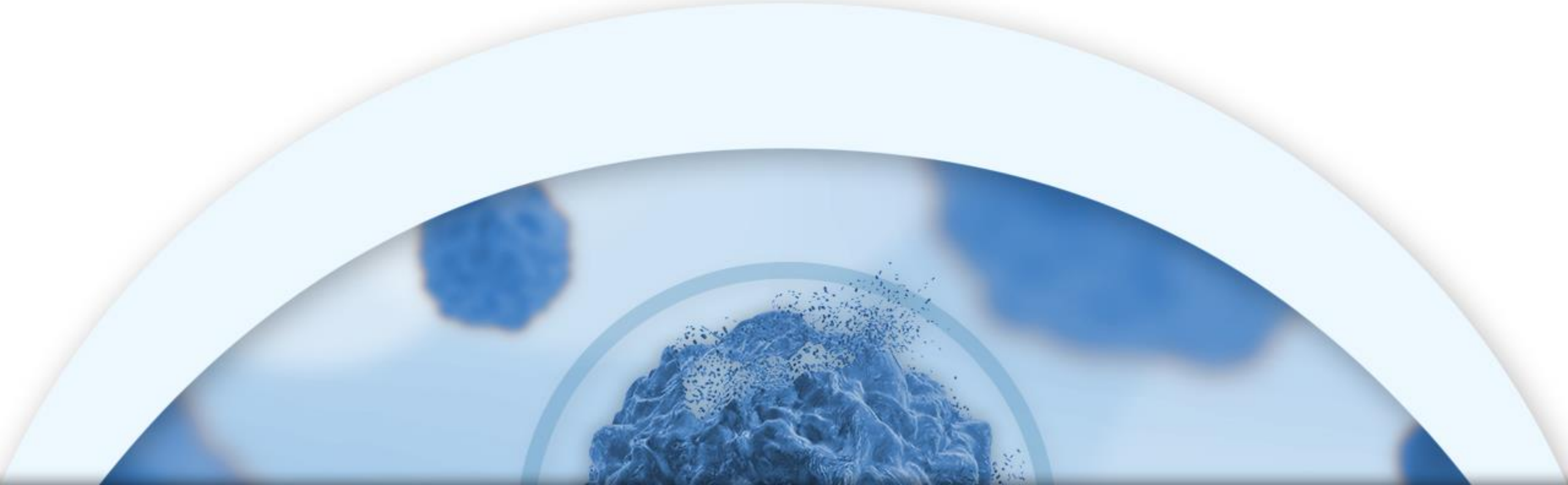
Corporate Presentation

NASDAQ: CRIS



Cautionary Note Regarding Forward Looking Statements

This presentation contains certain forward-looking statements about Curis, Inc. (“we,” “us,” or the “Company”) within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. Words such as “expect(s),” “believe(s),” “will,” “may,” “anticipate(s),” “focus(es),” “plans,” “mission,” “strategy,” “potential,” “estimate(s)”, "intend," "project," "seek," "should," "would" and similar expressions are intended to identify forward-looking statements. Forward-looking statements are statements that are not historical facts, reflect management’s expectations as of the date of this presentation, and involve important risks and uncertainties. Forward-looking statements herein include, but are not limited to, statements with respect to the timing and results of future clinical and pre-clinical milestones; the timing of future preclinical studies and clinical trials and results of these studies and trials; the clinical and therapeutic potential of our drug candidates; the proposed focus on emavusertib and management’s ability to successfully achieve its goals. These forward-looking statements are based on our current expectations and may differ materially from actual results due to a variety of important factors including, without limitation, risks relating to: whether and when the U.S. Food and Drug Administration may remove the partial clinical hold on the combination therapy phase (Phase 1b) and the expansion phase (Phase 2a) of the Phase 1/2 TakeAim Leukemia trial, or may take further regulatory action with regard to this trial, whether any of our drug candidates will advance further in the clinical development process and whether and when, if at all, they will receive approval from the FDA or equivalent foreign regulatory agencies; whether historical preclinical results will be predictive of future clinical trial results; whether historical clinical trial results will be predictive of future trial results; whether any of our drug candidate discovery and development efforts will be successful; whether any of our drug candidates will be successfully marketed if approved; our ability to achieve the benefits contemplated by our collaboration agreements; management’s ability to successfully achieve its goals; the sufficiency of our cash resources; our ability to raise additional capital to fund our operations on terms acceptable to us or the use of proceeds of any offering of securities or other financing; general economic conditions; competition; and the other risk factors contained in our periodic and interim reports filed with the Securities and Exchange Commission which are available on the SEC website at www.sec.gov. You are cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events, except as required by law.

Corporate Overview

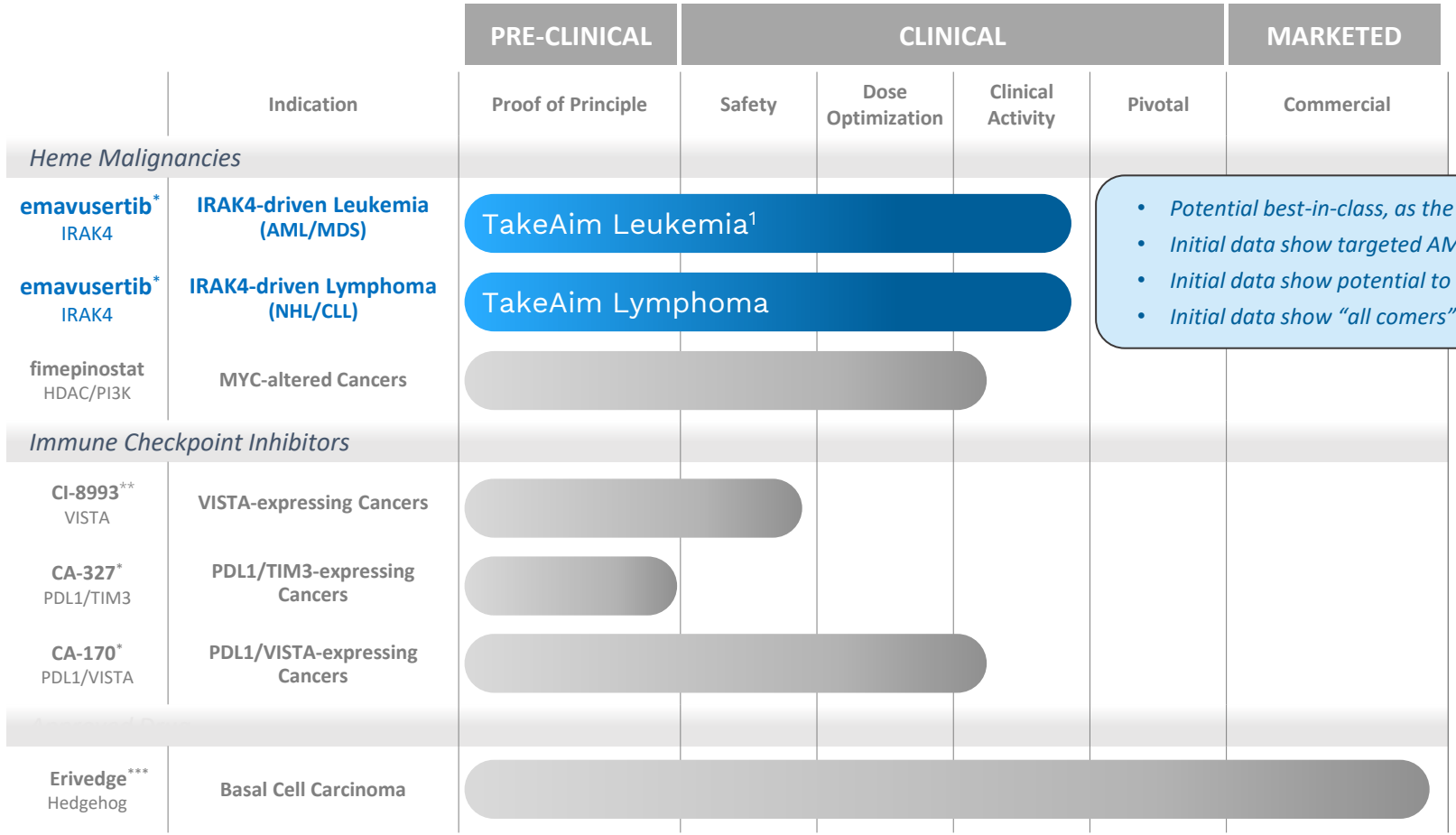
Summary

Investment Thesis	Curis develops novel cancer therapeutics in areas of significant unmet patient need *Cash runway into 2025 – $98.7M as of Sept 30, 2022*
Lead Program	**Emavusertib is positioned to become the cornerstone agent in heme malignancies** • IRAK4-L is the most prevalent driver of disease in AML/MDS[1,2] • IRAK4i has a synergistic effect when combined with ibrutinib in NHL
Market Opportunity	AML/MDS: 317K patients[3] *(current standard of care is HMA)* NHL/CLL: 1.8M patients[3] *(current standard of care is BTKi)*
2023 Milestones	Mid-Year: Full release of clinical hold on TakeAim Leukemia Mid-Year: Agreement with FDA on Recommended Phase 2 Dose 2nd Half: Updated data from both the R/R Leukemia and R/R Lymphoma studies

1) Smith et al. Nat Cell Biol 2019; 2) Saygin, et al. J Hematol Oncol. 2017 Apr 18; 3) 2022 Prevalence Data DRG Clarivate

Pipeline

Curis develops first-in-class cancer therapeutics



Lead Program

- *Potential best-in-class, as the only IRAK4 inhibitor that hits both IRAK4 and FLT3*
- *Initial data show targeted AML/MDS patients can achieve responses in monotherapy*
- *Initial data show potential to overcome BTKi resistance in patients with NHL/CLL*
- *Initial data show "all comers" AML/MDS patients may achieve responses in combination*

[1] *In April 2022, the U.S. Food and Drug Administration ("FDA") placed the TakeAim Leukemia study on partial clinical hold. In August 2022, the FDA notified Curis that it may resume enrollment in the monotherapy dose finding phase of the study. The partial hold remains in place for the combination therapy and expansion phases of the study.*

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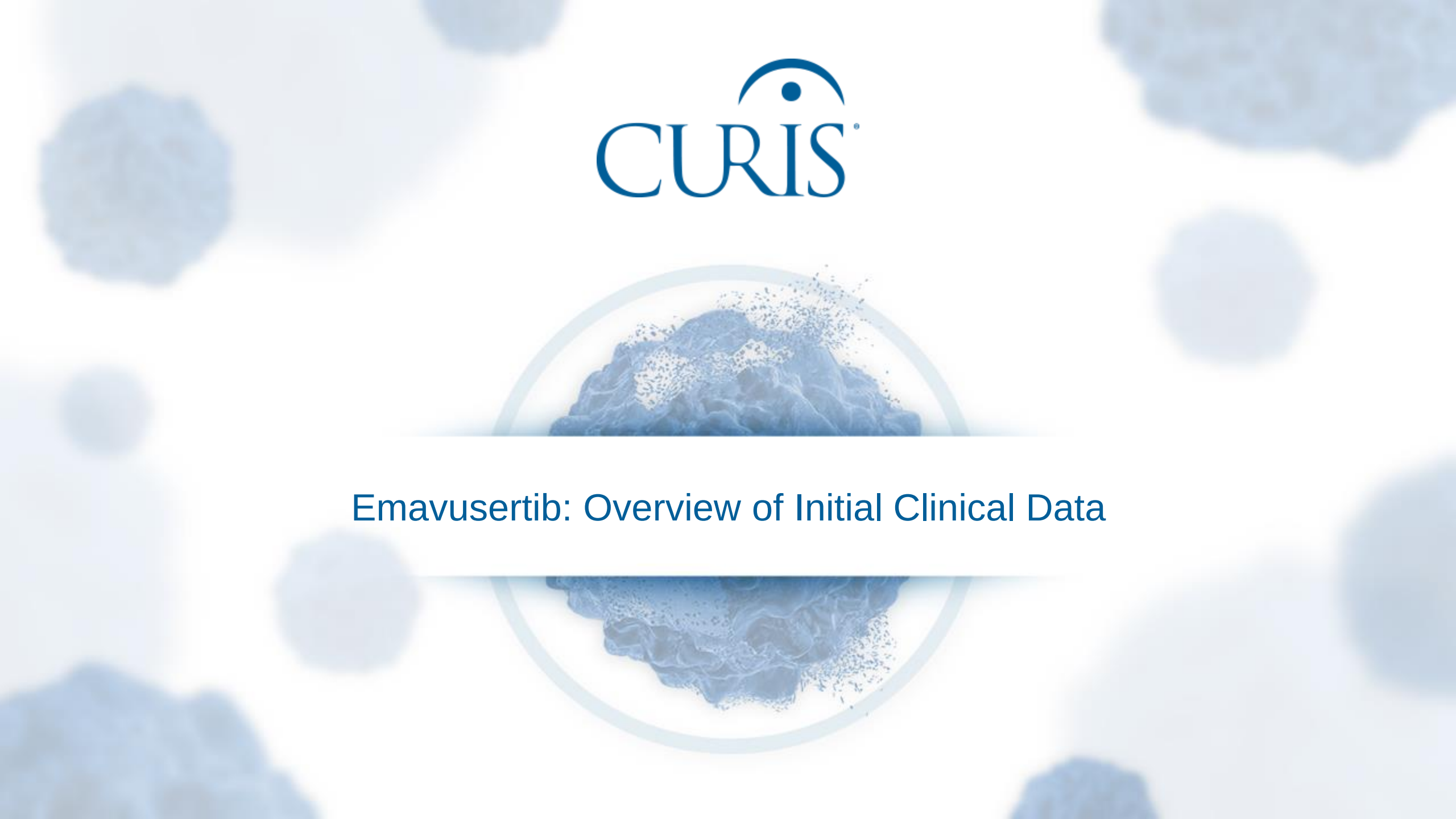
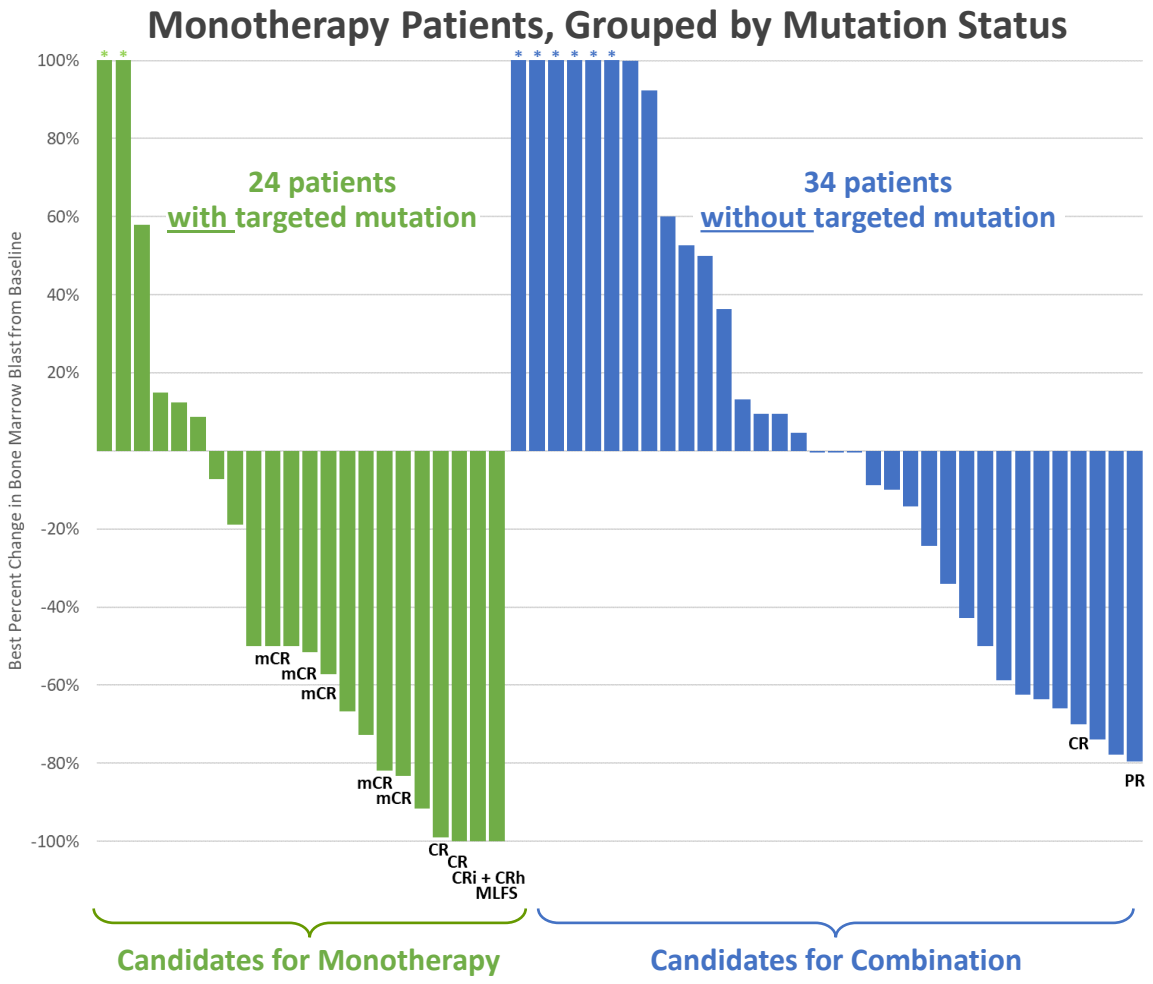


Emavusertib: Overview of Initial Clinical Data

Emavusertib Overview

Initial clinical data support development strategy for novel IRAK4 inhibitor

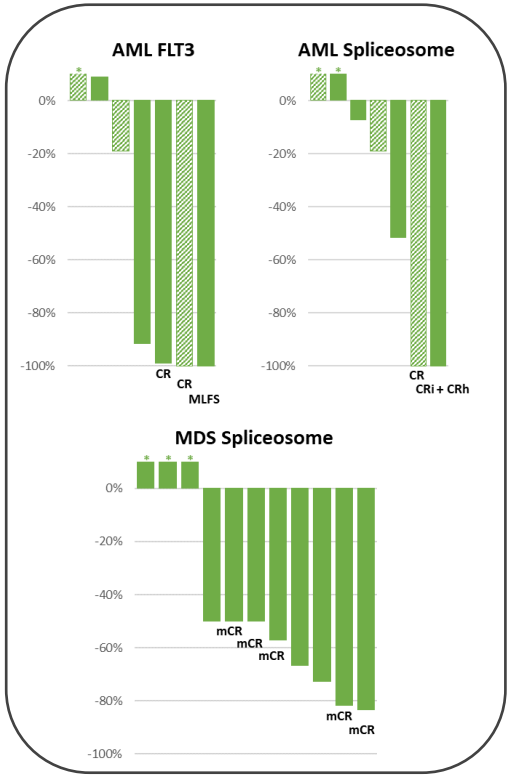


* *Indicates the graphic cutoff as 100%*

2 additional AML patients with spliceosome mutation had no post-treatment bone marrow assessment, but reported progressive disease and were considered as response evaluable

with targeted mutations

Monotherapy



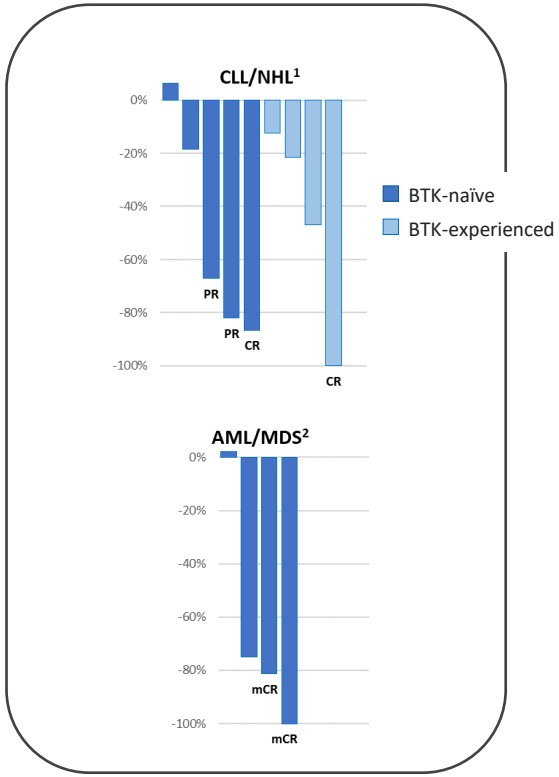
* *Indicates the graphic cutoff as 10%*

3 patients have both a FLT3 and spliceosome mutation and are included in both populations

2 additional AML patients with spliceosome mutation had no post-treatment bone marrow assessment, but reported progressive disease and were considered as response evaluable

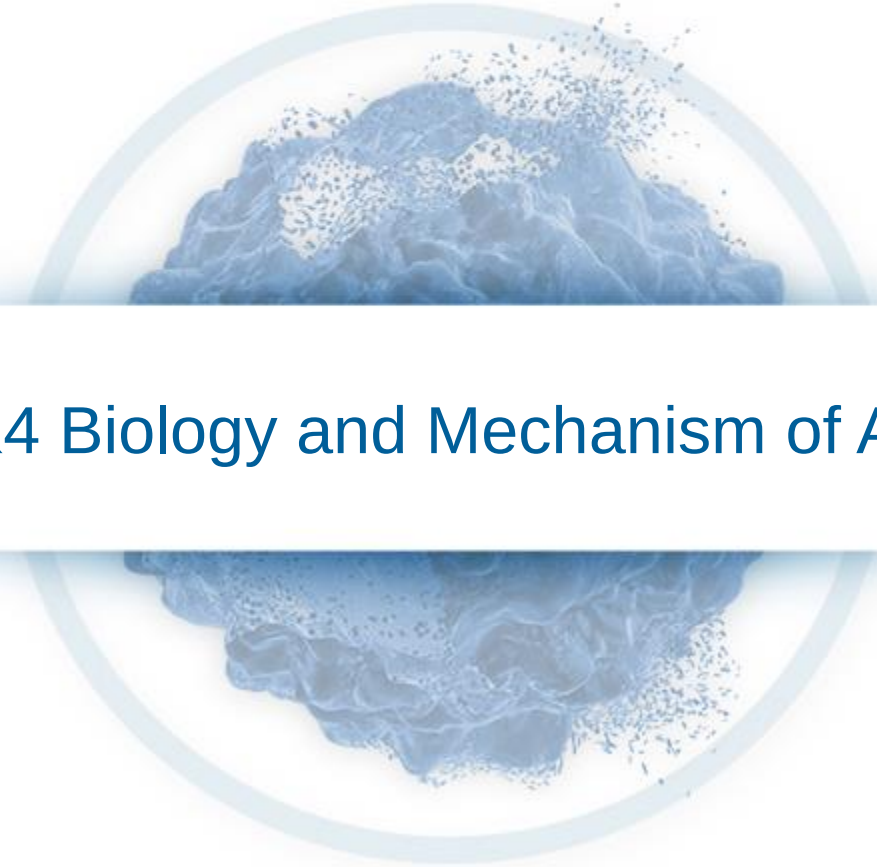
all comers

Combination



[1] *in combination with ibrutinib*
[2] *in combination with venetoclax*

CURIS



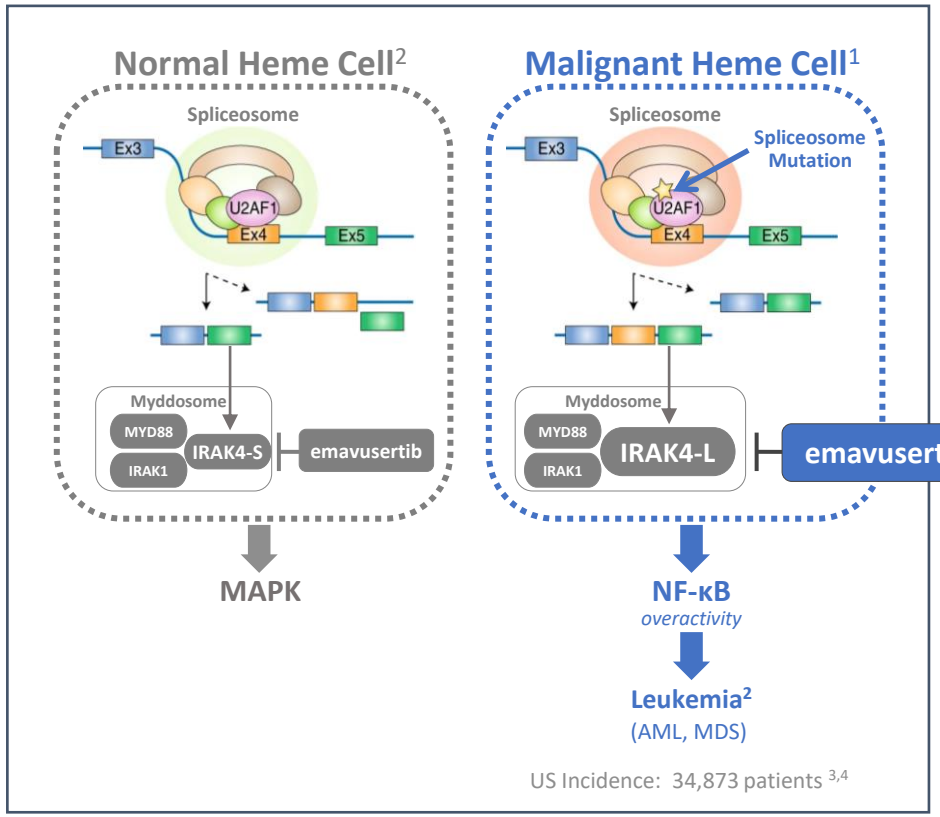
IRAK4 Biology and Mechanism of Action

Emavusertib Mechanism of Action

IRAK4 is a novel and important target across multiple heme malignancies

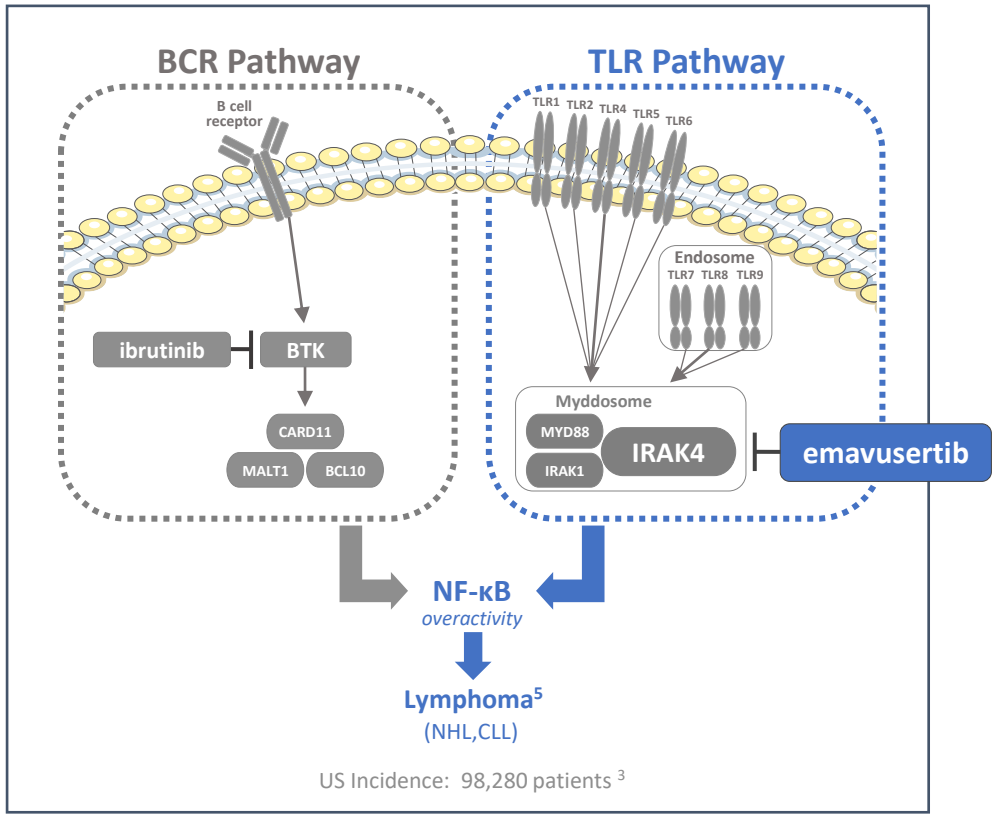
IRAK4 in AML/MDS

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 (2nd 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 Unique Molecular Fingerprint

Targeted design specifically engineered to hit key oncogenic targets

The NCI has selected emavusertib for both clinical and non-clinical studies of IRAK4 inhibition in oncology

NCI Selection for IRAK4

Emavusertib Kinase Interaction Map

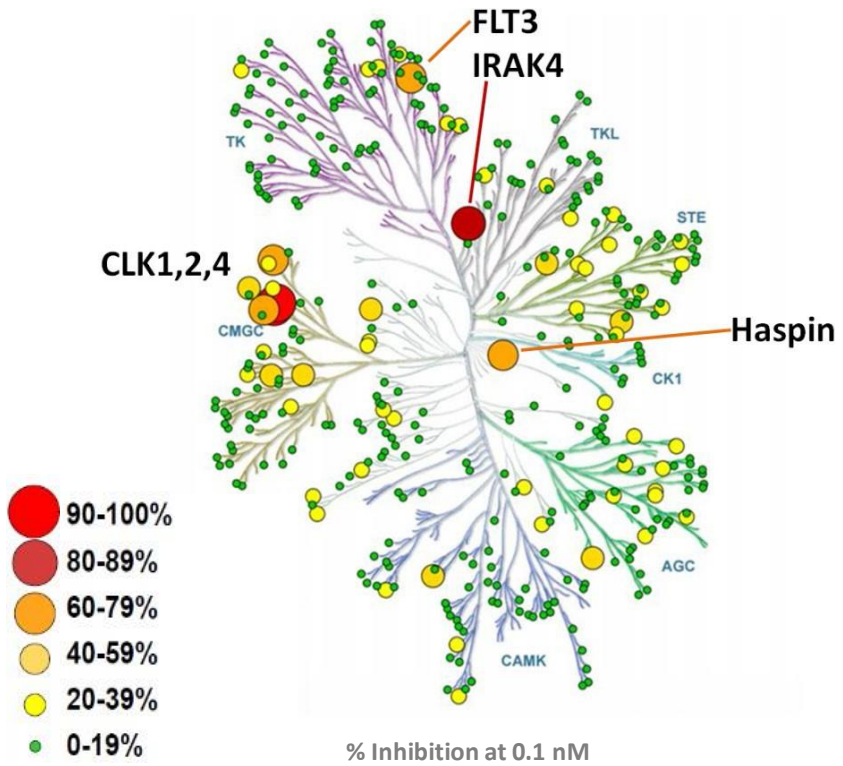


Illustration reproduced courtesy of Cell Signaling Technology

Emavusertib Binding Affinity

Target	K_d 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)

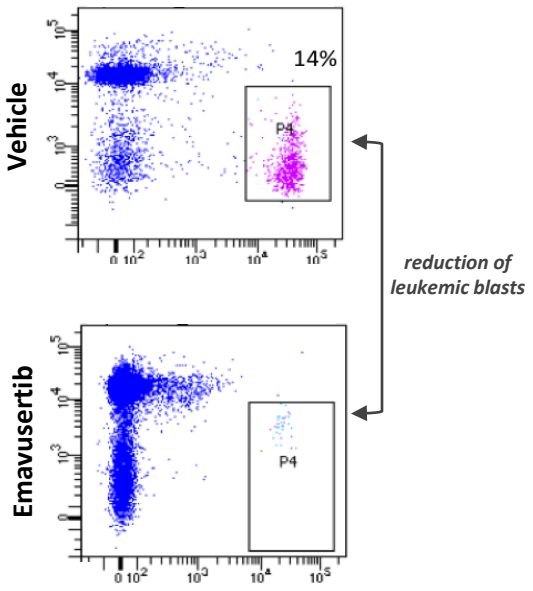
Binds with high affinity to IRAK4

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

Emavusertib Preclinical Data

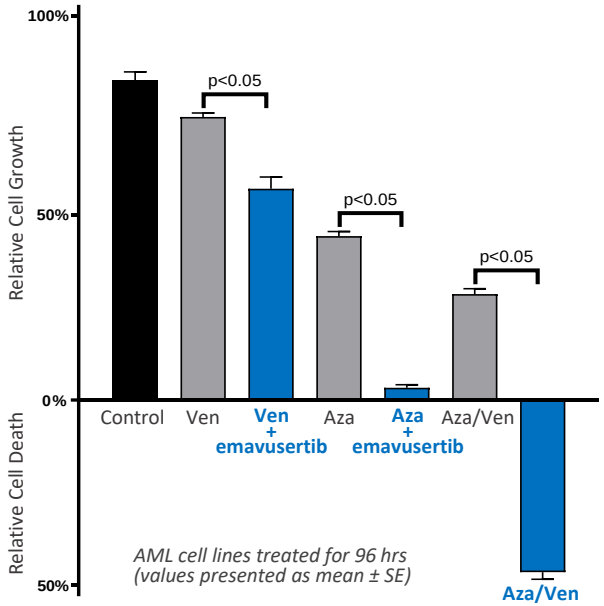
Clear anti-cancer activity suggests broad potential across heme malignancies

AML/MDS Monotherapy



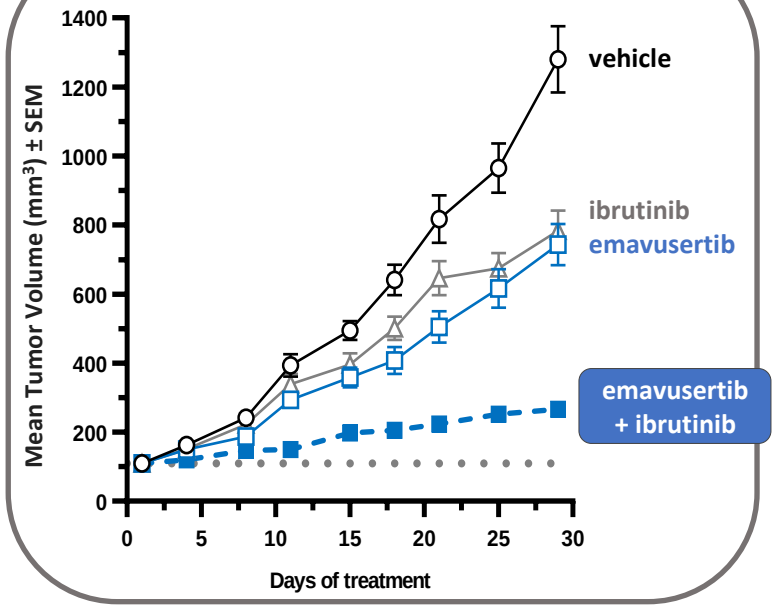
emavusertib demonstrates monotherapy activity in patient-derived xenografts[1]

AML/MDS Combination Therapy



emavusertib demonstrates synergy with both azacitidine and venetoclax in THP-1 model[2]

NHL/CLL Combination Therapy



emavusertib demonstrates synergy with ibrutinib in OCI-Ly10 model[3]

1) Choudhary et al. AACR 2017; 2) Curis AML MDS poster, EHA 2021; 3) Booher et al. Waldenström Roadmap Symposium 2019

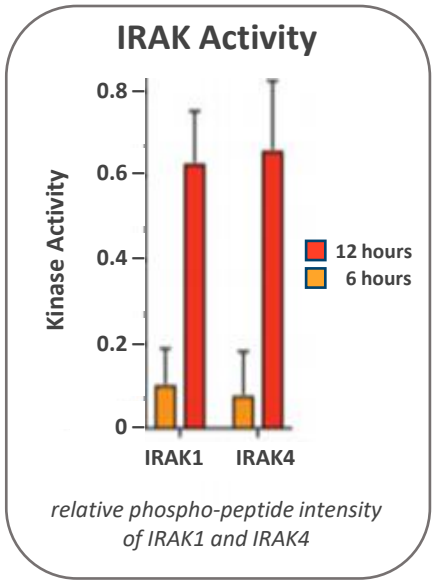
Emavusertib in Leukemia (AML/MDS)

Emavusertib in AML/MDS with FLT3 Mutation

Preclinical data suggest potential to address FLT3 population, as well as spliceosome population

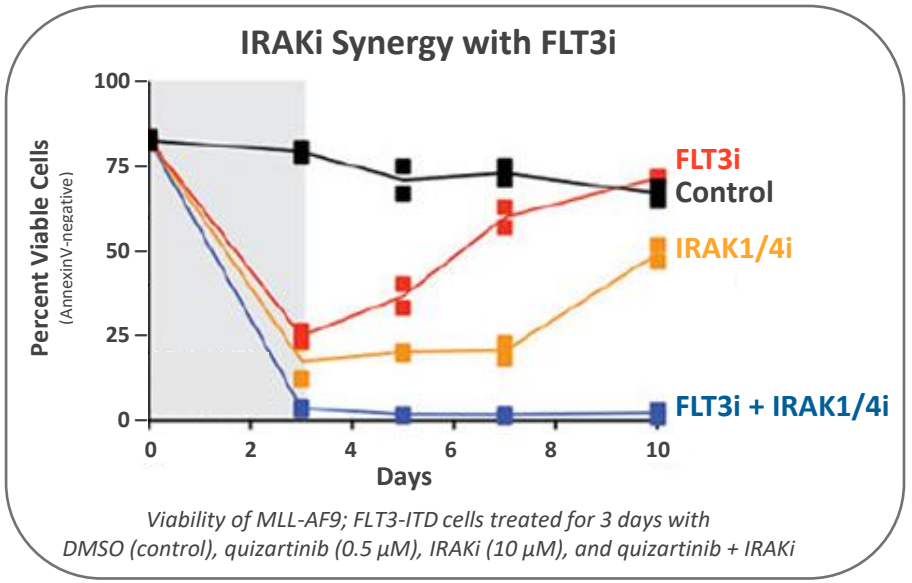
"Concomitant targeting of IRAK1 or IRAK4, alongside FLT3, is the most effective means to overcome the adaptive resistance incurred when targeting FLT3"

IRAK activity increases after treatment with FLT3i



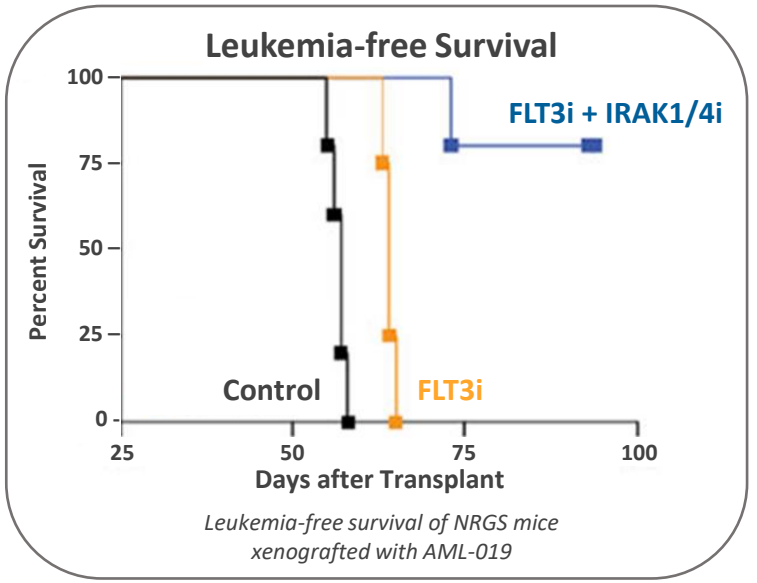
relative phospho-peptide intensity of IRAK1 and IRAK4

IRAK/FLT3 combination is synergistically cytotoxic



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

Mice die if treated FLT3i alone, but survive if treated with IRAK/FLT3 combination

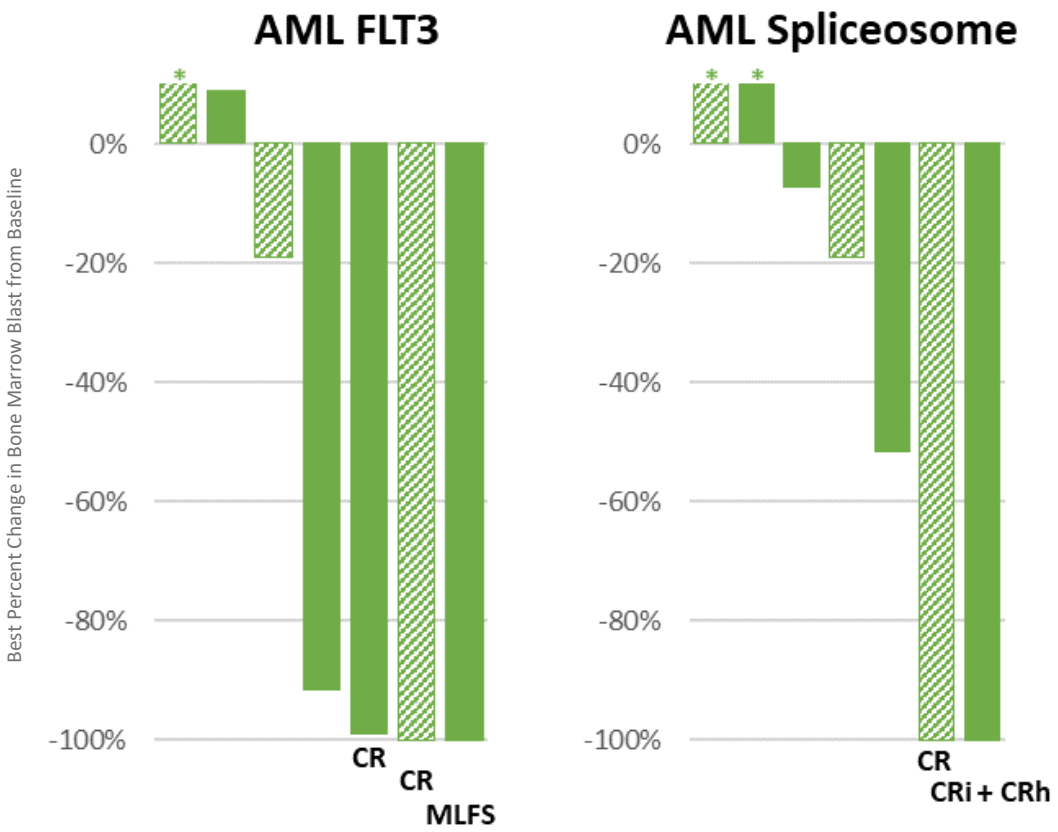


Leukemia-free survival of NRGS mice xenografted with AML-019

Source: Melgar, Sci Transl Med. 2019.

Emavusertib Initial Clinical Data

Potential for clear regulatory path in two target populations: AML FLT3 and AML Spliceosome



* *Indicates the graphic cutoff as 10%*

3 patients have both a FLT3 and spliceosome mutation and are included in both populations

	CR/CRh Rate
FLT3 AML	2/7 (29%)
Spliceosome AML	2/9 (22%)

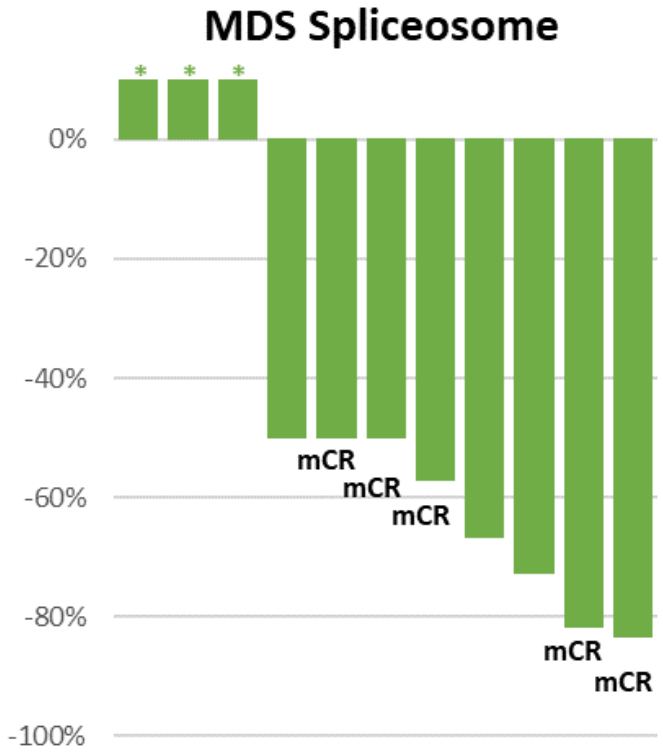
- All patients were R/R, most patients received prior HMA
  - Prognosis for this population is very poor; mOS is 2-4 months[1]
- Full approval has been granted for several AML drugs with a single-arm study using CR/CRh rate as primary endpoint
  - 21% CR/CRh rate for gilteritinib
  - 23% CR/CRh rate for enasidenib

Note: 2 of the 9 AML patients with spliceosome mutation had no post-treatment bone marrow assessment, but reported progressive disease and were considered as response evaluable

1) Maiti et al. Haemtologica 2021

Emavusertib Initial Clinical Data

Clear unmet need in R/R hrMDS – there are no approved therapies



* *indicates the graphic cutoff as 10%*
data include all response evaluable patients with baseline and post-treatment bone marrow assessments at data cutoff

	ORR
Spliceosome MDS	5/11 (45%)

- All patients on study were R/R, most patients received prior HMA
  - Prognosis for this population is very poor; mOS is 4-6 months[1]
  - There are no approved therapies for patients who are R/R to HMA
- U2AF1/SF3B1 are the most prominent mutations in MDS
  - 30% of MDS patients have one of these two spliceosome mutations[2]

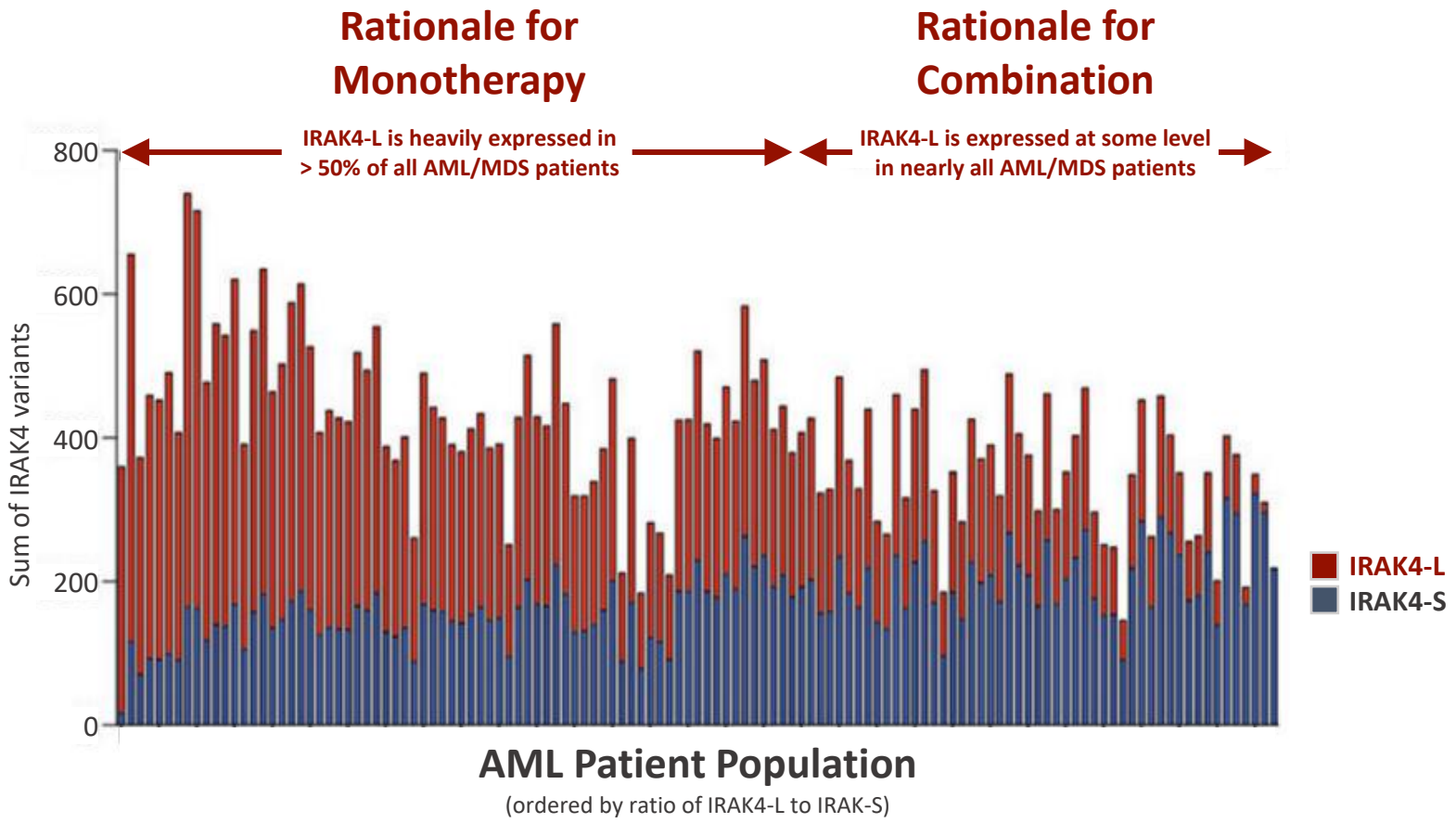
1) Prébet et al, JCO 2011; 2) Ochi Cancers 2021; 3) Jabbour et al Cancer 2010

Emavusertib in AML/MDS

Genomic data provide clear rationale for monotherapy & combination

IRAK4-L is the most prevalent disease driver in AML/MDS[1,2]

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



- *IRAK4 activation stimulates NF-κB and an array of anti-apoptotic factors*
- *emavusertib enhances the anti-cancer efficacy of azacitidine and venetoclax in preclinical models*

1) Smith et al. Nat Cell Biol 2019; 2) Saygin, et al. J Hematol Oncol. 2017 Apr 18; 3) DiNardo, Cortes. Hematology Am Soc Hematol Educ Program. 2016; 4) DiNardo et al. N Engl J Med 2018

Emavusertib in AML/MDS

Clinical data support strategy for monotherapy & combination

In patients with a targeted mutation:

- Enhanced monotherapy efficacy in a genetically-defined population suggests potential for clear path to first NDA submission

In patients without a targeted mutation:

- Initial data show broad anti-cancer activity in non-targeted patients, suggesting emavusertib could enhance the efficacy of other therapies when used in combination

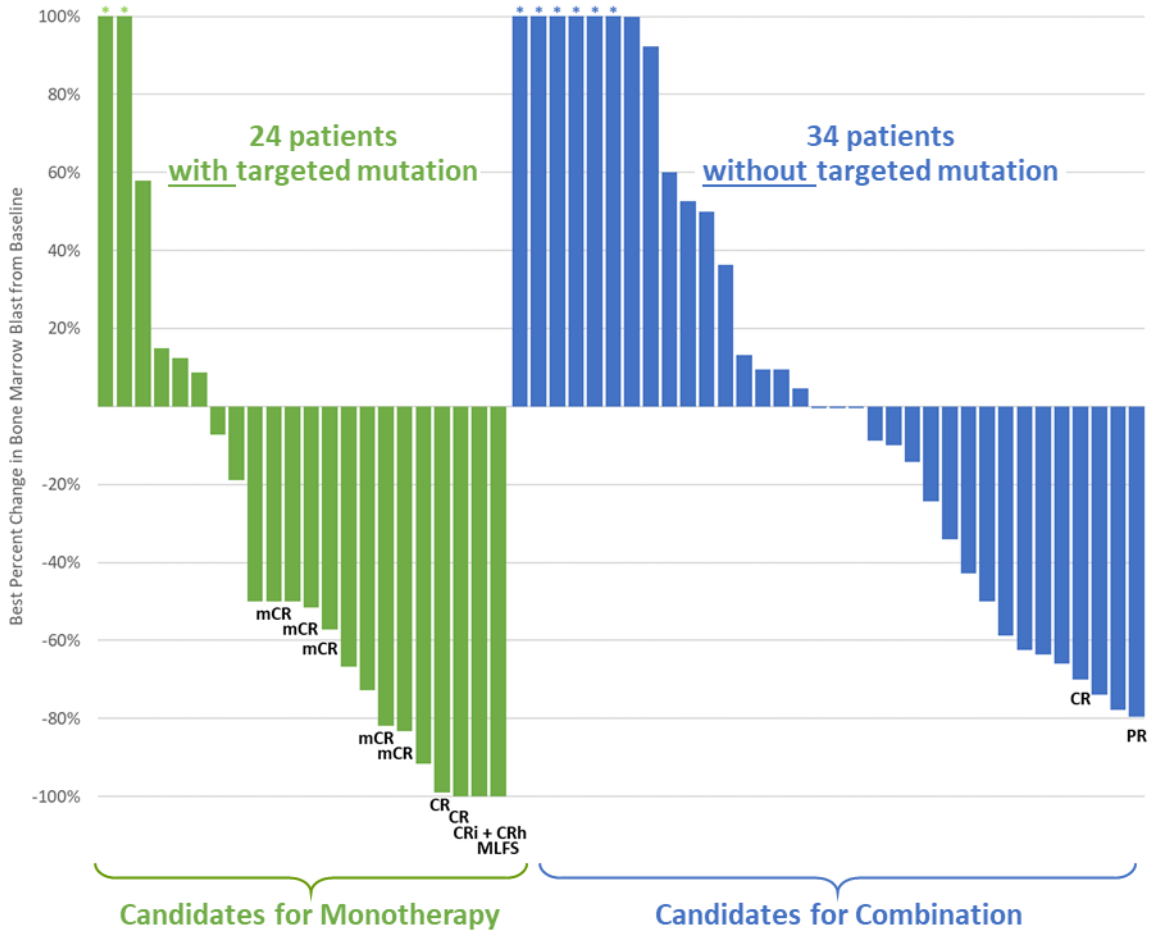
Spliceosome mutations can be used to identify patients with higher levels of IRAK4-L expression

- *U2AF1 and SF3B1 mutations cause overexpression of IRAK4-L[1]*
- *Genetic screening enables the utilization of existing gene panels to identify candidates for monotherapy*

1) Guillamot et al. Nat Cell Biol 2019

Initial Clinical Data in AML/MDS

(patients treated with monotherapy, grouped by mutation status)



* *Indicates the graphic cutoff as 100%*

2 additional AML patients with spliceosome mutation had no post-treatment bone marrow assessment, but reported progressive disease and were considered as response evaluable

Emavusertib in Leukemia (AML/MDS)

The ideal candidate to address the two largest genetically-defined populations in AML/MDS

Emavusertib addresses the two largest genetically-defined populations in AML/MDS:

1) IRAK4-L (>50% of population)[1]
2) FLT3 (>25% of population)[2]

- Clear single-agent activity
- Genetically-defined patient population
- Dual targeting of IRAK4 and FLT3 may prevent adaptive resistance observed with current FLT3 inhibitors[3]

TakeAim

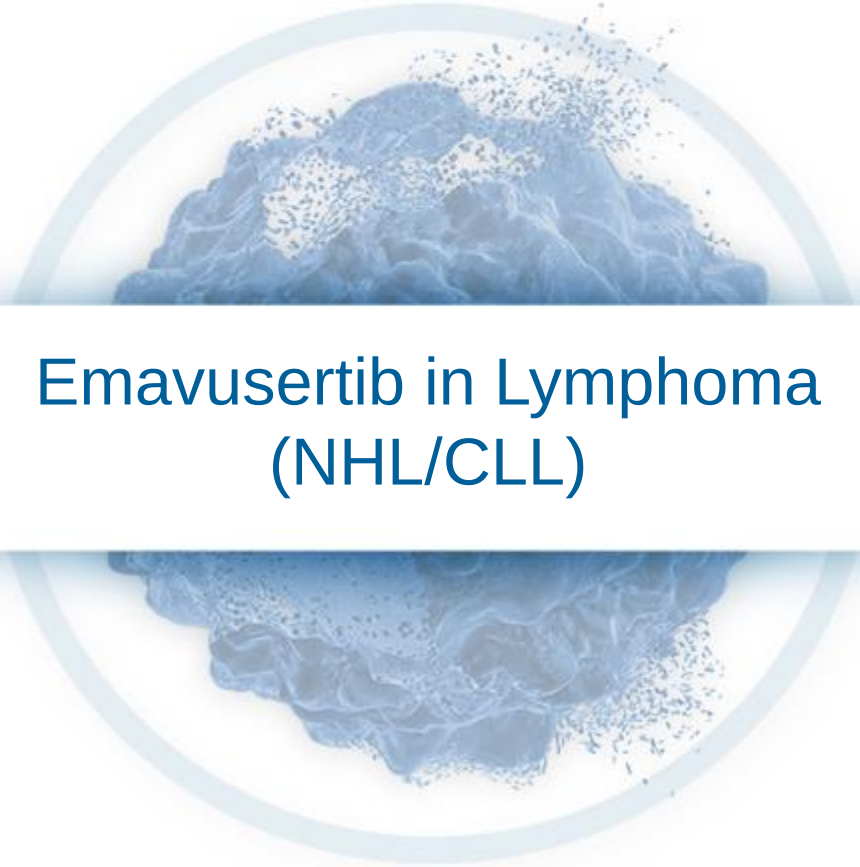
Next Steps

TakeAim Leukemia Study

- *Monotherapy: targeted patients (spliceosome, FLT3)*
- *Combination: all other patients*

1) Smith et al. Nat Cell Biol 2019; 2) Saygin, et al. J Hematol Oncol. 2017 Apr 18; 3) Melgar, Sci Transl Med. 2019

CURIS



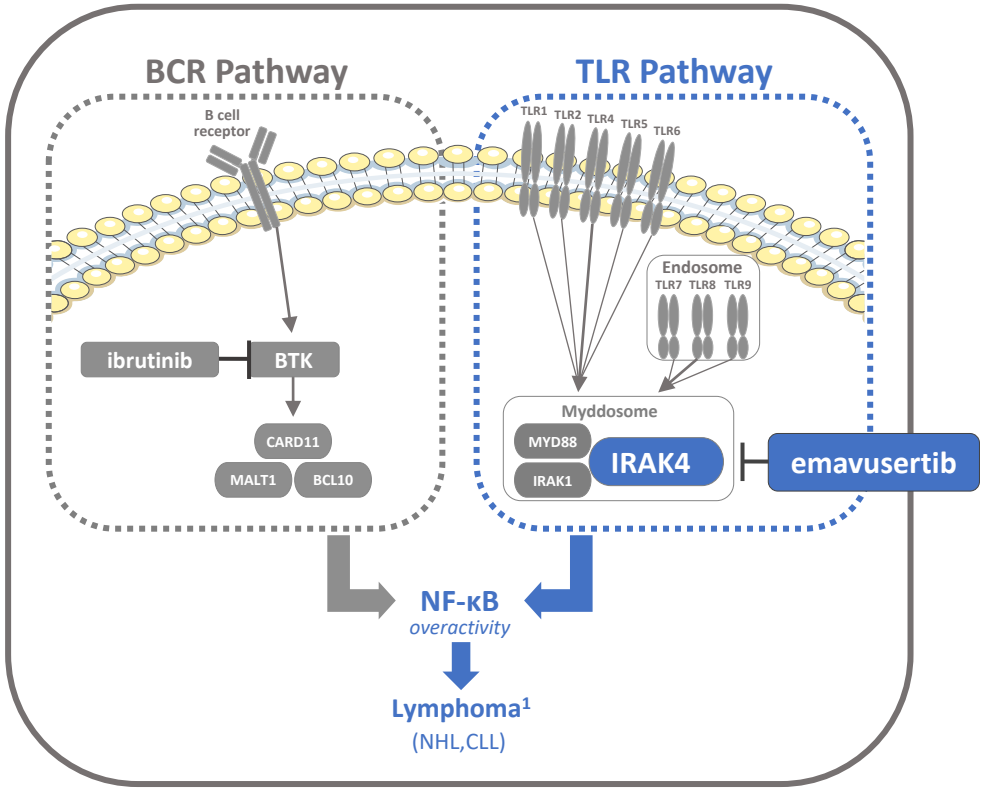
Emavusertib in Lymphoma (NHL/CLL)

Emavusertib in B Cell Cancers

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

NFκB Biology: Two Pathways Drive B Cell Cancers

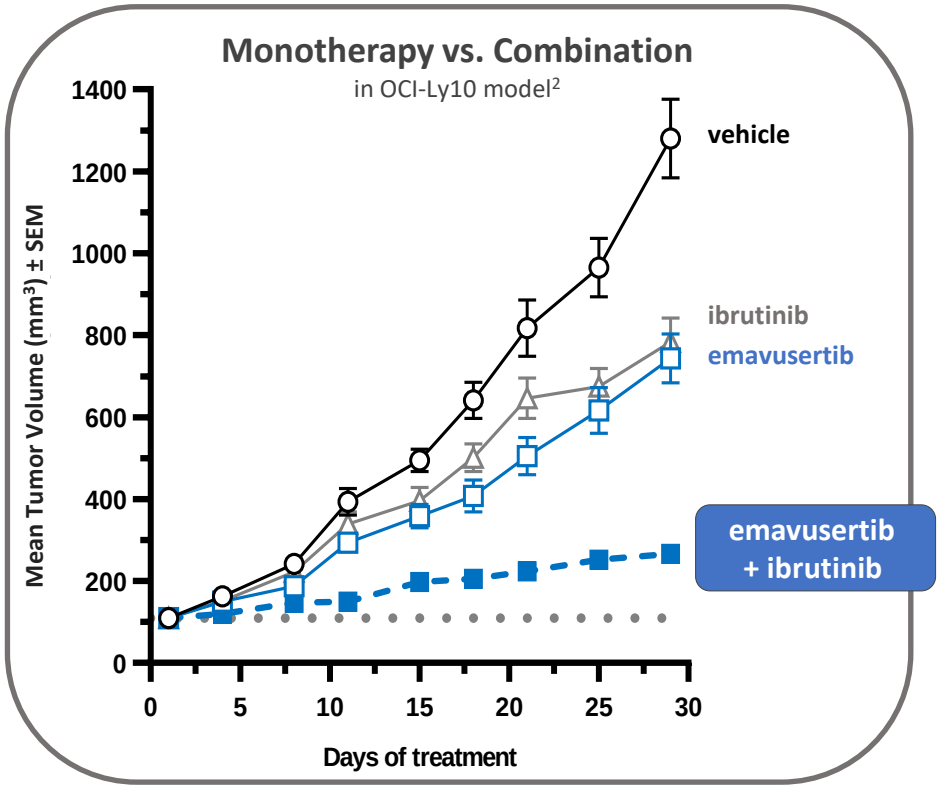
BCR and TLR Pathways independently drive NF-κB overactivity (and NF-κB drives B Cell Cancers)



1) IMBRUVICA Package Insert. Rev 08/2018

Clinical Strategy: Use Combination Therapy

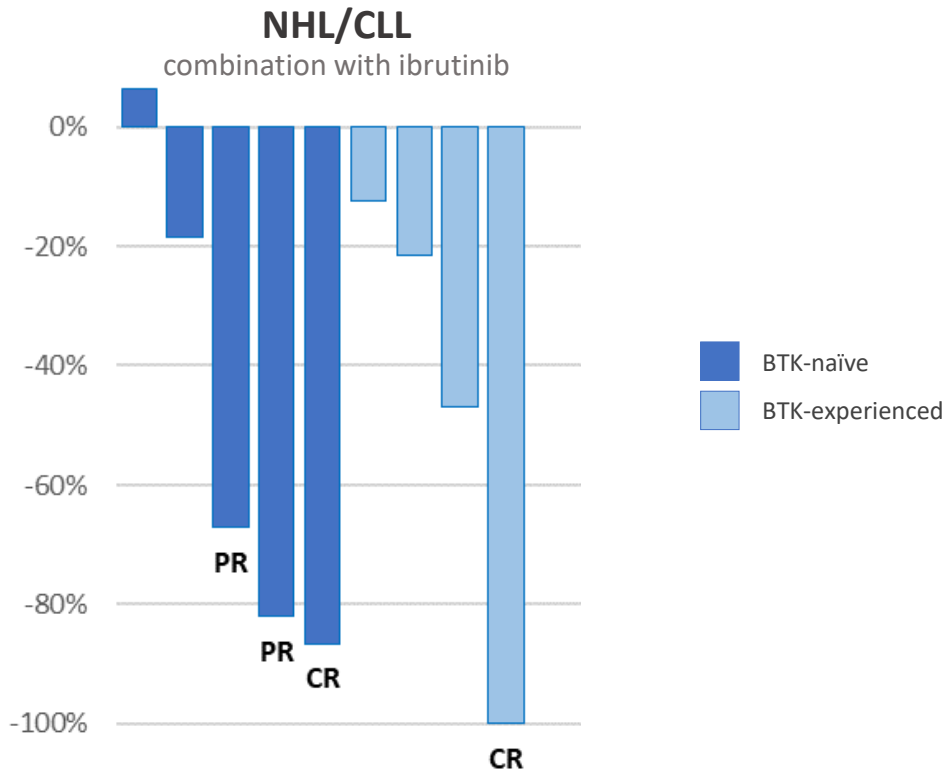
In preclinical testing, blocking both IRAK4 and BTK drove tumor reduction better than blocking either one alone



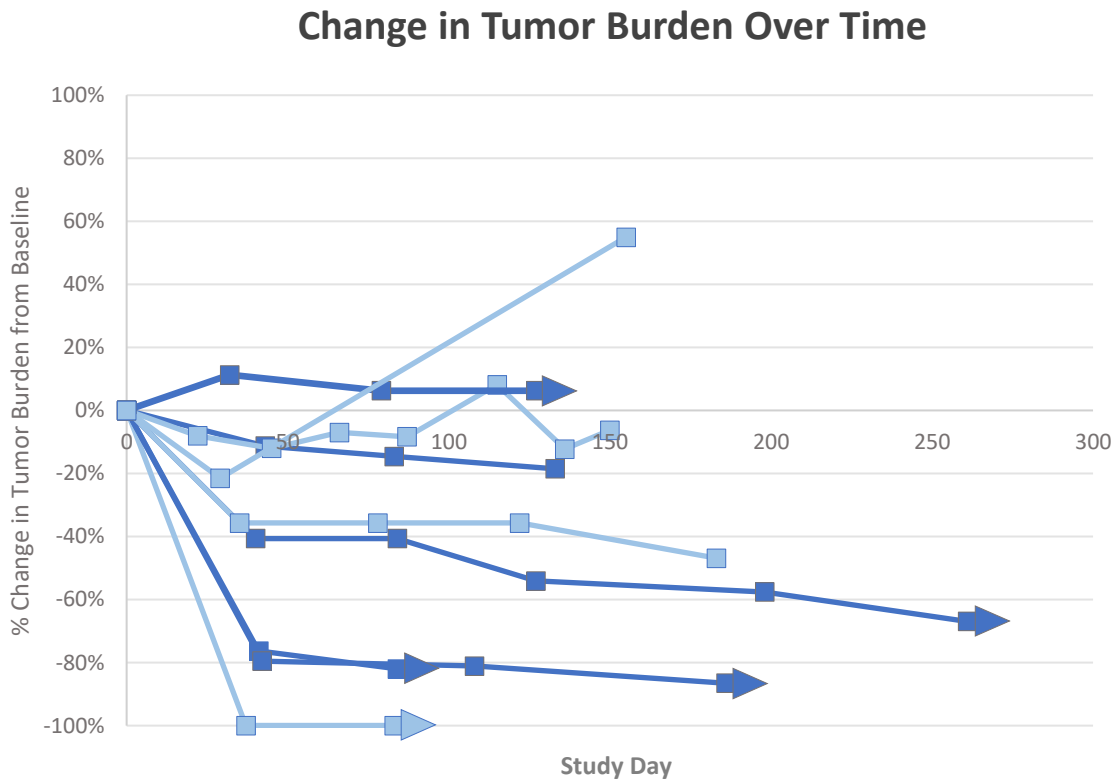
2) Booher et al. Waldenström Roadmap Symposium 2019

Emavusertib Initial Clinical Data

Majority of patients achieved decreases in tumor burden, including complete responses



response evaluable patients with baseline and post-treatment disease assessment at data cutoff



Emavusertib in Lymphoma (NHL/CLL)

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

- Patients are currently 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

TakeAim

Next Steps

TakeAim Lymphoma Study

- *Targeted Patients: MZL, pCNSL*
- *All Comers: patients resistant to BTKi*

Corporate Overview

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Lead Program	**Emavusertib is positioned to become the cornerstone agent in heme malignancies** • IRAK4-L is the most prevalent driver of disease in AML/MDS[1,2] • IRAK4i has a synergistic effect when combined with ibrutinib in NHL
Market Opportunity	AML/MDS: 317K patients[3] *(current standard of care is HMA)* NHL/CLL: 1.8M patients[3] *(current standard of care is BTKi)*
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1) Smith et al. Nat Cell Biol 2019; 2) Saygin, et al. J Hematol Oncol. 2017 Apr 18; 3) 2022 Prevalence Data DRG Clarivate

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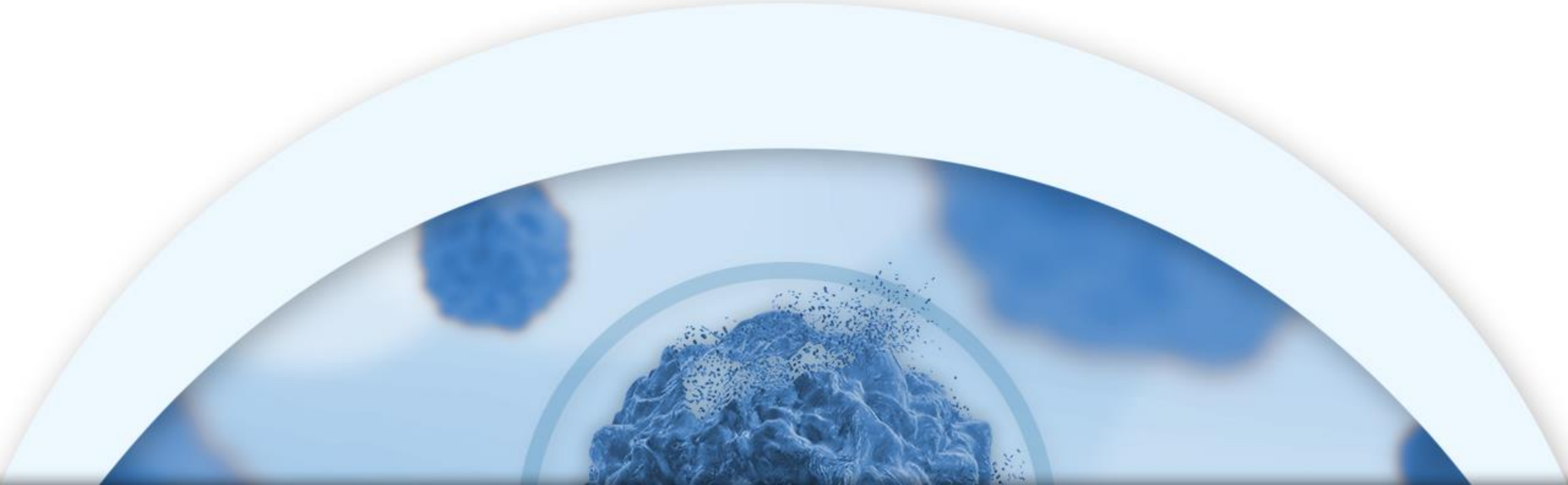
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