CLINICAL TRIAL RESULTS

This summary reports the results of only one study. Researchers must look at the results of many types of studies to understand if a study medicine works, how it works, and if it is safe to prescribe to patients. The results of this study might be different than the results of other studies that the researchers review.

Sponsor: Pfizer Japan, Inc.

Medicine(s) Studied: Prevenar 13® (13-valent Pneumococcal Conjugate Vaccine [13vPnC]; also known as Prevnar 13® in some countries)

Protocol Number: B1851172

Dates of Trial: 12 July 2018 to 16 November 2018

Title of this Trial: A Study Investigating a Single Dose of 13-Valent Pneumococcal Conjugate Vaccine in Japanese Participants Aged 6 to 64 Years With Illnesses That Mean They Are More Likely to Get Pneumococcal Disease [Final Report: A Phase 3, Multicenter, Single-Arm, Open-Label Study to Assess the Safety, Tolerability, and Immunogenicity of a Single Dose of 13-Valent Pneumococcal Conjugate Vaccine in Japanese Subjects Aged 6 to 64 Years Who are Considered to be at Increased Risk of Pneumococcal Disease and Who are Naive to Pneumococcal Vaccines]

Date of this Report: 14 November 2019

– Thank You –

Pfizer, the Sponsor, would like to thank you for your participation in this clinical trial and provide you a summary of results representing everyone who participated. If you have any questions about the study or results, please contact the doctor or staff at your study site.

WHY WAS THIS STUDY DONE?

The 13-valent pneumococcal conjugate vaccine (13vPnC) may help prevent pneumococcal disease caused by the "bacteria", or germ, *Streptococcus pneumoniae.* This germ is also known as *S. pneumoniae*, pneumococcus, or pneumococci. *S. pneumoniae* can spread from person to person through coughing and sneezing. Sometimes the *S. pneumoniae* can cause pneumococcal disease. This can include infections in the ear and/or in the "sinuses", which are the spaces in the bones behind the nose as well as more serious conditions such as "meningitis" or "pneumonia". Meningitis happens when *S. pneumoniae* infect the coverings around the brain and spinal cord, and pneumonia happens when the pneumococcal infection is in the lungs.

When given the 13vPnC vaccine, a person's "immune system" makes "antibodies" against 13 different sugars in the vaccine. These sugars are like the ones found on the surface of *S. pneumoniae*, with a different sugar on the surface of each "strain" or type of *S. pneumoniae.* The immune system is what defends the body from germs like *S. pneumoniae*. Antibodies are germ-fighting proteins that can recognize 13 common strains of *S. pneumoniae* that cause people to become sick. Once the immune system recognizes the pneumococci, the immune system can then kill the pneumococci and stop an infection from developing in someone who has been vaccinated. This will only happen if the infection is caused by 1 of the 13 most common types of *S. pneumoniae* that the vaccine protects against.

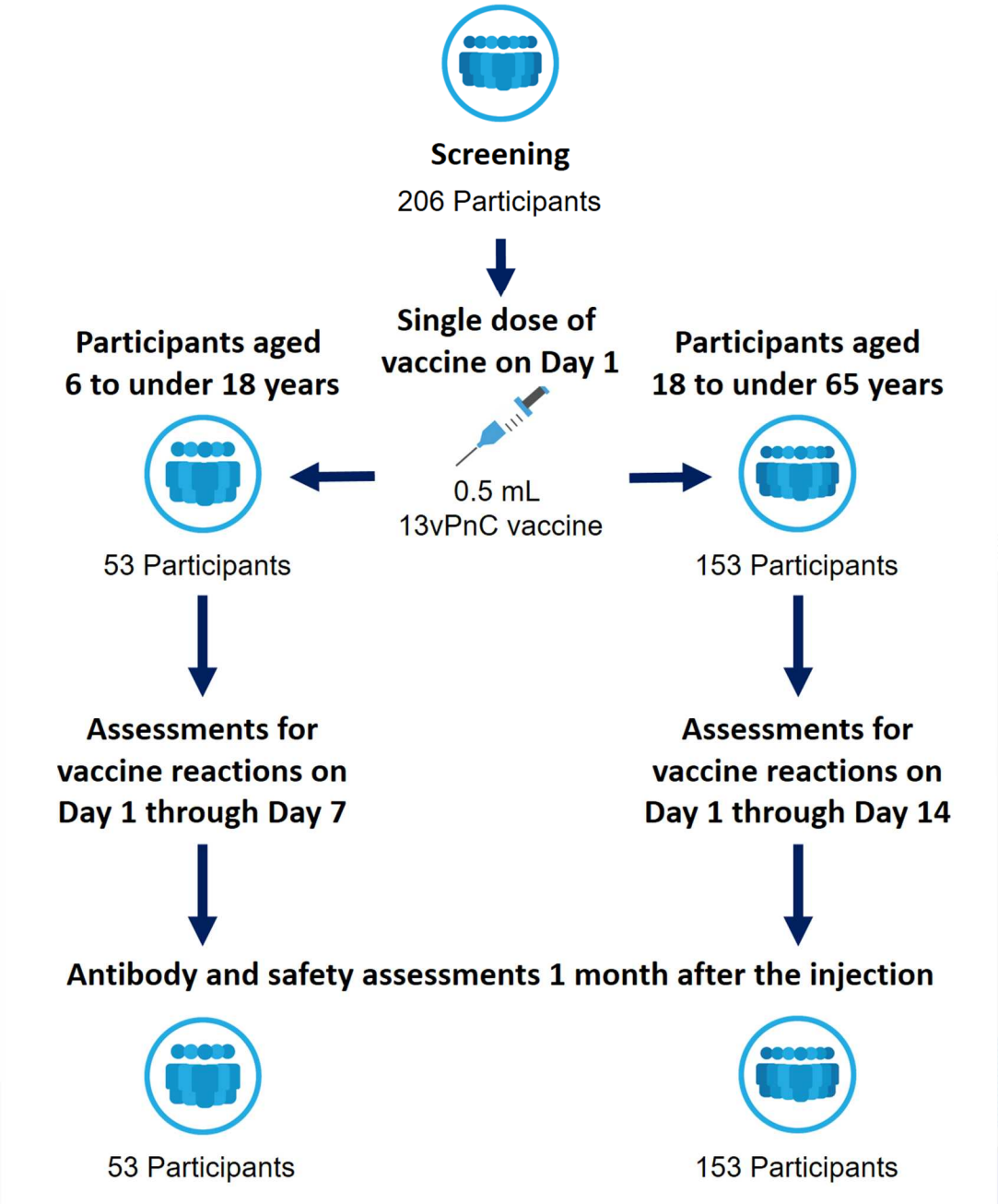
13vPnC is a vaccine that has been approved for sale in many countries, including Europe and Japan where it is sold as Prevenar 13® and the United States where it is known as Prevnar 13®. In Japan, the 13vPnC vaccine can be given to infants and children under 6 years and to people who are aged 65 years and older. This vaccine is not currently licensed for use in people aged 6 to 64 years in Japan. The researchers did this study to learn more about how this vaccine works in Japanese people aged 6 to 64 years.

WHAT HAPPENED DURING THE STUDY?

This study compared 2 groups of participants, children and adolescents aged 6 to under 18 years and adults aged 18 to under 65 years, to find out if participants given 13vPnC were able to make antibodies that recognize 13 common types of *S. pneumoniae.* The researchers also wanted to see if the participants had any safety issues in the month after having the 13vPnC vaccine. The study participants were all

Japanese people with illnesses that mean they are more likely to get pneumococcal disease.

All participants in this study received a single dose of 13vPnC on Day 1 at the start of the study.



While participants were only in the study for approximately 1 month, the entire study took approximately 4 months to complete. The sponsor ran this study at 8 locations across Japan. It began 12 July 2018 and ended 16 November 2018. 31 boys and 22 girls aged 7 to 17 years as well as 76 men and 77 women aged 18 to 64 years participated. All of the 206 participants were between the ages of 7 and 64 years.

Participants were given a single dose of the 13vPnC vaccine. Of the 206 participants who started the study, all 206 finished the study and all were asked to write down if they had experienced any reactions to the 13vPnC vaccine.

When the study ended in November 2018, the Sponsor began reviewing the information collected. The Sponsor then created a report of the results. This is a summary of that report.

WHAT WERE THE RESULTS OF THE STUDY?

Did the 13vPnC vaccine make antibodies that recognized *S. pneumoniae*?

When blood samples taken 1 month after being given the 13vPnC vaccine were tested, antibodies were seen against the 13 common types of *S. pneumoniae*. There were different average amounts of antibody produced for each of the 13 common types of *S. pneumoniae*. All of these antibody levels were high enough to show that 13vPnC produced an "immune response" to the vaccine. An immune response means a person's immune system is able to recognize and produce antibody against a vaccine. The antibody responses were higher in the group aged 6 to under 18 years compared with the group aged 18 to under 65 years old.

Did participants who were given the 13vPnC vaccine have any reactions to the vaccine?

The researchers looked at whether there were any "local" reactions to the vaccine. A local reaction is something that is seen at the site where the injection of vaccine was given and can include pain at the vaccination site, redness, and/or swelling. These local vaccination site reactions were reported by the study participants on Day 1 through Day 7 for participants aged 6 to under 18 years and on Day 1 through Day 14 for participants aged 18 to under 65 years. Local vaccination site reactions reported by participants may not have been reported by the study doctors as medical problems.

Local vaccination site reactions were reported in 43 out of 52 participants (83%) aged 6 to under 18 years and in 98 out of 146 participants (67%) aged 18 to under 65 years. Pain at the vaccination site was the most common local reaction in both age groups. Most vaccination site reactions were mild or moderate in severity. Severe reactions to 13vPnC were reported in 3 out of the 198 participants who had any local reaction after receiving 13vPnC. Severe local reactions were reported by 1 participant who was aged 6 to under 18 years who had severe swelling and 2 participants who were aged 18 to under 65 years who both had severe pain at the vaccination site.

Local Vaccination Site Reactions in Participants After the 13vPnC Vaccine

Local Reactions	Participants 6 to Under 18 Years	Participants 18 to Under 65 Years
Pain at the vaccination site	41/52 (79%)	96/145 (66%)
Swelling	16/47 (34%)	17/136 (13%)
Redness	10/47 (21%)	10/135 (7%)
Any of the above	43/52 (83%)	98/146 (67%)

The researchers also looked at whether there were any "systemic events" or reactions to the vaccine. Systemic means something that affects the whole body or specific parts of it, like the muscles or joints. The systemic events were reactions that participants might have after they had been given the vaccine, like feeling tired, muscle pain, headache, loose stools, high temperature, and/or being sick. Systemic events were reported by the study participants on Day 1 through Day 7 for participants aged 6 to under 18 years and on Day 1 through Day 14 for participants aged 18 to under 65 years. The systemic events reported by participants may not have been reported by the doctors as medical problems. Systemic events reported in participants given the 13vPnC vaccine are listed in the following table. Systemic events were reported by 31 out of 51 participants (61%) aged 6 to under 18 years and 85 out of 145 participants (59%) aged 18 to under 65 years.

The most common systemic events were feeling tired, muscle pain, and headache. Most systemic events were mild or moderate in severity. There were 2 severe

systemic events in participants aged 6 to under 18 years (1 case of severe tiredness and 1 case of severe headache) and 3 severe systemic events in participants aged 18 to 64 years (1 case of severe diarrhea or loose stools, 1 case of severe muscle pain, and 1 case of severe joint pain). Overall, 3 out of 47 (6%) participants aged 6 to under 18 years and 11 out of 134 (8%) participants aged 18 to under 65 years took medicine after having been given the 13vPnC vaccine, to either help lower their body temperature (eg, because of fever) or for pain relief.

Systemic Events in Participants After the 13vPnC Vaccine		
Systemic Events	**Participants 6 to Under 18 Years**	**Participants 18 to Under 65 Years**
Feeling tired (tiredness)	**18/48 (38%)**	**47/142 (33%)**
Muscle pain	**15/49 (31%)**	**38/139 (27%)**
Headache	**12/49 (25%)**	**33/141 (23%)**
Loose stools	**4/48 (8%)**	**26/141 (18%)**
High temperature (fever)	**7/48 (15%)**	**8/134 (6%)**
Joint pain	**3/48 (6%)**	**19/138 (14%)**
Being sick (vomiting)	**0**	**2/136 (2%)**
Any of the above	**31/51 (61%)**	**85/145 (59%)**

WHAT MEDICAL PROBLEMS DID PARTICIPANTS HAVE DURING THE STUDY?

The researchers recorded any medical problems the participants had during the study. Participants could have had medical problems for reasons not related to the study (for example, caused by an underlying disease or by chance). Or, medical problems could also have been caused by the study vaccine, or by another medicine the participant was taking. Sometimes the cause of a medical problem is unknown. By comparing

medical problems across many vaccine groups in many studies, doctors try to understand what the side effects of an experimental drug or vaccine might be.

33 out of 206 participants (16%) in this study had at least 1 medical problem within 1 month of being given the 13vPnC vaccine. This included 6 participants who had a medical problem that the doctor thought was related to the 13vPnC vaccine (3%, or 6 out of 206 participants, with 3 participants in each age group). In the group of participants aged 6 to under 18 years, these related medical problems were 1 report each of vaccination site pain, vaccination site swelling, and reduced appetite. In the group of participants aged 18 to under 65 years, these related medical problems were 2 reports of vaccination site pain and 1 report of waking from sleep during the middle of the night.

Most of the medical problems were mild or moderate in severity. There were 2 severe medical problems (1 case of severe asthma in a participant aged 6 to under 18 years and 1 case of severe back pain in a participant aged 18 to under 65 years). The study doctors did not think these severe medical problems were related to the 13vPnC vaccine. None of the participants left the study because of medical problems.

The most common medical problems reported by 2 or more participants are listed below.

Most Common Medical Problems (Reported by 2 or More Participants)	
Medical Problem	**13vPnC Vaccine (206 Participants)**
Common cold	**9 (4%)**
Sore throat	**5 (2%)**
Vaccination site pain	**3 (2%)**

This does not mean that everyone in this study had these results. Other studies may produce different results, as well. These are just some of the main findings of the study, and more information may be available at the websites listed at the end of this summary.

WERE THERE ANY SERIOUS MEDICAL PROBLEMS?

A medical problem is considered "serious" when it is life-threatening, needs hospital care, or causes lasting problems.

None of the 206 participants had serious medical problems. No participants died during the study.

WHERE CAN I LEARN MORE ABOUT THIS STUDY?

If you have questions about the results of your study, please speak with the doctor or staff at your study site.

For more details on this study protocol, please visit:

www.clinicaltrials.gov	Use the study identifier **NCT03571607**
https://www.clinicaltrials.jp/cti-user/trial/Search.jsp	Use the study identifier **JapicCTI-184024**

Please remember that researchers look at the results of many studies to find out which medicines or vaccines work and are safe for participants.

Again, **thank you** for volunteering. We do research to try to find the best ways to help patients, and you helped us to do that!