



News Release

Media Contacts:

Zayn Qureshi
+44 7760 334666
Email: zqureshi@its.jnj.com

Investor Relations:

Raychel Kruper
Email: investor-relations@its.jnj.com

Janssen Submits Marketing Authorisation Application to the European Medicines Agency Seeking Approval of Lazertinib, in combination with RYBREVANT[®]▼ (amivantamab), for the First-Line Treatment of Patients with EGFR-Mutated Non-Small Cell Lung Cancer

The submission is supported by data from the Phase 3 MARIPOSA study, which featured in a Late-Breaking Presidential Symposium session at the 2023 ESMO Congress¹

Lazertinib is a highly selective, central nervous system-penetrant, third-generation EGFR tyrosine kinase inhibitor^{2,3}

BEERSE, BELGIUM, 21 December, 2023 – The Janssen Pharmaceutical Companies of Johnson & Johnson today announced the submission of a marketing authorisation application (MAA) to the European Medicines Agency (EMA) seeking approval of lazertinib, in combination with RYBREVANT[®]▼ (amivantamab), for the first-line treatment of adult patients with advanced non-small cell lung cancer (NSCLC) with common epidermal growth factor receptor (EGFR) mutations including exon 19 deletions (ex19del) or exon 21 L858R (L858R) substitution mutations.

“Despite significant advances in the treatment of EGFR-mutated non-small cell lung cancer, the progression-free survival rate with the current first-line therapies remains low,” said Catherine Taylor, Vice President, EMEA Medical Affairs, Therapy Area Strategy, Janssen-Cilag AG. “Novel targeted therapies are necessary to address resistance and disease progression, and provide new options for patients in this area of high unmet medical need.”

MARIPOSA ([NCT04487080](#)) is a randomised, Phase 3 study evaluating amivantamab in combination with lazertinib compared to osimertinib in the first-line treatment of patients with locally advanced or metastatic NSCLC with EGFR ex19del or L858R substitution mutations.⁴ The MARIPOSA study met its primary endpoint, resulting in statistically significant and clinically meaningful improvement in progression-free survival (PFS) for amivantamab plus lazertinib versus osimertinib, as assessed by blinded independent central review (BICR).¹ The safety profile of amivantamab plus lazertinib was consistent with prior reports of the combination, with mostly Grade 1 or 2 adverse events (AEs).¹

“Lung cancer remains the leading cause of cancer death worldwide and high unmet needs remain for patients with certain oncogenic driver mutations,” said Kiran Patel, M.D., Vice President, Clinical Development, Solid Tumors, Janssen Research and Development, LLC. “We’re pleased to announce the submission of lazertinib, in combination with amivantamab as a chemotherapy-free regimen, in the first-line, common EGFR-mutated NSCLC setting, to the European Medicines Agency. Once again, this shows our commitment to advancing innovative therapies that have the potential to be a future standard of care.”

The pivotal data from the MARIPOSA study [were featured](#) in a Late-Breaking Presidential Symposium session (Abstract #LBA14) at the 2023 European Society of Medical Oncology (ESMO) Congress.¹

#ENDS#

About the MARIPOSA Study

MARIPOSA ([NCT04487080](#)), which enrolled 1,074 patients, is a randomised, Phase 3 study evaluating amivantamab in combination with lazertinib versus osimertinib and versus lazertinib alone in first-line treatment of patients with locally advanced or metastatic NSCLC with EGFR ex19del or L858R substitution mutations.^{1,4} The primary endpoint of the study is PFS (using RECIST v1.1 guidelines[‡]) as assessed by BICR.¹ Secondary endpoints include overall survival (OS), overall response rate (ORR), duration of response (DOR), second progression free survival (PFS2) and intracranial PFS.¹

The MARIPOSA study required all patients to have serial brain imaging with MRIs in order to detect or monitor brain metastases, a measure not implemented in most prior studies for

EGFR-mutated NSCLC.¹ The primary endpoint of PFS in MARIPOSA included these central nervous system (CNS) events detected by serial brain MRIs.¹ Extracranial PFS, which may more closely approximate what would be seen in other trials, was also explored in MARIPOSA.¹

About Lazertinib

Lazertinib is an oral, third-generation, brain-penetrant EGFR TKI that targets both the T790M mutation and activating EGFR mutations while sparing wild-type EGFR. An analysis of the efficacy and safety of lazertinib from the Phase 3 study LASER301 was published in [The Journal of Clinical Oncology](#) in 2023.² In 2018, Janssen Biotech, Inc., entered into a license and collaboration agreement with Yuhan Corporation for the development of lazertinib.

About Amivantamab

Amivantamab is a fully-human EGFR-MET bispecific antibody with immune cell-directing activity that targets tumours with activating and resistance EGFR mutations and MET mutations and amplifications.^{5,6,7,8,9}

The European Commission granted conditional marketing authorisation of amivantamab in December 2021 for the treatment of adult patients with advanced NSCLC with activating epidermal growth factor receptor (EGFR) exon 20 insertion mutations, after failure of platinum-based therapy.⁵ Amivantamab is the first approved treatment in the European Union specifically targeting EGFR exon 20 insertion mutations for NSCLC.⁵ In October 2023, a type II extension of indication application was [submitted](#) to the EMA seeking approval of amivantamab in combination with chemotherapy (carboplatin-pemetrexed) for the first-line treatment of patients with NSCLC with EGFR exon 20 insertion mutations.¹⁰ This was followed, in November 2023, with the [submission](#) of a second type II extension of indication application seeking approval of amivantamab in combination with chemotherapy (carboplatin and pemetrexed) for the treatment of adult patients with advanced NSCLC with EGFR ex19del or L858R substitution mutations, after failure of prior therapy including a third-generation EGFR TKI.¹¹

For a full list of adverse events and information on dosage and administration, contraindications and other precautions when using amivantamab please refer to the Summary of Product Characteristics.¹²

▼In line with EMA regulations for new medicines and those given conditional approval, amivantamab is subject to additional monitoring.

About Non-Small Cell Lung Cancer

In Europe, over 477,500 patients were diagnosed with lung cancer in 2020.¹³ NSCLC accounts for 85 percent of all lung cancer cases.¹⁴ Lung cancer is Europe's biggest cancer killer, with more deaths than breast cancer and prostate cancer combined.¹³

The main subtypes of NSCLC are adenocarcinoma, squamous cell carcinoma and large cell carcinoma.¹⁴ Among the most common driver mutations in NSCLC are alterations in EGFR, which is a receptor tyrosine kinase controlling cell growth and division.^{14,15} EGFR mutations are present in 10 to 15 percent of Western patients with NSCLC with adenocarcinoma histology and occur in 40 to 50 percent of Asian patients.^{16,17,18,19} EGFR ex19del or EGFR L858R mutations are the most common EGFR mutations.²⁰ The five-year survival rate for all people with advanced NSCLC and EGFR mutations treated with EGFR TKIs is less than 20 percent.^{21,22} Patients with EGFR ex19del or L858R mutations have a real-world five-year OS of 19 percent.²³ In addition, it has been demonstrated that approximately 50 percent of patients with NSCLC will develop brain metastases which are a substantial contributor to overall cancer mortality.^{24,25,26}

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: Oncology, Immunology, Neuroscience, Cardiovascular, Pulmonary Hypertension, and Retina.

Learn more at www.janssen.com/emea. Follow us at www.linkedin.com/janssenEMEA for our latest news. Janssen Pharmaceutica NV, Janssen-Cilag AG, Cilag GmbH International, and Janssen Research & Development, LLC are Johnson & Johnson companies.

Cautions Concerning Forward-Looking Statements

This press release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 regarding product development and the potential benefits and

treatment impact of amivantamab and lazertinib. 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 Pharmaceutica NV, Janssen Research and Development, LLC, Janssen Biotech, Inc., Janssen-Cilag AG, Cilag GmbH International, 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; competition, including technological advances, new products and patents attained by competitors; challenges to patents; changes in behavior 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 1, 2023, including in the sections captioned "Cautionary Note Regarding Forward-Looking Statements" and "Item 1A. Risk Factors," and in Johnson & Johnson's subsequent Quarterly Reports on Form 10-Q and other filings with the Securities and Exchange Commission. Copies of these filings are available online at www.sec.gov, www.jnj.com or on request from Johnson & Johnson. None of Janssen Pharmaceutica NV, Janssen Research and Development, LLC, Janssen Biotech, Inc., Janssen-Cilag AG, Cilag GmbH International, nor Johnson & Johnson undertakes to update any forward-looking statement as a result of new information or future events or developments.

###

‡RECIST (version 1.1) refers to Response Evaluation Criteria in Solid Tumors, which is a standard way to measure how well solid tumours respond to treatment and is based on whether tumours shrink, stay the same or get bigger.

References

¹ Cho BC P, et al. Amivantamab Plus Lazertinib vs Osimertinib as First-line Treatment in Patients With EGFR-mutated, Advanced Non-small Cell Lung Cancer (NSCLC): Primary Results From MARIPOSA, a Phase 3, Global, Randomized, Controlled Trial. 2023 European Society for Medical Oncology. October 23, 2023.

-
- ² Cho, BC, et al. Lazertinib versus gefitinib as first-line treatment in patients with *EGFR*-mutated advanced non-small-cell lung cancer: Results From LASER301. *J Clin Oncol*. 2023;41(26):4208-4217.
- ³ Ahn M-J, et al. Lazertinib in patients with *EGFR* mutation-positive advanced non-small-cell lung cancer: results from the dose escalation and dose expansion parts of a first-in-human, open-label, multicentre, phase 1–2 study. *Lancet Oncol*. 2019;20(12):1681-1690
- ⁴ ClinicalTrials.gov. A Study of Amivantamab and Lazertinib Combination Therapy Versus Osimertinib in Locally Advanced or Metastatic Non-Small Cell Lung Cancer (MARIPOSA). Available at: <https://clinicaltrials.gov/ct2/show/NCT04487080>. Accessed December 2023.
- ⁵ European Medicines Agency. Amivantamab Summary of Product Characteristics. January 2023. Available at: [Rybrevant, INN-amivantamab \(europa.eu\)](https://www.ema.europa.eu/en/medicines/humans/summary-of-product-characteristics/Rybrevant_INN-amivantamab_europa.eu). Accessed: December 2023.
- ⁶ Grugan, et al. Fc-mediated activity of *EGFR* x c-Met bispecific antibody JNJ-61186372 enhanced killing of lung cancer cells. *MAbs*. 2017;9(1):114-126.
- ⁷ Yun, et al. Antitumor Activity of Amivantamab (JNJ-61186372), an *EGFR*–*MET* Bispecific Antibody, in Diverse Models of *EGFR* Exon 20 Insertion–Driven NSCLC. *Cancer Discov*. 2020;10(8):1194-1209
- ⁸ Vijayaraghavan, et al. Amivantamab (JNJ-61186372), an Fc Enhanced *EGFR*/cMet Bispecific Antibody, Induces Receptor Downmodulation and Antitumor Activity by Monocyte/Macrophage Trogocytosis. *Mol Cancer Ther*. 2020;19(10):2044-2056.
- ⁹ Moores, et al. A Novel Bispecific Antibody Targeting *EGFR* and cMet Is Effective against *EGFR* Inhibitor-Resistant Lung Tumors. *Cancer Res*. 2016;76(13)(suppl 27216193):3942-3953.
- ¹⁰ J&J.com. Press Release. Available at: https://www.investor.jnj.com/files/doc_news/2023/Oct/06/amivantamab-papillon-ema-filing-release.pdf. Accessed December 2023.
- ¹¹ Janssen EMEA. Press Release. Available at: https://www.janssen.com/emea/sites/www/janssen_com_emea/files/janssen_mariposa-2_filing_press_release_2023.pdf. Accessed December 2023.
- ¹² European Medicines Agency. Amivantamab Summary of Product Characteristics. September 2023. Available at: [Rybrevant, INN-amivantamab \(europa.eu\)](https://www.ema.europa.eu/en/medicines/humans/summary-of-product-characteristics/Rybrevant_INN-amivantamab_europa.eu). Accessed: December 2023.
- ¹³ Globocan 2020. Estimated number of incident cases deaths in 2020, Europe, both sexes, all ages. Available at: www.gco.iarc.fr. Accessed December 2023.
- ¹⁴ Zappa C et al. Non-small cell lung cancer: current treatment and future advances. *Transl Lung Cancer Res* 2016;5(3): 288–300.
- ¹⁵ Wee, P & Wang, Z. *Cancers* 2017. Epidermal Growth Factor Receptor Cell Proliferation Signaling Pathways Volume: 9 Issue: 12 Pages: 52.
- ¹⁶ Pennell NA, et al. A phase II trial of adjuvant erlotinib in patients with resected epidermal growth factor receptor-mutant non-small cell lung cancer. *J Clin Oncol*. 37:97-104.
- ¹⁷ Burnett H, et al. Epidemiological and clinical burden of *EGFR* exon 20 insertion in advanced non-small cell lung cancer: a systematic literature review. Abstract presented at: World Conference on Lung Cancer Annual Meeting; January 29, 2021; Singapore.
- ¹⁸ Zhang YL, et al. The prevalence of *EGFR* mutation in patients with non-small cell lung cancer: a systematic review and meta-analysis. *Oncotarget*. 2016;7(48):78985-78993.
- ¹⁹ Midha A, et al. *EGFR* mutation incidence in non-small-cell lung cancer of adenocarcinoma histology: a systematic review and global map by ethnicity. *Am J Cancer Res*. 2015;5(9):2892-2911.
- ²⁰ American Lung Association. *EGFR* and Lung Cancer. <https://www.lung.org/lung-health-diseases/lung-disease-lookup/lung-cancer/symptoms-diagnosis/biomarker-testing/egfr>. Accessed October 2023.
- ²¹ Howlader N, et al. SEER Cancer Statistics Review, 1975-2016, National Cancer Institute. Bethesda, MD, https://seer.cancer.gov/csr/1975_2016/, based on December 2018 SEER data submission, posted to the SEER web site.
- ²² Lin JJ, et al. Five-Year Survival in *EGFR*-Mutant Metastatic Lung Adenocarcinoma Treated with *EGFR*-TKIs. *J Thorac Oncol*. 2016 Apr;11(4):556-65.
- ²³ Girard N, et al. Comparative clinical outcomes for patients with NSCLC harboring *EGFR* exon 20 insertion mutations and common *EGFR* mutations. Abstract presented at: World Conference on Lung Cancer Annual Meeting; January 29, 2021; Singapore.
- ²⁴ Shao J et al. The number of brain metastases predicts the survival of non-small cell lung cancer patients with *EGFR* mutation status. *Cancer Rep (Hoboken)*. 2022;5(9): e1550.
- ²⁵ Achrol A et al. Brain metastases. *Nat Rev Dis Primers*. 2019;17(5): 5.
- ²⁶ Rangachari D et al. Brain metastases in patients with *EGFR*-mutated or *ALK*-rearranged non-small-cell lung cancers. *Lung Cancer*. 2015;88(1): 108-111.