Beyfortus® (nirsevimab) Phase 2b study

Beyfortus® significantly reduced the risk of medically attended respiratory syncytial virus (RSV) lower respiratory tract infections (LRTIs) in healthy pre-term infants (gestational age [GA] ≥ 29 to <35 weeks) vs. placebo. [1,2]

Study design and baseline characteristics

Randomized, double-blind, placebo-controlled multicenter phase 2b trial [1,2]

Healthy, very and moderately pre-term infants
(GA ≥29 to <35 weeks) aged ≤1 year and entering their first RSV season

N=1453
Randomized 2:1 during a 2 month period immediately before the RSV season

Single intramuscular dose of 50 mg Beyfortus® irrespective of weight
(n=969)

Single intramuscular dose of placebo
(n=484)

Follow up
Participants were monitored for medically attended respiratory illnesses for 150 days after dosing: by telephone every 2 weeks and during trial site visits on days 8, 31, 91, and 151, as well as on day 361

Primary endpoint
Medically attended LRTI (inpatient or outpatient) caused by reverse transcription polymerase chain reaction (RT-PCR)-confirmed RSV through 150 days post injection (intention-to-treat [ITT] population)*

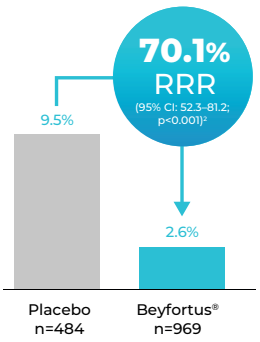
Secondary efficacy endpoint
Hospitalization for medically attended RSV LRTI through 150 days post injection

Baseline characteristics at randomization: [1]

- GA ≥ 29 to < 32 weeks: 20.3%
- GA ≥ 32 to < 35 weeks: 79.7%
- Weighed < 5 kg: 59.5%
- Weighed < 2.5 kg: 17.0%
- ≤ 1.0 month of age: 17.3%
- > 1.0 to ≤ 3.0 months: 35.9%
- > 3.0 months to ≤ 6.0 months: 32.6%
- > 6.0 months: 14.2%

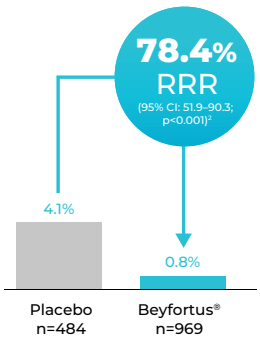
Primary endpoint

Incidence of medical attended RSV LRTI (inpatient or outpatient) through 150 days post injection



Secondary endpoint

Incidence of hospitalization for medically attended RSV LRTI through 150 days post injection



Adapted from Griffin MP et al. 2020

The types and frequencies of adverse reactions were similar in Beyfortus® and placebo groups [2]

RRR, relative risk reduction

References: 1. Beyfortus. EU summary of Product Characteristic (SmPC). **2.** Griffin MP et al. N Engl J Med 2020; 383(5): 415-425 & Protocol.

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▼This medicinal product is subject to additional monitoring. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse reactions. **NAME OF THE MEDICINAL PRODUCT** Beyfortus 50 mg solution for injection in pre filled syringe. Beyfortus 100 mg solution for injection in pre filled syringe **QUALITATIVE AND QUANTITATIVE COMPOSITION** Beyfortus 50 mg solution for injection in pre filled syringe: Each pre filled syringe contains 50 mg of nirsevimab in 0.5 mL (100 mg/mL). Beyfortus 100 mg solution for injection in pre filled syringe :Each pre filled syringe contains 100 mg of nirsevimab in 1 mL (100 mg/mL). Nirsevimab is a human immunoglobulin G1 kappa (IgG1κ) monoclonal antibody produced in Chinese hamster ovary (CHO) cells by recombinant DNA technology. For the full list of excipients, see section 6.1. **PHARMACEUTICAL FORM** Solution for injection (injection). Clear to opalescent, colourless to yellow, pH 6.0 solution. **THERAPEUTIC INDICATIONS** Beyfortus is indicated for the prevention of Respiratory Syncytial Virus (RSV) lower respiratory tract disease in neonates and infants during their first RSV season. Beyfortus should be used in accordance with official recommendations. **POSOLOGY AND METHOD OF ADMINISTRATION** *Posology* The recommended dose is a single dose of 50 mg administered intramuscularly for infants with body weight <5 kg and a single dose of 100 mg administered intramuscularly for infants with body weight ≥5 kg. Beyfortus should be administered prior to commencement of the RSV season, or from birth for infants born during the RSV season. Dosing in infants with a body weight from 1.0 kg to <1.6 kg is based on extrapolation, no clinical data are available. Exposure in infants <1 kg is anticipated to yield higher exposures than in those weighing more. The benefits and risks of nirsevimab use in infants <1 kg should be carefully considered. There are limited data available in extremely preterm infants (Gestational Age [GA] <29 weeks) less than 8 weeks of age. No clinical data available in infants with a postmenstrual age (gestational age at birth plus chronological age) of less than 32 weeks (see section 5.1). For infants undergoing cardiac surgery with cardiopulmonary bypass, an additional dose may be administered as soon as the infant is stable after surgery to ensure adequate nirsevimab serum levels. If within 90 days after receiving the first dose of Beyfortus, the additional dose should be 50 mg or 100 mg according to body weight. If more than 90 days have elapsed since the first dose, the additional dose could be a single dose of 50 mg regardless of body weight, to cover the remainder of the RSV season. There are no safety and efficacy data available on repeat dosing. The safety and efficacy of nirsevimab in children aged 2 to 18 years have not been established. No data are available. *Method of administration* Beyfortus is for intramuscular injection only. It is administered intramuscularly, preferably in the anterolateral aspect of the thigh. The gluteal muscle should not be used routinely as an injection site because of the risk of damage to the sciatic nerve. *Instructions for administration* Beyfortus is available in a 50 mg and a 100 mg pre-filled syringe. Check the labels on the carton and pre filled syringe to make sure you have selected the correct 50 mg or 100 mg presentation as required. Beyfortus 50 mg (50 mg/0.5 mL) pre filled syringe with a purple plunger rod. Beyfortus 100 mg (100 mg/1 mL) pre filled syringe with a light blue plunger rod. Step 1: Holding the Luer lock in one hand (avoid holding the plunger rod or syringe body), unscrew the syringe cap by twisting it counter clockwise with the other hand. Step 2: Attach a Luer lock needle to the pre filled syringe by gently twisting the needle clockwise onto the pre filled syringe until slight resistance is felt. Step 3: Hold the syringe body with one hand and carefully pull the needle cover straight off with the other hand. Do not hold the plunger rod while removing the needle cover or the rubber stopper may move. Do not touch the needle or let it touch any surface. Do not recap the needle or detach it from the syringe. Step 4: Administer the entire contents of the pre filled syringe as an intramuscular injection, preferably in the anterolateral aspect of the thigh. The gluteal muscle should not be used routinely as an injection site because of the risk of damage to the sciatic nerve. **CONTRAINDICATIONS** Hypersensitivity to the active substance or to any of the excipients listed in section 6.1. **UNDESIRABLE EFFECTS** Summary of the safety profile The most frequent adverse reaction was rash (0.7%) occurring within 14 days post dose. The majority of cases were mild to moderate in intensity. Additionally, pyrexia and injection site reactions were reported at a rate of 0.5% and 0.3% within 7 days post dose, respectively. Injection site reactions were non-serious. *List of adverse reactions* The list below presents the adverse reactions reported in 2 966 term and preterm infants (GA ≥29 weeks) who received nirsevimab in clinical trials. Adverse reactions reported from controlled clinical trials are classified by MedDRA System Organ Class (SOC). Within each SOC, preferred terms are arranged by decreasing frequency and then by decreasing seriousness. Frequencies of occurrence of adverse reactions are defined as: very common (≥1/10); common (≥1/100 to <1/10); uncommon (≥1/1 000 to <1/100); rare (≥1/10 000 to <1/1 000); very rare (<1/10 000) and not known (cannot be estimated from available data). Skin and subcutaneous tissue disorders : Uncommon – Rasha aRash was defined by the following grouped preferred terms: rash, rash maculo-papular, rash macular. General disorders and administration site conditions Uncommon - Injection site reactionb, Pyrexia b Injection site reaction was defined by the following grouped preferred terms: injection site reaction, injection site pain, injection site induration, injection site oedema, injection site swelling *Infants at higher risk for severe RSV disease* Safety was also evaluated in MEDLEY in 918 infants at higher risk for severe RSV disease, including 196 extremely preterm infants (GA <29 weeks) and 306 infants with chronic lung disease of prematurity, or haemodynamically significant congenital heart disease entering their first RSV season, who received nirsevimab (614) or palivizumab (304). The safety profile was comparable to the palivizumab comparator and consistent with the safety profile in term and preterm infants GA ≥29 weeks (D5290C00003 and MELODY). *Immunogenicity* As with all therapeutic proteins, there is potential for immunogenicity. Reporting of suspected adverse reactions Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via: Belgium: Federal Agency for Medicines and Health Products – Vigilance Division – PO Box 97 – 1000 Brussels Madou – Website: www.notifieruneffetindesirable.be – E-mail: adr@fagg-afmps.be Luxembourg: Centre Régional de Pharmacovigilance de Nancy ou Division de la pharmacie et des médicaments de la Direction de la santé – Website: www.guichet.lu/pharmacovigilance MARKETING AUTHORISATION HOLDER Sanofi Winthrop Industrie, 82 avenue Raspail, 94250 Gentilly, France MARKETING AUTHORISATION NUMBER EU/1/22/1689/001 - 50 mg, 1 single use pre filled syringe EU/1/22/1689/002 - 50 mg, 1 single use pre filled syringe with needles EU/1/22/1689/003 - 50 mg, 5 single use pre-filled syringe EU/1/22/1689/004 - 100 mg, 1 single use pre filled syringe EU/1/22/1689/005 - 100 mg, 1 single use pre filled syringe with needles EU/1/22/1689/006 - 100 mg, 5 single use pre-filled syringe DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION Date of first authorisation: 31 October 2022 DATE OF REVISION OF THE TEXT 04/2024 Detailed information on this medicinal product is available on the website of the European Medicines Agency http://www.ema.europa.eu: