DR. JOEL M. GELFAND: Welcome to this educational session on psoriasis. I’m Dr. Joel Gelfand, a dermatologist and epidemiologist at the University of Pennsylvania at Philadelphia, and I’m joined here today by Dr. Allan Gibofsky, who’s a rheumatologist, and he’s going to help me talk a little bit at the end about how we should co-manage patients with psoriatic disease. Welcome, Allan. Thank you for joining us.

DR. ALLAN GIBOFSKY: Thank you.
The Natural History of Psoriasis and Treatment Goals

Psoriasis Epidemiology

- Prevalence
  - Affects 2-3% of adult population (>7 million in US)
  - Caucasians: 2.5%
  - African Americans: 1.3% (more likely to have moderate-to-severe disease)

- Disease severity
  - 15% have moderate disease (3-10% BSA)
  - 5% have severe disease (>10% BSA)

BSA – body surface area

DR. JOEL M. GELFAND: Let's begin by talking about the epidemiology of psoriasis. This is a common disease, affecting over 7 million people in the United States, over 125 million people worldwide. The disease affects patients of all ethnic backgrounds, although there are some differences from one ethnic group to another.

For example, in Caucasians, it's a little more common. About 2.5% of Caucasians are affected. It is a little less common in African Americans, but African Americans are more likely to suffer from more moderate to severe or extensive skin disease. So there are some differences in how this disease behaves in different ethnic or racial groups.

In terms of the severity of psoriasis, most patients in the general population, about 80%, will have pretty limited or mild disease affecting less than 2% of their body. But about 20% will have more moderate to severe disease, affecting between 3% and 10% of the body, or more than 10% of the body surface area where it’s going to be severe psoriasis.
The Natural History of Psoriasis and Treatment Goals

DR. JOEL M. GELFAND: Let’s talk a little about the natural history of this condition. Psoriasis is a chronic disease. Once it starts, it’s really incurable, and patients will have lifelong challenges with psoriasis, although in some patients there can be a spontaneous remission that can last for a period of months to years. Most patients typically have the disease start in their early 20s or 30s. However, disease onset could be anywhere from the neonatal period all the way to people in their 90s and up.

Genetic susceptibility plays an important role for those who develop psoriasis. About 40% of patients will report a family history of the disease, with HLA-Cw6 being the most commonly implicated gene affected in people who have psoriasis. That being said, the genetics are quite complicated, with over 40 genes having been identified to date that make people susceptible to developing psoriasis. Many of these genes overlap with other common conditions, like diabetes or inflammatory bowel disease, perhaps suggesting why these conditions can be so common in people with psoriasis.

Virtually any part of skin can be affected by psoriasis, including the face, the scalp, the nails, the genitals, the bottom of the feet, and therefore it’s important to do a comprehensive skin examination in patients with psoriasis in order to understand all the areas affected for the patient.

It’s also important to understand that the majority of patients who have more severe psoriasis remain poorly controlled for decades. And so what we’re really witnessing in our patients is people who have had long-standing chronic inflammation of their skin that has not been well controlled for many of our patients, and the sequelae that occur related to that.
DR. JOEL M. GELFAND: Psoriasis was once felt to be just a skin disease without much importance beyond its physical appearance. But much research has come out in the last 2 decades. We have a much better understanding of both the physical effects of this disease and the mental effects of this disease.

Studies that have looked at quality-of-life outcomes, such as the Short Form 36 looking at physical and mental health domains, found that patients with psoriasis tend to have worse physical functioning than people who have other serious medical problems, like arthritis or recent myocardial infarction or lung disease. For mental health function, they tend to function worse than people who have, say, diabetes or congestive heart failure.

It’s important to recognize when we see a patient with psoriasis, especially those who have more extensive disease or areas that are more debilitating, like the hands or feet or the genitals or the face, for example, or scalp, that these patients may be substantially impacted by this condition.

The numbers don’t always tell the whole story. These are just the statistics behind psoriasis I’m sharing with you. But I think the patient vignettes really tell us a lot more about the patient experience, and certainly as a physician taking care of people with psoriasis, I always try and get a good sense from my patients about how the disease impacts their life and their own subjective experience.
DR. JOEL M. GELFAND: John Updike, a famous, award-winning poet, wrote extensively about his long-term battle with psoriasis in a chapter in his autobiography called “At War with My Skin.” He wrote that, “Only psoriasis could have taken a very average boy and made him into a prolific, adaptable, ruthless-enough writer.” What John Updike meant by this is that to be a writer, you need to be used to being criticized by people. That’s the same way it feels to have psoriasis.

To walk around and go to get your hair cut is not a normal experience for a person with psoriasis. They have to worry that they’ll be criticized by the people washing their hair or cutting their hair. To go to a beach or a pool, or even to walk around with shorts or short sleeves in the summertime, could be a very difficult experience for people who have this chronic skin disease.
DR. JOEL M. GELFAND: Let's talk a little about the clinical features of psoriasis. We'll talk about psoriasis vulgaris, the most common form of psoriasis, affecting 80% of patients. This is typically demonstrated by these very sharply demarcated red, inflamed patches or plaques that have an adherent silver scale. When the scale is removed, you often will reveal a little bit of bleeding or a little bit of crusting, called the Auspitz sign. This is because in order to have all this rapid epidermal proliferation, one needs a substantial amount of angiogenesis or growing blood supply in the superficial dermis or papillary dermis to support all this metabolic activity of the skin.
DR. JOEL M. GELFAND: It's critically important to have a differential diagnosis when evaluating a patient presenting with a chronic scaly, inflamed rash. It's important to think about autoimmune diseases that could present looking like psoriasis. For example, subacute cutaneous lupus and dermatomyositis both could share fairly typical features that could look just like psoriasis. Of course, we wouldn't want to treat those diseases with ultraviolet light. Ultraviolet light is very effective for psoriasis, but could be devastating for a patient with, say, subacute cutaneous lupus or dermatomyositis.

There are certain forms of cancers or malignancies that one needs to concern themselves with when a person presents with widespread scale and eruption, or even localized lesions. Mycosis fungoides, otherwise known as cutaneous T cell lymphoma, is a widespread T cell lymphoma of the skin and sometimes the blood. It can often look psoriasis-like and needs to be distinguished from that disease, typically by clinical features, but sometimes with a biopsy. The issue here is that treatment of mycosis fungoides with immunosuppressants indicated for psoriasis may rapidly progress to mycosis fungoides, leading to disease complications, even mortality.

For isolated skin lesions, squamous cell carcinoma and basal cell carcinoma can often look just like a patch of psoriasis. For the patient who has long-standing psoriasis, for this one spot on the cheek or this one spot of the forearm that won't clear, one needs to consider, could this be a skin cancer?
Infectious etiologies need to be considered, as well. Dermatophyte infections such as tinea, scabies, like an infestation of mites, and syphilis are all infectious diseases that could look very similar to psoriasis.

Other skin diseases could mimic psoriasis, as well. Chronic eczema, pityriasis rubra pilaris, or lichen planus are all conditions in the differential diagnosis of a psoriatic-appearing rash, and it’s important, again, to distinguish, because the treatments and advice may be different for the patient, depending on what the actual diagnosis is.

And finally, it’s important to make sure that a new case of psoriasis or psoriasis-like skin eruption is not due to a recent start of a medication that may induce a psoriasiform skin reaction that, of course, could be easily cured by removing the offending drug and wouldn’t be a condition that you would have to treat lifelong the way, say, chronic psoriasis is.
DR. JOEL M. GELFAND: Let’s talk about the psoriasis treatment paradigm. Clinically speaking, we tend to think of the disease as being either mild or moderate to severe. Mild disease is typically defined as affecting less than 5% of body surface area, and having minimal disability or minimal effect on health-related quality of life.

For truly mild disease, topical medications alone are typically enough to make the patient satisfied and have a reasonable response. For moderate to severe disease, these patients typically have 5% or more of their body surface area involved or have a significant disability or low health-related quality of life related to psoriasis. The patient who has psoriasis just on their palms, for example, may have limited body surface area that could be extremely disabling for the patient.

For patients with moderate to severe psoriasis, we have a broad algorithm of treatments available, from topical medications, ultraviolet therapies, traditional oral medications like methotrexate or acitretin, and then the evolving landscape of injectable biologics. And increasingly, we often will use these medications in combination. A patient may be on, say, methotrexate plus a TNF inhibitor plus topical medications to help control all the psoriasis they have on their skin as well as their joints, potentially.
The Natural History of Psoriasis and Treatment Goals

DR. JOEL M. GELFAND: Let’s talk about the pathophysiology of this disease, which is quite complex. There’s really 3 or 4 critical components to the pathophysiology of psoriasis. The first one is localized and systemic inflammation, characterized by defects in T regulatory cells, upregulation of Th1 and Th17 cells, APCs, and cytokines, and an association with increased CRP and other markers of inflammation.

Epidermal Hyperproliferation
- Clinically appreciated as scaling, cracking
- Associated with elevated uric acid and oxidative stress

Angiogenesis
- Clinically appreciated as “Auspitz” sign
- Associated with increased circulating VEGF

Genes
- >40 susceptibility loci

The second major component of psoriasis is epidermal hyperproliferation -- in a typical healthy patient, the epidermis turns over every 30 days or so. In the psoriasis patient, that occurs over a period of 2 to 3 days, so a massive amount of metabolic activity in patients with this condition. Epidermal hyperproliferation is associated with elevated uric acid levels, as well as oxidative stress.

Then there is chronic angiogenesis, often an underappreciated aspect of this disease. It’s clinically appreciated as the Auspitz sign, as I discussed earlier, about these dilated vessels in the papillary dermis that feed the proliferating epidermis and are associated with increased circulating VEGF.

Finally, there’s a genetic component to genetic susceptibility to psoriasis, with over 40 loci being identified to date, many of which overlap with other diseases, such as Crohn’s disease, for example, or diabetes, possibly explaining some of the associations we see in psoriasis with other chronic medical conditions.
The Natural History of Psoriasis and Treatment Goals

**Presence of Psoriatic Arthritis Alters Treatment Recommendations (AAD Guidelines)**

- **Psoriasis +/- psoriatic arthritis**
  - Limited disease
    - Anti-TNF +/- MTX*
    - Topicals/Targeted phototherapy
  - Extensive disease
    - UVB/PUVA
    - Systemic
    - Biologic

- Lack of Effect

*Patients with nondeforming PsA without any radiographic changes, loss of range of motion, or interference with tasks of daily living should not automatically be treated with TNF inhibitors.

† Patients with limited skin disease should not automatically be treated with systemic treatment if they do not improve; such treatment may carry more risk than the disease itself.

MTX, Methotrexate; PUVA; psoralen plus ultraviolet (UV)-A.


**DR. JOEL M. GELFAND:** Shown on this slide is an overview of how we think about treating psoriasis, as well as when it may have concomitant psoriatic arthritis. This is from the latest guidelines from the American Academy of Dermatology, which I was a part of. We tend to think about this disease in two ways. We think about, do they just have skin disease, or do they have comorbid joint disease? If the patient has comorbid psoriatic arthritis, we think about using disease-modifying agents, such as anti-TNF inhibitors, anti-IL-12/23 inhibitors, or methotrexate. This is especially the case if the patient has disability from their joint disease, active inflammatory arthritis, evidence of joint damage on x-rays, for example.

If they don’t have evidence of an inflammatory arthritis, then they go down a different pathway, where for limited disease we’re typically using topical medications or targeted phototherapy, like an excimer laser, which could treat just individual patches of plaques.

If they have more extensive disease, we tend to think of all of our modalities as being first-line. We don’t differentiate in our guidelines between phototherapy with ultraviolet B or pulmonary vasculature, systemic therapy, such as acitretin, methotrexate, or cyclosporin, or our evolving landscape of biologic therapies. They’re all felt to be first-line by the American Academy of Dermatology guidelines, primarily because patient preferences in the individual health makeup were really to drive what the treatment decision will be. It’s hard to say what the right treatment is for all patients. It’s really highly individualistic.
The Natural History of Psoriasis and Treatment Goals

DR. JOEL M. GELFAND: We’ll discuss a little bit about outcomes in treating psoriasis. Unlike other diseases, such as diabetes, where you’re trying to target patients to have a hemoglobin A1C at a certain level -- for example, a blood pressure at a certain level to make sure you’ve controlled it -- in psoriasis, how we decide a disease is controlled or not is very subjective, a decision made between the patient and their dermatologist. Essentially, we want to know at a global level, are you satisfied with your treatment? Do you want to change direction?

But more recent work has emerged from our group, recently published in the Journal of the American Academy of Dermatology, that’s questioned this approach, and suggests that perhaps we need to think about patients who have residual skin disease as potentially being more impaired than we may think.

In our study, we looked at patients who had truly clear skin disease, or really were only almost clear of their skin disease, often considered to be a success for an FDA-approved treatment. What we found is that patients who were only almost clear, about 20% of them had enough impairment in their health-related quality of life, measured by the DLQI, that other guidelines, say, in Europe, would suggest that we should consider modifying the patient’s treatment regimen.

I think one of the take-home messages of this information is that it’s important for us to discuss with our patients what their treatment goals are, and when they’re responding to therapy to get a sense of are they clear enough, are they satisfied enough with how they’re doing, or do we need to try to get the patient all the way clear? Because there may be additional benefits with patients in terms of their health-related quality of life by getting their skin in true remission.
DR. JOEL M. GELFAND: In clinical trials, what are the outcomes? We’ll typically look at something called a PASI 75, a 75% reduction in the PASI score, or a PGA, a Physician’s Global Assessment, of being clear or almost clear. With our newer therapies, increasingly looking at things like PASI 90 and PASI 100, because the newer therapies seem to be hitting higher bars of efficacy, and therefore we’re starting to report on a more regular basis patients truly getting completely clear from their disease.

In clinical practice, these measurements are really not used at all. They’re somewhat cumbersome, and they have not been widely adopted in clinical practice in the United States, although in some European countries they are used fairly routinely, especially in terms of allowing patients to qualify for certain more expensive therapies.
The Natural History of Psoriasis and Treatment Goals

**PGA: Physician’s Global Assessment (Averaged Over All Lesions)**

<table>
<thead>
<tr>
<th>Induration (I) or Pustulation</th>
<th>Erythema (E)</th>
<th>Scaling (S)</th>
<th>Physician’s Static Global Assessment based upon total average (I+E+S)/3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 no plaque elevation</td>
<td>no erythema or hyper-pigmentation is present</td>
<td>no evidence of scaling</td>
<td>clear; except for residual discoloration</td>
</tr>
<tr>
<td>1 minimal elevation, 0.25mm</td>
<td>faint erythema</td>
<td>minimal; fine scale on &lt;5% of lesion</td>
<td>minimal; majority of lesions have individual scores for (I+E+S)/3 that average 1</td>
</tr>
<tr>
<td>2 mild elevation, 0.5mm</td>
<td>light red coloration</td>
<td>mild; fine scale predominates</td>
<td>mild; majority of lesions have individual scores for (I+E+S)/3 that average 2</td>
</tr>
<tr>
<td>3 moderate elevation, 0.75mm</td>
<td>moderate red coloration</td>
<td>moderate; coarse scale predominates</td>
<td>moderate; majority of lesions have individual scores for (I+E+S)/3 that average 3</td>
</tr>
<tr>
<td>4 marked elevation, 1mm</td>
<td>bright red coloration</td>
<td>marked; thick, nontenacious scale predominates</td>
<td>marked; majority of lesions have individual scores for (I+E+S)/3 that average 4</td>
</tr>
<tr>
<td>5 severe elevation, &gt;1.25mm</td>
<td>dusky to deep red coloration</td>
<td>severe; very thick tenacious scale predominates</td>
<td>severe; majority of lesions have individual scores for (I+E+S)/3 that average 5</td>
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</table>

**DR. JOEL M. GELFAND:** Shown here is what the Physician’s Global Assessment might look like. We are looking at the degree of induration on the skin, how thick it is, how red it is, how scaly it is, or how flaky it is. There are different scales out there for PGA. Some go 0 to 5, some go 0 to 4. But essentially what we’re trying to get at is, are the plaques essentially clear or almost clear, which is a score of 0 to 1, or is it more activity than that?
DR. JOEL M. GELFAND: Shown here is an example of how we’re doing in terms of clearing patients with psoriasis in the real world compared to randomized controlled trials, data we published a little while ago in JAMA Dermatology. What you see in the histogram is really a cross-section of patients, about 700 patients or so seen during routine clinical follow-up in clinical practices across the United States in our network, called the Dermatology Clinical Effectiveness Research Network, or DCERN.

We’re looking at the odds of them being clear or almost clear on their routine follow-up, and what you see is that for virtually all of our drugs, the histogram bars show where they were in terms of being clear or almost clear, and the lines show what we would have expected the patient to be based on what’s been published in clinical trials.

For example, the CHAMPION trial shows that about 70% of patients on adalimumab should be clear to almost clear, whereas in clinical practice, only about a high of 40% of patients, near 50% of patients, are clear to almost clear. So there’s a gap between how well the drugs perform short term in clinical trials versus how well they perform in a long-term setting and routine clinical practice.
The Natural History of Psoriasis and Treatment Goals

Moderate-to-Severe Psoriasis Outcomes: Clinical Practice

- Treatment goals in clinical practice remain largely undefined
- Guideline goals:
  - European: PASI 75 and DLQI \leq 1 (no effect)
  - Australasian: PASI 75 and DLQI \leq 5 (small effect)
- In context of PsA, minimal disease activity defined as PASI \leq 1 or BSA \leq 3%
- Psoriasis nontreatment, undertreatment, and treatment dissatisfaction remain significant problems in the US


DR. JOEL M. GELFAND: I alluded to this a little bit earlier, that in moderate to severe psoriasis, we really don’t have well-defined treatment goals in clinical practice. In European guidelines, they suggest trying to reach a PASI 75 or a DLQI score of less than or equal to 1, which would mean having no effect on health-related quality of life.

In Australasian guidelines that recently came out, they suggest a PASI 75 as a goal, or a DLQI score of less than or equal to 5, meaning a small effect on health-related quality of life. I’ve shown you from the previous slide how challenging it can be to reach and maintain a PASI 75 response. Only less than half of our patients in clinical practice, despite being on, you know, well-validated and approved therapies for psoriasis, actually are able to achieve long-term PASI 75 control.

In the context of psoriatic arthritis, other recommendations have been placed. Minimal disease activity is defined as a PASI score of less than 1 or a PSA less than 3%. But again, we’re just talking about arbitrary distinctions, and they’re still being debated in the community.

It is important to understand that psoriasis nontreatment, undertreatment, and treatment satisfaction remain significant public health problems in the United States for our patients with psoriatic disease despite the rapid increase in the number of therapies we have to help our patients.

Let’s talk about co-management of psoriatic disease, psoriasis patients, especially those who come in complaining of joint disease. And for me, as a dermatologist, this is always the most challenging
aspect of taking care of these patients, because joint disease can come from so many different possible etiologies. It could be inflammatory psoriatic arthritis, or the worry that it could progress and cause permanent joint damage, or it could be osteoarthritis or musculoskeletal issues. It could be gout. It could be fibromyalgia. It could be a combination of these diseases, and it could be very difficult for me as a dermatologist to know when the patient really needs to see a rheumatologist and when it’s okay just to have them managed with me alone.

I have Dr. Gibofsky here with me today, a rheumatologist, and tell me your reflections on when we, as dermatologists, should think about referring our patients to you for evaluation of their joint symptoms.

DR. ALLAN GIBOFSKY: Well, Joel, I think you’ve correctly outlined the situation. When a patient comes in complaining of joint pain, you don’t really know at that point whether that is joint pain in a patient with psoriasis due to the inflammation of psoriatic arthritis, or whether it’s just a musculoskeletal complaint in a patient who happens to have psoriasis as well.

I think that whenever that situation arises, and particularly given the increasing number of people that we’re recognizing as having the particular inflammatory situation of psoriatic arthritis, I think that a referral is appropriate. It may turn out not to be psoriatic arthritis, and it may turn out that the aches and pains are easily manageable by other strategies. But I think whenever there is a question in your mind about what the patient has, that’s an appropriate time for referral to the rheumatologist.

I think the rheumatologist can then order the appropriate serologic examination to define whether the patient is seropositive or seronegative. I think the patient can appropriately differentiate inflammatory arthritis from other comorbidities that you’ve touched upon, such as gout, which may be occurring in a patient because of their rapid skin turnover and productive burden of purine, as a result. But I do think that any patient with a musculoskeletal complaint is probably best referred at least once to the rheumatologist.

Now, if the diagnosis of psoriatic arthritis is then made, then that’s an opportunity to share care, because that’s an opportunity, as you pointed out in your algorithm, to begin thinking about perhaps more systemic therapies like the biologics, like the PDE4 inhibitors, like some of the other immunosuppressants that are used, and thus the stakes are higher in terms of the need for monitoring these patients for liver abnormalities, for CBC abnormalities, and so on. And I think that’s where the shared care comes into place.

I like to think about a Venn diagram, where there is what I refer to as my care, your care, and then shared care, or their care and flare care and share care, however, you want to refer to that Venn diagram. But I think we’re going to overlap in the management of the patient with psoriatic arthritis, as opposed to the patient with psoriasis and joint complaints. And I think that’s where an early referral will be preferable and optimal for ultimate patient care.

DR. JOEL M. GELFAND: Yeah. I think one of the challenges I often find as a dermatologist taking care of my patients is helping them understand how serious a joint component of psoriatic disease can be. Oftentimes, they’ve chosen to see me because the skin manifestations are the dominant thing that’s bothering them, and it often takes some convincing from the patient to say, “Well, you need to see another doctor to have your joint symptoms reviewed.”

What I tend to do in my practice for patients who are reluctant to see another physician for evaluation of their joints is try and look for things that are danger signs for more aggressive psoriatic
The Natural History of Psoriasis and Treatment Goals

arthritides, patients who have symptoms of polyarthritis, multiple joints involved, obvious swelling on exam or dactylitis, you know, clear swelling of the joints in the morning with stiffness that lasts more than an hour, for example, or elevated CRPs. That’s the sort of algorithm I use. If they have one of those things, I say, “You know, you really have to see the rheumatologist.”

But many of my patients, like we said, may have either very, very mild, hard-to-diagnose psoriatic arthritis or may have more osteoarthritis or other things that are going on that don’t require that sort of urgent attention.

Is this a reasonable algorithm in your mind? Or how would you recommend dermatologists approach patients who are reluctant to see another provider?

DR. ALLAN GIBOFSKY: I think it’s a reasonable algorithm. But just as when I’m evaluating a patient with joint disease who develops a skin lesion, I feel that the evaluation of that skin lesion is probably best done by someone with different training. I think that when it comes to evaluating joint pain, that’s probably best done by someone who has my training. As good as the dermatologists I work with are, and as good as you are, I think it’s always good to have the other specialist have a look-see, so to speak.

And then there may be no need to see that specialist again, or there may be a need to have the specialist see the patient at infrequent intervals just to assess the continuing care. So I think your algorithm works, but I think that there’s always an opportunity for evaluation of any patient with psoriasis who develops joint pain by the rheumatologist.

DR. JOEL M. GELFAND: Certainly. And so let’s come to the idea of how one co-manages this patient. So in my practice, I’m very fortunate. I have a rheumatologist who works right down the hall from me, and so we share a lot of patients. She specializes in inflammatory joint disease. The way we tend to do things is that, depending on what really is the dominant, underlying indication for their therapy -- if their skin disease is very severe and their joint disease is more mild -- then I would be the one managing the systemic agents.

On the converse, if the skin disease is pretty mild, but the joint disease is more dominant, then the rheumatologist may manage the systemic agents in that respect. Although I always still try and encourage my patients, even when they have mild joint disease and I’m controlling it with, say, disease-modifying agents such as methotrexate or a TNF inhibitor or IL-12/23 inhibitor, I always still want them to see the rheumatologist to make sure that my drug’s having an appropriate effect on their joints. Is that something that’s important to do for our patients?

DR. ALLAN GIBOFSKY: Oh, absolutely. And I think there’s one other thing that we should both be doing, and that’s an objective disease assessment measure. So for you, it’s the measurement of the body skin surface area with a PASI. For me, it may be a disease activity score, or a DAS, and just as I wouldn’t dream about doing PASIs and getting any reproducible scores with them, I think that the DAS is another outcome instrument that requires assessment of tender joints, swollen joints, and other factors that are probably done by the specialist who’s co-managing with you.

You know, I do find it amusing, almost ironic, that as I travel I do find that many derm units and rheumatology units are situated very close to each other. I think that’s because there is so much opportunity to co-manage these patients, depending upon which feature is most prominent at which point in time.

As you also well know, that can flip on a dime. The patients with clearing skin can have bad joints.
The patients with negligible joint disease can have severe skin activity. So I think that’s why the co-management of these patients becomes important, and it becomes important for each of us at different points in the spectrum of the patient’s continuity.

**DR. JOEL M. GELFAND:** Yeah. Well, I certainly know my patients appreciate very much having the expertise of 2 different doctors who are helping manage a complicated multisystem disease.

**DR. ALLAN GIBOFSKY:** Yeah, and I think it’s particularly true when we are located so close together. But you’re absolutely right. When patients out in the community have logistic difficulties in getting to 1 doctor, let alone 2, it’s important for both of us to know the tools and tricks that each of our other specialties have so that we can apply it to those patients, as well.

**DR. JOEL M. GELFAND:** That’s right. I want to thank Dr. Allan Gibofsky for being with me here today for educating us about when it’s appropriate to have a patient who has psoriatic skin disease be referred to a rheumatologist. I think for me as a dermatologist, my take-home point from that is that any of my patients who have inflammatory skin psoriasis who have a joint complaint, significant joint complaint, that really could be helpful to have the input from an expert in distinguishing between inflammatory psoriatic arthritis, which is so highly prevalent in our patients, from other common causes of joint disease, such as osteoarthritis or fibromyalgia, or even gout, for example.

We spent a lot of time talking today about the pathophysiology of this disease, how common it is, some of our therapeutic approaches. Thank you for joining us. I hope you found this to be helpful.