Myositis Support and Understanding Association, Inc. (MSU)

FDA Listening Session
Adult Dermatomyositis

SESSION SUMMARY

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FDA Patient-Led Listening Session – Adult Dermatomyositis

Tuesday, April 26, 2022, 2-3:30 PM ET

Participants - Partner Organization

Myositis Support and Understanding (MSU)

Jerry Williams – Founder and President
Lynn Wilson – Vice President, Director Patient Centered Research
Manuel Lubinus – Chief Science Officer
Cindy Crim – Special Projects
Dr. Salman Bhai – MSU Medical Advisor, UT Southwestern

FDA Divisions Represented

Office of the Commissioner (OC) – *3 offices*

- OC/OCPP/OPA – Office of Clinical Policy and Programs/Office of Patient Affairs *(organizer)*
- OC/OCPP – Office of Clinical Policy and Programs
- OC/OCPP/OOPD – Office of Clinical Policy and Programs/Office of Orphan Products Development

Center for Biologics Evaluation and Research (CBER) – *4 offices/divisions*

- CBER/OCBQ/DIS/PSB - Office of Compliance and Biologics Quality/Division of Inspections and Surveillance/Program Surveillance Branch
- CBER/OCD – Office of the Center Director
- CBER/OTAT/DCEPT/GMBI – Office of Tissues and Advanced Therapies/Division of Clinical Evaluation and Pharmacology/Toxicology/General Medicine Branch I
- BER/OTAT/DCEPT/GMBII – Office of Tissues and Advanced Therapies/Division of Clinical Evaluation and Pharmacology/Toxicology/General Medicine Branch II

Center for Devices and Radiological Health (CDRH) – *1 office/division*

- CDRH/OPEQ/OHTIII – Office of Product Evaluation and Quality/Office of Health Technology III

Center for Drug Evaluation and Research (CDER) – *3 offices/divisions*

- CDER/OND/OII/DRTM – Office of New Drugs/Office of Immunology and Inflammation/Division of Rheumatology and Transplant Medicine
- CDER/OND/ON/DNI – Office of New Drugs/Office of Neuroscience/Division of Neurology
- CDER/OTS/OB/DBIII – Office of Translational Sciences/Office of Biostatistics/Division of Biometrics III

Office of Regulatory Affairs (ORA) – *1 office/division*

- ORA/ORS/OMPTSLO/NMPL – Office of Regulatory Science/Office of Medical Products and Tobacco and Specialty Laboratory Operations/Northeast Medical Products Laboratory

Objective of Session

- Convey to FDA the heterogeneity of adult dermatomyositis
- Highlight the severity of complications and impact on patient quality of life
- Underscore the lack of effective treatments and the need for personalized care management
- Highlight the impact of physical pain associated with dermatomyositis conditions and the need for better therapies for pain management
- Underscore need for clinical trials design based on the diverse dermatomyositis manifestations

Topics Discussed

- Diversity of disease manifestations and symptoms
- Key impacts on quality of life – pain, muscle weakness, fatigue, severe skin issues
- Decline in health due to flare cycles, and lack of effective treatments
- Emotional toll on patients, caregivers, and families

Disclosure

Myositis Support and Understanding receives funding from a variety of sources, including sponsors. However, no sponsor funds were used for the purpose of organizing or participating in this Session.

Myositis Support and Understanding is providing fair market value compensation to the patients and caregivers who are speaking today for their valuable time and expertise. Neither Myositis Support and Understanding nor the patients are receiving funding from any sponsor for this meeting.

Dr. Salman Bhai serves on Scientific Advisory Boards at Argenx, Alnylam, Alexion, Pfizer, and Octapharma. He consults with Taysha Gene Therapies through the UT Southwestern Gene Therapy Program. He has an honorarium from KabaFusion. He has received no compensation for his participation in this session.

Meeting Summary

VP Myositis Support and Understanding (MSU) – Organization Overview

- MSU is a patient led, all-volunteer nonprofit organization, founded in 2015 by a Dermatomyositis (DM) patient who fought for over 3 years to find a diagnosis
- The mission is to improve the lives of and empower those fighting myositis through education, support, awareness, advocacy, and access to research
- Financial Assistance Program provides help to myositis patients for emergency household expenses, medical bills, and assistive devices
- Patients are the experts in myositis and our research focus is on the everyday improvement of patient quality of life

MSU Medical Advisor – Overview of Adult Dermatomyositis

- Adult Dermatomyositis is a rare, severe, and debilitating systemic autoimmune disorder
- Causes muscle inflammation that damages muscle tissue leading to loss of muscle strength and poor physical functioning
- Skin manifestations have distinct features, ranging from mild to severe symptoms

- Usually affects adults between the ages of 40 and 60. Women are 2 times more often affected than men. Women of color with certain myositis sub-types are disproportionally affected and have worse outcomes.
- Myositis Specific Antibodies contribute to different systemic manifestations associated with DM – pulmonary, vascular, cardiovascular, musculoskeletal, gastrointestinal, and dermatological
- Current therapies have not markedly altered the poor prognosis leading to morbidity and mortality
    - 62-67% of adult DM patients do not achieve remission with current standard of care
    - 53% 10-year survival rate in DM
    - 73% of DM patients experience disease flares despite therapy, with worsening muscle weakness, fatigue, and pain
- Standard of care is suboptimal and has significant safety risks
    - Current therapies are effective in some cases but only partially effective in a large proportion of cases
    - Prolonged use of current immunosuppressive therapies is associated with numerous complications
- Failure of recent clinical trials highlights the clinical and research challenges in DM
    - Seeing DM as a single disease is incorrect
        - Every patient's journey is different and carries different burdens, paralleling the clinical heterogeneity with which DM presents and progresses
        - Tailored and flexible analysis of outcome measures is needed because of the diverse manifestations
    - Recognizing barriers to accessibility
        - Outreach to underserved/overrepresented community
        - Length of clinical trials with a placebo arm
        - The list of limitations is lengthy: Financial, time off work, childcare, transportation
    - Clinical trial inclusion criteria - not representative of the current state of a typical patient, especially when considering current therapies a patient is on

Patients Represented

Speaker 1: A nurse on disability in Spokane, Washington, describes her journey with refractory Dermatomyositis (DM), leaving her wheelchair-dependent, with pain skin involvement, and lingering muscle weakness.

- **Disease status:** Repeating flare cycles. Under palliative care.
- **Treatments that work:** Weekly IV solumedrol and IVIG every 3 weeks
- **Clinical Trials:** None, inability to leave home/travel

> ***DM has taken so much from me - physically and emotionally. The things that gave me joy are gone. I never know what each day will bring but my faith sustains me.***

Speaker 2: A 23-year-old young adult from California, with the MDA-5 antibody facing the challenges of Dermatomyositis (DM) during her college years describes her journey with weakness, pain, skin rashes and facial edema; and shares the emotional toll of living with DM.

- **Disease status:** Remission
- **Treatments that work:** CellCept, prednisone, IVIG, Rituxan(rituximab)
  - **IVIG Schedule**: 4-hour infusion every week
  - **Rituxan:** every 6 months
- **Clinical Trials:** None, did not qualify for certain requirements

> ***Life has just begun for me, and I will not let my pain and grievance of my healthier self get in the way.***

Speaker 3: A former speech pathologist from New York living with NXP-2+ Dermatomyositis (DM) and non-Hodgkin Lymphoma with severe fatigue and lingering pain and weakness describes treatment side effects, the loss of the job she loved, and changes in her family life.

- **Disease status:** Fluid, fluctuates between stable and deteriorating
- **Treatments that work:** methotrexate, IVIG, Rituxan (rituximab), Plaquenil
  - **IVIG Schedule**: 4-hour infusion every week
  - **Rituxan:** every 6 months
- **Clinical Trials:** Applied for one, however, did not qualify, likely because of the cancer component with DM

> ***Living with DM is like being in the Witness Protection Program…you are no longer yourself and are constantly looking over your shoulder, waiting for the next surprise or diagnosis.***

Speaker 4: A retired business owner in Virginia with anti-Jo-1 positive Dermatomyositis/Antisynthetase syndrome talks about his suffering from DM-related arthritis, interstitial lung disease (ILD), and pain while seeking treatment and participating in clinical trials, all while caring for his parents.

- **Disease status:** Stable
- **Treatments that work:** methotrexate, Rituxan (rituximab)
    - **Rituxan:** once a year
- **Clinical Trials:** Participating in a clinical trial

> ***I'm too legit to quit and I do what I can when I can, and I can't do when I can't do things. To God be all the honor for his Grace and Mercy.***

Speaker 5: A young mother in Wichita, Kansas with Mi-2+ Dermatomyositis (DM), who struggles with muscle weakness, skin sensitivity, fatigue, and calcinosis, will talk about the impact on her health, family and professional life.

- **Disease status:** Stable
- **Treatments that work:** prednisone, IVIG
    - **IVIG Schedule:** 6-day infusion every 4 weeks, 2 days hydrate, 4 days infuse, with home health nurse
- **Clinical Trials:** None, not compatible with having a full-time job

> ***Living with calcinosis is literally like sitting on sharp rocks for 24 hours a day with no relief. Just because I'm used to it, doesn't mean it doesn't hurt anymore.***

Speaker 6: A mother of two, including a 4-year-old, from Georgia, diagnosed with refractory Mi-2+ Dermatomyositis (DM), describes her journey with DM-induced pain and weakness; and shares how DM has impacted her family life, mental health, finances, and the need for better treatments for all.

- **Disease status:** Deteriorating
- **Treatments that work:** IVIG
    - **IVIG Schedule:** 5 ½ hour infusion, every 2 weeks
- **Clinical Trials:** Participated in a medical device trial

> ***There is only one (1) FDA approved treatment for Dermatomyositis. Unacceptable.***

Speaker 7: A new grandmother, mother of 4, and a former rising star in her sales career until anti-Jo-1 positive Dermatomyositis/Antisynthetase syndrome entered her life, with lung disease, muscle weakness, and pain refractory to treatment. She talks about her failing health due to constant flares.

- **Disease status:** Deteriorating
- **Treatments that work:** prednisone, IV solumedrol, CellCept, and in the past, Rituxan (rituximab) for lungs
- **Clinical Trials:** None, consistently disqualified because I can't stop treatments

> ***The weakness, breathing troubles, itchy skin, and severe pain of my Dermatomyositis (Antisynthetase Syndrome) have taken my independence, my dreams for the future, and vastly reduced my quality of life. I want to run and play around with my grandchildren, and I want to go back to work!***

Speaker 8: A loving wife, and a mother of three children, describes the impact on her family of caring for and then losing her husband to Dermatomyositis (DM) in a desperate race to find a correct diagnosis and treatment.

> ***We found healing and a passion to help other myositis families and created The Myositis Empower Walk in loving memory of my husband.***

Open Discussion

FDA thanked speakers for sharing their stories. It is important to have this feedback directly from patients to help with drug development. It is helpful in understanding the needs for immunotherapies and finding sponsors interested in developing in these areas.

Question on Clinical Trials: You talked about the fact that you did not qualify for the trial because you would have to go off treatment. Can you speak to those experiences?

Patient 7
Yes, 3 or 4 times I have been given opportunities to participate in trials, but I would have been required to stop CellCept, Rituxan or be on a lower dose of steroids. I could not take the chance because I would not have been stable enough if given a placebo.

Patient 4
I contracted Covid and had to miss methotrexate for 3 weeks in a row and my rheumatoid arthritis flared with severe hand issues and fatigue. I also had to stop Rituxan for a year. Unfortunately, I have multiple myeloma, which doctors say that they believe is one of the reasons I haven't presented with cancer yet. My condition deteriorated with such fatigue. I feel like the Rituxan gives me the best change at normalcy and keeps the disease stable. I would not take the risk of participating in a trial if I had or stop my infusions.

MSU Medical Advisor
I think what these stories have made clear is that Dermatomyositis patients struggle with daily tasks that become very challenging while clinicians are waiting for more effective therapies to treat these symptoms.

Disclaimer

Discussions in FDA Patient Listening Sessions are informal. All opinions, recommendations, and proposals are unofficial and nonbinding on FDA and all other participants. This report reflects Myositis Support and Understanding's account of the perspectives of patients and caregivers who participated in the Patient Listening Session with the FDA. To the extent possible, the terms used in this summary to describe specific manifestations of [disease or condition], health effects and impacts, and treatment experiences, reflect those of the participants. This report is not meant to be representative of the views and experiences of the entire [disease or condition] patient population or any specific group of individuals or entities. There may be experiences that are not mentioned in this report.

Appendix: Speaker Stories

Speaker 1: Refractory Dermatomyositis

I love to garden! You would find me working 8 hours on the weekends, growing vegetables, blueberries, and nectarines. In 2018, I suffered from a sudden onset of extreme muscle weakness and pain, unable to squat and carry mulch. I could only tend to the garden for a half hour before I was exhausted. My doctor treated this with prednisone packs, but the symptoms kept coming back.

Since 2012, I have shown the classic skin signs of Dermatomyositis like cracked and bleeding feet (Hikers Feet), rashes on my body, Groton's papules on my fingers, severe itching, and sun sensitivity, and I had simply learned to accommodate. But now it was worse.

Nothing was working, so in the summer of 2018, I saw a rheumatologist. He put me on Prednisone and Methotrexate, then Plaquenil and by December, I was able to exercise, and I thought I was getting better.

Less than a year later, I had a flare. I could not lift my arms above my shoulders, I could not comb my hair and I couldn't brush my teeth. I had intense pain in my legs, could not walk more than fifty feet and had to use a cane for stability. The severe itching returned. I was switched to Imuran.

With no diagnosis yet, I did a self-referral to Mayo and saw a rheumatologist and a neuromuscular specialist, where I got the formal diagnosis of Dermatomyositis. My medication was switched to CellCept, along with oral prednisone. I had so much fatigue and mental fog, I did not have the energy or ability needed to continue working. I have a Master's in Nursing and worked for 40 years, but now I was forced to go on disability. I was experiencing more overall weakness and pain. The pain was initially a burning sensation, then like knives jabbing my thighs, then like an ax through the bone. I needed Hydrocodone for pain at night.

By October of 2020, I developed bleeding colitis as a side effect of the CellCept and had to change to subcutaneous-IG (SQIG). I had to use a walker and I could no longer drive. The SQIG did not help, and I started a course of Rituxan. I had 4 infusions, 4 weeks in a row, but unfortunately, I saw no real benefit from it.

In October 2021, I had a severe kidney infection and was hospitalized for a week. I could no longer stand on my own. I started IVIG infusions in the hospital every three weeks and physical/occupational therapy.

In April 2022, I developed intermittent swallowing issues where I aspirate food into my lungs. I currently take oral prednisone, solumedrol, and IVIG, but even keeping this level of treatment has been a fight. I am now in Palliative care, with a pain management protocol. This, hopefully, will stabilize me and I won't need to go into hospice care.

I have given up my independence. My quality of life has diminished. I am confined to my electric wheelchair and a walker. Things that brought me joy, like writing notes to friends, reading books or gardening are gone. Life is a teeter totter, never knowing what each day will be like. It is easy to lose hope when there are no treatments that work. My faith in Jesus is what I hold onto.

Speaker 2: Dermatomyositis with MDA-5+ Autoantibody

My journey started in January of 2019 when I developed a small rash on the side of my face and the dermatologist gave me topical steroids, thinking it was just something like dermatitis, but even after six months, the steroids were not working. I was 21 at this point, and busy applying to universities and keeping my grades up. It was a stressful time.

Soon after that, I developed facial edema and felt very fatigued. I went back to the dermatologist; she did not know what to do.

In April I got the news I was accepted into UCSD in San Diego. I was so happy because my husband was stationed at the military base there. After I arrived in San Diego and started school, I still had facial edema and I was so tired, even after 8 hours of sleep. I blamed many of the symptoms on the school stress. My parents were also showing concern at the time.

By September my condition worsened, I had muscle weakness, trouble getting off the sofa, having difficulty even opening a tomato sauce jar. I thought it was stress-related and pushed It aside because I had never been sick. By now, my face was so swollen and so red that people on the street started asking me about it - as if I had been beaten. My husband, who had been gone on deployment for 2 months noticed how difficult it was for me to get out of bed and up from chairs.

I went to Mexico to see a primary care doctor, He determined that I had lupus and prescribed Plaquenil for me. I also took advantage of UCSD school services and had lab work done. My ANA antibodies came positive, I was then referred to a rheumatologist in San Diego. At this time, I could not even smile, my lips were so swollen. By now, I was having a lot of pain in both my hands and my joints and crying in bed. The Plaquenil did not work and worsened my symptoms. By then I was in pain, fatigued with a rash and swollen face.

In early March 2020 I was taken to the hospital after collapsing on the floor at a movie theater. I got a full battery of tests; lab work, EKG, my oxygen stats were down, and they kept me in the hospital 5 days. They said I had pneumonia because of my X-rays and gave me antibiotics. I had rashes on my elbows and my hips. A dermatologist was called to the hospital and took a skin punch biopsy.

I still was very weak and still going to school. My muscles were so weak, I was almost unable to get up from the chairs in the lecture halls at UCSD, I was embarrassed. I did not want to be seen like that. It was such a big struggle to stand up. I would be the first to come and the last one to leave the hall so nobody could see me in that condition. I also had a lot of pain, to the point of crying.

I got the diagnosis from the skin biopsy as suggestive of Dermatomyositis rather than lupus. I started looking into it online and started crying about this diagnosis, being angry about this disease as a young adult. My skin was the biggest issue at that point since I was not doing any exercise. My parents asked me to move back to LA, my mother had a friend who had DM and she was seeing a specialist at UCLA. I made an appointment with her. At that time, I was not taking any medication.

One night in May, I got a fever of 101, with chills and breathing issues acting up. I was taken to the ER at UCLA, I had to stay in the hospital for 3 days due to my labs and oxygen issues, I had facial edema, joint pain, and lung problems. I was given a dose of IV steroids. There they noticed my pain and I was given oxycodone since I could not sleep, but it gave me nausea. I spent my 22nd birthday in the hospital with the nurses. I was sad and lonely.

I finally got to see the UCLA rheumatologist specializing in DM, she knew about me and my case. She did a myositis panel and told me I was MDA5 positive. She asked me to come every week, she told me that the

next 2 months would be the worst months of my life, she put me on oral steroids and Myfortic, with an infusion of IVIG every week for my skin at the infusion center.

I had developed ulcerations over my body, ulcers in my fingernails, in my lips, back of my legs, and my buttocks, the rheumatologist explained to me that MDA5 often affects the vascular system. I lost 40 pounds because I did not want to eat due to ulcers. I am 5'8 and looked like a skeleton. I was the youngest at the infusion therapy and felt alone with no one to talk to. The mental aspect of the disease was difficult.

The pain was excruciating, worse than breaking a bone, this was different, something I had never felt in my life. In California, I had access to medical marijuana to deal with the pain so I could get to sleep, I took it every night at a time, I did not feel comfortable taking anything stronger for the risk of addiction. Unfortunately, I developed anxiety related to it and had to stop it.

The worst days of this disease came from the mental anxiety after I left the hospital. I had profound depression and I was crying to my mom about the thoughts I was having – a feeling of "what if this was my last breath?" This went on for a good 2-3 months till my mom took me to a clinic and I got medication to feel better.

Now my rheumatologist considers me in remission, I am still on treatment – taking IVIG. My lungs are stable, and my muscle weakness and rash are gone, but it was a journey to get to this point. I can't relax, as I know I could have a flare again. I always wanted to be a lawyer growing up, I think about my disease and ask myself if I am going to be able to do what I want, have children, and complete a full life. Now I am preparing to take the LSAT and go to law school. I still need to work on my future, take my time and manage my stress as it contributes to the disease.

Speaker 3: Dermatomyositis with NXP-2+ Autoantibody

My official journey started in April of 2017 with a visit to the ENT due to an inflamed lymph node that was later diagnosed at Sloan-Kettering as non-Hodgkin Lymphoma. It was classified as stage IV slow-growth type, and I was initially put on watch-and-wait.

I returned to work in September at the beginning of a busy school year, where I was a speech pathologist. I began to feel very fatigued, my muscles were getting sore when walking down the school hall, as if I were doing a ton of squats. I was feeling very tired. I started developing low-grade fevers in the evenings and night sweats. My oncologist ordered a CAT scan and said that I needed to start treatment with Rituximab as my spleen was enlarged and had a presentation of B symptoms. I was having more pain and swelling in my body.

As the pain and swelling increased, I had to go to the ER, they checked my CK levels, gave me morphine for the pain, and initially diagnosed me with rhabdomyolysis. This would not be the first time I was misdiagnosed. They gave me a dose of steroids and sent me home. The pain and swelling continued to come back and finally I was scheduled for my first treatment with Rituximab. After this, my symptoms continued. I had a lot of muscle pain and fatigue, terrible swelling, I could not get up from a chair, I had difficulty getting dressed, my mother-in-law had to help me with my bra. I also developed difficulty swallowing. Being a speech pathologist, I understood the seriousness of dysphagia.

Because of how quickly the symptoms came on again, I returned to the ER, they admitted me for several days, again saying it was rhabdomyolysis. My primary care had spoken to a rheumatologist who consulted in the hospital and saw me and told me after some tests, that he believed it was dermatomyositis. I read about the disease and things started to check, I realized my previous redness and rash in my face and arms, were related to DM but went unreported, I had ignored those symptoms, due to the fairness of my skin.

I was discharged, but a few days later the symptoms came back more aggressively, and I realized something was seriously wrong with me, not only lymphoma. I went to urgent care at SIoan-Kettering, and I remember saying "I'm not leaving here until you get this disease under control." I was put on morphine, and a 100 mg steroid daily dose. However, the treatment wasn't working, I was then put on IVIG. I also needed a feeding tube due to my dysphagia, but I went into respiratory distress during the procedure, they had to intubate me. I remember thinking I needed to tell my husband and my boys I love them, because I might not make it back. I found out afterward that they also told my husband they weren't sure I would survive. I was on a ventilator for 2 days. I developed aspiration pneumonia and was in the ICU for a few more days. I had lost all muscle control, had weakness in my neck, and legs, not being able to stand up – basically a quadriplegic. Staff had to take care of all my needs, including toileting and hygiene care. I ended up staying 5 ½ weeks in the hospital, and 2 ½ weeks in the acute rehab center for PT/OT and speech therapy.

By the time I went home I had lost 40 pounds, I was using a walker as I was very weak. It was really hard transitioning back home after the trauma of my hospital stay and still being on a feeding tube. This was around the holidays and my life had changed, from having a busy work schedule to staying on the sofa, without partaking in any of the activities, even at home, I was isolated in a different room while my family ate meals. This was the darkest period of this disease. My quality of life has been very affected by this disease, leaving me to feel useless. I get fatigued, my muscles get sore with just a bit of exercise, even trying to wash my hair is difficult.

Sometime after I left the hospital, I went to see a rheumatologist in NYC that specializes in myositis to follow up on my diagnosis. After some blood work he told me I had an Anti-NXP-2 antibody, and this marker is often associated with cancer in DM patients. He put me on my current drug treatment to try to manage the disease. My medicine list is long. IVIG; twice a month. Rituximab, for maintenance for both DM and lymphoma, every three months, Plaquenil and Methotrexate, plus many other meds taken to counteract some of the side effects of the primary medications. I have burning pain in my back, and I have developed other conditions; hypertension, chronic episcleritis, osteoporosis, as well as cataracts due to my previous steroid treatment. I have a full medical staff: a neurologist, rheumatologist, cardiologist, and many more. I also run a support group for patients with non-Hodgkin lymphoma and joined the support group for patients with dermatomyositis.

Currently my life has drastically changed. In a matter of 3 months, I had gone from being active, working with special needs children, loving my job, and having an active social life, to needing to take a 2-3 hour nap every day to rest. I don't want to admit that my cognitive ability is affected by, so-called brain fog, I know sometimes I feel that I need to go slow to process everything, even when expressing myself. Emotionally I feel like it would be best to go back to work. In fact my long-term disability provider is pushing for this, but my manual muscle measurements start to decline after doing exercises a couple of times and I feel very tired. I am sick, but outwardly I don't appear sick to others. This disease is also a financial burden, even when I was able to get disability, we had to alter our financial lives at home.

The hope was that if the lymphoma was under control, my DM would be stable. My regimen of medications have me somewhat stable, but at what cost? Both the fatigue and the brain fog are relentless. I am waiting for the other shoe to drop. I can't commit to things because I don't know how bad I will feel from day to day or what new condition will pop up that will put me back in hospital. I struggle with accepting that this may be all I will have. This disease has left me with more questions than answers – How can I take this new normal and make it something I can be proud of? My doctor is still hopeful that my DM will stabilize. To me hope is tiresome. I'm a realist and I want to know the facts and not live on hope.

I want better clinical trials that are designed to reflect the reality I face in my daily living with this debilitating condition.

Speaker 4: Dermatomyositis Specific Antisynthetase Syndrome with Jo-1+ Autoantibody

Back in 2010 - 2011. I started getting a rash on my face, I noticed my fatigue was getting worse and worse. As time progressed, I started getting weaker and weaker, up the point in 2013 I could not get off the sofa. I could barely make it to the top of the steps.

Then the onslaught of pain came in. I started experiencing pain in my shoulders radiating down to my arms. In my pelvis, all through my thighs and it just felt like, oh god my muscle tissue was being ripped and torn, it was just so painful I cannot describe how painful it was this progressed on data to my fingers. I never had my hands hurt so bad.

And everything was getting rapidly worse and worse. My primary care doctor did not quite know what was going on, nor did the dermatologist. I finally got to see a neurologist, and he started doing some tests.

I developed mechanics hands. I had sores, lesions, and cracks; my hands were just so painful. On a scale of one to 10 it was 12. I was really at a low point. I was so weak that I could not care for myself and clean myself in the restroom. Hygiene was a serious challenge, trying to get in and out of the shower, a real struggle. It was very scary, getting to the point where I could barely drive. Finally, the tests came back, and the neurologist told me; you have a muscle disease: myositis. and he explained to me that it was no cure.

He did not know much about it but started reaching out to a few of his colleagues around the Northern Virginia area. They got me in contact with the Myositis Center at Johns Hopkins, and because of the severity of my symptoms they expedited my appointment. By this time, I was using a walker, had swelling in my feet, calves, and in my knees up to my thighs, it hurt so bad. I could not drive, because of my feet were swollen. I was also experiencing a fever of anywhere from 100 to 103 for about five or six months.

The myositis antibody panel indicated that I was positive Jo-1 Antibody and had the anti-synthetase syndrome. The Doctor put me on 60 milligrams of prednisone and started me with methotrexate. A CT scan showed ground glass pattern in my lungs. She indicated that had interstitial lung disease, it was mild, but she opted to go with the treatment because my arthritis was just so bad in my hands, knees, and feet. After about two months, everything was progressively getting better.

I continued this path for the next year, the swelling had subsided, the mechanics' hands had gotten a lot better. I was going in the right direction, you know, but also during this time my marriage is steadily failing, and then that aspect of me emotionally really was just wrecking me. It was really recommended so I did some searching and I, by this time I had found myositis support groups. It had really started me emotionally making it a turn to the long road to recovery.

It took a year and nine months before I successfully got off prednisone. By this time, my doctor had introduced Rituxan, but my improvement is slow. I still have fatigue, and then to this day I'll notice if I over exercise pain increases. To this day it is tough going up steps. I've been in physical therapy and aquatic therapy, on and off the since 2015. that has really helped me.

Finally, I would say around 2019, I finally got to the point, pain was lot more manageable, but to this day my life is nowhere near what it was. I have been on Vicodin, Gabapentin, Percocet, Naproxen, but at the worst times, nothing really helped. I tapered off the methotrexate to 12 mg, but I get so fatigued. Just getting up in the morning taking a shower I feel tired, I could sit here and lie back down, but I still must push through.

In April 2021 I got COVID and was tremendously sick. I got monoclonal antibodies three days after I was diagnosed, and I will say that that helped me, but it was a very tough experience. Symptoms like dizziness, balance issues and brain fog were just under control and worsened again. I also had to stop Rituxan, so I

have not had this for a year, and it is concerning because I also have multiple myeloma and the doctors say one reason, I may not have presented with cancer yet is the Rituxan treatments. I was put on Truxima but I did not feel the boost I got with Rituxan. I should be able to get treatments like Rituxan that I I know will give me the best shot at normality

Many times, I just wanted to give up, I was alone with no support, laying on the couch in pain. The thing that kept me going was my parents. They depend on me, especially my 90-year-old mother who lives in a senior community nearby. I am grateful, blessed to be stable now and able to be there for her.

Speaker 5: Dermatomyositis with Mi-2+ Autoantibody

My journey with Dermatomyositis started in the spring of 2016. I visited my PCP after feeling tired all the time. She suggested I should lose weight, so I joined an exercise group at work, and we did stairs at the courthouse. After a few weeks, it became nearly impossible to do them. My PCP did not know what to do, so she blamed my anxiety disorder and gave me Xanax. It was a few weeks later when I squatted to pick something up at Hobby Lobby, I was unable to stand up and had to call for help.

I started getting rashes on my face and arms, so my PCP ordered more lab work. During this time, I went to an employee health fair at the largest arena in Wichita. I squatted to pick up my goody bag, and I was unable to stand, but nobody knew I needed help standing back up. I was embarrassed and scared. A good Samaritan finally helped me. He was also a handicapped man with a prosthetic leg. That encounter has helped me on my journey as I feel grateful for his help on that day.

My PCP said that I may have Lupus and sent me to a Rheumatologist, with no appointment available for 3 months. My skin issues worsened. I was at a ball game outside when I noticed my skin started burning through my clothes. I then had to begin using sun-blocking clothes and jackets, even in the summer, and a sun umbrella.

After examining my hands and fingers, the Rheumatologist said that I had Dermatomyositis, and was prescribed oral methotrexate. My situation kept deteriorating: I had more weakness, I had difficulty standing from a chair, my husband had to help me wash my hair, get in and out of the shower, as well as dress me daily, and my mother had to brush my hair to go to work. I had to walk my arm over the wall just to put on deodorant. My rheumatologist switched me to subcutaneous methotrexate. My legs and arms stayed weak, and I could not grab things from the closet or open doorknobs. I also fell at work, and it was a very difficult time.

I underwent a biopsy in August 2016 to confirm the dermatomyositis. My head was itching and burning, and I got bad sores on my head and neck. Even as a young mom, I now had to use a walker. We named it Violet, but one of my kids did not want me to go to school with Violet. We had hard lessons to learn as a family. This affected all of us.

Now, my rheumatologist switched to another type of methotrexate, this time a weekly infusion, and added 60 mg of prednisone. I was working full-time throughout this journey. This gave a bit of improvement, but I was still tired and fatigued, I could not take a shower in the morning without taking a rest.

My improvement was minimal, sometimes my labs went back to normal, and my rheumatologist thought I was in remission; then they were elevated again. She said she could do nothing more for me, that my case was refractory to treatment.

I had to advocate for myself and decided to find a myositis center. I went to the John Hopkins Myositis Center. There I got a full examination with MRI, EMG, and myositis panel test. I also had a full PT and OT evaluation. They confirmed that I had the MI2 antibody, and my doctor developed a treatment plan for me.

He changed my treatment to IVIG infusions, he proposed 4 consecutive days every four weeks at the infusion center. But since I could not take time off work, he proposed to do home infusions outside of regular business hours.

Once I started IVIG, both my CK and aldolase came into the normal range, and I was feeling better. However, something different happened to me: I started to develop calcinosis, initially in my arms as a pea size ball, then it grew tremendously to softball size. I developed them on my arms, abdomen, hips, lower back, and my butt. They are symmetrical, and they break through my skin and have caused staph infections. I would pull pieces out as they would break through my arms. I was given antibiotics for 3 months and added colchicine and a Calcium-channel blocker. But there is no remedy. Removal is not an option as it would leave a gaping wound that would never heal. If any future issues arise that require access to organs through my abdomen, they will first have to get through calcium masses that are blocking the way. It doesn't feel good, it's a tad nerve-wracking, AND when somebody casually fist-bumps me on the shoulder, they quickly withdraw and look at me like I might be a 4-headed monster.

My new rheumatologist decided to start over and back off from all previous treatment except IVIG. She put me on CellCept, but unfortunately, I developed nausea and stomach problems. In July 2021, I ended up at the ER due to stomach pain. The ER doctor had never seen a patient with calcinosis. I had a kidney stone, so I stopped the CellCept for the surgery and never restarted it again. I tapered off the prednisone completely.

As of December of 2021, my calcinosis has decreased, now my deposits are just half the size they were before. I don't know what caused the calcinosis or what drug may have stopped it. My rheumatologist believes that is just another part of my dermatomyositis disease.

Currently, I am only in IVIG home infusion as maintenance therapy. This disease has been a wild ride for my family and me. However, during the pandemic, being able to work from home has been a blessing for us. Work has always gotten the best of me. I went home and would just go to bed without the energy to interact with my kids.

I have not mentioned pain before, but I have had pain, that I sensed initially as a tingling in my body, like being electrocuted, but now I realize it was a real pain, and it was about 10 on a 10 -point scale on most days.

There are many challenges with this disease. I had to overcome many barriers: as a professional woman and a mother of two, I've had to keep up with different flares of this disease, maintain a full-time work schedule, and manage family life. In my job, I was not assigned work and denied business travel. They felt I was a liability. I had to advocate for my rights way too many times. Not working was not a choice for me. Even applying for disability is not an option: my state requires me to be unemployed for 12 months before being able to apply.

I wonder if my treatment would have been different, when my condition was first diagnosed by the rheumatologist, perhaps my journey would have been different, without all the weakness and fatigue I experienced while I was on methotrexate alone. I needed an aggressive, personalized treatment plan from the beginning. Forget all the methotrexate treatments. The IVIG is what has stabilized me.

Speaker 6: Dermatomyositis with MDA-5+ Autoantibody

In Dec 2019, I noticed a rash on my chest, and I went to the dermatologist that just prescribed a topical ointment for dermatitis. Next month, I started to feel fatigued, I had trouble standing and getting out of the shower. In Feb I experienced a radiating pain shoot through my thighs when I bent down to pick up a pen off the floor at work. I informed my PCP about my symptoms, and she ordered lab work. My ANA+ and CK levels were over 7500. She referred me to a rheumatology, unfortunately, my appointment was scheduled several months later. During the wait time my fatigue got worse, difficulties getting out of seated position. On Feb 9, 2020, I was no longer able to get out of bed and had a lot of pain in my legs. Rheumatology admitted me directly to the hospital. More testing, right deltoid biopsy, EMG, 100 mg of prednisone via IV. After discharge went home with only prednisone, walker, raised toilet seat, and shower chair.

I very quickly developed other medical issues due to the high dose of prednisone, including tachycardia, diabetes, SOB, gastric issues, high blood pressure, and osteoporosis. So of course, I had to take additional medications for the new health issues. I was diagnosed with Raynaud's during the 1st year in which my hands were very painful to touch. My fingertips felt like they were frostbitten. My skin involvement was significant ulcers on my knuckles and developed the typical shawl rash and a reddish-purple rash around my eyelids. During this flare I had to continuously wear mittens to protect my hands due to the Raynaud's.

I have received many drug treatments for myositis that failed, or I had side effects: Imuran, I had experienced severe diarrhea with no improvement. Methotrexate did not work. GA at the time was only using Hydroxychloroquine for Covid 19 patients, so I only took one month of it. I also completed two rounds of Rituximab which showed no benefits. Mycophenolate was prescribed due to more gastric side effects I had to stop. I switched to Myfortic. I still remember when I was initially diagnosed my previous rheumatologist informed me that since I was positive with the Mi2 autoantibody I would have the best possible outcome with this particular myositis antibody. So, when I was not responding to the typical treatment options for dermatomyositis, her treatment options were stomped. I had to find a new rheumatologist that I know traveled over 2 hours to receive care.

IVIG treatment has proven to be the only treatment I can tolerate, with premeds before each infusion. Currently, I receive IVIG every 2 weeks at home and it takes around 5 ½ hours to complete. Now I'm worried that the effectiveness is wearing off, in which my weakness and fatigue seems to return before the next infusion.

Myositis has made it impossible for me to return to work. My employer fired me after over 15 years of employment because I got sick. That was the only reason listed on my termination letter. I became disabled on Feb 9, 2020, at age 42. I use several different mobility devices, a walker, cane, toilet, and shower seats to assist with my daily activities.

One of the untold and unacknowledged burdens of Myositis is mental health. For me, it has been a mental rollercoaster; I have anxiety and depression because of this disease. As a mother with a four-year-old I had a different vision for my life, but all that got abruptly interrupted. I must now deal with this invisible disease that affects you on the inside as well as outside. I am no longer able to physically play with my daughter, pick her up or run with her and that creates a lot of depression and guilt. She does not understand that mommy has this illness now. Before myositis we were very active. We went to the library and Chuck E Cheeses every Wednesday. Myositis now has me with the minimum strength to be active with my daughter daily. Currently, I am not aware of any reasonable price or quality programs available to parents with rare diseases to provide assistance to their small children that are full of energy at this age. Not to mention, the financial burden it caused us, as medical bills piled up quickly. I would not have been able to cope with all the financial burden without the help of my husband. I know for sure if my husband would have left me during all of this I would have been homeless by now. It breaks my heart to know you can be financially secure one day and if you become sick you can lose everything in this country.

I want to be a better mother and wife. The only way I see how is to bring more awareness of this underserved disease to everyone else, especially the FDA. Myositis has become a part of me for the rest of my life. Myositis has taken a toll on me physically, mentally, emotionally, and financially. I had to seek psychiatric care to deal with the depression, anxiety, and guilt. To help me manage my daily depression. I look to patient support groups just to be able to get by. Unless you have this disease, you don't understand it completely. I am now much more sensitive to the plea of the invisible disabled due to this disease.

There is one last but very important symptom I would like to discuss: PAIN. I deal with chronic pain daily. I have had two pain management doctors so far. The 1st Provider did not listen to me at all. She dismissed my pain and did the minimum to alleviate it. My current doctor performed several procedures on me with little relief. I remember one day during a follow-up appointment after another failed attempt. He said 30 minutes of relief is considered a "success". I find this response reckless and insensitive to someone who deals with chronic pain daily. Unfortunately, some doctors often think that myositis patients don't have any pain, that's a myth. I know that if they took the time to find out from others who specialize in myositis patients, they would be enlightened. The doctors I have encountered in pain management make you feel guilty or a drug seeker for suggesting pain medication for relief. To avoid this shame and denial I use CBD gummies with THC to cope with this chronic pain.

Lastly, due to insurance restrictions; I don't have access to a research center outside of the state of Georgia that provides in-network coverage to see Providers who specialize in myositis; for ex. John Hopkins or the Mayo Clinic. I am forced to receive limited mediocre medical care that limits my treatment that limits my quality of life. Since we must suffer from myositis at least there should be a well-defined protocol for universal treatment options across the nation approved by the FDA. Never did I imagine on Feb 9, 2020, I would have become disabled at the early age of 42. I still have so much more to offer in my personal as well as my professional life. However, due to myositis, chronic pain, failed medical response, insurance restrictions, and only one approved FDA drug treatment I am unable to obtain a quality of life capable of pursuing those aspirations I once dreamed of.

As a patient I would like more consistent FDA treatment options. Sometimes I feel like I have become a testing subject for medications that have ended up hurting me more than helping me. I am willing to do my part and volunteer for clinical trials because I want more treatments for dermatomyositis that better address the quality-of-life issues I have living with this disease. Thank you for listening and considering the importance of advancing FDA approved treatments and guidelines for dermatomyositis patients.

Speaker 7: Dermatomyositis Specific Antisynthetase Syndrome with Jo-1+ Autoantibody

After having my first baby in 1991, I developed chronic muscular pain. I assumed everyone had pain and never said anything to anyone. When my 2nd child was 1, I became extremely weak: couldn't eat, ran fevers of 100-102 for about 3 weeks and lost 15 pounds. Infection was assumed, though no labs were drawn to check for anything else. While pregnant with my 3rd child in 1998, my white blood cells started inexplicably plummeting. My OB was concerned as my symptoms indicated systemic inflammation but about a month before birth the numbers went back to normal. About a month after giving birth, I developed a hot, raised, itchy red rash primarily on my thighs, chest, back, and upper arms. Again, no labs were run, and the rash resolved after about 6 weeks. A neurologist recently asked if I had been diagnosed with juvenile dermatomyositis because of the complexity and difficulty with my particular case, I certainly wonder if I did actually have Juvenile Dermatomyositis as I remember having strange itchy bumps on my hands, breathing troubles and white, blue and painful fingers as a child. In the early 2000s, my breathing troubles increased, and I was then dx with asthma. In 2005, after experiencing an increase in my chronic pain levels, I told my family doctor about it and, after the exam she dx me with fibromyalgia. Fibro was

fairly new to the world at that time and a dx was simply that, a dx with no treatment plan. In 2007 my breathing was very bad along with a returning rash, and I was hospitalized with O2 levels in the 70s. The doctors were perplexed as it took more iv steroids than they expected to stabilize me; unfortunately, no CTs were done at that time.

I went through a domestic violence divorce in 2009; to say it has been a stressful few years is putting it mildly. My widespread pain increased, along with new symptoms of occasional swelling all over my body, a facial rash, and strange itchy bumps primarily on my hands that would come and go. I had a positive ANA several times and was being watched for lupus or RA.

In 2015 I noticed my skin developed another itchy rash that would appear after being in the sun. I dismissed it as just another "thing". By then I had started work after being a stay-at-home mom for 24 years, and loved it! It was physically demanding as I was on my feet all the time, up and down ladders, squatting to the floor to put shoes on customers, unloading boxes and stocking shelves. I'd compete with the kids at work to see who could carry the biggest stack of full shoeboxes and I always beat them! I was finally taking charge and providing for my kids; I'd never felt more confident emotionally and physically as I did then.

In early 2016 I began having pain in my thighs and knees, a wave of crushing pain rolling from hip to knee, especially when standing from sitting or turning over in bed. I thought maybe it was from a new workout. Next came more itchy bumps on my shins and arms, and sudden eyelid and/or lip swelling that would come and go. My joints began to swell, and with each swollen joint came a hard, red itchy rash plus pain, weakness, and stiffness. I couldn't open my hands in the mornings which made it very difficult to give my special needs on his morning baths. I would use my elbows to pull the faucet on and off. I couldn't just jump up from the floor while waiting on customers anymore and eventually needed help to tighten their laces after doing their shoe fittings. I needed help with almost everything, including dressing myself.

I was given low-dose steroids by my primary care doctor who thought it was an allergy, but they didn't work. The swelling continued as did the rash, weakness, and, after developing a 102 fever one morning and feeling so weak I couldn't turn over in bed, I went to the ER where an alert doctor recognized an autoimmune process happening, ran a full autoimmune panel, gave me solumedrol and a referral to a rheumatologist. Shortly after the er visit I developed a deep dry cough and chest tightness and was using my inhaler multiple times a day. The rheumatologist insisted that I had psoriatic arthritis and ran tests to check the subtype of my positive ANA to "prove" he was right. My tests revealed high CPK, high aldolase, and positive for the Jo1 antibody. He wanted more tests done as he was still certain it was psoriatic arthritis and refused to prescribe any other prednisone which was the only thing keeping me working. At this point, I had been getting ready to go on a business trip as I was chosen to attend the annual New Balance conference in Tampa, Florida. I was misdiagnosed with pneumonia and was told by my family doctor that I couldn't fly. It was one of my biggest disappointments. Prior to this I was moving forward in my career: I was getting ready to purchase a new vehicle and move us into a bigger place, then everything came to a stop.

I went to see a new rheumatologist who almost immediately dx me with DM and Interstitial Lung Disease. He immediately began the process to get me treated with Rituxan, which was denied by insurance due to flawed clinical trials for DM treatment. Thankfully the pharma company provided me with a grant that supplied the Rituxan free of charge. After the 2nd dose of Rituxan, my breathing improved greatly but my rashes and weakness did not and I developed trouble swallowing. I was given IVIG in Nov 2016 but unfortunately developed aseptic meningitis after the 2nd day of treatment.

I received my 2nd round of Rituxan in February 2017; the swelling went down but I was still weak and having swallowing issues, so we tried IVIG one more time, with aseptic meningitis the result again. (I have tried IVIg 3 additional times, all with the same result) My doctor put me on CellCept, and I began to see improvements after my 3rd round of Rituxan and starting PT. In the summer of 2017, I was able to walk a

mile and felt hopeful! Unfortunately, due to a clerical error at the doctor's office, my treatment schedule was thrown off and I went 10 months with no Rituxan. By mid 2018, the relentless cycle of flares started: each started with the same symptoms of increasing pain in my thighs and upper arms, swallowing issues, weakness in my legs that was so bad it would make me nauseous and unable to walk, and the deep torturous itching. This would lead to a 3–5-day hospital visits for IV steroids, as well as an occasional inpatient physical rehab facility stay of 1-3 weeks. The pain I experience is often well beyond the 1-10 scale; it is an incapacitating pain that is like a constant loud distracting noise, or like having a horrible, infected toothache, that pain magnified throughout my body.

Now these flares come about every month. In the fall of last year my lungs became affected again. CTs showed new damage with ground glass patterns. I try to delay going to the hospital because of my son. He is 21 but has autism. He's in college but living at home and doesn't drive. I am so very proud of all he has accomplished, that we have accomplished together. He needs me but I am not the same mom physically I was before, but he needs my help, so I need the solumedrol to at least get back to basic functioning while waiting, hoping for a working treatment cocktail. We did try tacrolimus, but I could not tolerate it.

With each flare, my health is deteriorating. I need access to more effective, targeted treatments and clinical trials that deal specifically with this serious disease, and uniformity and consistency in treatments. I will begin Rituxan again finally, but after denial yet again by insurance, it took over 6 months to get the grant from the drug company.

Being dx with a debilitating, incurable, rare disease leaves us struggling invisibly emotionally, too. To go from the healthiest, most active point in my life to barely able to move and struggling to breathe in just over 3 months was life altering to say the least. DM has had an enormous, negative impact on my quality of life. It has taken my independence, my ability to support myself and my family, my sense of self-worth and my physical well-being.

Speaker 8: Caregiver of husband who lost his life to Dermatomyositis

On September 1, 2015, my husband passed away from complications from this rare autoimmune disease. Although it seemed that DM was only affecting him for a small portion of his life, he had been suffering from symptoms for years.

His journey started approximately in 2005. He noticed a rash under his neck, upper chest and back, along with painful sores on his scalp. He also experienced weight and muscle mass loss. These symptoms persisted for months and then would disappear. He was seen by his primary physician along with a dermatologist and cardiologist. Nothing was determined from these random symptoms other than the potential they could be from stress. Since these symptoms would come and go and vary in severity, it left us wondering if it was something more than what the doctors had previously assumed.

Fast forward to March of 2015, he experienced an extreme episode of a hot, red rash that appeared on his face, throat, and ears. He had fluid buildup under his eyes and severe muscle and joint pain. His main complaint was painful biceps, shoulders, and upper legs. He had difficulty eating, talking, and breathing. These symptoms continued and included severe fatigue, insomnia, and inflammation of his cuticles. But the worst was the dysphasia. He would choke on soft food and even his saliva.

We were desperate for answers from doctors during this time, but his symptoms and pain were often dismissed or misdiagnosed by the specialists. We were fortunate that with my husband's intellect and medical background as a Pharm-D, he was able to advocate for himself at these appointments. But even with his knowledge, we still had a difficult time getting the treatments he needed.

He had even done his own research and informed the doctor he believed he had DM. Before his appointment with the primary care doctor, he had been treating a patient of his and noticed the similarities of his symptoms to the patient's – who was being treated for DM. His primary doctor was able to prescribe him at the time – Prednisone, Tenormin, Alprazolam, Pantoprazole

Two months after his extreme flare-up, he was seen by a rheumatologist. It was then he was able to get a confirmed diagnosis of DM by a specialist. He asked for a muscle biopsy to rule out a viral cause. Bloodwork and a CT scan was ordered, and we scheduled a consultation with a Gastroenterologist. He was then prescribed – Methotrexate, Alprazolam, Solumedrol.

He was now pending a referral to UCLA, which took close to 4 months to get. But sadly, it was too late for the treatment to be effective as he was now in hospice. He passed peacefully at home with his family by his side after eight days in hospice care.

My husband was an avid gardener, often found tending to his yard. He also enjoyed a good burger and fries from In-N-Out, his favorite place. He was a respected, intelligent, and compassionate Pharmacist of 37 years. He was my husband of 33 years and a father to 3 amazing children. He was a wonderful human being that deserved the medical community to be educated and aware of this rare disease.

It was also unfortunate that the regulations of insurance and pharmaceutical companies inhibited my husband from a timely treatment after diagnosis.

Although heartbroken of our loss, our family decided to turn our story into something positive – a desire to make sure other families don't suffer as we did. We turned our grief into a passion to empower and advocate for others through our MSU Empower Walk which has become my husband's legacy. A way to reach out to others in the myositis community and give those patients and loved ones suffering a platform to tell their stories.

We hope you listen to us, and the many others today sharing their stories.

Learn more about Adult Dermatomyositis

Visit www.UnderstandingMyositis.org/dm