

Press Release

Results from Pivotal Phase 3 PROSPER Trial of XTANDI® (enzalutamide) in Men with Non-Metastatic Castration-Resistant Prostate Cancer Published in *New England Journal of Medicine*

Results show enzalutamide plus androgen deprivation therapy significantly reduced the risk of developing metastases or death by 71 percent compared to placebo plus androgen deprivation therapy

TOKYO, June 29, 2018 – Astellas Pharma Inc. (TSE: 4503, President and CEO: Kenji Yasukawa, Ph.D., “Astellas”) today announced that results from the pivotal Phase 3 PROSPER trial, which evaluated enzalutamide plus androgen deprivation therapy (ADT) versus placebo plus ADT in patients with non-metastatic castration-resistant prostate cancer (CRPC), were published in the *New England Journal of Medicine*. The paper, “Enzalutamide in Men with Nonmetastatic, Castration-Resistant Prostate Cancer,” appears in the June 28 print edition of the Journal.

In the study, enzalutamide plus ADT significantly reduced the risk of developing metastases or death compared to ADT alone, 23% of patients in enzalutamide and ADT arm had metastasis or had died, vs 49% in the ADT alone arm. The primary endpoint of metastasis-free survival (MFS), was 36.6 months for men who received enzalutamide compared to 14.7 months with ADT alone (n=1401; HR=0.29 [95% CI: 0.24-0.35]; p<0.001).

“I’m pleased with the PROSPER trial results, which confirm that men with non-metastatic CRPC receiving enzalutamide plus androgen deprivation therapy (ADT) had an almost two year delay in appearance of prostate cancer metastasis or death as compared to those taking ADT” said Maha Hussain, M.D.FACP,FASCO, Genevieve Teuton Professor of Medecine, Robert H. Lurie Comprehensive Cancer Center of Northwestern University, and lead study investigator.

The U.S. Food and Drug Administration (FDA) also recently accepted for Priority Review a supplemental New Drug Application (sNDA) for enzalutamide based on the results of the Phase 3 PROSPER study; the Prescription Drug User Fee Act (PDUFA) goal date assigned by the FDA is July 2018. In March 2018, the European Medicines Agency (EMA) validated and started the review process for Astellas’ application for a Type II Variation to extend the overall indication for enzalutamide to include patients with non-metastatic castration-resistant prostate cancer (CRPC) based on results from the PROSPER study. Enzalutamide is already approved for CRPC in Japan.

Results from the Phase 3 PROSPER data were previously presented at the Genitourinary Cancers Symposium (ASCO GU) in San Francisco in February 2018.

PROSPER Trial Results

The Phase 3 randomized, double-blind, placebo-controlled, multi-national PROSPER trial enrolled 1,401 patients with non-metastatic CRPC. Patients were randomized 2:1 and received either enzalutamide plus ADT or placebo plus ADT (ADT alone). In the PROSPER trial, enzalutamide plus ADT significantly reduced the risk of developing metastases or death compared to ADT alone. The median for the primary endpoint, metastasis-free survival (MFS), was 36.6 months for men who received enzalutamide compared to 14.7 months with ADT alone (HR=0.29 [95% CI: 0.24-0.35]; p<0.0001).

The primary efficacy outcome was supported by several secondary outcomes including a statistically significant delay in the time to first use of new antineoplastic therapy (TTA) for patients who received enzalutamide plus ADT compared to those who received ADT alone (median 39.6 months vs 17.7 months; HR=0.21 [95% CI: 0.17-0.26]; p < 0.0001). Overall survival (OS) data were not mature at the time of final MFS analysis.

The most common adverse reactions (greater than or equal to 10%) that occurred more frequently (greater than or equal to 2% over placebo) in enzalutamide plus ADT-treated patients compared to the ADT alone patients were: asthenic conditions (40% vs 20%), hot flush (13% vs 7.7%), hypertension (12% vs 5.2%), dizziness (12% vs 5.2%), nausea (11% vs 8.6%) and fall (11% vs 4.1%). Grade 3 or higher adverse reactions were reported in 31 percent of men treated with enzalutamide plus ADT and in 23 percent of men treated with ADT alone. In the study, 3.4 percent of patients in the enzalutamide plus ADT arm and 0.6 percent in the ADT alone arm died from adverse events. Discontinuations with an adverse event as the primary reason were reported for 9.4 percent of patients treated with enzalutamide plus ADT vs 6 percent treated with ADT alone.

About Prostate Cancer

Prostate cancer is the second most common cancer in men worldwide.ⁱ More than 164,000 men in the United States are estimated to be newly diagnosed with prostate cancer in 2018.ⁱⁱ In the European Union, the estimated number of new prostate cancer cases in 2015 was 365,000.ⁱⁱⁱ

Castration-resistant prostate cancer (CRPC) refers to the subset of men whose prostate cancer progresses despite castrate levels of testosterone (i.e., less than 50 ng/dL).^{iv} Non-metastatic CRPC means there is no clinically detectable evidence of the cancer spreading to other parts of the body (metastases), and there is a rising prostate-specific antigen (PSA) level.^v Many men with non-metastatic CRPC and a rapidly rising PSA level go on to develop metastatic CRPC.^{vi}

About the Pfizer/Astellas Collaboration

In October 2009, Medivation, Inc., which is now part of Pfizer (NYSE:PFE), and Astellas (TSE: 4503) entered into a global agreement to jointly develop and commercialize enzalutamide. The companies jointly commercialize XTANDI in the United States and Astellas has responsibility for manufacturing and all additional regulatory filings globally, as well as commercializing XTANDI outside the United States.

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>.

Astellas Forward-Looking Statement

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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ⁱ American Cancer Society. Global Cancer Facts and Figures (2015).

<https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/global-cancer-facts-and-figures/global-cancer-facts-and-figures-3rd-edition.pdf>. Accessed 06-13-2018.

² American Cancer Society. Key Statistics for Prostate Cancer. <https://www.cancer.org/cancer/prostate-cancer/about/key-statistics.html>. Accessed 06-13-2018.

ⁱⁱⁱ European Commission. Epidemiology of prostate cancer in Europe (03-17-2017).

<https://ec.europa.eu/jrc/en/publication/epidemiology-prostate-cancer-europe>. Accessed 06-13-2018.

^{iv} Kirby M, Hirst C, Crawford ED. Characterising the castration-resistant prostate cancer population: a systematic review. *Int J Clin Pract* 2011;65(11):1180-92.

^v Luo J, Beer T, Graff J. Treatment of nonmetastatic castration-resistant prostate cancer. *Oncology* 2016;30(4):336-44.

^{vi} Smith MR, Kabbinavar F, Saad F, et al. Natural history of rising serum prostate-specific antigen in men with castrate nonmetastatic prostate cancer. *J Clin Oncol* 2005;23(13):2918-25.