



Astellas and Seattle Genetics Announce Antibody-Drug Conjugate Enfortumab Vedotin Produced Tumor Response Rate of 44 Percent in Patients with Most Common Type of Advanced Urothelial (Bladder) Cancer

-First Investigational Therapy in a Pivotal Trial to Address Unmet Need for Patients with Advanced Urothelial Cancer After Treatment with Platinum Chemotherapy and a PD-1 or PD-L1 Inhibitor-

-Data Featured in Official Press Program and Presented in Late-Breaking Oral Session Today at 2019 ASCO Annual Meeting-

TOKYO and BOTHELL, Wash., June 3, 2019 – [Astellas Pharma Inc.](#) (TSE: 4503, President and CEO: Kenji Yasukawa, Ph.D., “Astellas”) and [Seattle Genetics, Inc.](#) (Nasdaq:SGEN) today announced that data from the first cohort of a pivotal phase 2 clinical trial known as EV-201 demonstrated that the investigational agent enfortumab vedotin rapidly shrank tumors in most patients, resulting in an objective response rate (ORR) of 44 percent (55/125; 95% Confidence Interval (CI): 35.1-53.2). Complete responses (CR) were observed in 12 percent of patients (15/125). The median duration of tumor response was 7.6 months (range 0.95-11.3+). This cohort was open to patients with locally advanced or metastatic urothelial cancer who had received previous treatment with a platinum-containing chemotherapy and a PD-1/L1 checkpoint inhibitor. Responses were similar in the subgroups of patients analyzed, including those who had the worst prognosis, such as patients who had three or more previous lines of therapy, patients with liver metastases, and those who had not responded to a PD-1/L1 inhibitor. Treatment-related adverse events that occurred in 40 percent or more of patients were fatigue, alopecia, rash, decreased appetite, taste distortion, and peripheral neuropathy.

The data will be featured today in the official press program of the American Society of Clinical Oncology (ASCO) Annual Meeting and be presented as a Late-Breaking oral presentation (Abstract #LBA4505) and have been submitted for publication in a peer-reviewed journal.

Despite recent advances in treatment, approximately 80 percent of people do not respond to PD-1/L1 inhibitors, which are the standard of care after platinum-containing therapy has failed as an initial treatment for advanced disease.^{1,2,3} These patients have few treatment options and new therapies are urgently needed.

Enfortumab vedotin is an investigational antibody-drug conjugate (ADC) that targets Nectin-4, a protein that is highly expressed in urothelial cancers.^{4,5} Based on the results of the EV-201 trial, the companies plan to submit a Biologics License Application (BLA) for enfortumab vedotin to the U.S. Food and Drug Administration (FDA) this year. Based on preliminary results from the phase 1 EV-101 trial, the FDA granted enfortumab vedotin Breakthrough Therapy designation for people with locally advanced or metastatic urothelial cancer whose disease has progressed during or following checkpoint inhibitor therapy.

“Outcomes for patients diagnosed with locally advanced or metastatic urothelial cancer are generally poor, and treatment options after initial chemotherapy and immunotherapy are very limited,” said Daniel P. Petrylak, M.D., Professor of Medicine and of Urology, Yale Cancer Center, New Haven. “These data have the potential to change the treatment course of advanced urothelial cancer, and it is gratifying to see these results for patients.”

“Even with the recent introduction of new therapies, there remains a need for continued innovation in the treatment of urothelial cancer, and if approved, we hope to bring this potential treatment to physicians and patients as quickly as possible,” said Andrew Krivoschik, M.D., Ph.D., Senior Vice President and Oncology Therapeutic Area Head at Astellas.

“We are encouraged that enfortumab vedotin is the first novel therapy to demonstrate substantial clinical activity in these difficult-to-treat patients who currently have limited treatment options,” said Roger Dansey, M.D., Chief Medical Officer at Seattle Genetics.

A global, randomized phase 3 confirmatory clinical trial (EV-301) is ongoing and is intended to support global registrations. Another trial (EV-103) is underway to evaluate enfortumab vedotin in earlier lines of treatment for patients with locally advanced or metastatic urothelial cancer, including in combination with pembrolizumab and/or platinum chemotherapy in newly diagnosed patients as well as patients who progressed from earlier-stage disease.

EV-201 Study Results

Efficacy

In the first cohort of the EV-201 study, 125 patients were treated with enfortumab vedotin. The primary endpoint of confirmed objective response rate (ORR) was 44 percent per blinded independent central review (BICR) [(55/125; 95% CI: 35.1-53.2)]. The overall duration of response (DoR), a key secondary endpoint, was 7.6 months (range 0.95-11.3+).

Most responses occurred within the first cycle of treatment, and were observed across all pre-specified patient subgroups irrespective of lines of therapy, response to prior PD-1/L1 inhibitor, or presence of liver metastases:

- Three or more prior therapies: 41 percent ORR (26/63)
- Non-responders to PD-1/L1 inhibitors: 41 percent ORR (41/100)
- Liver metastases: 38 percent ORR (19/50)

Median overall survival (OS) was 11.7 months (95% CI:9.1-not reached), and the median progression-free survival (PFS) was 5.8 months (95% CI:4.9-7.5).

Safety

- The most common treatment-related adverse events (AEs) occurring in more than 40 percent of patients were fatigue (50 percent (62/125)); alopecia (49 percent (61/125)); rash (48 percent (60/125)); decreased appetite (44 percent (55/125)); taste distortion (40 percent (50/125)); and peripheral neuropathy (50 percent (63/125)).
- Most peripheral neuropathy (94 percent) and rash (75 percent) were less than or equal to Grade 2 in severity. Hyperglycemia occurred in 11 percent of patients (14/125).
- The most common severe AEs (defined as greater than or equal to Grade 3) were: neutropenia – experienced by 8 percent of patients (10/125); anemia in 7 percent of patients (9/125); and fatigue in 6 percent of patients (7/125). One death due to interstitial lung disease occurred outside the safety-reporting period and was confounded by prolonged high-dose steroid use and suspected pneumonia.

About the EV-201 Trial

EV-201 is an ongoing single-arm, pivotal phase 2 clinical trial of enfortumab vedotin in patients with locally advanced or metastatic urothelial cancer who have been previously treated with a PD-1/L1 inhibitor, including those who have also been treated with a platinum-containing chemotherapy (cohort 1) and those who have not received a platinum-containing chemotherapy and who are ineligible for cisplatin (cohort 2). EV-201 continues to enroll patients in cohort 2. In cohort 1, 128 patients were enrolled at multiple centers internationally.⁶ The primary endpoint is confirmed objective response rate per blinded independent central review. Secondary endpoints include assessments of duration of response, disease control rate, progression-free survival, overall survival, safety and tolerability.

More information about enfortumab vedotin clinical trials can be found at [clinical trials.gov](https://clinicaltrials.gov).

About Urothelial Cancer

Urothelial cancer is the most common type of bladder cancer (90 percent of cases).⁷ In 2018, more than 82,000 people were diagnosed with bladder cancer in the United States.⁸ Globally, approximately 549,000 people were diagnosed with bladder cancer last year, and there were approximately 200,000 deaths worldwide.

About Enfortumab Vedotin

Enfortumab vedotin is an investigational ADC composed of an anti-Nectin-4 monoclonal antibody attached to a microtubule-disrupting agent, MMAE, using Seattle Genetics' proprietary linker technology. Enfortumab vedotin targets Nectin-4, a cell adhesion molecule that is expressed on many solid tumors, and that has been identified as an ADC target by Astellas.

The safety and efficacy of enfortumab vedotin are under investigation and have not been established. There is no guarantee that the agent will receive regulatory approval or become commercially available for the uses being investigated.

About Seattle Genetics

Seattle Genetics, Inc. is an emerging multi-product, global biotechnology company that develops and commercializes transformative therapies targeting cancer to make a meaningful difference in people's lives. The company is headquartered in Bothell, Washington, and has a European office in Switzerland. For more information on our robust pipeline, visit www.seattlegenetics.com and follow @SeattleGenetics on Twitter.

About Astellas

Astellas Pharma Inc., based in Tokyo, Japan, is a company dedicated to improving the health of people around the world through the provision of innovative and reliable pharmaceutical products. For more information, please visit our website at <https://www.astellas.com/en>

About the Astellas and Seattle Genetics Collaboration

Seattle Genetics and Astellas are co-developing enfortumab vedotin under a collaboration that was entered into in 2007 and expanded in 2009. Under the collaboration, the companies are sharing costs and profits on a 50:50 basis worldwide.

Seattle Genetics Forward Looking Statement

Certain statements made in this press release are forward looking, such as those, among others, relating to the companies' plan to submit a Biologics License Application (BLA) to the FDA in the near term under FDA's Accelerated Approval program based on the results of cohort 1 of the pivotal EV-201 trial,

conduct of a comprehensive clinical development program for enfortumab vedotin, which includes an ongoing randomized phase 3 confirmatory trial (EV-301) intended to support global registration in locally advanced or metastatic urothelial cancer, and the therapeutic potential of enfortumab vedotin; its possible safety, efficacy, and therapeutic uses; and anticipated development activities including future clinical trials and intended regulatory actions. Actual results or developments may differ materially from those projected or implied in these forward-looking statements. Factors that may cause such a difference include the possibility of delays in the submission of a BLA to the FDA; that the data from EV-201 may not be sufficient to support accelerated approval; and the inability to show sufficient activity in EV-301 and subsequent clinical trials; the risk of adverse events or safety signals; and the possibility of adverse regulatory actions as enfortumab vedotin advances in clinical trials even after promising results in earlier clinical trials. More information about the risks and uncertainties faced by Seattle Genetics is contained under the caption “Risk Factors” included in the company’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 filed with the Securities and Exchange Commission. Seattle Genetics disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Astellas Cautionary Notes

In this press release, statements made with respect to current plans, estimates, strategies and beliefs and other statements that are not historical facts are forward-looking statements about the future performance of Astellas. These statements are based on management’s current assumptions and beliefs in light of the information currently available to it and involve known and unknown risks and uncertainties. A number of factors could cause actual results to differ materially from those discussed in the forward-looking statements. Such factors include, but are not limited to: (i) changes in general economic conditions and in laws and regulations, relating to pharmaceutical markets, (ii) currency exchange rate fluctuations, (iii) delays in new product launches, (iv) the inability of Astellas to market existing and new products effectively, (v) the inability of Astellas to continue to effectively research and develop products accepted by customers in highly competitive markets, and (vi) infringements of Astellas’ intellectual property rights by third parties.

Information about pharmaceutical products (including products currently in development), which is included in this press release is not intended to constitute an advertisement or medical advice.

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¹ Kim HS, Seo HK, Immune checkpoint inhibitors for urothelial carcinoma. *Investig Clin Urol* 2018 Sep;59(5):285-296

² Alhalabi O, Shah AY, Lemke EA, Gao J. Current and Future Landscape of Immune Checkpoint Inhibitors in Urothelial Cancer. *Oncology (Williston Park)*. 2019 Jan 17;33(1):11-8

³ National Comprehensive Cancer Network. Bladder Cancer (Version 3.2019).

http://www.nccn.org/professionals/physician_gls/pdf/bladder.pdf

⁴ Vlachostergios P, Jakubowski C, Niaz J, et al. (2018). Antibody-Drug Conjugates in Bladder Cancer. *Bladder Cancer (Version 4.2018)*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6087439/pdf/blc-4-blc180169.pdf>

⁵ Astellas Pharma Global Development, Inc. Bladder Cancer (2019). <https://bladdercancerjournal.com/study-escalating-doses-asg-22ce-given-monootherapy-subjects-metastatic-urothelial-cancer-and-other>

⁶ Data on file at Seattle Genetics

⁷ American Society of Clinical Oncology. Bladder Cancer: Introduction (05-2019). <https://www.cancer.net/cancer-types/bladder-cancer/introduction>.

⁸ International Agency for Research on Cancer. Cancer tomorrow: bladder. <http://gco.iarc.fr/tomorrow>.