



## News Release

### Media Contact:

Bridget Kimmel

Mobile: (215) 688-6033

### Investor Contacts:

Christopher DelOrefice

Office: (732) 524-2955

Jennifer McIntyre

Office: (732) 524-3922

### New Phase 3 Data Show First-in-Class TREMFYA® (guselkumab) Achieved Complete Skin Clearance and Favorable Joint Efficacy in Adult Patients with Active Psoriatic Arthritis (PsA) Through Two Years

*Data show more than 50 percent of adults with active PsA achieved complete skin clearance (PASI 100) and more than 70 percent achieved at least 20 percent improvement in joint symptoms (ACR 20)*

*These data mark the first and only long-term Phase 3 study results for a selective interleukin (IL)-23 inhibitor therapy in PsA, which include impact on radiographic progression through two years*

**SPRING HOUSE, PENNSYLVANIA, March 16, 2021** – The Janssen Pharmaceutical Companies of Johnson & Johnson today announced long-term data from the Phase 3 DISCOVER-2<sup>a</sup> study showing that the skin clearance, joint symptom relief, and safety of TREMFYA® (guselkumab) previously demonstrated through 24 weeks and one year (Week 52) in adults with active psoriatic arthritis (PsA) continued through two years (Week 112).<sup>1,2</sup> These findings also confirmed that the robust efficacy TREMFYA demonstrated in patients at Week 24 on physical function, physical aspects of health-related quality of life, and resolution of enthesitis<sup>b</sup> and dactylitis<sup>c</sup> was also seen through Week 100.<sup>1-8</sup> In addition, the extent of radiographic progression<sup>d</sup> was studied through two years. These data will be presented virtually in abstract, poster, and video form during the Innovations in

Dermatology: Virtual Spring Conference, March 16–20, 2021.<sup>1,2</sup> TREMFYA is the first and only IL-23 inhibitor therapy approved in the U.S. to treat both adults with active PsA and adults with moderate to severe plaque psoriasis (PsO).<sup>9</sup>

"PsA can be a chronically painful and debilitating disease, and many PsA patients are still searching for enduring relief of their symptoms," said Philip J. Mease,<sup>e</sup> M.D., of the Swedish Medical Center/Providence St. Joseph Health and the University of Washington in Seattle, Washington and presenting author. "These data, which show that the observed benefits of TREMFYA in PsA continue through two years, represent positive news for physicians and patients alike."

Results showed that at Week 100:<sup>1,2</sup>

- **Complete Skin Clearance:**<sup>2</sup> In patients who had clinically meaningful skin involvement<sup>f</sup> at baseline, 59 percent of those receiving TREMFYA every four weeks (q4w)<sup>g</sup> and 53 percent of those receiving TREMFYA every eight weeks (q8w) achieved complete skin clearance (Psoriasis Area Severity Index [PASI] 100;<sup>h</sup> utilizing non-responder imputation [NRI], with this method of analysis, subjects with missing data are assumed to be non-responders).
- **Joint Symptom Improvement:**<sup>2</sup> Among randomized patients, 76 percent of those receiving TREMFYA q4w and 74 percent of those receiving TREMFYA q8w achieved at least 20 percent improvement in the American College of Rheumatology (ACR 20) response criteria<sup>i</sup> (utilizing NRI).<sup>j</sup>
- **Radiographic Progression:** At Week 24, TREMFYA q4w demonstrated statistically significant inhibition of radiographic progression of joint structural damage ( $p=0.011$ ) (as measured by PsA-modified van der Heijde-Sharp [vdH-S scores]).<sup>k</sup> TREMFYA q8w afforded numerically, but not statistically significant, less radiographic progression ( $p=0.072$ ) compared with placebo.<sup>3,4</sup> From Week 52-100, low rates of radiographic progression of joint damage were observed in patients receiving TREMFYA q4w (0.75) and TREMFYA q8w (0.46), which were both further numerically reduced from the results observed during Weeks 0-52 (1.06, q4w; 0.99, q8w).<sup>1,2</sup> In the group of patients who crossed over from placebo to TREMFYA q4w at Week 24,

mean changes in vdH-S scores were 1.12 from Week 0-24 while receiving placebo, and 0.34 from Week 24-52 and 0.13 from Week 52-100 while receiving TREMFYA q4w, indicating that further numerical improvements were also made through Year Two in this group.<sup>1,2</sup>

- **Durability:**<sup>1,2</sup> Robust joint and skin response rates and mean improvements from baseline in outcome measures were maintained through two years, and approximately 90 percent of patients randomized to TREMFYA q4w or q8w continued treatment with TREMFYA through Week 100.
- **Safety:**<sup>1,2</sup> No new safety signals were observed in the safety analysis conducted through Week 112. TREMFYA safety in patients with active PsA through two years was comparable to safety at six months and one year and generally consistent with TREMFYA safety in patients with moderate to severe plaque PsO.<sup>10,11</sup>

In addition, results showed 56 percent of TREMFYA q4w patients and 55 percent of TREMFYA q8w patients achieved at least 50 percent improvement in ACR score (utilizing NRI).<sup>2</sup> Among patients who had clinically meaningful PsO at baseline, 62 percent of TREMFYA q4w patients and 55 percent of TREMFYA q8w patients achieved complete skin clearance as measured by the Investigator Global Assessment (IGA) score of 0 (utilizing NRI).<sup>2</sup>

"PsA is a chronic inflammatory disease of the skin, joints, and soft tissue and therefore, sustained control of this inflammation is important to physicians and patients," said Alyssa Johnsen, M.D., Ph.D., Vice President, Rheumatology Disease Area Leader, Janssen Research & Development, LLC. "These long-term study results further bolster our confidence in the ability of TREMFYA to significantly improve the diverse manifestations of PsA over time."

[Click to Tweet:](#) New Phase 3 study shows efficacy and safety data at two years with Janssen's medicine in patients with active #PsA. Read more:

<http://bit.ly/3cEmmSY>

TREMFYA is the first and only treatment approved for both adults with moderate to severe plaque PsO and for adults with active PsA that selectively inhibits IL-23, a cytokine that is a key driver of the inflammatory immune response associated with the symptoms of these chronic autoimmune diseases.<sup>9,12</sup>

TREMFYA was approved in the U.S. for the treatment of adults with moderate to severe plaque PsO in July 2017 and in July 2020 for adults with active PsA.<sup>9</sup> The PsA approval was based on results from DISCOVER-1 and DISCOVER-2, which showed TREMFYA reached each study's primary endpoint of ACR 20 response at 24 weeks.<sup>4,5</sup> Complete study results were previously published in *The Lancet*.<sup>4,5</sup>

Previously [announced](#) DISCOVER-1 and DISCOVER-2 data showed TREMFYA demonstrated improvements in multiple clinical outcomes of PsA including joint symptoms, skin symptoms, soft tissue inflammation, physical function, axial-related disease, [fatigue](#) as measured by Functional Assessment of Chronic Illness Therapy - Fatigue (FACIT-F) Scale,<sup>1</sup> and low rates of radiographic progression at Week 52.<sup>3-9,13</sup>

**Editor's Note:**

- a. In DISCOVER-2, patients were randomized to TREMFYA 100mg q4w or q8w for two years, or to placebo with crossover to TREMFYA q4w at Week 24 through two years.<sup>14</sup>
- b. Enthesitis is defined as pain where the bone, tendon and ligament meet.<sup>15</sup>
- c. Dactylitis is defined as severe inflammation of the finger and toe joints.<sup>16</sup>
- d. Radiographic progression is measured by scoring the erosions and joint space narrowing in the hands and feet.<sup>17</sup>
- e. Dr. Mease is a paid consultant for Janssen. He has not been compensated for any media work.
- f. Clinically meaningful defined as  $\geq 3$  percent body surface area psoriatic involvement and an IGA score of at least 2 at baseline.
- g. TREMFYA q4w is not currently FDA-approved.
- h. PASI 75/90/100 is defined as at least 75/90/100 percent improvement from baseline in the PASI score. The PASI score grades the amount of surface area on each body region that is covered by PsO plaques and the severity of plaque redness, thickness, and scaliness.<sup>18</sup>
- i. ACR 20/50/70 response is defined as both at least 20/50/70 percent improvement from baseline in the number of tender and number of swollen

- joints, and at least 20/50/70 percent improvement from baseline in three of the following five criteria: patient global assessment, physician global assessment, functional ability measure, visual analog pain scale, and erythrocyte sedimentation rate or C-reactive protein.<sup>19</sup>
- j. ACR response rates at Week 100 were determined post-hoc using NRI, which categorized patients who discontinued the study as non-responders from Week 24 to 100.
  - k. Change in total vdH-S score is defined by change of score from baseline. The total vdH-S score combines erosion and joint space narrowing scores derived from radiographs of joints in hands and feet.<sup>20</sup> TREMFYA is not approved in the U.S. for inhibition of structural damage.
  - l. FACIT-F scale is measured on a 4-point Likert scale (4 = not at all fatigued to 0 = very much fatigued).<sup>21</sup>

#### **About DISCOVER-1 (NCT03162796)<sup>22</sup>**

DISCOVER-1 was a randomized, double-blind, multicenter Phase 3 study evaluating the efficacy and safety of TREMFYA administered by subcutaneous (SC) injection in participants with active PsA, including those previously treated with one or two biologic tumor necrosis factor inhibitors. DISCOVER-1 evaluated 381 participants and continued through approximately one year.

The study consisted of a screening phase of up to six weeks, a blinded active treatment phase of 52 weeks that included a placebo-controlled period from Week 0 to Week 24 and an active treatment period from Week 24 to Week 52. It also included a safety follow-up phase of eight weeks after Week 52 (Week 52 to Week 60; 12 weeks from the last administration of study agent at Week 48 through to the final visit in the safety follow-up phase). Efficacy, safety, pharmacokinetic, immunogenicity and biomarker evaluations were performed in the study on a defined schedule.

#### **About DISCOVER-2 (NCT03158285)<sup>14</sup>**

DISCOVER-2 was a randomized, double-blind, multicenter Phase 3 study evaluating the efficacy and safety of TREMFYA administered by SC injection in bio-naïve patients with active PsA. DISCOVER-2 evaluated 739 participants and continued through approximately two years.

The study consisted of a screening phase of up to six weeks, a blinded active treatment phase (approximately 100 weeks) that included a placebo-controlled period from Week 0 to Week 24 and an active treatment period from Week 24 to Week 100. It also included a safety follow-up phase of 12 weeks after the last administration of study agent. Clinical efficacy, radiographic efficacy, health economics, safety, pharmacokinetics, immunogenicity, biomarker, and pharmacogenomics evaluations were performed in the study on a defined schedule.

### **About Psoriatic Arthritis**

PsA is a chronic, immune-mediated inflammatory disease characterized by peripheral joint inflammation, enthesitis (pain where the bone, tendon and ligament meet), dactylitis (severe inflammation of the finger and toe joints), axial disease, and the skin lesions associated with PsO.<sup>15,16,23</sup> In addition, in patients with PsA, comorbidities such as obesity, cardiovascular diseases, anxiety and depression are often present.<sup>24</sup> Studies show up to 30 percent of people with PsO also develop PsA.<sup>25</sup> The disease causes pain, stiffness and swelling in and around the joints; it commonly appears between the ages of 30 and 50, but can develop at any time.<sup>25</sup> Nearly half of patients with PsA experience moderate fatigue and about 30 percent suffer from severe fatigue as measured by the modified fatigue severity scale.<sup>26</sup> Although the exact cause of PsA is unknown, genes, the immune system and environmental factors are all believed to play a role in disease onset.<sup>27</sup>

### **About TREMFYA® (guselkumab)**<sup>9</sup>

Developed by Janssen, TREMFYA is the first approved fully human monoclonal antibody that selectively binds to the p19 subunit of IL-23 and inhibits its interaction with the IL-23 receptor. IL-23 is an important driver of the pathogenesis of inflammatory diseases such as PsO and PsA.<sup>28</sup>

TREMFYA is approved in the U.S., Canada, Japan, and a number of other countries worldwide for the treatment of adults with moderate to severe plaque PsO who are candidates for systemic therapy (injections or pills) or phototherapy (treatment

using ultraviolet light), and for the treatment of adult patients with active PsA. It is also approved in the EU for the treatment of moderate to severe plaque PsO in adults who are candidates for systemic therapy and for the treatment of active PsA in adult patients who have had an inadequate response or who have been intolerant to a prior disease-modifying antirheumatic drug therapy.

The Janssen Pharmaceutical Companies of Johnson & Johnson maintain exclusive worldwide marketing rights to TREMFYA®.

### **Important Safety Information**

**What is the most important information I should know about TREMFYA®? TREMFYA® is a prescription medicine that may cause serious side effects, including:**

- **Serious Allergic Reactions.** Stop using TREMFYA® and get emergency medical help right away if you develop any of the following symptoms of a serious allergic reaction:
  - fainting, dizziness, feeling lightheaded (low blood pressure)
  - swelling of your face, eyelids, lips, mouth, tongue or throat
  - trouble breathing or throat tightness
  - chest tightness
  - skin rash, hives, itching
- **Infections.** TREMFYA® may lower the ability of your immune system to fight infections and may increase your risk of infections. Your healthcare provider should check you for infections and tuberculosis (TB) before starting treatment with TREMFYA® and may treat you for TB before you begin treatment with TREMFYA® if you have a history of TB or have active TB. Your healthcare provider should watch you closely for signs and symptoms of TB during and after treatment with TREMFYA®.

Tell your healthcare provider right away if you have an infection or have symptoms of an infection, including:

- fever, sweats, or chills
- muscle aches
- weight loss
- cough
- warm, red, or painful skin or sores on your body different from your psoriasis
- diarrhea or stomach pain
- shortness of breath
- blood in your phlegm (mucus)
- burning when you urinate or urinating more often than normal

**Do not take TREMFYA®** if you have had a serious allergic reaction to guselkumab or any of the ingredients in TREMFYA®.

**Before using TREMFYA®, tell your healthcare provider about all of your medical conditions, including if you:**

- have any of the conditions or symptoms listed in the section “**What is the most important information I should know about TREMFYA®?**”
- have an infection that does not go away or that keeps coming back.
- have TB or have been in close contact with someone with TB.
- have recently received or are scheduled to receive an immunization (vaccine). You should avoid receiving live vaccines during treatment with TREMFYA®.
- are pregnant or plan to become pregnant. It is not known if TREMFYA® can harm your unborn baby.
- are breastfeeding or plan to breastfeed. It is not known if TREMFYA® passes into your breast milk.

**Tell your healthcare provider about all the medicines you take,** including prescription and over-the-counter medicines, vitamins, and herbal supplements.

**What are the possible side effects of TREMFYA®?**

**TREMFYA® may cause serious side effects. See “What is the most important information I should know about TREMFYA®?”**

**The most common side effects of TREMFYA® include:** upper respiratory infections, headache, injection site reactions, joint pain (arthralgia), diarrhea, stomach flu (gastroenteritis), fungal skin infections, herpes simplex infections, and bronchitis.

These are not all the possible side effects of TREMFYA®. Call your doctor for medical advice about side effects.

Use TREMFYA® exactly as your healthcare provider tells you to use it.

**Please read the full [Prescribing Information](#), including [Medication Guide](#) for TREMFYA®, and discuss any questions that you have with your doctor.**

**You are encouraged to report negative side effects of prescription drugs to the FDA. Visit [www.fda.gov/medwatch](http://www.fda.gov/medwatch), or call 1-800-FDA-1088.**

### **About the Janssen Pharmaceutical Companies of Johnson & Johnson**

At Janssen, we’re creating a future where disease is a thing of the past. We’re the Janssen Pharmaceutical Companies of Johnson & Johnson, working tirelessly to make that future a reality for patients everywhere by fighting sickness with science,

improving access with ingenuity, and healing hopelessness with heart. We focus on areas of medicine where we can make the biggest difference: Cardiovascular & Metabolism, Immunology, Infectious Diseases & Vaccines, Neuroscience, Oncology, and Pulmonary Hypertension.

Learn more at [www.janssen.com](http://www.janssen.com).

Follow us at [www.twitter.com/JanssenGlobal](http://www.twitter.com/JanssenGlobal).

Janssen Research & Development, LLC is a part of the Janssen Pharmaceutical Companies of Johnson & Johnson.

### **Cautions Concerning Forward-Looking Statements**

*This press release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995 regarding ongoing and planned development efforts involving TREMFYA® (guselkumab) as a treatment for adult patients with active psoriatic arthritis. The reader is cautioned not to rely on these forward-looking statements. These statements are based on current expectations of future events. If underlying assumptions prove inaccurate or known or unknown risks or uncertainties materialize, actual results could vary materially from the expectations and projections of Janssen Research & Development, LLC, any of the other Janssen Pharmaceutical Companies and/or Johnson & Johnson. Risks and uncertainties include, but are not limited to: challenges and uncertainties inherent in product research and development, including the uncertainty of clinical success and of obtaining regulatory approvals; uncertainty of commercial success; manufacturing difficulties and delays; competition, including technological advances, new products and patents attained by competitors; challenges to patents; product efficacy or safety concerns resulting in product recalls or regulatory action; changes in behavior and spending patterns of purchasers of health care products and services; changes to applicable laws and regulations, including global health care reforms; and trends toward health care cost containment. A further list and descriptions of these risks, uncertainties and other factors can be found in Johnson & Johnson's Annual Report on Form 10-K for the*

*fiscal year ended January 3, 2021, including in the sections captioned "Cautionary Note Regarding Forward-Looking Statements" and "Item 1A. Risk Factors," and in the company's most recently filed Quarterly Report on Form 10-Q, and the company's subsequent filings with the Securities and Exchange Commission. Copies of these filings are available online at [www.sec.gov](http://www.sec.gov), [www.jnj.com](http://www.jnj.com) or on request from Johnson & Johnson. None of the Janssen Pharmaceutical Companies nor Johnson & Johnson undertakes to update any forward-looking statement as a result of new information or future events or developments.*

# # #

1. McInnes, I. B., Rahman, P., Gottlieb, A. B., Hsia, E. C., Kollmeier, A. P., Xu, X. L., Sheng, S., Jiang, Y., Shawi, M., Chakravarty, S. D., van der Heijde, D., Mease, P. J. (2021). Efficacy and Safety of Guselkumab, a Monoclonal Antibody Specific to the p19-Subunit of Interleukin-23, Through 2 Years: Results from a Phase 3, Randomized, Double-blind, Placebo-controlled Study Conducted in Biologic-naïve Patients with Active Psoriatic Arthritis. Presented at the Innovations in Dermatology: Virtual Spring Conference; March 16–20 (ABSTRACT)
2. McInnes, I. B., Rahman, P., Gottlieb, A. B., Hsia, E. C., Kollmeier, A. P., Xu, X. L., Sheng, S., Jiang, Y., Shawi, M., Chakravarty, S. D., van der Heijde, D., Mease, P. J. (2021). Efficacy and Safety of Guselkumab, a Monoclonal Antibody Specific to the p19-Subunit of Interleukin-23, Through 2 Years: Results from a Phase 3, Randomized, Double-blind, Placebo-controlled Study Conducted in Biologic-naïve Patients with Active Psoriatic Arthritis. Presented at the Innovations in Dermatology: Virtual Spring Conference; March 16–20 (POSTER)
3. Deodhar, A., Helliwell, P. S., Boehncke, W.-H., Kollmeier, A. P., Hsia, E. C., Subramanian, R. A., Xu, X. L., Sheng, S., Agarwal, P., Zhou, B., Zhuang, Y., & Ritchlin, C. T. (2020). Guselkumab in patients with active psoriatic arthritis who were biologic-naïve or had previously received TNF $\alpha$  inhibitor treatment (DISCOVER-1): a double-blind, randomised, placebo-controlled phase 3 trial. *The Lancet*, 395(10230), 1115–1125. [https://doi.org/10.1016/s0140-6736\(20\)30265-8](https://doi.org/10.1016/s0140-6736(20)30265-8)
4. Mease, P. J., Rahman, P., Gottlieb, A. B., Kollmeier, A. P., Hsia, E. C., Xu, X. L., Sheng, S., Agarwal, P., Zhou, B., Zhuang, Y., van der Heijde, D., & McInnes, I. B. (2020). Guselkumab in biologic-naïve patients with active psoriatic arthritis (DISCOVER-2): a double-blind, randomised, placebo-controlled phase 3 trial. *The Lancet*, 395(10230), 1126–1136. [https://doi.org/10.1016/s0140-6736\(20\)30263-4](https://doi.org/10.1016/s0140-6736(20)30263-4)
5. Helliwell, P., et al. Efficacy of Guselkumab, a Monoclonal Antibody that Specifically Binds to the p19 Subunit of IL-23, on Endpoints Related to Axial Involvement in Patients with Active PsA with Imaging-Confirmed Sacroiliitis: Week-24 Results from Two Phase 3, Randomized, Double-blind, Placebo-controlled Studies. Presented at the 2020 EULAR E-Congress June 3-6
6. Mease, P., et al. Efficacy of Guselkumab, a Monoclonal Antibody that Specifically Binds to the p19 Subunit of IL-23, on Axial-Related Endpoints in Patients with Active PsA with Imaging-Confirmed Sacroiliitis: Week-52 Results from Two Phase 3, Randomized, Double-blind, Placebo-controlled Studies. Abstract 898117. Presented at ACR Convergence 2020 November 5-9
7. Ritchlin, C. T., Helliwell, P. S., Boehncke, W.-H., Soriano, E. R., Hsia, E. C., Kollmeier, A. P., Chakravarty, S. D., Zazzetti, F., Subramanian, R. A., Xu, X. L., Zuraw, Q. C., Sheng, S., Jiang, Y., Agarwal, P., Zhou, B., Zhuang, Y., Shawi, M., Karyekar, C. S., & Deodhar, A. (2021). Guselkumab, an inhibitor of the IL-23p19 subunit, provides sustained improvement in signs and symptoms of active psoriatic arthritis: 1 year results of a phase III randomised study of patients who were biologic-naïve or TNF $\alpha$  inhibitor-experienced. *RMD Open*, 7(1), e001457. <https://doi.org/10.1136/rmdopen-2020-001457>
8. McInnes, I. B., Rahman, P., Gottlieb, A. B., Hsia, E. C., Kollmeier, A. P., Chakravarty, S. D., Xu, X. L., Subramanian, R. A., Agarwal, P., Sheng, S., Jiang, Y., Zhou, B., Zhuang, Y., van, D., der Heijde, & Mease, P. J. (2020). Efficacy and Safety of Guselkumab, an Interleukin-23p19-Specific Monoclonal Antibody, Through 1 Year in Biologic-naïve Psoriatic Arthritis Patients. *Arthritis & Rheumatology*. <https://doi.org/10.1002/art.41553>

9. Food and Drug Administration. TREMFYA (guselkumab) Injection Full Prescribing Information. <http://www.janssenlabels.com/package-insert/product-monograph/prescribing-information/TREMFYA-pi.pdf>
10. Griffiths, C. E. M., et al. (2020). Continuous treatment with guselkumab maintains clinical responses through 4 years in patients with moderate-to-severe psoriasis: results from VOYAGE 1. *Journal of Dermatological Treatment*, 1–9. <https://doi.org/10.1080/09546634.2020.1782817>
11. Reich, K., et al. (2020). Maintenance of Response Through up to 4 Years of Continuous Guselkumab Treatment of Psoriasis in the VOYAGE 2 Phase 3 Study. *American Journal of Clinical Dermatology*, 21(6), 881–890. <https://doi.org/10.1007/s40257-020-00555-7>
12. Tang, C., Chen, S., Qian, H., & Huang, W. (2012). Interleukin-23: as a drug target for autoimmune inflammatory diseases. *Immunology*, 135(2), 112–124. <https://doi.org/10.1111/j.1365-2567.2011.03522.x>
13. Rahman P, et al. In Two Phase-3 Trials, Guselkumab Reduced Fatigue over 52 Weeks in Patients with Psoriatic Arthritis and Demonstrated Independent Treatment Effects on Fatigue After Adjustment for Clinical Response (ACR20). Abstract: 898351. Presented at ACR Convergence 2020 November 5-9.
14. *A Study Evaluating the Efficacy and Safety of Guselkumab Administered Subcutaneously in Participants With Active Psoriatic Arthritis - Full Text View - ClinicalTrials.gov*. (2017, May 18). ClinicalTrials.Gov. <https://clinicaltrials.gov/ct2/show/NCT03158285>
15. Donvito, T. (2019, August 26). *What Is Enthesitis? The Painful Arthritis Symptom You Should Know About*. CreakyJoints. <https://creakyjoints.org/symptoms/what-is-enthesis/#:%7E:text=%E2%80%9CEntesitis%20is%20inflammation%20of%20the,is%20susceptible%20to%20this%20problem>
16. Donvito, T. (2019a, July 10). *What Is Dactylitis? The 'Sausage Finger' Swelling You Should Know About*. CreakyJoints. <https://creakyjoints.org/symptoms/what-is-dactylitis/>
17. van der Heijde, D., Gladman, D. D., Kavanaugh, A., & Mease, P. J. (2020). Assessing structural damage progression in psoriatic arthritis and its role as an outcome in research. *Arthritis Research & Therapy*, 22(1). <https://doi.org/10.1186/s13075-020-2103-8>
18. Center - Everyday Health. EverydayHealth.Com. <https://www.everydayhealth.com/psoriasis/living-with/how-the-pasi-index-works/>
19. Felson, D. T., & LaValley, M. P. (2014). The ACR20 and defining a threshold for response in rheumatic diseases: too much of a good thing. *Arthritis Research & Therapy*, 16(1), 101. <https://doi.org/10.1186/ar4428>
20. Sharp van der Heijde Score | Rheumatology. Department of Medicine Division of Rheumatology. Retrieved February 22, 2021, from <http://rheumatology.usherbrooke.ca/?q=scoresharp>
21. Acaster S, et al. Qualitative and quantitative validation of the FACIT-fatigue scale in iron deficiency anemia Health Qual Life Outcomes. 2015; 13: 60. Published online 2015 May 17. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4434873/>
22. *A Study Evaluating the Efficacy and Safety of Guselkumab Administered Subcutaneously in Participants With Active Psoriatic Arthritis Including Those Previously Treated With Biologic Anti -Tumor Necrosis Factor (TNF) Alpha Agent(s) - Full Text View - ClinicalTrials.gov*. (2017, May 22). ClinicalTrials.Gov. <https://clinicaltrials.gov/ct2/show/NCT03162796>
23. Belasco, J., & Wei, N. (2019). Psoriatic Arthritis: What is Happening at the Joint? *Rheumatology and Therapy*, 6(3), 305–315. <https://doi.org/10.1007/s40744-019-0159-1>
24. Haddad A and Zisman D. Comorbidities in Patients with Psoriatic Arthritis. *Rambam Maimonides Med J* 2017;8(1):e0004.
25. *Psoriatic Arthritis: Causes, Symptoms and Treatment*. National Psoriasis Foundation. Retrieved February 22, 2021, from <https://www.psoriasis.org/about-psoriatic-arthritis/>
26. Husted, J. A., Tom, B. D., Schentag, C. T., Farewell, V. T., & Gladman, D. D. (2008). Occurrence and correlates of fatigue in psoriatic arthritis. *Annals of the Rheumatic Diseases*, 68(10), 1553–1558. <https://doi.org/10.1136/ard.2008.098202>
27. Cassell, S., & Kavanaugh, A. (2005, September 2). *Psoriatic arthritis: Pathogenesis and novel immunomodulatory approaches to treatment*. Journal of Immune Based Therapies and Vaccines. <https://jibtherapies.biomedcentral.com/articles/10.1186/1476-8518-3-6>
28. Benson, J. M., Peritt, D., Scallon, B. J., Heavner, G. A., Shealy, D. J., Giles-Komar, J. M., & Mascelli, M. A. (2011). Discovery and mechanism of ustekinumab. *MAbs*, 3(6), 535–545. <https://doi.org/10.4161/mabs.3.6.17815>