

Delivering Novel Therapies in RAS/MAPK Pathway Driven Cancers

March 2024

Corporate Presentation



Disclaimers

This presentation includes forward-looking statements about Verastem Oncology's programs and product candidates, strategy, future plans and prospects, including statements related to the expected outcome and benefits of collaborations, including with GenFleet, the potential clinical value of various of its clinical trials, the timing of commencing and completing trials, including topline data reports, interactions with regulators, the potential for and timing of commercialization of product candidates and potential for additional development programs involving Verastem Oncology's lead compound. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," "can," "promising" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Each forward-looking statement is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statement.

Applicable risks and uncertainties include the risks and uncertainties, among other things, regarding: the success in the development and potential commercialization of our product candidates, including avutometinib in combination with other compounds, including defactinib, LUMAKRASTM and others; the uncertainties inherent in research and development, such as negative or unexpected results of clinical trials, the occurrence or timing of applications for our product candidates that may be filed with regulatory authorities in any jurisdictions; whether and when regulatory authorities in any jurisdictions may approve any such applications that may be filed for our product candidates, and, if approved, whether our product candidates will be commercially successful in such jurisdictions; our ability to obtain, maintain and enforce patent and other intellectual property protection for our product candidates; the scope, timing, and outcome of any legal proceedings; decisions by regulatory authorities regarding trial design, labeling and other matters that could affect the timing, availability or commercial potential of our product candidates; whether preclinical testing of our product candidates and preliminary or interim data from clinical trials will be predictive of the results or success of ongoing or later clinical trials; that the timing, scope and rate of reimbursement for our product candidates is uncertain; that third-party payors (including government agencies) may not reimburse; that there may be competitive developments affecting our product candidates; that data may not be available when expected; that enrollment of clinical trials may take longer than expected; that our product candidates will cause adverse safety events and/or unexpected concerns may arise from additional data or analysis, or result in unmanageable safety profiles as compared to their levels of efficacy; that our product candidates may experience manufacturing or supply interruptions or failures; that any of our third-party contract research organizations, contract manufacturing organizations, clinical sites, or contractors, among others, who we rely on fail to fully perform; that we face substantial competition, which may result in others developing or commercializing products before or more successfully than we do which could result in reduced market share or market potential for our product candidates; that we will be unable to successfully initiate or complete the clinical development and eventual commercialization of our product candidates; that the development and commercialization of our product candidates will take longer or cost more than planned, including as a result of conducting additional studies; that we may not have sufficient cash to fund our contemplated operations; that we may not attract and retain high quality personnel; that we or Chugai Pharmaceutical Co., Ltd. will fail to fully perform under the avutometinib license agreement; that our target market for our product candidates might be smaller than we are presently estimating; that Secura Bio, Inc. will fail to fully perform under the asset purchase agreement with Secura Bio, Inc., including in relation to milestone payments; that we will not see a return on investment on the payments we have and may continue to make pursuant to the collaboration and option agreement with GenFleet Therapeutics (Shanghai), Inc. ("GenFleet") or that GenFleet will fail to fully perform under the agreement; that we may be unable to obtain adequate financing in the future through product licensing, co-promotional arrangements, public or private equity, debt financing or otherwise; that we will not pursue or submit regulatory filings for our product candidates; and that our product candidates will not receive regulatory approval, become commercially successful products, or result in new treatment options being offered to patients.

Other risks and uncertainties include those identified under the heading "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2023, as filed with the Securities and Exchange Commission (SEC) on March 14, 2024, and in any subsequent filings with the SEC, which are available at www.sec.gov and www.verastem.com.

The forward-looking statements in this presentation speak only as of the original date of this presentation, and we undertake no obligation to update or revise any of these statements.

This presentation contains references to our non-GAAP operating expense, a financial measure that is not calculated in accordance with generally accepted accounting principles in the US ("GAAP"). This non-GAAP financial measure excludes certain amounts or expenses from the corresponding financial measures determined in accordance with GAAP. Management believes this non-GAAP information is useful for investors, taken in conjunction with the Company's GAAP financial statements, because it provides greater transparency and period-over-period comparability with respect to the Company's operating performance and can enhance investors' ability to identify operating trends in the Company's business. Management uses this measure, among other factors, to assess and analyze operational results and trends and to make financial and operational decisions. Non-GAAP information is not prepared under a comprehensive set of accounting rules and should only be used to supplement an understanding of the Company's operating results as reported under GAAP, not in isolation or as a substitute for, or superior to, financial information prepared and presented in accordance with GAAP. In addition, this non-GAAP financial measure is unlikely to be comparable with non-GAAP information provided by other companies. The determination of the amounts that are excluded from non-GAAP financial measures is a matter of management judgment and depends upon, among other factors, the nature of the underlying expense or income amounts. Reconciliations between this non-GAAP financial measure and the most comparable GAAP financial measure are included in the footnotes to the slides in this presentation on which such non-GAAP number appears.

Certain information contained in this presentation relates to or is based on studies, publications, surveys and other data obtained from third-party sources and Verastem Oncology's own internal estimates and research. While Verastem Oncology believes these third-party sources to be reliable as of the date of this presentation, it has not independently verified, and makes no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, all of the market data included in this presentation involves a number of assumptions and limitations, and there can be no guarantee as to the accuracy or reliability of such assumptions.



Verastem Oncology

Strong progress in 2023 sets up multiple valuecreation opportunities

Well-Positioned To Deliver on 2024 Catalysts

> On track to deliver the first approved therapy in LGSOC

- Data at ASCO 2023 of avutometinib, a RAF/MEK Clamp in combination with defactinib, a FAK inhibitor, demonstrated robust responses in patients with recurrent low-grade serous ovarian cancer (LGSOC)
- Phase 3 confirmatory study underway with plans to report updated topline data from RAMP 201 trial in H1 2024
- Commence rolling NDA for Accelerated Approval in H1 2024

> Ongoing studies in additional indications including Pancreatic Cancer and NSCLC

- Report initial safety and efficacy results from RAMP 205 trial of avutometinib + gemcitabine/nabpaclitaxel + defactinib in first-line metastatic pancreatic cancer in H1 2024
- Report updated data from both non-small cell lung cancer (NSCLC) trials RAMP 203 (sotorasib-Amgen) and RAMP 204 (adagrasib-Mirati) trials in Mid-2024

GenFleet collaboration furthers pipeline potential in RAS/MAPK driven cancers

- GenFleet expected to submit IND for GFH375/VS-7375, a potential best-in-class oral KRAS G12D (ON/OFF) inhibitor in China in H1 2024
- Initiate Phase I trial for GFH375/VS-7375 in China in H2 2024
- Ongoing discovery/lead optimization for second and third programs
- > Strong balance sheet to support ongoing programs and operations
 - Company ended Q4 2023 with \$137.1M in cash and investments and \$31.1 million GAAP operating expenses (\$29.5 million non-GAAP operating expenses*)

* Q4 2023 GAAP operating expenses - \$31.14M less Q4 2023 stock compensation of \$1.60M = \$29.54M Q4 2023 non-GAAP operating expenses; IND: investigational new drug; NDA: new drug application

Driving Momentum in 2024: Recap of Recent Key Achievements

	Avutometinib + Defactinib: Recurrent LGSOC	Avutometinib + Defactinib: Metastatic Pancreatic Cancer	Avutometinib + KRAS G12C Inhibitors: NSCLC	GFH375/VS-7375: Oral G12D (ON/OFF) Inhibitor
✓	Received FDA Orphan Drug Designation	 Initiated RAMP 205 combo avutometinib + 	 Received FDA Fast Track Designation for 	 Established discovery and development collaboration
√	Initiated Phase 3 confirmatory study	gemcitabine/nab-paclitaxel + defactinib	avutometinib in combo with Amgen's G12C inhibitor sotorasib	with GenFleet ✓ Selected GFH375/VS-7375,
√	Presented planned subgroup analysis of Part A RAMP 201 trial		 ✓ Presented initial results from Phase 1/2 RAMP 203 trial of avutometinib + 	a potential best-in-class oral KRAS G12D (ON/OFF) inhibitor
✓	RAMP 201 FDA meeting – combination selected as		sotorasib in KRAS G12C mutant NSCLC	
	go-forward regimen		 Added defactinib to avutometinib and sotorasib combination in the RAMP 203 trial 	



Clinical Program Designed for Success in LGSOC, Signal Generation

Regimen	IND-Enabling/ Preclinical	Phase 1	Phase 2	Phase 3	Anticipated Milestones	Collaboration
Avutometinib + D	efactinib: Recurrent	LGSOC				
RAF/MEK Clamp + FAKi					RAMP 301 Ongoing Enrollment	
RAF/MEK Clamp + FAKi					RAMP 201 Topline Data; Rolling NDA Submission Accelerated Approval: H12024	
Avutometinib + K	RAS G12C Inhibitor	s: NSCLC				
RAF/MEK Clamp + KRAS G12Ci + FAKi					RAMP 203 Updated Data Mid-2024	Amgen
RAF/MEK Clamp +KRAS G12Ci					RAMP 204 Updated Data Mid-2024	Mirati/BMS
Avutometinib + D	efactinib: Metastatio	c Pancreatic Ca	ncer			
RAF/MEK Clamp + FAKi + gemcitabine, nab-paclitaxel					RAMP 205 Initial Safety/Efficacy H12024	PanCAN
GFH375/VS-7375				·		
G12D (ON/OFF) inhibitor					GenFleet expected to submit IND in China in H12024; Initiate Phase 1 in H22024	GenFleet



Avutometinib RAF/MEK Clamp Program Overview



Avutometinib is a Differentiated Agent with the Potential to Serve as the Backbone for Combinations Across RAS Pathway-Driven Cancers

- Unique RAF/MEK clamp mechanism of action
- Novel intermittent dosing schedule; convenient oral regimen
- Orphan Drug Designation for avutometinib alone or in combination with defactinib in recurrent LGSOC
- Breakthrough Therapy Designation for combination of avutometinib and defactinib for treatment of recurrent LGSOC after one or more prior lines of therapy including platinum-based chemotherapy
- Received FDA Fast Track Designation for avutometinib in combination with Amgen's G12C inhibitor sotorasib in KRAS G12C-mutant NSCLC
- Potential best-in-class safety & tolerability profile relative to marketed MEK inhibitors, with potential for combinability with agents from multiple target classes
- Promising signals of clinical activity in various RAS pathway-driven cancers, including in patients whose tumors previously progressed on other MEK inhibitors

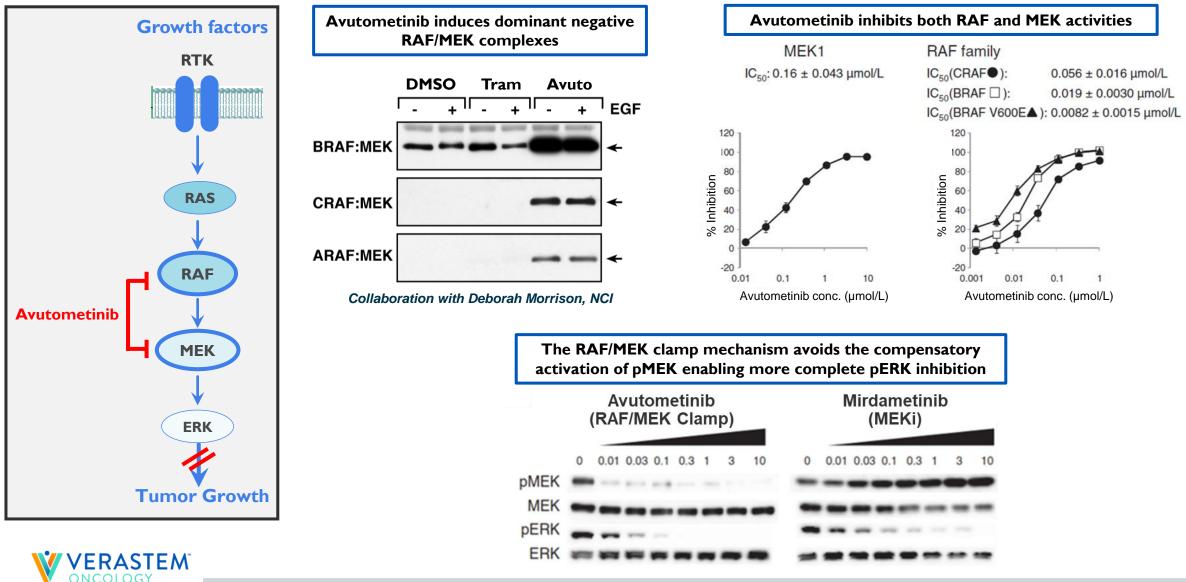


RAF-Rapidly accelerated fibrosarcoma, MEK-Mitogen-activated protein kinase kinase, RAS-Rat sarcoma virus MAPK-Mitogen-activated protein kinase KRAS-Kirsten rat sarcoma virus; NRAS-Neuroblastoma RAS viral oncogene homolog, BRAF-v-raf murine sarcoma viral oncogene homolog B1, NF1-Neurofibromatosis type 1

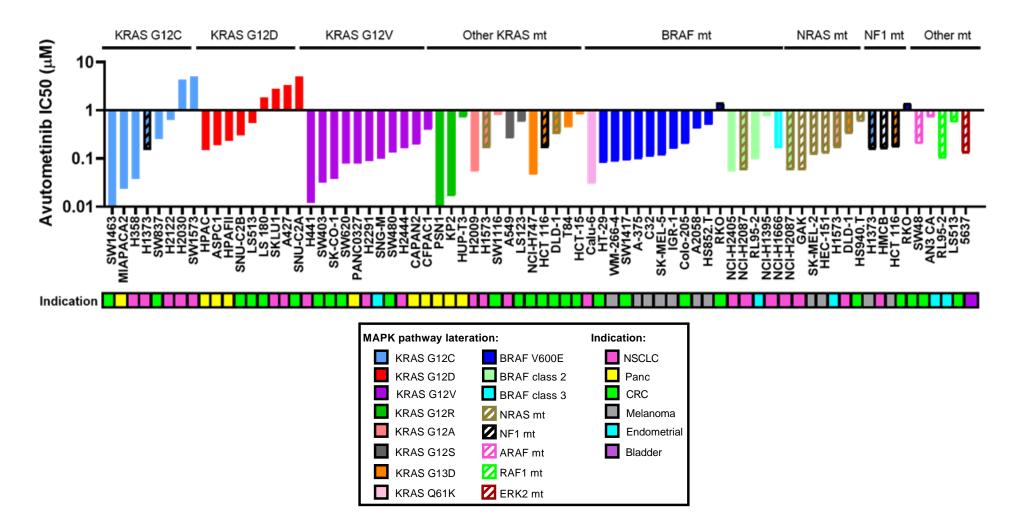
7

Avutometinib is a Unique Small Molecule RAF/MEK Clamp

Contrasting Mechanism of Action vs. MEK-Only Inhibitors

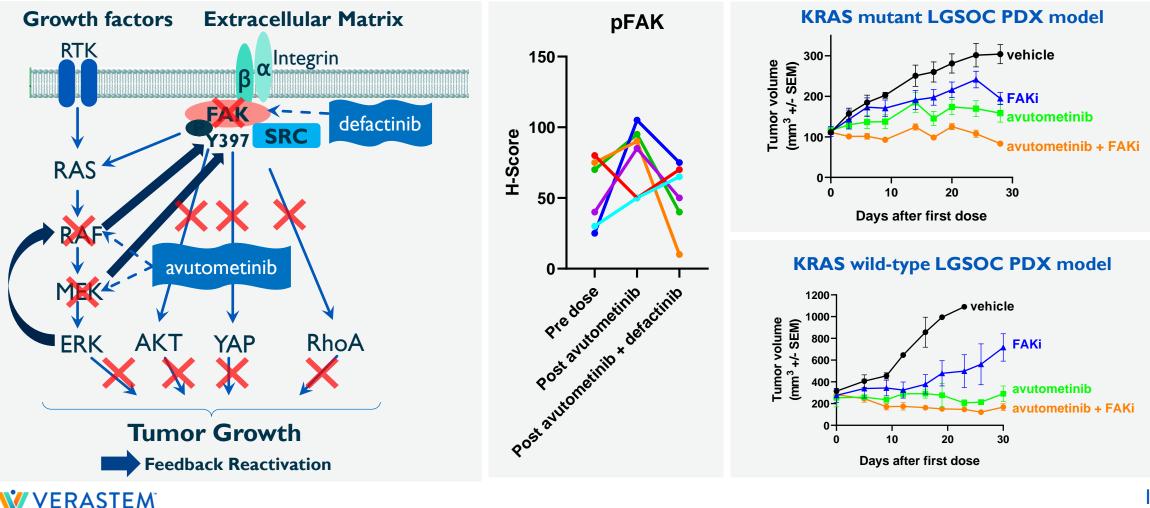


Avutometinib Inhibits Cell Proliferation Across Multiple RAS/MAPK Pathway Alterations and Multiple Solid Tumor Histologies





Strong Scientific Rationale for Avutometinib and FAK Inhibitor Combination Anti-Tumor Efficacy in KRAS Mutant and Wild-Type LGSOC models



Optimized Dosing Schedule Defined: Favorable Tolerability Profile with Novel Intermittent Dosing Regimen

Summary of Adverse Events Grade \geq 3 Occurring in \geq 5% of patients

	Avutometinib monotherapy Daily at MTD N=6 28-day cycle	RP2D Avutometinib monotherapy 4mg twice weekly N=26 28-day cycle	RP2D (Avutometinib 3.2mg twice weekly + defactinib 200mg twice daily) N=38 21 days of 28-day cycle
Treatment Related Adverse Event	Grade ≥3	Grade ≥3	Grade ≥3
Rash	3 (50%)	5 (19%)	2 (5%)
CK elevation (Creatine phosphokinase)	I (I 7 %)	2 (8%)	2 (5%)



RAS Pathway-Driven Cancers and Rational Avutometinib Combinations

Ongoing Comprehensive Approach to Establish More Complete Blockade of RAS Pathway & Resistance Pathways

	Indication	Incidence/ Prevalence	Biomarker	% Regimen	Setting	Collaborator				
Incidence ^{2,3} : II4K	RAMP301 LGSOC	Prevalence ¹ : 6K	70%	Avutometinib + defactinib	Relapsed Refractory molecularly profiled LGSOC					
Gynecologic	RAMP201 LGSOC	Prevalence ¹ : 6K	70%	Avutometinib + defactinib	Relapsed Refractory molecularly profiled LGSOC					
Cancers	Gynecologic Basket*	Incidence ⁶⁻¹⁰ : 85K	25%	Avutometinib + defactinib	Recurrent RAS Pathway-driven (RAS/RAF/NFI) endometrioid cancer, mucinous ovarian cancer, high-grade serous ovarian cancer or cervical cancer					
NSCLC	RAMP203 and 204 KRAS G12C	Incidence ^{2,3}	Incidence ^{2,3} :	Incidence ^{2,3} :	Incidence ^{2,3} :	Incidence ^{2,3} :		Avutometinib + sotorasib ± defactinib	Recurrent KRAS G12C with prior KRAS G12C inhibitor(i) treatment or KRAS G12Ci naïve	AMGEN
Adenocarcinoma		114K		Avutometinib + adagrasib	Recurrent KRAS G12C with prior KRAS G12Ci treatment that progressed	THERAPEUTICS				
Pancreatic	RAMP205 PDAC	Incidence⁴: 58K	98%	Avutometinib + defactinib + gemcitabine/nab-paclitaxel	Previously untreated (front-line) metastatic pancreatic ductal adenocarcinoma (PDAC)	PANCREATIC CANCER ACTION NETWORK				
CRC	KRAS mt*	Incidence⁵: I48K	45%	Avutometinib + cetuximab	Recurrent metastatic KRAS mt					
Breast Cancer	ER+*	Incidence⁵: 279K	22.5%	Avutometinib + abemaciclib + fulvestrant	Recurrent ER+/HER2- breast cancer following progression on CDK4/6i + aromatase inhibitor					
Thyroid	MAPK alterations*+	Incidence ⁴ : 44K	35%	Avutometinib + defactinib	Differentiated & anaplastic thyroid cancer					
*IST	+excludi	ng BRAFV600E								

¹ References: Monk, Randall, Grisham, The Evolving Landscape of Chemotherapy in Newly Diagnosed Advanced Epithelial Ovarian Cancer, Am Soc Clin Oncol Educ Book; 2019; Slomovitz, Gourley, Carey, Malpica, Shih, Huntsman, Fader., Grisham et al, Low-Grade serous ovarian cancer: State of the Science; Gynecol Oncol; 2020. Grisham, Iyer, Low-Grade Serous Ovarian Cancer: Current Treatment Paradigms and Future Directions; Curr Treat Options Oncology; 2018; Globocan 2020; ²Pakkala and Ramalingam [Cl Insight 2018); ³Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020, Siegel et. al. CA Cancer / Clin 2020;70:7-30; ⁴Cancer Statistics 2020; ⁴Cancer Statistics 2 Clin 2020;70:7-30 ⁵CbioPortal; ⁶Uterine cancer is one of the leading gynecologic neoplastic disorders in the US, of which over 80% are endometrioid adenocarcinomas (EA); ⁷Endometrioid OC (EnOC) accounts for approximately 10% of all OC, with the majority of cases diagnosed as low grade, early stage disease with excellent clinical; ⁸Mucinous ovarian cancer: 3-11% of ovarian cancer (Hada et al., 2021); ⁹90% of Ovarian Cancer is Epithelial Ovarian Cancer (org/content/dam/cancer-org/research/cancer-facts-and-figures/2018/cancer common type of ovarian cancer, accounting for approximately 75% of epithelial ovarian cancers. (https://ocrahope.org/news/high-grade-serous-carcinoma/#:~:text=High%2Dgrade%20serous%20carcinoma%20is,unless%20another%20type%20is%20specified.)

Robust Clinical Program: Avutometinib in Multiple Combinations Across RAS/MAPK Pathway-Driven Tumors

INDICATION	REGIMEN	STUDY NAME	PRECLINICAL	PHASE I	PHASE 2	PHASE 3	CLINICAL COLLABORATION WITH
LGSOC	Avutometinib + defactinib	RAMP 301				Confirm Trial	natory Randomized Controlled
LGSOC	Avutometinib + defactinib	RAMP 201				egistration-directed tria proval cohort fully enr	
R/R LGSOC	Avutometinib + defactinib	IST-FRAME				, ,	
Gynecological Cancers (RAS Pathway-driven)	Avutometinib + defactinib	IST					
Mesonephric ²	Avutometinib + defactinib	IST					
R/R NSCLC (KRAS G12C)	Avutometinib + sotorasib ± defactinib	RAMP 203					AMGEN MIRATI
R/R NSCLC (KRAS G12C)	Avutometinib + adagrasib	RAMP 204					THERAPEUTICS
Pancreatic Ductal Adenocarcinoma	Avutometinib + gemcitabine/nab- paclitaxel + defactinib	RAMP 205					PANCREATIC CANCER ACTION NETWORK
R/R Colorectal Cancer (KRAS mt)	Avutometinib + cetuximab (EGFRi)	IST					
ER+ Breast Cancer	Avutometinib + abemaciclib + fulvestrant	IST					
Thyroid Cancer ²	Avutometinib + defactinib	IST					



Avutometinib ± Defactinib in Low-Grade Serous Ovarian Cancer

LGSOC Unmet Need & Opportunity

- LGSOC is a less common type of ovarian cancer that is often diagnosed in younger women
 - LGSOC is a unique disease that is distinct from high-grade serous ovarian cancer (HGSOC) in its pathology, protracted clinical course and low response to chemotherapy and thus requires a more tailored therapeutic approach
 - An estimated 1,000-2,000 patients are diagnosed with LGSOC per year in the U.S., with prevalence of ~6,000
- There are currently no approved therapies specifically indicated for recurrent LGSOC
 - Recent clinical trials in recurrent LGSOC showed that standard-of-care chemo and hormonal therapy are relatively ineffective (6-13% ORR).
 - LGSOC has a chemo-resistant nature and optimal treatment has not yet been defined. NCCN guidelines include clinical trials and observation highlighting the lack of approved & effective therapies
- LGSOC is known to be driven by the MAPK (RAS) pathway in ≥70% of patients
- A phase I/II study in the UK (FRAME) evaluated the combination of avutometinib and defactinib
 - Results in recurrent LGSOC showed a <u>42%</u> confirmed ORR with durable responses and favorable safety/tolerability
- RAMP 201: A registration-directed Phase 2 trial of avutometinib and avutometinib + defactinib in recurrent LGSOC
 - Updated data from ASCO 2023 showed a <u>45%</u> confirmed ORR in the combination arm with tumor shrinkage in 86% of evaluable patients
- RAMP 301:A confirmatory Phase 3 trial evaluating the combination of avutometinib and defactinib versus standard chemotherapy or hormonal therapy for the treatment of recurrent LGSOC

> Orphan Drug Designation for avutometinib alone or in combination with defactinib in recurrent LGSOC

> Breakthrough Therapy Designation granted for avutometinib and defactinib in recurrent LGSOC after one or more prior lines of therapy



Monk et al., The Evolving Landscape of Chemotherapy in Newly Diagnosed Advanced Epithelial Ovarian Cancer, 2019; Slomovitz et al., Low-Grade serous ovarian cancer: State of the Science, 2020; Grisham et al., Low-Grade Serous Ovarian Cancer: Current Treatment Paradigms and Future Directions, 2018; AACR Project GENIE Cohort v9.0-public and Verastem unpublished analysis; Banerjee et al., Phase I study of the combination of the dual RAF/MEK inhibitor VS-6766 and the FAK inhibitor defactinib: Results of efficacy in low grade serous ovarian cancer, ESMO 2021; Malpica et al., Interobserver and intraobserver variability of a two-tier system for grading ovarian serous carcinoma, 2007; NCCN guidelines v1.2023; Zwimpfer et al., Cancer treatment Reviews 112 (2023).

LGSOC is a Unique RAS Pathway-Driven Cancer with a High Unmet Need

LGSOC is a type of ovarian cancer that disproportionately affects younger women

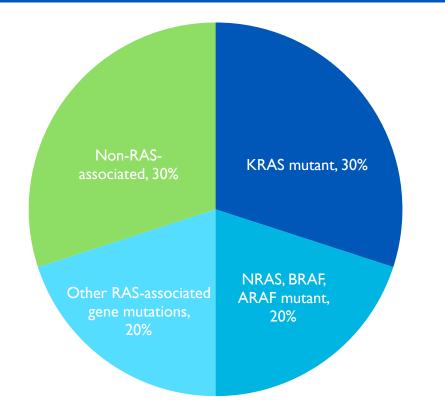
1,000 to 2,000 patients in the U.S. and 15,000 to 30,000 worldwide diagnosed with LGSOC each year

A slow growing cancer, that has a median survival of almost 10 years, so patients remain in treatment for a long time (10-yr prevalence ~80,000 worldwide, ~6,000 US)

Patients often experience significant pain and suffering from their disease over time

Prior research has focused primarily on high grade serous ovarian cancer (HGSOC). However, LGSOC is clinically, histologically and molecularly unique from HGSOC with limited treatments available

~30% of LGSOC Patients Have KRAS mt ~70% of LGSOC Shows RAS Pathway-Associated mts



References: AACR Project GENIE Cohort v9.0-public and Verastem unpublished analysis

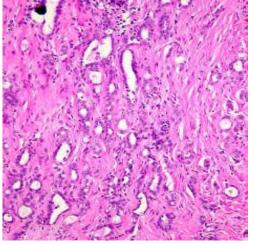
17



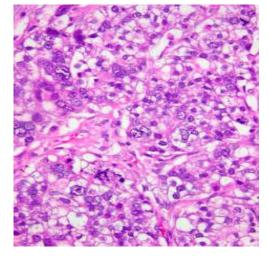
Monk, Randall, Grisham, The Evolving Landscape of Chemotherapy in Newly Diagnosed Advanced Epithelial Ovarian Cancer, Am Soc Clin Oncol Educ Book; 2019; Slomovitz, Gourley, Carey, Malpica, Shih, Huntsman, Fader., Grisham et al, Low-Grade serous ovarian cancer: State of the Science; Gynecol Oncol; 2020. Grisham, Iyer, Low-Grade Serous Ovarian Cancer: Current Treatment Paradigms and Future Directions; Curr Treat Options Oncology; 2018; Malpica et al., Am J. Surg Pathol 2007

Low-Grade and High-Grade Serous Ovarian Cancer Are Different Diseases

Variable	LGSOC	HGSOC
Nuclear atypia	Uniform round to oval with little variation	+++ Marked variation
Mitotic Index	<12 mitoses per 10 hpf	>12 mitoses per 10 hpf
Chromatin and variation in size of nucleus	Little	Marked (nuclear size ratio ≥3)
Mutation	KRAS ++ BRAF + ER/PR +++	P53 +++ BRCA1/2 +
Precursor	Serous borderline tumor	Tubal intraepithelial neoplasia



LGSOC



HGSOC

Recurrent LGSOC: High Medical Need No Approved Treatment Options – Limited Benefit from Available Therapies

Recurrent Low-Grade Ovarian Cancer – Treatment Guidelines¹

	RECURRENCE THERAPY	No Category I recommendations (high-level evidence). Category 2a (lower-level evidence with uniform NCCN consensus)
		unless otherwise indicated
		f:There is no standard sequencing of drugs for recurrent disease. Considerations include prior therapies, disease burden, relative
	Clinical trial	efficacy, and relative toxicity profile.
	or	t: An aromatase inhibitor (i.e., letrozole, anastrozole, exemestane) is
	Trametinib ^f	preferred if not used previously. Fulvestrant, tamoxifen, or leuprolide
	or	acetate is recommended if an aromatase inhibitor was given previously.
	Binimetinib (category 2B) ^f	
	or	.4
	Dabrafenib + trametinib (for BRAF V600E-positive tumor	•
Recurrent	or	 Preferred Regimens Paclitaxel/carboplatin g3weeks^{f,g} ± maintenance
disease ^s	→ Hormonal therapy ^t	 Pacilitaxel/carboplatin q3weeks^{3,9} ± maintenance letrozole (catęgory 2B) or other hormonal therapy
alocabo	or Chamatharany (if not providually used) and OV C (6 of 1)	
	Chemotherapy (if not previously used), see OV-C (6 of 1) or	• Paclitaxel/carboplatin/bevacizumab + maintenance
	Other systemic therapy ^{f,u}	bevacizumab ^{1,1} (ICON-7 & GOG-218)
	• For platinum-sensitive disease, see OV-C (8 of 11)	Hormone therapy (aromatase inhibitors:
	For platinum-resistant disease, see OV-C (9 of 11)	anastrozole, letrozole, exemestane) (category 2B)
	or	
	Observation	



Recent LGSOC Trials Highlight High Unmet Need

Trial	Number of Prior Systemic Therapies Median (range)	Prior MEK allowed	Prior Bevacizumab	Therapy	Response Rate ORR	Image Assessment	Median PFS Months (95% CI)	Discontinuation Rate due to AEs									
GOG		No	* Low %	SoC (n=130)	6% 95% CI: (3%, 12%)	INV	7.2 (5.6-9.9)	30%									
2811				Trametinib (n=130)	26% 95% CI: (19%, 35%)	INV	13.0 (9.9-15.0)	36%									
	MILO ² 2 (1-8)	2	N	NL	NIa	Nia	NIa	NIa	Nia	Nia	Nia	*1 our %	SoC (n=101)	13% 95% CI: (7%, 21%)	BICR	10.6 (9.2 - 14.5)	١7%
MILO ²		No	* Low %	Binimetinib ² (n=198)	16% 95% CI: (11%, 22%)	BICR	9.1 (7.3-11.3)	31%									

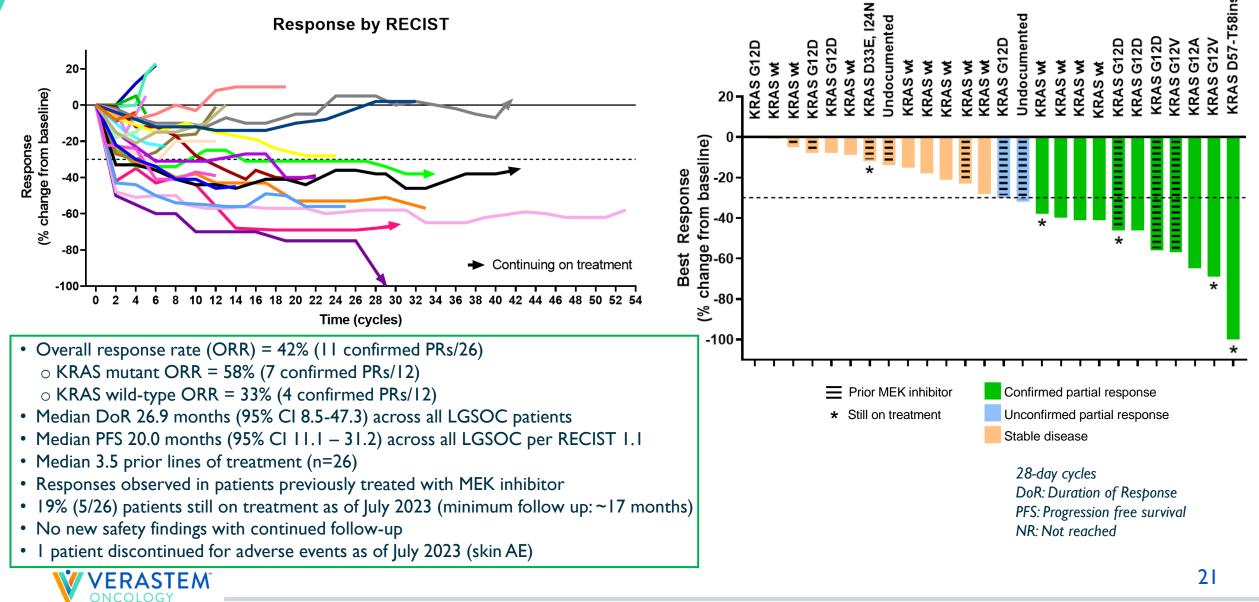
¹ Study GOG 281 trial Gershenson et al., Lancet 2022
 ² MILO Study Monk et al., J Clin Oncol 2020.

* Low historical use of bevacizumab during trial conduct. % not reported MILO: no more than 3 lines of prior chemotherapy

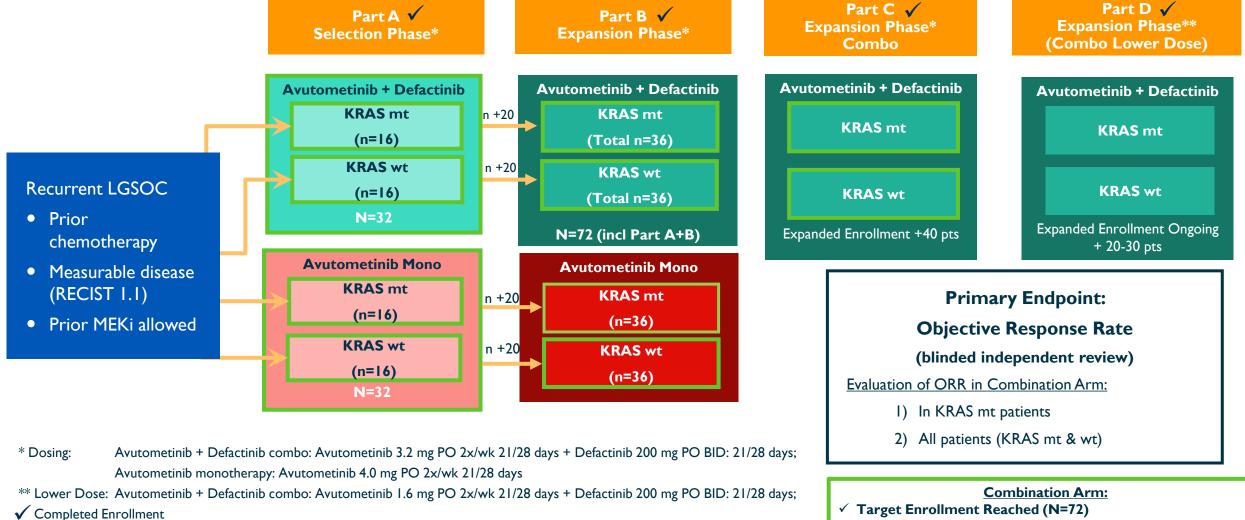
SoC = Standard of Care (endocrine / chemotherapy) INV = Investigator BICR = Blinded independent central review PFS = Progression free survival CI = confidence interval NR = Not reached



FRAME Study: High Rate of Durable Responses with the Combination of Avutometinib and Defactinib in Recurrent LGSOC (n=26)



RAMP 201 (ENGOTov60/GOG3052): Registration-Directed Phase 2 Trial of Avutometinib \pm Defactinib in Patients with Recurrent LGSOC



Expanded Enrollment Ongoing (Lower Dose)

"These results demonstrate avutometinib in combination with defactinib can deliver high response rates for patients with recurrent LGSOC with a promising safety profile to date. It is particularly encouraging to see extensive tumor shrinkage in women who have had several treatment lines, including prior MEK inhibitors. These latest findings suggest the combination may offer a new treatment option for women with this hard-to-treat cancer, and we are hopeful it will become the new standard of care."

-Dr. Susana Banerjee, MBBS, MA PhD, FRCP, global

and lead investigator of the study, Consultant Medical Oncologist at The Royal Marsden NHS Foundation Trust and Team Leader in Women's Cancers at The Institute of Cancer Research, London

ASCO 2023 data Updated Data from Part A of RAMP 201

	Avutometinib + Defactinib						
	Total (n=29)						
	45% (13) 95% CI: (26%, 64%)						
ORR, % (n)	KRAS mt 60% (9/15)	KRAS wt 29% (4/14)					
Tumor shrinkage, % (n)	86% (25)						
Median Time to Response	5.5 months (range 1.6-14.7 n	nonths)					
Relative avutometinib Dose Intensity	83% ± 20%						

- 29 patients were evaluable for efficacy with a minimum follow-up of 12 months and 13 (45%) patients remain on study treatment
- Patients were heavily pretreated with a median of 4 prior systemic regimens (up to 11)
 - 3 out of 4 patients who received prior MEK inhibitors responded to the combination
- Median duration of response and median progression free survival have not been reached
- Safety and tolerability continued to be favorable and consistent with previously reported data
 - The discontinuation rate due to ≥ 1 adverse event was 12% in the combination overall to date (4.9% due to elevated blood CPK)

Recent LGSOC Trials with Standard of Care Highlight High Unmet Need: Current Trials with Avutometinib + Defactinib Show Overall Response Rate >40%

Trial	Median Number of Prior lines of Therapy	Prior MEK Allowed	Prior Bevacizu mab	Therapy	Response Rate ORR	Image Assessment	Median PFS Months (95% CI)	Discontinuation Rate Due to AEs
GOG 2811	2	No	* Low %	Standard of Care	6% ^ 95% Cl: (3%, 12%)	INV	7.2 (5.6-9.9)	30%
GOG 201*	(1-10)	INO	· LOW /6	Trametinib	26%^ 95% CI: (19%, 35%)	INV	13.0 (9.9-15.0)	36%
	2	No	* Low %	Standard of Care	13% 95% CI: (7%, 21%)	BICR	10.6 (9.2 to 14.5)	17%
MILO ²	(1-8)	INO	2011 /0	Binimetinib	16% 95% CI: (11%, 22%)	BICR	9.1 (7.3-11.3)	31%
FRAME ³	3.5	Yes	19%	Avutometinib + Defactinib	42%^ 95% CI: (23%, 63%)	INV	20 (- 3)	4%
RAMP 201 Part A (ASCO 2023 data) ⁴	4	Yes	65%	Avutometinib + Defactinib	45% 95% CI: (26%, 64%) 52%***	BICR	Not Yet Reached	10%**
¹ Study GOG 281 trial Gershenson et al., Lancet 2022 ² MILO Study Monk et al., J Clin Oncol 2020. ³ Banerjee et al., ESMO Sept 2021 ⁴ Banerjee et al., ASCO June 2023 ⁴ Banerjee et al., ASCO June 2023								
* Low historical use of bevacizumab during trial conduct. % not reported MILO: no more than 3 lines of prior chemotherapy MILO: (chemotherapy only) MILO: (chemotherapy only) MILO: (chemotherapy only) MILO: (chemotherapy only) MILO: (chemotherapy only) MILO: (chemotherapy only)								

MILO: (chemotherapy only)

PLD (liposomal doxorubicin), paclitaxel or topotecan

PFS = Progression free survival 24 *CI* = *confidence interval*

RAMP 201 Part A: Heavily Pre-Treated Patient Population

Prior Platinum-Based Chemotherapy, Endocrine Therapy, Bevacizumab in Most Patients; Prior MEK Inhibitor Therapy was Permitted

	Avutor	netinib Monotł	nerapy	Avutometinib + Defactinib			
	KRAS mt (n=16)	KRAS wt (n=17)	Total (n=33)	KRAS mt (n=16)	KRAS wt (n=15)	Total (n=31)	
Age (yrs), median (min, max)	58 (27, 72)	48 (27, 74)	51 (27,74)	61 (29,71)	50 (30, 74)	55 (29,74)	
ECOG PS, n (%)							
0	8 (50)	15 (88)	23 (70)	(69)	9 (60)	20 (65)	
I	8 (50)	2 (12)	10 (30)	5 (31)	6 (40)	II (35)	
Number of Prior Systemic Regimens, median (min, max)	4 (1,10)	3 (1,9)	3 (1, 10)	4 (1,8)	5 (2, 11)	4 (1,11)	
Prior platinum-based chemotherapy, n (%)	15 (94)	17 (100)	32 (97)	16 (100)	15 (100)	31 (100)	
Prior MEK inhibitor therapy, n (%)	5 (31)	5 (29)	10 (30)	2 (13)	2 (13)	4 (13)	
Prior Bevacizumab, n (%)	8 (50)	8 (47)	16 (48)	7 (44)	13 (87)	20 (64)	
Prior Hormonal therapy, n (%)	(69)	13 (76)	24 (73)	15 (94)	13 (87)	28 (90)	



RAMP 201 Part A: Evaluable Patient Population*

Positive ORR Confirmed by Blinded Independent Central Review (BICR) Support Avutometinib + Defactinib as Go Forward Regimen in LGSOC - Regardless of KRAS Status

		Avutometinib		Avutometinib + Defactinib		
	KRAS mt (n=15)	KRAS wt (n=15)	Total (n=30)	KRAS mt (n=15)	KRAS wt (n=14)	Total (n=29)
Confirmed ORR, n (%)	2 (13)	l (6)	3 (10) 95% CI (2%, 24%)	9 (60)	4 (29)	I 3 (45) 95% CI (26%, 64%)
CR, n (%)	I (7)	0	I (3)	0	0	0
PR, n (%)	I (7)	l (6)	2 (7)	9** (60)	4 (29)	13 (45)
SD, n (%)	12 (80)	13 (81)	25 (83)	6 (40)	7 (50)	13 (45)
Disease control rate ^{***} , n (%)	14 (93)	14 (88)	28 (93)	15 (100)	(79)	26 (90)
PD, n (%)	I (7)	2 (13)	3 (10)	0	3 (21)	3 (10)
Confirmed + unconfirmed ORR, n (%)	2 (13)	I (6)	3 (10)	11 (73)	4 (29)	15 (52)

* Evaluable for Efficacy: At least one blinded imaging assessment in 31 of 33 and 29 of 31 patients enrolled in respective treatment arms

** Includes patient deepened to CR at last assessment; CR not yet confirmed

***Disease control rate (SD + PR + CR) at 8 weeks.



Combination of Avutometinib and Defactinib High Disease Control Rate + Tumor Reduction in Recurrent LGSOC

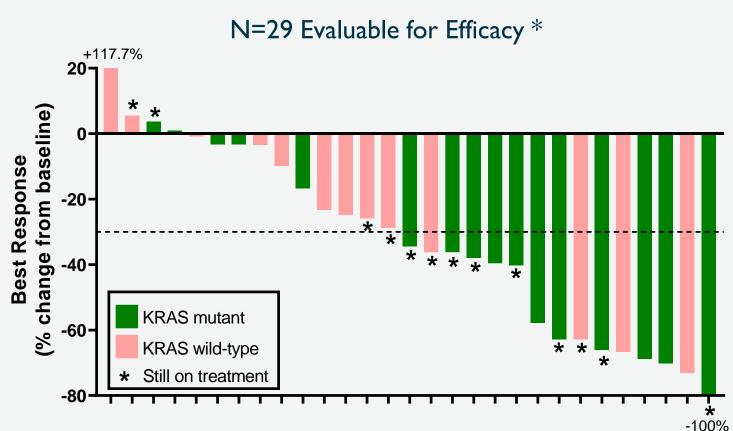
Part A (Evaluable for Efficacy *)

Confirmed ORR: 45%

Confirmed/Unconfirmed ORR: 52%

Disease Control Rate (SD+PR): 90%

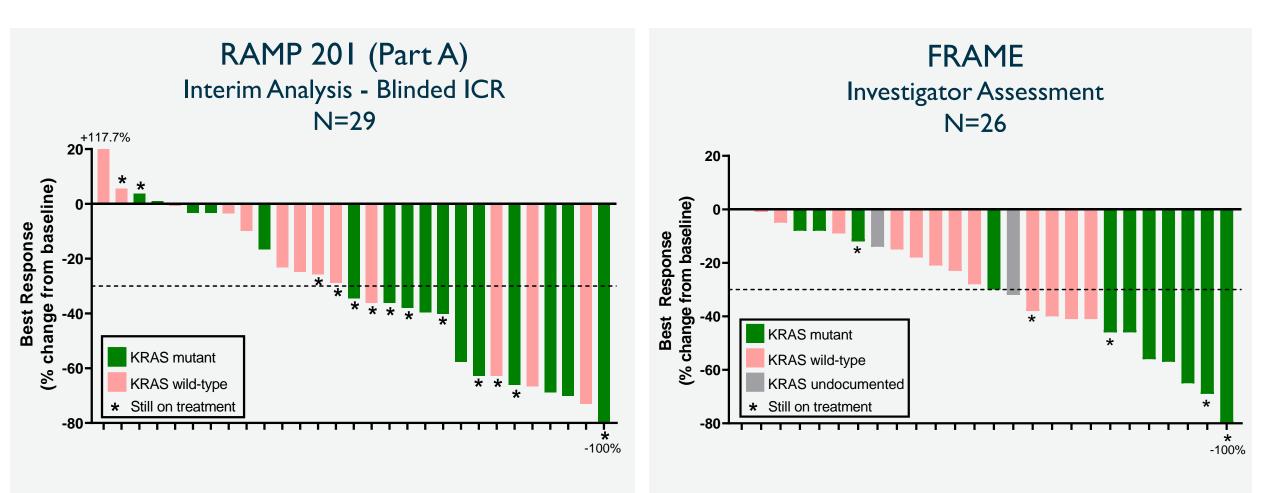
Patients still on study treatment: 45% Minimum follow-up: 12 months







Combination of Avutometinib and Defactinib Initial Data from RAMP 201 Trial Reinforce Findings from FRAME Trial





RAMP 201: Safety and Tolerability Profile of Avutometinib + Defactinib No New Safety Signals; Few Discontinuations Due to Adverse Events

Most Common Treatment-Related Adverse Events (>20%) in All Treated Patients

- Majority of adverse events are mild to moderate and manageable/reversible¹
- Few discontinuations due to adverse events (12.3% in combo due to ≥ 1 TEAE 4.9% due to elevated blood CPK*)

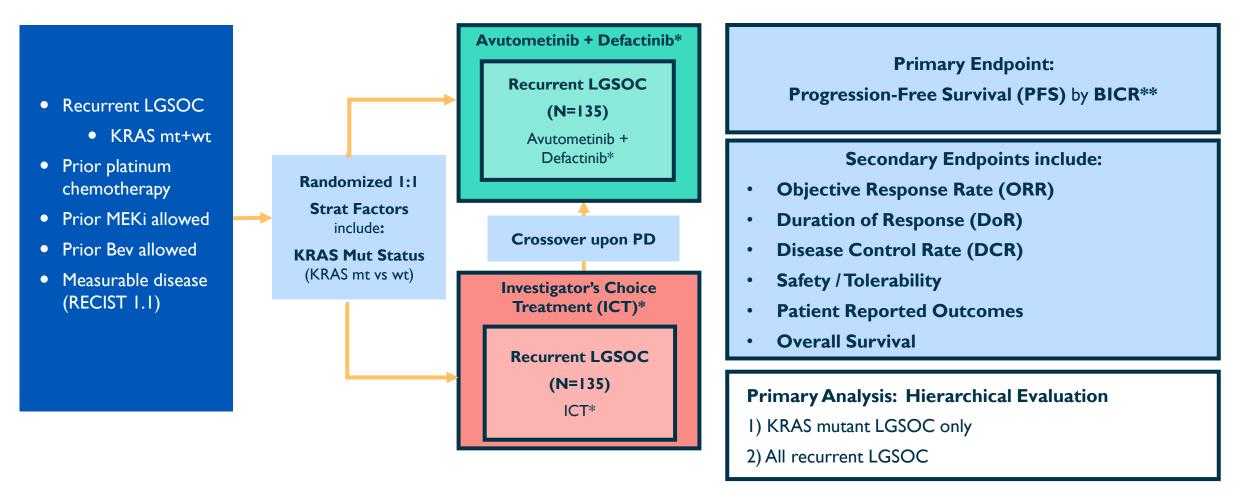
* No association to date with clinically significant toxicities, including rhabdomyolysis

Avutometinib + Defactinib (n=81)						
	Any Grade	Grade ≥3				
Nausea, n (%)	50 (61.7)	0				
Diarrhea, n (%)	40 (49.4)	3 (3.7)				
Blood CPK increased, n (%)	39 (48.1)	15 (18.5)				
Oedema peripheral, n (%)	34 (42.0)	I (I.2)				
Vomiting, n (%)	30 (37.0)	0				
Vision blurred, n (%)	29 (35.8)	0				
Dermatitis acneiform, n (%)	28 (34.6)	2 (2.5)				
Fatigue, n (%)	27 (33.3)	3 (3.7)				
Rash, n (%)	25 (30.9)	2 (2.5)				
Dry skin, n (%)	18 (22.2)	0				
Anemia, n (%)	14 (17.3)	3 (3.7)				



RAMP-301: Avutometinib + Defactinib

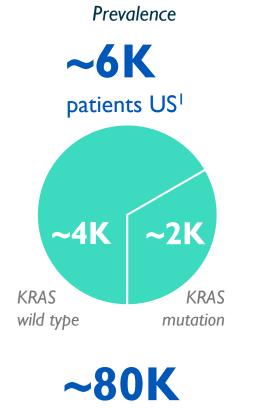
Phase 3 Confirmatory Trial – Randomized Controlled Trial (RCT)



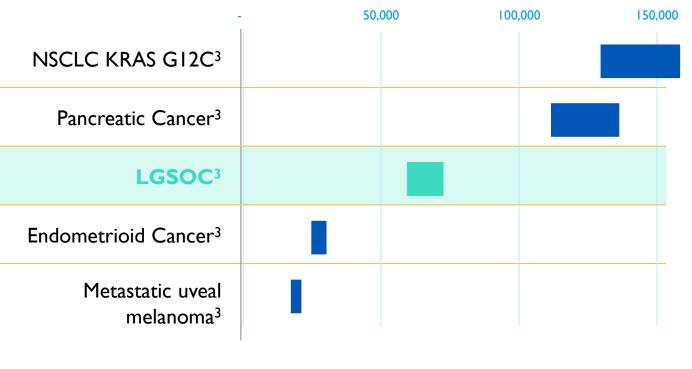
*A+D Dosing: Avutometinib 3.2 mg PO 2x/wk 21/28 days + Defactinib 200mg PO BID: 21/28 days *Chemo Hormonal ICT: Liposomal doxorubicin (PLD), Paclitaxel, Topotecan, Letrozole, Anastrozole



RAMP 201 Part A Interim Data Support Meaningful Market Potential for All Recurrent LGSOC Regardless of KRAS Status with Long Duration of Therapy



Patient-months of Therapy Per Year² (across all 2L+ patients)



patients WW

 ¹ Monk, Randall, Grisham, The Evolving Landscape of Chemotherapy in Newly Diagnosed Advanced Epithelial Ovarian Cancer, Am Soc Clin Oncol Educ Book; 2019; Slomovitz, Gourley, Carey, Malpica, Shih, Huntsman, Fader., Grisham et al, Low-Grade serous ovarian cancer: State of the Science; Gynecol Oncol; 2020. Grisham, Iyer, Low-Grade Serous Ovarian Cancer: Current Treatment Paradigms and Future Directions; Curr Treat Options Oncology; 2018; Globocan 2020
 ² Patient-months of Therapy metric calculated by multiplying relevant incidence/prevalence rate times estimated duration of therapy; represents US market opportunity only; patient population estimates from Globocan 2020, American Cancer Society 2021, AACR Genie Cohort V9.0 public, and scientific publications. Duration of therapy



estimates from clinical studies and clinician experience. Patient-months on therapy is for 2nd-line+ patients ³ NSCLC KRAS GI2C 2nd line patients (incidence); Pancreatic RAS/RAF mutant 2nd-line patients (incidence); LGSOC KRAS mutant and wild-type patients (prevalence); Endometrioid RAS/RAF mutant 2nd-line patients (incidence); Uveal melanoma RAS/RAF mutant 2nd-line patients (incidence) 31

Plan to File for Accelerated Approval with Mature RAMP 201 and FRAME Study Results

- Encouraging efficacy results include independently confirmed responses (FRAME study)
- RAMP 201 Part A data at ASCO 2023 demonstrated ORR of 45% (13/29) and tumor shrinkage in 86% (25/29) of evaluable patients
- No new safety signals; few discontinuations due to adverse events
- Initiated RAMP 301, a Phase 3 confirmatory trial
- High unmet need in rare ovarian cancer with no currently FDA approved therapies specifically for recurrent LGSOC
- Received FDA Breakthrough Therapy Designation and Orphan Drug Designation for avutometinib in combination with defactinib in LGSOC



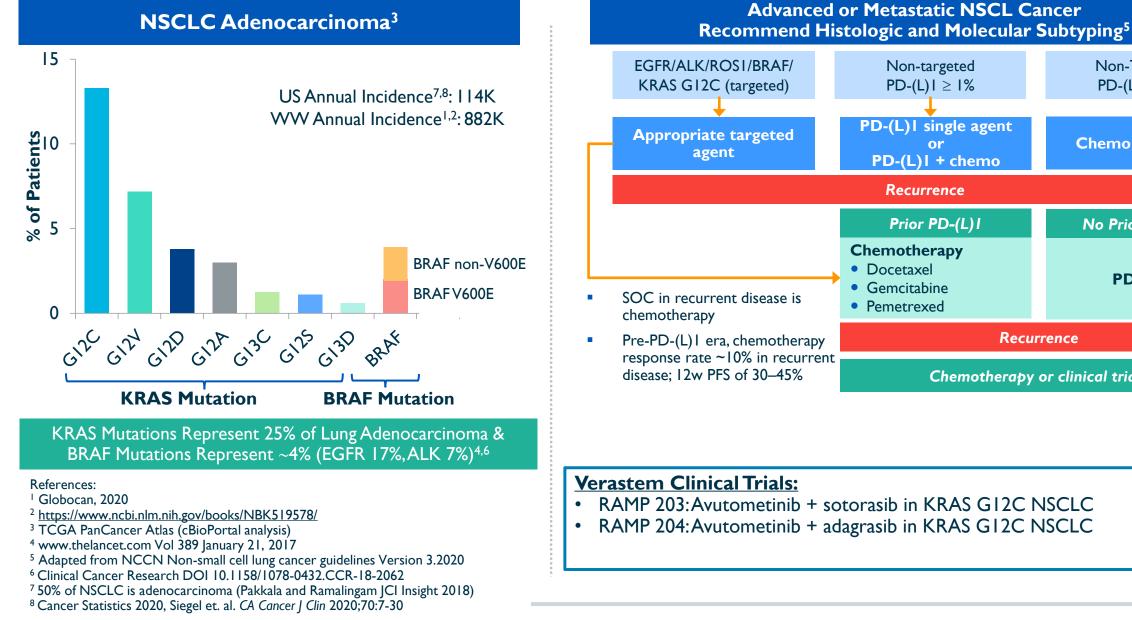
Next Milestones

- Plan to file for accelerated approval based on the totality of the data from the RAMP 201 and FRAME studies
- Report updated topline data from RAMP 201 trial in H1 2024
- Continue site activation (sites currently open in US and Australia) and enrollment of RAMP 301, a Phase 3 confirmatory study



Avutometinib with KRAS GI2C Inhibitors in Non-Small Cell Lung Cancer

High Unmet Need in Refractory NSCLC Adenocarcinoma



Non-targeted Non-Targeted $PD-(L) | \ge |\%$ PD-(L)I < 1%**PD-(L)** I single agent Chemo ± PD-(L)I PD-(L)I + chemo Recurrence Prior PD-(L) No Prior PD-(L)I Chemotherapy Docetaxel PD-(L)I Gemcitabine Pemetrexed Recurrence Chemotherapy or clinical trials

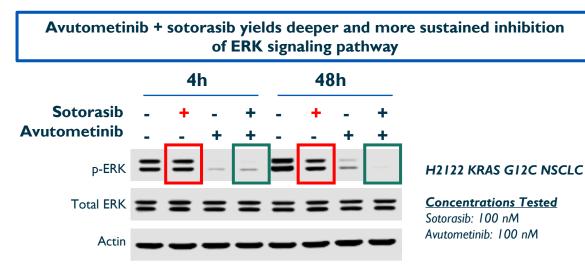
- RAMP 203: Avutometinib + sotorasib in KRAS G12C NSCLC
- RAMP 204: Avutometinib + adagrasib in KRAS G12C NSCLC

Preclinical Synergy of Avutometinib + GI2C Inhibitors in KRAS GI2C Models

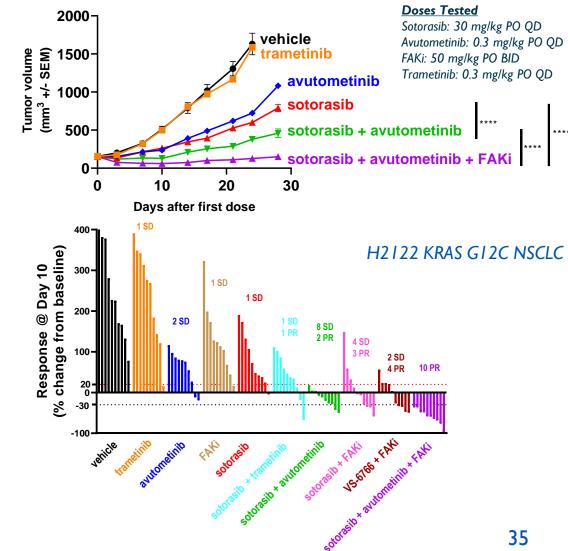
Synergy of avutometinib + GI2C inhibitors across GI2C mutant NSCLC, CRC & Pancreatic cancer cell lines

			Combined Synergy Score	
Cell line	Indication	Sensitivity to G12C inhibitors	Avutometinib + sotorasib	Avutometinib + adagrasib
H2122	NSCLC	Moderately sensitive	44.7	44.6
H1373	NSCLC	Sensitive	10.0	3.4
SW1573	NSCLC	Insensitive	8.6	12.0
H358	NSCLC	Sensitive	6.9	5.4
H2030	NSCLC	Moderately sensitive	5.1	ND
SW837	CRC	Sensitive	16.1	18.5
MIAPACA2	Panc	Sensitive	2.3	5.3

ND: not determined



Avutometinib & FAKi potentiate sotorasib efficacy in KRAS GI2C NSCLC in vivo; Tumor regression in all mice with triple combination



Reference: Coma et al., AACR 2021

VERASTEM

ONCOLOG'

Avutometinib \pm FAKi Restores Anti-Tumor Efficacy of Sotorasib in G12Ci-Resistant KRAS G12C Models

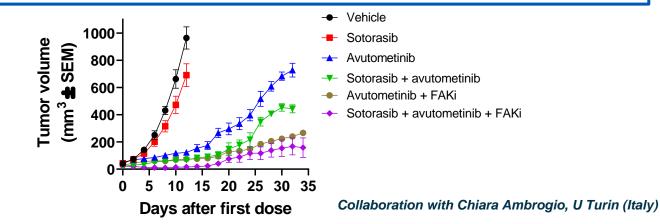
Avutometinib is effective against acquired KRAS mutations that occur clinically upon progression on G12C inhibitors

	IC50 (nM)			
Cell Line	Sotorasib	Adagrasib	Avutometinib	
G12C	29	3	14	
G12D	435	382	7	
G12C/R68S	157	85	13	
G12C/H95D	11	235	10	
G12C/Y96C	438	216	4	
G12C/Y96D	>5000	578	17	

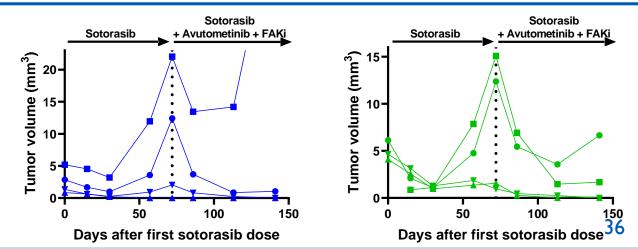
<30 nM 30 - 150 nM >150 nM

Collaboration with Andy Aguirre, DFCI

Addition of avutometinib + FAK inhibitor to sotorasib increases tumor growth inhibition in a sotorasib-resistant KRAS G12C/Y96D model



Addition of avutometinib + FAKi restores anti-tumor activity after progression on sotorasib monotherapy in a KRAS GI2C NSCLC GEMM model





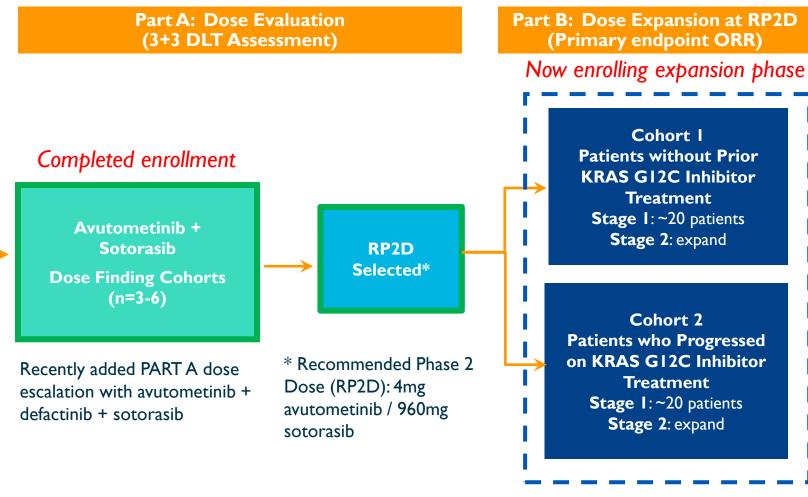
Reference: Coma et al., AACR RAS meeting 2023

Collaboration with Mariano Barbacid, CNIO (Spain)

RAMP 203: Phase I/2 Trial of Avutometinib + LUMAKRAS[™] (Sotorasib) ± Defactinib in KRAS G12C Advanced NSCLC

- Patients must have a KRAS G12C mutation determined using validated test
 Treatment with at least 1 but no more than 3 prior
 - but no more than 3 prior systemic regimens, for Stage 3B-C or 4 NSCLC*
 - Patient may have previously received adjuvant chemotherapy for earlier-stage disease
 - Measurable disease according to RECIST 1.1
 - ECOG performance status ≤ I

*may include patients with or without prior G12C therapy

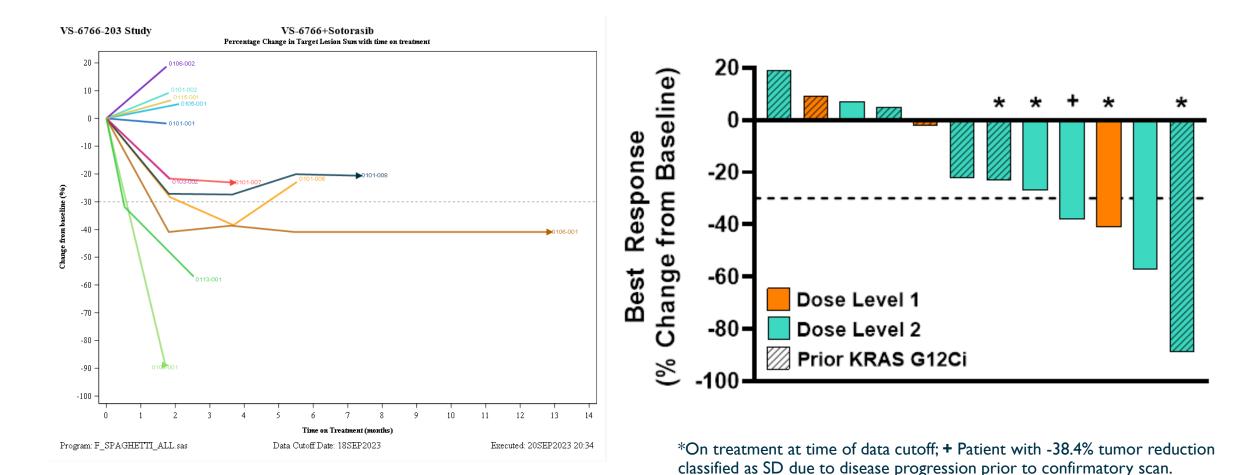


NCT05074810

Collaboration with Amgen

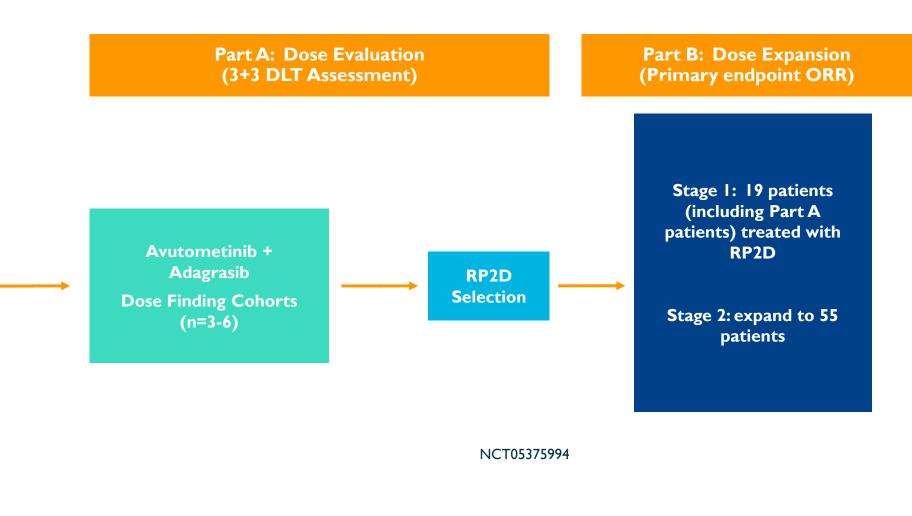
DLT = dose-limiting toxicity; n = number of patients; ORR = overall response rate; RP2D = recommended phase 2 dose

RAMP 203: Objective Responses in KRAS G12C NSCLC Sotorasib + Avutometinib Combination



RAMP 204: Phase I/2 Trial of Avutometinib + KRAZATITM (Adagrasib) in KRAS GI2C Advanced NSCLC

- Patients must have a KRAS GI2C mutation determined using validated test
- Treatment with at least I but no more than 3 prior systemic regimens, for Stage 3B-C or 4 NSCLC
- Patient must have received prior therapy with a KRAS G12C inhibitor and experience progressive disease
- Measurable disease according to RECIST 1.1
- ECOG performance status ≤ I



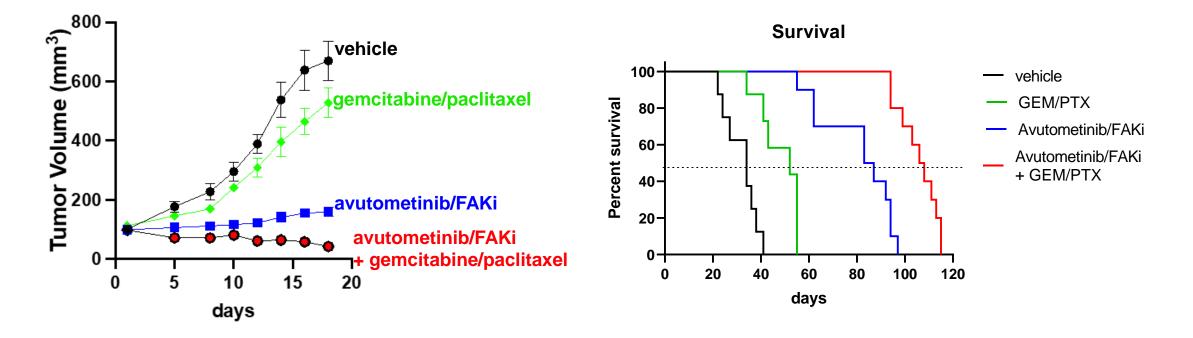


VERASTEM Collaboration with Mirati Therapeutics

DLT = dose-limiting toxicity; n = number of patients; ORR = overall response rate; RP2D = recommended phase 2 dose

Avutometinib Combinations in Pancreatic Cancer and Colorectal Cancer

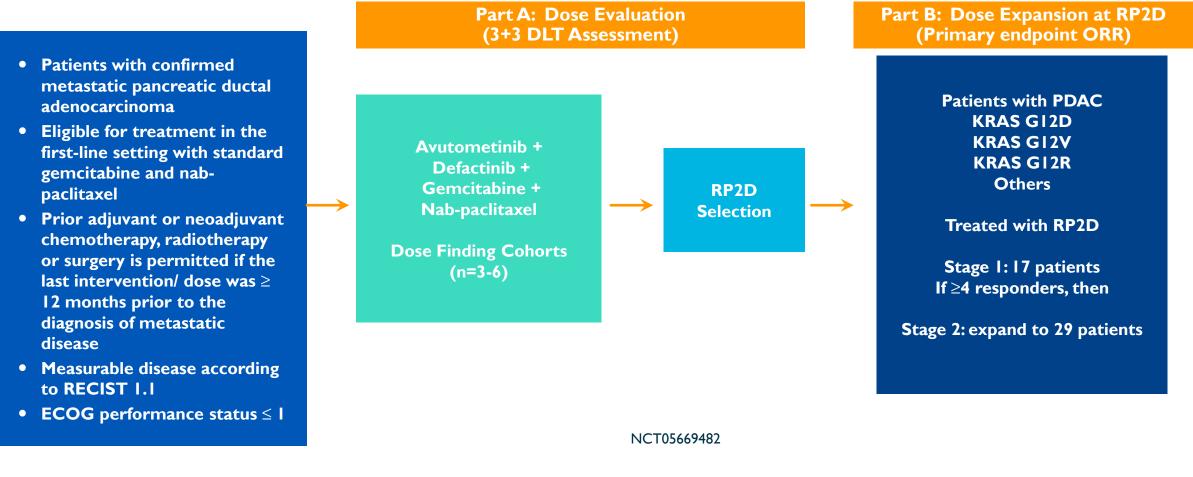
Addition of Avutometinib + FAKi to Chemotherapy Induces Tumor Regression and Increases Survival in a KRAS/p53 Pancreatic Cancer Mouse Model



- The combination of avutometinib + FAKi induces tumor growth inhibition and increases survival but does not induce tumor regression
- ✓ Addition of chemo (gemcitabine + paclitaxel) to avutometinib/FAKi induces tumor regression

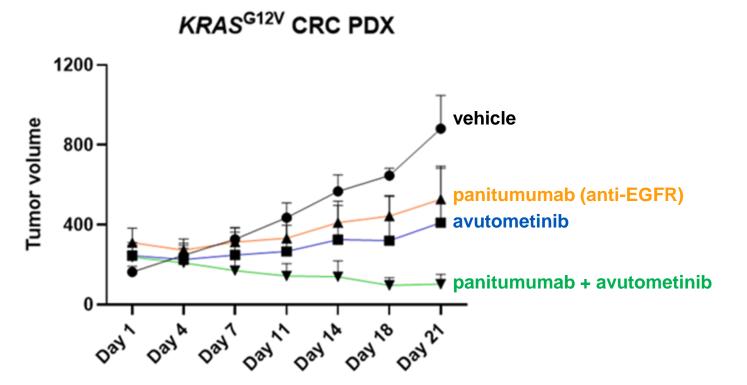


RAMP 205: Phase I/2 Trial of Avutometinib/Defactinib + GEMZARTM (Gemcitabine)/ABRAXANETM (Nab-paclitaxel) in Front Line Metastatic Pancreatic Cancer





Combination of Avutometinib with anti-EGFR mAb Induces Tumor Regression in a KRAS mt Colorectal PDX Model



- Avutometinib + anti-EGFR (panitumumab) induces tumor regression in a KRAS mutant CRC patient-derived xenograft model
- G12Ci + anti-EGFR (sotorasib + panitumumab and adagrasib + cetuximab) have shown partial responses in KRAS G12C CRC (Fakih et al. ESMO 2021; Weiss et al. ESMO 2021)
- These data support the ongoing clinical evaluation of avutometinib + cetuximab (anti-EGFR) for treatment of KRAS mt CRC (NCT05200442)

Collaboration with Marwan Fakih, City of Hope



Pachter, RAS Development Summit, 2021

Discovery Efforts and Financials

Discovery and Development Collaboration with GenFleet Strengthens Pipeline Targeting RAS Pathway-Driven Cancers

- Increases the breadth of Verastem's oncology pipeline with strategically-aligned RAS pathway focus
 - Exclusive option for Verastem to license up to 3 programs with development and commercialization rights outside China
 - Potential development in combination with Verastem's current pipeline
 - Completed IND enabling studies for oral KRAS G12D (ON/OFF) inhibitor GFH375 (VS-7375) as lead program; GenFleet expected to submit IND for GFH375/VS-7375 in China in H1 2024 and initiate Phase 1 trial for GFH375/VS-7375 in China in H2 2024
 - Programs 2 & 3 in discovery phase
 - Small molecule programs focused on anti-cancer targets related to the RAS/MAPK pathway or surrounding cancer cell signaling
- Strategic collaboration builds on Verastem Oncology and GenFleet's experience in RAS pathway-driven cancers
 - o Collective worldwide strengths in RAS pathway discovery and development
 - Established network of collaborators, including leading scientific and clinical experts
 - o Leverages experience from GenFleet's KRAS GI2C inhibitor program and Verastem's avutometinib/defactinib program
- Risk-sharing structure of the collaboration with milestone-based options provides capital efficient approach
 - At execution, Verastem paid GenFleet an upfront payment to obtain exclusive option right to 3 programs
 - Combined with the upfront amount, payments for future annual R&D support, development milestones and option payment for first program through completion of Phase I trial could equal up to \$11.5 million
 - o Potential total deal size across all 3 programs up to \$625.5 million excluding royalties if Verastem exercises its in-license options
 - Includes exclusive rights for Verastem to obtain a license to each of the compounds after successful completion of pre-determined milestones in Phase I trials



Key Financial Statistics

As of and for the quarter ended December 31, 2023

Cash, cash equivalents & investments	\$137.IM
GAAP Operating Expenses	\$31.1M
Non-GAAP Operating Expenses*	\$29.5M
Shares Outstanding	25.3M**

Sources of Non-Dilutive Capital

• Oxford Finance LLC Credit Facility

- Up to \$150M available in a series of term loans
 - \$40M term loans outstanding
 - Remaining \$110M available upon achievement of pre-defined milestones or at lender's discretion
- Floating interest rate, subject to a floor and a cap; 5% final payment charge, and loan subject to 1-3% early payment fee
- Interest only payments through April 2025
- No financial covenants
- Secura Bio, Inc. (Secura) Asset Purchase Agreement COPIKTRA
 - Regulatory and commercial milestone payments up to \$95M
 - Entitled to receive 50% of royalties, milestones, and sublicensee revenue payments made to Secura related to COPIKTRA
 - Low double-digit royalties on annual net sales over \$100M in US, EU, and UK

ERASTEM * Q4 2023 GAAP operating expenses - \$31.14M less Q4 2023 stock compensation of \$1.60M = \$29.54M Q4 2023 non-GAAP operating expenses

46

**Excludes Series A Preferred (0.8M Shares on as-converted basis), Series B Preferred (4.2M Shares on as-converted basis), and outstanding unexercised pre-funded warrants (1.5M Shares).

Avutometinib Patent Exclusivity





Experienced Senior Management Team



Daniel Paterson President and Chief Executive Officer

- CEO The DNA Repair Co. (now On-Q-ity)
- PharMetrics (now IMS), Axion



Dan Calkins Chief Financial Officer

- Technical Accounting Consultant-CFGI
- PwC LLP



Cathy Carew Chief Organizational Effectiveness Officer

- Principal HR Collaborative
- Ironwood, ActiveBiotics, Dynogen, Tufts Health Plan



Mike Crowther Chief Commercial and Business Strategy Officer

- CBO, Minerva Biotechnologies
- Interim US lead and VP of US Marketing, Kite Pharma
- Celgene



Jonathan Pachter, Ph.D. Chief Scientific Officer

- Head of Cancer Biology OSI (now Astellas)
- Schering-Plough



Hagop Youssoufian, MSc, M.D. Head of Medical Strategy

- CMO, BIND Therapeutics, EVP, Progenics,
- CMO & EVP, Ziopharm Oncology, SVP, Imclone





THANK YOU