MorphoSys

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Forward-Looking Statements

This communication contains certain forward-looking statements concerning the MorphoSys group of companies, including the expectations regarding Monjuvi's ability to treat patients with relapsed or refractory diffuse large B-cell lymphoma ("DLBCL"), 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® in relapsed or refractory DLBCL). The safety and efficacy of these investigational products have not been established and there is no guarantee any investigational product will be approved by regulatory authorities.

Strategic Oncology Focus with Strong Financial Position

OUR AMBITION

Redefine How Cancer is Treated

PELABRESIB	Become new standard of care in myelofibrosis as combination therapy; expand into other myeloid diseases
Monjuvi®	Sustain second-line DLBCL usage; generate growth in new indications
Tulmimetostat	Cost-effective investigations in solid tumors and lymphomas; pursue partnership opportunities

CASH AVAILABLE TO MID-2026*, COVERING ALL NEAR-TERM CATALYSTS

*Excluding convertible debt repayment (interest and principal)

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); DLBCL, diffuse large B-cell lymphoma; Monjuvi in the first-line DLBCL setting, pelabresib, and tulmimetostat are investigational uses or products and have not yet been evaluated or approved; The development of pelabresib was funded in part by The Leukemia and Lymphoma Society®.

Pelabresib in First-Line Myelofibrosis is Primary Focus in 2024

1. File and prepare for launch of pelabresib in first-line myelofibrosis
2. Prioritize and advance key clinical development programs
3. Diligently manage cash runway and implement cost-optimization measures

01

File and Prepare for Launch of Pelabresib in First-Line Myelofibrosis

Pelabresib's Potential in First-Line Myelofibrosis, Positioned for Success

IMPRESSIVE CLINICAL BENEFITS

- Phase 3 results show benefits across all four disease hallmarks and well-tolerated safety profile
- Phase 2 results show deep/durable responses at 48 and 60 weeks

OPERATIONAL EXCELLENCE

- Track record of delivering key milestones ahead of schedule
- Established and experienced Commercialization team, with Sales and Medical Affairs

STRONG SUPPORT FROM PHYSICIAN COMMUNITY

- Significant spleen size reduction is key finding given association with patient survival
- Results point to potential paradigm shift in myelofibrosis treatment

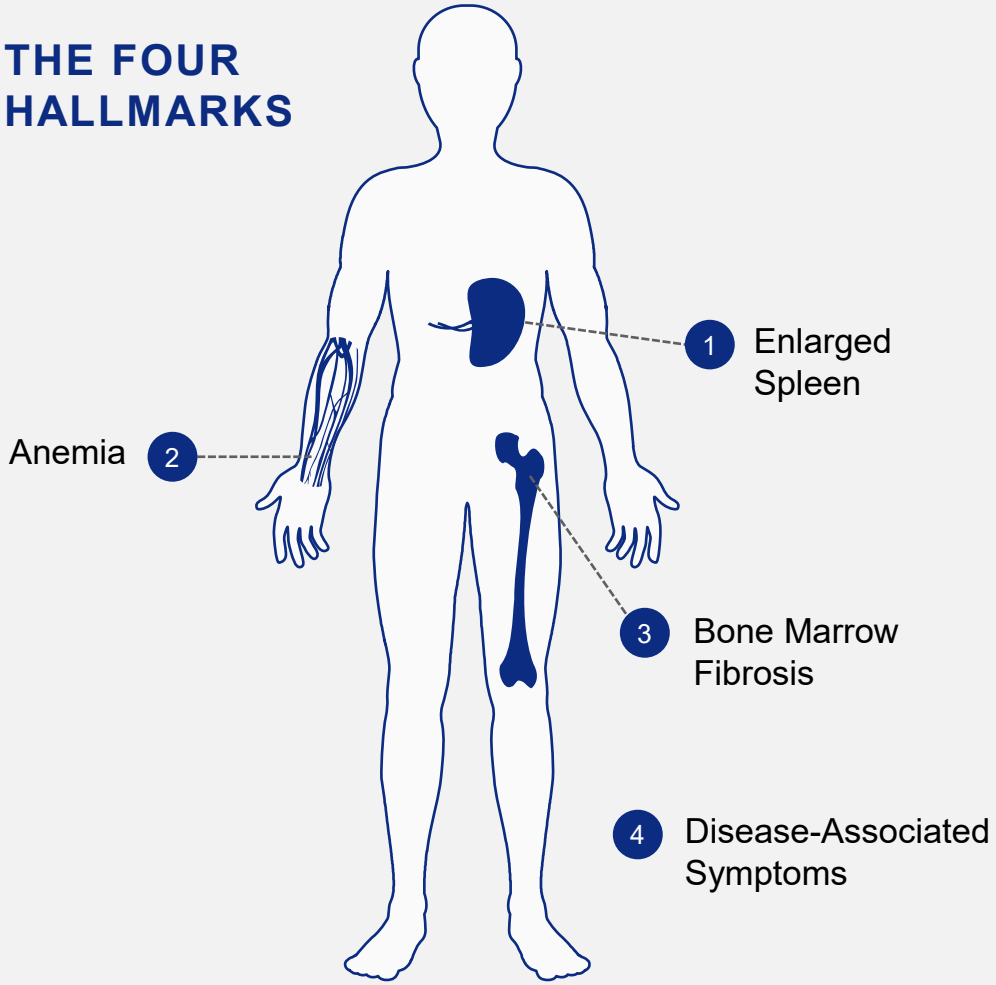
MULTI-BILLION DOLLAR MARKET OPPORTUNITY

- Dire need for treatment that addresses four disease hallmarks
- Worldwide opportunity with blockbuster potential

Rampal, R, et.al. ASH 2023. Oral 628. | Data Cut-Off August 31, 2023
Harrison C, et al. EHA 2023. Abstract P1027. | Data Cut-Off July 29, 2022
Harrison C, et al. Expert Rev Hematol 2013

No Approved Myelofibrosis Treatments Address All Four Hallmarks of Disease; New Therapies are Critically Needed

THE FOUR HALLMARKS



EPIDEMIOLOGY

- **~18,000 patients** in the U.S., with **3,200 diagnosed annually**
- **~18,000 patients** in Europe, with **3,400 diagnosed annually**
- **~90%** of patients have intermediate- or high-risk disease at diagnosis, with vast majority in intermediate-risk category

MEDIAN OVERALL SURVIVAL*

- Intermediate-risk**: **~4 – 14.2 years**
- High-risk: **~1.5 years**

*Measured by Dynamic International Prognostic Scoring System (DIPSS) | **Int-1 and Int-2
Harrison C, et al. Expert Rev Hematol 2013; Al-Ali HK, et al. Haematologica 2016; Panda A, et al. Decision Resources Group 2022; Gangat et al. Journal Clin Onc. 2011.

Pelabresib and Ruxolitinib Combination Offers Potential to Shift Myelofibrosis Treatment Paradigm

All myelofibrosis disease hallmarks were improved in Phase 3 MANIFEST-2 study

Significantly reduced spleen size, nearly doubling SVR35 response rate

Showed a strong positive trend in reducing symptom burden

Improved measures of anemia

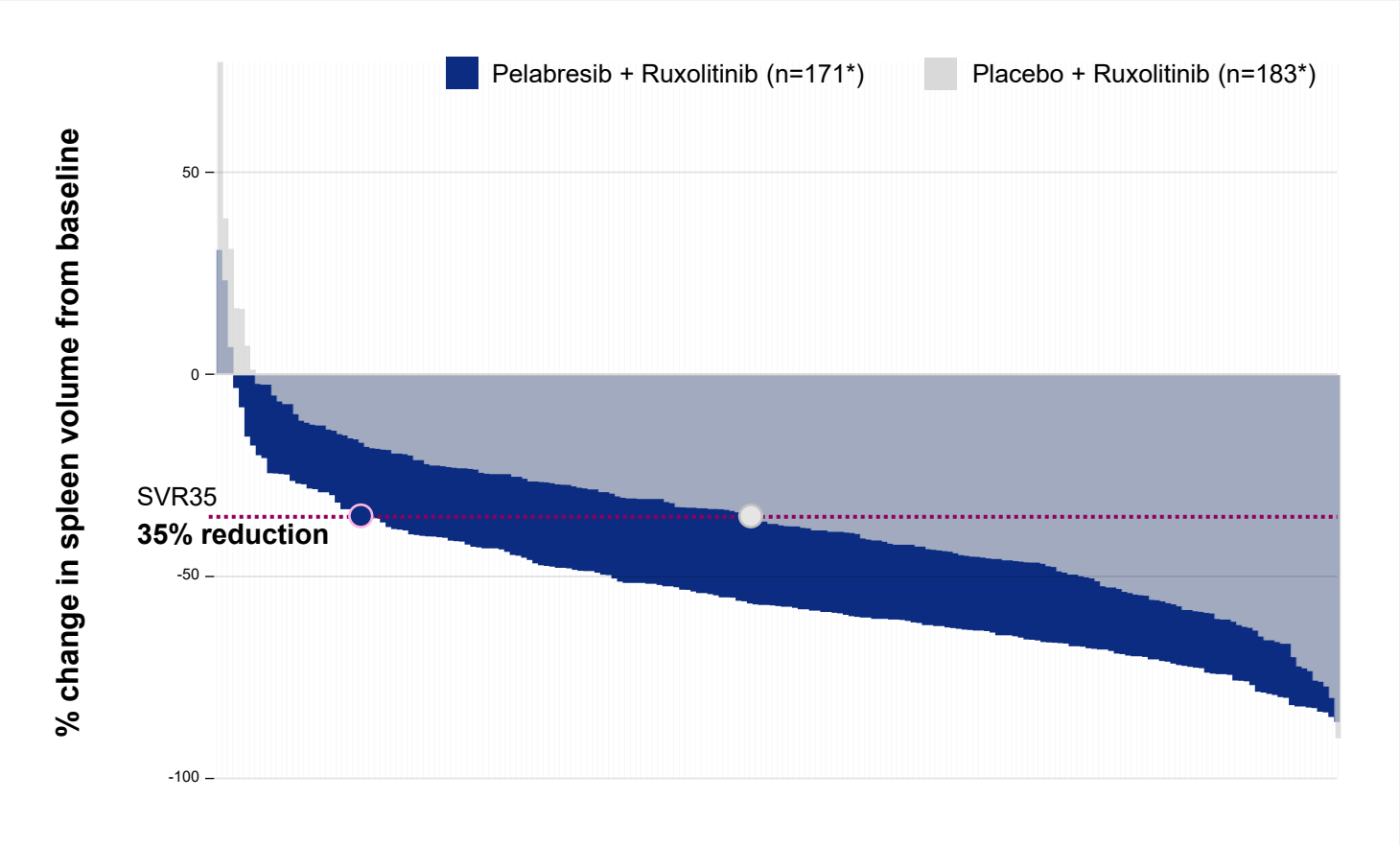
Improved bone marrow fibrosis; biomarker reductions suggest disease modification

Safety results consistent with prior clinical trials, with fewer grade ≥3 adverse events compared with placebo plus ruxolitinib

SVR35, ≥35% reduction in spleen volume
Rampal, R, et.al. ASH 2023. Oral 628. | Data Cut-Off August 31, 2023

Pelabresib and Ruxolitinib Combination Significantly Reduced Spleen Size

Key finding given the known association between spleen volume reduction and patient survival

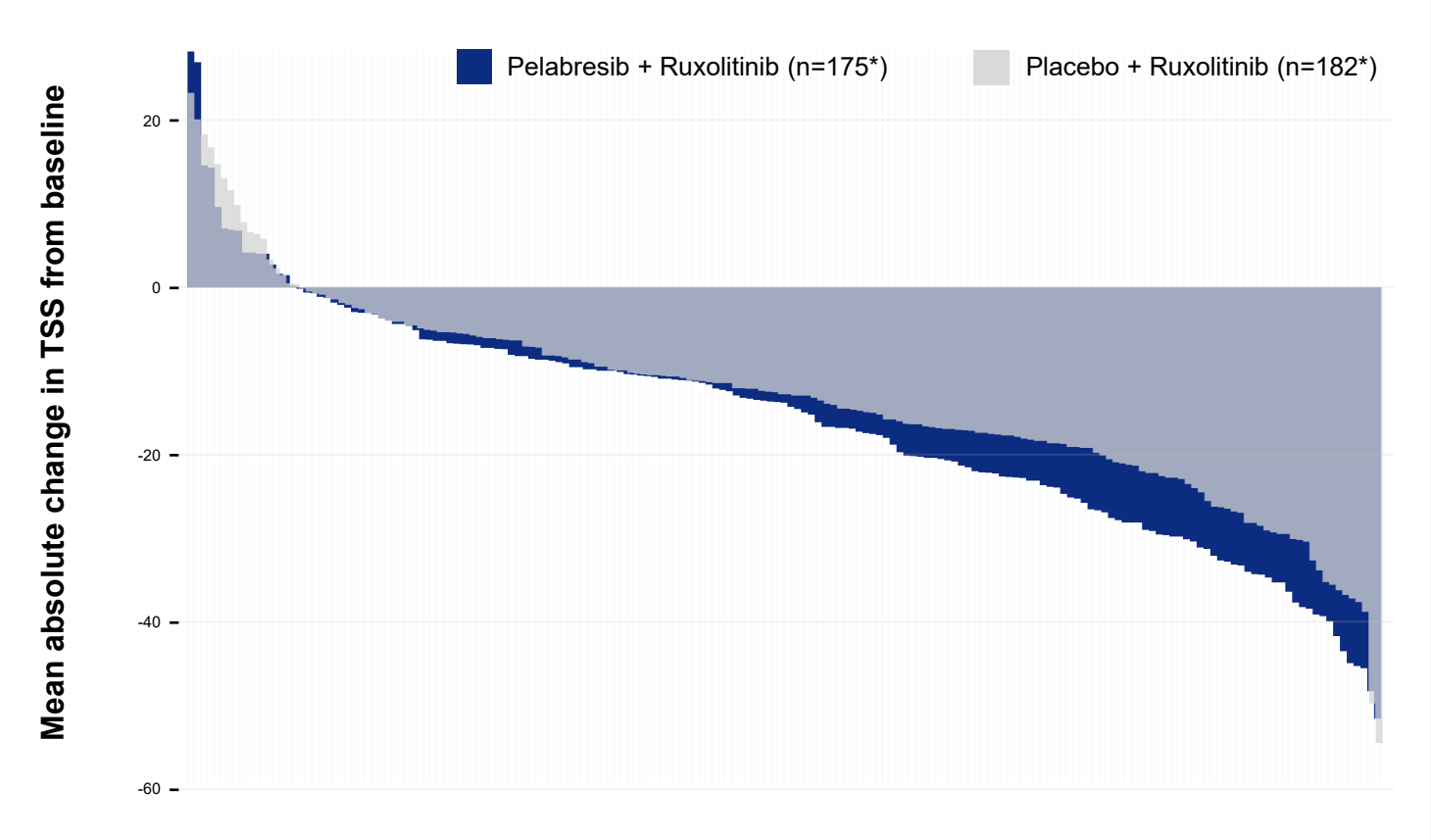


ITT POPULATION	Pelabresib + Ruxolitinib (N=214)	Placebo + Ruxolitinib (N=216)
SVR35 at Week 24	65.9%	35.2%
p-value	<0.001	

ITT, intent-to-treat; SVR35, ≥35% reduction in spleen volume. Spleen volume assessed by central read.
*Waterfall plots represent patients who have baseline and Week 24 data.
Rampal, R, et.al. ASH 2023. Oral 628. | Data Cut-Off August 31, 2023
Ajufo, H, et. al. Clinical Lymphoma Myeloma and Leukemia 2023.

Pelabresib and Ruxolitinib Combination Showed Strong Positive Trend in Reducing Symptom Burden

Disease-associated symptom benefits were observed and balanced across all TSS domains

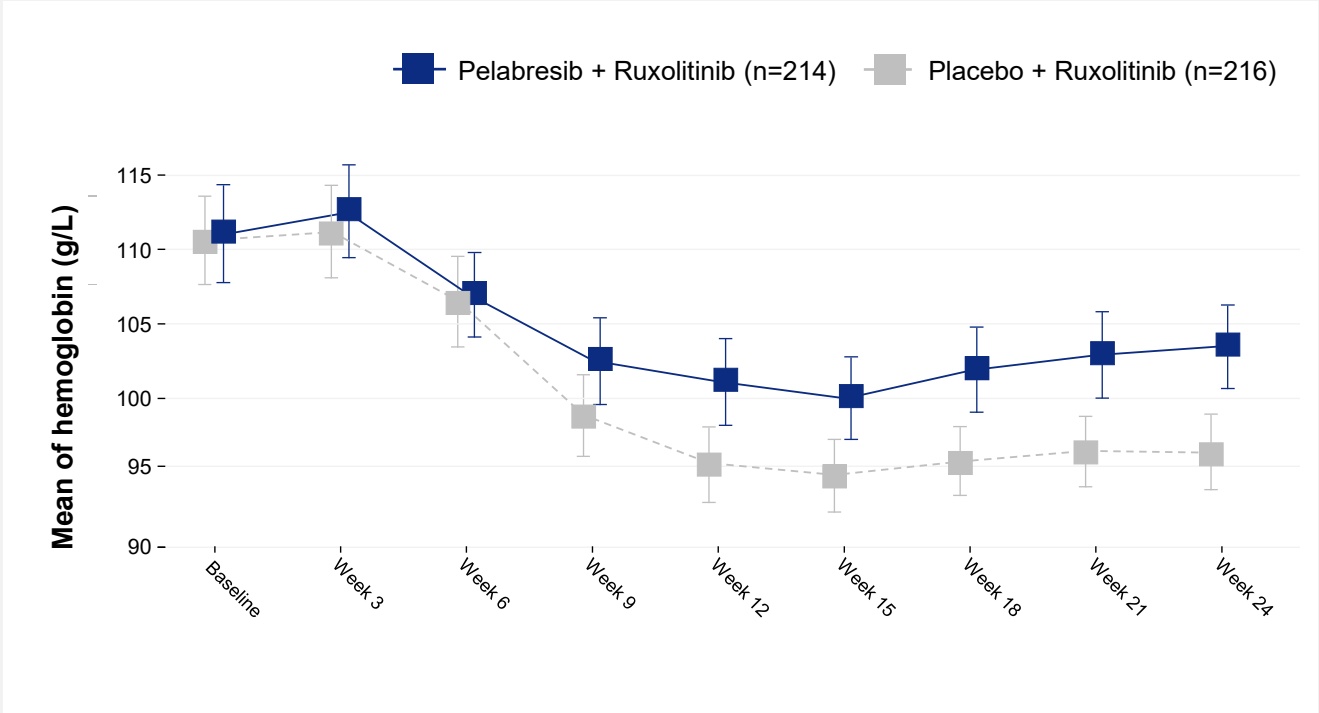


ITT POPULATION	Pelabresib + Ruxolitinib (N=214)	Placebo + Ruxolitinib (N=216)
TSS change† from baseline at Week 24	-15.99 (Mean Baseline: 28.26)	-14.05 (Mean Baseline: 27.36)
p-value	0.0545	

ANCOVA, analysis of covariance; ITT, intent-to-treat; TSS, total symptom score.
*Waterfall plots represent patients who have baseline and Week 24 data.
†Change from baseline determined by ANCOVA model using Multiple Imputation.
Rampal, R, et.al. ASH 2023. Oral 628. | Data Cut-Off August 31, 2023

Pelabresib and Ruxolitinib Combination Improved Multiple Measures of Anemia

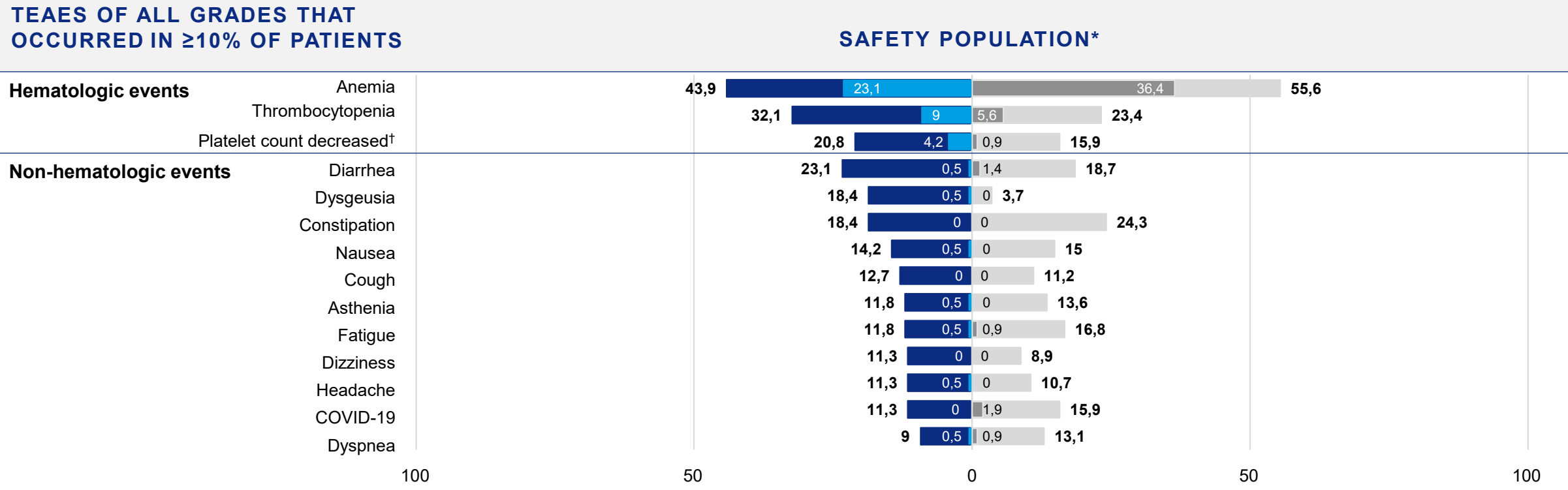
More patients achieved hemoglobin response and fewer patients required transfusions versus placebo plus ruxolitinib



ITT POPULATION	Pelabresib + Ruxolitinib (N=214)	Placebo + Ruxolitinib (N=216)
Hemoglobin response*	9.3%	5.6%
Patients requiring RBC transfusion during screening, (%)	16.4%	11.6%
Patients requiring RBC transfusion during first 24 weeks of treatment, (%)	30.8%	41.2%

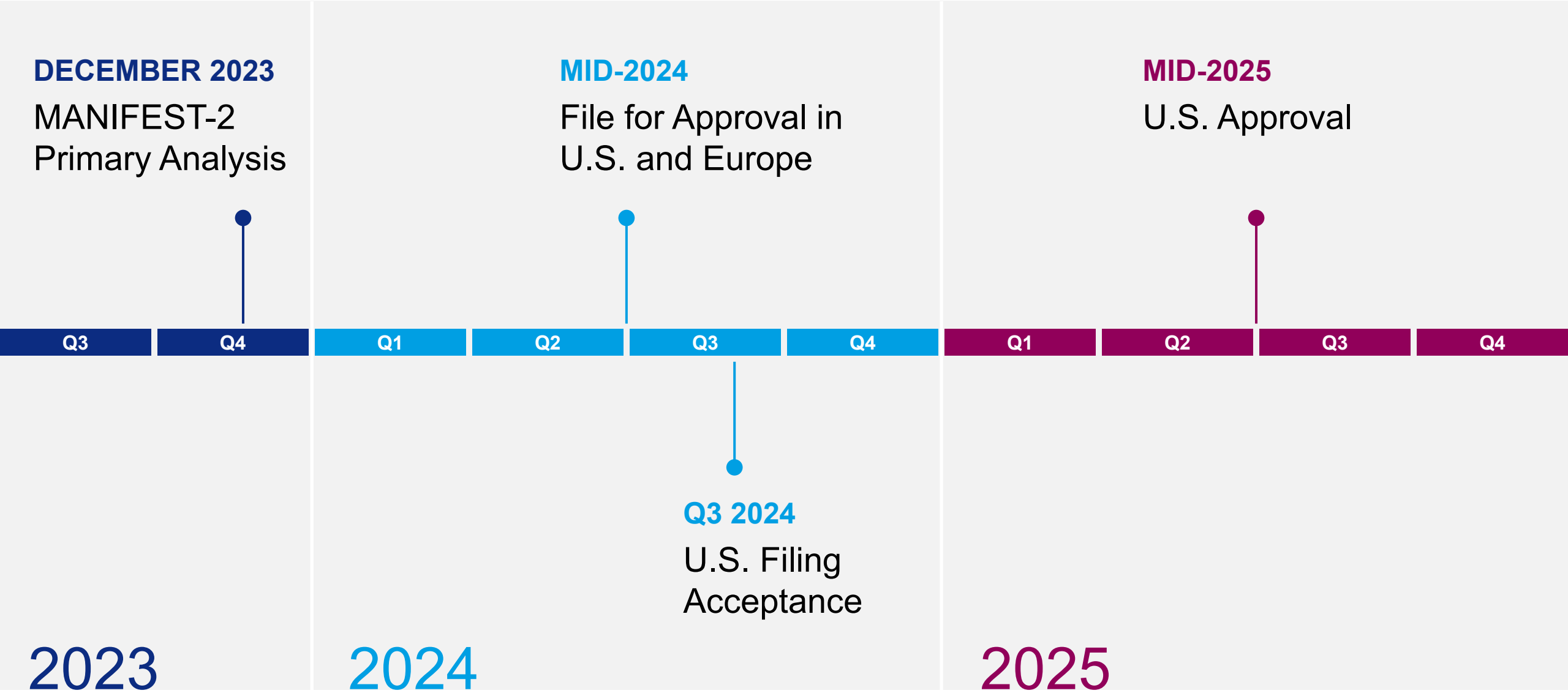
ITT, intent-to-treat; RBC, red blood cell; DIPSS, Dynamic International Prognostic Scoring System
*Hemoglobin response is defined as a ≥1.5 g/dL mean increase in hemoglobin from baseline in the absence of transfusions during the previous 12 weeks. Baseline hemoglobin defined as the last assessment prior to or on Cycle 1 Day 1, regardless of blood transfusions. A similar effect was observed across DIPSS categories.
Rampal, R, et.al. ASH 2023. Oral 628. | Preliminary Analyses from Data Cut-Off August 31, 2023

Grade ≥3 Adverse Events Were Less Frequent with Pelabresib and Ruxolitinib Combination



COVID-19, coronavirus disease 2019; TEAE, treatment-emergent adverse event.
*Safety population: received at least one dose of study drug. †Platelet count decreased was classified under the system organ class of investigation. TEAEs are regardless of relationship to study drug. A TEAE for the double-blinded treatment period is defined as an adverse event that has a start date on or after the first dose of the pelabresib/placebo and before 30 days after the last dose of pelabresib/placebo or before the start of alternative (off-study) treatment for myelofibrosis (MF), whichever occurs first.
Rampal, R, et.al. ASH 2023. Oral 628. | Preliminary Analyses from Data Cut-Off August 31, 2023

Planned Roadmap to Approval of Pelabresib in First-Line Myelofibrosis



02

Prioritize and Advance Key Clinical Development Programs

Deliver Near-Term Phase 3 Growth Opportunities, Implement Cost-Effective Mid-Stage Program Strategies

PHASE 2

PELABRESIB
LR MDS & ET

- Robust proof-of-concept results show potential clinical benefit in myeloid diseases
- Focus remains on first-line myelofibrosis

PHASE 3

TAFASITAMAB
First-Line DLBCL
*front*MIND

- Fully enrolled, 899 patients randomized
- Topline readout in 2H 2025

TAFASITAMAB
R/R FL/MZL
*in*MIND

- Fully enrolled, 654 patients randomized
- Topline readout in 2H 2024

PHASE 1/2

TULMIMETOSTAT
Solid Tumors & Lymphomas

- EZH2 has a broad role in tumor biology
- Phase 2 data show deep and durable responses
- Pursue partnership opportunities to expedite development

LR MDS, lower-risk myelodysplastic syndromes; ET, essential thrombocythemia; DLBCL, diffuse large B-cell lymphoma; R/R, relapsed/refractory; FL, follicular lymphoma; MZL, marginal zone lymphoma; EZH2, enhancer of zeste homolog 2

Passamonti F, et. al. EHA 2023. Abstract S168. | Data Cut-Off July 29, 2022

Drescher C, et. al. ASCO 2023. Abstract 3094. | Data Cut-Off February 14, 2023

Tafasitamab Offers Largest Potential Upside in the First-Line DLBCL Setting

INCIDENCE

30,000 newly diagnosed DLBCL patients in U.S. annually

MEDICAL NEED

50% of **high-risk DLBCL patients (IPI 3-5)** are not cured with R-CHOP

PHASE 3 *front*MIND STUDY
TOPLINE READOUT: 2H 2025

STUDY POPULATION

Previously untreated high-intermediate and high-risk (IPI 3-5) DLBCL and HGBCL patients

PATIENTS RANDOMIZED

899

TREATMENT ARM/ COHORT

Tafasitamab + Lenalidomide + R-CHOP

vs.

Placebo + R-CHOP

ENDPOINTS

Primary:
PFS

Key Secondary:
EFS, OS

DLBCL, diffuse large B-cell lymphoma; HGBCL; High-grade B-cell lymphoma; R-CHOP, rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone; IPI, International Prognostic Index; PFS, progression-free survival; EFS, event-free survival; OS, overall survival
Susanibar-Adaniya, S, et. al. Am J Hematol 2021.

Further Opportunity to Broaden Tafasitamab Use in Additional Indolent Lymphoma Indications

INCIDENCE

14,200 newly diagnosed FL patients in U.S. annually

MEDICAL NEED

80% of **FL patients** relapse on first-line therapies*

PHASE 3 *in*MIND STUDY
TOPLINE READOUT: 2H 2024

STUDY POPULATION	PATIENTS RANDOMIZED
r/r FL Grade 1 to 3a r/r MZL	654
TREATMENT ARM/ COHORT	**ENDPOINTS**
Tafasitamab + Lenalidomide + Rituximab vs. Placebo + Lenalidomide + Rituximab	**Primary:** PFS in FL **Key Secondary:** PFS in FL and MZL PET-CR rate in FL OS in FL

*Patients who receive drug therapy in the first-line setting and whose disease has not transformed into DLBCL
R/R, relapsed/refractory; FL, follicular lymphoma; MZL, marginal zone lymphoma; PFS, progression-free survival; PET, positron emission tomography; CR, complete response; OS, overall survival
Markanda, PS, et. al. Decision Resources Group 2023.

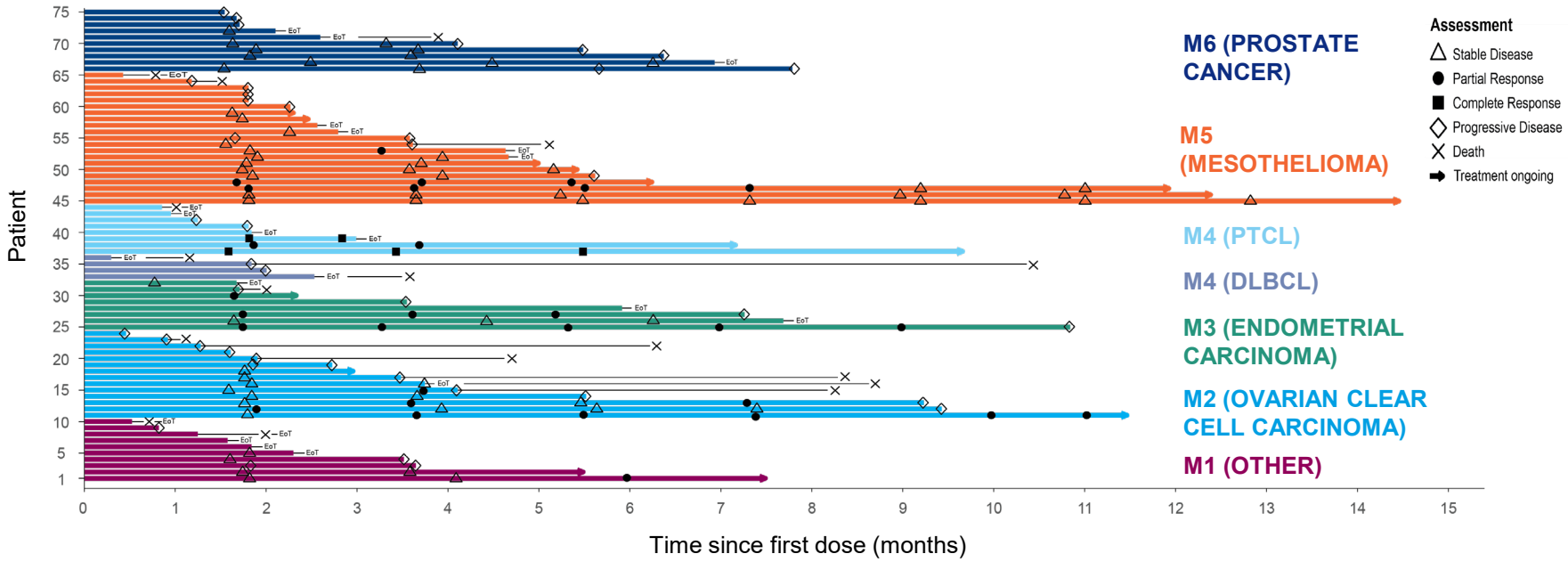
Tulmimetostat Offers Potential First- and Best-in-Class Opportunities Across Several Oncology Indications

EZH2 has broad role in tumor biology, offering monotherapy and combination therapy development options

TULMIMETOSTAT VS. 1ST GEN EZH2/1I

- Increased **potency**
- Longer **residence time**
- **No evidence of reduced exposure** due to induced metabolism
- **Enhanced physico-chemical properties**

TREATMENT DURATION AND RESPONSE ASSESSMENT WITH MONOTHERAPY (EFFICACY EVALUABLE PATIENTS)



EZH2, enhancer of zeste homolog 2; GEN, generation; I, inhibitor; PTCL, peripheral T-cell lymphoma; DLBCL, diffuse large B-cell lymphoma
Drescher, C, et. al. ASCO 2023. Abstract 3094. | Data Cut-Off February 14, 2023

Mid-to-Late-Stage Partner Programs Progressing Well, Offering Potential Upside and Options for Non-Dilutive Financing

	PARTNER	DISEASE AREA	STATUS
IANALUMAB	Novartis	Sjögren's Syndrome Lupus Nephritis Other autoimmune diseases	Several ongoing Phase 3 studies
ABELACIMAB	Anthos Therapeutics	Venous Thromboembolism Prevention	Three ongoing Phase 3 studies
SETRUSUMAB	Ultragenyx and Mereo BioPharma	Osteogenesis Imperfecta	Pivotal ongoing Phase 2/3 study
BIMAGRUMAB	Lilly	Adult Obesity	Ongoing Phase 2b study
FELZARTAMAB	HI-Bio and I-Mab Biopharma	Autoimmune Indications (PMN, IgAN) Multiple Myeloma	Ongoing clinical development

PMN: primary membranous nephropathy; IgAN: immunoglobulin A nephropathy

03

Diligently Manage Cash Runway and Implement Cost-Optimization Measures

Strategic Allocation of Financial Resources will Support all Near-Term Catalysts

IMPLEMENT COST-OPTIMIZATION MEASURES

REDUCE 2024 CASH BURN TO ~€250 MILLION*

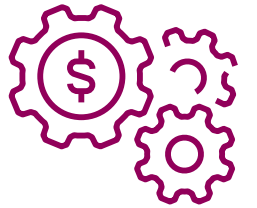
CASH RUNWAY EXTENDS TO MID-2026**

*Excluding debt and interest payments
**Excluding convertible debt repayment (interest and principal)

MorphoSys is Well Positioned to Create Significant Value

Multi-Billion Dollar Market Opportunity with Pelabresib

Regulatory and Late-Stage Development Catalysts Through 2025



Strong Financial Position with Cash Available to Mid-2026*

*Excluding convertible debt repayment (interest and principal)

04
Q&A

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CR&DO

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CFO

Thank you!

www.morphosys.com