Data HER2-/HR+ Breast Cancer Global Forecast; 3rd party data

1. Includes prevalent PI3Kα mutated HR+/HER2- patients receiving therapy in Neoadjuvant/Adjuvant setting (includes incident patients in 2023 receiving endocrine or non-endocrine therapy in Neo/Adjuvant settings [~50k], and patients diagnosed in previous years with local/regional disease receiving sequential endocrine therapy in 2023 [~69k]), and prevalent PI3Kα mutated HR+/HER2- metastatic patients receiving therapy in 1L or 2L setting

FGFR2 – Tumor Agnostic Opportunity

	Tumor Agnostic		Tumor Specific		
					
Indication	**All Solid Tumors: FGFR2 Fusions**	**All Solid Tumors: FGFR2 Amplifications**	**CCA: Fusions**	**HR+ Breast Cancer: All Alterations[2]**	**Gastric Cancer: All Alterations[2]**
US patients per year	**~13k**	**~7k**	**~1k**	**~9k**	**~2k**
Global patients per year[1]	**Up to ~43k**	**Up to ~34k**	**Up to ~6k**	**Up to ~28k**	**Up to ~67k**

Current data suggests potentially large global opportunity

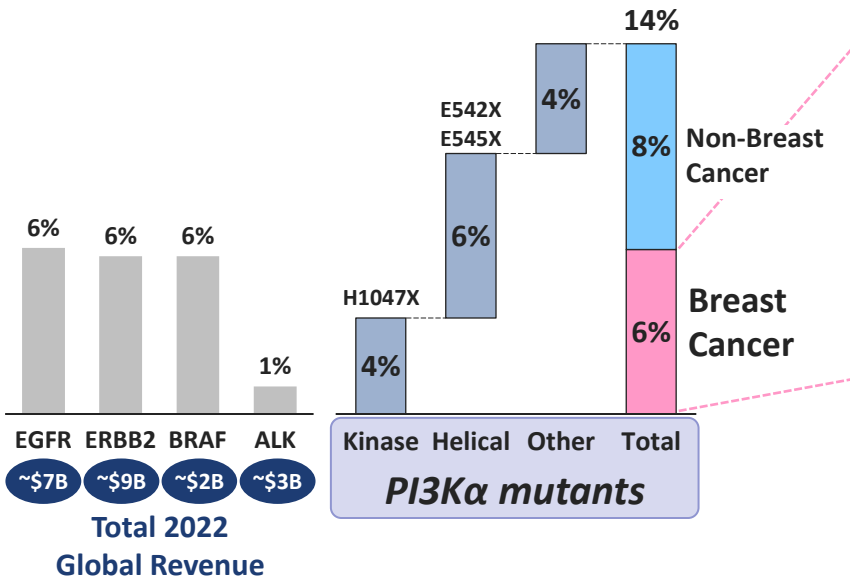
1. Incidence; Global includes US, EU4+UK, Japan, China; 2. Alterations include fusions, amplifications and mutations

Sources: ACS; SEER; Globocan; World Bank; 3rd party sources; Cholangiocarcinoma EU website; Jpn J Clin Oncol 2021, June, Tsujie; CCA News, 2021 Yr in review, "FGFR2 Fusion and/or Rearrangement Profiling in Chinese Patients with Intrahepatic CCA"; Nature, Jan 2012, K Matsumoto; Clin Cancer Res, May 2013, L Xie; Br J Cancer, Feb 2014, X Su; Ann Translational Med, Oct 2020, Yi Sun; Life (Basel), Jan 2022, C Lengyel; Am J Cancer Res, 2021, W Gu

PI3Kα Represents a Major Market Opportunity

PI3Kα is the most frequently mutated kinase in solid tumors

% of all solid tumors with alteration



HR+/HER2- Breast Cancer represents a significant market with high unmet need

~150k US PI3Kα Mutation HR+/HER2- Breast Cancer Patients[1]

Patient Segment *(PI3Kα mutated)*	2L	1L	(Neo) Adjuvant
US Patients	~14k	~18k	~120k

Relay Tx

RLY-2608
RLY-5836

→ Initial observed tolerability profile enables potential earlier lines of use

Current Tx

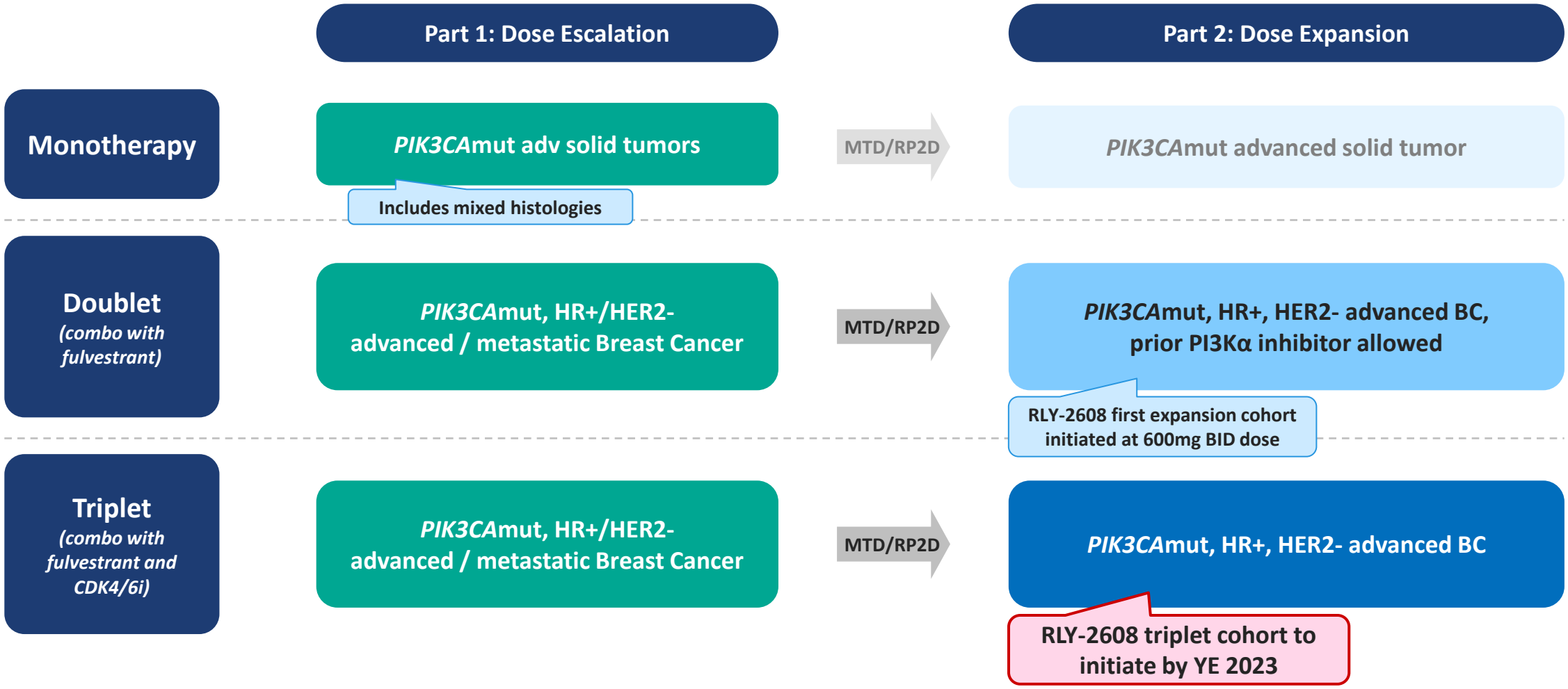
Piqray	Approved
Capivasertib	Filed[2]
Inavolisib	Ph 3[2]

→ Broad earlier use potentially unlikely due to tolerability challenges

RLY-2608 Triplet Trials with CDK4/6 inhibitors to be initiated before YE 2023

1. Includes prevalent PI3Kα mutated HR+/HER2- patients receiving therapy in Neoadjuvant/Adjuvant setting (includes incident patients in 2023 receiving endocrine or non-endocrine therapy in Neo/Adjuvant settings [~50k], and patients diagnosed in previous years with local/regional disease receiving sequential endocrine therapy in 2023 [~69k]), and prevalent PI3Kα mutated HR+/HER2- metastatic patients receiving therapy in 1L or 2L setting; 2. Phase 3 trials are focused in patients with early progression on endocrine therapy (during or within 12 months of completing adjuvant treatment); Sources: Global Data product sales; Global Data HER2-/HR+ Breast Cancer Global Forecast; 3rd party data

PI3Kα Franchise Moving Rapidly to Triplet Combinations



Relay Tx's Execution & Capital Focus on Highest Value Opportunities

Target	Program	Preclinical	Early Clinical	Late Clinical	Annual US Patient #
PI3Kα franchise	RLY-2608 PI3Kα^{PAN} Monotherapy				~10-68K breast cancer *~76-238K all solid tumors*
	RLY-2608 PI3Kα^{PAN} Endocrine Tx (ET) doublet				
	RLY-2608 PI3Kα^{PAN} CDK4/6i + ET triplet				
	RLY-5836 PI3Kα^{PAN} Monotherapy				
	RLY-5836 PI3Kα^{PAN} Endocrine Tx (ET) doublet				
	RLY-5836 PI3Kα^{PAN} CDK4/6i + ET triplet				
	PI3Kα^{H1047R}				~4-25K breast cancer *~15-48K all solid tumors*
FGFR2	RLY-4008	Tumor Agnostic (incl. CCA) Breast Cancer			~11-35K[4]
Solid Tumor	2 programs				*To be announced*
Genetic Disease	2 programs				*To be announced*
CDK2	RLY-2139 (Pausing programs YE 2023)				~46K[2]
ERα	ERα Degrader (Pausing programs YE 2023)				~29-196K[3]
SHP2	GDC-1971 Genentech A Member of the Roche Group	3 ongoing combo studies			~37-69K[5]

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

Breast Cancer Franchise

RLY-2608
RLY-5836
(PI3Kα^{PAN})

- ✓ Initial RLY-2608 data in 1H 2023
- ✓ RLY-5836 clinical start in 2Q 2023
- ✓ RLY-2608 expansion cohorts initiated 2H 2023
- ⊕ RLY-2608 Triplet Dose Escalation initiated by YE 2023
  - Additional data update in 2024

PI3Kα Companions

- ERα development candidate nomination in 2023
- CDK2i RLY-2139 clinical start in early 2024

Pausing both programs YE 2023

Tumor Agnostic

RLY-4008 (lirafugratinib)

- ✓ Full dose escalation data in 1H 2023 (2023 ASCO)
- ✓ Tumor Agnostic expansion cohorts data in 2H 2023 (2023 Triple)
- ✓ Pivotal cohort full enrollment in 2H 2023
- ⊕ Clinical data & regulatory update in 2024

GDC-1971 (SHP2)
Genentech
A Member of the Roche Group

- ✓ Ongoing combo trials; Genentech controls data disclosures

Undisclosed

To be announced

- ⊕ New program(s) to be disclosed in 2024

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

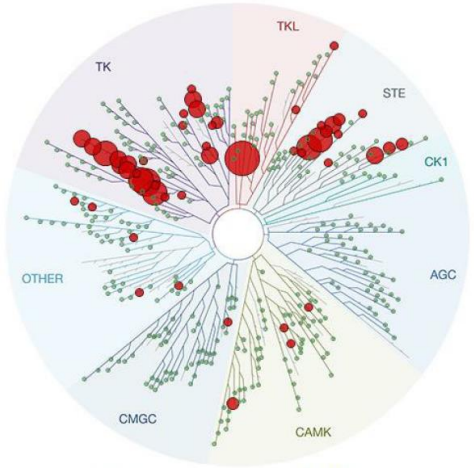
~$872M
Cash, cash equivalents and investments as of the end of 2Q 2023

Current cash, cash equivalents and investments are expected to be sufficient to fund current operating plan into 2H 2026

FGFR2 – Limitations of Current CCA and Non-CCA Treatment Options

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[1]	% of Patients with Hyperphosphatemia	% of Patients with Diarrhea
Pemigatinib	93%	39%
Futibatinib	88%	33%
Erdafitinib	71%	59%

Chemo and other late line therapies have high rates of AEs and dose modifications

Limited Target Coverage

E.g., pemigatinib 13.5mg QD achieves 76% inhibition of FGFR2 at trough[2]

Limited Efficacy

CCA

36-42% ORR in currently approved tx[1]
(in fusion+ CCA, FGFRi-naïve pt)

Non-CCA Solid Tumors

0-15% ORR in approved late-line tx[3]
(based on NCCN guidelines)

mPFS 1-5mo in non-CCA solid tumors

1. Sources: Pemigatinib – prescribing information; futibatinib – prescribing Information; erdafitinib – prescribing information; (note: AEs are reflective of respective label indications); 2. From pemigatinib NDA review documents: "Pemigatinib 13.5 mg daily provided 76% inhibition of ex vivo phosphorylated FGFR2α at trough"; 3. Reflects reported ORRs in key randomized studies evaluating NCCN recommended regimens for recurrent/metastatic patients (second/third line or later) for the following tumor types: HR+ breast cancer, gastric cancer, pancreatic cancer, NSCLC, ovarian cancer, and head and neck (studies on slide 23).

RLY-4008 (lirafugratinib) – 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)*

Advanced solid tumors with FGFR2 alterations (excluding CCA)

FGFR2-fusion+ solid tumors *(N=50)*

FGFR2-amplified solid tumors *(N=50)*

FGFR2-mutant solid tumors *(N=50)*

Today's Disclosure

Baseline Characteristics – Heavily Pre-Treated Patients Across 18 Tumor Types

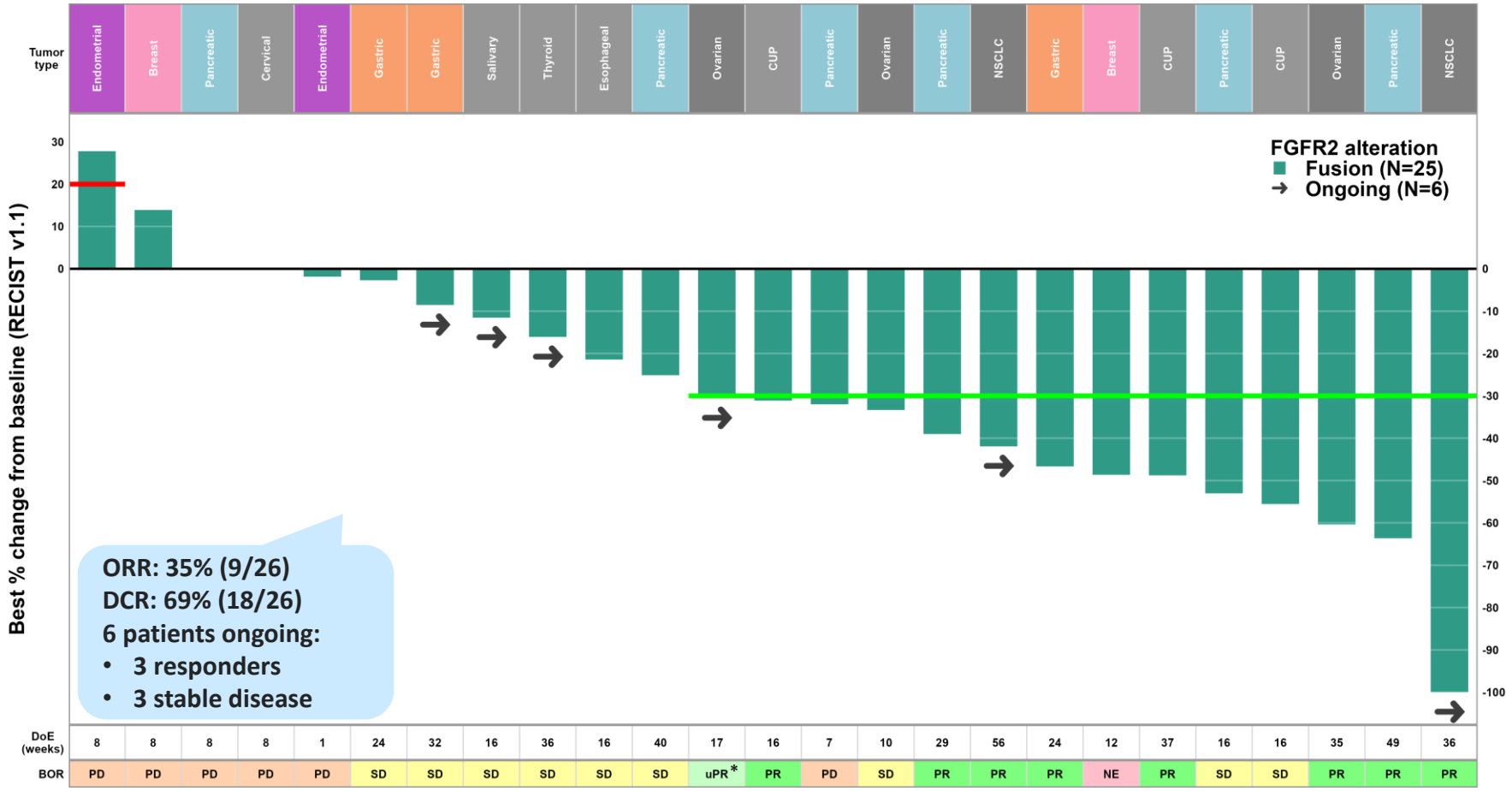
Parameter	Efficacy Population (N=84)
Sex, n (%)	
Female	51 (61)
Age (years), median (range)	62 (33, 84)
Race, n (%)	
White	46 (55%)
Asian	12 (14%)
Other/Unknown	26 (31%)
ECOG PS, n (%)	
0	31 (37%)
1	52 (62%)
2	1 (1%)
Prior lines of systemic therapy, n (%)	
0	2 (2%)
1	14 (17%)
2	26 (31%)
≥3	42 (50%)
Prior systemic therapy, n (%)	
Chemotherapy	79 (94%)
FGFR inhibitor	0

Parameter	Efficacy Population (N=84)
Tumor types, n (%)	
Gastric cancer	26 (31%)
Breast Cancer	14 (17%)
Pancreatic	7 (8%)
Ovarian	5 (6%)
Colorectal	4 (5%)
NSCLC	4 (5%)
Endometrial	4 (5%)
CUP	3 (4%)
Salivary	2 (2%)
Others[1]	15 (18%)
FGFR2 oncogenic alteration, n (%) by local testing	
FGFR2 fusion or rearrangement	26 (31%)
FGFR2 amplification[2]	34 (40%)
FGFR2 mutation	24 (29%)

1. *Includes ameloblastic, ampullary, cervical, duodenal, esophageal, fallopian, melanoma, orbita, thyroid
2. Amplification define as FGFR2 locus with copy number ≥8 in tumor tissue or validated by next generation sequencing (NGS). No amplification cutoff is defined for circulating tumor DNA (ctDNA)

Note: Efficacy population includes 84 patients with *FGFR2* fusions, amplifications, or mutations by local testing who had measurable disease and ≥1 post-baseline tumor assessment

Tumor Responses Observed Across Multiple FGFR2-Fusion Solid Tumors



Indication	PR	SD	N	ORR	DCR
All Fusions	9	9	26	35%	69%
NSCLC	2	0	2	100%	100%
Ovarian	2	1	3	67%	100%
Pancreatic	2	2	6	33%	67%
Gastric	1	2	3	33%	100%
Breast	0	0	2	0%	0%
Other	2	4	10	20%	60%

BOR = Best Overall Response:

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

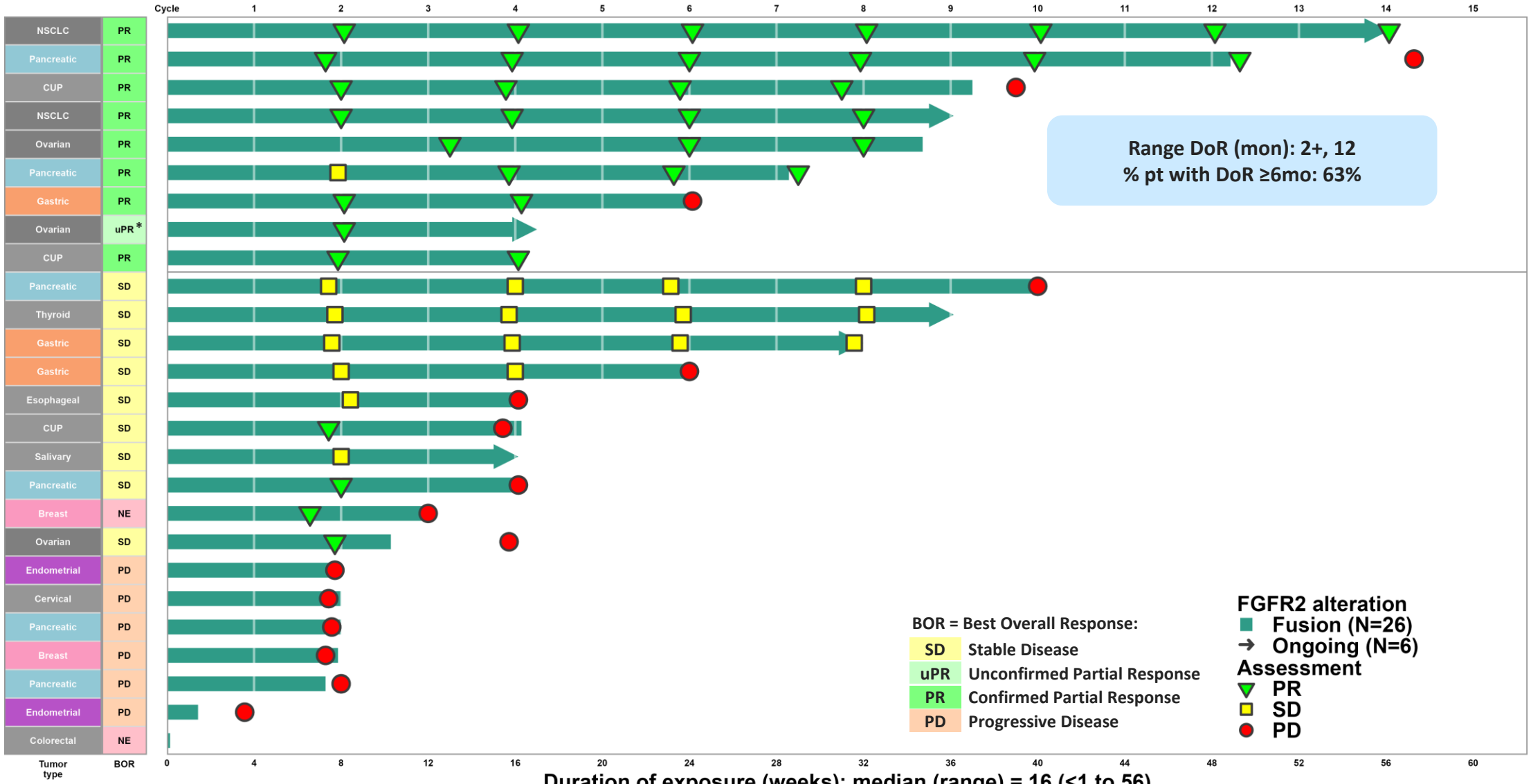
Consistent activity signal seen across a range of tumor types

Note: Waterfall includes patients with post-baseline scans. ORR calculation includes 26 efficacy evaluable patients; ORR = Objective Response Rate; DCR = Disease Control Rate

* Response confirmed post data cutoff

Preliminary data as of 23 Aug 2023

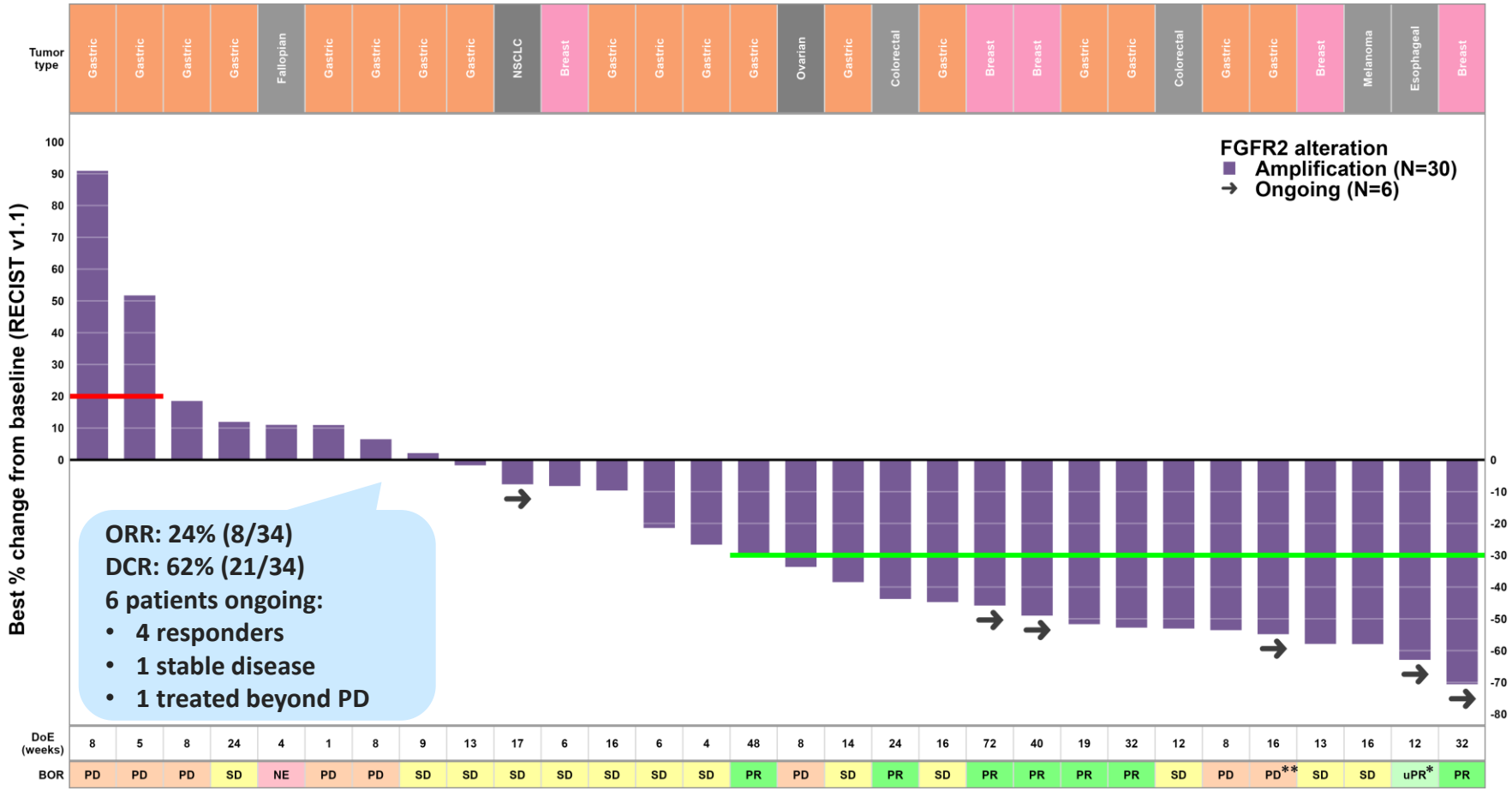
Durable Responses Observed Across FGFR2-Fusion Solid Tumors



* Response confirmed post data cutoff

Preliminary data as of 23 Aug 2023

Early Signal in FGFR2-Amplifications Driven by Key Tumor Types



Indication	PR	SD	N	ORR	DCR
All Amps	8	13	34	24%	62%
Breast	3	2	5	60%	100%
Colorectal	1	1	2	50%	100%
Gastric	3	8	19	16%	58%
NSCLC	0	1	2	0%	50%
Other	1	1	6	17%	33%

BOR = Best Overall Response:

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

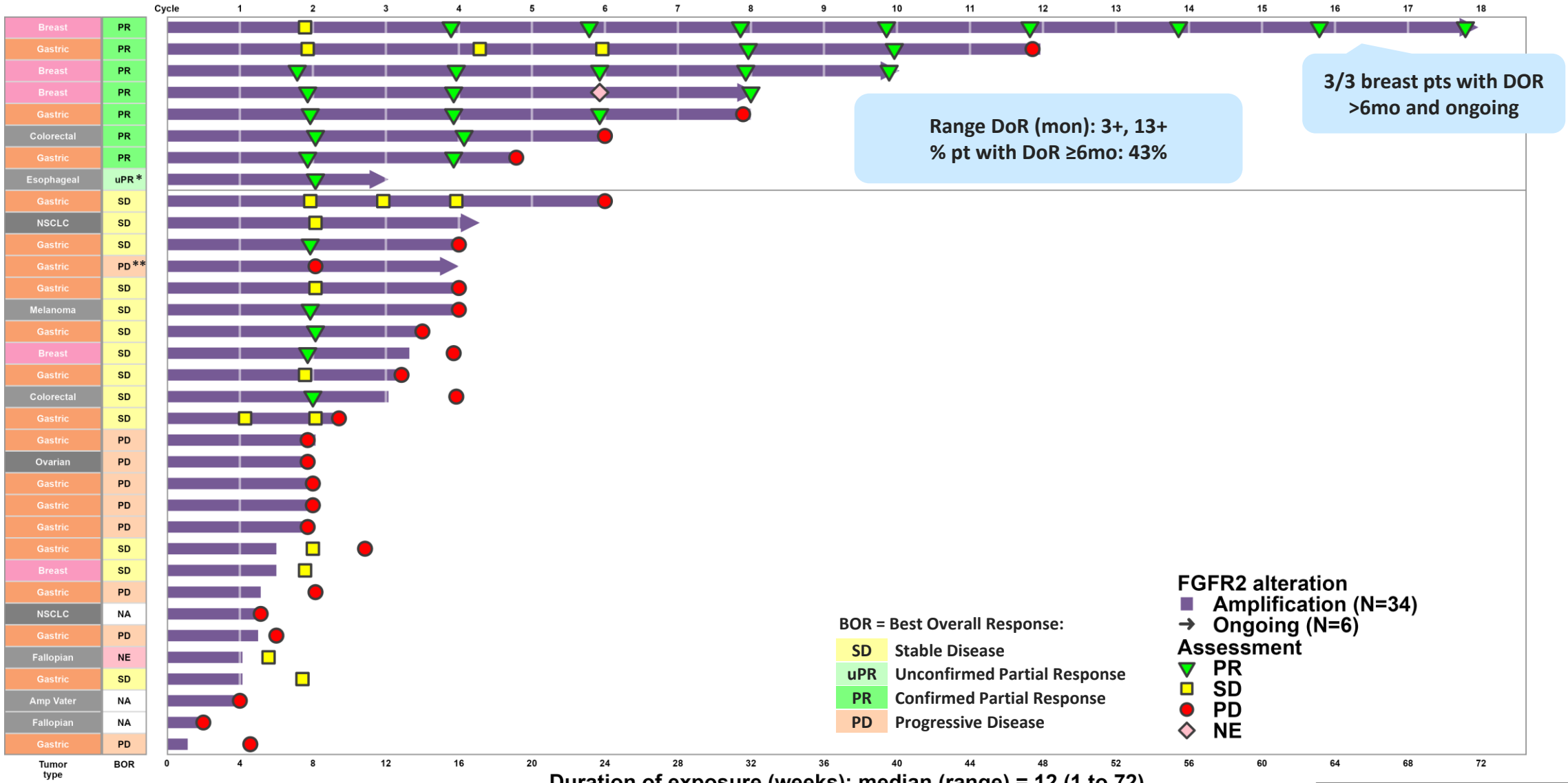
Encouraging gastric cancer signal where current approved last line of treatment yields 4% ORR, <4mo mPFS[1]

Note: Waterfall includes patients with post-baseline scans. ORR calculation includes 34 efficacy evaluable patients; ORR = Objective Response Rate; DCR = Disease Control Rate

1. Bang 2018 Ann Oncol 29:2052 (n=186); 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.; * Response confirmed post data cutoff; ** TBP: Treated Beyond Progression

Preliminary data as of 23 Aug 2023

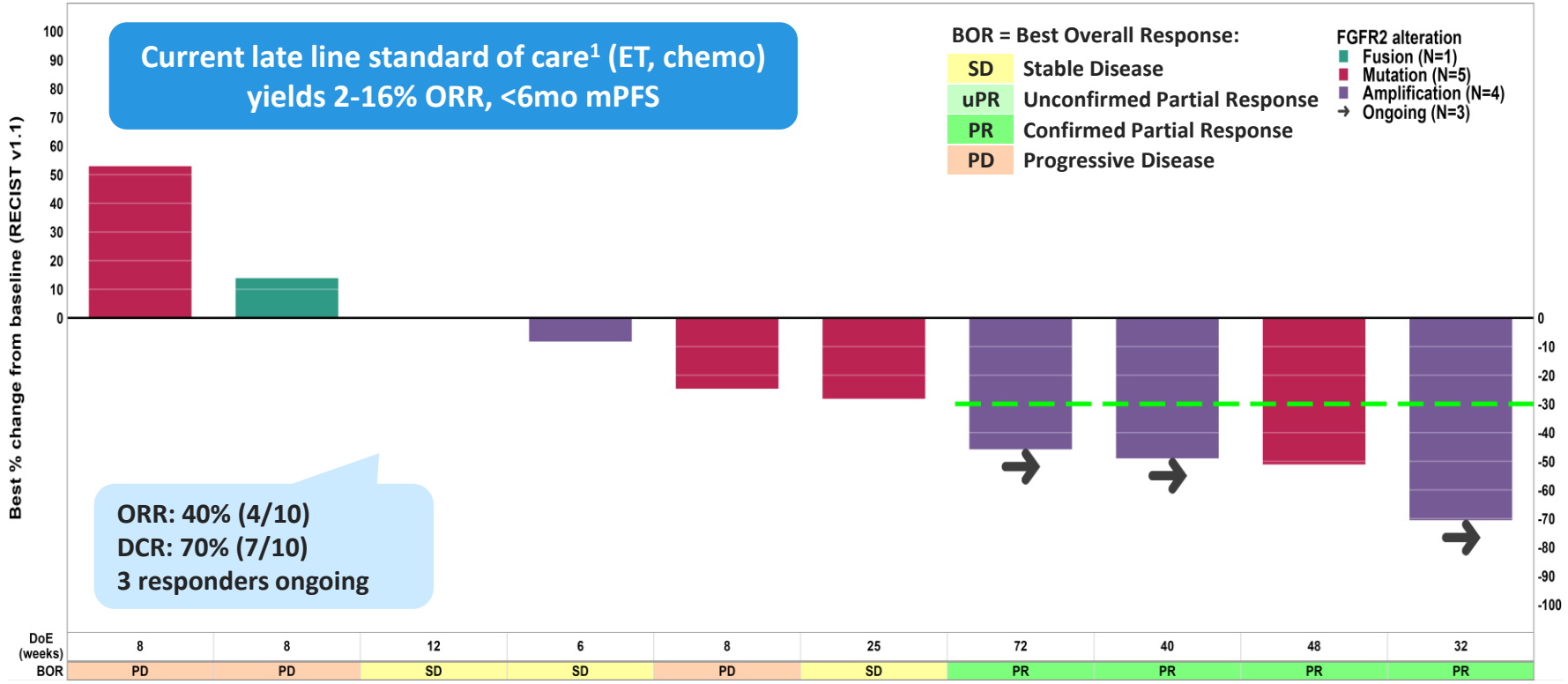
Durable Responses Observed Across FGFR2-Amplification Solid Tumors



* Response confirmed post data cutoff; ** TBP: Treated Beyond Progression

Preliminary data as of 23 Aug 2023

Strong Signal in HR+/HER2- Breast Cancer



DoE (weeks)	8	8	12	6	8	25	72	40	48	32
BOR	PD	PD	SD	SD	PD	SD	PR	PR	PR	PR
Subtype	HR+/HER2-	HR+/HER2-	HR+/HER2-	HR+/HER2-	HR+/HER2-	HR+/HER2-	HR+/HER2-*	HR+/HER2- ^	HR+/HER2- ^^	HR+/HER2-
Prior LoT	10	9	6	5	3	7	6	8	11	7
Prior ET?	-	Y	Y	Y	Y	Y	Y	Y	Y	Y
Prior CDK4/6?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ESR1 status	-	+	-	+	+	+	+	-	+	+

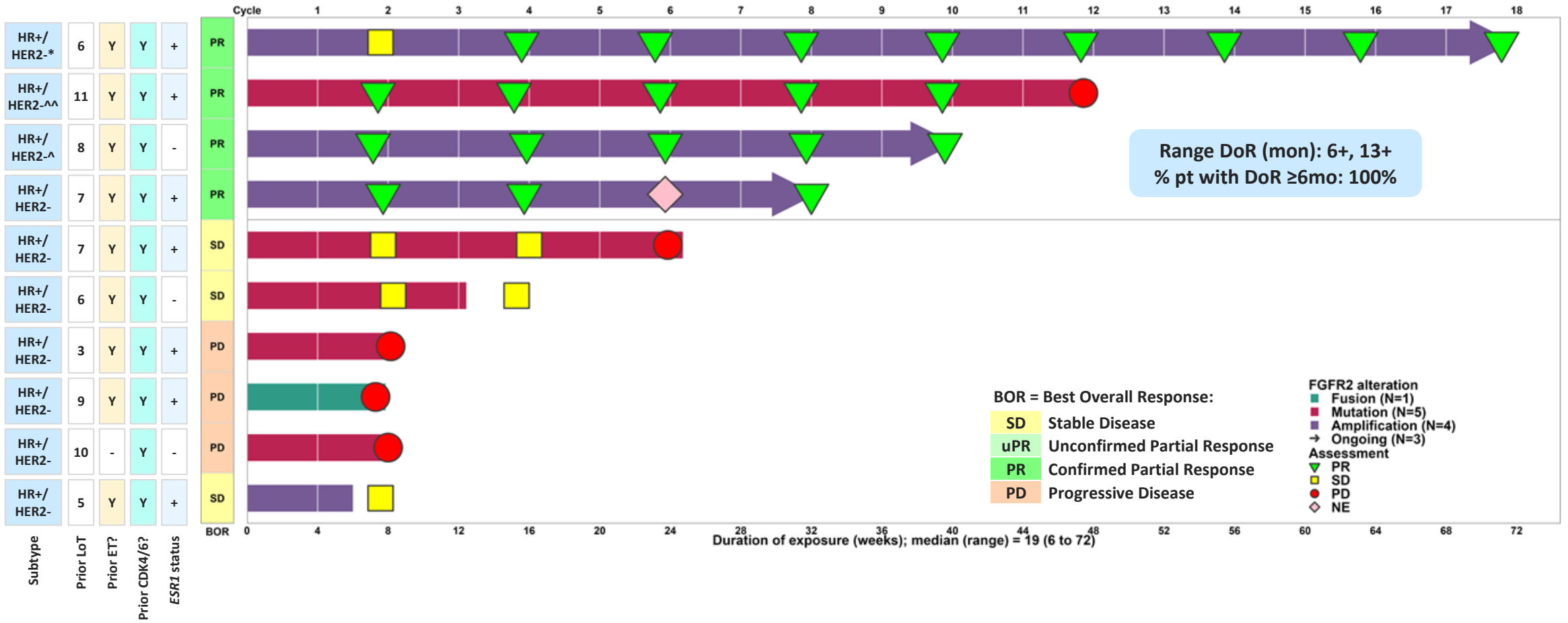
Median 7 prior lines of systemic therapy

ESR1 alteration status per central testing; ORR = Objective Response Rate; DCR = Disease Control Rate

* Local HER2 result equivocal and patient was treated with a single dose of concomitant fulvestrant; ^ Patient treated with concomitant letrozole and leuprorelin; ^^ Patient treated with concomitant anastrozole; 1. Reflects reported ORRs in key randomized studies evaluating NCCN recommended regimens for recurrent/metastatic patients (second/third line or later) for HR+ breast cancer (studies on slide 23). 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.

Preliminary data as of 23 Aug 2023

Multiple Long-Term Responses Observed in Heavily Pre-Treated HR+/HER2- Breast Cancer



* Local HER2 result equivocal and patient was treated with a single dose of concomitant fulvestrant; ^ Patient treated with concomitant letrozole and leuprorelin; ^^ Patient treated with concomitant anastrozole

Preliminary data as of 23 Aug 2023

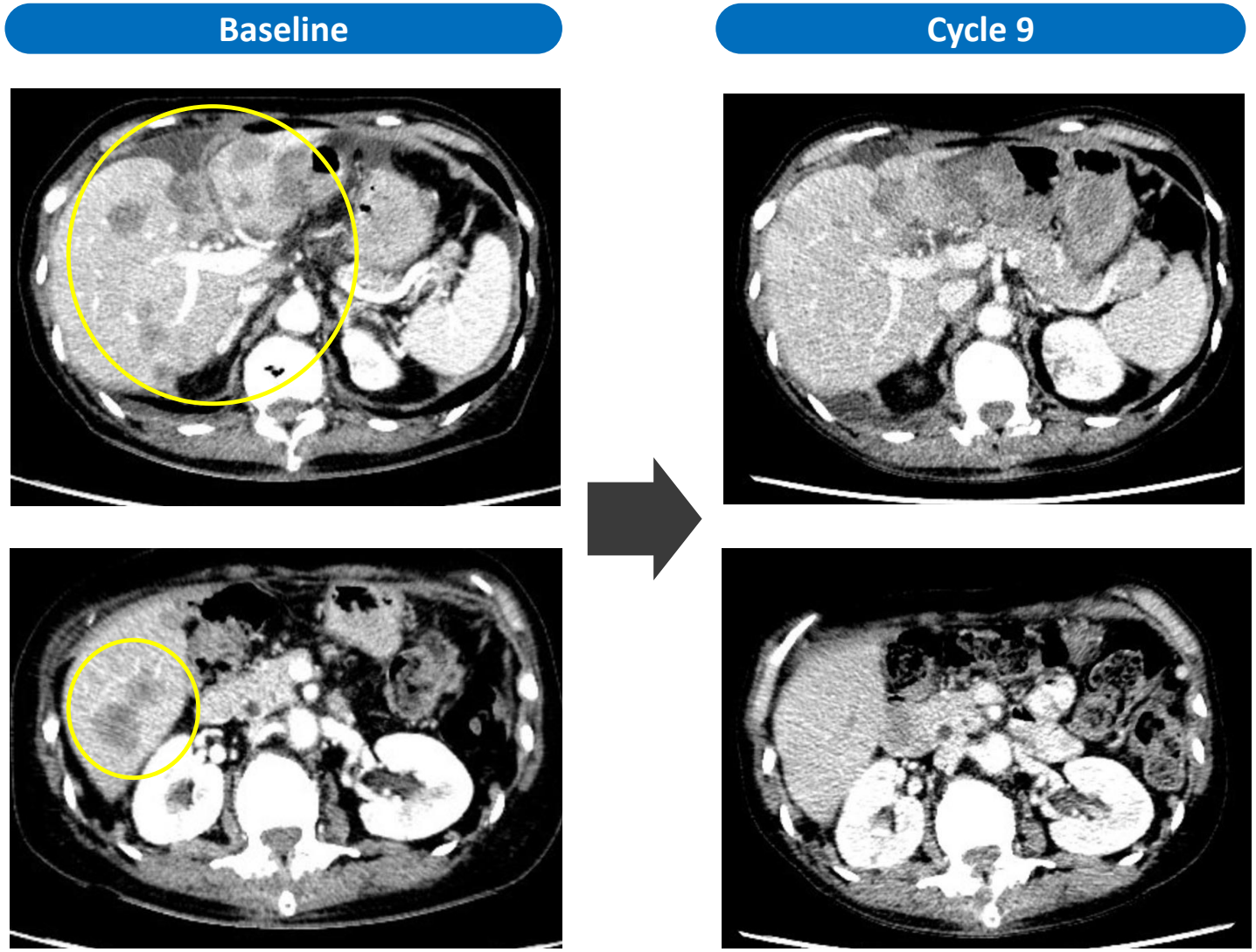
Durable cPR in Heavily Pre-Treated FGFR2-Amplified HR+ Breast Cancer

Patient Profile

- 66yr female with HR+/HER2- mBC*
- FGFR2 amplification (copy number: 10)
- 6 prior lines of therapy, including endocrine therapy, CDK4/6 inhibitor, and chemotherapy

Impact of RLY-4008

- ctDNA cleared at C2
- Initial PR at Cycle 5, Max 46% tumor regression
- Patient ongoing treatment at Cycle 19
- Generally tolerable safety profile with dose mods
  - Maintained cPR on 20mg QD
- Treated with a single dose of concomitant fulvestrant, otherwise single agent RLY-4008



* Local HER2 result equivocal

Courtesy Dr Tai, NCC Singapore

Preliminary data as of 23 Aug 2023

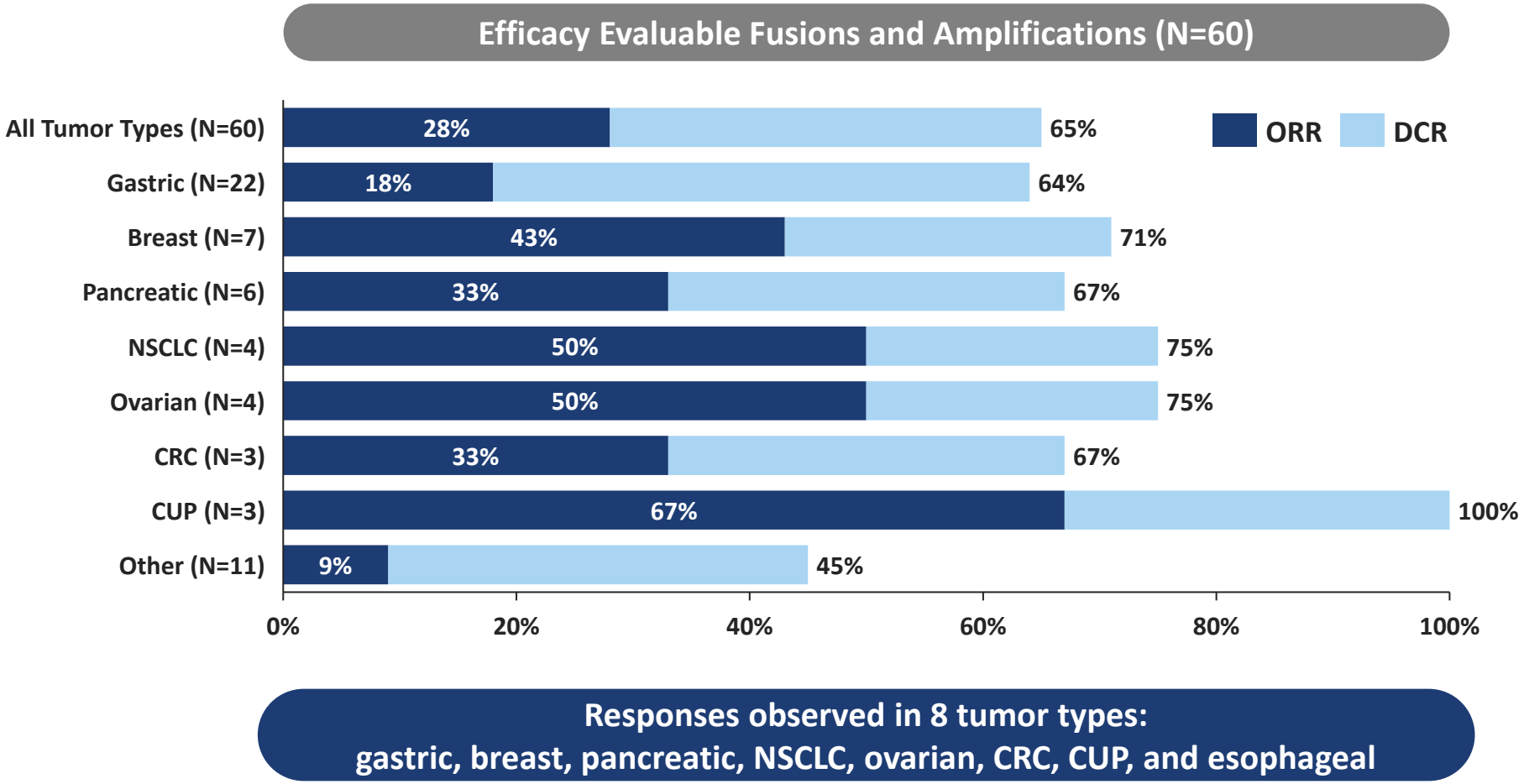
ORR & DCR by FGFR2 Alteration Types

Efficacy Parameter	Fusion N=26	Amplification N=34	Mutation N=24
Best Overall Response, n (%)			
Partial response, n (%)*	9 (35%)	8 (24%)	3 (13%)
Stable disease, n (%)	9 (35%)	13 (38%)	7 (29%)
Progressive disease, n (%)	6 (23%)	9 (26%)	12 (50%)
Not evaluable, n (%)**	2 (8%)	4 (12%)	2 (8%)
ORR n (%) 95% CI	9 (35%) 17, 56	8 (24%) 11, 41	3 (13%) 3, 32
Disease control rate, n (%) 95% CI	18 (69%) 48, 86	21 (62%) 44, 78	10 (42%) 22, 63

ORR = Objective Response Rate; DCR = Disease Control Rate
*Including ongoing 1 uPR in ovarian cancer patient with FGFR2 fusion, confirmed after data extraction, 1 ongoing uPR in esophageal cancer patient with FGFR2 amplification, and 1 ongoing uPR in gastric cancer patient with FGFR2 mutation
** Including N=2 fusion: 1 patient who discontinued due to death before first post-baseline scan and 1 patient with 1 post-baseline scan that did not meet the minimum duration of > 8 weeks from baseline for SD; N=4 amplification: 3 patients who discontinued due to progressive disease before first post-baseline scan and 1 patient with 1 post-baseline scan that did not meet the minimum duration of > 8 weeks from baseline for SD; N=2 mutation: 2 patients who discontinued due to progressive disease before first post-baseline scan

Preliminary data as of 23 Aug 2023

Encouraging ORR Across FGFR2 Fusions and Amplifications in Key Tumor Types



Responses observed in 8 tumor types:
gastric, breast, pancreatic, NSCLC, ovarian, CRC, CUP, and esophageal

ORR = Objective Response Rate; DCR = Disease Control Rate
Note: ORR includes PR + 1 ongoing uPR in ovarian cancer patient with *FGFR2* fusion confirmed after data extraction, 1 ongoing uPR in esophageal cancer patient with FGFR2 amplification
Other includes: ampula vater, cervical, endometrial, esophageal, fallopian, melanoma, salivary, thyroid; ORR = Objective Response Rate; DCR = Disease Control Rate

Preliminary data as of 23 Aug 2023

Current Limitations of Late Line Standard of Care for FGFR2 Non-CCA Tumors

Tumor	Regimen(s)	Med Prior LoT	ORR
HR+ Breast Cancer[1,2]	Endocrine Tx[1], chemo[2]	1-3+	2-16%
Gastric Cancer[3]	Chemotherapy	2	4%
Pancreatic Cancer[4-6]	Chemotherapy	1-2	0-6%*
NSCLC[7,8]	Chemotherapy	2	6-7%
Ovarian[9,10]	Chemotherapy	1-2^	6-15%
HNSCC[11]	Cetuximab	1-2	7%

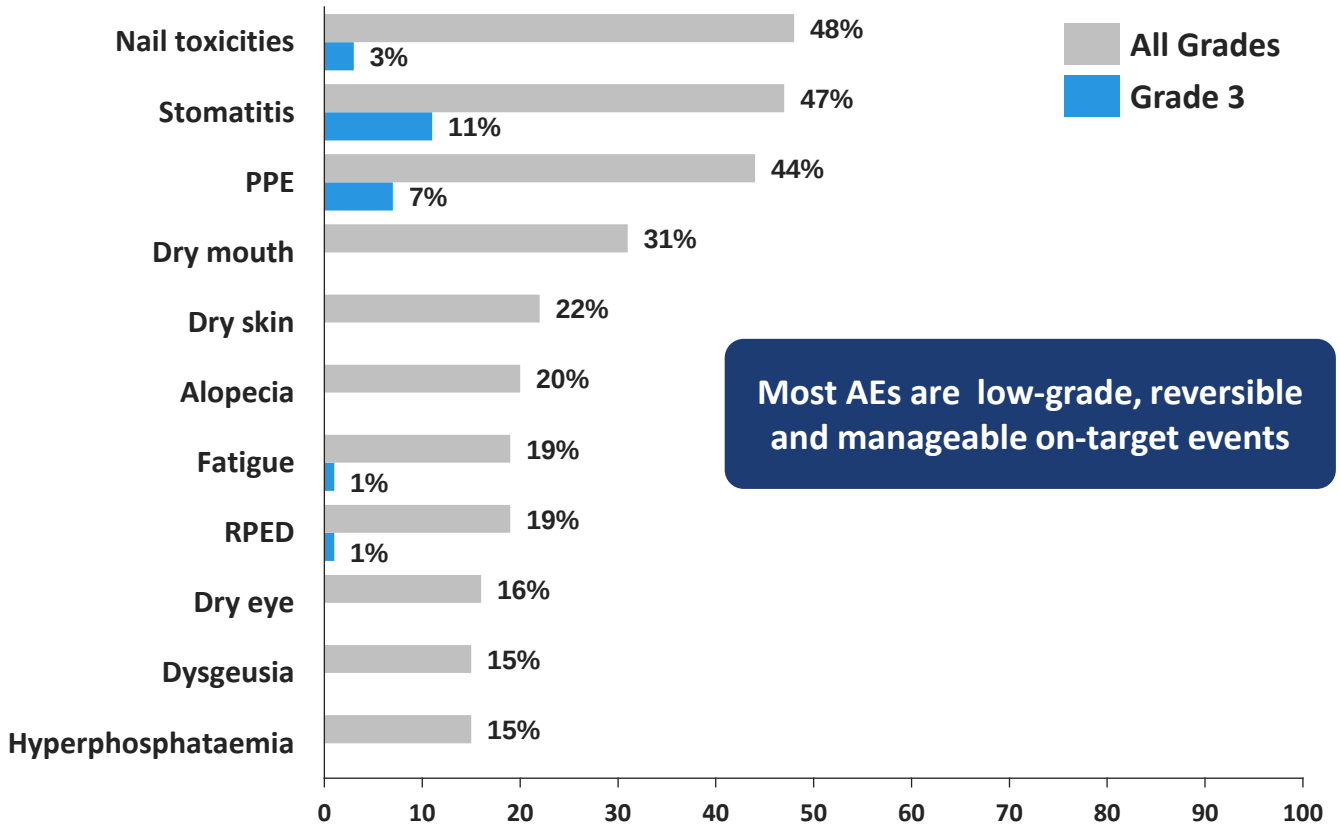
Table reflects NCCN recommended regimens. Median prior LoT and ORR are as reported in studies corresponding to each therapy

Sources: 1. Bidard 2022 J Clin Oncol 1:3246 (EMERALD, n=238), 2. ASCO 2022 #LBA3 (DB04, n=163), 3. Bang 2018 Ann Oncol 29:2052 (n=186), 4. Kobayashi 2023 BMC Cancer 21:177 (n=43), 5. Wang-Gillam 2016 Lancet 387:545 (NAPOLI-1, n=419), 6. Yoo 2009 Br J Cancer 101:10 (n=31), 7. Gidard 2009 J Thorac Oncol 4:1544 (n=173), 8. Shepherd 2000 J Clin Oncol 18:2095 (n=103), 9. ASCO 2023 #LBA5507 (MIRASOL, n=226), 10. Mutch 2007 J Clin Oncol 25:2811 (n=195), 11. Seiwert 2004 Ann Oncol 25:1813 (n=60); *ORR excludes 117 pts in NAPOLI-1 (70% ≤1 prior lines of therapy) treated with nanoliposomal irinotecan + fluorouracil + folinic acid, which is recommended for good performance status 2L pts (and less likely to be a 3L regimen) ^Platinum resistant ovarian cancer. Ovarian CTx: Paclitaxel, liposomal doxorubicin, topetecan, or gemcitabine; Breast CTx: capecitabine, eribulin, gemcitabine, paclitaxel, nab-paclitaxel; Pancreatic Cancer CTx: FOLFOX, 5-FU + fluorouracil, modified FOLFIRI3, NSCLC CTx: Docetaxel, gemcitabine, pemetrexed; Gastric Cancer: Paclitaxel or irinotecan

RLY-4008 (lirafugratinib) – Safety Profile Consistent with Previous Data

Consistent, manageable safety profile that minimizes off-isoform toxicity

Treatment-related AEs ≥15%
*Solid Tumor; 70mg QD (N=124)**



Most AEs are low-grade, reversible and manageable on-target events

Treatment-Related Dose Modifications
*Solid Tumor; 70mg QD (N=124)**

Interruption, n (%)	**59 (48%)**
Reduction, n (%)	**44 (36%)**
Discontinuation, n (%)	**1 (<1%)**

Treatment ongoing: N=38 (31%)
Discontinued from study treatment N=86 (69%):
- Due to progressive disease N=73 (59%)
- Due to adverse event N=3 (2.4%; 2 unrelated)

No treatment-related Grade 4/5 AEs

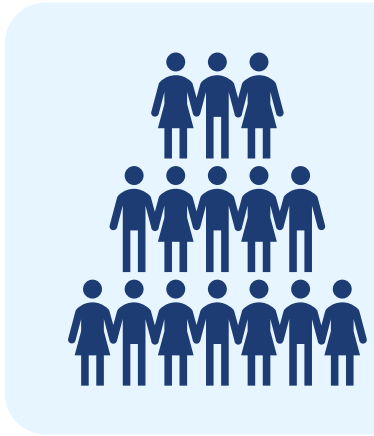
Safety population: FGFRi-naïve and FGFRi-pretreated non-CCA
PPE: Palmar-plantar erythrodysesthesia, RPED: retinal pigment epithelium detachment

Preliminary data as of 23 Aug 2023

RLY-4008 (lirafugratinib) – Regulatory Strategy to Address More Patients

CCA Fusions

Up to ~6k patients



Tumor Agnostic Fusions

Up to ~43k patients

Tumor Agnostic Amplifications

Up to ~34k patients

Breast Cancer (all alts)

Up to ~28k patients

Revised regulatory strategy:
Initial NDA focused on broader tumor agnostic opportunity

- Larger overall opportunity
- Preserves near-term capital
- Strategy driven by IRA

Note: Patient totals shown are global incidence rates

Relay Tx's Execution & Capital Focus on Highest Value Opportunities

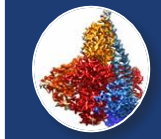
Target	Program	Preclinical	Early Clinical	Late Clinical	Annual US Patient #
PI3Kα franchise	RLY-2608 PI3Kα^{PAN} Monotherapy				~10-68K breast cancer *~76-238K all solid tumors*
	RLY-2608 PI3Kα^{PAN} Endocrine Tx (ET) doublet				
	RLY-2608 PI3Kα^{PAN} CDK4/6i + ET triplet				
	RLY-5836 PI3Kα^{PAN} Monotherapy				
	RLY-5836 PI3Kα^{PAN} Endocrine Tx (ET) doublet				
	RLY-5836 PI3Kα^{PAN} CDK4/6i + ET triplet				
	PI3Kα^{H1047R}				~4-25K breast cancer *~15-48K all solid tumors*
FGFR2	RLY-4008	Tumor Agnostic (incl. CCA) Breast Cancer			~11-35K[4]
Solid Tumor	2 programs				*To be announced*
Genetic Disease	2 programs				*To be announced*
CDK2	RLY-2139 (Pausing programs YE23)				~46K[2]
ERα	ERα Degrader (Pausing programs YE23)				~29-196K[3]
SHP2	GDC-1971 Genentech A Member of the Roche Group	3 ongoing combo studies			~37-69K[5]

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

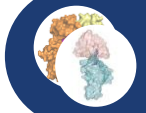
Relay Tx – Capital, Team & Execution Focus to Deliver on Key Milestones

Breast Cancer Franchise



RLY-2608
RLY-5836
(PI3Kα^{PAN})

- ✓ Initial RLY-2608 data in 1H 2023
- ✓ RLY-5836 clinical start in 2Q 2023
- ✓ RLY-2608 expansion cohorts initiated 2H 2023
- ⊕ RLY-2608 Triplet Dose Escalation initiated by YE 2023
- Additional data update in 2024

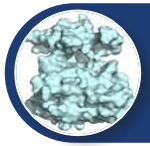


PI3Kα Companions

- ERα development candidate nomination in 2023
- CDK2i RLY-2139 clinical start in early 2024

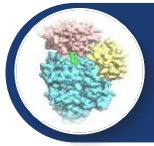
Pausing both programs YE 2023

Tumor Agnostic



RLY-4008
(lirafugratinib)

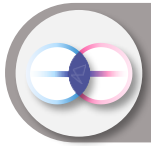
- ✓ Full dose escalation data in 1H 2023 (2023 ASCO)
- ✓ Tumor Agnostic expansion cohorts data in 2H 2023 (2023 Triple)
- ✓ Pivotal cohort full enrollment in 2H 2023
- ⊕ Clinical data and regulatory update in 2024



GDC-1971
(SHP2)
Genentech
A Member of the Roche Group

- ✓ Ongoing combo trials; Genentech controls data disclosures

Undisclosed



To be announced

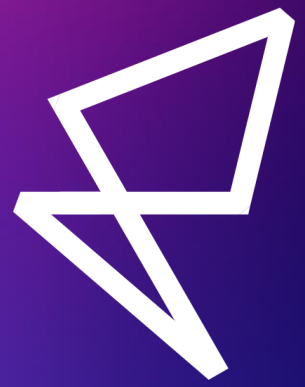
- ⊕ New program(s) to be disclosed in 2024

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

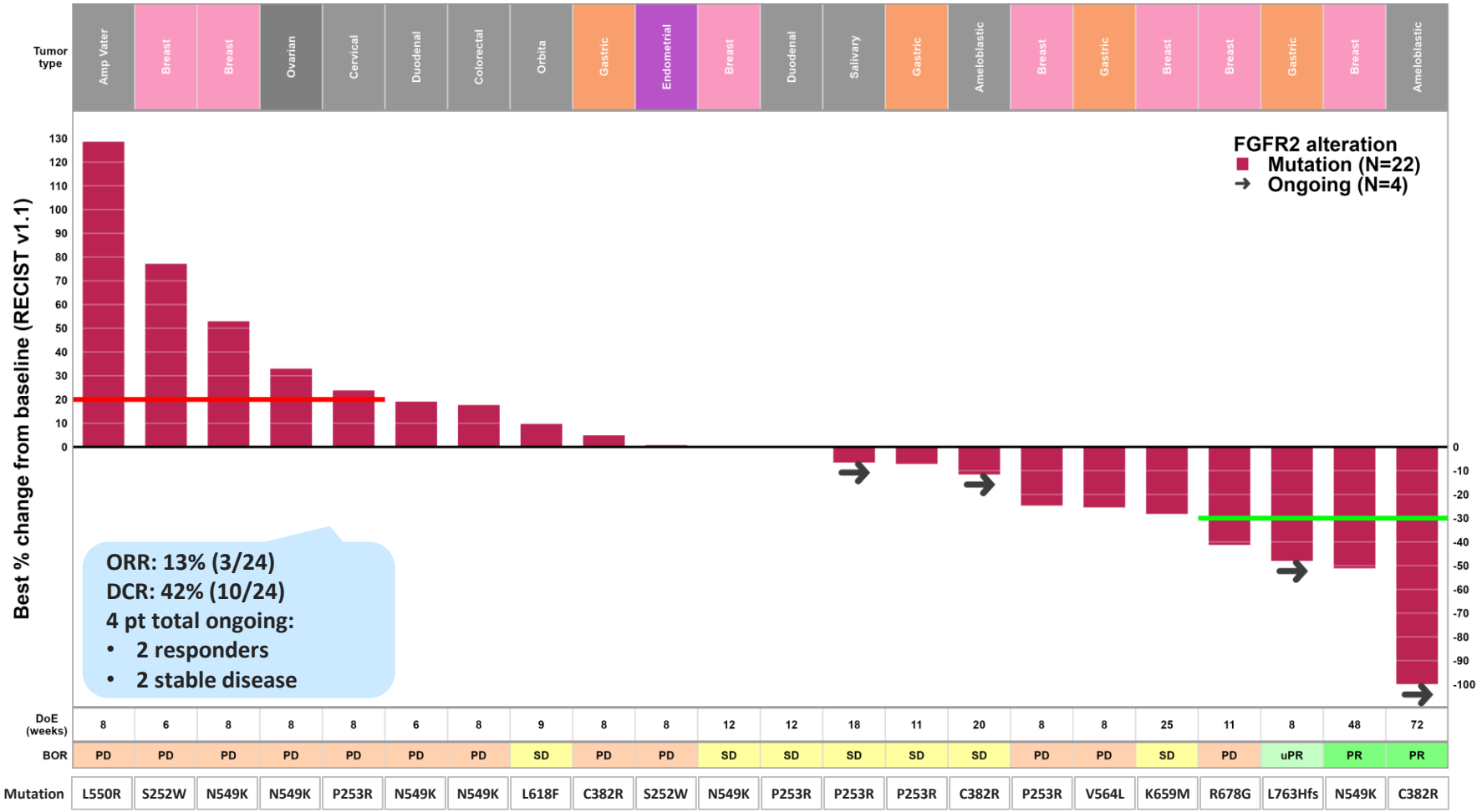
~$872M

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 2026



RLY-4008 – Non-CCA Mutations



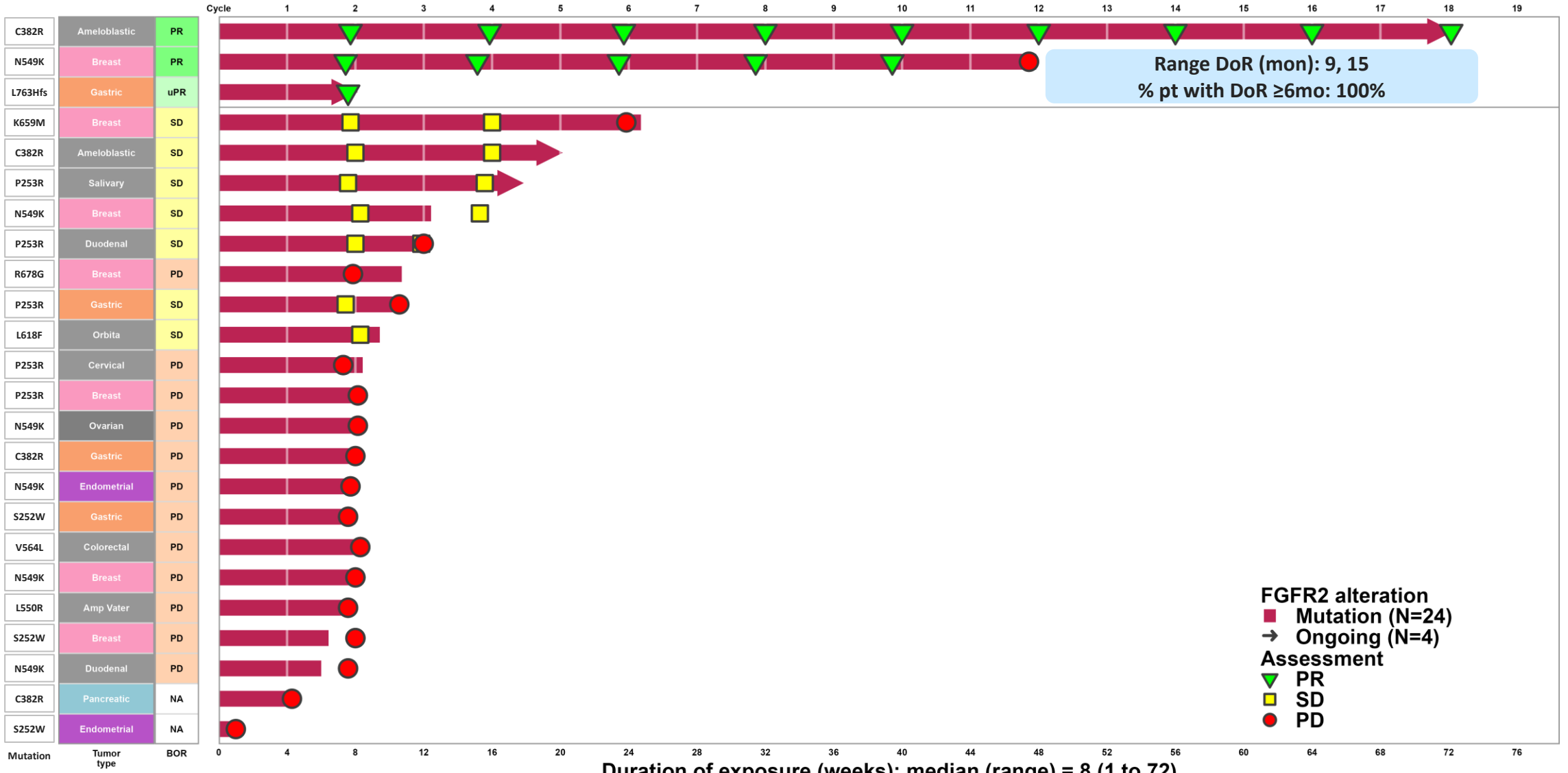
Indication	PR	SD	N	ORR	DCR
All Muts	3	7	24	13%	42%
Ameloblastic	1	1	2	50%	100%
Gastric	1	1	4	25%	50%
Breast	1	2	7	14%	43%
Salivary	0	1	1	0%	100%
Other	0	2	10	0%	20%

Add'l deep response (67% tumor reduction) in salivary gland cancer in pt previously treated with carboplatin/paclitaxel, lenvatinib

Note: ORR calculation includes 24 efficacy evaluable patients; mutations per local assessment

Preliminary data as of 23 Aug 2023

RLY-4008 – Non-CCA Mutations



Preliminary data as of 23 Aug 2023