

**Corporate Presentation** 

NASDAQ: CRIS



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## Corporate Overview

Summary

Investment Thesis	Curis develops novel, first-in-class, cancer therapeutics in areas of significant unmet patient need Cash runway into 2024 – \$107M as of June 30, 2022									
First-in-Class	Emavusertib: first-in-class oncology program targeting IRAK4									
Pipeline	CI-8993: first-in-class oncology program targeting VISTA									
Significant Market	AML/MDS: 317K patients <sup>1</sup> (standard of care: HMA)									
Opportunity	NHL/CLL: 1.8M patients <sup>1</sup> (standard of care: BTKi)									
Upcoming Data	2023: emavusertib in AML/MDS (monotherapy) 2023: emavusertib in NHL/CLL (combination with ibrutinib) 2H 2022: CI-8993 in solid tumors (monotherapy)									

### Pipeline

#### Curis develops novel, first-in-class cancer drugs





#### IRAK4 Biology and Emavusertib



## **IRAK4 Biology and Emavusertib**

*IRAK4* is a novel and important target across multiple heme malignancies

#### IRAK4 in AML/MDS

*Spliceosome mutation drives overexpression of IRAK4-L (which causes constitutive activation of the myddosome)* 



#### IRAK4 in NHL/CLL

TLR Pathway is dependent upon IRAK4 for function (2<sup>nd</sup> pathway driving NF-κB overactivity)



1) Guillamot et al. Nat Cell Biol 2019; 2) Smith et al. Nat Cell Biol 2019; 3) American Cancer Society, Cancer Facts & Figures 2020; 4) Leukemia & Lymphoma Society, Facts and Statistics Overview; 5) IMBRUVICA Package Insert. Rev 08/2018

## Emavusertib's Unique Molecular Fingerprint

Targeted design specifically engineered to hit key oncogenic targets



Emavusertib Binding Affinity								
	Target	K <sub>d</sub> nM						
	IRAK1	12,000						
	IRAK2	>20,000						
	IRAK3	8,500						
	IRAK4	23						
	DYRK1A	25						
	FLT3 wt	31						
	FLT3 (D835H)	5						
	FLT3 (D835V)	44						
	FLT3 (D835Y)	3						
	FLT3 (ITD)	8						
	FLT3 (K663Q)	47						
	FLT3 (N841I)	16						
	Haspin (GSG2)	32						
	CLK1	10						
	CLK2	20						
	CLK3	>20,000						
	CLK4	14						
	TrkA	130						

DiscoverX Kinase Panel (378 kinases screened)



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#### Binds with high affinity to IRAK4

Dual targeting of IRAK4 and FLT3 confers potential efficacy advantage vs. other IRAK4 inhibitors

### **Emavusertib Preclinical Data**

Clear anti-cancer activity suggests broad potential across heme malignancies



emavusertib demonstrates synergy with both azacitidine and venetoclax in THP-1 model<sup>2</sup>

emavusertib demonstrates monotherapy activity in patient-derived xenografts<sup>1</sup>

*ibrutinib in OCI-Ly10 model*<sup>3</sup>



# Emavusertib in Lymphoma (NHL/CLL)



## **Emavusertib in B Cell Cancers**

Combination therapy provides complimentary inhibition of two pathways that drive NF-κB

#### **Two Pathways Drive B Cell Cancers** BCR and TLR Pathways independently drive NF-κB overactivity (and NF-κB drives B Cell Cancers) **BCR Pathway TLR Pathway** recento Endosome TIR7 TIR8 TH ibrutinib BTK Myddosome IRAK4 emavusertib MALT1 NF-ĸB overactivity Lymphoma<sup>1</sup> (NHL,CLL)

1) IMBRUVICA Package Insert. Rev 08/2018

#### Clinical Strategy: Use Combination Therapy

*In preclinical testing, blocking both IRAK4 and BTK drove tumor reduction better than blocking either one alone* 



2) Booher et al. Waldenström Roadmap Symposium 2019

### Responses Seen in Both BTK-Naïve and BTK-Experienced Patients

Majority of patients achieved decreases in tumor burden



\* indicates patient is ongoing with treatment

13 total patients enrolled

9 patients were evaluable for tumor burden

4 patients did not receive pre/post tumor assessments



## Emavusertib in Lymphoma (NHL/CLL)

The ideal candidate to combine with BTKi to maximize downregulation of NF-κB

- Patients are treated with BTKi because it downregulates NF-κB
- Two pathways drive NF-κB:
  - 1) BCR Pathway: addressed by blocking BTK
  - 2) TLR Pathway: addressed by blocking IRAK4
- Initial clinical data suggest blocking both pathways may overcome resistance to ibrutinib



#### **Next Steps**

#### TakeAim Lymphoma Study

- BTK naïve: MZL, PCNSL, DLBCL
- BTK experienced: any NHL subtype



#### Emavusertib in Leukemia (AML/MDS)



### Emavusertib in AML/MDS

#### Clinical studies designed to leverage the role of IRAK4 and FLT3 in AML/MDS

Disease Driver	% of Patient <u>Population</u>
IRAK4-L	> 50%1
FLT3	> 25% <sup>2</sup>
TET2	10-20% <sup>3</sup>
IDH2	9-13% <sup>4</sup>
IDH1	6-10% <sup>4</sup>
CEBPA	~10% <sup>3</sup>



#### **Rationale for Monotherapy**

- IRAK4 is the most prevalent genetic target in AML/MDS<sup>1,2</sup>
- IRAK4 signaling is the adaptive response mechanism for FLT3 patients treated with a FLT3 inhibitor<sup>5</sup>
  - Emavusertib's unique molecular design targets both FLT3 and IRAK4

#### **Rationale for Combination**

- Nearly all patients express some level of IRAK4-L<sup>1</sup>
- Preclinical data demonstrate clear synergy with azacitidine and venetoclax
  - ο Even at lower levels, IRAK4 stimulates NF-κB and an array of anti-apoptotic factors beyond BCL2
  - Inhibiting IRAK4 with emavusertib enhances the anti-cancer efficacy of aza, ven, and aza/ven combination in preclinical models

## Encouraging Clinical Activity in R/R AML/MDS

Monotherapy activity in patients with Spliceosome and FLT3 mutations

Best Response	Efficacy	
Population #1: AML Spliceosome Patients <sup>1</sup>		
CR/CRh Rate	2/5 (40%)	The CR and CRh pat
CR	1/5 (20%)	are both MRD-neg
CRh	1/5 (20%)	
Population #2: MDS Spliceosome Patients		
<b>Objective Response Rate (ORR)</b>	4/7 (57%)	1 mCR patient wer
CR	0/7 (0%)	Stem Cell Transplant
mCR	4/7 (57%)	
Population #3: AML FLT3 Patients <sup>1</sup>		
CR/CRh Rate	1/3 (33%)	FLT3 mutation eradi
CR	1/3 (33%)	in 2 out of 3 patie
CRh	0/3 (0%)	

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Data extraction date: Dec 16. 2021.

1) Two AML patients have both a spliceosome and FLT3 mutation and are included in both populations (there are 13 total evaluable patients with Spliceosome or FLT3 mutation).

Response criteria per 2017 ELN Criteria for AML and Modified IWG Criteria for MDS:

CR = Complete Remission

CRh = CR with partial hematologic recovery

mCR = marrow CR

## Initial Emavusertib Data Compare Favorably to Existing Therapies

Potential to meaningfully improve outcomes in *R*/*R* AML patients with spliceosome mutation

## Most Commonly Used Therapies in R/R AML Patients without FLT3 Mutation<sup>1</sup>

Emavusertib	Decitabine <sup>2,3</sup>	Azacitidine <sup>2,4</sup>	LoDAC <sup>5</sup>	patients achieving CR/CRh have
IRAK4 Inhibitor	НМА	НМА	Chemotherapy	remained on emavusertib >6 months
<ul> <li>40% CR/CRh rate (2 of 5 patients)</li> <li>No dose-limiting myelosuppression</li> <li>Oral Administration</li> </ul>	<ul> <li>~16% CR rate</li> <li>Myelosuppressive</li> <li>IV Administration</li> </ul>	<ul> <li>17% CR/CRi rate</li> <li>Myelosuppressive</li> <li>IV or SC Administration</li> </ul>	<ul> <li>~13% ORR</li> <li>Myelosuppressive and Black Box Warning</li> <li>IV Administration</li> </ul>	<ul> <li>Spliceosome mutations occur in ~10% of AML patients<sup>6</sup></li> <li>There are no effective therapies for patients who are R/R to Ven/HMA</li> <li>mOS 2-4 months<sup>7</sup></li> </ul>

1) Source: CancerMPact Treatment Architecture U.S. AML, Cerner Enviza, www.cancermpact.com, accessed January 3, 2022. Patients with wild type FLT3 and IDH. Excludes Investigational Therapies and anti-CD33; 2) Product Package Insert; 3. Ritchie et al, Leuk Lymphoma 2013; 4) Itzykson et al, Leuk Res 2014; 5) Frikha et al, Bulletin du Cancer 1996; 6) DiNardo et al, Hematology Am Soc 2016; 7) Maiti et al. Haemtologica 2021

Initial emavusertib data compare favorably vs. historical responses with mainstay treatments for R/R AML patients with wild type FLT3/IDH

AML Spliceosome Mutation

## Clear Unmet Need in Relapsed/Refractory MDS

*Current standard of care offers little therapeutic benefit to patients* 

Er	navusertib	Chemotherapy <sup>2</sup>	Decitabine <sup>3</sup>	Azacitidine <sup>3</sup>	
IRA	AK4 Inhibitor	Chemotherapy	НМА	НМА	
• 57% n (4 of 7	nCR rate 7 patients)	• ~8% ORR	<ul> <li>2<sup>nd</sup> line response data unavailable</li> </ul>	<ul> <li>2<sup>nd</sup> line response data unavailable</li> </ul>	<ul> <li>Spliceosome mutations (U2AF1/SF3B1) are the most prominent mutations in MDS (~30% of MDS patients)<sup>2</sup></li> </ul>
No do     myelo	ose-limiting osuppression	<ul> <li>Myelosuppressive and Black Box Warning</li> </ul>	Myelosuppressive	Myelosuppressive	<ul> <li>No effective therapies for patients R/R to HMA (chemo is standard of care)</li> </ul>
Oral A	Administration	IV Administration	IV Administration	IV or SC Administration	• mOS 4-6 months <sup>6</sup>

#### Most Commonly Used Therapies in R/R MDS<sup>1</sup>

1) CancerMPact Treatment Architecture U.S. AML, Cerner Enviza, www.cancermpact.com, accessed January 3, 2022. Excludes Investigational Therapies; 2) Prébet et al, JCO 2011.; 3) Product Package Insert.; 4) Jabbour et al Cancer 2010; Prébet et al., JCO 2011; Duong et al, Clin Lymphoma Myeloma Leuk, 2013; 5) Ochi Cancers 2021.; 6) Jabbour et al Cancer 2010.

Initial emavusertib data compared favorably vs. historical responses with the mainstay treatment for R/R MDS patients

**MDS** Spliceosome Mutation

#### Emavusertib May Address Unmet Need in R/R AML Patients with FLT3 Mut

No approved therapies for patients R/R to FLT3 inhibitors

#### Most Commonly Used Therapies in R/R AML Patients with FLT3 Mutation<sup>1</sup>

Emavusertib	Gilteritinib <sup>2,3</sup>	Azacitidine <sup>2</sup>	Decitabine <sup>2</sup>
IRAK4 Inhibitor	FLT3 Inhibitor	НМА	НМА
<ul> <li>33% CR (1 of 3 patients)</li> </ul>	• ~12% CR	<ul> <li>2<sup>nd</sup> line response data unavailable</li> </ul>	<ul> <li>2<sup>nd</sup> line response data unavailable</li> </ul>
<ul> <li>No dose-limiting myelosuppression</li> </ul>	<ul> <li>No dose-limiting myelosuppression</li> </ul>	Myelosuppressive	Myelosuppressive
Oral Administration	Oral Administration	IV or SC Administration	IV Administration

~30% of AML patients have FLT3 mutation<sup>4</sup>

 Dual inhibition of IRAK4 and FLT3 may lead to increased efficacy, as signaling through IRAK4 drives resistance to FLT3 inhibitors<sup>5</sup>

1) CancerMPact Treatment Architecture U.S. AML, Cerner Enviza, www.cancermpact.com, accessed January 3, 2022. Excludes Investigational Therapies and anti-CD33; 2) Product Package Insert; 3) Perl et al NEJM 2019; 4) Saygin, et al. J Hematol Oncol. 2017; 5) Melgar, Sci Transl Med. 2019

IRAK4/FLT3 inhibition may improve efficacy in R/R AML patients with FLT3 mutation<sup>5</sup>

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AML FLT3

Mutation

## Emavusertib in Leukemia (AML/MDS)

The ideal candidate to address the two largest genetic populations in AML/MDS

Emavusertib addresses the two largest genetic populations in AML/MDS:

- 1) IRAK4 (>50% of population)<sup>1</sup>
- 2) FLT3 (>25% of population)<sup>2</sup>
- Clear single-agent activity
- Genetically-defined patient population
- Dual targeting of IRAK4 and FLT3 may prevent adaptive resistance observed with current FLT3 inhibitors<sup>3</sup>



#### **Next Steps**

#### TakeAim Leukemia Study

- Monotherapy: Spliceosome, FLT3 mutation
- Combination: all other AML/MDS patients

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#### VISTA Biology and CI-8993



## **CI-8993: Novel Checkpoint Inhibitor**

#### Published research suggests VISTA has a broad role among checkpoint inhibitors

	1	2	3	4	5
	Transforms MDSCs into activated macrophages	Activates NK cells	Brings T-cells out of quiescence	Enhances Antigen Presentation In TME	Expands and Transforms Activated and Exhausted T-cells into Effector cells
—	Suppressor	Inactive	Quiescent	Immature	Activated
	MDSC CCS	CD16	T	APC	Т
	Activator MØ	Activated	Activated	Mature APC	Effector
<u>Target</u>					
VISTA (CI-8993)					
PD-1 (Pembro, Nivo, etc.)		x	X	X	
PD-L1 (Atezo, Durva, etc.)	X	<u></u>	X	32	
CTLA-4 (Ipi)	X	×	X	2	
TIM3		×	X	×	
LAG3	X	52	X	32	
OX40	X	x	X	X	
TIGIT	X	52	X	X	

We believe VISTA inhibition has potential for broad application in many tumor types in monotherapy and in combination with existing checkpoint inhibitors

#### Checkpoint Inhibitors Approved in Multiple Malignancies:

- Melanoma
- Lung Carcinoma
- Renal Cell Carcinoma
- Head & Neck Squamous Cell Carcinoma
- Lymphoma
- Hepatocellular Carcinoma
- Merkel Cell Carcinoma
- Gastric/Gastroesophageal Adenocarcinoma
- Cervical Carcinoma
- Cutaneous Squamous Cell Carcinoma
- Breast Carcinoma
- Esophageal Carcinoma
- Uterine Carcinoma
- Urothelial Carcinoma
- Genomic Alterations (e.g., MSI-high)

## **CI-8993 Preclinical Data**

Clear single-agent activity; potential to transform immune-oncology treatment in combination

#### Monotherapy

Anti-VISTA inhibited tumor growth



<sup>1)</sup> Le Mercier et al. Cancer Res. 2014 Apr 1

**Combination Therapy** 



<sup>2)</sup> J. Lines, IEBMC Conference 2019

### **CI-8993 Initial Clinical Data**

CI-8993 is demonstrating a favorable PK profile



Saturation kinetics in C<sub>max</sub> data ("sink effect") suggest potential for broad bioavailability at higher dose levels

## **CI-8993** Initial Clinical Data

Initial data show reduction of MDSCs entering tumor & increased NK cell activation



CI-8993 activates NK cells  $(\downarrow CD16 signifies NK)$ activation); activated NK cells exert an important anti-tumor function via the innate immune system

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\* p<0.05

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## **CI-8993** Initial Clinical Data

#### *Initial data show enhanced antigen presentation & increased T cell activation factors*



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## CI-8993 Encouraging Progress at Early Dose Levels

*First-in-class CI-8993 has potential for broad applicability in immune checkpoint therapy* 

- Favorable PK profile
- Saturation kinetics ("sink effect") appear to be addressed with increase in dose level
- Initial clinical data suggest multiple anti-cancer mechanisms are being activated in patients

#### **Next Steps in Dose Escalation**

• Looks for additional signs of anti-cancer activity and determine RP2D

## Corporate Overview

Summary

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Pipeline	CI-8993: first-in-class oncology program targeting VISTA									
Significant Market	AML/MDS: 317K patients <sup>1</sup> (standard of care: HMA)									
Opportunity	NHL/CLL: 1.8M patients <sup>1</sup> (standard of care: BTKi)									
Upcoming Data	2023: emavusertib in AML/MDS (monotherapy) 2023: emavusertib in NHL/CLL (combination with ibrutinib) 2H 2022: CI-8993 in solid tumors (monotherapy)									



End of Corporate Presentation

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## Emavusertib PK/PD

#### Attractive PK profile supports BID dosing and high target suppression



Data from TakeAim lymphoma clinical study

Data from preclinical study of target inhibition

### Dose Response in Single Patient at Multiple Dose Levels

Patient in dose escalation phase of TakeAim Lymphoma study



Clear dose response observed

Tumor burden reduced with each increased dose

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### **Emavusertib Clinical Plan**

#### Ongoing clinical studies in AML/MDS and B cell cancers



Preclinical data demonstrate synergy with azacitidine

and venetoclax

• If patients who relapsed on ibrutinib can get clinical response with combination, it is likely impact of adding emavusertib

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#### Emavusertib in B Cell Cancers



### **Emavusertib in B Cell Cancers**

Proof-of-Concept demonstrated with monotherapy; Combination therapy study in progress

#### **Monotherapy**

*Ph1 proof-of-concept study demonstrated durable tumor reduction in monotherapy* 



<sup>2020</sup> American Society of Hematology (ASH) Conference Presentation

#### **Combination Therapy**

Blocking both IRAK4 and BTK may be better than blocking either one alone

#### **<u>4 Targeted Patient Populations</u>**

- BTKi naïve, Marginal Zone Lymphoma
- BTKi naïve, Primary CNS Lymphoma
- BTKi naïve, ABC-DLBCL
- Patients (any tumor type) who have relapsed after adaptive resistance to ibrutinib

#### TakeAim Lymphoma Study in Progress

initial data coming in 1H 2022



#### Emavusertib in AML/MDS



### Emavusertib in AML and MDS

TakeAim Leukemia Trial - Open-label, single arm, Phase 1/2 dose escalation and expansion study



Data extraction date: Dec 16, 2021

1) These are non-targeted patients, due to lack of Spliceosome or FLT3 mutation, this population will be addressed in the combination therapy study; 2) One patient was not response evaluable because of discontinuation due to patient decision; 3) Two AML patients have both a spliceosome and FLT3 mutation and are included in both populations (there are 13 total evaluable patients with Spliceosome or FLT3 mutation)

### Safety Profile for emavusertib

#### 49 total patients with AML/MDS treated with emavusertib

	Recommended Phase 2 Dose							
Grade 3+ Treatment-Related Adverse Event	200	0 mg BID (N = 3)	300 (I	300 mg BID (N = 26) n (%)		0 mg BID N = 17)	500 mg BID (N = 3)	
		n (%)				n (%)		n (%)
Number of patients having grade 3+ treatment-related AEs	1	(33.3)	6	(23.1)	6	(35.3)	2	(66.7)
Alanine aminotransferase increased	1	(33.3)	0		0		0	
Blood creatine phosphokinase increased	0		1	(3.8)	0		0	
Dizziness	1	(33.3)	0		0		0	
Dyspnoea	0		0		1	(5.9)	0	
Enterobacter infection	0		0		1	(5.9)	0	
Fatigue	0		0		1	(5.9)	0	
Gastrointestinal haemorrhage	0		1	(3.8)	0		0	
Hypophosphataemia	0		1	(3.8)	0		0	
Hypotension	0		1	(3.8)	0		0	
Lipase increased	0		2	(7.7)	0		0	
Platelet count decreased	0		1	(3.8)	0		0	
Presyncope	0		0		1	(5.9)	0	
Rhabdomyolysis	0		1	(3.8)	2	(11.8)	1	(33.3)
Syncope	0		0		0		1	(33.3)
Data extraction data: Dec 16, 2021			<b>N</b>					、 <i>,</i>

Well-tolerated and manageable AE profile at Recommended Phase 2 Dose

1. Data for the two patients that have escalated from 300 mg BID to 400 mg BID were included in the 400 mg BID dose group

No dose-limiting myelosuppression reported, which is a life-threatening problem characteristic of many cancer treatments, making emavusertib favorable for combinations



### Clinical Data: R/R AML Patients with Spliceosome Mutation

#### Patient Population #1



## Unmet Need for R/R AML Patients with Spliceosome Mutation

No approved targeted therapies and no unified standard of care for these patients

- Spliceosome mutations occur in ~10% of AML patients<sup>1</sup>
  - These mutations create a chronic inflammatory marrow microenvironment<sup>2</sup>, which impairs hematologic recovery<sup>3</sup>
  - Ability to achieve CR is impaired in patients with U2AF1/SF3B1 mutation<sup>4</sup>
- There are no effective therapies for patients R/R to Ven/HMA
  - no unified standard of care





Opportunity to meaningfully improve outcomes in R/R AML patients with spliceosome mutations

AML Spliceosome Mutation

1) DiNardo et al, Hematology Am Soc 2016; 2) Smith et al. Nat Cell Biol 2019; 3) Trowbridge JEM 2021. Ochi Cancers 2021. Hou, Oncotarget 2016; 4) Hou, Oncotarget 2016; 5) Maiti et al. Haemtologica 2021

### Encouraging Clinical Activity in R/R AML Patients with Spliceosome Mutation

Achieved 40% CR/CRh rate, with treatment duration >6 months to date in responding patients

100%	AML										
100%	spliceosome and FLT3	Dv	Dose	Risk Category (ELN)	Baseline Molecular Mutations	Prior Therapies		Duration on	Blasts	Blasts Best	% Change
90%		DX	(BID)			# Lines	Therapy	(mos)	Baseline	Response <sup>1</sup>	76 Change
80%		sAML	300 mg	Intermediate	RUNX1, WT1, SF3B1	1	decitabine	7	23	0	-100% (CRh)
50%		sAML	300 mg	Intermediate	U2AF1, FLT3, BCOR, WT1	1	decitabine/venetoclax	6+	39	4	-90% (CR)
40% 30%	and FLT3 Spliceosome	AML	300 mg	Intermediate	U2AF1, NRAS	4	cytarabine/idarubicin, decitabine/venetoclax, fludarabine/cyclophosphamide /methotrexate, azacitidine	2.5	33	16	-52%
- 20% 9	pliceosome	AML	300 mg	Adverse	FLT3, SF3B1, NRAS, PTPN11, RAD21, RUNX1, TET2, GATA, STAT3	4	cytarabine/daunorubicin, decitabine, decitabine/venetoclax, gilteritinib	2.6	95	77	-19%
0%	CR	sAML	400 mg	Adverse	SF3B1, DNMT3A, P53	1	azacitidine/venetoclax	2	20	23	15%
070	Baseline Best Response	Data extractio 1) Two AML p	on date: Dec 16 patients have bo	, 2021; "+" in Duration o th a spliceosome and FL	f Treatment indicates the patient T3 mutation and are included in	remains on t both populati	reatment as of the date of data extraction. ions (there are 13 total evaluable patients with	Spliceosome or FLT3	mutation).		

Emavusertib achieved CR/CRh responses, Spliceosome despite transformed AML being historically highly resistant to treatment

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AML

Mutation



## Clinical Data: R/R MDS Patients with Spliceosome Mutation

#### Patient Population #2



## **Spliceosome Mutations Common in MDS**

Large unmet need for R/R MDS patients with spliceosome mutation

- Spliceosome mutations (U2AF1/SF3B1) are the most prominent mutations in MDS, accounting for ~30% of all MDS patients<sup>1</sup>
  - These mutations create a chronic inflammatory marrow microenvironment<sup>2</sup>, which impairs hematologic recovery<sup>3</sup>
- There are no effective therapies for patients R/R to HMA: chemotherapy is standard of care



#### **MDS** Current standard of care offers limited therapeutic benefit to patients Spliceosome **Mutation**

1) Ochi Cancers 2021.; 2) Smith et al. Nat Cell Biol 2019.; 3) Trowbridge JEM 2021. Ochi Cancers 2021.; 4) Jabbour et al Cancer 2010; Prebet et al., JCO 2011; Duong et al, Clin Lymphoma Myeloma Leuk, 2013

#### Encouraging Clinical Activity in R/R MDS Patients with Spliceosome Mutation

Marrow blast reduction achieved in 5 of 7 patients, including 4 marrow CRs



Consistent tumor burden reduction in targeted population with limited options

MDS Spliceosome Mutation

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### Clinical Data: R/R AML Patients with FLT3 Mutation

#### Patient Population #3



## Emavusertib in AML/MDS with FLT3 Mutation

IRAK4 inhibition is synergistic with, and prevents adaptive resistance to, FLT3 inhibition

IRAK1/4i Synergy with FLT3i



IRAK4 activity increases after treatment of MLL-AF9 FLT3-ITD cells with FLT3i (quizartinib)

IRAK4 activity also shown to increase in patients during gilteritinib treatment



Combination of IRAK1/4 and FLT3 inhibition (quizartinib) is synergistically cytotoxic

Viability of MLL-AF9; FLT3-ITD cells treated for 3 days with DMSO (vehicle control), quizartinib (0.5 μM), IRAKi (10 μM), or quizartinib and IRAKi



Mice die if treated FLT3i (quizartinib) alone, but survive if treated with combination of IRAK1/4i and FLT3i

Leukemia-free survival of NRGS mice xenografted with AML-019

Preclinical data demonstrates synergistic effect of dual inhibition

FLT3 Mutation

AML

#### Encouraging Clinical Activity in R/R AML Patients with FLT3 Mutation

Achieving disease modification in heavily pretreated patients with emavusertib monotherapy



Data extraction date: Dec 16, 2021; "+" in Duration of Treatment indicates the patient remains on treatment as of the date of data extraction.

1) Two AML patients have both a spliceosome and FLT3 mutation and are included in both populations (there are 13 total evaluable patients with Spliceosome or FLT3 mutation).

Significant marrow blast reduction and FLT3 mutation eradicated in 2 out of 3 patients

AML FLT3

Mutation



#### VISTA Biology and CI-8993



## Incorporated Learnings from CI-8993 Prior Clinical Study

Pharmacodynamic activity (cytokine release) observed in initial clinical study

CI-8993 is the first anti-VISTA monoclonal antibody (IgG1k) to be studied in clinical trials

- Janssen initiated a Ph1 study in 2016 and enrolled 12 patients<sup>1</sup>
- Transient Cytokine Release Syndrome (CRS) was observed in several patients at 0.15mg/kg
- Transient grade 3 CRS-associated encephalopathy observed at 0.3mg/kg, after which Janssen halted the study

#### **CI-8993 Protocol Designed to Manage Expected CRS**

- CRS is likely an on-target effect; indicates the drug is hitting the target and inducing immune response
- NCCN guidelines were issued in 2018; oncology community now familiar with managing CRS
- Desensitizing step-dose of CI-8993, and pre/post-infusion medication, administered to mitigate CRS

## CI-8993 Clinical Plan: Phase 1 Dose Escalation Study

On-going clinical study to determine safety



#### **Patient Population**

• Patients with advanced refractory solid tumors (includes mesothelioma, melanoma, NSCLC, TNBC)

#### Treatment

- Bi-weekly dosing
- Plan to mitigate potential toxicities by co-medication and step dosing (desensitization)

#### **Objectives**

- Safety, PK/PD, tolerability during dose escalation
- Anti-cancer activity during expansion

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## CI-8993 Has Demonstrated Favorable Safety Profile

Successfully managed expected CRS at all levels dosed to date

All Grades Treatment-Related Adverse Events	0.1	l5 mg/kg (N = 7)	0.3 mg/kg (N = 5)		
Occurring in 2+ Patients		n (%)	n (%)		
Number of patients having any grade treatment-related AEs	4	(57.1)	4	(80.0)	
Headache	3	(42.9)	1	(20.0)	
Chills	2	(28.6)	1	(20.0)	
Alanine aminotransferase increased	1	(14.3)	1	(20.0)	
Fatigue	2	(28.6)	0		
Hypotension	0		2	(40.0)	

Grade 3+ Treatment-Related Adverse Events	ents n (%)		0.3 mg/kg (N = 5) n (%)	
Number of patients having grade 3+ treatment-related AEs	0		1	(20.0)
Leukopenia	0		1	(20.0)

Data extraction date: Dec 11, 2021.

One additional patient experienced grade 2 treatment-related AE after receiving step dose and chose not to proceed to full dose.

*Expected stimulation of immune response-related AEs* 

Successfully managed at all levels dosed to date

#### CI-8993 has successfully cleared dose level where Janssen observed DLT