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Treatment satisfaction in patients with moderate to severe psoriasis by drug class and dose frequency: Results from a United States web-based survey

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Background: Increasing treatment satisfaction may improve treatment adherence and long-term outcomes. Results are presented from a survey of patients with moderate to severe psoriasis focused on satisfaction with their current biologic therapy.

Methods: Data are from a United States web-based survey of patients with moderate to severe psoriasis (self-assessed body surface area involvement >3%) currently taking a biologic therapy. Satisfaction with treatment attributes were rated on a 0-10 scale: 0 represented "does not meet my needs at all" to 10, "completely meets my needs." Proportions of patients reporting scores ≥7 ("satisfaction") for attributes are presented. A multivariate analysis evaluated treatment attributes' contribution to overall treatment satisfaction.

Results: Of 248 survey respondents, most (68.1%) were on tumor necrosis factor (TNF) inhibitors; smaller proportions were on anti−IL-17 (19.4%), anti−IL-12 (8.9%), and anti−IL-23 (3.6%) therapies. More patients on anti−IL-17 therapies reported overall treatment satisfaction (79.2%) than other classes (54.5%-71.6%), with largest differences in effectiveness (83.3% vs 66.7%-69.2%), convenience (81.3% vs 59.1%-68.6%), and lasting effect (79.2% vs 55.6%-64.5%). More patients on therapies administered every 4 weeks reported satisfaction with convenient dosing (78.9%) compared with patients receiving therapies administered every 8 weeks or longer (60.0%). Satisfaction with effectiveness and lasting effect had the highest correlation with overall satisfaction (0.65 and 0.61, respectively), followed by rapid onset (0.51) and convenient dosing (0.50).

Conclusions: Our exploratory data suggest patients value efficacy, lasting effect, rapid onset, and convenient dosing. Each patient's individual treatment needs and goals should be evaluated and matched to the most appropriate therapy.

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Cost per cumulative clinical benefit of biologic therapies for patients with plaque psoriasis

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Background: Here, we compare cumulative benefits and cost per cumulative benefit (CPCB) for patients with moderate to severe plaque psoriasis receiving ixekizumab, adalimumab, secukinumab, guselkumab, risankizumab, and ustekinumab using area under the curve (AUC) based on a network meta-analysis (NMA).

Methods: Cumulative benefits in PASI90 and PASI100 responses (from a systematic literature review) were measured using AUC with the trapezoidal method. NMA fixed and random effects models in both Bayesian and Frequentist frameworks were used to model percent AUC of PASI response over maximum AUC through week 16 (%Max_AUCW16). Normal independent Bayesian models were assessed for fit and convergence. CPCB was estimated by multiplying number of doses (per FDA label) by wholesale acquisition costs for 16 weeks of treatment, divided by% Max_AUCW16. Cost analyses were conducted excluding or including doses administered at week 16.

Results: Ixekizumab showed greater mean%Max_AUCW16 in PASI90 and PASI100 (46.7% and 22.2%, respectively) than secukinumab (39.0% and 18.5%), risankizumab (37.1% and 16.8%), guselkumab (33.2% and 12.1%), adalimumab (23.9% and 7.4%), and ustekinumab (22.7% and 8.9%). For PASI90, CPCB including [excluding] week 16 dose was $98,007 [$98,007] (guselkumab), $103,543 [$92,038] (ixekizumab), $106,207 [$92,931] (secukinumab), $108,109 [$108,109] (adalimumab), $119,288 [$79,526] (risankizumab), and $183,550 [$122,366] (ustekinumab). For PASI100, CPCB including [excluding] week 16 dose was $218,005 [$193,782] (ixekizumab), $223,953 [$195,959] (secukinumab), $263,111 [$175,407] (risankizumab), $268,643 [$268,643] (guselkumab), $350,217 [$350,217] (adalimumab), and $470,196 [$313,464] (ustekinumab).

Conclusions: The greatest cumulative clinical benefit was observed with ixekizumab. Ixekizumab had the lowest or among the lowest CPCB of biologics studied, depending on method of cost calculations employed.

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Epidemiologic evidence for a negative association between air pollution and basal cell carcinoma in elderly Caucasian women

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Background: Basal cell carcinoma (BCC) is the most common human skin cancer. The risk to develop BCC is strongly modified by environmental factors. It is positively associated with exposure to ultraviolet radiation, but negatively with exposure to tobacco smoke, whereas nothing is known about the role of air pollution.

Objective: To investigate the association between BCC and air pollution and whether it is modified by other factors.

Methods: In this population-based cross-sectional study, logistic regression analysis was used to estimate the association of air pollution with BCC in elderly women from the SALIA cohort study. Modeled residential exposure to air pollution during the follow-up from 2007 to 2010 was estimated by land-use regression according to the ESCAPE study and the baseline exposure from 1985 to 1994 was back-extrapolated. Potentially related variables included history of sunbed use, Fitzpatrick skin type, exposure to tobacco smoke and residence area and were derived from interview-based questionnaires.

Results: The study included 799 elderly women (mean age: 74 ± 3.05) with complete data. From these, 6.45% had ever been diagnosed a BCC. Exposure to air pollution showed negative associations with BCC. These negative associations were stronger and reached significance in sunbed users. In addition, Fitzpatrick skin types, sunbed use history and exposure to second hand smoke showed significant interaction effects with air pollution on BCC.

Conclusions: Elderly Caucasian women exposed to higher levels of air pollution were less likely to be diagnosed with BCC, indicating that air pollution might decrease the risk of developing BCC.

Commercial disclosure: None identified.

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Interest of the Global Evaluation Acne (GEA) scale on facial photographs for different ethnicities

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Objective: The main objective of this study was to assess the suitability of the Global Evaluation Acne (GEA) scale for acne severity diagnosis on photographic images for Black African and Asian (Chinese) ethnicities compared with Caucasians.

Methods: 834 subjects (397 Caucasian, 294 Black African, 143 Chinese) with all acne severities were included in this analysis. Each subject was photographed with 2 types of smartphones (Android−Samsung S8 and iOS−iPhone 7 devices) providing two sets of 3 images (face, left and right profiles). Three acne experts using GEA scale evaluated all sets of images. Inter- and intrarater reproducibility were evaluated. For intrarater reproducibility, comparison between evaluations obtained from iOS and Android sets were used.

Results: There was a substantial intrarater reproducibility for all ethnicities and all dermatologists (κ = 0.65-0.84, $P < .0001$). The best agreement among the three evaluators was obtained for Black African subjects on IOS pictures ("Substantial": $\alpha = 0.69$, $P < .0001$). The lower agreement was obtained for Chinese subjects on Android pictures ("Fair": $\alpha = 0.38$, $P < .0001$). Results show that even if the two types of devices has the same camera quality, the color rendition has an influence on acne severity assessment.

Conclusions: Study demonstrates that assessment of acne severity on digital photos using GEA scale is also possible for Black African and Asian (Chinese) ethnicities.

Commercial disclosure: None identified.