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For a further description of the risks and uncertainties that could cause actual results to differ from those anticipated in these forward-looking statements, as well as risks relating to the business of Revolution Medicines in general, see Revolution Medicines' Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 9, 2022, and its future periodic reports to be filed with the Securities and Exchange Commission.

This presentation concerns product candidates that are under clinical investigation and which have not yet been approved for marketing by the U.S. Food and Drug Administration (FDA). These product candidates are currently limited by Federal law to investigational use, and no representation is made as to their safety or effectiveness for the purposes for which they are is being investigated.





On Target to Outsmart Cancer

HIGH UNMET NEED IN RAS-ADDICTED CANCERS

RAS proteins drive 30% of human cancers⁽¹⁾, and are largely unserved by targeted therapeutics

STRONG CLINICAL VALIDATION OF RAS AS CANCER DRIVER

Proof-of-principle from first-gen KRAS^{G12C} inhibitors⁽²⁾ predicts favorable impact of targeted inhibitors across numerous RAS cancer drivers

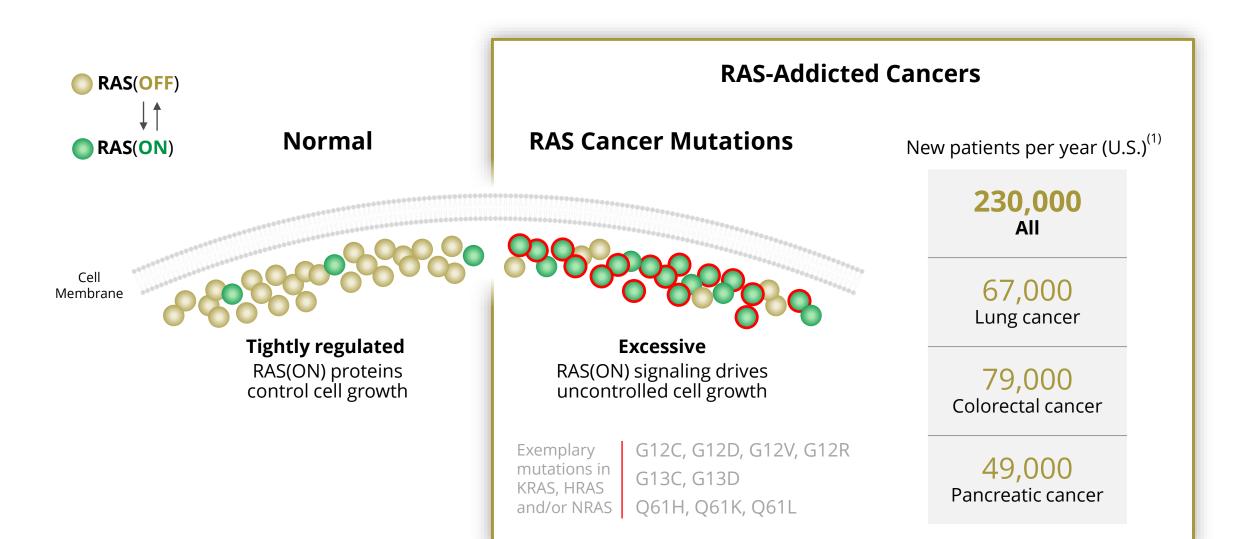
DEEP SCIENCE-DRIVEN PIPELINE

Comprehensive collection of groundbreaking *RAS(ON) Inhibitors* designed to have best-in-class preclinical profiles and/or first-in-class potential tailored to target RAS space broadly; first candidates in the clinic

Leading *RAS Companion Inhibitors* in clinic designed for combination treatment strategies to counter resistance to RAS targeted therapies

Excessive RAS(ON) Signaling Drives 30% of Human Cancers



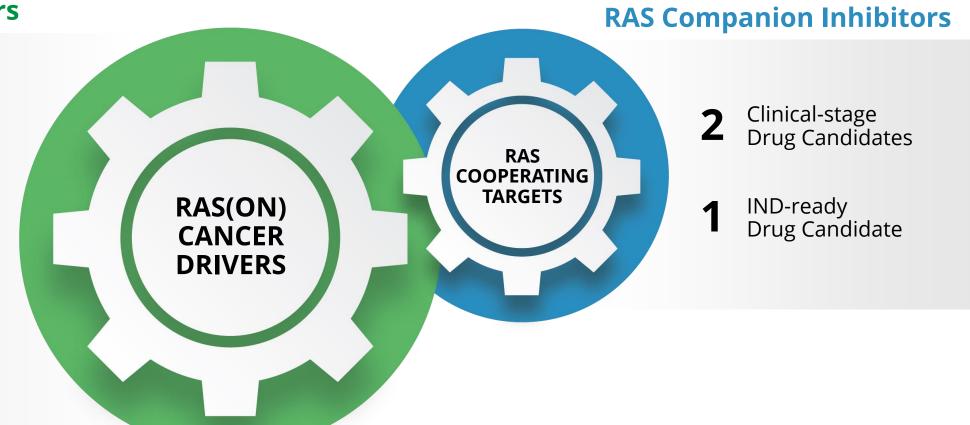


Deep Science-Driven Pipeline of Targeted Therapies for RAS-Addicted Cancers



RAS(ON) Inhibitors

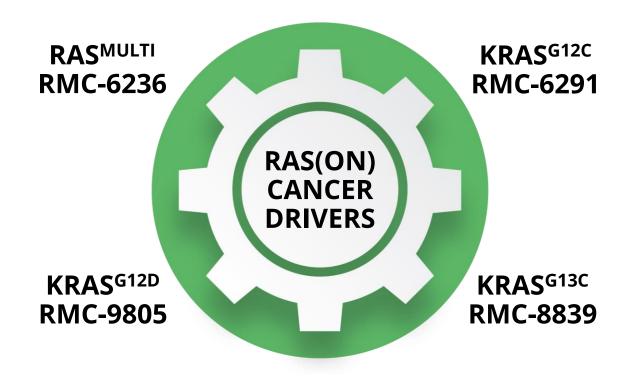
- Clinical-stage Drug Candidates
- 2 Drug Candidates in development
- **4+** Pipeline expansion programs



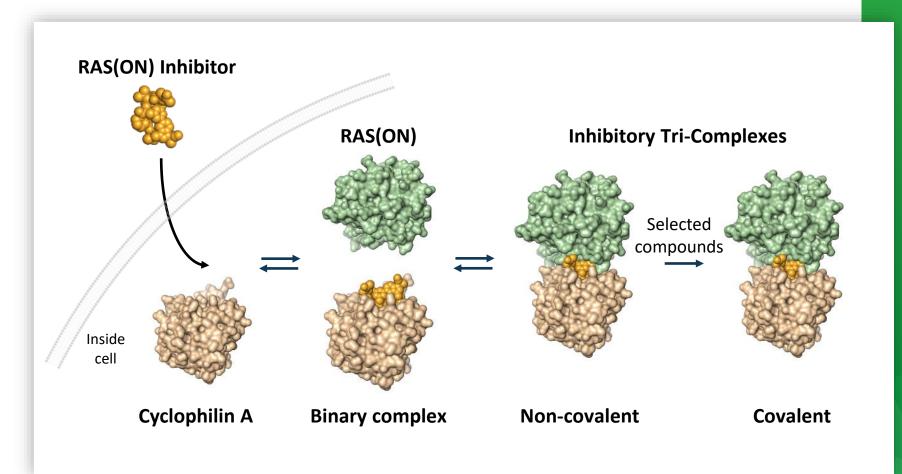


RAS(ON) Inhibitors

Induce Rapid, Deep and Sustained Suppression of RAS(ON) Cancer Drivers



Distinctive RAS Drug Discovery: Innovation Engine Targets Oncogenic RAS(ON) Proteins

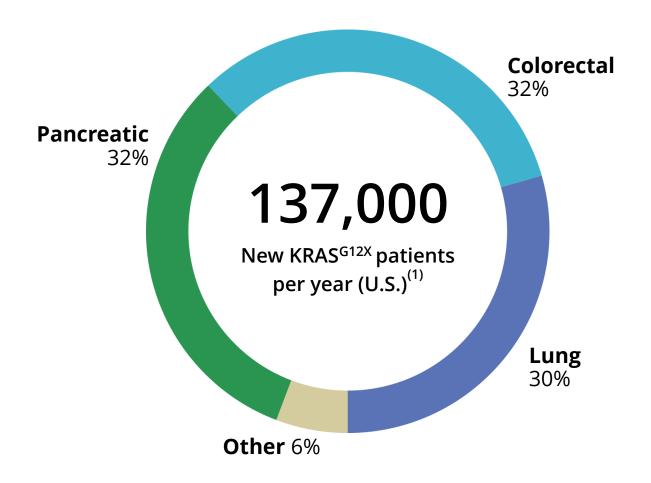


RAS(ON) Inhibitors Deep and Diverse Collection

- Highly potent and selective
- Oral and drug-like
- Rapid, deep and sustained suppression of RAS(ON) signaling

RMC-6236: First-in-Class RAS^{MULTI}(ON) Inhibitor with Broad Potential Against RAS-Addicted Cancers





KRAS^{G12X} includes KRAS^{G12D}, KRAS^{G12V}, KRAS^{G12R} and KRAS^{G12C}

Highly Potent and Selective RAS(ON) Inhibitor

 Inhibits canonical RAS family members, suppressing the mutant cancer driver and cooperating wild-type RAS proteins

Robust Anti-tumor Activity in Cancer Models

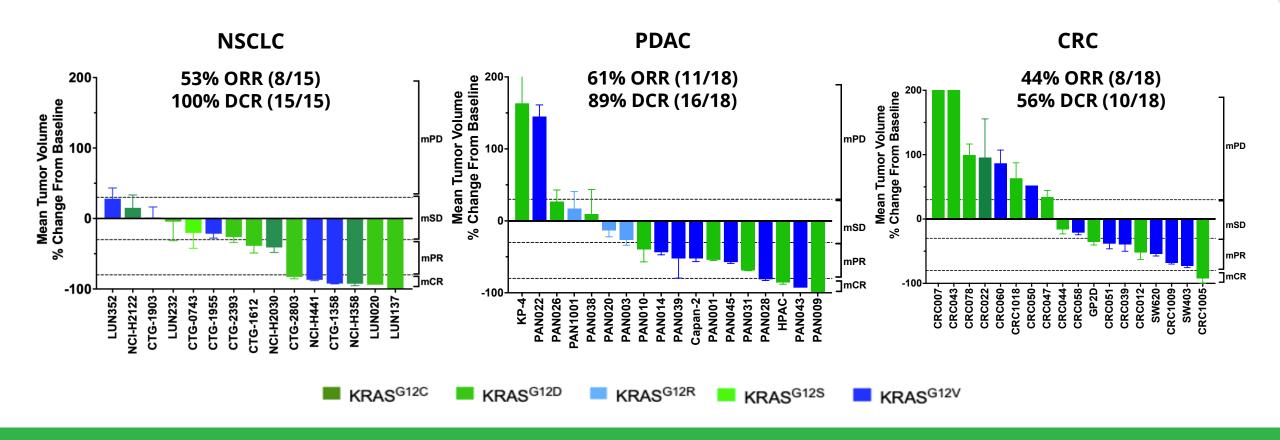
 Deep and sustained inhibition drives durable anti-tumor activity in tumors with common RAS variants including KRAS^{G12D}, KRAS^{G12V}, KRAS^{G12R} and KRAS^{G12C}

Attractive PK/ADME Profile

 Favorable in vivo oral bioavailability, clearance and concentration in tumors for effective target coverage in RAS-addicted cancer cells

RMC-6236: Highly Active *in Vivo* Across Cancer Models with KRAS^{G12X} Drivers

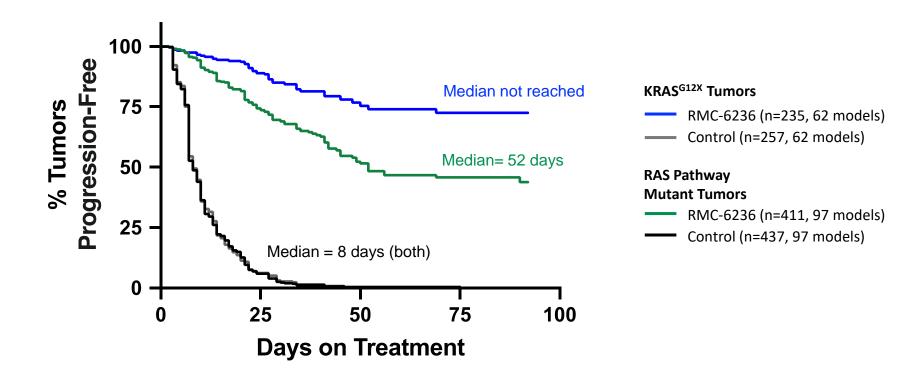




Deep Tumor Regressions and Complete Responses Observed Across Cancer Models

RMC-6236: Highly Active *in Vivo* Across Cancer Models with Diverse RAS Drivers



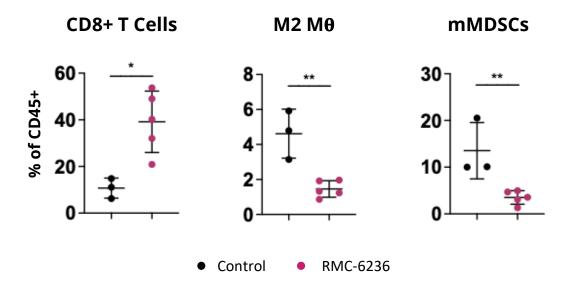


Durable Anti-Tumor Benefit Observed in KRAS^{G12X} Cancer Models and Beyond

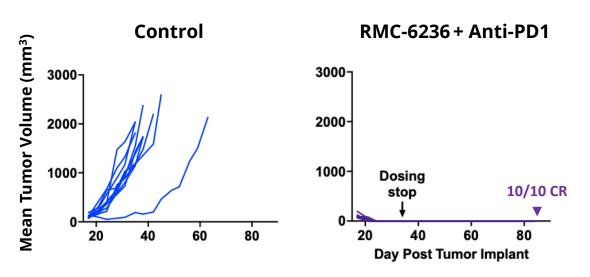
RMC-6236: Anti-Tumor Immunity *in Vivo* and Strong Additivity with Checkpoint Inhibitor



Favorable Transformation of Tumor Immune Microenvironment



Durable Complete Responses with Checkpoint Inhibitor Combination



Modulation of the Tumor Microenvironment Primes for Anti-Tumor Immunity in Cancer Models

Aims

RMC-6236: Clinical Priorities to Pursue First-in-Class Activity Against KRAS^{G12X} Tumors



Activities (ongoing* or projected)

- Initiated single agent dose escalation in patients with cancers with KRAS^{G12X} mutations (focused on NSCLC, pancreatic cancer and CRC)*
- Include 'below MTD' expansion cohorts in select populations during dose escalation
- Define RP2DS
- Single agent expansion cohorts in KRAS^{G12X} tumors (NSCLC, pancreatic cancer and CRC)
- Combinations in KRAS^{G12X} tumors (NSCLC, pancreatic cancer and CRC)

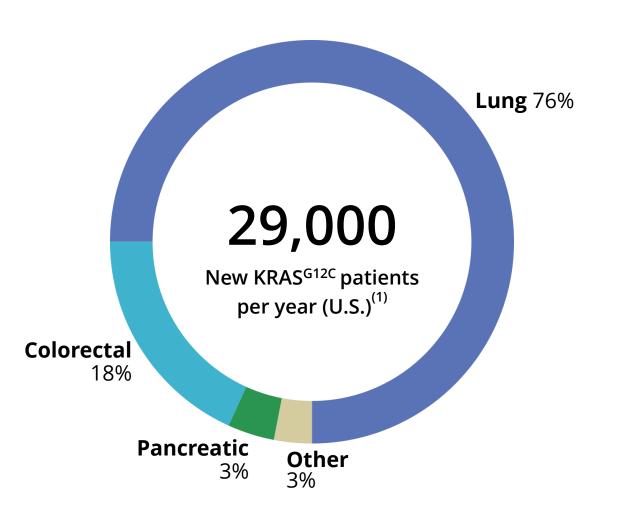


Evidence of first-in-class single agent activity against KRASG12X tumors[^]

^See Anticipated Milestones table

RMC-6291: Mutant-Selective RAS(ON) Inhibitor with Best-in-Class Potential for KRAS^{G12C} Cancers





Highly Potent and Selective RAS(ON) Inhibitor

- Highly active against KRAS^{G12C}
- Covalent for irreversible inhibition
- Low off-target risk and acceptable safety profile

Robust Anti-tumor Activity in Cancer Models

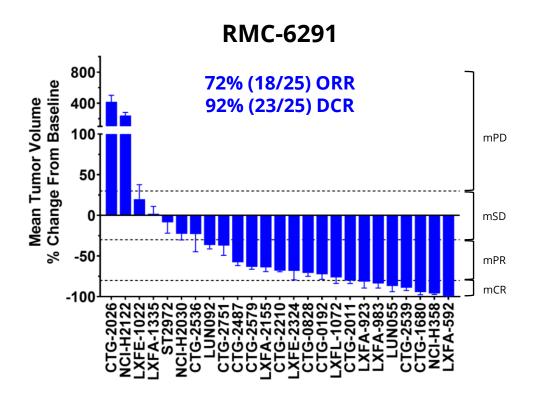
 Rapid, deep and sustained inhibition drives durable anti-tumor effects across multiple KRAS^{G12C} tumor types, with complete responses in some models

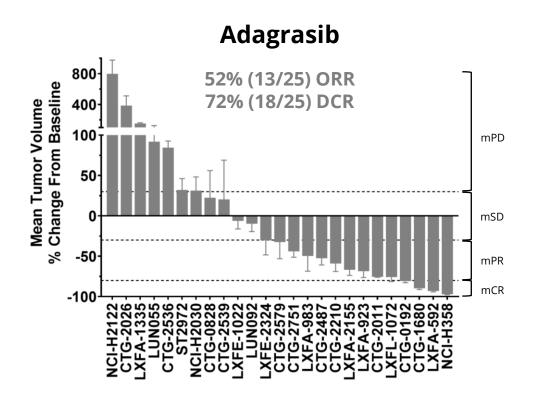
Attractive PK/ADME Profile

 Favorable in vivo oral bioavailability and clearance for effective target coverage in KRAS^{G12C}-addicted cancer cells

RMC-6291: Superior Outcomes in Mouse Clinical Trial with KRAS^{G12C} NSCLC Models





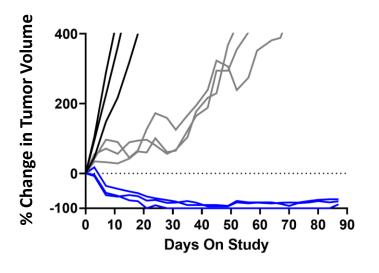


Best-in-Class Potential in KRAS^{G12C} NSCLC

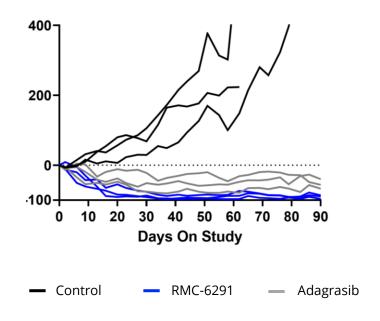
RMC-6291 May Improve on KRAS^{G12C}(OFF) Inhibitor Class Across Three Outcome Measures in NSCLC



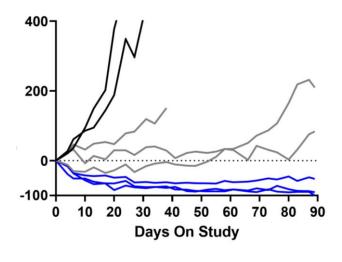




Increased <u>Depth</u> Of Response^(b)



Increased <u>Duration</u> Of Response^(c)

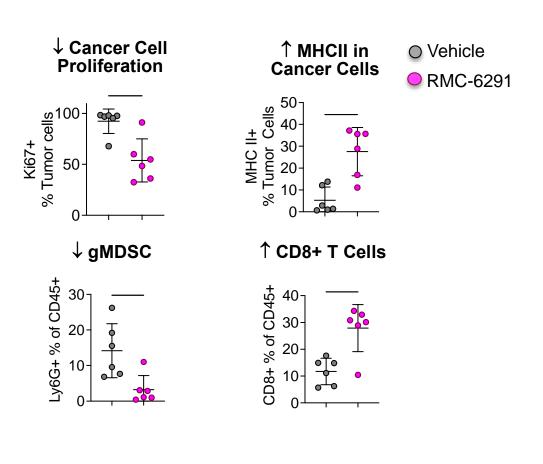


Best-in-Class Potential in KRAS^{G12C} NSCLC

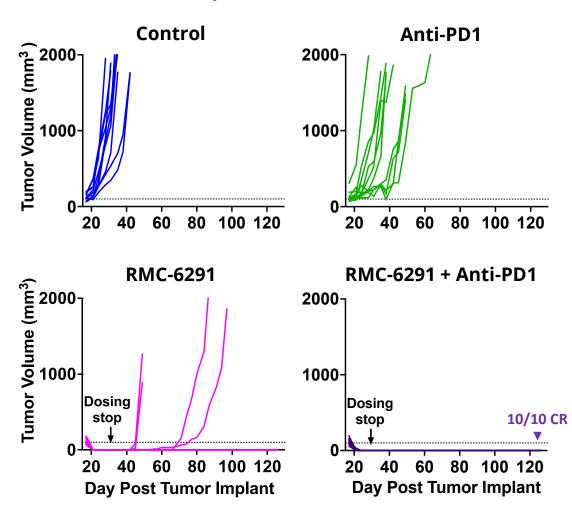
RMC-6291: Anti-Tumor Immunity *in Vivo* and Strong Additivity with Checkpoint Inhibitor



Favorable Transformation of Tumor Immune Microenvironment



Durable Complete Responses with Checkpoint Inhibitor Combination



Aims

RMC-6291: Clinical Priorities to Pursue Best-in-Class Activity Against KRAS^{G12C} Tumors



Activities (ongoing* or projected)

- Initiate single agent dose escalation in KRAS^{G12C} tumors[^]
- Include 'below MTD' expansion cohorts in select populations (e.g., NSCLC) during dose escalation
- Define RP2DS
- Single agent expansion cohorts in KRAS^{G12C} NSCLC and pancreatic cancer (RAS inhibitor naïve +/- failure)
- Combinations in KRAS^{G12C} NSCLC & CRC

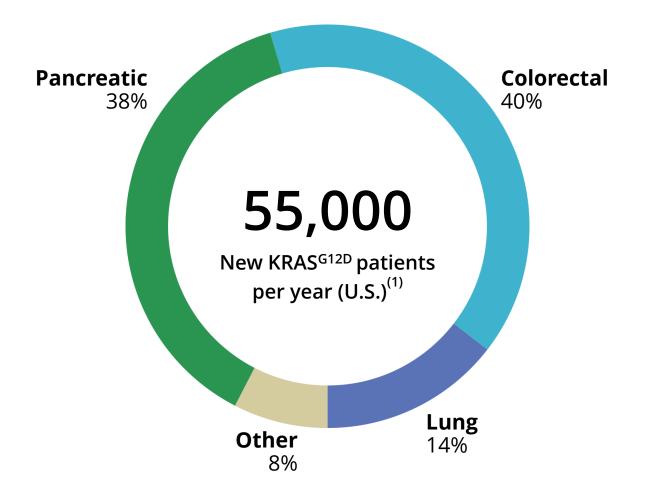


Preliminary evidence of superior activity against KRAS^{G12C} tumors[^]

^See Anticipated Milestones table

RMC-9805: First-in-Class Mutant-Selective RAS(ON) Inhibitor for KRAS^{G12D} Cancers





Highly Potent and Selective RAS(ON) Inhibitor

- Highly active against KRAS^{G12D}
- Covalent for irreversible inhibition
- Low off-target risk and acceptable safety profile

Robust Anti-tumor Activity in Cancer Models

 Rapid, deep and sustained inhibition drives durable regressions in KRAS^{G12D} lung, pancreatic and colorectal cancers

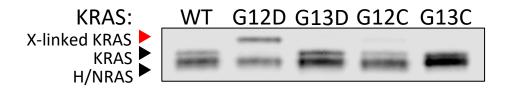
Attractive PK/ADME Profile

 Favorable in vivo oral bioavailability and clearance for effective target coverage in KRAS^{G12D}-addicted cancer cells

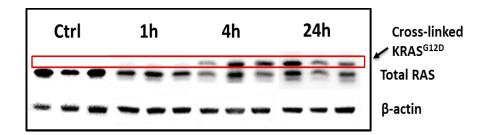
RMC-9805: Selective, Covalent and Orally Active with Sustained Inhibition of KRAS^{G12D} in Vivo



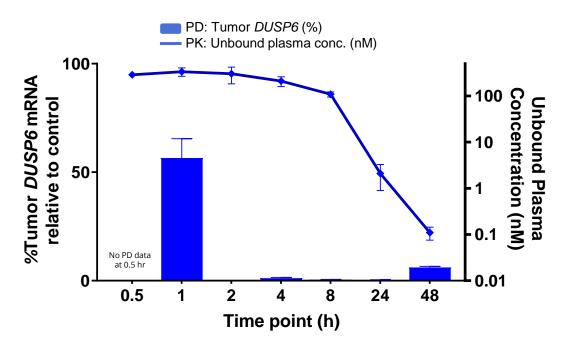
Selective Covalent Modification of KRAS^{G12D}



KRAS^{G12D} Target Engagement HPAC CDX (PDAC, KRAS^{G12D/WT})

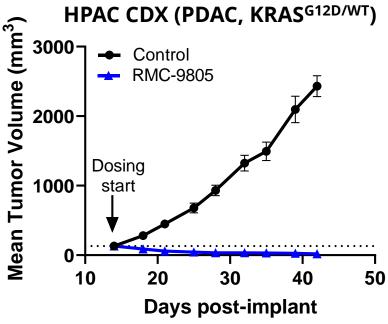


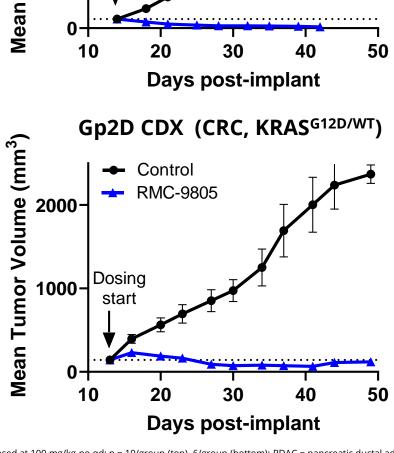
Single Dose PK/PD HPAC CDX (PDAC, KRAS^{G12D/WT})



RMC-9805: Tumor Regressions in Models of KRAS^{G12D} Cancers

- Designed as first-in-class mutant-selective covalent inhibitor of KRAS^{G12D}
- Deep and durable anti-tumor responses in vivo in pancreatic and colorectal cancer models
- Oral dosing, well tolerated

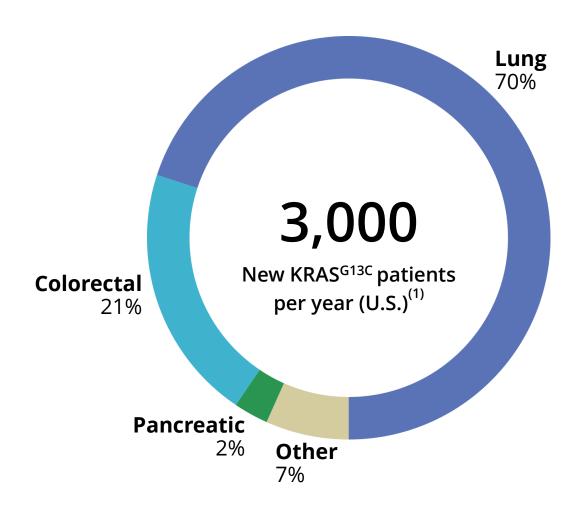






RMC-8839: First-in-Class Mutant-Selective RAS(ON) Inhibitor for KRAS^{G13C} Cancers





Highly Potent and Selective RAS(ON) Inhibitor

- Highly active against KRAS^{G13C}
- Covalent for irreversible inhibition
- Low off-target risk and acceptable safety profile

Robust Anti-tumor Activity in Cancer Models

 Rapid, deep and sustained inhibition drives durable regressions in KRAS^{G13C} lung cancers

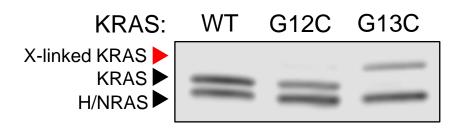
Attractive PK/ADME Profile

 Favorable in vivo oral bioavailability and clearance for effective target coverage in KRAS^{G13C}-addicted cancer cells

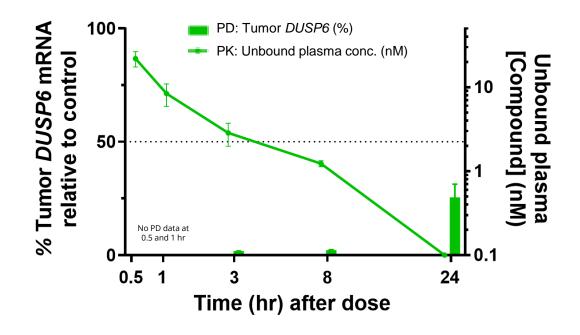
RMC-8839: Selective, Covalent and Orally Active with Sustained Inhibition of KRAS^{G13C} in Vivo



Selective Covalent Modification of KRAS^{G13C}



Single Dose PK/PD NCI-H1734 (NSCLC CDX, KRAS^{G13C})

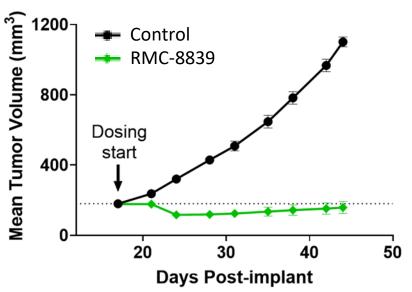


RMC-8839: Tumor Regressions in Models of KRAS^{G13C} Cancers

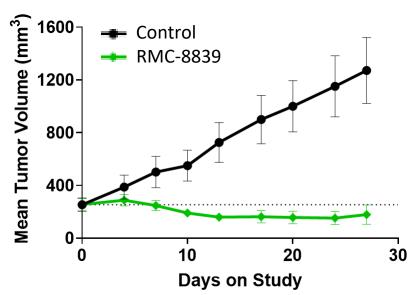
- Designed as first-in-class mutant-selective covalent inhibitor of KRAS^{G13C}
- Deep anti-tumor responses in vivo in non-small cell lung cancer models
- Oral dosing, well tolerated

NCI-H1734 CDX (NSCLC, KRAS^{G13C/WT})





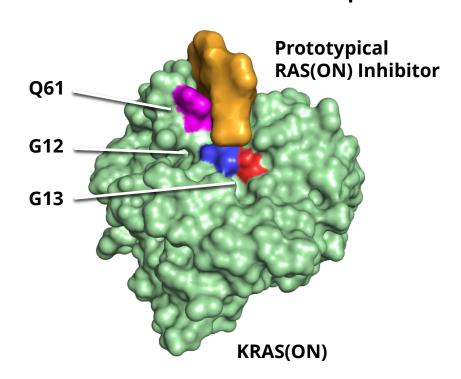
ST2822B PDX (NSCLC, KRAS^{G13C/WT})



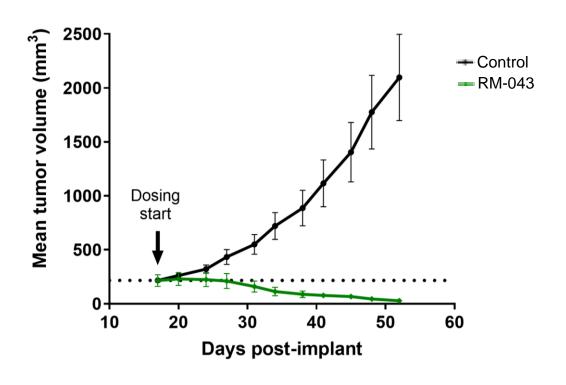
Pipeline Expansion Programs Include Oral, Potent, Selective, Non-Covalent Inhibitors of KRAS^{Q61H}(ON)



RAS(ON) Inhibitor Binding Geometry Enables Targeting of All Three Mutational Hotspots



Hs766T CDX (PDAC, KRASQ61H/Q61H)





Devastating disease >90% driven by KRAS mutations

49,000

New KRAS^{MUTANT} pancreatic cancer patients per year (US)⁽¹⁾

Dismal survival rates
No approved targeted therapies

RMC-6236 G12D 36% RMC-9805 **G12V RMC-6236** 26% **G12R RMC-6236** 13% RMC-6291 **G12C RMC-6236** Other **RMC-6236**

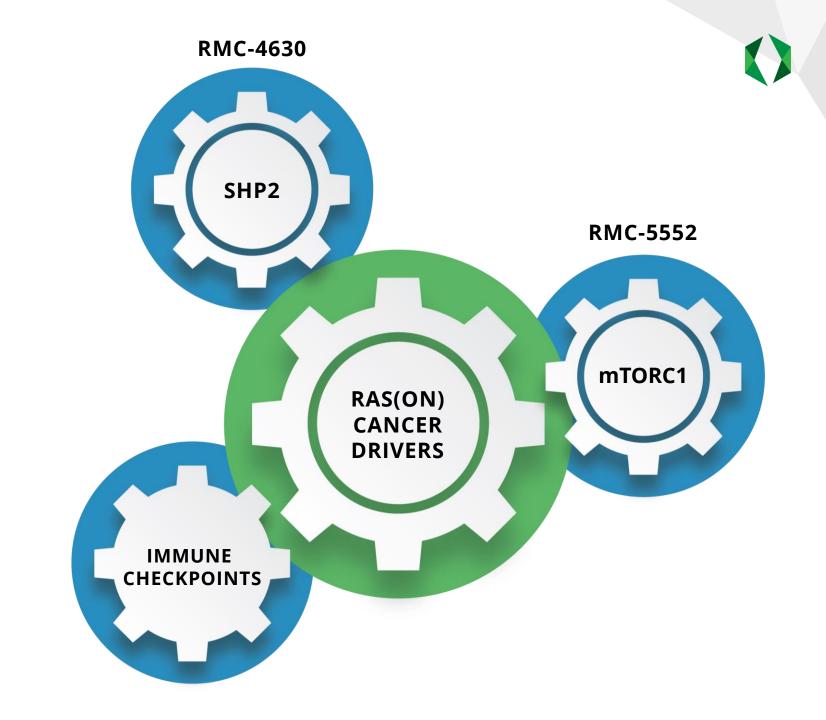
23%

Our development-stage RAS(ON) Inhibitors

- Inhibit >90% of pancreatic cancer drivers in cancer models⁽¹⁾
- Exhibit strong antitumor activity in preclinical models of pancreatic cancer

RAS Companion Inhibitors

Suppress
Cooperating Targets
and Pathways that
Sustain RAS-Addicted
Cancers



RMC-4630: Ongoing and Planned Clinical Combination Studies



STUDY	SPONSOR	COMBINED WITH	INDICATION(S)	STATUS
CodeBreaK 101c (U.S.)	Amgen	sotorasib	2L+ KRAS ^{G12C} solid tumors	Ongoing (Phase 1b)
RMC-4630-03 (Global)	RevMed	sotorasib	2L+ KRAS ^{G12C} NSCLC	Ongoing (Phase 2)
TCD16210 (Global)	Sanofi	adagrasib	2L+ KRAS ^{G12C} NSCLC	Recruiting (Phase 1/2)
TBD	RevMed	RMC-6291	KRAS ^{G12C} TBD	Planning
TCD16210 (Global)	Sanofi	pembrolizumab	1L PDL1+ NSCLC	Ongoing (Phase 2)

Evaluation of RMC-4630 in Combination with Sotorasib in KRAS^{G12C} Cancer Patients



"Promising clinical activity was observed"(1) in CodeBreaK101c

KRAS^{G12C} patients in dose/schedule exploration (all solid tumors, 100-200 mg twice weekly)(2)



"The combination of sotorasib with RMC-4630 was safe and tolerable"(1)

75% ORR/DCR among KRAS^{G12C} inhibitor-100% naïve NSCLC patients treated at top two doses of RMC-4630 (n=4)



DCR = disease control rate

One patient with progression on sotorasib monotherapy achieved an unconfirmed PR on RMC-4630 combo Currently enrolling patients in RMC-4630-03

- Global Phase 2 study of sotorasib + RMC-4630 to complement NSCLC findings of CodeBreaK101c
- Exclusively KRAS^{G12C} inhibitor-naïve **NSCLC** patients
- Focused on top two doses of RMC-4630 from CodeBreaK101c:
 - 140 and 200 mg D1D2 weekly
- Patients stratified into two cohorts: KRAS^{G12C} +/- co-mutations such as KEAP1 or STK11

https://clinicaltrials.gov/ct2/show/NCT04185883

https://clinicaltrials.gov/ct2/show/NCT05054725

Aims

RMC-4630: Clinical Priorities to Pursue Best-in-Class Combination Activity in KRAS^{G12C} Tumors



Activities ngoing* or projected

- Continue enrollment in RMC-4630-03*
- Registration study in combination with KRAS^{G12C}(OFF) inhibitor in KRAS^{G12C} NSCLC
- Combination study(ies) with KRAS^{G12C}(OFF) inhibitor in KRAS^{G12C} CRC and/or pancreatic cancer
- Combination study(ies) with RMC-6291



Evidence of clinical benefit as RAS Companion Inhibitor against KRAS^{G12C} NSCLC **Evidence of clinical benefit** as a RAS Companion Inhibitor against additional KRAS^{G12C} tumors

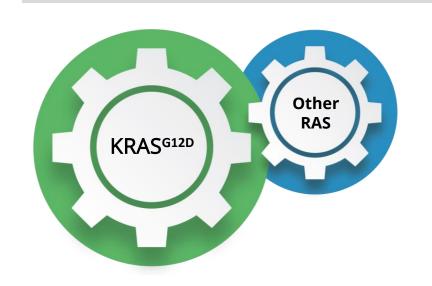


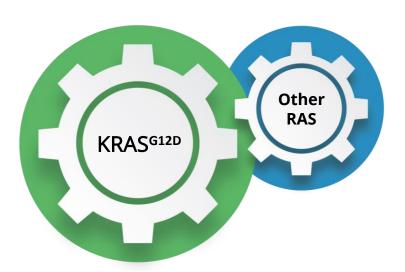
Parallel Treatment Strategies to Outsmart Diverse RAS Inhibitor Resistance Mechanisms

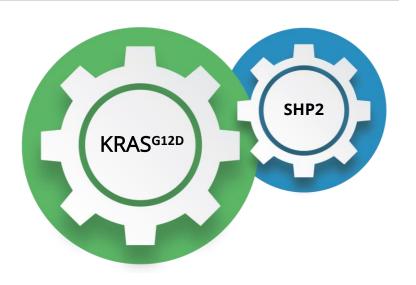


EXAMPLES

RESISTANCE PARADIGMS







TREATMENT STRATEGIES

RMC-6236

ALL-IN-ONE

RMC-9805 + RMC-6236

MAXIMAL DOSING FLEXIBILITY

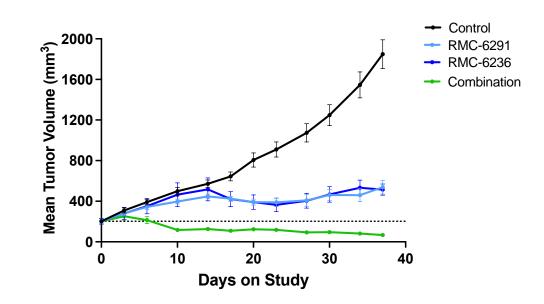
RMC-9805 + RMC-4630

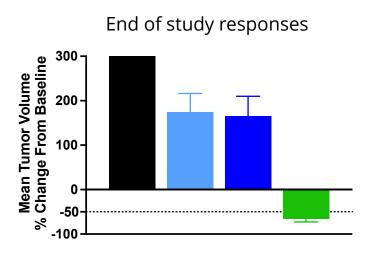
MAXIMAL DOSING FLEXIBILITY

RMC-6291 + RMC-6236 Combination Induces Tumor Regressions in a Relatively Resistant Model of KRAS^{G12C} CRC



CRC022 PDX (CRC, KRASG12C/WT)

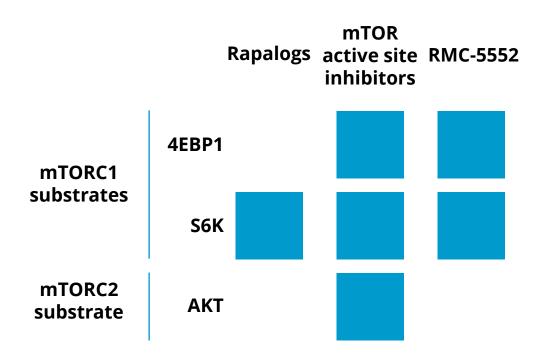




RASMULTI(ON) Inhibitor Deployed as a RAS Companion Inhibitor

RMC-5552: First-in-Class Bi-steric mTORC1-Selective Inhibitor for Cancers with Hyperactive mTOR Signaling





Highly Potent and Selective mTORC1 Inhibitor

- Bi-steric structure combines favorable features of rapalogs and active site inhibitors
- Capable of reactivating the tumor suppressor 4EBP1
- Selective over mTORC2, low off-target risk

Robust Anti-tumor Activity in Cancer Models

 Rapid, deep and sustained inhibitor of mTORC1 drives durable regressions in mTOR pathway cancers

Attractive PK/ADME Profile

 Favorable in vivo exposure following IV dosing for effective target coverage in mTORC1-dependent cancer cells

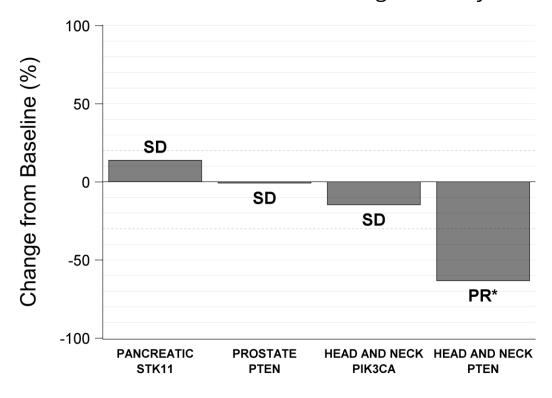


- Potent, selective inhibitor of hyperactivated mTORC1 to reactivate the tumor suppressor 4EBP1
- Designed for combination with RAS(ON) inhibitors in patients with cancers harboring RAS/mTOR pathway co-mutations⁽¹⁾
 - >30,000 new patients per year across lung, colorectal and pancreatic cancers (U.S.)⁽²⁾
- Single agent Phase 1b dose escalation underway, focused on tumor genotypes linked to hyperactivated mTORC1 signaling



Preliminary Evidence of Clinical Activity

Best Tumor Change in Efficacy Evaluable Patients Treated with 6 mg IV Weekly⁽³⁾



⁽¹⁾ mTOR pathway co-mutations include genetic changes with likely oncogenic activity in one or more of PIK3CA, PTEN, TSC1, TSC2, STK11, and/or mTOR (2) Calculated using tumor mutation frequencies from Foundation Medicine Insights August 2020 and scaled to estimated patient numbers using cancer incidence from ACS *Cancer Facts and Figures* 2020; see appendix for additional detail

Aims

RMC-5552: Clinical Priorities to Pursue Best-in-Class Combination Activity in RAS^{MUTANT}/mTORC1-Activated Tumors



Activities (ongoing* or projected)

Continue dose optimization and identify RP2DS

- Initiate single agent expansion cohorts in select tumors with mTOR pathway mutations
- Combinations with RAS(ON) inhibitors from our portfolio in RAS^{MUTANT} tumors with mTOR pathway co-mutations

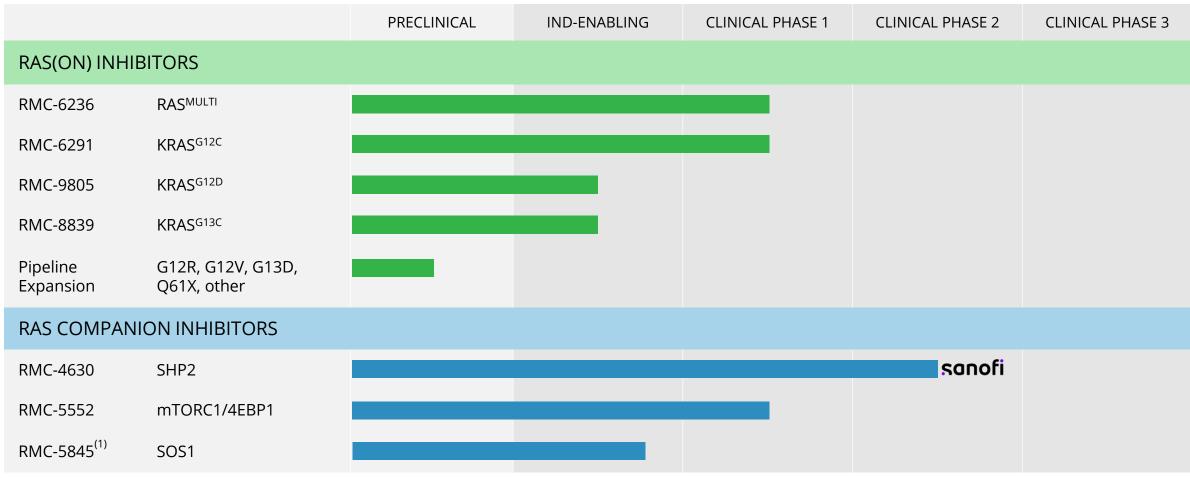


Additional evidence of single agent activity against tumors with mTOR pathway mutations[^]

^See Anticipated Milestones table

Deep Pipeline of Targeted Therapies for Majority of RAS-Addicted Cancers





(1) IND-ready

Anticipated Milestones



PROGRAM	MILESTONE (EXPECTED TIMING)			
RAS(ON) INHIBITORS				
RMC-6236 (RAS ^{MULTI})	Provide evidence of first-in-class single agent activity (2023)			
RMC-6291 (KRAS ^{G12C})	Announce dosing of first patient (2H22); Provide preliminary evidence of superior activity (2023)			
RMC-9805 (KRAS ^{G12D})	Announce dosing of first patient (mid-2023)			
 Additional Mutant-Selective Inhibitors RMC-8839 (KRAS^{G13C}) G12R, G12V, G13D, Q61X, other 	Nominate fifth development candidate (2H22) Advance selected Inhibitor(s) into clinical development (post-2023)			
RAS COMPANION INHIBITORS				
RMC-4630 (SHP2)	Provide topline data from RMC-4630-03 (2023)			
RMC-5552 (mTORC1/4EBP1)	Provide additional evidence of single agent activity (2023)			

Financial Information



Financial Position

Cash, cash equivalents and marketable securities as of June 30, 2022

\$461.4 million⁽¹⁾

2022 Financial Guidance

2022 GAAP net loss of \$260 million to \$280 million⁽²⁾

⁽¹⁾ Does not include \$248 million in net proceeds from the July 2022 public offering. With current cash, cash equivalents and marketable securities, including proceeds from the July public offering, the company projects it can fund planned operations through 2024.

⁽²⁾ Includes non-cash stock-based compensation expense of approximately \$30 million to \$35 million





On Target to Outsmart Cancer™

Focused on serving high unmet needs across numerous cancers driven by diverse RAS mutations

Targeted *RAS(ON) Inhibitors* with compelling preclinical profiles entered clinic in 2022

Targeted *RAS Companion Inhibitors* designed to counter drug resistance have shown initial clinical activity and evaluation continues

Development-stage portfolio covers RAS drivers of all major RAS-addicted cancers

Appendix



- RAS cancer epidemiology statistics are estimated using tumor mutation frequencies from Foundation Medicine Insights August 2020 and scaled to estimated patient numbers using cancer incidence from ACS *Cancer Facts and Figures* 2020:
 - RAS mutations include: KRAS G12(A,C,D,R,S,V), KRAS G13(C,D), KRAS Q61(H, K, L), KRAS A146T, KRAS wild-type amplification, NRAS G12C, NRAS Q61(K,L,R,P), HRAS mutations of known/likely function, BRAF class 3 mutations, NF1 loss of function mutations, PTPN11 mutations of known/likely function. NF1 LOF mutations = 50% of all NF1 mutations of known/likely function. BRAF class 3 mutations = D287H, D594(A,E,G,H,N,V,Y), F595L, G466(A,E,R,V,E,D,R), N581(I,S), S467L,T599I, V459L.
 - Includes 12 major types: non-small cell lung cancer, colorectal, pancreatic adenocarcinoma, renal, gastroesophageal, head and neck squamous cell, ovarian and biliary cancers, acute myeloid leukemia, and advanced melanoma, bladder and uterine/endometrial cancers causing mortality.
 - Est. worldwide annual incidence of RAS-mutated cancers is 3.4 million per Prior et al., Cancer Research 2020
- RAS mutations drive 30% of human cancers per Prior et al., Cancer Research 2020
- KRAS^{G12X} includes KRAS^{G12D}, KRAS^{G12V}, KRAS^{G12R} and KRAS^{G12C}
- Mouse tumor responses on slides 9 and 14 assigned according to mRECIST (modified from Gao et al. Nat Med. 2015):
 - mPD = progressive disease; mSD = stable disease; mPR = partial response; mCR = complete response
- Kaplan-Meier progression on slide 10 defined as tumor doubling from baseline over 28 days:
 - KRAS^{G12X} Tumors, where X = D,V,C,A or R: n = 207
 - RAS Pathway Mutant Tumors includes KRAS^{G12X} and other RAS and RAS pathway mutant tumors: KRAS^{G13C}, KRAS^{G13D}, KRAS^{G13D}, KRAS^{G117N}, KRAS^{G117N}, NF1^{LOF}, PTPN11^{E76K} or G503V, BRAF^{Class 3-mutant}, and KRAS^{WT-Amp}: n = 332
- PDX = patient-derived xenograft; CDX = cell line-derived xenograft
- PK = pharmacokinetic; ADME = absorption, distribution, metabolism, and excretion