

Press Release

ENHERTU[®] Supplemental New Drug Application Submitted in Japan for Patients with *HER2* Mutant Metastatic Non-Small Cell Lung Cancer

- Submission based on DESTINY-Lung02 and DESTINY-Lung01 results where ENHERTU demonstrated clinically meaningful tumor responses

Tokyo – (December 13, 2022) – Daiichi Sankyo (TSE: 4568) today announced that it has submitted a supplemental New Drug Application (sNDA) to Japan’s Ministry of Health, Labour and Welfare (MHLW) for ENHERTU[®] (trastuzumab deruxtecan) for the treatment of adult patients with previously treated *HER2* mutant unresectable advanced or recurrent non-small cell lung cancer (NSCLC).

Lung cancer is the second most commonly diagnosed form of cancer in Japan, with more than 138,000 cases diagnosed in 2020.¹ Prognosis is particularly poor for patients with metastatic NSCLC as only approximately 8% will live beyond five years after diagnosis.² In Japan, only 18.2% of patients with metastatic NSCLC will live beyond three years after diagnosis.³ There are currently no *HER2* directed therapies specifically for the treatment of *HER2* mutant NSCLC approved in Japan, which occurs in approximately 2% to 4% of patients with NSCLC and non-squamous histology.^{4,5,6,7}

“The results of DESTINY-Lung01 and DESTINY-Lung02 have shown that ENHERTU demonstrates a clinically meaningful tumor response in patients with previously treated *HER2* mutant non-small cell lung cancer,” said Wataru Takasaki, PhD, Executive Officer, Head of R&D Division in Japan, Daiichi Sankyo. “We look forward to working closely with the Japan Health Authority to bring the first *HER2* directed therapy for lung cancer to physicians and patients, representing the third tumor type for which ENHERTU could potentially be approved for use in Japan.”

The sNDA is based on data from the [DESTINY-Lung02](#) phase 2 trial [presented](#) at the European Society for Medical Oncology (ESMO) 2022 Congress, and the [DESTINY-Lung01](#) phase 2 trial published in *The New England Journal of Medicine* with updated data also presented at ESMO 2022.

ENHERTU also has been granted Orphan Drug designation by the Japan MHLW for this tumor type based on these data. Therapies that receive this designation are for those being developed for serious, difficult-to-

treat diseases affecting fewer than 50,000 patients in Japan and qualify for several measures intended to support development including priority review of an application.

About DESTINY-Lung02

DESTINY-Lung02 is a global, randomized phase 2 trial evaluating the safety and efficacy of ENHERTU in patients with *HER2* mutant metastatic NSCLC with disease recurrence or progression during or after at least one regimen of prior anticancer therapy that must have contained a platinum-based chemotherapy. Patients were randomized 2:1 to receive ENHERTU 5.4 mg/kg (Cohort 1; n=102) or ENHERTU 6.4 mg/kg (Cohort 2; n=50).

The primary endpoint of the trial is confirmed objective response rate (ORR) as assessed by blinded independent central review (BICR). Secondary endpoints include confirmed disease control rate (DCR), duration of response (DoR) and progression free survival (PFS) assessed by investigator and BICR, investigator-assessed overall survival (OS) and safety. DESTINY-Lung02 enrolled 152 patients at multiple sites, including Asia, Europe, Oceania and North America. For more information about the trial, visit [ClinicalTrials.gov](https://clinicaltrials.gov).

About DESTINY-Lung01

DESTINY-Lung01 is a global phase 2, open-label, two-cohort trial evaluating the efficacy and safety of ENHERTU (5.4 mg/kg or 6.4 mg/kg) in patients with *HER2* mutant (Cohort 2, n=91) or *HER2* overexpressing (Cohort 1 and 1a, n=90) (defined as IHC 3+ or IHC 2+) unresectable or metastatic non-squamous NSCLC relapsed from or refractory to standard treatment or for which no standard treatment is available.

The primary endpoint of the trial is confirmed ORR by independent central review. Key secondary endpoints include DoR, DCR, PFS, OS and safety. DESTINY-Lung01 enrolled 181 patients at multiple sites, including Asia, Europe and North America. For more information about the trial, visit [ClinicalTrials.gov](https://clinicaltrials.gov).

About *HER2* Mutant NSCLC

Lung cancer is the second most common form of cancer globally, with more than two million cases diagnosed in 2020.⁸ In Japan, lung cancer is the second most commonly diagnosed cancer, with more than 138,000 cases diagnosed in 2020.¹ Prognosis is particularly poor for patients with metastatic NSCLC, as only approximately 8% will live beyond five years after diagnosis.² In Japan, only 18.2% of patients with metastatic NSCLC will live beyond three years after diagnosis.³

HER2 is a tyrosine kinase receptor growth-promoting protein expressed on the surface of many types of tumors, including lung, breast, gastric and colorectal cancers. Certain *HER2 (ERBB2)* gene alterations (called *HER2* mutations) have been identified in patients with non-squamous NSCLC as a distinct molecular target, and occur in approximately 2% to 4% of patients with this type of lung cancer.^{4,5} While *HER2* gene mutations can occur in a range of patients, they are more commonly found in patients with NSCLC who are younger, female and have never smoked.⁹ *HER2* gene mutations have been independently associated with cancer cell growth and poor prognosis, with an increased incidence of brain metastases.¹⁰ Next-generation sequencing is being utilized in the identification of *HER2 (ERBB2)* mutations.¹¹

Although the role of anti-HER2 treatment is well established in breast and gastric cancers, there were no approved HER2 directed therapies in NSCLC prior to the accelerated U.S. Food and Drug Administration approval of ENHERTU in unresectable or metastatic *HER2* mutant NSCLC.^{6,7}

About ENHERTU

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

ENHERTU (5.4 mg/kg) is approved in more than 40 countries for the treatment of adult patients with unresectable or metastatic HER2 positive breast cancer who have received a (or one or more) prior anti-HER2-based regimen, either in the metastatic setting or in the neoadjuvant or adjuvant setting, and have developed disease recurrence during or within six months of completing therapy based on the results from the [DESTINY-Breast03](#) trial. ENHERTU also is approved in several 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.

ENHERTU (5.4 mg/kg) is approved in Brazil and the U.S. for the treatment of adult patients with unresectable or metastatic HER2 low (immunohistochemistry (IHC) 1+ or IHC 2+/*in-situ* hybridization (ISH)-) breast cancer who have received a prior systemic therapy in the metastatic setting or developed disease recurrence during or within six months of completing adjuvant chemotherapy based on the results from the [DESTINY-Breast04](#) trial.

ENHERTU (5.4 mg/kg) is approved under accelerated approval in the U.S. for the treatment of adult patients with unresectable or metastatic NSCLC whose tumors have activating *HER2 (ERBB2)* mutations, as detected

by a FDA-approved test, and who have received a prior systemic therapy based on the results from the [DESTINY-Lung02](#) trial. Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory trial.

ENHERTU (6.4 mg/kg) is 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.

About the ENHERTU Clinical Development Program

A comprehensive global development program is underway evaluating the efficacy and safety of ENHERTU 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.

Regulatory applications for ENHERTU in breast, non-small cell lung and gastric cancers are currently under review in several countries.

About the Daiichi Sankyo and AstraZeneca Collaboration

Daiichi Sankyo and AstraZeneca entered into a global collaboration to jointly develop and commercialize ENHERTU 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 ENHERTU and datopotamab deruxtecan.

About the DXd ADC Portfolio of Daiichi Sankyo

The DXd ADC portfolio of Daiichi Sankyo currently consists of five ADCs in clinical development across multiple types of cancer. The company's clinical trial stage ADCs include ENHERTU, a HER2 directed ADC and datopotamab deruxtecan (Dato-DXd), a TROP2 directed ADC, which are being jointly developed and commercialized globally with AstraZeneca; and patritumab deruxtecan (HER3-DXd), a HER3 directed ADC. Two additional ADCs including ifinatamab deruxtecan (I-DXd; DS-7300), a B7-H3 directed ADC, and DS-6000, a CDH6 directed ADC, are being developed through a strategic early-stage research collaboration with Sarah Cannon Research Institute.

Each ADC is designed using Daiichi Sankyo's proprietary DXd ADC technology to target and deliver a cytotoxic payload inside cancer cells that express a specific cell surface antigen. Each ADC consists of a monoclonal antibody attached to a number of topoisomerase I inhibitor payloads (an exatecan derivative, DXd) via tetrapeptide-based cleavable linkers.

Datopotamab deruxtecan, ifinatamab deruxtecan, patritumab deruxtecan and DS-6000 are investigational medicines that have not been approved for any indication in any country. Safety and efficacy have not been established.

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.

Media Contacts:

Global:

Victoria Amari
Daiichi Sankyo, Inc.
vamari@dsi.com
+1 908 900 3010 (mobile)

Japan:

Koji Ogiwara
Daiichi Sankyo Co., Ltd.
ogiwara.koji.ay@daiichisankyo.co.jp
+81 3 6225 1126 (office)

Investor Relations Contact:

DaiichiSankyoIR@daiichisankyo.co.jp

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