HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use FLUAD® safely and effectively. See full prescribing information for FLUAD.

FLUAD® (Influenza Vaccine, Adjuvanted)
Injectable Emulsion for Intramuscular Use
2020-2021 Formula
Initial U.S. Approval: 2015

INDICATIONS AND USAGE

FLUAD is an inactivated influenza vaccine indicated for active immunization against influenza disease caused by influenza virus subtypes A and type B contained in the vaccine. FLUAD is approved for use in persons 65 years of age and older. (1)

This indication is approved under accelerated approval based on the immune response elicited by FLUAD. (1) Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory trial. (14)

DOSAGE AND ADMINISTRATION

A single 0.5 mL dose for intramuscular injection. (2.1)

DOSAGE FORMS AND STRENGTHS

Injectable emulsion supplied in 0.5 mL single-dose pre-filled syringes. (3)

CONTRAINDICATIONS

Severe allergic reaction to any component of the vaccine, including egg protein, or after a previous dose of any influenza vaccine. (4, 11)

WARNINGS AND PRECAUTIONS

If Guillain-Barré Syndrome (GBS) has occurred within six weeks of previous influenza vaccination, the decision to give FLUAD should be based on careful consideration of the potential benefits and risks. (5.1)

ADVERSE REACTIONS

The most common (≥10%) local (injection site) adverse reactions observed in clinical studies were injection site pain (25%) and tenderness (21%). (6) The most common (≥10%) systemic adverse reactions observed in clinical studies were myalgia (15%), headache (13%) and fatigue (13%). (6)

To report SUSPECTED ADVERSE REACTIONS, contact Seqirus at 1-855-358-8966 or VAERS at 1-800-822-7967 and www.vaers.hhs.gov.

See 17 for PATIENT COUNSELING INFORMATION

Revised: 10/2020

FULL PRESCRIBING INFORMATION: CONTENTS*

1 INDICATIONS AND USAGE
2 DOSAGE AND ADMINISTRATION
3 DOSAGE FORMS AND STRENGTHS
4 CONTRAINDICATIONS
5 WARNINGS AND PRECAUTIONS
6 ADVERSE REACTIONS
7 DRUG INTERACTIONS
8 USE IN SPECIFIC POPULATIONS
9 USE IN SPECIFIC POPULATIONS
10 USE IN SPECIFIC POPULATIONS
11 DESCRIPTION
12 CLINICAL PHARMACOLOGY
13 NONCLINICAL TOXICOLOGY
14 CLINICAL STUDIES
15 REFERENCES
16 HOW SUPPLIED/STORAGE AND HANDLING
17 PATIENT COUNSELING INFORMATION

*Sections or subsections omitted from the full prescribing information are not listed.
FULL PRESCRIBING INFORMATION

1   INDICATIONS AND USAGE

FLUAD is an inactivated influenza vaccine indicated for active immunization against influenza disease caused by influenza virus subtypes A and type B contained in the vaccine. FLUAD is approved for use in persons 65 years of age and older. This indication is approved under accelerated approval based on the immune response elicited by FLUAD [see Clinical Studies (14)]. Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory trial.

2   DOSAGE AND ADMINISTRATION

For intramuscular injection only

2.1   Dosage and Schedule

Administer FLUAD as a single 0.5 mL intramuscular injection in adults 65 years of age and older.

2.2   Administration

- Gently shake each syringe. FLUAD has a milky white appearance. Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration whenever solution and container permit [see Description (11)]. If either condition exists, FLUAD should not be administered.

- To use a pre-filled syringe fitted with a Luer Lok system, remove the tip cap by unscrewing it in a counter-clockwise direction. Once the tip cap is removed, attach a needle to the syringe by screwing it on in a clockwise direction until it locks. Once the needle is locked in place, remove the needle protector and administer the vaccine.

- The vaccine should be administered by intramuscular injection, preferably in the region of the deltoid muscle of the upper arm. Do not inject the vaccine in the gluteal region or areas where there may be a major nerve trunk.

3   DOSAGE FORMS AND STRENGTHS

FLUAD is a sterile injectable emulsion supplied in 0.5 mL single-dose pre-filled syringes.

4   CONTRAINDICATIONS

Do not administer FLUAD to anyone with a history of severe allergic reaction (e.g. anaphylaxis) to any component of the vaccine, including egg protein [see Description (11)], or to a previous influenza vaccine.
5 WARNINGs AND PRECAUTIONS

5.1 Guillain-Barré Syndrome
If Guillain-Barré syndrome (GBS) has occurred within 6 weeks of receipt of prior influenza vaccine, the decision to give FLUAD should be based on careful consideration of the potential benefits and risks. The 1976 swine influenza vaccine was associated with an elevated risk of GBS. [see References (1)] Evidence for a causal relationship of GBS with other influenza vaccines is inconclusive; if an excess risk exists, it is probably slightly more than 1 additional case per 1 million persons vaccinated.

5.2 Preventing and Managing Allergic Reactions
Appropriate medical treatment and supervision must be available to manage possible anaphylactic reactions following administration of the vaccine.

5.3 Altered Immunocompetence
The immune response to FLUAD in immunocompromised persons, including individuals receiving immunosuppressive therapy, may be lower than in immunocompetent individuals. [see Concurrent Use With Immunosuppressive Therapies (7.2)]

5.4 Syncope
Syncope (fainting) may occur in association with administration of injectable vaccines including FLUAD. Ensure procedures are in place to avoid injury from falling associated with syncope.

5.5 Limitations of Vaccine Effectiveness
Vaccination with FLUAD may not protect all vaccine recipients against influenza disease.

6 ADVERSE REACTIONS
The most common (≥ 10%) local (injection site) adverse reactions observed in clinical studies were injection site pain (25%) and tenderness (21%).

The most common (≥ 10%) systemic adverse reactions observed in clinical studies were myalgia (15%), headache (13%) and fatigue (13%).

6.1 Clinical Trials Experience
Because clinical trials are conducted under widely varying conditions, the adverse reaction rates observed in the clinical trials of a vaccine cannot be directly compared to rates in the clinical trials of another vaccine and may not reflect rates observed in clinical practice.

Solicited adverse reactions were assessed in a multicenter, observer-blind, randomized
controlled study (Study 1) conducted in the United States, Colombia, Panama and the Philippines. The safety analysis set included 3545 FLUAD recipients and 3537 AGRIFLU (Influenza Vaccine) recipients. The enrolled subject population in Study 1 was 65 to 97 years of age (mean 72 years) and 64% were female. Within each treatment group, 53% were Asian, 28% were Caucasian, 18% were Hispanic, 1% were Black, and fewer than 1% each were Native American/Alaskan, Pacific Islander/Hawaiian, or Other.

Solicited local (injection site) and systemic adverse reactions were collected from subjects in Study 1 who completed a symptom diary card for seven days following vaccination. The reported frequencies of solicited local adverse events from Study 1 are presented in Table 1a and systemic adverse events from Study 1 are presented in Table 1b.

**Table 1a:** Percentages of Subjects ≥ 65 Years of Age With Solicited **Local** Adverse Reactions in Days 1-7 After Administration of FLUAD or AGRIFLU (a U.S. Licensed Comparator) NCT01162122

<table>
<thead>
<tr>
<th>Solicited Local Adverse Reactions</th>
<th>FLUAD (N=3418-3496) Percentage</th>
<th>AGRIFLU (N=3420-3488) Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injection site Pain: Any</td>
<td>25.0</td>
<td>12.2</td>
</tr>
<tr>
<td>Injection site Pain: Moderate b</td>
<td>3.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Injection site Pain: Severe c</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Tenderness: Any</td>
<td>21.1</td>
<td>11.2</td>
</tr>
<tr>
<td>Tenderness: Moderate</td>
<td>3.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Tenderness: Severe</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Erythema: Any</td>
<td>1.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Erythema: 25 to ≤ 50 mm</td>
<td>1.1</td>
<td>0.5</td>
</tr>
<tr>
<td>Erythema: 51 to ≤ 100 mm</td>
<td>0.2</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Erythema: &gt; 100 mm</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Induration: Any</td>
<td>1.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Induration: 25 to ≤ 50 mm</td>
<td>1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Induration: 51 to ≤ 100 mm</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Induration: &gt; 100 mm</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Swelling: Any</td>
<td>1.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Swelling: 25 to ≤ 50 mm</td>
<td>1.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Swelling: 51 to ≤ 100 mm</td>
<td>0.2</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Swelling: &gt; 100 mm</td>
<td>&lt;0.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**Table 1b:** Percentages of Subjects ≥ 65 Years of Age With Solicited **Systemic** Adverse Reactions in Days 1-7 After Administration of FLUAD or AGRIFLU (a U.S. Licensed Comparator) NCT01162122

---

*a N = number of subjects with safety data.

*b Moderate: pain, tenderness, defined as “some limitation in normal daily activity”

*c Severe: pain, tenderness, defined as “unable to perform normal daily activity”
<table>
<thead>
<tr>
<th>Solicited Systemic Adverse Reactions</th>
<th>FLUAD (N=3418-3496) Percentage</th>
<th>AGRIFLU (N=3420-3488) Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myalgia: Any</td>
<td>14.7</td>
<td>9.7</td>
</tr>
<tr>
<td>Myalgia: Moderate(^b)</td>
<td>2.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Myalgia: Severe(^c)</td>
<td>0.3</td>
<td>0.7</td>
</tr>
<tr>
<td>Fatigue: Any</td>
<td>13.3</td>
<td>10.4</td>
</tr>
<tr>
<td>Fatigue: Moderate</td>
<td>3.1</td>
<td>2.4</td>
</tr>
<tr>
<td>Fatigue: Severe</td>
<td>0.4</td>
<td>0.6</td>
</tr>
<tr>
<td>Fatigue: PLT(^d)</td>
<td>0.0</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Headache: Any</td>
<td>13.2</td>
<td>11.2</td>
</tr>
<tr>
<td>Headache: Moderate</td>
<td>3.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Headache: Severe</td>
<td>0.4</td>
<td>0.6</td>
</tr>
<tr>
<td>Headache: PLT</td>
<td>0.0</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Arthralgia: Any</td>
<td>8.5</td>
<td>7.8</td>
</tr>
<tr>
<td>Arthralgia: Moderate</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Arthralgia: Severe</td>
<td>0.2</td>
<td>0.6</td>
</tr>
<tr>
<td>Chills: Any</td>
<td>6.7</td>
<td>4.7</td>
</tr>
<tr>
<td>Chills: Moderate</td>
<td>1.5</td>
<td>1.2</td>
</tr>
<tr>
<td>Chills: Severe</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Chills: PLT</td>
<td>&lt;0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Diarrhea: Any</td>
<td>4.8</td>
<td>4.5</td>
</tr>
<tr>
<td>Diarrhea: Moderate</td>
<td>1.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Diarrhea: Severe</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Diarrhea: PLT</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Fever: Any</td>
<td>3.6</td>
<td>3.4</td>
</tr>
<tr>
<td>Fever: 38.0°C to 38.4°C</td>
<td>1.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Fever: 38.5°C to 38.9°C</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Fever: 39.0°C to 40.0°C</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Fever: 40.0°C</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Nausea: Any</td>
<td>2.9</td>
<td>2.8</td>
</tr>
<tr>
<td>Nausea: Moderate</td>
<td>0.4</td>
<td>0.6</td>
</tr>
<tr>
<td>Nausea: Severe</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Nausea: PLT</td>
<td>&lt;0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Vomiting: Any</td>
<td>1.4</td>
<td>1.7</td>
</tr>
<tr>
<td>Vomiting: Moderate</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>Vomiting: Severe</td>
<td>&lt;0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Vomiting: PLT</td>
<td>&lt;0.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>

\(^a\) N = number of subjects with safety data.

\(^b\) Moderate: myalgia, fatigue, headache, arthralgia, chills, nausea, vomiting defined as “some limitation in normal daily activity”, diarrhea defined as “4 to 5 stools a day”.

\(^c\) Severe: myalgia, fatigue, headache, arthralgia, chills, nausea, vomiting defined as “unable to perform normal daily activity”, diarrhea defined as “6 or more watery stools a day”.

\(^d\) Potentially life threatening (PLT) reaction defined as requiring emergency room visit or hospitalization.
Unsolicited Adverse Events (AEs): The clinical safety of FLUAD was assessed in fifteen (15) randomized, controlled studies. The total safety population in these trials included 10,952 adults 65 years of age and older, comprising 5,754 who received FLUAD and 5,198 who received other US licensed influenza vaccines. The percentage of subjects with an unsolicited AE within 30 days following vaccination was similar between vaccine groups (16.9% FLUAD vs. 18.0% active comparator).

Serious Adverse Events (SAEs) and Deaths: In Study 1, in which subjects were followed for SAEs and deaths for one year following vaccination (N=3,545 FLUAD, N=3,537 AGRIFLU), the percentages of subjects with an SAE were similar between vaccine groups (7% FLUAD vs. 7% AGRIFLU). Four SAEs (1 FLUAD and 3 AGRIFLU) were assessed as related to study vaccination over one year of observation and 2 of these occurred (1 FLUAD and 1 AGRIFLU) within 21 days following study vaccination. There were 98 deaths (N=52 FLUAD, N=46 AGRIFLU) over one year of which none occurred within the first 21 days following vaccination.

In 14 additional randomized, controlled studies, SAEs were collected over a 3 to 4-week period in 4 studies, over a 8-week period in 1 study, and over a 6-month period in 9 studies (N= 2,209 FLUAD, N=1,661 US licensed influenza vaccines). The percentages of subjects with an SAE within 30 days (1.1% FLUAD vs. 1.8% AGRIFLU) or within 6 months (4.3% FLUAD vs. 5.9% AGRIFLU) were similar between vaccine groups. The percentages of deaths within 30 days (0.3% FLUAD vs. 0.6% active comparator) or within 6 months (1.0% FLUAD vs. 1.5% active comparator) were also similar.

Adverse Events of Special Interest (AESIs): Rates of new onset neuroinflammatory and immune mediated diseases were assessed in a post hoc analysis of the 15 randomized controlled studies over the time periods specified above for SAEs. The percentage of subjects with an AESI at any time after vaccination was similar between vaccine groups (0.9% FLUAD vs. 0.9% active comparator). There were no notable imbalances for specific AESIs.

Safety of Annual Revaccination: In 5 of the randomized, controlled trials, subjects were followed for SAEs and deaths for 6 months following revaccination (N=492 FLUAD, N=330 US licensed and non-US licensed influenza vaccines). After the second annual vaccination, the percentages of subjects with an SAE were similar between vaccine groups (6.1% FLUAD vs. 5.5% comparator influenza vaccines); 23 deaths (N=17 FLUAD, N=6 comparator influenza vaccines) were reported. Causes of death included cardiovascular events, malignancy, trauma, gastrointestinal disorders, and respiratory failure. Clinical characteristics of the deaths, including the variable causes, timing since vaccination, and underlying medical conditions, do not provide evidence for a causal relationship with FLUAD.

6.2 Postmarketing Experience

The following adverse events have been spontaneously reported during post-approval use of FLUAD in Europe and other regions since 1997. Because these events are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to the vaccine.
**Blood and lymphatic system disorders:**
Thrombocytopenia (some cases were severe with platelet counts less than 5,000 per mm³), lymphadenopathy

**General disorders and administration site conditions:**
Extensive swelling of injected limb lasting more than one week, injection site cellulitis-like reactions (some cases of swelling, pain, and redness extending more than 10 cm and lasting more than 1 week)

**Immune system disorders:**
Allergic reactions including anaphylactic shock, anaphylaxis and angioedema

**Musculoskeletal and connective tissue disorders:**
Muscular weakness

**Nervous system disorders:**
Encephalomyelitis, Guillain-Barré Syndrome, convulsions, neuritis, neuralgia, paraesthesia, syncope, presyncope

**Skin and subcutaneous tissue disorders:**
Generalized skin reactions including erythema multiforme, urticaria, pruritis or non-specific rash

**Vascular disorders:**
Vasculitis, renal vasculitis

---

**7 DRUG INTERACTIONS**

**7.1 Concomitant Use With Other Vaccines**
There are no data to assess the concomitant administration of FLUAD with other vaccines. If FLUAD is given at the same time as other injectable vaccine(s), the vaccine(s) should be administered at different injection sites.
Do not mix FLUAD with any other vaccine in the same syringe.

**7.2 Concurrent Use With Immunosuppressive Therapies**
Immunosuppressive or corticosteroid therapies may reduce the immune response to FLUAD.

---

**8 USE IN SPECIFIC POPULATIONS**

**8.1 Pregnancy**
Risk Summary

FLUAD is not approved for use in persons < 65 years of age. There are insufficient human data to establish whether there is a vaccine-associated risk with use of FLUAD in pregnancy.

A developmental toxicity study has been performed in female rabbits administered FLUAD prior to mating and during gestation. A 0.5 mL dose was injected on each occasion (a single human dose is 0.5 mL).

Animal Data

In a developmental toxicity study, the effect of FLUAD was evaluated in pregnant rabbits. Animals were administered FLUAD by intramuscular injection twice prior to gestation, during the period of organogenesis (gestation day 7) and later in pregnancy (gestation day 20), 0.5 mL (45 mcg)/rabbit/occasion. No vaccine-related fetal malformations or variations and no adverse effects on pre-weaning development were observed in the study.

8.2 Lactation

FLUAD is not approved for use in persons < 65 years of age. No human or animal data are available to assess the effects of FLUAD on the breastfed infant or on milk production/excretion.

8.4 Pediatric Use

Safety and effectiveness of FLUAD and FLUAD QUADRIVALENT (same manufacturing process and overlapping composition with FLUAD) were evaluated in clinical trials conducted in children 6 months to <72 months of age. Data from these trials are inconclusive to demonstrate the safety and effectiveness of FLUAD in children 6 months to <72 months of age. The safety and effectiveness of FLUAD in infants less than 6 months of age and in children older than 72 months of age have not been evaluated.

8.5 Geriatric Use

Safety and immunogenicity of FLUAD have been evaluated in adults 65 years of age and older. [See Adverse Reactions (6.1) and Clinical Studies (14)]

11 DESCRIPTION

FLUAD (Influenza Vaccine, Adjuvanted), a sterile injectable emulsion for intramuscular use, is a trivalent, inactivated influenza vaccine prepared from virus propagated in the allantoic cavity of embryonated hens’ eggs inoculated with a specific type of influenza virus.

FLUAD is standardized according to United States Public Health Service requirements and each 0.5 mL dose is formulated to contain 15 mcg of hemagglutinin (HA) from each of the following three influenza strains recommended for the 2020-2021 influenza season; A/Victoria/2454/2019 IVR-207 (an A/Guangdong-Maonan/SWL1536/2019 (H1N1)pdm09-like virus), A/Hong Kong/2671/2019 IVR-208 (an A/Hong Kong/2671/2019 (H3N2)-like virus) and B/Victoria/705/2018 BVR-11 (a B/Washington/02/2019-like virus). FLUAD also
contains MF59C.1 adjuvant (MF59®), a squalene based oil-in-water emulsion. Each of the strains is harvested and clarified separately by centrifugation and filtration prior to inactivation with formaldehyde. The inactivated virus is concentrated and purified by zonal centrifugation. The surface antigens, hemagglutinin and neuraminidase, are obtained from the influenza virus particle by further centrifugation in the presence of cetyltrimethylammonium bromide (CTAB). The antigen preparation is further purified.

FLUAD is prepared by combining the three virus antigens with the MF59C.1 adjuvant. After combining, FLUAD is a sterile, milky-white injectable emulsion supplied in single-dose pre-filled syringes containing 0.5 mL dose. Each 0.5 mL dose contains 15 mcg of hemagglutinin (HA) from each of the three recommended influenza strains and MF59C.1 adjuvant (9.75 mg squalene, 1.175 mg of polysorbate 80, 1.175 mg of sorbitan trioleate, 0.66 mg of sodium citrate dihydrate and 0.04 mg of citric acid monohydrate) at pH 6.9-7.7.

FLUAD may contain trace amounts of neomycin (≤ 0.02 mcg by calculation), kanamycin (≤ 0.03 mcg by calculation) and hydrocortisone (≤ 0.0025 ng by calculation) which are used during the initial stages of manufacture, as well as residual egg proteins (≤ 0.4 mcg), formaldehyde (≤ 10 mcg), or CTAB (≤ 12 mcg).

FLUAD does not contain a preservative. The syringe, syringe plunger stopper and tip caps are not made with natural rubber latex.

12   CLINICAL PHARMACOLOGY

12.1   Mechanism of Action

Influenza illness and its complications follow infection with influenza viruses. Global surveillance of influenza identifies yearly antigenic variants. For example, since 1977, antigenic variants of influenza A (H1N1 and H3N2) viruses and influenza B viruses have been in global circulation. Specific levels of hemagglutination inhibition (HI) antibody titers induced by vaccination with inactivated influenza virus vaccine have not been correlated with protection from influenza illness. In some human studies, HI antibody titers of 1:40 or greater have been associated with protection from influenza illness in up to 50% of subjects. [see References (2, 3)]

Antibody against one influenza virus type or subtype confers limited or no protection against another. Furthermore, antibody to one antigenic variant of influenza virus might not protect against a new antigenic variant of the same type or subtype. Frequent development of antigenic variants through antigenic drift is the virologic basis for seasonal epidemics and the reason for the usual change of one or more new strains in each year's influenza vaccine. Therefore, inactivated trivalent influenza vaccines are standardized to contain the hemagglutinin of influenza virus strains (two subtypes A and one type B), representing the influenza viruses likely to be circulating in the United States in the upcoming influenza season.

Annual influenza vaccination is recommended because immunity declines during the year after vaccination, and because circulating strains of influenza virus change from year to year.
13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility
FLUAD has not been evaluated for carcinogenic or mutagenic potential, or for impairment of male fertility in animals. FLUAD did not affect female fertility in a rabbit developmental toxicity study [see Pregnancy (8.1)].

14 CLINICAL STUDIES
Study 1 (NCT01162122) evaluated the safety and immunogenicity of FLUAD in comparison to AGRIFLU. A total of 7,082 subjects were randomized and vaccinated with FLUAD (N=3,541) or AGRIFLU (N=3,541). The primary immunogenicity analyses were conducted on all vaccinated subjects with a blood sample collected at Day 22 (N=3,225-3,227 [91%] and 3,256-3,259 [92%] in the FLUAD and AGRIFLU groups, respectively). Non-inferiority of FLUAD compared with AGRIFLU was demonstrated for all three vaccine strains based on pre-defined thresholds for seroconversion rate differences and GMT ratios (Table 2a & 2b).

Table 2a: Immune Responses to Each Antigen 22 Days after Vaccination with FLUAD or AGRIFLU in Adults 65 Years and Oldera

<table>
<thead>
<tr>
<th>GMTs Against FLUAD and AGRIFLU Vaccine Strains</th>
<th>FLUAD Nb = 3225-3227 GMT (95% CI)</th>
<th>AGRIFLU Nb = 3256-3259 GMT (95% CI)</th>
<th>FLUAD and AGRIFLU GMT Ratioc (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/California/7/2009-like (H1N1)</td>
<td>99 (93-106)</td>
<td>70 (66-75)</td>
<td>1.4 (1.32-1.49)</td>
</tr>
<tr>
<td>A/Perth/16/2009-like (H3N2)</td>
<td>272 (257-288)</td>
<td>169 (159-179)</td>
<td>1.61 (1.52-1.7)</td>
</tr>
<tr>
<td>B/Brisbane/60/2008- like</td>
<td>28 (26-29)</td>
<td>24 (23-26)</td>
<td>1.15 (1.08-1.21)</td>
</tr>
</tbody>
</table>

GMT = Geometric mean antibody titer; CI = Confidence Interval.
a Results obtained following vaccination with influenza vaccine formulated for the 2010-2011 season.
b N is the number of vaccinated participants with available data for the immunologic endpoint listed.
c FLUAD met non-inferiority criteria based on GMT ratios if the lower limit of the 95% CI [FLUAD:AGRIFLU] for each strain was > 0.67.
Table 2b: Immune Responses to Each Antigen 22 Days after Vaccination with FLUAD or AGRIFLU in Adults 65 Years and Older

<table>
<thead>
<tr>
<th>Seroconversion for Vaccine Strains:</th>
<th>FLUAD Nb= 3225-3227 % of Subjects (95% CI)</th>
<th>AGRIFLU Nb =3256-3259 % of Subjects (95% CI)</th>
<th>FLUAD and AGRIFLU Difference in Seroconversion Rate (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/California/7/2009- like (H1N1)</td>
<td>69% (67%–70%)</td>
<td>58% (57%–60%)</td>
<td>9.8% (7.5%–12.1%)</td>
</tr>
<tr>
<td>A/Perth/16/2009-like (H3N2)</td>
<td>73% (71%–74%)</td>
<td>58% (56%–60%)</td>
<td>13.9% (11.7%–16.1%)</td>
</tr>
<tr>
<td>B/Brisbane/60/2008- like</td>
<td>33% (31%–35%)</td>
<td>29% (28%–31%)</td>
<td>3.2% (1.1%–5.3%)</td>
</tr>
</tbody>
</table>

a Results obtained following vaccination with influenza vaccine formulated for the 2010-2011 season.
b N is the number of vaccinated participants with available data for the immunologic endpoint listed.
c Seroconversion was defined as prevaccination HI titer <10 and postvaccination HI titer ≥ 40 or at least a 4-fold increase in HI from prevaccination HI titer ≥ 10.
d FLUAD met non-inferiority criteria based on seroconversion rate differences if the lower limit of the 95% CI [FLUAD - AGRIFLU] for each strain was >-10%.

15 REFERENCES


16 HOW SUPPLIED/STORAGE AND HANDLING

FLUAD is supplied in the product presentation listed below:
<table>
<thead>
<tr>
<th>Presentation</th>
<th>Carton NDC Number</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Filled Syringe</td>
<td>70461-020-03</td>
<td>0.5 mL dose in a pre-filled syringe (needle not supplied), package of 10 syringes per carton [NDC 70461-020-04]</td>
</tr>
</tbody>
</table>

Store FLUAD refrigerated at 2°C to 8°C (36°F to 46°F). Protect from light. Do not freeze. Discard if the vaccine has been frozen. Do not use after expiration date.

The syringe, syringe plunger stopper and tip cap are not made with natural rubber latex.

17 PATIENT COUNSELING INFORMATION

- Inform vaccine recipients of the potential benefits and risks of immunization with FLUAD.
- Educate vaccine recipients regarding the potential side effects. Clinicians should emphasize that (1) FLUAD contains non-infectious particles and cannot cause influenza and (2) FLUAD is intended to help provide protection against illness due to influenza viruses only, and cannot provide protection against other respiratory illnesses.
- Instruct vaccine recipients to report adverse reactions to their healthcare provider and/or to Vaccine Adverse Event Reporting System (VAERS) at 1-800-822-7967 and www.vaers.hhs.gov. Provide vaccine recipients with the Vaccine Information Statements which are required by the National Childhood Vaccine Injury Act of 1986. These materials are available free of charge at the Centers for Disease Control and Prevention (CDC) website (www.cdc.gov/vaccines).
- Inform vaccine recipients that annual vaccination is recommended.

FLUAD is a registered trademark of Seqirus UK Limited or its affiliates. MF59® is a trademark of Novartis AG.

Manufactured by: Seqirus Inc., 475 Green Oaks Parkway, Holly Springs, NC 27540, USADistributed by: Seqirus USA Inc., 25 Deforest Avenue, Summit, NJ 07901, USA Tel: 1-855-358-8966

US License No. 2049