MorphoSys

Jean-Paul Kress, M.D., CEO

SVB Securities Global Biopharma Conference | February 2023

FORWARD-LOOKING STATEMENTS

This communication contains certain forward-looking statements concerning the MorphoSys group of companies (referred to as MorphoSys in the rest of the text), including the expectations regarding Monjuvi's ability to treat patients with relapsed or refractory diffuse large B-cell lymphoma, the further clinical development of tafasitamab, including ongoing confirmatory trials, additional interactions with regulatory authorities and expectations regarding future regulatory filings and possible additional approvals for tafasitamab as well as the commercial performance of Monjuvi. The words "anticipate", "believe", "estimate", "expect", "intend", "may", "plan", "predict", "project", "would", "could", "potential", "possible", "hope" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. The forward-looking statements contained herein represent the judgment of MorphoSys as of the date of this release and involve known and unknown risks and uncertainties, which might cause the actual results, financial condition and liquidity, performance or achievements of MorphoSys, or industry results, to be materially different from any historic or future results, financial conditions and liquidity, performance or achievements expressed or implied by such forward-looking statements. In addition, even if MorphoSys' results, performance, financial condition and liquidity, and the development of the industry in which it operates are consistent with such forward-looking statements, they may not be predictive of results or developments in future periods. Among the factors that may result in differences are MorphoSys' expectations regarding risks and uncertainties related to the impact of the COVID-19 pandemic to MorphoSys' business, operations, strategy, goals and anticipated milestones, including its ongoing and planned research activities, ability to conduct ongoing and planned clinical trials, clinical supply of current or future drug candidates, commercial supply of current or future approved products, and launching, marketing and selling current or future approved products, the global collaboration and license agreement for tafasitamab, the further clinical development of tafasitamab, including ongoing confirmatory trials, and MorphoSys' ability to obtain and maintain requisite regulatory approvals and to enroll patients in its planned clinical trials, additional interactions with regulatory authorities and expectations regarding future regulatory filings and possible additional approvals for tafasitamab as well as the commercial performance of Monjuvi, MorphoSys' reliance on collaborations with third parties, estimating the commercial potential of its development programs and other risks indicated in the risk factors included in MorphoSys' Annual Report on Form 20-F and other filings with the U.S. Securities and Exchange Commission. Given these uncertainties, the reader is advised not to place any undue reliance on such forward-looking statements. These forward-looking statements speak only as of the date of publication of this document. MorphoSys expressly disclaims any obligation to update any such forward-looking statements in this document to reflect any change in its expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements, unless specifically required by law or regulation.

The compounds discussed in this slide presentation are investigational products being developed by MorphoSys and its partners and are not currently approved by the U.S. Food and Drug Administration (FDA), European Medicines Agency (EMA) or any other regulatory authority (except for tafasitamab/Monjuvi® and tafasitamab/Minjuvi®). There is no guarantee any investigational product will be approved by regulatory authorities.
Monjuvi® and Minjuvi® are registered trademarks of MorphoSys AG.

Focused and Committed to Driving Value

OUR AMBITIONS

Change the trajectory of blood cancer by providing patients with two novel medicines by 2025

PELABRESIB

- Enhance standard of care in myelofibrosis
- Expand into other myeloid diseases with unmet patient need

Monjuvi®	Drive use in second-line diffuse large B-cell lymphoma (DLBCL) and expand into new indications
Tulmimetostat (CPI-0209)	Demonstrate potential in different advanced solid tumors and lymphomas

STRONG BALANCE SHEET TO FUND STRATEGIC PRIORITIES

Monjuvi® (tafasitamab-cxix) is approved under accelerated approval by the U.S. FDA in combination with lenalidomide for the treatment of adult patients with relapsed or refractory DLBCL not otherwise specified, including DLBCL arising from low grade lymphoma, and who are not eligible for autologous stem cell transplant (ASCT).

Positioned for Success

ADVANCED PIPELINE

- Two late–stage and one mid-stage programs
- Hematology-oncology focus

CLINICAL DEVELOPMENT

- Operational excellence
- Track record in late-stage development and drug approvals

COMMERCIALIZATION

- Established commercial team focused on hematology-oncology

FINANCES

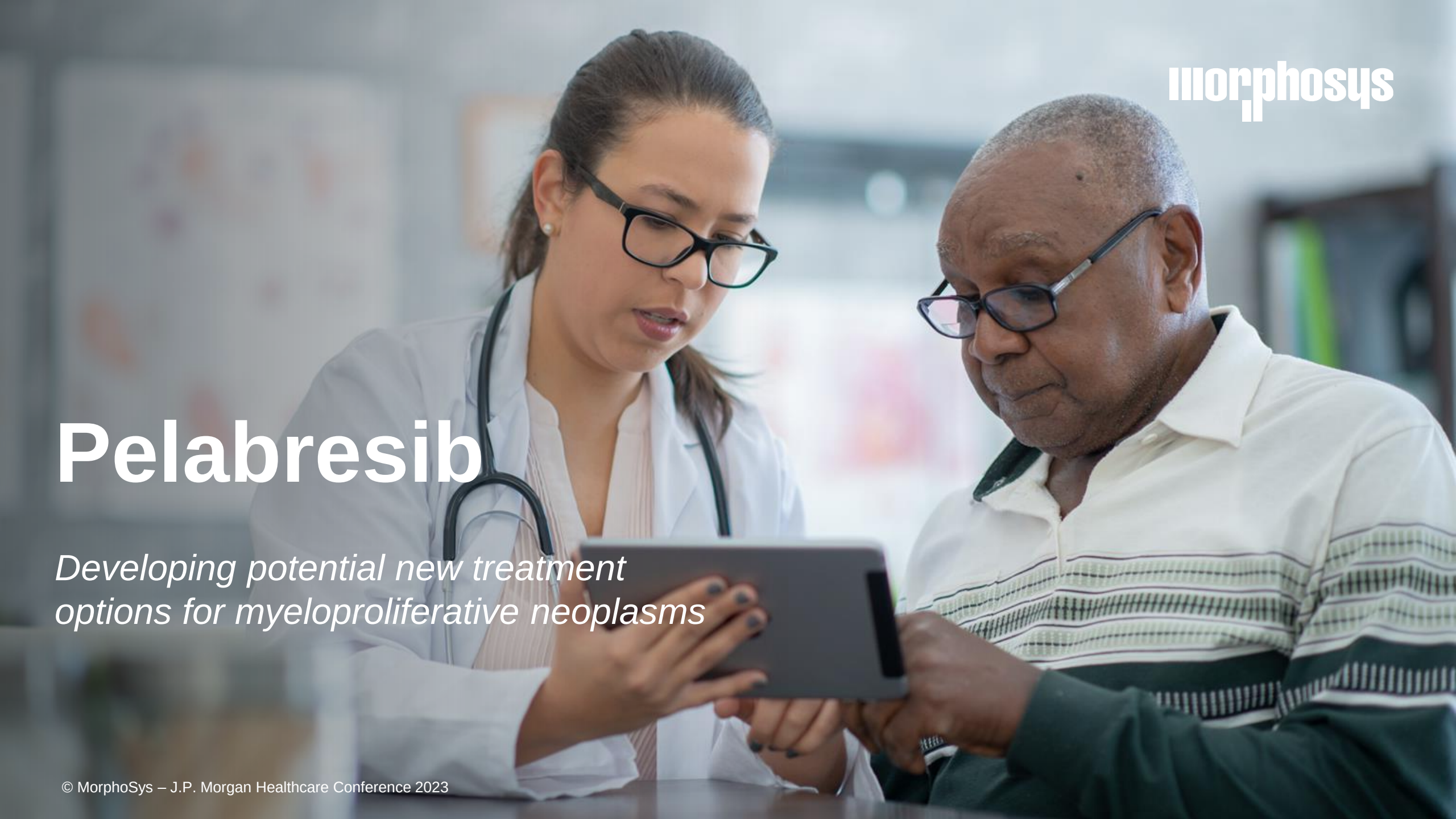
- Strong balance sheet
- Disciplined capital allocation

Accelerating our Innovation and Growth Strategy

High-potential, mid- to late-stage pipeline in hematology-oncology

ASSET	PARTNER	TARGET	DISEASE AREA	PHASE 1	PHASE 2	PHASE 3	MARKET
			r/r DLBCL				MONJUVI® tafasitamab-cxix | 200mg for injection, for intravenous use
Tafasitamab	Incyte	CD19	1L DLBCL (*front*MIND) r/r FL/MZL (*in*MIND) r/r DLBCL (with TTI-622)*			*trial not yet initiated*	
Pelabresib		BET	1L Myelofibrosis (MANIFEST-2) 1L/2L Myelofibrosis (MANIFEST)				
Tulmimetostat (CPI-0209)		EZH2	Solid tumors/Lymphomas				

Monjuvi® (tafasitamab-cxix) is approved under accelerated approval by the U.S. FDA in combination with lenalidomide for the treatment of adult patients with relapsed or refractory]DLBCL not otherwise specified, including DLBCL arising from low grade lymphoma, and who are not eligible for ASCT; r/r DLBCL: relapsed/refractory diffuse large B-cell lymphoma. r/r FL / MZL: relapsed/refractory Follicular Lymphoma or Marginal Zone Lymphoma
*Trial sponsored by Pfizer



Pelabresib

Developing potential new treatment options for myeloproliferative neoplasms

Myelofibrosis is a Debilitating Disease with Limited Treatment Options

CURRENT TREATMENTS ARE UNABLE TO ADDRESS ALL FOUR HALLMARKS OF DISEASE

Spleen Volume

Constitutional Symptoms

Anemia & Transfusion Dependence

Bone Marrow Fibrosis

ABOUT MYELOFIBROSIS

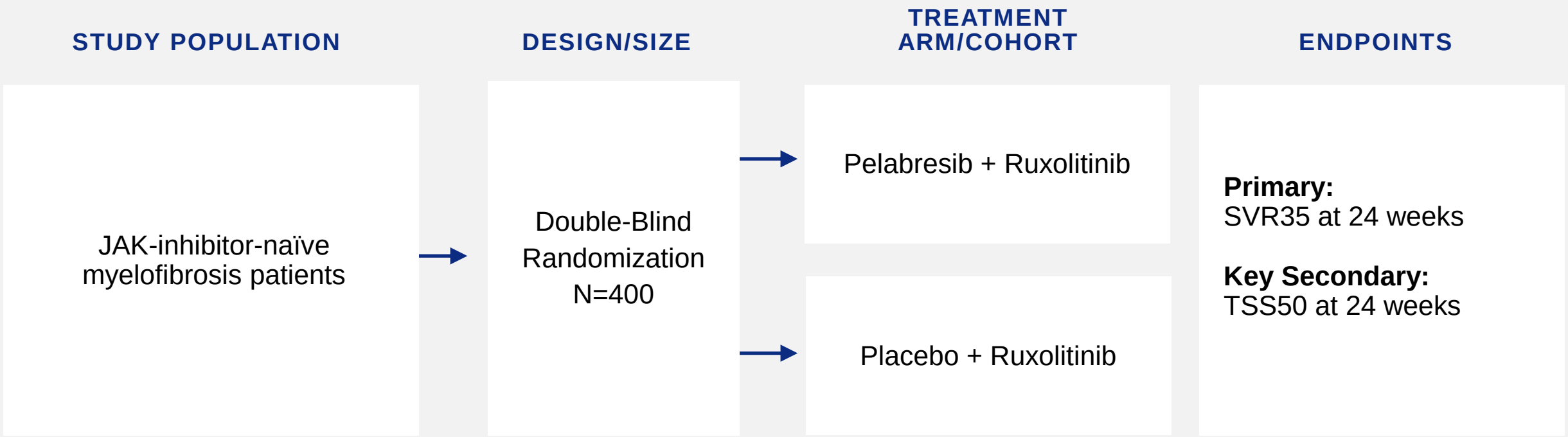
- **~18,000 patients** in the U.S.
- At diagnosis, **~90%** of patients have intermediate- or high-risk disease
- Median Overall Survival (OS)
  - Intermediate-risk **2.9 – 6.5 years**
  - High-risk **~1.3 years**

JAK INHIBITION IS THE ONLY APPROVED MYELOFIBROSIS TREATMENT IN THE LAST 10+ YEARS

Only ~50 % of patients see adequate control and responses are limited in their duration

Gangat N et al. J.Clin. Oncol. 2011;29(4),392-397; Tefferi A et al. Mayo Clinic proceedings. 2012;87(1):25-33..; https://www.voicesofmpn.com/myelofibrosis-information.aspx. Accessed July 2019.

Phase 3 MANIFEST-2 Study Investigating Pelabresib as Potential First-Line Treatment for Myelofibrosis

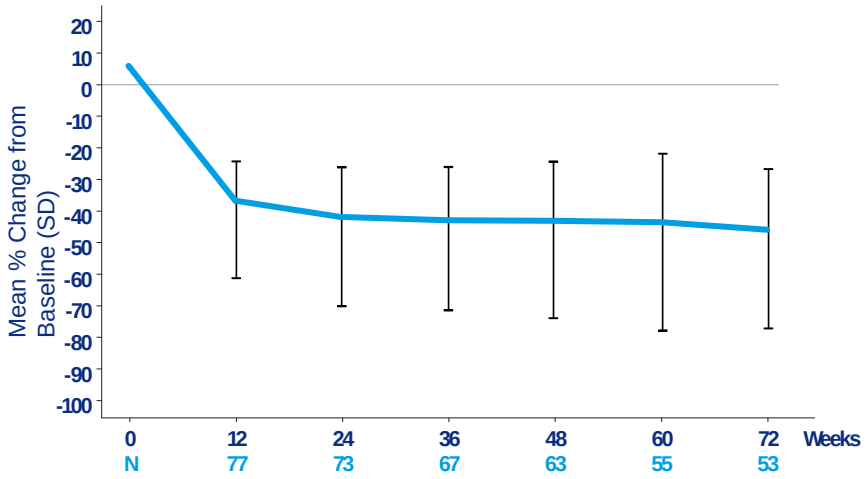


Topline data from MANIFEST-2 study expected in early 2024

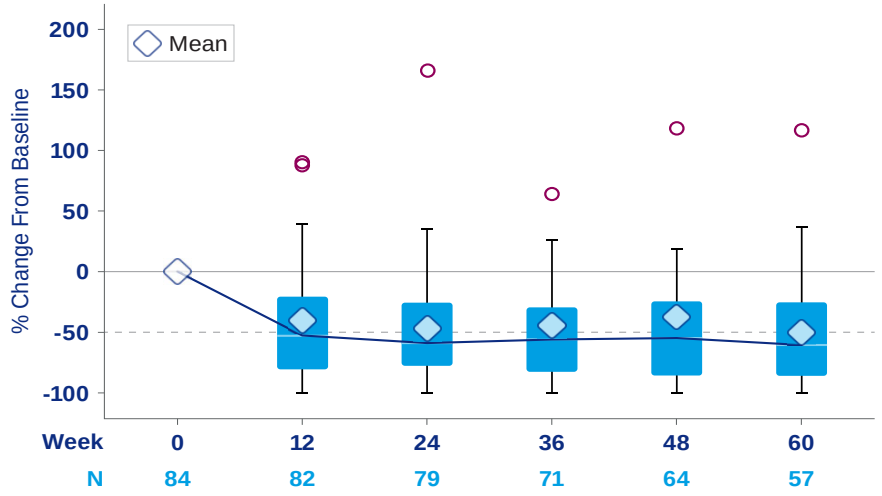
New Longer-Term Data from Phase 2 MANIFEST Trial Suggests Pelabresib's Potential in the First-Line Setting

Results show deep and durable improvements in both spleen volume and symptom score beyond 24 weeks

SPLEEN VOLUME CHANGE OVER TIME



TSS CHANGE OVER TIME



SVR35 AT WK 24:
68%
(57/84)

TSS50 AT WK 24:
56%
(46/82)

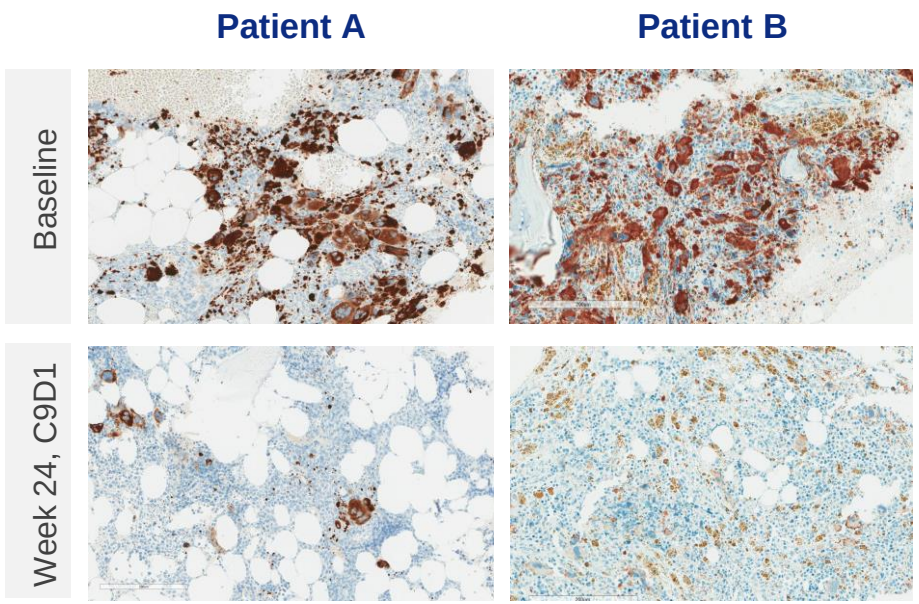
The most common hematologic adverse events (AE) were thrombocytopenia (55%, grade ≥3: 18%) and anemia (43%, grade ≥3: 34%)
The most common nonhematologic AEs of any grade were diarrhea (43%), respiratory tract infection (41%), asthenic conditions (38%), musculoskeletal pain (32%), constipation (30%), nausea (29%), dizziness (27%) and abdominal pain (26%)

Mascarenhas J, et al. ASH 2022. Abstract 238.

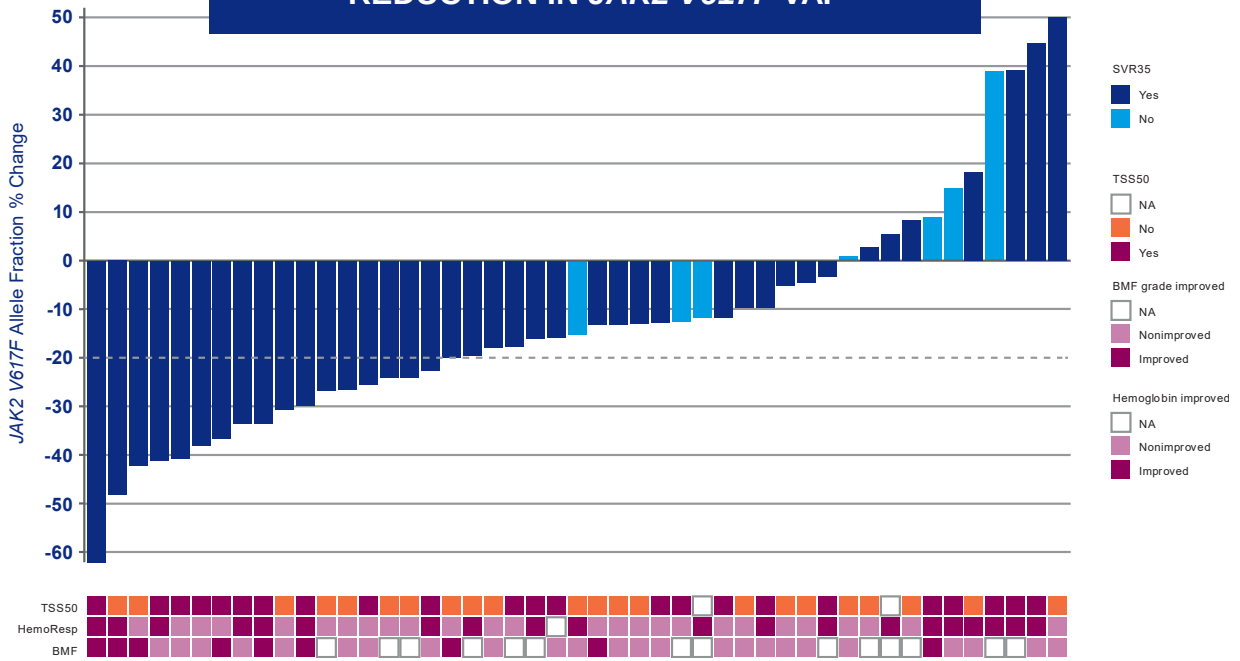
Exploratory Biomarker Analysis from the MANIFEST Trial Suggests Potential Disease-Modifying Effect of Pelabresib

Spleen response is associated with improvements in bone marrow morphology and reduction in *JAK2 V617F* allele frequency

MEGAKARYOCYTE DECLUSTERING in SVR35 RESPONDERS



38% OF PATIENTS REACHED ≥20% REDUCTION IN *JAK2 V617F* VAF



Scandura J, et al. ASH 2022. Abstract 630.

Pelabresib Expansion Possibilities Leverage Synergies in Myeloid Diseases

Explore potential opportunities in areas of high patient need

MYELOPROLIFERATIVE NEOPLASMS AND ADJACENCIES

MYELOFIBROSIS

- Pivotal data from ongoing Phase 3 study in first-line myelofibrosis expected in early 2024

ESSENTIAL THROMBOCYTHEMIA

- Characterized by elevated platelet levels, bleeding and thrombotic events
- Potential to progress to myelofibrosis or AML
- Ongoing arm 4 in MANIFEST Phase 2 study

LOWER RISK MYELODYSPLASTIC SYNDROME

- Most common myeloid neoplasm
- Patients suffer from cytopenia (causing fatigue, infections and bleeding)
- Risk of leukemic transformation
- Need for treatments to improve anemia after available therapies

Monjuvi® (tafasitamab-cxix)

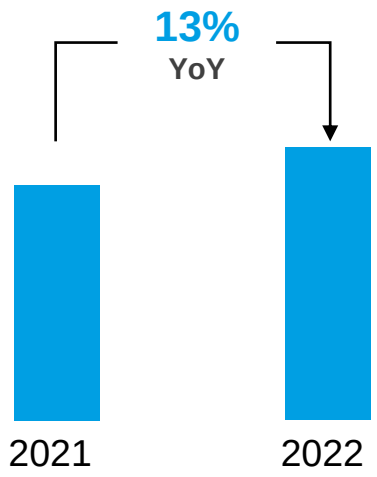
Expanding into other areas of patient need

Drive Continued Penetration of Monjuvi in Second-Line DLBCL

Out-patient, in-practice immunotherapy approved for 2L+ adult NTE DLBCL in combination with lenalidomide

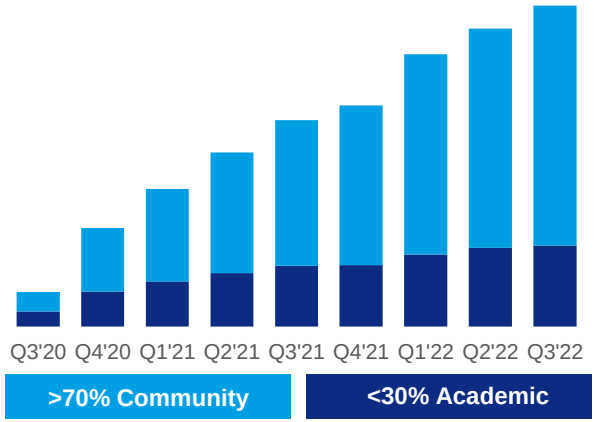
2022 U.S. SALES

$89.4MM



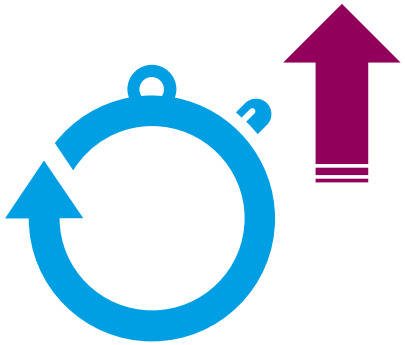
SOC GROWTH

1,350
sites of care*



IMPROVING PERSISTENCE

Continued education to evolve prescribing pattern



Monjuvi® (tafasitamab-cxix) is approved under accelerated approval by the U.S. FDA in combination with lenalidomide for the treatment of adult patients with relapsed or refractory DLBCL not otherwise specified, including DLBCL arising from low grade lymphoma, and who are not eligible for ASCT

*As of September 30, 2022

Explore Tafasitamab's Potential in First-Line DLBCL and Beyond

	STUDY DESIGN	PATIENT POPULATION	DATA READOUT
1L DLBCL ***front*MIND** *Ongoing Phase 3 study*	tafasitamab/ lenalidomide + R-CHOP vs. R-CHOP	**30,000 patients** in the U.S.	Pivotal data **H2 2025**
r/r FL / MZL ***in*MIND** *Ongoing Phase 3 study*	tafasitamab/ lenalidomide + rituximab vs. lenalidomide + rituximab	**17,000 patients** in the U.S., EU and Japan	Pivotal data **H1 2024**

DLBCL: diffuse large B-cell lymphoma. r/r FL / MZL: relapsed/refractory Follicular Lymphoma or Marginal Zone Lymphoma; R: Rituximab; CHOP: cyclophosphamide, doxorubicin, vincristine, prednisolone

Monjuvi has Potential to Redefine the First-Line DLBCL Treatment Landscape

Monjuvi well suited for all treatment settings and has a fixed duration schedule – offering further convenience to this patient population

30,000 newly diagnosed patients in the U.S. per year

High medical need, especially for **high-risk patients (IPI 3-5)**

- **50%** of **patients** are not cured with R-CHOP

Patients with r/r DLBCL have **poor prognosis** with **mOS of < 2 years**

*first*MIND Trial Underscores Potential of Tafasitamab in Newly Diagnosed DLBCL Patients

Phase 1b study shows no new safety signals and provides additional information on progression-free survival at 24 months

EVENT	TAFA/LEN + R-CHOP (n=33)
CR or PR (best response), %	94
24-month PFS rate, %	77
24-month OS rate, %	94

94% of patients are alive after 24 months

The most common hematological treatment emergent adverse events (AEs) in patients treated with tafasitamab, lenalidomide and R-CHOP were neutropenia (84.8%), anemia (60.6%), thrombocytopenia (42.4%) and leukopenia (27.3%).
Non-hematological AEs were well balanced and were mostly grades 1 and 2. No unexpected toxicities or new safety signals were identified in the final analysis.

Nowakowski G, et al. ASH 2022. Abstract 1619.

Tulmimetostat (CPI-0209)

Establishing proof of concept

Tulmimetostat Has Potential to Treat Different Advanced Cancers

Potential Use in Array of Advanced Tumors

Abnormal EZH2 function is seen in different types of cancer

Designed to Improve on First Generation EZH2i

Dual inhibitor of EZH2 and EZH1 with best-in-class potential

Initial Data from Ongoing Basket Trial

Ongoing Phase 2 study with anti-tumor responses across different tumor types

EZH2: enhancer of zeste homolog 2

Tulmimetostat Data Suggest Anti-Tumor Activity in Advanced Solid Tumors and Lymphomas

Data from Phase 2 basket trial are an important step toward demonstrating proof of concept

Best unconfirmed response by cancer cohort

Category N *	Ovarian ARID1A mut (N=10)	Endometrial ARID1A mut (N=4)	Lymphoma EZH2 / WT (N=3)	Mesothelioma BAP1 loss (N=9)	Prostate (N=8)	Overall total Phase II (N=34)
CR	**0** / 10	**0** / 4	**2** / 3	**0** / 9	**0** / 8	**2** / 34
PR	**4** / 10	**2** / 4	**0** / 3	**2** / 9	**0** / 8	**8** / 34
SD	**3** / 10	**2** / 4	**0** / 3	**4** / 9	**5** / 8	**14** / 34
PD	**3** / 10	**0** / 4	**1** / 3	**3** / 9	**3** / 8	**10** / 34

Biomarker selected cohort

Not biomarker defined

Preliminary results show signs of anti-tumor response in different types of advanced tumors in heavily pre-treated patients

Safety profile was consistent with the mechanism of action of EZH2 inhibition

Kindler et al., ENA 2022; Date of data-cut: July 16, 2022 *N of patients with evaluable efficacy; CR: complete response; PR: partial response; SD: stable disease; PD: progressive disease

Partner Programs Offer Potential Upside

	PARTNER	DISEASE AREA	STATUS
IANALUMAB	NOVARTIS	Immune Thrombocytopenia Sjögren's Syndrome Lupus Nephritis Additional hematology and immunology indications	Development program with several ongoing Phase 3 studies Key asset for Novartis with submission enabling data expected in 2025*
ABELACIMAB	ANTHOS THERAPEUTICS	Venous Thromboembolism Prevention	Development program with three ongoing Phase 3 studies
SETRUSUMAB	ultragenyx / Mereo BioPharma	Osteogenesis Imperfecta	Pivotal Phase 2/3 ongoing clinical study
FELZARTAMAB	HI·Bio / I-MAB BIOPHARMA	Multiple Myeloma Autoimmune Indications (MN, IgAN)	Clinical development ongoing

* Novartis Q4 2022 investor presentation (February 1st 2023); data for 1L and 2L ITP expected in 2025

MorphoSys is Well Positioned to Create Significant Value

PELABRESIB	• Potential to enhance standard of care in myelofibrosis • MANIFEST-2 data read out in first-line myelofibrosis in early 2024
MONJUVI®	• Commercialization in second-line DLBCL and potential expansion into new indications
TULMIMETOSTAT **(CPI-0209)**	• Potential in different solid tumors and lymphomas
FINANCIALS	• Strong balance sheet to fund strategic priorities


Thank You