KURA ONCOLOGY

DEVELOPING PRECISION MEDICINES FOR THE TREATMENT OF CANCER

Preliminary Data from KOMET-007 – January 30, 2024

WELCOME AND INTRODUCTION

Troy Wilson, Ph.D., J.D. – President & Chief Executive Officer, Kura Oncology

Forward-Looking Statements

This presentation contains forward-looking statements. Such statements include, but are not limited to, statements regarding our research, preclinical and clinical development activities, plans and projected timelines for ziftomenib, tipifarnib and KO-2806, plans regarding regulatory filings, our expectations regarding the relative benefits of our product candidates versus competitive therapies, and our expectations regarding the therapeutic and commercial potential of our product candidates. The words "believe," "may," "should," "will," "estimate," "promise," "plan", "continue," "anticipate," "intend," "expect," "potential" and similar expressions (including the negative thereof), are intended to identify forward-looking statements. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Risks that contribute to the uncertain nature of the forward-looking statements include: our preclinical studies and clinical trials may not be successful; the U.S. Food and Drug Administration (FDA) may not agree with our interpretation of the data from clinical trials of our product candidates; we may decide, or the FDA may require us, to conduct additional clinical trials or to modify our ongoing clinical trials; we may experience delays in the commencement, enrollment, completion or analysis of clinical testing for our product candidates, or significant issues regarding the adequacy of our clinical trial designs or the execution of our clinical trials may arise, which could result in increased costs and delays, or limit our ability to obtain regulatory approval; the commencement, enrollment and completion of clinical trials and the reporting of data therefrom; the COVID-19 pandemic may disrupt our business and that of the third parties on which we depend, including delaying or otherwise disrupting our clinical trials and preclinical studies, manufacturing and supply chain, or impairing employee productivity; our product candidates may not receive regulatory approval or be successfully commercialized; unexpected adverse side effects or inadequate therapeutic efficacy of our product candidates could delay or prevent regulatory approval or commercialization; and we may not be able to obtain additional financing. Additional risks and uncertainties may emerge from time to time, and it is not possible for Kura's management to predict all risk factors and uncertainties.

All forward-looking statements contained in this presentation speak only as of the date on which they were made. Other risks and uncertainties affecting us are described more fully in our filings with the Securities and Exchange Commission. We undertake no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

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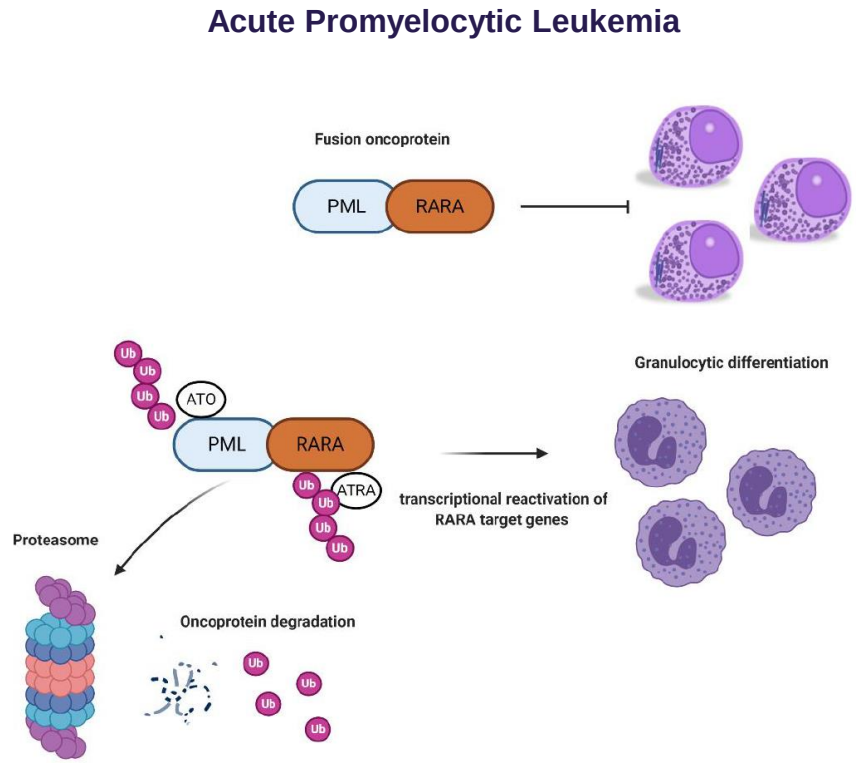
Targeting Foundational Mutations has Transformed Deadly Hematologic Cancers into Chronic Diseases

Acute Promyelocytic Leukemia (APL)

- APL arises from an abnormal fusion protein called PML/RARα, which is mechanistically similar to the menin-KMT2A complex in AML.
- ATRA/ATO therapy is a combination treatment of all-trans retinoic acid (ATRA) and arsenic trioxide (ATO).
- The mechanism of action of ATRA/ATO therapy is differentiation of promyelocytes, immature white blood cells.
- ATRA/ATO combinations have fundamentally transformed the treatment of APL.



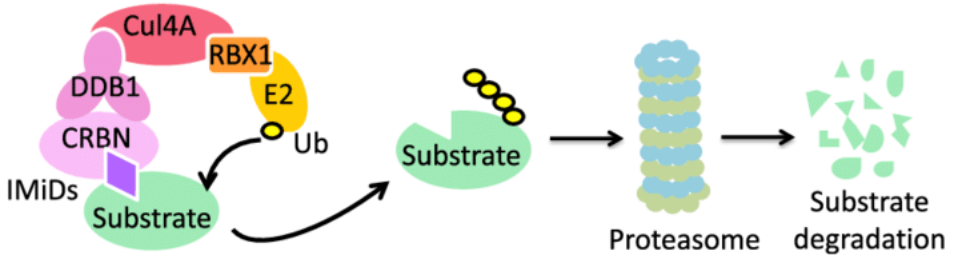
ATRA/ATO combinations demonstrate curative potential with 89% overall survival at 10 Years

Gurnari: APL in Children, A Model of Precision Medicine and Chemotherapy-Free Therapy: IJMS 2021

Targeting Foundational Mutations has Transformed Deadly Hematologic Cancers into Chronic Diseases

Multiple Myeloma

- Until the 2000's, there were few treatment options for multiple myeloma, and the median survival was 2–3 years.
- With the advent of immunomodulatory drugs (IMiDs) and proteasome inhibitors (PIs) in the 2000's, the outcomes of patients are now significantly improving.



- Many patients can now live with their disease > 10 years.
- **IMiDs have become a cornerstone of treatment for patients with multiple myeloma and are used in combinations at all stages of disease.**

IMiD combinations increased 5yr OS from 35% to > 65%; class generated ~$15B in revenues at peak

Holstein and McCarthy, *Drugs* (2017) 77(5), 505-520
Bird, S. and Pawlyn, C. *Blood* (2023) 142(2): 131-140

ZIFTOMENIB OPPORTUNITY AND INTRODUCTION TO KOMET-007 INVESTIGATORS

Stephen Dale, M.D. – Chief Medical Officer, Kura Oncology

Ziftomenib Demonstrates Potential to Become a Cornerstone of AML Therapy

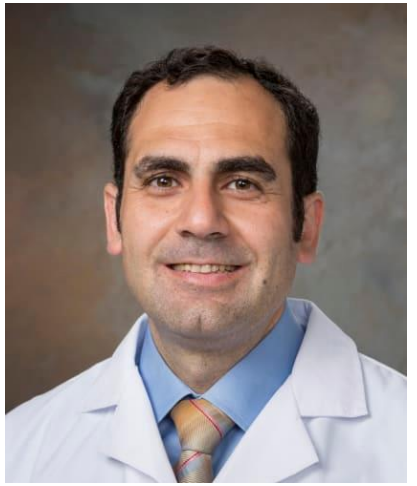
Targets foundational mutations at the core of up to 50% of AML cases

- **Compelling clinical data support frontline opportunity**
  - Good tolerability profile, enabling continuous administration in combination with SOC
  - Combinations appear to mitigate the risk of differentiation syndrome
  - No observed or predicted drug-drug interactions
  - Encouraging preliminary evidence of clinical activity
- **Strong investigator enthusiasm as evidenced by rapid enrollment across studies**
  - First 20 patients enrolled in KOMET-007 combination trial in less than four months
  - KOMET-001 monotherapy registrational trial expected to complete enrollment by mid-2024

KOMET-007 Investigators

Amir Fathi, M.D.

- Program Director, Center for Leukemia, Massachusetts General Hospital Cancer Center
- Associate Professor of Medicine, Harvard Medical School



Amer Zeidan, MBBS

- Interim Chief, Division of Hematologic Malignancies, Director of Hematology Early Therapeutics Research, Yale Cancer Center
- Associate Professor of Medicine (Hematology), Yale University

ZIFTOMENIB AS MONOTHERAPY / OPPORTUNITY IN COMBINATION

Amir Fathi, M.D. – Massachusetts General Hospital

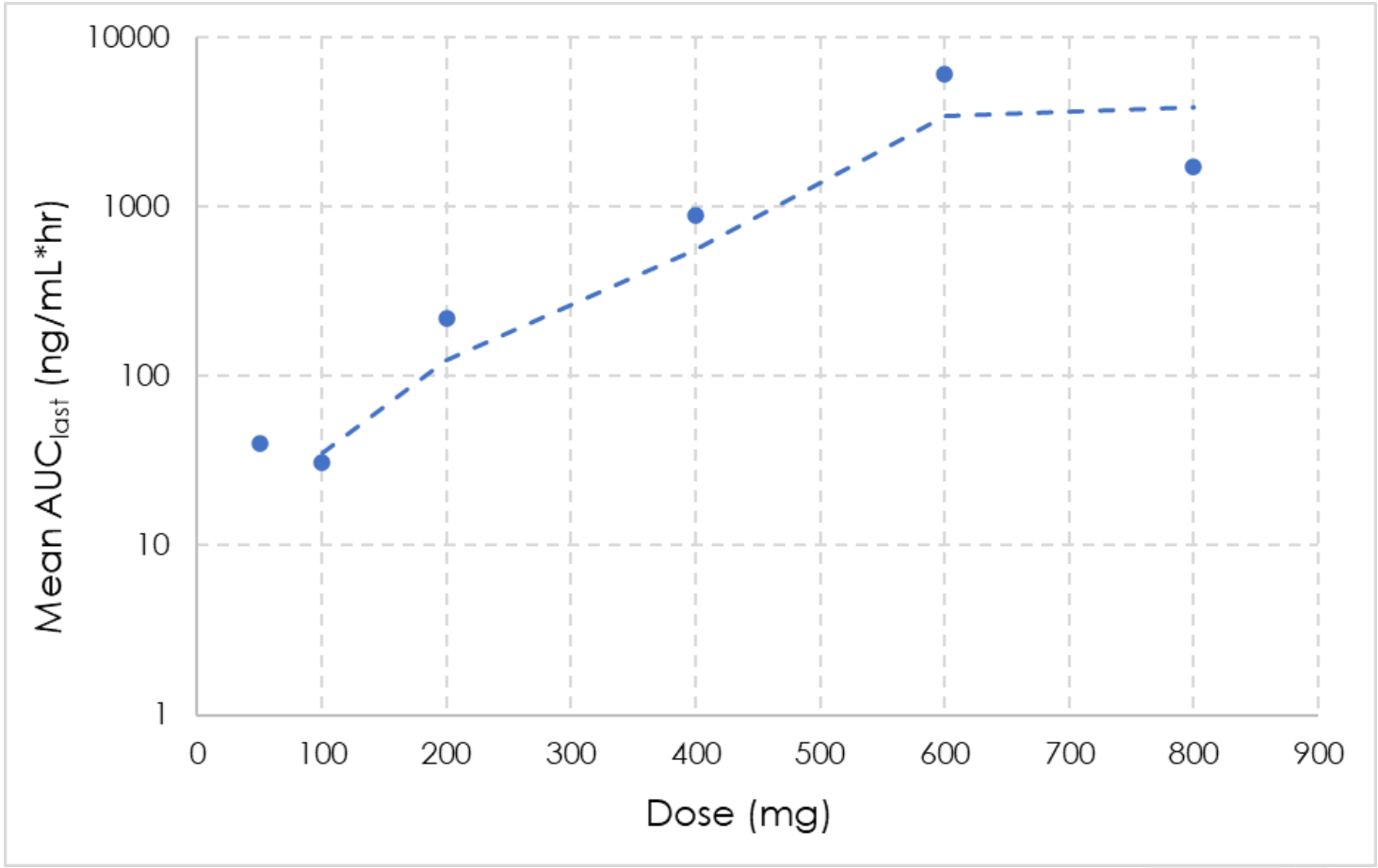
KOMET-001 Phase 1/2 Study of Ziftomenib in Relapsed/Refractory AML

Phase 1a Dose Escalation	Phase 1b Validation Cohorts	Phase 1b Expansion	Phase 2 Registration-Enabling
Completed	*Completed*	*Completed*	*Ongoing*
50 mg QD — 100 mg QD — 1000 mg QD	Cohort 1: 200 mg QD Cohort 2: 600 mg QD	Expansion of 600 mg QD	600 mg QD
***NPM1*-m, *KMT2A*-r, Other**	***NPM1*-m or *KMT2A*-r**	***NPM1*-m**	***NPM1*-m**
OBJECTIVES			

• Safety and tolerability
• Pharmacokinetics
• Early evidence of antitumor activity
	• Safety and tolerability
	• Pharmacokinetics
	• Clinical activity
		Continue enrollment of Phase 1b validation cohort(s) consistent with FDA's Project Optimus
		• Safety and tolerability
		• Pharmacokinetics
		• Clinical activity
			• Primary endpoint:
			  • CR/CRh
			• Secondary endpoints:
			  • Duration of CR/CRh
			  • Transfusion independence
			  • CR/CRh MRD negativity
			  • Adverse events

CR, complete remission; CRh, complete remission with partial hematological recovery; FDA, United States Food and Drug Administration; MRD, measurable residual disease; R/R, relapsed/refractory; RP2D, recommended phase 2 dose.

Dose-Proportional Increase in Ziftomenib Exposure Supports 600 mg Dose



AUC = area under the curve

Ziftomenib Demonstrates Encouraging Safety Profile in Phase 1b

- Differentiation syndrome (DS) appears manageable in NPM1-m monotherapy patients with mitigation strategy
  - 20% rate of mild to moderate DS
- Rates of DS in KMT2A-r monotherapy patients were 38.5% at 200 mg and 37.5% at 600 mg; potential to mitigate in combination
- DS is an on-target AE and represents evidence of clinical activity
- No reports of drug-induced QTc prolongation
- Maintained count recovery suggests no drug-induced myelosuppression

Fathi *et al*. EHA 2023 #LB2713 (preliminary data as of April 12, 2023)

Ziftomenib has Highly Differentiated Monotherapy Activity

40% of NPM1 patients achieved a CR during course of study

Best Overall Response	600 mg
NPM1-m Phase 1a + 1b	**(n=20)**
CR	**7 (35.0)**
CR/CRh	7 (35.0)
CRc	8 (40.0)
MRD negativity	4(50.0)[1]
ORR	9 (45.0)
KMT2A-r Phase 1a + 1b	**(n=18)**
CR/CRh	2 (11.1)
CRc	3 (16.7)
MRD negativity	3 (100.0)
ORR	3 (16.7)

(preliminary data as of April 10, 2023)

Differentiated CR Rates vs. SOC in Heavily Pretreated Patients

	MUTATION	CR %	mDOR	MEDIAN PRIORS
Ziftomenib 600mg QD	NPM1m	**35%**	**8.2** mo*	**3**
	FLT3m	**33%**	-	
	IDH 1/2	**50%**	-	
Gilteritinib	FLT3m	14.2%	14.8 mo	1
Enasidenib	IDH2	19%	8.2 mo	2
Ivosidenib	IDH1	25%	10.1 mo	2

*Median DoR for CRc without censoring at HSCT
Source: USPI's

- **High activity, durable responses and favorable profile suggest potential for ziftomenib to become a backbone therapy across the continuum of AML care**

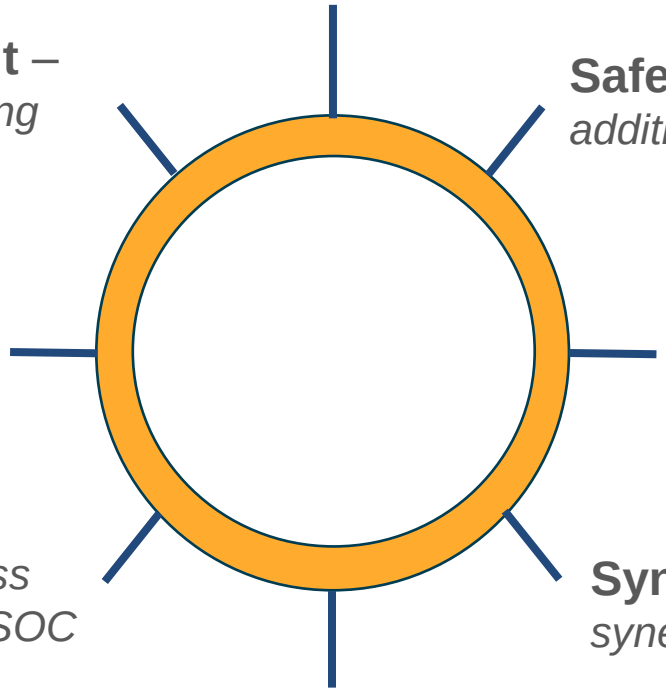
[1] MRD was assessed for 6/8 CRc patients; 4 of those 6 patients (67%) tested were MRD negative
CRc includes CR, CRh, CRi, CRp; ORR includes CR, CRh, CRi, CRp, MLFS

Maximizing the Therapeutic Value of Menin Inhibitors Will Come Through Combinations

Clinical Activity – *Enhanced relative to SOC*

Pharmacoeconomic Benefit – *Fewer requirements for monitoring and hospitalization*

Safety/Tolerability – *Minimal additive toxicity over SOC*



Quality of Life – *Fewer concomitant meds, less toxicity*

Drug-Drug Interactions – *Minimal to none*

Resistance – *Potential to address innate and adaptive resistance to SOC*

Synergistic MOA – *Ideally, additive / synergistic to SOC*

MRD – *Potential to achieve greater depth of response*

Holstein and McCarthy, *Drugs* 77(5), 505-520 (2017);
Bird, S. and Pawlyn, C. *Blood* (2023) 142(2): 131-140

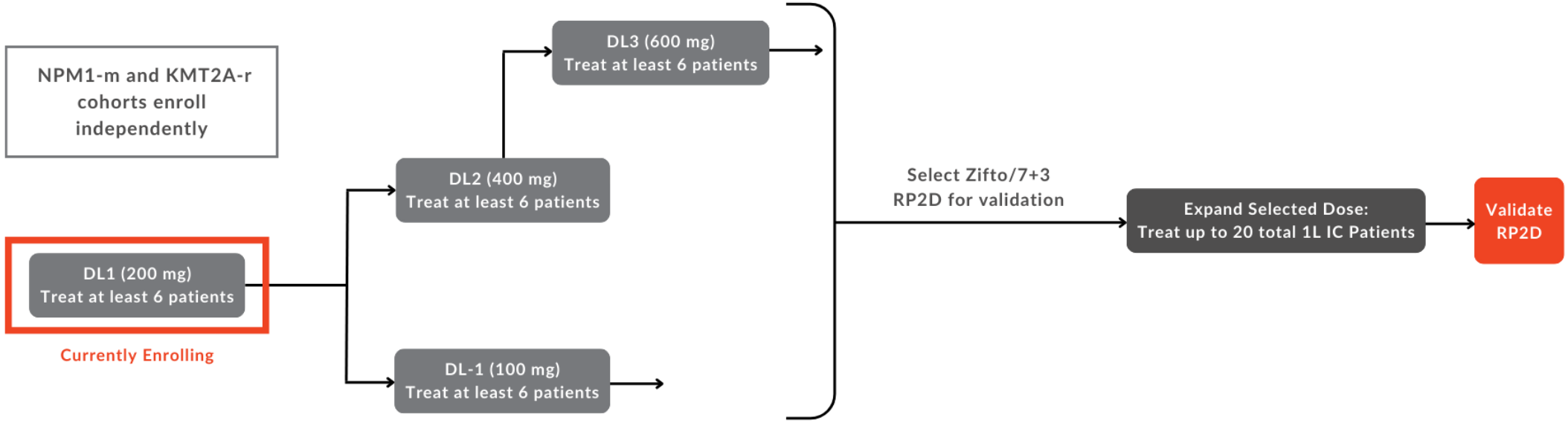
PRELIMINARY COMBINATION DATA FROM KOMET-007 TRIAL

Amer Zeidan, MBBS – Yale Cancer Center

Disclosure: Honoraria or consultation fees provided by Kura Oncology

KOMET-007: Phase 1 Combination Trial of Ziftomenib in Patients with Newly Diagnosed or R/R AML

Ziftomenib/cytarabine/daunorubicin (7+3) combination

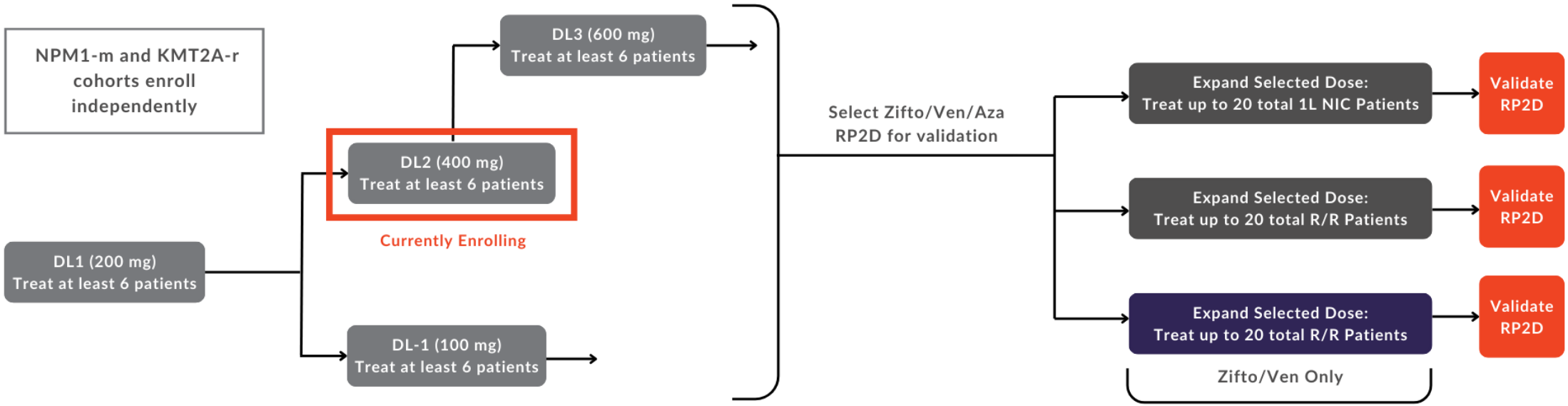


- Ziftomenib dosing will begin on Cycle 1 Day 8 and be administered continuously thereafter
- Cytarabine will be administered on C1 Day 1-7; administration of an additional cycle based on C1 bone marrow biopsy results
- Daunorubicin will be administered on C1 Day 1- 3; administration of an additional cycle based on C1 bone marrow biopsy results
- Dose escalation conducted in patients with adverse risk*

*Age > 60 years and/or treatment-related AML and/or adverse risk cytogenetics per ELN
DL = ziftomenib dose level; zifto = ziftomenib; 7+3 = cytarabine/daunorubicin; RP2D = recommended Phase 2 dose; 1L = first-line; IC = intensive chemotherapy

KOMET-007: Phase 1 Combination Trial of Ziftomenib in Patients with Newly Diagnosed or R/R AML

Ziftomenib/venetoclax/azacitidine combination



- Ziftomenib dosing will begin on Cycle 1 Day 8 and be administered continuously thereafter
- Venetoclax will be administered per label in 28-day cycles with adjustments to cycle length based on C1 bone marrow biopsy results
- Azacitidine will be administered per label on C1 Day 1-7 of each cycle with additional cycles based on bone marrow biopsy results

DL = ziftomenib dose level; zifto = ziftomenib; ven = venetoclax; ven = venetoclax; RP2D = recommended Phase 2 dose; NIC = non-intensive chemotherapy; 1L = first-line; R/R = relapsed/refractory

KOMET-007: Patient Demographics and Disposition

First 20 Patients Enrolled

- Relapsed/refractory patients with NPM1-m or KMT2A-r AML in combination with venetoclax/azacitidine
- Newly-diagnosed patients with adverse risk* NPM1-m or KMT2A-r AML in combination with cytarabine/daunorubicin (7+3)
- **80% (16/20) of patients remain on trial as of the January 11, 2024, including 100% of patients with NPM1-m AML**

	All	Cohorts			
		R/R NPM1-m Ven/Aza	1L NPM1-m 7+3	R/R KMT2A-r Ven/Aza	1L KMT2A-r 7+3
Age, years (Median, range)	55.5 (23, 77)	55.0 (41, 77)	65.5 (43, 74)	52.5 (23, 71)	49.0 (49, 49)
Female (n, %)	13 (65)	4 (57)	2 (50)	6 (75)	1 (100)
Genetic Subtypes [n (%)]					
NPM1-m	11 (55)	7 (100)	4 (100)	N/A	N/A
KMT2A-r	9 (45)	N/A	N/A	8 (100)	1 (100)
ECOG PS [n (%)]					
0	4 (20)	1 (14)	3 (75)	0	0
1	11 (55)	5 (71)	0	5 (63)	1 (100)
2	5 (25)	1 (14)	1 (25)	3 (38)	0
Prior Therapies (Median, Range)	N/A	2 (1,12)	0	2 (1,6)	0
Prior Antineoplastic Therapy [n (%)]					
Stem Cell Transplant	7 (47)	4 (57)	N/A	3 (38)	N/A
Hypomethylating Agent (HMA)	8 (53)	4 (57)	N/A	4 (50)	N/A
Venetoclax	10 (67)	5 (71)	N/A	5 (63)	N/A
Menin Inhibitors	6 (40)	2 (29)	N/A	4 (50)	N/A

Preliminary data as of January 11, 2024

*Age > 60 years and/or treatment-related AML and/or adverse risk cytogenetics per European LeukemiaNet (ELN)

KOMET-007: Promising Safety and Tolerability Profile in Combination

Combinations mitigate risk of differentiation syndrome (DS)

Grade ≥ 3 TEAEs (≥ 10%)	n (%)
Patients with Grade ≥ 3 TEAEs	**18 (90)**
Platelet count decreased	6 (30)
Febrile neutropenia	5 (25)
White blood cell count decreased	4 (20)
Pneumonia	3 (15)
Hypoxia	2 (10)
Neutrophil count decreased	2 (10)
Sepsis	2 (10)
Thrombocytopenia	2 (10)

Grade ≥ 3 Ziftomenib-Related AEs (All)	n (%)
Patients with Grade ≥ 3 Ziftomenib-Related AEs	**6 (30)**
Platelet count decreased	3 (15)
Anemia	1 (5)
Febrile neutropenia	1 (5)
Leukopenia	1 (5)
Neutrophil count	1 (5)
Thrombocytopenia	1 (5)

- No DS events reported
- No dose-limiting toxicities (DLTs) observed to date, including delayed hematologic count recovery
- No QTc prolongation observed
- TEAEs consistent with underlying disease and backbone therapies

Preliminary data as of January 11, 2024
TEAEs = Treatment-emergent adverse events

100% CR rate with Ziftomenib and 7+3 in 1L Patients with Adverse-Risk AML*

- Anticipated CR/CRi rate with 7+3 in all-comer 1L adverse risk patients: 32-33%[1,2]

1L Adverse-Risk Group n=5	CR Rate (n)
Overall (NPM1-m + KMT2A-r)	100% (5)
NPM1-m only (n=4)	100% (4)
KMT2A-r only (n=1)	100% (1)

- All patients treated in initial dose cohort (200 mg) in combination with 7+3

Preliminary data as of January 11, 2024

[1] Lancet et al. *Blood*. 2014 May 22;123(21):3239-46.

[2] Lin et al. *Blood Adv*. 2021 Mar 23;5(6):1719-1728.

*Age > 60 years and/or treatment-related AML and/or adverse risk cytogenetics per ELN

Ziftomenib + Ven/Aza with Pronounced Activity in Menin Inhibitor Naïve Patients

- ~35-45% CR/CRi is expected in ven-naïve relapsed/refractory patients[1]
- Anticipated response rate in KMT2A-r relapsed/refractory AML <10% ORR[2]
- 53% ORR in mITT population (n=15, including six menin experienced patients)
- 40% (6/15) of patients treated with ven/aza received prior treatment with a menin inhibitor

Menin Inhibitor Naïve Group n=9	ORR (n)	CR/CRi Rate (n)	CR/CRh Rate (n)
Overall (NPM1-m + KMT2A-r)	78% (7)	67% (6)	56% (5)
NPM1-m (n=5)	100% (5)	80% (4)	60% (3)
KMT2A-r (n=4)	50% (2)	50% (2)	50% (2)

- All patients treated in initial dose cohort (200 mg) in combination with Ven/Aza
- Enrollment in 400 mg dose cohort ongoing

Preliminary data as of January 11, 2024
[1] Stahl, M. *et al.*, *Blood Advances* 5(5), 1552-1564 (2021)
[2] Issa, Syndax ASH Investor Event (Dec. 2023)
ORR includes CR, CRh, CRi, MLFS

Ziftomenib + Ven/Aza Able to Drive Responses in Venetoclax Failures

- Expected response rates following ven/aza ~ 0-20%[1-4]
- Anticipated response rate in KMT2A-r R/R AML < 10% ORR[4]

Venetoclax Experienced Group n=10	ORR (n)	CR/CRi Rate (n)	CR/CRh Rate (n)
Overall (NPM1-m + KMT2A-r)	40% (4)	30% (3)	30% (3)
NPM1-m (n=5)	60% (3)	40% (2)	40% (2)
KMT2A-r (n=5)	20% (1)	20% (1)	20% (1)

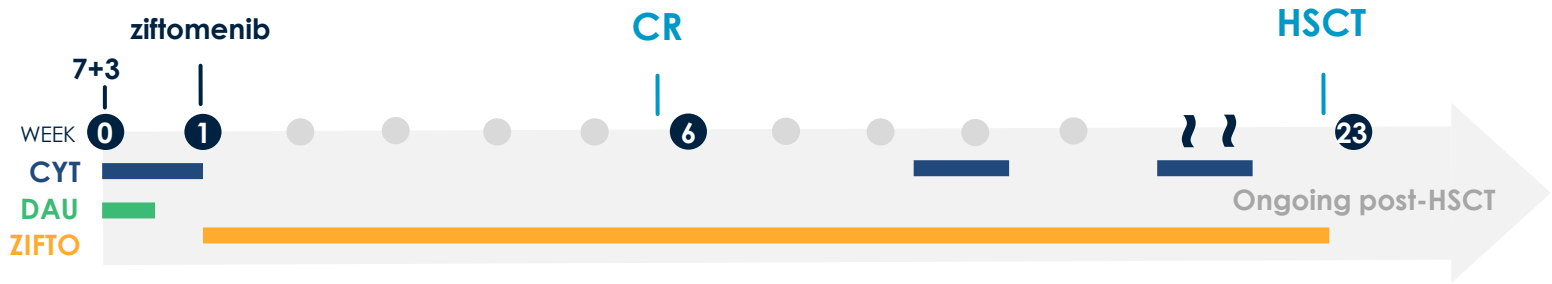
- All patients treated in initial dose cohort (200 mg) in combination with Ven/Aza
- Enrollment in 400 mg dose cohort ongoing

Preliminary data as of January 11, 2024

[1] Zainaldin, C. et al., Lymphoma 63(13):3245-3248 (2022);
[2] Chan, O. and Walker, A., *Hematology* 702-708 (2023);
[3] Maiti A, et al., Haematologica. 2021; 106(3):894-898;
[4] Issa, Syndax ASH Investor Event (Dec. 2023)
ORR includes CR, CRh, CRi, MLFS

Continued Use of Ziftomenib Following Successful Induction with 7+3

Cohort: Frontline NPM1-m 7+3

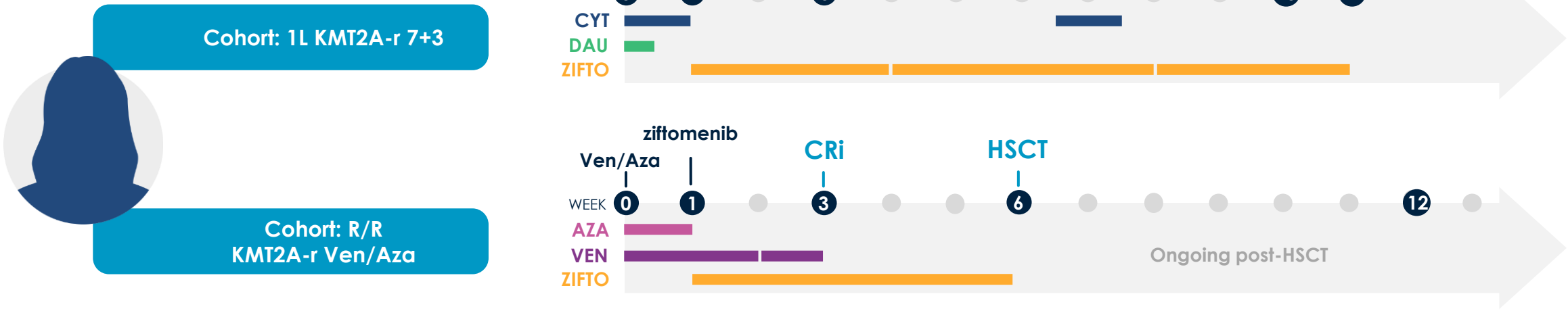


Patient Characteristics	
Demographics	66-year-old female
Mutational profile	*NPM1m, CBL, IDH2, NRAS, SRSF2*
Baseline bone marrow blasts	*77%*
Best overall response	CR

- CR after one cycle of induction (week 5-6)
- Maintained ziftomenib from induction through consolidation until conditioning for transplant (~5 months)
- Post-transplant ziftomenib maintenance planned

Preliminary data as of January 11, 2024

Ziftomenib Combinations Are Effective in Treating Aggressive Disease



Patient Characteristics

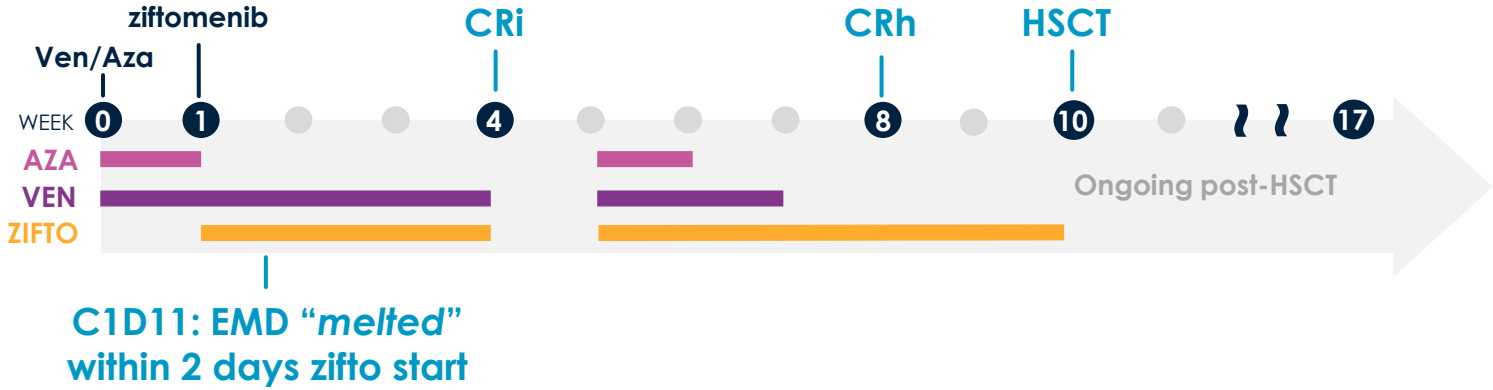
Demographics	49-year-old female
Mutational profile	*KMT2Ar, KRAS*
Baseline bone marrow blasts	10% (at relapse)
Best overall response	CR

- Patient with highly aggressive disease including KRAS at 79% VAF
- Initiated ziftomenib in 7+3 cohort: achieved CR post induction but relapsed post consolidation
- Continued ziftomenib in Ven/Aza cohort: achieved remission and proceeded to transplant
  - MRD negative for *KMT2Ar* and *KRAS* at time of transplant

Preliminary data as of January 11, 2024

Ziftomenib Eliminates Extramedullary Disease Unaffected by Prior Venetoclax in Heavily Pre-Treated Patient

Cohort: R/R
NPM1-m Ven/Aza



Patient Characteristics	
Demographics	41-year-old female
Mutational profile	*NPM1, FLT3-ITD, DNMT3A and CBL*
Baseline bone marrow blasts	Extramedullary disease (EMD) only
Best overall response	CRh

Prior lines of therapies

- 5+1
- 2nd induction w/ etoposide, cytarabine and midostaurin
- Aza/**Ven**
- MUD Allo SCT followed by gilteritinib maintenance
- Decitabine and **Ven**
- DLI and **Ven**
- 2nd DLI

Preliminary data as of January 11, 2024

CLINICAL DEVELOPMENT PLAN

Mollie Leoni, M.D. – Executive Vice President, Clinical Development

Ziftomenib Clinical Development Path

DEVELOPMENT APPROACH	PLANNED	STUDY STARTUP	PHASE 1	REGISTRATION DIRECTED	TRIAL
MONOTHERAPY (Relapsed/refractory)	NPM1-mutant acute myeloid leukemia (AML) Non- NPM1-m/KMT2A-r AML KMT2A-rearranged ALL				komet-001 ACUTE LEUKEMIAS KURA KO-MEN-001
COMBINATION WITH VENETOCLAX + AZACITIDINE (Relapsed/refractory, frontline)	NPM1-mutant AML KMT2A-rearranged AML				komet-007 ACUTE LEUKEMIAS KURA KO-MEN-007
COMBINATION WITH CYTARABINE + DAUNORUBICIN (7+3) (Relapsed/refractory, frontline)	NPM1-mutant AML KMT2A-rearranged AML				
COMBINATIONS WITH GILTERITINIB, FLAG-IDA, LDAC (Relapsed/refractory)	NPM1-mutant AML KMT2A-rearranged AML				komet-008 ACUTE LEUKEMIAS KURA KO-MEN-008
POST-TRANSPLANT MAINTENANCE	NPM1-mutant AML KMT2A-rearranged AML				Investigator / Company-sponsored studies
COMBINATION WITH FLA	Pediatric AML & ALL				Investigator-sponsored studies
COMBINATION WITH BV-DAM	Pediatric ALL				

MARKET OPPORTUNITY AND UPCOMING MILESTONES

Troy Wilson, Ph.D., J.D. – President & Chief Executive Officer, Kura Oncology

Ziftomenib Offers a Multi-Billion-Dollar Opportunity in AML and Beyond

Potential to Transform Outcomes Across the Continuum of Care

Relapsed / Refractory

- Initial approval represents **30% of potential patients**
- KOMET-001 registration-directed study for FDA full approval

Frontline / Maintenance

- Significant opportunity in 1L AML and Maintenance
- **Potential to drive > 50% revenue**
- Safety, tolerability and clinical activity anticipated to be ideal for combinations with SOC and with maintenance indication

Other Indications

- Compelling **additional opportunities beyond AML** offer multi-billion-dollar potential
- Early translational data supports potential in **solid tumor and non-oncology indications**

Upcoming Milestones for Ziftomenib in Acute Leukemia

MILESTONE	ESTIMATED TIME OF ACHIEVEMENT
Dose first patients in KOMET-008 trial in combination with FLT3 inhibitor gilteritinib, LDAC and FLAG-IDA	Q1 2024
Initiate post-transplant maintenance program	Q1 2024
Expand ziftomenib development to acute lymphoblastic leukemia (ALL)	Q1 2024
Complete enrollment of 85 patients in KOMET-001 registration-directed trial	Mid-2024
Determine recommended Phase 2 dose in combination with ven/aza	Mid-2024
Initiate dose validation/expansion in combination with ven/aza in 1L AML	Mid-2024
Provide next KOMET-007 combination update	2024

- **$570 million in pro forma cash* provides runway into 2027, enabling aggressive research, development and pre-commercial activities to maximize value of ziftomenib and other pipeline assets**

* Includes $424M in cash, cash equivalents and short-term investments as of 12/31/23 and estimated proceeds net of offering expenses of $146M from private placement closed on January 26, 2024

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