



האיגוד הישראלי  
לרפואת עור ומין

# DERMATOLOGY 2026

The Annual Meeting of the  
Israeli Society of Dermatology & Venereology

## ABSTRACT BOOK

**June 3-5 2026**

Museum of Tolerance  
& Waldorf Astoria Hotel, Jerusalem



### חברים וחברות יקרים,

אני מתכבדת להזמינכם לכנס השנתי ה-45 של האיגוד הישראלי לרפואת עור ומין, שיתקיים השנה בלב ירושלים בין התאריכים 3-5 ביוני 2026.

השנה בחרנו לארח את הכנס בשני אתרים ייחודיים: ביומיים הראשונים (3-4.6) נתכנס במוזיאון הסובלנות, וביום הנעילה (5.6) נקיים את הדיונים במלון וולדורף אסטוריה.

התוכנית המדעית תתמקד בחידושים האחרונים בחזית הדרמטולוגיה, עבודות מחקר עדכניות, טכנולוגיות חדשניות, לצד דיונים מעמיקים בסוגיות קריטיות בתחום. בכנס ישתתפו מרצים מובילים מהשורה הראשונה בעולם, שיגיעו מחו"ל לחלוק עמנו מידע חדש פורץ דרך בדרמטולוגיה. הכנס מהווה פלטפורמה חיונית לחיזוק הקשרים המקצועיים והחברתיים של הקהילה הדרמטולוגית בישראל ומהווה הזדמנות נפלאה ללמידה וחיבורים מקצועיים ואישיים.

אני מתרגשת לארח אתכם לחגיגה מקצועית ומעשירה.

### פרופ' ורד מולכו-פסח

יו"ר הכנס השנתי ה-45 של האיגוד הישראלי לרפואת עור ומין

# DERMATOLOGY 2026

The Annual Meeting of the  
Israeli Society of Dermatology & Venereology

June 3-5 2026


Museum of Tolerance  
& Waldorf Astoria Hotel, Jerusalem



## WEDNESDAY, JUNE 3<sup>RD</sup>, 2026 - Museum of Tolerance

08:00-09:00

Breakfast Symposium - For pre-registered only | Floor -1

◆ Sponsored by 

To JAK or not to JAK: That's the Question!

**Prof. Anna Lyakhovitsky**, *Sheba Medical Center*

**Prof. Yuval Ramot**, *Hadassah Medical Center*

08:00-09:00

Registration, Gathering, Exhibition & E-posters

09:00-09:10

### Greetings


**Prof. Vered Molho-Pessach**, *Conference Chairperson, Hadassah Medical Center*

**Prof. Assi Levi**, *President of the Israeli Society of Dermatology and Venereology, Rabin Medical Center*

09:10-10:42

### Session 1 - Hidradenitis Suppurativa, Acne and Rosacea, Hyper/Hypohidrosis

**Chairs: Dr. Mati Rozenblat**, *Emek Medical Center*; **Dr. Tal Goldberger**, *Hadassah Medical Center*; **Prof. Arieh Ingber**, *Hadassah Medical Center*

◆ Independently sponsored by 

09:10-09:25

Laser Management of Hidradenitis Suppurativa Scars

**Dr. Ziad Khamaysi**, *Rambam Health Care Campus*

09:25-09:31

Cardiovascular Disease Risk in Hidradenitis Suppurativa Across Treatment Pathways:  
A Large Population-Based Cohort Study

**Dr. Or Dagan**, *Soroka University Medical Center*

09:31-09:37

Safety of Oral Isotretinoin in Physically Active Young Adults: A Retrospective Study  
of 11,283 Patients

**Dr. Michal Leibovitch**, *Israel Defense Forces Medical Corps*

09:37-09:57

Update on Rosacea (New Therapies and Theories on Pathogenesis)

**Prof. Lawrence J Green**, *George Washington University School of Medicine, Washington DC, USA*

09:57-10:07

Pathophysiology of Sweat

**Prof. Smail Hadj Rabia**, *Necker-Enfants Malades Hospital, Paris, France*

10:07-10:22

Hyperhidrosis

**Prof. Jacob Mashiah**, *Tel Aviv Sourasky Medical Center*

10:22-10:42

Hypohidrosis and Ectodermal Dysplasia

**Prof. Smail Hadj Rabia**, *Necker-Enfants Malades Hospital, Paris, France*

◆ Sponsored by 

10:42-11:05

Coffee break, Exhibition & E-posters

11:05-12:05

**Session 2 - Part 1 - Beyond the Skin: A Dermatologist's Perspective on Type 2 Inflammation**

**Moderator: Dr. Emily Avitan-Hersh**, Rambam Health Care Campus

◆ Sponsored by **sanofi**

11:05-11:20

Beyond the Skin: An Immunologist's Perspective on Type 2 Inflammation

**Prof. Ariel Munitz**, *Tel Aviv University*

11:20-12:05

**Panel:**

**Prof. Ariel Munitz**, *Tel Aviv University*

**Dr. Osnat Livne Shtraichman**, *Rabin Medical Center*

**Dr. Naama Epstein**, *Assuta Ashdod Medical Center, Ben-Gurion University of the Negev*

**Dr. Rivka Friedland**, *Schneider Children's Medical Center*

12:05-12:52


**Session 2 - Part 2 - Type 2 Inflammation**

**Chairs: Prof. Sharon Baum**, Sheba Medical Center; **Dr. Nadav Astman**, Tel Aviv Sourasky Medical Center; **Dr. Yael Renert-Yuval**, Schneider Children's Medical Center; **Dr. Ron Yaniv**, Mayanei Hayeshua Medical Center

12:05-12:25

Chronic Spontaneous Urticaria (CSU): Updates and Innovations

**Prof. Yuval Ramot**, *Hadassah Medical Center*

◆ Independently sponsored by  **NOVARTIS**

12:25-12:40

Bullous Pemphigoid- Novel Treatments

**Dr. Meital Oren**, *Rabin Medical Center*

12:40-12:46

The IL-4/IL-13 Axis in Bullous Pemphigoid and Mucous Membrane Pemphigoid: Serum Cytokine Profiling and Keratinocyte Responses

**Prof. Khalaf Kridin**, *Galilee Medical Center*

12:46-12:52

Impact of Bullous Pemphigoid on All Cause Survival in Patients Treated with Immune Checkpoint Inhibitors

**Ms. Emily Benzikry**, *Tel Aviv Sourasky Medical Center*

12:52-13:00

Presentation of Certificates of Appreciation to Senior Dermatologists

**Prof. Assi Levi**, *President of the Israeli Society of Dermatology and Venereology, Rabin Medical Center*

13:00-14:00

Lunch, Exhibition & E-posters

13:00-14:00

Lunch Symposium -

For pre-registered only | Floor -1

◆ Sponsored by **abbvie**

From Immunologic Pathways to Meaningful Outcomes in Atopic Dermatitis

**Prof. Khalaf Kridin**, *Galilee Medical Center*

Lunch Symposium -

For pre-registered only | Floor -1

◆ Sponsored by  **NEOPHARM ISRAEL**  
NEOPHARM GROUP

Tuberculosis in the Biologic Era: Facts VS Myths

**Dr. Sivan Perl**, *Ministry of Health*

14:00-15:36

### Session 3 – Psoriasis

**Chairs:** Prof. Lev Pavlovsky, Rabin Medical Center; Prof. Felix Pavlotsky, Sheba Medical Center; Prof. Henri Trau, Sheba Medical Center

14:00-14:20

Oral Treatments for Psoriasis

**Prof. Mark Lebwohl**, *Icahn School of Medicine at Mount Sinai, NY, USA*

◆ Sponsored by **Johnson&Johnson**

14:20-14:26

Guselkumab in Biologic-Naïve versus Biologic-Experienced Patients with Moderate-to-Severe Plaque Psoriasis: A Cost-Effectiveness Analysis

**Dr. Bat Sheva Varda Berkovitch**, *Rabin Medical Center*

14:26-14:46

Long Term Control of Psoriasis – Does the Blockage of IL17A/F Makes the Difference

**Dr. Andreas Pinter**, *Goethe University Frankfurt, Germany* 

◆ Sponsored by 

14:46-14:52

Real-World Drug Survival of IL-17 Inhibitors in Psoriasis

**Dr. Tomer Shary Nitzan**, *Rabin Medical Center*

14:52-15:12

Marked by Psoriasis: the Interplay Between Disease and Identity

**Dr. Yuliya Valdman**, *Soroka University Medical Center*

◆ Sponsored by **abbvie**

15:12-15:18

Psoriasis, Biologic Therapy, and Dementia Risk: A Two-Part Propensity Score-Matched Cohort Study of Over 600,000 Patients

**Dr. Hanni Robinson**, *Hadassah Medical Center*

15:18-15:24

Psoriasis and Risk of 26 Cancers: Pooled Population-Based Cohort Studies From Israel, Denmark, England and Taiwan

**Prof. Khalaf Kridin**, *Galilee Medical Center*

15:24-15:30

Efficacy and Disease-Modifying Potential of Glucagon-Like Peptide 1 Analogues in Psoriasis: A Cohort Study

**Dr. Danielle Bar**, *Sheba Medical Center*

15:30-15:36

Treatment Outcomes and Drug Survival in Pediatric Psoriasis: A 10-Year Real-World Experience

**Dr. Hiba Zaaroura**, *Rambam Health Care Campus*

15:36-16:00

Coffee break, Exhibition & E-posters

16:00-17:04

### Session 4 – Hair Disorders

**Chairs:** Prof. Anna Lyakhovitsky, Sheba Medical Center; Dr. Ruba Ibrahim, Hadassah Medical Center; Prof. Abraham Zlotogorski, Hadassah Medical Center

16:00-16:20

Cicatricial Alopecia Masterclass- Focusing on Challenging Cases of FFA and LPP- Beyond the Standard Protocols

**Dr. Daniel Asz Sigal**, *Hospital General "Dr. Manuel Gea González", Mexico City, Mexico*

16:20-16:26

Cicatricial Alopecia in the Pediatric Population: A Case Series and Review of the Literature

**Dr. Mirit Glick**, *Schneider Children's Medical Center*

16:26-16:32

JAK Inhibitors in Moderate to Severe Alopecia Areata in Children: A Real World Single Center Experience

**Dr. Mirit Glick**, *Schneider Children's Medical Center*

16:32-16:38

The Role of the Skin Microbiome in Hair Disorders: A Systematic Review

**Dr. Sheri Avraham**, *Hadassah Medical Center*

16:38-16:44 Trichoscopic Patterns in Chemotherapy-Induced Alopecia: Dynamic Changes Across Treatment Stages and the Role of Scalp Cooling  
**Dr. Lital Brilant**, *Sheba Medical Center*

16:44-17:04 Advanced Trichoscopy- Tips and Tricks for the Complex Differential Diagnosis of Hair Loss  
**Dr. Daniel Asz Sigal**, *Hospital General "Dr. Manuel Gea González", Mexico City, Mexico*

**17:04-17:55 Session 5 - Pediatric Dermatology and Genodermatoses**

**Chairs:** **Prof. Liat Samuelov**, Tel Aviv Sourasky Medical Center; **Dr. Hiba Zaaroura**, Rambam Health Care Campus; **Prof. Danny Ben Amitai**, Schneider Children's Medical Center- Formerly Affiliated; **Dr. Eran Cohen-Barak**, Emek Medical Center

◆ Independently sponsored by **Padagis**.

17:04-17:19 Vascular Anomalies-What Does the Dermatologist Need to Know?  
**Prof. Shoshana Greenberger**, *Sheba Medical Center*

17:19-17:25 Evaluating Neurodevelopmental Sequelae of Propranolol Use in Infantile Hemangioma: A Large-Scale Population-Based Study  
**Prof. Khalaf Kridin**, *Galilee Medical Center*

17:25-17:31 CARMIL2- Related Immunodeficiency: A Cutaneous-Centered Disorder of T-Cell Metabolism Amenable to Glutamine Rescue  
**Dr. Eran Cohen-Barak**, *Emek Medical Center*

17:31-17:37 Persistent Cutaneous Lesions of Darier Disease and Second-Hit Somatic Variants in ATP2A2 Gene  
**Dr. Majd Shehade**, *Emek Medical Center*

17:37-17:43 NLRP7 Promoter Methylation Affects Epidermolysis Bullosa Simplex Severity  
**Ms. Lubna Gazi Khair**, *Tel Aviv Sourasky Medical Center*

17:43-17:49 Epidemiological and Clinical Characterization of Pediatric Lichen Sclerosus  
**Dr. Edan Davidson**, *Hadassah Medical Center*

17:49-17:55 Linear Pediatric Morphea is Associated with Greater Atopic Burden Compared with the Plaque Subtype: A Retrospective Analysis  
**Ms. Noor Abu Hjoel**, *Schneider Children's Medical Center*

18:00-19:00

**Plenary Hall**

Professional Meeting of the Israeli Dermatological Association

**Hall A | Floor -1**

Residents' Meeting- Learning Aids' Competition

## THURSDAY, JUNE 4<sup>TH</sup>, 2026 – Museum of Tolerance

08:00–09:00

Breakfast Symposium – For pre-registered only | Floor -1

◆ Sponsored by **Dexcel**<sup>®</sup>  
p h a r m a

Chronic Hand Eczema in 2026: What Dermatologists Must Know?

**Prof. Roni P. Dodiuk-Gad**, *Technion & Emek Medical Center, Israel, University of Toronto, Canada*

08:00–09:00

Registration, Gathering, Exhibition & E-posters

09:00–09:57

### Session 6 – Eczematous Conditions

**Chairs: Dr. Judith Nevet**, Rambam Health Care Campus; **Prof. Michal Solomon**, Sheba Medical Center; **Prof. Arnon Cohen**, Clalit Health Services

◆ Independently sponsored by **Dexcel**<sup>®</sup>  
p h a r m a

09:00–09:15

Eczema and Primary Immunodeficiency

**Dr. Michal Neumark**, *Hadassah Medical Center*

09:15–09:21

Eczema Restricted to the Hands- Etiologies and Response to Treatments

**Ms. Mona Eid**, *Rambam Health Care Campus*

09:21–09:27

Prevalence of Colophony Sensitization Among Patients With Suspected Shoe-Related Allergic Contact Dermatitis

**Mr. Itay Shavit**, *Tel Aviv University*

09:27–09:33

15-Year Experience of Patch Testing During Pregnancy: Retrospective Case-Control Study from a Tertiary Israeli Center

**Dr. Igor Snast**, *Rabin Medical Center*

09:33–09:39

Potassium Dichromate Sensitivity Presenting as Tefillin Dermatitis: A Retrospective Cohort Study

**Dr. Igor Snast**, *Rabin Medical Center*

09:39–09:45

Epidemiology of Sensitivity to Nickel, Cobalt and Chromium in Israel: A Retrospective Cohort Study

**Dr. Igor Snast**, *Rabin Medical Center*

09:45–09:51

Risk of Hematologic Malignancies in Patients with Atopic Dermatitis receiving Topical Calcineurin Inhibitor Therapy

**Dr. Irene Unterman**, *Hadassah Medical Center*

09:51–09:57

Gestational Diabetes Mellitus Increases the Risk of Atopic Dermatitis in Children: A National Retrospective Study

**Prof. Amir Horev**, *Soroka University Medical Center*

09:57-10:56

## Session 7 – Innovation, AI and Technologies

**Chairs: Prof. Assi Levi**, President of the Israeli Society of Dermatology and Venereology, Rabin Medical Center; **Prof. Baruch Kaplan**, Assuta Medical Center;  
**Dr. Jonathan Shapiro**, Maccabi Healthcare Services

09:57-10:12

Innovation in Dermatology

**Dr. Hedva Voliovitch**, *Israeli Society of HealthTech*  
**Dr. Mariana Zamir**, *Sheba Medical Center*

10:12-10:32

What is New in Lasers?

**Prof. Murad Alam**, *Northwestern University Feinberg School of Medicine, Chicago, USA*

10:32-10:38

Dermoscopic Predictors of Laser Treatment Response in Recalcitrant Viral Warts: A Retrospective Cohort Study

**Ms. Odeya Rotem Shabtai**, *Ben-Gurion University of the Negev*

10:38-10:44

Efficacy and Safety of Non-Fractional Ablative Carbon Dioxide Laser Resurfacing for the Treatment of Rhinophyma: A Retrospective Cohort and Questionnaires-Based Study

**Dr. Yehonatan Noyman**, *Rabin Medical Center*

10:44-10:50

Phage Therapy in Impetigo and Assessment of Combined Treatment with Pulsed Blue Light

**Dr. Rami Qahoush**, *Hadassah Medical Center*

10:50-10:56

Real World Performance of the DEXI AI Tool for Melanoma Detection in a Skin Cancer Detection Clinic

**Dr. Gila Isman Nelkenbaum**, *Tel Aviv Sourasky Medical Center*

10:56-11:25

Coffee break, Exhibition & E-posters

11:25-12:41

## Session 8 – Dermato-Oncology

**Chairs: Prof. Emilia Hodak**, Rabin Medical Center; **Dr. Sharon Merims**, Hadassah Medical Center; **Prof. Ilan Goldberg**, Tel Aviv Sourasky Medical Center;  
**Dr. Sivan Sheffer Levi**, Hadassah Medical Center

11:25-11:45

HPV in Males: The Dermatologist at the Front Line

**Dr. Eduardo Schejter**, *Maccabi Healthcare Services*

◆ Sponsored by  **MSD**

11:45-11:51

Mycosis Fungoides / Sézary Syndrome and Systemic Janus Kinase Inhibitors: A Real-World Retrospective Study on Behalf of the EORTC-CLTG

**Prof. Iris Amitay-Laish**, *Rabin Medical Center*

11:51-11:57

Risk of Cutaneous T-Cell Lymphoma and Lymphoid Malignancies with Dupilumab: A Propensity-Matched Cohort Study Across Atopic Dermatitis and other Type-2 Inflammatory Diseases

**Prof. Khalaf Kridin**, *Galilee Medical Center*

11:57-12:03

The MATRIX Predictive Model for Subungual Melanoma in Longitudinal Melanonychia

**Dr. Eran Galili**, *Sheba Medical Center*

12:03-12:09

Immune Status and Merkel Cell Carcinoma: Lessons from a 25-Year Institutional Experience

**Dr. Adi Raviv**, *Tel Aviv Sourasky Medical Center*

12:09-12:15

Reduced Risk of Squamous Cell Carcinoma in Atopic Dermatitis Patients Treated with JAK Inhibitors Compared to Dupilumab: A Propensity-Matched Cohort Study

**Dr. Tahel Fachler**, *Hadassah Medical Center*

12:15-12:21 Cutaneous Immune-Related Adverse Events Vary by Cancer Type During PD-1 Blockade: A Multi-Cohort Analysis

**Prof. Khalaf Kridin**, *Galilee Medical Center*

12:21-12:41 Systemic Treatments for Advanced Melanoma

**Prof. Michal Lotem**, *Hadassah Medical Center*

12:45-13:45 Lunch, Exhibition & E-posters

12:45-13:45 Lunch Symposium -  
For pre-registered only | Floor -1

◆ Sponsored by  **NOVARTIS**

Panel Discussion | Unlocking Hidradenitis Suppurativa: Perspective & Solutions

**Prof. Yuval Ramot**, *Hadassah Medical Center*

**Dr. Ariela Hafner**, *Tel Aviv Sourasky Medical Center*

**Dr. Ziad Khamaysi**, *Rambam Health Care Campus*

**Dr. Yossi Taieb**, *Rabin Medical Center*

12:45-13:45 Lunch Symposium -  
For pre-registered only | Floor -1

◆ Sponsored by **Johnson & Johnson**

Psoriasis: Which Drug for Which Patient

**Prof. Mark Lebwohl**, *Icahn School of Medicine at Mount Sinai, NY, USA*

### 13:45-14:25 Session 9 - Derm of Thrones - Scientific Jeopardy Challenge

**Chairs: Prof. Yuval Ramot**, Hadassah Medical Center,  
**Dr. Yuliya Valdman**, Soroka University Medical Center

An interactive scientific Jeopardy-style game featuring dermatologists competing in a dynamic, knowledge-based session


◆ Sponsored by 

### 14:25-16:04 Session 10 - General Dermatology

**Chairs: Dr. Tamar Koren**, Emek Medical Center; **Prof. Sima Halevy**, Ben-Gurion University of the Negev; **Dr. Riad Kassem**, Sheba Medical Center

14:25-14:45 From Pathways to Networks: TYK2 Inhibition in Psoriasis

**Prof. Yuval Ramot**, **Prof. Yuval Tal**, *Hadassah Medical Center*

◆ Sponsored by 

14:45-15:05 Diagnostic and Therapeutic Pearls

**Prof. Mark Lebwohl**, *Icahn School of Medicine at Mount Sinai, NY, USA*

15:05-15:25 Skin Aging

**Prof. Jack Arbisser**, *Emory University School of Medicine, Atlanta, GA, USA*

15:25-15:31 Extracellular Vesicles Expressing CD24 Enhance Skin Wound Healing

**Dr. Lia Mazur**, *Tel Aviv Sourasky Medical Center*

15:31-15:37 Inhibiting Enzyme-Mediated Fibronectin Fibrillogenesis - A Novel Mechanism for Fibrosis Inhibition

**Mr. Maher Abu Saleh**, *The Technion- Israel Institute of Technology*

15:37-15:52 Safety of Dermatological Medications in Pregnancy and Lactation

**Dr. Ibrahim Elatuana**, *Soroka University Medical Center*

15:52-15:58 Variability in Genital Herpes Management during Pregnancy: Insights from a Single-Center Study  
**Dr. Hanni Robinson**, *Hadassah Medical Center*

15:58-16:04 Cutaneous Adverse Events Associated With GLP-1 Receptor Agonists: A Retrospective Cohort Study from a Tertiary Medical Center  
**Dr. Lital Brilant**, *Sheba Medical Center*

16:04-16:30 Coffee Break, Exhibition, E-Posters & Prize Raffle

Raffle sponsored by



First Prize provided by



16:30-17:39 **Session 11 - Immunity and the Skin**

**Chairs: Prof. Shany Sherman Bergman**, Rabin Medical Center;  
**Dr. Mor Pavlovsky**, Tel Aviv Sourasky Medical Center

16:30-16:45 Rewiring Skin Immunity: Translational Insights in Dermato-Immunology  
**Dr. Eran Cohen Barak**, *Emek Medical Center*

16:45-16:51 Impact of Rituximab Timing on Long-Term Outcomes in Pemphigus: A Real-World Propensity-Matched Study  
**Prof. Khalaf Kridin**, *Galilee Medical Center*

16:51-16:57 Assessing ST18 Gene Polymorphisms (rs17315309, rs2304365) in Israeli Patients with Pemphigus Vulgaris  
**Dr. Wisal Sawaed**, *Galilee Medical Center*

16:57-17:03 Assessing Genetic, Phenotypic and Polygenic Risk Associations of Autoimmune Comorbidities in FinnGen Patients with Vitiligo  
**Dr. Mor Pavlovsky**, *Tel Aviv Sourasky Medical Center*

17:03-17:09 The Association Between Vitiligo and Uveitis: A Large Population-Based Study  
**Prof. Shany Sherman Bergman**, *Rabin Medical Center*

17:09-17:15 Supporting Late-Phase Clinical Development of Upadacitinib: Validation of Three-Dimensional Imaging for Facial Vitiligo Assessment  
**Dr. Amber Abir**, *Rabin Medical Center*

17:15-17:21 Factors Associated with Treatment Response in Granuloma Annulare  
**Ms. Ela Glazer Michael**, *Sheba Medical Center*

17:21-17:27 Involvement of the Degradosome in Autoinflammatory Skin Diseases  
**Dr. Eylon Sharoni**, *Tel Aviv Sourasky Medical Center*

17:27-17:33 Cutaneous Manifestations in Pediatric and Adult Inflammatory Bowel Disease; Incidence and Association with Poor Disease Course: A Population-Based Study from the epi-IIRN  
**Dr. Ayelet Ollech**, *Shaare Zedek Medical Center*

17:33-17:39 Cutaneous Manifestations of Common Variable Immunodeficiency (CVID): A Multicenter Retrospective Study  
**Dr. Ilana Roth**, *Hadassah Medical Center*

17:39-18:15

**Session 12 – Award Research Projects**

**Chairs:** **Prof. David Enk**, Hadassah Medical Center, **Prof. Ilan Goldberg**, Tel Aviv Sourasky Medical Center, **Prof. Marcelo Grinwald**, Soroka University Medical Center

17:39-17:47

From Failure to Success: Evaluating Infliximab Efficacy After Adalimumab Failure in Hidradenitis Suppurativa

**Dr. Ruba Srour**, *Rambam Health Care Campus*

17:47-17:55

The Stress of War: A Surge in Psoriasis Incidence in Israel Following the Israel-Hamas War

**Dr. Maya Engler Markowitz**, *Rabin Medical Center*

17:55-18:03

Is Juvenile Plantar Dermatitis Associated with Atopy – a Systematic Review and Meta-Analysis

**Dr. Israel Khanimov**, *Rabin Medical Center*

18:03-18:11

A Cross-Sectional Study of the Dermoscopic Features of Darier Disease

**Dr. Miriam Ben Shachar**, *Emek Medical Center*

18:11-18:15

Announcement of Award winners

18:15-19:15

**Cocktail Evening – Museum Main Entrance**



19:00

Bus Departure for the National Library Tour – Museum Main Entrance

19:00

“6:29” Exhibition at the Museum of Tolerance – Museum Main Entrance

19:15

Bus Departure for the Tasting Tour at Machane Yehuda Market – Museum Main Entrance

# FRIDAY, JUNE 5<sup>TH</sup>, 2026 - Waldorf Astoria Hotel

07:30-08:00

Welcome & Registration

## Hall A

## Hall B

08:00-09:15

Workshop / Pediatric Dermatology

Workshop / Dermato-Oncology

### Moderators:

**Dr. Yizhak Confino**, Wolfson Medical Center  
**Dr. Ayelet Ollech**, Shaare Zedek Medical Center

### Moderator:

**Dr. Emily Avitan-Hersh**, Rambam Health Care Campus

08:00-08:40

### Panel Discussion

Practical Dilemmas in Atopic Dermatitis: Insights from Pediatric Dermatology Experts

◆ Sponsored by **sanofi**

Systemic Treatment Failure in Children Under 12: What Next?

**Prof. Vered Molho-Pessach**, *Hadassah Medical Center*

Vaccination During Biologic or Systemic Therapy

**Dr. Hiba Zaaroura**, *Rambam Health Care Campus*

Managing Comorbidities in Atopic Dermatitis

**Dr. Yuliya Valdman**, *Soroka University Medical Center*

Unusual Adverse Events with Biological Treatments for Atopic Dermatitis

**Dr. Eran Cohen-Barak**, *Emek Medical Center*

Beyond AD: Cases Treated with Biologics Commonly Used for Atopic Dermatitis

**Prof. Liat Samuelov**, *Tel Aviv Sourasky Medical Center*

When Atopic Dermatitis Overlaps with Psoriasis

**Dr. Rivka Friedland**, *Schneider Children's Medical Center*

AD Mimickers: Conditions that Respond-or Fail to Respond-to Standard Therapy

**Prof. Shoshana Greenberger**, *Sheba Medical Center*

08:00-08:20

Fundamental Principles of Photo-Carcinogenesis and Photo-Aging

**Prof. Felix Pavlotsky**, *Sheba Medical Center*

08:20-08:30

New Era in Squamous Cell Carcinoma (SCC)

**Dr. Emily Avitan-Hersh**, *Rambam Health Care Campus*

08:30-09:15

Skin Cancer Tumor Board Challenging Cases

**08:30-08:38 - Dr. Sharon Merims**, *Hadassah Medical Center*

**08:38-08:46 - Dr. Hanaa Haj-Abaya**, *Rambam Health Care Campus*

**08:46-08:54 - Dr. Eran Galili**, *Sheba Medical Center*

**08:54-09:02 - Dr. Sivan Sheffer-Levi**, *Hadassah Medical Center*

**09:02-09:10 - Dr. Ayelet Rishpon**, *Tel Aviv Sourasky Medical Center*

**09:10-09:15 - Questions**

**08:40-09:15**

Challenging Cases in Pediatric Dermatology -  
Test Your Knowledge

Epidermal Nevus Co-Occurring with  
Woolly Hair

**Dr. Aviya Muallem, Hadassah Medical Center**

An Infant with Papulo-Ulcerative Lesions

**Dr. Tal Kind, Sheba Medical Center**

Hemorrhagic Bullae in a Girl

**Dr. Nadav Friedel, Tel Aviv Sourasky  
Medical Center**

Recurrent Nasal Bridge Swelling

**Dr. Shiran Reiss Hoss, Schneider  
Children's Medical Center**

A Case of Recurrent Periorificial Rash

**Dr. Avigail Rotem, Rambam Health Care  
Campus**

Tiny Head, Big Itch!

**Dr. Meital Haber, Clalit Health Services**

Beyond Routine Infection

**Dr. Mira Hamed, Emek Medical Center**

### Hall A

### Hall B

09:20-10:35

#### Workshop/ Psoriasis

#### Workshop / Nails

##### Moderator:

**Prof. Felix Pavlotsky, Sheba Medical Center**

##### Moderators:

**Prof. Avner Shemer, Sheba Medical Center**

**Dr. Eran Galili, Sheba Medical Center**

**09:20-09:35**

Updates From The Guidelines of Treatment  
of the Israeli Society of Psoriasis

**Dr. Hagit Matz, Tel Aviv Sourasky  
Medical Center**

**09:20-09:30**

Why is it Becoming More Complex? Rise in  
Resistant Fungal Infections

**Prof. Avner Shemer, Dr. Eran Galili,  
Sheba Medical Center**

**09:35-09:50**

Contraindications for Phototherapy in  
Psoriasis Management

**Prof. Felix Pavlotsky, Sheba Medical Center**

**09:30-09:40**

Debate - Treat or Check First in Suspected  
Onychomycosis

**Prof. Avner Shemer, Dr. Eran Galili,  
Sheba Medical Center**

**09:50-10:05**

Monitoring Acitretin Treatment in Psoriasis,  
Emphasis on Children

**Prof. Shoshana Greenberger,  
Sheba Medical Center**

**09:40-09:55**

Cases You Sent From Your Practices

**Dr. Tomer Goldshmidt, Tel Aviv Sourasky  
Medical Center**

**10:05-10:20**

Biologics and Small Molecules Available in  
Israel for the Treatment of Psoriasis

**Prof. Lev Pavlovsky, Rabin Medical Center**

**09:55-10:05**

Longitudinal Melanonychia- When to Suspect  
and Perform a Biopsy?

**Dr. Tomer Goldshmidt, Tel Aviv Sourasky  
Medical Center**

**Dr. Moran Barcan Ronen, Emek Medical  
Center**

**10:20-10:35**

Panel - Questions and Answers

**10:05-10:15**

Retronychia - Non-Invasive and Invasive Treatment Approaches

**Dr. Yehonatan Noyman**, *Rabin Medical Center*

**10:15-10:25**

Drug Resistance - What to Do in Practice?

**Prof. Avner Shemer, Dr. Eran Galili**,  
*Sheba Medical Center*

**10:25-10:35**

Panel - Questions and Answers

10:35-11:05

Brunch

**11:05-12:20**

Hall A

**Workshop / Contact Dermatitis**

**Moderator:**

**Prof. Dan Slodownik**, *Tel Aviv Sourasky Medical Center*

**11:05-11:25**

What's New in Systemic Contact Dermatitis

**Dr. Liran Horev**, *Hadassah Medical Center*

**11:25-11:40**

Trends in Contact Sensitization, Results, and Implications from a Contact Dermatitis Clinic in Israel

**Dr. Danny Daniely**, *Tel Aviv Sourasky Medical Center*

**11:40-11:55**

Revisiting Contact Sensitization Among Patients With LPP/FFA: Cross-Sectional Findings From 55 Cases

**Dr. Yair Levin**, *Tel Aviv Sourasky Medical Center*

**11:55-12:10**

Patch Test Results in Anogenital Dermatitis

**Dr. Sophia Polansky**, *Rambam Health Care Campus*

**12:10-12:20**

Q&A

**11:05-13:00**

Hall B

**Practical AI Workshop for Dermatologists**

**Moderator:**

**Dr. Jonathan Shapiro**, *Maccabi Healthcare Services*

**11:05-11:30**

Introduction to Artificial Intelligence: How Did We Get Here? The GPU and Transformer Revolution, Getting to Know the AI Ecosystem and the Tools Available to Us

**Dr. Jonathan Shapiro**, *Maccabi Healthcare Services*

**11:30-11:45**

From Physician to Engineer - Prompt Engineering

**Dr. Yuval Hilerowicz**, *Maccabi Healthcare Services, IDF*

**11:45-12:00**

"Talking with the Research": Advanced Article Analysis

**Dr. Yaron Ben Mordehai**, *Maccabi Healthcare Services*

**12:00-12:30**

The Digital Researcher - Literature Review and Evidence-Based Academic Writing

**Dr. Esther Tahover**, *Assuta Ramat HaHayal*

**12:30-12:45**

From Idea to Slides: Building PowerPoint Presentations

**Dr. Jonathan Shapiro**, *Maccabi Healthcare Services*

**12:45-13:00**

Claude, the New Revolution

**Dr. Yehonatan Noyman**, *Rabin Medical Center*

## INTERNATIONAL SPEAKERS

---



**Mark G. Lebwohl, MD**

.....  
Professor and Dean for Clinical Therapeutics,  
Chairman Emeritus Department of  
Dermatology Icahn School of Medicine  
at Mount Sinai, NY, USA



**Jack L Arbiser, MD, PhD**

.....  
Attending Dermatologist,  
Metroderm/United Derm Partners,  
Atlanta, GA



**Murad Alam, MD, MSCI, MBA**

.....  
Professor of Dermatology,  
Northwestern University Feinberg  
School of Medicine, Chicago, USA



**Lawrence J Green, MD, FAAD**

.....  
Clinical Professor of Dermatology  
George Washington Univ School  
of Medicine, Washington, DC



**Dr. Daniel Asz-Sigall, MD**

.....  
Dermatologist and Trichologist  
Trichology clinic, Dr Manuel Gea  
Gonzalez General Hospital, Mexico  
City, Mexico



**Smail Hadj-Rabia, MD, PhD**

.....  
Professor in Dermatology,  
Necker-Enfants Malades Hospital,  
Paris, France



# ABSTRACTS

Oral presentations listed in the conference program in order of appearance

---



## Cardiovascular disease risk in hidradenitis suppurativa across treatment pathways: a large population-based cohort study

**Dr. Or Dagan**

*Soroka University Medical Center*

Arnon Cohen<sup>1</sup>, Yulia Valdman<sup>2</sup>, Anat Reiner-Benaim<sup>3</sup>

1. kupat hulim clalit

2. soroka medical center

3. Ben Gurion University

**Background:** Hidradenitis suppurativa (HS) is a chronic inflammatory disease associated with increased cardiovascular disease (CVD) risk, yet it remains unclear how cardiovascular outcomes vary across the HS treatment pathway.

**Objectives:** To evaluate the incidence of CVD across successive treatment lines in patients with HS.

**Methods:** We conducted a population-based retrospective cohort study within Clalit Health Services. Patients with HS (n = 8,937) were categorized by their position on the treatment-escalation pathway. The baseline group included patients managed with local therapies or non-HS-specific antibiotics, the antibiotic group included patients treated with systemic HS-specific antibiotics (doxycycline, clindamycin, or rifampicin), and the TNFi group included patients treated with tumor necrosis factor inhibitors. Follow-up began at HS diagnosis for the baseline group (n = 5,618), at the first systemic antibiotic prescription for the antibiotic group (n = 2,979), and at TNFi initiation for the TNFi group (n = 340). The primary outcome was incident CVD, defined as ischemic heart disease or cerebrovascular accident. Propensity score weighting was applied to balance baseline characteristics. Incidence rates and hazard ratios (HRs) were estimated using Cox proportional hazards models. Sensitivity analyses were performed using an expanded TNFi cohort.

**Results:** TNFi treatment was not associated with increased cardiovascular risk compared with baseline therapy (HR 1.19, 95% CI 0.41–3.49), with similar incidence rates (4.33 vs. 4.84 per 1,000 person-years). In contrast, antibiotic treatment was associated with an increased risk (HR 1.97, 95% CI 1.39–2.81) and higher incidence rates (4.29 vs. 2.51 per 1,000 person-years). Direct comparison between TNFi and antibiotics showed no significant difference (HR 0.51, 95% CI 0.20–1.29). Sensitivity analyses yielded similar results.

**Conclusions:** Cardiovascular risk in HS varied across treatment strata. An increased risk was observed among patients treated with systemic antibiotics, whereas TNFi therapy was not associated with an increased risk.

**Baseline Characteristics by Treatment Group**

| Characteristic                  | Overall (N=8,9371) | Baseline (N=5,6181) | Antibiotics (N=2,9791) | TNFi (N=34011) | p-value <sup>2</sup> |
|---------------------------------|--------------------|---------------------|------------------------|----------------|----------------------|
| Age at Diagnosis                | 28.73 (12.54)      | 28.99 (12.89)       | 28.12 (11.87)          | 29.71 (12.29)  | 0.005                |
| Sex                             |                    |                     |                        |                | <0.001               |
| Male                            | 3,668 (41.04%)     | 2,301 (40.96%)      | 1,181 (39.64%)         | 186 (54.71%)   |                      |
| Female                          | 5,269 (58.96%)     | 3,317 (59.04%)      | 1,798 (60.36%)         | 154 (45.29%)   |                      |
| Ethnicity (Arab, Jewish, NA)    |                    |                     |                        |                | <0.001               |
| Jewish                          | 7,256 (81.19%)     | 4,635 (82.50%)      | 2,367 (79.46%)         | 254 (74.71%)   |                      |
| Arab                            | 1,681 (18.81%)     | 983 (17.50%)        | 612 (20.54%)           | 86 (25.29%)    |                      |
| Socioeconomic Status (Category) |                    |                     |                        |                | <0.001               |
| Medium Level                    | 5,108 (57.16%)     | 3,216 (57.24%)      | 1,677 (56.29%)         | 215 (63.24%)   |                      |
| Low Level                       | 1,538 (17.21%)     | 915 (16.29%)        | 554 (18.60%)           | 69 (20.29%)    |                      |
| High Level                      | 1,924 (21.53%)     | 1,279 (22.77%)      | 596 (20.01%)           | 49 (14.41%)    |                      |
| Missing                         | 367 (4.11%)        | 208 (3.70%)         | 152 (5.10%)            | 7 (2.06%)      |                      |
| Obesity                         | 3,352 (37.51%)     | 1,972 (35.10%)      | 1,219 (40.92%)         | 161 (47.35%)   | <0.001               |
| Smoking                         | 4,442 (49.70%)     | 2,607 (46.40%)      | 1,610 (54.04%)         | 225 (66.18%)   | <0.001               |
| Diabetes Mellitus               | 593 (6.64%)        | 342 (6.09%)         | 216 (7.25%)            | 35 (10.29%)    | 0.003                |
| Hypertension                    | 620 (6.94%)        | 395 (7.03%)         | 199 (6.68%)            | 26 (7.65%)     | 0.7                  |
| Hyperlipidemia                  | 1,902 (21.28%)     | 1,160 (20.65%)      | 650 (21.82%)           | 92 (27.06%)    | 0.013                |
| Chronic Renal Failure           | 88 (0.98%)         | 58 (1.03%)          | 21 (0.70%)             | 9 (2.65%)      | 0.006                |
| Liver disease                   | 105 (1.17%)        | 55 (0.98%)          | 45 (1.51%)             | 5 (1.47%)      | 0.077                |
| Valvular heart disease          | 176 (1.97%)        | 118 (2.10%)         | 50 (1.68%)             | 8 (2.35%)      | 0.4                  |
| Chronic heart failure           | 59 (0.66%)         | 38 (0.68%)          | 15 (0.50%)             | 6 (1.76%)      | 0.033                |
| Atrial fibrillation             | 65 (0.73%)         | 46 (0.82%)          | 15 (0.50%)             | 4 (1.18%)      | 0.12                 |
| COPD                            | 103 (1.15%)        | 48 (0.85%)          | 39 (1.31%)             | 16 (4.71%)     | <0.001               |
| Crohn's disease                 | 77 (0.86%)         | 23 (0.41%)          | 16 (0.54%)             | 38 (11.18%)    | <0.001               |
| Ulcerative colitis              | 49 (0.55%)         | 28 (0.50%)          | 13 (0.44%)             | 8 (2.35%)      | 0.001                |
| Rheumatoid arthritis            | 38 (0.43%)         | 20 (0.36%)          | 12 (0.40%)             | 6 (1.76%)      | 0.006                |
| Alcohol                         | 75 (0.84%)         | 46 (0.82%)          | 26 (0.87%)             | 3 (0.88%)      | 0.9                  |

**Table 2. Incidence rates and hazard ratios for cardiovascular disease among patients with hidradenitis suppurativa**

| Treatment group | No. of patients | Person-years | No. of events | Incidence rate per 1,000 PY | HR (95% CI)        |
|-----------------|-----------------|--------------|---------------|-----------------------------|--------------------|
| Antibiotic      | 2,979           | 13,229.6     | 55            | 4.16                        | 1.91 (1.35 - 2.69) |
| Baseline        | 5,618           | 36,353.1     | 91            | 2.50                        | 1 (Reference)      |
| TNF inhibitor   | 340             | 1,125.8      | 6             | 5.33                        | 2.73 (1.18 - 6.63) |

**Table 3. IPTW-weighted Incidence rates and hazard ratios for cardiovascular disease among patients with hidradenitis suppurativa**

| Treatment group | Person-years | Incidence rate per 1,000 PY | HR (95% CI)      |
|-----------------|--------------|-----------------------------|------------------|
| Antibiotic      | 13,157       | 4.29                        | 1.97 (1.39-2.81) |
| baseline        | 36,450       | 2.51                        | 1                |

| Treatment group | Person-years | Incidence rate per 1,000 PY | HR (95% CI)     |
|-----------------|--------------|-----------------------------|-----------------|
| TNFi            | 750          | 4.33                        | 1.19(0.41-3.49) |
| Baseline        | 12,938       | 4.84                        | 1               |

| Treatment group | Person-years | Incidence rate per 1,000 PY | HR (95% CI)     |
|-----------------|--------------|-----------------------------|-----------------|
| TNFi            | 1012         | 2.29                        | 0.51(0.20-1.29) |
| Antibiotic      | 10,338       | 5.14                        | 1               |

**Table 4. unweighted Incidence rates and hazard ratios for cardiovascular disease among patients with hidradenitis suppurativa: sensitivity analysis**

| Treatment group | No. of patients | Person-years | No. of events | Incidence rate per 1,000 PY | HR (95% CI)      |
|-----------------|-----------------|--------------|---------------|-----------------------------|------------------|
| Antibiotic      | 2,979           | 13,229.6     | 55            | 4.16                        | 1.91 (1.35–2.69) |
| Baseline        | 5,618           | 36,353.1     | 91            | 2.50                        | 1 (Reference)    |
| TNFi            | 454             | 1,627.51     | 8             | 4.91                        | 2.38 (1.14–4.95) |

**Table 5. IPTW weighted Incidence rates and hazard ratios for cardiovascular disease among patients with hidradenitis suppurativa: sensitivity analysis**

| Treatment group | Person-years | Incidence rate per 1,000 PY | Hazard Ratio (95% CI) |
|-----------------|--------------|-----------------------------|-----------------------|
| TNFi            | 1179         | 4.03                        | 1.35 (0.55 - 3.30)    |
| Baseline        | 15,330       | 4.22                        | 1                     |

| Treatment group | Person-years | Incidence rate per 1,000 PY | Hazard Ratio (95% CI) |
|-----------------|--------------|-----------------------------|-----------------------|
| TNFi            | 1366         | 2.16                        | 0.52 (0.22 - 1.24)    |
| Antibiotic      | 12,216       | 4.65                        | 1                     |

## Safety of Oral Isotretinoin in Physically Active Young Adults: A Retrospective Study of 11,283 Patients

**Dr. Michal Leibovitch**

*Israel Defence Forces Medical Corps*

Michal Leibovitch<sup>1</sup>, Shahar Ronen<sup>1</sup>, Lirom Motola<sup>1</sup>, Omer Itzkovitch<sup>1</sup>, Doron Stupp<sup>1</sup>, Meir Schechter<sup>1</sup>, Yuval Hilerowicz<sup>1,2</sup>

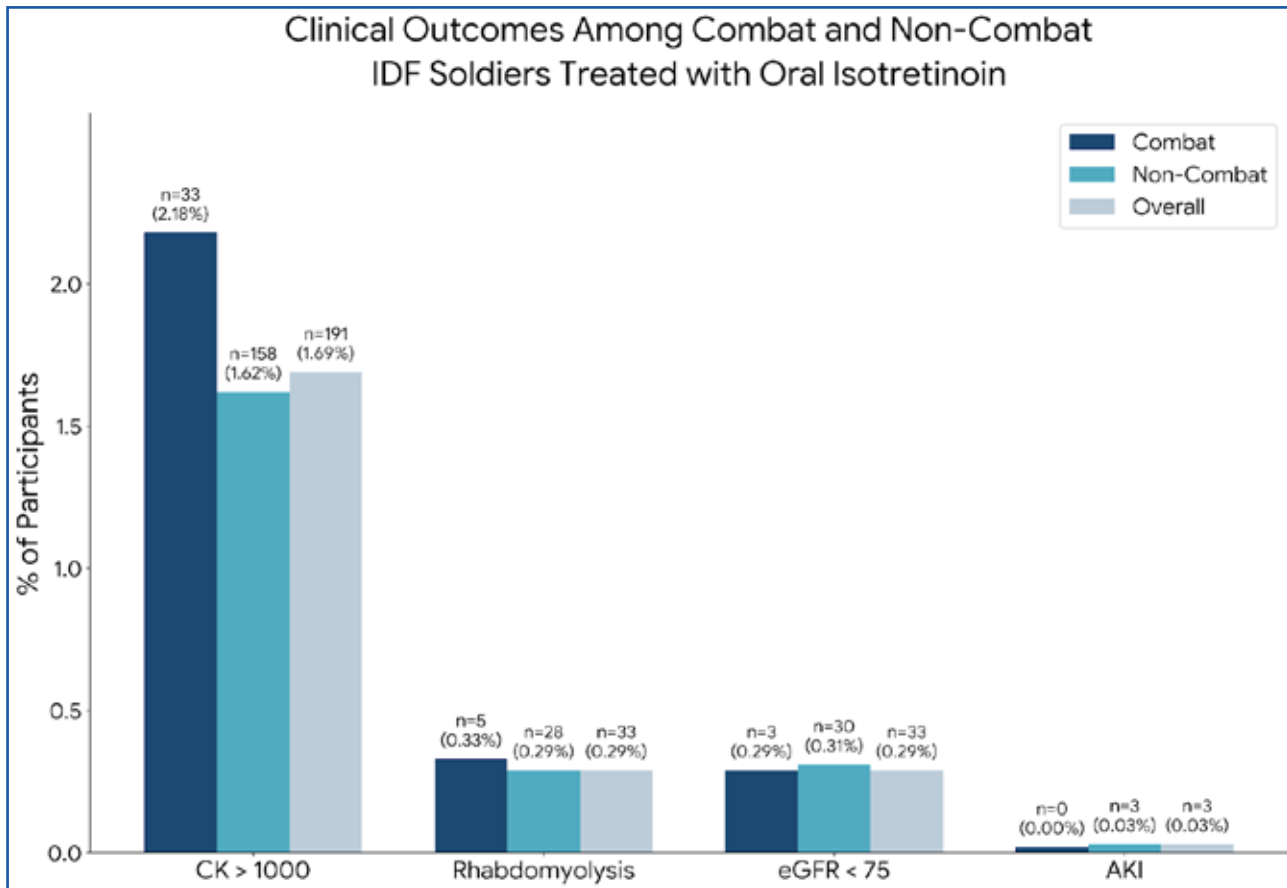
1. Israel Defence Forces Medical Corps
2. Maccabi Healthcare Services

**Background:** Acne is common among young adults and may cause long-term aesthetic sequelae if untreated. Oral isotretinoin, the most effective treatment for severe acne, may increase Creatine Kinase (CK) levels, raising concern for rhabdomyolysis and acute kidney injury (AKI), particularly with intense physical activity. Until recently, the Israel Defense Forces (IDF) restricted combat service during isotretinoin treatment, forcing soldiers to choose between optimal care and combat service despite limited evidence of clinically significant risk. We evaluated oral isotretinoin safety in a large IDF cohort to reassess these restrictions.

**Methods:** We conducted a retrospective cohort study of IDF soldiers (2007–2024) with combat-eligible profiles and pharmacy-documented isotretinoin dispensation. Participants were stratified into combat and non-combat groups according to their military profession. Study outcomes included significant CK elevation ( $>1000$  U/L [ $\times 5$  upper normal limit]), impaired kidney function (eGFR  $<75$  mL/min/1.73m<sup>2</sup>), and diagnoses of rhabdomyolysis, AKI, and other treatment-related adverse events. The intention-to-treat follow-up continued until discharge from service or up to 2.8 years.

**Results:** The cohort included 11,283 soldiers (mean age  $20.3 \pm 1.4$  years, 53.9% women), of whom 1,513 (13.4%) served in combat roles. Median baseline CK levels were 139 [IQR 96–196] vs. 94 [67–138] U/L in combat vs. non-combat soldiers, respectively. During follow-up, CK  $>1000$  U/L occurred in 2.18% vs. 1.62%, and rhabdomyolysis in 0.33% vs. 0.29%, in combat and non-combat soldiers, respectively. eGFR  $<75$  mL/min/1.73m<sup>2</sup> occurred in 0.29% vs. 0.31%, with AKI documented only among non-combatants ( $n=3$ ; 0.03%). Liver enzyme elevations and dry eye were uncommon ( $\leq 4\%$ ) and similar between groups. These findings were consistent across sex-stratified and as-treated analyses.

**Conclusions:** Oral isotretinoin was rarely associated with significant muscle, renal, or hepatic toxicity, including among soldiers serving in combat roles. Based on these findings, the IDF updated its policy in 2025 to allow combat service during isotretinoin treatment under defined conditions.



## The IL-4/IL-13 Axis in Bullous Pemphigoid and Mucous Membrane Pemphigoid: Serum Cytokine Profiling and Keratinocyte Responses

**Prof. Khalaf Kridin**

*Nahariya Galilee Medical Center*

W. Sawaed, N. Abu-Romi K. Kridin  
Galilee MC

**Background:** Pemphigoid diseases (PD), including bullous pemphigoid (BP) and mucous membrane pemphigoid (MMP), are subepidermal autoimmune blistering disorders characterized by autoantibody-mediated disruption of the dermal-epidermal junction. Current treatment relies primarily on corticosteroids, which, despite their efficacy, are associated with substantial toxicity and frequent relapses. Emerging evidence implicates type 2 cytokines—particularly interleukin-4 (IL-4) and interleukin-13 (IL-13)—in PD pathogenesis through promotion of Th2 polarization, eosinophil recruitment, autoantibody production, and epithelial damage. However, the relative contributions of these cytokines and the therapeutic potential of selectively targeting each pathway remain unclear.

**Aim:** To investigate the contribution of the IL-4/IL-13 axis to BP and MMP pathogenesis by combining serum cytokine profiling with in vitro keratinocyte stimulation assays.

**Methods:** Serum samples from healthy donors (HD; n=5), BP patients (n=16), and MMP patients (n=17) were analyzed by ELISA. HaCaT keratinocytes were stimulated with patient sera or recombinant cytokines, and gene expression was assessed by RT-qPCR. Cytoskeletal changes were evaluated by actin quantification.

**Results:** IL-13 levels were significantly elevated in MMP compared with HD, whereas IL-8 levels were increased in BP sera. In keratinocytes, stimulation with IL-13 or MMP sera upregulated IL-13R $\alpha$ 1 and IL-6 expression, while IL-4R $\alpha$  expression remained unchanged across conditions. IL-8 and CCL17 expression showed variable responses without consistent significant differences. Dupilumab treatment reduced IL-13R $\alpha$ 1 expression in keratinocytes compared with untreated controls; however, IL-4R $\alpha$ , IL-6, IL-8, and CCL17 expression showed no consistent significant changes following IL-4R $\alpha$  inhibition. Additionally, incubation with BP and MMP sera resulted in less uniform actin organization in cultured keratinocytes than with HD, characterized by filament thickening and irregular cytoskeletal patterns. Dupilumab treatment was associated with increased actin intensity and more defined filament organization across all conditions.

**Conclusion:** These findings support the involvement of the IL-4/IL-13 axis in epithelial responses in PD and highlight its potential as a putative therapeutic target.

## Impact of Bullous Pemphigoid on Overall Survival in Patients Treated with Immune Checkpoint Inhibitors

**Mrs. Emily Benzikry**

*Ichilov Medical Center (Sourasky)*

Tali Epstein, Tomer Ziv-Baran, Avital Baniel

*Ichilov Medical Center (Sourasky)*

**Background:** Immune checkpoint inhibitors (ICIs) are associated with immune-related adverse events (irAEs), including bullous pemphigoid (BP). While irAEs may reflect enhanced immune activation, the prognostic significance of BP remains unclear.

**Methods:** We conducted a retrospective cohort study of patients treated with ICIs between 2000–2024. Inclusion criteria were age  $\geq 50$  years, confirmed malignancy, and  $\geq 30$  days follow-up. BP was modeled as a time-dependent covariate in a multivariable Cox regression adjusting for demographics, comorbidities, and malignancy type. A sensitivity analysis using 1:4 case-control matching (age, sex, malignancy) with stratified Cox regression was performed.

**Results:** Among 2,055 patients, 19 (0.9%) developed BP. BP patients were older at cancer diagnosis and at treatment initiation ( $p=0.003$  and  $0.001$  respectively), with no other baseline differences. BP was independently associated with improved survival (HR 0.208, 95% CI 0.052–0.836,  $p=0.027$ ), corresponding to a 79% reduction in mortality risk.

In the matched cohort ( $n=88$ ), BP showed a consistent reduction in mortality (HR 0.25, 95% CI 0.056–1.080,  $p=0.063$ ). Although not reaching statistical significance, the trend was maintained as effect size and direction were consistent with the primary analysis.

**Conclusions:** Based on a large cohort analysis adjusted for demographic, oncologic, and comorbidity confounders, bullous pemphigoid was independently associated with improved overall survival in ICI-treated patients. A case-control matched sensitivity analysis showed a consistent effect size, although the smaller sample size limited statistical significance. BP may therefore serve as a clinically meaningful biomarker of enhanced immune activation and favorable oncologic outcomes. Given this improved prognosis, dermatologic management of BP should be prioritized over discontinuation of ICI therapy whenever clinically feasible. Ongoing analysis within this cohort aim to distinguish BP from other cutaneous irAEs, and to evaluate its association with more specific oncologic outcomes, including overall response rate and progression-free survival.

# Guselkumab in Biologic-Naïve versus Biologic-Experienced Patients with Moderate-to-Severe Plaque Psoriasis: A Cost-Effectiveness Analysis

**Dr. Bat Sheva Varda Berkovitch**

*Beilinson Hospital*

Moshe Leshno<sup>1</sup>, Daniel Mimouni<sup>2</sup>, Lev Pavlovsky<sup>2</sup>

1. Tel-aviv University

2. Beilinson Hospital

**Background:** Psoriasis is a chronic inflammatory skin disorder affecting approximately 125 million individuals worldwide. Advances in understanding its immunopathogenesis have led to targeted biologic therapies, significantly improving outcomes. Guselkumab, targeting the IL-23 pathway, has shown high efficacy and a favorable safety profile in randomized controlled trials for moderate-to-severe plaque psoriasis.

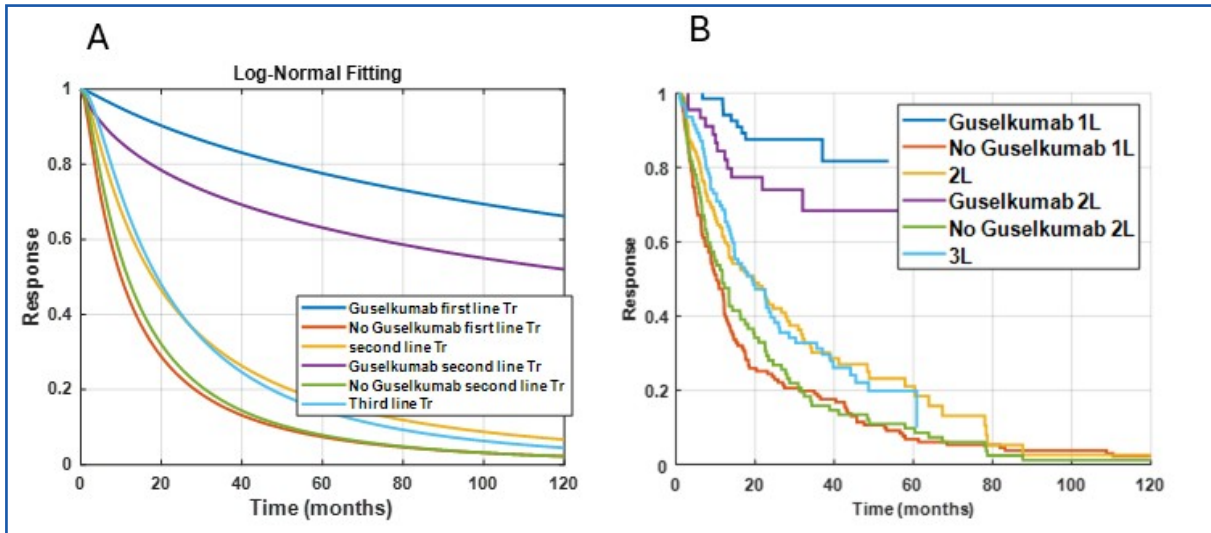
**Objective:** To evaluate the drug survival and cost-effectiveness of guselkumab as first-line compared with later-line biologic therapy use in moderate-to-severe plaque psoriasis.

**Methods:** We conducted a retrospective cohort study of 200 patients treated for moderate-to-severe plaque psoriasis at a tertiary medical center (2002-2024). Patients were stratified according to line of guselkumab use: first-line (n=69) versus second - or later-line (n=131). Drug survival was assessed with Kaplan-Meier and Cox regression, and PASI response rates were compared between groups. A patient-level Markov microsimulation (10-year horizon, 1-month cycles, 10,000 patients) estimated costs and quality-adjusted life years (QALYs). Sensitivity analyses tested robustness.

**Results:** First-line guselkumab was associated with significantly longer drug survival ( $p < 0.001$ ) and markedly higher PASI 100 response rates (72.5% vs. 14.5%,  $p < 0.0001$ ). Mean total cost per patient was lower (584,731 vs. 673,201 Israeli New Shekels; ILS), with greater QALY gains (8.19 vs. 5.83). The incremental cost-effectiveness ratio (ICER) indicated dominance (-37,610 ILS). Sensitivity analyses confirmed the robustness of results.

**Conclusions:** In this real-world cohort, initiating guselkumab as first-line biologic therapy yielded superior persistence, greater clinical response, and improved cost-effectiveness compared with later-line use. These findings support earlier initiation of guselkumab to optimize long-term outcomes in moderate-to-severe plaque psoriasis.

**Funding:** This study was not funded.



## Real-World Drug Survival of IL-17 Inhibitors in Psoriasis

**Dr. Tomer Shary Nitzan**

*Rabin Medical Center*

B. Varda Berkovitch, D. Mimouni, L. Pavlovsky

Rabin MC

**Background:** Biologic therapies targeting the interleukin-17 (IL-17) pathway have substantially improved outcomes in moderate-to-severe psoriasis. Secukinumab and ixekizumab selectively inhibit IL-17A and are widely used in clinical practice. Bimekizumab, a newer monoclonal antibody targeting IL-17A and IL-17F, has demonstrated high efficacy in clinical trials, but real-world comparative data including this agent remain limited.

**Methods:** We conducted a retrospective cohort study including all treatment episodes of secukinumab, ixekizumab, and bimekizumab initiated between 2018 and 2025 at a tertiary dermatology center. Each treatment episode was analyzed independently. Drug survival was defined as time from treatment initiation to discontinuation for any reason. Kaplan-Meier analysis and multivariable Cox proportional hazards models were used to evaluate treatment persistence while adjusting for age, sex, and psoriatic arthritis. Outcomes were also examined according to prior biologic exposure.

**Results:** Drug survival differed significantly across treatment groups and was strongly influenced by prior biologic exposure. The analysis included 447 treatment episodes: secukinumab bio-naïve (n=54), secukinumab bio-experienced (n=123), ixekizumab (n=203), and bimekizumab (n=67). Patients treated with bimekizumab had the highest number of prior biologic exposures and the highest prevalence of psoriatic arthritis. Secukinumab bio-experienced patients demonstrated significantly shorter drug survival than secukinumab bio-naïve patients. Bimekizumab showed significantly longer drug survival compared with secukinumab bio-experienced patients ( $P<0.001$ ) and ixekizumab ( $P=0.012$ ), while showing comparable survival to secukinumab bio-naïve patients. In multivariable Cox analysis, secukinumab bio-experienced patients had a higher risk of treatment discontinuation (HR 1.62; 95% CI 1.07-2.46), whereas bimekizumab showed a trend toward reduced discontinuation risk (HR 0.55; 95% CI 0.29-1.06).

**Conclusions:** Drug survival of IL-17 inhibitors in psoriasis is strongly influenced by prior biologic exposure. In this real-world cohort, bimekizumab demonstrated favorable treatment persistence despite being used predominantly in heavily pretreated patients, suggesting that dual IL-17A/F inhibition may provide durable treatment persistence even in biologic-experienced populations.

## Psoriasis, Biologic Therapy, and Dementia Risk: A Two-Part Propensity Score-Matched Cohort Study of Over 600,000 Patients

**Dr. Hanni Robinson**

*Hadassah Ein Kerem Hospital*

Dr. Irene Unterman, Prof. Vered Molho-Pessach

Hadassah Medical Center

**Background:** Dementia affects over 55 million people worldwide and is projected to triple by 2050<sup>1</sup>. Psoriasis, a chronic immune-mediated inflammatory disease affecting 2–3% of the global population, is characterized by systemic elevation of TNF- $\alpha$ , IL-17A, and IL-23 cytokines. These are also implicated in Alzheimer's disease (AD) neuroinflammation<sup>2-7</sup>. Prior studies report conflicting associations between psoriasis and dementia risk<sup>3-5</sup>, and no study has examined whether biologics differentially affect risk of dementia in psoriasis.

**Methods:** Two-part retrospective propensity score-matched cohort study using the TriNetX Global Collaborative Network (66–67 healthcare organizations). Part 1 compared patients aged  $\geq 65$  with psoriasis (ICD-10: L40.x) to matched seborrheic keratosis controls. Part 2 compared four biologic classes (TNF alpha-inhibitors, IL-17 inhibitors, IL-23 inhibitors, IL-12/23 inhibitors) against conventional systemic therapy (methotrexate, cyclosporine, acitretin, dimethyl fumarate) in psoriasis patients. Patients with pre-existing dementia were excluded. Primary outcome was new-onset dementia (ICD-10: F01–F03, G30, G31). Analyses included Kaplan–Meier survival, Cox proportional hazards, risk ratios, and log-rank testing.

**Results:** Part 1 (n=608,913 matched): psoriasis was associated with significantly higher dementia incidence (5.1% vs. 3.6%; RR 1.427 [95%CI 1.393–1.462]; HR 1.160 [1.132–1.189], p<0.001). Part 2: all biologic classes showed significantly reduced dementia risk versus systemic therapy. TNF alpha inhibitors showed no significant effect, serving as a negative control against healthy-user bias. IL-23 inhibitors showed the highest reduction in the risk of dementia from all biologics. IL-23 inhibitors showed lower risk of dementia compared to IL-17 inhibitors in a head-to-head comparison.

**Conclusions:** In this retrospective study, psoriasis showed increased dementia risk compared to disease-free population. IL-12/23 inhibitors, IL-17 inhibitors and IL23 inhibitors therapy significantly showed lower risk of dementia compared to systemic medications. To our knowledge, this is the first real-world evidence of pathway-specific neuroprotection in psoriasis. More research is needed to consider prescribing biologics to older psoriasis patients with dementia risk factors.

## Psoriasis and risk of 26 cancers: pooled population-based cohort studies from Israel, Denmark, England, and Taiwan

**Prof. Khalaf Kridin**

*Nahariya Galilee Medical Center*

K. Kridin<sup>1</sup>, Y. Schonmann<sup>2</sup>, A. Egeberg<sup>3</sup>, TC. Wang<sup>4</sup>, CEM Griffiths<sup>5</sup>, DM Aschroft<sup>5</sup>, AD. Cohen<sup>2</sup>

1 Galilee MC

2 Clalit Healthcare Services

3 University of Copenhagen

4 National Taiwan University

5 University of Manchester;

**Background:** Understanding the association between psoriasis and cancer is imperative for providing optimal psoriasis care. We aimed to examine the risk of developing cancer in individuals with psoriasis.

**Methods:** Population-based cohort studies were conducted in Denmark, England, Israel, and Taiwan using linked electronic health records. Individuals aged at least 18 years with a diagnosis of psoriasis during the country-specific study period were matched with up to 6 comparators with no prior record of psoriasis before the index date. Country-specific hazard ratios for the risk of cancer development overall and for 26 site-specific cancers between individuals with and without psoriasis were calculated through Cox regression. Country-specific estimates were pooled using random effects modelling.

**Results:** We included 702,022 individuals with psoriasis and 4,185,342 matched comparators. In models implicitly controlled for age, sex, and calendar time by matching, there was a small association between psoriasis and cancer overall [pooled HR (pHR) 1.08, 95% confidence interval (CI) 1.04–1.13; I<sup>2</sup> = 92.4%]. Adjustment for potential confounding factors resulted in a slight attenuation of risk (pHR 1.05, 95% CI 1.01–1.09; I<sup>2</sup> = 81.2%). When restricted to those with moderate-to-severe psoriasis, the risk of cancer overall was slightly higher (pHR 1.16, 95% CI 1.04–1.28; I<sup>2</sup> = 92.8%). Associations with psoriasis were observed for oral cavity, pharynx, oesophagus, liver, pancreas, kidney, bladder, and keratinocyte cancers, as well as Hodgkin lymphoma, non-Hodgkin lymphoma, and leukaemia. Site-specific associations generally persisted, with slight risk exacerbations and additional associations for lung and ovarian cancers, when limited to people with moderate-to-severe psoriasis.

**Conclusions:** Psoriasis was associated with an increased risk of developing 14 of 26 investigated site-specific cancers, including cancers with a poor prognosis. Our findings can be used to reinforce cancer prevention strategies in psoriasis care.

## Efficacy and Disease-Modifying Potential of Glucagon-Like Peptide 1 Analogues in Psoriasis: A Cohort Study

**Dr. Danielle Bar**

*Sheba Medical Center (Tel HaShomer)*

Sharon Baum, Felix Pavlotsky, Aviv Barzilai  
Sheba medical center

**Background:** Obesity-related metabolic inflammation contributes to psoriasis pathogenesis and is associated with reduced therapeutic response. We sought to investigate whether treatment with GLP-1 analogues improves skin disease in obese patients with psoriasis.

**Methods:** Consecutive patients with psoriasis eligible for GLP-1 analogue therapy (BMI  $\geq 27$ ) were enrolled. A comparator cohort comprised obese patients with psoriasis who did not receive GLP-1 therapy. The primary outcomes were the proportion of patients achieving an investigator's global assessment (IGA) score of 0/1, and the correlation between weight reduction and improvement in skin disease.

**Results:** An IGA 0/1 response was achieved by 16 of 36 patients (44.4%) in the GLP-1 group compared with 7 of 58 patients (12.1%) in the control group ( $P < .001$ ). Greater weight loss correlated with a more rapid response ( $\tau = -0.59$ ;  $P < .001$ ). Among patients receiving biologic therapy, the addition of GLP-1 treatment was associated with superior response rates ( $P = .029$ ).

**Conclusion:** GLP-1 receptor agonists demonstrated efficacy in obese patients with psoriasis and may represent a therapeutic alternative for individuals in whom conventional systemic or biologic therapies are contraindicated, or in those who prefer a non-immunomodulatory approach.

# The role of the skin microbiome in hair disorders: a systematic review

**Sheri Avraham**

*Hadassah Ein Kerem Hospital*

Tahel Fachler, Sheri Avraham, Hanni Robinson, Vered Molho-Pessach, Abraham Zlotogorski  
Hadassah Ein Kerem Hospital

**Background:** In recent decades, studies have been conducted to investigate the role of the body's microbiome in various diseases. Most studies have focused on the gut microbiome, but in recent years, studies have been conducted on the role of the skin microbiome in skin diseases and found that it has a significant impact.

**The aim** of this study is to summarize the studies that have examined the relationship between the skin microbiome and hair diseases, in order to evaluate existing evidence, clarify the potential role of the skin microbiome in hair disorders, identify knowledge gaps, and explore therapeutic approaches.

**Methods:** A systematic review was performed following the PRISMA-2020 guidelines. A comprehensive literature search via PubMed, Embase, Web of Science, Scopus and Cochrane. Studies were included if they were original observational or clinical studies conducted in human participants with a sample size of  $\geq 5$  participants. Both randomized and non-randomized studies were eligible. Reviews, systematic reviews, meta-analyses, case reports or small case series ( $\leq 4$  participants), and animal or in vitro studies were excluded. Study screening and data extraction were performed independently by two reviewers.

**Results:** A total of 3017 records were identified, of which 831 were duplicates. Following the screening process, 91 studies were included in the final analysis. Preliminary results suggest that alterations in the skin microbiome may be associated with hair disorders, with studies reporting differences in microbial composition and diversity between affected and healthy individuals. However, the evidence remains heterogeneous in terms of methodology and outcomes.

**Conclusions:** This systematic review provides an overview of the association between the skin microbiome and hair diseases. While alterations have been observed, further large-scale, well-designed studies are required to clarify its role and therapeutic potential.

Registration: PROSPERO ID CRD420261327313

# Cicatricial Alopecia in the Pediatric Population: A Case Series and Review of the Literature

**Dr. Mirit Glick**

*Schneider Children's Medical Center*

Helena Martinez, Shiran Reiss, Rivka Friedland  
Schneider Children's Medical Center

**Background:** Cicatricial alopecia (CA) in children is an uncommon yet potentially irreversible cause of hair loss. Early recognition and timely intervention are essential to prevent permanent follicular destruction. Both primary and secondary etiologies should be considered, with inflammatory disorders representing the leading causes.

**Methods:** We performed a single-center retrospective study at Schneider Children's Medical Center, Israel, including pediatric patients diagnosed with cicatricial alopecia between 2021 and 2025. Demographic, clinical, trichoscopic, histopathologic, and treatment data were collected and analyzed. Cases of traction alopecia were excluded from the primary analysis due to the ongoing debate regarding its classification as a true cicatricial alopecia. Scalp biopsies were performed in all patients except those diagnosed with inflammatory tinea capitis (kerion).

**Results:** A total of 35 pediatric patients were included, of whom 22 (62.9%) were female, with a median age of 13 years. The most common diagnosis was lichen planopilaris (LPP) in 13 patients (37.1%), followed by folliculitis decalvans in 10 patients (28.6%). Additional diagnoses included discoid lupus erythematosus (DLE) in 5 patients (14.3%), inflammatory tinea capitis (kerion) in 3 patients (8.6%), dissecting cellulitis in 2 patients (5.7%), and morphea in 2 patients (5.7%). Clinically, most patients presented with patchy alopecia characterized by loss of follicular ostia, perifollicular erythema, and scaling. Trichoscopy supported the diagnosis, and histopathology demonstrated findings consistent with the underlying inflammatory or scarring process.

**Conclusions:** This study represents one of the largest single-center pediatric CA cohorts reported to date and highlights the heterogeneous nature of cicatricial alopecia in children. Primary cicatricial alopecias, particularly LPP, predominated, alongside a spectrum of other genera autoimmune and inflammatory conditions. Early recognition based on clinical evaluation and trichoscopy is critical to prevent disease progression. Prompt, targeted therapy may stabilize disease, although established scarring remains irreversible.

# Trichoscopic Patterns in Chemotherapy-Induced Alopecia: Dynamic Changes Across Treatment Stages and the Role of Scalp Cooling

**Dr. Lital Brilant**

*Sheba Medical Center (Tel HaShomer)*

Lital Brilant, Aviv Barzilai, Sharon Baum, Michal Golpur, Hodaya Aharoni, Inbal Greenhouse,  
Anna Lyakhovitsky  
Sheba MC

**Background:** Chemotherapy-induced alopecia (CIA), including both transient and persistent forms (pCIA), is a common and emotionally distressing side effect, particularly among women undergoing taxane-based chemotherapy for breast cancer. Although scalp cooling systems such as Paxman can reduce the incidence and severity of CIA, they remain underutilized. Trichoscopy is a widely used tool for diagnosing and monitoring hair disorders, yet its application in CIA, including post-treatment follow-up, remains underexplored. Prior reports have described overlapping features between CIA and alopecia areata (AA), complicating differential diagnosis. Our aim is to characterize trichoscopic features of CIA across treatment stages, evaluate the protective effects of Paxman scalp cooling, and differentiate CIA from AA.

**Methods:** Female breast cancer patients receiving taxane-based chemotherapy underwent serial trichoscopic evaluations using the Canfield HairMetrix system at baseline, during chemotherapy, and in post-treatment follow-up. A subset of patients using the Paxman scalp cooling system was evaluated in parallel. Findings were compared to those described in the literature for AA.

**Results:** CIA was characterized by hair shaft thinning, caliber variation, broken hairs, early regrowth, and distinctive three-dimensional yellow dots with internal black dots. In contrast to AA, classical exclamation mark hairs and typical yellow dots were absent. Scalp cooling was associated with milder changes, better hair retention, and faster regrowth with fewer dystrophic hairs.

**Conclusion:** CIA presents with distinct, evolving trichoscopic features that help differentiate it from AA. Scalp cooling appears to mitigate follicular damage. Trichoscopy may serve as a valuable noninvasive tool for diagnosis, monitoring, and post-treatment evaluation in CIA.

## Evaluating Neurodevelopmental Sequelae of Propranolol Use in Infantile Hemangioma: A Large-Scale Population-Based Study

**Prof. Khalaf Kridin**

*Nahariya Galilee Medical Center*

K. Kridin, W. Sawaed  
Galilee MC

**Background:** Propranolol is widely adopted as the first-line treatment for problematic infantile hemangioma (IH). Despite its efficacy and widespread use, concerns persist about potential long-term neurodevelopmental risks, given propranolol's ability to cross the blood-brain barrier during early development. We aimed to evaluate the long-term risk of neurodevelopmental disorders among patients with IH treated with propranolol compared to those not receiving systemic therapies, and to assess whether delayed initiation of propranolol affects these risks.

**Methods:** We conducted a population-based, retrospective cohort study. Children with IH diagnosed before age three were grouped based on treatment exposure: propranolol-treated versus untreated (no systemic therapy). Propensity score matching was performed (1:1) for demographics and comorbidities. The primary outcomes included six neurodevelopmental diagnoses: attention-deficit/hyperactivity disorder (ADHD), behavioral and emotional disorders (BED), speech and language development disorders (SLDD), scholastic skill disturbances (SSD), learning disorders (LD), and autism spectrum disorder (ASD). A subanalysis examined delayed initiation of propranolol (3-12 months and 1-2 years after diagnosis).

**Results:** Among 10,143 matched pairs, propranolol use was not associated with increased risk of ADHD, SSD, or ASD. Conversely, propranolol was associated with significantly reduced risks of BED (HR, 0.77; 95% CI, 0.68-0.88), SLDD (HR, 0.77; 95% CI, 0.70-0.85), and LD (HR, 0.78; 95% CI, 0.66-0.93). No increased risk was observed in the delayed-treatment subgroup.

**Conclusions:** Propranolol treatment for IH was not associated with elevated neurodevelopmental risk and may be linked to a lower incidence of several developmental disorders. These findings support the long-term neurodevelopmental safety of propranolol.

## CARMIL2- related Immunodeficiency: A Cutaneous-Centered Disorder of T-cell Metabolism Amenable to Glutamine Rescue

**Dr. Eran Cohen-Barak**

*Emek Medical Center*

M. Kabha<sup>1</sup>, M. Bochnik-Liakes<sup>1</sup>, O. Atar<sup>1</sup>, F. Zagairy<sup>2</sup>, M. Hamed<sup>2</sup>, M. Ziv<sup>2</sup>, S. Reiss-Huss<sup>3</sup>, R. Friedland<sup>3</sup>, N. Danial-Farran<sup>2</sup>, M. Khayat<sup>2</sup>, O. Ishach<sup>4</sup>, Y. Dinur-Schejter<sup>5</sup>, V. Molho-Pessach<sup>5</sup>, I. Somekh<sup>6</sup>, S. Frizinsky<sup>6</sup>, E. Bar-Ilan<sup>6</sup>, S. Greeberger<sup>6</sup>, N. Adeeb<sup>6</sup>, R. Somech<sup>6</sup>, Polina Stepansky<sup>6</sup>, Noga Ron-Harel<sup>1\*</sup>, Eran Cohen-Barak<sup>2,3\*</sup>

1. Technion
2. Emek MC
3. Schneider MC
4. Hillel-Yaffe MC
5. Hadassah Medical Center
6. Sheba MC

**Background:** Inborn errors of immunity (IEIs) are genetically heterogeneous disorders characterized by recurrent infections and immune dysregulation. Among these, CARMIL2 deficiency represents a severe form, often with prominent cutaneous involvement. Although the causative gene has been identified, the mechanisms underlying immune dysfunction remain poorly understood.

**Objective:** To delineate the cutaneous phenotype of patients with CARMIL2 mutations and elucidate the metabolic basis of their immune dysregulation

**Methods:** Clinical, genetic, and histopathological data were collected from 11 patients with genetically confirmed CARMIL2 deficiency. CD4<sup>+</sup> T cells from 9 patients and matched healthy controls underwent bulk RNA sequencing and LC-MS/MS-based metabolomic profiling. Flow cytometry was used to evaluate activation markers and signaling pathways, guided by omics-informed hypotheses for amino acid supplementation experiments.

**Results:** Patients exhibited early-onset, treatment-refractory dermatitis, recalcitrant viral infections (HPV, molluscum contagiosum), and oral ulcers. Transcriptomic analyses revealed downregulation of genes involved in key metabolic pathways, including mTOR signaling, glycolysis, one-carbon metabolism, and glutamine utilization. Metabolomic profiling confirmed reduced intracellular glutamine levels. Ex vivo glutamine supplementation restored NF- $\kappa$ B and mTOR activity and enhanced IL-17A expression in patient-derived CD4<sup>+</sup> T cells.

**Conclusion:** CARMIL2 deficiency impairs T-cell metabolic reprogramming, linking defective nutrient sensing to immune dysregulation and cutaneous pathology. Partial restoration of function through glutamine supplementation suggests a metabolic therapeutic avenue for this rare immunodeficiency.

## Developing International Diagnostic Criteria for Darier Disease: A Delphi Consensus Study Protocol – Darier Disease International Task Force

### Professor Roni P. Dodiuk-Gad

*Emek Medical Center*

Sofia Labbouz<sup>1</sup>, Simon Mueller<sup>2</sup>, Dedee F Murrell<sup>3</sup>, Ori Ben Valid<sup>4</sup>, Rana Ghandour<sup>5</sup>, Itzik Shabat<sup>5</sup>, Omer Levron<sup>5</sup>, Grace Xiong<sup>6</sup>, Alain Hovnanian<sup>7</sup>, Alexander Navarini<sup>2</sup>, Michael Ziv<sup>5,8</sup>, Khaled Ezzedine<sup>9</sup>

1. Department of Dermatology, Ramon y Cajal Hospital, Madrid, Spain
2. Department of Dermatology, University Hospital Basel, Basel, Switzerland
3. Faculty of Medicine, University of NSW, Sydney, Australia, Dept of Dermatology, St George Hospital, Sydney, Australia
4. Gray Faculty of Medical and Health Sciences, Tel Aviv University
5. Ruth and Bruce Rappaport Faculty of Medicine, Technion Institute of Technology, Haifa, Israel
6. Michael G. DeGroot School of Medicine, McMaster University, Hamilton, Ontario, Canada
7. IMAGINE Institute for Genetic Diseases, University of Paris Cité, France and Laboratory of Genetic Skin Diseases, INSERM U1163, Paris, France
8. Department of Dermatology, Emek Medical Center, Afula, Israel
9. Department of Dermatology, Hôpital Henri Mondor, Créteil, France, Epidemiology in Dermatology and Evaluation of Therapeutics (EpiDermE), EA 7379, Paris-Est Créteil University, Créteil, France

**Background:** Darier disease (DD), also known as keratosis follicularis, is a rare autosomal dominant genodermatosis caused by ATP2A2 mutations and characterized by marked phenotypic variability. It typically presents with hyperkeratotic papules in seborrheic areas and characteristic nail and mucosal abnormalities. As with other rare, phenotypically heterogeneous disorders, this variability complicates the development of standardized diagnostic criteria, hindering consistent diagnosis and management. To address this gap, we propose an international Delphi consensus study to establish standardized diagnostic criteria for DD.

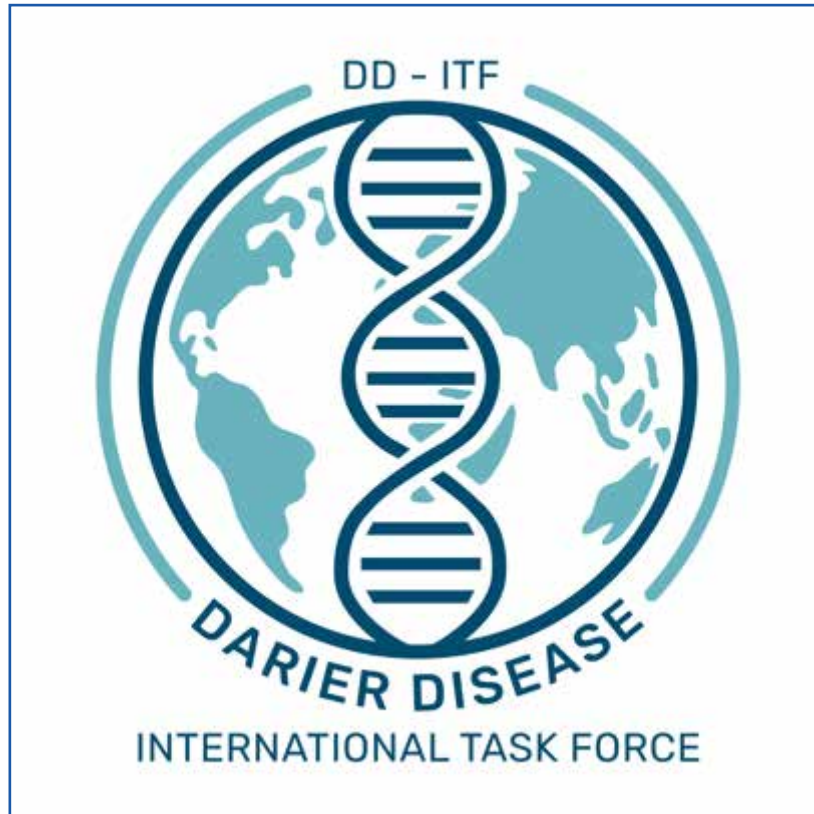
**Methods:** The Darier Disease International Task Force (DD-ITF), a global consortium of 59 DD experts from 25 countries, led this study through a rigorous five-stage methodology: 1) a scoping review to identify potential diagnostic criteria; 2) recruitment of international dermatology experts, followed by a focus group to refine the criteria; 3) a two-round electronic Delphi (e-Delphi) process to achieve consensus on which criteria should be included; 4) classification of agreed-upon criteria into major and minor categories by the Steering Committee, along with proposed thresholds for diagnostic classification (definite, probable, possible, or not a case); and 5) a final consensus meeting where the criteria will be ratified and diagnostic thresholds defined. Criteria will be assessed for agreement using a five-point Likert scale, with provisional consensus defined as  $\geq 70\%$  agreement among participants.

The final diagnostic criteria, based on major/minor classifications and diagnostic thresholds, will be presented for approval at the consensus meeting.

**Results:** The scoping review and expert recruitment phases have been completed. The two-round e-Delphi process is currently underway to establish consensus on diagnostic criteria. Results,

including agreed-upon major and minor criteria and diagnostic thresholds, will be presented at the conference meeting.

**Discussion:** This collaborative, international effort will not only standardize diagnostic criteria for DD but also foster broader international engagement in refining diagnostic processes for rare conditions with complex phenotypic presentations.



## Persistent Cutaneous Lesions of Darier Disease and Second-Hit Somatic Variants in ATP2A2 Gene

**Dr. Majd Shehade**

*Emek Medical Center*

Lihi Atzmony<sup>1,2</sup>, Fadia Zagairy<sup>3</sup>, Yasmin Tatour<sup>4</sup>, Nada Danial-Farran<sup>4</sup>, Michael Ziv<sup>3</sup>  
Roni Dodiuk-Gad<sup>3,5,6</sup>, Eran Cohen-Barak<sup>3,5</sup>

1. Division of Dermatology, Rabin Medical Center, Petach Tikva, Israel
2. Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel
3. Department of Dermatology, Emek Medical Center, Afula, Israel
4. The Genetic Institute, Emek Medical Center, Afula, Israel
5. Bruce and Ruth Rappaport Faculty of Medicine, Technion, Haifa, Israel
6. Department of Medicine, University of Toronto, Toronto, Ontario, Canada

**Background:** Darier disease (DD) is a rare autosomal dominant genodermatosis caused by heterozygous germline mutations in the ATP2A2 gene. Clinically, it is characterized by recurrent hyperkeratotic papules and plaques, located primarily in seborrheic areas. While some lesions wax and wane and are influenced by environmental factors, others persist and show poor therapeutic response. The molecular basis underlying this lesion-specific persistence remains poorly understood.

**Methods:** Samples were collected from 9 patients with DD. DNA was extracted from blood, unaffected skin, transient lesions, and persistent lesions. Genetic analysis was performed using paired-whole exome sequencing of affected skin and blood or by deep sequencing of ATP2A2 of affected skin. Chromosomal microarray analysis was used to detect copy number variants and loss of heterozygosity. All variants were validated by Sanger sequencing or restriction fragment length polymorphism analysis.

**Results:** All patients had heterozygous pathogenic germline variants in the ATP2A2 gene. All 11 persistent skin lesions were associated with second-hit somatic variants in the ATP2A2 gene. The somatic variants were classified as highly deleterious via combined annotation-dependent depletion (CADD) scores or affect splicing. Second-hit variants in the ATP2A2 gene were not identified in the transient lesions (n = 2) or the normal skin (n = 2).

**Conclusion:** In this study, persistent DD lesions were associated with the presence of second-hit somatic variants in the ATP2A2 gene. Identification of these second-hit variants offers insight into the underlying mechanisms that contribute to the lasting nature of persistent DD lesions.

## NLRP7 promoter methylation affects epidermolysis bullosa simplex severity

**Lubna Gazi Khair**

*Ichilov Medical Center (Sourasky)*

L. Gazi Khair<sup>1,2</sup>, O. Sarig<sup>1</sup>, R. Fayez Ishtewy<sup>1,2</sup>, Y. Moskovitz<sup>1</sup>, K. Malovitski<sup>1,2</sup>, A. Zenab<sup>1</sup>, T. Kocher<sup>3</sup>, J. Hummel<sup>3</sup>, J. Pinon Hofbauer<sup>3</sup>, M. Arad<sup>1,2</sup>, E. Sharoni<sup>1</sup>, N. Adam<sup>1,2</sup>, B. Avshalom<sup>1</sup>, U. Koller<sup>3</sup>, V. Wally<sup>3</sup>, L. Samuelov<sup>1,2</sup>, E. Spreche<sup>1,2</sup>

1. Division of Dermatology, Tel Aviv Medical Center
2. Gray Faculty of Medical and Health Sciences, Tel Aviv University
3. EB House Austria, Department of Dermatology and Allergology, University Hospital of the Paracelsus Medical University Salzburg, Austria

**Background:** Epigenetic mechanisms have recently emerged as potential modifiers of clinical variability in inherited skin diseases. Here we aimed to explore epigenetic modulation of NLRP7 expression as a potential mechanism mediating disease severity in KRT14-associated epidermolysis bullosa simplex (EBS).

**Methods:** We used reduced-representation bisulfite sequencing (RRBS) to identify differentially methylated genomic regions. We experimentally manipulated methylation using DNMT1/3 in combination with S adenosyl methionine and employed the hypomethylating agent 5-aza 2' deoxycytidine. The functional consequences of these manipulations were assessed through luciferase promoter activity assays, RT qPCR and ELISA.

**Results:** RRBS performed in a cohort of 39 epidermolysis bullosa (EB) patients revealed a differentially methylated region spanning the NLRP7 promoter and first non-coding exon in patients with a severe EB phenotype. We subsequently identified two CpG sites at positions CpG1: 54966285 and CpG2: 54966302 showing consistent hypermethylation in severe KRT14-associated EBS. We engineered a series of NLRP7 promoter-first exon constructs, including constructs in which only one of the methylation-sensitive CpG dinucleotides remained intact, a fully methylation-competent sequence, and a variant where both CpG motifs were disrupted. Hypermethylation at either CpG site suppressed NLRP7 promoter activity and as a consequence, abolished NLRP7 expression at the mRNA and protein levels. Hypomethylation rescued these effects. Using a luciferase promoter activity assay, RT-qPCR, ELISA, and Western blotting, we showed that NLRP7 silencing driven by targeted CpG methylation increases interleukin (IL)-1 $\beta$  and IL-18 secretion as well as triggers activation of NF- $\kappa$ B signaling. Importantly, IL-1 $\beta$  neutralization abolished NF- $\kappa$ B activation despite unchanged CpG methylation status, indicating that methylation activates NF- $\kappa$ B signaling indirectly, initiating a cytokine-dependent amplification loop.

**Conclusions:** Collectively, our findings suggest that NLRP7 promoter methylation may epigenetically modify the severity of EBS by amplifying cutaneous inflammation. This work supports the notion that recently introduced therapies targeting IL-1 $\beta$  may particularly benefit EB patients with NLRP7 promoter hypermethylation.

## JAK Inhibitors in Moderate to Severe Alopecia Areata in Children: A Real World Single Center Experience

**Dr. Mirit Glick**

*Schneider Children's Medical Center*

Helena Martinez<sup>1</sup>, Yael Renart-Yuval<sup>2</sup>, Rivka Friedland<sup>2</sup>,

1. Rabin MC

2. Schneider Children's Medical Center

**Background:** Alopecia areata (AA) in children may present with moderate-to-severe disease (SALT  $\geq 50$ ) and significant psychosocial burden. Early intervention in this population is critical, as prolonged disease activity is associated with poorer outcomes. Janus kinase (JAK) inhibitors have emerged as effective treatments, yet pediatric data remain limited.

**Objectives:** To evaluate the clinical outcomes and safety of JAK inhibitors in pediatric patients with moderate-to-severe alopecia areata.

**Methods:** We conducted a retrospective single-center study at Schneider Children's Medical Center, Israel, including patients aged 3-18 years with moderate to severe AA treated with JAK inhibitors between 2023 and 2025. Treatments included ritlecitinib (n=20), tofacitinib (n=7) and baricitinib (n=7n). All patients received concomitant adjunctive therapy with oral minoxidil and antihistamines. Clinical response, time to improvement, and adverse events were assessed.

**Results:** A total of 34 patients were included. Clinical improvement was observed in most patients across all treatment groups. Initial response was typically observed within 3-6 months, with progressive hair regrowth thereafter. Ritlecitinib was the most commonly used agent, reflecting evolving treatment patterns and availability.

Treatment was generally well tolerated. Reported adverse events were mild and included upper respiratory tract infections and transient laboratory abnormalities. No serious adverse events or treatment discontinuations due to side effects were observed.

**Conclusions:** This real-world cohort suggests that JAK inhibitors, particularly when initiated early and used in combination with adjunctive therapies, are effective and well tolerated in pediatric patients with moderate to severe alopecia areata. The consistent clinical response despite high baseline disease burden highlights their role as a key therapeutic option in children. Early use of JAK inhibitors may alter the disease trajectory in children with severe alopecia areata. These findings support the expanding use of JAK inhibitors in pediatric dermatology and underscore the need for prospective studies to define optimal timing, combination strategies, and long-term safety.

# Epidemiological and Clinical Characterization of Pediatric Lichen Sclerosus

**Dr. Edan Davidson**

*Hadassah Ein Kerem Hospital*

Edan Davidson<sup>1</sup>, Roni Twizer<sup>1</sup>, Mor Sachs<sup>1</sup>, Yasmin Leiba<sup>1</sup>, Shoshana Greenberger<sup>2</sup>, Hiba Zaaroura<sup>3</sup>, Rivka Friedland<sup>4</sup>, Ayelet Ollech<sup>5</sup>, Amir Horev<sup>6</sup>, Vered Molho-Pessach<sup>1</sup>

1. Department of Dermatology, Hadassah Medical Center, Hebrew University of Jerusalem, The Faculty of Medicine
2. Pediatric Dermatology Unit, Dermatology Department, Sheba Medical Center, Ramat Gan, Israel
3. Department of Dermatology, Rambam Health Care Campus, Haifa, Israel
4. Division of Dermatology, Rabin Medical Center, Petah Tikva, Israel
5. Pediatric Dermatology Service, Shaare Zedek Medical Center, Jerusalem, Israel
6. Department of Dermatology and Venereology, Soroka Medical Center, Beer-Sheva, Israel

**Background:** Lichen sclerosus et atrophicus (LSA) is a chronic inflammatory dermatosis with a strong predilection for the anogenital region, that carries the risk for scarring and long-term functional impairment. While well studied in adults, pediatric LSA remains poorly characterized. This study aims to characterize epidemiological features, potential predisposing factors, clinical presentation, response to treatment and prognosis in the largest pediatric LSA cohort to date.

**Methods:** We performed a retrospective multicenter study across six Israeli tertiary medical centers. We identified 283 children diagnosed with genital LSA between 2007 and 2025. Patient demographics, clinical features, disease extent, treatments, and outcomes were collected from medical health records. Data was analyzed using SPSS statistical software.

**Results:** A total of 283 children were included, median age at diagnosis was 7 years (range 2–18 years), with strong female predominance (97%), most were prepubertal at presentation. Autoimmune comorbidities were noted in 10%, mean age of diagnosis was 6.6 years (SD± 3.20), and pruritus was the most common presenting symptom (64%). All patients received topical corticosteroids as first-line therapy, and 52% required more than one treatment modality. Median follow-up duration was 4 months (IQR 0–15), 27% did not return after a single visit, and complete remission at the last visit was documented in 27%, all suggesting the disease may be self-limiting in some patients. Longer follow-up duration was significantly associated with higher remission rates ( $p = 0.013$ ), and older age at diagnosis was significantly associated with a lower likelihood of remission ( $p = 0.025$ ). Long-term sequelae were infrequent: clitoral phimosis in 4.2%, labial adhesions in 3.8% and no malignant transformation was observed.

**Conclusions:** This Israeli multicenter cohort of 283 children is the largest epidemiological investigation of pediatric LSA to date, and provides valuable insight into the clinical spectrum and natural history of the disease.

## Prevalence of Colophony Sensitization Among Patients With Suspected Shoe-Related Allergic Contact Dermatitis

**Mr. Itay Shavit**

*Tel Aviv University*

I. Shavit<sup>1</sup>, R. Linzen<sup>1</sup>, Y. Hilerowicz<sup>2</sup>, Y. Lavi<sup>3</sup>, A. Barzilai<sup>3</sup>, M. Solomon<sup>3</sup>

1. Tel Aviv University
2. The Hebrew University
3. Sheba Medical Center

**Background:** Shoe-related allergic contact dermatitis (ACD) is a common occupational condition, particularly among military personnel exposed to prolonged friction, moisture, and medical adhesives. Colophony, a component of many adhesives and shoe glues, is a known sensitizer, but its prevalence among Israeli soldiers has not been systematically studied.

**Objectives:** To assess the prevalence of colophony sensitization in patients evaluated for suspected shoe-related ACD and to compare rates between soldiers and civilians.

**Methods:** This retrospective single-center study included adults referred for patch testing between 2009 and 2025 with suspected foot-related ACD who underwent testing with a shoe allergen series and had documented occupational status. Colophony sensitization was defined as a positive reaction to colophonium and/or hydroabietyl alcohol.

**Results:** Among 231 patients (84 soldiers, 147 civilians), soldiers were younger, predominantly male, and had shorter symptom duration ( $P < 0.001$ ). At least one positive patch test was found in 45% of soldiers and 38% of civilians. Sensitization to colophony and 1,3-diphenylguanidine was more frequent among soldiers ( $P = 0.04$  and  $P = 0.047$ ). No consistent temporal trend was observed.

**Conclusions:** Colophony sensitization is common in shoe-related ACD and appears more prevalent in military personnel, likely reflecting occupational exposure to footwear materials and medical adhesives.

## 15-Year Experience of Patch Testing During Pregnancy: Retrospective case-control study from a Tertiary Israeli Center

**Dr. Igor Snast**

*Bellinson Hospital*

D. Hilewitz<sup>1,2</sup>, A. Trattner<sup>1,2</sup>, Y. Noyman<sup>1,2</sup>, I. Radinsky<sup>2,3</sup>, N. Ben Simon<sup>2</sup>, S. Sherma<sup>1,2</sup>, D. Mimouni<sup>1,2</sup>, I. Snas<sup>1,2</sup>

**Background:** Although patch testing (PT) is not contraindicated during pregnancy, most dermatologists defer testing due to lack of data and possibility that immunologic changes might influence outcomes. In our center we routinely perform PT during pregnancy as it is not known to be teratogenic and may lead to significant improvements in quality of life.

**Objective:** To assess whether pregnancy alters the outcome of PT.

**Methods:** A retrospective, single-center case-control study was conducted at a tertiary Israeli dermatology clinic (2009–2023). Women who gave birth within 40 weeks of PT were identified, and for each, three age-, sex-, year-, and atopic dermatitis-matched controls were selected.

**Results:** Of 3351 women tested, 54 (1.6%) were pregnant at the time of PT. Most were tested during the first trimester (63%). No significant differences were found in the frequency of positive patch test reactions between pregnant women and matched controls. The most common allergens in pregnant patients were nickel sulfate (61.1%), 2-hydroxyethyl methacrylate (13.64%), and fragrance mix II (5.5%).

**Conclusion:** Pregnancy does not appear to significantly affect patch test outcomes. PT may be considered during pregnancy when clinically indicated.

## Potassium dichromate sensitivity presenting as tefillin dermatitis: A retrospective cohort study

**Dr. Igor Snast**

*Bellinson Hospital*

D. Hilewitz<sup>1,2</sup>, A. Trattner<sup>1,2</sup>, Y. Noyman<sup>1,2</sup>, D. Mimouni<sup>1,2</sup>, I. Snast<sup>1,2</sup>

**Background:** Tefillin are a religious article worn by Jewish men during daily prayer. Tefillin dermatitis secondary to potassium dichromate sensitivity is recognized, but data remain sparse.

**Objective:** To investigate the prevalence and clinical characteristics of tefillin dermatitis.

**Methods:** Patients who underwent European standard patch testing in a tertiary dermatology clinic in 2009–2023 and were diagnosed with tefillin dermatitis were identified by file review and their clinical data recorded.

**Results:** Of 1679 consecutive male patients tested, 25 (1.49%) were diagnosed with tefillin dermatitis, accounting for 15.34% of all potassium–dichromate–positive patients (163/1679). Mean pre-symptomatic duration of tefillin use was  $38 \pm 16.9$  years, and mean follow-up time,  $3.1 \pm 2.9$  years. Patients presented with an eczematous rash on body areas in direct contact with the leather box or straps of the tefillin. An id reaction was noted in 32%, and sensitivity to other leather accessories, in 44%. Fourteen patients (56%) switched to chromate-free tefillin: symptoms resolved completely in 11 (79%) and partially in 2.

**Conclusion:** This is the largest study to date of tefillin dermatitis caused by sensitivity to potassium dichromate used in leather production. Prognosis after switching to chromate-free tefillin was good-to-excellent. Tefillin dermatitis may be more prevalent than previously thought.

## Epidemiology of Sensitivity to Nickel, Cobalt and Chromium in Israel: A Retrospective Cohort Study

**Dr. Igor Snast**

*Bellinson Hospital*

D. Hilewitz<sup>1,2</sup>, A. Trattner<sup>1,2</sup>, A. Hackett<sup>1,2</sup>, A. Raviv<sup>1,2</sup>, Y. Noyman<sup>1,2</sup>, S. Endelman<sup>1,2</sup>, D. Slodownik<sup>2,3</sup>, D. Daniely<sup>2,3</sup>, R. Friedland<sup>2,4</sup>, D. Mimouni<sup>1,2</sup>, I. Snast<sup>1,2</sup>

**Background:** Nickel, cobalt and chromium are three common allergens included in the European baseline series (EBS). There is limited data regarding the epidemiology of these metals in Israel.

**Objective:** To investigate the epidemiology of sensitivity to nickel, cobalt and chromium in the EBS in a single center in Israel.

**Methods:** Retrospective cohort study that included all patients who underwent patch testing with the EBS in a tertiary center in Israel (2009–2023).

**Results:** Of 5234 consecutive patients (1679 males [32.1%]) 2158 (41%) were sensitive to nickel, 541 (10.3%) to cobalt and 383 (7.3%) to chromium. During the study period nickel sensitivity was stable, and was associated with female sex and age 18–40 years. Among both sexes cobalt sensitivity decreased significantly from 11.7% in 2009–2011 and to 7.9% in 2020–2023, and was associated with female sex and age <18 years. Chromium sensitivity decreased significantly from 11.1% in 2009–2011 to 5% in 2020–2023 and was associated with male sex and older age (>60 years). Among both sexes cobalt strongly co-reacted with nickel (OR=1.69, 95% CI 1.38–2.06, p<0.001) and chromium (OR=3.57, 95% CI 2.67–4.55, p<0.001). Nickel–cobalt co-sensitization was significantly more common among patients with strong (++) or very strong (+++) nickel sensitivity compared to patients with weak (+) sensitivity. Among patients with nickel sensitivity the strong (++) or very strong (+++) reaction (36.3%) was significantly more common compared to patients with cobalt or chromium sensitivity.

**Conclusion:** In this retrospective study prevalence of sensitivity to nickel was stable but much higher compared to European and North American studies highlighting necessity for multicenter and general population studies and possibly a legislation regarding nickel restriction.

## Risk of Hematologic Malignancies in Patients with Atopic Dermatitis receiving Topical Calcineurin Inhibitor Therapy

**Dr. Irene Unterman**

*Hadassah Ein Kerem Hospital*

Vered Molho-Pessach

Hadassah Ein Kerem Hospital

**Background:** Topical calcineurin inhibitors (TCIs) are widely used to treat atopic dermatitis in both children and adults. In 2006, the FDA issued a black box warning citing a potential increased risk of malignancy, particularly lymphoma, leading to ongoing controversy. Subsequent studies have yielded conflicting findings. This study aimed to evaluate the association between TCI use and hematologic malignancies in a large retrospective cohort.

**Methods:** We conducted a retrospective active-comparator cohort study using a target trial emulation framework within TriNetX, a global federated health research network. Electronic health records from over 170 million patients were queried to identify patients with atopic dermatitis treated with TCIs or topical corticosteroids (TCSs). Patients were propensity score-matched on demographic variables and relevant comorbidities, including asthma, food allergy, and immunodeficiency.

**Results:** 115,983 patients were included in the TCI cohort, and 191,179 in the TCS cohort. After propensity score matching, each group had 112,176 patients. After matching, demographics were similar between cohorts, with slightly more immune deficient patients in the TCI cohort. The propensity score-matched cohorts had no difference in incidence of hematologic malignancies. The 10-year cumulative incidence of hematologic malignancies was low (~0.3%) in both cohorts. No significant differences in lymphoma or other hematological malignancies were observed in subgroup analyses for children and adults. Prolonged TCS exposure was also not associated with hematologic malignancies.

**Conclusions:** TCI use was not associated with an increased risk of hematologic malignancies compared to TCSs. Given the low absolute incidence observed, these findings support the overall safety of TCIs with respect to hematologic malignancy risk. Limitations include lack of data on dosing, compliance and explicit atopic dermatitis severity scores.

## Gestational Diabetes Mellitus Increases the Risk of Atopic Dermatitis in Children: A National Retrospective Study

**Prof. Amir Horev**

*Head of Pediatric Dermatology Service, Soroka University Medical Center*

Sarah Weissmann, Nir Amitai, Tamar Eshkoli  
Ben-Gurion University

**Background:** Atopic dermatitis (AD) is a common childhood inflammatory disease influenced by genetic and environmental factors. Maternal metabolic conditions, including gestational diabetes mellitus (GDM), may affect offspring risk, but large population-based studies are limited. We aimed to examine the association between maternal GDM and offspring AD, and whether risk varies by maternal diabetes treatment type.

**Methods:** We conducted a retrospective cohort study of 326,611 mother-child dyads from Clalit Health Services, Israel, between 2010–2023. GDM was classified as diet-controlled (A1) or pharmacologically treated (A2). Offspring AD was identified using ICD-10 codes. Multivariable logistic regression estimated adjusted odds ratios (aORs), controlling for maternal age, allergic history, smoking, gestational age, infant sex, and follow-up duration.

**Results:** A total of 326,611 mother-child dyads were included in the final cohort: 16,008 (4.9%) were born to mothers with GDM. Of the 16,008 (4.9%) mothers with GDM, offspring AD prevalence was higher than in non-GDM offspring (28% vs. 26%,  $p < 0.001$ ). Maternal GDM was independently associated with increased offspring AD risk (aOR 1.07, 95% CI 1.03–1.11,  $p < 0.001$ ). Additional independent predictors included maternal allergic rhinitis, asthma, smoking, male sex, and shorter gestational age.

**Conclusions:** Maternal GDM is associated with an increased risk of AD in offspring, independent of maternal allergic and perinatal factors, though causality cannot be inferred due to retrospective study design. These findings may suggest a role of maternal metabolic health in early-life immune and skin barrier development.

# Impact of Rituximab Timing on Long-Term Outcomes in Pemphigus: A Real-World Propensity-Matched Study

**Prof. Khalaf Kridin**

*Nahariya Galilee Medical Center*

K. Kridin<sup>1</sup>, W. Sawaed<sup>1</sup>, R.J. Ludwig<sup>2</sup>

1. Galilee MC
2. University of Lubeck

**Background:** Rituximab has transformed the management of pemphigus; however, the optimal timing of initiation relative to disease onset remains uncertain. We aimed to compare long-term outcomes among patients with pemphigus receiving early rituximab (within 1 year of diagnosis) versus late rituximab ( $\geq 1$  year after diagnosis).

**Methods:** We conducted a retrospective cohort study using the Global Collaborative Network. Adult patients with pemphigus treated with rituximab were identified and propensity score-matched 1:1 based on demographic characteristics, comorbidities, and prior immunosuppressive drug exposure. Primary outcomes included mortality, corticosteroid-related complications (type-2 diabetes mellitus, hypertension, osteoporosis), infectious and thromboembolic events, relapse, and systemic corticosteroid dependence. Hazard ratios (HRs) were estimated using Cox regression.

**Results:** A total of 1,172 patients were included (586 early; 586 late). Early rituximab was associated with significantly reduced risks of type-2 diabetes mellitus (6.2% vs 18.8%; HR 0.44, 95% CI 0.30-0.65), osteoporosis (3.3% vs 12.8%; HR 0.40, 95% CI 0.24-0.66), and hypertension (13.1% vs 31.6%; HR 0.58, 95% CI 0.43-0.76). Mortality and infectious complications were numerically lower with early treatment but did not reach statistical significance. Early rituximab was associated with sustained reductions in relapse and corticosteroid dependence at  $\geq 2$  years (relapse: 47.3% vs 85.2%; HR 0.80; corticosteroid use: 37.5% vs 86.0%; HR 0.56),  $\geq 3$  years (HR 0.77 and 0.55, respectively), and  $\geq 5$  years (HR 0.73 and 0.51, respectively).

**Conclusions:** Early initiation of rituximab in pemphigus is associated with reduced corticosteroid-related complications, lower relapse rates, and decreased long-term corticosteroid dependence compared with delayed treatment, supporting early B-cell depletion as a strategy to optimize long-term outcomes.

## Assessing ST18 gene polymorphisms (rs17315309, rs2304365) in Israeli patients with Pemphigus vulgaris

**Dr. Wisal Sawaed**

*Nahariya Galilee Medical Center*

Wisal Sawaed, yasmin yosif, Khalaf Kridin  
Nahariya Medical Center, Israel

**Background:** Pemphigus vulgaris (PV) is a severe autoimmune blistering disease caused by autoantibodies against desmoglein (DSG) 1 and 3, leading to loss of keratinocyte adhesion. Genetic factors, particularly polymorphisms in the ST18 gene, have been implicated in PV susceptibility in a population-dependent manner. This study aimed to investigate the association between ST18 polymorphisms (rs17315309 A/G and rs2304365 C/T), disease susceptibility, antibody levels, and ethnic background in PV patients.

**Methods:** Thirteen PV patients and eight healthy donors were included. Serum anti-DSG1 and DSG3 levels were measured by ELISA. ST18 polymorphisms were genotyped using PCR and Sanger sequencing. Genotype and allele frequencies were compared between groups, and associations with antibody levels, ethnicity, and clinical features were evaluated.

**Results:** Allele analysis of rs2304365 showed a higher frequency of the C allele in PV patients compared to controls (80.7% vs. 50%,  $p=0.036$ ), although genotype distribution did not reach statistical significance ( $p=0.07$ ). No significant differences were observed for rs17315309 between PV patients and controls ( $p=0.19$ ).

A strong association was found between the rs17315309 genotype and ethnicity: all Arab patients carried the AG genotype, whereas all Jewish patients had the AA genotype ( $p<0.001$ ), indicating a population-specific effect. No significant association with ethnicity was observed for rs2304365 ( $p=0.24$ ).

No association was detected between ST18 polymorphisms and antibody positivity. However, T allele carriers in rs2304365 (CT+TT) showed a trend toward higher DSG3 levels compared to CC homozygotes. For rs17315309, DSG3 levels were similar between genotypes, while AA carriers exhibited higher DSG1 levels compared to GA carriers.

No significant association was found between ST18 polymorphisms and clinical phenotype.

**Conclusions:** ST18 polymorphisms demonstrate population-dependent patterns in PV. rs17315309 is strongly associated with ethnicity rather than disease susceptibility, while Assessing genetic,

## phenotypic, and polygenic risk associations of autoimmune comorbidities in FinnGen patients with vitiligo

**Dr Mor Pavlovsky**

*Division of Dermatology, Tel Aviv Medical Center*

Simon Chen<sup>1</sup>, Mor Pavlovsky<sup>2</sup>, Mary Pat Reeve<sup>3</sup>, Thierry Passeron<sup>4</sup>, Iltefat Hamzavi<sup>5</sup>, Melis Atalar<sup>6</sup>, Pranab Ghosh<sup>6</sup>, Victoria Basey<sup>7</sup>, Roni Adiri<sup>8</sup>

1. Pfizer Inc NY USA
2. Tel Aviv MC Israel
3. Institute for Molecular Medicine Finland Helsinki Institute of Life Science University of Helsinki Helsinki Finland
4. University Côte d'Azur Centre Hospitalier Universitaire Nice Department of Dermatology Nice France and University Côte d'Azur INSERM U1065 C3M Nice France
5. Henry Ford Health Multicultural Dermatology Center Detroit MI USA and Hamzavi Dermatology Detroit MI USA
6. Pfizer Inc Cambridge MA USA
7. Pfizer Ltd Surrey UK
8. Pfizer Pharmaceutical Israel Ltd Herzliya Pituach Israel

**Background:** Vitiligo is an autoimmune skin disease characterized by the loss of skin pigmentation due to the destruction of melanocytes. Polygenic risk factors are known to contribute significantly to its development. Individuals with vitiligo often exhibit higher prevalence of autoimmune comorbidities, suggesting shared genetic and immunological background. Utilizing data from the FinnGen study, this study investigated the genetic, phenotypic, and polygenic risk associations of autoimmune comorbidities in Finnish patients with vitiligo.

**Methods:** A genome-wide association study (GWAS) detected genetic variants linked to vitiligo. Phenotypic analyses compared patients with vitiligo to matched controls, and patients with vitiligo in the top 20% of  $\geq 1$  predefined vitiligo polygenic risk score (PGS) distribution to those not in the top 20% of vitiligo PGS distributions. Analysis of the impact of PGS on risk of comorbidities compared all patients with vitiligo and patients in the top 20% of  $\geq 1$  vitiligo PGS distribution.

**Results:** 629 patients with vitiligo and 388,760 controls were included. The GWAS confirmed previously reported associations. Vitiligo conferred genome-wide significant increased risk of alopecia areata, atopic dermatitis, thyroid gland disorders, rheumatoid arthritis (RA), and vitamin B12 deficiency anemia vs controls. Patients in the top 20% of  $\geq 1$  vitiligo PGS had significantly increased risk of type 1 diabetes (T1D) and thyroid gland disorders compared to those not in the top 20% of vitiligo PGS. In the PGS analysis, vitiligo conferred significantly higher risk of developing psoriasis, T1D, RA, and hypothyroidism, and lower risk of developing multiple sclerosis compared to controls. Associations were stronger among the top 20% of PGS distributions.

**Conclusions:** This is the first study highlighting genetic and polygenic contributions to vitiligo and its autoimmune comorbidities in Finnish patients. Individuals with higher vitiligo PGS exhibited elevated risk for several comorbid autoimmune diseases, supporting polygenic risk profiling utility in risk stratification and personalized care.

## The association between vitiligo and uveitis: a large population-based study

**Dr. Shany Sherman Bergman**

*Rabin Medical Center*

Dr. Oran Mann<sup>1</sup>, Dr. Arnon D. Cohen<sup>1</sup>, Dr. Doron Comaneshter<sup>1</sup>, Dr. Doron Netzer<sup>1</sup>, Dr. Sapir Glazer Levavi<sup>2</sup>, Dr. Itay Cohen<sup>3</sup>, Dr. Shany Sherman<sup>2</sup>

1. Clalit Healthcare Services, Tel Aviv, Israel
2. Division of Dermatology, Rabin Medical Center - Beilinson Hospital, Petach Tikva, Israel
3. Rutgers School of Public Health, Rutgers University, Piscataway, NJ, USA

**Background:** Vitiligo is a common acquired immune-mediated skin disease, often associated with other systemic inflammatory conditions. However, a clear association between vitiligo and uveitis, a vision-threatening inflammatory eye condition, has not been confirmed. This study sought to investigate the association between vitiligo and uveitis.

**Methods:** A large population-based cross-sectional study was conducted. The database of a large health maintenance organization was screened for patients with a dermatologist-documented diagnosis of vitiligo as of January 2024. Cases secondary to Behçet disease or Vogt-Koyanagi-Harada syndrome were excluded. Eligible patients were matched 4:1 with healthy controls, and the groups were compared for prevalence of uveitis, as documented clinically by an ophthalmologist in the same database. Outcome measures were adjusted for age, sex, and referral clinic. Multivariate logistic regression models were applied to study the independent relationship between variables.

**Results:** The study population included 24,398 consecutive patients with vitiligo and 114,609 control subjects. The estimated prevalence of uveitis was 0.53% and 0.39%, respectively. The likelihood of having uveitis was almost 35% higher in the patient than the control group (OR 1.35; CI 1.11-1.64;  $p=0.003$ ). On multivariate analysis, there was an independent association between vitiligo and uveitis (OR 1.33; CI 1.06-1.67,  $p=0.016$ ) regardless of a history of uveitis-associated conditions (inflammatory bowel disease, sarcoidosis).

**Conclusion:** Vitiligo is significantly associated with an increased prevalence of uveitis. Dermatologists should be alert to this potential comorbidity, because a coordinated multidisciplinary approach is essential to prevent long-term ocular sequelae. Large prospective studies are needed to corroborate these findings.

## Supporting Late-Phase Clinical Development of Upadacitinib: Validation of Three-Dimensional Imaging for Facial Vitiligo Assessment

**Amber Abir, MD**

*Sheba Medical Center (Tel HaShomer)*

Daniel Mimouni<sup>1</sup>, Shany Sherman<sup>1</sup>, Avishay Tzur<sup>2</sup>, Sandra L. Goss<sup>3</sup>, Ted He<sup>3</sup>, Stavonnie Patterson<sup>3</sup>

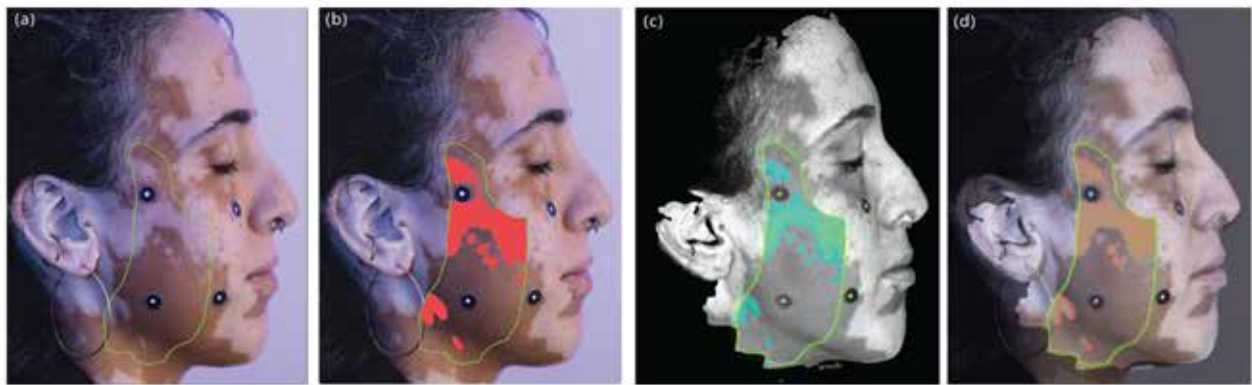
1. Division of Dermatology, Rabin Medical Center; Faculty of Medicine, Tel Aviv University
2. Cherry Imaging Ltd
3. AbbVie Inc

**Background:** Upadacitinib, a selective Janus kinase 1 (JAK1) inhibitor, is being evaluated in late-phase clinical trial for vitiligo, highlighting the need for reliable and objective tools to assess facial disease extent and monitor treatment response. Current clinical scores (e.g., F-VASI) rely on visual estimation and are subject to intra- and inter-rater variability. Three-dimensional (3D) imaging offers a potential objective alternative for quantifying lesion surface area. This study evaluated a 3D imaging platform against two-dimensional (2D) ultraviolet (UV) photography as a reference standard.

**Methods:** This non-interventional, exploratory study enrolled 19 adults with non-segmental vitiligo and significant facial involvement. Participants underwent full-face 3D scanning using the Cherry 3D imaging platform, which incorporates multispectral algorithms and manual thresholding for lesion demarcation. Reference measurements were based on investigator-annotated facial 2D images acquired under UV light. Following pixel-level spatial alignment, performance across a total of 48 facial regions was assessed using the Dice Similarity Coefficient (DSC).

**Results:** Participants (mean age of 47.7 years, Fitzpatrick phototypes I-IV) had a mean F-VASI score of 0.94. The 3D platform achieved good spatial agreement (mean DSC: 0.707) with the 2D reference. A positive correlation was observed between skin phototype and DSC (Spearman's  $\rho = 0.302$ ,  $p = 0.037$ ). The highest accuracy was observed in darker skin tone (Type IV, mean DSC: 0.763). Facial topography also influenced performance, with flatter regions (cheeks, forehead) exhibited higher agreement than contoured areas (nose, lips).

**Conclusions:** This 3D imaging platform represents a promising advancement for the objective evaluation of facial vitiligo. It provides a standardized, quantitative method for assessing lesion area with good concordance to the reference standard. Agreement was highest in darker skin phototypes and flatter facial regions. Future larger-scale studies across more diverse populations are warranted to validate these findings and support broader generalizability.



**Figure 1: Visual comparison of aligned investigator-annotated vitiligo lesions and the Cherry 3D threshold annotation.** (a) Cherry software-generated region boundaries overlaid on the 2D UV photograph. (b) Investigator manual demarcation of vitiligo lesions on the 2D UV image (red). (c) Screenshot of the Cherry 3D image with investigator-defined threshold annotations (cyan) (d) Overlay of (b) and (c), demonstrating areas of spatial agreement (orange) and disagreement (red and cyan). [Pictures obtained and published with patient's consent].

## Factors Associated with Treatment Response in Granuloma Annulare

**Dr. Shir Toubiana**

*Sheba Medical Center (Tel HaShomer)*

Shir Toubiana, Ela Glazer Michael, Alina Lozinski, Felix Pavlotsky, Aviv Barzilai, Sharon Baum

**Background/purpose:** Granuloma annulare (GA) is a chronic inflammatory dermatosis with limited effective treatments and inconsistent response rates across modalities. The Goeckerman protocol consisting of coal tar, phototherapy, and topical corticosteroids has demonstrated robust efficacy in other inflammatory dermatoses but has not been systematically evaluated in GA. This study aimed to characterize treatment outcomes across multiple therapeutic approaches, including the Goeckerman protocol, and to explore clinical factors associated with treatment response.

**Methods:** A retrospective cohort study was performed at Sheba Medical Center (2010–2024) including 240 patients with biopsy-confirmed GA. Treatment modalities included topical corticosteroids, phototherapy, combination therapy, the Goeckerman protocol, and observation. Responses were dermatologist-assessed as complete, partial, or none. Multivariate logistic regression was used to examine factors associated with treatment response.

**Results:** Among 240 patients (mean age 55.4 years; 77.5% female), 184 had follow-up data (median 3.0 months). The overall response rate was 58.2% (107/184). Response differed significantly by modality: Goeckerman protocol 93.5% (29/31), topical corticosteroids + phototherapy 69.6% (16/23), topical corticosteroids alone 56.3% (49/87), no active treatment 32.4% (12/37), and phototherapy alone 16.7% (1/6). In multivariate analysis, the Goeckerman protocol was the strongest factor associated with treatment response (OR 32.52; 95% CI 7.45–233.64;  $p < 0.001$ ), followed by combination therapy (OR 5.79;  $p = 0.006$ ) and topical corticosteroids (OR 2.82;  $p = 0.015$ ). Hyperlipidemia was associated with response in univariate analysis but did not remain significant in the multivariable model.

**Conclusions:** Treatment modality was the factor most strongly associated with treatment response in this cohort. The Goeckerman protocol demonstrated a notably high response rate compared with other commonly used therapies. Although these findings should be interpreted in the context of a retrospective design and potential selection bias, they suggest that intensive multimodal anti-inflammatory therapy may represent a promising treatment strategy for this challenging condition.

## Linear Pediatric Morphea is Associated with Greater Atopic Burden Compared with the Plaque Subtype: A Retrospective Analysis

**Ms. Noor Abu Hjool**

*Schneider Children's Medical Center*

N. Abu Hjool<sup>1,2</sup>, S. Reiss-Huss<sup>1</sup>, R. Friedland<sup>1,2</sup>, Y. Renert-Yuval<sup>1,2</sup>

1. Schneider Children's Medical Center of Israel

2. Tel Aviv University

**Background:** Morphea is a rare autoimmune fibrotic skin disease that frequently presents in childhood. While traditionally associated with Th1/Th17 signaling, studies also identify a Th2 inflammatory signature in the serum and lesional skin. As Th2 pathways drive both atopy and fibrosis, this suggests a pathogenic link between morphea and atopic conditions. This study aimed to evaluate the prevalence of atopic comorbidities in pediatric morphea and assess potential association between linear and plaque subtypes.

**Methods:** We conducted a retrospective cohort study of pediatric morphea patients (<18 years) diagnosed at the pediatric dermatology unit at Schneider Children's Medical Center (2007–2024). Baseline demographics, clinical characteristics, and physician-diagnosed atopic comorbidities (atopic dermatitis/asthma/allergic rhinitis/food allergy/allergic conjunctivitis) were recorded. The number of atopic comorbidities (0–5) was compared between morphea subtypes using univariate and multivariable models.

**Results:** Of 177 pediatric morphea patients, 93 were classified as plaque and 84 as linear subtype, with comparable male-to-female ratios. Linear morphea patients were younger ( $9.1 \pm 3.9$  vs.  $10.4 \pm 4.2$  years,  $p < 0.05$ ) and presented greater head, face, and scalp involvement (45.2% vs. 6.5%,  $p < 0.001$ ). Atopic comorbidities were highly prevalent (64.4%). Linear morphea patients had increased prevalence of atopy compared with plaque subtype (75.0% vs. 54.8%,  $p = 0.005$ ) and a greater number of atopic comorbidities (1.73 vs. 1.20,  $p = 0.006$ ), while non-atopic comorbidities did not differ ( $p = 0.52$ ). When adjusted for age, sex, and follow-up duration, patients with  $\geq 3$  atopic comorbidities had increased odds of linear morphea (aOR 4.42, 95%CI 1.8–11.4,  $p = 0.001$ ), whereas 1–2 comorbidities showed no association.

**Conclusions:** Pediatric linear morphea is associated with a higher burden of atopic comorbidities compared to plaque subtype. The presence of  $\geq 3$  atopic comorbidities is strongly associated with the linear phenotype, supporting a potential shared Th2-driven mechanism. These findings underscore the importance of comprehensive atopic assessment in children with linear morphea and warrant further investigation into shared therapeutic targets.

## Involvement of the degradosome in autoinflammatory skin diseases

**Dr. Eylon Sharoni**

*Ichilov Medical Center (Sourasky)*

Eylon Sharoni<sup>1</sup>, Florence Assan<sup>3</sup>, Lubna Khair<sup>1,2</sup>, Noy Keller Rosenthal<sup>1</sup>, May Arad<sup>1,2</sup>, Valentina Zemser Werner<sup>1</sup>, Yoni Moskovitz<sup>1</sup>, Rawaa Ishtewy<sup>1,2</sup>, Angi Zenab<sup>1</sup>, Naama Adam<sup>1,2</sup>, Alon Peled<sup>1</sup>, Ofer Sarig<sup>1</sup>, Kiril Malovitski<sup>1,2</sup>, Nadav Astman<sup>1,2</sup>, Liat Samuelov<sup>1,2</sup>, Eli Sprecher<sup>1,2</sup>, Hervé Bachelez<sup>3</sup>, Mor Pavlovsky<sup>1</sup>

1. Tel Aviv MC
2. Tel Aviv University
3. Imagine Institute / Hôpital Saint-Louis

**Background:** Autoinflammatory skin diseases such as vitiligo and interferon-driven subtypes of psoriasis share overlapping pathogenic mechanisms involving immune dysregulation, mitochondrial dysfunction, and type I interferon (IFN-I) signalling. Loss-of-function variants in PNPT1 have previously been linked to systemic interferonopathies but not to frequent inflammatory skin diseases. PNPT1 codes for polynucleotide phosphorylase (PNPase), a key component of the mitochondrial RNA degradosome, a conserved protein complex essential for RNA surveillance, processing, and degradation within mitochondria and critical for mitochondrial homeostasis.

**Methods:** We used whole-exome and bulk RNA sequencing, structural conservation mapping (ConSurf) and stability modeling (FoldX/AlphaFold), cell cultures, Western blotting (WB) and immunostaining.

**Results:** We investigated four families in which affected members presented with vitiligo and/or psoriasis. Whole-exome sequencing identified four heterozygous PNPT1 variants including c.94C>T (p.Gln32Ter), c.857\_862delATACTC (p.Thr287\_His288del), c.887A>G (p.Tyr296Cys), and c.1759C>T (p.Gln587Ter), that co-segregated with the disease phenotype. Structural analysis showed that the variants p.Thr287\_His288del and p.Tyr296Cys cluster within the  $\alpha$ -helical domain and are predicted to result in local destabilization using the AlphaFold/FoldX modelling. WB analysis demonstrated reduced PNPT1 expression in perilesional keratinocytes (KCs) from three patients as compared to control KCs. To explore downstream effects of PNPT1 dysfunction, we assessed expression of MDA5, a primary cytosolic dsRNA sensor. Both primary KCs overexpressing PNPT1 variants and patient-derived KCs exhibited increased MDA5 levels compared to controls.

To further validate activation of the IFN-I pathway, immunofluorescence staining of patients' biopsies confirmed robust MDA5 and IFNAR1 expression in vivo. Additionally, increased STAT1 phosphorylation was observed in cells expressing the variants. Finally, RNA sequencing revealed increased mitochondrial genes expression in variant-expressing cells, potentially promoting mitochondrial dsRNA accumulation and MDA5-dependent interferon signaling.

**Conclusions:** These findings support the pathogenicity of PNPT1 variants in interferon-driven endotypes of psoriasis and vitiligo, two diseases known to preferentially associate, and pave the way for precision therapies targeting IFNAR signaling in these conditions.

# Cutaneous Manifestations in Pediatric and Adult Inflammatory Bowel Disease; Incidence and Association with Poor Disease Course: A Population-Based Study from the epi-IIRN

**Dr. Ayelet Ollech**

*Shaare Zedek Medical Center*

Ayelet Ollech<sup>1</sup>, Rona Lujan<sup>2</sup>, Chagit Friss<sup>2</sup>, Elad Sinai<sup>2</sup>, Gili Focht<sup>2</sup>, Amir Ben-Tov<sup>3,5</sup>, Galia Zacay<sup>4,5</sup>, Eran Matz<sup>6</sup>, Shir Zekaria<sup>7</sup>, Iris Dotan<sup>8</sup>, Dan Turner<sup>2</sup>, Dotan Yogev<sup>2</sup>

1. Pediatric Dermatology Service, The Eisenberg R&D Authority, Shaare Zedek Medical Center, Jerusalem, Israel, The Hebrew University of Jerusalem, Israel
2. Juliet Keidan Institute of Pediatric Gastroenterology Hepatology and Nutrition, The Eisenberg R&D Authority, Shaare Zedek Medical Center, The Hebrew University of Jerusalem, Israel
3. Maccabi Research and Innovation Center Maccabi Healthcare Services, Tel Aviv University
4. Meuhedet Health Services and Gray Faculty of Medical and Health Sciences, Tel Aviv University, Tel Aviv, Israel
5. Faculty of Medical and Health Sciences, Tel Aviv University, Tel Aviv, Israel
6. Leumit Health Services, Tel Aviv, Israel
7. Clalit Health Services, Clalit Research Institute Tel Aviv, Israel
8. Division of Gastroenterology, Rabin Medical Center, Petah Tikva, Israel and the Gray Faculty of Medical and Health Sciences

**Background:** Inflammatory Bowel Disease (IBD) is associated with various extraintestinal manifestations, most notably the skin. We aimed to evaluate the association between IBD and cutaneous manifestations, and to assess their association with disease course in an unselected population of IBD.

**Methods:** We utilized the validated nationwide epi-IIRN cohort, integrating data from all four Israeli health maintenance organizations (98% population coverage), matched to non-IBD controls. Skin manifestations were identified using ICD-9 codes. Cox proportional hazards models and propensity score matching were used to compare groups and evaluate prognosis. Poor disease course was defined as exposure to  $\geq$  two biologic classes, steroid-dependency, or intestinal surgery.

**Results:** 49,335 patients with IBD (26,767 CD; 22,568 UC; 7,550 pediatric-onset IBD [PIBD]) were matched with 148,097 non-IBD controls. Median follow-up was 8.22 [IQR 4.0–13.3] years. Compared with controls, patients with IBD had increased hazard of erythema nodosum (HR=18.07, 95%CI 13.88–23.53), pyoderma gangrenosum (HR=123.59, 30.35–503.22), psoriasis (HR=1.64, 1.55–1.73), hidradenitis suppurativa (HR=1.63, 1.49–1.79), atopic dermatitis (HR=1.42, 1.22–1.66), rosacea (HR=1.50, 1.31–1.73), acne (HR=1.29, 1.24–1.33), and vitiligo (HR=1.53, 1.01–2.31; Figure 1). Compared with adults, PIBD showed higher association with atopic dermatitis, acne, erythema nodosum (HR 1.88, 1.47–2.41), and aphthous stomatitis (HRs=1.58–4.21), but lower rates of psoriasis (HR=0.59, 0.50–0.70) and rosacea (HR=0.46, 0.28–0.74). Compared with UC, CD was associated with a higher hazard of psoriasis (HR=1.19, 1.09–1.31), hidradenitis suppurativa (HR 1.22, 1.04–1.42), and erythema nodosum (HR=2.60, 2.04–3.30), whereas pyoderma gangrenosum was similar (HR=0.96, 0.61–1.51). After propensity score matching, only pyoderma gangrenosum was associated with poor disease course (HR=4.54, 2.93–7.03).

**Conclusion:** In this population-based cohort, IBD was associated with a broad excess burden of cutaneous disease, with distinct patterns across age groups and IBD subtype. Pyoderma gangrenosum identified a subgroup with markedly worse subsequent disease course.

# Risk of Cutaneous T-Cell Lymphoma and Lymphoid Malignancies With Dupilumab: A Propensity-Matched Cohort Study Across Atopic Dermatitis and other Type-2 Inflammatory Diseases

**Prof. Khalaf Kridin**

*Nahariya Galilee Medical Center*

K. Kridin<sup>1</sup>, D. Tahci<sup>2</sup>, R.J. Ludwig<sup>2</sup>

1. Galilee MC
2. University of Lubeck

**Background:** Concerns have been raised regarding whether dupilumab therapy may influence the risk of cutaneous T-cell lymphoma (CTCL) development or progression. We evaluated the risk of CTCL and other lymphoid malignancies among patients treated with dupilumab compared with those receiving other systemic therapies across atopic dermatitis (AD) and non-dermatologic type-2 inflammatory diseases (T2IDs).

**Methods:** In this retrospective cohort study, patients with AD (n=7,840) or other T2IDs (n=16,926) treated with dupilumab were propensity-score matched to patients receiving alternative systemic therapies, including systemic corticosteroids, cyclosporine, methotrexate, azathioprine, and mycophenolate mofetil. Outcomes included CTCL, CTCL excluding Sézary syndromes (SS), SS, T/NK-cell lymphoma (NKTCL), non-Hodgkin lymphoma (NHL), myeloproliferative neoplasms (MPNs), and multiple myeloma (MM). Hazard ratios (HRs) with 95% confidence intervals (CIs) were calculated.

**Results:** Among patients with AD, dupilumab exposure was not associated with increased risks of CTCL (HR 1.04, 95% CI 0.62-1.73), CTCL excluding SS (HR 1.04, 95% CI 0.62-1.73), SS (HR 0.18, 95% CI 0.04-1.18), NKTCL (HR 0.93, 95% CI 0.57-1.51), MPN (HR 0.57, 95% CI 0.36-0.91), or MM (HR 0.51, 95% CI 0.27-0.96). Similar findings were observed in other T2IDs, with no increased risk of CTCL (HR 0.36, 95% CI 0.14-1.03), CTCL excluding SS (HR 0.35, 95% CI 0.15-1.04), or NKTCL (HR 0.57, 95% CI 0.26-1.26), while risks of NHL (HR 0.24, 95% CI 0.16-0.35), MPN (HR 0.41, 95% CI 0.29-0.56), and MM (HR 0.16, 95% CI 0.08-0.31) were reduced. Regardless of treatment modality, AD (HR 9.46, 95% CI 7.28-12.28) and T2IDs (HR 1.38, 95% CI 1.27-1.50) were associated with an elevated risk of CTCL.

**Conclusion:** Dupilumab therapy was not associated with an increased risk of lymphoma, including CTCL, in patients with AD or other T2IDs, suggesting that reported cases likely reflect underlying disease-related risk rather than a causal drug effect.

## The MATRIX predictive model for subungual melanoma in longitudinal melanonychia

**Dr. Eran Galili**

*Sheba Medical Center (Tel HaShomer)*

E. Galili, O. Kotek, D. Yaari, A. Shemer, A. Lyakhovitsky, A. Barzilai  
Sheba MC

**Background:** Distinguishing subungual melanoma (SUM) from benign longitudinal melanonychia (LM) remains challenging, as commonly used ABCDEF criteria lack predictive accuracy and dermoscopy alone offers limited specificity.

**Methods:** In this retrospective cohort study, patients evaluated for LM at a tertiary referral nail clinic (2021–2025) were included. Clinical and dermoscopic variables were analyzed using univariate logistic regression to identify significant predictors of SUM, which were subsequently entered into a multivariable logistic regression model to construct a weighted mnemonic scoring system (MATRIX). Model performance was assessed using receiver operating characteristic (ROC) analysis, sensitivity, specificity, number needed to biopsy (NNB), and bootstrap internal validation. Performance was compared with the ABCDEF criteria and a dermoscopy-specific model.

**Results:** The cohort included 274 patients (20 SUM; 254 benign LM). All melanoma cases presented as mono-digit lesions. On univariate analysis, significant predictors of SUM were age  $\geq 50$  years (OR 2.94,  $p=0.02$ ), thick band  $>3$  mm (OR 21.38,  $p<0.001$ ), recent evolution of a pre-existing band (OR 9.48,  $p<0.001$ ), irregular nail plate dermoscopic pattern (OR 23.61,  $p<0.001$ ), Hutchinson's sign (OR 14.31,  $p<0.001$ ), and longitudinal nail plate splitting (OR 84.33,  $p<0.001$ ).

These variables were incorporated into the weighted MATRIX mnemonic score: M (Mono-digit involvement; prerequisite); A (Age  $\geq 50$  years) = 1 point; T (Thick band  $>3$  mm) = 2 points; R (Recent change) = 1 point; I (Irregular dermoscopic pattern) = 1 point; X (eXternal pigmentation [Hutchinson's sign] or nail splitting) = 2 points (total score 0–7).

The MATRIX model demonstrated excellent discrimination (AUC 0.947). At a cutoff  $\geq 3$  points, sensitivity was 100%, specificity 80%, and NNB 2.7. ABCDEF and dermoscopy-specific models showed lower specificity and higher NNB at equivalent sensitivity thresholds.

**Conclusions:** The MATRIX weighted mnemonic score provides a simple, internally validated decision-support tool for LM, maintaining maximal sensitivity while reducing unnecessary biopsies.

## Immune Status and Merkel Cell Carcinoma: Lessons from a 25-Year Institutional experience

**Dr. Adi Raviv**

*Ichilov Medical Center (Sourasky)*

T. shochatb, D. Mimouni, A. levi, B. Davidivici  
Rabin MC

**Introduction:** Merkel cell carcinoma (MCC) is a rare but highly aggressive neuroendocrine skin tumor associated with poor prognosis. Established risk factors include advanced age, male sex, chronic ultraviolet exposure, and immunosuppression. However, survival data stratified by type of immunosuppression remain limited. In 2017, the U.S. Food and Drug Administration approved immune checkpoint inhibitors (ICIs) for metastatic MCC, representing a major advancement in the management of advanced disease. Nevertheless, real-world data comparing ICI outcomes in immunocompetent and immunocompromised patients are scarce.

**Methods:** We conducted a retrospective study including all MCC patients diagnosed between 2000 and 2024 at a tertiary medical center.

**Results:** A total of 156 patients met the inclusion criteria, including 10 solid organ transplant recipients (SOTRs) and 14 patients with hematologic malignancies (HM). SOTR patients were younger at MCC diagnosis compared with immunocompetent and HM patients (66 vs. 74 years,  $P=0.07$ ) and had a significantly longer interval between initiation of immunosuppression and MCC diagnosis (13 vs. 4 years,  $P=0.0052$ ).

ICIs were incorporated into the treatment regimen in 30% of SOTRs and 50% of HM patients. Durable partial or complete responses were observed in 33% of treated SOTRs and 57% of HM patients. Multivariate Cox analysis identified older age, male sex, advanced tumor stage at diagnosis, and SOTR status as independent predictors of worse overall and MCC-specific survival. Among patients with stage IV disease, ICI therapy was associated with a 72% reduction in overall mortality and an 81% reduction in MCC-related mortality ( $P<0.03$ ).

**Conclusion:** In this cohort, SOTR status emerged as an independent adverse prognostic factor, whereas HM status did not. ICI therapy provided substantial survival benefit in advanced MCC, supporting its selective use even in immunocompromised populations.

## Reduced Risk of Squamous Cell Carcinoma in Atopic Dermatitis Patients Treated with JAK Inhibitors Compared to Dupilumab: A Propensity-Matched Cohort Study

**Dr. Tahel Fachler**

*Hadassah Ein Kerem Hospital*

Tahel Fachler, Hanni Robinson, Vered Molho-Pessach

**Background:** Pharmacovigilance and registry data suggest a disproportionate signal for squamous cell carcinoma (SCC) with JAK inhibitors, although absolute event rates remain low. Many affected patients have additional risk factors so the incremental contribution of JAK inhibition alone is difficult to quantify. There is lack of data regarding risk of SCC in atopic dermatitis patients treated with JAK inhibitors. This study aimed to evaluate the risk of SCC in AD patients treated with JAK inhibitors compared with AD patients treated with dupilumab.

**Methods:** We conducted a retrospective cohort study using TriNetX, a global federated health research network. Electronic health records from over 170 million patients were queried to identify patients with atopic dermatitis treated with JAK inhibitors or dupilumab. Patients were propensity score-matched on demographic variables and relevant comorbidities and treatments.

**Results:** Two cohorts were identified based on treatment exposure. After propensity score matching, 4,301 patients were included in each group, ensuring balanced baseline characteristics. Outcomes were assessed from one day after treatment initiation with no predefined end date.

The primary outcome was the incidence of SCC. Patients treated with JAK inhibitors demonstrated a significantly lower risk of SCC compared to those treated with dupilumab (0.8% vs. 1.4%; risk ratio 0.54, 95% CI 0.36–0.83,  $p=0.004$ ). Kaplan-Meier analysis supported these findings, showing a reduced hazard of SCC in the JAK inhibitor group (hazard ratio 0.53, 95% CI 0.35–0.81; log-rank  $p=0.003$ ).

**Conclusions:** These results highlight a potentially favorable malignancy risk profile associated with JAK inhibitors compared to dupilumab.

Despite propensity score matching and balancing of baseline comorbidities, residual confounding factors cannot be excluded, and the observed differences may reflect, in part, differences in patient selection and underlying disease burden not fully captured in real-world data. These findings warrant further prospective investigation.

## Cutaneous Immune-Related Adverse Events Vary by Cancer Type During PD-1 Blockade: A Multi-Cohort Analysis

**Prof. Khalaf Kridin**

*Nahariya Galilee Medical Center*

K. Kridin<sup>1</sup>, R. Ghanayem<sup>1</sup>, R.J. Ludwig<sup>2</sup>

1. Galilee MC
2. University of Lubeck

**Background:** Immune-related cutaneous adverse events (irCAEs) are the most common toxicities associated with programmed cell death protein 1 (PD-1) inhibitors, yet tumor-specific patterns across different cancer indications remain incompletely characterized. We sought to compare the risk of irCAEs among patients treated with PD-1 antagonists for cutaneous squamous cell carcinoma (cSCC) relative to melanoma, non-small cell lung cancer (NSCLC), head and neck squamous cell carcinoma (HNSCC), hepatocellular carcinoma (HCC), and renal cell carcinoma (RCC).

**Methods:** We conducted a retrospective cohort study using the TriNetX Global Collaborative Network. Patients treated with cemiplimab, nivolumab, or pembrolizumab were identified, and propensity-score matched across cancer indications based on demographics and comorbidities. Outcomes included nonspecific rash, pruritus, psoriasis, atopic dermatitis (AD), bullous pemphigoid (BP), and vitiligo. Hazard ratios (HRs) were estimated using Cox regression.

**Results:** Matched cohorts included cSCC compared with melanoma (n=11,470 per group), NSCLC (n=11,620), HNSCC (n=9,031), HCC (n=4,474), and RCC (n=10,387). Relative to melanoma, cSCC demonstrated similar risks of inflammatory irCAEs but a significantly lower risk of vitiligo (HR 0.38). Compared with NSCLC, cSCC showed higher risks of rash (HR 1.31), pruritus (HR 1.36), AD (HR 1.49), BP (HR 1.55), and vitiligo (HR 2.30). Compared with HNSCC, cSCC had increased risks of rash (HR 1.14), pruritus (HR 1.21), and vitiligo (HR 1.64). Compared with HCC and RCC, cSCC demonstrated a higher risk of rash and AD, while pruritus was slightly less frequent in the HCC and RCC cohorts. Tumor-specific differences persisted across early and late follow-up periods.

**Conclusion:** Patients with cSCC treated with PD-1 inhibitors display a distinct irCAE profile, supporting tumor-specific dermatologic monitoring and suggesting tumor biology influences checkpoint inhibitor-associated skin toxicity.

# Extracellular Vesicles Expressing CD24 Enhance Skin Wound Healing

**Dr. Lia Mazur**

*Ichilov Medical Center (Sourasky)*

N. Arber<sup>1</sup>, S. Israeli<sup>1</sup>, D. Kazanov<sup>1</sup>, N. Jaffe<sup>1</sup>, J. Lotvall<sup>2</sup>, S. Shapira<sup>1</sup>

1. Tel Aviv Sourasky Medical Center, Gray Faculty of Medicine
2. Krefting Research Centre, Institute of Medicine, the Sahlgrenska Academy, University of Gothenburg, Sweden

**Background:** Chronic non-healing wounds are driven by persistent inflammation, impaired cell migration, and defective tissue regeneration. CD24 is a highly glycosylated glycosylphosphatidylinositol-anchored protein with immunoregulatory functions and has been implicated in wound repair.

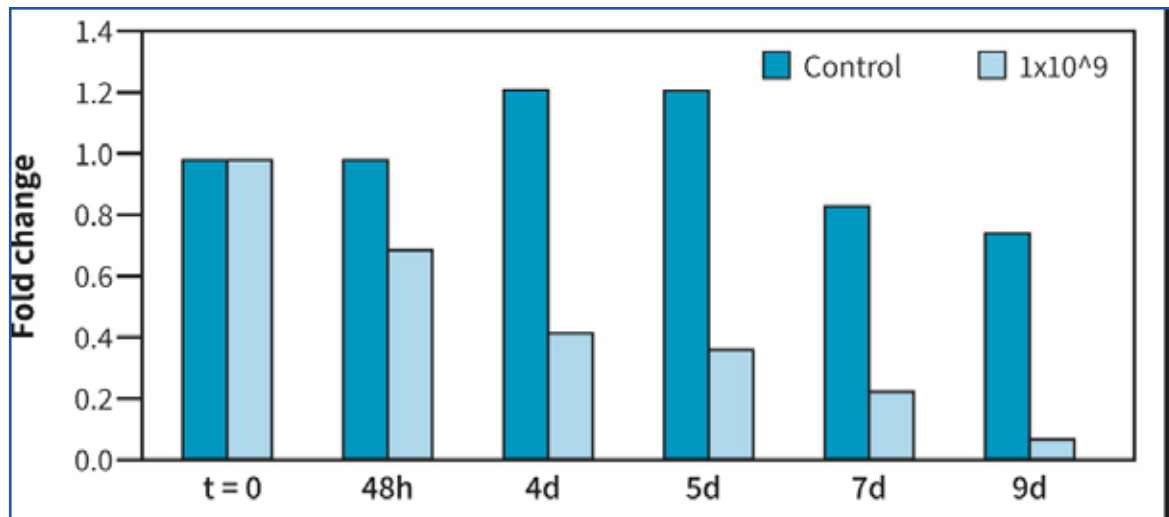
**Aim:** To evaluate glycosylated CD24-based topical therapeutics, including purified protein formulations and CD24-enriched extracellular vesicles (EXO-CD24), for accelerating acute and diabetic wound healing.

**Methods:** Wound repair was assessed using in vitro scratch assays of an epithelial cell line, and in vivo full-thickness dorsal wound models in C57BL/6 mice, including a streptozotocin/nicotinamide-induced diabetes model. Animals received topical applications of either glycosylated murine CD24 (100-500µg or ointment 0.2-1mg/mL) or EXO-CD24 (10<sup>9</sup> particles/day). Wound area was quantified longitudinally using image analysis. Non-glycosylated CD24 derivatives were tested to assess structure-function requirements.

**Results:** Glycosylated CD24 enhanced cell migration in vitro, resulting in ~70% scratch closure at 48 h compared with ~35% in controls. In vivo, topical CD24 accelerated acute wound healing (~60% wound-area reduction by day 7 and ~90% by day 14, compared with ~35% and ~55% in placebo-treated animals, p<0.05).

In diabetic mice, CD24 reduced wound area by ~50% at 72 h and ~85% by day 10, whereas placebo-treated wounds showed ~20% and ~45% reduction, respectively (p<0.05). Non-glycosylated CD24 derivatives showed no significant effect. EXO-CD24 further accelerated healing, achieving ~75% wound-area reduction by day 7 and 95% by day 9, compared with ~45% and ~55% in controls (p<0.05). Systemic exposure was minimal to undetectable.

**Conclusions:** Glycosylated CD24 accelerates wound healing in acute and diabetic in vivo models, and exosomal delivery further enhances efficacy through localized immunomodulation and enhanced tissue regeneration. Glycosylation is essential for CD24 activity, supporting topical CD24 and EXO-CD24 as translational candidates for chronic wound therapy.



**Figure 1. Exosome-mediated delivery of CD24 enhances wound repair**

Quantification of wound-area reduction over time in  $10^9$  EXO-CD24 treated mice, compared with controls. Data are presented as mean  $\pm$  SD;  $p < 0.05$ .  $n = X-Y$  wounds per group.

## Inhibiting Enzyme-Mediated Fibronectin Fibrillogenesis – A Novel Mechanism for Fibrosis Inhibition

**Mr. Maher Abu Saleh**

*The Technion – Israel Institute of Technology*

Maher Abu Saleh<sup>1</sup>, Noa Lavi<sup>1</sup>, Anas Odeh<sup>1</sup>, Tina Shogan<sup>1</sup>, Lavi Coren<sup>1</sup>, Ido Mizrahi<sup>1</sup>, Shelly Zaffryar-Eilot<sup>1</sup>, Elisabeth Nadjar-Boger<sup>1</sup>, Ilanit Boyango<sup>2</sup>, Marwan Dawood<sup>2</sup>, Emily Avitan-Hers<sup>2</sup>, Haguy Wolfenson<sup>\*1</sup>, Peleg Hasson<sup>\*1</sup>

1. Department of Genetics and Developmental Biology, The Ruth and Bruce Rappaport Faculty of Medicine, Technion
2. Department of Dermatology, Rambam Health Care Center, Haifa & Clinical Research Institute at Rambam (CRIR)

(\* Equal contributions)

**Background:** Fibrosis is a detrimental condition that appears in numerous cutaneous disorders. It results from dysregulated repair of damaged tissue and involves excess deposition and crosslinking of extracellular matrix (ECM) proteins, resulting in tissue stiffening and impairment. One such ECM protein is fibronectin (FN), a multi-domain protein that is secreted as a closed dimer but is only functional in its fibrillar form. This transition occurs when dimers gradually bind to each other, leading to assembly of long and stable fibrils. FN fibrils are required for subsequent collagen deposition, and accordingly excessive FN deposition and fibrillogenesis drive the fibrotic process. Despite intensive research, anti-fibrosis therapies are scarce.

**Methods:** We have previously shown that oxidation of FN by lysyl oxidases (LOX) enzyme family on 3 specific lysine residues is essential for promoting FN fibrillogenesis and is required for further ECM assembly. Based on these findings, we generated two FN-derived mini-proteins (MPs) that harbor the LOX oxidation sites, and evaluated their effects both in-vitro and in-vivo in a full thickness skin scarring mouse model.

**Results:** We find that inhibitor MPs suppress FN fibrillogenesis in-vitro and abrogate TGFβ1-mediated fibroblast-to-myofibroblast activation. We show in-vivo that topical administration of the inhibitor MPs promotes superior skin regeneration, marked by reduced dermal thickening, increased dermal white adipose tissue recovery, and scarless healed skin, achieved through inhibiting myofibroblast activation. We found that the above inhibitory activities are mediated through MP recruitment to nascent FN fibrils and are dependent on the oxidized lysine residues. Finally, we demonstrate similar anti-fibrotic effects in human fibrotic-disease-derived dermal fibroblasts.

**Conclusions:** Targeting LOX-mediated FN oxidation effectively suppresses FN fibrillogenesis and myofibroblast activation. Our MPs reduce fibrosis and improve tissue regeneration, highlighting their potential as a novel anti-fibrotic therapeutic strategy.

## Variability in Genital Herpes Management during Pregnancy: Insights from a Single-Center Study

**Dr. Hanni Robinson,**

*Hadassah Ein Kerem Hospital*

Meller Nir, Kassem Riad, Yinon Yoav, Levy Itzchak, Baum Micha  
Sheba Medical Center

Genital herpes simplex virus (HSV) infection during pregnancy poses significant risks of vertical transmission and neonatal herpes, which carries mortality rates of ~60% without treatment and substantial neurological morbidity even with antiviral therapy<sup>1,2</sup>. Guidelines, including those of the CDC, RCOG, and the IAOG, recommend suppressive antiviral therapy from 36 weeks' gestation and cesarean delivery (CS) in the presence of active lesions<sup>3-10</sup>. Despite recommendations, management variability remains poorly characterized.

**Methods:** A retrospective cohort study was conducted at Sheba Medical Center, Israel (January 2010 - December 2023), using the MdClone electronic health records platform. Pregnant women with a genital HSV diagnosis before delivery were included. Various parameters including demographic data, delivery mode, HSV documentation, and antiviral treatment were extracted and analyzed. Categorical variables were compared using chi-square tests and continuous variables using ANOVA.

**Results:** Among 150,000 deliveries, 473 occurred in 318 women with confirmed or suspected genital herpes (116 had >1 delivery); mean maternal age  $32.6 \pm 4.7$  years, mean gestational age at delivery  $38.6 \pm 1.65$  weeks. Vaginal delivery occurred in 296 cases (62.6%) and CS in 177 (37.4%), with genital herpes as the primary CS indication in 65 cases (36.7%). Antiviral therapy was documented in 230 deliveries (48.6%), 215 deliveries (45.5%) received no treatment and 33 (7%) had undocumented status. 62 patients (13.1%) received sub-suppressive doses and 3 (0.6%) exceeded therapeutic thresholds. HSV PCR was performed in 37.6% of cases. One neonatal herpes case was documented; two additional women had prior neonatal herpes outcomes, including one neonatal death and one case of permanent encephalopathy, at other institutions.

**Conclusions:** Real-world management of HSV in pregnancy demonstrates substantial variability, with widespread antiviral underuse, dosing errors, and inconsistent documentation. Structured, evidence-based protocols incorporating standardized diagnostic criteria, mandatory HSV documentation, and clear antiviral guidelines are needed to reduce vertical transmission risk and improve neonatal outcomes<sup>4,8,9</sup>.

## **Dermoscopic Predictors of Laser Treatment Response in Recalcitrant Viral Warts: A Retrospective Cohort Study**

**Mrs. Odeya Rotem Shabtai**

*Ben-Gurion University of the Negev*

Nadav Feldman<sup>1</sup>, B. Kaplan<sup>2</sup>, Y. Kaplan<sup>3</sup>

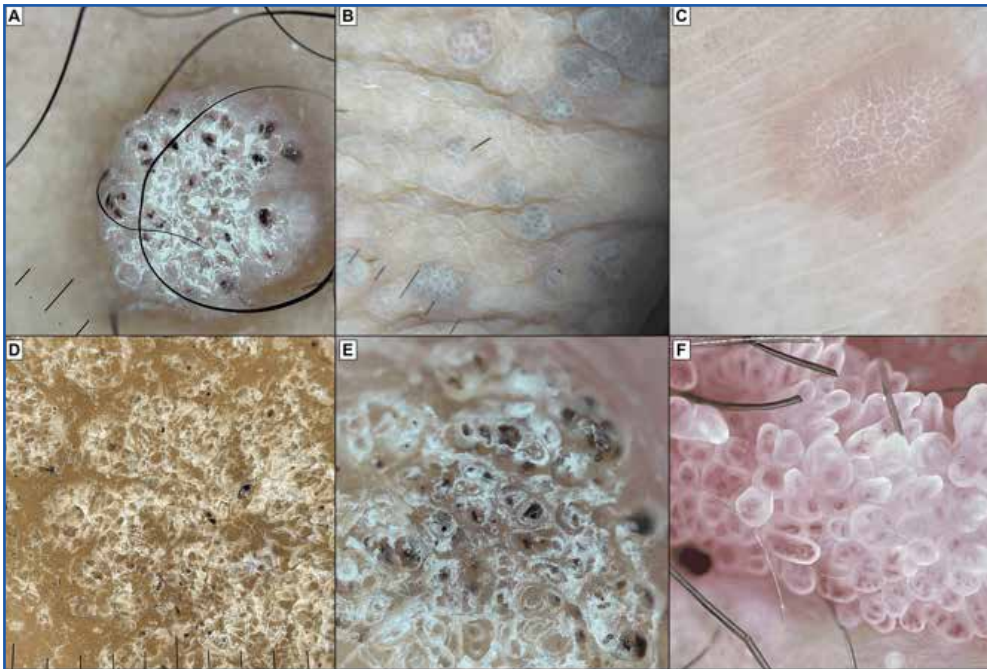
1. The Gray Faculty of Medical and Health Sciences at Tel Aviv University, Tel Aviv, Israel
2. Adelson School of Medicine, Ariel University, Ariel, Israel
3. Maccabi Healthcare Services

**Background:** Laser therapy is used for recalcitrant viral warts, yet no study has examined whether dermoscopic features can predict treatment response. Dermoscopy reveals structural and vascular patterns that may serve as prognostic markers. This study evaluated whether pretreatment dermoscopic features predict laser treatment response in recalcitrant viral warts.

**Methods:** A single-center retrospective cohort study of 107 patients with viral warts (69 palmoplantar, 38 condylomata) treated with long-pulsed Nd:YAG 1064 nm and/or Er:YAG 2940 nm laser (Alma Harmony XL Pro) between 2023 and 2025. Pretreatment dermoscopic images were evaluated for vascular and structural features. The primary outcome was clinical clearance at a minimum of 6 months following the first treatment. Univariate and multivariate logistic regression analyses were performed.

**Results:** Overall clearance was 43.0% (46/107). Nd:YAG 1064 nm monotherapy achieved the highest clearance rate (54.0%), significantly exceeding combination therapy (30.3%;  $p = 0.043$ ). Prior treatments, including cryotherapy (71.0%) and topical therapy (57.9%), did not predict outcome ( $p > 0.6$ ). Frog-spawn pattern was associated with lower clearance in condylomata (OR = 0.21;  $p = 0.047$ ) and in patients treated with Er:YAG 2940 nm monotherapy (clearance 23.5% vs 71.4%;  $p = 0.061$ ). On multivariate analysis, hyperkeratosis grade showed a non-significant association with clearance (OR = 2.08;  $p = 0.100$ ), while the number of treatment sessions was inversely associated with clearance (OR = 0.72 per session;  $p < 0.001$ ), likely reflecting treatment resistance. Patients requiring three or fewer sessions achieved 70% clearance versus 32.5% for those requiring more (OR = 4.85;  $p < 0.001$ ).

**Conclusions:** Frog-spawn pattern is a negative prognostic dermoscopic marker for laser treatment of recalcitrant warts, particularly in condylomata and with ablative wavelengths. Hyperkeratosis grade showed a non-significant association with improved clearance. These dermoscopic markers may help guide laser selection and set realistic patient expectations.



**Figure 5.** Representative dermoscopic images of viral warts. **(A)** Dense thrombosed capillaries (grade 3) with frog-spawn pattern in a condyloma. **(B)** Classic frog-spawn pattern in condylomata acuminata: rounded papillae with central dotted vessels surrounded by a white reticular network. **(C)** Palmar wart with dotted vessels and absent frog-spawn pattern; note the irregular white network without the characteristic rounded papillae. **(D)** Plantar wart demonstrating frog-spawn pattern, thrombosed capillaries, and loss of dermatoglyphics. **(E)** Palmar wart with combined features: thrombosed capillaries, frog-spawn, hyperkeratosis, and loss of dermatoglyphics. **(F)** Condylomata acuminata with papillomatous growth and absent frog-spawn pattern; loop vessels are visible without the characteristic rounded papillae. The frog-spawn pattern is defined as rounded, whitish papillae outlined by a white reticular network, each containing centrally placed red dots or globules corresponding to dilated capillary loops within elongated dermal papillae.

## Efficacy and Safety of Non-Fractional Ablative Carbon Dioxide Laser Resurfacing for the Treatment of Rhinophyma - a Retrospective Cohort and Questionnaires-Based Study

Dr. Yehonatan Noyman

*Bellinson Hospital*

Yehonatan Noyman<sup>1</sup>, Hadas Ofer Friedman<sup>1</sup>, Moshe Lapidoth<sup>1</sup>, Gaia Harris Rimon<sup>2</sup>, Efrat Solomon-Cohen<sup>1</sup>, Igor Snast<sup>1</sup>, Mati Rozenblat<sup>3</sup>, Daniel Mimouni<sup>1</sup>, Assi Levi<sup>1</sup>

1. Rabin Medical Center
2. Tel Aviv University
3. "Emek" medical center

**Background:** Phymatous rosacea is a chronic and disfiguring subtype of rosacea, mainly affecting the nose and leading to the development of rhinophyma. This condition manifests with erythema, enlarged pores and increased sebum secretion, progressing to textural alterations and nasal hypertrophy. Ablative CO<sub>2</sub> laser resurfacing has emerged as a preferred approach, offering hemostatic control and favorable cosmetic outcomes. This case series presents our treatment experiences with a non-fractional ablative CO<sub>2</sub> laser resurfacing under local anesthesia for severe rhinophyma patients.

**Methods:** A Retrospective case series of patients with severe rhinophyma treated with an ablative CO<sub>2</sub> laser between December 2010 and March 2020 in our laser unit. Post-procedure aesthetic outcome was assessed by the treating physician 3 months following treatment and patients were asked to complete a long-term follow-up questionnaire.

**Results:** Sixteen patients (15 males) were included, of which 13 patients (81%) had completed the questionnaire on an average of 15 months following treatment (range 2 - 24 months). Patient satisfaction following treatment was high, with an average satisfaction score of 7.9 out of 10 (range 4-10). Post-procedure aesthetic outcome was rated as very good or excellent in 13 patients (81%, with 75% or greater improvement). Among the 13 patients who completed the questionnaire, 11 (85%) indicated that they would recommend this treatment to others with a similar condition.

**Conclusions:** Non-fractional, ablative CO<sub>2</sub> laser resurfacing performed under local anesthesia has proven to be a safe, effective and well-tolerated treatment for severe rhinophyma, yielding sustainable results and high satisfaction rate.



# ABSTRACTS

Award research projects abstracts

.....

## From Failure to Success: Evaluating Infliximab Efficacy After Adalimumab Failure in Hidradenitis Suppurativa

**Dr Ruba Srour**

*Rambam Health Care Campus*

E. Avitan-Hersh, Khamaysi Z.

Rambam medical center

**Background:** Hidradenitis Suppurativa (HS) is a debilitating, chronic skin disease. Although Adalimumab is a Food and Drug Administration (FDA)-approved biologic drug to treat HS, a significant number of patients develop primary or secondary failure to this treatment. Limited data exist in the literature on the effectiveness of the Infliximab medication in such a group of patients. This study assesses the effectiveness and safety of Infliximab treatment in patients diagnosed with HS whose Adalimumab therapy has failed.

**Methods:** The current retrospective study collected data from medical records of 40 HS patients who received Infliximab after failure of Adalimumab. The parameters included an evaluation of Hidradenitis Suppurativa Clinical Response (HiSCR) and Dermatology Life Quality Index (DLQI) over time, and determination of prognostic factors associated with the clinical response.

**Results:** Twenty-nine of 40 patients (72.5%) who were administered with Infliximab reached HiSCR at 24 weeks, and 86.2% of them (25/29) persisted at 48 weeks. DLQI scores demonstrated that the impaired quality of life affecting the patients was improved significantly. The DLQI at baseline (mean  $19.55 \pm 4.4$  [range 9-26]) has decreased by 24 weeks (mean  $12.4 \pm 5.08$  [range 4-24];  $p < 0.001$ ) and 48 weeks (mean  $11.8 \pm 5.87$  [range 2-25];  $p < 0.001$ ). Obesity (Body Mass Index  $> 30$ ), smoking, hypertension, disease duration, and primary Adalimumab failure were negatively associated with HiSCR achievement and DLQI improvement. Adverse events were in line with the drug's known safety profile.

**Conclusion:** Infliximab showed a significant clinical efficacy in Adalimumab-unresponsive HS patients. Initiation of treatment at an early stage and management of modifiable risk factors like obesity and smoking can maximize the outcomes. These findings provide evidence to endorse the use of infliximab as an effective alternative treatment for HS after failure with Adalimumab.

# Is Juvenile Plantar Dermatosi Associated with Atopy – a Systematic Review and Meta-Analysis

Israel Khanimov, MD MHA

*Bellinson Hospital*

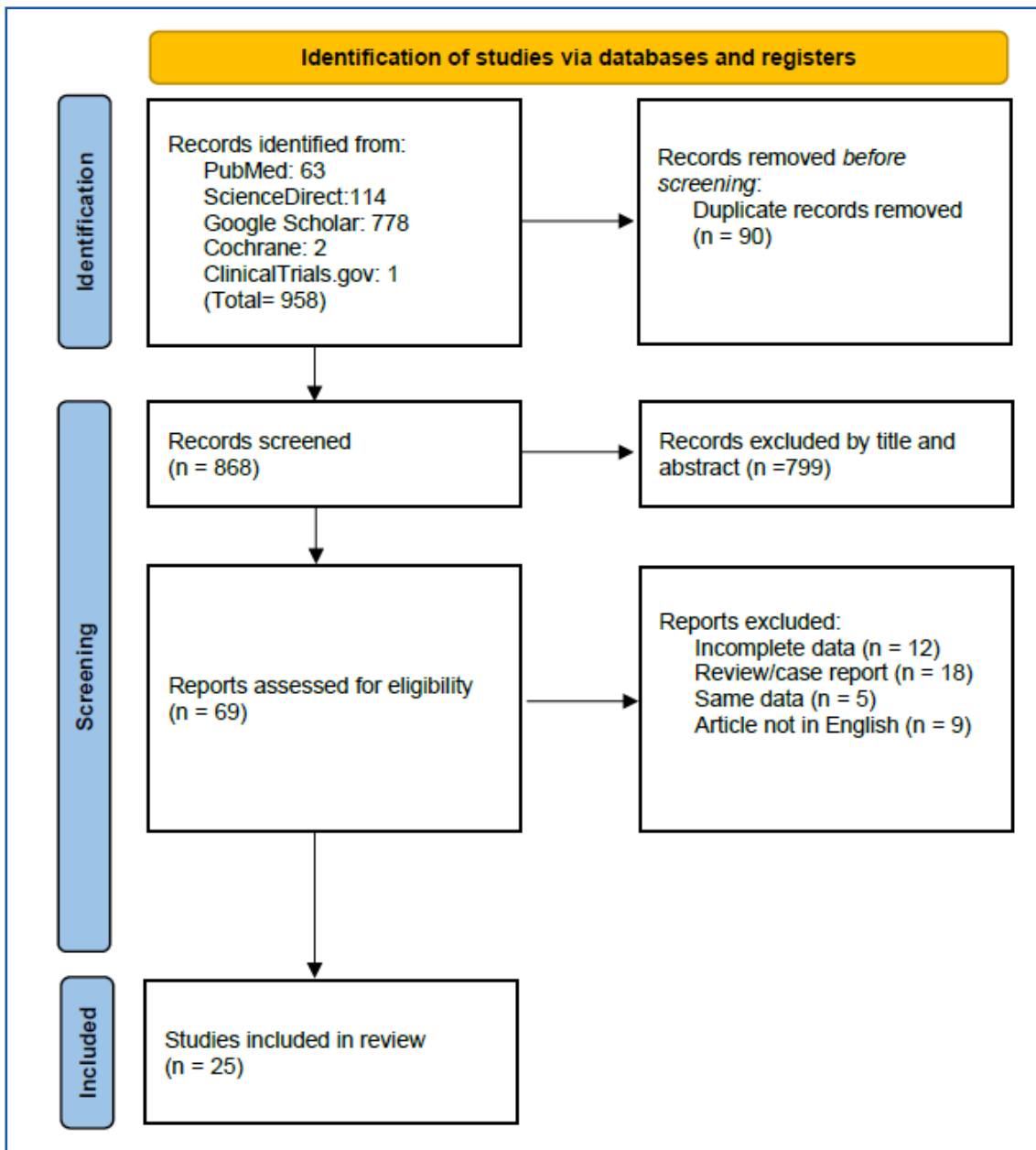
M. Engler Markowitz, I. Snast, Y. Noyman, A. Levi, D. Mimouni, S. Sherman  
Beilinson Hospital

**Background:** Juvenile plantar dermatosis (JPD) is an ill-characterized dermatological condition, clinically characterized by erythematous patches exhibiting a characteristic shiny or glazed appearance, affecting the weight-bearing surfaces of the feet. The pathophysiology behind this condition remains unclear. This study aims to perform a systematic review and meta-analysis in order to determine whether an association between JPD and atopy exists.

**Methods:** The literature search included PubMed, Google Scholar, ScienceDirect, CENTRAL and ClinicalTrials.gov, covering all records from database inception to January 1, 2025. Random-effects model meta-analysis was performed to quantify the pooled proportion of patients with atopic background among those diagnosed with JPD. Subgroup analyses were conducted to assess the proportion of personal and familial atopic background. Heterogeneity was assessed using the  $I^2$  statistic.

**Results:** Among 958 citations identified from database searching, 25 studies with a total of 1220 subjects were included. The pooled proportion of personal atopic background among patients with JPD was 0.26 (22 studies; 95% CI 0.17–0.37,  $I^2=72.5\%$ ), meaning that 1 in 3.8 patients with JPD had personal atopic background. The pooled proportion of atopy among patients with JPD or their relatives (first-degree or distant) was 0.50 (25 studies; 95% CI 0.37–0.62,  $I^2=85.7\%$ ), and in patients with JPD or first-degree relatives was 0.46 (16 studies; 95% CI 0.31–0.62,  $I^2=84.9\%$ ).

**Conclusions:** The findings of this systematic review and meta-analysis provide evidence supporting a positive association between JPD and both personal and family history of atopy. These results may contribute to a better understanding of the underlying pathophysiology of this condition.



## A Cross-sectional Study of the Dermoscopic Attributes of Darier Disease

**Dr. Nisim Asayag**

*Emek Medical Center*

Prof Roni P. Dodiuk-Gad<sup>1</sup>, Prof Alon Scope<sup>2</sup>,

1. Head, Inflammatory and Autoimmune Skin Diseases Unit, Dermatology Department, Emek Medical Center, Afula, Israel
2. Head, Kittner Skin Cancer Screening & Research Institute, Sheba Medical Center, Ramat Gan, Israel and Gray Faculty of Medical and Health Sciences, Tel Aviv University, Israel

**Background:** Darier disease (DD) is a rare autosomal dominant keratinization disorder characterized by acantholysis and abnormal keratinization affecting the skin, nails, and mucosa. Although dermoscopy may assist in the bedside diagnosis of inflammatory dermatoses, comprehensive characterization of dermoscopic features across the full clinical spectrum of DD lesions remains limited.

**Objectives:** To systematically characterize the dermoscopic attributes of DD lesions and to test whether current lesion classification by clinical morphology correlates with distinct dermoscopic attributes.

**Methods:** This cross-sectional study included patients with clinically-confirmed Darier disease. Patients were recruited at a tertiary dermatology referral center between 10/2024-02/2025 2024. Lesions were selected from to predefined anatomical sectors. Standardized clinical and dermoscopic imaging was performed, including polarized and non-polarized dermoscopy. Dermoscopic images were evaluated for presence of scale, erosions, vascular morphology and additional dermoscopic structures based on established inflamoscopy and DD-specific criteria.

**Results:** Twenty-six DD patients (61.5% female; mean age  $45.8 \pm 17.3$  years) contributed 379 lesions, of which, 334 were eligible for image analysis. Lesions were most commonly located on the trunk-36.9%, followed by acral regions (21.4%). Lesions with classical clinical morphology predominated, with keratotic papules (25.3%) and erosive papules (21.1%) being most frequent. Dermoscopically, vascular structures were identified in-36.4% of lesions, most commonly dotted vessels (28.5%), followed by hairpin vessels (15.3%). Scale (32.9%) and erosions (38.3%) were frequently observed, and were often concomitant (17.4%). Similarly, erosion and vessels were often concurrent in lesions (25.3%). Nail involvement demonstrated characteristic longitudinal red lines (28.3%) and white lines (26.4%) and splinter hemorrhages (24.5%). Comparing dermoscopic attributes across clinical lesion subtypes showed overlap rather than distinctive dermoscopic features.

**Conclusions:** DD demonstrates a limited, consistent set of dermoscopic attributes, across clinical lesion subtypes and anatomical sites. This suggests that the various clinical lesion subtypes may represent a morphologic continuum arising from a common disease pathogenesis. These findings also propose a role for dermoscopy as a valuable tool in the diagnosis and evaluation of DD.



# ABSTRACTS

ePosters presented during the conference

.....



## Impact of COVID-19 on Cutaneous Squamous Cell Carcinoma Severity in a Tertiary 3 Referral Center in Israel: Lessons for Future Pandemics

**Dr. Michael Cleiman**

*Hadassah Ein Kerem Hospital*

Deborah Korn MD, Sivan Sheffer-Levi MD, Maayan Eitan-Wexler PhD, Stephanie Ben-Shushan MD, Mordechai Avner MD, Nir Hirshhorn MD, Meni Bracha MD, Alexander Maly MD, Roni Shereberk-Hasidim MD, Sharon Merims MD, Aron Popovtzer MD, Verd Molho MD, Michal Lotem MD, Jonathan E. Cohen MD PhD  
Hadassah Medical Center

**Background:** The COVID-19 pandemic disrupted healthcare access and dermatological services, potentially affecting diagnosis and treatment of cutaneous squamous cell carcinoma (cSCC).

**Objective:** To assess the impact of the COVID-19 pandemic on cSCC severity across different patient populations, with particular focus on immunosuppressed and elderly patients.

**Methods:** A single-center, retrospective cohort study analyzing 511 patients with cSCC at Hadassah Medical Center across three time periods: before (6/2018-5/2019), during (6/2020-5/2021), and after (6/2022-5/2023) COVID-19. Tumor severity was classified according to 56 National Comprehensive Cancer Network (NCCN) guidelines.

**Results:** Non-immunosuppressed patients showed a significant increase in proportion of severe cSCC during COVID-19 (36.5% before vs. 58.1% during;  $p=0.022$ ), particularly those aged  $\geq 75$  years (41.9% before vs. 71.4% during;  $p=0.024$ ). Immunosuppressed patients maintained stable tumor severity across all periods ( $p=0.589$ ), likely due to continued medical surveillance despite pandemic restrictions.

**Conclusion:** Regular medical surveillance mitigated increased cSCC severity in immunosuppressed patients during the pandemic, underscoring the importance of maintaining access to dermatologic care for vulnerable populations during healthcare system disruptions.

## A Recurrent Basal Cell Carcinoma in a Child with Ataxia Telangiectasia: Case Report and Review of Skin Cancer–Associated Genodermatoses

**Dr. Michael Cleiman**

*Hadassah Ein Kerem Hospital*

Vered Molho–Pessach<sup>1</sup>, Mariana Zamir<sup>2</sup>, Galit Avinoam–Dar<sup>3</sup>, Sivan Sheffer Levi<sup>1</sup>

1. Department of Dermatology, Hadassah Medical Center, Jerusalem, Israel

2. Department of Dermatology, Sheba Medical Center, Tel Hashomer, Israel

3. Department of Plastic and Reconstructive Surgery, Sheba Medical Center, Tel-Hashomer Israel

**Background:** Basal cell carcinoma (BCC) is the most common cancer in humans but is rare in children. Genodermatoses can predispose to early-onset BCC and other skin cancers. Ataxia telangiectasia (AT) is a rare autosomal recessive disorder marked by cerebellar ataxia, oculocutaneous telangiectasias, immunodeficiency, and cancer susceptibility. While AT is not typically associated with skin cancers, its overall cancer risk is well recognized.

**Methods:** We report a case of a 12-year-old girl with recurrent BCC of the nasal ala, treated with Mohs micrographic surgery (MMS). A literature review was performed to identify genodermatoses associated with BCC, cutaneous squamous cell carcinoma (cSCC), and malignant melanoma (MM).

**Results:** Several genodermatoses are associated with heightened skin cancer risk. BCC-associated syndromes include Gorlin–Goltz, Rombo, and Bazex–Dupré–Christol. Conditions linked to cSCC include xeroderma pigmentosum, oculocutaneous albinism, and Rothmund–Thomson syndrome. MM risk is increased in familial atypical multiple mole melanoma syndrome. AT, typically linked with leukemias and lymphomas, has an unclear association with skin cancers, though our case suggests a potential link.

**Conclusion:** Several familial syndromes are associated with increased risk of skin cancers, often involving internal malignancies and requiring multidisciplinary care. Dermatologists play a critical role, as cutaneous findings are often the first clinical clue. Although AT is not currently recognized as a skin cancer–prone genodermatosis, this case raises the possibility of a link to BCC, potentially mediated by impaired DNA repair and UV sensitivity. Further investigation is warranted to clarify whether AT contributes to increased skin cancer susceptibility.

## From National Crisis to Viral Reactivation: Herpes Zoster Incidence During the October 2023 War

**Dr. Michael Cleiman**

*Hadassah Ein Kerem Hospital*

Dr. Ayal Hassidim<sup>1</sup>, Dr. Rony Shreberk-Hassidim<sup>2</sup>

1. Service of Plastic Surgery, Assuta Ashdod Medical Center, Ashdod, Israel
2. Department of Dermatology, Hadassah Medical Center, Hebrew University of Jerusalem, The Faculty of Medicine, Jerusalem, Israel

**Introduction:** Following the October 2023 national crisis in Israel, which profoundly affected the population's psychological, physical, and socioeconomic well-being, the population was exposed to widespread psychological stress. Psychological stress is increasingly recognized as a modulator of dermatological conditions; however, its impact during national crises remains poorly established.

**Objectives:** To assess the association between crisis-induced stress and the incidence of infectious and inflammatory skin diseases, focusing on herpes zoster.

**Methods:** A retrospective cross-sectional study was performed using emergency room records from Hadassah Medical Center, Israel. Skin-related visits were compared between: (1) October-December 2023 (national crisis) and the same months in 2014-2022; and (2) COVID-19 lockdowns (March-May 2020, December 2020-February 2021) and pre-pandemic years (2014-2022). Logistic regression models, adjusted for age and sex, evaluated disease incidence.

**Results:** Among 1,644 patients, infectious skin diseases increased significantly during the October-December 2023 crisis (OR = 2.106,  $p < 0.001$ ), mainly due to herpes zoster (OR = 2.616,  $p = 0.009$ ). No significant change was observed for inflammatory skin diseases. During COVID-19 lockdowns, no significant differences were found, likely reflecting reduced healthcare utilization.

**Conclusions:** National crisis-related stress was associated with higher incidence of infectious skin diseases, particularly herpes zoster, but not with inflammatory conditions. These findings support targeted interventions, including vaccination and stress management, during crises.

# Diagnostic Criteria in Darier Disease: A Scoping Review seeking International Consensus

**Dr. Itzhak Shabat**

*Nahariya Galilee Medical Center*

Xiong Grace-Michael<sup>1</sup>, Sofia Labbouz-Ramon<sup>2</sup>, Tal Kaminski Rosenberg<sup>3</sup>, Michael ziv<sup>4</sup>, Khaled Ezzedine<sup>5</sup>, Dodiuk-Gad RP<sup>6</sup>

1. G. DeGroot School of Medicine, McMaster University, Hamilton, Ontario, Canada
2. y Cajal University Hospital, Madrid, Spain
3. Bruce Rappaport Faculty of Medicine, Technion – Institute of Technology, Haifa, Israel
4. Department of Dermatology, Emek Medical Center, Afula, Israel
5. Department of Dermatology, Hôpital Henri Mondor and Université Paris–Est Créteil, EpiDermE (Epidemiology in Dermatology and Evaluation of therapeutics), Institut Mondor de Recherche Biomédicale, Inserm U955, Université Paris Est Créteil (UPEC)
6. Department of Dermatology, Emek Medical Center, Afula, Israel

Darier Disease (DD), or keratosis follicularis, is a rare autosomal-dominant genodermatosis often characterized by scaly, yellow-to-brown papules and plaques most commonly in seborrheic areas. The clinical characterization and diagnostic criteria of DD remains heterogenous.

**Objective:** This scoping review aims to evaluate the range of diagnostic criteria used for \*DD and assess the consistency of their application across prior literature, with the broader goal of supporting the development of an international diagnostic consensus.

**Methods:** A scoping review was reported following PRISMA-ScR guidelines. Comprehensive searches were performed in Embase , Medline, CENTRAL , and Web of Science. Two independent researchers conducted the screening and extracted data on study characteristics, clinical, histopathological, genetic features, family history of DD. Quality assessment was conducted using the Joanna Briggs Institute checklists.

**Results:** From 258 initial records, sixteen studies were identified. Amongst the included articles, 62.5% (10/16) had explicitly defined diagnostic criteria. Clinical features were consistently reported across all studies, with histopathology described in 87.5% (14/16), genetic testing in 37.5% (6/16), and family history in 25% (4/16) of studies. Case reports and case series were more likely to specify diagnostic criteria than cohort or cross-sectional studies. Temporal analysis demonstrated that older studies relied more heavily on clinical and histopathological findings, whereas recent studies increasingly incorporated genetic testing as part of diagnostic criteria. Geographic variability was observed, with European studies frequently integrating both histopathological and genetic assessments, studies from the United States and United Kingdom predominantly emphasizing clinical and histopathological criteria, and Asian studies more often prioritizing genetic testing.

**Conclusion:** Currently, there is no standardized diagnostic framework for Darier Disease. Clinical and histopathological features are the most consistently used criteria, while genetic and familial information are applied inconsistently. Temporal trends indicate increased integration of molecular diagnostics in recent studies. However, a unified international consensus remains lacking.

## Metastatic Carcinoma Mimicking Herpes Zoster virus infection – report of two cases

**Dr. Eran Shavit MD**

*Wolfson Medical Center*

Eran Shavit<sup>1,2</sup>, Hananya Vaknine<sup>3</sup>, Ronen Brenner<sup>4</sup>, Yizhak Confino<sup>1</sup>

1. Dermatology clinic, Wolfson Medical Center, Holon, Israel
2. Gray faculty of Medical and Health Sciences, Gray School of Medicine, Tel-Aviv University, Tel-Aviv, Israel
3. The Department of Pathology, Wolfson Medical Center, Holon, Israel
4. The Oncology department, Wolfson Medical Center, Holon, Israel

Cutaneous metastases are rare. Cutaneous metastases presenting in a 'zosteriform' pattern mimicking herpes zoster is indeed a rare form for cancer cells to spread.

**Materials & Methods:** We describe herein two cases of young female and male patients who presented with skin eruption localized to cutaneous dermatomes; hence mimicking herpes zoster infection, and initially misdiagnosed as an ordinary case of herpes zoster infection. A 47 years-old female patient presented with painful eruption located on the left side of her breast and truncal area since one-week prior to her referral to our clinic. On her medical background she was diagnosed with stage III breast carcinoma on her left breast since April 2024. Physical examination revealed grouped edematous papules some are on an erythematous basis located on the left breast. Interestingly, the eruption is localized with a dermatomal distribution involving T3-4 dermatomes. Histological examination consisted of metastatic adenocarcinoma associated with vascular invasion. The tumor cells were positive for GATA3 immunohistochemical staining supporting breast origin. HER2 immunohistochemical staining positive. ER (estrogen receptor), PR (Progesterone receptor) immunohistochemical staining were negative.

The second patient was a 48 years-old male patient diagnosed with stage III Gastric adenocarcinoma 8-years prior to his referral to our clinic. The cutaneous eruption elapsed for three weeks and located to truncal dermatomes T6-7 on the right side, without affecting the contralateral side. Histological examination consisted of diffusely involved metastatic adenocarcinoma with signet ring cell formation. Immunohistochemistry was positive for CK7 and negative for CDX2, compatible with metastatic carcinoma of gastric origin.

**Results:** Both patients have been diagnosed with cutaneous metastatic disease with unique presentation mimicking herpes zoster infection.

**Conclusion:** Metastatic cutaneous cancer is uncommon complication of internal malignancies. Therefore, high level of suspicion is suggested in oncological patients and we recommend skin biopsy to determine the exact etiology of the eruption.

## A typical dermatophytosis in patients treated by JAK inhibitors

**Dr. Jen Barak Levitt**

*Emek Medical Center*

Jen A Barak Levitt, Nurit Kulish, Mira Hamed, Michael Ziv, Eran Cohen Barak  
Emek MC

**Background:** Janus kinase (JAK) inhibitors are commonly used to treat immune-mediated diseases by modulating the JAK-STAT signaling pathway. While these agents are therapeutically effective, they may also impair immunity, including antifungal response. Here, we describe atypical phenotypic presentations of dermatophyte infections in patients treated with JAK inhibitors.

**Methods:** We present five cases of atypical dermatophyte infections in patients treated with baricitinib or upadacitinib. Their clinical presentations and treatment regimens were summarized to highlight the atypical features and the presumed effects of JAK inhibitors.

**Results:** Patients presented with erythematous indurated plaques, clustered firm papules, and widespread thin plaques with scaling and erosions. PCR and fungal cultures confirmed infections with *Trichophyton tonsurans*, *Trichophyton rubrum*, *Trichophyton verrucosum* and *Microsporum canis*. Treatment with systemic antifungal agents such as terbinafine, itraconazole, and griseofulvin was effective. In some cases, the dosage of JAK inhibitors was reduced during antifungal therapy.

**Conclusions:** Clinicians should be vigilant for cutaneous fungal infections in JAK inhibitor-treated patients with new rashes. The immunomodulatory effect of JAK inhibitors may attenuate the clinical manifestation and lead to delayed recognition of dermatophytosis.

## Granuloma Annulare in the pediatric population – a single center study

**Dr. Keren Peled MD**

*Wolfson Medical Center*

Yizhak Confino<sup>1</sup>, Eran Shavit<sup>2</sup>

1. Dermatology clinic, Wolfson Medical Center, Holon
2. Dermatology clinic, Wolfson Medical Center, Holon, Israel, and Gray faculty of Medical and Health Sciences, Gray School of Medicine, Tel-Aviv University, Tel-Aviv, Israel

**Introduction & Objectives:** Granuloma annulare (GA) is a benign inflammatory cutaneous disease, characterized clinically with annular plaques without epidermal changes, presenting on the back of hands, elbows. The most common presentation is of solitary asymptomatic lesion. The etiology of GA is unknown. Overall, they are much more common in adults and especially after the 5th decade of life. In adults GA has been associated with other chronic diseases such as diabetes and dyslipidemia. However, little is known in the literature about GA in the pediatric population. In this retrospective study we sought to shed some more light about this disease in the younger population. Naturally, GA is much rarer disease in this population. The purpose of this study was to characterize GA in the unique pediatric population in our medical center.

**Materials & Methods:** A single center retrospective study, based on medical charts between 01/2020 to 12/2024. Included cases are under 18 years of age, and have undergone through a skin biopsy in our clinic.

**Results:** We have collected twenty cases of pediatric patients with confirmed clinical and histological findings of GA. Their demographics and characteristic and management will be discussed in our presentation.

**Conclusion:** GA is rare in the pediatric population. This is a unique study on this specific age group. We believe that our findings will facilitate the work of clinicians treating GA in under 18 years old now and in the future.

## CO<sup>2</sup> Laser Matrixectomy for Refractory MEK Inhibitor - Induced Paronychia: A Case Series

**Dr. Rivka Friedland**

*Schneider Children's Medical Center*

Yehonatan Noyman<sup>1</sup>, Assi Levi<sup>1</sup>, Helen Toledano<sup>2</sup>,

1. Division of Dermatology, Rabin Medical Center

2. Schneider Children's Medical Center

**Background:** Paronychia is a frequent cutaneous adverse event associated with MEK inhibitor (MEKi) therapy and may impair quality of life and compromise treatment adherence. Although surgical management has been reported in adults, data in pediatric patients are limited. We evaluated the safety and efficacy of CO<sup>2</sup> laser matrixectomy for recalcitrant MEKi-induced paronychia in children.

**Methods:** We conducted a retrospective review of pediatric patients treated with MEKi between January 2016 and January 2026 at a tertiary pediatric center.

**Results:** Six patients were included, all had grade 3 paronychia. The mean age at MEKi initiation was  $12.8 \pm 4.4$  years, and paronychia developed after a mean of  $3.4 \pm 1.9$  months. All patients had persistent symptoms despite extensive conservative management, including topical and systemic therapies, and required multiple dermatology visits prior to surgery. CO<sup>2</sup> laser matrixectomy was performed at a mean age of  $13.4 \pm 4.5$  years. Complete and sustained resolution was achieved in all cases, with no procedure-related complications. Outcomes remained favorable over a mean follow-up of  $3.6 \pm 1.8$  years.

**Conclusions:** CO<sup>2</sup> laser matrixectomy appears to be a safe and effective treatment for recalcitrant MEKi-induced paronychia in pediatric patients and may help prevent prolonged morbidity and treatment interruption. Prospective studies are warranted.

## Clinical and molecular characteristics of H Syndrome: A systematic review and pooled analysis of published cases

**Dr. Naama Stepanov**

*Hadassah Ein Kerem Hospital*

Naama Stepanov<sup>1</sup>, Vered Molho-Pessach<sup>1</sup>, Adi Chowers<sup>2</sup>, Ori Meidler<sup>2</sup>, Yuval Ramot<sup>1</sup>, Zvi Gilula<sup>2</sup>, Abraham Zlotogorski<sup>1</sup>

1. Hadassah Ein Kerem Hospital
2. Hebrew University of Jerusalem

**Background:** H syndrome is a rare autosomal recessive disorder caused by mutations in SLC29A3, characterized by pathognomonic cutaneous hyperpigmentation and hypertrichosis. Understanding its clinical variability is essential for diagnosis and management. This study aimed to characterize clinical and molecular features of H-syndrome comprehensively.

**Methods:** A systematic literature search was performed using PubMed with the terms "H syndrome" and "SLC29A3". Demographic, clinical and molecular data were extracted from identified cases. Descriptive statistics analyzed demographic and clinical variables. Correlation analysis examined relationships between age and clinical features, and logistic regression assessed predictors of clinical manifestations.

**Results:** 179 molecularly-confirmed H syndrome cases (92 males, 86 females, 1 not determined) were identified; 63% were of Arab descent, and the mean age at presentation was 16 years. Predominant clinical features included cutaneous hyperpigmentation and hypertrichosis (81%), hearing loss (61%), camptodactyly (55%), short stature (49%) and insulin-dependent diabetes mellitus (IDDM) (41%). Adults showed significantly increased odds of cutaneous involvement (OR = 4.63;  $p = 0.009$ ). Younger age correlated significantly with IDDM and concurrent hearing loss.

A total of 49 mutations were identified, with G437R ( $n = 33$ ) and G427S ( $n = 24$ ) being the most prevalent. Clinical variability was not associated with mutation type.

**Conclusions:** This comprehensive review confirms the progressive nature of H syndrome, highlights consistent cutaneous findings, and underscores earlier onset of IDDM and hearing loss. Clinical heterogeneity appears independent of genotype, emphasizing the importance of early clinical suspicion and ongoing monitoring for systemic complications.

## Beyond Redness: Practical Rosacea Management with 590nm 3D IPL, Targeted Topical Therapy, and Demodex-Guided Assessment

**Dr. Nadav Pam**

*Clinical Director at Forma-TK Systems Ltd*

Dr. Nadav Pam, MD<sup>1</sup>, Alicja Zaremba<sup>2</sup>

1. Clinical Director, Clinical Department, Forma-TK Systems Ltd: Certified CRA, CTA, and CRC (Technion - Israel Institute of Technology), Israel
2. Licensed Cosmetologist, Founder of Vera Beauty Clinic, Poland

**Background:** Rosacea is a chronic inflammatory dermatosis characterized by persistent centrofacial erythema, telangiectasia, inflammatory lesions, and recurrent flares. Conventional pharmacologic therapies often provide partial control and do not directly address dilated superficial vessels or increased Demodex folliculorum density, both recognized contributors to rosacea pathophysiology. Intense pulsed light (IPL) has therefore emerged as an important adjunctive modality for vascular manifestations of the disease. This case study evaluates a multimodal treatment strategy combining 590 nm 3D IPL with targeted topical therapy and Demodex-guided assessment in patients with persistent rosacea.

**Methods:** This retrospective observational case series included four female patients aged 42–70 years with Fitzpatrick skin types I–II and clinically diagnosed facial rosacea, treated at a single aesthetic clinic in Poland. All patients had previously demonstrated insufficient response or intolerance to systemic pharmacologic therapies. Treatment consisted of 590 nm 3D IPL using the Alpha system combined with adjunctive topical therapy using azelaic acid and mandelic acid between IPL sessions. Demodex density was evaluated microscopically before the first and after the final treatment. Clinical outcomes were documented through standardized photography and assessed using a 4-Point Aesthetic Visual Scale.

**Results:** Patients received 4–10 IPL sessions with treatment intervals of 3–5 weeks. Pulse width ranged from 15–20 ms, fluence from 19–20 J/cm<sup>2</sup>, and contact cooling from 10–15 °C. Photographic evaluation demonstrated clinical improvement ranging from 83% to 90%. Post-treatment microscopy showed absence of detectable Demodex in three patients and a marked reduction in the remaining case. Treatment discomfort ranged from 4–5 on a 10-point visual analogue scale. No adverse events were observed.

**Conclusions:** A multimodal strategy combining 590 nm 3D IPL with adjunctive topical therapy and Demodex-guided assessment demonstrated favorable outcomes and good tolerability. Integrating energy-based therapy with targeted topical management may help maintain rosacea control even when ideal IPL treatment intervals cannot be maintained.



# Extensive Cutaneous Viral Warts During JAK Inhibitor Therapy for Atopic Dermatitis

**Dr Daniel Hilewitz**

*Sheba Medical Center (Tel HaShomer)*

Yael A. Leshem<sup>1</sup>, Roni P. Dodiuk-Gad<sup>2</sup>, Amarilla B Mandola<sup>3</sup>, Melinda Gooderham<sup>4</sup>, Shoshana Greenberger<sup>3</sup>

1. Rabin Medical Center
2. Emek Medical Center
3. Sheba Medical Center
4. SKiN Centre for Dermatology, Queen's University, Canada

**Background:** Janus kinase (JAK) inhibitors, including upadacitinib, provide rapid and robust disease control in moderate-to-severe atopic dermatitis (AD). However, their broad immunomodulatory effects may impair viral immune surveillance. While herpesvirus infections are well recognized, non-herpetic cutaneous viral infections, particularly human papillomavirus (HPV), associated warts and molluscum contagiosum remain less characterized.

**Methods:** We conducted a multicenter retrospective case series of patients with moderate-to-severe AD who developed new-onset extensive cutaneous viral warts during treatment with upadacitinib. Clinical data included AD history, prior systemic therapies, JAK inhibitor dose and duration, latency to viral lesion onset, lesion distribution, management strategies, and outcomes following treatment modification. To contextualize these findings, we performed a structured descriptive review of international pharmacovigilance databases for wart-type adverse events associated with JAK inhibitors approved for AD.

**Results:** Five patients (ages 17-59) with long-standing, treatment-refractory AD developed extensive HPV-associated warts (n=4) or disseminated molluscum contagiosum (n=1) after initiation of upadacitinib. Viral lesions appeared weeks to years after treatment initiation and often involved non-eczematous skin. Local destructive therapies provided limited or transient benefit. Dose reduction or discontinuation of upadacitinib resulted in partial or complete regression of viral lesions but was frequently accompanied by rapid and severe AD flares. In contrast, switching to targeted biologic therapy led to resolution of viral disease with restoration of eczema control in selected cases.

**Conclusions:** This case series offers preliminary clinical observations of extensive cutaneous warts and molluscum contagiosum emerging during upadacitinib therapy in patients with atopic dermatitis. While the data suggest a possible association causality cannot be established and generalizability is limited. These findings underscore the importance of ongoing vigilance and individualized risk-benefit assessment for viral infections during JAK inhibitor therapy. Larger, prospective studies are needed to better define incidence, risk factors, and optimal management strategies for cutaneous viral infections in this population.

## Leukemia Cutis- an unusual presentation

### Dr. Eran Shavit MD

*Wolfson Medical Center*

Eran Shavit<sup>1,2</sup>, Hananya Vaknine<sup>3</sup>, Itay Silbershatz<sup>4</sup>, Yizhak Confino<sup>1</sup>

1. Dermatology clinic, Wolfson Medical Center, Holon, Israel
2. Gray faculty of Medical and Health Sciences, Gray School of Medicine, Tel-Aviv University, Tel-Aviv, Israel
3. The Department of Pathology, Wolfson Medical Center, Holon, Israel
4. The Hematology department, Wolfson Medical Center, Holon, Israel

**Background:** Lukemia Cutis (LC) is a rare skin infiltration of leukemic cells. This is a rare condition characterized with various morphological presentation including papules, plaques, nodules etc.(1) namely there is not one specific morphology to discern LC from other specific dermatoses. LC is most commonly associated with acute myelocytic leukemia (AML) but also other hematological neoplasms have been reported (2). LC carries relatively poor prognosis, hence, high clinical vigilance and suspicion is required. (2-3).

**Methods:** a case presentation

We describe herein a male patient who presented with few months' skin eruption mostly located to his trunk with no other symptom rather than the skin rash.

An 88 years-old male patient with essential thrombocytosis and Myleofibrosis on his medical background, presented with painful and itching eruption since 6 months. He admits that the eruption has gradually increased in size in the past few weeks. Upon clinical examination, the eruption is located mainly in the trunk with some predilection to the folds including the inguinal areas and axilla. The morphology is of cutaneous erythematous large plaques with elevated protuberant edges and some central clearing, there is not epidermal changes on the lesions. Histological examination shows dense perivascular infiltrate consisted of cells with blastoid morphology admixed with rare immature eosinophils. CD123 is positive. TCL1 stain is pending.

**Conclusion:** LC is rare carries poor prognosis, although its rarity we recommend high level of awareness not to miss such diagnosis.

## Subcutaneous fat necrosis of the newborn– a rare entity that must be sought

**Dr. Yizhak Confino MD**

*Wolfson Medical Center*

Yizhak Confino<sup>1</sup>, Hananya Vaknine<sup>2</sup>, Eran Shavit<sup>1,3</sup>,

1. Dermatology clinic, Wolfson Medical Center, Holon, Israel
2. The Department of Pathology, Wolfson Medical Center, Holon, Israel
3. Gray faculty of Medical and Health Sciences, Gray School of Medicine, Tel-Aviv University, Tel-Aviv, Israel

**Background:** Subcutaneous Fat Necrosis (SFN) of the newborn is a rare form of panniculitis of neonates (1). SFN is commonly associated with perinatal hypoxia treated with therapeutic hypothermia (2). Morphologically it presents with nodular firm discoloration of the skin usually located on the upper trunk, and are discernable a few days postpartum (2). SFN is also a condition associated with laboratory abnormalities, especially delayed-onset hypercalcemia (3). The pathogenesis is unknown, theories have connected it to hypoxia, local pressure etc. (4).

**Methods:** a case presentation: A full-term female neonate, born to a diabetic mother, at 39 weeks' gestation in a vaginal delivery. She had suffered bradycardia and meconium discharge. The APGAR score was 2/3/6 in the 1st, 5th and 10th minutes respectively. Induced hypothermia treatment for 72 hours provided. Laboratory tests: hypoglycemia, impaired liver and renal function tests.

3 weeks postpartum, dermatological exam: hardened firm subcutaneous nodules located on the upper, mid-back, and buttocks. Skin biopsy revealed lobular panniculitis with features of subcutaneous fat necrosis containing characteristic, radially- shaped needle-shaped crystals. More than three weeks after delivery, hypercalcemia of 15.3 mg/dl (normal range 8–11.3 mg/dl) were measured. Treatment included; diuretics and corticosteroids in addition to supportive care. At 6 weeks of age, calcium levels returned to normal range. Cutaneous involvement mitigated with time.

**Conclusion:** subcutaneous fat necrosis of the newborn is a rare entity that may be associated with electrolyte abnormalities, such as hypercalcemia. Therefore, dermatologist and pediatricians must be aware of these findings and close surveillance is required.

# Combat Military Service and Psoriasis Exacerbation: a Retrospective Cohort Study of Israeli Soldiers

## Dr. Shahar Ronen

*Head of Volunteer Medicine, Medical Classification and Occupational Health Branch, IDF Medical Corps, Israel*

Lirom Motola<sup>1</sup>, Yael Hod<sup>1</sup>, Michal Leibovitch<sup>1</sup>, Doron Stupp<sup>1</sup>, Aya Bardugo<sup>1</sup>, Meir Schechter<sup>1</sup>, Yuval Hilerowicz<sup>2</sup>

1. Medical Corps Data Research Center, IDF Medical Corps, Tel Hashomer, Israel
2. Department of Military Medical Research, Hebrew University of Jerusalem, Israel

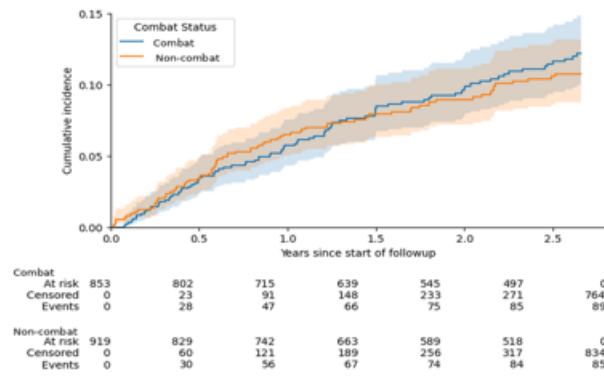
**Background:** Psychological stress is frequently cited as a trigger for psoriasis flares, yet controlled evidence remains inconsistent. The impact of sustained, objective stress exposure through occupational or life circumstances on clinical exacerbation remains unclear. Military service entails defined physical and psychological demand, offering a unique model to study the relationship between stress and psoriasis using real-world longitudinal data.

**Methods:** We conducted a retrospective cohort study of 3,109 Israeli Defense Forces (IDF) conscripts (ages 16–25 years) enlisted between 2007 and 2024 with pre-existing psoriasis. Psoriasis diagnoses were based on prior civilian physician documentation. All participants held combat-eligible medical fitness profiles. Conscripts were categorized by initial role assignment as combat or non-combat. To address confounding by sex and differing mandatory service lengths, males and females were followed for 32 and 24 months respectively. The primary outcome was psoriasis exacerbation, defined as a composite of worsening of the medical fitness code or the initiation of systemic, biologic or phototherapy treatment. Adjusted Cox regression was used to calculate adjusted hazard ratios (aHR).

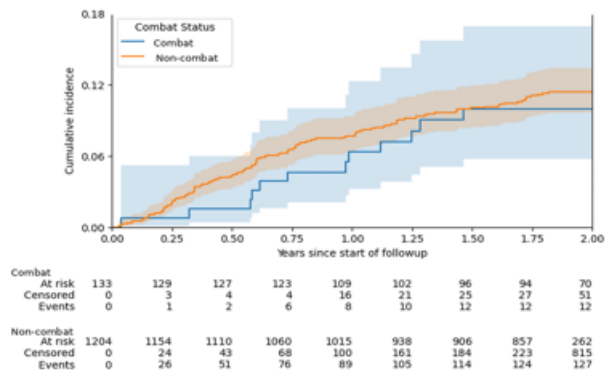
**Results:** Participants included 986 (31.7%) in combat roles and 2,123 in non-combat roles. The exacerbation outcome occurred in 110 (11.2%) combat soldiers and 216 (10.2%) non-combat soldiers. No significant difference in psoriasis exacerbation was found between the two groups in males (aHR=1.3, p-value=0.07, 95% CI [0.98–1.8]) or in females (aHR=1.2, p-value=0.56, 95% CI [0.65–2.20]).

**Conclusions:** In this large longitudinal study, combat service was not significantly associated with an increased risk of psoriasis exacerbation compared to non-combat roles, although a modest trend was observed among male soldiers. These findings suggest that high-intensity occupational stress alone may be insufficient to drive clinically significant exacerbations. This may reflect the multifactorial nature of psoriasis and the role of additional biological or environmental factors in clinically significant exacerbations, warranting further study.

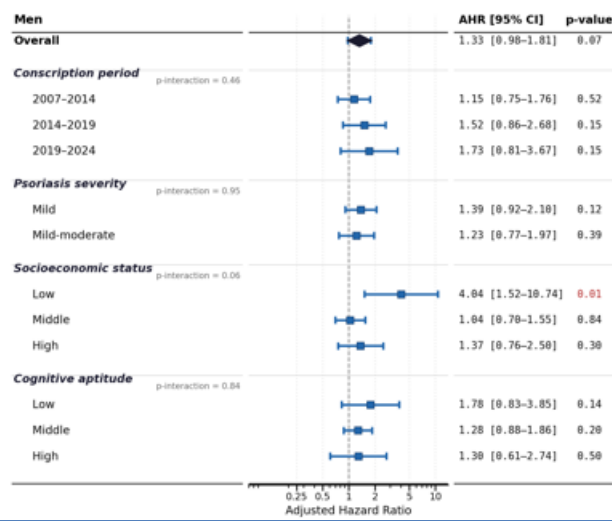
**A** Kaplan Meier: Time to Psoriasis Exacerbation by Combat Status in Males



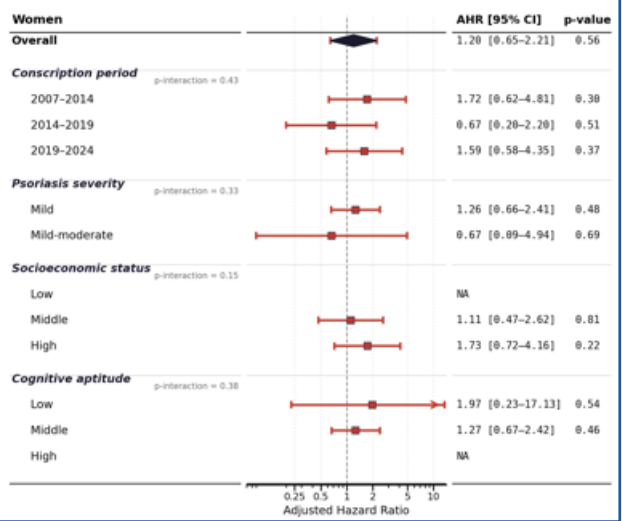
**B** Kaplan Meier: Time to Psoriasis Exacerbation by Combat Status in Females



**C** Forest Plot: Subgroup Analysis in Males



**D** Forest Plot: Subgroup Analysis in Females



## Feasibility of smartphone-based three-dimensional imaging for longitudinal assessment of craniofacial morphea

**Dr. Hiba Zaaroura**

*Rambam Health Care Campus*

Hiba, Zaaroura<sup>1</sup>, Emily, Avitan-Hersh<sup>1</sup>, Adi, Miller-Barmak<sup>2</sup>, Leraz, Tobias<sup>2</sup>, Yonatan, Butbul Aviel<sup>2</sup>

1. Department of Dermatology, Rambam Health Care Campus, Haifa, Israel

2. Pediatric Rheumatology Service, Ruth Rappaport Children's Hospital, Rambam Health Care Campus, Haifa, Israel

**Objectives:** Craniofacial morphea can result in progressive cutaneous and subcutaneous atrophy, leading to facial asymmetry and functional compromise. Identifying subtle progression with conventional two-dimensional photography remains difficult. This pilot study sought to assess the feasibility of smartphone-based three-dimensional (3D) imaging as a practical, non-invasive modality for longitudinal monitoring of disease activity and progression in individuals with craniofacial morphea.

**Methods:** Patients diagnosed with craniofacial morphea underwent sequential facial imaging at baseline and follow-up visits using a smartphone-based 3D imaging application. Standardized images were captured under consistent lighting and positioning conditions, generating interactive 3D facial reconstructions. Serial comparisons were performed to evaluate changes in contour, volume, and facial symmetry. Disease activity was independently assessed by both a dermatologist and a rheumatologist using the Localized Scleroderma Cutaneous Assessment Tool (LOSCAT). Ultrasound imaging was performed in selected cases to supplement clinical and 3D assessments. Correlations between 3D findings, LOSCAT scores, and ultrasound results were descriptively examined.

**Results:** Preliminary findings from this ongoing pilot suggest that smartphone-based 3D imaging can identify subtle alterations in contour and volume not easily appreciated with standard photography. Patients with clinically active disease demonstrated progressive asymmetry and volume reduction on serial 3D reconstructions, corresponding with elevated LOSCAT activity scores and ultrasound evidence of dermal thickening. Conversely, clinically stable patients exhibited minimal interval changes across all modalities. Image acquisition was efficient (less than 3 minutes per session) and well tolerated.

**Conclusion:** Smartphone-based 3D facial imaging appears to be a feasible, affordable, and reproducible adjunctive tool for longitudinal assessment of craniofacial morphea. When combined with established clinical scoring systems and ultrasound, it may improve objective evaluation of disease activity and support therapeutic decision-making. Further studies are underway to validate its reliability and define its role in standardized follow-up protocols.

## Photosensitive erythema multiforme induced by Vandetanib in a pediatric patient

**Dr Hiba Zaaroura**

*Rambam Health Care Campus*

Hiba, Zaaroura<sup>1</sup>, Michal, Ramon<sup>1</sup>, Shifra Ash<sup>2</sup>, Emily, Avitan-Hersh<sup>1</sup>

1. Department of Dermatology, Rambam Health Care Campus, Haifa, Israel

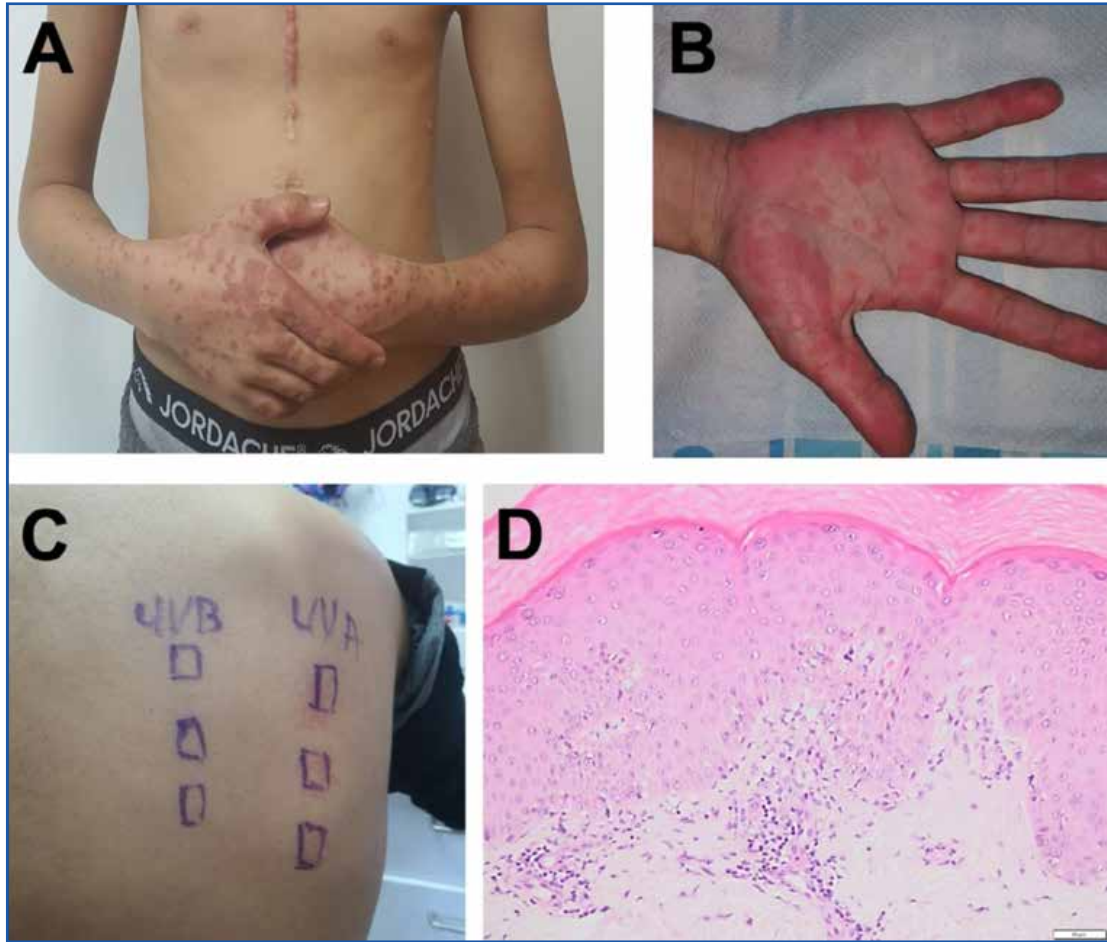
2. Pediatric Hematology-Oncology and Bone Marrow Transplantation, Ruth Rappaport Children's Hospital, Rambam Health Care Campus, Haifa, Israel

**Objectives:** Vandetanib is a multikinase inhibitor approved for metastatic medullary thyroid carcinoma and is recognized to induce photosensitivity. Photo-induced erythema multiforme (EM) represents a rare adverse effect, previously described exclusively in adults. We describe what is likely the first pediatric case of vandetanib-associated photosensitive EM, supported by clinical findings, phototesting, and histopathologic assessment.

**Methods:** A 14-year-old male receiving oral vandetanib presented with a pruritic eruption. Evaluation included comprehensive dermatologic examination and targeted laboratory studies (ANA, HSV PCR) to rule out infectious and autoimmune causes. Phototesting for minimal erythema dose (MED) to UVA and UVB was conducted, followed by UVA photoprovocation on protected skin. Two biopsies – one from a spontaneous lesion and another from the photoproved site – were obtained for histologic confirmation.

**Results:** Cutaneous findings appeared three weeks after initiation of vandetanib and included targetoid erythematous papules and plaques involving the face, neck, upper extremities, hands, and palms (Figure 1A,1B). Laboratory evaluation excluded viral and autoimmune triggers. Phototesting revealed a markedly decreased UVA MED ( $<2.5 \text{ J/cm}^2$ ) (Figure 1C). UVA photoprovocation induced erythematous papules after two exposures to  $5 \text{ J/cm}^2$ . Histopathology from both specimens demonstrated interface dermatitis with numerous dyskeratotic keratinocytes throughout the epidermis, consistent with EM (Figure 1E). Topical corticosteroids produced partial improvement; addition of a brief course of oral prednisone resulted in further clinical resolution. Strict photoprotection led to complete clearance within two months without interruption of vandetanib therapy. No relapse occurred during one year of follow-up. Review of the four previously reported adult cases showed comparable onset timing, similar histopathologic features, and abnormal phototesting when assessed.

**Conclusion:** This report underscores vandetanib-induced photosensitive EM as a rare yet manageable adverse reaction in pediatric patients. Combined phototesting and targeted biopsy facilitate diagnostic confirmation while maintaining essential oncologic therapy. Prompt recognition and strict photoprotection may enable continuation of vandetanib without compromising treatment efficacy.



# Clinical Phenotype, Treatment Patterns, and Predictors of Treatment Escalation in Papular Urticaria: A Retrospective Multi-center Cohort Study

**Mr. Jonathan Ollech**

*The Hebrew University of Jerusalem*

Jonathan Ollech<sup>1</sup>, Zvi Segal<sup>2,3</sup>, Michal Solomon<sup>2,3</sup>, Shoshana Greenberger<sup>2,3</sup>, Amir Horev<sup>4</sup>, Ori Toker<sup>5</sup>, Vered Molho-Pessach<sup>1,6</sup>, Ayelet Ollech<sup>7</sup>

1. The Faculty of Medicine, Hebrew University, Jerusalem, Israel
2. Department of Dermatology Chaim Sheba Medical Center, Tel Hashomer
3. The Grey faculty of Medicine, Tel Aviv University, Tel Aviv
4. Pediatric Dermatology Service, and Ben Gurion University of the Negev Faculty of Health Sciences, Soroka University Medical Center Beer Sheva, Israel
5. Allergy and Clinical Immunology Unit, Department of Pediatrics, Shaare Zedek Medical Center, Faculty of Medicine, The Hebrew University of Jerusalem, Jerusalem, Israel
6. Pediatric Dermatology Service, Department of Dermatology, Hadassah Medical Center, Jerusalem, Israel
7. Pediatric Dermatology service, The Eisenberg R&D Authority, Shaare Zedek Medical Center, Jerusalem, Israel

**Background:** Papular urticaria is a common hypersensitivity eruption to insect bites in children, but data on treatment patterns and predictors of a more refractory course are limited.

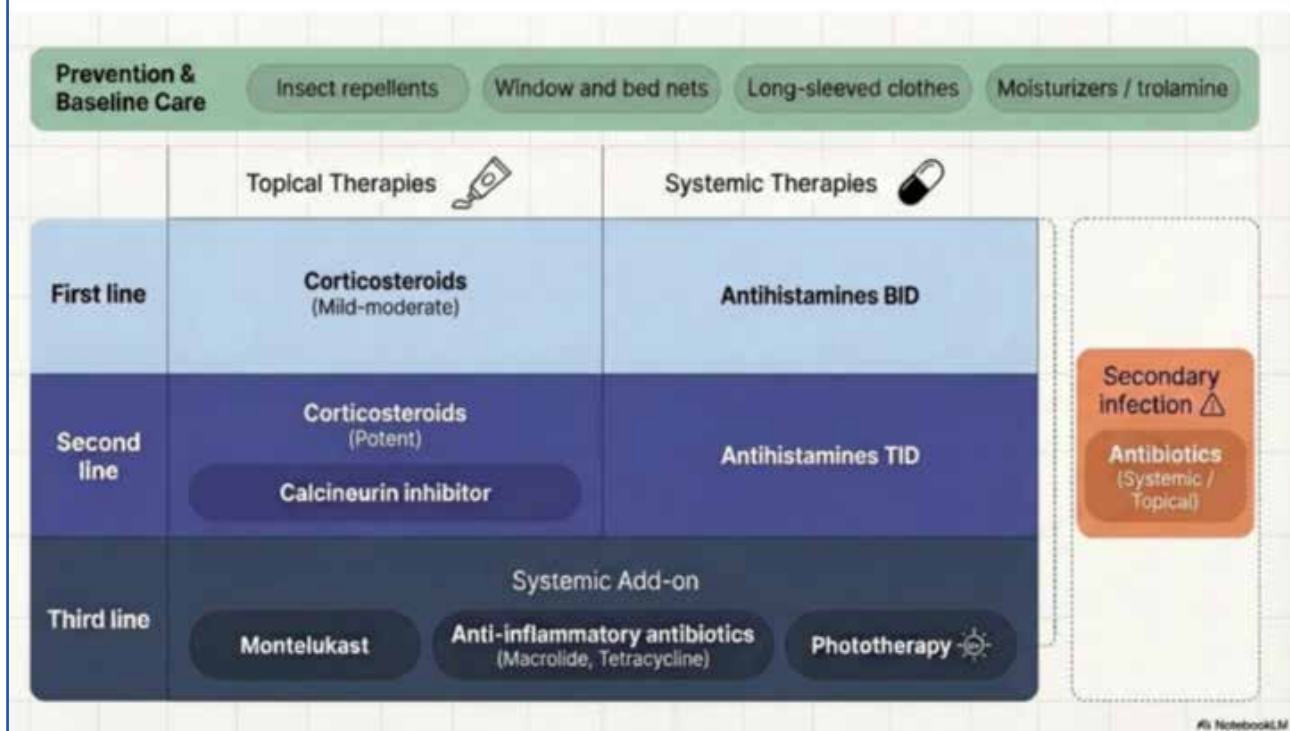
**Objective:** To characterize the clinical phenotype and treatment patterns of papular urticaria and identify baseline features associated with treatment escalation.

**Methods:** We conducted a retrospective multi-center cohort study of children with clinician-diagnosed papular urticaria. Demographic, clinical, histopathology, treatment, and response data were extracted from medical records. The primary outcome was treatment escalation, defined as use of any second- or third-line therapy after the initial regimen. Third-line therapy was also evaluated as a secondary severity outcome. Continuous variables were compared using the Mann-Whitney U test and categorical variables using Fisher's exact test. Predictors of treatment escalation were explored using multivariable logistic regression.

**Results:** A total of 106 patients were included. Median age at first visit was 2.71 years (IQR, 1.70–5.22), 58.5% were male, and median follow-up time was 1.84 (IQR 0.92–6.08) months. Extremity involvement was present in 96.2%, facial involvement in 58.5%, and truncal involvement in 41.5%. Papules were observed in 95.3%, erosions/excoriations in 38.7%, and nodules in 28.3%; 31.1% underwent biopsy. Among treated patients, 31(30.1%) required treatment escalation. In univariable analyses, escalation was associated with family atopy, scab/crusting, and bullous lesions. In multivariable analysis, family atopy remained independently associated with escalation (OR, 4.18; 95% CI, 1.09–16.07).

**Conclusions:** Papular urticaria in children may be chronic and may require treatment escalation in a substantial proportion of cases. Family atopy and specific lesion morphologies may identify patients at risk for a more refractory course. A therapeutic algorithm proposed by the authors may help guide management in affected children.

**Figure 1.** Therapeutical algorithm for papular urticaria



## Real-World Safety of Liposomal Amphotericin B (Ambisome) in Cutaneous Leishmaniasis: A Large Retrospective Cohort Study

**Dr. Meital Haber**

*head of dermatology service, south district, Kupat Holim Clalit*

Or Dagan

Soroka medical center

**Background:** Cutaneous leishmaniasis is typically managed with local therapies; however, systemic treatment with liposomal amphotericin B (Ambisome) is often required in selected cases, including multiple lesions, facial involvement, or peri-articular lesions. Despite its use, real-world safety data in dermatology are limited.

**Methods:** We conducted a retrospective cohort study using data from Clalit Health Services based on ICD-coded diagnoses. Patients with cutaneous leishmaniasis (*Leishmania major* only) were categorized by exposure to Ambisome, defined as receipt of the first dose. A 1:4 matched cohort was constructed. Patients were followed for two years. Outcomes included laboratory abnormalities (renal, hepatic, metabolic, and pancreatic) and clinical diagnoses associated with potential adverse drug reactions. Short-term outcomes were assessed within the first year.

**Results:** A total of 3,204 patients were included, of whom 801 received Ambisome and 2,403 served as controls.

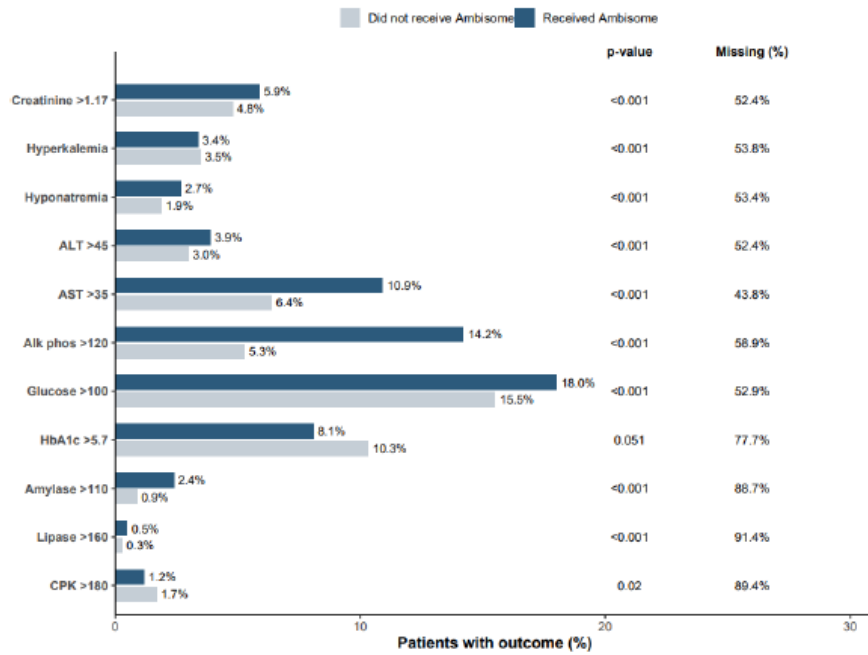
Within the first year, Ambisome-treated patients demonstrated higher rates of laboratory abnormalities, including elevated AST (10.9% vs. 6.4%), alkaline phosphatase (14.2% vs. 5.3%), and creatinine (5.9% vs. 4.8%). Electrolyte disturbances were also more frequent, including hyponatremia (2.7% vs. 1.9%). Despite these findings, clinically diagnosed adverse outcomes were not increased. Rates of renal failure were lower in the Ambisome group (2.4% vs. 3.6%), as were diabetes mellitus (7.4% vs. 8.3%) and pancreatic disease (0.4% vs. 0.5%). At one-year follow-up laboratory reassessment, differences between groups were attenuated, with similar rates of abnormal creatinine (1.7% vs. 2.3%) and liver enzymes.

**Conclusions:** Ambisome use was associated with increased rates of transient laboratory abnormalities but not with higher rates of clinically significant adverse outcomes. These findings support its safety in dermatological practice and emphasize that laboratory abnormalities should be interpreted in the clinical context.

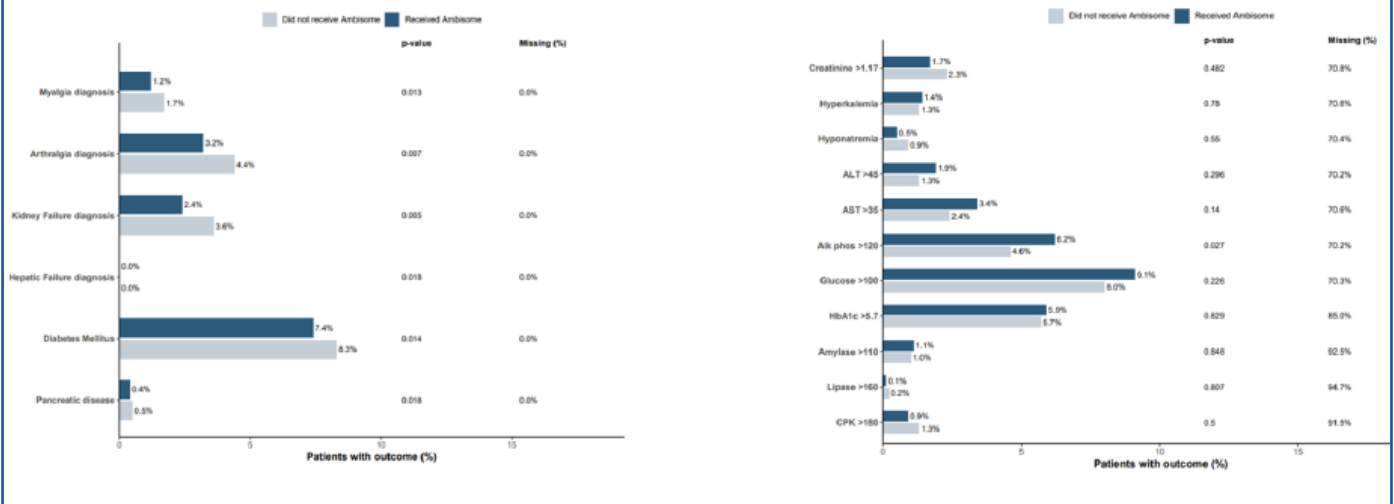
**Table 1 – Baseline characteristics**

| Characteristics                                  |  | Received Ambisome          | Didn't Receive Ambisome     | p-value          | Missing (%) |
|--|--|----------------------------|-----------------------------|------------------|-------------|
| <b>n = 3204</b>                                  |  | <b>801</b>                 | <b>2,403</b>                |                  |             |
| <b>Matched variables</b>                         | Age at Leishmania diagnosis (median [IQR]) | 29.00 [8.00, 49.00]        | 29.00 [8.00, 49.00]         | 0.802            | 0           |
|  | Gender = Male (%)                          | 438 (54.7)                 | 1330 (55.3)                 | 0.774            | 0           |
|  | Socioeconomic score (%)                    |                            |                             | 0.953            | 0           |
|  | High                                       | 102 (12.7)                 | 290 (12.1)                  |                  | 12.1        |
|  | Medium                                     | 477 (59.6)                 | 1439 (59.9)                 |                  |             |
| Low  | 124 (15.5)                                 | 384 (16.0)                 |                             |                  |             |
| <b>Age at Ambisome first dose (median [IQR])</b> |  | <b>29.75 [8.80, 49.06]</b> | <b>36.80 [17.65, 58.72]</b> | <b>&lt;0.001</b> | <b>0</b>    |
| <b>Sector (%)</b>                                |  |                            |                             | <b>&lt;0.001</b> | <b>0</b>    |
| Jewish   |  | 609 (76.0)                 | 1962 (81.6)                 |                  |             |
| Arab   |  | 81 (10.1)                  | 319 (13.3)                  |                  |             |
| Other  |  | 111 (13.9)                 | 122 (5.1)                   |                  |             |
| Chronic pulmonary disease (%)                    |  | 111 (13.9)                 | 313 (13.0)                  | 0.588            | 0           |
| Chronic liver disease (%)                        |  | 65 (8.1)                   | 183 (7.6)                   | 0.703            | 0           |
| Malignancy (%)                                   |  | 60 (7.5)                   | 177 (7.4)                   | 0.969            | 0           |
| Type 2 diabetes (%)                              |  | 37 (4.6)                   | 106 (4.4)                   | 0.882            | 0           |
| <b>Cerebrovascular disease (%)</b>               |  | <b>32 (4.0)</b>            | <b>55 (2.3)</b>             | <b>0.014</b>     | <b>0</b>    |
| Peptic ulcer (%)                                 |  | 15 (1.9)                   | 67 (2.8)                    | 0.196            | 0           |
| Congestive heart failure (%)                     |  | 13 (1.6)                   | 33 (1.4)                    | 0.732            | 0           |
| Rheumatologic disease (%)                        |  | 9 (1.1)                    | 28 (1.2)                    | 1                | 0           |
| Type 1 diabetes (%)                              |  | 5 (0.6)                    | 21 (0.9)                    | 0.649            | 0           |
| Aids or HIV before (%)                           |  | 1 (0.1)                    | 1 (0.0)                     | 1                | 0           |
| <b>Baseline Kidney function</b>                  | Creatinine > 1.17 (%)                      | 31 (3.9)                   | 148 (6.2)                   | <0.001           | 13.7        |
|  | Hyperkalemia (%)                           | 26 (3.2)                   | 98 (4.1)                    | 0.004            | 14.4        |
|  | Hyponatremia (%)                           | 16 (2.0)                   | 70 (2.9)                    | 0.004            | 13.7        |
| <b>Baseline Hepatic functions</b>                | ALT > 45 (%)                               | 42 (5.2)                   | 99 (4.1)                    | <0.001           | 14.1        |
|  | AST > 35 (%)                               | 101 (12.6)                 | 233 (9.7)                   | <0.001           | 14.9        |
|  | Alk phos > 120 (%)                         | 190 (23.7)                 | 512 (21.3)                  | <0.001           | 16.3        |
| <b>Baseline Diabetes measurements</b>            | Glucose > 100 (%)                          | 172 (21.5)                 | 556 (23.1)                  | <0.001           | 14.9        |
|  | HbA1c > 5.7 (%)                            | 81 (10.1)                  | 378 (15.7)                  | <0.001           | 54.5        |
| <b>Baseline Pancreas measurements</b>            | Amylase > 110 (%)                          | 27 (3.4)                   | 102 (4.2)                   | 0.242            | 57.8        |
|  | Lipase > 160 (%)                           | 0 (0.0)                    | 12 (0.5)                    | <0.001           | 73.3        |
| <b>Other - Baseline</b>                          | CPK > 180 (%)                              | 44 (5.5)                   | 165 (6.9)                   | <0.001           | 48.8        |

**Figure 1 - Bar plot of abnormal lab results within the first year of the first dose**



**Figure 2 – Diagnoses and Abnormal lab results after more than 1 year post first dose**



## Screening sensitivity for fragrance allergy: Does the European baseline series suffice?

**Dr. Mariela Judith Nevet**

*Rambam Health Care Campus*

S. Serfaty<sup>2</sup>, J. Dascalu<sup>1</sup>, E. Avitan-Hersh<sup>1,2</sup>

1. Department of Dermatology, Rambam Health Care Campus, Haifa, Israel

2. The Ruth and Bruce Rappaport Faculty of Medicine, Technion - Israel Institute of Technology, Haifa, Israel

**Background:** Allergic contact dermatitis caused by fragrances is common, but the fragrance screening markers in the European Baseline Series (EBS) may miss many sensitized patients. Sensitization patterns also vary across countries and change over time, so older reports may not reflect the current situation in Israel. This study aimed to assess the sensitivity of the EBS in detection of fragrance allergy compared with an extended fragrance series, and to propose a short and focused panel of fragrance allergens to improve detection without submitting the patient to the entire fragrance tray.

**Methods:** We conducted a retrospective cohort study of patients that were patch tested at Rambam Health Care Campus (Haifa, Israel) between 2018 and 2024. Of 2,991 patients, 1,448 were tested with both the EBS and the extended Fragrance series (48 allergens, Chemotechnique Diagnostics). Demographic, clinical and occupational data were analyzed using descriptive statistics and chi square or Fisher's exact tests.

**Results:** Among 1,448 patients, 447 (30.9%) had fragrance allergy. Women had a higher prevalence of fragrance allergy than men. The most common areas involved were the hands, face and eyelids. Fragrance allergy occurred across many occupations. Hydroperoxides of linalool and limonene were the most frequent allergens, each affecting nearly half of fragrance allergic patients, while the fragrance markers in the EBS together detected only 40.9% of fragrance allergic cases. A focused add on panel of eight single substance allergens would be expected to raise the sensitivity of baseline fragrance screening in this cohort to approximately 94%.

**Conclusions:** In this tertiary patch test population the fragrance markers in the EBS detected only 40% of fragrance allergic patients, with most missed cases driven by hydroperoxides of linalool and limonene. Adding a small panel of eight allergens to the EBS could substantially improve diagnostic sensitivity while remaining practical for routine clinical use.

## Drug-Related Psoriasis – A Critical Review

**Prof. Sima Halevy**

*Ben-Gurion University of the Negev*

**Background:** A variety of drugs have been implicated in triggering of new-onset psoriasis or exacerbating pre-existing psoriasis. Much of the data linking the association of drugs with the induction and/or exacerbation of psoriasis stems from anecdotal case reports and review articles.

**Objective:** To critically review the evidence regarding drug-induced or drug-exacerbated psoriasis in relation to frequently reported drugs.

**Methods:** A structured PubMed search (1970–2024) was conducted using predefined search terms. The search focused on frequently reported drugs associated with psoriasis onset or worsening, including lithium salts, antimalarials, non-steroidal anti-inflammatory drugs (NSAIDs), beta-blockers, angiotensin-converting enzyme (ACE) inhibitors, and calcium channel blockers. Eligible studies included case series, clinical trials, systematic reviews, animal studies, and in vitro experiments. Relevant findings, including odds ratios (ORs) and confidence intervals were extracted when available. The quality of evidence was judged based on study design, methodological rigor, consistency, and the presence of challenge-dechallenge data.

**Results:** This review identified varying levels of evidence regarding the association between specific drugs and psoriasis. Strong evidence supports a link for beta-blockers and lithium; moderate evidence exists for ACE inhibitors and calcium channel blockers; and weak evidence exists for NSAIDs and antimalarials. Drug causality was established in a limited number of case series and supported by animal models and in vitro studies.

**Conclusions:** The methodology employed in studies investigating drug-related psoriasis plays a pivotal role in determining causality. This review highlights the drug classes most likely to induce or exacerbate psoriasis, providing guidance for clinical decision-making.

# Diagnostic Reliability and Morphological Realism of Synthetic Dermatological Images Generated by the NANO BANANA 2 AI Tool

**Dr. Yotam Adi**

*Soroka University Medical Center*

Yotam Adi<sup>1</sup>, Yuliya Valdman<sup>1</sup>, Ibrahim Alatawna<sup>1</sup>, Adi Saadia<sup>1</sup>, Jonathan Shapiro<sup>2</sup>

1. Soroka MC

2. Maccabi

**Background:** AI development in dermatology is hindered by clinical data scarcity. While generative AI offers a potential solution, previous studies using other AI tools have reported diagnostic concordance rates ranging from 1% to 40%. This study evaluates the diagnostic viability of synthetic images generated by NANO BANANA 2 and helps determine whether failures stem from image quality or from the lack of supporting clinical context and the non-specific visual nature of certain rare diseases.

**Methods:** NANO BANANA 2 generated 90 synthetic clinical images of dermatologic diseases. Three board-certified dermatologists provided a three-disease differential diagnosis for each. Concordance with the ground-truth (defined as the input diagnosis used to generate the image) was categorized (Top1, Top3, Top3-similar, or discordant). In "discordant" cases, experts reviewed a real clinical image and could refine (recover) their diagnosis. Finally, image quality was rated on a 5-point scale (where 1 represents 'Highly Realistic' and 5 represents 'Obvious Artifact'). To ensure statistical rigor, results were analyzed using mean values across the three experts to account for individual variance.

**Results:** The Top 1 diagnostic concordance rate ranged between 54.5% - 68.9%, with an average of 63.0%  $\pm$ 7.6%. The average Top 3 diagnostic concordance rate was 83.3% with a confidence interval of 78.4%-87.3%. Notably, 85.6% of images achieved diagnostic concordance by most experts. The recovery rate was 84.4%. Inter-rater reliability demonstrated moderate agreement with a Kappa of 0.52 ( $p < 0.001$ ). A significant positive correlation exists between image quality and diagnostic accuracy (Spearman's  $\rho=0.251$ ,  $p=0.017$ ). Expert image quality ratings ranged between 1.82 and 2.74, resulting in a collective average score of  $2.48 \pm 1.25$ .

**Conclusions:** These results demonstrate improved diagnostic accuracy and morphological realism compared to previously published works. These findings suggest that synthetic images have potential for integration into medical education and the robust training of future AI models.

# Kaposi Sarcoma In Patients With Hematological Malignancies

**Dr. Tal Benkovich**

*Kaplan Medical Center*

Assi Levi<sup>1</sup>, Wohl Yonit<sup>2</sup>, Daniel Mimouni<sup>1</sup>

1. Division of Dermatology, Rabin Medical Center - Beilinson Hospital, Petach Tikva, Israel

2. Maccabi Health Services, Tel-Aviv, Israel

**Background:** Kaposi sarcoma (KS) is a rare vascular neoplasm associated with human herpesvirus-8 infection, classically observed in individuals of Mediterranean, and Eastern European origin. It occurs more frequently in immunocompromised populations, i.e. HIV/AIDS and solid organ transplant recipients. Hematologic malignancies (HM) are characterized by intrinsic immune dysregulation, exacerbated by cytotoxic, biologic, and immunosuppressive therapies. This biological milieu suggests a potential increased risk of KS in HM patients; however, the incidence, clinical behavior, and outcomes of KS in this population remain insufficiently defined.

**Objective:** To evaluate the incidence, risk factors, clinical features, and outcomes of KS in patients with HM, and to assess associated morbidity and mortality in HM.

**Methods:** We conducted a retrospective cohort study including all patients diagnosed with HM between 2000 and 2025 at Rabin Medical Center. Cases of KS were identified through institutional databases. Incidence rates were calculated, and comparative analyses were performed using survival analysis and multivariable regression models.

**Results:** Among 8,677 patients with HM, 24 cases of KS were identified (0.276%), of whom 66.7% were male. In 58.3% of cases, HM preceded or coincided with KS, while in 41.7% KS preceded HM diagnosis. Patients with both HM and KS were significantly older at HM diagnosis compared to those without KS (75.1 vs. 61.6 years,  $P=0.008$ ). Mortality was significantly higher in the HM+KS group (58.3% vs. 29.3%,  $P=0.0006$ ). Clinically, KS mostly presented as cutaneous lesions on the lower extremities, occasionally with multifocal involvement. Most cases were confined to the skin, with no visceral disease.

**Conclusion.** KS is an uncommon but clinically relevant comorbidity in patients with HM. Its presentation resembles classic KS with an indolent course. The increased mortality observed in this group appears primarily driven by the underlying hematologic malignancy rather than KS itself, underscoring the need for heightened clinical awareness and individualized management strategies.

# Harnessing Cloud AI for Dermatology Practice: A Practical Review of HIPAA-Compliant Platforms with an Illustrative Document Processing Framework

**Dr Tania Zaher**

*Rambam Health Care Campus*

B. Kaplan<sup>1</sup>, Y. Kaplan<sup>2</sup>

1. Ariel University

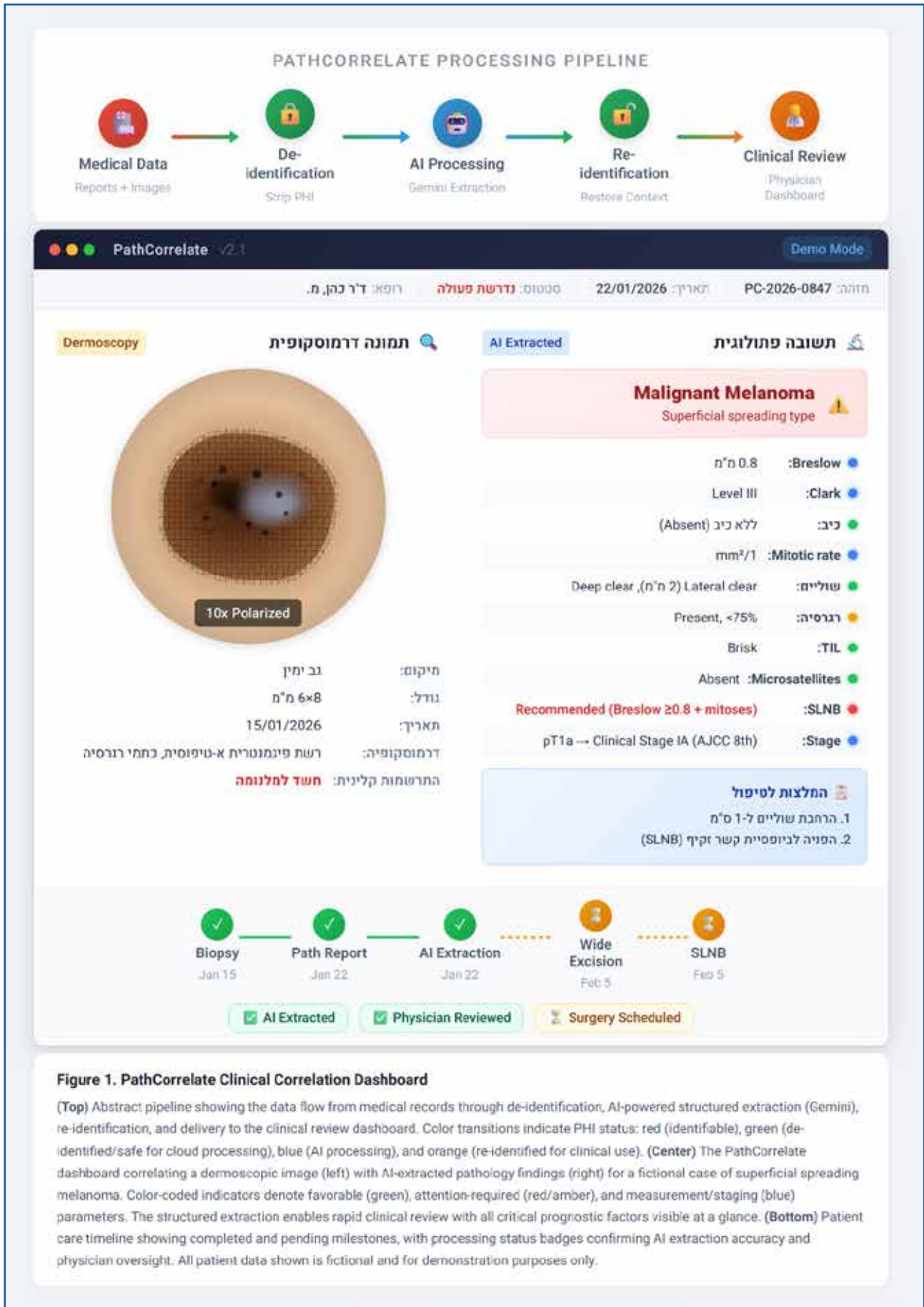
2. Maccabi Healthcare Services

**Background:** Artificial intelligence (AI) transforms productivity across industries, yet clinical adoption remains constrained by privacy requirements. While AI can automate repetitive tasks—document processing, data extraction, correspondence—regulations limit its use with patient data. This administrative burden drives physician burnout, with studies reporting half of work time is consumed by documentation. Large institutions procure enterprise platforms, but solo and small-group dermatologists lack practical guidance for deploying AI within privacy-compliant workflows. Cloud platforms now offer HIPAA-compliant tiers with Business Associate Agreement (BAA) coverage, but implementation guides for clinicians remain scarce.

**Methods:** We conducted a narrative review of AI-powered clinical documentation, cloud AI compliance frameworks (HIPAA/BAA), and administrative automation in dermatology. PubMed and Google Scholar were searched through March 2026. Vendor documentation from Google, Microsoft, Anthropic, and Amazon was reviewed. We describe a generalizable framework for automated clinical document processing in solo dermatology practice using BAA-covered Google Workspace services, incorporating local de-identification of protected health information (PHI) prior to cloud transmission. Pathology report processing is the primary illustrative use case.

**Results:** Four major platforms offer BAA-covered AI as of early 2026: Google Workspace with Gemini (HIPAA-compliant since December 2024, ISO 42001 certified), Microsoft Azure OpenAI, Anthropic Claude Enterprise, and AWS Bedrock. Our framework demonstrates a four-step privacy-layered architecture: (1) local text extraction with zero PHI transmission, (2) local de-identification to strip identifiers, (3) BAA-covered AI analysis, and (4) structured output to a clinical dashboard. This dual-protection approach—contractual (BAA) plus procedural (de-identification)—provides robust privacy without custom servers or commercial middleware.

**Conclusions:** This review demonstrates that the transformative capabilities of AI can be harnessed in clinical medicine without compromising patient privacy obligations. The “extract, de-identify, analyze, structure” pattern provides a practical, generalizable approach for pathology reports, referrals, insurance forms, and clinical correspondence – requiring minimal technical expertise and no institutional IT support.



**Figure 1. PathCorrelate Clinical Correlation Dashboard**

(Top) Abstract pipeline showing the data flow from medical records through de-identification, AI-powered structured extraction (Gemini), re-identification, and delivery to the clinical review dashboard. Color transitions indicate PHI status: red (identifiable), green (de-identified/safe for cloud processing), blue (AI processing), and orange (re-identified for clinical use). (Center) The PathCorrelate dashboard correlating a dermoscopic image (left) with AI-extracted pathology findings (right) for a fictional case of superficial spreading melanoma. Color-coded indicators denote favorable (green), attention-required (red/amber), and measurement/staging (blue) parameters. The structured extraction enables rapid clinical review with all critical prognostic factors visible at a glance. (Bottom) Patient care timeline showing completed and pending milestones, with processing status badges confirming AI extraction accuracy and physician oversight. All patient data shown is fictional and for demonstration purposes only.

# Vibe Coding for Clinician Empowerment: A Review of AI-Assisted Software Development by Clinicians, with DermTools as an Illustrative Open-Source Clinical Toolbox

**Ms. Rawan Yassin**

*Gray School of Medicine, Tel Aviv University*

Y. Kaplan, B. Kaplan

Maccabi Healthcare Services

**Background:** Artificial intelligence (AI) has the potential to fundamentally expand what clinicians can achieve. However, this has traditionally required programming expertise inaccessible to most physicians. “Vibe coding” – AI-assisted software development using natural language prompts (coined by Andrej Karpathy, February 2025) – removes this barrier, enabling clinicians, regardless of technical background, to describe a clinical need and have AI build the solution. The resulting tools run locally on the clinician’s device, this process does not require sharing patient data with AI services – eliminating risk to medical confidentiality. As of March 2026, only three peer-reviewed publications describe vibe coding in medicine, none addressing dermatology.

**Methods:** We conducted a narrative review of the vibe coding literature in medicine, AI-assisted development platforms, and clinical decision support tools in dermatology (PubMed, Google Scholar, GitHub). We present DermTools (dermai.co.il), an open-source, AI-assisted clinical toolbox built entirely through vibe coding by a practicing dermatologist with no programming training. The platform operates as a client-side web application – clinical logic runs entirely in the browser with no patient data transmitted to external servers.

**Results:** DermTools encompasses structured clinical templates across 26 dermatological categories, validated scoring calculators, interactive dermoscopy algorithms, a differential diagnosis wizard, a prescription generator with safety alerts and drug interaction checks, medication safety tools including pregnancy risk ratings, and evidence-based clinical guides. Critically, the platform is not static – any clinician can request AI to generate new templates, calculators, or guides for clinical scenarios they encounter, without sharing patient data. Development required a fraction of the time and cost of traditional software development.

**Conclusions:** Vibe coding enables clinicians without programming expertise to independently develop, customize, and continuously expand clinical decision support tools limited only by clinical imagination – while client-side architecture ensures that patient privacy is structurally preserved throughout the development and deployment process.

Figure 1. DermTools (DermAI.co.il) – Representative Features of an AI-Assisted Clinical Decision Support Platform for Dermatology



Figure 1. Selected features from DermTools (DermAI.co.il), a clinical decision support platform built through AI-assisted development by a practicing dermatologist. (A) Differential diagnosis wizard - 27 clinical scenarios across 295 diagnoses with 5-dimensional filtering. (B) Clinical template (295 templates, 26 categories) with structured exam checkboxes, ICD codes, prescription, and patient education. (C) Patch test reference (European Baseline 2023) with Israeli SPIN data and occupation-based search. (D) Pregnancy drug safety (25 drugs, PLLR classification, Israeli teratology services). (E) Dermoscopy Revised Inverse Approach (Rosendahl 2022) - benign pattern identification; unmatched lesions flagged for biopsy. (F) Israeli Health Basket formulary (51 drugs, 21 biologics with kupsh-specific eligibility criteria, updated Mar 2026). Additional tools include: Drug Eruption Timeline (203 drugs, latency-based likelihood scoring), Wound Dressing Selector, Genodermatosis Wizard, Smart Search with Hebrew medical synonyms, and 35 validated scoring calculators. All tools execute client-side with no patient data transmission.

# Sovereign AI for Dermatology: A Practical Review of Local Open-Source Language Model Deployment and Air-Gap Operation on Consumer Hardware

Amber Abir, MD

*Sheba Medical Center (Tel HaShomer)*

Baruch Kaplan, MD<sup>1</sup>, Yehonatan Kaplan, MD<sup>2</sup>

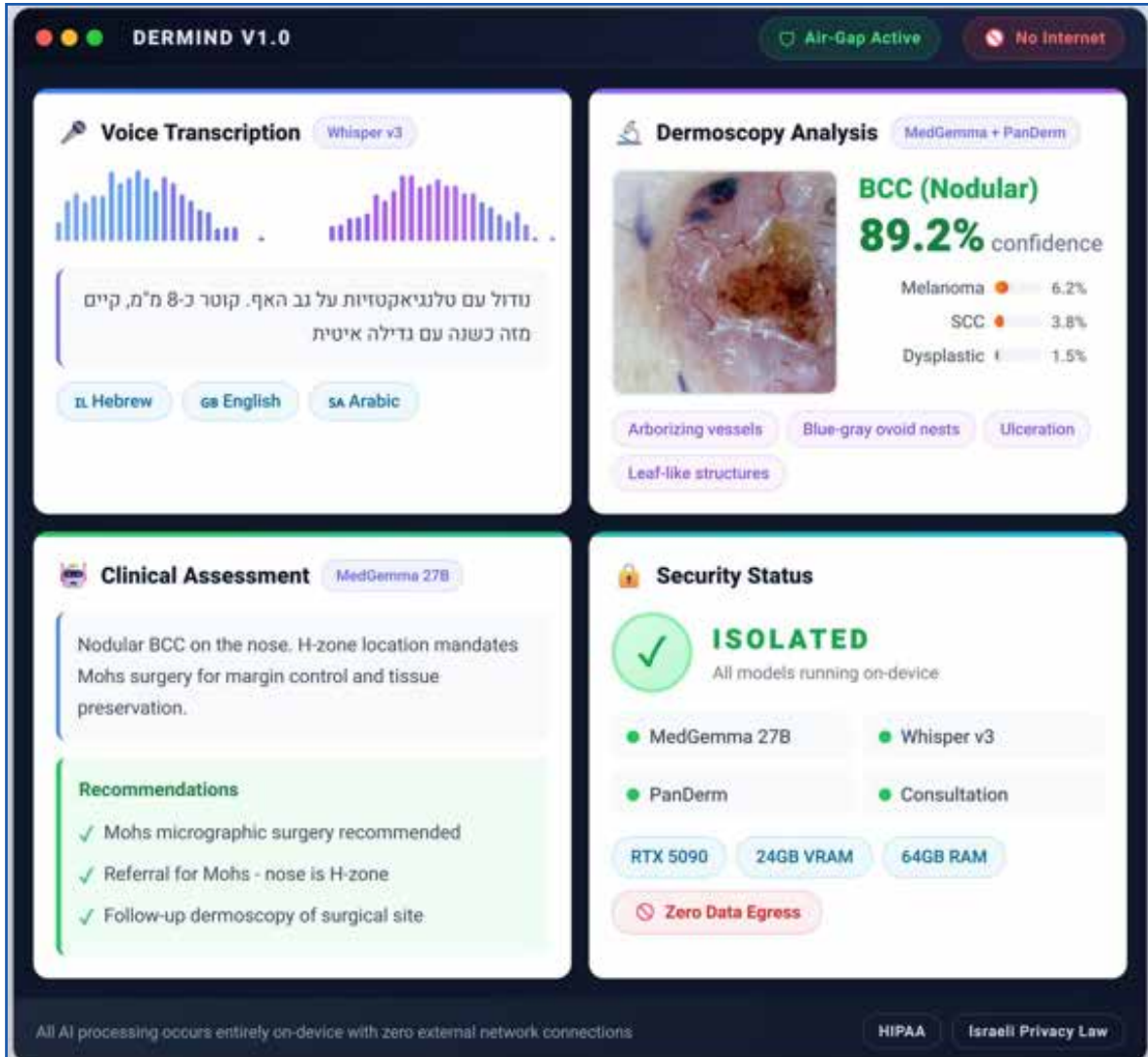
1. Adelson School of Medicine, Ariel University
2. Maccabi healthcare services; Assuta Medical Center, Tel Aviv, Herzliya Medical Center

**Background:** Artificial intelligence (AI) is transforming dermatology through clinical decision support and automated documentation. While multimodal foundation models (such as MedGemma and PanDerm) and large language models (LLMs) offer powerful new capabilities, most commercial platforms process data on external servers, relying on contractual rather than architectural privacy. For practitioners operating under HIPAA and Israel's Privacy Protection Law, we developed a fully local AI infrastructure ensuring no patient data leaves the clinician's machine.

**Methods:** We conducted a narrative review of open-source LLMs, local deployment frameworks, and privacy-preserving architectures (PubMed, arXiv; through March 2026). We proposed a four-tier privacy model ranging from consumer cloud AI to air-gapped local deployment. As an implementation example, we describe DermAI – a Docker-based, self-hosted platform running four containerized AI services on a consumer laptop (NVIDIA RTX 5090 Laptop GPU), employing dual isolated Docker networks to restrict AI containers to an internal network with no internet access.

**Results:** Multiple open-source models were identified as suitable for local dermatology use. DERMind integrates four capabilities: (1) clinical text analysis via MedGemma 27B (Google, medical-specialized) and additional LLMs via Ollama at 4-bit quantization; (2) multilingual voice transcription (Hebrew, English, Arabic) via Whisper; (3) dermoscopic image analysis using locally deployed vision models including PanDerm, MedSigLIP, MONET, ViT, and Swin; and (4) patient-contextualized AI consultation. Air-gap operation was verified for all use cases, confirming zero data egress. Future directions include fine-tuning via LoRA for specialized tasks.

**Conclusions:** A sovereign AI infrastructure for dermatology practice is achievable using consumer hardware and open-source models, without cloud dependency, recurring costs, or specialized programming. This approach provides architectural privacy guarantees that complement HIPAA and Israeli regulatory frameworks by ensuring protected health information remains strictly on the clinician's device. Local deployment offers practitioners a practical pathway to harness clinical AI while maintaining full data sovereignty.



**Figure 1.** DERMind multi-modal analysis dashboard. The platform integrates three AI capabilities in a fully offline, air-gapped environment running on consumer hardware. Top-left: Hebrew clinical voice input is transcribed locally using Whisper Large v3 without cloud connectivity. Top-right: A dermoscopic image of nodular BCC on the nose is analyzed by a locally deployed model ensemble (MedGemma 27B, PanDerm, MedSigLIP), yielding classification with confidence scores and identification of key dermoscopic structures (arborizing vessels, blue-gray ovoid nests, ulceration, leaf-like structures). Bottom-left: MedGemma 27B synthesizes voice transcription, image findings, and clinical context into a structured assessment recommending Mohs micrographic surgery for this H-zone lesion. Bottom-right: System security and hardware status confirming complete network isolation. All processing occurs entirely on-device (NVIDIA RTX 5090, 24 GB VRAM) with zero data egress.

# Comparative Diagnostic Performance of Large Multimodal Models (LMMs) in Histopathological Identification of Non-Melanoma Skin Cancer: A Mohs-Grouped Study

**Dr. Tomer Feuerman**

*Soroka University Medical Center*

Dr. Yulia Valdman, Dr. Adi Saadi, Dr. Jonathan Shapiro  
Soroka Medical center

**Background:** Large Multimodal Models are increasingly being explored for their potential in medical diagnostics. So far their ability to interpret complex histopathological slides remains less characterized, particularly within the context of Mohs micrographic surgery. The goal is to evaluate the diagnostic accuracy, sensitivity, and inter-rater agreement of two leading LMMs (ChatGPT and Gemini) in identifying Basal Cell Carcinoma and Squamous Cell Carcinoma from histological slides against the ground truth established by Mohs surgery.

**Methods:** A cross-sectional study was conducted using N=65 histological slides (26 BCC; 39 SCC). Images were presented to ChatGPT and Gemini without specific fine-tuning. Models were tasked with identifying the primary diagnosis. Statistical analysis included overall accuracy, sensitivity, McNemar's exact test and Cohen's Kappa for inter-rater agreement. Responses providing alternative diagnoses (e.g., mimics like Seborrheic Keratosis or Keratoacanthoma) were categorized as "Other" for accuracy calculations.

**Results:** Both models shared identical overall diagnostic accuracy of 53.85%.

**Sensitivity:** ChatGPT was more sensitive for BCC (76.92% vs. 57.69%), while Gemini was more sensitive for SCC (51.28% vs. 38.46%). Invalid Predictions demonstrated a high rate of cases that were categorized as "Other" (ChatGPT: 38.46%; Gemini: 40.0%).

Error Patterns ChatGPT misclassified 51.3% of true SCC cases as "Other", while Gemini misclassified 42% of true BCC cases as "Other".

McNemar's test ( $p=1.0$ ) indicated no significant difference in diagnostic accuracy between the models. Cohen's Kappa was 0.3962, representing fair agreement.

**Conclusion:** General-purpose Large Multimodal Models currently lack the sensitivity required for independent histological diagnosis of non-melanoma skin cancer. While overall accuracy is statistically equivalent ( $p=1.0$ ), the "fair agreement" (Kappa: 0.3962) suggests models encounter distinct diagnostic challenges rather than sharing uniform error patterns. The high frequency of non-definitive "Other" classifications remains a critical barrier to clinical integration. Future development must prioritize specialized medical fine-tuning to reduce false-negative rates in cancerous lesions.

## AI Adoption and Privacy Awareness Among Israeli Dermatologists: A Cross-Sectional Survey

**Mr. Asaf Givon**

*Tel Aviv University*

Baruch Kaplan, MD<sup>1</sup>, Yehonatan Kaplan, MD<sup>2</sup>

1. Adelson School of Medicine, Ariel University
2. Maccabi healthcare services

**Background:** Israel ranks first globally in per-capita artificial intelligence (AI) usage, yet AI adoption in healthcare lags behind all other industries worldwide due to patient privacy constraints. To our knowledge, no published data exist on AI usage patterns or privacy compliance among Israeli dermatologists.

**Methods:** An anonymous cross-sectional online survey was distributed directly to practicing dermatologists in Israel through professional networks in March 2026. The 19-item Hebrew-language questionnaire assessed AI tool usage, privacy awareness, trust in clinical AI scenarios, and barriers to adoption. This preliminary sample skewed toward early-career dermatologists (97% with 10 years of experience or less), which may partly account for high baseline AI engagement.

**Results:** Of 30 respondents (~8% of approximately 400 active Israeli dermatologists), 93% reported weekly AI use and 77% paid for subscriptions. While 73% entered clinical information into AI tools and 70% knew consumer AI trains on input, 73% were unaware that privacy-compliant platforms with Business Associate Agreements (BAA) exist; only 3% used one – yielding a “privacy paradox” where 63.3% of all respondents (19/30) entered patient data without awareness of compliant alternatives. Trust varied markedly by scenario: highest for drug interactions (median 5/5), lowest for dermoscopy (median 1/5). The leading barriers were accuracy concerns (67%) and lack of training (60%); dermatology-specific AI tools (73%) and CME courses (70%) were the top facilitators.

**Conclusions:** Even among early-career Israeli dermatologists predisposed to technology adoption, clinical AI integration remains constrained and non-compliant with privacy regulations. Closing this gap requires not new technology but targeted education: structured training in privacy-compliant AI use, awareness of BAA-covered platforms, and dermatology-specific tools – interventions that are immediately actionable and could empower an already AI-enthusiastic workforce to harness AI safely and effectively.

**Figure 1. AI Adoption and Privacy Compliance Among Israeli Dermatologists (N=30)**

Preliminary cross-sectional survey, March 2026. All respondents were active AI users (93% weekly).



## Can Benzathine penicillin prevent psoriasis flares?

**Mrs. Lihi Tibi**

*Tel Aviv University*

L. Tibi<sup>1</sup>, F. Pavlotsky Sheba<sup>2</sup>, O. Segal<sup>2</sup>, A. Barzilai<sup>2</sup>

1. Tel Aviv U

2. Sheba MC

**Background:** Psoriasis is a chronic immune mediated disease with multifactorial pathogenesis, in which environmental triggers, particularly streptococcal infections, play a significant role in disease exacerbations, despite continuous systemic treatment.

**Objective:** To evaluate the potential preventive effect of Benzathine penicillin in patients with psoriasis, particularly in the setting of streptococcal infection associated disease flares.

**Methods:** Retrospective case series of patients with streptococcal infection associated psoriasis flares during 2009–2026. The patients were treated once monthly by IM Benzathine penicillin, permanently. Treatment course was defined as a separate course if more than six months had elapsed before next injection. Treatment success was defined as complete remission or very mild flare ups within the period of 30 days post the last injection.

**Results:** Thirty treatment courses of 26 patients with psoriasis flares associated with streptococcal infection or pharyngitis were included, of whom 16 and 10 had recurrent throat infections and cellulitis, respectively.

Benzathine penicillin monthly injections were given for 6.5 (median) months. Complete remission or very mild flare ups was achieved in 60% of treatment courses.

Among treatment courses in which concomitant systemic therapy was administered alongside benzathine penicillin, remission or very mild flare-ups was achieved in approximately 65%, whereas among treatment courses with benzathine penicillin without systemic therapy, remission or very mild flare-ups was achieved in 54%.

No side effects, besides mild local injection reactions observed.

**Conclusions:** Benzathine penicillin may provide a preventive benefit in a subset of psoriasis patients with streptococcal infection associated exacerbations, especially in patients receiving systemic therapy. However, treatment failure was still documented in 40% of the treatment courses. Further controlled studies are needed to better define the role of Benzathine penicillin as a preventive strategy in psoriasis.

## ZC3H12A variants modify the severity of epidermal differentiation disorder

**Naama Adam and Kiril Malovitski**

*Ichilov Medical Center (Sourasky)*

Naama Adam<sup>\*1,2</sup>, Kiril Malovitski<sup>\*1,2</sup>, Lubna Khair<sup>1</sup>, Ajit B. Janagond<sup>3</sup>, Moshe Giladi<sup>2,4</sup>, Kartikkumar Babulal Solanki<sup>3</sup>, Gurushantappa Kadakol<sup>3,5</sup>, Yarden Feller<sup>1,2</sup>, Janan Mohamad<sup>1,2</sup>, Rawaa Ishtewy<sup>1,2</sup>, Angi Zenab<sup>1</sup>, Alon Peled<sup>1</sup>, Eylon Sharoni<sup>1</sup>, Liat Samuelov<sup>1,2</sup>, Nadav Atsman<sup>1,2</sup>, Yoni Moskovitz<sup>1</sup>, Arun C. Inamadar<sup>3</sup>, Eli Sprecher<sup>1,2</sup>

1. Division of Dermatology, Tel Aviv Medical Center, Tel Aviv, Israel
2. Gray Faculty of Medical & Health Sciences, Tel Aviv University, Israel
3. Department of Dermatology, Venereology and Leprosy, Shri B M Patil Medical College and Research Centre, BLDE, Vijayapura, India
4. Department of Internal Medicine D, Tel Aviv Medical Center, Tel Aviv, Israel
5. Genetics Laboratory, Department of Anatomy, Shri B M Patil Medical College and Research Centre, BLDE, Vijayapura, India \*These authors have contributed equally

**Background:** CARD14 and SLURP1 pathogenic variants result in 2 types of epidermal differentiation disorders (EDD): CARD14 nEDD and SLURP1- pEDD, respectively, both featuring increased NF- $\kappa$ B activity and proinflammatory cytokines expression. Here we studied two families with CARD14 nEDD and SLURP1- pEDD displaying an unusually severe phenotype, suggesting the existence of a genetic modifier.

**Methods:** We used whole-exome and Sanger sequencing, RT-qPCR, luciferase reporter assay, protein modelling, immunofluorescence confocal microscopy, immunoblotting and three-dimensional organotypic skin equivalents.

**Results:** Whole-exome sequencing identified two heterozygous variants in ZC3H12A encoding Regnase-1: c.779T>C (p.Ile260Thr) in the individual with CARD14 nEDD carrying a homozygous CARD14 c.458G>C variant and c.1378G>A (p.Glu460Lys) in an individual with SLURP1-pEDD carrying a heterozygous c.82delT SLURP1 variant. Regnase-1 is an endoribonuclease that maintains epidermal homeostasis through post-transcriptional degradation of pro-inflammatory cytokine mRNAs. Bioinformatic analyses and protein modelling supported the pathogenicity of both ZC3H12A variants. Luciferase assays demonstrated increased NF- $\kappa$ B activity in primary human keratinocytes (KCs) expressing mutant ZC3H12A compared to wild type. This was associated with upregulation of NF- $\kappa$ B target genes (IL6, IL1B and TNFA) and reduced desmoglein-1 expression at both mRNA and protein levels. ZC3H12A knockdown in primary KCs recapitulated these findings, with increased IL6 levels and reduced DSG1 expression. Moreover, ZC3H12A knockdown in 3-dimensional organotypic skin equivalents resulted in reduced desmoglein-1 expression and acanthosis.

**Conclusion:** Our findings suggest that ZC3H12A genetic variants can exacerbate the severity of inherited epidermal differentiation disorders by up-regulating NF- $\kappa$ B, leading to cytokine-associated decreased expression of desmoglein 1, which has been shown to cause a wide range of EDDs.



לשכת  
הכנסים  
ירושלים



## DIAMOND SPONSORS

abbvie

Johnson&Johnson

sanofi

NEOPHARM ISRAEL  
NEOPHARM GROUP

L'ORÉAL  
Dermatological Beauty

NOVARTIS

## GOLD SPONSORS

Pfizer

MSD

Takeda

Lilly  
A MEDICINE COMPANY

Padagis.

Dexcel<sup>®</sup>  
pharma

## SILVER SPONSORS

Rafa.



AMI  
technologies

TARO  
a SUN PHARMA company

Dr. Fischer

CICABIAFINE<sup>®</sup>

SEBOCALM

DOCTOR  
OR

URIAGE  
EAU THERMALE

Tzamal  
MEDICAL GROUP  
Patient is Our Care

SANDOZ

MEDISON

Flexitol<sup>®</sup>  
SKIN THERAPY

MegaPharm  
We Know The Way