KINETA®

March 2024

Developing next-generation immunotherapies that address cancer immune resistance

KA (Nasdaq)

Disclaimers and other information

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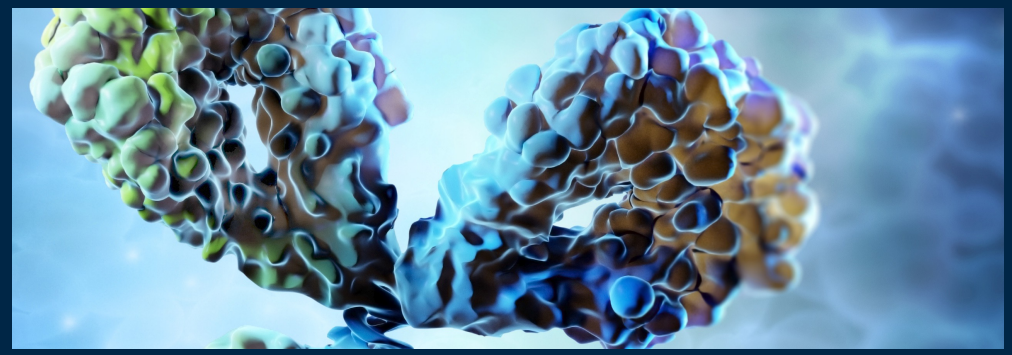
Kineta is developing next-generation immunotherapies that address cancer immune resistance



Innate Immunity Focused Pipeline

KVA12123: VISTA blocking mAb to address immunosuppression in the TME

- Ongoing Phase 1/2 clinical study evaluating KVA12123 alone and in combination with pembrolizumab in advanced solid tumors
- Cleared first 5 monotherapy cohorts & first two combination cohorts, no dose limiting toxicities, >90% VISTA receptor occupancy
- Biomarkers demonstrate efficacy-related cytokine secretion and significant changes in anti-tumor immune cell subpopulations
- Long-term stable disease observed in monotherapy and partial responses in combination therapy

Anticipated KVA12123 Catalysts

2Q24: Additional monotherapy safety and efficacy data

2Q24: Initial combination therapy data

Partnerships

~$1.3 billion in potential milestone payments plus royalties on net sales

MERCK

Genentech
A Member of the Roche Group

FAIR Therapeutics

Currently exploring strategic alternatives

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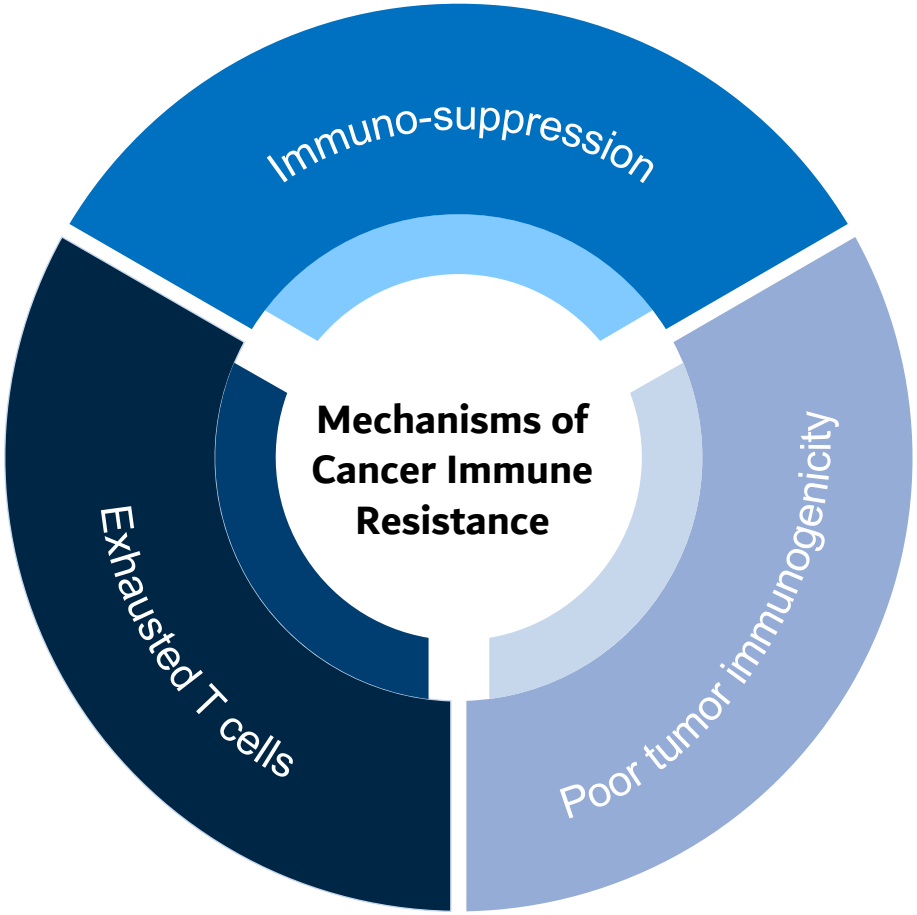
Immune resistance is a major challenge with current cancer therapy



Blockade and down-regulation of immune response

T cells lose cancer fighting function

Tumor cells are invisible to immune system

Next-generation cancer treatments require:

Improving survival for checkpoint inhibitor (CPI) non-responders (**70-80%**)*

Reprogramming the immune system to attack cancer

Integrating **innate and adaptive immune** responses

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*Based on publicly available information

Kineta pipeline integrates innate and adaptive immunity to address mechanisms of cancer resistance

Innate immunity

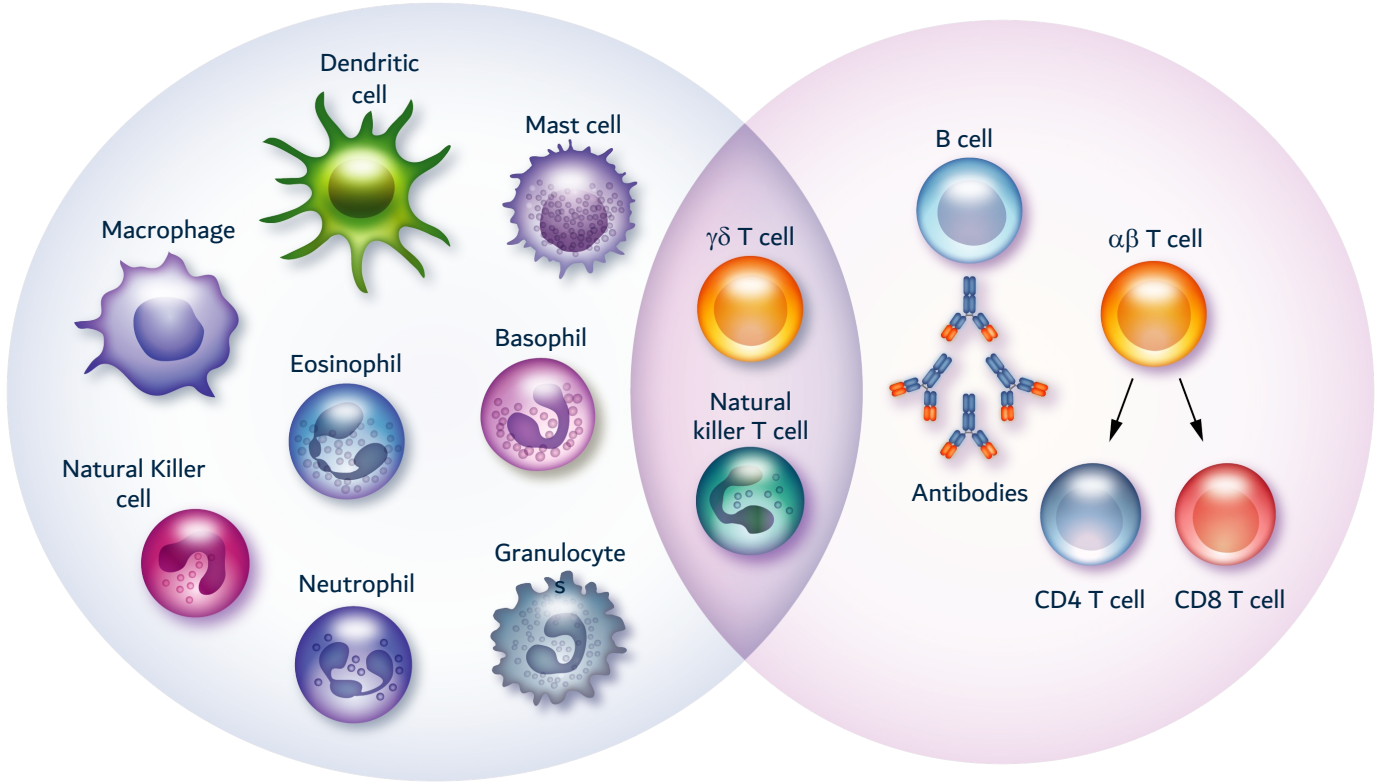
Involved in early response to cancer

Necessary driver for appropriate adaptive immunity

Significant cause of cancer resistance

Adaptive immunity

Most competitor drug development is focused **only** on T cell adaptive immunity



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Kineta's immuno-oncology pipeline aims to address the mechanisms of cancer immune resistance

Drug program	Discovery	Pre-clinical	Phase 1	Phase 2	Phase 3	Anticipated milestones
Immuno-suppression: αVISTA mAb						
Indications: Advanced solid tumors (NSCLC, CRC, OC)			**KVA12123**			2Q24: Additional monotherapy safety and efficacy data 2Q24: Initial combination therapy data
Exhausted T-cells: αCD27 agonist mAb						
Indications: Advanced solid tumors						

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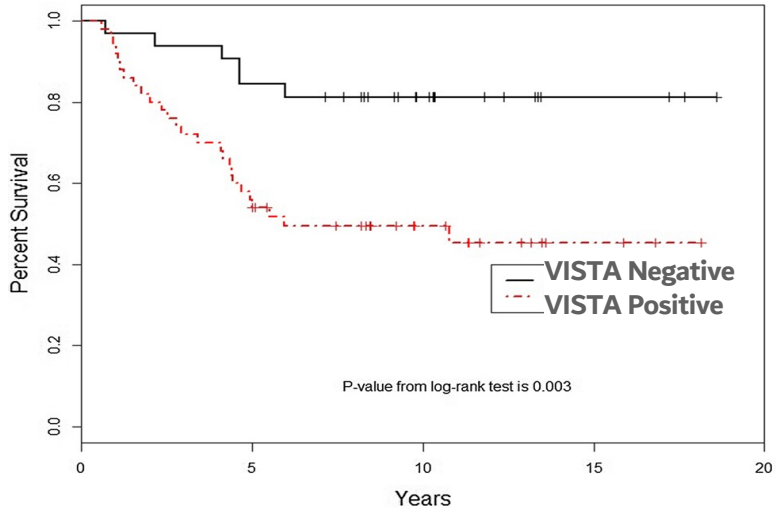
KVA12123

Potentially differentiated
VISTA blocking immunotherapy

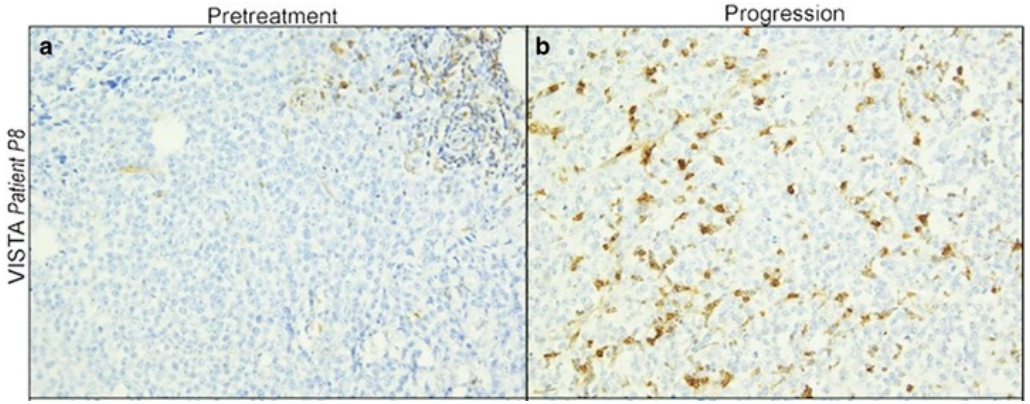
VISTA is a key driver of immunosuppression in the tumor microenvironment

- Immunosuppressive protein expressed on **myeloid cells**
- Highly expressed in **cold tumors** including lung, colon and ovarian cancers
- Correlates with **poor outcomes** in cancer patients
- Up-regulated after CPI therapy and **associated with treatment failure**

Melanoma patient survival by VISTA expression in tumor-infiltrating immune cells [1]



VISTA expression increases in melanoma patient during pembrolizumab relapse/progression [2]



Brown staining in human tumors indicates VISTA expression

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References: 1. Kuklinski et al. 2018; 2. Kakavand et al. 2017

KVA12123: Potentially differentiated VISTA blocking immunotherapy

Product	Development stage	Isotype	pH Binding	Single Agent Tumor Model Efficacy	CRS Cytokine Release
Kineta KVA12123	Phase 1	Engineered IgG1 mAb that binds to a unique epitope	Binds at both physiologic and acidic pH	Strong single agent tumor growth inhibition	No CRS-associated cytokine release or neurotoxicity
Hummingbird HMBD002	Phase 1	IgG4	Physiologic & acidic	Moderate	IL-6
Sensei SNS-101	Phase 1	IgG1	Acidic	Weak	TNFα
Pierre Fabre WO180	Phase 1	IgG1	Physiologic & acidic		IL-6
Curis* CI-8993	Phase 1	IgG1	Physiologic	Moderate	TNFα, IFNγ, IL2, IL-1β
Pharmabcine PMC309	Phase 1	IgG1	Physiologic & acidic	Moderate	IFNγ

Other discovery stage programs: Apexigen, Five Prime Therapeutics/BMS
Empty cells indicate no public data available

**Curis de-prioritized to focus on company's lead asset*

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Kineta data and analysis on file

Blocking VISTA can reverse immunosuppression in the TME

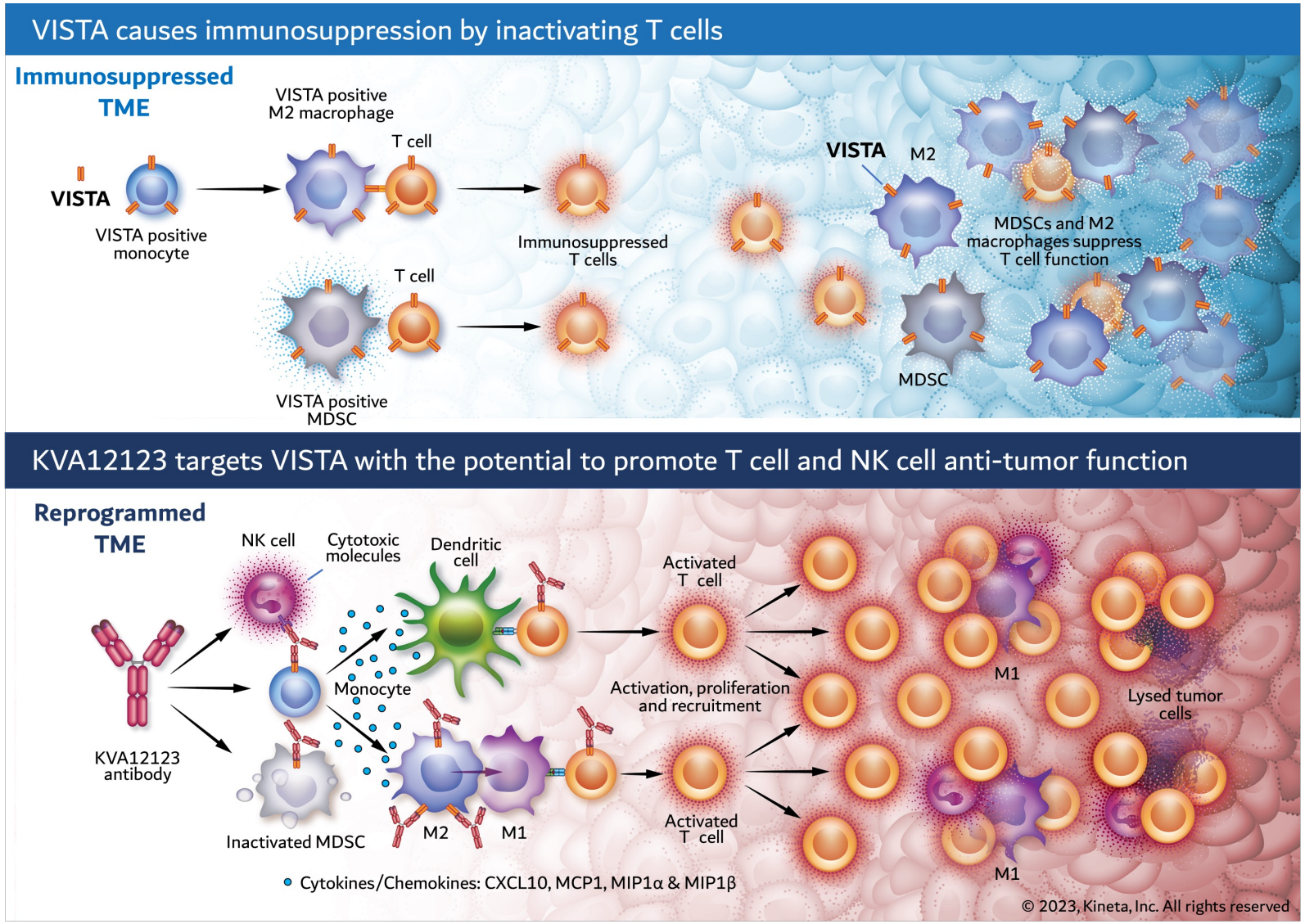
Enhances **NK cell** activation

Enhances **monocyte** activation and pro-inflammatory **cytokine** induction

Inhibits **MDSC** (myeloid-derived suppressor cells)

Promotes T_{eff} function

Drives anti-tumor activity



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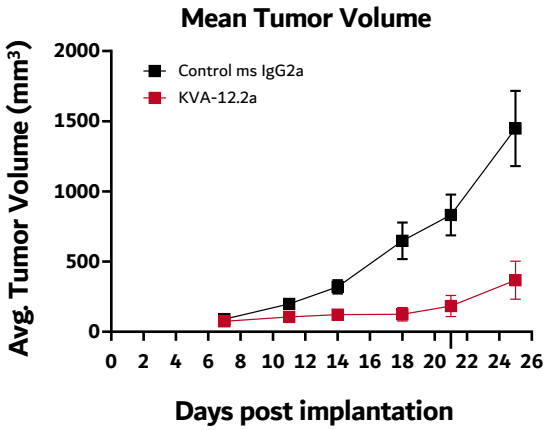
KVA12123 demonstrates single agent tumor growth inhibition and in combination with PD-1 in preclinical models

Monotherapy

Bladder Cancer Model MB49

hVISTA KI mice

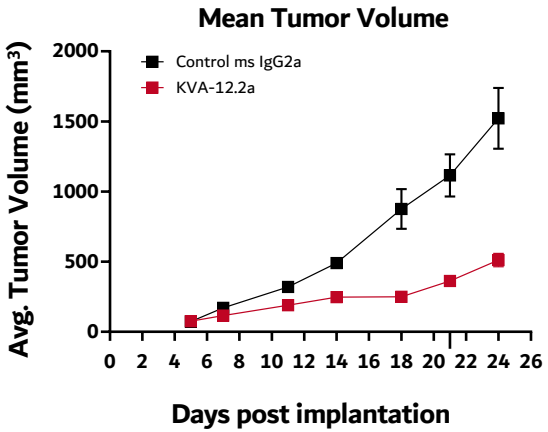


Tumor Growth Inhibition

Anti-VISTA: **75%**

T Cell Lymphoma Model EG7

hVISTA KI mice



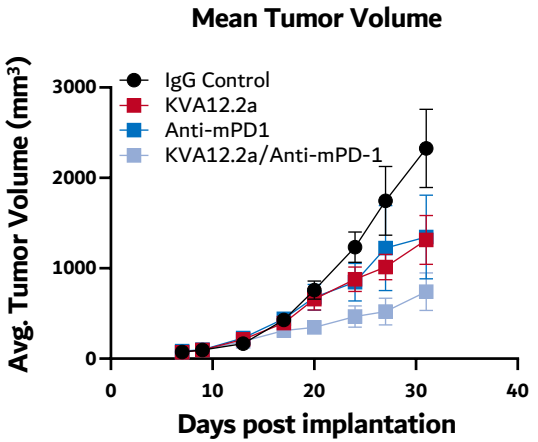
Tumor Growth Inhibition

Anti-VISTA: **66%**

Combination therapy

Colon Carcinoma Model MC38*

hVISTA KI mice



Tumor Growth Inhibition

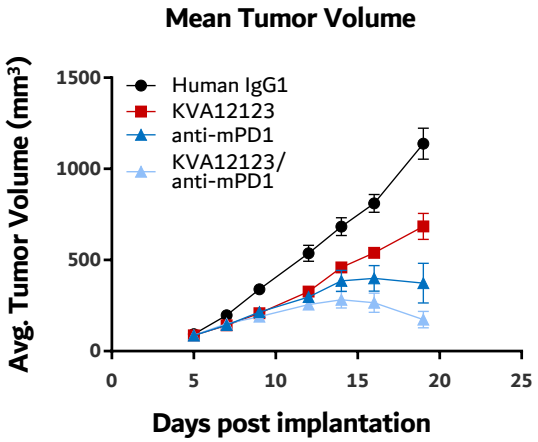
Anti-VISTA: **35-42%**

Anti-PD1: **42-60%**

Combination: **68%**

Bladder Cancer Model MB49*

hVISTA KI mice



Tumor Growth Inhibition

Anti-VISTA: **40%**

Anti-PD1: **67%**

Combination: **85%**

***Combination therapy studies used sub-optimal doses of each agent**

KVA12.2a: mouse isotype equivalent of KVA12123

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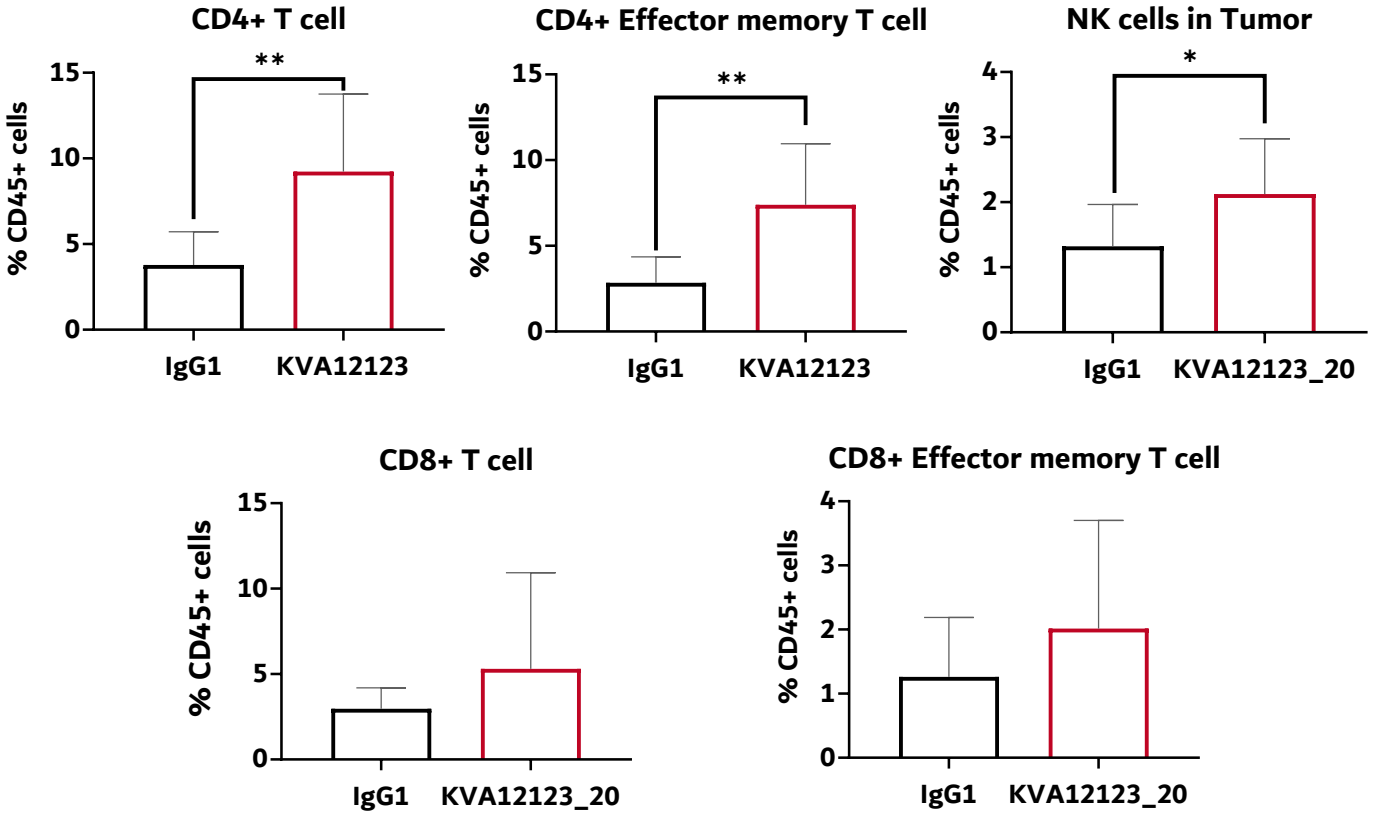
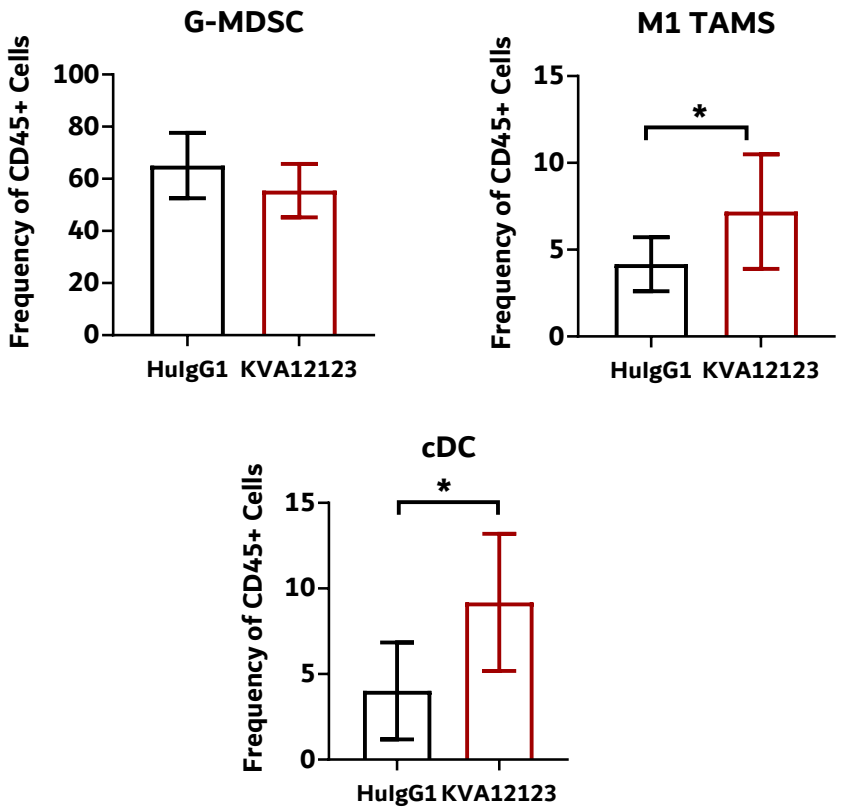
KVA12123 drives an integrated innate and adaptive anti-tumor immune response in MB49 preclinical model (ex vivo)

Lymphoid compartment



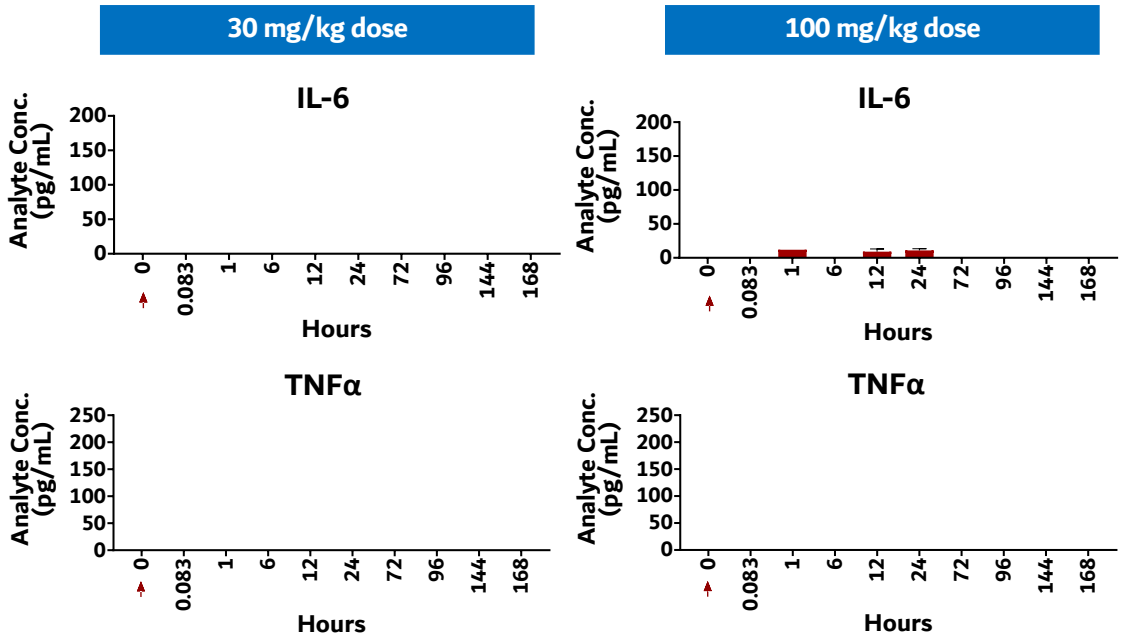
Myeloid compartment



KVA12123 was well tolerated with no CRS-associated signal in preclinical models

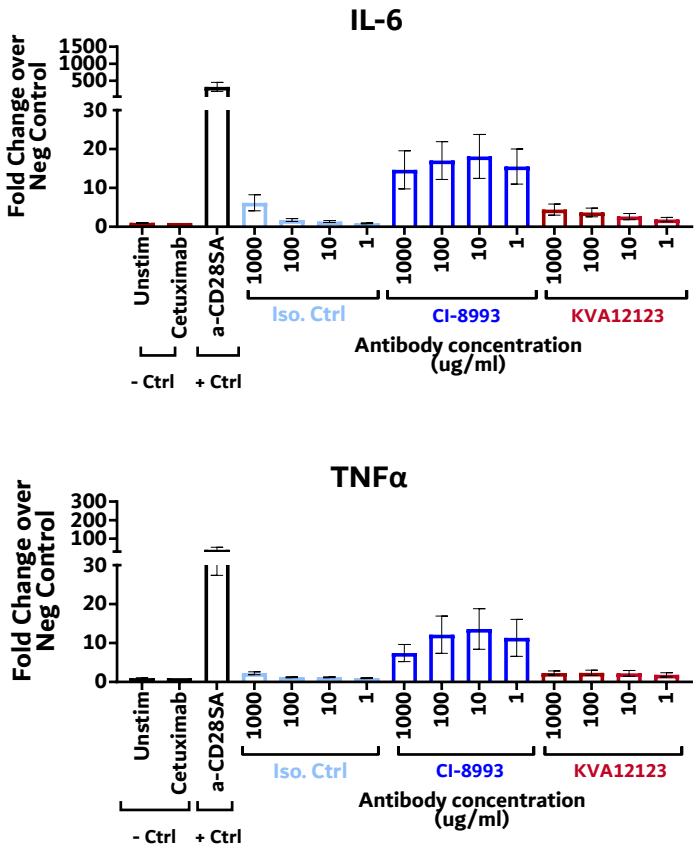
NHP toxicology studies

- ✓ Well tolerated
- ✓ No treatment-related adverse events
- ✓ No change in CRS cytokine levels (IL6 or TNFα)
- ✓ No mortality
- ✓ No overt clinical signs or weight loss

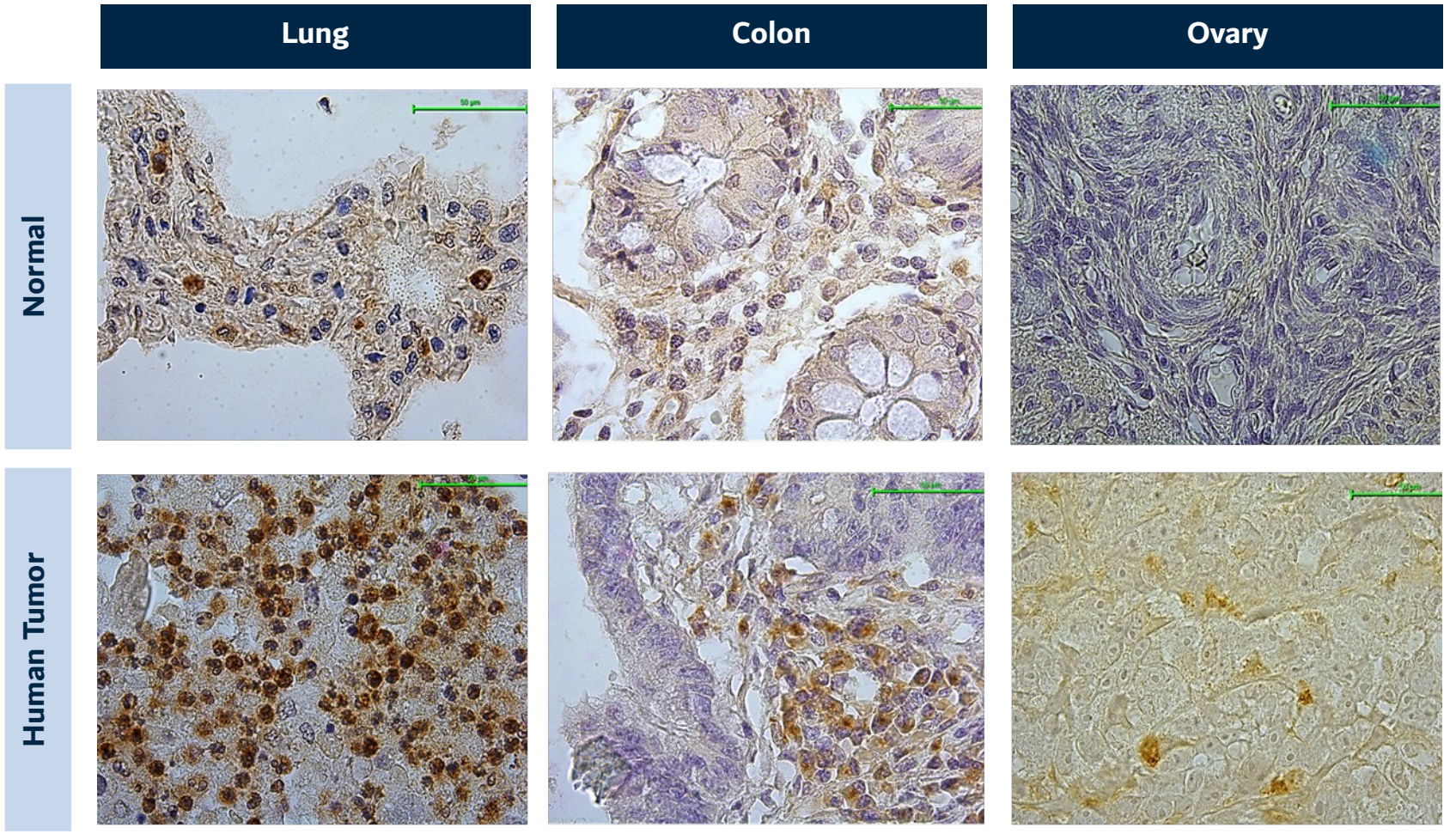


Single and repeat-dose toxicology studies in NHP with KVA12123 exposure >100-fold over target human exposure

Human whole blood



Clinical applications for KVA12123 are primarily focused on solid tumors with high levels of VISTA expression



Brown staining in human tumors indicates VISTA expression

Kineta data on file

VISTA-101: Phase 1/2 open-label clinical trial of KVA12123 alone and in combination with pembrolizumab in patients with advanced solid tumors

Patient population:

- Phase 1 basket trial in patients with advanced solid tumors (up to 60 patients)
- Phase 2 in NSCLC, HNSCC, OC, CRC, RCC and TBD other patients

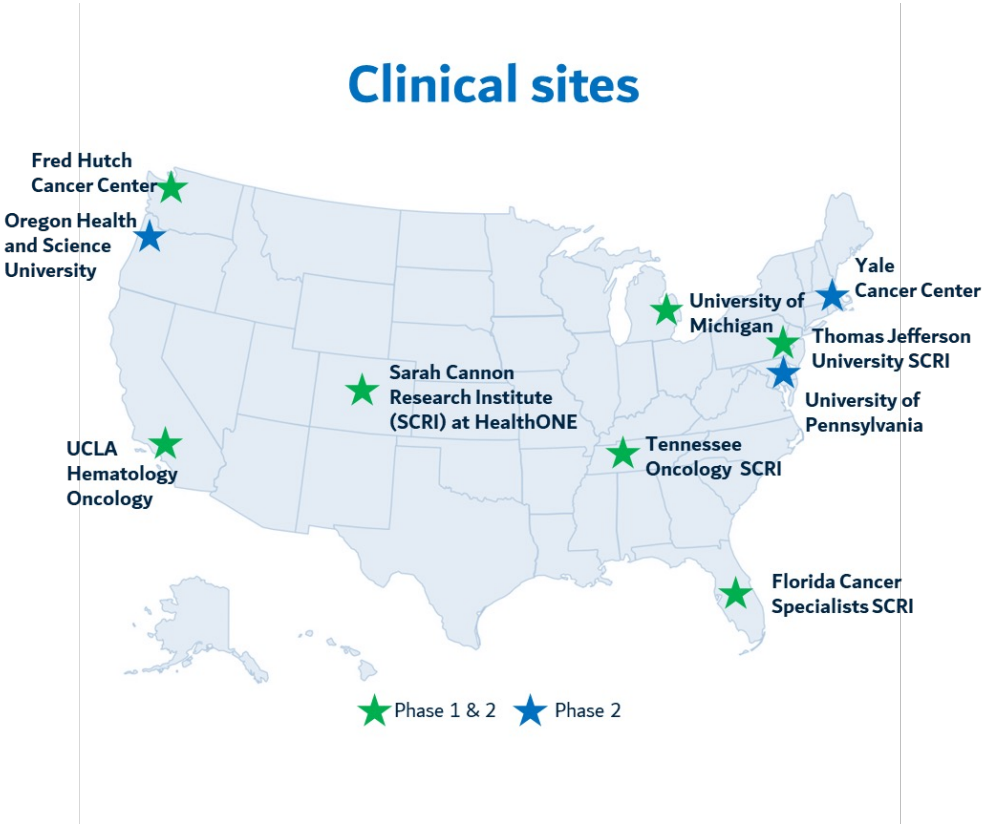
Study objectives:

- Primary: Safety and tolerability, recommended Phase 2 dose (RP2D) or maximum tolerated dose (MTD) of KVA12123
- Secondary: Pharmacokinetics, immunogenicity, tumor response in subjects with advanced solid tumors per iRECIST (ORR)
- Exploratory: Biomarker and receptor occupancy

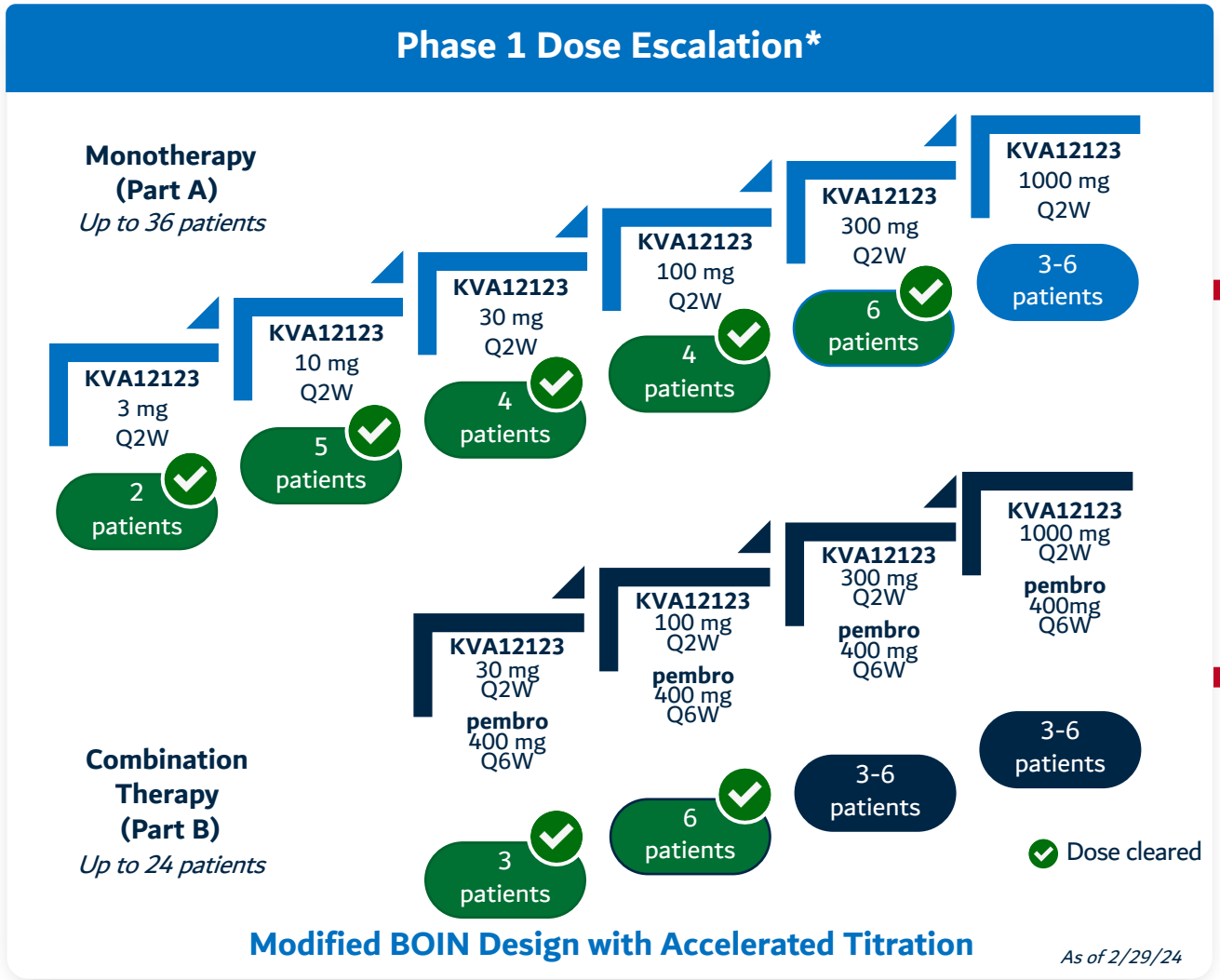
Merck research collaboration

- Clinical trial collaboration and KEYTRUDA® supply agreement

MERCK

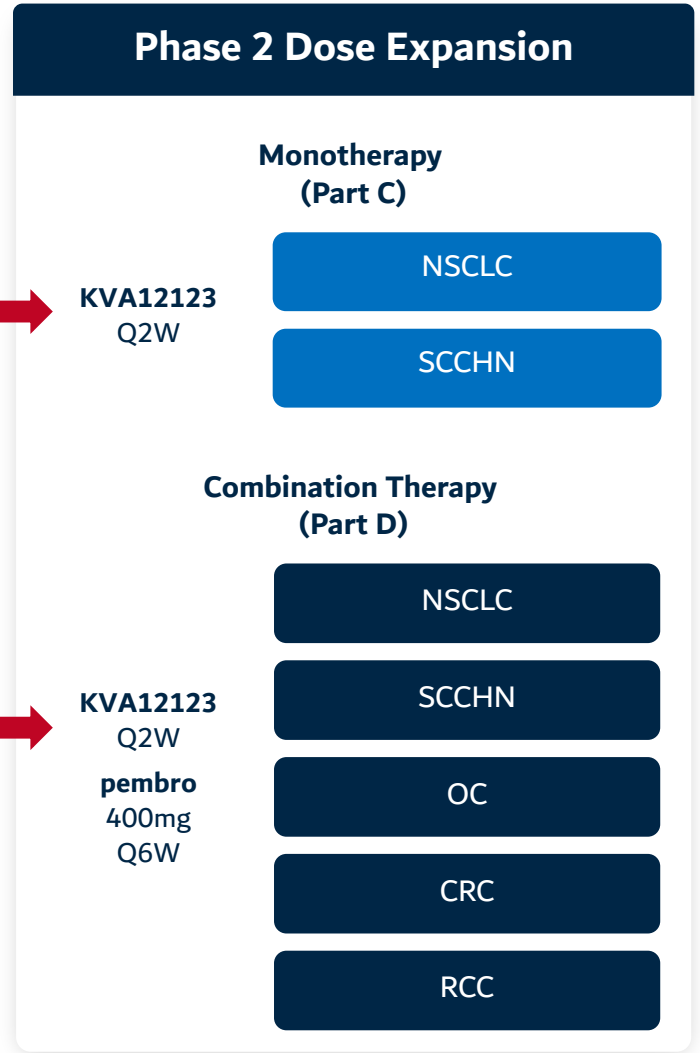


VISTA-101: Cleared five monotherapy cohorts and first two cohorts in combination with pembrolizumab



Part A RP2D

Part B RP2D



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Kineta data and analysis on file

VISTA-101: Baseline patient characteristics

	PART A					PART B		
Characteristic Statistic	**3mg IV Q2W (N=2)**	**10mg IV Q2W (N=5)**	**30mg IV Q2W (N=4)**	**100mg IV Q2W (N=4)**	**300mg IV Q2W (N=4)**	**30mg IV Q2W + Pemb. (N=3)**	**100mg IV Q2W + Pemb. (N=5)**	**Total**
Gender (n %)								
Female	1 (50)	4 (80)	2 (50)	1 (25)	2 (50)	1 (33)	2 (40)	13 (48)
Male	1 (50)	1 (20)	2 (50)	3 (75)	2 (50)	2 (67)	3 (60)	14 (52)
Race (n %)								
Black or African American	0 (0)	1 (20)	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)	2 (7)
Other	0 (0)	2 (40)	0 (0)	0 (0)	0 (0)	0 (0)	1 (20)	3 (11)
White	2 (100)	2 (40)	3 (75)	4 (100)	4 (100)	3 (100)	4 (80)	22 (81)
Age (Years)								
Mean	62.5	62.0	57.8	65.0	63.2	60.0	73.2	63.9
Median	62.5	64.0	56.5	64.0	68.0	61.0	75.0	64.0
Min, Max	62.0, 63.0	47.0, 72.0	53.0, 65.0	55.0, 77.0	47.0, 70.0	49.0, 70.0	57.0, 87.0	47.0, 87.0
Baseline ECOG PS (n %)								
Grade 0	0 (0)	2 (40)	0 (0)	1 (25)	1 (25)	2 (67)	0 (0)	6 (22)
Grade 1	2 (100)	3 (60)	4 (100)	3 (75)	3 (75)	1 (33)	5 (100)	21 (78)

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Heavily pretreated patients with multiple prior lines of therapy

As of 02/27/24

VISTA-101: Demographics

	PART A					PART B		
Characteristic Statistic	**3mg IV Q2W (N=2)**	**10mg IV Q2W (N=5)**	**30mg IV Q2W (N=4)**	**100mg IV Q2W (N=4)**	**300mg IV Q2W (N=4)**	**30mg IV Q2W + Pemb. (N=3)**	**100mg IV Q2W + Pemb. (N=5)**	**Total**
Cancer Type (n %)								
Bladder	1 (50)	1 (20)	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)	3 (11)
Breast	0 (0)	0 (0)	0 (0)	0 (0)	1 (25)	0 (0)	0 (0)	1 (4)
Colon	0 (0)	1 (20)	0 (0)	1 (25)	2 (50)	0 (0)	0 (0)	4 (15)
Endometrial	0 (0)	0 (0)	0 (0)	0 (0)	1 (25)	0 (0)	0 (0)	1 (4)
Lung	0 (0)	1 (20)	1 (25)	0 (0)	0 (0)	1 (33)	0 (0)	3 (11)
Other	1 (50)	0 (0)	0 (0)	3 (75)	0 (0)	1 (33)	5 (100)	10 (37)
Pancreatic	0 (0)	1 (20)	2 (50)	0 (0)	0 (0)	0 (0)	0 (0)	3 (11)
Renal	0 (0)	1 (20)	0 (0)	0 (0)	0 (0)	1 (33)	0 (0)	2 (7)
TNM Stage at Initial Dx (n %)								
I	0 (0)	1 (20)	0 (0)	0 (0)	1 (25)	0 (0)	0 (0)	2 (7)
II	0 (0)	1 (20)	1 (25)	0 (0)	0 (0)	1 (33)	1 (20)	4 (15)
III	0 (0)	0 (0)	0 (0)	0 (0)	2 (50)	1 (33)	0 (0)	3 (11)
IV	1 (50)	3 (60)	2 (50)	2 (50)	0 (0)	1 (33)	2 (40)	11 (41)
Missing	1 (50)	0 (0)	1 (25)	2 (50)	1 (25)	0 (0)	2 (40)	7 (26)

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As of 02/27/24

VISTA-101: KVA12123 was well tolerated in 3, 10, 30, 100 and 300mg monotherapy cohorts and in 30 and 300mg combotherapy cohorts

MedDRA Preferred Term	3mg N=2 (%)	10mg N=5 (%)	30mg N=4 (%)	100mg N=4 (%)	300mg N=4 (%)	30mg IV Q2W + Pemb. (N=3)	100mg IV Q2W + Pemb. (N=5)	All doses N=27 (%)
Total Subjects With Any Related TEAE	**1 (50)**	**4 (80)**	**3 (75)**	**2 (50)**	**2 (50)**	**2 (67)**	**2 (40)**	**16 (59)**
Chills	0 (0)	1 (20)	1 (25)	1 (25)	0 (0)	1 (33)	1 (20)	5 (19)
Infusion related reaction	0 (0)	2 (40)	2 (50)	0 (0)	0 (0)	0 (0)	0 (0)	4 (15)
Fatigue	0 (0)	0 (0)	0 (0)	0 (0)	1 (25)	1 (33)	1 (20)	3 (11)
Blood bilirubin increased	0 (0)	0 (0)	1 (25)	0 (0)	0 (0)	1 (33)	0 (0)	2 (7)
Constipation	1 (50)	0 (0)	0 (0)	1 (25)	0 (0)	0 (0)	0 (0)	2 (7)
Diarrhoea	0 (0)	1 (20)	0 (0)	0 (0)	0 (0)	0 (0)	1 (20)	2 (7)
Myalgia	1 (50)	0 (0)	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)	2 (7)
Pyrexia	0 (0)	0 (0)	1 (25)	0 (0)	1 (25)	0 (0)	0 (0)	2 (7)

As of 02/27/24

No dose limiting toxicities (DLT) were observed

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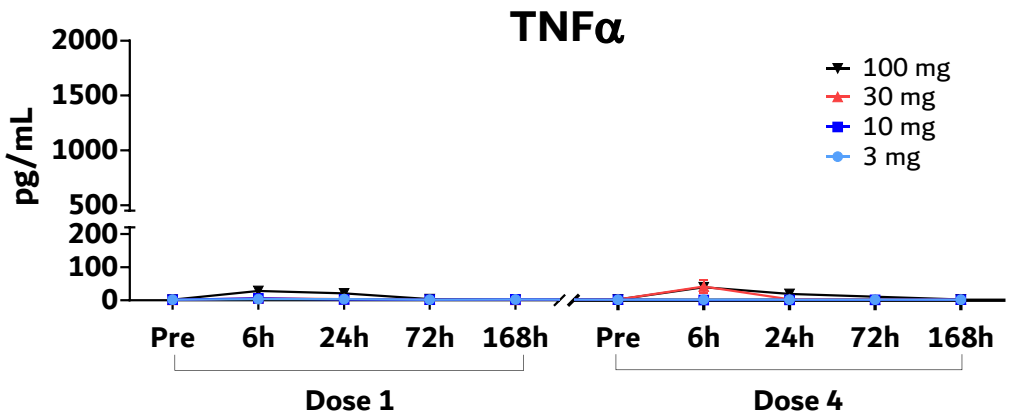
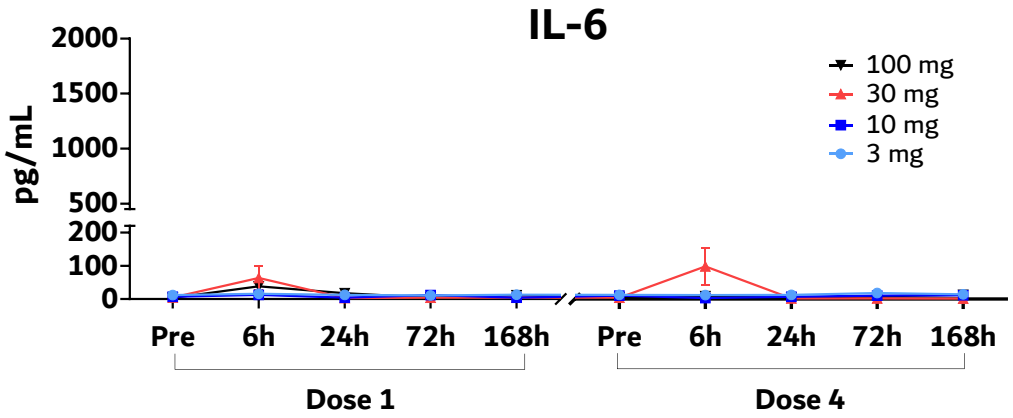
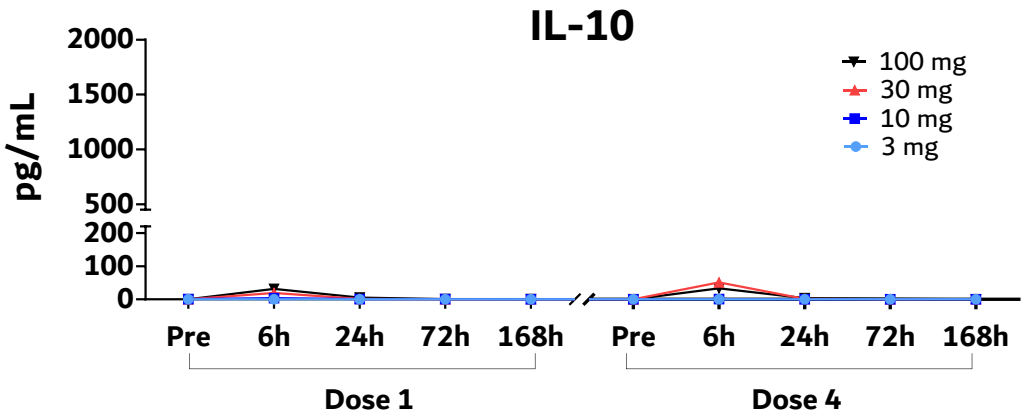
Kineta data and analysis on file

VISTA-101: No evidence of CRS-associated cytokine induction after KVA12123 administration







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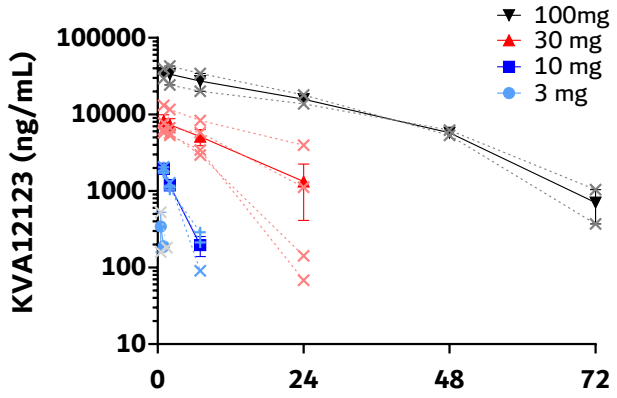
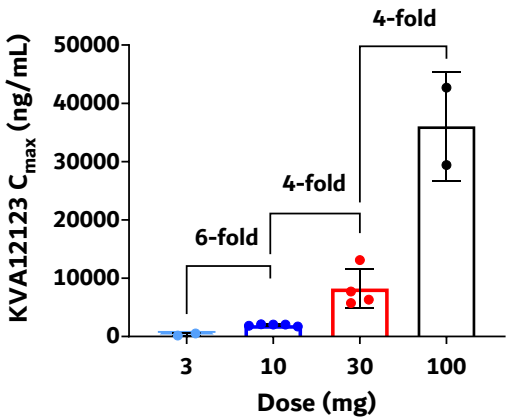
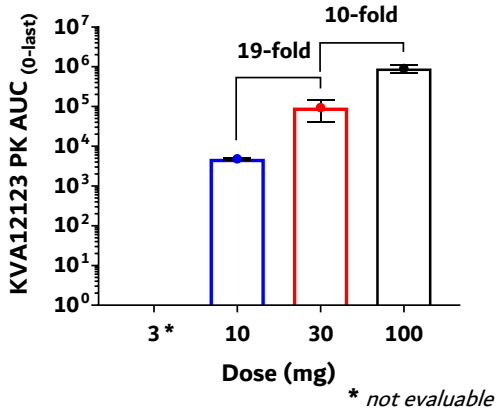
VISTA-101: KVA12123 exhibited a greater than dose-proportional PK profile and achieved >90% VISTA RO at doses ≥30 mg

Pharmacokinetics

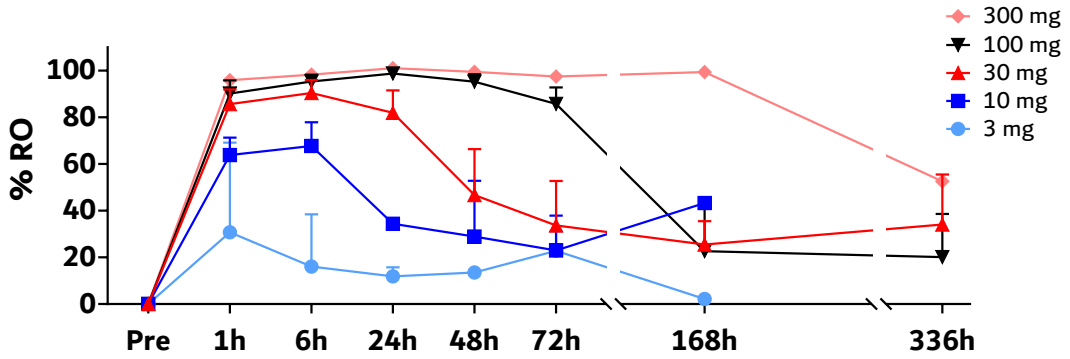


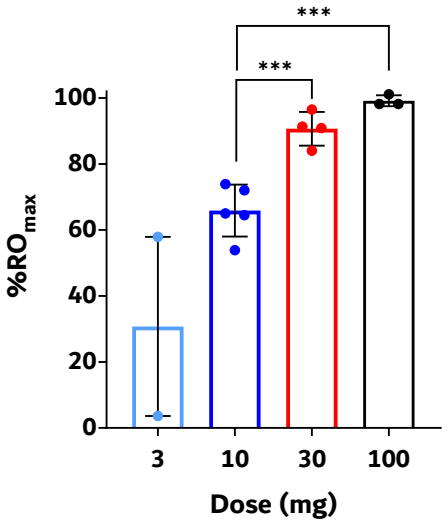


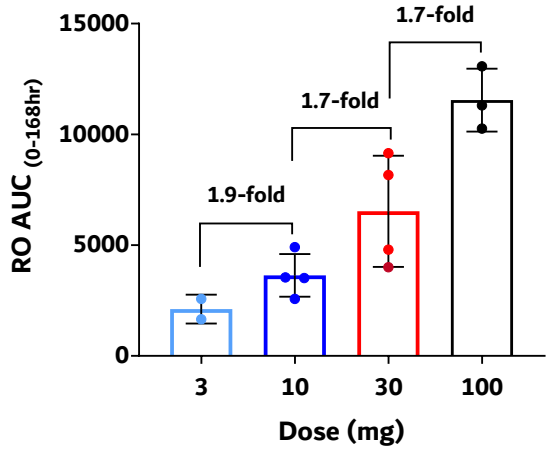


* *not evaluable*

VISTA Receptor Occupancy (RO)







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VISTA-101: KVA12123 clinical profile summary

Safety

- Cleared 3, 10, 30, 100 and 300 mg KVA12123 monotherapy cohorts and 30mg and 100mg KVA12123/pembrolizumab combination cohorts
- Well tolerated and no dose limiting toxicities (DLT) were observed at any dose level
- No evidence of CRS-associated cytokines (IL-6, TNFα & IL-10) were detected

Pharmacokinetics and Receptor Occupancy (RO)

- KVA12123 administration achieved >90% VISTA RO at ≥30 mg doses
- Pharmacokinetic analyses demonstrated a greater than dose-proportional increase in drug exposure across all evaluated doses, consistent with target-mediated drug disposition at lower doses
- Estimated RP2D is approximately 600 mg

Biomarkers

- Demonstrated efficacy-related cytokine secretion of CXCL10, IFNγ, CCL2, CCL3, CCL4 and CXCL8
- Significant changes in anti-tumor immune cell subpopulations were observed after treatment

VISTA-101: clinical study summary

Monotherapy Arms (3 – 300 mg KVA12123, Q2W)

- 21 patients enrolled
- 12 patients received both baseline and at least one follow up scan
- 9 of 12 patients achieved stable disease as best overall response (75%)
- Mean duration of stable disease is 15 weeks (9 patients remain on therapy)
- Longest duration of SD is 28 weeks in ongoing CPI-failed NSCLC patient with 6 prior lines

Combination Arms (30 – 100 mg KVA12123 Q2W; 400 mg pembro Q6W)

- 9 patients enrolled
- 3 patients received both baseline and at least one follow up scan
- 1 of 3 evaluable patients achieved a **partial response** and 1 of 3 a stable disease as best overall response (67%)
  - RCC patient achieved BOR of **23.7% reduction** in target lesion
  - Mucoepidermoid carcinoma patient achieved BOR of **52.7%** in target lesions

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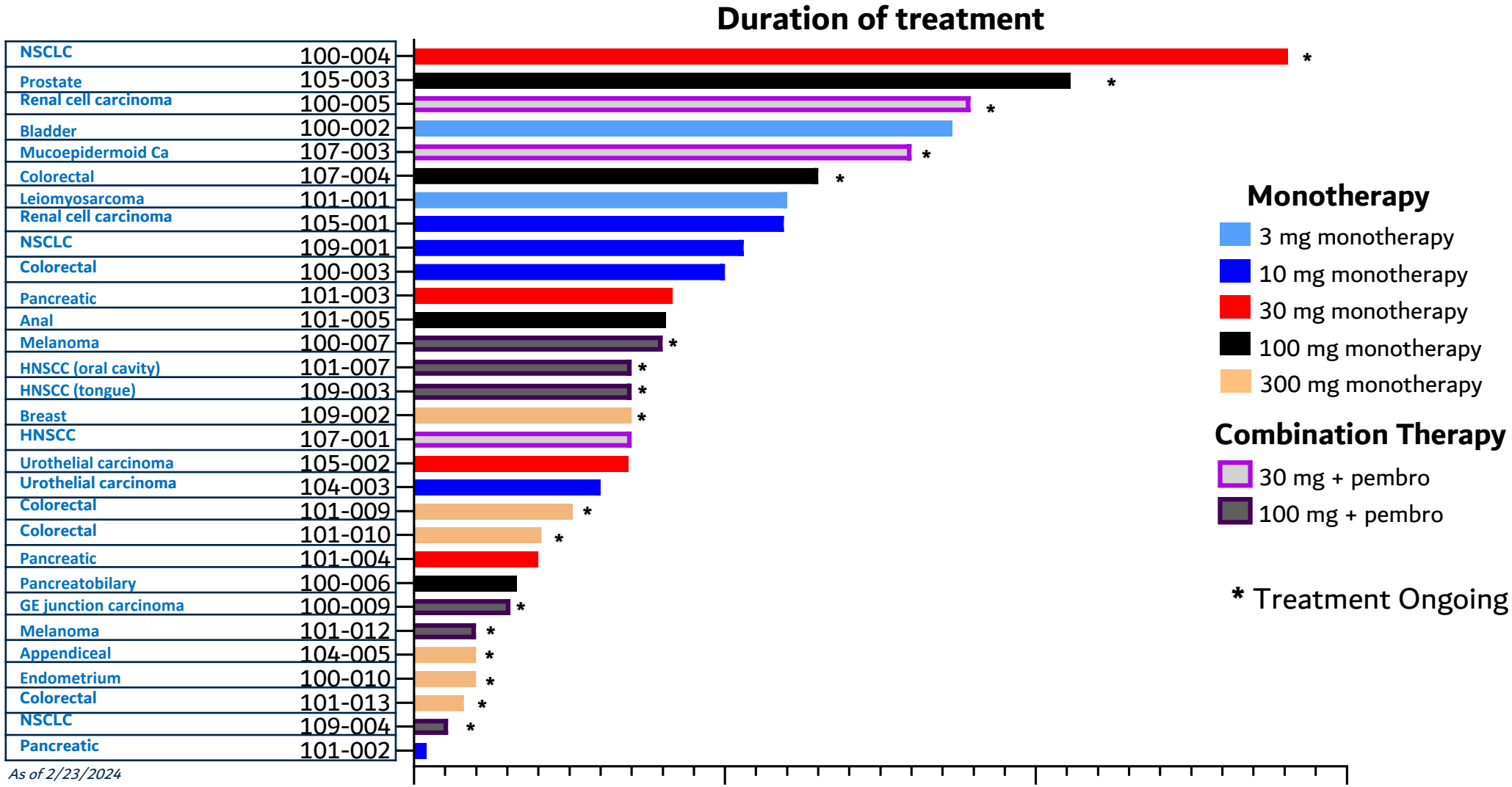
VISTA-101 phase 1: Duration of treatment



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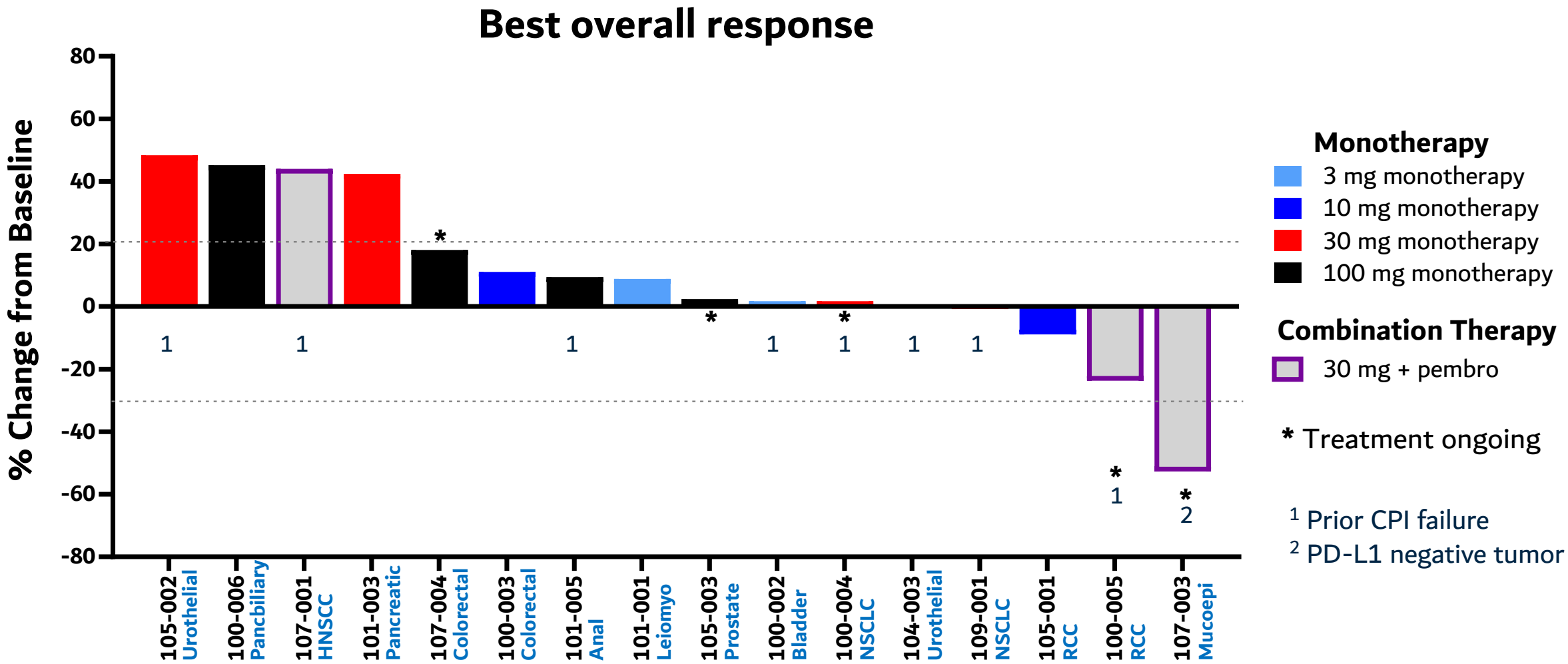
VISTA-101 phase 1: Best overall response (iRecist, patients with at least one follow up scan)



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As of 3/05/2024

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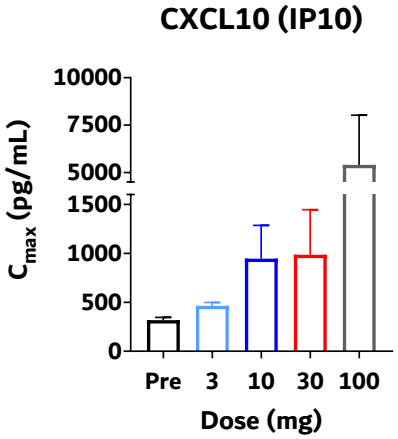
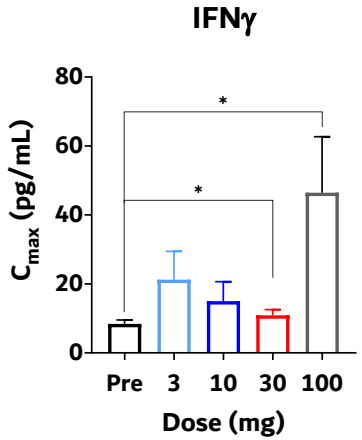
VISTA-101: KVA12123 demonstrated dose proportional induction of pro-inflammatory biomarkers required for strong anti-tumor activity

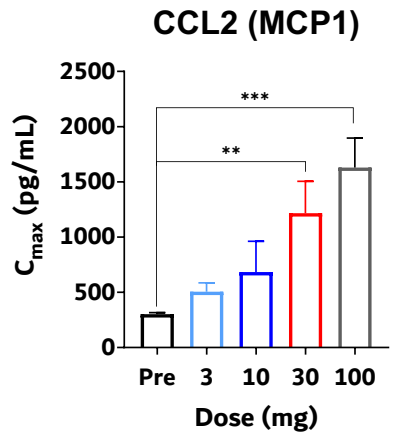
Induces pro-inflammatory myeloid derived cytokines/chemokines involved in immune cell activation and recruitment in the TME

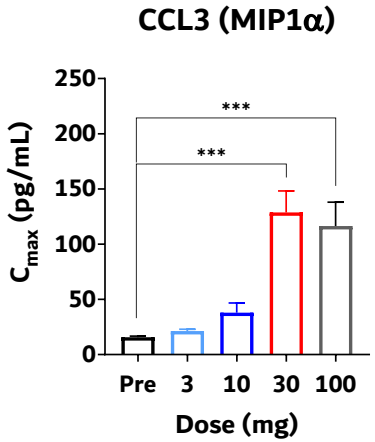
Consistent with preclinical models (NHP and KO mice)

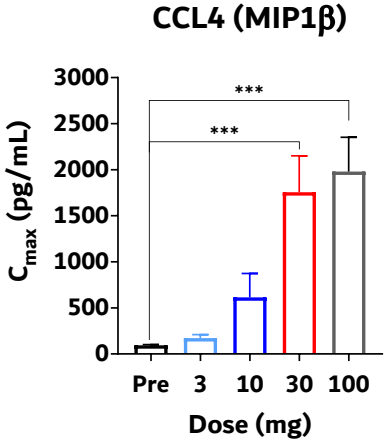
Biomarker validation of VISTA target engagement

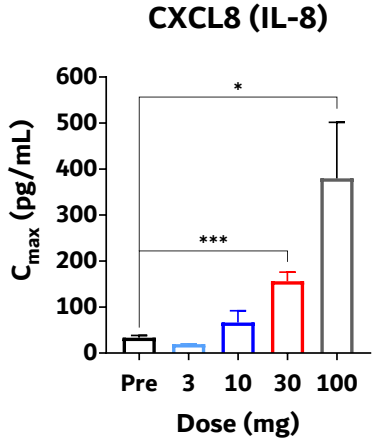








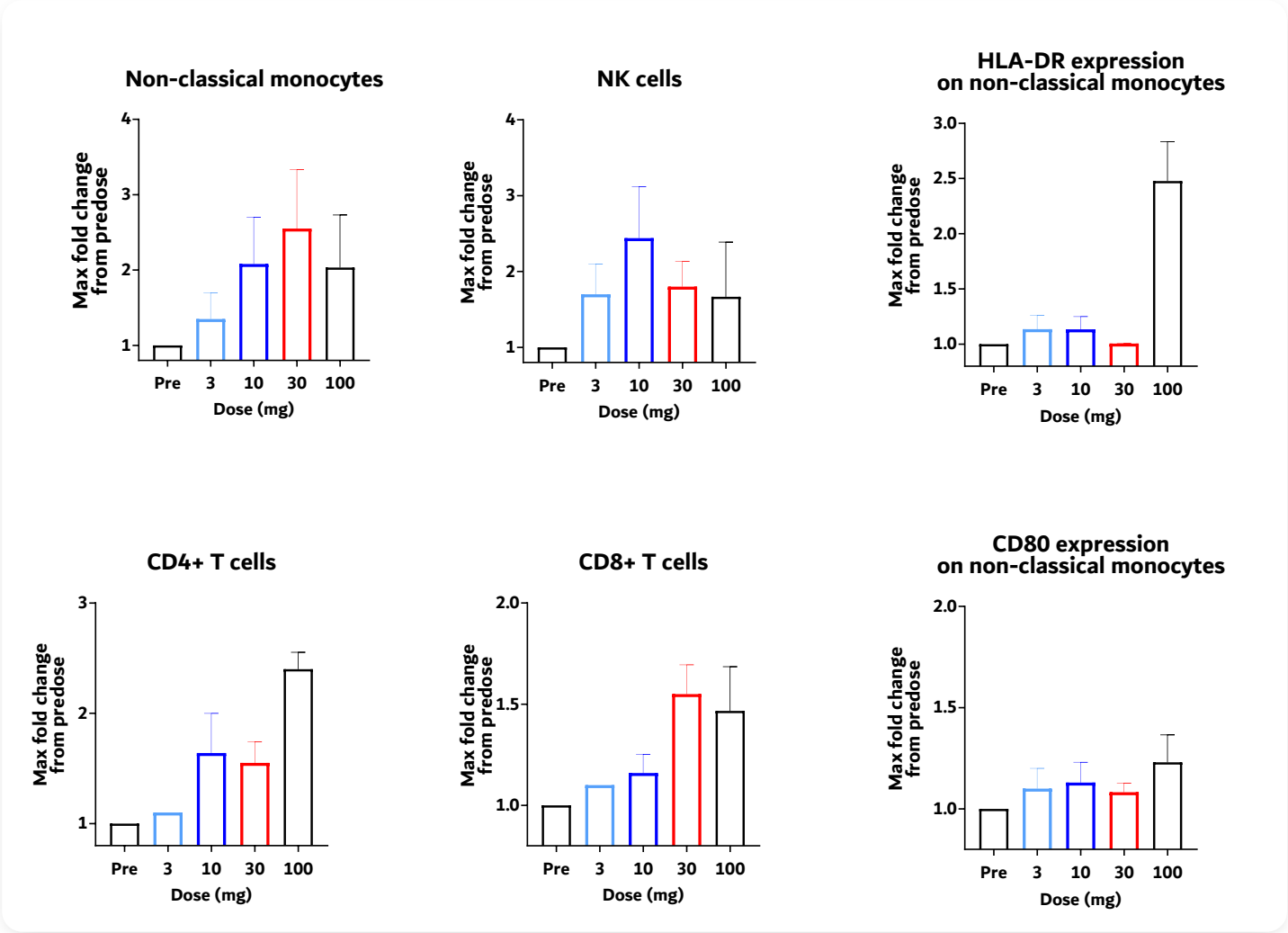




** p<0.05, ** p<0.01, *** p<0.001*

Kineta data and analysis on file

VISTA-101: KVA12123 demonstrated VISTA on-target immune cell responses involved in anti-tumor activity



Increases anti-tumor Non-classical monocytes, NK cells, helper (CD4+) and cytotoxic (CD8+) T cells in the blood

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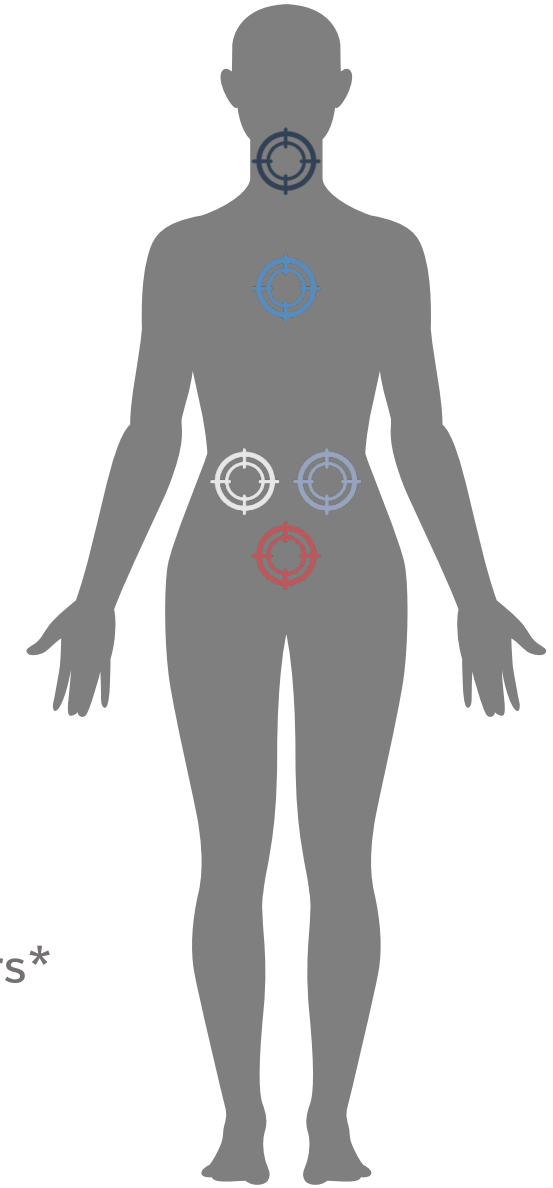
Large commercial market opportunity in potential solid tumor indications for KVA12123 in 2027

2.9M

annual newly diagnosed patients

2.0M

70% checkpoint inhibitor non-responders*



Source: Globaldata: Epidemiology Market Size Forecast - 2027
Incident cases diagnosed (N)
8MM: US, France, Germany, Italy, Spain, UK, Japan, and urban China
**Based on publicly available information (70-80%)*

NSCLC
984K newly diagnosed patients

Head and neck
243K newly diagnosed patients

Ovarian
142K newly diagnosed patients

Colorectal
1.2M newly diagnosed patients

Renal cell carcinoma
372K newly diagnosed patients

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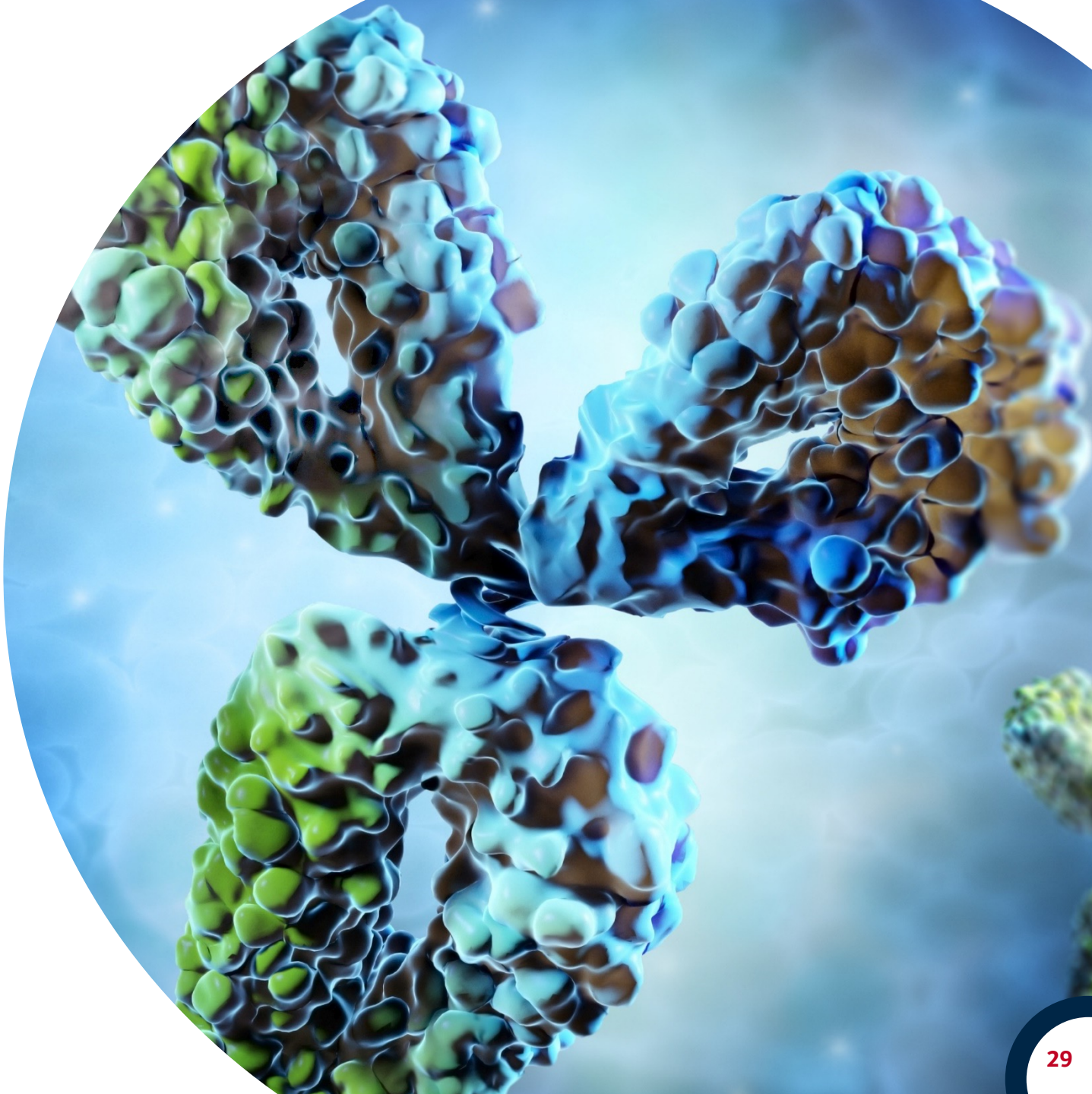
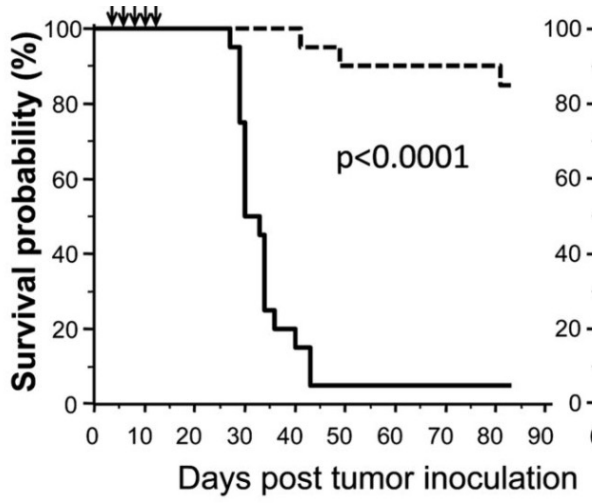
Anti-CD27 agonist mAb immunotherapy

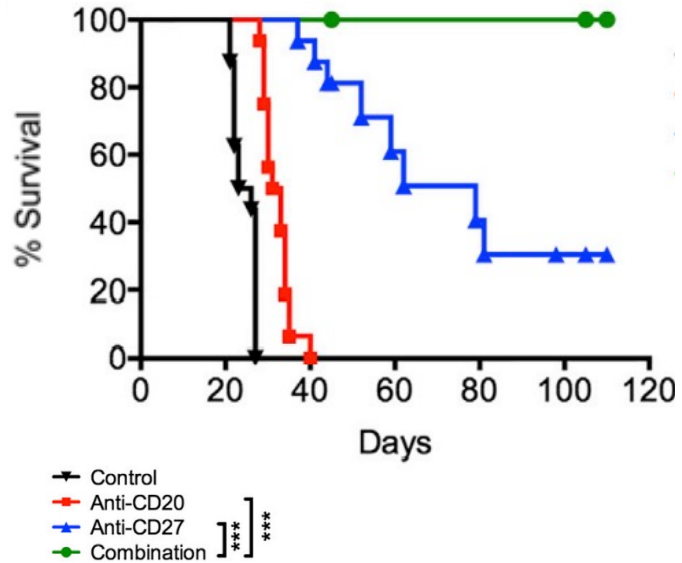


Anti-CD27 agonist antibodies can drive tumor growth inhibition as a monotherapy and in combination with CPIs

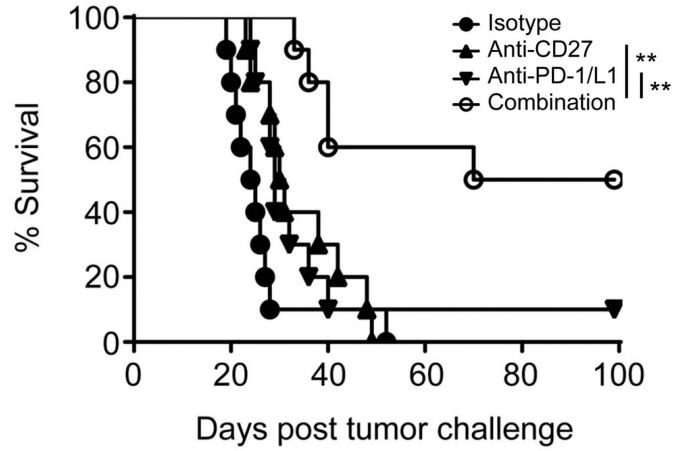
Monotherapy
CT26 Colorectal Cancer [1]



Combination Therapy
BCL-1 B cell lymphoma [2]



Combination Therapy
B16-BL6 Melanoma [3]



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References: 1. He et al. J. Immunol 2013 2. Turaj et al. Cancer Cell 2017 3. Buchan et al. Clin. Cancer Research 2018

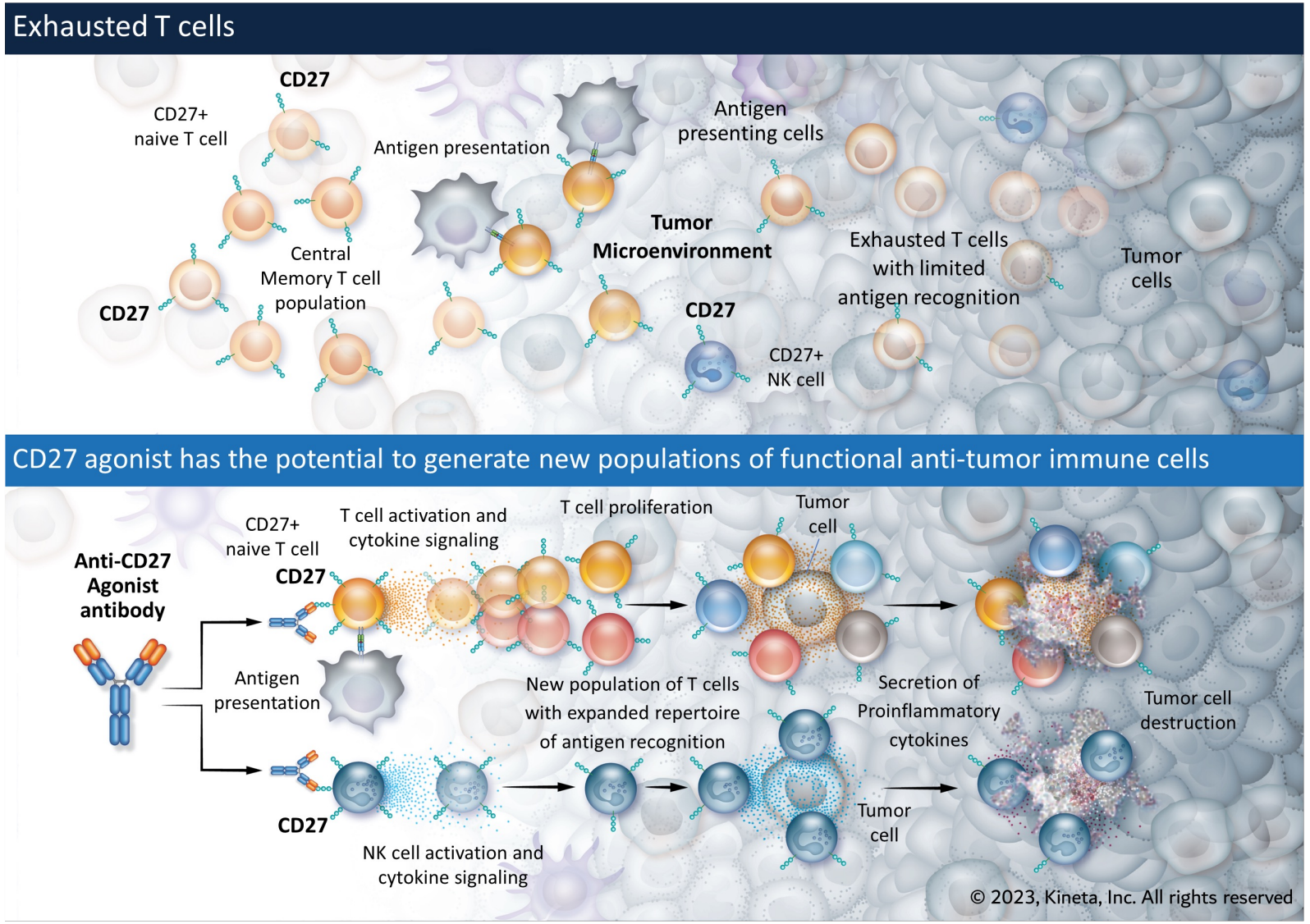
Anti-CD27 agonist to address exhausted T cell mechanism of cancer immune resistance

Activates and induces the maturation and migration of naïve **T cells**

Drives the **diversification of the T cell** repertoire

Enhances **NK cell** activation

Activates **low affinity antigens**



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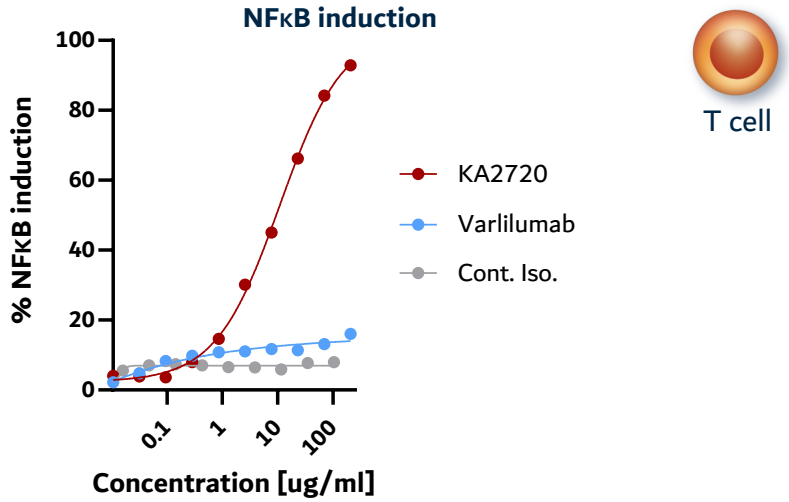
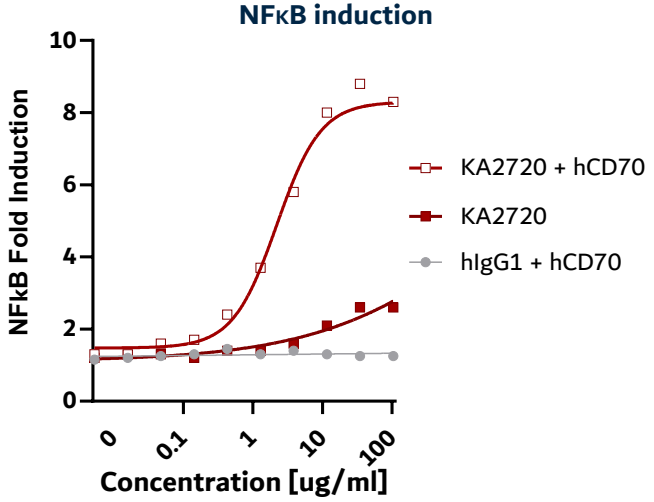
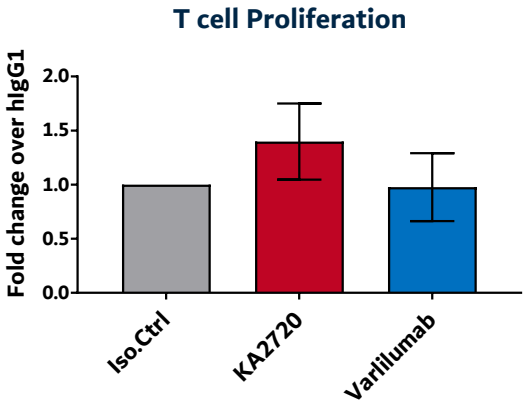
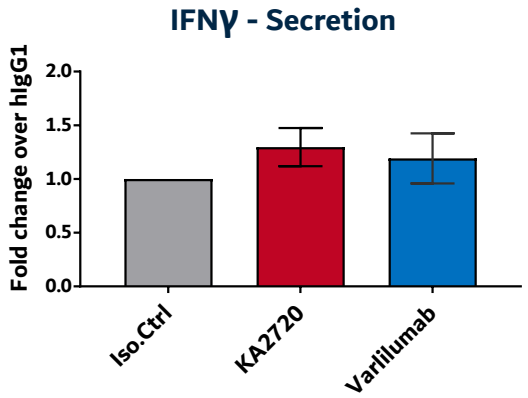
Lead anti-CD27 mAb demonstrates robust agonist activity on T and NK cells in *in vitro* studies

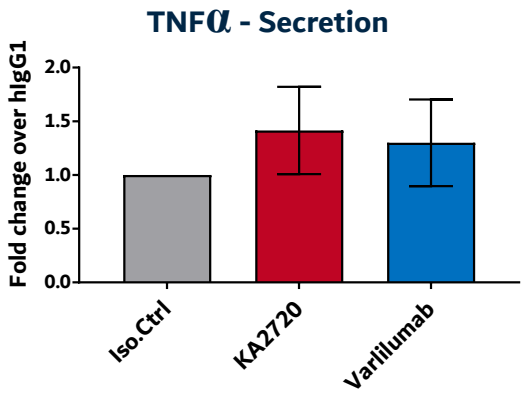
Increases T cell proliferation and activation



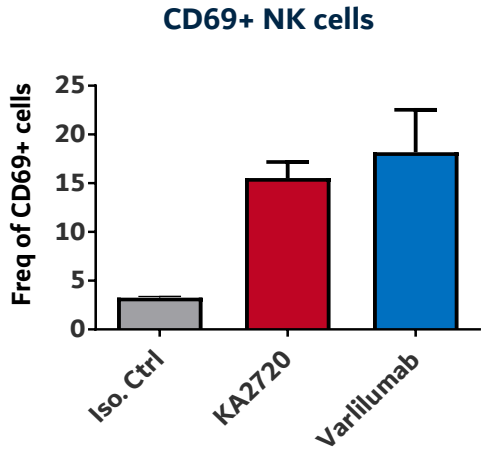








Increases NK cell activation



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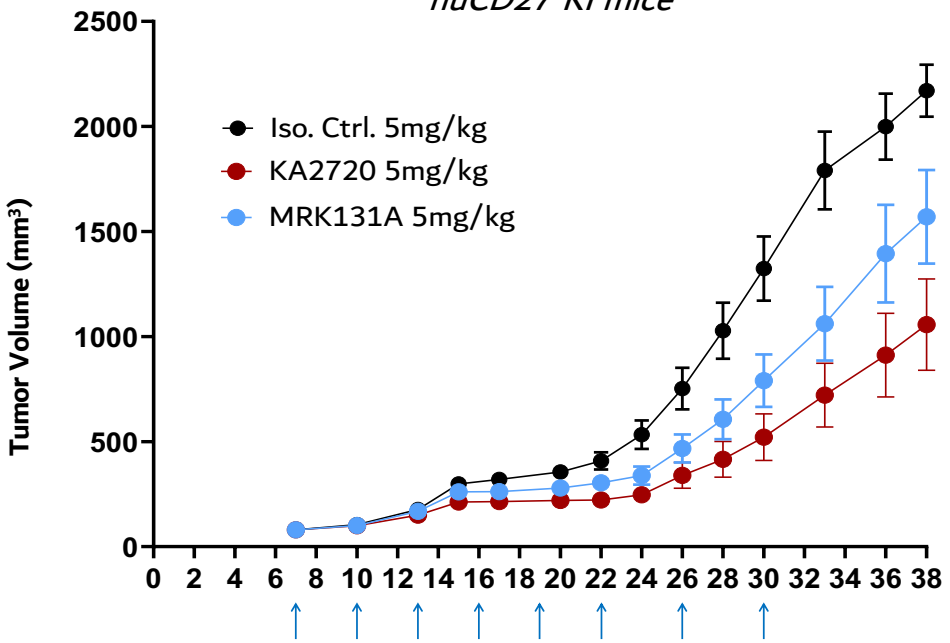
Kineta data on file

Lead anti-CD27 agonist mAb demonstrates single agent tumor growth inhibition (TGI) in preclinical models

Monotherapy

Colorectal Cancer Model MC38

huCD27 KI mice



Tumor Growth Inhibition

Lead anti-CD27 mAb: **61%**

mMRK131A: **40%**

KA2720 & MRK131A mouse IgG2a isotype equivalent

Kineta data on file

~$1.3 billion in potential milestone payments plus royalties on net sales

	License Agreements		
Program	**Neuromuscular diseases-ALS**	**Undisclosed target**	**Cystic fibrosis**
Partner	MERCK	Genentech *A Member of the Roche Group*	FAIR Therapeutics
Key deal terms	Received **$5M** milestone payment in July 2023 Up to **$255M** in milestones Royalties on net sales	Over **$100M** in upfront payment and milestones Tiered royalties on net sales	Up to **$965M** in commercial only milestones Royalties on net sales Revenue share on sub-license payments

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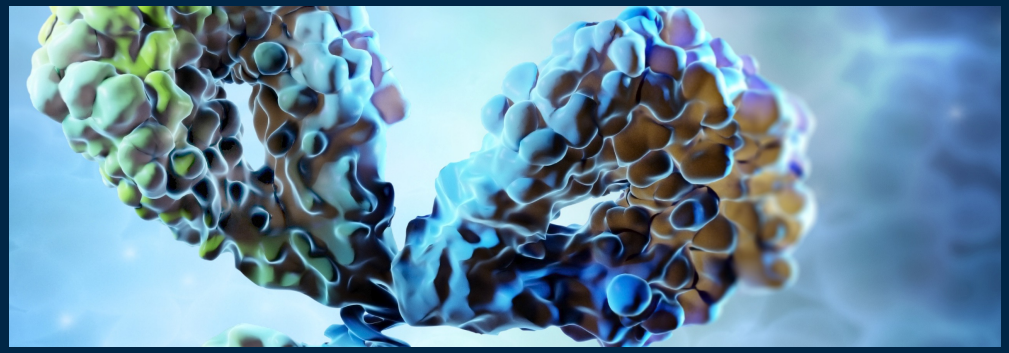
Currently Evaluating Strategic Alternatives

- Completed a review of our business and will be evaluating strategic alternatives for the Company and the assets to maximize shareholder value
  - Approved by the Board of Directors

- Based on the current financing environment, the Company implemented several immediate actions
  - Reduction in force of 64%
  - Cease enrollment of new patients into the ongoing Phase 1 clinical trial (VISTA-101)
  - Outreach to potential strategic and/or financial partners regarding the Company's assets

- Strategic options may include, but are not limited to, sale of assets of the Company, a sale of the Company, licensing of assets, a merger, liquidation, or other transactions

Kineta is developing next-generation immunotherapies that address cancer immune resistance



Innate Immunity Focused Pipeline

KVA12123: VISTA blocking mAb to address immunosuppression in the TME

- Ongoing Phase 1/2 clinical study evaluating KVA12123 alone and in combination with pembrolizumab in advanced solid tumors
- Cleared first 5 monotherapy cohorts & first two combination cohort, no dose limiting toxicities, >90% VISTA receptor occupancy
- Biomarkers demonstrate efficacy-related cytokine secretion and significant changes in anti-tumor immune cell subpopulations
- Long-term stable disease observed in monotherapy and partial responses in combination therapy

Anticipated KVA12123 Catalysts

2Q24: Additional monotherapy safety and efficacy data

2Q24: Initial combination therapy data

Partnerships

~$1.3 billion in potential milestone payments plus royalties on net sales

MERCK

Genentech
A Member of the Roche Group

FAIR Therapeutics

Currently exploring strategic alternatives

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Developing next generation immunotherapies for cancer patients

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