

# EADV 2023



## Review of the European Academy of Dermatology and Venereology (EADV) Congress 2023

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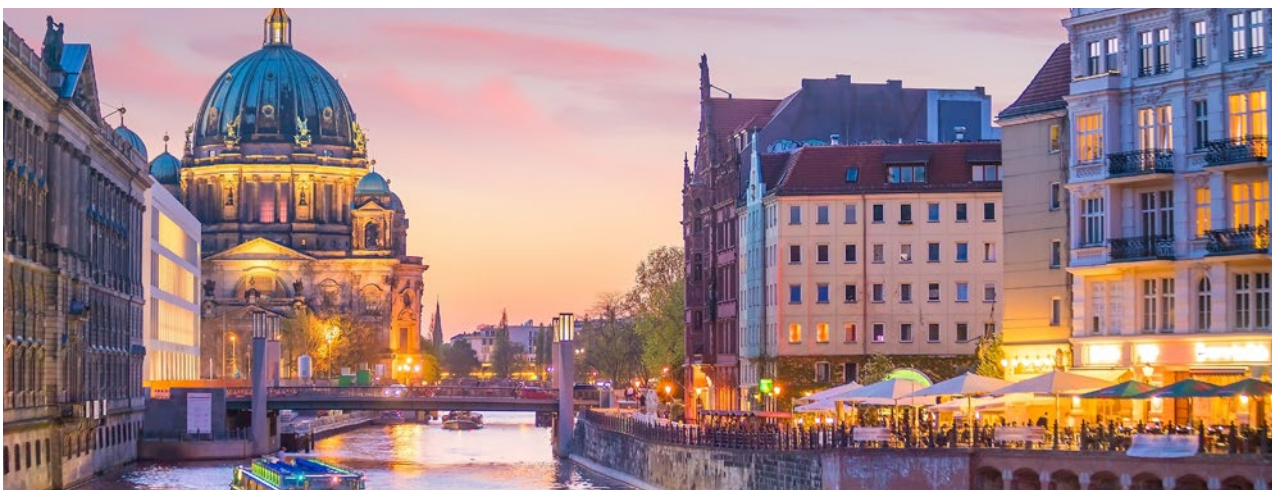
BERLIN, Germany, was the setting for the 2023 European Academy of Dermatology and Venereology (EADV) Congress. With over 15,500 attendees, 600 speakers, and 180 sessions, the congress provided an incredible opportunity for the discussion of the latest technologies, treatments, and products in the dermatology and venereology field. EADV President, Martin Röcken, Eberhard Karl University of Tübingen, Germany, had the “tremendous pleasure” of opening this year’s congress, and he extended his sincere gratitude to the speakers and organising committee for providing a fantastic environment for networking.

Julia Welzel, University Hospital Augsburg, Germany, and President of the German Dermatological Society (DDG), warmly welcomed attendees to the congress. She outlined that in Germany, there are 6,300 active dermatologists working in 108 clinics. Of these, over 4,000 are DDG members, responsible for representing dermatology in political matters of healthcare, research, and teaching. Welzel stated that the beautiful field of dermatology faces great challenges; the incredible breadth of the field must be maintained, and dermatologists are compelled to inspire the brightest young talent through excellent teaching. Both are challenges the DDG actively tackles through supporting young colleagues, and promoting digital dermatology.

Welzel also encouraged participants to explore Berlin’s rich history. Specifically, the Tränenpalast, or Palace of Tears, which offers insight into how both sides of Berlin were able to establish contact under extremely challenging conditions. Berlin Underworld, a series of underground bunkers from the Cold War, and the Brandenburg Gate offer further historical context, with the hope that attendees can relate to Kennedy’s famous words “Ich bin ein Berliner” after visiting these significant landmarks.

The rest of the opening ceremony centred around climate change, its widespread impacts on humanity, and, more specifically, on healthcare. Bernd Scherer, Director of the House of World Cultures, Berlin, Germany, delivered a fascinating presentation entitled ‘The Anthropocene, A New Earth Epoch’. He began by highlighting the exponential increase in global temperatures in the last 50 years, the melting of ice in the Arctic, the death of coral reefs, and deforestation. Together, these factors result in mass migration. This poses a large question regarding the cause of climate change, with scientists analysing both socioeconomic and earth system trends indicative of a new Earth epoch. When considering each of these factors individually, for example, world population, primary energy use, water use, methane levels, surface temperature, and tropical forest loss,





each graph follows the same pattern: a period of slight increase, followed by exponential growth. Each of these increases were induced by humans, and ultimately resulted in the generation of a new epoch.

Technology and capitalist production have allowed humans to use more energy in the last 7 years than the previous 11,000 years. In addition to this, humans have single handily produced a 'Technosphere', weighing more than all of the biomass on Earth. It is, therefore, clear to see how humans have transformed the entire planetary system. Scherer concluded by highlighting the statistic that in 1970, the resources on planet Earth were sufficient for its population. In 2004, population growth and increasing consumption meant that 1.50 planets were required to provide sufficient resources, which rose again to 1.75 in 2019. We are, therefore, consuming this planet at an alarming rate, to the detriment of all other species.

The final talk, delivered by Diarmid Campbell-Lendrum, World Health Organization (WHO), Geneva, Switzerland, specifically focused on climate change in the context of healthcare. Re-emphasising the reality of climate change, and the exponential increase in temperature, disparities in the impact globally were attributed to variations in vulnerability. Unlike viruses, such as COVID-19, climate change cannot be isolated and controlled by public health measures; instead, it affects every aspect of healthcare. More recently, the impact on mental health, particularly in young people, has been a large focus for the WHO, with 45% of young people reporting that climate change has a

negative impact on their daily functioning. Campbell-Lendrum recently co-authored a paper called 'Climate change and health: three grand challenges', which summarised a diverse range of connections between climate change and health. The three grand challenges refer to strengthening the climate resilience and environmental stability of health systems and facilities; addressing the wide range of health impacts of climate change; and promoting the health co-benefits of climate change mitigation in other sectors. If tackled correctly, Campbell-Lendrum believes this could save "millions of lives." Solutions to climate change exist across all sectors, with the largest carbon reduction possible through renewable energy, followed by agriculture. Many of these methods are already cost-saving. However, with the inclusion of global health gains as a factor, several of these solutions become more compelling. Campbell-Lendrum concluded by encouraging healthcare professionals to become more actively involved in the conversation surrounding climate change, specifically supporting movements such as the Fossil Fuel Non-Proliferation Treaty.

EMJ had the pleasure of participating in this congress, and looks forward to next year's congress, held in Amsterdam, the Netherlands. The current issue of *EMJ Dermatology* offers summaries of the most compelling research presented during EADV 2023, alongside feature articles delving into hair disorders and atopic dermatitis. Engaging interviews with field experts are also included, featuring five EADV board members. We invite you to continue reading for more in-depth insights from this year's congress. ●

## New Study Links Microbial Dysbiosis and Darier's Disease

FOR the first time, cutaneous microbiome dysbiosis and its consequences in Darier's Disease (DD) has been investigated in a study presented at the EADV Congress 2023 in Berlin, Germany. DD, also known as keratosis follicularis, is a rare genodermatosis, caused by a mutation in the *ATPA2* gene, and resulting in disrupted calcium signalling and loss of keratinocyte adhesion. DD is characterised by recurrent episodes of inflammation and skin infections that are associated with malodour. This led Amar and colleagues at the Technical University of Munich, Germany, to investigate whether microbial dysbiosis could play a role in the characterisation of DD.

The study collected 1,115 swabs from 14 patients, as well as healthy volunteers who they had been matched with. Swabs were then analysed using 16S ribotyping. Microbiome changes were assessed in relation to DD malodour.

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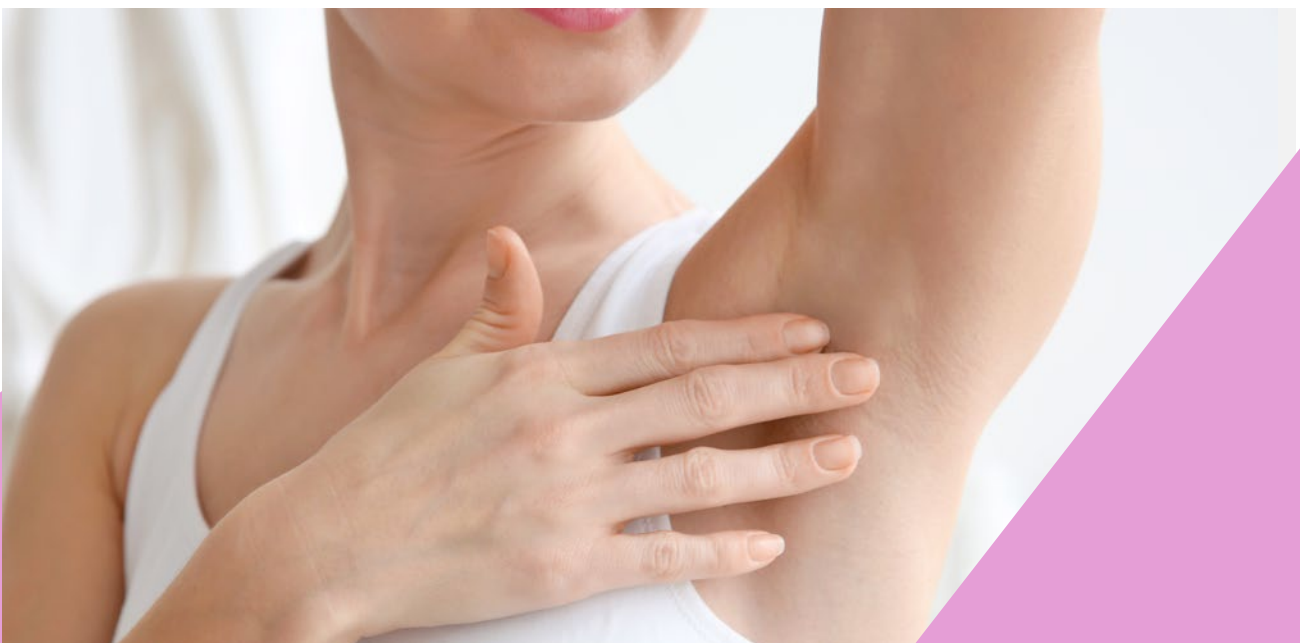
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Lastly, inflammation and dysbiosis signatures were explored in DD skin transcriptomes.

The obtained results revealed a disease-specific microbiome that was characterised by a loss of microbial diversity and potentially beneficial commensals.

DD lesions were dominated by inflammation associated microbes, including *Staphylococcus aureus* and *Staphylococcus warneri*, that correlated strongly with disease severity. Dysbiosis was also characterised by expansion of taxa of the *Corynebacteria*, *Staphylococci*, and *Streptococci* genera. These genera also had strong associations with intensity of malodour. Analysis of transcriptomes indicated upregulation of epidermal repair, inflammatory, and immune defence pathways, suggesting an immune response to the dysbiotic microbiome. A skin barrier impairment was indicated by downregulation of barrier genes such as *CLDN4* and *CDH4*.

Findings of the study outline further potential biomarkers and intervention targets, as well as highlighting the role of cutaneous dysbiosis in DD inflammation. ●





## Non-melanoma Skin Cancer Kills More People than Melanoma

FINDINGS from a new study presented at the EADV Congress 2023 in Berlin, Germany, on 11<sup>th</sup> October, show that non-melanoma skin cancer (NMSC) leads to a higher number of deaths globally than melanoma, a more serious form of skin cancer. Researchers added that NMSC is underreported, and that the impact of the disease may therefore be higher than previously estimated.

Thierry Passeron, University Hospital of Nice, France, and colleagues carried out research using the World Health Organization (WHO) International Agency for Research on Cancer (IARC) to examine the overall burden of skin cancers. They found that, although NMSC is less likely to result in death than melanoma skin cancer, it is far more prevalent. NMSC accounted for 78% of all skin cancer cases (1.2 million reported cases) in 2020, leading to over 63,700 fatalities, compared with the 57,000 deaths caused by melanoma (324,635 reported cases) in the same year. The researchers added that, “as alarming as these figures are, they may, in fact, be underestimated. NMSC is often underreported in cancer registries, making it challenging to understand the true burden.”

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Additionally, the team was able to identify the specific population groups who were more at risk of developing skin cancers, including people who work outside, organ transplant recipients, and those with the hereditary skin condition xeroderma pigmentosum. A higher incidence of skin cancer was found in fair-skinned and elderly populations in the USA, Germany, UK, France, Australia, and Italy; however, countries with a high proportion of dark phenotypes were not immune to skin cancer-related fatality either.

The authors concluded that spreading awareness that melanoma is not the only potentially fatal skin cancer is vital, and that effective strategies are needed to reduce the fatalities associated with all skin cancers, tailored to at-risk populations. They add that it is important to note that those with melanin-rich skin are also at risk of dying from NMSC, and more interventions are needed to stop progression of the disease as early as possible. ●

## The Burden of Female Adult Acne

ACNE, especially in adult females, significantly impacts the way individuals are perceived, according to data presented at the EADV Congress 2023. The last decade has seen a worldwide increase in acne among females. This condition has been associated with serious consequences, such as low self-esteem, psychological impact, social isolation, and depression, due to the perception of pejorative physical characteristics. Marek Jankowski, Nicolaus Copernicus University, Toruń, Poland, assessed how different anatomical variants of acne affected natural gaze patterns and social perception.

Eye movements of 245 participants were tracked while they viewed images of females with neutral and emotional faces with clear skin, and clinically relevant anatomical variants of acne. Participants had to rate for acne-related visual disturbance and valence intensity. A further 205 participants were asked to rate personality traits of the individuals through an online survey.

Results showed that faces with acne were perceived as significantly less attractive (difference: 1.1593; 95% confidence interval [CI]: 1.0191–1.2995), less trustworthy (difference: 0.3549; 95% CI: 0.2260–0.4838), less confident (difference: 0.9573; 95% CI: 0.7853–1.1293), less successful (difference: 0.6220; 95% CI: 0.4994–0.7445), and less dominant (difference: 0.9086; 95% CI: 0.7495–1.0675). The team noted that female acne around the U-zone, including the jawline, mouth, and chin, was considered the most visually disturbing, and received the lowest attractiveness score. Participants also rated happy female faces with acne as less happy than clear-skin faces.

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Lead author Jankowski stated that he has consistently seen more social challenges in adult female acne compared with adolescent acne, which was confirmed by the study.

Surprisingly, generalised acne, covering a larger area with more lesions, was associated with higher positive ratings than acne in the U-zone.

"Treatment needs to focus on improving the quality of life of patients, not just reducing the surface area impacted by the acne. Unfortunately, this is not currently a goal when treating acne, with therapeutic guidelines still advocating for certain treatment modalities based on the number of lesions, irrespective of their location. Unsurprisingly, acne severity scores do not correlate with quality of life scores in patients with acne," said Jankowski. ●



## Improvements in Skin Cancer Detection Using Artificial Intelligence

NEW research presented at the EADV Congress 2023, in Berlin, Germany, on 12<sup>th</sup> October, indicates that skin cancer detection by artificial intelligence (AI) has improved rapidly. Researchers Kashini Andrew and Irshad Zaki, University Hospitals, Birmingham NHS Foundation Trust, UK, found that latest AI software can reach 100% detection rate for melanoma.

The study involved 22,356 patients with suspected skin cancers over the course of 2 and a half years. The third version of the AI was used to assess the patients for skin cancer. This new software used was able to identify 59 out of 59 (100%) cases of melanoma, the most serious form of skin cancer, as well as 189 out of 190 (99.5%) of all skin cancers, and 541 out of 585 (92.5%) of pre-cancerous lesions. This marks a significant improvement from the original version of the software, tested in 2021, which detected only 85.9% of melanoma, 83.8% of all skin cancers, and 54.1% of pre-cancerous lesions.

Andrew and Zaki noted that their findings are encouraging for the future of cancer detection using AI, commenting:

"The latest version of the software has saved over 1,000 face-to-face consultations in the secondary care setting between April 2022 and January 2023, freeing up more time for patients that need urgent attention". They add, however, that AI should not be used as a standalone tool for detection without the support of a consultant dermatologist. This need to have appropriate clinical oversight of the AI was demonstrated when one case of base cell carcinoma was missed, out of 190, and later picked up on by a dermatologist 'safety net'.

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"Further research with appropriate clinical oversight may allow the deployment of AI as a triage tool," added Andrew. "However, any pathway must demonstrate cost-effectiveness, and AI is currently not a standalone tool in dermatology. Our data shows the great promise of AI in future provision of healthcare." ●



## Skin Diseases Linked to Sleep Disturbances

NEARLY half of patients with skin diseases experience sleep disturbances (42%) and reduced productivity at work (49%), suggests data from the ALL PROJECT, presented at the EADV Congress 2023. These disturbances had broad implications on patients' quality of life.

"Our study is the first to uncover the profound impact of sleep disturbances on the physical functioning of patients with skin disease, and these findings underscore the critical need for early detection and effective management of sleep disturbances," stated lead author Charles Taieb, European Market Maintenance Assessment (EMMA), Fontenay-sous-Bois, France.

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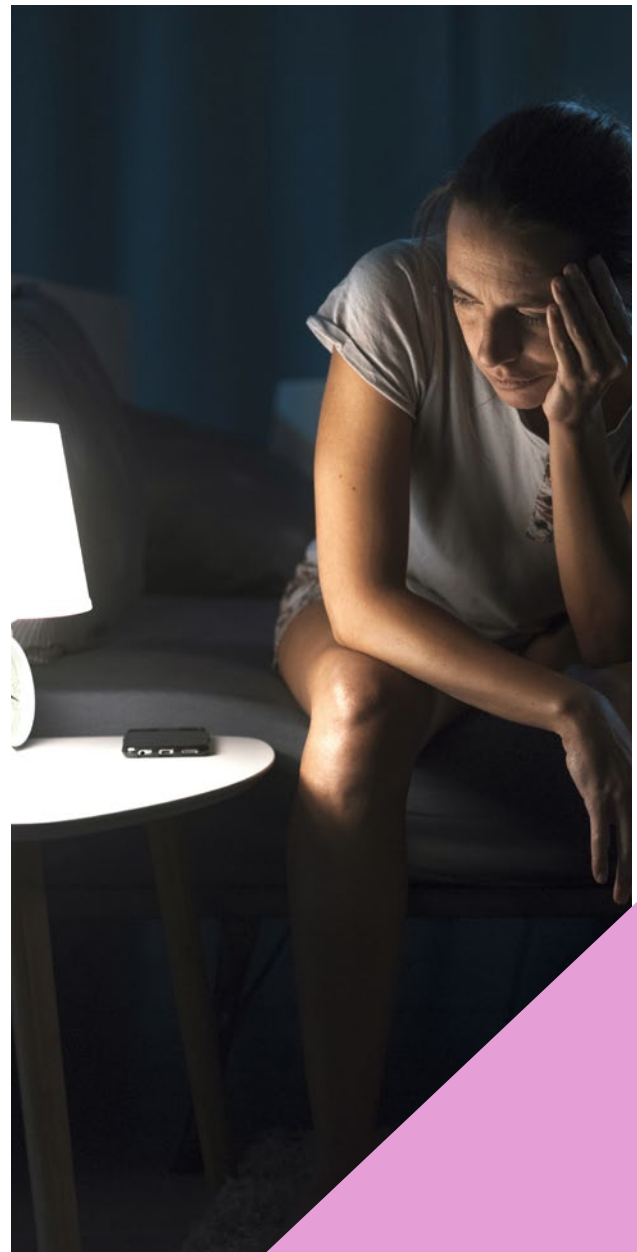
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Sleep disturbances were mainly caused by burning sensation or tingling (17%) and itching (60%). Patients also reported experiencing a feeling of fatigue as soon as they woke up more frequently than patients who do not have a skin disease (81% versus 64%), as well as tingling sensations in the eyes (58% versus 41%), drowsiness during the day (83% versus 71%), and repeated yawning (72% versus 58%). The authors encouraged healthcare providers to ask patients with skin conditions about sleep disturbance during examinations in order to better understand how skin diseases impact their lives.

The ALL PROJECT further analysed the impact of hidradenitis suppurativa, a condition that causes painful skin abscesses and scarring, and is difficult to manage. Data showed that 77% of patients with this condition feel stigmatised due to their disease, and 58% have experienced rejection from others. A further 57% reported others avoided touching them or approaching them (54%). These experiences heavily impacted patients' self-perception, relationships, and daily lives, leading them to avoid taking selfies and

control their appearance when passing in front of a mirror.

Author Bruno Halioua, a dermatologist in Paris, France stated: "The study highlights the need for immediate action, including public education efforts to increase understanding and improved access to tailored healthcare and support services for patients with hidradenitis suppurativa." They hope the results will encourage a more inclusive society, improving treatment adherence and reducing patient burden. ●







## Prolonged Use of Ruxolitinib Cream in Vitiligo Treatment

RESEARCH regarding the efficacy of the prolonged use of ruxolitinib cream for the treatment of vitiligo in patients with limited, or no, initial response at the 6-month marker has been presented at the EADV Congress 2023. Vitiligo, which is characterised by the destruction of melanocyte cells, is a chronic autoimmune disease that leads to the depigmentation of the skin. To date, limited studies have examined the efficacy of long-term topical treatment in the disease.

Albert Wolkerstorfer, Amsterdam University Medical Center (UMC), the Netherlands, and colleagues from Canada, Germany, the USA, Poland, and France, led two randomised, double-blinded, and vehicle-controlled Phase III studies in a cohort of adults and adolescents aged over 12 years, with non-segmental vitiligo. Patients were randomised 2:1 to apply 1.5% ruxolitinib cream twice-daily, or vehicle for a 24-week period. All patients were then able to apply 1.5% ruxolitinib cream up to Week 52 of the study.

The TRuE-V1 and TRuE-V2 studies demonstrated that the application of ruxolitinib cream resulted in improvements in the repigmentation of skin, which were statistically superior, and well tolerated at Week 24. Between the open-label period (Weeks 24–52) and long-term extension period of TRuE-V (Weeks 52–104), further

improvements in the repigmentation of facial and body skin were observed in patients who continued ruxolitinib treatment, according to Vitiligo Area Scoring Index (VASI) responses. Those patients who did not achieve a  $\geq 90\%$  improvement in their VASI scores by Week 52 continued to apply the cream for a further 52 weeks.

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**"The application of ruxolitinib cream resulted in improvements in the repigmentation of skin."**

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In the group who observed no facial repigmentation at Week 24, improvements in VASI scores at Weeks 52 and 104 were observed in 49 out of 63 (77.8%) and 34 out of 35 (97.1%), respectively. In both groups, 39 out of 71 patients achieved  $\geq 75\%$  improvement from baseline in VASI score at Week 104.

The research team reports that both of these studies highlight the significance of prolonged treatment for patients with vitiligo, even when no, or minimal, repigmentation has been reached following 6 months of treatment. ●

## IL-23 p19 Inhibitors Versus Other Biologics in Psoriasis

IL-23 p19 inhibitors have the highest drug survival, according to research presented at the EADV Congress 2023. Zenas Yiu, Division of Musculoskeletal and Dermatological Sciences, University of Manchester, UK, and colleagues compared the drug survival of guselkumab and risankizumab, two IL-23 p19 inhibitors, with other biologics for psoriasis.

Using the data collected from the British Association of Dermatologists Biologic and Immunomodulators Register (BADBIR) from November 2007–June 2023, the researchers measured discontinuation due to adverse effects or ineffectiveness after exposure to specific biologics. The study included 11,877 patients with 19,034 treatment courses, with a median follow-up of 2.3 years. A total of 6,815 patients were exposed to adalimumab, 5,639 to ustekinumab, 3,051 to secukinumab, 1,072 to ixekizumab, and 367 to brodalumab, while 1,258 were exposed to guselkumab and 832 to risankizumab.

Results show that patients treated with the IL-23 p19 inhibitors had the highest drug

survival, while adalimumab had a lower survival compared for effectiveness with ustekinumab. While secukinumab, ixekizumab, and brodalumab had a similar drug survival earlier when compared with ustekinumab, they had lower drug survival during follow-up.

At 1 year, the unadjusted survival functions for safety were 0.91 for adalimumab, ixekizumab, and brodalumab; 0.94 for ustekinumab; and 0.93 for secukinumab. After the same amount of time, these safety survival functions were 0.95 for guselkumab and 0.97 for risankizumab.

This study included the largest cohort of patients with psoriasis on IL-23 p19 inhibitors. It shows that guselkumab and risankizumab had the highest drug survival in regard to safety and effectiveness, and their drug survival was similar. The researchers believe that dermatologists should take these findings into consideration when treating patients with psoriasis who value treatment effect longevity, and who are due to start biologic therapy. ●

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