



**News Release**

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**New RYBREVANT® (amivantamab-vmjw) Data Showed Long-Term Clinical Response and Safety in Patients with Advanced Non-Small Cell Lung Cancer with EGFR Exon 20 Insertion Mutations Who Have Failed Prior Platinum-Based Chemotherapy**

**COPENHAGEN, DENMARK, March 29, 2023** – The Janssen Pharmaceutical Companies of Johnson & Johnson today announced new long-term data from the CHRYSALIS study evaluating RYBREVANT® (amivantamab-vmjw) in patients with advanced non-small cell lung cancer (NSCLC) and epidermal growth factor receptor (EGFR) exon 20 insertion mutations whose disease progressed on prior platinum-based chemotherapy.<sup>1</sup> Data from the study showed long-term response and safety in this population and were presented in an oral presentation at the [2023 European Lung Cancer Congress \(ELCC\)](#) (Abstract #779).<sup>1</sup>

In the analysis of the CHRYSALIS study, investigators assessed the efficacy and safety of RYBREVANT® in patients (n=114) with NSCLC and EGFR exon 20 insertion mutations, who had progressed on prior platinum-based chemotherapy, and were treated at the approved Phase 2 dose of 1050 mg (1400 mg for a patient weight of at least 80 kg).<sup>1</sup> The primary endpoint was overall response rate (ORR) per Response Evaluation Criteria in Solid Tumors Version 1.1\* (RECIST v1.1).<sup>1</sup> Additional endpoints included duration of response (DOR), clinical benefit rate, progression-free survival (PFS) and overall survival (OS).<sup>1</sup>

After a median follow-up of 19.2 months, the median OS with RYBREVANT<sup>®</sup> treatment was 23 months (95 percent Confidence Interval [CI], 18.5–29.5) with a two-year OS rate of 47 percent.<sup>1</sup> The investigator-assessed ORR was 37 percent (95 percent CI, 28–46) with a median DOR of 12.5 months (95 percent CI, 6.9–19.3), and median PFS of 6.9 months (95 percent CI, 5.6–8.8).<sup>1</sup> Across subgroups, treatment with RYBREVANT<sup>®</sup> resulted in consistent efficacy across post-platinum patients with EGFR exon 20 insertion mutations, including the elderly, regardless of prior therapies or response to prior platinum chemotherapy.<sup>1</sup> Forty-eight patients (42 percent) had sustained clinical response measured by ORR on RYBREVANT<sup>®</sup> for at least 12 cycles.<sup>1</sup> The median duration of treatment was 7.5 months and treatment is ongoing in 15 patients (13 percent) who have received RYBREVANT<sup>®</sup> for a median of 2.6 years.<sup>1</sup> Of these patients, seven are progression-free and eight are receiving treatment beyond progression.<sup>1</sup>

No new safety signals were identified and rash (all group, 89 percent), infusion-related reactions (IRR; 67 percent) and paronychia (58 percent) remained the most common treatment emergent adverse events (AEs).<sup>1</sup> The incidence of treatment-related AEs leading to dose interruption, reduction and discontinuation was 29 percent, 18 percent and seven percent, respectively.<sup>1</sup>

“With these new data, amivantamab showed long-term consistent efficacy regardless of prior therapies or response to prior platinum chemotherapy,” said Pilar Garrido<sup>♦</sup>, M.D., Associate Professor of Medical Oncology at Universidad de Alcalá, Head of Medical Oncology Department at the University Hospital Ramón y Cajal in Madrid, Spain and principal investigator. “Due to the aggressive nature of NSCLC with EGFR exon 20 insertion mutations, treatment with targeted therapies is an important consideration when identifying a treatment option for patients.”

NSCLC driven by EGFR exon 20 insertion mutations carries a worse prognosis and shorter survival rates compared with lung cancer driven by more common EGFR mutations, such as exon 19 deletions and L858R substitutions.<sup>2</sup> The standard of care for common EGFR mutations, such as EGFR tyrosine kinase inhibitor (TKIs), are generally inactive against exon 20 insertion mutations and are not FDA-approved for these patients.<sup>22</sup>

“The long-term CHRYSALIS data presented at ELCC support RYBREVANT as an important treatment option for patients with EGFR exon 20 insertion mutation-positive NSCLC, providing

valuable clinical insights that may help inform treatment decisions,” said Kiran Patel, M.D., Vice President, Clinical Development, Solid Tumors, Janssen Research & Development, LLC. “We’re committed to transforming the treatment of lung cancer through continued research and the development of targeted therapies for gene-mutated disease where high unmet needs continue to exist.”

### **About the CHRYSALIS Study**

CHRYSALIS ([NCT02609776](#)) is a Phase 1 open-label, multicenter, first-in-human study to evaluate the safety, pharmacokinetics and preliminary efficacy of RYBREVANT® as a monotherapy and in combinations including with lazertinib\*, a novel third-generation EGFR TKI<sup>3</sup>, in adults with advanced NSCLC.<sup>4</sup> The study consists of two parts: RYBREVANT® monotherapy and combination-dose escalations (Part 1) and RYBREVANT® monotherapy and combination-dose expansions (Part 2).<sup>4</sup> The study enrolled 780 patients with advanced NSCLC.<sup>4</sup>

In the ongoing CHRYSALIS study, patients with locally advanced or metastatic NSCLC with EGFR exon 20 insertion mutations weighing less than 80 kg received RYBREVANT® 1050 mg and patients weighing at least 80 kg or more received RYBREVANT® 1400 mg weekly for four weeks, with the initial dose as a split infusion in week 1 on day 1 and day 2, then administered every two weeks thereafter until disease progression or unacceptable toxicity.<sup>5</sup> Disease response using ORR, per Response Evaluation Criteria in Solid Tumors Version 1.1\*\* (RECIST v1.1) as evaluated by Blinded Independent Central Review (BICR), was the primary endpoint.<sup>4</sup>

### **About RYBREVANT®**

RYBREVANT® (amivantamab-vmjw) [received](#) accelerated approval by the U.S. Food and Drug Administration (FDA) in May 2021 for the treatment of adult patients with locally advanced or metastatic NSCLC with EGFR exon 20 insertion mutations, as detected by an FDA-approved test, whose disease has progressed on or after platinum-based chemotherapy.<sup>6</sup> This indication is approved under accelerated approval based on overall response rate and duration of response. Continued approval for this indication may be contingent upon verification and description of clinical benefit in the confirmatory trials. RYBREVANT® has also received approval from health authorities in [Europe](#), as well as other markets around the world.

The NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Non-Small Cell Lung Cancer◇ prefer NGS-based strategies over PCR-based approaches for the detection of EGFR exon 20 insertion variants and include amivantamab-vmjw (RYBREVANT®) as a subsequent

therapy option with a Category 2A recommendation for patients that have progressed on or after platinum-based chemotherapy with or without immunotherapy and have EGFR exon 20 insertion mutation-positive advanced NSCLC.<sup>76+^</sup>

RYBREVANT® is being studied in multiple clinical trials in NSCLC, including:

- As first-line therapy in the Phase 3 MARIPOSA ([NCT044487080](https://clinicaltrials.gov/ct2/show/study/NCT044487080)) study assessing amivantamab in combination with lazertinib, a novel third generation EGFR TKI, against osimertinib and against lazertinib alone in untreated advanced EGFR-mutated NSCLC.<sup>8</sup>
- The Phase 3 MARIPOSA-2 ([NCT04988295](https://clinicaltrials.gov/ct2/show/study/NCT04988295)) study assessing the efficacy of lazertinib, amivantamab and carboplatin-pemetrexed versus carboplatin-pemetrexed in patients with locally advanced or metastatic EGFR exon 19 deletion or exon 21 L858R substitution NSCLC after osimertinib failure.<sup>9</sup>
- The Phase 1/1b CHRYSALIS-2 ([NCT04077463](https://clinicaltrials.gov/ct2/show/study/NCT04077463)) study evaluating amivantamab in combination with lazertinib and lazertinib as a monotherapy in patients with advanced NSCLC with EGFR mutations.<sup>10</sup>
- The Phase 3 PAPILLON ([NCT04538664](https://clinicaltrials.gov/ct2/show/study/NCT04538664)) study assessing amivantamab in combination with carboplatin-pemetrexed versus chemotherapy alone in patients with advanced or metastatic EGFR-mutated NSCLC and exon 20 insertion mutations.<sup>11</sup>
- The Phase 1 PALOMA ([NCT04606381](https://clinicaltrials.gov/ct2/show/study/NCT04606381)) study assessing the feasibility of subcutaneous (SC) administration of amivantamab based on safety and pharmacokinetics and to determine a dose, dose regimen and formulation for amivantamab SC delivery.<sup>12</sup>
- The Phase 2 PALOMA-2 ([NCT05498428](https://clinicaltrials.gov/ct2/show/study/NCT05498428)) study assessing amivantamab in participants with advanced or metastatic solid tumors including EGFR-mutated NSCLC.<sup>13</sup>
- The Phase 3 PALOMA-3 ([NCT05388669](https://clinicaltrials.gov/ct2/show/study/NCT05388669)) study assessing lazertinib with subcutaneous amivantamab as compared to intravenous amivantamab in participants with EGFR-mutated advanced or metastatic NSCLC.<sup>14</sup>
- The Phase 1/2 METalmark ([NCT05488314](https://clinicaltrials.gov/ct2/show/study/NCT05488314)) study assessing amivantamab and capmatinib combination therapy in unresectable metastatic NSCLC.<sup>15</sup>

For more information, visit: <https://www.RYBREVANT.com>.

### **About Non-Small Cell Lung Cancer**

Worldwide, lung cancer is one of the most common cancers, and NSCLC makes up 80 to 85 percent of all lung cancers.<sup>3</sup> The main subtypes of NSCLC are adenocarcinoma, squamous cell

carcinoma and large cell carcinoma.<sup>3</sup> Among the most common driver mutations in NSCLC are alterations in EGFR, which is a receptor tyrosine kinase supporting cell growth and division.<sup>3</sup> EGFR mutations are present in 10 to 15 percent of people with NSCLC adenocarcinoma and occur in 40 to 50 percent of Asians.<sup>3</sup> The five-year survival rate for all people with advanced NSCLC and EGFR mutations treated with EGFR TKIs is less than 20 percent.<sup>3</sup> Patients with EGFR exon 20 insertion mutations have a real-world five-year OS of eight percent in the frontline setting, which is worse than patients with EGFR exon 19 deletions or L858R mutations, who have a real-world five-year OS of 19 percent.<sup>3</sup>

## **RYBREVANT® IMPORTANT SAFETY INFORMATION<sup>55</sup>**

### **WARNINGS AND PRECAUTIONS**

#### **Infusion Related Reactions**

RYBREVANT® can cause infusion related reactions (IRR); signs and symptoms of IRR include dyspnea, flushing, fever, chills, nausea, chest discomfort, hypotension, and vomiting.

Based on the safety population, IRR occurred in 66% of patients treated with RYBREVANT®. Among patients receiving treatment on Week 1 Day 1, 65% experienced an IRR, while the incidence of IRR was 3.4% with the Day 2 infusion, 0.4% with the Week 2 infusion, and cumulatively 1.1% with subsequent infusions. Of the reported IRRs, 97% were Grade 1-2, 2.2% were Grade 3, and 0.4% were Grade 4. The median time to onset was 1 hour (range 0.1 to 18 hours) after start of infusion. The incidence of infusion modifications due to IRR was 62% and 1.3% of patients permanently discontinued RYBREVANT® due to IRR.

Premedicate with antihistamines, antipyretics, and glucocorticoids and infuse RYBREVANT® as recommended. Administer RYBREVANT® via a peripheral line on Week 1 and Week 2. Monitor patients for any signs and symptoms of infusion reactions during RYBREVANT® infusion in a setting where cardiopulmonary resuscitation medication and equipment are available. Interrupt infusion if IRR is suspected. Reduce the infusion rate or permanently discontinue RYBREVANT® based on severity.

#### **Interstitial Lung Disease/Pneumonitis<sup>5</sup>**

RYBREVANT® can cause interstitial lung disease (ILD)/pneumonitis. Based on the safety population, ILD/pneumonitis occurred in 3.3% of patients treated with RYBREVANT®, with

0.7% of patients experiencing Grade 3 ILD/pneumonitis. Three patients (1%) discontinued RYBREVANT® due to ILD/pneumonitis.

Monitor patients for new or worsening symptoms indicative of ILD/pneumonitis (e.g., dyspnea, cough, fever). Immediately withhold RYBREVANT® in patients with suspected ILD/pneumonitis and permanently discontinue if ILD/pneumonitis is confirmed.

### **Dermatologic Adverse Reactions<sup>5</sup>**

RYBREVANT® can cause rash (including dermatitis acneiform), pruritus and dry skin. Based on the safety population, rash occurred in 74% of patients treated with RYBREVANT®, including Grade 3 rash in 3.3% of patients. The median time to onset of rash was 14 days (range: 1 to 276 days). Rash leading to dose reduction occurred in 5% of patients, and RYBREVANT® was permanently discontinued due to rash in 0.7% of patients.

Toxic epidermal necrolysis occurred in one patient (0.3%) treated with RYBREVANT®.

Instruct patients to limit sun exposure during and for 2 months after treatment with RYBREVANT®. Advise patients to wear protective clothing and use broad spectrum UVA/UVB sunscreen. Alcohol free emollient cream is recommended for dry skin.

If skin reactions develop, start topical corticosteroids and topical and/or oral antibiotics. For Grade 3 reactions, add oral steroids and consider dermatologic consultation. Promptly refer patients presenting with severe rash, atypical appearance or distribution, or lack of improvement within 2 weeks to a dermatologist. Withhold, dose reduce or permanently discontinue RYBREVANT® based on severity.

### **Ocular Toxicity<sup>5</sup>**

RYBREVANT® can cause ocular toxicity including keratitis, dry eye symptoms, conjunctival redness, blurred vision, visual impairment, ocular itching, and uveitis. Based on the safety population, keratitis occurred in 0.7% and uveitis occurred in 0.3% of patients treated with RYBREVANT®. All events were Grade 1-2. Promptly refer patients presenting with eye symptoms to an ophthalmologist. Withhold, dose reduce or permanently discontinue RYBREVANT® based on severity.

### **Embryo Fetal Toxicity<sup>5</sup>**

Based on its mechanism of action and findings from animal models, RYBREVANT® can cause fetal harm when administered to a pregnant woman. Advise females of reproductive potential of the potential risk to the fetus. Advise female patients of reproductive potential to use effective contraception during treatment and for 3 months after the final dose of RYBREVANT®.

### **Adverse Reactions<sup>5</sup>**

The most common adverse reactions ( $\geq 20\%$ ) were rash, IRR, paronychia, musculoskeletal pain, dyspnea, nausea, fatigue, edema, stomatitis, cough, constipation, and vomiting. The most common Grade 3 or 4 laboratory abnormalities ( $\geq 2\%$ ) were decreased lymphocytes, decreased albumin, decreased phosphate, decreased potassium, increased alkaline phosphatase, increased glucose, increased gamma-glutamyl transferase, and decreased sodium.

**Please read full [Prescribing Information](#) for RYBREVANT®.**

### **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: Cardiovascular, Metabolism & Retina; Immunology; Infectious Diseases & Vaccines; Neuroscience; Oncology; and Pulmonary Hypertension.

Learn more at [www.janssen.com](http://www.janssen.com). Follow us at [@JanssenGlobal](https://twitter.com/JanssenGlobal) and [@JanssenUS](https://twitter.com/JanssenUS). Janssen Research & Development, LLC and Janssen Biotech, Inc. belong to the Janssen Pharmaceutical Companies of Johnson & Johnson.

### **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 RYBREVANT® (amivantamab-vmjw). 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 Research and Development, LLC, Janssen Biotech, Inc., any of the other Janssen Pharmaceutical Companies 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](http://www.sec.gov), [www.jnj.com](http://www.jnj.com) or on request from Johnson & Johnson. None of Janssen Research and Development, Janssen Biotech, Inc., the Janssen Pharmaceutical Companies nor Johnson & Johnson undertakes to update any forward-looking statement as a result of new information or future events or developments.*

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♦Dr. Garrido has served as a consultant to Janssen; she has not been paid for any media work.

\*In 2018, Janssen Biotech, Inc. entered into a license and collaboration agreement with Yuhan Corporation for the development of lazertinib.

\*\*RECIST (version 1.1) refers to Response Evaluation Criteria in Solid Tumors, which is a standard way to measure how well solid tumors respond to treatment and is based on whether tumors shrink, stay the same or get bigger.<sup>3</sup>

◇The NCCN Content does not constitute medical advice and should not be used in place of seeking professional medical advice, diagnosis or treatment by licensed practitioners. NCCN makes no representations or warranties and explicitly disclaims the appropriateness or applicability of the NCCN Content to any specific patient's care or treatment.

†See the NCCN Guidelines for detailed recommendations, including other treatment options.

^The NCCN Guidelines for NSCLC provide recommendations for certain individual biomarkers that should be tested and recommend testing techniques but do not endorse any specific commercially available biomarker assays or commercial laboratories.

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- <sup>1</sup> Garrido P., et al. Long-term efficacy, safety and predictors of response to amivantamab among patients with post-platinum EGFR Ex20ins-mutated advanced NSCLC. 2023 European Lung Cancer Congress. March 29, 2023.
- <sup>2</sup> Bazhenova, L., Minchom, A., Viteri, S., Bauml, J. M., Ou, S. I., Gadgeel, S. M., Trigo, J. M., Backenroth, D., Li, T., Londhe, A., Mahadevia, P., & Girard, N. (2021). Comparative clinical outcomes for patients with advanced NSCLC harboring EGFR exon 20 insertion mutations and common EGFR mutations. *Lung cancer (Amsterdam, Netherlands)*, 162, 154–161. <https://doi.org/10.1016/j.lungcan.2021.10.020>
- <sup>3</sup> RYBREVANT™ (amivantamab-vmjw) Receives FDA Approval as the First Targeted Treatment for Patients with Non-Small Cell Lung Cancer with EGFR Exon 20 Insertion Mutations. Available at: [https://www.janssen.com/rybrevant-amivantamab-vmjw-receives-fda-approval-first-targeted-treatment-patients-non-small-cell#\\_edn16](https://www.janssen.com/rybrevant-amivantamab-vmjw-receives-fda-approval-first-targeted-treatment-patients-non-small-cell#_edn16). Accessed March 2023.
- <sup>4</sup> ClinicalTrials.gov. Study of JNJ-61186372, a Human Bispecific EGFR and cMet Antibody, in Participants With Advanced Non-Small Cell Lung Cancer. (CHRYSALIS) Available at: <https://clinicaltrials.gov/ct2/show/NCT02609776>. Accessed March 2023.
- <sup>5</sup> RYBREVANT® Prescribing Information. Horsham, PA: Janssen Biotech, Inc.
- <sup>6</sup> Janssen Announces New Data Supporting Safety and Efficacy of RYBREVANT® and Lazertinib Combination for Patients with Non-Small Cell Lung Cancer and EGFR Mutations. Available at: [https://www.jnj.com/janssen-announces-new-data-supporting-safety-and-efficacy-of-rybrevant-and-lazertinib-combination-for-patients-with-non-small-cell-lung-cancer-and-egfr-mutations#\\_edn9](https://www.jnj.com/janssen-announces-new-data-supporting-safety-and-efficacy-of-rybrevant-and-lazertinib-combination-for-patients-with-non-small-cell-lung-cancer-and-egfr-mutations#_edn9). Accessed March 2023.
- <sup>7</sup> Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Non-Small Cell Lung Cancer V.3.2022. © National Comprehensive Cancer Network, Inc. 2022. All rights reserved. Accessed March 22, 2023. To view the most recent and complete version of the guideline, go online to NCCN.org.
- <sup>8</sup> 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 March 2023.
- <sup>9</sup> ClinicalTrials.gov. A Study of Amivantamab and Lazertinib in Combination With Platinum-Based Chemotherapy Compared With Platinum-Based Chemotherapy in Patients With Epidermal Growth Factor Receptor (EGFR)-Mutated Locally Advanced or Metastatic Non- Small Cell Lung Cancer After Osimertinib Failure (MARIPOSA-2). Available at: <https://clinicaltrials.gov/ct2/show/NCT04988295>. Accessed March 2023.
- <sup>10</sup> ClinicalTrials.gov. A Study of Lazertinib as Monotherapy or in Combination With Amivantamab in Participants With Advanced Non-small Cell Lung Cancer. Available at: <https://clinicaltrials.gov/ct2/show/NCT04077463>. Accessed March 2023.
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- <sup>12</sup> ClinicalTrials.gov. A Study of Amivantamab Subcutaneous (SC) Administration for the Treatment of Advanced Solid Malignancies. Available at: <https://clinicaltrials.gov/ct2/show/NCT04606381>. Accessed March 2023.
- <sup>13</sup> ClinicalTrials.gov. A Study of Amivantamab in Participants With Advanced or Metastatic Solid Tumors Including Epidermal Growth Factor Receptor (EGFR)-Mutated Non-Small Cell Lung Cancer (PALOMA-2). Available at: <https://clinicaltrials.gov/ct2/show/NCT05498428>. Accessed March 2023.
- <sup>14</sup> ClinicalTrials.gov. A Study of Lazertinib With Subcutaneous Amivantamab Compared With Intravenous Amivantamab in Participants With Epidermal Growth Factor Receptor (EGFR)-Mutated Advanced or Metastatic Non-small Cell Lung Cancer (PALOMA-3). Available at: <https://clinicaltrials.gov/ct2/show/NCT05388669>. Accessed March 2023.
- <sup>15</sup> ClinicalTrials.gov. A Study of Amivantamab and Capmatinib Combination Therapy in Unresectable Metastatic Non-small Cell Lung Cancer (METalmark). Available at: <https://clinicaltrials.gov/ct2/show/NCT05488314>. Accessed March 2023.