



News Release

Media Contact:

Craig Stoltz
Mobile: (215) 779-9396

Investor Contact:

Raychel Kruper
investor-relations@its.jnj.com

New Real-World Data Show TREMFYA® (guselkumab) Was Associated With Clinically Meaningful Improvements in Patient-Reported Outcomes for Adults Living With Active Psoriatic Arthritis

People living with treatment-resistant active psoriatic arthritis reported meaningful improvements in pain, physical function and fatigue on TREMFYA through six months

Additional pooled data from three clinical trials support the established efficacy of TREMFYA in key psoriatic domains across those who were bio-naïve or TNFi-experienced

SPRING HOUSE, PENNSYLVANIA, November 8, 2023 – Janssen

Pharmaceuticals, Inc., a Johnson & Johnson company, today announced new data from the CorEvitas Psoriatic Arthritis (PsA) and Spondyloarthritis Registry that showed a substantial proportion of people living with treatment-resistant active PsA and using TREMFYA® (guselkumab) in real-world settings reported meaningful improvements in pain, physical function and fatigue through six months.¹ Additionally, across the DISCOVER-1, DISCOVER-2 and COSMOS clinical trials, treatment with TREMFYA was associated with higher rates of clinically meaningful improvements in a composite assessment of patient-reported pain, fatigue, physical

function, skin problems and PsA-related depression than placebo in the first assessment of the PsA 5-Thermometer Scale Domains (PsA-5T-Ds).²

TREMFYA is the first and only fully human selective interleukin (IL)-23p19-subunit inhibitor therapy approved for the treatment of adults living with active PsA.^{3,4} These study results are among 24 company-sponsored abstracts being presented by Janssen at the American College of Rheumatology (ACR) Convergence 2023 meeting taking place in San Diego, CA, November 10-15, 2023.

“People living with active psoriatic arthritis who are treatment-resistant need options that improve debilitating symptoms of their disease, like pain, physical function and fatigue,” said Philip Mease, M.D., Swedish Medical Center/Providence St. Joseph Health and University of Washington in Seattle, Washington.^a “It is important that we assess patient-reported outcomes in a real-world setting, ensuring that we address unmet needs for people living with this challenging disease.”

CorEvitas data showed patients characterized by longstanding, treatment-resistant, active disease reported meaningful improvements in pain, physical function and fatigue.¹

In this analysis of the CorEvitas registry data,^b substantial proportions of on-label TREMFYA persisters^c (n=90) reported clinically meaningful improvements from baseline (unadjusted nominal p values):¹

- Among these registry participants who reported moderate levels of PsA-related pain prior to starting TREMFYA (n=89, mean baseline score of 57 on a 0-100 mm visual analog scale [VAS]), substantial proportions experienced clinically meaningful improvements in pain.¹ Thirty-eight percent reported a ≥30 percent reduction (n=33/86) and 40 percent reported a ≥15-mm reduction (n=33/82).¹
- Participants were evaluated for clinically meaningful improvements in overall joint and skin disease (n=84, mean baseline score of 50.3 VAS).¹ Forty-

seven percent had a ≥ 15 -mm reduction (n=36/77) in the patient global assessment of arthritis and psoriasis.¹

- Participants' physical function was also assessed (n=89, mean baseline score of 0.9 with Health Assessment Questionnaire Disability Index [HAQ-DI]).^{d,1} Thirty percent (n=21/69) showed clinically meaningful improvements in physical function with HAQ-DI improvement of ≥ 0.35 .¹
- Up to one-quarter of patients achieved the more stringent thresholds of response, generally representing a major response or minimal disease activity, including 26 percent (n=18/69) with patient global assessment score ≤ 20 -mm, 22 percent (n=19/86) with ≥ 50 percent reduction in pain, 18 percent (n=14/80) with pain score ≤ 15 mm and 10 percent (n=6/58) with HAQ-DI ≤ 0.5 (all nominal $p < 0.001$).¹
- Mean change (95 percent confidence interval [CI]) in PsA-related fatigue from baseline at six months was -8.8 (-14.9, -2.7; nominal $p = 0.005$; based on component score of the Bath Ankylosing Spondylitis Disease Activity Index, 0-100 VAS; with a 56.5 baseline score [n=89]).¹
- These aspects of psoriatic arthritis are often difficult to treat and are important contributors to health-related quality of life for people living with PsA.¹

Analysis of DISCOVER-1, DISCOVER-2 and COSMOS clinical trials supports established TREMFYA efficacy across key PsA patient-reported outcomes.²

In the first assessment of the PsA-5T-Ds^e longitudinal construct validity, in people living with PsA who were bio-naïve or who had an inadequate response to one or two tumor necrosis factor inhibitors (TNFis),^f this composite score of five patient-reported outcomes showed a strong correlation with the Psoriatic Arthritis Disease Activity Score (PASDAS), a validated instrument that encompasses most core PsA domains, and a good ability to discriminate between those with and without clinically meaningful improvements in disease activity and health-related quality of life.²

- PsA-5Ts is a simple multidimensional composite measure, assessing self-reported pain, fatigue, physical function, skin problems and depression, recently

developed to measure overall health in people living with PsA and correlate with established composite measures.²

- Changes in PsA-5T-Ds score through week 24 correlated strongly with variations in PASDAS ($r=0.7$; $p<0.0001$) and moderately with variations in Disease Activity Index for PsA (DAPSA), clinical DAPSA and 36-Item short form survey (SF-36) physical component summary (PCS) scores ($r=0.5$; all $p<0.0001$).²
- Achievement of clinically meaningful improvement in PASDAS, DAPSA, clinical DAPSA and SF-36 PCS score through week 24 was associated with significantly greater improvements in PsA-5T-Ds score vs. nonachievement.²

“These new TREMFYA results demonstrate our commitment to addressing symptoms that impact people living with active psoriatic arthritis, including depression, pain, fatigue, physical function and skin problems,” said Terence Rooney, M.D., Vice President, Rheumatology, Immunology Disease Area Leader, Janssen Research & Development, LLC. “It is critical that we evaluate patient-reported outcomes to truly understand the lived experiences of patients and better develop and provide treatments in psoriatic disease.”

Editor’s Notes:

- a. Dr. Philip Mease is a paid consultant for Janssen. He has not been compensated for any media work.
- b. This analysis includes registry patients who initiated on-label TREMFYA use after July 13, 2020, and were on-label persisters.¹ Among 114 on-label TREMFYA initiators with a six-month follow-up visit, 90 (79 percent) had persistent on-label TREMFYA use.¹ On average, these patients had longstanding, treatment-resistant active PsA.¹
- c. TREMFYA persisters were patients who received TREMFYA post-Food and Drug Administration (FDA) approval and persisted with treatment through the six-month visit.¹
- d. HAQ-DI is a patient questionnaire that assesses physical function and disability across rheumatic diseases.⁵ HAQ-DI was measured on a scale of 0-3.¹

- e. A PsA-5T-Ds score (range 0-100) was calculated based on the Functional Assessment of Chronic Illness Therapy Fatigue (FACIT-F) scale, HAQ-DI, and question 28 (*'Have you felt downhearted and depressed'*) of the 36-Item Short Form Survey (SF-36) to assess fatigue, physical function, and depression, respectively, after 0-10 transformation; patient pain and skin disease activity were assessed with native 0-10 visual analog scales.²
- f. Participants in DISCOVER-1 and DISCOVER-2 (D1 and D2; n=1120 ~90 percent bio-naïve) and COSMOS (n=285; inadequate response to one or two TNFi) had active PsA and were randomized to TREMFYA 100 mg every four weeks (D1/D2 only); TREMFYA 100 mg at week 0, week 4, at every eight weeks; or placebo.²

About CorEvitas

The CorEvitas PsA/Spondyloarthritis (SpA) Registry is a prospective, observational registry for patients living with PsA or SpA in the United States under the care of a rheumatologist.^{1,6} Response rates at six months were determined for established outcomes related to improvements or achievement of low levels of disease activity in patient-reported pain (0-100 mm visual analog scale [VAS]), patient global assessment of arthritis and psoriasis (patient global assessment [PtGA]; 0-100 mm VAS), and HAQ-DI (0-3).¹ On average, patients had longstanding, treatment-resistant, active PsA.¹

About DISCOVER-1 (NCT03162796)

DISCOVER-1 was a Phase 3, multicenter, randomized, double-blind study evaluating the efficacy and safety of TREMFYA administered by subcutaneous injection in participants with active PsA, including those previously treated with one to two TNFis.⁷ DISCOVER-1 evaluated 381 participants who were randomized and treated.⁸ The study consisted of a screening phase of up to six weeks, a blinded treatment of 52 weeks that included a placebo-controlled period from week 0 to week 24, and a blinded active treatment period from week 24 to week 52.⁷ It also included a safety follow-up phase through week 60 (i.e., approximately 12 weeks from the last administration of the study agent at week 48).⁷ Efficacy, safety,

pharmacokinetic, immunogenicity and biomarker evaluations were performed in the study on a defined schedule.⁷ The primary endpoint was response of ACR20 at week 24.⁷

About DISCOVER-2 (NCT03158285)

DISCOVER-2 was a Phase 3, multicenter, randomized, double-blind study evaluating the efficacy and safety of TREMFYA administered by subcutaneous injection in biologic-naïve patients with active PsA.⁹ DISCOVER-2 evaluated 739 participants who were randomized and treated.¹⁰ The study consisted of a screening phase of up to six weeks, a blinded treatment phase of approximately 100 weeks that included a placebo-controlled period from week 0 to week 24 and a blinded active treatment period from week 24 to week 100.⁹ It also included a safety follow-up phase through week 112 (i.e., approximately 12 weeks after the last administration of study agent at week 100).⁹ Clinical efficacy, radiographic efficacy, health economics, safety, pharmacokinetics, immunogenicity, biomarker and pharmacogenomics evaluations were performed in the study on a defined schedule.⁹ The primary endpoint was response of ACR20 at week 24.⁹

About COSMOS (NCT03796858)

COSMOS was a Phase 3b, multicenter, randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of TREMFYA, administered by subcutaneous injection, in 285 adult patients with active PsA and inadequate response to TNFi therapy.¹¹ The primary endpoint was response of ACR20 at week 24.¹¹ The primary endpoint results were announced in June 2021.¹² Participants were randomized (2:1) to receive TREMFYA 100 mg at weeks 0, 4 and every eight weeks thereafter, or placebo.¹¹ The study included two periods: a 24-week double-blind, placebo-controlled period for the primary analysis of the efficacy and safety of TREMFYA compared with placebo and a 32-week active-treatment and safety follow-up period for additional analysis of the efficacy and safety of TREMFYA.¹¹ Safety was monitored throughout the study to week 56.^{11,13} As such, the COSMOS safety results were consistent with the known safety profile of TREMFYA in bio-naïve patients with PsA.^{8,10,14,15,16}

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 (a type of inflammation in the fingers and toes that can result in a swollen, sausage-like appearance), axial disease and the skin lesions associated with plaque psoriasis (PsO).^{17,18,19} 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 age.²⁰ 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.²¹ In patients with PsA, comorbidities such as obesity, cardiovascular disease, anxiety and depression are often present.²² Studies show up to 30 percent of people with plaque PsO also develop PsA.²⁰ 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.²³

About TREMFYA® (guselkumab)

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.^{3,24} IL-23 is an important driver of the pathogenesis of inflammatory diseases such as moderate to severe plaque PsO and active PsA.³ 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 injections or pills (systemic therapy) or phototherapy (treatment using ultraviolet light), and for the treatment of adult patients with active PsA.^{3,25,26} 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 conventional synthetic disease-modifying antirheumatic drug therapy.³

In vitro studies have demonstrated that TREMFYA binds to CD64 expressed on the surface of IL-23 producing cells, and captures IL-23 produced from these same cells when bound to CD64 in an inflammatory monocyte model.^{27,28,29,30} The clinical significance of this finding is not known.³¹

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, or call 1-800-FDA-1088.

cp-82626v3

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 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 & Retina; Immunology; Infectious Diseases & Vaccines; Neuroscience; Oncology; and Pulmonary Hypertension.

Learn more at www.janssen.com. Follow us at www.twitter.com/JanssenUS.

Janssen Pharmaceuticals, Inc.; Janssen Research & Development, LLC; Janssen Biotech, Inc.; and Janssen Scientific Affairs, LLC are Johnson & Johnson companies.

Cautions Concerning Forward-Looking Statements

This press release contains “forward-looking statements” as defined in the Private Securities Litigation Reform Act of 1995 regarding TREMFYA. 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 Pharmaceuticals, Inc., Janssen Research & Development, LLC, Janssen Biotech, Inc., Janssen Scientific Affairs, LLC 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 1, 2023, including in the sections captioned “Cautionary Note Regarding Forward-Looking Statements” and “Item 1A. Risk Factors,” and in Johnson & Johnson’s subsequent Quarterly Reports on Form 10-Q and other filings with the Securities and Exchange Commission. Copies of these filings are available online at www.sec.gov, www.jnj.com or on request from Johnson & Johnson. None of Janssen Pharmaceuticals, Inc., Janssen Research & Development, LLC, Janssen Biotech, Inc., Janssen Scientific Affairs, LLC nor Johnson & Johnson undertakes to update any forward-looking statement as a result of new information or future events or developments.

References

- ¹ Mease PJ, *et al.* Improvements in Patient-Reported Outcomes Through 6 Months of Guselkumab Treatment in Patients With Active Psoriatic Arthritis: Real-World Data From the CorEvitas Psoriatic Arthritis/Spondyloarthritis (PsA/SpA) Registry. Presented at ACR Convergence 2023, Nov. 10-15.
- ² Selmi C, *et al.* Longitudinal Evaluation of the Novel Psoriatic Arthritis 5-Thermometer Scale (PsA-5Ts) Domains During Treatment with Guselkumab: Pooled Analysis of Three Phase 3, Randomized, Double-blind, Placebo-Controlled Studies. Presented at ACR Convergence 2023, Nov. 10-15.
- ³ Food and Drug Administration. TREMFYA® Prescribing Information. Horsham, PA. 2017. Available at: <https://www.janssenlabels.com/package-insert/product-monograph/prescribing-information/TREMFYA-pi.pdf>. Accessed October 2023.
- ⁴ Go-ahead for first anti-IL-23 mAb to treat psoriasis. *Nature Biotechnology* volume 35, page806 (2017). Available at: <https://www.nature.com/articles/nbt0917-806>. Accessed October 2023.
- ⁵ Bruce, B., & Fries, J. F. (2003). The Stanford Health Assessment Questionnaire: Dimensions and Practical Applications. *Health and Quality of Life Outcomes*. 2003;1(1), 20.
- ⁶ CorEvitas Psoriatic Arthritis / Spondyloarthritis Registry. Available at: <https://www.corevitas.com/registry/psa-spa/>. Accessed October 2023.
- ⁷ ClinicalTrials.gov. 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) (DISCOVER 1). Identifier: NCT03162796. Available at: <https://clinicaltrials.gov/ct2/show/NCT03162796>. Accessed October 2023.
- ⁸ Ritchlin, C. T., *et al.* 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 TNFa Inhibitor-Experienced. *RMD Open* 2021;7:e0001457. Available at: <https://pubmed.ncbi.nlm.nih.gov/33568556/>. Accessed October 2023.
- ⁹ ClinicalTrials.gov. A Study Evaluating the Efficacy and Safety of Guselkumab Administered Subcutaneously in Participants With Active Psoriatic Arthritis. Identifier: NCT03158285. Available at: <https://clinicaltrials.gov/ct2/show/NCT03158285>. Accessed October 2023.
- ¹⁰ McInnes, I. B., *et al.* Long-Term Efficacy and Safety of Guselkumab, a Monoclonal Antibody Specific to the p19 Subunit of Interleukin-23, Through Two Years: Results From a Phase III, Randomized, Double-Blind, Placebo-Controlled Study Conducted in Biologic-Naïve Patients With Active Psoriatic Arthritis. *Arthritis Rheumatol* 2022;74(3):275-485. Available at: <https://pubmed.ncbi.nlm.nih.gov/34719872/>. Accessed October 2023.
- ¹¹ Clinicaltrials.gov. A Study of Guselkumab in Participants with Active Psoriatic Arthritis and an Inadequate Response to Anti-Tumor Necrosis Factor Alpha (Anti-TNF Alpha) Therapy (COSMOS). Identifier: NCT03796858. Available at: <https://clinicaltrials.gov/ct2/show/NCT03796858>. Accessed October 2023.
- ¹² Johnson & Johnson. Press Release. New Phase 3b Psoriatic Arthritis (PsA) Data Show First-in-Class TREMFYA® (guselkumab) Achieved Robust Joint Symptom Improvement and Complete Skin Clearance in Patients with Inadequate Response to Tumor Necrosis Factor Inhibition (TNFi-IR). Available at: <https://www.jnj.com/new-phase-3b-psoriatic-arthritis-psa-data-show-first-in-class-tremfya-guselkumab-achieved-robust-joint-symptom-improvement-and-complete-skin-clearance-in-patients-with-inadequate-response-to-tumor-necrosis-factor-inhibition-tnfi-ir>. Accessed October 2023.
- ¹³ Coates, L., *et al.* Efficacy and safety of guselkumab in patients with active psoriatic arthritis who are inadequate responders to tumour necrosis factor inhibitors: results through one year of a phase IIIb, randomized, controlled study (COSMOS). *Ann Rheum Dis* 2021;0:1-11. Available at: <https://pubmed.ncbi.nlm.nih.gov/34819273/>. Accessed October 2023.
- ¹⁴ Ritchlin, C. T., *et al.* Multidomain Efficacy and Safety of Guselkumab Through 1 Year in Patients With Active Psoriatic Arthritis With and Without Prior Tumor Necrosis Factor Inhibitor Experience: Analysis of the Phase 3, Randomized, Placebo-Controlled DISCOVER-1 Study. *ACR Open Rheumatology* 2023;5(3):149-164. Available at: <https://ncbi.nlm.nih.gov/pmc/articles/PMC10010489/>. Accessed October 2023.
- ¹⁵ Deodhar, A., *et al.* Guselkumab in Patients with Active Psoriatic Arthritis who were Biologic-Naïve or had Previously Received TNFa Inhibitor Treatment (DISCOVER-1): A Double-Blind, Randomised, Placebo-Controlled Phase 3 Trial. *Lancet* 2020;4(395):1115-1125. Available at: <https://pubmed.ncbi.nlm.nih.gov/32178765/>. Accessed October 2023.
- ¹⁶ Mease, P., *et al.* Guselkumab in Biologic-Naïve Patients with Active Psoriatic Arthritis (DISCOVER-2): A Double-Blind, Randomised, Placebo-Controlled Phase 3 Trial. *Lancet* 2020;4(395):1126-1136. Available at: <https://pubmed.ncbi.nlm.nih.gov/32178766/>. Accessed October 2023.

-
- ¹⁷ Donvito T., CreakyJoints: What Is Dactylitis? The 'Sausage Finger' Swelling You Should Know About. Available at: <https://creakyjoints.org/symptoms/what-is-dactylitis/>. Accessed October 2023.
- ¹⁸ Belasco J., Wei N. Psoriatic Arthritis: What is Happening at the Joint? *Rheumatol Ther.* 2019 Sep;6(3):305-315. Available at: <https://pubmed.ncbi.nlm.nih.gov/31102105/>. Accessed October 2023.
- ¹⁹ Gower, T. Enthesitis and PsA. Arthritis Foundation. Available at: <https://www.arthritis.org/health-wellness/about-arthritis/related-conditions/physical-effects/enthesitis-and-psa>. Accessed October 2023.
- ²⁰ National Psoriasis Foundation. About Psoriatic Arthritis. Available at: <https://www.psoriasis.org/about-psoriatic-arthritis/>. Accessed October 2023.
- ²¹ Husted J.A., *et al.* Occurrence and correlates of fatigue in psoriatic arthritis. *Ann Rheum Dis*, 2008;68(10), 1553–1558. Available at: <https://doi.org/10.1136/ard.2008.098202>. Accessed October 2023.
- ²² Haddad A., Zisman D. Comorbidities in Patients with Psoriatic Arthritis. *Rambam Maimonides Med J* 2017 Jan 30;8(1):e0004. Available at: <https://doi.org/10.5041/RMMJ.10279>. Accessed October 2023.
- ²³ Cassell S., Kavanaugh A. Psoriatic arthritis: pathogenesis and novel immunomodulatory approaches to treatment. *J Immune Based Ther Vaccines* 2005 Sep 2;3:6. Available at: <https://doi.org/10.1186/1476-8518-3-6>. Accessed October 2023.
- ²⁴ European Medicines Agency. TREMFYA Summary of Product Characteristics. Last Updated July 2022. Available at: https://www.ema.europa.eu/en/documents/product-information/tremfya-epar-product-information_en.pdf. Accessed October 2023.
- ²⁵ Japan Pharmaceuticals and Medical Devices Agency. Tremfya Report on the Deliberation Results. Available at: <https://www.pmda.go.jp/files/000234741.pdf>. Accessed October 2023.
- ²⁶ The Canadian Agency for Drugs & Technologies in Health. TREMFYA Prescribing Information. Available at: https://pdf.hres.ca/dpd_pm/00042101.PDF. Accessed October 2023.
- ²⁷ Mehta H, *et al.* Differential Changes in Inflammatory Mononuclear Phagocyte and T-Cell Profiles within Psoriatic Skin during Treatment with Guselkumab vs. Secukinumab. *J Invest Dermatol* 2021;141(7):1707-1718. Available at: <https://pubmed.ncbi.nlm.nih.gov/33524368/>. Accessed October 2023.
- ²⁸ Wang Y, *et al.* Monocytes/Macrophages play a pathogenic role in IL-23 mediated psoriasis-like skin inflammation. *Sci Rep.* 2019;9(1):5310. Available at: <https://pubmed.ncbi.nlm.nih.gov/30926837/>. Accessed October 2023.
- ²⁹ Matt P, *et al.* Up-regulation of CD64-expressing monocytes with impaired FcγR function reflects disease activity in polyarticular psoriatic arthritis. *Scand J Rheumatol* 2015; 44(6):464-473. Available at: <https://pubmed.ncbi.nlm.nih.gov/26084203/>. Accessed October 2023.
- ³⁰ Atreya R, Abreu MT, Krueger JG, *et al.* P504 Guselkumab, an IL-23p19 subunit-specific monoclonal antibody, binds CD64+ myeloid cells and potently neutralises IL-23 produced from the same cells. *Journal of Crohn's and Colitis*, Volume 17, Issue Supplement_1, February 2023, Pages i634–i635, <https://doi.org/10.1093/ecco-jcc/jjac190.0634>.
- ³¹ McGonagle D, *et al.* Guselkumab, an IL-23p19 Subunit-Specific Monoclonal Antibody, Binds CD64+ Myeloid Cells and Potently Neutralises IL-23 Produced From the Same Cells. Presented at EULAR 2023, May 31-June 3.