Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

<table>
<thead>
<tr>
<th>Title of each class</th>
<th>Trading Symbol(s)</th>
<th>Name of each exchange on which registered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Stock, par value $0.0001</td>
<td>GRTS</td>
<td>The Nasdaq Global Select Market</td>
</tr>
</tbody>
</table>

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒
On July 13, 2020, Gritstone Oncology, Inc. (the “Company”) hosted a teleconference and webcast during which it provided a clinical update on its ongoing Phase 1 studies of its immunotherapy product candidates GRANITE and SLATE, as well as discussing its Phase 2 study plans.

A copy of the presentation utilized by the Company during the teleconference and webcast is filed as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated by reference herein.

<table>
<thead>
<tr>
<th>Exhibit No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>99.1</td>
<td>Presentation, dated July 13, 2020</td>
</tr>
</tbody>
</table>
Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

GRITSTONE ONCOLOGY, INC.

Date: July 13, 2020

By: /s/ Jean-Marc Bellemin
Jean-Marc Bellemin
Executive Vice President, Chief Financial Officer
Clinical Data Update & Near-term Phase 2 Plans
13 July 2020
Safe Harbor and Forward-Looking Statements

This presentation contains forward-looking statements including, but not limited to, statements related to our preclinical and clinical product candidates, GRANITE, SLATE, and our bispecific antibody program. All statements other than statements of historical facts contained in this presentation, including statements regarding the timing of immunogenicity and clinical data for GRANITE and SLATE, identification of development candidate for our bispecific antibody program, our future results of operations and financial position, business strategy, prospective products, availability of funding, clinical trial results, product approvals and regulatory pathways, timing and likelihood of success, plans and objectives of management for future operations, future results of current and anticipated products, and our ability to create value are forward-looking statements. Because forward-looking statements are inherently subject to risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements.

Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the business of the company in general, see Gritstone’s periodic filings with the Securities and Exchange Commission (the “SEC”), including its Quarterly Report filed on May 7, 2020 and any current and periodic reports filed thereafter.
• Gritstone’s GRANITE and SLATE product candidates - Dr Andrew Allen
• Phase 1 Clinical Trial Data - Dr Daniel Catenacci
• Phase 2 Studies in Advanced Disease - Dr Andrew Allen
  - GRANITE – advanced CRC & gastric cancer
  - SLATE - post-CPI advanced NSCLC
• Company Milestones - Dr Andrew Allen
• Q&A
  - Drs Catenacci & Allen, joined by Gritstone Executive Leadership: Dr Rousseau (CMO),
    Dr Jooss (CSO), Dr Yelensky (CTO) and Mr Bellemin (CFO)
Gritstone Is Steadily Delivering Data to Validate the Platform

- Nat Biotech 2018
- SITC 2019
  - NEOANTIGEN PREDICTION: Does EDGE accurately identify human tumor neoantigens?

- ESMO-IO DEC 2019
  - IMMUNOGENICITY: Does platform prime neoantigen-specific CD8+ T cells consistently in humans?

- MID-2020
  - EARLY EFFICACY:
    - Strong signals (MSS colorectal cancer)
    - Signals (Gastric cancer, NSCLC, Urothelial cancer)

- 2021 2022
  - EFFICACY:
    - Large single-arm cohorts
    - Randomized trial data
Gritstone’s Approach: Next Generation Cancer Immunotherapy Demands Excellence in Two Key Dimensions

1. Target Product Profile
2. Neoantigen Identification
3. Potent Platform for T Cell Generation

T Cells

Strong T Cell Generation
Gritstone’s EDGE™ Leads The Field in Neoantigen Identification

Deep learning using tumor HLA peptide mass spectrometry datasets improves neoantigen identification

Bulik-Sullivan, et. al. December 2018

United States Patent

Assignee: Gritstone Oncology, Inc., Sunnyvale, CA (USA)

Patent No.: US 10,055,540 B2
Date of Patent: Aug. 21, 2018

Inventors: Yelensky et al.

Inventors: Bulik-Sullivan et al.
Gritstone Has Developed a Unique, Potent Platform for Delivering Antigens to the Immune System to Drive a Strong T Cell Response

Heterologous Prime/Boost

Chimpanzee Adenovirus (ChAdV)
Self-amplifying mRNA (SAM)

Non-Human Primate Experiment: 6 SIV antigens
ChAdV + SAM + anti-CTLA-4

Weeks post ChAdV prime

IFN-γ+ T Cells/10^6 PBMCs

Delivery of SAM boost + anti-CTLA-4

Up to 8% of peripheral CD8+ T cells are antigen-specific

PBMC: peripheral blood mononuclear cell

CD8+ specific T cell responses (overnight stimulation with short peptides of 8-12 amino acids)
Many Solid Tumor Patients Will Have Their Own Unique Neoantigens Enabling Personalized Immunotherapy - GRANITE

<table>
<thead>
<tr>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine Biopsy</td>
<td>Sequencing</td>
<td>Neoantigen Prediction</td>
<td>Personalized Immunotherapy</td>
<td>Simple Injection</td>
</tr>
<tr>
<td>Routine clinical biopsy as input material</td>
<td>Tumor DNA Tumor RNA Normal DNA</td>
<td>Gritstone EDGE™ AI model for tumor antigen prediction trained on human tumor data</td>
<td>20 Patient-specific predicted neoantigens inserted into viral and RNA vectors</td>
<td>Immunotherapy administered in conjunction with checkpoint inhibitors</td>
</tr>
</tbody>
</table>

Oncologist | Gritstone | Oncologist
SLATE Delivers Shared Neoantigens To Selected Patients Using Gritstone’s Prime/Boost Platform - Off-the-Shelf Therapy

Prime
ChAdV Vector

Boost
SAM Vector

SLATE Shared Neoantigen Cassette
- “Off-the-shelf” Neoantigen Immunotherapy
- 20 cancer driver mutations
- Efficient patient selection via gene panels

G12V  G12D  G12C  \times 20 \text{ total}  \text{ mutations}

KRAS, TP53 \& other mutations delivered as 25 aa sequences
Efficacy of Neoantigen Immunotherapy: How Will it Manifest?

Form of response to neoantigen immunotherapy likely different vs CPI alone where intra-tumoral T cells already present

1. Release of cancer cell antigens (cancer cell death)
2. Cancer antigen presentation (dendritic cells/MCAs)
3. Priming and activation (APCs & T cells)
4. Trafficking of T cells to tumor (CTLs)
5. Migration of T cells into tumor (CTLs, endothelial cells)
6. Recognition of cancer cells by T cells (CTLs, cancer cells)
7. Killing of cancer cells (immune and cancer cells)
PHASE ONE CLINICAL TRIAL DATA

Dr Dan Catenacci
Director GI Oncology Program
Assistant Director of Translational Research
Comprehensive Cancer Center
University of Chicago
GRANITE and SLATE Phase One Studies Are Very Similar

GRANITE personalized
- Lung
- Gastric
- Colorectal (MSS)
- Bladder

SLATE off-the-shelf
- Lung
- Pancreatic
- Colorectal (MSS)
- Mutation Positive Tumors

High Frequency KRAS Mutation

PHASE 1
Objectives:
- Safety and RP2D
- Immunogenicity

Dose Level 1
- ChAdV 1x10^{11} vp
- SAM 30 kg
- Nivolumab 480 mg IV

Dose Level 2
- Increasing doses of SAM
- Nivolumab 480 mg IV

Dose Level 3
- with 50 mg 5C
- Nivolumab

Dose Level 4
- 50 mg 5C
- Nivolumab
GRANITE and SLATE: Treatment of Previously Treated Metastatic Patients

<table>
<thead>
<tr>
<th></th>
<th>GRANITE (n=10)</th>
<th>SLATE (n=19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean, range)</td>
<td>59 (38-76)</td>
<td>58 (33-83)</td>
</tr>
<tr>
<td>Gender (Female/Male)</td>
<td>4/6</td>
<td>12/7</td>
</tr>
<tr>
<td># of doses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ChAdV</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>SAM</td>
<td>44</td>
<td>39</td>
</tr>
<tr>
<td>Nivolumab (IV)</td>
<td>61</td>
<td>58</td>
</tr>
<tr>
<td>Ipilimumab (SC)</td>
<td>14</td>
<td>47</td>
</tr>
<tr>
<td>Tumor Types</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSCLC</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Microsatellite stable (MSS)-CRC</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Gastroesophageal adenocarcinoma(GEA)</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Pancreatic Ductal Adenocarcinoma</td>
<td>N/A</td>
<td>5</td>
</tr>
<tr>
<td>Ovarian adenocarcinoma</td>
<td>N/A</td>
<td>1</td>
</tr>
<tr>
<td>Ampullary adenocarcinoma</td>
<td>N/A</td>
<td>1</td>
</tr>
<tr>
<td>Prior anti-PD(L)1 therapy</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

Data cut-off 6/30/2020
GRANITE Therapy is Well Tolerated with TRAEs Indicative of an Immune Response to the Vaccine
No DLTs; TRAEs all Grade 1/2 with exception of Grade 3 Hyperthyroidism in 1 patient and self-limiting, asymptomatic Grade 3 CK elevation in 1 patient

<table>
<thead>
<tr>
<th>Treatment-related adverse events (TRAES) after ChAdV or SAM</th>
<th>Safety</th>
<th>CHAdV (1x10^9 vp)</th>
<th>SAM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 10 (all patients treated with concurrent nivolumab)</td>
<td>No SC IP</td>
<td>With SC IP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(n=5)</td>
<td>(n=5)</td>
</tr>
<tr>
<td>Fever</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Injection-site reactiona</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Fatigue</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Skin rash</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Anorexia</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Chills</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CK Elevation</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Congestion</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Hot flashes</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Hyperthyroidiamns</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hypotension</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Infusion-related reaction</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Myalgia</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Pruritus</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Vomiting</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* One patient did not receive SAM boosts

Data cut-off 6/30/2020
Fever is the Only SAE Associated with GRANITE Neoantigen Vaccination

All serious adverse events (SAEs) after ChAdV or SAM

<table>
<thead>
<tr>
<th>Safety</th>
<th>n = 10 (all patients treated with concurrent nivolumab)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ChAdV (1x10^{12} vp)</td>
</tr>
<tr>
<td></td>
<td>No SC IPI (n=5)</td>
</tr>
<tr>
<td></td>
<td>With SC IPI (n=5)</td>
</tr>
<tr>
<td></td>
<td>30 ug (n=3)</td>
</tr>
<tr>
<td></td>
<td>100 ug a + SC IPI (n=2)</td>
</tr>
<tr>
<td></td>
<td>100 ug + SC IPI (n=2)</td>
</tr>
<tr>
<td></td>
<td>300 ug + SC IPI (n=2)</td>
</tr>
<tr>
<td>SAEs</td>
<td></td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>1e</td>
</tr>
<tr>
<td>Fever</td>
<td>1b</td>
</tr>
<tr>
<td>Bradycardia</td>
<td>1c</td>
</tr>
<tr>
<td>Heart Failure</td>
<td>1c</td>
</tr>
<tr>
<td>Hyperthyroidism</td>
<td>1c</td>
</tr>
<tr>
<td>Respiratory Failure</td>
<td>1c</td>
</tr>
</tbody>
</table>

Grade 5 respiratory failure resulted from patient’s altered mental status (checkpoint inhibitor-induced acute thyrotoxicosis), with associated aspiration pneumonia, respiratory failure leading to patient death and is not related to vaccine treatment.

* One patient did not receive SAM boosts
a Occurring in the same patient
b Occurring in the same patient
c Occurring in the same patient
d Not treatment-related

Data cut-off 6/30/2020
SLATE Therapy is Well Tolerated with TRAEs Indicative of an Immune Response to the Vaccine

<table>
<thead>
<tr>
<th>Safety</th>
<th>ChAdV (1×10^10 vP)</th>
<th>SAM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NG SC IP [n=19]</td>
<td>WITH SC IP [n=12]</td>
</tr>
<tr>
<td>Treatment-related adverse events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td>-</td>
<td>7</td>
</tr>
<tr>
<td>Fatigue</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Dizziness</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Nausea</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pruritus</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Clayma</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Osteosynthesis</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>ALT increased</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>AST increased</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Myalgia</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Neutropenia</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rash</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Arthralgia</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dry skin</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fatigue</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dizziness</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Night sweats</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Myalgia</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Night sweats</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Myalgia</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

All grade 1/2 with exception of:
- One patient with grade 3 fever after 300 µg SAM + SC IPI, resolved with acetaminophen
- One patient with reversible grade 3 ALT and grade 4 AST elevation attributed to nivolumab (DLT)
- One patient with grade 3 neutropenia and thrombocytopenia
- One patient with grade 3 rhabdomyolysis

Two DLTs after ChAdV in combination with nivolumab and ipilimumab (1 each of CPI-induced autoimmune hepatitis and myositis)

*1 patient discontinued after ChAdV due to autoimmune myositis

Data cut-off 6/30/2020
SLATE SAEs: Mostly attributable to CPI, no other clear pattern

All serious adverse events (SAEs) after ChAdV or SAM

<table>
<thead>
<tr>
<th>Safety Event</th>
<th>ChAdV (1x10¹⁹ vp)</th>
<th>SAM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No SC ipi (n=2)</td>
<td>With SC ipi (n=17)</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Acute kidney failure</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Anemia</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>ALT elevation</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>AST elevation</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Cervical fracture</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fever</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Hypertension</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Myopathy</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Nausea</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Neutropenia</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Right Frontal Brain Metastasis</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Rhabdomyolysis</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Small bowel obstruction</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Vomiting</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

- *Not treatment-related
- *Occurring in the same patient
- *Occurring in the same patient
- *One patient not treated with nivolumab or ipilimumab in combination with SAM

Data cut-off 6/30/2020
Strong Neoantigen-specific CD8+ T Cell Responses Consistently Induced Across All Patients (Ex Vivo ELISpot Assay with Short Peptides)

G1

G2

G3

G4

G6

G7

G8

G5: Data not available due to lack of samples

LOD = limit of detection
Each Patient Has CD8+ T Cell Responses To Multiple Neoantigens

Mini-pools of multiple short neoantigenic peptides (a mini-pool is a subset of the 20 in the vaccine) studied in each patient with sufficient PBMCs

Patient G2 (leukapheresis): 12 of 20 neoantigens elicit CD8+ T-cell responses

G6: Data not available due to lack of sample
Do Therapy-Induced Neoantigen-Specific T Cells Traffic to the Tumor? T Cell Receptor (TCR) Sequence Analysis Can Address This

**RNA sequencing of TCRβ of Neoantigen-reactive CD8+ T cells**

**Blood**

10x Genomics

- Screen
- T cells expanding in blood
- Week 1, 4, 8, 12, 16

**Tumor**

Adaptive Biotechnologies

- Baseline Biopsy
- T cells expanding in tumor
- On-Treatment Biopsy

**DNA sequencing of TCRβ of Tumor-infiltrating T Cells**

Can neoantigen reactive T cells expanded by vaccine in blood traffic to tumor?
27 TCRβs were expanded on-treatment in neoantigen-peptide-stimulated PBMCs, 5 of which infiltrated the tumor.

40 TCRβs significantly expanded in the on-treatment tumor biopsy, 5 of which also expanded in PBMCs.

- Expanded in Tumor: 35
- Contracted in Tumor: 11
- No significant change: 243

Proportion of productive T cells (%) on-treatment biopsy TCRβ Frequency (%)

Baseline On-Treatment
**GRANITE**: No DLTs and frequent treatment beyond apparent radiologic progression

<table>
<thead>
<tr>
<th>Dose Level 1</th>
<th>ChAdV + SAM + nivolumab</th>
<th>Chemotherapy</th>
<th>G1</th>
<th>GEA</th>
<th>6</th>
<th>RPD</th>
<th>15</th>
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<tbody>
<tr>
<td>G2</td>
<td>GEA</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>G3</td>
<td>NSCLC</td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>5</td>
<td>RPD</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Dose Level 2</th>
<th>ChAdV + SAM + nivolumab</th>
<th>Chemotherapy</th>
<th>G4</th>
<th>MSS-CRC</th>
<th>15</th>
<th>2</th>
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</thead>
<tbody>
<tr>
<td>G5</td>
<td>GEA</td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>G6</td>
<td>MSS-CRC</td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td></td>
<td>RPD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dose Level 3</th>
<th>ChAdV + SAM + nivolumab</th>
<th>Chemotherapy</th>
<th>G7</th>
<th>GEA</th>
<th>3</th>
<th>4</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>G8</td>
<td>MSS-CRC</td>
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<td>4</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Dose Level 4</th>
<th>ChAdV + SAM + nivolumab</th>
<th>Chemotherapy</th>
<th>G9</th>
<th>MSS-CRC</th>
<th>3</th>
<th>2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>G10</td>
<td>MSS-CRC</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Legend**
- chemotherapy
- chemotherapy + anti-PD-(L)1
- surgery
- radiation
- ChAdV/SAM/nivolumab
- duration in months
- RPD: RECIST1.1 PD
- NED: No evidence of disease
G2 (DL1): Prolonged disease-free period on therapy after surgery

59-year-old male with metastatic gastric cancer

Clinical status
- 365+ days on study, back to work, discontinued study treatment per patient request, continuing to monitor

Tumor response
- no evidence of disease at any timepoint on study (post-surgery)

T-cell response
- CD8 T-cell expansion with 12 neoantigen-specific CD8 T-cell clones

dtDNA kinetics
- No mutations detected above the lowest call threshold for the patient’s mutations

No ctDNA detected at any point from week 0-52
G3 (DL1): NSCLC Patient with Progression on Prior CPI – Evidence of Tumor Control (Clinical Benefit, ctDNA Control) Until T Cell Decline

Clinical status
- 180+ days on study, symptomatically improving since study entry without any complaint compared to prior lines of treatment, treated beyond radiologic progression

Tumor response
- Best overall response: PD at week 8 (+34% from baseline), at week 16 (+3% relative to week 8) and confirmed at week 24 (+16% relative to week 16), with apparent lesion cavitation

T cell response
- CD8 T cell expansion following ChAdV prime, expansion of pre-existing responses

ctDNA kinetics
- Trending down following an initial increase at week 4 (20 of 20 variants detected)

<table>
<thead>
<tr>
<th>Avg VAF</th>
<th>Max reduction</th>
<th>Avg VAF</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.69%</td>
<td>6x</td>
<td>0.12%</td>
</tr>
<tr>
<td>Week 4</td>
<td></td>
<td>Week 20</td>
</tr>
</tbody>
</table>
### G3 (DL1): Slow Expansion of Lung Nodules on CT Imaging with Cavitation and No New Lesions

<table>
<thead>
<tr>
<th>Baseline</th>
<th>Week 8 (+34% relative to baseline)</th>
<th>Week 16 (+37% relative to baseline)</th>
<th>Week 24 (+53% relative to baseline)</th>
</tr>
</thead>
</table>

The images show sequential CT scans with annotations highlighting changes over time. The relative expansion of lung nodules is quantified with percentages relative to baseline.
ctDNA May Help Understand Tumor Biology when CT Scans Uninformative

Advanced melanoma patients treated with CPI can show pseudoprogression - ctDNA changes may identify these patients

1. 29 Patients with metastatic melanoma treated with anti-PD1 who progressed on first scan

2. 9 of 29 (31%) has pseudoprogression on subsequent scan

3. All 9 had a favorable ctDNA profile, defined as:
   - ctDNA undetectable at baseline or on therapy
   - ctDNA with >10x reduction over time

In patients with progression on first scan, a favorable ctDNA profile identified 100% of pseudoprogression events

Lee et al JAMA Oncology (2018)
**G8 (DL3): Clear Evidence of Clinical Benefit in MSS-CRC Patient**

**Prior Therapy**

50-year old female with MSS-CRC

- FOLFOX/bev (15 months) → PD → FOLFI RI/bev (6 months)

**Clinical status**

- 112+ days on study, clinically feeling well

**Tumor response**

- Best overall response: SD at week 16 (one liver lesion stable, all other lesions shrinking)
- TMB = 7 mutations/MB

**T-cell response**

- T cells induced with prime and further increased with boost

**ctDNA kinetics**

- Increase in ctDNA levels at 1 month correlating with CEA spike followed by decrease with loss of some variants (16 of 20 total variants detected)

**Study Treatment**

- Every 4 weeks over first 6 months

**Ex vivo ELISpot**

**Neonatigen ctDNA**

**Laboratory Values**

- CEA (ng/mL)
- ALT (U/L)
- AST (U/L)

- Weeks post prime: 0, 4, 8, 12, 16
**G8 (DL3):** Lung CT Shows Transient Lesion Expansion at Week 8 (T Cell Infiltration?) then Contraction (Slide 1 of 2)

<table>
<thead>
<tr>
<th>Baseline</th>
<th>Week 8</th>
<th>Week 16</th>
</tr>
</thead>
</table>

Multiple lung lesions increasing in size at 8 weeks and shrinking at 16 weeks below baseline.
G8 (DL3): Lung CT Shows Transient Lesion Expansion at Week 8 (T Cell Infiltration?) then Contraction (Slide 2 of 2)

Multiple lung lesions increasing in size at 8 weeks and shrinking at 16 weeks below baseline.
**G8 (DL3):** Large Liver Lesion Unchanged in Size (but LFTs Normalized)

Mixed response of two target liver lesions with one stable and one decreasing in size.
GRANITE Conclusions to Date

- Data to dose level 3 show good tolerability
  - Vaccine elicits transient fever and injection site reaction as expected
  - Customary CPI-induced immune-related adverse events
- Strong, consistent induction of killer CD8+ T cells, specific to multiple neoantigens, which have now been shown to accumulate in tumor (in 2/2 patients studied to date)
- Dose/intensity level 1 efficacy data suggest induction of disease control, perhaps more durable in the adjuvant-like context
  - Early tumor lesion expansion observed —consistent with T cell infiltration and proliferation in tumor
- Dose/intensity level 2 data suggest that since development of T cell response (and thus, presumably, any consequent benefit) takes multiple weeks, patients about to progress and die within a few weeks are unlikely to benefit from this form of immunotherapy
- Dose/intensity level 3 data very encouraging — no disease progression observed — clear clinical benefit ongoing in metastatic colorectal cancer patient (MSS genotype)
- More MSS-CRC patients under study at dose/intensity level 4
**SLATE**: CD8+ T Cells Consistently Induced Against Multiple KRAS Driver Mutations but ex vivo ELISpot Positive in Subset of Patients Only

*SLATE* drives detectable CD8+ T cell responses against single neoantigens

**S2**  
**KRAS G12C**  
*Ex vivo ELISpot*

**S4**  
**KRAS Q61H**  
*Ex vivo ELISpot*

**CD8+ T cell responses against single neoantigens from multiple KRAS driver mutations detectable in post IVS ELISpot**

**Patient ID/KRAS mutation**
SLATE: TP53mut Neoantigens Seem Immunodominant - Although Rarer than KRASmut Neoantigens, they Drive Strong CD8+ T Cell Responses

Responses to 3/3 TP53 mutations tested to date; mutations presented by 3 different Class I HLA alleles
SLATE: Patients with NSCLC (All of Whom Progressed on Prior IO) Have Largest Degree of Clinical Benefit

Data cut-off: 06/30/20
S2 (DL1): Good Clinical Response to Therapy with ctDNA Reduction and Minor Tumor Shrinkage on CT Scan

Prior Therapy

84-year-old female with NSCLC: KRAS G12C

Clinical status

- 168 days on study, then declined further treatment due to fatigue

Tumor response

- Best overall response: stable disease with a 20% reduction from baseline

T-cell response

- Expansion of pre-existing CD8 T-cell against KRAS G12C

ctDNA kinetics

- Drop in ctDNA correlates with 20% tumor reduction at week 8 by CT scan
S2 (DL1): Increased Immune Infiltration, Including CD8+ T Cells, Observed in Post Treatment Biopsy

Full panel analysis:

<table>
<thead>
<tr>
<th>CD4</th>
<th>PD-L1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD8a</td>
<td>CD68</td>
</tr>
<tr>
<td>CD45RO</td>
<td>Pan-Cytokeratin</td>
</tr>
<tr>
<td>Granzyme B</td>
<td>DAPI</td>
</tr>
<tr>
<td>FoxP3</td>
<td></td>
</tr>
</tbody>
</table>

Bar chart showing percentage of CD8+ population.
**S2 (DL1): Good Clinical Response to Therapy with ctDNA Reduction and Minor Tumor Shrinkage on CT Scan**

<table>
<thead>
<tr>
<th>Baseline</th>
<th>Week 8</th>
<th>Week 16</th>
<th>Week 24</th>
</tr>
</thead>
<tbody>
<tr>
<td>95 mm*</td>
<td>77 mm* (-19% relative to baseline)</td>
<td>75 mm* (-21% relative to baseline)</td>
<td>89 mm* (-6% relative to baseline)</td>
</tr>
</tbody>
</table>

*Sum of longest diameters of two target lesions*
**S3 (DL2): Sustained Clinical Benefit in Patient after Progression on Front-Line Pembrolizumab-Chemotherapy**

- **Prior Therapy**
  - 55-year old male with NSCLC; KRAS G12C
  - Pembrolizumab + Carboplatin/pemetrexed (8 months, BOR = PD)

- **Clinical status**
  - 196+ days on study, clinically doing well

- **Tumor response**
  - Best overall response: stable disease with a 15% reduction from baseline at week 24 and 32

- **T-cell response**
  - Detection of CD8 T-cell against KRAS G12C following in vitro stimulation

- **ctDNA kinetics**
  - KRAS G12C mutation not detected at any timepoint

---

**IVS ELISpot**

<table>
<thead>
<tr>
<th>Weeks post Prime</th>
<th>SPU per 10^6 cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Vehicle</td>
</tr>
<tr>
<td></td>
<td>KRAS G12C Pool</td>
</tr>
</tbody>
</table>

**Every 4 weeks over first 6 months**

- Weeks 0, 4, 28
- Nivolumab/Iplimumab
SLATE Conclusions to Date

- Data to dose level 4 show good SLATE tolerability with expected CPI-induced immune-related adverse events
- RP2D at highest evaluated dose in Phase 1 (dose level 4)
- Strong, consistent induction of CD8+ T cells to some neoantigens (TP53 mutations) which display features of immunodominance
- Less consistent induction of CD8+ T cells to KRAS neoantigens which are less immunodominant
- Evidence of clinical benefit and minor but sustained tumor shrinkage in multiple NSCLC patients with KRAS G12C mutations who had progressed on prior CPI therapy; no patients with TP53 mutations treated yet
PHASE TWO STUDIES IN ADVANCED DISEASE

Dr Andrew Allen
GRANITE Phase 2 Begins 2H20: Pursue Colorectal Cancer Signal & Continue to Study Gastric Cancer

Strong Efficacy Signal with Single-Arm Trial if Multiple Responses Observed in MSS-CRC

Phase 1

Single-Arm Phase 2 Cohorts in Patients with Advanced Tumors

- MSS-CRC
  - Post FOLFOX/FOLFIRI
  - Single-arm trial; N=10
  - 2H2020

- Gastro-esophageal cancer (GEA)
  - 2nd line post chemotherapy
  - Single-arm trial; N=10
  - 2H20

DL = dose level
SLATE Phase 2 Begins 2H20 With Focus on Post-IO NSCLC

Pursue signals observed in dose escalation (KRAS<sup>mut</sup> & TP53<sup>mut</sup>) and optimize epitope cassette

**Phase 1**

- **DL1**
- **DL2**
- **DL3**
- **DL4**

**Single-Arm Phase 2 Cohorts in Patients with Advanced Tumors**

- **Neoantigen Cassette v1**
  - N= ~10 patients
  - 2H2020

- **Neoantigen Cassette v1**
  - N= ~10 patients
  - 2H2020

- **Neoantigen Cassette v2**
  - N= ~10 patients
  - 1H2021

- **P53 mutation+ tumors**
  - Ovarian Cancer
  - Other

- **NSCLC post-IO/chemo**
  - Refractory
  - Acquired resistance

**DL = dose level**
SLATE Optimization: Repeating Epitopes Within the Vaccine Antigen Cassette Strongly Increases Antigen-Specific T-cell Response

Key issues are epitope competition and epitope immunodominance

| 1x | 1 | 2 | 3 | 4 | 5 | 6 | 7 | gp100 2 | gp100 2 | gp100 2 | gp100 2 | gp100 2 | gp100 2 | gp100 2 | gp100 2 | 10 ug SAM IM – 8e10 VP | 14 days IFN
| 4x | gp100 2 | Tnp2 4 | 3 | 10 | gp100 2 | Tnp2 4 | 3 | 10 | gp100 2 | Tnp2 4 | 3 | 10 | gp100 2 | Tnp2 4 | 3 | 10 | 8e10 VP

10 µg SAM

B16/B6

IM – 8e10 VP

14 days Splenocyte isolation IFNγ ELISpot

GP100

TRP2

SFC/1e6 Splenocytes

8000

6000

4000

2000

0

1x 4x

8000

6000

4000

2000

0

1x 4x

TNTC

TNTC

gritstone
Future Step: Assess Adjuvant Immunotherapy in Stage II/III NSCLC

**Neoadjuvant**

Neoadjuvant nivolumab linked to 45% major pathologic response rate in 20 NSCLC patients with untreated resectable disease

**Adjuvant**

Overall survival in NSCLC patients by disease stage at diagnosis

**Stage III**

PACIFIC trial of durvalumab maintenance after chemoradiation for unresectable Stage III NSCLC

CONCLUSIONS & COMPANY MILESTONES

Dr Andrew Allen
GRANITE & SLATE IMMUNOTHERAPY

Demonstrating clear signals of efficacy - now driving into phase 2 trials to establish path to registration

- Phase 1 trials with intensive translational medicine elements generating substantial insights – series of “N of 1” clinical trials informing program development

- GRANITE is demonstrating clear signals of efficacy
  - At intensity/dose level 1, consistent & strong CD8+ T cell induction with evidence of disease control
  - At intensity/dose level 3, no disease progression in treated patients to date and clear clinical benefit emerging in patient with metastatic MSS-CRC
  - Intensity/dose level 4 patients (including MSS-CRC) underway now

- GRANITE will advance rapidly into phase 2 single-arm cohorts in advanced MSS-CRC and gastric cancer (where CPI have low utility)

- SLATE neoantigens sorting into immunodominant versus non-dominant classes – the former driving strong, consistent CD8+ T cell responses; the latter less consistently so
  - TP53 mutations (immunodominant, common in ovarian cancer) to be studied immediately using current SLATE neoantigen cassette in current clinical trial
  - KRAS mutations (non-dominant) to be studied in post-CPI NSCLC patients, using both current neoantigen cassette (building on clinical signals) and an optimized version 2 neoantigen cassette that increases T cell response to KRAS mutations in pre-clinical models
**GRITS: Sequential Data Readouts Over Next 18 Months**

<table>
<thead>
<tr>
<th>Anticipated Milestones</th>
<th>2H20</th>
<th>1H21</th>
<th>2H21</th>
<th>1H22</th>
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<tbody>
<tr>
<td>GRANITE Phase 1 Dose Level 4 Data</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Bispecific Antibody DC Nomination</td>
<td></td>
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<tr>
<td>SLATE Phase 2 TP53\textsuperscript{mut} &amp; KRAS\textsuperscript{mut} Cassette 1 Data</td>
<td></td>
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<tr>
<td>GRANITE Phase 2 MSS-CRC Data</td>
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<tr>
<td>GRANITE Phase 2 Gastric Cancer Data</td>
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<tr>
<td>SLATE Phase 2 Post-IO NSCLC Cassette 2 Data</td>
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</table>
Acknowledgements

- Patients and their families
- GRANITE and SLATE Investigators, research nurses, study coordinators, and site staff
- Gritstone Oncology staff supporting the study
- Bristol-Myers Squibb for supply of nivolumab and ipilimumab
Thank You