**Bonus: Mechanism of Action Approach to Acne Treatment—**
**Combination Therapy Targeting Root Causes**
**(Sponsored by Almirall)**

Julie Claire Harper, MD, FAAD, interviewed by Katherine Avery Gordon, MD, FAAD

**KATHERINE AVERY GORDON, MD, FAAD:** Good afternoon. I'm Katie Gordon and I am an Assistant Professor at the University of Texas Southwestern, in the Department of Dermatology. And I have the distinct pleasure today of interviewing Dr. Julie Harper on Therapeutic Targets for Treatment of Acne. Dr. Harper, would you please introduce yourself?

**JULIE CLAIRE HARPER, MD, FAAD:** Absolutely, and thank you so much for the nice introduction already. So I am Julie Harper. I am a dermatologist, now in private practice. I've been in practice for a total of 22 years and have really just developed a special knowledge, I hope, and relationship with acne and rosacea. I've been involved with it really since my earliest days in my career and had the opportunity even to be one of the founding Directors of the American Acne and Rosacea Society.—

--I'm also one of the organization's Past Presidents and stay very involved with that. I think treating our acne and rosacea patients is just one of the most vital things that we do as dermatologists.

**KATHERINE AVERY GORDON, MD, FAAD:** Thank you so much. And thank you so much for sharing your expertise today and all the service you've done to benefit our patients. So just starting off, could you shed a little light on what's new in the etiology and pathogenesis of acne and how that emphasizes our treatment choices

**JULIE CLAIRE HARPER, MD, FAAD:** I think there are certainly some things that are new in the pathogenesis of acne but there's also still a lot of old things that are worth revisiting. So when I'm in front of the acne patient, I am still trying to target those four main pillars of the pathogenesis of acne. And I've been targeting those for many years now and I'm sure many of

the listeners have, too. Those are inflammation, Cutibacterium acnes, sebum, and then follicular hyperkeratinization or plugging of the follicle.—

--And we've all been talking about those a lot. I think what we don't know is if there's an order to those, if one of those happens first and then the others follow subsequently. I think it's probably more cyclical. The one that probably isn't first is C. acnes but it still plays a very crucial role in the inflammatory response in acne. Maybe one of the earliest ones is inflammation. And very likely one of the earliest ones is sebum, because when you think about when we first start to see acne in our patients, we see it when it's under the influence of androgen hormone, for example.—

--So around that time of adrenarche and puberty, when we then start to see the development of acne. So what would I say is new in this? A couple of things. One thing that's new is our understanding of C. acnes. We have learned now that not all C. acnes are created equal. There are some subtypes or phylotypes of C. acnes that seem to be more proinflammatory than others, and so that's something that's new and interesting.—

--We still don't really have a way to type that in our clinics. We're not necessarily going to look at one patient and say, "Ooh, I'm going to now go after that one type of C. acnes." But we are learning I think a lot about the role of C. acnes in the pathogenesis of acne.

**KATHERINE AVERY GORDON, MD, FAAD:** Fascinating. So shifting a little bit to our approach to our acne patients, what are some of the most important questions we can elicit during history and when we're reviewing systems with our patients? And how might you select your therapies based on those answers?

**JULIE CLAIRE HARPER, MD, FAAD:** We could probably spend the rest of the time talking just about this. These won't necessarily be in any order of importance, but one thing that we need to

ascertain is how long they've had acne. What other treatments they've already used. Is there a family history of acne and in particular, scarring acne. All three of those first questions are really about how aggressive do I need to get right now. Because yes, it's important that we treat acne. We want to get rid of acne.—

--But we are also trying to prevent the development of scarring. And we know that there are some indicators out there. For example, if acne has gone on for two or three years without being well controlled, that person is now at higher risk of scarring. If they have a family history of scarring, we know that we can look at that patient in front of us and know that they're at higher risk of scarring. But I think another equally important question is really how much does this bother you. And we don't always get a real clear answer from that. You might even consider asking it in a different way like, "How aggressive do I need to work to get this as clear as I can?"—

--Because there are people who are really, really bothered by acne. And we know it doesn't correlate with what we see, meaning there can be people who have what we might deem rather mild acne but they're very, very bothered by it. And those people deserve our most aggressive treatment pretty quickly up front.

**KATHERINE AVERY GORDON, MD, FAAD:** Sometimes it's interesting to see when patients do respond and you see them back in follow up and they're doing much better and how happy they are with the progress. I think sometimes that can be telling on how motivated they were to treat it. Sometimes you find out a little bit more after the fact.

**JULIE CLAIRE HARPER, MD, FAAD:** We see that in clinic all the time. I had a nurse, I'll never forget this, we had treated a young guy who had really bad acne. And in this particular case, he was treated with isotretinoin. And he came back at the end of the course and my nurse said, "He knows he's hot now." Because he came in and he didn't have the hat pulled down over his

eyes. He was maybe walking a little bit more confidently. So I would ask any provider in dermatology, if you treat acne, have you ever noticed that you have improved somebody's quality of life by treating their acne? And the answer is going to be yes, absolutely.

**KATHERINE AVERY GORDON, MD, FAAD:** It's very gratifying. Other questions during the history. I know there's a strong emphasis on eliciting for hormonal acne, given some of the therapeutic targets that we have for female patients in particular, who may flare during menstruation or even our peri or postmenopausal patients. What pearls do you have for us in regards to that?

**JULIE CLAIRE HARPER, MD, FAAD:** I've kind of been on my soapbox a little bit lately and just reminding all of us that all acne is hormonal, all of it. One of the chief causes of acne is androgen hormone driving that sebaceous gland. And that happens in men, and it happens in women, it happens in 9-year-old boys, it happens in 15-year-old girls and 28-year-old girls. And so one thing I would remind all of us is that hormonal treatments are for anybody with acne.—

--It doesn't have to be somebody specifically with features of polycystic ovarian disease or something like that, it doesn't have to be that. We are certainly going to get information from some of our female patients who do say they have worsening at a certain time during the cycle. Sometimes it's around ovulation, sometimes it's more around the time of their period. And so asking some of those questions can be helpful. I do find that even in that case though, our best approach is still to go back and not to just try to target hormone, although we can do that, but to try to target that whole pathogenesis of acne and not try to do something different just because of that specific presentation.—

`--I think part of what you're alluding to there too though is we do want to find those patients who maybe their acne is driven more by hormone than others, for example, in that case of polycystic ovarian disease or even some of the oddball congenital adrenal hyperplasia or things like that.

We would want to know, are your periods regular? Do they come every month? How frequently do you have one? Do you have other signs of hyperandrogenism anywhere? And of course we wouldn't use that language but do you have facial hair?—

--Do you have hair in other parts of your body that you're removing, like your chin, your face? And so I do think it can be important that we talk about some of those things, as well. But my take home on all of that is even in the absence of that, all acne is hormonal.

**KATHERINE AVERY GORDON, MD, FAAD:** Are there any other diagnostic pearls or salient features you look for on exam that helps drive your decision making in selecting therapeutics?

**JULIE CLAIRE HARPER, MD, FAAD:** Probably exactly like you do, I'm looking for scarring. If I see any scarring, I will say I'm very quick to get to isotretinoin in a case like that. I think the longer that I practice, the more I use isotretinoin and the more I get to it quickly. Because again, I've got some great laser devices in my practice, as well, but I still can't get rid of scars. I can make them a little better. So our best option is always going to be prevention. And we can do some really great work with our topical retinoids.—

--But if that acne is looking deep and nodular and we see evidence of scarring, that's going to prompt me to move up that chain in my treatment options much more quickly and get to something like isotretinoin. So I would say that's one. Also, when you look really closely though, I think another area of acne that is really hard to treat is that full face comedonal acne. And you may not even notice it until you get right up on the patient. And it's those darn closed comedones, you really see very minimal inflammatory acne.—

--And I think that acne is going to be very slow to respond. This is a time where, of course I'd like to say every one of my acne patients is on a topical retinoid and they certainly would be in that case, but I think this is a time where occasionally we're going to do some procedures. We

may be doing some chemical peels to try to jumpstart that a little bit. We may have to do some extractions to jumpstart that a little bit. So just looking at features like that, whether they're very comedonal or you're seeing deep nodules, those are going to be things that kind of change my treatment plan a little bit.

**KATHERINE AVERY GORDON, MD, FAAD:** As far as choosing topicals versus systemic medications, we already discussed this a little bit, but share with us some of your algorithms, aside from getting to isotretinoin quicker. How long do you counsel your patients to expect improvement from compliance with topicals? And if you use them, how long will you use systemic antibiotics? What are some of your algorithms that you use?

**JULIE CLAIRE HARPER, MD, FAAD:** Lots of things in that question, so you may have to remind me of some parts. They're all great questions. So one of the first things I would say is I think we have a tendency to think of our oral medications as always being more effective than our topicals and I think that's totally false. I think that our topical medications, they are the heavy lifters in acne, with the exception of isotretinoin. And I'm not downplaying the important role of our oral antibiotics. I use them, I use them all the time.—

--But even in the AAD guidelines, the oral antibiotics are usually recommended for more moderate to severe acne. Now, is that because they're just so powerful that we need them only in moderate and severe? My opinion on that is we save them for moderate to severe because now we're willing to up the risk a little bit and we're willing to give a medicine that may have other potential side effects. And we never bring those oral antibiotics in by themselves, they're always going to be added to that topical medication that we're already doing.—

--Now, doing something that's totally unfair, there are not big head-to-head studies that compare all of these different topicals versus orals. But if you look at phase 3 trial data, you will notice that the success rate in general is much higher with our topical medicines than it is with most of

the orals. So I would first of all remind all of us to be really comfortable using the powerful topical medications that we have.—

--We can get a lot of our patient clear by using just topical medications. And when I can, I do start with that. Now, if I need to give somebody a double hit or a triple hit, then we can certainly add an oral medication at that time. But I'm really impressed by what we can do with many of our topicals. So, like you I'm sure, I still, even though I've done this for so long, I am always still thinking about those four causes of acne, am I hitting all of them?—

--So I'm just absolutely on the bandwagon for a topical retinoid. Every patient should be on a topical retinoid who has acne, with the exception of maybe those people who are pregnant, I still don't feel real comfortable with that, I don't do that. So there are going to be some cases where I don't use that. But even the people who say they have very sensitive skin and they have problems tolerating these, we can find a way to help them tolerate them. We have newer products now, that are in nicer vehicles, that are better tolerated. We can use them on alternate days.—

--We can use moisturizer with the product. So I think there are ways to do that. But I'm pretty much always going to start with a topical retinoid, because they are antiinflammatory. And they are the only products really that normalize that follicular hyperkeratinization, nothing else does that. We have other products that can help get rid of comedones but the way I think of it is the topical retinoids are really the only ones that are preventing comedones.—

--So it's one thing to clear the pore out after it's started. It's a whole other thing to be working on the prevention of the next one. And so I do agree with the guidelines that retinoids really they're just a cornerstone of treating acne. Now, what might I add with that? We could certainly add topical benzoyl peroxide. I think benzoyl peroxide has been around for a long time but it's still a

very effective product. It's one of those products that does probably help get rid of comedones but doesn't do anything to prevent them.—

--It's also antiinflammatory and it's an amazing antimicrobial. And there's no resistance to it at all, so if you want to come in an hit C. acnes, use benzoyl peroxide. It could be a little bit antiinflammatory and then with your retinoid, now you're also normalizing that follicular epithelial hyperkeratinization with that. You've got three of the four covered. We now, for the first time ever, have this topical clascoterone, which I have enjoyed getting to use. It's the first time we've had a topical that's an androgen receptor inhibitor that should allow us then to have an impact on sebum.—

--And we've never had a topical before that could do that. People get a little confused on that, I think they think sometimes that because the topical retinoids are a little drying, maybe they're having an impact on sebum, but they are not. Or maybe people think that because it's akin to oral isotretinoin. But we've never been able to show topically that the topical retinoids really impact sebum. The only product that we have now that does that is the topical clascoterone.—

--So using those different things in combination, I think we can get many, many of our patients clear. That's another point, and I'm going to ramble on here, you may have to interrupt me. But I do think it's important when people come in, when I was in training, and I know why we did this, we would purposely kind of set people's expectation low. And I think that's wrong. And what's really convinced me that that's wrong is what's happened in the psoriasis and atopic dermatitis world.—

--We don't want to just get people better, we want to get them as close to clear as we can. And acne is no exception, it should be no exception. And so I've started looking at my patients now and saying, "I know you want to be clear. I know you don't want to just be better, you want to be clear. And that is my goal, too. And you and I are going to work on that together as a team. And

it is probably going to take more than one visit and it will very likely take more than one treatment plan. But that is where we're headed and it's okay for you to have an expectation like that."—

--So then we might start with topicals. I might see them back at week eight. And if we're maybe 50 percent improved, you know what? I'm pretty happy with that. We do know still that acne is not the fastest, we're not going to get people where they want to be fast. If you're at 40 to 60 percent improvement at 8 weeks, I think you probably just keep going. But now is where I would come in and add an oral antibiotic, like oral sarecycline or oral doxy or oral minocycline, those are the three that I would use most commonly.—

--And we add that, not in place of course of what we were doing, but we add it just right on top of those other things that we're doing. And again, I don't think it's necessarily the heavy lifter but sometimes it's just the boost that we need. And we all know how those work, they kill C. acnes and they're antiinflammatory. So if we can just boost ourselves a little bit with that, I think that's great. The AAD guidelines again say to limit use to three to four months, when you can. And I'm pretty dogmatic about that. If I can't get it done in three to four months, this is one of those times where I'm like, okay, let's do isotretinoin.—

--Let's do something else, because I would rather go to isotretinoin than do real long courses or repetitive courses of an oral antibiotic.

**KATHERINE AVERY GORDON, MD, FAAD:** It sounds like you already answered, so typically an eight week follow up visit for your patients that you start on topicals, to see if you're seeing adequate improvement. If not, you're adding possibly a second therapeutic such as an oral antibiotic. As far as some other topical agents, are there any others that you commonly employ in your practice, such as like an azelaic acid, in particular your pregnant and nursing patients who cannot do topical retinoids? What are some of your other most common topical agents?

**JULIE CLAIRE HARPER, MD, FAAD:** I love that you just brought that up, the pregnant person, or the one who is trying to get pregnant, or the one that's nursing, because I do want to remind all of us that those people deserve to be treated, too. And I know where it comes from, it comes from a place of just extreme caution and I understand that. But there are things that we can safely use in people who are pregnant. And azelaic acid is one of the best for that, azelaic acid being both FDA approved for acne and rosacea. And it really actually works pretty well.—

--The other time I love to use azelaic acid is in a skin of color patient who might also have postinflammatory hyperpigmentation. I think it can really be beneficial. Now, in that case I might still be using it with a retinoid, kind of getting the effect of both of those. But in somebody who is pregnant, I think it's an excellent choice to bring in something like azelaic acid. I would say otherwise it's not, in acne at least, it's not in my first tier approach but it's absolutely in my back pocket, and I think it can be very beneficial.—

--I would also say I do use topical dapsone a good bit. Where I think it fits so well is in adult female acne. I think it's a very well-tolerated product. It works mostly by being antiinflammatory. But I also think it does really well in people with real sensitive skin. I find it to be very well tolerated. And so again, it has not achieved the level in my practice of a retinoid yet, they're going to just kind of be the cornerstone that's my go-to every time, but there definitely are places where I bring some of these other products in.—

--Sometimes even in my most sensitive skin patients, I'll do something like sodium sulfacetamide, with or without sulfur. And again, that is not the majority of cases but it's nice that we have some of these alternatives that we can bring in when we need them.

**KATHERINE AVERY GORDON, MD, FAAD:** For a topical combination therapy, such as an adapalene/benzoyl peroxide combination, your benzoyl peroxide/clindamycin or erythromycin, how often are you using those versus the single agents?

**JULIE CLAIRE HARPER, MD, FAAD:** A lot. I'm a mother of teenagers. I'm also not always great at doing things multiple times a day. So I like easy. I just think the easier we can make the acne treatment routine, the better chance we all have for success. And so I love the fixed dose combinations, really almost all of them. I use a lot of the adapalene/benzoyl peroxide. I'm using the newer tretinoin/benzoyl peroxide. I certainly use benzoyl peroxide with clinda.—

--Part of the benefit I think with some of these fixed dose combinations is until recently, we have a new product for rosacea that is a prescription benzoyl peroxide, but other than that, in the acne space, our benzoyl peroxides have all gone over-the-counter, unless they're in a fixed dose combination. And we have at least a small, little publication that shows that if you tell your patients to go get benzoyl peroxide over-the-counter, the vast majority of them never get it.—

--We think it's an important part of treatment, particularly if you're using an antibiotic. We think using that benzoyl peroxide with it helps to prevent the development of bacterial resistance. It's also just an important part of treatment. And so if I know that I really want a patient to get it, I think I stand a better chance of doing that by making it part of the prescription product, as long as people have good access and insurance that will cover that. So I love all of the fixed dose products. I love them, I use them all the time.

**KATHERINE AVERY GORDON, MD, FAAD:** The access issue is the big one when it comes to acne topicals. Do you have any tips for our listeners in regards to that? Any workarounds that you commonly employ>

**JULIE CLAIRE HARPER, MD, FAAD:** Not really, I wish that I did. I'm fortunate where I practice, in general my clientele has access. When I do have those occasional ones that come in, I am able to at least steer them toward some generic products, like adapalene 0.1, which is now over-the-counter even. So there are times that we have to do things like that. But I much prefer when I can to do something like the fixed dose.

**KATHERINE AVERY GORDON, MD, FAAD:** Moving on to systemics, we've already mentioned several of some of the most common systemic antibiotics that you'll use. We've touched upon isotretinoin. I don't believe we've discussed systemic hormonal therapies. How often do you use oral contraceptive pills, combination pills? And then spironolactone, one of our most useful systemic hormonal therapies for acne?

**JULIE CLAIRE HARPER, MD, FAAD:** Isn't that the truth, that's absolutely right. I think I'll start, if it's okay I'm going to kind of just ramble on about the oral medicines. So I would say oral antibiotics first of all. If I have good access, and I'll say that first, I do like sarecycline. So sarecycline being a weight-based dosing, of course, but once a day, well tolerated. But what I really appreciate about sarecycline is the fact that it's narrow spectrum and targets C. acnes and acne, and yet leaves the gut largely alone.—

--I just think if you can be precise in your targeting and have less off-target problems with the gut, because I think we're all becoming more and more aware of maybe what we're doing to the microbiome within the skin, but in the body on the whole, so I really love the idea that that product is narrow spectrum. Now, I still limit it to three to four months. Even though I feel better about it, this is not something that I think in general we need to be using for nine or twelve months at a time.—

--I also do like doxycycline. I like minocycline, I happen to be in the doxycycline camp just because I think the potential risk of that are a little easier for me to manage: things like phototoxicity and esophagitis. And the minocycline, I use it and I almost never have any trouble, but we know it crosses the blood-brain barrier, can cause tinnitus, vertigo, but also very effective. I would remind people that the AAD guidelines were published in 2016. That was before sarecycline was approved, it was approved in 2018 for acne.—

--But the guidelines say minocycline and doxycycline are recommended over tetracycline, but neither of them is more effective than the other. And so when we're picking which antibiotic to use, it's not usually "this one works better," it's that I have more confidence in this one or I like this adverse event profile better. Or maybe you've got somebody who is a redhead, who spends all summer in the sun, and you don't want to deal with phototoxicity. So you're really making your decision based more on those kinds of things than you are on efficacy.—

--As far as oral contraceptives go, I love them. Four of them are FDA approved specifically for acne. But I think all of them probably work, as long as they're a combination of estrogen and progestin. A progestin-only mini-pill, probably going to make acne worse because progesterones in the body act like androgen. And we see that sometimes even if somebody has an IUD that is a hormonal IUD, we've all seen that flare acne up, even though all that hormone is supposed to stay relatively local, I think we've all seen that make acne worse.—

--But I do like birth control pills. They're not the fastest tool that we have, they probably don't kick in for three months. And so when I do prescribe them, I'm also prescribing them usually with an antibiotic and with those topicals that we talked about. And then once we get the results we want with the oral antibiotic, we can stop it at three to four months, and now the birth control pill has really kicked in, and we can do good longterm maintenance with that. And we know those birth control pills don't just work for facial acne, we've got a study that shows that they work for truncal acne, as well.—

--They do have risk. I do think we should largely limit them to people who really do also want contraception. Because the risk of them, we're always going to win when we're looking at a risk/benefit ratio of a birth control pill versus pregnancy, because pregnancy still has risks. But in somebody who is not trying to get pregnant, if you're just comparing risk of the birth control pill

to the risk of acne, now we might be a little bit out of whack. So I do prefer to use it in people who also need contraception.—

--There are reasons not to use a birth control pill. So if somebody smokes, and there's a number there but I don't care if you smoke one or fifteen, if you smoke you're not going to get it from me. If you have migraine headache with aura, you're not going to get it from me. Certainly, if you've had DVT, strong family history of clotting, you're just not going to get that birth control pill from me. So there are things that we need to keep in mind when it comes to safety there.—

--Spironolactone, who doesn't love spironolactone? It is accessible, it's cheap, it works well. I think the biggest negative of spironolactone is that it's longterm treatment. For many people, they love that, that's fine. But I do think when we start it, it is not like the antibiotics. We don't look at that patient and say, "In three to four months, we're going to stop this." We look at that patient and say, "If this works for you, you're probably going to stay on it, and maybe for years."—

--And there's no reason to worry about safety from that. If you think about what spironolactone is FDA approved for, every condition would be pretty much longterm treatment. And by the way, it's not FDA approved for acne. So I think longterm treatment there. I don't know how long it takes spironolactone to kick in. We've always lumped it together with the birth control pills, but I think it's faster, I think it can kick in pretty fast. I usually start at like 50 mg a day. Many people start at 100 mg a day, I'm not sure what the right thing is there.—

--But there's room to titrate, both up and down. The side effects are things like breast swelling and tenderness. Menstrual irregularities is the most common side effect, and so pushing that dose up too high will certainly lead to some unwanted side effects. But it works really, really well. Again, never going to be used by itself, always going to be used in combination with something else. And then isotretinoin, well, what can I say about that? Just use more of it, get to

it faster. The only side effect of that drug that worries me is if somebody gets pregnant while they're on it. And I take that part of iPLEDGE very, very seriously and I'm sure we all do.

**KATHERINE AVERY GORDON, MD, FAAD:** Absolutely. Any other systemic agents that you will employ for your acne patients? For instance, low dose prednisone, in particular when you're initiating isotretinoin in your male teenage patients. Any more severe acne conglobata or fulminans patients who have needed TNF-alpha inhibitors or systemic dapsone? Or any of the less common systemics that you want to discuss?

**JULIE CLAIRE HARPER, MD, FAAD:** The whole office just kind of takes this big gasp when we see somebody come in who has got like that acne fulminans. And my nurses are ready to go before I am. They know what we're going to do and they want to get these people better fast. There are certainly cases where we will employ prednisone. And you're right, you said males. Usually it's going to be a young male. And even if they don't have acne fulminans, if they come in and they have really horrendous acne, usually truncal but it can be on the face, too, and we're starting isotretinoin, you know you don't want to make it worse.—

--You don't want to tip them over into more inflammation, then start with prednisone. I usually start with 1 mg/kg. And I'll do that at least the whole first month. Because what I'm trying to do is to prevent that awful acne fulminans flare and then actually worsening of scarring, which is exactly the opposite of what we're trying to accomplish. I don't know if I've used dapsone orally, it's been a long time ago. And I don't use that much at all. Very occasionally, I'll pull out trimethoprim sulfa. But I'll be honest, it makes me nervous.—

--It's not my favorite one to use for acne but I will use it from time to time. We can use the trimethoprim without the sulfa and that makes me feel a little bit better about it. What else orally? That's probably it. I do have a laser in my practice now that has just been FDA cleared for acne that I'm just kind of getting my feet wet with. It's a 1726 nanometer laser that targets

the sebaceous gland. I think we're going to get more information about that over the next few months and years, as we all use it and get more comfort with it and get more knowledgeable about really what it can do, not just in the acute setting, but how it might change acne over the long haul in our patients.

**KATHERINE AVERY GORDON, MD, FAAD:** Since you've mentioned some physical treatments, how often are you employing extractions? You had already mentioned that for some of our more comedonal patients, chemical peels as well. Not just for the acne scarring that's left behind, but just as actual therapeutics in targeting some of those four pillars that we discussed early on in the pathogenesis of acne?

**JULIE CLAIRE HARPER, MD, FAAD:** I would say a fair amount. I probably do more extractions than I do chemical peels. I think that's just because I am very comfortable using all of these prescription medicines, I kind of know what's going to happen with them. But it may be that I start somebody on, for example, topical tretinoin or topical tazarotene and they're very comedonal. And I see them back at eight weeks and things haven't budged enough.—

--I think we have two choices there. One is to add chemical peels, at least in my practice these are the two choices. The other is to really start doing some extractions. But I end up, if they're a face full, it doesn't make sense to do extractions, we would go to chemical peels. But if it's just some isolated areas, then I think extractions do really well. And with that, we just keep on going with the topical retinoid, as well. So I do that. I will occasionally do something like my pulsed dye laser for some erythema, not very often, but I will.—

--I think that's probably about it. Well, intralesional Kenalog, which we all do, of course, from time to time. Very, very dilute, of course, but I will employ that as well, too.

**KATHERINE AVERY GORDON, MD, FAAD:** What are your usual doses for the intralesional Kenalog that you're doing, face versus trunk?

**JULIE CLAIRE HARPER, MD, FAAD:** I keep it all about the same for acne, and it's 2.5 mg/cc. Is that what you do? What do you do?

**KATHERINE AVERY GORDON, MD, FAAD:** Yeah, same. I do 2.5. Some of the larger truncal involvement, sometimes I go up to 5 or even 10, depending on just how inflamed. Any blue light therapy that you use? Have you done any of the light devices?

**JULIE CLAIRE HARPER, MD, FAAD:** No. I do have photodynamic therapy in my practice but I use it really for AK. I have not tipped over to that yet and tried it for acne. Part of the reason I think for that, and maybe I'm just patting myself on the back when I say this, but I'm really good at convincing people that isotretinoin is safe. And so I don't think I have to get out in the weeds into those alternative treatments real often, because isotretinoin is safe.—

--And it's still amazing to me when people come in and the reasons that they list for not wanting to take isotretinoin that are just not real. I've heard, "I'll never be able to have children." Okay, stop, let's talk about this a little bit. And so I think if we spend a little time, I know that we have a drug already that can almost cure this for some people, and so I think I don't get out into those less traditional treatments very often because I get to isotretinoin so fast.

**KATHERINE AVERY GORDON, MD, FAAD:** Are there any other treatments that we have not discussed that you like to use? Or in closing, any comments that you'd like to share?

**JULIE CLAIRE HARPER, MD, FAAD:** One thing I've been really kind of harping on lately is back to the whole hormonal piece. I think because all we've had in the hormonal space over the last many years has been spironolactone and oral contraceptives, we have a tendency to think of hormonal therapies as only for women. And those two, by the way, are. Do not use

spironolactone in men. Of course, we're not going to use a combination oral contraceptive in men. But this new clascoterone that's out there, we can use that in guys. And so don't forget, we just kind of bust out of that bubble a little bit.—

--All acne is hormonal and both genders can really benefit from a product that is an androgen receptor inhibitor. It's just that in men, we have to keep all of that action in the skin and not have a systemic effect from that. So that's just something that I've been trying to really remind myself of and to remind other people of, so that we are able to hit all of those four targets. And now we can hit them in both men and women and we can hit them topically or orally.

**KATHERINE AVERY GORDON, MD, FAAD:** Thank you so much for sharing your time and expertise in this very, very important topic. I think our listeners will all benefit greatly from your knowledge, so thank you so much, Dr. Harper.

**JULIE CLAIRE HARPER, MD, FAAD:** Thank you, Katie.