Enhancing the Lives of Patients with Hematologic Malignancies

Corporate Presentation

February 2024
Forward-Looking Statements and Safe Harbor

Except for the historical information contained herein, this presentation contains forward-looking statements made pursuant to the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Investors are cautioned that such statements, include, without limitation, those regarding: (i) that the Company is on target for successful transition to a commercial company in 2024; (ii) plans for approval and a potential launch of imetelstat in TD LR-MDS in the U.S. by the end of the first half of 2024 and for the MAA review to be completed in early 2025, with potential EU approval and launch in 2025; (iii) that imetelstat has shown unprecedented durability of transfusion independence across multiple MDS patient subgroups that are not addressed by currently available products, and is a differentiated first-in-class investigational telomerase inhibitor; (iv) that for the Phase 3 IMpactMF in R/R MF, Geron expects to conduct an interim analysis in the first half of 2025 and the final analysis in the first half of 2026, together with the assumptions used in making these estimates; (v) that the Company believes imetelstat has a potential total addressable market (TAM) in the US/EU of greater than $3.5B in TD LR-MDS and greater than $3.5B in R/R MF in 2031; (vi) the status, plans and expected timing of the Company’s clinical programs on its pipeline chart; (vii) that imetelstat has the potential to have disease-modifying activity in patients; (viii) the Company’s estimates and assumptions used in the calculations of percentages and numbers of patients in the treatment landscape for LR-MDS; (ix) that the Company expects imetelstat to be a highly differentiated product in the TD LR-MDS commercial marketplace; (x) that there are unmet needs in TD LR-MDS and R/R MF potentially addressed with imetelstat treatment; (xi) the Company’s market research used to obtain the views of practicing hematologists of the IMerge Phase 3 data and the opportunity in TD LR-MDS patients, including the characteristics of imetelstat and the Phase 3 data that support the expectation that imetelstat can become a compelling treatment option and standard of care with a significant market opportunity; (xii) that the Company is well-positioned for a successful launch of imetelstat, if approved, and the Company’s plans and expectations regarding launch preparations; (xiii) the Company’s assumptions and expectations regarding the expected opportunity for imetelstat in R/R MF; (xiv) the Company’s projections of operating expenses in 2024; (xv) the Company’s projections and expectations regarding the sufficiency of its cash resources and expected available funds to support its projected operating requirements into Q3 2025, and the assumptions underlying such projections and expectations; (xvi) the Company’s estimates and assumptions used in the calculations of total addressable market (TAM); and (xvii) other statements that are not historical facts, constitute forward-looking statements. These forward-looking statements involve risks and uncertainties that can cause actual results to differ materially from those in such forward-looking statements. These risks and uncertainties, include, without limitation, risks and uncertainties related to: (a) whether the FDA and EMA may have issues with the NDA or MAA for imetelstat for TD LR-MDS that delay or prevent approval and a potential commercial launch; (b) whether we will be able to continue to develop imetelstat or advance imetelstat to subsequent clinical trials, or that we will be able to receive regulatory approval for or successfully commercialize imetelstat, on a timely basis or at all; (c) whether imetelstat may cause, or have attributed to it, adverse events that could further delay or prevent the commencement and/or completion of clinical trials, delay or prevent its regulatory approval, or limit its commercial potential; (d) whether the IMpactMF Phase 3 trial for R/R MF has a positive outcome and demonstrates safety and effectiveness to the satisfaction of the FDA and international regulatory authorities, and whether our projected rates for enrollment and death events differ from actual rates, which may cause the interim and final analyses to occur later than anticipated; (e) whether we overcome all of the enrollment, clinical, safety, efficacy, technical, scientific, intellectual property, manufacturing and regulatory challenges in order to have the financial resources for, and to meet the expected timelines and planned milestones; (f) if imetelstat is approved for marketing and commercialization, whether we are able to establish and maintain effective sales, marketing and distribution capabilities, obtain adequate coverage and third-party payor reimbursement, and achieve adequate acceptance in the marketplace; (g) whether imetelstat actually demonstrates disease-modifying activity in patients; (h) whether there are failures in manufacturing or supplying sufficient quantities of imetelstat that would delay, or not permit, the anticipated commercial launch or not enable ongoing or planned clinical trials; (i) whether we are able to obtain and maintain the exclusivity terms and scopes provided by patent and patent term extensions, regulatory exclusivity, and have freedom to operate; (j) that we may be unable to successfully commercialize imetelstat due to competitive products, or otherwise; (k) that we may decide to partner and not to commercialize independently in the U.S. or in Europe and other international markets; (l) whether we have sufficient resources to satisfy our debt service obligations and to fund our planned operations; (m) that we may seek to raise substantial additional capital in order to complete the development and commercialization of imetelstat and to meet all of the expected timelines and planned milestones, and that we may have difficulty in or be unable to do so; and (n) the impact of general economic, industry or political climate in the U.S. or internationally and the effects of macroeconomic conditions on our business and business prospects, financial condition and results of operations. Additional information on the above risks and uncertainties and additional risks, uncertainties and factors that could cause actual results to differ materially from those in the forward-looking statements are contained under the heading "Risk Factors" or other similar headings found in documents Geron files from time to time with the Securities and Exchange Commission (the "SEC"), including the Company’s Report on Form 10-Q for the quarter ended September 30, 2023 and subsequent filings. Undue reliance should not be placed on forward-looking statements, which speak only as of the date they are made, and the facts and assumptions underlying the forward-looking statements may change. Except as required by law, Geron disclaims any obligation to update these forward-looking statements to reflect future information, events or circumstances.
**Geron is on Target for a Successful Transition to Commercial Company in 2024**

- **PDUFA date of June 16, 2024, for imetelstat in transfusion-dependent (TD) LR-MDS**
- **ODAC scheduled for March 14, 2024**
- **MAA review completion expected in early 2025**

- Imetelstat Ph3 data showed unprecedented durability of red blood cell transfusion independence (RBC-TI) across multiple MDS patient subgroups, addressing areas of high unmet need

- Additional Ph3 trial of imetelstat ongoing in relapsed/refractory myelofibrosis (R/R MF) with an interim analysis expected first half of 2025

- Significant commercial opportunities with total addressable market (TAM) for TD LR-MDS >$3.5B and R/R MF >$3.5B in 2031 (U.S./EU)

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*Imetelstat is currently under regulatory review by FDA and EMA for the treatment of transfusion-dependent anemia in adult patients with low- to intermediate-1 risk myelodysplastic syndromes (LR-MDS) who have failed to respond or have lost response to or are ineligible for erythropoiesis-stimulating agents (ESAs).

#Platzbecker, Santini et al. The Lancet 2023

^see slide 33 for more information on TAM and patient numbers
Exploring the Broad Potential of Imetelstat and Telomerase Inhibition

### Indications

<table>
<thead>
<tr>
<th>Indications</th>
<th>Discovery</th>
<th>Preclinical</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>TD LR-MDS</td>
<td>Single Agent</td>
<td></td>
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<td>IMmerge</td>
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<tr>
<td>R/R MF</td>
<td>Single Agent</td>
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<td>IMPactMF</td>
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<td>Frontline MF</td>
<td>Combination Therapy</td>
<td>IMproveMF</td>
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<tr>
<td>R/R AML &amp; HR-MDS</td>
<td>Single Agent</td>
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<td>IMpress</td>
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<tr>
<td>R/R AML</td>
<td>Combination Therapy</td>
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<td>TELOMERE</td>
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<td>Lymphoid Malignancies</td>
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<tr>
<td>Next Generation TI Program</td>
<td></td>
<td></td>
<td>Leads identified; optimization ongoing</td>
<td></td>
<td>Planned; Investigator Led</td>
</tr>
</tbody>
</table>

#### Observations:
- Ongoing: Company Sponsored
- Ongoing: Investigator Led
- Planned: Investigator Led

**TD LR-MDS:** transfusion-dependent lower-risk myelodysplastic syndrome; **R/R MF:** relapsed/refractory myelofibrosis; **MF:** myelofibrosis; **R/R AML:** relapsed/refractory acute myeloid leukemia; **HR-MDS:** higher-risk myelodysplastic syndromes; **TI:** telomerase inhibitor; **PDUFA:** Prescription Drug User Fee Act; **MAA:** marketing authorization application.

**Important Dates:**
- **U.S. PDUFA:** June 16, 2024
- **EU MAA under review**
- **Interim Analysis est.: 1H 2025**
- **Final Analysis est.: 1H 2026**
- **First patient dosed: June 2023**
- **Escalated to third dose cohort: Jan. 2024**
- **To follow single agent data from IMpress**
- **Experiments ongoing**
- **Leads identified; optimization ongoing**
Imetelstat is a First-in-Class Telomerase Inhibitor Based on Nobel-Prize Winning Science

Potentially powerful mechanism for treating hematologic malignancies

- Clinical efficacy: durable TI (TD LR-MDS Ph3); improved overall survival (R/R MF Ph2)

- Molecular data: reductions in variant allele frequency (VAF) and depletion of mutated abnormal cells associated with disease

Evidence for potential disease modification

**Telomerase is continually upregulated in malignant cells**

**Imetelstat binds to telomerase, inhibiting its activity**

**Apoptosis of malignant cells and recovery of effective hematopoiesis**

Imetelstat is designed to target malignant clones at their source and enable recovery of healthy blood cell production

Telomerase

Malignant clones

Upregulated telomerase

Imetelstat

Apoptotic malignant clones

Inhibition of telomerase

Malignant clones

Upregulated telomerase

Imetelstat

Apoptotic malignant clones

Inhibition of telomerase

Malignant clones

Upregulated telomerase

Imetelstat

Apoptotic malignant clones

Inhibition of telomerase

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Upregulated telomerase

Imetelstat

Apoptotic malignant clones

Inhibition of telomerase

Malignant clones

Upregulated telomerase

Imetelstat

Apoptotic malignant clones

Inhibition of telomerase
Transfusion-Dependent Lower-Risk MDS

PDUFA date of June 16, 2024*

*Imetelstat is currently under regulatory review in the U.S. and EU for the treatment of transfusion-dependent anemia in adult patients with low-to-intermediate-1 risk myelodysplastic syndromes (MDS) who have failed to respond or have lost response to or are ineligible for erythropoiesis-stimulating agents (ESAs).
Lower-Risk MDS Patient Experience

Symptomatic anemia and transfusion dependence are key drivers of patient burden and poor quality of life.

Symptomatic Anemia
Increasing Transfusion Dependence
Lengthy Office Visits
High-Cost Burden
Diagnosis
Median age ~70 years

Poor Quality of Life
Higher Risk of Progression to AML
Shortened Survival

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Continuing unmet need presents significant opportunity for imetelstat; ~$3.5B TAM in 2031 (U.S./EU)^

Treatment Landscape for LR-MDS

Lower-Risk MDS (~70%)

Symptomatic Anemia (~90%)

1st line

NCCN Guidelines (updated Jan. 2024)

Luspatercept

ESAs - preferred
Luspatercept – other recommended

Second line & later
RS+/RS-

Complex presentations

RS+ (~25%)

sEPO (>500 mU/mL) (~10%)

RS- (~75%)

sEPO (>500 mU/mL) (~10%)

Clinical trials preferred. Other options include HMAs and immunosuppressive drugs.

ESAs and luspatercept are among the agents approved in this first-line setting.

Significant potential opportunity for imetelstat:

- Frontline ESA ineligible (~4k)^
- ESA-failed, RS+ (~8k)^
- ESA-failed, RS- (~24k)^


^see slide 33 for more information on TAM and patient numbers
Differentiated Imetelstat Profile in IMerge Phase 3

**Robust and Durable Response**

- **40% ≥ 8-wk RBC-TI response rate; 3.6 g/dL median Hgb rise**
- **18% ≥ 1-yr RBC-TI response rate; 5.2 g/dL median Hgb rise**
- **60% transfusion reduction by ≥4U/8 wks; 1.4 g/dL median Hgb rise**
- **1-year median TI duration**
- **2.4-years median TI duration**
- **1.3-years duration**

**Broad Response across MDS Subgroups**

- RS+ and RS-
- High and very high transfusion burden
- sEPO level greater than or less than 500 mU/mL
- Low or intermediate-1 IPSS risk category

**Additional Attributes**

- **50% of imetelstat-treated patients**
  - reported less fatigue (PRO data)
- **≥50% VAF reduction**
  - in commonly mutated MDS genes experienced by more imetelstat-treated patients vs placebo

**Well-Characterized Safety Profile**

- The most common adverse events were thrombocytopenia and neutropenia that were manageable and of short duration

Patzbecker, Santini et al. The Lancet 2023
Additional IMerge data including placebo comparisons included on slides 10-17
Durable Transfusion Independence and Significant Response Rates Observed with Imetelstat

- **80-weeks median duration**
  - Imetelstat (n=118): 28.0% (P<0.001)
  - Placebo (n=60): 3.3%

- **123-weeks median duration**
  - Imetelstat (n=118): 17.8% (P=0.002)
  - Placebo (n=60): 1.7%

- **52-weeks median duration**
  - Imetelstat (n=118): 39.8% (P<0.001)
  - Placebo (n=60): 15.0%

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8, 16, 24-week data cut off was October 2022; 1-year represents 3 additional months of data (cut off January 2023)

P-value is based on Cochran Mantel Haenszel test stratified for prior RBC transfusion burden (≤6 units or >6 units of RBCs/8 weeks) and baseline IPSS risk score (Low or Intermediate-1)

8-week TI = proportion of patients without any RBC transfusion for at least eight consecutive weeks since entry to the trial; 16-week TI = proportion of patients without any RBC transfusion for at least 16 consecutive weeks since entry to the trial; 24-week TI = proportion of patients without any RBC transfusion for at least 24 consecutive weeks since entry to the trial; 1-year TI = proportion of patients without any RBC transfusion for at least 52 consecutive weeks since entry to the trial

Platzbecker, Santini et al. The Lancet 2023
Significant Hemoglobin Rises and Reduction in Transfusions Observed with Imetelstat

3.6 g/dL median Hgb rise in 8-wk RBC-TI responders

P-value is based on a mixed model for repeated measures with change in Hgb as the dependent variable, week, stratification factors, dose date, and treatment arm as the independent variables with autoregressive moving average (ARMA(1,1)) covariance structure.

≥4U/8 wks transfusion reduction in ~60% of imetelstat-treated patients

P-value is based on a mixed model for repeated measures with change in RBC transfusion as the dependent variable, week, stratification factors, prior transfusion burden, and treatment arm as the independent variables with autoregressive moving average (ARMA(1,1)) covariance structure.

NOTE: graph starts at week 1-8 with the number of the patients with transfusion follow-up data available at least eight weeks on study for imetelstat and placebo arms.

Platzbecker, Santini et al. The Lancet 2023
Consistent Responses Observed across MDS Subgroups with Imetelstat (≥ 8-wk RBC-TI Responses)

<table>
<thead>
<tr>
<th>WHO category^</th>
<th>Imetelstat, n/N (%)</th>
<th>Placebo, n/N (%)</th>
<th>% Difference (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS+</td>
<td>33/73 (45.2)</td>
<td>7/37 (18.9)</td>
<td>26.3 (5.9–42.2)</td>
<td>0.016</td>
</tr>
<tr>
<td>RS-</td>
<td>14/44 (31.8)</td>
<td>2/23 (8.7)</td>
<td>23.1 (-1.3 to 40.6)</td>
<td>0.038</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prior RBC transfusion burden per IWG 2006</th>
<th>Imetelstat, n/N (%)</th>
<th>Placebo, n/N (%)</th>
<th>% Difference (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-6 U/8 wk</td>
<td>28/62 (45.2)</td>
<td>7/33 (21.2)</td>
<td>23.9 (1.9–41.4)</td>
<td>0.027</td>
</tr>
<tr>
<td>&gt;6 U/8 wk</td>
<td>19/56 (33.9)</td>
<td>2/27 (7.4)</td>
<td>26.5 (4.7–41.8)</td>
<td>0.023</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IPSS risk category</th>
<th>Imetelstat, n/N (%)</th>
<th>Placebo, n/N (%)</th>
<th>% Difference (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>32/80 (40.0)</td>
<td>8/39 (20.5)</td>
<td>19.5 (-0.1 to 35.2)</td>
<td>0.034</td>
</tr>
<tr>
<td>Intermediate-1</td>
<td>15/38 (39.5)</td>
<td>1/21 (4.8)</td>
<td>34.7 (8.8–52.4)</td>
<td>0.004</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Baseline sEPO</th>
<th>Imetelstat, n/N (%)</th>
<th>Placebo, n/N (%)</th>
<th>% Difference (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤500 mU/mL</td>
<td>39/87 (44.8)</td>
<td>7/36 (19.4)</td>
<td>25.4 (5.27–40.70)</td>
<td>0.011</td>
</tr>
<tr>
<td>&gt;500 mU/mL</td>
<td>7/26 (26.9)</td>
<td>2/22 (9.1)</td>
<td>17.8 (-8.17 to 40.25)</td>
<td>0.107</td>
</tr>
</tbody>
</table>

* Cochran Mantel Haenszel test stratified for prior RBC transfusion burden (≤6 units or >6 units of RBCs/8 weeks) and baseline IPSS risk score (Low or Intermediate-1)

^ One patient on imetelstat arm missing RS category

Platzbecker, Santini et al. The Lancet 2023
Consistent Responses Observed across MDS Subgroups with Imetelstat (≥ 24-wk RBC-TI Responses)

<table>
<thead>
<tr>
<th></th>
<th>Imetelstat, n/N (%)</th>
<th>Placebo, n/N (%)</th>
<th>% Difference (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>33/118 (28.0)</td>
<td>2/60 (3.3)</td>
<td>24.6 (12.64–34.18)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>WHO category</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RS+</td>
<td>24/73 (32.9)</td>
<td>2/37 (5.4)</td>
<td>27.5 (10.0–40.37)</td>
<td>0.003</td>
</tr>
<tr>
<td>RS-</td>
<td>9/44 (20.5)</td>
<td>0/23 (0.0)</td>
<td>20.5 (-0.03 to 35.75)</td>
<td>0.019</td>
</tr>
<tr>
<td>Prior RBC transfusion burden per IWG 2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-6 U/8 wk</td>
<td>19/62 (30.6)</td>
<td>2/33 (6.1)</td>
<td>24.0 (5.68–38.66)</td>
<td>0.006</td>
</tr>
<tr>
<td>&gt;6 U/8 wk</td>
<td>14/56 (25.0)</td>
<td>0/27 (0.0)</td>
<td>26.5 (6.44–38.65)</td>
<td>0.001</td>
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<tr>
<td>IPSS risk category</td>
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<td>2/39 (5.1)</td>
<td>23.6 (7.23–35.75)</td>
<td>0.003</td>
</tr>
<tr>
<td>Intermediate-1</td>
<td>10/38 (26.3)</td>
<td>0/21 (0.0)</td>
<td>26.3 (3.46–43.9)</td>
<td>0.009</td>
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<tr>
<td>Baseline sEPO</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤500 mU/mL</td>
<td>29/87 (33.3)</td>
<td>2/36 (5.6)</td>
<td>27.8 (10.46–39.1)</td>
<td>0.002</td>
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<tr>
<td>&gt;500 mU/mL</td>
<td>4/26 (15.4)</td>
<td>0/22 (0.0)</td>
<td>15.4 (-5.81 to 35.73)</td>
<td>0.050</td>
</tr>
</tbody>
</table>

^ Cochran Mantel Haenszel test stratified for prior RBC transfusion burden (≤6 units or >6 units of RBCs/8 weeks) and baseline IPSS risk score (Low or Intermediate-1)

^ One patient on imetelstat arm missing RS category

Platzbecker, Santini et al. The Lancet 2023
Improvement in Patient-Reported Fatigue Associated with Clinical Responses with Imetelstat

Significant patient-reported fatigue improvements in 8-wk and 24-wk RBC-TI responders

Sustained meaningful improvement in fatigue reported in imetelstat-treated patients

Platzbecker, Santini et al. The Lancet 2023
Among patients with evaluable mutation data, the maximum reductions in VAF of the SF3B1, TET2, DNMT3A and ASXL1 genes were greater with imetelstat than placebo.

VAF reduction correlated with longer RBC-TI duration and increases in hemoglobin levels in patients treated with imetelstat.

Note: Analyses included patients in the intent-to-treat population with a detectable mutant allele for the indicated gene (≥5%) prior to treatment and ≥1 postbaseline mutation assessment and had postbaseline Hgb assessment, excluding assessments within 14 days post-RBC transfusion. Fitted lines and P value based on linear regression with maximum increase in RBC-TI duration or maximum increase in Hgb from pretreatment as the dependent variable and the maximum percentage reduction from baseline in each gene VAF as independent variable.

DNMT3A: DNA (cytosine-5)-methyltransferase 3A; RBC: red blood cell; Hgb: hemoglobin; TET2: Tet methylcytosine dioxygenase 2; SF3B1: splicing factor 3b subunit 1.
The Most Common AEs were Manageable, Short-Lived Thrombocytopenia and Neutropenia

Consistent with prior clinical experience, the most common imetelstat AEs were hematologic. Grade 3-4 cytopenias were generally of short duration and reversible.

<table>
<thead>
<tr>
<th>Ae (≥10% of patients), n (%)</th>
<th>Imetelstat (N=118)</th>
<th>Placebo (N=59)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Grade</td>
<td>Grade 3-4</td>
<td>Any Grade</td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>89 (75)</td>
<td>73 (62)</td>
</tr>
<tr>
<td>Neutropenia</td>
<td>87 (74)</td>
<td>80 (63)</td>
</tr>
<tr>
<td>Anemia</td>
<td>24 (20)</td>
<td>23 (19)</td>
</tr>
<tr>
<td>Leukopenia</td>
<td>12 (10)</td>
<td>9 (8)</td>
</tr>
</tbody>
</table>

- Grade 3-4 thrombocytopenia and neutropenia most often reported during Cycles 1-3.
- Non-hematologic AEs were generally low grade.
- No cases of Hy’s Law or drug-induced liver injury observed.

<2-weeks median duration grade 3-4 thrombocytopenia and neutropenia

>80% of events were reversible to grade ≤ 2 within 4 weeks.
Grade 3–4 Cytopenias were Manageable with Low Incidence of Clinical Consequences

Clinical consequences of grade 3–4 infection and bleeding were low and similar for imetelstat and placebo

<table>
<thead>
<tr>
<th>Event, n (%)</th>
<th>Imetelstat N = 118</th>
<th>Placebo N = 59</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade ≥3 bleeding events</td>
<td>3 (2.5)</td>
<td>1 (1.7)</td>
</tr>
<tr>
<td>Grade ≥3 infections</td>
<td>13 (11.0)</td>
<td>8 (13.6)</td>
</tr>
<tr>
<td>Grade 3 febrile neutropenia</td>
<td>1 (0.8)</td>
<td>0</td>
</tr>
</tbody>
</table>

Imetelstat AEs were manageable with supportive care and dose modifications

- Most AEs leading to dose modifications were grade 3–4 neutropenia and thrombocytopenia
- <15% of patients discontinued treatment due to TEAEs
- 74% of patients treated with imetelstat had dose modifications due to AEs
- Imetelstat discontinuation due to TEAEs generally occurred late in treatment (21.1-wks median time to treatment discontinuation; range, 2.3 to 44.0 weeks)
- 18% of imetelstat-treated patients received a median of 1 platelet transfusion per patient; 34% of imetelstat-treated patients received growth factor support

Infections were not common in the setting of grade 3-4 neutropenia and were similar for imetelstat and placebo

<table>
<thead>
<tr>
<th>Event, n (%)</th>
<th>Imetelstat N = 118</th>
<th>Placebo N = 59</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any infection AE within ± 7 days of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 3-4 neutropenia</td>
<td>9 (8%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Grade 3-4 infection AE</td>
<td>3 (3%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Febrile neutropenia</td>
<td>1 (1%)</td>
<td>0</td>
</tr>
</tbody>
</table>

Bleeding events were not reported in the setting of grade 3-4 thrombocytopenia

<table>
<thead>
<tr>
<th>Event, n (%)</th>
<th>Imetelstat N = 118</th>
<th>Placebo N = 59</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any bleeding AE within ± 7 days of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 3-4 thrombocytopenia</td>
<td>9 (8%)</td>
<td>0</td>
</tr>
<tr>
<td>Grade 3-4 bleeding AE</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
IMerge Phase 3 Data Received Favorably by Surveyed Practicing Hematologists Across U.S./EU Key Markets
Key attributes of imetelstat resonated strongly with community and academic hematologists

**EFFICACY**

- **Totality of Clinical Benefit**
  - Compelling TI rates across RS subgroups, sustained reduction of RBC units, and continuous rise of Hgb levels

- **Meaningful Durability of Response**
  - 16- and 24-week TI data regarded as more robust than current standard of care

**SAFETY**

- **Predictable AE Profile, Manageable Cytopenias**
  - Given the familiar AE profile with transient cytopenias, physicians expect to use imetelstat in their LR-MDS patients across both community and academic settings
Hematologists’ Feedback Confirms Imetelstat Opportunity across RS Subtypes and High Transfusion Burden Patients

**Imetelstat’s novel mechanism of action (MOA) is seen as a key driver for future market adoption**

Physicians view imetelstat’s novel/first-in-class MOA together with its durability of response as highly compelling, differentiating and as a foundation for imetelstat's efficacy.

**Imetelstat is projected to be part of the standard of care across both RS- and RS+ patient subtypes**

Physicians express a clear preference to use imetelstat first for their frontline RS-ESA-ineligible patients and across all luspatercept prior-treated patients, given the significant efficacy shown by imetelstat and dissatisfaction with current treatments.

**In ESA R/R patient segment, durability of TI with imetelstat is considered compelling**

Physicians note that imetelstat demonstrated significant improvements in long-term response (24-week TI) over available options, especially in RS- population; additional clinical experience may increase comfort to prescribe before currently available options.

**Imetelstat is significantly differentiated in high transfusion burden patients**

Physicians believe that in high transfusion burden patients, imetelstat may be a compelling option over currently approved therapies.
Imetelstat Expected to Become New Standard-of-Care in Second-Line TD LR-MDS, ~32k patients by 2031 (U.S./EU)

- Imetelstat is expected to be used in the second-line regardless of frontline use with either ESAs or luspatercept.
- Imetelstat is expected to be used in the frontline in the majority of patients who are ESA-ineligible (sEPO ≥500 U/L).

Based on U.S. market research with 50 practicing community and academic hematologists.
Imetelstat Expected to Become Important New Option in RS-Subgroup, Comprising 75% of LR-MDS Patients

- Imetelstat is expected to be used second line following ESAs in the majority of RS- patients
- Imetelstat is expected to be used in the majority of second line patients following luspatercept regardless of RS status

Based on U.S. market research with 50 practicing community and academic hematologists

Geron Market Research with U.S. based practicing hematologists (N=50), May 2023; share estimates represent unadjusted physician preference shares across key patient segments and are directional. Utilization percentages were calculated using a weighted average of RS+ and RS- utilization estimates (1/3 RS+ and 2/3 RS- LR-MDS segmentations were assumed). Stimuli included Imetelstat Phase 2 data, Phase 3 topline results and publicly available data on other LR-MDS therapies.
Well-Positioned for U.S. Launch upon Potential Approval

Prepare Geron
- Commercial and medical affairs teams fully integrated and preparing for launch
- Sales force hiring on track for Q1-Q2 2024
- Infrastructure development on track

Prepare Imetelstat
- Commercial supply plans, third-party logistics, and specialty distribution network finalized
- Global trademark secured
- Value proposition messaging on target

Prepare the Market
- Comprehensive market access; payor and medical stakeholder engagement plan on target (majority of U.S. patients are treated under Medicare Part B)
- Concentrated prescriber base identified
- Pivotal Ph3 IMerge data published in The Lancet; additional publication planning on target
- HUB system finalized; patient access and affordability solutions on target

Goal:
Ensure broad access and reimbursement and deliver a seamless customer experience to all stakeholders
Imetelstat in Relapsed/Refractory MF

Evaluating potential improved survival
Expected MF Market Evolution and Imetelstat Opportunity

Continuing unmet need in JAKi-treated patients presents significant opportunity for imetelstat; ~$3.5B TAM in 2031 (U.S./EU)*

We expect the future MF market to expand significantly with potential approvals of JAKi-based combination regimens and treatments that address anemia in MF patients. Agents in development today have primary endpoints focused on addressing spleen, symptoms and anemia.

- Int-2/High-Risk MF Patients
- Treated with JAK Inhibitors ~75% discontinuation rate after 5 years
- Potential Patient Population (2031): ~29,000 JAKi-treated MF patients

Almost all JAKi-treated patients expected to become unresponsive to JAKis and eligible for imetelstat

Unresponsive to JAK Inhibitors (JAKi) median OS ~14 – 16 months per literature reviews

*see slide 33 for more information on TAM and patient numbers
First and Only Phase 3 Trial in MF with OS as Primary Endpoint
50% enrolled as of Nov. 2023

Actively enrolling global trial
- Sites across United States, South America, Europe, Australia and Asia

Planned analyses
- Interim Analysis expected in 1H 2025 when ~35% of the planned enrolled patients have died; alpha spend ~0.01
- Final Analysis expected in 1H 2026 when >50% of the planned enrolled patients have died

Statistically well-powered trial
- Designed with >85% power to detect a 40% reduction in the risk of death in the imetelstat arm compared to best available therapy (BAT; hazard ratio=0.60; one-sided alpha=0.025)
  - Conservative powering assumptions
    - Median OS: 14 mos for BAT vs 23 mos for imetelstat

Primary Endpoint:
- Overall survival (OS)

Key Secondary Endpoints:
- Symptom response
- Spleen response
- Patient Reported Outcomes (PROs)
Median OS in IMbark Phase 2 Compared Favorably to Historical Controls

Improvement in overall survival (OS) observed for JAKi relapsed/refractory MF patients in IMbark Phase 2

- 14 – 16 mos median OS for historical controls for JAKi relapsed/refractory MF patients
- 29.9 mos median OS in imetelstat 9.4 mg/kg arm

Mascarenhas et al, JCO 2021; Mascarenhas et al, ASH 2018 and 2020; Mascarenhas et al, EHA 2021
Acknowledging the limitations of such comparative analyses between RWD and clinical trial data, we believe the favorable overall survival (OS) of imetelstat treatment suggested by these comparative analyses in this very poor prognosis patient population warrants further evaluation.

IMbark Phase 2 data compared to real world data (RWD) from a closely-matched cohort of patients at the Moffitt Cancer Center who had discontinued ruxolitinib and were subsequently treated with best available therapy (BAT).

Evaluating imetelstat vs BAT in JAKi relapsed/refractory MF

- Improvement in overall survival and lower risk of death for imetelstat vs BAT in RWD study
  - Imetelstat: 33.8 mos median OS
  - BAT RWD: 12.0 mos median OS
  - 65% lower risk of death with imetelstat compared to BAT from RWD

- OS improvement and lower risk of death for imetelstat vs BAT support IMPactMF Phase 3 trial design

- Same dose and schedule being used in IMPactMF Phase 3 trial
## Manageable Imetelstat Safety Results in IMbark Phase 2

### Limited clinical consequences of reversible, on target cytopenias

- **Thrombocytopenia and neutropenia characterization:**
  - Short time to onset: Median 9-weeks (~3 cycles)
  - Short duration: Median <2-weeks
  - Reversible: >70% within 4 weeks*
  - Manageable with dose hold and modifications

- **Limited clinical consequences:**
  - 2% Grade 3 febrile neutropenia
  - 5% Grade 3/4 hemorrhagic events
  - 10% Grade 3/4 infections

### Table: Hematologic and Non-hematologic Adverse Events

<table>
<thead>
<tr>
<th></th>
<th>9.4 mg/kg (n=59)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All Grades</td>
<td>Grade ≥ 3</td>
</tr>
<tr>
<td><strong>Hematologic (≥10% in either arm)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>29 (49)</td>
<td>24 (41)</td>
</tr>
<tr>
<td>Anemia</td>
<td>26 (44)</td>
<td>23 (39)</td>
</tr>
<tr>
<td>Neutropenia</td>
<td>21 (36)</td>
<td>19 (32)</td>
</tr>
<tr>
<td><strong>Non-hematologic (≥20% in either arm)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nausea</td>
<td>20 (34)</td>
<td>2 (3)</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>18 (31)</td>
<td>0</td>
</tr>
<tr>
<td>Fatigue</td>
<td>16 (27)</td>
<td>4 (7)</td>
</tr>
<tr>
<td>Dyspnea</td>
<td>14 (24)</td>
<td>3 (5)</td>
</tr>
<tr>
<td>Abdominal Pain</td>
<td>14 (24)</td>
<td>3 (5)</td>
</tr>
<tr>
<td>Asthenia</td>
<td>14 (24)</td>
<td>6 (10)</td>
</tr>
<tr>
<td>Pyrexia</td>
<td>13 (22)</td>
<td>3 (5)</td>
</tr>
<tr>
<td>Edema peripheral</td>
<td>11 (19)</td>
<td>0</td>
</tr>
</tbody>
</table>

*Reversible to Grade 2 or lower

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*Mascarenhas et al, JCO 2021; Mascarenhas et al, ASH 2018 and 2020; Mascarenhas et al, EHA 2021
Financials & Summary
Financial Resources to Support Potential U.S. Commercial Launch of Imetelstat

<table>
<thead>
<tr>
<th>Amount</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>~$378M</td>
<td>Cash and marketable securities as of 12/31/23</td>
</tr>
<tr>
<td>~$54M</td>
<td>Q4 2023 operating expenses</td>
</tr>
<tr>
<td>~$194M</td>
<td>FY 2023 operating expenses</td>
</tr>
<tr>
<td>$270M to $280M</td>
<td>FY 2024 expected range of operating expenses</td>
</tr>
</tbody>
</table>

* Based on the Company’s current operating plan and expectations regarding the timing of potential approval of imetelstat in the U.S., the Company expects that its existing cash, cash equivalents, and current and noncurrent marketable securities, together with projected revenues from U.S. sales of imetelstat, proceeds from the exercise of outstanding warrants, and funding under the Company’s loan facility, will be sufficient to fund projected operating requirements into the third quarter of 2025.
Geron Positioned for Successful Imetelstat Launch, if Approved

Imetelstat TD LR-MDS PDUFA date of June 16, 2024*
MAA under review in same indication

Underserved TD LR-MDS and R/R MF markets with potential combined TAM >$7B in 2031 (U.S./EU)^

Differentiated first-in-class investigational telomerase inhibitor

U.S. commercial preparations on track for expected June 2024 launch

People and financial resources to support U.S. launch

*Imetelstat is currently under regulatory review by FDA and EMA for the treatment of transfusion-dependent anemia in adult patients with low- to intermediate-1 risk myelodysplastic syndromes (LR-MDS) who have failed to respond or have lost response to or are ineligible for erythropoiesis-stimulating agents (ESAs).

^see slide 33 for more information on TAM and patient numbers
Thank you!

Contact:
Investor Relations
investor@geron.com
Appendix: TAM (U.S./EU)

**LR-MDS Patient Numbers**: Company projections in 2031, based on DRG MDS Landscape and Forecast syndicated data report 2021 and 2022 and YoY growth rate assumptions for eligible patient populations in LR-MDS in the U.S. and EU. EU4/UK population as % of U.S. population in 2031: ~93%; UN Population (2019) dataset used for total European population calculations. 60% patients treated for 12 months each year; 2nd line treated prevalence adjustments (~55%); LR-MDS: ~73% of all MDS; RS+ estimated as ~25%; first line ESA in-eligible estimates ~10% (Platzbecker, Treatment of MDS, Blood 2019).

**R/R MF Patient Numbers**: Company projections U.S./EU (2031), based on DRG 2020 MF Niche & Rare Disease Landscape & Forecast and YoY growth rate assumptions for eligible Int-2/HR patient populations (excludes Int-1, patients with platelets <50K); Int-2/HR ~65%; platelets <50K ~14% (Al-Ali HK & Vannucchi AM, Ann Hematol 2017); JAKi treated ~90% (Geron Market Research); % with leukemic transformations (~10%, Vallapureddy et al. 2019); EU4/UK population as % of US population in 2031: ~93%; UN Population (2019) dataset used for total European population calculations.

**Total Addressable Market Price Assumptions**: Includes annualized 12 months of treatment @ $25K/month; EU5: annualized 12 months of treatment @ $6K/month; Rest of Europe: annualized 12 months of treatment @ $3K/month

---

**Potential LR-MDS Patient Population**

<table>
<thead>
<tr>
<th>ESA ineligible (RS+/RS-):</th>
<th>~4,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESA R/R RS+:</td>
<td>~8,000</td>
</tr>
<tr>
<td>ESA R/R RS-:</td>
<td>~24,000</td>
</tr>
</tbody>
</table>

**Become part of SOC in LR-MDS (~$3.5B TAM 2031)**

**Potential R/R MF Patient Population**

| JAKi treated: | ~29,000 |

**Expand as SOC in R/R MF (~$3.5B TAM 2031)**

> $7B by 2031