U.S. FOOD & DRUG ADMINISTRATION

Vaccines and Related Biological Products Advisory Committee Meeting

May 18, 2023

Biologics License Application for Respiratory Syncytial Virus Vaccine (ABRYSVO)

Immunization During Pregnancy to Prevent RSV Lower Respiratory Tract Disease [LRTD] and Severe RSV LRTD in Infants

Applicant: Pfizer Inc.

Goutam Sen, Ph.D.
FDA/CBER
Office of Vaccines Research and Review
Division of Vaccines and Related Products Applications

Outline

- Respiratory Syncytial Virus (RSV) disease
- Introduction (Vaccine composition, dosage/administration and proposed indication)
- Overview of the ABRYSVO Biological License Application (BLA) Clinical Package
- Overview of Today's Agenda
- Questions for VRBPAC

Respiratory Syncytial Virus Disease

- RSV is the leading cause of bronchiolitis and viral pneumonia in infants worldwide. The peak of hospitalization due to RSV disease in infants occurs at 1 to 2 months after birth.

- Palivizumab, a mAb is approved by FDA for the prevention of serious lower respiratory tract disease (LRTD) caused by RSV in certain pediatric patients who are at high risk of RSV disease.

- Nirsevimab, a prefusion F-specific mAb is under review at FDA with the Applicant's proposed indication for the prevention of RSV LRTD in newborns and infants entering or during their first RSV season and for children up to 24 months of age who remain vulnerable to severe RSV disease through their second RSV season.

- GSK's RSV vaccine AREXVY was recently approved by FDA for prevention of LRTD caused by RSV in individuals 60 years of age and older.

Respiratory Syncytial Virus Disease (Cont)

- Among infants <6 months of age, RSV is associated with around 1.4 million hospital admissions, and around 13,000 in-hospital deaths globally each year.
- In the US, RSV is the leading cause of infant hospitalization, with approximately 1% to 3% of all children in the first 12 months of life hospitalized due to RSV lower respiratory tract disease.
- Treatment of RSV disease for infants consists primarily of supportive care.
- There is no vaccine available to prevent RSV disease in infants.

RSVPreF Vaccine (ABRYSVO)

Vaccine composition	Respiratory syncytial virus (RSV) recombinant stabilized prefusion F (preF) proteins • 60 µg RSVpreF from RSV A • 60 µg RSVpreF from RSV B
Dosage and administration	A single 0.5 mL dose administered intramuscularly during the second and third trimester of pregnancy (24 through 36 weeks gestation)
Applicant's proposed indication	Prevention of LRTD and severe LRTD caused by RSV in infants from birth through 6 months of age by active immunization of pregnant individuals

ABRYSVO Clinical Studies

The clinical package includes:

- Safety, immunogenicity and efficacy data from an ongoing Phase 3 study (C3671008) conducted globally in the Northern and Southern Hemispheres (18 countries) with 7,357 pregnant participants and 7,128 infants

- Additional safety data from approximately 3,638 participants (1248 ABRYSVO recipients) across four clinical studies conducted in the US, Argentina, Chile and South Africa (C3671001, C3671003, C3671004, and C3671014)

Overview of Today's Agenda

- FDA Introduction
  - Welcome (5 Min)
    David C. Kaslow, M.D., Director, OVRR
  - Introduction to the Biologics License Application (15 Min)
    Goutam Sen, Ph.D., Review Committee Chair, DVRPA, OVRR

    Q & A: (5 Min)

- Center for Disease Control and Prevention
  - RSV Virology, Strain Variation, and Surveillance Measures
    Natalie Thornburg, Ph.D. (15 Min)
  - RSV Epidemiology and Disease Burden in Infants from birth through 6 months of age
    Katherine E. Fleming-Dutra, M.D. (15 Min)

    Q & A: (10 Min)

Overview of Today's Agenda (Cont)

- Clinical Considerations
  - Durability of Naturally Acquired Immunity and Susceptibility to Repeated RSV Infections
    Helen Chu, M.D., M.P.H.; Associate Professor, University of Washington (15 Min)

    Q & A: (5 Min)
- Break (10 Min)
- Sponsor Presentations
  - Safety and Efficacy of Bivalent RSV Prefusion F Vaccine for Maternal Immunization to Protect Infants (50 min)
    William C. Gruber, M.D., FAAP, FIDSA, Senior Vice President, Vaccine Clinical Research and Development, Pfizer Inc.
    Eric A. Simoes, M.B.B.S., DCH, M.D., University of Colorado School of Medicine
    Iona Munjal, M.D., Senior Vice Director, Vaccine Clinical Research and Development, Pfizer Inc.
    Jamie Wilkins, PharmD., Senior Director, Head-Risk Management Center of Excellence, Worldwide Safety, Pfizer Inc.

    Q & A: (10 Min)

Overview of Today's Agenda (Cont)

- FDA Presentation
  - Review of Efficacy and Safety of Respiratory Syncytial Virus Vaccine (ABRYSVO): Immunization During the Second or Third Trimester of Pregnancy (24-36 weeks gestational age) to Prevent RSV Lower Respiratory Tract Disease [LRTD] and Severe RSV LRTD in Infants, From Birth Through 6 Months of Age (50 Min)
    Yugenia Hong-Nguyen, M.D., Medical Officer, DVRPA, OVRR

    Q & A: (10 Min)
- Lunch (45 Min)
- Open Public Hearing (60 Min)
- Additional Q& A for CDC, FDA, Sponsor and Other Presenters (60 Min)
- Break (15 Min)
- Committee Discussion and Voting (120 Min)
- Meeting Adjourned

Voting Questions for VRBPAC

1. Are the available data adequate to support the effectiveness of immunization with ABRYSVO during the second or third trimester of pregnancy (24-36 weeks gestational age) to prevent RSV lower respiratory tract disease [LRTD] and severe RSV LRTD in infants, from birth through 6 months of age?

   Please vote "Yes" or "No" or "Abstain"

2. Are the available data adequate to support the safety of immunization with ABRYSVO during the second or third trimester of pregnancy (24-36 weeks gestational age) to prevent RSV LRTD and severe RSV LRTD in infants, from birth through 6 months of age?

   Please vote "Yes" or "No" or "Abstain"

Thank you!