- 1. Why should I get the COVID-19 vaccine when there are other ways to prevent COVID-19? Stopping a pandemic requires using all the tools and resources available. Vaccines help your immune system build protections against germs before you are exposed to them (and possibly sickened by them). Other steps, like wearing a mask, hand hygiene and social distancing, help reduce your chance of being exposed to the virus or spreading it to others. Together, getting the COVID-19 vaccine and following all other preventive strategies provides the best protection from COVID-19.
- 2. Is the COVID-19 vaccine safe? Safety is a top priority during the vaccine approval process. The U.S. Food and Drug Administration (FDA) has a rigorous regulatory review process led by physicians and scientists to ensure the safety and effectiveness of the Pfizer and Moderna vaccines. Over 30,000 individuals participated in each of the Pfizer and Moderna Phase 3 vaccine trials and completed follow-up through several months after getting all required vaccine doses. A broad range of people took the vaccine safely in the clinical trials.
- 3. How well do the COVID-19 vaccines work ("vaccine effectiveness")? Data from mRNA vaccine trials show a reduced risk of having a severe case of COVID-19 after you get the 1st vaccine dose; in other words, about 50% or greater immunity to the virus. Starting (seven days for Pfizer) (14 days for Moderna) after you get the 2nd dose, the vaccine is about 95% effective in preventing COVID-19 infection. We are very excited about this incredible scientific advancement.
- 4. What are possible side effects of the COVID-19 vaccine? A side effect is any health problem shown by studies to be caused by a vaccine. Like any medication, vaccines can cause side effects. Less than 0.6% of people who were given the vaccine and 0.51% of people who were given the placebo reported allergic reactions, some of which were mild in the trials, according to the first Food and Drug Administration (FDA) review of the vaccine data. In other words, there was no difference between the vaccine and placebo group regarding allergic reactions in the clinical trials. Usually, the Pfizer and Moderna vaccine side effects are minor (like a sore arm where the shot was given or a low-grade fever after getting a vaccine), and they go away on their own within a few days.
- 5. Will everyone in my department get the shot at the same time? Our goal is to get as many team members/physicians vaccinated as soon as possible to ensure their safety. Because the vaccine can potentially cause temporary side effects such as fever and muscle aches that may require a day of rest, members of a department should stagger their scheduled vaccines. As per CDC recommendation, approximately 1/3rd of a department will be vaccinated at the same time selected randomly to ensure equality.
- 6. If I already had COVID-19 and have recovered, do I still need to get the COVID-19 vaccine?

  There is not enough information currently available to fully tell whether someone is protected (called natural immunity) from getting COVID-19 a 2nd time. Early data suggest that natural immunity to COVID-19 may not last very long, but more studies are needed. It is recommended that those individuals should be vaccinated. The vaccine will likely boost one's immunity and will not harm you if you have already had COVID-19. If you have COVID-19 in the past 90 days,

- including a positive test, you may elect to wait to get vaccine until later in the vaccine program allowing others, who have not already had COVID-19 to get the vaccine first.
- 7. I am pregnant. Should I get the COVID-19 vaccine? The American College of Obstetricians and Gynecologists (ACOG) recommends that COVID-19 vaccines should not be withheld from pregnant individuals who meet vaccination criteria. Pregnant women were not part of the research trials into the vaccine, so there is no safety data available for that group, but ACOG's advisory group notes that the type of vaccines used to protect individuals against COVID-19 (mRNA vaccines) do not contain live virus, do not alter human DNA and are expected to be similarly safe to administer to both pregnant and non-pregnant women. Additionally, studies have shown that women battling coronavirus during pregnancy have a 25% higher risk of premature birth than healthy women, and they face a 70% increased risk of dying compared to non-pregnant women. Ultimately pregnant patients should have a discussion with their health care provider, who can help them make an informed decision.
- 8. I am breastfeeding. Should I get the COVID-19 vaccine? The Society for Maternal-Fetal Medicine (SMFM) believes there is no reason why the COVID-19 vaccines would affect the safety of breastmilk and strongly recommends that lactating people have access to COVID-19 vaccines and discuss their options with their health care provider. At this point, both pregnant and lactating individuals have been excluded from vaccine trials, therefore there are no safety data available on COVID-19 vaccines in these groups. However, because mRNA vaccines do not contain live virus and it does not enter into a cell's nucleus, SMFM believes that the benefit of receiving the Pfizer or Moderna vaccine outweighs the risk associated with becoming ill with COVID-19. What if I become pregnant after receiving my first dose of the COVID-19 vaccine? If an individual becomes pregnant after the first dose of a COVID-19 vaccine, the second dose should be administered as indicated 3 (for the Pfizer-BioNTech COVID-19 vaccine) to 4 (for the Moderna vaccine) weeks apart.
- 9. How do the COVID-19 vaccines effect fertility? Because of the safety profiles associated with the type of vaccines used to protect individuals against COVID-19 (mRNA vaccines), COVID-19 mRNA vaccines are not thought to cause an increased risk of infertility. According to the American Society for Reproductive Medicine (ASRM), since the vaccine is not a live virus, there is no reason to delay pregnancy attempts because of vaccination administration or defer fertility treatment before, while, or after receiving this vaccine series. Additionally, it is not necessary to delay pregnancy after completing both doses of a COVID-19 vaccine.
- 10. How does the COVID-19 vaccine work? Both the Pfizer and Moderna vaccines are "messenger RNA vaccine" (mRNA vaccine) injected into the deltoid (upper arm/shoulder) muscle with a needle. mRNA is most easily described as "instructions for cells" on how to make a piece of the "spike protein" that is unique to the COVID-19 virus. When you get the COVID-19 mRNA vaccine, an immune response against the COVID-19 "spike protein" is triggered. This immune response helps our bodies build immunity to the virus (SARS-CoV-2) that causes COVID-19 disease. The "spike protein" is only one piece of the virus; by itself, the "spike protein" cannot cause COVID-19 infection or spread COVID-19 to anyone else.

- 11. How many shots of the COVID-19 vaccine will I need to get? Pfizer and Moderna vaccine that requires 2 shots given 21 days apart (Pfizer) and 28 days apart (Moderna). You must get 2 doses of the same vaccine from the same manufacturer (that is, you cannot get 1 Pfizer and 1 Moderna shot). Will the COVID-19 vaccine cause me to test positive for COVID-19? The COVID-19 vaccine will not cause you to have a positive PCR (molecular) or antigen test, the tests that are used to determine if you are currently infected with COVID-19. In some people, it is possible that getting the vaccine will cause the body to make enough COVID-19 antibodies to be detectable on antibody blood tests, the tests we have been using to know if you have been exposed to COVID-19 in the past. Even after getting the vaccine, if you have signs and symptoms of COVID-19, exposure to COVID-19, or other indication for being tested, you may still get a PCR or antigen test per usual.
- **12.** How long does immunity from the vaccine last? It is unknown at this time how long the immunity from the vaccine lasts as the first people to receive the vaccine only did so in July of this year. A longer period of study and follow up will be needed.
- 13. Will the virus mutate and change the vaccine next year? This, too, is unknown as we have only been aware of this virus for the past year. Certain viruses, notably influenza, mutate readily in ways that make them insensitive to antibodies from previous infections or to previous vaccines. We do know that the SARS-Co-V-2 can mutate, but so far, the mutations that have been observed effect how readily the virus can cause infection, and not how it will react to antibodies. Nevertheless, this virus, being so new to our experience, will require further study and follow up to determine if it can develop mutations affecting its ability to overcome the vaccine.
- 14. Is this an annual vaccine? When a vaccine is licensed, we will only have information about the length of immunity from the vaccine clinical trials. For example, if the first people in the study were vaccinated in July 2020 and the vaccine is licensed in December 2020, we will only have information about the immune response up to 5 months after vaccination. The vaccine manufacturers will likely continue to monitor vaccine recipients for several months or more so that, over time, we will continue to get a better picture of the durability of immunity. With this information, we will be better able to understand whether vaccines against COVID-19 will require annual dosing like influenza.
- **15.** Is there an incubation/quarantine period after receiving this vaccine? No. The vaccine does not contain a live virus, so a person who receives the vaccine will not pose any danger to other individuals
- **16.** What do I need to do between the first and second shots? Please follow all best practices to stay healthy (following PPE and universal masking and eye protection protocols, cleaning hands frequently, disinfecting commonly used items and surfaces, social distancing, monitoring for signs and symptoms of COVID-19, etc.) and reporting illness and staying home when sick still apply even after vaccination.
- **17.** What do I do if I miss my second dose appointment? If you receive one dose of the vaccine, you should receive a second dose of this same vaccine 3 (Pfizer) or 4 (Moderna) weeks later to complete the vaccination series. Should you miss the second dose appointment, make a follow-

- up appointment immediately. At this point, there is no recommendation that you will need to restart the series from the beginning if you miss the second dose.
- **18.** Does the COVID-19 vaccine take the place of the pneumonia vaccine or the flu vaccine? No, the COVID-19 vaccine does not take the place of the pneumonia vaccine or the flu vaccine. It is a good idea to be up to date on pneumonia and flu vaccines in addition to COVID-19. Please consult with your health care provider regarding which vaccines are recommended for you.
- 19. Will getting the flu vaccine protect me against coronavirus? No. Influenza viruses and coronaviruses are different. Getting a flu vaccine will not protect against COVID-19; however, the vaccine can reduce flu illnesses, hospitalizations and can help to conserve potentially scarce healthcare resources during the pandemic. It's likely that flu viruses and the virus that causes COVID-19 will both be spreading this winter, making it more important than ever to get a flu vaccine. It is the best way to protect yourself and others especially those who are particularly vulnerable to both COVID-19 and influenza, such as older adults and those with chronic health conditions.
- **20.** Can I get the flu shot and the new COVID-19 vaccine on the same day? The CDC currently recommends not getting other vaccines 14 days before or after receiving the COVID-19 vaccine.
- 21. Can I get COVID-19 or spread COVID-19 to others after getting the COVID-19 vaccine? The vaccine has shown great efficacy to protect the vaccine recipient, but there may still be the possibility of transmitting the virus to others if you are exposed to the virus. The COVID-19 vaccine is not 100% effective, so exposure to someone with a COVID-19 infection could still result in you getting sick with COVID-19 even after you are vaccinated. If you develop symptoms consistent with COVID-19, you must follow the usual protocol.
- **22. Should I get tested for COVID-19 before getting the vaccine?** Data from the vaccine trials showed that individuals who were asymptomatic but tested positive for COVID-19 were still able to be safely vaccinated. As such, no testing for COVID-19 is necessary prior to getting the vaccine (neither the antibody blood test nor the nasal or saliva PCR and antigen tests).
- 23. Are there any specific vaccination recommendations if I received convalescent plasma or monoclonal antibodies as part of my therapy for COVID-19? Currently, there are no data on the safety and efficacy of the Pfizer or Moderna COVID-19 vaccination in persons who received monoclonal antibodies or convalescent plasma as part of COVID-19 treatment. Based on the estimated half-life of such therapies, as well as evidence suggesting that reinfection is uncommon in the 90 days after initial infection, vaccination should be deferred for at least 90 days, as a precautionary measure until additional information becomes available, to avoid interference of the antibody treatment with vaccine-induced immune responses.
- **24.** Are there different vaccines for over **50** years of age, similar to the flu? No. There is no specific vaccine for the older population as there is for the flu. Although older people tend to respond less well to vaccines in general, the COVID-19 vaccine trials did indicate that there was an excellent protective response in older individuals.
- **25.** Can children get the COVID-19 vaccine? In early clinical trials for various COVID-19 vaccines, only non-pregnant adults (16 years or older Pfizer) (18 years or older Moderna) participated.

- However, clinical trials continue to expand those recruited to participate. The groups recommended to receive the vaccines could change in the future.
- 26. Is the COVID-19 vaccine safe? Safety is a top priority during the vaccine approval process. The U.S. Food and Drug Administration (FDA) has a rigorous regulatory review process led by physicians and scientists to ensure the safety and effectiveness of the Pfizer and Moderna vaccines. Over 30,000 individuals participated in each of the Pfizer and Moderna Phase 3 vaccine trials and completed follow-up through several months after getting all required vaccine doses. A broad range of people took the vaccine safely in the clinical trials. Over time, as more people are vaccinated, even more information will become available about the benefits and risks of these vaccines.
- 27. What are possible side effects of the COVID-19 vaccine? A side effect is any health problem shown by studies to be caused by a vaccine. Like any medication, vaccines can cause side effects. Less than 0.6% of people who were given the vaccine and 0.51% of people who were given the placebo reported allergic reactions, some of which were mild in the trials, according to the first Food and Drug Administration (FDA) review of the vaccine data. In other words, there was no difference between the vaccine and placebo group regarding allergic reactions in the clinical trials. Usually, the Pfizer and Moderna vaccine side effects are minor (like a sore arm where the shot was given or a low-grade fever after getting a vaccine), and they go away on their own within a few days.
- **28. Do I need to follow the same safety precautions after I get the COVID-19 vaccine?** Yes! Please follow best practices to stay healthy (PPE and universal masking and eye protection protocols, cleaning hands frequently, disinfecting commonly used items and surfaces, social distancing, monitoring for signs and symptoms of COVID-19, etc.) and reporting illness and staying home when sick still apply even after vaccination.
- **29. Do I need to wear a mask after I get the COVID-19 vaccine?** Yes! All best practices to stay healthy still apply even after vaccination. Team members and physicians must continue to follow all universal masking and eye protection protocols.
- **30.** Can I start traveling after I get the COVID-19 vaccine? No. Team members and physicians must continue to follow all pandemic travel policies.

Damanpreet Ubhi, MD