

Press Release

Trastuzumab Deruxtecan Type II Variation Application Validated by EMA for Patients with HER2 Positive Metastatic Breast Cancer Treated with a Prior Anti-HER2-Based Regimen

- Application based on DESTINY-Breast03 results showing Daiichi Sankyo and AstraZeneca's trastuzumab deruxtecan reduced risk of disease progression or death by 72% versus trastuzumab emtansine (T-DM1)

Tokyo and Munich – (December 28, 2021) – Daiichi Sankyo Company, Limited (hereafter, Daiichi Sankyo) today announced that the European Medicines Agency (EMA) has validated the Type II Variation application for trastuzumab deruxtecan for the treatment of adult patients with unresectable or metastatic HER2 positive breast cancer who have received one or more prior anti-HER2-based regimens.

Trastuzumab deruxtecan is a HER2 directed antibody drug conjugate (ADC) being jointly developed by Daiichi Sankyo and AstraZeneca (LSE/STO/Nasdaq: AZN).

Validation confirms that the application is complete and commences the scientific review process by the EMA's Committee for Medicinal Products for Human Use (CHMP). This application is based on data from the [DESTINY-Breast03](#) phase 3 trial [presented](#) at the 2021 European Society for Medical Oncology (ESMO) Congress.

Breast cancer is the most common cancer worldwide, with more than two million cases diagnosed in 2020, resulting in nearly 685,000 deaths globally.¹ In Europe, approximately 531,000 cases of breast cancer are diagnosed annually.² Approximately one in five cases of breast cancer are considered HER2 positive.³ Despite initial treatment with trastuzumab and a taxane, patients with HER2 positive metastatic breast cancer will often experience disease progression.⁴ More treatment options are needed to further delay progression and extend survival.^{4,5,6}

“We are excited to have submitted a second application this year seeking approval for trastuzumab deruxtecan for a potential third indication in Europe,” said Gilles Gallant, BPharm, PhD, FOPQ, Senior Vice President, Global Head, Oncology Development, Oncology R&D, Daiichi Sankyo. “With this specific application, we look forward to working closely with the EMA to support the review of trastuzumab deruxtecan to be used in an earlier setting for patients with HER2 positive metastatic breast cancer.”

In DESTINY-Breast03, trastuzumab deruxtecan demonstrated a 72% reduction in the risk of disease progression or death compared to trastuzumab emtansine (T-DM1) (hazard ratio [HR] = 0.28; 95% confidence interval [CI]: 0.22-0.37; $p=7.8 \times 10^{-22}$) in patients with HER2 positive unresectable and/or metastatic breast cancer previously treated with trastuzumab and a taxane. The median progression-free survival (PFS) for patients treated with trastuzumab deruxtecan was not reached (95% CI: 18.5-NE) compared to 6.8 months for T-DM1 (95% CI: 5.6-8.2) as assessed by blinded independent central review (BICR). In the secondary endpoint analysis of PFS assessed by investigators, patients treated with trastuzumab deruxtecan experienced an improvement in PFS of 25.1 months (95% CI: 22.1-NE) compared to 7.2 months (95% CI: 6.8-8.3) for T-DM1 (HR=0.26; 95% CI: 0.20-0.35). There was a strong trend towards improved overall survival (OS) with trastuzumab deruxtecan (HR=0.56; 95% CI: 0.36-0.86; $p=0.007172$), however this analysis is not yet mature and is not statistically significant. Nearly all patients treated with trastuzumab deruxtecan were alive at one year (94.1%; 95% CI: 90.3-96.4) compared to 85.9% of patients treated with T-DM1 (95% CI: 80.9-89.7). Confirmed objective response rate (ORR) was more than doubled in the trastuzumab deruxtecan arm versus the T-DM1 arm (79.7% [n=208; 95% CI: 74.3-84.4] versus 34.2% [n=90; 95% CI: 28.5-40.3]).

The safety profile of the most common adverse events with trastuzumab deruxtecan in DESTINY-Breast03 was consistent with previous clinical trials with no new safety concerns identified. The most common grade 3 or higher drug-related treatment emergent adverse events in the trastuzumab deruxtecan arm were neutropenia (19.1%), thrombocytopenia (7.0%), leukopenia (6.6%), nausea (6.6%), anemia (5.8%), fatigue (5.1%), vomiting (1.6%), increase in ALT (1.6%), decreased appetite (1.2%), increase in AST (0.8%), diarrhea (0.4%) and alopecia (0.4%). Overall, 10.5% of patients had interstitial lung disease (ILD) or pneumonitis related to treatment as determined by an independent adjudication committee. The majority of ILD events (9.7%) were low grade (grade 1 (2.7%) or grade 2 (7.0%)) with two grade 3 (0.8%) events reported. No grade 4 or grade 5 ILD or pneumonitis events occurred.

About HER2 Positive Breast Cancer

Breast cancer is the most common cancer and is one of the leading causes of cancer-related deaths worldwide.¹ More than two million cases of breast cancer were diagnosed in 2020, resulting in nearly 685,000 deaths globally.¹ In Europe, approximately 531,000 cases of breast cancer are diagnosed annually.²

HER2 is a tyrosine kinase receptor growth-promoting protein expressed on the surface of many types of tumors including breast, gastric, lung and colorectal cancers.⁷ HER2 protein overexpression may occur as a result of *HER2* gene amplification and is often associated with aggressive disease and poor prognosis in breast cancer.⁸ Approximately one in five cases of breast cancer are considered HER2 positive.³

Despite initial treatment with trastuzumab and a taxane, patients with HER2 positive metastatic breast cancer will often experience disease progression.⁴ More treatment options are needed to further delay progression and extend survival.^{4,5,6}

About DESTINY-Breast03

DESTINY-Breast03 is a global, head-to-head, randomized, open-label, pivotal phase 3 trial evaluating the efficacy and safety of trastuzumab deruxtecan (5.4 mg/kg) versus T-DM1 in patients with HER2 positive unresectable and/or metastatic breast cancer previously treated with trastuzumab and a taxane. The primary efficacy endpoint of DESTINY-Breast03 is PFS based on BICR. Secondary efficacy endpoints include OS, ORR, duration of response, PFS based on investigator assessment and safety. DESTINY-Breast03 enrolled 524 patients at multiple sites in Asia, Europe, North America, Oceania and South America. For more information about the trial, visit [ClinicalTrials.gov](https://clinicaltrials.gov).

About Trastuzumab Deruxtecan

Trastuzumab deruxtecan (fam-trastuzumab deruxtecan-nxki in the U.S. only) is a HER2 directed ADC. Designed using Daiichi Sankyo's proprietary DXd ADC technology, trastuzumab deruxtecan is the lead ADC in the oncology portfolio of Daiichi Sankyo and the most advanced program in AstraZeneca's ADC scientific platform. Trastuzumab deruxtecan consists of a HER2 monoclonal antibody attached to a topoisomerase I inhibitor payload, an exatecan derivative, via a stable tetrapeptide-based cleavable linker.

Trastuzumab deruxtecan (5.4 mg/kg) is approved in more than 30 countries for the treatment of adult patients with unresectable or metastatic HER2 positive breast cancer who have received two or more prior anti-HER2-based regimens based on the results from the [DESTINY-Breast01](#) trial.

A supplemental New Drug Application is under review in Japan for the treatment of adult patients with HER2 positive unresectable or recurrent breast cancer previously treated with trastuzumab and a taxane, based on the results from the DESTINY-Breast03 trial.

Trastuzumab deruxtecan (6.4 mg/kg) is also approved in several countries for the treatment of adult patients with locally advanced or metastatic HER2 positive gastric or gastroesophageal junction (GEJ) adenocarcinoma who have received a prior trastuzumab-based regimen based on the results from the [DESTINY-Gastric01](#) trial.

A Type II Variation is currently under review by the EMA for the treatment of adult patients with locally advanced or metastatic HER2 positive gastric or GEJ adenocarcinoma who have received a prior anti-HER2-based regimen.

About the Trastuzumab Deruxtecan Clinical Development Program

A comprehensive global development program is underway evaluating the efficacy and safety of trastuzumab deruxtecan monotherapy across multiple HER2 targetable cancers including breast, gastric, lung and colorectal cancers. Trials in combination with other anticancer treatments, such as immunotherapy, are also underway.

Trastuzumab deruxtecan was highlighted in the [Clinical Cancer Advances 2021](#) report as one of two significant advancements in the “ASCO Clinical Advance of the Year: Molecular Profiling Driving Progress in GI Cancers,” based on data from both the DESTINY-Gastric01 and [DESTINY-CRC01](#) trials, as well as one of the targeted therapy advances of the year in NSCLC based on the interim results of the *HER2* mutant cohort of the [DESTINY-Lung01](#) trial.

Trastuzumab deruxtecan recently received its fourth [Breakthrough Therapy Designation](#) in the U.S. for the treatment of adult patients with unresectable or metastatic HER2 positive breast cancer who have received one or more prior anti-HER2-based regimens.

About the Daiichi Sankyo and AstraZeneca Collaboration

Daiichi Sankyo and AstraZeneca entered into a global collaboration to jointly develop and commercialize trastuzumab deruxtecan in [March 2019](#) and datopotamab deruxtecan (Dato-DXd) in [July 2020](#), except in Japan where Daiichi Sankyo maintains exclusive rights for each ADC. Daiichi Sankyo is responsible for the manufacturing and supply of trastuzumab deruxtecan and datopotamab deruxtecan.

About Daiichi Sankyo in Oncology

The oncology portfolio of Daiichi Sankyo is powered by our team of world-class scientists that push beyond traditional thinking to create transformative medicines for people with cancer. Anchored by our DXd antibody drug conjugate (ADC) technology, our research engines include biologics, medicinal chemistry, modality and other research laboratories in Japan, and [Plexxikon Inc.](#), our small molecule structure-guided R&D center in the U.S. We also work alongside leading academic and business collaborators to further advance the understanding of cancer as Daiichi Sankyo builds towards our ambitious goal of becoming a global leader in oncology by 2025.

About Daiichi Sankyo

Daiichi Sankyo is dedicated to creating new modalities and innovative medicines by leveraging our world-class science and technology for our purpose “to contribute to the enrichment of quality of life around the world.” In addition to our current portfolio of medicines for cancer and cardiovascular disease, Daiichi

Sankyo is primarily focused on developing novel therapies for people with cancer as well as other diseases with high unmet medical needs. With more than 100 years of scientific expertise and a presence in more than 20 countries, Daiichi Sankyo and its 16,000 employees around the world draw upon a rich legacy of innovation to realize our 2030 Vision to become an “Innovative Global Healthcare Company Contributing to the Sustainable Development of Society.” For more information, please visit: www.daiichisankyo.com.

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