

May 13, 2020 Clinical Trials Patient Education Webinar Transcription

Becky: Welcome everyone. This call is now being recorded. I'd like to thank you for being on the call with us today and a big thank you to our sponsors Genentech, Principia Biopharma and Argenx for making today's call possible. Today's topic is research and clinical trials with Dr. Donna Culton. First, let me introduce you to our speaker. Dr. Donna Culton completed her medical degree at the University of North Carolina Chapel Hill. While there, she received her PhD in the Department of Microbiology and Immunology where she studied autoreactive B cell development and regulation. She continued her training at UNC and following her Dermatology residency she completed a postdoctoral fellowship applying her knowledge of autoreactive B cell pathophysiology to pemphigus by studying B cells and autoantibodies from patients. Her laboratory generated a novel murine model of pemphigus allowing for a better understanding of mucosal pemphigus vulgaris. In her current position as Associate Professor of Dermatology at the University of North Carolina at Chapel Hill, she serves as the Director of the Clinical Immunofluorescence Laboratory at UNC and sees pemphigus and pemphigoid patients from North Carolina and neighboring states in her specialty Autoimmune clinic. She has served as an investigator in clinical trials in pemphigus and has contributed to consensus statement publications as part of the International Pemphigus and Pemphigoid Committee. So now it is my pleasure to introduce Dr. Donna Culton to answer your questions. Some of you on the webinar can see me and not Dr. Culton and she's experiencing some technical difficulties that we are trying to work out right now, but she will be able to share some information and help us by answering your questions. I would like to start off today just by launching a poll. What we'd like to know is how many of you on the call today have participated in a clinical trial? And so if you could answer that question and then, Dr. Culton while people are answering that question, do you want to tell us right now there seems to be a lot of research going on on pemphigus and pemphigoid. Why does there seem to be so much much excitement around these diseases right now?

Dr. Culton: Hi Becky. Hi everyone Thanks for being here and joining us. Becky, you can hear me, right?

Becky: Yes.

Dr. Culton: Okay, just making sure that that wasn't part of the technical difficulty. So yeah, I've said for the last couple years pemphigus seems to be having a moment and really what that means is, that for the longest time pemphigus and pemphigoid both being rare diseases really no drug companies were excited to be doing research and developing drugs for such a small

target patient population. Always those of us who care about these diseases really felt like pemphigus and pemphigoid represented a very well-defined, we know a lot about the basic science and research. We can see the disease activity right on the skin, we have excellent biomarkers with the antibody levels in the blood. And so we thought it was a really great representative autoimmune disease, antibody mediated autoimmune disease that whatever we learn from it and whatever drugs work in pemphigus and pemphigoid might be helpful to other antibody-mediated autoimmune diseases that are a little messier to study to be honest. So think about things like lupus or multiple sclerosis. So for the longest time again, we had felt like our diseases were important not only because we wanted to help our patients but also because even though they're rare, they're excellent diseases that whatever we learn could pertain to other other diseases. So what's happening is that drug companies have realized that that is true and so many of the new medications being developed for pemphigus and pemphigoid and tested in clinical trials, there is hope that they will also eventually be able to help other patients like with other antibody-mediated autoimmune diseases. So that's kind of where we are right now is that and quite honestly part of why drug companies are coming to pemphigus and pemphigoid is because the IPPF has done a wonderful job kind of serving as a landing place for patients, but also for physicians who treat those patients. We have a really tight network with the IPPF and with many of the patients. So drug companies and clinical trials can easily reach patients with these diseases through the IPPF, to let them know that the studies are going on, but also a tight-knit community of physicians across the world that treat these disorders. So the drug companies think, gosh it's like my life is made easy. We can go and find the doctors who know the disease and are willing to do the studies and we can find the patients all in one place through the IPPF. So I think that's why pemphigus and pemphigoid have really been having a moment in terms of increased interest in clinical trials.

Becky: Great. It looks like about 11 percent of the people on our call today have participated in clinical trials. So for the rest of us, can you quickly just review what a clinical trial is?

Dr. Culton: Sure. I'm going to try to show my screen now. So, I'm actually referencing the IPPF website because there's so much great information here and actually is super helpful. So really just to quickly review in general a clinical trial is a research study that's performed on people, patients and it's aimed at evaluating a medical, surgical or behavioral intervention. And so for the purposes of pemphigus and pemphigoid, it's typically medications that are being tested. The goal of the clinical trials is really to evaluate for the safety of the drug and the efficacy, that means how well it works. So in a clinical trial a drug company also called the sponsor has a drug they're ready to test. Early on they test their drug in a very early phase. I'm going to scroll down on the page. Early phase trials in humans, these are typically healthy volunteers and they test the drug primarily how the drug works in the body. How well it's absorbed in the body, is the drug reaching the target tissues and how quickly is a drug broken down in the body. So a lot of the real important science is tested in healthy volunteers, a limited number of healthy volunteers. Then as they move into other phases. So here you can

see phase 1 studies would test the safety of a drug and again often Phase I is healthy volunteers, but there are some studies where Phase I can be patients as well. Often a very limited number of people and again mostly focusing on the safety of the medication. Oftentimes we're looking at dose finding studies as well in Phase I studies. Then when you move to Phase II studies, we're really now starting to focus on the efficacy of a drug. Testing in patients where we're still always evaluating for the safety of the medication so looking for side effects, but also now starting to look at does the drug work. I'll just take a moment to kind of say another definition that's important, which is the primary and secondary endpoints of clinical trials. These are things that the drug company or the sponsor designates before the study even gets started. They outline how they are going to design the study, the primary endpoints are going to be X, Y and Z. Maybe they want the antibody levels to go down, maybe they want to see that the disease activity index of the disease is going down. The primary and secondary endpoints really define the study and again look at both safety and efficacy. Then once you get into Phase III studies we're starting to look at a much larger phase of the studies, many more patients participating. These are often randomized and double-blinded meaning their placebo controlled or the new drug is being tested against the standard of care. So some other drug that's already out there that we know works. Nobody knows who's getting the drug. So nobody knows who's in which arm of the study, who's getting the drug and who's getting the other treatment. Both the patients and the physicians that are running the clinical trial do not know. That's typically in Phase III studies. Once you have completed a Phase III study, then you can request FDA approval for the drug. So here on the IPPF's website is really great. People get confused about clinical trial phases all the time. And the truth of the matter is because it's not so much important what phases it's called, but the phases really differ. I have led Phase I studies that were actually in patients. I have led Phase II studies that were open label, meaning there was not another drug being tested. Or there's Phase II studies that are tested against the standard of care medication. They can be blinded or unblinded. So it's more important to know the details of the study. Obviously as a patient you're interested in knowing has this drug been in any other person before and always answer to that is yes, because there's always the Phase 0 studies where we're looking at healthy volunteers.

Becky: Great. Thank you. You kind of gone into the next question that was going to be asked which was the different stages and you covered that beautifully. Thank you, but with the trials that are active right now, what stages are they in for pemphigus and pemphigoid?

Dr. Culton: Okay to everyone listening, Becky gave me a sneak peek of some of the questions. So I'm going to share the next part of my screen here, which is the [clinical trials.gov](https://clinicaltrials.gov) website. So the beauty of any clinical trial is that it is reported here on clinicaltrials.gov. So while it can be a little overwhelming, potentially for a patient who isn't as familiar to navigate, I actually go to clinicaltrials.gov all the time. I am just going to show you quickly because the truth is there's changes in pemphigus and pemphigoid trials all the time and the best way to know what's going on is to go to [clinical trials.gov](https://clinicaltrials.gov). So I'm going to use this as an example and

just put pemphigus. You can see all the other kinds of forms of pemphigus come up and it lists pemphigoid as well. So you can list the condition or the disease. Then you can see there's 46 studies right now. Now all of us know that seems like way too many. So I'm going to scroll down and show you the status of the study listed, kind of on the left hand in red or green. So as a patient you might be more interested if you're thinking of participating in a clinical trial you really want to go to the studies that are recruiting right now. That means studies that are looking for patients to participate. So we can go over here to the left hand panel and click status recruiting and apply that filter. Now we're down to seven studies which seems accurate. So if we go down here, you can look at all the studies that are recruiting and some of them are for actual medications that are being tested but some of them are questionnaire based studies. So you just have to look through them carefully, but we'll start just at the top. This first study is a study of PRN 1008 in patients with pemphigus. You can click into this and scroll on down and it will tell you right off, you can see the condition or disease, the intervention or treatment, and then to the right hand side what phase this trial is in. So this is a Phase III study. Then it gives a little detailed description here of what types of patients they're looking for, about how long the studies are going to last. Some interesting things that you might be looking for after you do this is a randomized parallel group, double-blinded that means nobody patients and doctors don't know who's getting the drug, placebo-controlled. Then it's followed by an open-label extension. So that means once you've completed the first part of the study if you stayed with it, you would be eligible to do an open-label extension and that means the blinded portion of the study is completed and now everybody who continues an open-label extension would get the medication. Then after the open-label extension period there's an option to continue in a long-term extension. I know some people have asked what happens if like the drug was really working for me and then the studies over, can I not get in anymore? This study allows for a long-term extension period. So that's just one example. Okay, we're going to go back, then move on. This second study is actually just a study looking at human B cell response and pemphigus so it's not testing an actual medication. It's just patients giving blood samples which again is super useful to researchers but in terms of a drug used to treat your disease would not necessarily be doing that. So then let's look down here. Here's polyclonal regulatory T cells for pemphigus and that one if you kind of scroll on down you can see that that is a Phase I study. I guess the other thing I should mention is if you scroll all the way down typically there is going to be a portion. Oh, look, they give a lot of information here about the criteria, inclusion criteria, exclusion criteria. Exactly what patients they're looking for who would be eligible. But then way down at the bottom you can see the locations. So this tells you where the studies are going on. This is a study that's based in the US and there's four different institutions that are participating in the study. So if you live outside the U.S. this would not be a study that would be easy for you to do. Okay let's go back. There's one more I was just going to show here which is another study that actually is in Phase II. This one I should say is an open-label, so everybody knows who's getting the medication and meaning all patients in this studies don't appear to be placebo-controlled. You just have to look at the details and clinicaltrials.gov does a pretty good job of listing it. Now this one, I don't know at this moment if it is in the U.S. but it is in Germany, Hungary, Israel, Italy, Ukraine. So again, just when people ask I always go to clinicaltrials.gov just because things change so often with what studies are going

on, which studies are not recruiting for patients anymore because they're all full. So it's a great website.

Becky: Great. We are going to move into some definitions that we hear a lot. Some terms that maybe we don't necessarily know exactly what they mean. But can you help explain what orphan drugs status and an FDA Fast Track medication mean?

Dr. Culton: Okay. Here we go. It's like I knew what you were going to ask me Becky. So I pulled up the FDA's website to make sure that I'm giving you accurate information here because I think it is important. So designating an orphan drug designation. So this is a special status that's given to medication that's being used to treat a rare disease or condition and it has to be requested by the sponsor or the drug company. So it's not like the FDA reaches out to them and says, you are going to get a special designation as an orphan drug. The sponsor of the study has to ask for that designation and both the drug and the disease or condition have to meet certain criteria. You can see here there's like a little link and actually I clicked on that link and there is a lot of information so we're not going to do that right now, but essentially what it means is that there's certain things that are that the FDA does to make it a little bit easier for this study to happen. It's more logistical benefits. So you can see there in the middle that it includes things like tax credits for qualifying clinical testing, some of the marketing stuff for the prescription drug product is not subject to this prescription drug user fee. I'm going to scroll down. Becky, can you see my cursor?

Becky: I can.

Dr. Culton: Okay, so you can see down here it does not alter the standard regulatory requirements or process for obtaining approval. The safety and efficacy of the drug still has to be established. So it just eases a little bit of the logistical requirements for the study to get done. So hopefully that's helpful. Orphan drug doesn't mean there are any other shortcuts in terms of making sure that it's safe and effective.

Becky: Great. What about the term compassionate use and are patients able to use this for trial drugs and how can the doctor help to utilize this program as well?

Dr. Culton: A compassionate use is something that a company would have to allow for compassionate use for a medication to be used. To my knowledge it's not a certain program. So essentially, your physician would need to contact the company and request compassionate use for certain medication to be used. I think of it as being a bit outside of the clinical trial arena. Certainly not something that a patient... yeah, I think of it as very different from clinical trials. So whether a medication could be used in compassionate use, say there's a study going

on that's a placebo control trial but you really feel like you would love to be able to use this medication in your patient that typically is not allowed because we quite honestly don't 100% know the safety and efficacy of the medication yet to treat a particular disease. So where I've seen it be useful is a drug that's already approved for another condition. We do this all the time in dermatology specifically and for pemphigus and pemphigoid. We think that a specific drug may actually be helpful in one of our diseases and so we will sometimes ask for compassionate use to try a medication in a patient who has really tried everything else and if we did not intervene could have dire outcomes.

Becky: Great. Thank you. Our next question comes from Trish and she says that most of the research seems to be focused on pemphigus. Are there any research studies on pemphigoid or any new FDA approved treatments? And then her follow-up question is do other countries treat pemphigoid differently?

Dr. Culton: So that's a really good question. Okay. I'm going to start with going back to clinicaltrials.gov and we're going to start over. We're going to put the condition as pemphigoid. And let's see what we get. I am going to click the recruiting and not yet recruiting and apply that filter. Definitely there's a strong interest in pemphigoid as well. Pemphigoid is sometimes considered to be a little bit more of a special patient population in that it does tend to affect older individuals who may or may not but may have other diseases, other comorbidities such as diabetes. Again certainly any patient with pemphigus or pemphigoid could have other diseases because the general age range of patients affected with bullous pemphigoid tends to be a little bit older. I think some potentially drug companies have been a little more nervous to get into this field. However you can see there's still plenty of studies going on in pemphigoid. I think because pemphigus and pemphigoid, while on the surface may seem very similar in that they are mediated by autoantibodies and they cause blisters, from a pathophysiology point of view they're very different in that pemphigoid has a lot more inflammation in the skin. So there's many more drug targets I think that are possible with pemphigoid, just aimed at that inflammation and all the inflammatory cells that participate in causing the disease that we see on the skin in patients or in the mouth. Certainly there are up-and-coming studies. You can see a couple of these here, not yet recruiting but are kind of on the launching pad. I think pemphigoid is about to follow suit with pemphigus. So all of you out there with pemphigoid, hang in there because I think there are a few studies but more are coming.

Becky: Great, great information.

Dr. Culton: What was the other question?

Becky: Do other countries treat pemphigoid differently?

Dr. Culton: That's an excellent question and in general the treatments that are used in different countries are pretty similar. A lot of the differences that we see, we have a group of physicians who specialize in treating pemphigus and pemphigoid and we get together quite frequently to discuss questions just like this. Do we do it the same, do we do it differently? Most of us use the same types of treatments. A lot of it depends on what's available in different countries. So in some countries you can easily get Rituximab. In some countries you can't easily get Rituximab. In some countries the use of potent topical steroids is the first and foremost treatment for patients with even extensive bullous pemphigoid. And in the U.S. that's not as commonly used as an approach. Certainly we use topical steroids, but when it's quite severe or extensive disease activity we oftentimes will move past that. We all got together and realize that's because Clobetasol is cheaper in Europe than it is in the U.S.. I think that there are some differences in our algorithm. The treatments are the same but the order that we use them might be different and a lot of that has to do just with what is available and what patients in the different countries are willing to do.

Becky: Great. Our next question is what is the process for joining a clinical trial? Do you have to become a patient of a participating doctor or do you ask your own doctor to refer you? How does that look?

Dr. Culton: Great question. Typically you do not have to be a patient of the doctor who's running the study at a particular site. If you look at some of what we were looking at on clinicaltrials.gov you'll see perhaps, there are four different centers that are running this study. Each center will have what they call a PI or a primary investigator on that study and that's the doctor who's in charge of running the study. You do not have to be a former or current patient of that doctor to participate. Your doctor would suggest that this might be a great study for you. You should look into it. Because there's so many details, we saw that one example of all the inclusion and exclusion criteria, your doctor would not necessarily be expected to know all of that information about each of the different studies. So really the best thing to do is have either your doctor or yourself contact one of the study sites. Most study sites will do an initial screening. A pre-screening sometimes it's called, where over the phone you go through some of these things. Many of the studies say for example, you can't have a history of cancer or maybe no cancer in the last five years. Some things right off the bat would mean you weren't eligible for that particular study and the study coordinator can do this pre-screening over the phone to see if you would be eligible as well as answer your questions about how long does this study go? Let's say you don't live in the town where the study is being done, asking questions like would the sponsor or drug company, are they willing to pay for your travel?

Even just reaching out to the study coordinator at the different site, like the site closest to you, you can do yourself as a patient.

Becky: Great. Thank you. Laurance asks is psychological support included in clinical trials, especially if the trial doesn't work for me?

Dr. Culton: That's a good question. In general for most of the clinical trials there's a specific list of things that we as the primary investigator have to do as part of the trial. Some of those may include questionnaires about your emotional well-being. But in general, a larger way to look at that question is just to say, what happens if the study is not working for me? At the end of the day your doctor, the doctor who's running the study, the number one responsibility of the doctor is to take care of you as the patient and do what's in your best interest. So all along the way the doctor is working with you to determine how you are doing and how you are feeling. Also if you are frustrated because you're not really seeing any improvement yet. So I do think kind of in the background there's always a level of support around your emotional state. We know that pemphigus and pemphigoid can be so taxing on you mentally and emotionally but that's always there. In general I think we go out of our way to make sure that you feel comfortable continuing to participate in the trial at every step of the way, particularly if you're not seeing any benefit. Many of the studies have part of the protocol that if you're having a flare that there's something that can be done to help you without pulling you out of the study. Sometimes everything that we can do within the confines of the clinical trial protocol has been done and you're still not doing well. And then sometimes we make a tough decision to do what we call an early termination of the study, so to pull you out of the study because continuing is not safe for you or just not in your best interest at that moment. So you always have that support as well. There is a lot more communication with your doctor's, with the study coordinators. You have this team that is dedicated to you while you're in the clinical trial. Communication is highly encouraged. If you sneeze too many times in a row, they want to know about it. I think sometimes even that anxiety that some patients might have about being in a clinical trial is counteracted by just the availability of the clinical trial's staff, both the nurses and the physician, to you and your needs while you're in the trial.

Becky: Great. It sounds like from what you're saying that there is a lot of communication between medical teams and medical personnel and the patient compared to not being involved in a trial. Are you monitored more closely during a clinical trial?

Dr. Culton: Typically, yes. The only reason I say that is I think about some of my patients with pemphigus or pemphigoid while they're on a standard dose of medication and we're seeing them every few months and checking labs every few months. These clinical trials are looking at a lot more detail and there's a lot more lab work. The lab work is done more frequently, the assessments for looking at your skin are done more frequently. All of it is to capture the data

around safety and efficacy of the drug. So I do think there's a lot more monitoring while you're in a clinical trial compared to and that it all depends on where you are in your course of disease. So early on, new pemphigus or pemphigoid patient, we have a lot of contact and a lot of assessments. As well as a lot of checking in and a lot of blood work. But later in the disease course where patients are stable on a certain medication, it's a little bit less. So compared to a clinical trial where we have to follow the rules of the protocol. So if the protocol says you have to see the patient every month and that visit has to be within a two-day window, then that's what we have to do. I think it's just a little more regimented how all of that is done.

Becky: Okay great. This question has to do with coronavirus. How has COVID-19 impacted clinical trials?

Dr. Culton: Yeah, that's a good question. So no doubt there's been a huge upheaval in clinical trials in the setting of COVID-19. What we're seeing is that both the clinical trials teams, so the clinical trials coordinator, the nursing staff, the doctors, we all want to keep our patients safe especially patients with pemphigus and pemphigoid who are often on medicines that suppress their immune system. The sponsors or the drug companies who are running these studies have been very willing to be a little more flexible. All of this requires a tremendous amount of work because any changes that are made to a protocol have to go through a lot of institutional review to make sure that we're not compromising the safety of our patients. What's happening now is we're trying to focus many of the studies and I can only really speak to the ones that I'm involved with but I think across the board we're trying to do as much as we can remotely. So video visits if that's possible, any type of remote visit. Having you go to a local lab to get your labs run instead of coming in for your blood work. Focusing on the blood work and the assessments that would be most important for safety, for patient safety and for the primary outcomes. We talked earlier on about primary and secondary outcomes. So if the whole goal of going through all of this work to do a big old clinical trial for a disease like pemphigus or pemphigoid, we want to get the data. We want to make sure patients are safe and we want to get the data so that if it's effective we can apply to the FDA for this new drug to make it to be out there for everybody to be able to use. Really what's happening is we're focusing on primary outcomes and safety of the patient. Any assessment that is related to patient safety is getting prioritized right now. And then some of the secondary outcomes company sponsors are allowing us more flexibility around those

Becky: Great. Are there any companies or trials that are still recruiting at this time?

Dr. Culton: Yeah, I think again it's always tricky. I think COVID has affected all of us across the country in different ways and we're at different phases of our response and our curves and

all that stuff. And so while recruiting is on hold for some studies, I think we're always thinking in the back of our minds that it's ongoing for some however a lot of it is like site-specific.

Becky: Great. With the trials, what are the costs associated with a clinical trial and specifically what costs are our patients responsible for compared to the standard cost of standard treatments?

Dr. Culton: So clinical trials cost a lot of money. There's just so much work that goes into all of the paperwork and the keeping track across all these multiple sites, gathering the data, having the patients come in, paying the nurses and doctors who are taking time to do the studies. In general clinical trials cost a great deal of money, but to the patient the cost is typically nothing. For patients, typically like the medication itself, the lab monitoring, the assessments by the physicians all of that is covered by the study. Oftentimes patients are reimbursed for their travel or given a small amount of money for each of the visits that they attend as a form of compensation to cover coming out and making the drive. As we know the diseases are rare and you're often not in the same places where the study is being done. So the cost of the patient is typically nothing to participate in the study.

Becky: Great news. When we're talking about trial drugs versus placebo, is placebo generally a sugar pill or is it another treatment? If you could talk a little bit about that and then what if I have a flare during the treatment and I can't get the medicine that I'm taking and the trial doesn't get it under control? Are there any protocols in place to help?

Dr. Culton: So I'll start with the idea of a placebo and again a placebo controlled study might mean that some patients are getting the active drug and some patients are getting a placebo that could be a sugar pill. It could be if it's an injectable type of medicine or an infusion, you just wouldn't know but it would look the same but you don't know if it's the active drug or not. We talked about how sometimes the study is the medicine against another medicine that we already know to work, so Comparing the new medicine versus an old medicine. Sometimes in certain studies and protocols a patient is allowed to continue on their prior medicines. So let's say I'm not using a normal scale, but I'm saying a scale of 1 to 10 of your disease when you first got it was terrible, it was a 10. Then you were put on a certain medication that is standardly used to treat pemphigus or pemphigoid and you got down to a 5 but you still were not doing perfectly. Some studies will allow you to stay on that medicine and then just add on the study drug or the placebo on top of that. So you're not asked to stop all your prior medicines as long as you've been on a stable dose of that for several months. They don't want to mix it up and if you just had a dose increase and then it looks like you got better they won't know if it was from your old medicine or for the study drug. That's just another example of how you have to really look at the protocol. Can you stay on your current medicines or are you asked to stop your current medicines? And what does that mean in terms of your own care for

your disease? Then the second question of what happens if you have a flare up while you're on a study. As we talked about, some of the studies do have in the protocol what you should do if you're patient flares and what options you have. Whether that's adding another medicine or it can typically within each study protocol it's defined on what options you might have if you're having a flare-up. Then, again as we talked about while it's never our goal to enter someone into a trial with the idea of withdrawing them if it gets to the point where you're having such a bad flare that it would be not in your best interest to continue in the study you can always withdraw early from the study.

Becky: Great, that's a lot of great information there. Our next question says when I choose to participate in a trial will I only be in contact with you or will I be in contact with your team of people or will I be in contact with people from the pharmaceutical company who is sponsoring the trial?

Dr. Culton: Yes, you would be in touch with your study team. That would be the doctors, nurses, and study coordinators that are running the trial at that particular site. They're the ones who know you, know your disease, know everything about you. So that's who you would be communicating with most of the time. I think some patients ask, what about my regular dermatologist? Would they still be in the loop? Our goal is always to involve them but really they cannot be changing your medicines in the background. So usually while you're in a clinical trial you are with the study team and the study doctor. The goal is again that we would take the best care of you as possible and then when the study is over, you return to your regular dermatologist. The idea is that the regular dermatologist wouldn't be making changes to your treatment because we really have to follow the protocol and they don't know the protocol as they are not part of the study team. What was the second question?

Becky: Will I be in contact and who do I contact if I have a problem during the study?

Dr. Culton: If you were on this study and you had a problem you would first usually have the direct number to the study coordinator. And so you would call your study coordinator who would then loop in the doctor involved in the studies to decide what to do next. I would say probably most patients who are listening who have been involved in a study know that the study coordinator is your go to person and they can arrange anything else that needs to be arranged.

Becky: Great. Thank you. It sounds like the clinical coordinator then or the nurse would be coordinating the general healthcare around the trial? Do they also coordinate your general health care or is it just specifically for the trial? Who would do that if they don't?

Dr. Culton: It would just be around the disease that you're in the clinical trial for. Your background stuff that you're doing for your diabetes or hypertension, your primary care physician would still do that. Most of us who do clinical trials, we provide you with information that you give to your primary care physician so that if they feel they need to change a medicine for you that they would check with us first. Again, it's more about making sure we have all the communication, not that they can't add a new medicine or change something. It's just making sure it's safe within the study.

Becky: Great. This question goes back to the time it takes to get a drug approved. The question says it seems like for COVID-19, treatments and vaccines are happening very fast. Why is it happening so rapidly for this disease and then for our disease, it seems to take so long to get approval?

Dr. Culton: Yeah. I think it goes back to the severity of the disease and what we already have available for treatments. As we know right now, for the most part I think pemphigus and pemphigoid studies have really been able to get some of these fast track designation for an orphan drug. I'm going to just move over really quickly to a different part of my screen which explains the term fast track. That was another question and one of the definitions that we were going to potentially over here. So the term fast track, if I scroll down on this page, again this is the FDA website. Fast track is a process designed to facilitate the development and expedite the review of drugs to treat serious conditions and fill an unmet medical need. So right now I think COVID-19 is kind of front and center. The FDA is really using all their resources to focus on new drugs and new vaccines for COVID because really it's a huge unmet medical need. We don't have anything to treat it that we know works right now. As we've talked about all this clinical trial stuff, it takes a long time to do all this and to see how it's going to play out, to gather all the data, to review the data, and analyze it. So no matter how you slice it, doing a clinical trial on anything is going to take a long time but fast-tracking really just means that the FDA is going to expedite the review of those studies first. I do think you know right now COVID-19 is taking priority but I think that pemphigus and pemphigoid studies have done well to be either fast-tracked or again get designated orphan drug status to help our patients. It's just obviously a global pandemic sometimes gets a little more action

Becky: Sure. Who else besides my team of doctors needs to know that participating in a trial? Does my insurance company also need to be notified?

Dr. Culton: So no, they don't need to be notified at all. All of this is done with the goal of keeping you and your health information safe just like in your regular medical care. We keep your health information protected and we do that in a clinical trial as well. So while we as the doctors and nursing team that are running the clinical trial know who you are and your identity even the drug company or the sponsor of the study does not know your personal details. They don't get your name or your birthday. They just get the unidentified data that we are sending them. So certainly then your insurance company doesn't need to know because none of this is done through your insurance anyway.

Becky: Great. Thank you. Another question that came in is, can I talk to other people who are participating in the trial, other patients?

Dr. Culton: So unfortunately because we do keep everybody's health information protected, we are not able to give you a list of other people who are participating in the study because that would be sharing their information, so typically no. I would say the best resource is through the IPPF and Becky you can probably speak to this. There are probably Health Coaches that have participated in clinical trials that would be happy to talk with you about the broad strokes being in a clinical trial. Obviously they won't know about this specific trial you're on, but at least to be able to talk through some of your questions and again the peer coaches are great in general about just being there for you and the uncertainty around the disease and the treatments.

Becky: Great. We do have another question and the question is, for those who participate in a clinical trial do they get to find out the results of this trial? How and when is that information given?

Dr. Culton: Typically patients themselves are not necessarily notified of the outcomes, but the companies will often do press releases when results of a trial have been released to the general public meaning other doctors who aren't participating in the study and really even to the doctors who are participating in study. Sometimes the first inclination I have of whether the drug was deemed to be helpful or not comes when the rest of everybody gets that information with a big press release that a company might do. What we never find out is whether you were on the drug or not. I have a lot of patients ask me if the sponsor will tell them after it's all said and done if I got the drug or not? No, they never circle back and give that information to any of us. Again not necessarily to patients but in general the results are released and a lot of times you can find those results on the clinicaltrials.gov the results of the study or through press releases from the company.

Becky: That's great information. William is asking can you give some information about DSG3-CAART, by Cabaletta Bio. A press release just went out for that as well and we mentioned it in our newsletter.

Dr. Culton: Yes. So the CAR T-cell therapy is a very interesting new approach that will be tested. It's in very early phases of the study, but the idea is to take T cells from the patient themselves and re-engineer them to essentially kill the desmoglein 3 specific B cells in that person. It takes a lot of time and it is considered a very advanced technology because it requires taking T cells out of the patient, re-engineering them, growing them and expanding them and then putting them back into the patient. This type of approach has been used, although a little bit different but in general used to treat B cell cancers and is now potentially going to be used in a little bit of a different way to see if we can really just target desmoglein 3 specific B cells. So it's a pretty impressive technology and potentially has the chance, I would say to put patients into a durable remission. But all that being said, this treatment like all other treatments it's going to be going through all these phases and will have specific inclusion and exclusion criteria. Just like all the other medications that we're talking about it will go through all the phases of the trial before it's approved.

Becky: Great. Thank you. Badri says that there was a drug from Immune Pharmaceuticals that was targeting eotaxin-1. Immune pharmaceutical appears to have gone bankrupt. Did the trial fail or is it being tested somewhere else under another drug company's name?

Dr. Culton: That's a good question. I'm not going to be able to answer it right off. I was looking to see if we could find it. So it wouldn't be recruiting anymore but we can circle back on that. I do think there were some early results that came out. It is true because these studies are so expensive sometimes companies do go bankrupt before they're able to complete the trial or publish the results. I do think there are some results and Becky you and I can circle back and potentially send that out afterwards.

Becky: Great. Thank you. Sylvia is asking how, can I be part of a clinical trial for nomacopan? I'm not familiar with that medicine.

Dr. Culton: I'm going to say I'm not familiar with it either. So I would again, direct you back to clinicaltrials.gov. And we can look into it a little bit more after the call and see if we can figure out exactly what she's asking about and if that's a study that's going on here in the U.S.

Becky: Sure no problem. So we have time for one more question. And while I am doing that question I'm just going to ask another poll. I was just interested in seeing how many people

after listening to this call would consider participating in a clinical trial? Our last question is how long do clinical trials last?

Dr. Culton: It's very variable and that's all going to be part of that protocol. When you're calling and asking your initial questions to the clinical coordinator that's something that you would ask about. If you completed the full study, how long would that be? Some drugs they expect you're going to work quickly so it's a relatively short trial of perhaps a few months. Other trials can go on for years. So I think it's a wonderful question to ask up front, but it's quite variable.

Becky: Great. Well, it looks like you've motivated some people in our community and after listening to this call about 70% of the people said that they are interested in learning more about clinical trials and they would consider participating. So thank you so much.

Dr. Culton: That's wonderful.

Becky: That's what these calls are about, educating and breaking down some of the barriers and just getting information out there so we hope that we've done that. This call has gone by very quickly as do most calls. So I want to thank you Dr. Culton for being on the call with us today. I would also like to give a huge thank you to everyone on the call for joining us today and thank you to Genentech, Principia Biopharma and Argenx for helping to make today's call possible. Before we go, I have a few announcements:

Our next Patient Education Webinar will be on May 21st with Michelle Greer, an Immunoglobulin Certified Nurse, and Senior Vice President of Sales for Nufactor Speciality Infusion Company to answer your questions about IVIG. You can register on our website today!

As you know, the IPPF's main focus is to improve the quality of life for all those affected by pemphigus and pemphigoid through early diagnosis and support. Day in and day out, we're here for you, whether it's by providing support through our peer health coaches, supporting the research of new treatment options, advocating on behalf of the rare disease community, or accelerating the diagnostic process. What you may not know is that we accomplish all of this with just 4 full-time and 6 part-time employees. Though our commitment is international in scope, the IPPF operates as a small nonprofit organization. Due to the ongoing COVID-19 pandemic, the world is facing unprecedented challenges. Unfortunately, the IPPF is not immune. Recent donations are down, and our usual sources of funding are now unreliable. In short, we need your help to keep the IPPF operating in the way you've come to expect. Together, we can keep hope alive. We want to thank everyone who donated on Giving Tuesday Now last week! We exceeded our goal of raising \$5,000 on Giving Tuesday Now and raised over \$7,000. We need your continued help to reach our goal to raise \$30,000 by June 2. You

can go online and donate today at www.pemphigus.org/hope. Principia Biopharma has generously agreed to match 100% of all donations raised until June 2. Give today, and you'll double your impact!

If you have not registered for the IPPF's natural history study we encourage you to do so. The IPPF Natural History study is a patient registry sponsored by the National Organization for Rare Disorders (NORD) and the US Food and Drug Administration (FDA). You can register today at www.pemphigus.iamrare.org. This online data system collects, stores, and retrieves patient data for analysis in research studies. The more data we can collect, the better the information we can give to researchers, the sooner they can find better treatments, earlier diagnosis, and one day – A CURE!

Lastly, If you have a question that didn't get answered on the call, or have additional questions please e-mail me Becky Strong, at becky@pemphigus.org, or call (916) 922-1298 x:105, and we would be more than happy to help. This call recording will be sent out with the survey following this call. Have a great day, everyone. Goodbye.

Dr. Culton: Bye.