▼This vaccine is subject to additional monitoring in Australia. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse events at www.tga.gov.au/reporting-problems.

AUSTRALIAN PRODUCT INFORMATION

mRESVIA (respiratory syncytial virus F protein mRNA (nucleoside modified)) VACCINE

1 NAME OF THE MEDICINE

Respiratory syncytial virus F protein mRNA (nucleoside modified)

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Single-dose pre-filled syringe that contains one dose of 0.5 mL.

One dose (0.5 mL) contains 50 micrograms of respiratory syncytial virus F protein mRNA (nucleoside modified).

For the full list of excipients, see Section 6.1 List of excipients.

3 PHARMACEUTICAL FORM

Suspension for injection.

White to off-white suspension.

4 CLINICAL PARTICULARS

4.1 THERAPEUTIC INDICATIONS

mRESVIA is a vaccine indicated for active immunisation for the prevention of lower respiratory tract disease (LRTD) caused by respiratory syncytial virus (RSV) in adults 60 years of age and older.

mRESVIA should be used in accordance with official recommendations.

4.2 DOSE AND METHOD OF ADMINISTRATION

Dose

The recommended dose of mRESVIA is one single dose of 50 micrograms (0.5 mL) as an intramuscular (IM) injection.

The need for revaccination has not been established.

Paediatric population

mRESVIA is not to be used in people under the age of 60 years. The safety, immunogenicity and efficacy of mRESVIA in children, adolescents and young adults less than 18 years of age have not been established.

Method of administration

The vaccine should be prepared and administered by a trained healthcare professional using aseptic techniques to ensure sterility of the suspension.

Preparation for Administration

mRESVIA is supplied as a pre-filled syringe that is shipped frozen. Thaw each pre-filled syringe before use, either in the refrigerator or at room temperature, following the instructions in Table 1. After thawing, do not refreeze.

Table 1. Thawing conditions and times based on configuration and temperature

Configuration	Thaw instructions and durations				
	Thaw in refrigerator	**Thaw duration* (minutes)**		**Thaw at room temperature**	**Thaw duration (minutes)**
Pre-filled syringe in 1 pack	2°C to 8°C	60	**OR**	15°C to 25°C	45
Carton of 10	2°C to 8°C	155		15°C to 25°C	140

*Includes duration for equilibration rounded off to the nearest 5-minute interval.

If mRESVIA is thawed in the refrigerator, let each pre-filled syringe stand at room temperature for between 10 and 20 minutes before administering.

If mRESVIA is thawed at room temperature, the pre-filled syringe is ready to administer. Pre-filled syringes should not be returned to the refrigerator after being thawed at room temperature.

Do not dilute the product.

Do not shake the pre-filled syringe before use.

Parenteral drug products should be inspected visually for particulate matter and discolouration prior to administration, whenever suspension and container permit. mRESVIA is a white to off-white suspension. Inspect the suspension visually and do not administer if the suspension is discoloured and/or contains other particulate matter.

mRESVIA does not contain a preservative, is for single use in one patient only and should be administered immediately after uncapping.

Administration

For intramuscular injection only.

Do not administer this vaccine intravenously.

The preferred site is the deltoid muscle. mRESVIA should not be combined through reconstitution or mixed with any other vaccine.

- Open the plastic blister and remove the pre-filled syringe.
- Use a sterile needle of the appropriate size for intramuscular injection.
- With the tip cap upright, remove tip cap from pre-filled syringe by twisting counter-clockwise until tip cap releases. Remove tip cap in a slow, steady motion. Avoid pulling tip cap while twisting.
- Attach the needle by twisting in a clockwise direction until the needle fits securely on the pre-filled syringe.
- Administer the entire dose intramuscularly.
- Discard the pre-filled syringe after use.

For instructions on disposal of the vaccine, see Section 6.6 Special Precautions for Disposal.

4.3 CONTRAINDICATIONS

Hypersensitivity to the active substance or to any of the excipients listed in Section 6.1 List of Excipients.

4.4 SPECIAL WARNINGS AND PRECAUTIONS FOR USE

Hypersensitivity and anaphylaxis

Appropriate medical treatment and supervision should always be readily available in case of a severe hypersensitivity reaction, including anaphylaxis, following administration of the vaccine.

Syncope

Syncope (fainting) may occur in association with administration of injectable vaccines, including mRESVIA. It is important that precautions are in place to avoid injury from fainting.

Concurrent illness

Vaccination should be postponed in individuals suffering from moderate to severe acute infection or febrile illness, unless, in the opinion of the physician, withholding mRESVIA entails a greater risk.

Thrombocytopenia and coagulation disorders

As with other intramuscular injections, the vaccine should be given with caution in individuals receiving anticoagulant therapy or those with thrombocytopenia or any coagulation disorder (such

as haemophilia) because bleeding or bruising may occur following an intramuscular administration in these individuals.

Immunocompromised individuals

The efficacy and safety of the vaccine have not been assessed in immunocompromised individuals, including those receiving immunosuppressant therapy. These individuals may have a diminished immune response to mRESVIA.

Duration of protection

The duration of protection afforded by the vaccine is unknown.

Limitations of vaccine effectiveness

As with all vaccines, vaccination with mRESVIA may not protect all vaccine recipients.

Excipients with known effect

Sodium: This vaccine contains less than 1 mmol sodium (23 mg) per 0.5 mL dose, that is to say, essentially 'sodium-free'.

Use in the elderly

There are no special precautions for use in the elderly.

Paediatric use

Do not use in people <60 years of age. The safety and efficacy of mRESVIA in children, adolescents and younger adults have not yet been established.

Use in pregnancy

Do not use in people who are pregnant. The safety and efficacy have not been established for use in pregnancy.

Effects on laboratory tests

No data available.

4.5 INTERACTIONS WITH OTHER MEDICINES AND OTHER FORMS OF INTERACTIONS

Data are currently not available for concomitant administration of mRESVIA with other vaccines.

4.6 FERTILITY, PREGNANCY AND LACTATION

mRESVIA is only indicated for use in adults 60 years of age and older.

Effects on fertility

No human data are available.

In a combined fertility and developmental toxicity study, mRESVIA was administered to female rats at 96 µg/dose by the intramuscular route on four occasions: 28 and 14 days prior to mating, and on gestation days 1 and 13. There were no vaccine-related adverse effects on female fertility, pregnancy, embryofetal or postnatal development. Anti-RSV preF protein antibodies were detected in maternal animals, fetuses and pups.

Impairment of male fertility has not been tested in animals.

Use in pregnancy

Pregnancy Category B1

mRESVIA is not recommended in women of childbearing potential or women who are or may be pregnant. The safety, immunogenicity and efficacy of mRESVIA in pregnancy have not been established.

A combined fertility and development toxicity study in rats did not show vaccine-related harmful effects on embryofetal development (see Effects on Fertility).

Use in lactation

mRESVIA is not recommended in women who are lactating.

No human data are available.

In a combined fertility and developmental toxicity study in rats (see Effects on Fertility), anti-RSV antibodies were present in fetal serum samples immediately after birth through 21 days of lactation and in maternal milk samples, demonstrating effective placental and lactation transfer of anti-RSV antibodies to offspring when females are immunized prior to and after mating.

4.7 EFFECTS ON ABILITY TO DRIVE AND USE MACHINES

No studies on the effects of mRESVIA on the ability to drive or operate machinery have been performed.

4.8 ADVERSE EFFECTS (UNDESIRABLE EFFECTS)

The safety profile presented below is based on data generated in a global placebo-controlled Phase 2/3 clinical study (mRNA-1345-P301) conducted in 22 countries worldwide including Australia, in which 18,245 adult participants aged ≥60 years received one injection of 50 microgram mRESVIA. Demographic characteristics were similar between participants who received mRESVIA and those who received placebo (see Section 5.1 Pharmacodynamic properties, Clinical Trials).

The most frequently reported solicited local adverse reaction was injection site pain, which was reported for 55.9% of participants in the mRESVIA group versus 13.8% of participants in the placebo group. The most frequently reported solicited systemic adverse reactions were fatigue (30.8% in the mRESVIA group versus 20.0% in the placebo group), headache (26.7% versus 18.8%), myalgia (25.6% versus 14.4%) and arthralgia (21.7% versus 14.0%). The onset of most solicited local and systemic

adverse reactions was within 1 to 2 days after injection and most solicited adverse reactions resolved within 1 to 2 days after onset.

The reported number and percentage of the solicited local and systemic adverse reactions of any grade and Grade 3 or higher are presented in Table 2.

Table 1. Percentage of participants with solicited local and systemic adverse reactions of any Grade and Grade 3 and higher starting within 7 days* of dosing.

	mRESVIA 50 mcg (N= 18,174) %	Placebo† (N= 18,102) %
Local Adverse Reactions‡		
Injection Site Pain, Any Grade	55.9	13.8
Grade 3§	1.7	1.1
Erythema (Redness), Any Grade	2.0	0.6
Grade 3, >100 mm/>10 cm	0.6	0.3
Swelling (Hardness), Any Grade	3.7	0.3
Grade 3, >100 mm/>10 cm	0.9	<0.1
Axillary (underarm) swelling or tenderness, Any Grade	15.2	6.1
Grade 3§	0.8	0.6
Systemic Adverse Reactions		
Fever, Any Grade	2.8	1.3
≥Grade 3, ≥39.0°C/102.1°F	0.6	0.4
Headache, Any Grade	26.7	18.8
Grade 3β	1.5	1.2
Fatigue, Any Grade	30.8	20.0
Grade 3à	1.7	1.2
Myalgia, Any Grade	25.6	14.4
Grade 3à	1.4	0.9
Arthralgia, Any Grade	21.7	14.0
Grade 3à	1.1	0.7
Nausea/vomiting, Any Grade	7.0	5.3
Grade 3è	0.4	0.4
Chills, Any Grade	11.6	6.8
Grade 3ð	0.6	0.4

Abbreviations: Any = Grade 1 or above; Percentages were based on the number of exposed participants who submitted any data for the event.

* 7 days included day of vaccination and the subsequent 6 days. Events and use of antipyretic or pain medication were collected in the electronic diary (e-diary).

† Placebo is 0.9% sodium chloride (normal saline) injection.

‡ No Grade 4 Solicited Local Adverse Reactions were reported.

§ Grade 3 injection site pain, axillary (underarm) swelling or tenderness: Defined as any use of prescription pain reliever; prevents daily activity.

β Grade 3 headache: Defined as Significant; any use of prescription pain reliever or prevents daily activity.

à Grade 3 fatigue, myalgia, and arthralgia: Defined as Significant; prevents daily activity.

è Grade 3 nausea/vomiting: Defined as prevents daily activity; requires outpatient intravenous hydration.

ð Grade 3 chills: Defined as prevents daily activity and requires medical intervention.

Tabulated list of adverse reactions

Adverse reactions reported are listed according to the following frequency convention:

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)

Within each frequency grouping, adverse reactions are presented in order of decreasing seriousness (Table 3).

Table 3. Adverse reactions following administration of mRESVIA from clinical trials in individuals 60 years of age and older.

MedDRA system organ class	Frequency	Adverse reaction(s)
Blood and lymphatic system disorders	Very common	Axillary (underarm) swelling
Immune system disorders	Uncommon	Hypersensitivity
Nervous system disorders	Very common	Headache
	Uncommon	Dizziness
	Rare	Peripheral facial nerve paralysis (e.g., Bell's palsy)†
Gastrointestinal disorders	Common	Nausea/vomiting
Skin and subcutaneous tissue disorders	Rare	Urticaria‡
Musculoskeletal and connective tissue disorders	Very common	Myalgia Arthralgia
General disorders and administration site conditions	Very common	Injection site pain Fatigue Chills
	Common	Pyrexia Injection site erythema Injection site swelling/induration
	Rare	Injection site pruritis

† One participant in the vaccine group had a serious adverse event of facial paralysis with onset on Day 5 assessed by the investigator as related to injection. Within the 42-day risk window following injection, Bell's palsy and/or facial paralysis was reported by 2 participants in the mRESVIA group and 2 participants in the placebo group. All 4 of these participants had risk factors for Bell's palsy.
‡ Urticaria has been observed with either acute onset (within a few days after vaccination) or delayed onset (up to approximately two weeks after vaccination) and may be acute or chronic (≥ 6 weeks) in duration.

Reporting suspected adverse effects

Reporting suspected adverse reactions after registration 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 at www.tga.gov.au/reporting-problems.

4.9 OVERDOSE

No case of overdose has been reported.

In case of overdose, it is recommended that the patient be monitored for any signs or symptoms of adverse reactions or effects and appropriate symptomatic treatment instituted immediately.

For information on the management of overdose, contact the Poisons Information Centre on 13 11 26 (Australia).

5 PHARMACOLOGICAL PROPERTIES

5.1 PHARMACODYNAMIC PROPERTIES

Pharmacotherapeutic group: respiratory syncytial virus vaccines, ATC code: J07BX05

Mechanism of action

mRESVIA is a lipid nanoparticle-encapsulated mRNA-based vaccine encoding the membrane-anchored RSV F glycoprotein and stabilised in the prefusion conformation through structural engineering. The F protein exists in two primary conformational states, prefusion and post-fusion. The prefusion state facilitates entry into the host cell through a conformational change to the post-fusion state.

mRESVIA stimulates innate immune responses, which activates B-cell and T-cell responses from the adaptive immune system, resulting in secretion of antibodies that neutralise RSV-A and RSV-B subtypes and induction of RSV F-specific Th1-biased CD4+ T cells, as well as CD8+ T cells.

Clinical trials

Study mRNA-1345-P301

Study mRNA-1345-P301 is an ongoing Phase 2/3, randomised, observer-blind, placebo-controlled, case-driven, pivotal study that was conducted in 22 countries, including Australia. This study evaluated the safety and efficacy of a single dose of mRESVIA vaccine (50 micrograms) to prevent RSV-LRTD in adults ≥60 years with or without underlying medical conditions for up to a year after single vaccination with mRESVIA. Participants were randomised in a 1:1 ratio to mRESVIA or placebo. Randomisation was stratified by age (60 to 74 years; ≥75 years), and comorbidities that increase the risk of severe LRTD, defined as congestive heart failure (CHF) and/or chronic obstructive pulmonary disease (COPD) at screening.

The primary efficacy analysis population (referred to as the per-protocol efficacy set), included 35,064 participants who received either mRESVIA (n=17,561) or placebo (n=17,503) with a data cut-off of 30 November 2022. Most participants were White (63.4%); 12.2% of participants were Black or African American 8.7% were Asian, 5.1% were American Indian or Alaska Native, and 10.6% reported 'Other' (i.e., Native Hawaiian or other Pacific Islander, other, not reported or multiracial). A total of 34.7% of participants were Hispanic or Latino. Treatment groups were balanced according to race and ethnicity. Risk factors were balanced between treatment groups.

There were approximately the same number of male and female participants (male 51%; female 49%). The median age of participants was 67.0 years (range: 60 to 96 years), with 63.5% of participants between 60-69 years, 30.9% of participants between 70 and 79 years and 5.6% of participants ≥80 years.

There were no notable differences in demographics or pre-existing medical conditions between participants who received mRESVIA and those who received placebo. A total of 29.5% of participants had one or more comorbidity of interest (chronic cardiopulmonary conditions, including CHF, COPD, asthma and chronic respiratory conditions as well as diabetes, advanced liver, and advanced kidney disease) and a total of 21.7% scored "vulnerable" or "frail" according to Edmonton Frail Scale. A total of 7.0% had protocol-defined LRTD risk factors (CHF and/or COPD).

Exclusion criteria included history of myocarditis, pericarditis, or myopericarditis within 2 months prior to screening; autoimmune conditions requiring systemic immunosuppressants (stable HIV positive participants were permitted); history of serious reaction to any prior vaccination. Individuals were not eligible for inclusion in the per protocol efficacy set if they received any other vaccine within 28 days before or after administration of the study injection.

The primary efficacy endpoints were the prevention of a first episode of RSV-associated lower respiratory tract disease (RSV-LRTD) with ≥2 or ≥3 signs/symptoms between 14 days and 12 months post-injection. RSV-LRTD was defined based on the following criteria: the participant must have had RT-PCR-confirmed RSV infection and radiologic evidence of pneumonia or experienced new or worsening of at least 2 or more (or 3 or more) of the following signs/symptoms, lasting for at least 24 hours: shortness of breath, cough and/or fever (≥ 37.8°C [100.0°F]), wheezing and/or rales and/or rhonchi, sputum production, tachypnoea (≥ 20 breaths per minute or increase of ≥ 2 breaths per minute from baseline measurement in those who have baseline tachypnoea), hypoxemia (new oxygen saturation ≤ 93% or new or increasing use of supplemental oxygen), pleuritic chest pain. If signs/symptoms could not be captured, radiologic evidence of pneumonia with RT-PCR-confirmed RSV infection was also counted as RSV-LRTD.

The primary efficacy endpoints have been met (the lower bound of the alpha-adjusted confidence interval [CI] of the vaccine efficacy [VE] was >20%) for VE against RSV-LRTD as defined by 2 or more signs/symptoms or 3 or more signs/symptoms. These analyses were performed after a median of 3.7 months of follow-up (range 15 to 379 days). An additional analysis of efficacy was performed after a median of 8.6 months of follow-up (range 15 to 530 days) and met the same criterion as defined in the primary analysis for the prevention of RSV-LRTD (lower bound of the 95% CI of the VE was >20%) (Table 4).

Table 4. Vaccine efficacy of mRESVIA to prevent first episode of protocol-defined RSV-LRTD (per-protocol efficacy set).

Primary analyses **3.7 months median follow-up**	**mRESVIA (N=17,561) n (%)**	**Placebo (N=17,503) n (%)**	**Vaccine Efficacy* Based on Hazard Ratio (%) (% CI)†**

RSV-LRTD With 2 or More Signs/Symptoms	15 (0.09)	70 (0.40)	78.7 (62.8, 87.9)
RSV-LRTD With 3 or More Signs/Symptoms	5 (0.03)	26 (0.15)	80.9 (50.1, 92.7)
Additional analyses 8.6 months median follow-up	**mRESVIA (N=18,074) n (%)**	**Placebo (N=18,010) n (%)**	**Vaccine Efficacy* Based on Hazard Ratio (%) (% CI)‡**
RSV-LRTD With 2 or More Signs/Symptoms	48 (0.27)	127 (0.71)	62.5 (47.7, 73.1)
RSV-LRTD With 3 or More Signs/Symptoms	20 (0.11)	51 (0.28)	61.1 (34.7, 76.8)

CI=Confidence Interval. Stratification factors at randomisation are age group (60 to 74 years or >= 75 years) and LRTD risk (present or absent).

* Vaccine efficacy (VE) is defined as 100% x (1 - hazard ratio (mRESVIA vs. placebo)). The CI for VE is based on a stratified Cox proportional hazard model with Efron's method of tie handling and with the treatment group as a fixed effect, adjusting for stratification factors at randomisation.

† For primary analysis for RSV-LRTD with 2 or more symptoms, 95.04% CI where the alpha value of 4.96% was derived from the Lan-DeMets approximation to the Pocock stopping boundary with an information fraction of 0.99 (85 out of total of 86 cases). For primary analysis for RSV-LRTD with 3 or more symptoms, 95.10% CI where the alpha value of 4.90% was derived from the Lan-DeMets approximation to the Pocock stopping boundary with an information fraction of 0.97 (31 out of total of 32 cases).

‡ For additional analyses for RSV-LRTD with 2 or more and 3 or more symptoms, 95% CI.

In the primary analysis of efficacy (3.7 months median follow-up), first episode of RSV-LRTD by RSV subtype was reported in a total of 85 cases of RSV-LRTD with ≥2 signs/symptoms and 31 cases of RSV-LRTD with ≥3 signs/symptoms. VE for RSV-LRTD with ≥2 signs/symptoms against RSV-A was 82.4% (95% CI: 62.6, 91.7) and RSV-B was 72.1% (95% CI: 35.5, 87.9). The lower bound of the 95% confidence interval of the VE for both RSV subtypes exceeded 20%.

VE for RSV-LRTD with ≥3 signs/symptoms against RSV -A was 80.2% (95% CI: 31.6, 94.3) and RSV-B was 81.9% (95% CI: 18.4, 96.0). The lower bound of the 95% CI of the VE against RSV-A was >20%; the relatively small number of RSV-B cases resulted in a wide confidence interval that crossed zero. No participants with RSV-LRTD tested positive for both RSV-A and RSV-B concurrently.

VE point estimates for subgroup analyses by age, comorbidity and frailty were generally similar to the VE point estimates for the overall PPE Set for that endpoint, see Table 5.

Table 5. Vaccine Efficacy of mRESVIA to prevent first episode of RSV-LRTD with two or more signs/symptoms by subgroup (per-protocol efficacy set)

3.7month median follow up **Subgroup**	**mRESVIA Cases, n/N***	**Placebo Cases, n/N***	**VE, % (95% CI)†**
Overall	15/17,561	70/17,503	78.7 (62.8, 87.9)
Age group			
60 to 69 years	13/11,158	42/11,113	69.4 (43.0, 83.6)
70 to 79 years	1/5,436	27/5,408	96.3 (72.6, 99.5)
≥80 years	1/967	1/982	NE (NE, NE)#
Comorbidities‡			
None (0)	10/12,338	44/12,396	77.4 (55.1, 88.6)
One or more (≥1)	5/5,223	26/5,107	81.0 (50.6, 92.7)
Frailty status§			
Fit (0-3)	14/13,340	56/13,199	75.3 (55.6, 86.2)
Vulnerable/Frailty (≥4)	0/2,785	5/2,842	100.0 (NE, 100.0)
8.6-month median follow up			
Overall	48/18,074	127/18,010	62.5 (47.7, 73.1)
Age group			
60 to 69 years	32/11,193	77/11,146	58.8 (37.8, 72.7)
70 to 79 years	10/5,455	45/5,431	78.0 (56.3, 88.9)
≥ 80 years	6/1,426	5/1,433	-20.0 (-293.3, 63.4)¶
Comorbidities‡			
None (0)	31/12,709	76/12,766	59.5 (38.5, 73.3)
One or more (≥ 1)	17/5,365	51/5,244	67.4 (43.6, 81.2)
Frailty status§			
Fit (0-3)	37/13,382	104/13,246	65.0 (49.0, 75.9)
Vulnerable/Frailty (≥ 4)	8/2,810	10/2,861	18.9 (-105.6, 68.0)¶

NE = Not Estimated, NA = Not applicable

* Based on the number of participants in each subgroup (N1).

† For overall VE, the 2-sided alpha-adjusted 95.04% CI is displayed; for subgroups VE, the 95% CI is displayed.

VE cannot be reliably estimated due to the low number of cases accrued in this age group. VE (95% CI): 3.4% (-1444.5, 94.0%).

‡ Comorbidities included in this analysis were chronic cardiopulmonary conditions, including CHF, COPD, asthma and chronic respiratory conditions as well as diabetes, advanced liver, and advanced kidney disease.

§ Frailty status based on the Edmonton Frailty scale: a survey-based assessment composed of 11 questions spanning 9 different domains: cognition, general health status, functional independence, social support, medication use, nutrition, mood, continence, and functional performance.

¶ VE cannot be reliably estimated due to the low number of cases accrued in this age group.

RSV-ARD

RSV-ARD was a key secondary efficacy endpoint and was defined based on the following criteria: the participant must have had RT-PCR-confirmed RSV infection and experienced new or worsening of one or more of the following signs/symptoms for at least 24 hours: cough, stuffy nose, runny nose, sore throat, fever (≥ 37.8°C [100.0°F]), shortness of breath, observed tachypnoea (≥ 20 breaths per minute or increase of ≥ 2 breaths per minute from baseline in those who have baseline tachypnoea), hypoxemia (new oxygen saturation ≤ 93% or new or increasing use of supplemental oxygen), wheezing, sputum production, hoarseness, sinus pain, chills, or pleuritic chest pain.

VE against protocol-defined RSV-ARD between 14 days and up to 12 months post injection was 69.1% (95% CI: 54.3, 79.1) after 3.7 months median follow up and 54.1%, (95% CI, 40.8, 64.4) after 8.6 months median follow up (Table 6).

Table 6. Vaccine efficacy analysis of mRESVIA to prevent first episode of RSV-ARD between 14 days and up to 12 months post injection (per-protocol efficacy set)

3.7 months median follow up†	**mRESVIA 50 micrograms (N=17,561)**	**Placebo (N=17,503)**
Number of participants with RSV-ARD, n (%)	33 (0.19)	106 (0.61)
VE based on HR (%) (95% CI) *	69.1 (54.3, 79.1)	
8.6 months median follow up‡	**mRESVIA 50 micrograms (N=18,074)**	**Placebo (N=18,010)**
Number of participants with RSV-ARD, n (%)	87 (0.48)	188 (1.04)
VE based on HR (%) (95% CI) *	54.1 (40.8, 64.4)	

* VE was defined as 100% × (1 − hazard ratio (mRESVIA versus placebo). The CI for VE was based on a stratified Cox proportional hazard model with Efron's method of tie handling and with the treatment group as a fixed effect, adjusting for stratification factors at randomisation.

† 30 Nov 2022 data cut-off

‡ 30 April 2023 data cut-off

5.2 PHARMACOKINETIC PROPERTIES

Not applicable

5.3 PRECLINICAL SAFETY DATA

Genotoxicity

mRESVIA has not been evaluated for genotoxic potential.

The lipid components, SM 102 PEG-2000-DMG, of the vaccine were negative in the bacterial reverse mutation Ames test and *in vitro* micronucleus test in human peripheral blood lymphocytes. A luciferase mRNA in SM102-containing lipid nanoparticles was negative in a rat bone marrow micronucleus assay (IV dose of SM-102 28.5 mg/kg, PEG 2000-DMG 2.8 mg/kg), whilst a surrogate ZIKA mRNA-based vaccine formulated in SM-102-containing lipid nanoparticles induced micronuclei in male rats, but not in females (IV dose of SM-102 60 mg/kg, PEG-2000-DMG 6 mg/kg). The weight of evidence suggests the genotoxicity potential of the novel lipid components SM 102 and PEG-2000-DMG is very low. The other components of mRESVIA (other lipids and mRNA) are not expected to be genotoxic.

Carcinogenicity

mRESVIA has not been evaluated for carcinogenicity.

The components of the vaccine (lipids and mRNA) are not expected to have carcinogenic potential.

6 PHARMACEUTICAL PARTICULARS

6.1 LIST OF EXCIPIENTS

Heptadecan-9-yl 8-[2-hydroxyethyl-(6-oxo-6-undecoxyhexyl)amino]octanoate
Cholesterol
Distearoylphosphatidylcholine
1,2-dimyristoyl-rac-glycero-3-methoxypolyethylene glycol-2000
Trometamol
Trometamol hydrochloride
Acetic acid
Sodium acetate trihydrate
Sucrose
Water for injections

6.2 INCOMPATIBILITIES

This medicinal product must not be mixed with other medicinal products or diluted.

6.3 SHELF LIFE

In Australia, information on the shelf life can be found on the public summary of the Australian Register of Therapeutic Goods (ARTG). The expiry date can be found on the packaging.

Unopened pre-filled syringe:

The unopened pre-filled syringe may be stored refrigerated between 2°C to 8°C, protected from light, for a maximum of 30 days.

The pre-filled syringe may be stored at 8°C to 25°C for a total of 24 hours after removal from refrigerated conditions. Discard the pre-filled syringe if not used within this time.

The prefilled syringe is for single use in one patient only. Discard any residue.

6.4 SPECIAL PRECAUTIONS FOR STORAGE

During storage, minimize exposure to room light, and avoid exposure to direct sunlight and ultraviolet light.

Frozen Storage

Store in a freezer between -40°C to -15°C.

Store the pre-filled syringes in the original carton to protect from light.

Storage after thawing

Within the shelf life, after removal from the freezer, the unopened pre-filled syringe in the outer carton may be stored refrigerated between 2°C to 8°C, protected from light, for a maximum of 30 days (see Section 6.3 Shelf Life).

- Upon moving the vaccine to 2°C to 8°C storage, the updated expiry date must be written on the outer carton and the original expiry date should be crossed out. The vaccine should be used or discarded by the updated expiry date.
- If the vaccine is received at 2°C to 8°C, it should be stored at 2°C to 8°C. The expiry date on the outer carton should have been updated to reflect the refrigerated expiry date and the original expiry date should have been crossed out

If required prior to use, the pre-filled syringe may be stored at 8°C to 25°C for a total of 24 hours after removal from refrigerated conditions.

Do not refreeze once thawed and do not refrigerate after being stored at 8°C to 25°C.

Thawed pre-filled syringes can be handled in room light conditions.

Transportation of thawed pre-filled syringes in liquid state at 2°C to 8°C

Thawed pre-filled syringes can be transported at 2°C to 8°C.

Once thawed and transported at 2°C to 8°C, pre-filled syringes should not be refrozen and should be stored at 2°C to 8°C until use (see Section 6.3 Shelf Life.

6.5 NATURE AND CONTENTS OF CONTAINER

Plastic pre-filled syringe containing 0.5 mL suspension for injection.

Pack size: 1, 2 or 10 plastic pre-filled syringes per carton.

Not all pack sizes may be marketed.

mRESVIA does not contain any preservatives, antibiotics, adjuvants, or human- or animal-derived materials.

6.6 SPECIAL PRECAUTIONS FOR DISPOSAL

In Australia, any unused medicine or waste material should be disposed of in accordance with local requirements.

6.7 PHYSICOCHEMICAL PROPERTIES

CAS number

2766353-31-3

7 MEDICINE SCHEDULE (POISONS STANDARD)

Prescription only medicine (Schedule 4)

8 SPONSOR

Moderna Australia Pty Ltd
Level 49, 101 Collins Street
Melbourne
VIC 3000
Phone: 1800 344 018
Email address: wecare@modernatx.com

9 DATE OF FIRST APPROVAL

TBC

10 DATE OF REVISION

Not applicable

SUMMARY TABLE OF CHANGES

Section Changed	Summary of new information
N/A	N/A