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**Janssen Reports New Data for BCMA CAR-T, Cilta-Cel, Showing Deep and Durable Responses in Patients with Relapsed or Refractory Multiple Myeloma**

*Eighteen-month follow-up data from pivotal CARTITUDE-1 study, including progression-free-survival data, to be presented at ASCO and EHA Annual Meetings*

*Findings from the Phase 2 CARTITUDE-2 study will be presented for the first time*

**BEERSE, BELGIUM, 1 June 2021**– The Janssen Pharmaceutical Companies of Johnson & Johnson today announced that new data for ciltacabtagene autoleucel (cilta-cel), an investigational B-cell maturation antigen (BCMA)-directed CAR-T therapy, demonstrated sustained efficacy and durable responses in heavily pretreated patients with relapsed/refractory multiple myeloma (RRMM).<sup>1</sup> Updated results from the Phase 1b/2 CARTITUDE-1 study (n=97) with a longer-term follow-up at a median of 18 months (range, 1.5–30.5) showed an overall response rate (ORR) of 98 percent, with 80 percent of patients achieving an increasing rate of stringent complete response (sCR), highlighting a deepening response over time (increasing from 67 percent sCR presented [at ASH 2020](#)).<sup>1,2</sup> These data also showed 66 percent of patients were progression free and alive at 18 months (95 percent Confidence Interval [CI], range, 54.9–75.0).<sup>1</sup> The latest findings, to be presented at the American Society of Clinical Oncology (ASCO) Annual Meeting, showed 18 month overall survival (OS) of 81 percent (95 percent CI, range, 71.4–87.6)<sup>1</sup>

and response rates comparable (range, 95-100 percent) across prespecified subgroups and lines of treatment ([Abstract #8005](#)).<sup>1</sup> Data from the CARTITUDE-1 study supported the filing of a marketing authorisation application to the European Medicines Agency in April 2021.<sup>3</sup>

“The efficacy results observed in heavily pre-treated patients with multiple myeloma receiving cilta-cel are remarkable,” said Saad Z. Usmani, M.D.\*, Division Chief of Plasma Cell Disorders, Levine Cancer Institute, and principal study investigator. “With the possibility of achieving the progression-free-survival reported and responses deepening as observed in the longer-term follow-up, I’m hopeful that cilta-cel will be part of the armamentarium in the future for patients in need of an additional treatment option.”

The study included patients who had received a median of six prior treatment regimens (range, 3-18).<sup>1</sup> All patients were triple-class [immunomodulatory agent (IMiD), a proteasome inhibitor (PI) and an anti-CD38 antibody] exposed, while 42 percent of patients were penta-drug refractory and 99 percent of patients were refractory to the last line of therapy.<sup>1</sup> Fourteen percent of patients achieved a very good partial response (VGPR) and 3 percent achieved a partial response (PR).<sup>1</sup> Median time to first response was one month (range, 0.9–10.7 months) and responses deepened over time.<sup>1</sup> Among minimal residual disease (MRD) evaluable patients (n=61), 92 percent achieved MRD negativity status at  $10^{-5}$  at a median of one month (range, 0.8-7.7 months) post infusion.<sup>1</sup>

The data demonstrated a consistent safety profile for cilta-cel and no new safety signals were observed with longer follow-up.<sup>1</sup> The most common haematologic adverse events (AEs) observed in the CARTITUDE-1 study were neutropenia (96 percent); anaemia (81 percent); thrombocytopenia (79 percent); leukopenia (62 percent); and lymphopenia (53 percent).<sup>1</sup> Cytokine release syndrome (CRS) of any grade was observed in 95 percent of patients with a median duration of four days (range, 1-97), and 99 percent of which resolved within 14 days of onset.<sup>1</sup> Of the 92 patients with CRS, 95 percent experienced Grade 1/2 events.<sup>1</sup> Neurotoxicity of any grade was observed in 21 percent (n=20) of patients, with Grade 3 or higher neurotoxicity observed in 10 percent (n=10) of patients.<sup>1</sup>

### **First Results from the CARTITUDE-2 Study**

Findings from Cohort A (n=20) in the Phase 2 CARTITUDE-2 ([NCT04133636](#))<sup>4</sup> study evaluating the safety and efficacy of cilta-cel in patients with multiple myeloma whose disease progressed after one to three prior lines of therapy, and who were lenalidomide refractory, will be presented for the first time at ASCO ([Abstract #8013](#)) and as an oral presentation at the European Hematology Association (EHA) Congress ([Abstract #S190](#)).<sup>5</sup> Results from this cohort showed early and deep responses at a median of 5.8 months of follow-up, and an ORR of 95 percent with 45 percent of patients achieving a sCR, 30 percent of patients achieving a CR, 10 percent of patients achieving a VGPR, and 10 percent of patients achieving a PR.<sup>5</sup> The overall safety profile, including incidence of CRS and most common haematologic AEs, was consistent with observations in the CARTITUDE clinical development programme.<sup>5</sup>

Results in a separate poster ([Abstract #8028](#)) will detail the incidence, mitigation and management of neurologic AEs in patients in Cohort A from the CARTITUDE-2 study.<sup>6</sup> Neurotoxicities occurred in 20 percent (n=4) of patients; however, there were no movement and neurocognitive treatment-emergent AEs or Grade 3 neurotoxicity events observed in patients of Cohort A.<sup>6</sup>

“Our aim is to develop therapies that improve patient outcomes, and importantly in patients with heavily pre-treated multiple myeloma who have no other options,” said Sen Zhuang, M.D., Ph.D., Vice President, Clinical Research and Development, Janssen Research & Development, LLC. “These results from the CARTITUDE clinical development programme continue to show the promise of cilta-cel and support our efforts to bring this important treatment to patients in need in the near future.”

“Following last month’s [submission](#) of a marketing authorisation application to the EMA for cilta-cel, we are pleased to be able to share these significant results with the wider oncology community,” said Edmond Chan, EMEA Therapeutic Area Lead Haematology, Janssen-Cilag Limited. “At Janssen, through our innovation we strive to redefine what it

means to receive a cancer diagnosis and I hope that one day, with cilta-cel, we may be able to offer a new treatment option for people in urgent need.”

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### **About CARTITUDE-1**

CARTITUDE-1 ([NCT03548207](#))<sup>7</sup> is an ongoing Phase 1b/2, open-label, multicentre study evaluating the safety and efficacy of cilta-cel in adults with relapsed or refractory multiple myeloma, including 99 percent who were refractory to the last line of treatment and 88 percent of who were triple-class refractory, meaning their cancer did not respond, or no longer responds, to an immunomodulatory agent (IMiD), a proteasome inhibitor (PI) and an anti-CD38 antibody.<sup>7</sup>

The primary objective of the Phase 1b portion of the study is to characterise the safety and confirm the dose of cilta-cel, informed by the first-in-human study with LCAR-B38M CAR-T cells (LEGEND-2).<sup>7</sup> Based on the safety profile observed in this portion of the CARTITUDE-1 study, the Phase 2 portion further evaluated the efficacy of cilta-cel at the recommended Phase 2 dose with overall response as the primary endpoint.<sup>1</sup>

### **About CARTITUDE-2**

CARTITUDE-2 ([NCT04133636](#))<sup>4</sup> is an ongoing, multi-cohort Phase 2 study evaluating the safety and efficacy of cilta-cel in patients with multiple myeloma. CARTITUDE-2 Cohort A evaluates patients who had progressive multiple myeloma after 1–3 prior lines of therapy, including a PI and an IMiD, were lenalidomide refractory, and had no prior exposure to BCMA-targeting agents. The primary endpoint is minimal residual disease (MRD)  $10^{-5}$  negative rate.<sup>5,6</sup>

### **About Ciltacabtagene Autoleucel (cilta-cel)**

Cilta-cel is an investigational chimeric antigen receptor T cell (CAR-T) therapy that is being studied in a comprehensive clinical development program for the treatment of patients with relapsed or refractory multiple myeloma and in earlier lines of treatment.<sup>2</sup>

The design consists of a structurally differentiated CAR-T with two BCMA-targeting single domain antibodies.<sup>1</sup> In December 2017, Janssen Biotech, Inc. (Janssen) entered into an exclusive worldwide license and collaboration agreement with Legend Biotech to develop and commercialise cilta-cel.<sup>8</sup>

In April 2021, Janssen [announced](#) its submission of a Marketing Authorisation Application to the European Medicines Agency seeking approval of cilta-cel for the treatment of patients with relapsed and/or refractory multiple myeloma.<sup>3</sup> In December 2020, Janssen [announced](#) initiation of a rolling submission of its BLA to the U.S. FDA for cilta-cel, which was completed in Q1 2021.<sup>9</sup> In addition to U.S. Breakthrough Therapy Designation [granted](#) in December 2019, cilta-cel [received](#) a PRIority MEdicines (PRiME) designation from the European Commission in April 2019, and a Breakthrough Therapy Designation in China in August 2020.<sup>10,11</sup> Janssen also received Orphan Drug Designation for cilta-cel from the European Commission in February 2020.<sup>12</sup>

### **About Multiple Myeloma**

Multiple myeloma (MM) is an incurable blood cancer that starts in the bone marrow and is characterised by an excessive proliferation of plasma cells.<sup>13</sup> In Europe, 50,918 people were diagnosed with MM in 2020, and more than 32,400 patients died.<sup>14</sup> Around 50 percent of newly diagnosed patients do not reach five-year survival,<sup>15</sup> and approximately 10 percent of patients with multiple myeloma will die within one year of diagnosis.<sup>16</sup>

Although treatment may result in remission, unfortunately, patients will most likely relapse as there is currently no cure.<sup>17</sup> Refractory MM is when a patient's disease progresses on or within 60 days of their last therapy.<sup>18</sup> Relapsed cancer is when the disease has returned after a period of initial, partial or complete remission.<sup>19</sup> While some patients with MM have no symptoms at all, others are diagnosed due to symptoms that can include bone problems, low blood counts, calcium elevation, kidney problems or infections.<sup>20</sup> Patients who relapse after treatment with standard therapies, including protease inhibitors and immunomodulatory agents, have poor prognoses and require new therapies for continued disease control.<sup>21</sup>

## **About the Janssen Pharmaceutical Companies of Johnson & Johnson**

At Janssen, we're creating a future where disease is a thing of the past. We're the Pharmaceutical Companies of Johnson & Johnson, working tirelessly to make that future a reality for patients everywhere by fighting sickness with science, improving access with ingenuity, and healing hopelessness with heart. We focus on areas of medicine where we can make the biggest difference: Cardiovascular & Metabolism, Immunology, Infectious Diseases & Vaccines, Neuroscience, Oncology, and Pulmonary Hypertension.

Learn more at [www.janssen.com/emea](http://www.janssen.com/emea). Follow us at [www.twitter.com/janssenEMEA](http://www.twitter.com/janssenEMEA) for our latest news. Janssen Pharmaceutical NV, Janssen Research & Development, LLC, and Janssen-Cilag Limited are part of the Janssen Pharmaceutical Companies of Johnson & Johnson.

*\*Saad Z. Usmani, M.D. has been a paid consultant to Janssen; he has not been paid for any media work.*

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## **Cautions Concerning Forward-Looking Statements**

*This press release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 regarding ciltacabtagene autoleucl (cilta-cel). The reader is cautioned not to rely on these forward-looking statements. These statements are based on current expectations of future events. If underlying assumptions prove inaccurate or known or unknown risks or uncertainties materialize, actual results could vary materially from the expectations and projections of Janssen Pharmaceutical NV, any of the other Janssen Pharmaceutical Companies, and/or Johnson & Johnson. Risks and uncertainties include, but are not limited to: challenges and uncertainties inherent in product research and development, including the uncertainty of clinical success and of obtaining regulatory approvals; uncertainty of commercial success; manufacturing difficulties and delays; competition, including technological advances, new products and patents attained by competitors; challenges to patents; product efficacy or safety concerns resulting in product recalls or regulatory action; changes in behaviour and spending patterns of purchasers of health care products and services; changes to applicable laws and regulations, including global health care reforms; and trends toward health care cost containment. A further list and descriptions of these risks, uncertainties and other factors can be found in Johnson & Johnson's Annual Report on Form 10-K for the fiscal year ended January 3, 2021, including in the sections captioned "Cautionary*

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*Note Regarding Forward-Looking Statements” and “Item 1A. Risk Factors,” and in the company’s most recently filed Quarterly Report on Form 10-Q, and the company’s subsequent filings with the Securities and Exchange Commission. Copies of these filings are available online at [www.sec.gov](http://www.sec.gov), [www.jnj.com](http://www.jnj.com) or on request from Johnson & Johnson. None of the Janssen Pharmaceutical Companies nor Johnson & Johnson undertakes to update any forward-looking statement as a result of new information or future events or developments.*

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