Forward-Looking Statements

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 for IMerge Phase 3, Geron Corporation (“Geron” or “the Company”) expects top-line results to be available in early January 2023, regulatory filings in the United States (“U.S.”) in the first half of 2023 and the European Union (“EU”) in the second half of 2023, and a potential launch in lower risk MDS in the U.S. in the first half of 2024 and in the EU in the second half of 2024; (ii) for IMPactMF, that Geron expects to conduct an interim analysis in 2024 and a final analysis in 2025; (iii) for the next generation telomerase inhibitor program Geron plans to make a program update in 2022 when and if Geron identifies a lead candidate and IND timing is known; (iv) that Geron expects its financial resources, with the projected funding under a current debt facility, to fund operations, including the new imetelstat indications and telomerase inhibition program, through the end of the first quarter of 2023; (v) that Geron plans to engage over 180 sites for IMPactMF; (vi) that IMerge Phase 3 and IMPactMF have registration intent; (vii) that imetelstat has the potential to demonstrate disease-modifying activity in patients and to target the malignant stem and progenitor cells of the underlying disease; (viii) that the Company expects imetelstat to be a highly differentiated product in the lower risk MDS commercial marketplace; (ix) that the Company projects that the addressable patients in 2030 for imetelstat in LR MDS are approximately 33,000 and for Int-2/HR MF are approximately 18,000; (x) that the Company believes imetelstat has potential large market opportunities with potential peak 2030 revenue from the United States and the five largest countries of the European Union (“EUS”) of approximately $3 billion, with $1.2 billion from MDS sales and $1.8 billion from MF sales; (xi) that there are unmet needs in LR MDS and MF potentially addressed with imetelstat treatment; (xii) that the telomerase inhibition of imetelstat gives it the potential for expanding into new indications; (xiii) that the Company expects the first clinical site for IMProveMF to open in the first half of 2022; (xiv) that the Company expects IMpress to begin in the first half of 2022; (xv) that the Company expects TELOMERE to begin in the first half of 2022; (xvi) that the Company expects preliminary results from the preclinical program in lymphoid malignancies to be available at the end of 2022; (xvii) statements regarding potential exclusivity terms and scopes provided by patent and patent term extensions, orphan drug, data and marketing and pediatric coverages; (xviii) that the Company expects to report that, as of December 31, 2021, it had cash, cash equivalents, restricted cash and marketable securities of approximately $210.0 million and a principal outstanding balance of $50.0 million in long-term debt; (xix) Geron’s vision to transform the treatment of hematologic malignancies and become a leader in the field; and (xx) 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 current or evolving effects of the COVID-19 pandemic and resulting global economic and financial disruptions will materially and adversely impact Geron’s business and business prospects, its financial condition and the future of imetelstat; (b) whether Geron overcomes all of the potential delays and other adverse impacts caused by the current or evolving effects of the COVID-19 pandemic, and overcomes all 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 in (i) to (iii) and (xiii) to (xvi) above; (c) whether regulatory authorities permit the further development of imetelstat on a timely basis, at all, without any clinical holds, (d) whether imetelstat is demonstrated to be safe and efficacious in IMerge Phase 3 and IMPactMF to enable regulatory approval; (e) whether any future efficacy or safety results may cause the benefit-risk profile of imetelstat to become unacceptable; (f) whether imetelstat actually demonstrates disease-modifying activity in patients and the ability to target the malignant stem and progenitor cells of the underlying disease; (g) that Geron may seek to raise substantial capital in order to complete the development and commercialization of imetelstat to meet all of the expected timelines and planned milestones in (i) to (iii) and (xiii) to (xvi) above; (h) whether regulatory authorities require an additional clinical trial for approval even if IMerge Phase 3 or IMPactMF meet their respective primary endpoints; (i) whether there are failures or delays in manufacturing or supplying sufficient quantities of imetelstat or other clinical trial materials in a timely manner; (j) whether imetelstat is able to obtain and maintain the exclusivity terms and scopes provided by patent and patent term extensions, orphan drug, data and marketing and pediatric coverages and have freedom to operate; (k) whether the follow-up period of 12 months for the IMerge Phase 3 primary analysis results in not obtaining adequate data to demonstrate safety and efficacy, including transfusion independence, in the primary analysis; (l) whether Geron can accurately project the timing of complete enrollment in its clinical trials, whether due to the current or evolving effects of the COVID-19 pandemic or otherwise; (m) whether Geron is able to enroll its clinical trials at a pace that would enable the financial resources for, and to meet the expected timelines and planned milestones in (i) to (iii) and (xiii) to (xvi) above; (n) that Geron may be unable to successfully commercialize imetelstat to achieve the peak revenues in (x) above due to competitive pressures, or otherwise; (o) the completion of financial closing procedures, final audit adjustments and other developments that may arise that would cause the Company’s expectations in (xviii) above to differ, perhaps materially, from the financial results that will be reflected in the Company’s audited financial statements for the year ended December 31, 2021; and (p) if the FDA does not grant priority review to the IMerge data, then the launch date in lower risk MDS may be later than the first half of 2024. 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 in Geron’s filings and periodic reports filed with the Securities and Exchange Commission under the heading “Risk Factors” and elsewhere in such filings and reports, including Geron’s quarterly report on Form 10-Q for the quarter ended September 30, 2021 and future filings and reports by Geron. 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’s Vision
Transform the Treatment of Hematologic Malignancies and Become a Leader in the Field

- Top-line results from IMerge Phase 3 lower risk MDS trial expected in early January 2023; potential U.S. launch as early as 2024 with a highly differentiated profile

- Demonstrate an overall survival benefit in ongoing IMpactMF Phase 3 refractory MF trial; interim analysis expected in 2024

- Strategically invest in new hematologic indications and treatment combinations for imetelstat

- Commercialize imetelstat in lower risk MDS and refractory MF with annual peak revenue potential of ~$3 billion expected in 2030 in the US and EU5

MDS, myelodysplastic syndromes; MF, myelofibrosis; EU5, key five European Union markets
References on slide 26
## Imetelstat and Telomerase Inhibitor Pipeline

### Strategically Investing in New Indications and Treatment Combinations

<table>
<thead>
<tr>
<th>Indications</th>
<th>Discovery</th>
<th>Preclinical</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Expected Milestones</th>
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<tr>
<td>LR MDS</td>
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<td>IMerge</td>
<td>Top-Line Results: Early Jan 2023</td>
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<td>Refractory MF</td>
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<td>Interim Analysis: 2024 Final Analysis: 2025</td>
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<td>R/R AML &amp; HR MDS</td>
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<td></td>
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<td>IMpress</td>
<td>First Patient In: 1H 2022</td>
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<td>Initial Data: Year End 2022</td>
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<td>Next Generation TI Program</td>
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<td>Program Update: 2022</td>
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**MDS**, myelodysplastic syndromes; MF, myelofibrosis; R/R AML, relapsed/refractory acute myeloid leukemia; HR MDS, higher risk MDS; TI, telomerase inhibitor

See Appendix 2 for additional information on IMproveMF, IMpress, TELOMERE, lymphoid malignancies and next generation TI program.
IMETELSTAT:
A TELOMERASE INHIBITOR
WITH DISEASE-MODIFYING
POTENTIAL
Telomerase – A Critical Target in Hematologic Malignancies

Inhibition of Telomerase by Imetelstat Results in Potential Disease Modification

Telomerase Continually Upregulated in Malignant Cells Enabling Their Uncontrolled Proliferation

Imetelstat Inhibits Telomerase Leading to Selective Killing of Malignant Cells

References on slide 26
IMETELSTAT IN LOWER RISK MDS
Lower Risk Myelodysplastic Syndromes (LR MDS)

Durable TI, Ability to Treat Both RS+ve and RS-ve Patients and Disease Modification Needed

**Disease Characteristics**

Malignant stem and progenitor cells in bone marrow result in ineffective blood production (anemia) and disease progression

**Chronic Transfusion-Dependent Anemia**

- Ring Sideroblast Positive (RS+ve)
- High Transfusion Burden (4-6 units/8wks)
- Ring Sideroblast Negative (RS-ve)
- Very High Transfusion Burden (>6 units/8wks)

**Patient Subgroups Include:**

- High Transfusion Burden (4-6 units/8wks)
- Very High Transfusion Burden (>6 units/8wks)

**Current Unmet Needs**

- Higher rate of transfusion independence (TI)
- Durable transfusion independence
- Ability to treat both RS+ve and RS-ve patients
- Disease-modifying therapy

**Current Treatment Paradigm**

- Initial treatment with erythropoiesis stimulating agents (ESAs) mostly fail after 2+ years
- Patients relapsed/refractory (R/R) to ESAs become RBC transfusion dependent
- Treatment options for R/R ESA patients include:
  - Reblozyl (luspatercept) labeled for use in RS+ve patients only; 8-wk TI rate: 32%; worldwide sales ~$400M through Q3 ’21
  - Hypomethylating agents (HMAs); 8-wk TI rate: 17%
  - Lenalidomide approved only for deletion (5q) patients

References on slide 26
Depth and Durability of Transfusion Independence in IMerge Phase 2

Imetelstat (IMerge Phase 2, RS+ve and RS-ve) and Luspatercept (MEDALIST Phase 3, RS+ve)

Patients with Baseline Transfusion Burden ≥ 4 units/8wks

*Reported as 14% for MEDALIST patient population with baseline transfusion burden > 2 units/8wks; MEDALIST data not available for patients with baseline transfusion burden > 4 units/8wks

**Reported as median duration of TI for the 58/153 (38%) of luspatercept-treated patients in MEDALIST with baseline transfusion burden ≥ 2U/8wk who achieved a TI > 8 weeks during study weeks 1-24

Comparative MEDALIST Phase 3 data provided for informational purposes only and should not be relied upon as demonstrative or indicative of imetelstat's potential in LR MDS. There are several limitations when comparing results from an open-label Phase 2 trial to a blinded, placebo-controlled Phase 3 trial with a significantly greater patient population; in addition, luspatercept is an approved treatment with a relatively benign safety profile. MEDALIST sponsor – Celgene/Acceleron

References on slide 26
Efficacy Results in IMerge Phase 2 Across Patient Subgroups

Similar 8-Wk TI Rates Across RS+ve and RS-ve Patients and High/Very High Transfusion Burden Patients

All subjects

WHO category
- RS+
- RS-

RBC transfusion burden
- <=6 units
- >6 units

8-Week TI %
Strong Evidence of Imetelstat Disease-Modifying Activity in IMerge Phase 2

Depletion of Mutated Malignant Cells Correlates with Clinical Benefits

- **Telomerase Activity Inhibited in Imetelstat-Treated Patients**
  - Reduction in telomerase activity correlated with clinical benefits confirms MOA

- **Killing of Malignant Cells**
  - Depletion of mutated and cytogenetically abnormal malignant cells correlated with greater 8-wk TI and longer duration of TI

- **Recovery of Bone Marrow and Normal Blood Cell Production**
  - Long duration of transfusion independence (TI); ≥3g/dL rise in hemoglobin in 75% of responders
  - 42% 8-wk TI
  - 29% 1-year TI
  - 88 wks (~1.8 yrs) median duration of TI

See Appendix 1 for additional data
References on slide 26
Imetelstat Safety Profile in IMerge Phase 2

Cytopenias Manageable and Reversible with Limited Clinical Consequences

<table>
<thead>
<tr>
<th>TEAE</th>
<th>All Grades N=38 (n, %)</th>
<th>Grade 3/4 N=38 (n, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hematologic AEs (≥20% in either arm)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>25 (66)</td>
<td>23 (61)</td>
</tr>
<tr>
<td>Neutropenia</td>
<td>22 (58)</td>
<td>21 (55)</td>
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<tr>
<td>Anemia</td>
<td>11 (29)</td>
<td>8 (21)</td>
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<tr>
<td><strong>Non-hematologic AEs (≥15% in either arm)</strong></td>
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<tr>
<td>Back Pain</td>
<td>9 (24)</td>
<td>2 (5)</td>
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<tr>
<td>ALT Increased</td>
<td>7 (18)</td>
<td>2 (5)a</td>
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<tr>
<td>AST Increased</td>
<td>6 (16)</td>
<td>3 (8)a</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>6 (16)</td>
<td>3 (8)</td>
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<tr>
<td>Headache</td>
<td>6 (16)</td>
<td>1 (3)</td>
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<tr>
<td>Asthenia</td>
<td>6 (16)</td>
<td>1 (3)</td>
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<tr>
<td>Other AEsb</td>
<td>6 (16)</td>
<td>0</td>
</tr>
</tbody>
</table>

Most common adverse events (AEs) are on target Grade 3/4 thrombocytopenia and neutropenia:

- **Median time to onset**: 4 weeks (~1 cycle)
- **Median duration**: <2 weeks
- **Reversible**: >85% within 4 weeks
- **Manageable with dose hold and modifications**
- **Limited clinical consequences**:
  - 5% Grade 3/4 febrile neutropenia
  - 8% Grade 3/4 bleeding

Hematologic adverse events were treatment emergent, per reported adverse events (not laboratory values). Frequency of reported Grade 3/4 hematologic adverse events was consistent with cytopenias reported through laboratory values. For nonhematologic adverse events, the number and frequency of patients per reported adverse events are shown.

a No Grade 4 LFT elevations; all Grade 3 LFT elevations were reversible; b nasopharyngitis, diarrhea, constipation, and edema peripheral

References on slide 26
IMerge Phase 3 Trial Focuses on Durability of Transfusion Independence

Top-Line Results (TLR) Expected in Early January 2023

- Low or intermediate-1 risk MDS
- Non-del(5q)
- Transfusion dependent
- Relapsed/refractory to ESAs (n=170)

Primary Endpoint:
- Red Blood Cell Transfusion Independence (RBC-TI) ≥8 weeks

Key Secondary Endpoints:
- RBC-TI ≥24 weeks
- Time to and duration of RBC-TI
- Hematologic Improvement (HI)
- Patient Reported Outcomes (PROs)

Imetelstat
7.5mg/kg every 4 weeks
(n ~115)

Placebo
(n ~55)

2:1

- Designed to confirm Phase 2 results including broad, durable transfusion independence by using the same:
  - Patient population
  - Dose and schedule of administration
  - Primary and secondary endpoints

- Designed with >85% power to detect statistically significant difference in 8-wk TI rate between placebo and imetelstat (one-sided alpha=0.025)
  - For example: an 8-wk TI rate of 7.5% in the placebo arm vs. 30% in the imetelstat arm

- Broad patient enrollment
  - RS-ve and RS+ve
  - ESA ineligible
  - Luspatercept-experienced

References on slide 26
Expected Broad Imetelstat Opportunity in LR MDS

Patients Relapsed/Refractory to ESAs Expected to be Addressable by Imetelstat

Lower Risk MDS (>100,000 LR MDS Patients* in US/EU5)

ESA Eligible (~90%)

ESA Ineligible (~10%)

Relapsed/Refractory to ESA

Ring Sideroblast Positive (RS+ve) (~25%)

Ring Sideroblast Negative (RS-ve) (~75%)

Luspatercept

NO APPROVED THERAPY

Imetelstat Expected Addressable Patient Population: ~33,000 Patients* (US/EU5)

USD $1.2 Billion in Potential Peak Revenue Across US & EU5 Markets**

References on slide 26

ESA, erythropoiesis stimulating agent; Reblozyl – tradename for Celgene/Merck’s drug luspatercept

* Company projections in 2030

** Company projections in 2030: based on treated prevalence estimates for imetelstat eligible patient populations in LR MDS; DRG syndicated data, Payor research (US/EU5) and Geron analysis using assumptions for a) expected target product profile at launch, b) obtaining regulatory approvals and favorable reimbursement in US and key European markets, c) duration of treatment and d) potential market penetration
Preparations to Become a Commercially Capable Company

Comprehensive, Milestone-Driven, Stage-Gated Plan

Investment in Launch Preparations

- **2021**: Build HR & IT, CMC and Supply & Distribution Infrastructure to Support Potential Launch
- **2022**: Establish Commercial Leadership (Access, Medical Affairs, Marketing and Sales)
- **2023**: U.S. Commercial Team Expansion
  - Execute US "Go-to-Market" Strategy
  - EU Commercialization Strategy Finalized
- **2024**: Integrated U.S. Commercial Organization Established
  - U.S. Commercial Team Expansion
  - Execute US "Go-to-Market" Strategy
  - EU Commercialization Strategy Finalized

- **TLR** LR MDS (Early Jan 2023)*
- **LR MDS**
  - Planned Regulatory Filings US (1H 2023)*
  - EU (2H 2023)*
- **LR MDS**
  - Potential Launch US (1H 2024)*
  - EU (2H 2024)*

* Expected timing

TLR, top-line results
IMETELSTAT IN REFRACTORY MF
Intermediate-2/High-Risk (Int-2/HR) JAKi Refractory Myelofibrosis
A Disease with Limited Treatment Options and Poor Survival

**Disease Characteristics**

- **Bone Marrow Fibrosis**
- **Splenomegaly**
- **Symptoms** (fever, weight loss, night sweats)

**Malignant stem and progenitor cells** in bone marrow continue to proliferate despite JAKi treatment, resulting in disease progression.

**Current Unmet Needs**

- Treatment option for patients who are refractory to JAK inhibitor (JAKi) therapy
- Disease-modifying therapy
- Improvement in overall survival (OS)

**Current Treatment Paradigm**

- Only approved therapies in the US are JAKis – ruxolitinib and fedratinib
- Most patients eventually become refractory to JAKis with 75% discontinuation rate in 5 yrs
- Dismal survival (median OS ~14 – 16 months) after discontinuation from ruxolitinib due to suboptimal response or loss of therapeutic effect

References on slide 26
OS Improvement in JAKi Relapsed/Refractory MF Patients

Median Overall Survival (OS) in IMbark Phase 2 Compares Favorably to Historical Controls

- Improvement in overall survival in 9.4 mg/kg arm
  - 29.9 mos median OS in 9.4 mg/kg arm compares favorably to historical controls of 14 – 16 mos for JAKi refractory patients
  - 9.4 mg/kg administered every 3 weeks is being used in IMpactMF Phase 3 trial

Imetelstat 4.7 mg/kg vs 9.4 mg/kg

Survival probability

Time

References on slide 26
OS Improvement in Real-World Data Study of Refractory MF Patients

Median OS More Than Double Compared to BAT Treatment in Real-World Data (RWD)

Study designed to evaluate imetelstat benefit vs. BAT treatment in JAKi refractory MF patients

- IMbark Phase 2 data compared to 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)

Improvement in overall survival (OS) 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

Data support IMpactMF Phase 3 trial design

References on slide 26
Strong Evidence of Imetelstat Disease-Modifying Activity in IMbark Phase 2
Clinical Benefits Correlated with Decreased Telomerase Activity and Depletion of Malignant Cells

Telomerase Activity Inhibited in Imetelstat-Treated Patients
Killing of Malignant Cells
Recovery of Bone Marrow and Normal Blood Cell Production
Clinical Benefits

- Improved overall survival (OS)
- Improved symptoms

Myelofibrosis
Reduction in telomerase activity correlated with clinical benefits
Depletion of cells with key driver mutations and abnormal cytogenetics correlated with improved OS
Improvements in bone marrow fibrosis correlated to improved OS

See Appendix 1 for additional data
References on slide 26
Imetelstat Safety Profile in IMbark Phase 2
Cytopenias Manageable and Reversible with Limited Clinical Consequences

Thrombocytopenia and neutropenia characterization:

- Median time to onset: 9 weeks (~3 cycles)
- Median duration: ≤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

### Hematologic (≥10% in either arm)*

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<td>26 (44)</td>
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### Non-hematologic (≥20% in either arm)

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</table>

* Treatment emergent, per reported AEs (not laboratory values). Frequency of reported Grade 3/4 hematologic AEs were consistent with cytopenias reported through lab values.
IMpactMF – Global Phase 3 Trial in Refractory MF

Actively Enrolling Patients Now

Intermediate-2 or High-Risk MF
Refractory to JAK inhibitors (JAKi)
(n=320)

2:1

Imetelstat
9.4mg/kg every 3 weeks
(n ~214)

Best Available Therapy (BAT)
(n ~106)

Primary Endpoint:
• Overall survival (OS)

Key Secondary Endpoints:
• Symptom response
• Spleen response
• Patient Reported Outcomes (PROs)

• First and only Phase 3 trial in MF with OS as primary endpoint
• BAT treatment options in IMpactMF include BAT options similar to those used in the RWD study
• Designed with >85% power to detect a 40% reduction in the risk of death in the imetelstat treatment arm compared to the BAT arm (hazard ratio=0.60; one-sided alpha=0.025)
  – For example: median OS of 14 mos for the BAT arm vs. 23 mos for the imetelstat arm
• Interim Analysis expected in 2024 when ~35% of the patients planned to be enrolled have died; alpha spend ~0.01
• Final Analysis expected in 2025 when more than 50% of the patients planned to be enrolled have died
Expected MF Market Evolution and Imetelstat Opportunity

JAKi-Treated Patients Expected to Become Refractory to JAKis and Addressable by Imetelstat

Int-2/High-Risk MF Patients (~40,000 Int-2/HR MF Patients* US/EU5)

Treated with JAK Inhibitors

Unresponsive to JAK Inhibitors

NO APPROVED THERAPY

Expected Imetelstat Addressable Patient Population

~18,000 Patients* (US/EU5)

USD $1.8 Billion in Potential Peak Revenue Across US & Key European Markets**

* Company projections in 2030
**Company projections in 2030 in Int-2/HR MF based on treated prevalence estimates for imetelstat eligible patient populations in Int-2/HR MF (2030); DRG syndicated data, US/G5 payor research and Geron analysis using assumptions for a) expected target product profile at launch, b) obtaining regulatory approvals and favorable reimbursement in US and key European markets, c) duration of treatment and d) potential market penetration; Company estimate does not include Int-1 & platelets <50K pts.

References on slide 26
Geron Take-Aways

**DURABLE TRANSFUSION INDEPENDENCE**

Observed in LR MDS Phase 2 Trial

**PHASE 3 TRIALS ONGOING**

LR MDS Top-Line Results Expected Jan 2023; Refractory MF Interim Analysis Expected in 2024

**OVERALL SURVIVAL IMPROVEMENT**

Compared favorably to historical controls and RWD analyses of BAT in R/R MF

**2030 ANNUAL PEAK REVENUE POTENTIAL**

~$3 Billion Expected in the US and EU5 in LR MDS and Refractory MF

**FINANCIAL POSITION**

Expected Cash Runway* Through LR MDS Phase 3 Readout and End of Q1 2023

---

*Geron expects to report cash, cash equivalents, restricted cash and marketable securities of approximately $210.0 million and a principal outstanding balance of $50.0 million in long-term debt as 12/31/21.

References on slide 26:

MOA, mechanism of action; LR MDS, lower risk MDS; RWD, real-world data; BAT, best available therapy; R/R MF, relapsed/refractory myelofibrosis; MF, myelofibrosis; EU5, key five European Union markets

In the U.S.: expected orphan drug protection seven years from approval; composition of matter patent coverage expires Dec 2025 with potential patent term extension until 2030; extended patent term coverage of an additional six months for LR MDS as allowed under pediatric extension; and methods of use patent coverage until 2033 for MDS and MF.

In Europe: expected data/marketing exclusivity 10 years from date of approval for first indication; composition of matter patent coverage expires Sep 2024; expected orphan drug exclusivity 10 years from date of approval of each indication and extended orphan drug exclusivity up to two years for LR MDS as allowed under pediatric extension; and methods of use patent coverage until 2033 for MDS and MF.
THANK YOU

If you have any questions, please contact us:
investor@geron.com
References

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<thead>
<tr>
<th>Slide #</th>
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<tr>
<td>10</td>
<td>Steensma et al, JCO 2020; Platzbecker et al, ASH 2020</td>
<td>21</td>
<td>Mascarenhas et al, JCO 2021; Mascarenhas et al, ASH 2018 and 2020; Mascarenhas et al, EHA 2021</td>
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<td>Hu et al, ASH 2019</td>
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<td>11</td>
<td>Steensma et al, JCO 2020; Platzbecker et al, ASH 2020</td>
<td>22</td>
<td>IMPACTMF clinical trial protocol</td>
<td>34</td>
<td>Bruewigam et al, Cell Stem Cell 2014; Bruewigam et al, ASH 2017</td>
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<td>14</td>
<td>Incidence and Outcomes for Lower Risk MDS, ASH 2012; Greenberg et al, Blood 2012; Malcovati et al, Blood 2013; Platzbecker et al, Blood 2019; NCCN Guidelines v2, 2021; MDS Landscape and Forecast, DRG Clarivate, Nov 2020; Company market research; Company estimates</td>
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APPENDIX 1
EVIDENCE OF DISEASE MODIFICATION POTENTIAL
Strong Evidence of Disease Modification Potential

Imetelstat Results in Reduction of Malignant Clones in IMerge Phase 2

A. Change in VAF of SF3B1 Mutations

- Reduction of SF3B1 mutation burden in LR MDS patients treated with imetelstat

B. Percent SF3B1 VAF Reduction vs. Longest TI Duration

- Greater SF3B1 variant allele frequency reduction (VAF) correlates with longer duration of TI

C. Imetelstat Reduces Abnormal Cytogenetic Clones

- Patients with abnormal cytogenetics at baseline have reduction of their clones and long (>1 year) TI; 2 of 3 patients achieved partial cytogenetic response

References on slide 26

ClinicalTrials.gov (NCT02598661)
Strong Evidence of Disease Modification Potential:
Improved Bone Marrow Fibrosis Correlated to Improved Survival in IMbark Phase 2

Significant Dose-Dependent Fibrosis Improvement with Imetelstat Treatment

% Achieved BM Fibrosis Improvement

- 41% at 9.4 mg/kg
- 20% at 4.7 mg/kg

Longer Median OS and Higher Survival Rate in Patients with Improved Fibrosis

<table>
<thead>
<tr>
<th>BM Fibrosis Improvement</th>
<th>Median OS (months) (95% CI)</th>
<th>HR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>31.6 (23.6, NE)</td>
<td>0.54 (0.23, 1.29)</td>
</tr>
<tr>
<td>No</td>
<td>24.6 (18.4, NE)</td>
<td></td>
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</table>

Survival Probability

References on slide 26
Strong Evidence of Disease Modification Potential
Reduction in Key MF Driver Mutations Correlated to Improved Survival in IMbark Phase 2

Significant Dose-Dependent ≥20% VAF Reduction with Imetelstat Treatment

<table>
<thead>
<tr>
<th>Dose (mg/kg)</th>
<th>% Achieved ≥20% Reduction of VAF</th>
</tr>
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<tbody>
<tr>
<td>4.7</td>
<td>17%</td>
</tr>
<tr>
<td>9.4</td>
<td>46%</td>
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p=0.0321

Longer Median OS and Higher Survival Rate in Patients Who Achieved ≥ 20% VAF Reduction

<table>
<thead>
<tr>
<th>≥20% VAF Reduction</th>
<th>Median OS (months) (95% CI)</th>
<th>HR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>31.6 (21.5, -)</td>
<td>0.512 (0.238, 1.100)</td>
</tr>
<tr>
<td>No</td>
<td>22.8 (17.1, 31.6)</td>
<td></td>
</tr>
</tbody>
</table>

VAF, variant allele frequency
References on slide 26
Strong Evidence of Disease Modification Potential
Malignant Clones Reduced in Imetelstat-Treated Patients in IMbark Phase 2

Dose-Dependent Complete Elimination of Mutation Burden from Multiple Driver- and Non-Driver Genes

- Mutation status and variant allele frequency (VAF) were evaluated by next-generation sequencing (NGS) using Illumina TruSight Myeloid Sequencing Panel of 54-genes
- Lower limit detection is 5% and 2% for well documented hotspots
- 49 pts had matched pre- and at least a post-imetelstat treatment NGS data

References on slide 26
APPENDIX 2
LIFE CYCLE MANAGEMENT (LCM) PROGRAMS
**IMproveMF – Planned Phase 1 Geron-Sponsored Study in Frontline MF Combination Treatment of Ruxolitinib Followed by Imetelstat**

University of Miami / Mt. Sinai / Moffit Cancer Center

- Preclinical data for ruxolitinib followed by imetelstat:
  - Additive inhibitory effect on MF stem cells *in vivo*
  - Synergistically depletes stem cells from MF patients (PDX model)

### Rationale

**Frontline MF**
DIPSS int1/int 2/HR

- **Objective:** Identify recommended Phase 2 doses
- **Primary Wk 24 Endpoint:** Safety
- **Other Wk 24 Endpoints:** TSS, SVR35, Fibrosis

**Ruxolitinib + Imetelstat**
single arm open label

- **Phase 2 Dose Selected**

**Part 1: Dose Finding**
(n = up to 20)

**Part 2: Dose Confirmation & Expansion**
(n = ~ 20)

- **Objective:** Confirm safety of doses and evaluate efficacy
- **Primary Wk 24 Endpoint:** Safety, TSS
- **Other Wk 24 Endpoints:** TSS, SVR35, Fibrosis

References on slide 26

RP2D, Recommended Phase 2 Dose DIPSS, dynamic international prognostic scoring system; int1, intermediate-1; int2, intermediate-2; HR, high risk; TSS, total symptom score; SVR35, spleen volume reduction ≥ 35%; TI, transfusion independence; IWG-MRT, international working group-myeloproliferative neoplasms treatment
IMpress – Planned Phase 2 Investigator-Sponsored Study of Single Agent Imetelstat in Post-HMA Relapsed/Refractory AML

Lead Principal Investigator: Dr. Uwe Platzbecker, University Hospital, Leipzig, Germany

Rationale

- In preclinical models, imetelstat:
  - Prevented expansion of human AML leukemic stem cells (PDX model)
  - Prolonged survival of AML PDX mice

Objectives:
- Evaluate efficacy

Endpoint:
- Overall Response Rate per IWG 2018 criteria (MDS) and the criteria of the European LeukemiaNet (AML)

Open-label, Single-arm Multicenter
(n = ~ 45)

R/R/Intolerant HR MDS and AML
Post HMA

Imetelstat
7.5mg/kg I.V.

First Patient Expected: 1H 2022

References on slide 26

PDX, patient-derived xenografts; R/R, relapsed or refractory; HR MDS, intermediate-2 or high risk MDS per International Prognostic Scoring System; AML, acute myeloid leukemia; HMA, hypomethylating agent; IWG 2018, international working group 2018 criteria for hematologic response
TELOMERE – Planned Phase 1/2 Investigator-Sponsored Study of Imetelstat in Combination with Venetoclax or Azacitidine in Relapsed/Refractory AML

Lead Principal Investigator: Dr. John Mascarenhas, Mt. Sinai Hospital, New York, New York

• **Objective:** Identify recommended Phase 2 dose for each combination
• **Endpoint:** Safety for each combination

In preclinical models, imetelstat + venetoclax (Ven):
- Synergistically induced apoptosis in primary AML blasts ex vivo
- Enhanced survival with potential cure in AML xenograft model

In preclinical models, imetelstat + azacitidine (Aza):
- Synergistically induced apoptosis in AML cell lines

---

**Phase 1 Dose Finding**

(n = up to 20)

- **R/R AML Post Aza and/or Ven**
  - Imetelstat + Aza
  - Imetelstat + Ven

**Stable Disease → PD**

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
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<tbody>
<tr>
<td>Imetelstat + Aza</td>
<td>Imetelstat + Aza</td>
</tr>
<tr>
<td>Imetelstat + Ven</td>
<td>Imetelstat + Ven</td>
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</table>

**Phase 2 SIMON 2 Stage Design**

(n = ~ 50)

- **Objective:** Evaluate efficacy for each combination
- **Endpoint:** Overall Response Rate for each combination

R反腐, relapsed or refractory; AML, acute myeloid leukemia; PD, progressive disease

First Patient Expected: 1H 2022

References on slide 26
Ongoing and Planned Preclinical Experiments to Define the Role of Imetelstat in Lymphoid Malignancies

Lead Principal Investigator: Dr. Swaminathan Iyer, MD Anderson Cancer Center, Houston, Texas

**Rationale**

- **T-Cell lymphoma cell lines in vitro** have shown:
  - Short telomere length (Sezary syndrome; transformed mycosis fungoides)
  - High telomerase activity (cut. anaplastic large-cell lymphoma; mycosis fungoides)
- **In Cutaneous T-Cell lymphoma cell lines in vitro**:
  - Telomerase overexpression increased T-Cell proliferation
  - RNAi inhibition of telomerase decreased T-Cell proliferation

**Studies Planned To Be Conducted at MD Anderson Cancer Center**

- **In vitro** assays in cell lines and patient-derived materials (blood, etc.) from T and B-cell lymphomas
  - Apoptosis (cell death) assays
  - Colony forming cell (CFCs) assays
  - Cytokine assays
  - TA, TL, hTERT assays
- **In vivo** mouse studies in T and B-cell lymphoma models

**Initial Data**

**Expected:**

YE 2022

- T-Cell lymphoma cell lines have shown:
  - Short telomere length (Sezary syndrome; transformed mycosis fungoides)
  - High telomerase activity (cut. anaplastic large-cell lymphoma; mycosis fungoides)
- In Cutaneous T-Cell lymphoma cell lines:
  - Telomerase overexpression increased T-Cell proliferation
  - RNAi inhibition of telomerase decreased T-Cell proliferation

References on slide 26

TA, telomerase activity, TL, telomere length, hTERT, human telomerase reverse transcriptase
Long-Term Next Generation Telomerase Inhibitor Discovery Program

- **Program Goal:** discover and develop novel small molecules based on chemistry platforms proprietary to Geron that bind to the active site of the telomerase molecule and directly inhibit telomerase activity.

- Aspirational profile of a lead compound candidate:
  - Oral delivery
  - High potency & selectivity
  - High potential for combinability

- Development of novel, chemistry platform(s) for lead compound identification underway

- Updates expected when lead compound(s) identified and IND timing known

References on slide 26