MORPHOSYS:

Redefining How Cancer Is Treated

Corporate Presentation | March 2024

Additional Information and Where to Find It

The takeover offer described in this communication (the "Takeover Offer") has not yet commenced. This communication is neither an offer to purchase nor a solicitation of an offer to sell shares of MorphoSys AG (the "Company"). The final terms and further provisions regarding the Takeover Offer will be in the offer document once the publication of the offer document by Novartis BidCo AG (formerly known as Novartis data42 AG) (the "Bidder") has been approved by the German Federal Financial Supervisory Authority (the "BaFin"), after which the offer document will be filed with the U.S. Securities and Exchange Commission (the "SEC"). A solicitation and an offer to buy shares of the Company will be made only pursuant the offer document. In connection with the Takeover Offer, the Bidder and Novartis AG will file a Tender Offer Statement on Schedule TO with the SEC (together with the offer document, an Offer to Purchase including the means to tender and other related documents, the "Takeover Offer Documents"), the Company's management board and supervisory board will issue a joint reasoned statement in accordance with sec. 27 of the German Securities Acquisition and Takeover Act and the Company will file a Solicitation/Recommendation Statement on Schedule 14D-9 with the SEC (together with the joint reasoned statement, the "Recommendation Statements"). THE COMPANY'S STOCKHOLDERS AND OTHER INVESTORS ARE URGED TO READ THE TAKEOVER OFFER DOCUMENTS AND THE RECOMMENDATION STATEMENTS BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION WHICH SHOULD BE READ CAREFULLY BEFORE ANY DECISION IS MADE WITH RESPECT TO THE TAKEOVER OFFER. The Takeover Offer Documents and the Recommendation Statements will be distributed to all stockholders of the Company in accordance with German and U.S. securities laws. The Tender Offer Statement on Schedule TO and the Solicitation/Recommendation Statement on Schedule 14D-9 will be made available for free at the SEC's website at www.sec.gov. Additional copies may be obtained for free by contacting the Bidder or the Company. Free copies of these materials and certain other offering documents will be made available on the Company's website in English at morphosys.com/en/investors/Novartis-TakeoverOffer and in German at morphosys.com/de/investoren/Novartis-TakeoverOffer, by mail to MorphoSys AG, Semmelweisstrasse 7, 82152 Planegg, Germany or by phone at +49 89 8992 7179.

In addition to the Offer to Purchase, including the means to tender and certain other Takeover Offer Documents, as well as the Solicitation/Recommendation Statement, the Company files other information with the SEC. The Company's filings with the SEC are also available for free to the public from commercial document-retrieval services and at the website maintained by the SEC at www.sec.gov and are also available free of charge under the "SEC Filings" section of the Company's website at www.morphosys.com/en/investors.

In order to reconcile certain areas where German law and U.S. law conflict, Novartis AG and the Bidder expect to request no-action and exemptive relief from the SEC to conduct the Takeover Offer in the manner described in the offer document.

Acceptance of the Takeover Offer by stockholders residing outside Germany and the United States of America may be subject to further legal requirements. With respect to the acceptance of the Takeover Offer outside Germany and the United States, no responsibility is assumed for the compliance with such legal requirements applicable in the respective jurisdiction.

Forward-Looking Statements

This communication contains certain forward-looking statements concerning the Company, the Bidder and the Takeover Offer that involve substantial risks and uncertainties. Forward-looking statements include any statements containing the words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “goal,” “may,” “might,” “plan,” “predict,” “project,” “seek,” “target,” “potential,” “will,” “would,” “could,” “should,” “continue” and similar expressions. In this communication, the Company’s forward-looking statements include statements about the parties’ ability to satisfy the conditions to the consummation of the Takeover Offer; statements about the expected timetable for the consummation of the Takeover Offer; the Company’s plans, objectives, expectations and intentions; and the financial condition, results of operations and business of the Company and Novartis AG.

The forward-looking statements contained in this communication represent the judgment of the Company as of the date of this communication and involve known and unknown risks and uncertainties, which might cause the actual results, financial condition and liquidity, performance or achievements of the Company, 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 the Company's 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. Those risks and uncertainties that could cause the actual results to differ from expectations contemplated by forward-looking statements include, among other things: uncertainties as to the timing of the Takeover Offer; uncertainties as to how many of the Company’s stockholders will tender their stock in the Takeover Offer; the possibility that competing offers will be made; the possibility that various conditions for the Takeover Offer may not be satisfied or waived, including that a governmental entity may prohibit, delay or refuse to grant approval for the consummation of the Takeover Offer; the effects of the Takeover Offer on relationships with employees, other business partners or governmental entities; that the Bidder and Novartis AG may not realize the potential benefits of the Takeover Offer; transaction costs associated with the Takeover Offer; that the Company’s expectations may be incorrect; the inherent uncertainties associated with competitive developments, clinical trial and product development activities and regulatory approval requirements; the Company's reliance on collaborations with third parties; estimating the commercial potential of the Company’s development programs; and other risks indicated in the risk factors included in the Company’s filings with the SEC, including the Company’s Annual Report on Form 20-F, as well as the Solicitation/Recommendation Statement on Schedule 14D-9 to be filed by the Company and the Tender Offer Statement on Schedule TO and related Takeover Offer Documents to be filed by the Bidder and Novartis AG. 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 communication. The Company and the Bidder expressly disclaim any obligation to update any such forward-looking statements in this communication 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.

Strategic Oncology Focus with Strong Financial Position

On February 5, 2024, MorphoSys entered into a Business Combination Agreement to be acquired by Novartis to advance its pipeline at greater speed and scale

OUR AMBITION

Redefine How Cancer is Treated

PELABRESIB	Become new standard of care in myelofibrosis as combination therapy; expand into other myeloid diseases
TULMIMETOSTAT	Advance investigations in solid tumors and lymphomas

CASH AVAILABLE APPROXIMATELY UNTIL EARLY 2026*

*On a standalone basis and including convertible debt repayment
Pelabresib and tulmimetostat are investigational medicines and have not yet been evaluated or approved by regulatory authorities.
The development of pelabresib was funded in part by The Leukemia and Lymphoma Society®.

World-Class Team Of Experts Driven to Redefine Cancer Care

524
Employees in the U.S. & Germany

60%
Percentage of Female Employees

40%
Percentage of Male Employees

41%
Leadership Positions Held by Women

37
Nationalities Represented

MorphoSys Headquarters | *Munich*

MorphoSys U.S. | *Boston*

As of December 31, 2023

Key 2024 Priorities

MorphoSys and Novartis will continue to act as two separate companies, business as usual through expected close in first half of 2024

1. Close proposed Novartis acquisition
2. Prepare and submit New Drug Application for pelabresib in combination with ruxolitinib in myelofibrosis to the FDA and a Marketing Authorization Application to the EMA
3. Complete tafasitamab transition to Incyte
4. Diligently manage cash runway and maintain business continuity

FDA, Food and Drug Administration; EMA, European Medicines Agency

01
Transactions with Novartis and Incyte

Entered into Business Combination Agreement to be acquired by Novartis for € 68.00 per share in cash or € 2.7 billion equity value

Sold all tafasitamab rights worldwide to Incyte

Novartis and Incyte Agreements in Best Interest of MorphoSys, Shareholders and Cancer Patients

Following thorough review of strategic options, MorphoSys' Management Board and Supervisory Board unanimously approved both agreements

Provides Attractive, Immediate and Certain Value Creation for Shareholders

Accelerates Potential of Pelabresib on Global Scale Under Novartis

Allows for Future, Independent Growth of Tafasitamab More Efficiently Under Incyte

Agreements with Novartis and Incyte Expected to Provide Substantial Value to All Stakeholders

The closing of the proposed acquisition by Novartis is currently expected to take place in the first half of 2024

NOVARTIS PUBLIC TAKEOVER OFFER

Provides Attractive Premium for Shareholders

Offer price of € 68.00 per share in cash represents significant premium of 94% to 1M VWAP*

Maximizes Potential of Pelabresib

Novartis has ample resources, additional scientific expertise and global footprint

SALE OF TAFASITAMAB TO INCYTE

Keeps Program with Current Partner

Collaborating with Incyte on tafasitamab program since 2020

Consolidates Program Under One Company

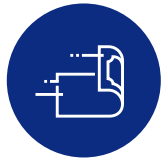
Incyte assumes full responsibility and cover all costs for development and commercialization of tafasitamab worldwide

* VWAP, volume-weighted average price; as of the unaffected January 25, 2024, closing share price

Novartis Public Takeover Offer Provides Attractive, Immediate and Certain Value Creation Opportunity for Shareholders

- € 68 per share in cash

- 89% premium to the unaffected January 25, 2024, closing share price
- 94% premium to 1M VWAP*
- 142% premium to 3M VWAP*



- € 2.7 billion equity value

- Customary closing conditions including regulatory clearances
- Acceptance threshold of 65%
- MorphoSys and Novartis agreed to take MorphoSys private promptly after takeover offer is settled

* VWAP, volume-weighted average price; as of the unaffected January 25, 2024, closing share price

02
Pelabresib

Potential to become new standard of care in myelofibrosis as combination therapy and expand into other myeloid diseases

Pelabresib Focus is First-Line Myelofibrosis, with Expansion into Other Myeloid Diseases

MYELOPROLIFERATIVE NEOPLASMS AND ADJACENCIES

PIVOTAL STAGE

MYELOFIBROSIS

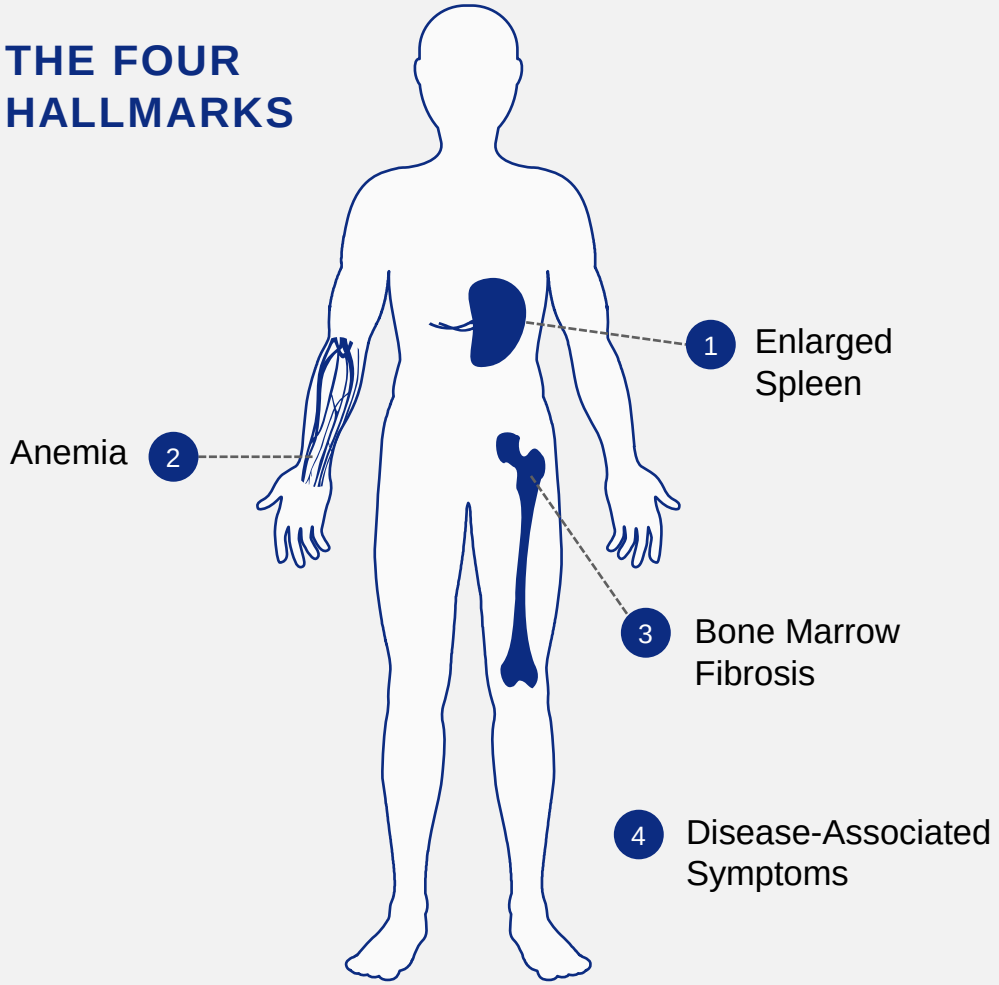
- Pelabresib and ruxolitinib improved all four hallmarks of myelofibrosis in Phase 3 MANIFEST-2 study
- Intend to file for approval in U.S. and Europe in mid-2024

CLINICAL PROOF-OF-CONCEPT STAGE

LOWER-RISK MYELODYSPLASTIC SYNDROMES (MDS)	Initiate Phase 2 study
ESSENTIAL THROMBOCYTHEMIA (ET)	Phase 2 proof-of-concept results show potential clinical benefit

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

THE FOUR HALLMARKS



EPIDEMIOLOGY

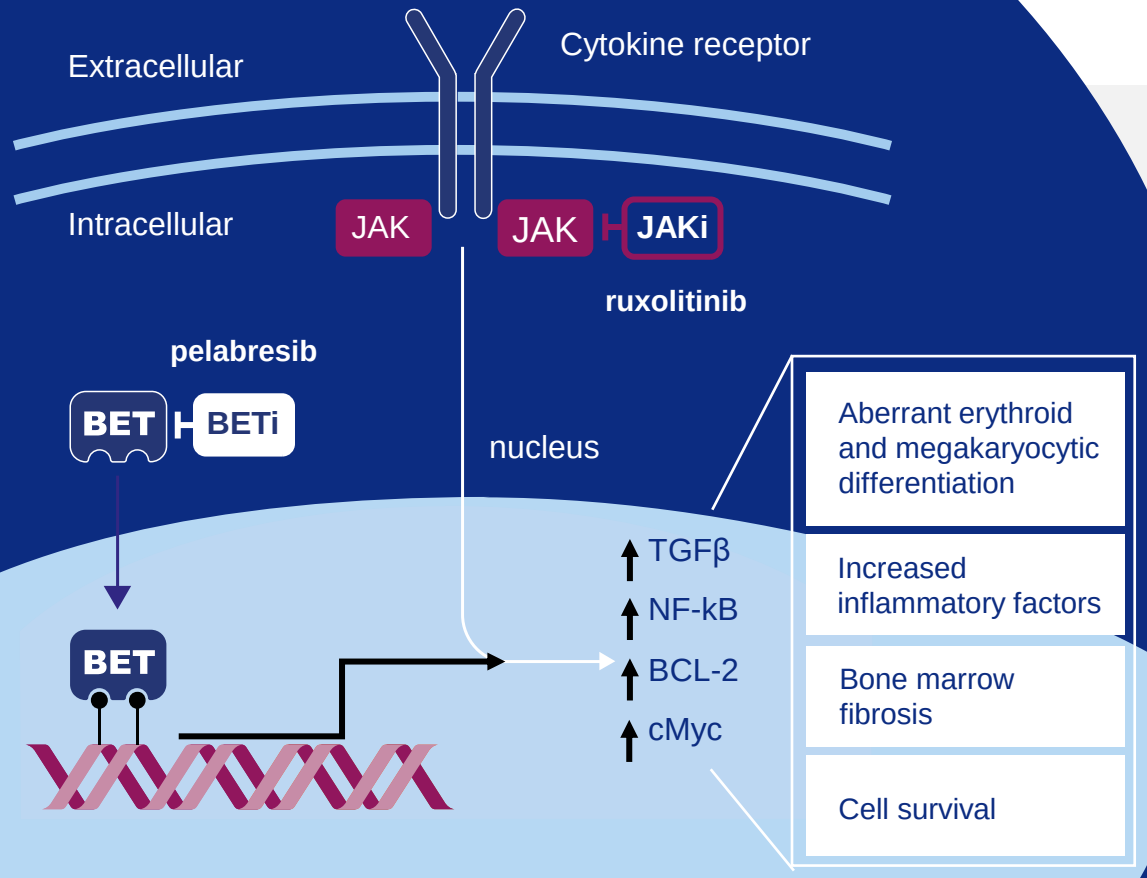
- **~18,000 patients** in the U.S., with **3,200 diagnosed annually**
- **~18,000 patients** in Europe, with **3,400 diagnosed annually**
- **~90%** of patients have intermediate- or high-risk disease at diagnosis, with vast majority in intermediate-risk category

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.

JAK-STAT Pathway and BET Proteins Are Central to Myelofibrosis Pathology



Dysregulation of JAK–STAT pathway and BET proteins lead to the processes implicated in myelofibrosis

Tefferi A, et al. Am J Hematol 2021; Shorstova T, et al. Br J Cancer 2021; Mughal TI, et al. Int J Gen Med 2014; Kleppe M, et al. Cancer Cell 2018; Albrecht BK, et al. J Med Chem 2016; Mascarenhas J, et al. J Clin Oncol 2023; Harrison CN, et al. Future Oncol 2022.

The combination of BET and JAK inhibition:

- Showed broad suppression of the proinflammatory molecules involved in bone marrow fibrosis *in vivo*
- Normalized the balance of precursor red blood cells and precursor platelet-forming cells in the bone marrow *in vivo*

BCL-2, B-cell lymphoma 2; BET, bromodomain and extraterminal domain; CALR, calreticulin; cMyc, cellular Myc oncogene; MPL, Myeloproliferative leukemia virus oncogene; Myc oncogene; JAK, Janus kinase; NF-κB, nuclear factor kappa b; Pol, polymerase; STAT, signal transducer and activator of transcription; TGF, transforming growth factor.

Combining BET inhibition with JAK inhibition represents a potential therapeutic approach in myelofibrosis to change the natural course of the disease

Pelabresib Inhibits BET Proteins, Decreasing the Expression of Genes Related to Blood Cancers

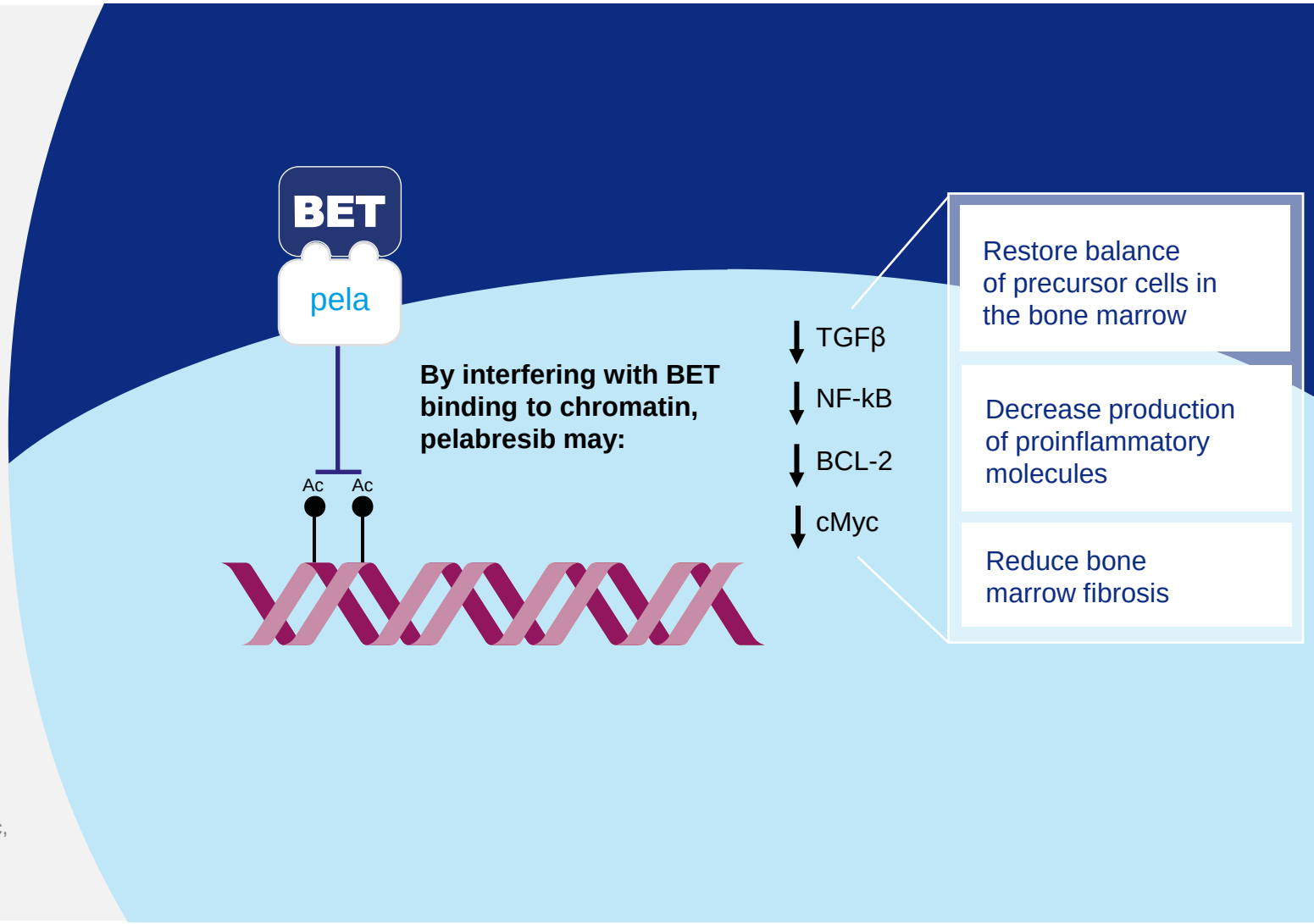
Pelabresib is an investigational oral drug designed to inhibit BET proteins

Helps restore the balance of cells in the bone marrow

Regulates megakaryocyte (hematopoietic cells responsible for the production of blood platelets) differentiation and proliferation

Reduces proinflammatory signals involved in bone marrow fibrosis

Half-life (~15 hours) allows for once-daily oral dosing



Albrecht BK, et al. J Med Chem 2016; Keller P, et al. Hemasphere 2021; Blum KA, et al. Cancer Research Communications 2022; Shi J, Vakoc CR. Mol Cell 2014.

BCL-2, B-cell lymphoma 2; BET, bromodomain and extraterminal domain; cMyc, cellular Myc oncogene; MF, myelofibrosis; NF-κB, nuclear factor kappa b; Pol, polymerase; TGF, transforming growth factor.

Majority of U.S. Physicians View Combination Therapy as the "Way of the Future" in Myelofibrosis

MAJORITY IMPRESSED BY THE IMPROVED EFFICACY OF COMBINATION THERAPY

HESITANT TO UTILIZE (13%)

OPEN TO UTILIZE (87%)

PELABRESIB RANKED AMONG THE HIGHEST IN TOP ATTRIBUTES DRIVING TREATMENT DECISIONS*

IMPRESSIVE EFFICACY
(Spleen Volume Reduction, Symptom Improvement)
Mentioned by ~85% of HCPs

HEMATOLOGIC FUNCTION
(Transfusion Dependency, Hemoglobin Count, Quality of Life)
Mentioned by ~70% of HCPs

LOW RATES OF HEMATOLOGIC ADVERSE EVENTS
(Anemia, Thrombocythemia, Neutropenia)
Mentioned by ~70% of HCPs

*MF Drivers and Barriers Qualitative Market Research, Aug 2023 | N=23 MF treating US Hem Oncs & Med Oncs; Product attributes rated based on Target Product Profile for pelabresib

Pelabresib and Ruxolitinib Combination Offers Potential to Shift Myelofibrosis Treatment Paradigm

All four myelofibrosis disease hallmarks were improved over placebo plus ruxolitinib in Phase 3 MANIFEST-2 study

KEY FINDINGS

- Significantly reduced spleen size, nearly doubling SVR35 response rate
- Showed a strong positive trend in reducing symptom burden
- Improved measures of anemia
- Improvement in bone marrow fibrosis
- Biomarker reductions suggest disease modification
- Safety results in line with assessments from previous clinical trials
- Fewer grade ≥3 adverse events compared with placebo plus ruxolitinib

NEXT STEPS

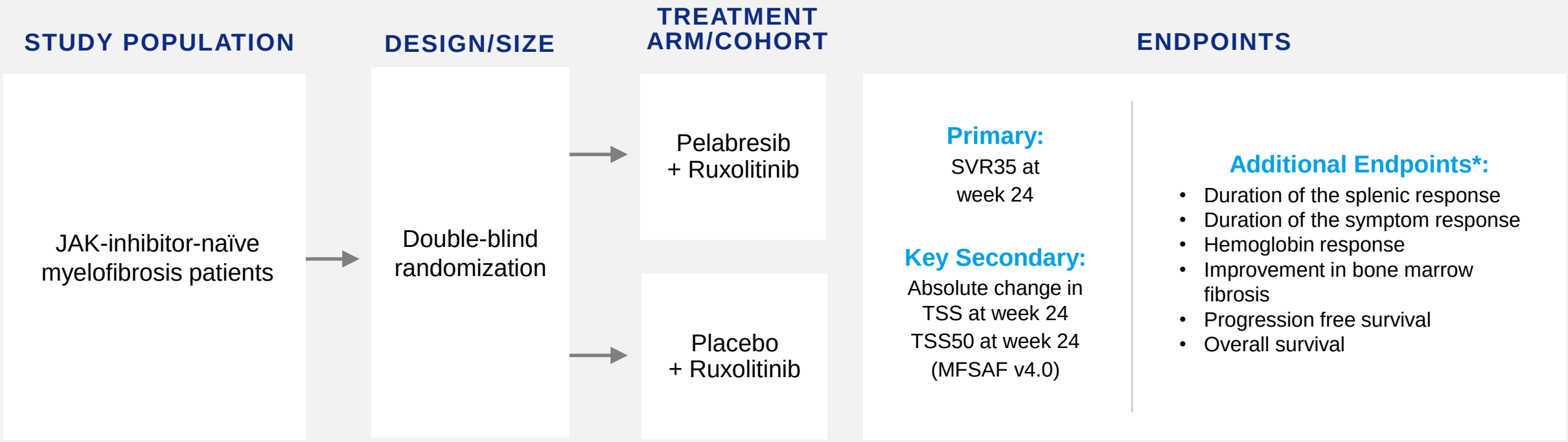
Intend to file for approval in the U.S. and Europe mid-2024

Collect longer-term data, including quality of life and duration of treatment

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

Phase 3 MANIFEST-2 Study: One of the Largest Myelofibrosis Trials Ever Conducted

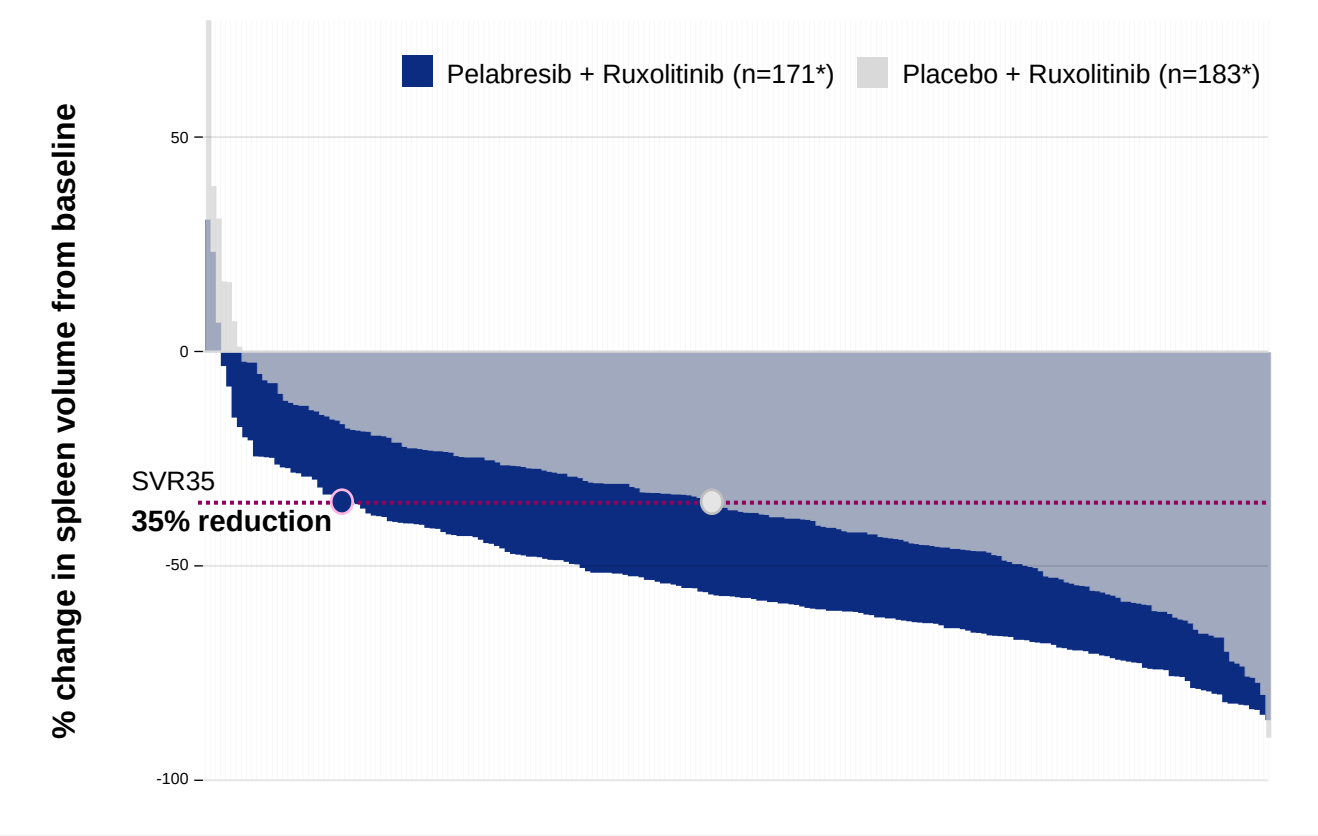
430 *JAK-inhibitor-naïve myelofibrosis patients randomized, representative of the disease population and aligned with NCCN criteria*



SVR35, ≥35% reduction in spleen volume; TSS50, ≥50% reduction in total symptom score; TSS, total symptom score; MFSAF, Myelofibrosis Symptom Assessment Form; NCCN, National Comprehensive Cancer Network
*Only includes sample of additional endpoints being assessed in Phase 3 MANIFEST-2 study

Phase 3 MANIFEST-2: Significantly Reduced Spleen Size at 24 Weeks, Primary Endpoint

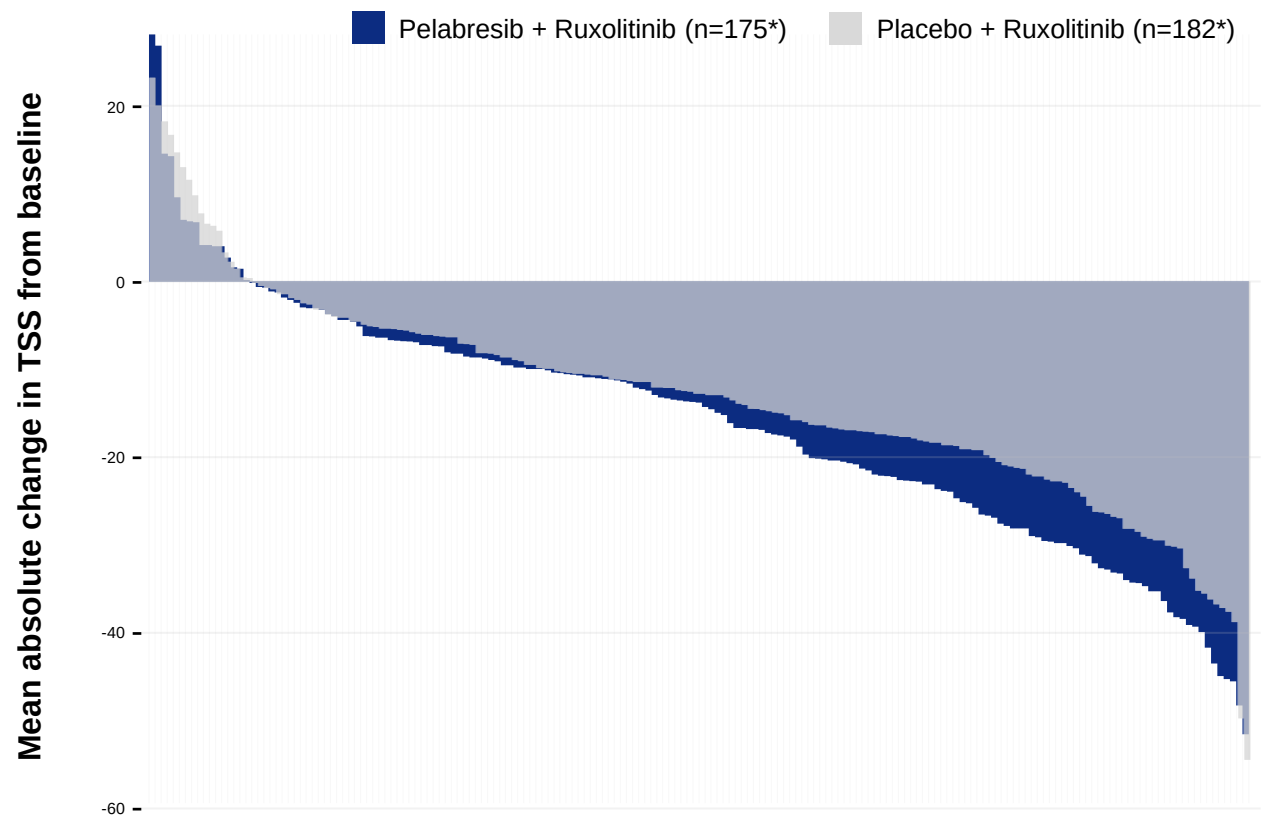
Key finding given the known association between spleen volume reduction and patient survival



ITT POPULATION	Pelabresib + Ruxolitinib (N=214)	Placebo + Ruxolitinib (N=216)	p-value
SVR35 at Week 24	65.9%	35.2%	
Difference† (95% CI)	30.4 (21.6, 39.3)		<0.001
Mean % change in spleen volume at Week 24‡	-50.6 (n=171)	-30.6 (n=183)	
95% CI	-53.2, -48	-33.7, -27.5	

CI, confidence interval; 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. †Calculated by stratified Cochran–Mantel–Haenszel test; ‡Patients without Week 24 assessment are considered non-responders.
Rampal, R, et.al. ASH 2023. Oral 628. | Data Cut-Off August 31, 2023

Phase 3 MANIFEST-2: Strong Numerical Improvements in Absolute Change in TSS at 24 Weeks, Key Secondary Endpoint



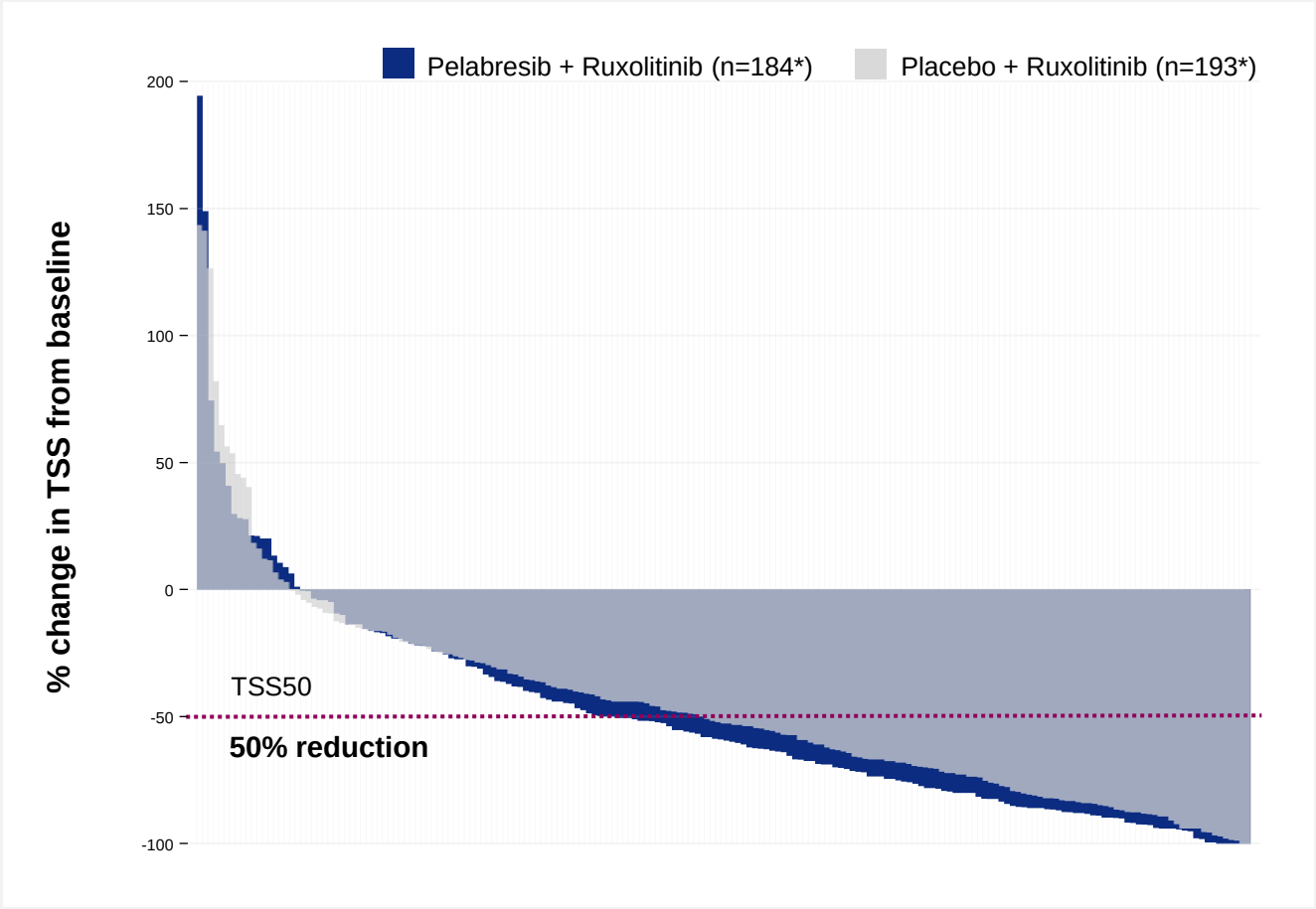
ITT POPULATION	Pelabresib + Ruxolitinib (N=214)	Placebo + Ruxolitinib (N=216)	p-value
TSS change† from baseline at Week 24	-15.99 (Mean Baseline: 28.26)	-14.05 (Mean Baseline: 27.36)	
Mean difference‡ (95% CI)	-1.94 (-3.92, 0.04)		0.0545

ANCOVA, analysis of covariance; CI, confidence interval; 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. ‡Least square mean difference from ANCOVA model using baseline DIPSS, baseline platelet count and baseline spleen volume as factors, and baseline TSS as covariate.

Rampal, R, et.al. ASH 2023. Oral 628. | Data Cut-Off August 31, 2023

Phase 3 MANIFEST-2: Numerically Greater Response Rates in TSS50 at 24 Weeks, Key Secondary Endpoint



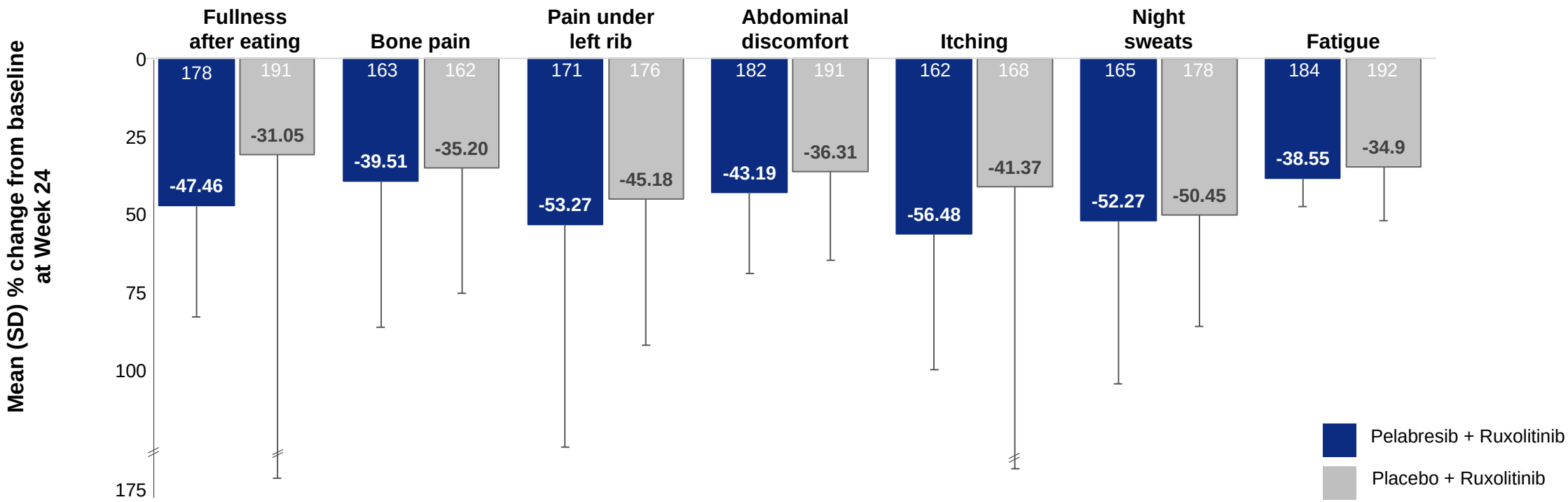
ITT POPULATION	Pelabresib + ruxolitinib (N=214)	Placebo + ruxolitinib (N=216)	p-value
TSS50 at Week 24	52.3%	46.3%	
Difference† (95% CI)	6.0 (-3.5, 15.5)		0.216

CI, confidence interval; ITT, intent-to-treat; TSS, total symptom score; TSS50, ≥50% reduction in total symptom score. Patients are evaluable for TSS50 at Week 24 if they have had Week 24 TSS assessment by the data cutoff date or discontinued without Week 24 assessment at any time.

*Waterfall plots represent patients who have baseline and Week 24 data. †Difference in treatment groups analyzed by stratified Cochran–Mantel–Haenszel test (weighted 95% CI adjusted across strata).

Rampal, R, et.al. ASH 2023. Oral 628. | Data Cut-Off August 31, 2023

Phase 3 MANIFEST-2: Disease-Associated Symptom Benefits Were Observed and Balanced Across all TSS Domains



TSS, total symptom score
Rampal, R, et.al. ASH 2023. Oral 628. | Data Cut-Off August 31, 2023

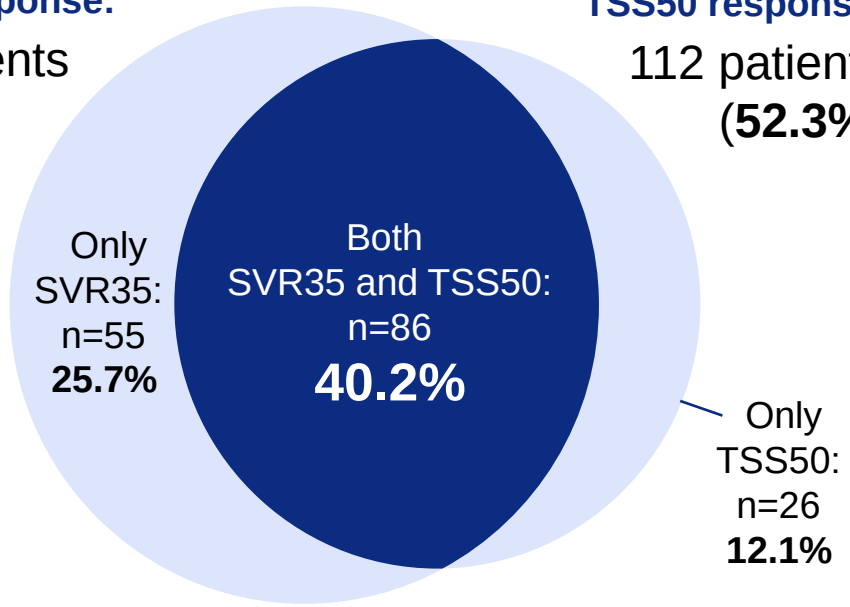
Phase 3 MANIFEST-2: Twofold Increase in Patients Achieving Both SVR35 and TSS50

Dual SVR35 / TSS50 responders at week 24

PELABRESIB + RUXOLITINIB (N=214)

SVR35 response:
141 patients
(**65.9%**)

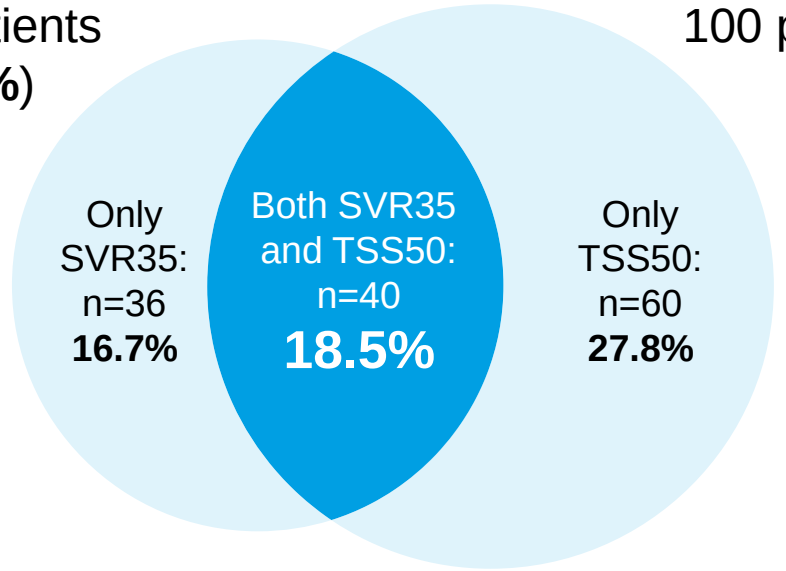
TSS50 response:
112 patients
(**52.3%**)



PLACEBO + RUXOLITINIB (N=216)

SVR35 response:
76 patients
(**35.2%**)

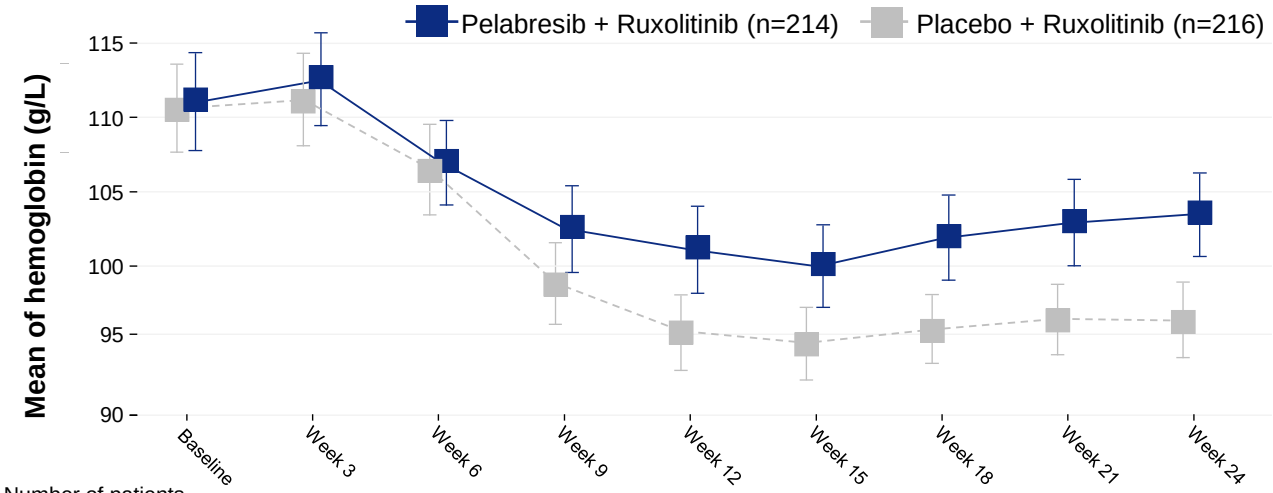
TSS50 response:
100 patients
(**46.3%**)



SVR35, ≥35% reduction in spleen volume; TSS50, ≥50% reduction in total symptom score. Diagrams are not drawn to scale.
Rampal, R, et.al. ASH 2023. Oral 628. | Data Cut-Off August 31, 2023

Phase 3 MANIFEST-2: Improved Multiple Measures of Anemia

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



Number of patients

	Baseline	Week 3	Week 6	Week 9	Week 12	Week 15	Week 18	Week 21	Week 24
Pelabresib + ruxolitinib	212	204	209	199	193	189	186	185	184
Placebo + ruxolitinib	214	206	211	209	207	205	204	199	196

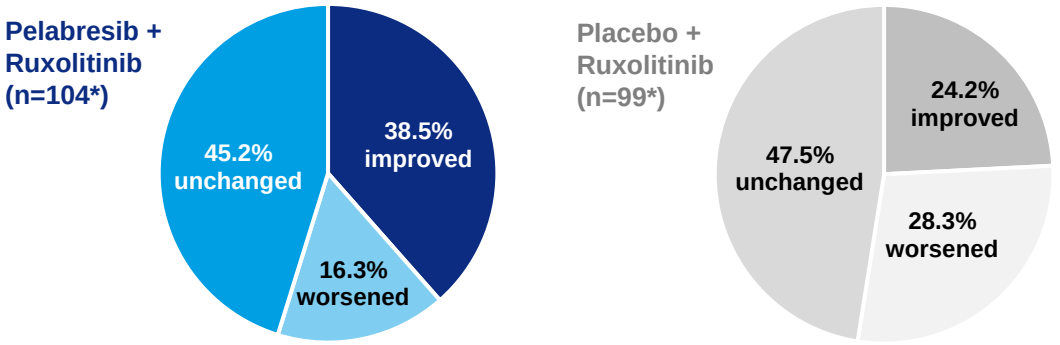
ITT POPULATION	Pelabresib + Ruxolitinib (N=214)	Placebo + Ruxolitinib (N=216)
Hemoglobin response* (95% CI)	9.3% (5.45, 13.25)	5.6% (2.50, 8.61)
Patients requiring RBC transfusion during screening, n (%)	35 (16.4)	25 (11.6)
Patients requiring RBC transfusion during first 24 weeks of study treatment, n (%)	66 (30.8)	89 (41.2)

ITT, intent-to-treat; CI, confidence interval; RBC, red blood cell.
*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

Phase 3 MANIFEST-2: Reduction in Bone Marrow Fibrosis and Inflammatory Cytokines

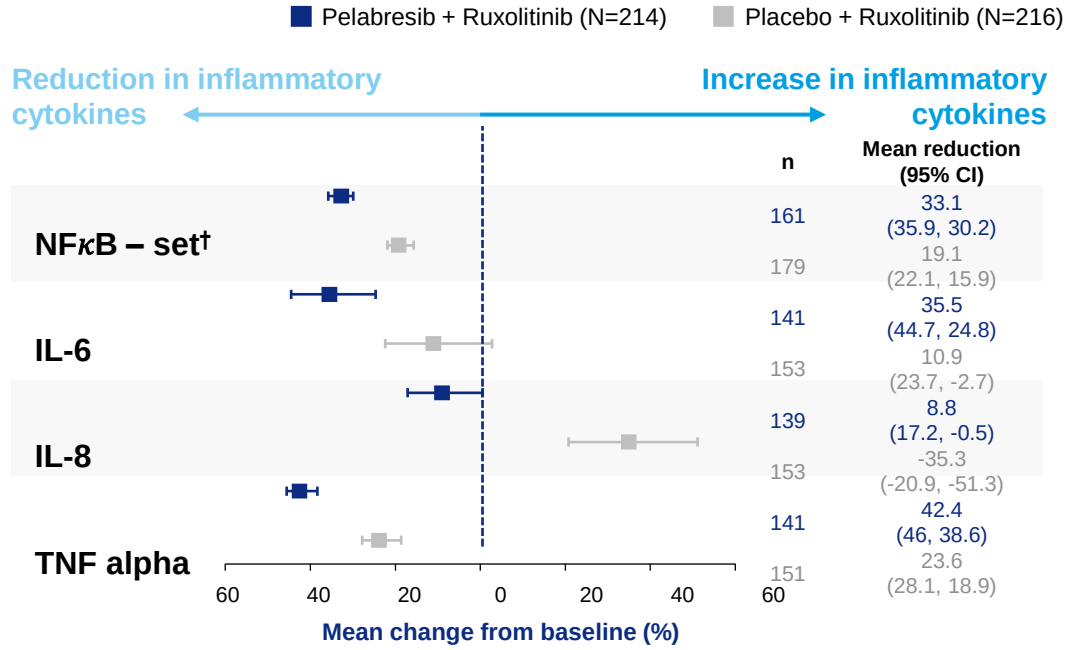
Biomolecular improvements suggest early evidence of a disease-modifying effect

IMPROVEMENT OF RETICULIN FIBROSIS GRADE IN CENTRAL READ BY WEEK 24



	Pelabresib + Ruxolitinib	Placebo + Ruxolitinib	Odds ratio
Worsened ≥1 grade (%)	16.3	28.3	0.47 (0.23-0.92)
Improved ≥1 grade (%)	38.5	24.2	2.09 (1.14-3.93)

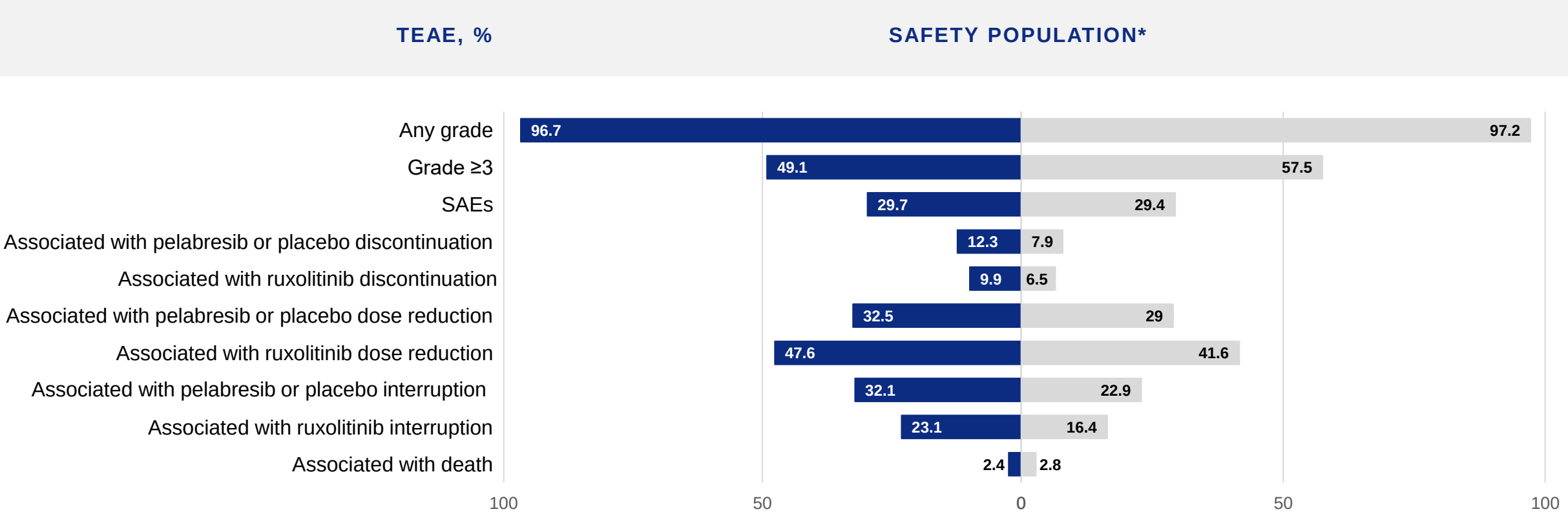
REDUCTION OF INFLAMMATORY CYTOKINES BY WEEK 24



IL-6, interleukin 6; IL-8, interleukin 8; NFκB, Nuclear factor kappa-light-chain-enhancer of activated B cells; TNF, tumor necrosis factor. *n=203 evaluable patients (baseline & C9D1). †NFκB - set includes: B2M, CRP, CD40-L, HEPCIDIN, IL-6, IL-12p40, MIP-1 BETA, MPIF-1, RANTES, TNFR2, TNF alpha, VCAM-1.

Rampal, R, et.al. ASH 2023. Oral 628. | Preliminary Analyses from Data Cut-Off: August 31, 2023

Phase 3 MANIFEST-2: Pelabresib and Ruxolitinib Combination Safety Results In Line with Assessments from Previous Clinical Trials



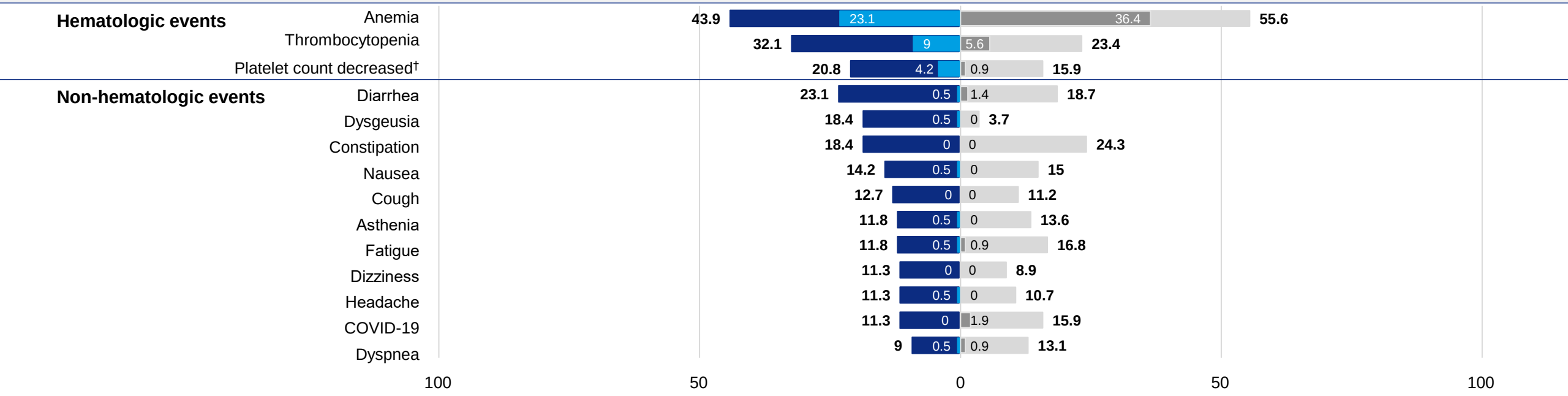
TEAE, treatment-emergent adverse event; SAE, serious adverse event. *Safety population: received at least one dose of study drug. TEAEs are regardless of relationship to study drug. A TEAE for the double-blinded treatment period is defined as an adverse event that has a start date on or after the first 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

Phase 3 MANIFEST-2: Grade ≥3 Adverse Events Were Less Frequent with Pelabresib and Ruxolitinib Combination

TEAES OF ALL GRADES THAT OCCURRED IN ≥10% OF PATIENTS

SAFETY POPULATION*



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

Pelabresib + ruxolitinib (N=212)
% Grade ≥3
Placebo + ruxolitinib (N=214)
% Grade ≥3

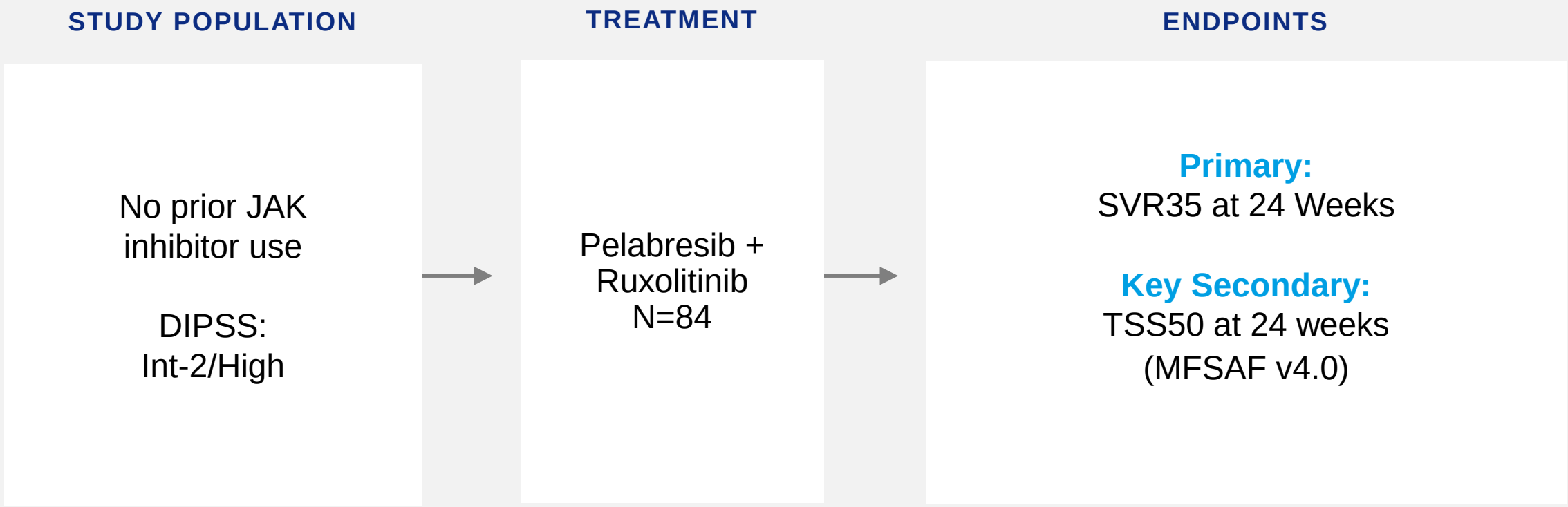
Phase 3 MANIFEST-2 Study Outcome Reinforced by Robust, Long-Term Phase 2 MANIFEST Results

Phase 2 MANIFEST Study: Ongoing, global, open-label investigation of pelabresib in myelofibrosis and essential thrombocythemia

	STUDY POPULATION	TREATMENT		PRIMARY ENDPOINT	SECONDARY ENDPOINTS
ARM 1	**Second-Line Myelofibrosis** • No longer on ruxolitinib • Refractory or intolerant or ineligible	**Pelabresib monotherapy**	TD (1A)	TD → TI	SVR35, TSS50
			Non-TD (1B)	SVR35	TSS50
ARM 2	**Second-Line Myelofibrosis** • 'Add on' to ruxolitinib • Suboptimal response or MF progression	**Pelabresib + Ruxolitinib**	TD (2A)	TD → TI	SVR35, TSS50
			Non-TD (2B)	SVR35	TSS50
ARM 3	**First-Line Myelofibrosis** • No prior JAKi use • DIPSS: Int-2/High	**Pelabresib + Ruxolitinib**		SVR35	TSS50
ARM 4	**Essential Thrombocythemia** • High-risk disease • Resistant or intolerant to HU	**Pelabresib monotherapy**		CHR	TSS50

CHR, complete hematologic response; DIPSS, Dynamic International Prognostic Scoring System; HU, hydroxyurea; Int-2, intermediate-2; JAKi, Janus kinase inhibitor; SVR35, ≥35% reduction in spleen volume at Week 24; TD, transfusion dependent; TI, transfusion independent; TSS50, ≥50% reduction in total symptom score at Week 24.
Harrison C, et al. EHA 2023. Abstract P1027. | Data Cut-Off July 29, 2022

Phase 2 MANIFEST Arm 3: Pelabresib and Ruxolitinib in JAK Inhibitor-Naïve Patients with Myelofibrosis

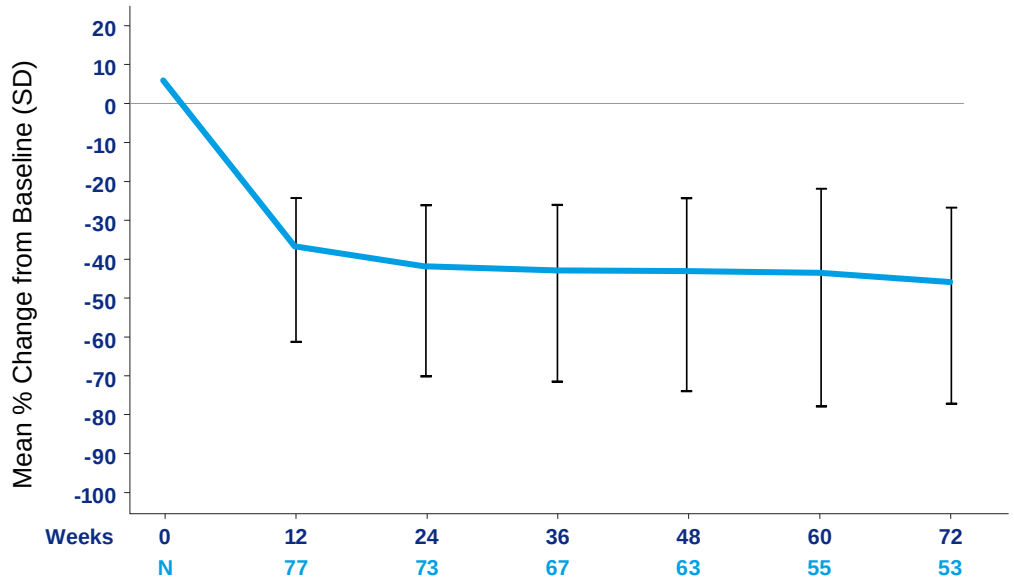


DIPSS, Dynamic International Prognostic Scoring System; Int-2, intermediate-2; SVR35, ≥35% reduction in spleen volume; TSS50, ≥50% reduction in total symptom score; MFSAF, Myelofibrosis Symptom Assessment Form

Harrison C, et al. EHA 2023. Abstract P1027. | Data Cut-Off July 29, 2022

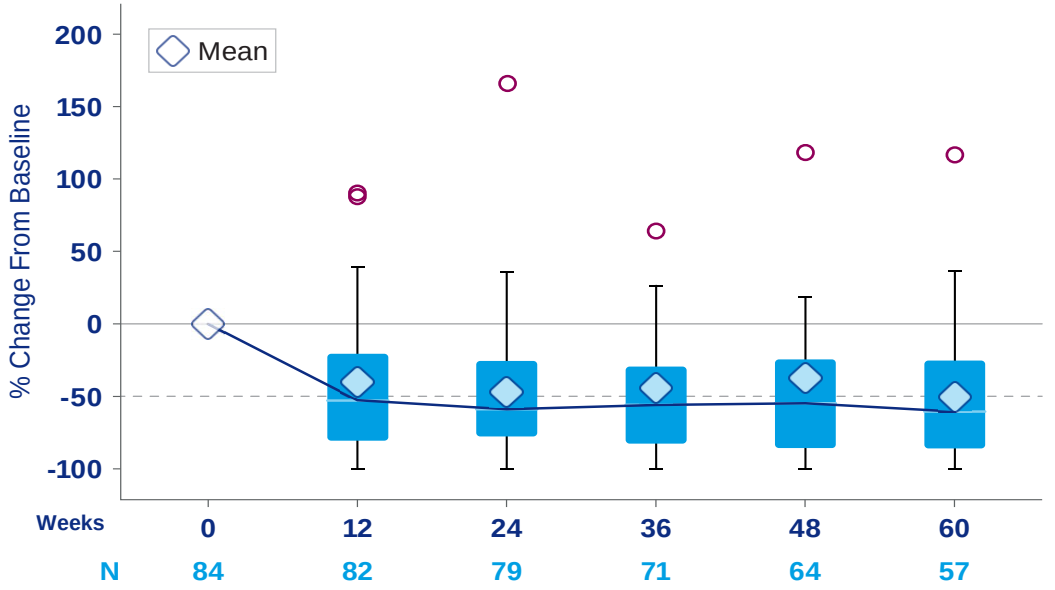
Phase 2 MANIFEST Arm 3: Pelabresib and Ruxolitinib Offers Deep and Durable Improvements in Spleen Volume and Disease-Associated Symptoms

SPLEEN VOLUME CHANGE OVER TIME



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

TOTAL SYMPTOM SCORE CHANGE OVER TIME



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

Harrison C, et al. EHA 2023. Abstract P1027. | Data Cut-Off July 29, 2022

Phase 2 MANIFEST Arm 4: Pelabresib Monotherapy in Patients with High-Risk Essential Thrombocythemia

Data underscore potential clinical benefit of pelabresib in myeloid diseases beyond myelofibrosis

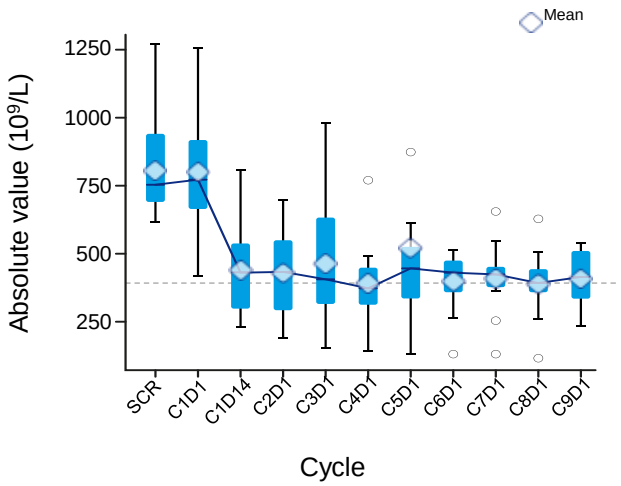
STUDY POPULATION	DESIGN/SIZE	ENDPOINTS
High-risk essential thrombocythemia Refractory or intolerant to hydroxyurea* ≥ two symptoms average score ≥3/ TSS ≥15 Platelets >600 × 10^9/L	Pelabresib monotherapy N=21	**Primary:** Complete hematologic response (confirmed – CHR) **Secondary:** Partial hematologic response (confirmed – PHR) Symptom improvement (MPN-SAF)

Complete Hematologic Response (CHR): Normal platelet and white blood cell count with these labs confirmed after 3 weeks, and a normal spleen size
Partial Hematologic Response (PHR): Platelets 400 – 600 and normal white blood cell count with these labs confirmed after 3 weeks
Hematologic Response is confirmed, when conditions are met in two consecutive cycles; unconfirmed, when conditions are met in one cycle but not in the next cycle
MPN-SAF, Myeloproliferative Neoplasm Symptom Assessment Form; TSS, total symptom score
Passamonti F, et al. EHA 2023. S168
*Refractory or intolerant criteria, as per Barosi, et al. 2007.

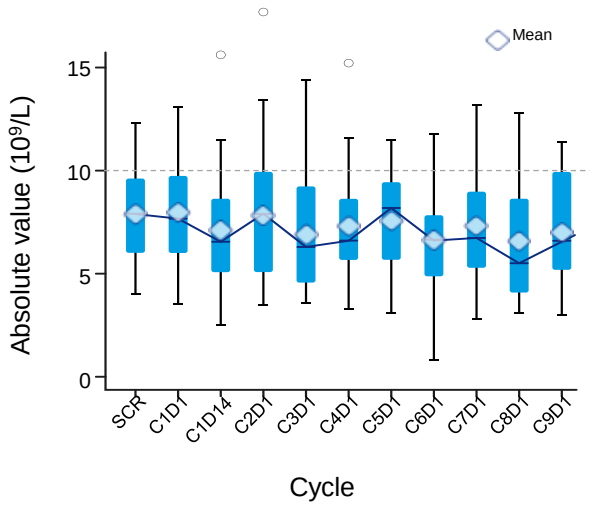
Phase 2 MANIFEST Arm 4: 60% of Essential Thrombocythemia Patients Had Confirmed Complete or Partial Hematologic Response at Any Time

Pelabresib monotherapy normalized platelet count over time without causing anemia or thrombocytopenia

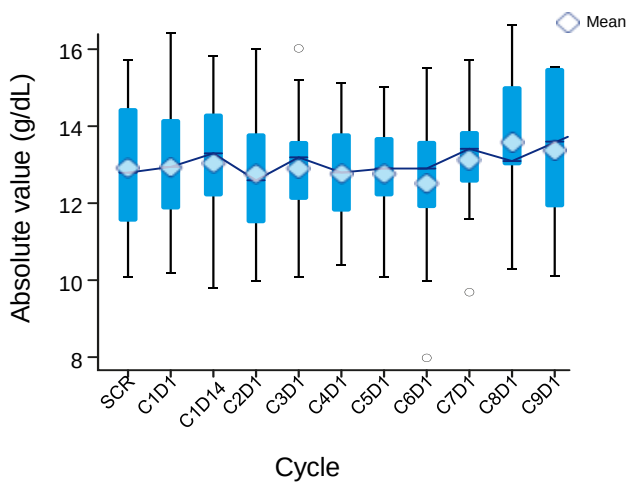
PLATELETS OVER TIME



WHITE BLOOD CELL OVER TIME



HEMOGLOBIN OVER TIME



CHR or PHR (Confirmed)

60%

(12/20)

CHR or PHR (Unconfirmed)

90%

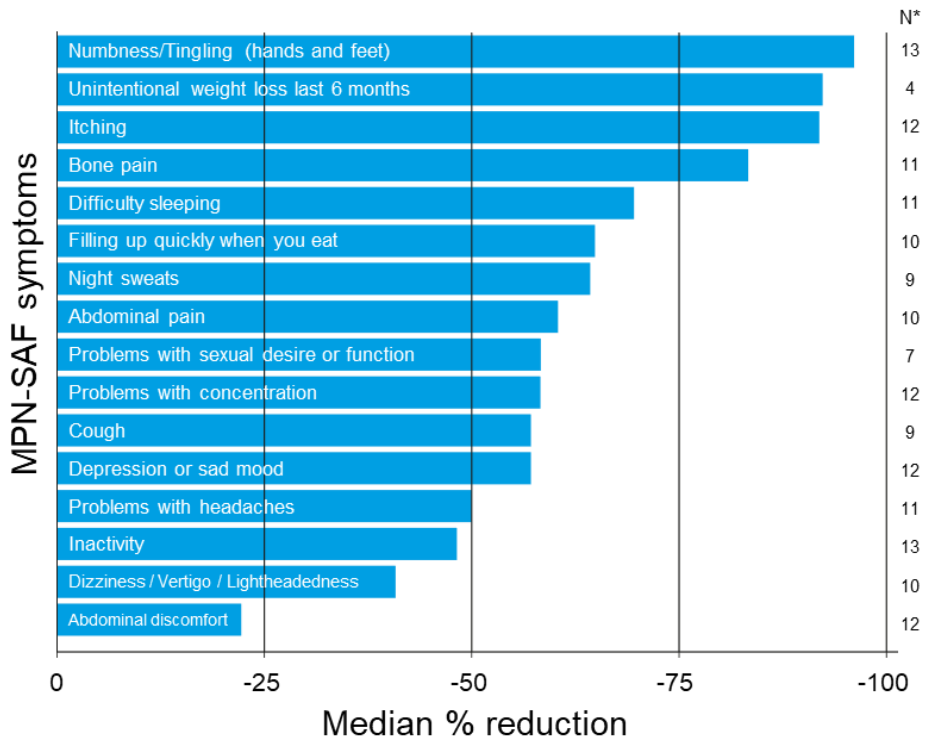
(18/20)

The most common nonhematologic adverse events were nausea, diarrhea and dysgeusia. Hemorrhagic or thromboembolic events were reported in 30% of patients. No grade 4 events or higher were reported.

Complete Hematologic Response (CHR): Normal platelet and white blood cell count with these labs confirmed after 3 weeks, and a normal spleen size
Partial Hematologic Response (PHR): Platelets 400 – 600 and normal white blood cell count with these labs confirmed after 3 weeks
Passamonti F, et al. EHA 2023. Abstract S168. | Data Cut-Off July 29, 2022

Phase 2 MANIFEST Arm 4: Symptom Reduction in Essential Thrombocythemia Patients Observed Across All MPN-SAF Domains

BEST PERCENTAGE REDUCTION IN MPN-SAF SYMPTOMS



One-half of patients had ≥50% reduction in total symptom score from baseline at any time

N=14*	MPN-SAF SYMPTOMS
TSS50 at any time	50% (7/14)
Median % TSS reduction at Week 12	-31%

*Patients with non-missing and nonzero baseline symptom score.

TSS, total symptom score assessed based on MPN-SAF; TSS50, ≥50% reduction in total symptom score from baseline.

MPN-SAF, Myeloproliferative Neoplasm Symptom Assessment Form

Fever not depicted in the figure due to zero baseline.

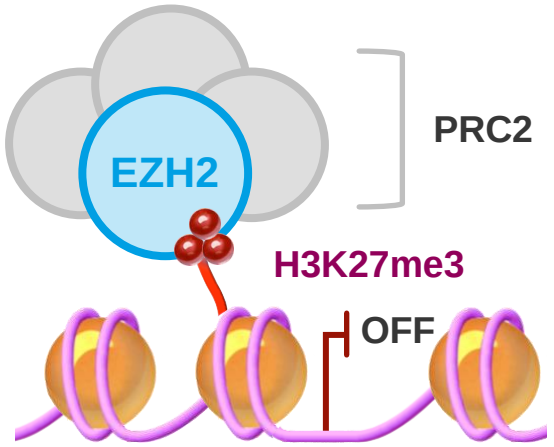
Passamonti F, et al. EHA 2023. Abstract S168. | Data Cut-Off July 29, 2022

03
Tulmimetostat

Demonstrate potential in broad array of advanced solid tumors and lymphomas

EZH2 Has a Broad Role in Tumor Biology

POLYCOMB REPRESSIVE COMPLEX 2 (PRC2)



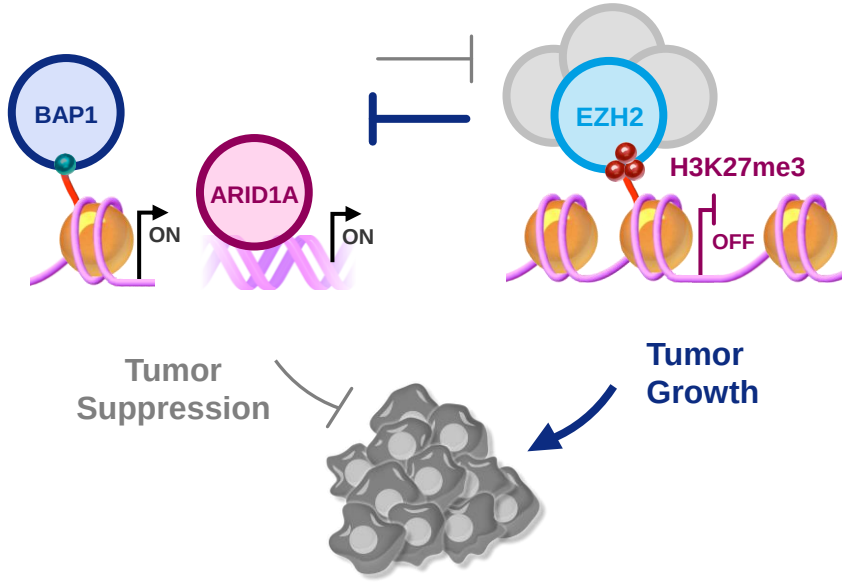
EZH2 trimethylates histone H3 at **lysine 27** (H3K27me3) and **suppresses transcription**

BROAD IMPLICATIONS IN CANCER

- Activating mutations
- Oncogenic driver synergy
- Synthetic lethal relationships
- Drug resistance
- Tumor immunity

SYNTHETIC LETHAL INTERACTIONS BY EZH2 INHIBITION

ACTIVATION VS. REPRESSION



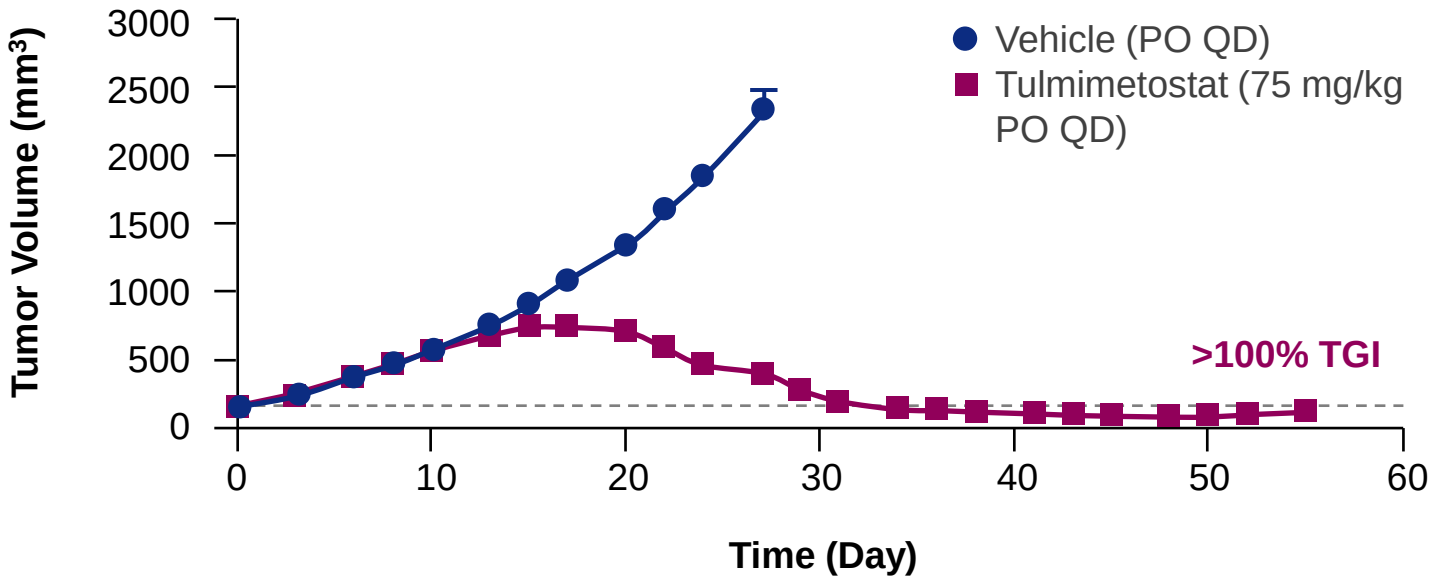
Tulmimetostat is a Next-Generation Dual EZH2/EZH1 Inhibitor Offering Potential First- and Best-in-Class Opportunities

TULMIMETOSTAT VS. 1ST GEN EZH2I

Tulmimetostat

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

HT1376 ARID1A MUTANT BLADDER CANCER XENOGRAFT MODEL



EED, embryonic ectoderm development protein; EZH2, enhancer of zeste homolog 2; PO, per os (by mouth, oral); QD, quaque die (once daily); ARID1A, AT-rich interacting domain containing protein 1A
Lakhani N, et al. ASCO 2021. Abstract 3104.

Tulmimetostat showed superior tumor reduction compared with the vehicle in several *in vivo* tumor models

Phase 1/2 Study Investigating Tulmimetostat Monotherapy in Heavily Pretreated Patients with Advanced Cancers

COMPLETED PHASE 1: ESCALATION

Advanced Tumor

RP2D
Tulmimetostat
Monotherapy

Partial responses in unselected heavily pre-treated patients with mesothelioma and endometrial cancer

PHASE 2: TWO-STAGED EXPANSION

Disease-Specific Cohorts

M1	Tumor Agnostic Solid Cancers (*ARID1A* mutant)
M2	Ovarian Clear Cell Carcinoma (*ARID1A* mutant)
M3	Endometrial Carcinoma (*ARID1A* mutant)
M4	Lymphoma (either B-cell or T-cell histology, EZH2 mutant and wildtype)** *Biomarker selected for DLBCL*
M5	Pleural or Peritoneal Mesothelioma (*BAP1* loss)
M6	Metastatic Castration Resistant Prostate Cancer

Biomarker selected cohort

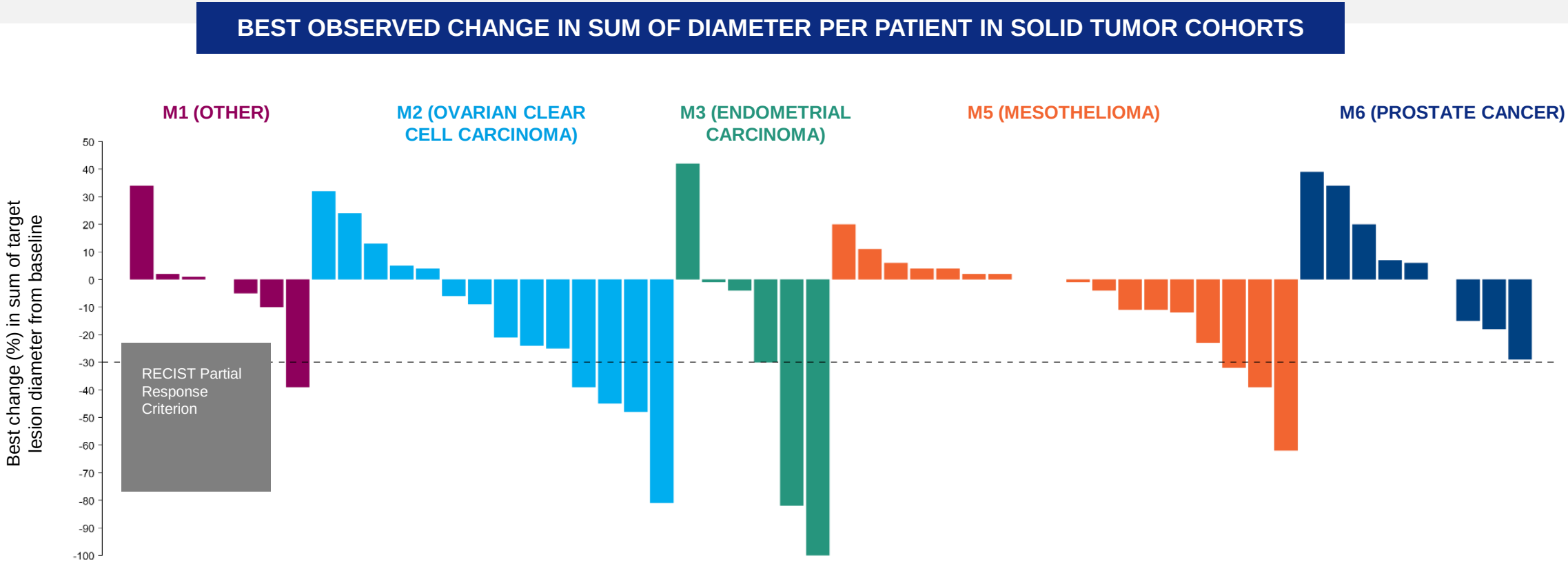
Not biomarker defined

***Cohort M4: Enrolled ~20 patients including PTCL and DLBCL*

Phase 2 includes heavily pre-treated patients and, in several cohorts, pre-selected patients based on potentially relevant biomarkers

EZH2, enhancer of zeste homolog 2; ARID1A, AT-rich interacting domain containing protein 1A; RP2D, recommended Phase 2 dose, PTCL, peripheral T-cell lymphoma; DLBCL, diffuse large B-cell lymphoma
Lakhani N, et al. ASCO 2021. Abstract 3104.

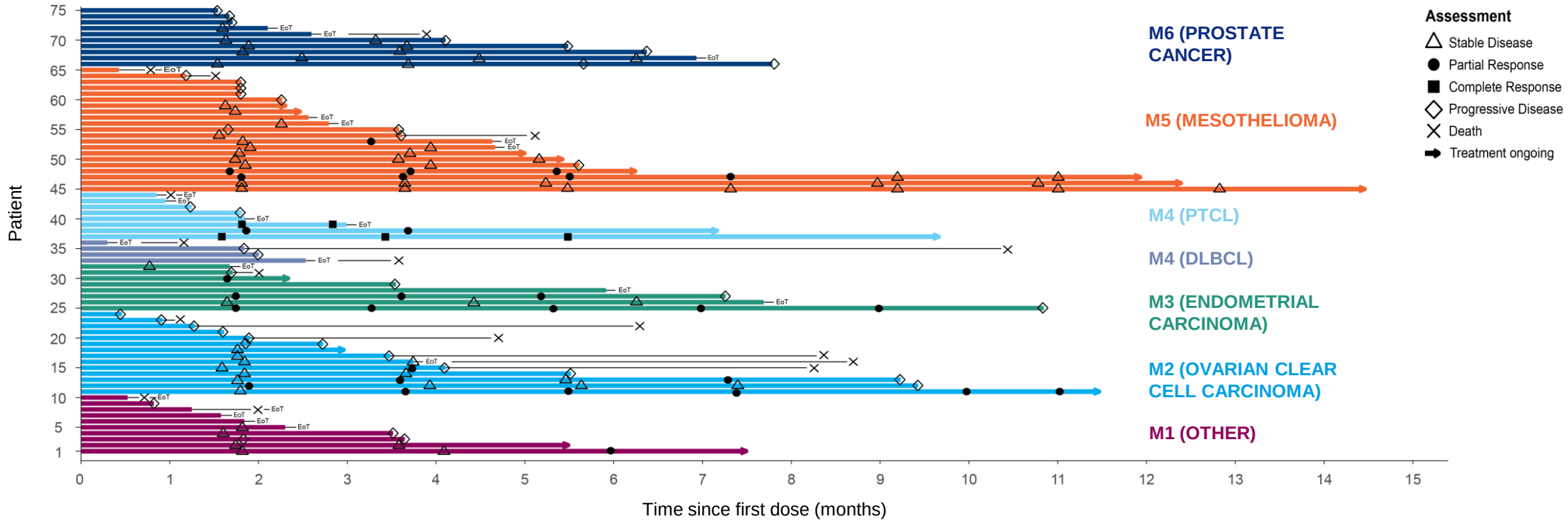
Tulmimetostat Shows Tumor Reduction and Disease Stabilization Across All Solid Tumor Cohorts



RECIST, Response Evaluation Criteria in Solid Tumors
Drescher C, et al. ASCO 2023. Abstract 3094. | Data Cut-Off February 14, 2023

Tulmimetostat Demonstrates Anti-Tumor Activity Across All Indications Investigated

TREATMENT DURATION AND RESPONSE ASSESSMENT BY CANCER COHORT (EFFICACY EVALUABLE PATIENTS)

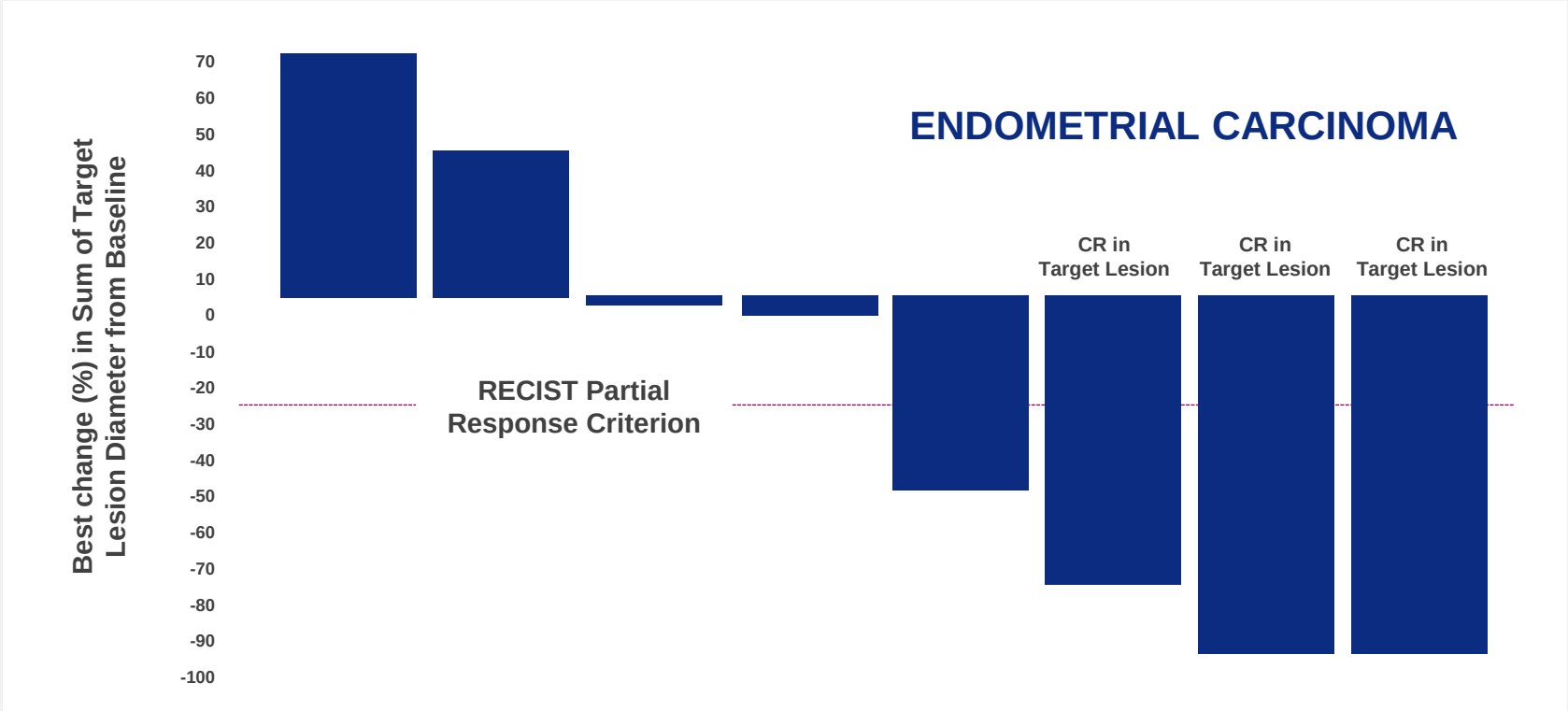


PTCL, peripheral T-cell lymphoma; DLBCL, diffuse large B-cell lymphoma
Drescher C, et al. ASCO 2023. Abstract 3094. | Data Cut-Off February 14, 2023

FDA Grants Fast Track Designation for Tulmimetostat in Endometrial Cancer

Tulmimetostat and pelabresib have both received Fast Track designations from the FDA

Fast Track designation granted for the treatment of patients with advanced, recurrent or metastatic endometrial cancer harboring *ARID1A* mutations and who have progressed on at least one prior line of treatment



RECIST, Response Evaluation Criteria in Solid Tumors; CR, complete response; ARID1A, AT-rich interacting domain containing protein 1A

Tulmimetostat Safety Profile Appears Manageable for Heavily Pretreated Patients with Advanced Cancer

MOST FREQUENTLY REPORTED TREATMENT-EMERGENT ADVERSE EVENTS (TEAES)*

Preferred Term	Any Grade	Grade ≥3
Thrombocytopenia	41 (50.6)	20 (24.7)
Diarrhea	37 (45.7)	9 (11.1)
Anemia	29 (35.8)	12 (14.8)
Nausea	27 (33.3)	1 (1.2)
Fatigue	26 (32.1)	0
Alopecia	22 (27.2)	1 (1.2)
Dysgeusia	20 (24.7)	0
Vomiting	18 (22.2)	1 (1.2)
Decreased appetite	12 (14.8)	1 (1.2)
Neutropenia	13 (16.0)	11 (13.6)
Weight decreased	10 (12.3)	0

The majority of the most frequently reported TEAEs were Grade 1 or 2

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

*Occurring in ≥10% of patients. Data are N (%) patients in the safety analysis set
Drescher C, et al. ASCO 2023. Abstract 3094. | Data Cut-Off February 14, 2023

04
Partner Programs

Offering potential upside and options for non-dilutive financing

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 disease 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	Multiple Myeloma Autoimmune Indications (PMN, IgAN)	Ongoing clinical development

PMN: primary membranous nephropathy; IgAN: immunoglobulin a nephropathy

05
Summary

MorphoSys is Well-Positioned for Innovation in Oncology

PROPOSED ACQUISITION BY NOVARTIS

EXPECTED TO CLOSE IN FIRST HALF OF 2024

Provides attractive, immediate and certain cash value to shareholders

Maximizes and accelerates potential of pelabresib on global scale

PELABRESIB

Pelabresib and ruxolitinib improved all four hallmarks of myelofibrosis in MANIFEST-2

Intend to file for approval in first-line myelofibrosis in U.S. and Europe in mid-2024

Approval offers multi-billion-dollar market opportunity

Strong evidence of potential clinical benefit in other myeloid diseases

TULMIMETOSTAT

Potential best- and first-in-class opportunities in array of advanced cancers

Promising Phase 2 data, deep and durable responses in heavily pre-treated patients with solid tumors or lymphomas

FDA Fast Track designation in *ARID1A*-mutated endometrial cancer*

FINANCIALS

€ 680.5 million in cash and other financial assets as of December 31, 2023

Raised € 102.7 million in gross funding in December 2023

Cash available approximately until early 2026**

DLBCL: diffuse large B-cell lymphoma; r/r: relapsed/refractory; FL / MZL: follicular lymphoma or marginal zone lymphoma; ARID1A, AT-rich interacting domain containing protein 1A
*Patients with advanced, recurrent or metastatic endometrial cancer harboring ARID1A mutations and who have progressed on at least one prior line of treatment
**On a standalone basis and including convertible debt repayment

Thank you!

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(Julia.Neugebauer@Morphosys.com)