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For immediate release

Groundbreaking nipocalimab study of pregnant individuals at high risk for early onset severe hemolytic disease of the fetus and newborn published in The New England Journal of Medicine

Nipocalimab delayed or prevented severe fetal anemia and 54 percent of study participants in the Phase 2 UNITY study achieved a live birth at or after 32 weeks without the need for intrauterine transfusion (IUT)

The AZALEA Phase 3 clinical study is currently enrolling patients: Nipocalimab is the only therapy in clinical development for use in pregnancies at risk for severe hemolytic disease of the fetus and newborn (HDFN)

SPRING HOUSE, Pa., (August 7, 2024) – Johnson & Johnson today announced the results from the Phase 2 open-label UNITY study of nipocalimab for the treatment of alloimmunized[a] pregnant individuals at risk of early onset severe (EOS) HDFN have been published in *The New England Journal of Medicine (NEJM).* The UNITY study met its primary endpoint with 54 percent of individuals receiving nipocalimab achieving a live birth at or after 32 weeks gestational age (GA) without the need for IUT.[1] Nipocalimab is currently the only therapy reported to be in clinical development for HDFN, a serious and rare condition that occurs when the blood types of a pregnant individual and the developing fetus are incompatible, potentially causing life-threatening anemia in the fetus or infant.[2] These results showed that nipocalimab delayed or prevented severe fetal anemia requiring treatment prenatally and reduced the need for IUTs in pregnancies at high risk for recurrent EOS HDFN.[1]

“The Phase 2 data published in the *NEJM* are encouraging, as the results support the potential of nipocalimab in the treatment of pregnant individuals with a history of severe HDFN, helping to establish a path forward for further development in this disease in a larger scale Phase 3 study,” said Kenneth J. Moise Jr., M.D., Professor, Department of Women’s Health and Co-Director, Comprehensive Fetal Care Center at Dell Medical School of the University of Texas at Austin and lead study investigator[b]. “For many patients, severe HDFN has a poor prognosis, and the current standard of care carries with it a high treatment burden, such as repeated IUTs and additional in-utero procedures that require access to specialty care and carry a risk to the life of the fetus. If approved, nipocalimab would be the first non-surgical treatment for pregnancies at high risk of HDFN.”[3]

The multicenter, open-label, single-arm Phase 2 UNITY study assessed intravenous nipocalimab from 14-35 weeks in pregnancies at high risk for recurrent EOS HDFN.[1] The primary endpoint of the study is live birth at ≥32 weeks GA without IUT. Study results showed the primary endpoint was achieved in 54 percent (7/13) of pregnancies versus the 10 percent historical benchmark (95 percent CI, 25.1-80.8; P<0.001).[1] The *NEJM* manuscript includes new data that compares the outcomes of qualifying pregnancies[c] and on-study (UNITY) pregnancies.[1] The comparison revealed that study pregnancies had a higher proportion of live births (92 percent versus 38 percent), fewer participants requiring IUTs (85 percent versus 46 percent), a later median GA at first IUT (27 and 1/7 weeks versus 20 and 4/7 weeks) and a later median GA at delivery (36 4/7 weeks versus 23 and 6/7 weeks).[1] Additionally, among pregnant individuals who joined the study, seven had a fetus that developed hydrops in their most recent qualifying pregnancy, whereas no incidences of hydrops occurred in the study pregnancies.[1]

In the UNITY study, the most frequently reported adverse events were consistent with those common in pregnancy and HDFN.[1] Serious side effects were consistent with HDFN or other pregnancy-related conditions including subchorionic hematoma and premature separation of the placenta.[1] Infections and illnesses in infants of mothers exposed to nipocalimab were consistent with those typically observed in the neonatal and infancy period.[1] No maternal or neonatal/infant deaths occurred in the study.[1] One pregnancy resulted in fetal demise related to a complication of an IUT.[1]

The UNITY study demonstrated positive efficacy and safety results which supports a favorable benefit risk profile for nipocalimab.[1] Thus, the UNITY study results support further clinical development of nipocalimab for the treatment of severe HDFN.[1] The AZALEA Phase 3 pivotal study is currently enrolling pregnant individuals at risk for severe HDFN who have a history of severe HDFN in a prior pregnancy(ies) to further assess the efficacy and safety of nipocalimab.[4] In addition, Johnson & Johnson is conducting a Phase 3 study of nipocalimab in fetal and neonatal alloimmune thrombocytopenia

(FNAIT), which has been considered to be the platelet counterpart of HDFN.[5] FNAIT is an alloimmune disorder of pregnancy that results when the pregnant person's immune system attacks fetal or newborn platelets, resulting in thrombocytopenia and risk of bleeding, which can be life-threatening.[6]

"We are committed to developing non-surgical options that are effective and have a proven safety profile for the treatment of alloantibody-driven maternal-fetal diseases," said Katie Abouzahr, M.D., Vice President, Autoantibody Diseases and Maternal-Fetal Immunology Disease Area Leader, Johnson & Johnson Innovative Medicine. "The data published in the *NEJM* underscore the potential of nipocalimab to address the high unmet medical need in severe HDFN*,* a serious, life-threatening and rare condition in which no other therapies in clinical development exist."

Editor's Notes:

a. Alloimmunized: immune response to foreign antigens upon exposure to genetically different cells or tissues
b. Dr. Kenneth Moise is a paid consultant for Janssen. He has not been compensated for any media work.
c. Most recent qualifying pregnancy: previous HDFN pregnancy that made the participant eligible for the UNITY Phase 2 study

ABOUT THE UNITY STUDY

UNITY (NCT03842189) is a global, multicenter, non-blinded Phase 2 clinical study designed to evaluate the safety, efficacy, pharmacokinetics and pharmacodynamics of nipocalimab for the treatment of pregnant individuals at high risk for early-onset severe (EOS)-HDFN.[7] The study enrolled RhD (D) or Kell (K) alloimmunized pregnant individuals with singleton pregnancies at high risk for EOS-HDFN due to an obstetric history of severe fetal anemia, fetal hydrops, or a stillbirth at ≤24 weeks GA.[1] The primary endpoint was live birth at or after GA of 32 weeks, without a need for an intrauterine transfusion (IUT) throughout the entire pregnancy.[1] Safety was monitored for 24 weeks post-delivery for the 13 maternal individuals enrolled, and up to 96 weeks post-birth for infants. Participants received once-weekly intravenous infusions.[1] The study met the primary endpoint, with 54 percent of pregnant participants who received nipocalimab achieving a live birth at or after 32 weeks GA, without the need for an IUT throughout their entire pregnancy.[1]

ABOUT HDFN

Hemolytic disease of the fetus and newborn (HDFN) is a rare disease (and in its severe form, ultra rare) that arises in pregnancies with maternal-fetal incompatibility in certain red blood cell types.[8] Alloantibodies produced by the maternal immune system against fetal red blood cells cross the placenta during pregnancy and attack fetal red blood cells causing fetal anemia or persist after birth in the neonate to cause neonatal hyperbilirubinemia and anemia.[2] The symptoms of HDFN can range from mild jaundice, to neurotoxic hyperbilirubinemia in the newborn, to life-threatening fetal anemia requiring invasive intervention.[9] The potential for in utero onset at an increasingly earlier GA with increasing risk of severe outcomes may occur with each incompatible pregnancy due to pregnancy-related alloimmunization.[10] Currently no non-surgical interventions are approved for pregnancies at high risk for severe HDFN.[3] Pregnancies affected by severe HDFN may necessitate repeated intrauterine transfusions (IUTs), which are invasive, technically complex surgical procedures performed by specialists at specialized medical centers, and these procedures are associated with an increased rate of fetal mortality and premature birth.[11,12,13] The most difficult to treat cases of HDFN are early onset severe HDFN (EOS-HDFN) that develops at ≤24 weeks gestational age (GA) and results in significant fetal/neonatal morbidity and mortality. According to the *American Journal of Obstetrics and Gynecology*, in the U.S., it is estimated that up to 80 of every 100,000 pregnancies are affected by HDFN each year.[14]

ABOUT NIPOCALIMAB

Nipocalimab is an investigational monoclonal antibody, purposefully designed to bind with high affinity to block FcRn and reduce levels of circulating immunoglobulin G (IgG) antibodies, while preserving immune function without causing broad immunosuppression. This includes autoantibodies and alloantibodies that underlie multiple conditions across three key segments in the autoantibody space including Rare Autoantibody diseases, Maternal-Fetal diseases mediated by maternal alloantibodies and Prevalent Rheumatology.[15,16,17,18,19,20,21,22,23] Blockade of IgG binding to FcRn in the placenta is also believed to prevent transplacental transfer of maternal alloantibodies to the fetus.[24,25]

The U.S. Food and Drug Administration (FDA) and European Medicines Agency (EMA) have granted several key designations to nipocalimab including:

- Fast Track designation in hemolytic disease of the fetus and newborn (HDFN) and warm autoimmune hemolytic anemia (wAIHA) in July 2019, gMG in December 2021 and fetal neonatal alloimmune thrombocytopenia (FNAIT) in March 2024
- Orphan drug status for wAIHA in December 2019, HDFN in June 2020, gMG in February 2021, chronic inflammatory demyelinating polyneuropathy CIDP in October 2021 and FNAIT in December 2023
- Breakthrough Therapy designation for HDFN by the FDA in February 2024
- Orphan medicinal product designation for HDFN by the EMA in October 2019

ABOUT JOHNSON & JOHNSON

At Johnson & Johnson, we believe health is everything. Our strength in healthcare innovation empowers us to build a world where complex diseases are prevented, treated, and cured, where treatments are smarter and less invasive, and solutions are personal. Through our expertise in Innovative Medicine and MedTech, we are uniquely positioned to innovate across the full spectrum of healthcare solutions today to deliver the breakthroughs of tomorrow, and profoundly impact health for humanity.

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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 nipocalimab. 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 & Development, LLC, Janssen Biotech, Inc. 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; manufacturing difficulties and delays; competition, including technological advances, new products and patents attained by competitors; challenges to patents; product efficacy or safety concerns resulting in product recalls or regulatory action; 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 December 31, 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 Research & Development, LLC, Janssen Biotech, Inc. nor Johnson & Johnson undertakes to update any forward-looking statement as a result of new information or future events or developments.

Source: Johnson & Johnson

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