האיגוד הישראלי
לרפואת עור ומין

כנס 2025
עור ומין

הכנס השנתי ה 44 של האגוד הישראלי לרפואת עור ומין

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חברות וחברים יקרים,

אני מתכבד להזמין אתכם לקחת חלק בכנס השנתי ה־44 של איגוד רופאי עור ומין בישראל - אירוע שמהווה נקודת שיא בקהילה הרפואית שלנו, ויוצר הזדמנות יוצאת דופן ללמידה, השראה וחיבורים מקצועיים ואישיים.

הכנס יתקיים במלון הילטון ת"א בתאריכים 22-24 באוקטובר 2025, ויהווה במה מרכזית לעדכונים הקליניים והמחקרים העדכניים ביותר בתחום הדרמטולוגיה, מהמרצים המובילים בעולם.

לצד זאת, תינתן הזדמנות להעמיק בסוגיות חדשניות, לדון בנושאים השנויים במחלוקת, להיחשף לטכנולוגיות פורצות דרך, ולהיפגש עם קולגות, חוקרים ומובילים מהארץ ומהעולם.

מעבר לתוכן המקצועי, אנו שמים דגש גם על חוויית כנס אנושית, נעימה ומשמעותית - שתעודד שיח פתוח, שיתופי פעולה עתידיים והעמקת תחושת הקהילה.

ביום חמישי כולכם מוזמנים לקוקטייל שקיעה במרפסת מלון הילטון ת"א.

אני מזמין את כל העוסקים בדרמטולוגיה לקחת חלק, לשתף, ללמוד ולהשפיע.

בברכה חמה,

פרופ' אביב ברזילי
יו"ר הכנס השנתי ה־44 של איגוד רופאי עור ומין בישראל
מנהל מחלקת עור, תל השומר

יום רביעי ה-22 לאוקטובר 2025

07:45-08:45 רישום, התכנסות ותערוכה

07:55-08:45

סימפוזיון בוקר - באולם המלך שלמה C
07:55-08:15 - ארוחת בוקר קלה
08:15-08:45 - הרצאה ושאלות קצרות

שליטה מתמשכת בפסוריאזיס - תובנות מ-5 שנות מעקב
פרופ' לב פבלובסקי, *מנהל היחידה לפסוריאזיס, פוטותרפיה ואשפוז יום במערך העור, מרכז הרפואי רבין*
בחסות AbbVie

סימפוזיון בוקר - באולם המלך שלמה AB
07:55-08:15 - ארוחת בוקר קלה
08:15-08:45 - הרצאה ושאלות קצרות

מהמדד למטופל - שיפור ב-PASI ובאיכות החיים
ד"ר יוליה ולדמן, *מנהלת מחלקת עור, מרכז רפואי סורוקה*
בחסות Taro

8:50 **פתיחת הכנס**

08:50-09:00 **דברי פתיחה**
פרופ' אביב ברזילי, *יו"ר הכנס*
ד"ר ברוך קפלן, *יו"ר האיגוד הישראלי לרפואת עור ומין*

09:00-10:55 **מושב 1 -**
יושבי ראש - פרופ' יעל לשם, פרופ' ליאת סמואלוב, ד"ר אמילי אביטן הרש, ד"ר יוליה ולדמן, ד"ר ערן כהן ברק

09:00-09:20 **חידושים / התקדמות בטיפול בדרמטיטיס אטופית**
Advances / Innovations in the Treatment of Atopic Dermatitis
Prof. Emma Guttman, *Mount Sinai Hospital, New-York, USA*

09:20-09:35 **מה בין אטופיק דרמטיטיס ומיקוזייס פונגואידס - פתוגנזה והיסטולוגיה**
פרופ' ראובן ברגמן, *מחלקת עור ופתולוגיה, הקריה הרפואית רמב"ם*

09:35-09:50 **מיקוזיס פנגוידס מתקדמת לעומת אטופיק דרמטיטיס: אתגרי אבחון קליניים ומשמעות הטיפולים החדשים**
פרופ' איריס אמיתי לייש, *מערך העור, מרכז הרפואי רבין*

09:50-09:58 **יעילות ובטיחות של דופילומאב בקרב ילדים עם אטופיק דרמטיטיס בעולם האמיתי: מחקר רטרוספקטיבי רב מרכזי**
ד"ר איתן פירוב, *יחידת עור ילדים מרכז רפואי שיבא ומחלקת עור, הדסה*

09:58-10:06 **הסיכונים התרומבואמבוליים והקרדיווסקולריים של מעכבי ג'אק באטופיק דרמטיטיס - מחקר קוהורט גלובלי**
פרופ' חלף כרידין, *היחידה לרפואת העור והמעבדה לחקר העור במרכז הרפואי לגליל, נהריה*

10:06-10:10 **נתוני העולם האמיתי לגבי הסיכון ארוך הטווח לזיהומים תחת דופילומב באטופיק דרמטיטיס - מחקר עוקבה גלובלי**
פרופ' חלף כרידין, *היחידה לרפואת העור והמעבדה לחקר העור במרכז הרפואי לגליל, נהריה*

10:10-10:18 **פגיעה באדהזיה האפידרמלית הבינתאית בעקבות שינויים בביטוי הציטוקין LIF באטופיק דרמטיטיס**
ירדן פלר, *המרכז הרפואי תל אביב ע"ש סוראסקי*

10:18-10:26 **איפיון טרנסקריפטומי של תגובות פרדוקסליות דמויות דרמטיטיס אטופית המושרות על ידי נוגדי TNF ונוגדי IL 23/17**
ד"ר ערן כהן ברק, *עור ילדים, מרכז רפואי העמק*

10:26-10:34 **שינויים מטבוליים המושרים בקרטינוציטים על ידי IL 4 ו - IL13 - השלכות בדרמטיטיס אטופית**
מאיה ליאקס, *מחלקת עור, מרכז רפואי העמק*

10:34-10:42	**אפיון ביומרקרים עוריים בדרמטיטיס אטופית בילדים באמצעות שיטת דגימה לא פולשנית חדשנית** **ד"ר יעל רנרט-יובל,** *מרכז שניידר לרפואת ילדים*
10:42-10:46	**הערכת תוקף כלי בקרת דרמטיטיס אטופית (ADCT) באוכלוסיית הילדים - מחקר פרוספקטיבי בעולם האמיתי** **ד"ר רבקה פרידלנד,** *מרכז שניידר לרפואת ילדים*
10:46-10:50	**תפקידו המורכב של IL13 במחלת בולוס פמפיגואיד, תובנות חדשות ממחקר עוקבה רטרוספקטיבי** **ד"ר מרואן דאוד,** *הקריה הרפואית רמב"ם*
10:50-10:54	**בחינת התפקיד של דלקת סוג-2 בפתוגנזה של Mucous Membrane Pemphigoid** **פרופ' חלף כרידין,** *היחידה לרפואת העור והמעבדה לחקר העור במרכז הרפואי לגליל, נהריה*
10:54-10:58	**בינה מלאכותית בשרות הטלה-דרמטולוגיה: ChatGPT-4 מציג שיעור דיוק אבחנתי גבוה ואיכות גבוהה של תיאורי תמונות קליניות** **ד"ר יונתן שפירא,** *מכבי שרותי בריאות*
10:58-11:25	הפסקת קפה וביקור בתערוכה
11:25-13:15	**מושב 2 -** **יושבי ראש - פרופ' לב פבלובסקי, פרופ' יובל רמות, ד"ר חגית מץ, ד"ר מיכל רמון, ד"ר דורית שפירא** * שעות ההרצאות המדויקות במושב זה יתפרסמו בהמשך
*	**פסוריאזיס: מפתוגנזה לטיפול Psoriasis: From Pathogenesis to Therapy** **Prof. James G. Krueger,** *The Rockefeller University, New York, USA* בחסות Neopharm
*	**בטיחות טיפולים ביולוגיים בחולי פסוריאזיס עם ממאירות פעילה או רצנטית: מחקר עוקבה השוואתי** **ד"ר ליטל ברילנט,** *מערך העור, מרכז רפואי שיבא, תל השומר*
*	**השוואת שרידות טיפול ביולוגי באיקסקיזומאב לעומת סקוקינומאב בחולי פסוריאזיס: מחקר עוקבה רטרוספקטיבי** **ד"ר תומר שרי ניצן,** *מערך העור, מרכז הרפואי רבין*
*	**שרידות מעכבי אינטרלוקין 17 - לאחר מעבר ממעכבי אינטרלוקין 23 - בפסוריאזיס: מחקר עוקבה תצפיתי** **ד"ר דניאלה קושניר-גרינבאום,** *מרפאת פסוריאזיס, מחלקת עור, מרכז רפואי העמק*
*	**הסיכון לדמנציה בחולי פסוריאזיס המטופלים בטיפולים ביולוגיים** **ד"ר חן ברק לויט,** *מחלקת עור, מרכז רפואי העמק, הפקולטה לרפואה ע"ש רפפורט בטכניון*
*	**תובנות ממודל 'עכבר אנושי' לפסוריאזיס** **ד"ר עמית ברגמן,** *המעבדה לחקר העור, הפקולטה לרפואה ע"ש רפפורט בטכניון*
*	**טיפול ביולוגי קצר-טווח בפסוריאזיס טיפתית: טיפול מוצלח בבימקיזומאב וסקירת ספרות** **ד"ר דניאלה קושניר-גרינבאום,** *מרפאת פסוריאזיס, מחלקת עור, מרכז רפואי העמק*
*	**פריחות פסוריאזיסיפורמיות פרדוקסליות בילדים עם מחלת מעי דלקתית המטופלים במעכבי TNF** **ד"ר דניאל הילביץ,** *אוניברסיטת תל אביב*
*	**שינויים גנטיים הפוגעים בתפקוד Dual-Specificity Phosphatase 1 גורמים לקרטודרמה בכפות הידיים והרגליים** **ד"ר קיריל מלוביצקי,** *המרכז הרפואי תל אביב ע"ש סוראסקי*
*	**פגמים במסלול קוטביות התאים והגנטיקה של תסמונת הציפורן הצהובה** **ד"ר חופית גדות,** *המכון הגנטי והמרכז הגנומי, מרכז רפואי ת"א ע"ש סוראסקי*
*	**מניפיסטציות עוריות במחלת גושה סוג 1: מחקר חתך מבוסס מרפאה** **ד"ר איילת אולך,** *עור ילדים, המרכז הרפואי שערי צדק*
*	**הדומה והשונה - מבט על המנגנונים בפסוריאזיס ודרמטיטיס אטופית** **What Divides and What Unites: Exploring the Mechanisms of Atopic Dermatitis and Psoriasis** **Dr. Kave Shams** בחסות AbbVie
13:15-14:05	ארוחת צהריים וביקור בתערוכה

13:15-14:05	**סימפוזיון צהריים -** באולם המלך שלמה C 13:15-13:35 - ארוחת צהריים 13:35-14:05 הרצאה ושאלות קצרות **יו"ר - ד"ר יעל רנרט-יובל** **Seeing Beyond the Rash: Recognizing Hidden Burden in Moderate Atopic Dermatitis** **Prof. Emma Guttman,** *Chair of the Department of Dermatology and Health System, Mount Sinai, New-York, USA*	**סימפוזיון צהריים -** באולם המלך שלמה AB 13:15-13:30 - ארוחת צהריים 13:30-14:05 הרצאה ושאלות קצרות **יו"ר - ד"ר רון יניב** **ניהול ומניעת תחלואת HPV בעידן החיסון עדכונים בנושא יבלות מין** **ד"ר נדב אסטמן, רופא בכיר,** *מחלקת עור, מרכז רפואי שיבא, תל השומר* **ד"ר אדוארדו שכטר,** *מומחה ברפואת נשים, מנהל מרכז בריאות האישה, מכבי השלום* בחסות MSD
14:05-14:15	חלוקת תעודות הוקרה **ד"ר ברוך קפלן,** *יו"ר האיגוד הישראלי לרפואת עור ומין*	
14:15-14:55	**מושב 3 -** **יושבי ראש - פרופ' מיכאל דוד, פרופ' סימה הלוי, פרופ' אנה לכוביצקי, ד"ר מור פבלובסקי, ד"ר שני שרמן**	
14:15-14:35	**חידושים באלופציה אראטה: עדויות, ניסיון ומה מסתמן** **Innovation in Alopecia Areata: Evidence, Experience, and Evolving Practice** **Prof. Emma Guttman,** *Mount Sinai Hospital, New-York, USA* בחסות Pfizer	
14:35-14:43	**אלופציה אנדרוגנטית בילדים ומתבגרים: מחקר קליני רטרוספקטיבי וסקירת ספרות** **ד"ר מירית גליק,** *יחידת עור ילדים, מרכז שניידר לרפואת ילדים*	
14:43-14:47	**שיפור מתמשך בצפיפות השיער עם טיפול סיסטמי במינוקסידיל - מעקב רב-שנתי בנשים עם התקרחות נשית** **ד"ר דניאלה קושניר-גרינבאום,** *מרפאת פסוריאזיס, מחלקת עור, מרכז רפואי העמק*	
14:47-14:55	**עכבר עם עור אנושי - כלי חדשני לחקר ויטיליגו** **ד"ר אביעד קרן,** *המעבדה לחקר העור, הפקולטה לרפואה ע"ש רפפורט בטכניון*	
14:55-16:08	**מושב 4 -** **יושבי ראש - פרופ' איריס אמיתי לייש, פרופ' דני בן-אמיתי, פרופ' ורד מולכו פסח**	
14:55-15:10	**מיקוד באקנה באמצעות רכיבים פעילים עיקריים** **Targeting Acne Topically with Key Active Ingredients** **Prof. Christos Zouboulis,** *Staedtisches Klinikum Dessau, Germany* בחסות L'Oréal	
15:10-15:25	**"פניני" אקנה והטיפול בהם** **Acne Pearls and their Treatment** **Prof. Christos Zouboulis,** *Staedtisches Klinikum Dessau, Germany* בחסות L'Oréal	
15:25-15:33	**ניתוח יעילות של בקטריופאג'ים אנדוגניים כנגד Cutibacterium acnes באקנה וולגריס** **ד"ר רוני טייטלבאום,** *מחלקת עור, במרכז הרפואי הדסה עין כרם, הפקולטה לרפואה האוניברסיטה העברית*	
15:33-15:50	**מקרים בלתי שגרתיים של נאופלזמות המטו-פרוליפרטיביות של העור** **Unusual Cases of Hematoproliferative Neoplams of the Skin** **Dr. Joan Guitart,** *Northwestern Memorial Hospital, Chicago, USA* בחסות בלתי תלויה Stemline Therapeutics	
15:50-16:10	**דרמטיטיס אטופית, אלרגיה למזון ומה שביניהן** **Atopic Dermatitis Food Allergy and What's in Between** **Prof. Moshe Ben Shoshan,** *Mc Gill University, Montreal, Canada*	
16:10-16:30	הפסקת קפה וביקור בתערוכה	

16:30-17:30 **מושב 5 -**

יושבי ראש - פרופ' אריה אינגבר, ד"ר ירון לביא, ד"ר יהודית נבט

16:30-16:50 **אורטיקריה כרונית: מה ידוע ומה שעדיין לא**
Chronic Urticaria: What is Known and What is Yet Unknown
Prof. Moshe Ben Shoshan, *Mc Gill University, Montreal, Canada*
בחסות בלתי תלויה Novartis

16:50-16:58 **יעילות הטיפול בסולר אורטיקריה: סקירה שיטתית ומטה-אנליזה**
ד"ר מאיה אנגלר מרקוביץ', *מערך העור, מרכז הרפואי רבין*

16:58-17:06 **השפעת גיל המטופלת על דלקת עור ממגע בגניטליה בנשים**
ד"ר שרית גלבוע, *מערך העור, מרכז רפואי שיבא, תל השומר*

17:06-17:14 **תוצאות תבחיני PhotoPatch בישראל: מחקר עוקבה רטרוספקטיבי של 15 שנה**
ד"ר סתיו אנדלמן, *מערך העור, מרכז הרפואי רבין*

17:14-17:22 **מגיפה של רגישות לאקריל ציפורניים בקרב נשים צעירות בישראל? תוצאות תבחיני מטלית עם 2-hydroxyethyl methacrylate (HEMA) בסדרה האירופאית**
ד"ר דניאל הילביץ, *מערך העור, מרכז הרפואי רבין*

17:22-17:30 **הספקטרום של שחרור ציטוקינים מושרה־תרופות ב-DRESS: סדרת מקרים**
פרופ' סימה הלוי, *הפקולטה למדעי הבריאות, אוניברסיטת בן-גוריון בנגב*

17:30-18:22 **מושב 6 -**

יושבי ראש - פרופ' עמוס גילהר, פרופ' אמיליה (אמי) חודק, פרופ' איריס אמיתי לייש, ד"ר איילת אולך

17:30-17:38 **TRAV19 - מטרה טיפולית חדשה בפמפיגוס וולגריס**
ד"ר עסאף סרי, *מערך העור, המרכז הרפואי תל אביב ע"ש סוראסקי*

17:38-17:46 **אנליזת טרנסקריפטום בבולוס פמפיגואיד**
ד"ר קרין וורשבסקי, *מערך העור, מרכז רפואי שיבא, תל השומר*

17:46-17:52 **יעילות הטיפול עם NB-UVB בפרוריגו נודולריס**
ד"ר עינב כהן בכר, *מחלקת עור, הקריה הרפואית רמב"ם*

17:52-18:00 **צריכת שירותי בריאות וטיפול תרופתי בילדים עם אטופיק דרמטיטיס בישראל - מחקר מבוסס אוכלוסיה**
ד"ר עמית איטון-שוורץ, *מערך העור, מרכז הרפואי רבין*

18:00-18:08 **הפסקת טיפול בפרופראנולול בהמנגיומה: ניווט בין הסיכונים, הפחתת הישנות והגעה לחוף מבטחים**
ד"ר אפיק טיבי, *מחלקת עור ומין, הקריה הרפואית רמב"ם*

18:08-18:16 **אפיון נויטרופילים מדם פריפרי ב-Hidradenitis suppurativa**
ד"ר נטע-לי סבאג פלמן, *רפואת עור ומין, במרכז הרפואי הדסה עין כרם*

18:16-18:22 **הכרזת הזוכה**

18:25-19:25

18:25-19:25 באולם המלך שלמה AB
Meet the expert: practical insights in atopic dermatitis management
מתמחים שואלים את המומחה*
Prof. Emma Guttman, *Mount Sinai Hospital, New-York, USA*
*למתמחים ורופאים צעירים בלבד

18:25-18:50 באולם המליאה
ישיבה פרופסיונלית

יום חמישי ה-23 לאוקטובר 2025

07:55-08:40 רישום, התכנסות ותערוכה

07:55-08:40

סימפוזיון בוקר - באולם המלך שלמה C
07:55-08:15 - ארוחת בוקר קלה
08:15-08:40 - הרצאה ושאלות קצרות

העולם האמיתי של הטיפולים הביולוגים, מה למדנו ממחקרי עולם אמיתי?
ד"ר תומד גולדשמיד, *רופא בכיר, המרכז הרפואי תל אביב, מנהל מכון פוטותרפיה, אסותא רעננה*
בחסות Johnson&Johnson

סימפוזיון בוקר - באולם המלך שלמה AB
07:55-08:15 - ארוחת בוקר קלה
08:15-08:40 - הרצאה ושאלות קצרות

מקומו של הטיפול המקומי יחד עם טיפול סיסטמי
פרופ' פליקס פבלוצקי, *מנהל מכון פוטותרפיה ואשפוז יום, מערך העור, המרכז הרפואי שיבא תל השומר*
בחסות Dexcel Pharma

08:45-11:05 **מושב 7 -**
יושבי ראש - פרופ' ארנון כהן, פרופ' שושנה גרינברגר, פרופ' משיח יעקב, ד"ר דניאלה קושניר-גרינבאום, ד"ר רבקה פרידלנד

08:45-09:00 **מה זה שינוי במהלך מחלה בראיה אפידמיולוגית**
פרופ' סיגל סדצקי, *אוניברסיטת תל אביב, רופאה מומחית בבריאות הציבור ואפידמיולוגיה*

09:00-09:20 **חידושים באונקולוגיה דרמטולוגית ושינוי מהלך מחלה**
פרופ' גל מרקל, *מרכז דוידוף לטיפול ולחקר הסרטן, מרכז הרפואי רבין*

09:20-09:40 **הימים האחרונים של המורפולוגיה**
פרופ' אלי שפרכר, *מנכ"ל המרכז הרפואי תל אביב ע"ש סוראסקי*

09:40-10:00 **נגעים וסקולריים הופכים לפשוטים להבנה: איך למצוא את דרכינו**
Vascular Anomalies Made Simple: How to Find Your Way
Prof. Annabel Maruani-Raphael, *University of Tours, France*
בחסות בלתי תלויה Padagis

10:00-10:12 **השפעת הטיפול בפסוריאזיס על המחלות הנלוות**
פרופ' לב פבלובסקי, *מערך העור, מרכז הרפואי רבין*

10:12-10:32 **שינוי מהלך פסוריאזיס**
Psoriasis Course Modification
Prof. Andreas Pinter, *Goethe University Frankfurt, Germany*
בחסות Johnson & Johnson

10:32-11:02 **שינוי מהלך מחלה בדרמטיטיס אטופית**
פרופ' יעל לשם, *מערך העור, מרכז הרפואי רבין,* **ופרופ' ורד מולכו פסח, מחלקת עור,** *מרכז רפואי הדסה עין כרם*

11:05-11:25 הפסקת קפה וביקור בתערוכה

11:25-13:20 **מושב 8 -**
יושבי ראש - פרופ' אילן גולדברג, פרופ' הנרי טראו, פרופ' דניאל מימוני, ד"ר שרון מרימס

11:25-11:38 **האם הטיפולים במיקוזיס פונגואידס משנים את מהלך המחלה? מיתוסים מול עובדות**
פרופ' אמיליה (אמי) חודק, *מרכז דוידוף, ביח בילינסון, מרכז הרפואי רבין*

11:38-11:46 **תפקיד הפוטותרפיה בשינוי מהלך מחלות דלקתיות**
פרופ' פליקס פבלוצקי, *המרכז לפסוריאזיס וטיפולי פוטותרפיה, מערך העור, המרכז הרפואי שיבא, תל השומר*

11:46-11:56 **מהשליטה במחלה לשינוי מהלך המחלה - עידן חדש בפמפיגוס**
פרופ' שרון באום, *מערך העור, מרכז רפואי שיבא, תל השומר*

11:56-12:04 **EGFR מתווך אקנטוליזיס המונעת ע"י ST18 בפמפיגוס וולגריס**
ראועה אשתיוי, *המרכז הרפואי תל אביב ע"ש סוראסקי, אוניברסיטת תל אביב*

12:04-12:12 **מאפיינים קליניים ואימונולוגים של בולוס פמפיגואיד מושרה גליפטינים - מחקר קוהורט ישראלי**
ד"ר אביטל בניאל, מערך העור, *המרכז הרפואי תל אביב ע"ש סוראסקי*

12:12-12:20	**הפנוטיפ האימוני של חולי פמפיגואיד שהתפתח תחת טיפול אימונותרפי** **נדא ספורי,** *הקריה הרפואית רמב"ם*
12:20-12:28	**אפיון תופעות לוואי עוריות הקשורות ל-Immune Checkpoint Inhibitors בחולי מלנומה לעומת ממאירויות אחרות** **ד"ר תומר זילברמינץ,** *מערך העור, מרכז רפואי שיבא, תל השומר*
12:28-12:36	**תופעות עוריות לאחר טיפול ב-CAR-T** **ד"ר אופיר קוטק,** *מערך העור, מרכז רפואי שיבא, תל השומר*
12:36-12:44	**הוריאנט של הגן ITGB4 משפיע על חומרת מחלת הריאות הבין-רקמתית, תסמונת נפרוטית ואפידרמוליזיס בולוזה (ILNEB) הקשורות למוטציה ב-ITGA3** **לובנא חיר,** *המרכז הרפואי תל אביב ע"ש סוראסקי, אוניברסיטת תל אביב*
12:44-12:48	**התחלה מוקדמת של הידרוכסיכלורוקווין עבור לופוס עורי למניעת התקדמות למחלה סיסטמית** **דניאל בר,** *אוניבסיטת תל אביב, מערך העור והיחידה הראומטולוגית, המרכז הרפואי שיבא, תל השומר*
12:48-12:56	**אניפרולומאב לטיפול בלופוס עורית עמידה: תוצאות קליניות מסדרת מקרים במרכז שלישוני** **ד"ר נוי קלר רוזנטל,** *מערך העור, המרכז הרפואי תל אביב ע"ש סוראסקי*
12:56-13:04	**מחקר עוקבה רטרוספקטיבי להערכת מעורבות דם במיקוזיס פונגואידס בשלב מוקדם בילדים** **ד"ר יעל רנרט-יובל,** *יחידת עור ילדים, מרכז שניידר לרפואת ילדים*
13:04-13:12	**תוצאות FACS במטופלי מיקוזיס פונגואידס ואטופיק דרמטיטיס** **ד"ר קרין וורשבסקי,** *מערך העור, מרכז רפואי שיבא, תל השומר*
13:12-13:20	**טיפול בריטוקסימאב תוך נגעי בלימפומה עורית של תאי B** **ד"ר אמילי אביטן הרש,** *מחלקת עור, הקריה הרפואית רמב"ם*
13:20-14:10	ארוחת צהריים וביקור בתערוכה

13:20-14:10	**סימפוזיון צהריים -** באולם המלך שלמה C 13:20-13:40 - ארוחת צהריים 13:40-14:05 הרצאה ושאלות קצרות **יו"ר - פרופ' חלף כרידין** **מחקר STEPIN: לקראת שינוי מהלך המחלה בפסוריאזיס** **פרופ' יובל רמות,** *מנהל השירות למחלות דלקתיות של העור, מחלקת עור, מרכז רפואי הדסה עין-כרם* בחסות Novartis	**סימפוזיון צהריים -** באולם המלך שלמה AB 13:20-13:40 - ארוחת צהריים 13:40-14:05 הרצאה ושאלות קצרות **יו"ר - ד"ר טל גולדברגר** **האם ישראל מוכנה למעבר JAK** דיון פתוח על חסמים והזדמנויות **פרופ' יעל לשם,** *מנהלת מרפאת אטופיק דרמטיטיס בית חולים בלינסון* בחסות Pfizer

14:10-16:00 מושב 9 -
יושבי ראש - ד"ר נדב אסטמן, ד"ר זיאד חמאיסי, ד"ר ישראל צירולניקוב, ד"ר ריאד קאסם

14:10-14:30	**מה חדש במחלות מין** **What's New in STIs?** **Prof. George-Sorin Tiplica,** *Colentina Clinical Hospital, Bucharest, Romania* בחסות בלתי תלויה MSD
14:30-14:38	**מוות בתחלואת פטרת עור בישראל בשנים 2019-2022** **ד"ר ערן גלילי,** *מערך העור, מרכז רפואי שיבא, תל השומר*
14:38-14:42	**מגמות בשכיחות והטיפול בסקביאס במשך עשור במרכז שלישוני יחיד בישראל** **סאן דגן,** *מערך העור, מרכז רפואי שיבא, תל השומר ואוניברסיטת תל אביב*
14:42-14:50	**היעילות של שילוב לייזר CO_2 פרקציונאלי עם בליאומיצין טופקלי לטיפול ביבלות ויראליות עמידות** **ד"ר רנא ח'שיבון מוסא,** *משפחה קדושה, נצרת*
14:50-14:54	**ניאופלזיה תוך-אפיתליאלית של הפין (PeIN) על רקע HPV: מצג קליני, ממצאים דרמוסקופיים ותובנות טיפוליות - סקירת ספרות וסדרת מקרים** **ד"ר אמבר אביר,** *מרפאת ד"ר יהונתן קפלן, רפואת עור ומין וניתוחי מוהז*

14:54-14:58	**מחלות עור בדרי רחוב - ניתוח השוואתי של מצבים עוריים בדרי מקלטים וברחוב** **ד"ר איילת רשפון, מערך העור,** *המרכז הרפואי תל אביב ע"ש סוראסקי*
14:58-15:06	**השוואת היעילות והבטיחות של IV Sodium Stibogluconate מול IM Meglumine Antimoniate בלישמניה עורית** **איליה ויינשטיין,** *מערך העור, מרכז רפואי שיבא, תל השומר*
15:06-15:26	**מחוסר מוצא לטיפול חדשני בהידרדניטיס סופורטיבה עם נוגדי IL17A and IL17F** **From Unmet Need to Innovative HS Therapy Targeting IL17A and IL17F** **Prof. James G. Krueger,** *The Rockefeller University, New York, USA* בחסות Neopharm
15:26-15:34	**הסיכון לסרטן בקרב חולי הידרדניטיס סופורטיבה המטופלים במעכבי TNF** **ד"ר אור דגן,** *מחלקת עור, בית חולים סורוקה, אוניברסיטת בן גוריון בנגב*
15:34-15:42	**טיפולי לייזר להידרדניטיס סופורטיבה** **ד"ר זיאד ח'מאיסי,** *יחידת הלייזר/מחלקת עור, הקריה הרפואית רמב"ם*
15:42-15:52	**חידושים בהדמיה ממוקדת עור: שילוב טכנולוגיה בפרקטיקה קלינית** **ד"ר איל טלב,** *מערך רפואת עור, המרכז הרפואי תל אביב ע"ש סוראסקי*
15:52-15:56	**סמני צואה כרמז להתפתחות מחלת קרוהן בחולי פיודרמה גנגרנוזום אדיופטית** **ד"ר מרואן דאוד,** *מחלקת עור, הקריה הרפואית רמב"ם*
15:56-16:20	הפסקת קפה וביקור בתערוכה
16:20-17:52	**מושב 10 -** **יושבי ראש - פרופ' אמיר חורב, פרופ' אסתר עזיזי, ד"ר היבא זערורה, ד"ר מורן פורמן, ד"ר סיון שפר לוי**
16:20-16:32	**מה חדש תחת השמש? האם ניתן למנוע גידולי עור** **ד"ר אמילי אביטן הרש,** *מחלקת עור, הקריה הרפואית רמב"ם*
16:32-16:44	**שינויים קטנים תובנות גדולות: מיפוי שומות ממוחשב - העבר והעתיד** **ד"ר גילה איזמן נלקנבאום,** *מערך רפואת עור, המרכז הרפואי תל אביב ע"ש סוראסקי*
16:44-16:52	**המאפיינים הדרמוסקופיים של נבוסים מנבאים את התנהגותם לאורך זמן** **ד"ר עופר רייטר אגר,** *מערך העור, מרכז הרפואי רבין*
16:52-16:56	**כשהחוף מתקרב למרפאה: בדיקות שומות בעידן הבא** **ד"ר אסף פלדמן, מערך העור,** *המרכז הרפואי תל אביב ע"ש סוראסקי*
16:56-17:00	**שימוש בבינה מלאכותית לסקירה כללי גופית של נבוסים: ניסיון של שנה עם IntelliStudio 3** **ד"ר אליזה מאייר,** *המרפאה לאבחון מוקדם של סרטן העור ביחידת העור, המרכז הרפואי לגליל, נהריה*
17:00-17:04	**מעבר לקופסה השחורה: השוואת ChatGPT-4 ומודלי CNN באבחון דרמוסקופי של נגעים מלנוציטיים** **ד"ר עופר רייטר אגר,** *מערך העור, מרכז הרפואי רבין*
17:04-17:08	**נבוס ספיץ דמוי גרנולומה פיוגנית בילדים: סדרת מקרים** **ד"ר גאיה הריס רימון,** *מערך העור, מרכז הרפואי רבין*
17:08-17:12	**סדרת מקרים אלימים של סרטן תאי קשקש בגפיים העליונים בקרב מושתלי איברים** **ד"ר מאיה אנגלר מרקוביץ',** *מערך העור, מרכז הרפואי רבין*
17:12-17:16	**הקשר בין לבקנות עינית-עורית לסרטן העור בישראל** **מיכאל קליימן,** *יחידת עור ילדים, המרכז הרפואי הדסה עין כרם*
17:16-17:24	**אפיון הקשר בין הגנוטיפ לפנוטיפ במטופלים עם Tuberous Sclerosis** **ד"ר פיליפ נסראללה,** *בית חולים ספרא לילדים - המרכז הרפואי שיבא, תל השומר*
17:24-17:28	**קורטז' מול אלקטרודסיקציה כטיפול במולוסקום בילדים - יעילות ובטיחות** **ד"ר דניאל הילביץ,** *מחלקת עור ילדים, המרכז הרפואי שיבא, תל השומר*
17:28-17:48	**מקרים קליניים בדרמטולוגיה פדיאטרית: אבחנות מאתגרות ורמזים שאסור להתעלם מהם** **Clinical Cases in Pediatric Dermatology: Tricky Diagnoses and Clues You Can't Overlook** **Prof. Annabel Maruani-Raphael,** *University of Tours, France*
17:50	**קוקטייל שקיעה במרפסת החיצונית ומופע סטנד אפ מוסיקלי של עידן אלתרמן**

יום שישי ה-24 לאוקטובר 2025

07:30-08:00 רישום והתכנסות

08:00-09:10 **החוגים לדרמטו-אונקולוגיה ודרמטוסקופיה**

יושבי ראש - ד"ר אמילי אביטן-הרש, ד"ר ניר נתנזון, ד"ר עופר רייטר אגר

08:00-08:45 **דיבייטים**

08:00-08:15 **לנטיגו מליגנה - לנתח או לא**

ד"ר הנאא חאג' עבאיה, *הקריה הרפואית רמב"ם,* **ד"ר מריאנה זמיר,** *מרכז רפואי שיבא, תל השומר*

08:15-08:30 **דגימת בלוטת זקיף - עדיין רלבנטי?**

ד"ר מור מיודובניק, *המרכז הרפואי תל אביב ע"ש סוראסקי,* **ד"ר שרון מרימס,** *המרכז הרפואי הדסה עין כרם*

08:30-08:45 **האם בינה מלאכותית תחליף אותנו?**

ד"ר ניר נתנזון, *מרכז רפואי שיבא, תל השומר,* **ד"ר עופר רייטר אגר,** *מערך העור, מרכז הרפואי רבין*

08:45-09:10 **מקרים שלמדתי מהם**

08:45-08:50 **ד"ר איילת רשפון,** *מערך העור, המרכז הרפואי תל אביב ע"ש סוראסקי*

08:50-08:55 **ד"ר מרים קרנר,** *מרפאה פרטית, גבעת שמואל*

08:55-09:00 **ד"ר נדב אסטמן,** *מערך העור, מרכז רפואי שיבא, תל השומר*

09:00-09:05 **ד"ר עדי נוסרטי,** *בית החולים בילינסון, ומרכז הסרטן ע"ש דוידוף*

09:05-09:10 **ד"ר אמילי אביטן-הרש,** *הקריה הרפואית רמב"ם*

09:15-10:15 **החוגים לדלקת עור ממגע ודרמטולוגיה פדיאטרית**

יושבי ראש - פרופ' דן סלודובניק, ד"ר יצחק קונפינו

09:15-09:45 **מה חדש ב-Contact Dermatitis: חידון נושא פרסים**

פרופ' דן סלודובניק, *מערך העור, המרכז הרפואי תל אביב ע"ש סוראסקי*

09:45-10:15 **אופקים חדשים בטיפול באפידרמוליזיס בולוזה**

פרופ' ליאת סמואלוב, *מערך העור, המרכז הרפואי תל אביב ע"ש סוראסקי*

10:15-10:45 בראנץ

10:45-12:17 **טכנולוגיות ברפואת עור**

יושבי ראש - פרופ' אסי לוי, ד"ר ערן גלילי, ד"ר אינס ורנר, ד"ר פנינה רוזנשפיר-שמש, ד"ר מיכאל שוחט

המושב בחסות בלתי תלויה AMI Technologies

10:45-11:05 **לייזרים מבוא ושימושים רפואיים**

פרופ' אסי לוי, *מערך העור, מרכז הרפואי רבין*

11:05-11:17 **לייזרים בנגעים וסקולריים**

פרופ' אופיר ארצי, *מערך העור, המרכז הרפואי תל אביב ע"ש סוראסקי*

11:17-11:29 **לייזרים לאקנה ורוזציאה**

ד"ר מתי רוזנבלט, *מרפאה ד"ר רוזנבלט מתי - הוד השרון*

11:29-11:41 **אקסוזומים וביוזומים**

פרופ' חלף כרידין, *היחידה לרפואת העור והמעבדה לחקר העור במרכז הרפואי לגליל*

11:41-11:53 **טיפול מחדש בהתקרחויות**

ד"ר להבית אקרמן, *מרפאה ד"ר להבית אקרמן, הרצליה*

11:53-12:05 **בוטולניום טוקסין - שימושים רפואיים**

ד"ר פנינה רוזנשפיר-שמש, *מערך העור, מרכז רפואי שיבא, תל השומר*

בחסות בלתי תלויה Medison

12:05-12:17 **גלי רדיו - סקירה והתוויות ברפואת עור**

ד"ר אינס ורנר, *המרכז הרפואי ורנר קליניק*

תקצירים

AI at the Frontlines of Teledermatology: ChatGPT-4 Achieves High Diagnostic Concordance and Superior Image Descriptions

Dr. Jonathan Shapiro

Maccabi Health Services

Emily Avitan-Hersh, Rambam Health Care Campus; Binyamin Greenfield, Maccabi Healthcare Services; Ziad Khamaysi, Rambam Health Care Campus; Yulia Valdman-Grinshpoun, Soroka Medical University Center, Ben-Gurion University of the Negev; Anna Lyakhovitsky, Sheba Medical Center, Tel Hashomer.

Background: The integration of artificial intelligence in healthcare is significantly transforming medical diagnostics. teledermatology may benefit from these advancements. Out objective was to compare the performance of ChatGPT-4 in executing essential teledermatology tasks, including describing images, and generating differential diagnoses, to that of human teledermatologists.

Methods: Our study compared data from 154 teledermatology consultations between December 2023 and February 2024 with ChatGPT-4's performance. Diagnoses concordance with teledermatologists was classified as 'Yes' ('Top1' for exact matches, 'Top3' for one of the top three), 'No', or 'Partial'. Teledermatologists' and ChatGPT-4's image descriptions received scores ranging from 1 to 5, based on criteria including location, color, size, morphology, and a description of the surrounding area. The scores were then compared. Accuracy of ChatGPT-4's descriptions were categorized as 'Yes', 'No', or 'Partial'.

Results: Out of 154 cases, ChatGPT-4 achieved Top1 concordance in 108 cases (70.8%) (95%CI: 63.2%-77.4%) and a Top3 concordance in 137 cases 87.7% (95%CI: 81.5%-92.0%). There were 4 cases (2.6%) of partial concordance and 15 cases (9.7%) of discordance. For image descriptions, ChatGPT was accurate in 130 cases (84.4%), partially accurate in 22 cases (14.3%), and inaccurate in 2 cases (1.3%). The quality of ChatGPT-4's image descriptions significantly surpassed those of teledermatologists across all evaluated parameters.

Conclusion: ChatGPT-4 demonstrates a significant capacity to analyze metadata and clinical images, providing precise descriptions and offering accurate differential diagnoses. In most cases, its diagnostic accuracy rivals that of human teledermatologists during asynchronous interactions. These findings emphasize the potential for integrating AI algorithms into teledermatology practice.

Baseline Dermoscopic Patterns Predict Long-Term Changes in Nevus Diameter and in Dermoscopic Features

Dr. Ofer Reiter

Beilinson Hospital

Tomer Maimoni, Tel Aviv University; Alon Skop, Sheba Medical Center; N. Kurtansky, Memorial Sloan Kettering Cancer Center; L. Pastor, Memorial Sloan Kettering Cancer Center; A. Halpern, Memorial Sloan Kettering Cancer Center; A. Margov, Memorial Sloan Kettering Cancer Center.

Background: In monitoring melanocytic neoplasms, change patterns may help distinguish nevi from melanoma. Anticipating nevus growth dynamics based on dermoscopic pattern is essential.

Objective: To evaluate the association between baseline dermoscopic patterns and changes in diameter, pattern, and color during long-term follow-up.

Methods: High-risk adults who underwent ≥2 total-body photography (TBP) sessions over at least 14 years were included. Nevi on the torso with available dermoscopic images were analyzed. New and disappearing nevi were identified by presence or absence on first and last TBPs. Nevus diameter and color were assessed using clinical images, while dermoscopic patterns and structures were analyzed at baseline and follow-up.

Results: A total of 877 nevi from 101 patients were included. Mean follow-up time between TBPs was 16.7 years, and between dermoscopic images, 11.5 years. Most nevi were reticular or structureless at baseline. New nevi more often showed peripheral globules or smudgy patterns. Nevi with peripheral globules, diffuse negative network, or regression structures were more likely to grow. Among existing nevi, 15% changed dermoscopic pattern, compared to 30% of new nevi. Most evolving nevi transitioned into reticular or structureless patterns.

Conclusions: In high-risk patients, nevi with peripheral globules or negative network are more prone to diameter growth during long-term monitoring. While most nevi maintain their original dermoscopic pattern, changes—when they occur—tend to result in reticular or structureless patterns.

Beyond Black Box AI: Comparing ChatGPT-4's Interpretability and Accuracy with CNN Models in Dermoscopic Diagnosis of Melanocytic Lesions

Dr. Jonathan Shapiro

Maccabi Health Services

Yonatan Shapira, Maccabi Healthcare Services, Ramat Hasharon; Cristián Navarrete-Deschamps, Department of Dermatology, Pontifical Catholic University of Chile, Santiago, Chile; Mor Atlas, Ono Academic College, Kiryat Ono; Nir Natanzon, Sheba Medical Center, Ramat Gan; Yaron Ben Mordechai, Maccabi Healthcare Services, Tel Aviv; Tomer Maimoni, Faculty of Medicine, Tel Aviv University, Tel Aviv; Romi Gleicher, Rappaport Faculty of Medicine, Technion, Haifa; Mahdi Awad, Northern Medical Center, Tiberias; Ofer Reiter, Department of Dermatology, Rabin Medical Center, Petah Tikva.

Background: Artificial intelligence (AI) models have demonstrated high accuracy in diagnosing skin cancer from dermoscopic images. While convolutional neural networks (CNNs) are widely used, the diagnostic capabilities of large language models (LLMs) such as ChatGPT-4 in this domain remain largely underexplored. This study compared the diagnostic performance of ChatGPT-4 with CNN-based models in classifying melanocytic lesions.

Methods: In this cross-sectional comparative study, 117 dermoscopic images of melanocytic lesions were evaluated. ChatGPT-4 was assessed under two conditions: (1) providing direct diagnosis without feature annotations, and (2) diagnosing after describing dermoscopic features. Its results were compared to those of two CNN-based models (YPSONO and ResNet) and expert dermatologists. Performance was evaluated using sensitivity, specificity, overall accuracy, and interobserver agreement (Cohen's Kappa) for dermoscopic pattern recognition.

Results: ChatGPT-4 achieved 92% sensitivity, 89% specificity, and 89.7% overall accuracy when diagnosing directly. When annotations were required, sensitivity and specificity dropped to 68% and 64%, respectively. Agreement with experts on dermoscopic patterns was minimal (Cohen's Kappa = 0.13). ChatGPT-4 outperformed CNN models in direct diagnosis but showed notable limitations in dermoscopic feature description.

Conclusions: ChatGPT-4 shows strong potential for classifying melanocytic lesions without relying on intermediate annotations, even outperforming traditional CNNs. However, its limited ability to describe dermoscopic features emphasizes the need for targeted training. Future research should explore model fine-tuning using annotated image-text datasets to enhance diagnostic and educational utility.

Psoriasis, Dementia and Biologic treatment

Jen A Barak Levitt[1,2], **Michael Ziv**[1,2]

1 *Department of Dermatology, Emek Medical Center, Afula, Israel*
2 *Ruth and Bruce Rappaport Faculty of Medicine, Technion Institute of Technology, Haifa, Israel*

Background: Psoriasis is increasingly recognized as a systemic inflammatory disease– with new evidence highlighting potential involvement of the brain. Emerging research shows that key cytokines involved in psoriasis, such as TNF-alpha, IL-17, and IL-23, also play a central role in the neuroinflammation associated with Alzheimer's disease and other forms of dementia. Could targeting these pathways help preserve cognitive function? This study evaluates the association between biologic therapies for psoriasis and dementia incidence.

Methods: A retrospective cohort study of patients aged ≥65 with moderate-to-severe psoriasis was conducted using Clalit Health Services data (2000-2023). Patients receiving biologics were compared to those on non-biologic systemic treatments. Propensity score matching (1:1) balanced key covariates. Dementia incidence was the primary outcome, analyzed using Cox regression. Sensitivity analysis addressed immortality bias.

Results: Propensity score matching yielded 1,766 patients (883 per group). Biologic therapy was associated with a 53% reduced dementia risk (hazard ratio 0.47, 95% confidence interval 0.323-0.699), supported by a multivariate Cox model (adjusted hazard ratio 0.52, 95% confidence interval 0.392-0.699).

Conclusions: Our results suggest that biologic therapies may confer neuroprotective benefits, offering new insight into the systemic impact of psoriasis, and opening the door to potential drug repurposing beyond dermatologic indications.

Metabolic Reprogramming of Keratinocytes by IL-4/IL-13 Drives Epidermal Barrier Dysfunction in Atopic Dermatitis

Miss Maya Liaks-Bohnick

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Background: Atopic dermatitis (AD) is a Th2-driven inflammatory skin disease resulting in profound keratinocyte proliferation, which requires metabolic reprogramming to adequately meet the increased demands for nutrients and energy. However, the specific pathways involved in AD are still poorly defined.

Methods: Bulk RNA-sequencing and LC-MS/MS-based metabolomic profiling of IL-4/IL-13 stimulated normal human epidermal keratinocytes (NHEKs) was performed. Real time PCR, immunoblot and immunofluorescence were used to validate the transcriptomic results and to assess the effect of metabolic pathway modulation on epidermal differentiation and inflammation.

Results: Transcriptomic and metabolomic analysis revealed a significant upregulation of the glycine-serine biosynthesis pathway in IL-4/IL-13-stimulated keratinocytes. Gene and protein expression of the rate-limiting enzyme of Glycine-Serine pathway, Phosphoglycerate dehydrogenase (PHGDH) was increased in IL-4/IL-13- stimulated NHEKs, as well as in public available datasets and in immunofluorescence staining of AD lesion samples compared to healthy skin. Pharmacologic inhibition of PHGDH with CBR-588 restored epidermal differentiation and reduced the expression of Th2-associated chemokines in IL-4/IL-13 stimulated NHEKs

Conclusions: Our findings identify glycine-serine pathway as an important regulator of keratinocyte metabolic reprogramming in AD. Targeting PHGDH may offer a novel therapeutic strategy to restore epidermal differentiation and mitigate epithelial inflammation in AD.

Epidemiology and Trends of Cutaneous Fungal Infections Over a Four-Year Period in Israel: A Single Tertiary Center Study

Dr. Eran Galili

Sheba Medical Center

A. Taieb, Sheba MC; A. Shemer, Sheba MC; G.Leor, Tel Aviv University; A. Lyakhovitsky, Sheba MC; A. Barzilai, Sheba MC; S. Baum, Sheba MC

Background: Cutaneous fungal infections, primarily caused by dermatophytes, are a global public health concern. Their distribution varies by region, age group, and anatomical site, with recent shifts in pathogen patterns being reported.

Methods: A retrospective analysis was conducted at a large tertiary care center in Israel, reviewing data from 2,244 patients with suspected superficial fungal infections between 2019 and 2022. Diagnosis was based on PCR and fungal cultures. Infection sites, age groups, and pathogen distribution were analyzed.

Results: Fungal infection was confirmed in 53.0% of cases. In adults, the most affected sites were the nails (44.1%) and feet (38.7%), while in children, the scalp (32.9%) and nails (27.1%) were most commonly involved. Trichophyton rubrum was the predominant pathogen overall (80.4% in adults, 51.4% in children). However, T. tonsurans emerged as the leading cause of scalp, face, neck, and upper-body tinea corporis in children. Notably, its incidence in adults significantly increased from 4.8% in 2019 to 11.5% in 2022 ($p < 0.001$). By 2022, T. tonsurans became the most frequent cause of upper-body tinea corporis in both children and adults.

Conclusions: The findings demonstrate a changing epidemiology of dermatophytosis in Israel, with T. tonsurans emerging as a dominant pathogen, particularly in upper-body infections. These shifts call for enhanced awareness, updated diagnostic approaches, and further investigation into T. tonsurans transmission and prevention strategies.

TWEAK Links Psoriasis to Atopic-Like Inflammation through Paradoxical Reactions

Dr. Eran Cohen-Barak

Department of Dermatology, Emek Medical Center

Sahiti Marella, University of Michigan; Mira Hamed, Emek Medical Center; Fadia Zagairy, Emek Medical Center; Rachael Bogle, University of Michigan; Jennifer Fox, University of Michigan; Lam C. Tsoi, University of Michigan; Michael Ziv, Emek Medical Center; Johann E. Gudjonsson, University of Michigan; Eran Cohen Barak, Emek Medical Center and Technion.

Introduction: Psoriasis is a Th17-driven inflammatory skin disease affecting ~ 5% of the population. Treatments range from topical and systemic agents to biologics targeting key cytokines like TNF/IL17/IL23. While biologics are effective for many, a subset of patients develop paradoxical skin reactions (PR) resembling the Th2-driven disease, atopic dermatitis (AD). A leading hypothesis for PR is that inhibition of Th1/Th17 signaling may promote a Th2 driven response in susceptible individuals. However, the regulatory mechanisms underlying this immune shift remain obscure.

Methods: Skin samples were analyzed through single cell RNA sequencing and spatial transcriptomics. Keratinocytes and monocytes cultures were used to test the regulatory mechanisms.

Results: We generated a single-cell and spatial transcriptomic atlas of skin biopsies from patients with PR, healthy controls and patients with psoriasis or AD. PRs showed 141 unique differentially expressed genes, characterized by enrichment of IFN a, IFN g and TNF-a responses. We further identify TNFSF12 (TWEAK) signaling as a driver of the inflammatory shift and interferon signature in PR. Immunohistochemistry validated high expression of TWEAK, and its receptor FN14, in PR and AD skin samples compared to control and PP. Spatial transcriptomics showed that myeloid-derived TWEAK and keratinocyte-expressed FN14 could drive downstream inflammatory pathways, including interferon signature characteristic of PR. Given the Th2-skewed profile in AD, we co-stimulated keratinocytes with IL-13 and TWEAK and identified an amplified IFN response, mirroring PR skin.

Conclusions: These findings suggest a synergistic mechanism that may underlie PR pathogenesis and highlight TWEAK-IL-13 signaling as a potential therapeutic target.

Aggressive cutaneous squamous cell carcinomas of the upper extremities in solid-organ transplant recipients

Maya Engler Markowitz[1,2], Assi Levi[1,2], Yehonatan Noyma[1,2], Daniel Mimouni[1,2], Batya Davidovici[1,2]

1 *Division of Dermatology, Rabin Medical Center, Petach Tikva, Israel*
2 *Gray Faculty of Medical and Health Science, Tel Aviv University, Tel Aviv*

Background: Solid organ transplant recipients (SOTRs) have a significantly higher incidence of cutaneous squamous cell carcinoma (SCC) than the general population, which often exhibit a more aggressive biological behavior. Besides immunosuppression, known risk factors for aggressive SCC include certain anatomical sites, high-risk histological features, and prior radiation exposure. Our clinic recently experienced an increasing number of SOTRs presenting with aggressive SCC in the upper extremities, a site traditionally considered as a low risk one. The aim of this study was to explore the clinical, pathological, and outcome features of these tumors.

Methods: A retrospective search of the electronic files of a tertiary medical center was conducted (2016-2024) to identify SOTRs diagnosed with upper-extremity SCC with an aggressive course. Data on patient demographics, tumor characteristics, treatment, and outcomes were extracted.

Results: The cohort consisted of 7 kidney transplant recipients in whom aggressive SCC developed in the upper extremities at a median of 31 years after transplantation. Initial histopathological examination revealed varying SCC differentiation. Treatments consisted of primary tumor excision, radical surgeries, radiotherapy, and chemotherapy. Six patients received immune checkpoint inhibitors, 3 of whom achieved a durable complete response. Two patients died of disease-related complications.

Conclusions: Aggressive SCCs in the upper extremities are rare in SOTRs but may exhibit a highly malignant course. This series underscores the importance of heightened vigilance in SOTRs, particularly those with prolonged immunosuppression, even for SCCs arising in traditionally low-risk sites or with initially reassuring histology. Early intervention with systemic therapies, including immunotherapy, should be considered.

Cancer risk in hidradenitis suppurativa patients treated with TNF-alpha inhibitors

Dr. Or Dagan

Soroka Medical Center

Yulia Waldman, Soroka Medical Center; Arnon Cohen, Quality Indicators and Research Institute, Clalit Health Services; Yochai Schonmann, Quality Indicators and Research Institute, Clalit Health Services; Anat Reiner Ben-Na'im, Ben-Gurion University of the Negev.

Background: Hidradenitis suppurativa (HS) is a chronic inflammatory skin disorder associated with increased cancer risk. TNF-α inhibitors are effective treatments for HS, yet their long-term safety in HS patients regarding malignancy remains uncertain.

Methods: We conducted a population-based retrospective cohort study within Clalit Health Services to assess cancer risk among HS patients treated with TNF-α inhibitors, focusing on the impact of cumulative exposure. The study included patients diagnosed with HS between 2000 and 2024. Patients were excluded if they had less than 36 months of follow-up, a prior malignancy, HIV infection, a history of organ transplantation, or exposure to IL-17/IL-23 inhibitors. Patients were first stratified based on any exposure to TNF-α inhibitors and subsequently by the cumulative duration of TNF-α inhibitor exposure. The primary outcome was incident malignancy. Cancer risk was assessed using Kaplan-Meier survival curves and stepwise Cox proportional hazards models.

Results: Among 8,015 HS patients, 342 received TNF-α inhibitors. Overall, cancer incidence was 3.29 per 1,000 person-years. Stepwise multivariable Cox regression showed no significant association for ever-exposure to TNF-α inhibitors (HR 1.09; 95% CI 0.59-2.02; p = 0.79). In the secondary analysis, cumulative TNF-α inhibitor exposure >3 years was associated with elevated cancer risk compared to the non-exposed group (HR 2.02; 95% CI 1.03-3.99; p = 0.042).

Conclusions: HS patients receiving prolonged TNF-α inhibitor therapy show increased cancer risk. Risk stratification should consider individual comorbidities and treatment duration. Long-term malignancy surveillance is warranted for HS patients with sustained immunomodulatory therapy.

"Genotype-Phenotype Correlation of Cutaneous Manifestations in Patients with Tuberous Sclerosis Complex (TSC)"

Dr. Philip Nasrallah

Sheba Tel HaShomer Medical Center

Prof. Shoshana Greenberger

Background: Tuberous Sclerosis Complex (TSC) is an autosomal dominant multisystem disorder characterized by hamartomas and frequent cutaneous involvement. It results from mutations in either the TSC1 or TSC2 genes. Studies suggest that TSC2 mutations are associated with more severe clinical manifestations. This study aims to characterize the cutaneous phenotype in pediatric patients with confirmed TSC1 or TSC2 mutations and to assess their response to mTOR inhibitor therapy.

Methods: This retrospective study includes 83 genetically confirmed TSC patients (23 with TSC1 and 60 with TSC2) treated at the Edmond and Lily Safra Children's Hospital. Cutaneous findings are categorized as major or minor according to international diagnostic criteria. Data on topical and systemic mTOR inhibitor treatment and response are collected. Statistical analyses are conducted using SPSS, with significance defined as $p<0.05$.

Results: Patients with TSC2 mutations exhibit a significantly higher prevalence of major cutaneous features, particularly hypomelanotic macules (88.3% vs. 60.9%, $p=0.01$). Minor features do not differ significantly between genotypes. Response to topical mTOR inhibitors is higher in TSC2 patients (79.4% vs. 50%, $p=0.035$). Systemic treatment is primarily administered to TSC2 patients and shows favorable outcomes. Only one TSC1 patient receives systemic therapy, with partial improvement.

Conclusions: The findings demonstrate a clear genotype-phenotype correlation, with TSC2 mutations linked to more severe skin manifestations and better therapeutic response to mTOR inhibitors. Early genetic testing may facilitate accurate diagnosis and enable genotype-based clinical decisions, particularly regarding dermatologic monitoring and treatment strategies in TSC.

Results of Photopatch Testing In Israel. A Retrospective cohort study

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1 *Division of Dermatology, Rabin Medical Center – Beilinson Hospital, Petach Tikva, Israel*
2 *Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel*
3 *Department of Dermatology, Chaim Sheba Medical Center, Tel Hashomer, Israel*
4 *Faculty of Medicine, Lithuanian University of Health Sciences, Kaunas, Lithuania*

Background: There is limited data regarding photopatch testing (PPT) in Israel.

Objectives: To investigate the prevalence of positive reactions and concurrent diagnosis of patients that underwent PPT in a single Israeli center.

Methods: Retrospective cohort study that included all patients that were suspected of having contact dermatitis and underwent patch testing with European baseline series (EBS) and additionally were selectively photopatch tested with the Scandinavian/European baseline photopatch series in a tertiary-medical-center in Israel (2009-2023).

Results: Of 5234 consecutive patients tested with the EBS, 78 (1.5%) underwent PPT. Overall, 23 (29.49%) patients demonstrated positive PPT results and 13 (56.52%; 17 postive reactions, 12 different allergens) exhibited clinically relevant reaction and diagnosed with photoallergic contact dermatitis (PACD). Sunscreen-related allergens represnted the most common relavent photoallergens (6 patients, 46.15%), with benzophenone-3 yielding positive and relavent results in 5 cases. The duration of symptoms was significanly ($p<0.05$) longer among 13 patients with relevant photopatch test reaction that were diagnosed with PACD (12.16±12.44 years) compared to patients with unrelevant (4.86±6.75 years) or negative results (5.29±7.98 years). The most common final diagnosis was allergic contact dermatitis (ACD) (18 cases) followed by PACD (13 cases), non-specific dermatitis (5 cases) or atopic dermatitis (4 cases). About half (48.71%) of patients had indeterminate or other diagnoses including rosacea and solar urticaria.

Conclusion: In this study prevalence of positive to PPT was relatively high (29%) however falls within the wide range of reported values. Sunscreen-related allergens, specifically benzophenone-3, were the most common culprit. Among PACD patients time-to-diagnosis was significantly delayed.

Pandemic of sensitivity to acrylate containing nail cosmetic among young Israeli women? Result of patch testing 2-hydroxyethyl methacrylate (HEMA) in The European baseline series

Dr. Daniel Hilvitz

Tel HaShomer Medical Center

Daniel Hilewitz, Tel Aviv University; Akiva Trattner, Rabin Medical Center; Ofer Reiter, Rabin Medical Center; Vlad Uvaidov, Rabin Medical Center; Yonatan Noyman, Rabin Medical Center; Efrat Solomon Cohen, Rabin Medical Center; Asher Hackett, Rabin Medical Center; Daniel Mimouni, Rabin Medical Center; Igor Snast, Rabin Medical Center.

Background: 2-Hydroxyethyl methacrylate (HEMA) was added into the European Baseline Series (EBS) in 2019. There is limited data regarding the frequency, relevance and sources of exposure to HEMA.

Objectives: To investigate the frequency and clinical relevance of positive reactions to HEMA in the EBS in Israel, and explore sources of exposure.

Methods: Retrospective cohort study that included patients who underwent patch testing with the EBS in a tertiary center in Israel between 2019 and 2023. Positive reactions to HEMA were stratified by sex, 6 age groups, and year of study. Sources of exposure to HEMA as well as occupational data were recorded.

Results: Of 1,671 patients, 135 (8.1%) had a positive reaction to HEMA (130 females, 5 males). Prevalence in women (11.0%) was significantly higher than in men (1.0%) ($p < 0.001$). The highest frequency (17.6%) occurred in women under 30, with an odds ratio (OR) of 2.3 (95% CI 1.6–3.3, $p < 0.001$) compared to older women. Sensitization increased in 2022–2023 compared to 2020–2021 (OR 1.7, 95% CI 1.5–2.1, $p < 0.01$), likely due to pandemic-related changes. No significant variation was observed in men. Among 111 patients with clinically relevant reactions (110 females), 95% were attributed to nail cosmetics. Twenty (18%) had occupational contact dermatitis—mainly nail stylists and dentists. Other sources included sanitary pads (n=4), medical adhesives (n=3), and paints (n=2).

Conclusion: HEMA sensitivity was found in 8.1% of patients, most commonly among young women. Nail cosmetics were the leading exposure source, reflecting a growing trend of (meth)acrylate sensitization.

Paradoxical Psoriasiform Skin Eruption in Pediatric Patients with Inflammatory Bowel Disease Treated with TNFα Inhibitors

Dr. Daniel Hilewit

Tel Hashomer

Sharon Yacobovitz, Tel Aviv University; Shiran Reiss-Huss, Schneider Children's Medical Center; Manar Matar, Schneider Children's Medical Center; Yael Weintraub, Schneider Children's Medical Center; Dror S. Shouval, Schneider Children's Medical Center; Lev Pavlovsky, Rabin Medical Center; Rivka Friedland, Schneider Children's Medical Center.

Background: Tumor necrosis factor α inhibitors (TNFαI)-induced psoriasiform eruptions are a well-known phenomenon among adults. However, data are limited regarding this reaction in children. This study aim to describe in pediatric patients with inflammatory bowel diseases (IBD), the clinical characteristics of TNFαI-induced psoriasiform eruptions and the outcomes of various therapeutic options.

Methods: We reviewed the medical charts of pediatric patients (aged <18 years old) with IBD who developed TNFαI-induced psoriasiform eruptions during 2006-2022.

Results: Among 454 patients with IBD treated with TNFαI, 58 (12.8%) were diagnosed with TNFαI-induced psoriasiform eruptions, of whom 51 were included in the study. The female to male ratio was 1:1.3. The median age at skin eruption was 14.1 [interquartile range, 12.11-16.05] years. The median elapsed time to eruption appearance was 15 [interquartile range, 7-24] months after initiation of the treatment. All the patients were treated with topical steroids and 17 (33%) needed systemic treatment (phototherapy, methotrexate or acitretin). Sixteen patients (31%) needed to stop TNFαI treatment due to an intractable eruption. Female patients, patients with inflammatory alopecia and patients who were treated with methotrexate or phototherapy were more prone to stop TNFαI.

Conclusions: TNFαI-induced psoriasiform eruptions are common in pediatric patients with IBD. The eruption may appear months or even years after treatment initiation. Almost one-third of the described patients had to replace their treatment due to a recalcitrant cutaneous eruption. This indicates that a multidisciplinary approach is required for effective management.

Curettage vs Electrodessication for Paediatric Molluscum Contagiosum: Efficacy & Safety Follow-Up Study

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Introduction: Molluscum contagiosum (MC) is a common pediatric skin infection caused by a DNA poxvirus, often impairing quality of life due to its visibility and symptoms. Despite its tendency to resolve spontaneously, treatment is commonly seek for cosmetic, symptomatic, or preventive reasons. No gold-standard therapy exists; commonly used methods include curettage and electrodessication (ED).

Objective: To compare the efficacy, cosmetic outcomes, and patient satisfaction of curettage versus ED in treating pediatric MC.

Methods: This prospective comparative study included 103 pediatric patients with $\geq$10 MC lesions (or $\geq$5 facial lesions) treated at Sheba Medical Center. Treatment choice (curettage vs. ED) was determined by guardian preference. Clinical data, pain scores, and procedural outcomes were collected. A structured follow-up questionnaire assessed healing, remnants, infection, recurrence, and satisfaction over six weeks. Statistical significance was set at $p \leq 0.05$.

Results: The cohort (mean age 4.37 years, 60% female) included 67 patients treated with curettage and 42 with ED. Most had facial (67.9%) and multiple-site lesions (50.5%). Curettage was associated with fewer remnants (42.9% vs. 70%, $p = 0.007$), higher aesthetic satisfaction ($p = 0.039$), and faster healing ($p = 0.050$). Pain was comparable at the time of treatment but higher at one-week follow-up in the ED group ($p = 0.014$). Recurrence rates did not differ significantly (49.2% curettage vs. 35% ED).

Conclusion: Curettage showed superior cosmetic results, faster recovery, and less pain, supporting its use as the preferred first-line treatment for MC. ED remains an option for delicate anatomical regions.

Comprehensive Analysis of Native Phage Effectiveness Against Cutibacterium acnes in Acne Vulgaris

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Background: Cutibacterium acnes (C. acnes) has a major role in the inflammatory response in acne vulgaris. Topical and systemic antibiotics targeting C. acnes have been standard treatments. With the emergence of worldwide resistance, bacteriophage (phage) therapy is evolving as one of the most promising solutions for the problem. Currently, there is a gap in data regarding the effectiveness of native C. acnes phages, their role in the pathogenesis of acne vulgaris, and their therapeutic potential.

Methods: This cross-sectional study enrolled 60 participants: 30 with inflammatory acne and 30 healthy controls. Facial skin swabs were used to culture C. acnes bacteria and isolate phages. Each isolated phage (n=60) was tested against all bacterial isolates (n=60), generating a comprehensive 60×60 susceptibility matrix.

Results: Analysis of 3,600 phage-bacteria interactions revealed distinct effectiveness patterns. Acne-derived phages demonstrated significantly greater effectiveness than control-derived phages. Top-performing phages exhibited >50% bacterial susceptibility, whereas the least effective ones showed <20% susceptibility. Acne-associated bacteria were more susceptible to phages compared to control strains. Cross-reactivity analyses revealed that high-performing acne phages maintained effectiveness against control isolates.

Conclusions: This comprehensive analysis highlights the heterogeneity of native C. acnes phage activity, underscoring greater effectiveness of phages isolated from acne lesions. Results indicate a possible ecological role for native phages in acne pathogenesis and support personalized phage therapy. Observed cross-reactivity emphasizes the importance of phage screening for high-performing phages. Collectively, our results support the continued development of targeted phage-based interventions as a viable alternative to conventional antibiotics in the treatment of acne vulgaris.

The immuno-phenotype of immune checkpoint induced Bullous pemphigoid: a cohort study

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Background: Immune checkpoint inhibitors (ICIs) are increasingly used in cancer therapy and have been linked to adverse dermatologic effects, including bullous pemphigoid (BP), which sometimes necessitates treatment interruption. This study aims to characterize the immunologic profile of ICI-induced BP (BPICI) and identify associated autoantibodies.

Methods: We conducted a retrospective cohort study (2015-2022) at Rambam Health Care Campus including patients aged ≥18 years who received anti-PD-1/PD-L1 therapy and developed BP. Controls included (1) patients with non-BP cutaneous irAEs (NBPICI), (2) ICI-treated patients without irAEs (NirAEICI), and (3) BP patients not treated with ICIs (BPNICI). Sera were analyzed via ELISA for BP180, BP230, DSG1, DSG3, and Collagen VII autoantibodies.

Results: Among 242 patients with cutaneous irAEs, 17 developed BP; 11 had available serums. ELISA detected BP180 antibodies in 81.8% of BPICI cases; other autoantibodies were negative in all but one case. BPICI patients were significantly older ($p<0.05$), more often male ($p=0.0066$), and predominantly had cutaneous squamous cell carcinoma (43.8%). Cemiplimab-treated patients with SCC developed BP earlier than those with other cancers ($p=0.0493$) or other ICIs ($p=0.0035$). BP onset occurred later in BPICI (mean 61.3 weeks) than in other irAEs (mean 32.2 weeks), and patients required higher monthly prednisone doses over six months compared to BPNICI ($p<0.0001$). Most (93.8%) discontinued ICI therapy due to BP.

Conclusion: Our findings suggest that ICI-induced BP shares a similar immunologic profile with classic BP, without evidence of antigen spreading, and that SCC patients treated with Cemiplimab are at greater risk.

ABBREVIATIONS: ICI (Immune Checkpoint Inhibitors), BP (Bullous Pemphigoid), BP ICI (Underwent immunotherapy and developed Bullous Pemphigoid), BP NICI (Did not undergo Immunotherapy but developed Bullous Pemphigoid), NBPICI (Underwent immunotherapy and developed different dermatological Immune-Related Adverse Event Than Bullous Pemphigoid), NirAE ICI (Underwent immunotherapy and did not develop Immune-Related Adverse Events). SCC (Squamous Cell Carcinoma).

Impaired Wnt/planar cell polarity signaling and the genetics of yellow nail syndrome

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Background: Yellow nail syndrome (YNS) is a rare disorder characterized by a triad of yellow dystrophic nails, lymphedema, and chronic lung disease. Most patients present in adulthood, with only few congenital or familial cases described. YNS etiology remains largely unknown, though defects in lymphatic vessel development are suggested to play a significant role.

Methods: We studied 11 YNS patients, six with congenital YNS (cYNS) and five with sporadic delayed-onset disease (sYNS). Exome and genome sequencing were used to detect disease-causing variants, complemented by RNA analysis for intronic variants. Immunofluorescence staining and real-time reverse transcription quantitative PCR (RT-qPCR) were used to study expression of proteins and genes of interest.

Results: We identified bi-allelic variants in CELSR1 in five cYNS patients, and a variant in FZD6 in one cYNS patient; both genes encode for core molecules in the Wnt/planar cell polarity (PCP) pathway. None of the sYNS patients had candidate genetic variants. Immunofluorescence staining revealed that CELSR1 co-localizes with lymphatic vessels in the skin, but not in the lungs or the intestine. Moreover, patient tissues showed negligible-to-none CELSR1 and FZD6 expression compared to controls. Gene expression of Wnt/PCP-related genes was reduced in all available samples from cYNS patients, while sYNS patients showed milder gene expression impairments.

Conclusions: We suggest that defects in planar cell polarity organization play a major role in the pathogenesis of YNS. This is the first demonstration of a mechanism explaining YNS development, both in its congenital and sporadic forms.

The Relationship Between Oculocutaneous Albinism and Skin Cancer

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Background: Oculocutaneous albinism (OCA) is a genetic condition characterized by reduced or absent melanin in the skin, hair, and eyes, leading to increased sensitivity to ultraviolet (UV) radiation and a higher risk of skin cancer. Despite the known risks, limited data exist on the incidence of skin cancer among individuals with OCA in Mediterranean regions.

Objective: To analyze the clinical and epidemiological characteristics of patients with OCA in Israel and assess the prevalence of skin cancer in this high-risk population.

Methods: This retrospective study included 98 patients with a confirmed diagnosis of OCA who were evaluated at the Michaelson Institute and Hadassah Medical Center dermatology clinics between 1998 and 2023. Demographic and clinical data, including age, sex, and skin cancer diagnoses (squamous cell carcinoma, basal cell carcinoma, melanoma), were collected from medical records. Descriptive statistics were used for analysis.

Results: Of the 98 patients, 10 (10.2%) were diagnosed with skin cancer. Patients with cancer were significantly older (mean age 58.3 years) than those without (mean age 9.8 years). Squamous cell carcinoma was the most common cancer type, followed by basal cell carcinoma and melanoma. Most patients had a single malignant lesion.

Conclusion: Although skin cancer prevalence among individuals with OCA in Israel was relatively low in this cohort, the findings highlight an increased risk with age and emphasize the need for long-term follow-up. These results support implementing targeted prevention strategies, including UV protection education and regular dermatologic screening for patients with OCA, particularly in sun-intense regions like Israel.

Drug survival of interleukin 17 inhibitors after switch from interleukin 23 inhibitors in psoriasis: An observational cohort study

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Background: Real-world evidence is essential for guiding treatment sequencing in biologic-experienced psoriasis patients. This study evaluated the drug survival of secukinumab and ixekizumab following prior IL-23 inhibitor therapy.

Methods: A retrospective cohort study was conducted using Clalit Health Services data (2005-2023). Adult psoriasis patients switching from IL-23 inhibitors (tildrakizumab, risankizumab, guselkumab) to secukinumab or ixekizumab were included.

Results: Seventy-eight patients were analyzed (62 ixekizumab; 16 secukinumab). At 6 months, drug survival favored secukinumab (93.8% vs 79.8%), but from 12 months onward, ixekizumab showed superior survival rates: 73.3% vs 49.0% at 12 months, and 62.2% vs 27.2% at 18 months. No significant associations were found between drug survival and age, sex, BMI, or treatment line.

Conclusions: Our findings suggest that real-life survival of ixekizumab may be superior to secukinumab in biologic-experienced patients who switched from IL-23 inhibitors. Further studies are required to corroborate this observation.

The cutaneous phenotypic landscape of Gaucher disease type 1: a clinic based cross-sectional study

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Background: Cutaneous manifestations of type 1 Gaucher disease (GD1) have rarely been described, and the influence of modern treatments on skin findings is unknown.

Objective: To characterize the contemporary GD1 skin phenotype and identify demographic, genotypic, laboratory and drug-specific predictors.

Methods: Consecutive genetically confirmed patients with GD1 attending the Gaucher clinic (Jan 2024–May 2025) underwent a standardized dermatology examination. Logistic models evaluated age, sex, genotype severity, laboratory tests, and current treatment.

Results: Among 101 patients (mean ± SD age 35.3 ± 22.5 y; 54.5 % female), 98 % exhibited ≥ 1 skin lesion. Novel findings included palmar erythema (53.5 %), rosacea (45.5 %) and atypical café au lait macules (20.8 %). Other prevalent lesions were purpura/ecchymoses (50.5 %), easy burning (48.5 %) and yellow brown skin dyschromia (38.6 %).

Age independently raised the odds of angiomas, telangiectasia, and purpura (adjusted odds ratio [aOR]: 1.02–1.04 per year). Male sex was associated with telangiectasia (aOR 0.20; 95% CI 0.07–0.59) and palmar erythema (aOR 0.41; 95% CI 0.18–0.94). Any GD-1 treatment lowered easy-burning complaints (aOR 0.37) yet raised skin dyschromia nearly five-fold (aOR 4.53). Higher alanine aminotransferase levels were also associated with increased odds of telangiectasia (aOR 1.45 per 10 U/L; 95% CI 1.00–2.11). Genotype severity was not associated with skin lesions.

Conclusions: Cutaneous involvement in GD1 is nearly universal; the broadened skin spectrum we describe, including several novel lesions, provides easily recognizable clinical markers and highlights therapy-specific patterns that should guide counselling and dermatologic surveillance.

Early Initiation of Hydroxychloroquine in Cutaneous Lupus Erythematosus to Prevent Progression to Systemic Lupus Erythematosus: A Long-term Follow-up Study

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Background: The progression from cutaneous lupus erythematosus (CLE) to systemic lupus erythematosus (SLE) remains a significant clinical challenge, with identified risk factors but no established preventative strategies. We sought to evaluate whether early hydroxychloroquine (HCQ) initiation reduces the risk of CLE progressing to SLE.

Methods: A longitudinal study of 286 consecutive patients with isolated CLE (full study cohort), treated with HCQ (n = 186) or topical corticosteroids/calcineurin inhibitors (TCS/CNI; n =100). Progression to SLE was defined using the 2019 European League Against Rheumatism/American College of Rheumatology classification criteria.

Results: Progression to SLE occurred in 4.8% of the HCQ group and 27% of the TCS/TCI group ($p<0.001$). Early initiation of HCQ was associated with an 87% reduction in SLE risk over time (HR: 0.13, 95% CI: 0.06–0.27, $p<0.001$), consistent across all CLE severity levels and both positive and negative baseline antinuclear antibody titers. Severe SLE with end-organ involvement was also significantly less frequent in the HCQ group (risk ratio: 0.16, 95% CI: 0.19–0.86, $p=0.003$).

Conclusions: Early HCQ treatment demonstrated protective effects against progression to SLE, supporting its use as a preferred strategy in managing CLE to prevent systemic involvement.

Cardiovascular and Thromboembolic Risks of JAK Inhibitors in Atopic Dermatitis: A Global Cohort Study

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Introduction: Janus kinase (JAK) inhibitors are increasingly used for moderate-to-severe atopic dermatitis (AD). However, concerns have emerged regarding their cardiovascular safety profile, particularly the risk of thromboembolic complications. Evidence specific to AD populations remains sparse.

Objective: To evaluate the real-world risk of myocardial infarction (MI), stroke, pulmonary embolism (PE), and deep vein thrombosis (DVT) among patients with AD treated with JAK inhibitors relative to those treated with dupilumab, methotrexate, and cyclosporine.

Methods: We conducted three propensity score-matched analyses comparing AD patients initiating JAK inhibitors with those receiving dupilumab (n=1,006), methotrexate (n=958), or cyclosporine(n=948). The incidence of MI, stroke, PE, and DVT over three years was assessed.

Results: The risk of PE (hazard ratio [HR], 2.75; 95% confidence interval [CI], 1.19–6.38; P=0.014) and DVT (HR, 2.54; 95% CI, 1.14–5.64; P=0.017) was significantly higher among patients treated with JAK inhibitors relative to dupilumab, with risk difference of 8 and 9 additional cases of PE and DVT/1,000 patients starting JAK inhibitors, respectively. Relative to methotrexate, JAK inhibitors were associated with an increased risk of DVT (HR, 2.41; 95% CI, 1.14–5.08; P=0.017), with a risk difference of 7 additional cases/1,000 patients starting JAK inhibitors. The risk of MI and stroke was not statistically elevated under JAK inhibitors in comparison to any of the comparators.

Conclusion: JAK inhibitor use in patients with AD is associated with a slightly increased risk of PE and DVT compared to dupilumab and methotrexate. This underscores the need for careful patient selection and thrombotic risk assessment when prescribing JAK inhibitors.

The real-world, long-term risk of infections associated with dupilumab in atopic dermatitis: A global cohort study

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Background: A low risk of infections was found in the randomized placebo-controlled trials of dupilumab in atopic dermatitis (AD). Dupilumab-associated real-life long-term risk of infections remains unclear.

Objective: To assess the risk of infectious complications in patients with AD managed by dupilumab relative to those treated with methotrexate and cyclosporine.

Methods: A retrospective cohort study comprised two distinct analyses comparing patients with AD under different treatments: (i) initiators of dupilumab (n=10,913) versus methotrexate (n=10,913) and (ii) initiators of dupilumab (n=6,943) versus cyclosporine (n=6,943). Study groups were compared regarding the risk of 32 infections during the initial three years following drug initiation.

Results: During the first year of treatment, relative to methotrexate and cyclosporine, dupilumab was associated with a decreased risk of herpetic (HR, 0.59; 95% CI, 0.47–0.74 and HR, 0.65; 95% CI, 0.50–0.85, respectively) and non-herpetic skin infection (HR, 0.55; 95% CI, 0.49–0.63 and HR, 0.68; 95% CI, 0.58–0.80, respectively) and systemic infections (HR, 0.39; 95% CI, 0.34–0.44 and HR, 0.47; 95% CI, 0.40–0.56, respectively). More specifically, dupilumab was associated with a reduced risk of pneumonia, urinary tract infection (UTI), upper respiratory tract infection (URTI), otitis media, sinusitis, herpes simplex, herpes zoster, hepatitis B virus (HBV) and HCV reactivation, cytomegalovirus, Epstein–Barr virus, infective gastroenteritis, influenza, parasitic diseases, cellulitis, folliculitis, and dermatophytosis. The risk of eczema herpeticum was not increased among dupilumab-treated patients.

Conclusion: Dupilumab is associated with a reduced risk of a wide array of systemic and cutaneous infections. This agent might be preferred in patients with susceptibility to infections.

Construct validity of the atopic dermatitis control tool (ADCT) in the pediatric population – a real-world prospective study

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Background: Patient-reported outcomes (PRO) are key for AD management, including the AD control tool (ADCT). Although AD primarily affects pediatric patients, ADCT validation in children is lacking.

Methods: We conducted a real-world, cross-sectional study to assess the construct validity of the ADCT in pediatric AD patients. Parents (P-ADCT) and, where applicable, children (C-ADCT) completed the ADCT alongside additional patient-reported outcomes (PROs, i.e., pruritus and insomnia), and clinician-reported outcomes (ClinRO): body surface area (BSA), investigator's global assessment (IGA), eczema area and severity index (EASI), and IGA*BSA. Construct validity was evaluated via Spearman correlations with a priori thresholds ($r \geq 0.5$ for PROs; $r = 0.30–0.50$ for ClinRO). Data was collected during routine pediatric dermatology clinic visits, supporting the study's relevance to real-world clinical settings.

Results: P-ADCT, PROs, and ClinRO were completed for 100 children (mean age 7.0±4.7yrs). Twenty-five patients (mean age 13.2□2.3yrs) also self-reported C-ADCT. Correlations with total P-ADCT and C-ADCT scores met our criteria for construct validity: stronger correlations were recorded with other PROs (r=0.64-0.79) as compared with ClinROs (r=0.44-0.64). Total P-ADCT displayed adequate-to-good correlation with total C-ADCT (r=0.70). Across individual P-ADCT and C-ADCT items, conceptual items (assessing effect on daily activities and effect on mood/emotions) displayed poorer correlations when children completed the ADCT.

Conclusions: The ADCT demonstrates adequate construct validity in pediatric AD when completed by both parents and children. Conceptual items may be less reliable in self-reported child responses. Our findings underscore the importance of tailoring PRO tools to pediatric patients to optimize their utility in this population.

Evaluating blood involvement in early-stage pediatric mycosis fungoides: A retrospective cohort study using flow cytometry

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Background: Flow cytometry (FC) is routinely used to assess blood involvement in mycosis fungoides (MF). In early-stage adult MF, most patients are classified as B0, a small proportion as B1, and B2 is extremely rare, corresponding to no, low-level, or significant blood involvement, respectively. However, data on B classification in pediatric MF remain strikingly scarce, and pediatric-specific reference standards are lacking.

Methods: We retrospectively analyzed FC data from 65 children with early-stage MF for B status classification.

Results: Using adult reference standards, none of the patients were classified as B2. All were classified as B0 or B1: B1 rates were 33.8% and 49.2%, based on percentage and absolute count criteria of CD4+/CD7- or CD4+/CD26-, respectively. Total WBC, lymphocytes, CD3+, CD4+, CD26- and CD7- cell counts significantly decreased with age. However, age did not correlate with CD4+/CD7- or CD4+/CD26- percentage/absolute counts and B status was not correlated with other demographic or clinical parameters. Over a mean follow up of 5.6±4.0 years, none of the patients showed stage progression.

Conclusions: Clinicians should be aware of the high prevalence of B1 among early-stage pediatric MF, which may lack any clinical significance. This calls into question the benefit of routine evaluation of blood involvement in this population, given the strikingly indolent disease course. Our study reflects real-world clinical practice, where FC evaluation of CD4□/CD7□ and CD4□/CD26□ subsets in pediatric MF relies on adult reference standards. Future investigations should include comparisons with healthy pediatric cohorts to further contextualize these findings.

Skin Biomarker Profiling in Pediatric Atopic Dermatitis Using a Novel Non-Invasive Sampling Technique

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Background: Atopic dermatitis (AD) is a common, inflammatory skin disease, primarily affecting pediatric patients. While skin biopsies enable robust molecular analysis, their invasiveness limits pediatric use. Non-invasive alternatives like skin swabs offer promise, yet their ability to detect AD-related biomarkers across lesional (LS) and non-lesional (NL) skin in pediatric populations remains underexplored.

Methods: Ninety-eight pediatric AD patients (ages 0-17) were enrolled and stratified by age and disease severity. LS and NL skin samples were collected using phosphate-buffered saline-pretreated swabs and analyzed via ELISA for nine biomarkers (IL-1α, IL-1β, IL-1RA, IL-6, IL-8, IL-36γ, KLK5, albumin, and ORAC) and total protein content. Statistical analyses compared LS vs NL levels, stratified biomarkers by age/severity, and examined correlations with clinical scores.

Results: Most biomarkers showed significantly higher levels in LS vs NL skin ($P<0.01$), with fold-changes up to 3.48. Overall, adolescents exhibited increased LS biomarker levels compared to children, while LS levels of IL-8, albumin, and IL-1RA were significantly elevated in infants' vs children's samples. LS levels of IL-8, KLK5, IL-6, and IL-1β were significantly intensified in moderate-to-severe vs mild AD ($p<0.05$). NL biomarkers demonstrated stronger correlations ($\rho \geq 0.4$) with clinical scores, particularly IL-8 and albumin. IL-1α did not differentiate LS from NL skin.

Conclusions: Superficial skin swabs effectively capture AD-related biomarker changes in pediatric patients and reflect disease severity, especially in NL skin. This non-invasive method may offer a practical alternative to biomarker sampling for clinical and research purposes, supporting its potential for broader use in pediatric AD assessments and future longitudinal studies.

Life without LIF: Leukemia Inhibitory Factor-associated impaired epidermal adhesion in atopic dermatitis

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Background: Atopic dermatitis (AD) results from immune dysregulation, epidermal barrier malfunction and defective epidermal cell-cell adhesion. The role of dermal elements, particularly fibroblasts (FBs), in AD pathogenesis remains unclear. Leukemia Inhibitory Factor (LIF), an interleukin (IL)-6 cytokine family member, was reported to be downregulated in AD FBs and acts as an important mediator of inflammatory signals between FBs and keratinocytes (KCs). Here we aimed to delineate the role of dermal elements in AD pathogenesis.

Methods: Single-cell RNA sequencing (ScRNAseq) of skin samples. Cytokine expression patterns were characterized at the RNA and protein levels for primary KCs and FBs. FBs and KCs co-cultures were used to evaluate dermal epidermal crosstalk. The dispase dissociation assay assessed cell-cell adhesion. Immunofluorescence validated protein localization in vivo.

Results: ScRNAseq and immunofluorescence of skin samples obtained from AD patients showed lower LIF RNA and protein expression in dermal FBs as compared to healthy controls. IL-4 inhibited LIF production in FBs. In FBs and KCs co-culture, disrupting LIF signaling significantly disrupted KCs cell-cell adhesion. LIF KD induced IL-6 expression in KCs, followed by increased ERK phosphorylation and decreased desmoglein 1 (DSG1) membrane expression. Blocking IL-6 signaling with tocilizumab rescued the adhesion deficits and restored DSG1 localization. DSG1 KD in KCs upregulated IL-6 expression, revealing a self-amplifying circuit where decreased LIF expression leads to increased IL-6 secretion which in turn down-regulates DSG1 membrane expression on KCs that further triggers IL-6 secretion.

Conclusion: LIF mediates in an IL-6-dependent fashion the contribution of dermal FBs to the pathogenesis of AD.

Cutaneous Toxicities in Hematologic Malignancy Patients Undergoing CAR-T Cell Therapy: A Retrospective Cohort Analysis

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Background: Chimeric antigen receptor (CAR)-T cell therapy has become a cornerstone in the treatment of relapsed and refractory hematologic malignancies. While systemic toxicities such as cytokine release syndrome (CRS) and immune effector cell-associated neurotoxicity syndrome (ICANS) are well characterized, cutaneous adverse events (cAEs) remain underreported and poorly understood, with reported incidence ranging from 4% to 36%. Better characterization of these dermatologic toxicities may inform early recognition and improve management of immune-related skin effects.

Methods: We conducted a retrospective cohort study of patients treated with CAR-T therapy at Sheba Medical Center between 2017 and 2024. Dermatologic adverse events were identified and graded using the Common Terminology Criteria for Adverse Events (CTCAE), with severity assessed using the Hartwig scale. Demographic and clinical variables were analyzed for association with cAE incidence and severity. Statistical comparisons were performed using multivariable regression.

Results: Among 389 patients receiving CAR-T therapy, 60 (15.4%) developed cAEs. Of these, 45 (75%) were mild-to-moderate, and 15 (25%) were classified as severe. cAEs were more frequent among patients who developed systemic effects such as CRS or ICANS (16%). Severity of skin reactions correlated with the grade of systemic toxicity.

Conclusions: Cutaneous adverse events are a clinically relevant complication of CAR-T therapy, particularly among patients with CRS, ICANS. These findings support the need for routine dermatologic surveillance as part of CAR-T care protocols, including long-term dermatologic monitoring to enable early detection and management of immune-mediated skin toxicities, supporting safer and more personalized CAR-T treatment strategies.

Anogenital Allergic Contact Dermatitis and Age Association

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Background: Allergic contact dermatitis (ACD) can occur on any area of the body. Our study focused on the anogenital region, for which information remains limited. Our objective was to investigate the association between age and patch test results in female patients with anogenital ACD symptoms.

Methods: We conducted a retrospective cohort study using data from computerized medical records of patients with anogenital ACD symptoms who underwent patch testing at Sheba Medical Center between January 2013 and September 2023.

Results: A total of 150 females were included and categorized as younger (<45 years, n = 86) and older (≥45 years, n = 64). Relevant positive reactions occurred in 60% of the cases. The most common allergens were linalool, gallate mix, nickel sulfate, and hydroperoxides of limonene. Allergic reactions to methyldibromoglutaronitrile (p=0.043), hydroperoxides of limonene (p=0.036) increased with age, similar to the medicament series (p=0.039). Sensitivity to fragrance mix I was higher in older females with isolated anogenital symptoms (p=0.014). Both groups underwent a similar number of tested series; however, the older group tested positive for more series (p=0.007).

Conclusions: Our findings highlight the importance of patch testing in suspected anogenital ACD, as over 50% of patients exhibited relevant allergic reactions. We observed increased ACD to fragrances, preservatives, and medicaments in patients aged ≥ 45 years as well as a larger number of positive series. These findings emphasize the significance of considering age in the diagnosis process and management of anogenital ACD.

Pyogenic granuloma-like Spitz nevus in pediatric patients: A case series

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Background: Pyogenic granuloma (PG) is a benign vascular lesion. The differential diagnosis encompasses both malignant and benign conditions. Several modalities are available for its management, however; only surgical options enable a histopathological diagnosis, which is crucial due to potential clinical mimickers. In this case series, we present six pediatric patients with such a mimicker: PG-like Spitz nevus (SN).

Patients and methods: A retrospective single-center study of pediatric patients with lesions clinically diagnosed as PG, ultimately diagnosed as SN following a histopathological evaluation, between January 2018 and December 2023.

Results: Of 84 pediatric patients with a recorded biopsy following a clinical diagnosis of PG (one lesion per patient), histopathological examination revealed SN in 6 patients (7.1%), all of which had involved surgical margins. The mean age at onset was 2 years and 4 months (median: 1.5 years, range: 3 months to 7 years and 3 months) and the average time from onset to biopsy was 4.5 months. Three of the lesions involved the face and 3 were located on the extremities. In all cases re-excision was performed, leading to free margins with no recurrency during an average follow-up period of 27.5 months.

Discussion and Conclusion: The broad differential diagnosis of PG highlights the risk of misdiagnosis when solely relying on a clinical diagnosis. Although non-surgical treatments are convenient, the high clinicopathological discrepancy rate further underscores the need for histopathological confirmation. We advocate for tissue diagnosis of clinically suspected PG to ensure diagnostic accuracy and optimal patient care.

Treatment Outcomes in Solar Urticaria: A Systematic Review and Meta-Analysis

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Background: Solar urticaria is a rare and disabling photodermatosis. Due to its low prevalence, most available data regarding treatment are derived from observational studies and case series, and a systematic evaluation of treatment efficacy is lacking. This systematic review and meta-analysis aim to assess therapeutic outcomes across treatment modalities in order to guide clinical care.

Methods: We conducted a systematic literature search across PubMed, ScienceDirect, the Cochrane Library, and ClinicalTrials.gov. Studies reporting treatment outcomes in patients with solar urticaria were included. Pooled response rates were calculated for each treatment modality.

Results: Out of 508 studies initially identified, 38 met the inclusion criteria. Antihistamines were evaluated in 21 studies (376 patients), with a pooled response rate (partial or complete) of 83.0% (95% CI, 70.4–91.1%) and a complete response rate of 7.7% (95% CI, 1.7–28.3%). Phototherapy was assessed in 11 studies (145 patients), showing a similar overall response (89.8%; 95% CI, 77.9–95.3%) but a higher complete response rate (39.8%; 95% CI, 18.3–66.1%). Omalizumab, evaluated in 9 studies (76 patients), demonstrated the highest efficacy, with 93.2% (95% CI, 73.8–98.5%) achieving response and 68.4% (95% CI, 48.5–83.2%) complete remission. Limited data on IVIG, cyclosporine, and plasmapheresis suggested partial efficacy in selected refractory cases.

Conclusions: This meta-analysis may support clinical decision-making by clinicians. A stepwise approach is suggested: high-dose H□-antihistamines as first-line therapy, phototherapy as an alternative option in patients with access to treatment centers, and omalizumab for those with insufficient response. In refractory cases, additional options might be considered.

Continued year-on-year improvement in hair density with systemic minoxidil in women with female pattern hair loss: A case series

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Emek Medical Center

Background: Long-term data on systemic minoxidil for female pattern hair loss (FPHL) are scarce. This study evaluated the sustained efficacy of sublingual minoxidil over 3–5 years in women with FPHL.

Methods: We conducted a retrospective analysis of women aged ≥18 years treated with sublingual minoxidil for ≥3 years at a specialized hair clinic in Melbourne, Australia. Standardized global photographs were assessed using the Sinclair Scale and 7-point midline density scale. Patients with other hair disorders or prolonged treatment interruption were excluded.

Results: Fifty-one women were included (mean age 49.6 years). After 3 years of treatment, 47% showed a ≥1-point Sinclair grade improvement, increasing to 64.7% after 5 years. Hair density stabilized in 29.4% after 5 years, with only 5.9% showing progression. Facial hypertrichosis occurred in 45%; systemic side effects were infrequent and mild. Unlike topical minoxidil data, patients showed progressive improvement beyond year 1 without decline over time.

Conclusions: Long-term sublingual minoxidil treatment leads to sustained stabilization or improvement in hair density in most women with FPHL, with continued improvement over 5 years. This study supports systemic minoxidil as a durable long-term therapy for FPHL.

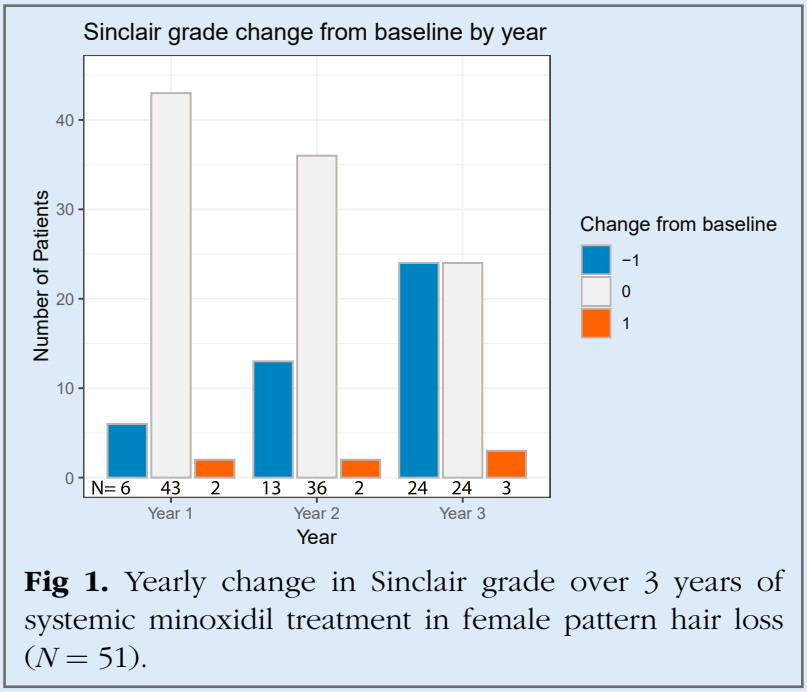

Fig 1. Yearly change in Sinclair grade over 3 years of systemic minoxidil treatment in female pattern hair loss ($N = 51$).

Short-Term Biologic Therapy for Guttate Psoriasis: Successful Treatment with Bimekizumab and Literature Review

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Background: Guttate psoriasis (GUP) is an acute psoriasis subtype often triggered by infections and may progress to chronic plaque psoriasis (CPP). While spontaneous remission is common, severe or refractory cases require intervention. Biologic therapies, though approved for CPP, may also benefit GUP.

Case Presentation: A 34-year-old woman with recurrent GUP was successfully treated with two doses of bimekizumab (320 mg, 6 weeks apart) after failure of phototherapy. Complete resolution occurred within 2 weeks of the first dose, with remission maintained for 10 months.

Literature Review: A review of published cases identified successful short-course biologic therapy for GUP using IL-17, IL-23, and IL-12/23 inhibitors. Reported outcomes included prolonged remissions of 6-24 months after limited dosing.

Conclusion: Short-course bimekizumab therapy induced rapid and sustained remission of GUP in our patient. Emerging evidence supports the potential role of biologics as effective short-term treatment in severe or recalcitrant GUP. Further

Table 1 Reports of guttate psoriasis treated with short-course biologics

Reference	Biologic	Patients (*N*)	Treatment regimen	Time to PASI 100 (weeks)	Prior treatments	Remission (months)
Printy 2021[7]	Secukinumab	1	300 mg at weeks 0, 1, 2, 3, 4, 8, 12 and 16	12	Adalimumab 6 weeks	12
	Ixekizumab	1	160 mg once	1.7	TCS	11
Flora 2022[4]	Risankizumab	4	150 mg at weeks 0, 4 and 16 (*n*=4)	12	TCS, NB-UVB, CI, Ac	12
				4	None	18
				4	None	24
				8	None	24
Abbad-Jaime de Aragón 2024[5]	Guselkumab	1	100 mg at weeks 0 and 4	8	N/A	12
Hall 2019[6]	Guselkumab	1	100 mg once	10	N/A	6
Brummer 2017[8]	Ustekinumab	6	90 mg once (*n*=1)	4	TCS, OCS, CI	16
			90 mg weeks 0 and 8, then 45 mg weeks 23, 35 and 58 (*n*=1)	N/A	TCS, NB-UVB	N/A
			90 mg weeks 0 and 6, then every 8 weeks[a] (*n*=1)	14	TCS, CNI, CI	20
			90 mg weeks 0 and 4[b] (*n*=1)	12	TCS, CI	7
			45 mg weeks 0, 6, 18 and 30 (*n*=1)	N/A	TCS, OCS, CI	20
			45 mg weeks 0 and 4 (*n*=1)	12	NB-UVB, CI	3

All treatments were administered as subcutaneous injections.[4–8] Ac, acitretin; CI, ciclosporin; CNI, topical calcineurin inhibitor; N/A, information not available; NB-UVB, narrowband ultraviolet-B; OCS, oral corticosteroids; PASI, Psoriasis Area and Severity Index; TCS, topical corticosteroids. [a]Continuous treatment due to concomitant Crohn disease. [b]Patient previously diagnosed with plaque psoriasis, with GUP appearing during treatment with apremilast.

Phototherapy Role in Inflammatory Skin Disease Modification

Prof Felix Pavlotsky

Sheba Medical Center, Tel Hashomer

R. Kassem, Sheba Medical Center, Tel Hashomer; A. Barzilai, Sheba Medical Center, Tel Hashomer

Background: Despite the high success of the modern treatments for inflammatory skin disorders, many patients are still unsatisfied with disease remission only, while expecting permanent disease resolution without the need for chronic medications. Recent data suggest that certain biologic therapies can possibly offer such disease modification in psoriasis and atopic dermatitis, especially when started in the early stage of the disease. Phototherapy is commonly the first line therapy in psoriasis, atopic dermatitis, lichen planus and mycosis fungoides. The purpose of our presentation is to examine the role of phototherapy to provide disease modification.

Methods: Retrospective analysis of all guttate psoriasis, adult atopic dermatitis and lichen planus patients treated with UVB during defined period at the Sheba phototherapy unit and followed up for several years. Long term/permanent remission was studied in initially fully responding patients.

Results: 65% of 395 guttate psoriasis had no recurrence for a mean of at least 83 months in contrast to those treated topically. 112/390 adult atopic dermatitis patients (28.7%) achieved complete response with a median of at least 24 months remission. In 50 lichen planus patients, complete response was achieved in 70% and 85% of those were still in remission after a median of 34.7 months.

Conclusions: Phototherapy in general and UVB phototherapy in particular can possibly provide disease modification in selected inflammatory skin disorders.

Development of a "Humanized" Mouse Model of Vitiligo

Prof Amos Gilhar

Technion

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Background: Vitiligo pathogenesis is complex, underscoring the need for robust preclinical in vivo models. Here, we introduce a novel model that reliably transforms healthy human skin xenografts into clinically relevant vitiligo lesions in-vivo.

Methods: SCID/beige mice xenotransplanted with healthy dark human skin were pre-treated topically with H□O□-NaN□ and catalase inhibitor to induce epidermal oxidative stress. Autologous PBMCs were polarized and cultured in vitro with menadione-stressed melanocytes and synthetic peptides derived from MART1, gp100, and tyrosinase, enhancing melanocyte antigen availability for dendritic cell cross-presentation. Thereafter, co-cultured Th1-skewed PBMCs and stressed melanocytes were injected into the xenotransplants, while the host mice received intradermal IgG4 antibodies from vitiligo patients and intravenous HSP70 to enhance antigen presentation.

Results: Under these conditions, 80% of xenotransplants developed vitiligo-like lesions, characterized by decreased melanin content, melanocyte loss, a vitiligo-like cytokines IFN-γ, IFN-α, IL-15, IL-18), increased dendritic cells (CD11c+ and plasmacytoid DCs), and epidermal resident memory T cells (CD8+/CD103+/CD49a+). Prior to depigmentation, keratinocytes and melanocytes showed increased expression of senescence markers (P16INK4A, p-S6) and decreased SIRT1, antioxidant/mitochondrial markers (NRF2, MTCO1, Porin/VDAC, PGC1α). FACS analysis revealed stressed melanocytes expressing MICA, and epidermal TRM cells expressing TNFα and IFN-γ specifically in lesional xenotransplants. Therapeutically, topical tacrolimus and ruxolitinib promoted repigmentation in 30% and 70% of lesions, respectively, mimicking known clinical response rates.

Conclusions: We report the first (partially) humanized mouse model of vitiligo, closely recapitulating key features of the human disease and providing a robust platform for investigating vitiligo pathogenesis and testing therapeutic strategies directly in human skin in vivo.

Targeting neurogenic skin inflammation mitigates stress-exacerbated psoriasis: Insights from a stress-responsive "humanized" psoriasis mouse model

Prof Amos Gilhar

Technion

Amit Bergman, Technion – Israel Institute of Technology, Haifa, Israel; Aviad Keren, Technion – Israel Institute of Technology, Haifa, Israel; Assaf Zeltzer, Plastic & Reconstructive Surgery Departments, Rambam Health Care Campus, Haifa, Israel; Ralf Paus, Dermatology, University of Miami Miller School of Medicine, Miami, FL, USA and CUTANEON – Hamburg & Berlin, Germany.

Background: Psychoemotional stress can trigger and exacerbate psoriasis, but mechanistic insights remain limited by the lack of suitable preclinical models. We tested whether 24-hour sonic-stress could induce or reactivate psoriasis lesions in our established (partially) humanized mouse model with human skin xenotransplants on SCID/beige mice.

Methods: After injecting human skin xenotransplants with autologous, IL-2-activated PBMCs to induce psoriasis-like lesions, we examined whether sonic stress could (a) accelerate lesion onset, (b) reactivate lesions after topical betamethasone treatment, (c) induce neurogenic inflammation (FACS, quantitative immunohistomorphometry), and (d) respond to pharmacological inhibition of key stress-related neurogenic pathways (CRHR1 blockade, ketotifen, NGF-neutralizing antibodies, NK-1R antagonist aprepitant).

Results: Exposing the mice to sound-stress significantly accelerated the development of psoriasis lesions in human skin xenotransplants, reproducing psoriatic hallmarks like Munro microabscesses, epidermal hyperplasia, parakeratosis, rete ridge elongation, and neoangiogenesis (VEGF-A, MMP1)—with upregulation of psoriasis markers (ADAMTSL5, K16, IL-17A/F, IL-22, IL-36γ, S100A7), psoriasis-like immune infiltration by human CD3□/CD8□ T cells, plasmacytoid DCs, ILC3, γδT cells, CD8□ TRM cells, elevated HLA-DR, IFN-γ, TNFα, CXCL10, IL-15, and IL-8 in epidermal and dermal cells. Neurogenic inflammation was confirmed by mast-cell degranulation, increased expression of NGF, NK-1R, Substance P, CGRP, TRPV-1, and IL-31. These changes were mitigated by NGF neutralization, CRHR1 blockade, and ketotifen. Additionally, sonic-stress re-triggered psoriasis lesions previously resolved by betamethasone, an effect prevented by aprepitant.

Conclusion: This provides the first conclusive evidence that perceived stress can operate as a powerful, neurogenic inflammation-driven inducer of psoriasis lesions in human skin in vivo, which is amenable to pharmacological intervention.

Comparison of Physical Examination vs Image-Based Assessment for Melanoma Detection in Low-Risk Patients: A Method Comparison Study

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Background: Image-based assessment may provide an alternative approach to physical examination for melanoma screening. This study compares diagnostic agreement between physical examination and blinded image-based assessment performed by the same dermatologist.

Methods: A method comparison study was conducted with 100 low-risk melanoma patients (currently results of 53). Each patient underwent both physical examination and image-based assessment by the same dermatologist, who was blinded to patient identity during image review. Primary outcome was binary classification (suspicious vs. not suspicious). Statistical analysis included Cohen's kappa, McNemar's test, and equivalence testing with pre-specified margins.

Results: Overall agreement between methods was 81.1% (43/53 cases). Cohen's kappa was 0.337 (95% CI: -0.032 to 0.707), indicating fair agreement with uncertain strength. No statistically significant systematic bias was detected (McNemar's $p > 0.05$), though a numerical trend favored image assessment. Physical examination identified 13.2% suspicious lesions vs. 20.8% for image assessment (difference: +7.5%, 95% CI: -4.0% to +19.1%). Discordance was imbalanced: 3 cases physical-positive/image-negative, 7 cases physical-negative/image-positive. Equivalence testing failed for both overall agreement (≥90%) and rate difference (±5%).

Conclusions: Fair agreement (κ=0.335) was observed between physical examination and image-based assessment. The imbalanced discordance pattern suggests potential differences in diagnostic sensitivity rather than complementary capabilities. Current evidence indicates substantial methodological differences requiring further investigation before clinical implementation. Clinical Implications: Results suggest image-based assessment may detect different features than physical examination, requiring investigation of diagnostic accuracy against histopathological confirmation before clinical implementation decisions.

EGFR mediates ST18-induced acantholysis in PV

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Background: Pemphigus vulgaris (PV) is an autoimmune blistering disease caused by a wide range of autoantibodies, including antibodies directed against desmoglein 3 (DSG3), leading to normal human epidermal keratinocytes (NHEKs) detachment. Genetically determined increased expression of ST18, a transcription factor, has been found to confer an increased risk to develop PV. ST18 increased expression was shown to result in loss of cell-cell adhesion in the epidermis through induction of abnormal inflammatory response and increased apoptotic activity. As EGFR signaling has been shown to contribute to acantholysis in PV through similar mechanisms, we investigated whether it may mediate ST18 deleterious effects.

Methods: NHEKs were subjected to plasmid transfection, antibody treatments, immunofluorescence staining, western blotting and dispase-based cell dissociation.

Results: NHEKs overexpressing ST18 were exposed to AK23, a pathogenic anti-DSG3 antibody, or control IgG, in the presence or absence of the EGFR inhibitor erlotinib. Immunostaining showed reduced membrane DSG3 expression in cells overexpressing ST18 while erlotinib was found to rescue this abnormal phenotype. ST18 was found to induce EGFR phosphorylation at tyrosine 1068, leading to elevated pERK levels, indicative of EGFR pathway activation. Using the dispase dissociation assay, erlotinib was found to abolish ST18-induced acantholysis.

Conclusions: Our findings suggest that ST18 amplifies EGFR-mediated responses to pathogenic antibodies and promotes acantholysis. Targeting the ST18-EGFR axis may offer a new therapeutic approach for PV patients carrying the ST18 risk allele.

ITGB4 variant modifies the severity of ITGA3-associated interstitial lung disease, nephrotic syndrome, and epidermolysis bullosa (ILNEB)

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Background: Biallelic ITGA3 variants cause interstitial lung disease, nephrotic syndrome, and epidermolysis bullosa (ILNEB) syndrome. ILNEB is characterized by extensive clinical heterogeneity, suggesting the existence of modifier genes. Here we studied a family with two siblings affected with ILNEB due to a homozygous ITGA3 variant. One of the two siblings was found to display a dramatically more severe phenotype with extensive skin fragility, recurrent urinary tract infections, interstitial lung disease, and nail dystrophy, while the other affected individual exhibited mild interstitial lung disease, patchy scalp and eyebrow hair, and mild skin fragility.

Methods: Whole exome sequencing (WES), cell cultures, co-immunoprecipitation, western blot, immunofluorescence and cell surface biotinylation.

Results: WES revealed a heterozygous variant in ITGB4 in each of the two patients, p.Arg977Cys in the more severely affected individual and p.Asp285Asn in the milder case. Using co-immunoprecipitation, immunofluorescence, and cell surface biotinylation, we demonstrated a hitherto unrecognized direct interaction between ITGA3 and ITGB4. The ITGB4 p.Arg977Cys variant caused a significantly greater reduction in ITGA3-ITGB4 complex stability, impaired membrane localization, and diminished activation of the FAK/AKT/mTOR/S6 pathway compared to the p.Asp285Asn variant.

Conclusions: Our findings suggest that faulty interaction between ITGA3 and ITGB4 underlies the fact that monoallelic ITGB4 genetic variants can exacerbate ITGA3-associated ILNEB phenotype.

Trends in Scabies Incidence and Treatment over a decade in a single tertiary center in Israel (2013-2023)

Miss Sun Dagan

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Sharon, Baum, Sheba Medical Center.

Background: Scabies is a skin disease caused by the mite Sarcoptes scabiei Var Hominis, affecting millions worldwide. Symptoms include itching and a skin rash. Mite transmission occurs through close contact or cohabitation. The incidence of scabies infections is increasing in several countries, possibly due to migration and refugees, as well as healthcare system limitations. Several studies suggest that mite mutations may contribute to treatment failure.

Objectives: This study aimed to examine and analyze the incidence of scabies infections and their response to treatment in the years 2013-2023 at a single tertiary center.

Methods: A retrospective cohort study was conducted based on data from the electronic medical records of patients diagnosed with scabies. Treatment-failure trends were assessed with year-specific logistic-regression models, join-point analysis was applied to detect slope changes. Annual incidence counts (2013-2023) were modelled with a Negative-Binomial regression to account for over-dispersion.

Results: First-line failure rose significantly over the decade: Permethrin cream 5% odds increased by 14 % per year (OR = 1.14, $p < 0.001$), Ivermectin 200 µg/kg PO by 31 % (OR = 1.31, $p < 0.001$), whereas the 8 % annual rise for Sulfur (5-10% oint.) was not significant (OR = 1.08, $p = 0.231$). Join-point analysis flagged a sharp escalation in permethrin failure beginning in 2021. By contrast, Negative-Binomial modelling showed no significant secular change in yearly case counts (IRR = 0.99, 95 % CI 0.95-1.03, $p = 0.55$).

Conclusions: The findings indicate a continuous decline in treatment efficacy, necessitating a re-evaluation of treatment protocols. The incidence of cases remained stable, but may have been influenced by factors such as changes in reporting patterns and access to healthcare services.

Fluorescence-activated cell sorting (FACS) results in patients with Mycosis Fungoides (MF) and Atopic Dermatitis (AD)

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Background: Fluorescence-activated cell sorting (FACS) is a diagnostic tool used in the staging of mycosis fungoides (MF)/Sezary syndrome (SS). However, its prognostic value in early MF and diagnostic value in inflammatory dermatoses remain uncertain.

Objective: To evaluate the diagnostic and prognostic role of FACS in patients with early-stage MF and inflammatory skin conditions, particularly atopic dermatitis (AD).

Methods: A retrospective cohort was conducted at Sheba Medical Center, including patients evaluated between 2010- 2022. Data was retrieved from electronic records of hospitalized patients and/or dermatology outpatient clinics. Patients were categorized based on FACS results as defined in TMN staging system for MF/SS (B0, B1, B2), and their clinical outcomes were analyzed.

Results: 110 patients were included: 79 with MF/SS and 31 with AD. The median follow-up for MF/SS patients and AD was 976 and 643 days, respectively. Thirty-six patients had abnormal FACS results. Among them 5 had > 1000 abnormal lymphocytes/mm3 (CD4+/CD7- or CD4+/CD26-) and were diagnosed with SS. Among B1 (250-999/mm3 abnormal lymphocytes), 8/31 (25.8%) were AD and 23/74 (31.1%) were MF patients, a difference not statistically significant. FACS results did not correlate with the TMN stage in MF or with IGA score in AD patients. Treatment response was also unrelated to the blood status.

Conclusions: FACS results have limited value diagnosing MF, expect for identifying patients with SS. B1 FACS appears in both MF and AD regardless of stage and does not correlate with treatment response,

Unseen Vulnerabilities: A Comparison of Skin Disorders Between Sheltered and Unsheltered People Experiencing Homelessness

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Introduction: Street Medicine Tel Aviv is a non-profit organization that delivers medical care directly to people experiencing homelessness—on the street, where they live and face daily challenges. People experiencing homelessness face a disproportionately high burden of disease due to poverty, trauma, limited healthcare access, and environmental exposure. Skin disorders, including chronic ulcers, infections, and infestations, are especially prevalent and often worsened by poor hygiene and immobility. Shelters offering basic hygiene and essential services may play a vital role in improving skin health. The objective of this study is to compare the prevalence and severity of Skin disorders between unsheltered individuals and those residing in shelters, and to identify subgroup-specific risk factors to guide targeted interventions.

Methods: We conducted a retrospective analysis of patients seen by the Street Medicine Tel Aviv team from January 2021 to July 2023, comparing dermatological presentations during street rounds and shelter visits.

Results: We documented 318 unsheltered and 85 sheltered patient encounters. Dermatological complaints were the chief concern in 60% of unsheltered vs. 27% of sheltered individuals ($p<0.001$). Chronic leg ulcers (19% vs. 12%), traumatic injuries (22% vs. 12%), and skin infections (18% vs. 3%) were significantly more frequent in unsheltered patients ($p<0.05$). Wound dressings (36% vs. 6%) and systemic antibiotics (14% vs. 2%) were also more commonly required ($p<0.05$).

Conclusions: Unsheltered individuals suffer more frequent and severe Skin disorders. Expanding shelter access and integrated care can mitigate these disparities. Collaborative public health strategies are essential to improve outcomes for this vulnerable population.

The spectrum of drug-induced cytokine release in Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) – A Case Series

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Background: Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) is a severe cutaneous adverse drug reaction (SCAR) characterized by systemic inflammation and immune dysregulation. Immune activation in DRESS involves type 2/eosinophil-axis-associated cytokines (IL-4, IL-5, IL-13), as well as proinflammatory and Th17-related mediators (IFN-γ, IL-6, IL-10, IL-17).

Objective: To characterize in vitro drug-induced cytokine release in DRESS.

Methods: Five patients with DRESS following drug exposure were included. Suspected drugs were categorized by level of suspicion. Peripheral blood mononuclear cells were stimulated with PHA, with or without the implicated drugs. Cytokine concentrations were measured in supernatants after 24 hours. A panel of 13 cytokines was assessed using the ProcartaPlex Multiplex Immunoassay. Responses were evaluated relative to internal and external controls.

Results: Multiplex analysis of 164 drug tests revealed positive cytokine responses in 30 tests. The most frequently elevated cytokines were IL-13 (42.9%) and IL-5 (40.0%), followed by GM-CSF (21.4%), IL-2 (21.4%), IL-8 (21.4%), IFN-γ (14.3%), TNF-α (14.3%), IL-4 (10.0%), IL-10 (7.1%), IL-17 (7.1%), RANTES (7.1%), MIF (50% of 4 tests), and Granzyme B (7.1%). Among high/moderate suspicion drugs (n = 13), IL-5 and IL-13 had the highest response rates; 12 were antiepileptics.

Conclusion: In vitro cytokine release profiles in DRESS support a Th2-skewed and broad inflammatory response and may help identify causative agents in SCAR.

Real-World Drug Survival of Ixekizumab Versus Secukinumab in Psoriasis: A Retrospective Cohort Study

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Background: IL-17A inhibitors, including secukinumab and ixekizumab, are highly effective for moderate-to-severe psoriasis. Although both target the same cytokine, differences in structure, immunogenicity, and administration may affect long-term treatment persistence. Real-world comparative data remain limited.

Objective: To compare real-world drug survival of ixekizumab and secukinumab in patients with psoriasis treated at a tertiary dermatology center.

Methods: This retrospective cohort study included all patients treated with either agent at Rabin Medical Center between 2018 and 2024. Treatment episodes were analyzed regardless of prior biologic exposure. Drug survival, defined as continued treatment at end of follow-up, was assessed using Kaplan-Meier analysis and multivariate Cox regression.

Results: The cohort included 319 patients (203 on ixekizumab, 177 on secukinumab), with 61 receiving both agents sequentially. Baseline characteristics were largely similar, although psoriatic arthritis and BMI were higher in the ixekizumab group (53.2% vs. 33.3%; 29.4 vs. 28.0). Kaplan-Meier analysis revealed a significant difference in drug survival across treatment groups (log-rank $p = 0.033$), with the highest persistence in secukinumab bio-naive patients and the lowest in bio-experienced patients on secukinumab. Ixekizumab-treated patients, mostly bio-experienced, showed intermediate survival, superior to that of secukinumab in the same subgroup. In multivariate analysis, only treatment type showed a trend toward significance ($p = 0.062$), while sex, BMI, and psoriatic arthritis were not associated with drug survival.

Conclusions: Treatment persistence is influenced by prior biologic exposure. Secukinumab showed high durability in bio-naive patients, while ixekizumab may offer an advantage in treatment-experienced individuals, supporting its use in this setting.

Loss-of-function variants in DUSP1 encoding dual specificity phosphatase 1 cause palmoplantar keratoderma

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Background: Dual specificity phosphatase 1 (DUSP1) has recently been shown to regulate keratinocytes (KCs) proliferation through ERK signaling. Here we aimed at delineating the genetic basis underlying inherited palmoplantar keratoderma (PPK) in two families.

Methods: We used whole exome and direct sequencing, RT-qPCR, protein modeling, immunofluorescence confocal microscopy, immunoblotting, three-dimensional skin equivalents and the dispase dissociation assay.

Results: Whole exome sequencing revealed two variants in DUSP1 (c.809T>G, p.Leu270Arg and c.251T>A, p.Val84Glu) encoding DUSP1, in four individuals with PPK belonging to two unrelated families affected by a semi-dominant form of PPK. Bioinformatics and protein modeling predicted the variants to be pathogenic. Primary human KCs transfected with constructs expressing the PPK-causing pathogenic variants in DUSP1 showed decreased DUSP1 expression and concomitant increased expression of p-ERK1/2 as well as reduced DSG1 expression. Accordingly, primary human KCs downregulated for DUSP1 displayed disrupted cell-to-cell adhesion, increased p-ERK1/2 and reduced DSG1 expression. Three-dimensional organotypic skin equivalents downregulated for DUSP1 demonstrated reduced DSG1 expression and increased epidermal thickness, reminiscent of the human phenotype. ERK1/2 inhibition rescued this abnormal phenotype.

Conclusions: The present study attributes to DUSP1 a hitherto unrecognized role in epidermal differentiation and expands the spectrum of genetic defects known to cause inherited PPK.

The Safety and Efficacy of IV Sodium Stibogluconate versus IM Meglumine Antimoniate for old world Cutaneous Leishmaniasis

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Background: world cutaneous leishmaniasis (CL) is highly endemic to Israel. IV Sodium stibogluconate (IV SSG) has been the gold-standard of therapy but was replaced by IM Meglumine Antimoniate, (IM MA) due to a shortage of SSG supply. The difference in effectiveness and safety of these systemic treatment for CL remains unclear.

Methods: This retrospective study was conducted in a tertiary medical center in Israel, between January 2012 until December 2023. 128 patients with CL were treated systemically with either IV SSG or IM MA.

Results: Among 128 patients treated systemically for cutaneous leishmaniasis, 102 (79.7%) had L. major and 26 (20.3%) had L. tropica. Median age at diagnosis was 21.3 years. Of the L. major cases, 31 received IM MA and 97 received IV SSG. Treatment efficacy was similar between groups (complete response: 82.4% vs. 78.6%; P = 0.871), with no significant differences in partial or non-response rates. However, adverse events were more frequent with IV SSG (93.2% vs. 64.3%; P = 0.001), including elevated pancreatic enzymes (78.4% vs. 35.7%; P < 0.001) and hepatic enzymes (40.5% vs. 14.3%; P = 0.023). IV SSG was a significant predictor for adverse effects in both univariate and multivariate models (OR range: 3.86–8.17; all P < 0.05).

Conclusion: While the efficacy of both systemic treatments, IV SSG and IM MA, was similar, Patients who were treated with IV SSG had significantly more adverse effects. Therefore, IM MA may be an efficacious and safer systemic treatment option for Old World CL.

Monthly intra-lesional Rituximab for cutaneous B-cell lymphoma

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Background: Primary cutaneous marginal zone lymphoma (PCMZL) and primary cutaneous follicle center lymphoma (PCFCL) are rare B-cell lymphomas. Treatment options include surgical excision, irradiation, intralesional or intravenous rituximab. Protocols for intralesional rituximab vary; the standard regimen typically involves administration three times per one week during each cycle, with repeated cycles as needed.

Objective: To evaluate the efficacy of monthly intralesional rituximab for primary cutaneous B-cell lymphomas.

Methods: A retrospective study on on six patients with PCMZL or PCFCL who received once monthly intralesional rituximab.

Results: We treated five females with PCFCL and one man with PCMZL. Four lesions were located on the face. All but one patient had failed previous treatments (irradiation/excision). Two patients experienced side effects to prior intralesional steroids, and the remaining failed. Patients were treated with 2-4 monthly injections of intralesional rituximab, after which four patients achieved complete remission, and in two patients marked improvement was recorded and treatment is ongoing. The maximum dose per cycle was 30 mg. In three patients intralesional steroids were added during the third cycle if the lesion persisted. Local recurrence adjacent to the injected area occurred in two patients, and resolved following 2-3 additional cycles. Side effects included pain, erythema, weakness and flu-like symptoms, which resolved with the use of premedication at subsequent visits.

Conclusion: Monthly intralesional rituximab is a well-tolerated and effective treatment for PCMZL or PCFCL. Co-administration of intralesional steroids is recommended for persistent lesions. Premedication is advised to minimize flu-like symptoms following injection.

HPV-related penile intraepithelial neoplasia (PeIN): clinical presentation, dermoscopic features, and management insights from literature review and case series

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Background: Penile intraepithelial neoplasia (PeIN), classified into HPV-related and HPV-independent types, is a premalignant lesion with potential progression to invasive squamous cell carcinoma (SCC). HPV-related PeIN, commonly linked to high-risk HPV-16, predominantly affects younger males and clinically mimics benign condylomas. HPV-independent PeIN usually occurs in older individuals, often associated with chronic inflammatory dermatoses such as lichen sclerosus. Clinical misdiagnosis delays appropriate intervention, increasing morbidity and invasive cancer risk. Recent reports indicate a rising incidence of PeIN, underscoring the need for accurate clinical and dermoscopic recognition, timely diagnosis, and appropriate management.

Methods: A literature review (2020–2024) was performed. Additionally, a retrospective analysis of seven circumcised males diagnosed histologically with HPV-related high-grade PeIN at our dermatology clinic was conducted, reviewing clinical presentation, dermoscopic features, previous treatments, surgical interventions, and outcomes.

Results: Patients (mean age 38.7, range 30–53) predominantly presented with solitary flat plaques or macular lesions characterized by greyish pigmentation, amorphic shapes, chaotic dermoscopic structures, and atypical vascular patterns. Five patients were initially misdiagnosed as condylomas and demonstrated lesions resistant to previous therapies. Definitive surgical treatment with Mohs micrographic surgery provided complete clearance without recurrence. Surgical intervention remains optimal for reducing recurrence risks, supported by recent literature.

Conclusion: Clinicians should maintain high suspicion for HPV-related PeIN, especially in younger males with solitary, treatment-resistant penile lesions displaying amorphic shapes, atypical vessels, chaotic dermoscopic structures, and greyish pigmentation. Prompt biopsy and definitive surgical intervention improve outcomes. Increased clinical awareness, standardized biopsy guidelines, and patient education are critical.

Stool Biomarkers As A Clue For Developing Crohn's Disease In Idiopathic Pyoderma Gangrenosum Patients

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Background: Pyoderma gangrenosum (PG) is a rare neutrophilic dermatosis often linked to systemic diseases, especially inflammatory bowel disease (IBD). Identifying idiopathic PG patients at risk of developing IBD is challenging. Non-invasive stool biomarkers, such as fecal blood and fecal calprotectin, may provide early predictive value for Crohn's disease in this population.

Methods: A retrospective cohort study was conducted on 66 PG patients diagnosed between 2000 and 2024 at a tertiary dermatology center. Patients with established systemic comorbidities were excluded. The remaining 21 idiopathic PG patients underwent baseline stool blood and fecal calprotectin testing before immunosuppressive treatment. Patients were followed longitudinally for IBD development. Fisher's Exact Test was used to assess associations, and sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were calculated.

Results: During a mean follow-up of 49 months (1-130), 4 of 21 idiopathic PG patients (19%) developed Crohn's disease. Positive stool blood tests were found in all Crohn's cases versus 3 of 17 non-Crohn's cases (p=0.0058), yielding 100% sensitivity, 82.35% specificity, 57.14% PPV, and 100% NPV. Elevated fecal calprotectin (>50 µg/g) was detected in 2 Crohn's cases (85 and 792 µg/g) and none of the non-Crohn's cases (p=0.0286), with 50% sensitivity, 100% specificity, 100% PPV, and 89.47% NPV.

Conclusions: Stool blood and fecal calprotectin may serve as predictive, non-invasive biomarkers for Crohn's disease in idiopathic PG. Stool blood testing showed high sensitivity and NPV, while fecal calprotectin offered excellent specificity and PPV. Early gastrointestinal assessment is recommended for idiopathic PG patients with positive stool biomarkers.

The complex role of IL-13 in Bullous Pemphigoid: new insights from a retrospective cohort study

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Background: Bullous pemphigoid (BP) is the most common autoimmune blistering skin disease, primarily affecting the elderly. The role of interleukin-13 (IL-13) in BP pathogenesis remains unclear, particularly regarding its potential as a therapeutic target.

Objectives: To compare serum IL-13 levels between idiopathic and drug-induced BP patients and healthy controls, and to assess correlations between IL-13 levels, disease severity, mucosal involvement, and prognosis.

Methods: This retrospective study included 42 BP patients diagnosed between 2008 and 2023 at a dermatology referral center, 12 healthy controls, and 4 pemphigus vulgaris patients. Serum IL-13 levels were measured using ELISA. Primary outcomes included IL-13 levels and associations with disease etiology, eosinophil counts, mucosal involvement, and need for adjuvant therapy.

Results: Serum IL-13 levels were lower in BP patients (mean 62.46 ±16.53 pg/mL) than in healthy controls (mean 87.83 ±8.87 pg/mL, $p<0.0001$) and pemphigus patients (mean 87.6 ±5.16 pg/mL, $p=0.013$). Idiopathic BP patients had higher IL-13 levels than DPP4 inhibitor-induced BP patients (67.01 ±14.3 vs. 57.36 ±21 pg/mL, $p=0.0104$). IL-13 levels did not correlate with mucosal involvement ($p=0.338$), eosinophil counts ($r=0.18$, $p=0.253$), need for adjuvant therapy ($p=0.32$), or prognosis ($p=0.45$). Higher eosinophil levels correlated with the need for adjuvant therapy ($p=0.027$).

Conclusions: Serum IL-13 levels are reduced in BP compared to controls and are lower in DPP4-induced BP than idiopathic BP, suggesting a complex role in pathogenesis. IL-13 was not linked to disease severity or prognosis, indicating limited value as a biomarker. Further research is warranted.

Exploring the role of type-2 inflammation in the pathogenesis of mucous membrane pemphigoid

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Background: Mucous membrane pemphigoid (MMP) is a chronic autoimmune subepithelial blistering disorder that affects mucosal tissues and currently lacks specific targeted therapies. Growing evidence suggests that type 2 cytokines, especially the interleukin(IL4)/ IL13 axis, play a role in the development of MMP. However, the exact function of this pathway in regulating epithelial inflammation and cytoskeletal structure remains to be determined.

Methods: Serum IL4 and IL13 levels were measured by ELISA in healthy donors (HD), bullous pemphigoid (BP), and MMP patients. HaCaT keratinocytes were incubated with sera from patients and controls, recombinant IL4, IL13, and IFNγ. After 24 hours, IL8 secretion was quantified by ELISA, and gene expression of IL4RA, IL13RA1, IL6, and IL-8 was assessed by qPCR. Cytoskeletal morphology was evaluated by phalloidin staining, and the modulatory effects of IL4Rα inhibition via dupilumab were also investigated.

Results: IL13 serum levels were significantly elevated in MMP patients compared to BP and HD controls, whereas IL4 levels were comparable across all groups. Exposure of HaCaT cells to MMP sera led to upregulation of IL13RA1 and IL6, but not IL4RA and IL8 transcripts, as well as to disruption of actin cytoskeletal integrity and cell morphology alterations, including cell rounding and loss of typical polygonal shape. Treatment with dupilumab attenuated pro-inflammatory gene expression.

Discussion: Sera from MMP patients induce both pro-inflammatory gene expression and cytoskeletal reorganization in keratinocytes. These effects might be mediated by the IL4/ IL13 axis and can be attenuated by IL-4Rα blockade, supporting this pathway as a therapeutic target in MMP.

Leveraging AI-Driven Total Body Imaging for Nevus Screening: A One-Year Experience with IntelliStudio 3

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Background: Digital dermoscopy and AI-assisted imaging platforms are increasingly used for early detection of malignant melanoma (MM) and non-melanoma skin cancer (NMSC). However, real-world data on their diagnostic performance remains limited. This study aimed to evaluate the clinical utility of the Canfield IntelliStudio 3 in nevus screening.

Methods: A prospective, observational study was conducted over one year among patients undergoing total body photography and lesion risk assessment using the Canfield IntelliStudio 3. Lesions were assigned a risk score (0–10) by the platform. A score ≥4 was defined as elevated. Patients with suspicious lesions were referred for histological assessment. Logistic regression was used to identify predictors of elevated risk.

Results: Sixty-six patients (mean age, 49.3 years; 47% male) were screened. Twenty-three (34.8%) were referred for histological assessment, yielding diagnoses of MM (n=3) and NMSC (n=2). The mean (SD) lesion risk score was 2.2 (2.5). We then evaluated determinants of elevated risk scores. A personal history of basal cell carcinoma (BCC) was associated with increased risk scores (HR, 5.35; 95% CI, 1.23–23.22; P=0.016). Estimated sensitivity was 100.0% (95% CI, 47.8–100.0%) and specificity was 20.0% (95% CI, 0.5–71.6%). Negative and positive predictive values were 100.0% and 47.5%, respectively.

Conclusion: The Canfield IntelliStudio 3 demonstrated high sensitivity and negative predictive value in real-world nevus screening, supporting its utility in ruling out malignancy. However, limited specificity underscores the need for clinical oversight to reduce unnecessary biopsies. A history of BCC may aid in individual risk stratification.

Clinical and Immunologic Features of Dipeptidyl Peptidase-4 Inhibitor-Associated Bullous Pemphigoid: An Israeli Cohort Study

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Background: Bullous pemphigoid is an autoimmune blistering disease caused by autoantibodies against basement membrane proteins and may be triggered by dipeptidyl peptidase 4 (DPP 4) inhibitors. DPP 4 inhibitor use more than doubles the risk of BP. This study compared DPP 4 inhibitor associated BP (DPP 4iBP) with conventional BP.

Methods: We performed a retrospective chart review of 319 BP patients (2008-2021) at Tel Aviv Medical Center. DPP 4iBP was defined as BP developing while receiving a DPP 4 inhibitor. Demographics, comorbidities, clinical features, eosinophil counts, autoantibody profiles, treatments and outcomes were compared using univariate statistics and multivariable logistic regression.

Results: Among 319 patients, 76 (24 %) developed BP while taking DPP 4 inhibitors. These patients were younger and had more metabolic comorbidities. Latency from drug initiation exceeded one year in most. Disease subtype was similar, but DPP 4iBP had wider distribution, more mucosal involvement, lower eosinophil counts and fewer antibodies targeting BP230. They more often received systemic steroids and methotrexate. Mortality was lower despite greater comorbidity, although continuing gliptins increased mortality. In contrast to Japanese cohorts reporting a non inflammatory, BP180NC16A negative presentation, our patients had typical, widespread disease with mucosal involvement and preserved BP180NC16A antibody positivity.

Conclusions: These findings suggest that DPP 4i associated BP in Israeli patients presents at a younger age and is linked to metabolic comorbidities, mucosal involvement and lower eosinophil counts. The phenotype differs from the less inflammatory, BP180NC16A negative variant reported in Japan, underscoring ethnic heterogeneity; prompt gliptin withdrawal is essential.

Pediatric Androgenic Alopecia: Clinical Retrospective Study and a Review of the Literature

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Background: Androgenetic alopecia (AGA) typically affects post-pubertal men and women and is the most common cause of hair loss in adults. Due to this predilection, AGA in children and adolescents is rarely discussed or reported in the literature. Our objective is to describe the clinical, dermoscopic, and histological features of pediatric AGA, in addition to the available treatment options.

Methods: This was a retrospective single-center cohort. Included were all pediatric patients with clinical and trichoscopy features compatible with AGA.

Result: 45 pediatric AGA patients ages 9 to 18 years were identified (20 males and 25 females). All had normal physical development. The most common hair loss pattern was diffuse thinning at the crown with preservation of the frontal hairline (75%). The clinical diagnosis was confirmed by trichoscopy that showed hair diameter variability (as a consequence of miniaturization), in all cases, and by scalp biopsy performed in 32 cases. Twenty-two patients were treated with topical minoxidil 5% and 23 patients were treated with oral minoxidil (0.5-5 mg daily), all with good response. There was a strong genetic predisposition to the disease in all patients.

Discussion: AGA in the pediatric population is not uncommon, but its incidence and prevalence are unknown. It can be diagnosed clinically by physical examination and trichoscopy. Topical and oral minoxidil, although not approved, has been used with success. Other treatment modalities are poorly studied in children. Although the pathogenesis of pediatric AGA remains speculative, endocrine evaluation and strict follow-up are strongly recommended.

Anifrolumab for refractory cutaneous lupus erythematosus: Clinical outcomes from a case series at a tertiary center

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Background: Cutaneous lupus erythematosus (CLE) is a chronic autoimmune skin disease that may occur independently or as part of systemic lupus erythematosus (SLE). It often leads to disfigurement and scarring, with limited treatment options for refractory cases. Most systemic therapies are off-label and primarily target systemic disease. Anifrolumab, a monoclonal antibody that blocks the type I interferon receptor, was recently approved for moderate-to-severe SLE and has shown promising effects in CLE through post-hoc trial analyses and real-world data.

Objective: To describe our center's real-world experience with anifrolumab in patients with CLE, with or without systemic involvement.

Methods: We retrospectively analyzed four female patients (aged 31–69) with histologically confirmed CLE treated with anifrolumab 300 mg IV every four weeks. Two had SLE, one had mixed connective tissue disease, and one had CLE alone. All had failed at least one systemic therapy due to inefficacy or intolerance. Clinical response, time to improvement, relapse, serologic trends, and tolerability were assessed.

Results: All patients experienced clinical improvement within 1–6 infusions. One relapsed after extending infusion intervals but improved upon returning to standard dosing. No serious adverse events occurred. Partial serologic improvement was noted in one case. CLASI activity and damage scores improved by 92.2% and 7.4%, respectively. Compared to published real-life series, our patients showed similarly rapid and sustained responses.

Conclusion: This case series supports anifrolumab as an effective and well-tolerated option for refractory CLE, including cases without systemic involvement, and reinforces its role in targeting interferon-driven cutaneous disease.

Enhanced Clearance of Recalcitrant Warts: Topical Bleomycin Following Ablative Fractional CO□ Laser Therapy

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Background: The treatment of recalcitrant cutaneous warts remains a therapeutic challenge. Intralesional bleomycin is an effective treatment modality for treating recalcitrant warts. However, it can result in several side effects that limit its clinical use including: pain, eschar formation, pigmentation and onychodystrophy. This study aimed to investigate the efficacy and safety of topical application of bleomycin solution after ablative fractional carbon dioxide (CO□) laser for treating recalcitrant verruca vulgaris, palmoplantar and periungual warts.

Methods: Superficial paring of wart surface was performed following local anesthesia using a 5% prilocaine-18% lidocaine ointment for 15 minutes. Warts were then treated with ablative CO□ fractional laser, after which bleomycin solution (3 U/mL) was applied and covered with saran wrap for 12 hours. Patients were treated every 3-8 weeks.

Results: 20 patients (11 women, mean age: 22.5 years, median age:17 years) with a total of 220 warts were enrolled. 201 (90.8%) warts achieved complete clearance; 10 (4.5%) had excellent partial response (>75% improvement). The median number of sessions until complete clearance was 4 treatments. Fifteen patients (75%) had complete cure of all warts with no recurrence over a follow-up period of up to 12 months. No significant adverse effects occurred.

Conclusions: Bleomycin solution after ablative fractional CO□ laser is an effective and safe method for treating recalcitrant warts including among the pediatric population. This treatment modality is well tolerated and can be easily performed in an outpatient setting. Further large, controlled studies are necessary to validate the effectiveness and optimize the treatment protocol.

Safety of Biologic Agents in Psoriasis and Psoriatic Arthritis Patients with Active or Recent Malignancy: An Active Comparator Surveillance Study

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Background: While biologic therapies have revolutionized psoriatic disease management, limited data regarding their safety in patients with recent or active malignancy lead guidelines to advise against their use within five years of cancer diagnosis - posing challenges and often limiting systemic treatment options.

Objective: To evaluate the safety of biologic therapies in psoriasis patients with active or recent (≤5 years) cancer.

Methods: A retrospective cohort study of patients with psoriasis and either active cancer or a recent cancer history (≤5 years). Patients treated with conventional systemic agents (Methotrexate, Acitretin, Apremilast) served as comparators. Follow-up was conducted during treatment and up to one year after cessation. Primary outcomes included progression- or recurrence-free survival (PFS/RFS), the incidence of new primary malignancies and severe infections.

Results: 354 cases of psoriasis with active/recent cancer included, 302 solid malignancy (85%) and 52 hematologic malignancy (15%), stages 0-II 50% and stages III-IV 50%. Over a median follow-up of 6 years, progression/recurrence rates per 100 patient-years were 10.7 (biologics) and 10.5 (conventional). The cumulative 1-year PFS/RFS was 86% in both groups (p=0.89). Overall, biologics did not affect progression (HR, 1.02; 95% CI, 0.59-1.77;p=0.94), with the exception of IL 17 inhibitors (HR, 2.30; 95% CI,1.13-4.66;p=0.02), which were also the only biologic subclass linked to an increased risk of severe infections (HR,3.79; 95% CI,1.56-8.98; p=0.002).

Conclusions: In patients with psoriasis and active or recent cancer, biologic therapies and conventional systemic agents demonstrated a comparable safety profile. The long-term safety of IL-17 inhibitors warrants further evaluation.

Characterization of Cutaneous Adverse Events Related to Immune Checkpoint Inhibitors in Patients with Melanoma Versus Other Malignancies

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Immune checkpoint inhibitors (ICIs) are monoclonal antibodies that target immune checkpoint molecules and are used to treat various malignancies. ICIs have been associated with immune-related adverse events (irAEs), most commonly cutaneous irAEs (cirAEs), which affect roughly one-third of patients. The incidence and severity of cirAEs vary by cancer type, with melanoma patients typically showing higher rates. However, the relationship between cancer type and cirAE characteristics remains unclear.

Data was extracted from electronic files of patients who visited the dermatology department and outpatient clinic, in the Sheba Medical Center, between 2009 and 2024. Participants are oncology patients with melanoma or other malignancies who were treated with ICIs and had a cutaneous adverse event (CAE).

Among 162 patients, 63 had melanoma and 99 had other malignancies. Melanoma patients experienced more severe CAEs (grade 3-4; 29.1% vs. 12.1%, p=0.01), longer onset time of CAEs (36.7 vs. 25.7 weeks, p=0.03), and better survival outcomes (mean progression-free survival (PFS) 155.8 vs. 91.9 weeks, p<0.01; overall survival (OS) 217.3 vs. 142.1 weeks, p<0.01) compared to non-melanoma patients. Patients with cirAEs experienced ICI cessation more frequently (31.2% vs. 13.2%, p=0.01) and had longer PFS (147.0 vs. 104.9 weeks, p=0.03).

Melanoma patients treated with ICIs experienced more severe CAEs, later onset of skin toxicity, and better survival outcomes compared to patients with other malignancies. Although cirAEs led to higher cessation rates of immunotherapy, these patients demonstrated improved progression-free survival, suggesting cirAEs may reflect a robust anti-tumor immune response. Further prospective studies are warranted to confirm these findings.

Real-world efficacy and safety of Dupilumab for pediatric Atopic Dermatitis, a multi-center retrospective study

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Background: Real-world data regarding the use of dupilumab in children with atopic dermatitis (AD) is limited. The present study aims to evaluate the real-world efficacy of dupilumab in children with moderate-to-severe AD over an extended follow-up period.

Methods: A retrospective study of patients (≤ 18 years) with moderate-to-severe AD treated with dupilumab in four Israeli tertiary centers. Efficacy and safety were assessed using descriptive statistics.

Results: A total of 230 patients were included in the efficacy analysis (age 9.9±4.3, male:female 1:1 ratio). Of them, 59.6% had at least one atopic comorbidity, most commonly asthma. The follow-up duration ranged from two to 248 weeks, with a median of 52 weeks (IQR 72). Within 12 weeks of treatment, 41.7% of patients had reached Investigator Global Assessment (IGA) 0-1. The mean Body Surface Area (BSA) was reduced from 58.0±20.5% at baseline to 27.8±20.2% at 12 weeks. The average Pruritus Numeric Rating Scale (PNRS) score was reduced from 7.9±2.2 at baseline to 2.3±2.8 at 12 weeks. Adverse events included conjunctivitis in 34 patients (16.2%), injection site reactions in 11 patients (5.2%), Dupilumab-associated head and neck dermatitis (DAHND) in six patients (2.6%), and arthralgias in four patients (1.7%). Overall, 26 patients (12.3%) discontinued the treatment: nine patients (34.6%) due to adverse events and 15 patients (57.7%) due to inadequate efficacy. The overall probability of dupilumab survival at 52 weeks was 94.0%.

Conclusion: Real-life data presented here on 230 pediatric and adolescents with moderate-to-severe AD reinforce dupilumab's efficacy and safety and highlight dupilumab's high survival rate after one year of treatment in the pediatric population.

Laser treatment for Hidradenitis Suppurativa טיפולי לייזר להידרדניטיס סופורטיבה

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Background: Hidradenitis Suppurativa is a chronic, inflammatory disease. Although there is limited literature on the use of erbium-doped yttrium aluminum garnet (Er: YAG) laser for deroofing in HS, its mechanism is similar to CO2 laser, suggesting that it could be a useful alternative for treatment. An effective and efficient surgical method is required, which can be performed in an office setting and is superior to simple incision and drainage. The study conducted to establish whether Deroofing treatment, at Hidradenitis Suppurativa hurley stage. with ERB YAG Laser, reduced recurrence and improved patients' quality of life.

Objectives: To present the results of Er: YAG laser treatment of recalcitrant HS in ninety-four patients who had failed to improve on medical and other surgical treatments.

Method: ERB: YAG laser treatment for HS involved identifying and marking chronic and active sinuses, using the laser in focused mode to incise the skin and subcutaneous fat, and using percutaneous vaporization to remove isolated diseased apocrine glands. The wounds were healed by second intention.

Results: An impressive 82 percent (77 out of 94) of the procedures resulted in complete remission of the anatomical area.

Conclusion: The presented Er: YAG laser deroofing regimen proved safe and effective in treating sinus hidradenitis suppurative

Brains, Bots, and Boards: Dermatologists Review ChatGPT-4's Dermatology Board Exam Question-Writing Skills

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Background: ChatGPT-4 has shown promising results in medical education, including the generation of USMLE-style questions. This study explores its capabilities in generating dermatology board exam content aligned with the Israeli board syllabus. The primary aim was to evaluate the quality, complexity, and clinical relevance of multiple-choice questions (MCQs) produced by ChatGPT-4 across 12 core dermatological topics. this study aimed to assess whether AI could serve as a meaningful tool in medical examination preparation.

Methods: ChatGPT-4 was prompted to generate 402 multiple-choice questions across 12 dermatology topics. Eight board-certified dermatologists independently evaluated each question for accuracy, clinical relevance, structure, and educational value. Each question was labeled as "appropriate" or "inappropriate" for use in board exams.

Results: Of the 402 questions, 125 (31.1%) were accepted as appropriate, while 277 (68.9%) were rejected—primarily due to low difficulty or factual errors. Only 18 questions were found to be too difficult. Topics such as B-cell lymphoma and biopsy techniques yielded higher-quality questions, while acne, rosacea, and vasculitis had lower acceptance rates. Expert feedback noted that AI-assisted question generation could save up to 55 minutes per question. However, inter-rater reliability among reviewers was low, suggesting variability in expert opinion.

Conclusion: ChatGPT-4 demonstrates a limited but promising ability to generate board-style dermatology questions. While current outputs often lack the complexity required for high-stakes assessments, the tool may serve as a valuable assistant in drafting educational material. Human oversight remains essential, particularly for clinically nuanced or diagnostically subtle content.

Charting the Future of EMR Chatbots: NLP in Identifying Psoriasis-Affected Body Areas, Including Nails and Joints

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Introduction: Managing psoriasis is challenging due to its diverse manifestations and comorbidities, including psoriatic arthritis. While electronic medical records (EMRs) support care and research, their unstructured nature hinders data extraction. Natural language processing (NLP) may help overcome these limitations.

Objective: To evaluate ChatGPT-4's ability to analyze unstructured EMR data and identify affected body areas, including nails and joints.

Methods: EMR data from 94 patients at Sheba Medical Center's psoriasis clinic were analyzed. Clinical notes, written in a mix of Hebrew and English, were processed using ChatGPT-4 to extract psoriasis-related body areas, nail involvement, and joint symptoms. A senior dermatologist independently reviewed.

Results: Among 94 patients (58.5% female), aged 18.9-86.7 years, the average clinical note was 278 ± 154.1 words. Nail involvement was present in 32 cases (34.0%), with ChatGPT-4 identifying 29 (sensitivity 90.6%, specificity 100%). Joint involvement was present in 25 cases (26.6%), with 24 correctly identified (sensitivity 96.0%, specificity 98.6%). Of 479 body areas annotated by the dermatologist, ChatGPT-4 correctly identified 445 (92.9%), missed 34 (7.1%), and added 30 false positives. Full agreement with the dermatologist occurred in 54 cases (57.4%). Accuracy was significantly associated with note length and number of body areas ($p < 0.01$).

Conclusion: ChatGPT-4 effectively analyzed unstructured psoriasis EMR data, accurately identifying affected areas including nails and joints. NLP-based AI tools show promise for clinical data extraction and dermatologic research.

Enhancing Teledermatology Diagnosis: A Cross-Sectional Explorational Comparative Study of AI Generated Clinical Image Descriptions

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Background: While AI tools such as ChatGPT have shown promising results in dermatology, the practical use of AI-generated clinical image descriptions for diagnosis remains underexplored. This study evaluated the diagnostic utility of ChatGPT-4-generated image descriptions and their potential integration into Electronic Medical Records (EMRs) for teledermatology.

Methods: This cross-sectional study included 130 clinical images from teledermatology consultations conducted between December 2023 and February 2024. ChatGPT-4 was used to generate clinical image descriptions. Two senior dermatologists reviewed these descriptions to produce differential diagnoses. The same method was applied to the original descriptions written by teledermatologists at the time of consultation. Diagnoses were compared to the original teledermatologist diagnosis and classified as 'Top1' (exact match), 'Top3' (correct diagnosis among top three), 'Partial,' or 'No match.' Cohen's Kappa was used to assess inter-rater agreement.

Results: Of the 130 cases, 57 were male (43.8%) and 73 female (56.2%), ranging from newborn to 93 years old. ChatGPT-4 descriptions averaged 74.9 ± 33.8 words versus 7.2 ± 2.7 words for teledermatologists. ChatGPT-4 achieved a 63.1% Top1 diagnostic match using its own descriptions and 69.2% using teledermatologists' descriptions. Investigators' Top1 concordance ranged from 31.5%-70.0% (ChatGPT-4 descriptions) and 43.1%-65.4% (teledermatologist descriptions). Top3 concordance for ChatGPT-4 was 77.7%. Cohen's Kappa for agreement between ChatGPT-4 and investigators ranged from 0.474 to 0.564.

Conclusions: ChatGPT-4-generated clinical image descriptions demonstrated potential to support diagnostic accuracy in teledermatology. Their integration into EMRs may enhance documentation and diagnosis but requires expert oversight to ensure reliability.

Toward Conversational EMRs: ChatGPT Accurately Extracts Psoriasis Treatments from Unstructured Medical Records

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Background: Large language models (LLMs), such as ChatGPT, are increasingly explored for clinical applications, including automated documentation and decision support. However, their ability to accurately extract treatment information from unstructured dermatology records remains underexplored.

Methods: In this retrospective study, 94 electronic medical records (EMRs) of patients with psoriasis were analyzed. ChatGPT-4o was tasked with identifying psoriasis treatments from unstructured clinical notes written in Hebrew. Its outputs were compared to expert-curated annotations. A total of 78 treatments—including topical agents, systemic medications, biologics, phototherapy, and procedural interventions—were evaluated. Performance metrics included recall, precision, F1-score, specificity, accuracy, Cohen's Kappa, and AUC. Analyses were performed at both the individual-treatment and pharmacologic group levels.

Results: ChatGPT-4o demonstrated strong performance, with a recall of 88.0%, precision of 97.0%, F1-score of 92.0%, specificity of 99.0%, and overall accuracy of 99.0%. Agreement with expert annotations was high (Cohen's Kappa = 0.92; AUC = 0.98). Group-level analysis showed the highest performance for biologics and methotrexate (F1 = 1.00), while lower recall was noted in categories with more ambiguous documentation, such as systemic steroids and antihistamines.

Conclusions: ChatGPT-4o accurately extracted treatment information from unstructured psoriasis EMRs, performing comparably to expert human reviewers. Its strengths were most notable in identifying well-specified and commonly prescribed treatments. These findings support the feasibility of integrating LLMs into dermatology workflows to enhance structured documentation, support clinical decision-making, and facilitate retrospective research.

Metastatic Carcinoma Mimicking Herpes Zoster virus infection- report of two cases

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Background: Cutaneous metastasis of solid organs are rare. Tumors scarcely metastasize to the skin (1). Cutaneous metastases varies in presentation (1-2). Cutaneous metastases presenting in a zosteriform pattern mimicking herpes zoster is a rare form for skin spread.

Methods: We describe herein a female and a male patients who presented with skin eruption allocated to cutaneous dermatomes; hence initially misdiagnosed as an ordinary case of herpes zoster.

A 47 years-old female patient with breast carcinoma on her background, presented with a painful eruption located on the left side of her breast and truncal area since one-week prior to her referral to our clinic, she was diagnosed with Herpes Zoster, until PCR test turned out negative for Herpes infection.

The eruption is localized with a dermatomal distribution involving T3-4dermatomes. Histological examination consisted of metastatic adenocarcinoma associated with vascular invasion. The tumor cells were positive for GATA3 immunohistochemical staining supporting breast origin. HER2 immunohisto-chemical staining positive.

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, compatible with metastatic carcinoma of gastric origin.

Conclusion: metastatic cutaneous cancer is rare and is a poor prognostic sign (4-8) We recommend skin biopsy in selected cases.

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Antibiofilm enzyme plus low-dose benzoyl peroxide for the treatment of acne vulgaris

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Background: Staphylococcus epidermidis and Cutibacterium acnes cohabitate in acne lesions. Both species produce the biofilm polysaccharide poly-N-acetylglucosamine (PNAG). This study investigated the role of PNAG in S. epidermidis/C. acnes dual-species biofilms grown under aerobic conditions.

Methods: Dual-species biofilms were cultured in Tryptic Soy broth in glass tubes. Biofilms were detached from the tubes by sonication. S. epidermidis and C. acnes CFUs in the sonicate were measured independently. In some experiments, biofilms were treated with 20 μg/ml DispersinB (a PNAG-degrading enzyme) and/or 1% benzoyl peroxide (BPO).

Results: C. acnes grew under aerobic conditions when co-cultured with S. epidermidis and accounted for 10% of the total biofilm CFUs. Treatment of biofilms with DispersinB resulted in a 1-log reduction in S. epidermidis CFUs and a 2-log reduction in C. acnes CFUs. BPO treatment resulted in no reduction in S. epidermidis CFUs and a 1-log reduction in C. acnes CFUs. Treatment of biofilms with DispersinB followed by BPO resulted in a >6-log reduction in C. acnes CFUs.

Conclusions: S. epidermidis allows C. acnes to grow under aerobic conditions. PNAG is a functional adhesin in S. epidermidis/C. acnes dual species biofilms. PNAG protects C. acnes from BPO killing. DispersinB and BPO act synergistically to kill C. acnes cells. Pre-treatment of acne lesions with DispersinB may increase the effectiveness of BPO in acne patients.

Leukemia Cutis- an unusual presentation

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Background: Leukemia Cutis (LC) is a rare skin infiltration of leukemic cells. LC is a rare condition characterized with various morphological presentation including papules, plaques and nodules (1). Namely, there is not one specific morphology that distinct LC from other specific dermatoses. LC is most commonly associated with acute myeloid leukemia (AML), and less to other hematological neoplasms (2). LC carries poor prognosis, hence, early diagnosis is imperative (2-3).

Methods: a case presentation: A male patient presented in our clinic with few months old skin eruption located to his trunk with no other associated symptoms. An 88 years-old male patient with essential thrombocytosis and Myleofibrosis on his medical background, presented with 6 months of painful, itching eruption. The eruption has gradually increased in size in the past few weeks prior to his presentation. Upon dermatological examination, lesions are located mainly on the trunk with some predilection to the folds including the inguinal areas and axilla. Morphology consists of cutaneous erythematous large plaques with elevated protuberant edges and some central clearing; there are no scales or ulceration. Histological examination shows dense perivascular infiltrate consisted of cells with blastoid morphology admixed with rare immature eosinophils. The neoplastic cells were positive for: CD4, CD123, HLDAR and CD43 and showed a proliferative index of 20-25% by Ki67. TCL1 stain is pending to distinguish between Blastic Plamacytoid Dendritic Cell Neoplasm (BPDCN) versus AML.

Conclusion: LC is rare, carries poor prognosis, despite its rarity, high clinical vigilance and suspicion is required not to miss such diagnosis.

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

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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, clinicians dermatologist must be aware of these findings and close surveillance is required.

Epidemiology and Trends of nail disorders (2014-2024): A single tertiary-center study

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Background: Nail disorders encompass a broad spectrum of conditions affecting individuals across all age groups and represent a diagnostic and therapeutic challenge.

Methods: A retrospective review was conducted of all nail-related visits (NRVs) to the dermatology outpatient clinic at Sheba Medical Center between January 1, 2014, and February 29, 2024, to assess trends and workload.

Results: A total of 9,064 NRVs were documented among 4,241 patients, accounting for 4.8% of 189,481 dermatology visits. The first-to-follow-up visit ratio was 1:1.1. With the exception of 2017 and 2022, the annual proportion of NRVs increased steadily, peaking at 6.8% in early 2024. Females comprised 54% of NRVs, with a mean age of 44.9 years compared to 43.5 years in males ($p < 0.001$). Isolated toenail involvement was most common (71.8%). Infectious etiologies predominated (63.2%), with onychomycosis representing 60.6% of diagnoses, though its relative frequency declined significantly over time. In contrast, tumor-related diagnoses (9.7%), particularly longitudinal melanonychia, increased. Pediatric and elderly NRVs rose significantly (pediatric: 2.5% to 5.5%, $p = 0.01$; elderly: 18.1% to 22.1%, $p = 0.03$), while young adult representation declined. Other notable increases were observed in acrylate-induced nail changes and lateral ingrown nails.

Conclusions: NRVs constitute a growing proportion of dermatologic outpatient care. The observed diagnostic shifts, declining onychomycosis and rising longitudinal melanonychia and acrylate-induced disorders, highlight evolving epidemiologic patterns. These findings support the expanding role of specialized nail services in tertiary dermatology settings.

Evaluating the Quality of TikTok Videos on Vitiligo and Alopecia areata: A Cross-Sectional Study

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Background: Vitiligo and alopecia areata (AA) are chronic autoimmune skin conditions that carry a substantial burden on quality of life, particularly among adolescents.
In parallel, with TikTok emerging as a major platform for health-related information, concerns about the spread of misinformation have arisen. This study aimed to evaluate the quality, accuracy, and reliability of TikTok videos related to Vitiligo and AA, and their potential impact on health education.

Methods: A cross-sectional analysis was conducted using a newly created account to minimize algorithmic bias. Videos were retrieved using predefined hashtags and filtered by popularity (most liked), with inclusion based on defined criteria. Two independent reviewers assessed video quality using validated tools. Additionally, we developed novel disease-specific tools- V-TRACE for vitiligo and AloCheck for AA, to assess clinical and psychosocial aspects. Videos were categorized by creator type as healthcare providers (HP) and non-healthcare providers (NHP).

Results: Of 193 included videos, only 25% were created by HPs. Across both conditions, HPs consistently scored higher across all validated quality metrics, Conversely, NHP videos achieved significantly higher user engagement. HPs focused on pathophysiology and treatment approaches, while NHPs emphassized body image and emotional aspects (body image scores: 0.66 vs. 0.00 in vitiligo, P=0.01; 64% vs. 38% in AA, P=0.02).

Conclusion: TikTok presents both a challenge and an opportunity for reshaping public health education. While HP videos are of higher quality, it often fails to achieve similar reach or engagement.

Clinical and molecular characteristics of H Syndrome: A systematic review

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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: 172 molecularly-confirmed H syndrome cases (88 males, 83 females, 1 not determined) were identified; 64% were of Arab descent, and the mean age at presentation was 16 years. Predominant clinical features included cutaneous hyperpigmentation and hypertrichosis (81%), hearing loss (60%), camptodactyly (56%), short stature (48%) and insulin-dependent diabetes mellitus (IDDM) (40%). Adults showed significantly increased odds of cutaneous findings (OR = 5.15, p = 0.013). 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.

A Descriptive Study of the Clinical and Dermoscopic Attributes of Darier Disease

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Background: Darier disease ('DD') is a rare autosomal dominant disorder characterized by acantholysis and abnormal keratinization affecting the skin, nails, and mucosa. While dermoscopy may aid the bedside diagnosis of inflammatory dermatoses ('inflammoscopy'), there is a lack of systematic dermoscopic characterization of DD lesions. To address this gap, the study aims to describe the dermoscopic features of a spectrum of DD lesions.

Methods: Patients with confirmed diagnosis of DD were enrolled without age or gender restrictions. Representative lesions from pre-defined anatomic sectors of the entire body—including head/neck, trunk, extremities, acral areas, nails, and mucosa—were imaged clinically and dermoscopically. Lesions were analyzed using inflammoscopy criteria (scale, vascular patterns, color, follicular changes), alongside DD-specific and novel dermoscopic features. Descriptive statistics were used via analysis performed with SAS v9.4.

Results: Sixteen DD patients (31% male; mean age 45, range 14-77 years) contributing 222 lesions were included. The most common lesion locations were the trunk and acral areas. Papules were the predominant clinical morphology. Dermoscopically, lesions frequently exhibited erosions, scale, white rim, dotted and hairpin vessels in a clustered or diffuse distribution. Prominent nail findings included l ongitudinal red and white streaks, splinter hemorrhages.

Conclusions: Darier disease presents with consistent dermoscopic patterns across skin and nail lesions, offering valuable non-invasive diagnostic clues. Dermoscopy can support bedside diagnosis and may aid in clinical monitoring for disease flare-ups.

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

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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.

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

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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.

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.

National Crisis-Induced Psychological Stress and Increased Herpes Zoster Incidence: A 10-Year Retrospective Study

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Background: Psychological stress is known to influence dermatological conditions, yet its impact during large-scale crises remains underexplored. This study examines the association between national crisis-induced stress and the incidence of infectious and inflammatory skin diseases, with a focus on herpes zoster, using a 10-year retrospective comparison.

Methods: A retrospective cross-sectional study was conducted using emergency room (ER) data from Hadassah Medical Centers in Israel. Patients presenting with skin-related complaints were analyzed during two stress periods: 1. October-December 2023 (national crisis) versus corresponding periods in 2014-2022. 2. COVID-19 lockdowns (March-May 2020, December 2020-February 2021)versus pre-pandemic years (2014-2022). Logistic regression models assessed associations between time periods and disease incidence, adjusting for age and sex.

Results: Among 1,644 patients, infectious skin diseases showed a significant increase in October-December 2023 (OR = 2.106, p < 0.001), primarily driven by herpes zoster(OR = 2.616, p = 0.009). No significant association was found for inflammatory skin diseases. In contrast, no significant changes in skin disease incidence were observed during the COVID-19 lockdowns, possibly due to reduced healthcare utilization.

Conclusion: Psychological stress during national crises is associated with an increased incidence of infectious skin diseases, particularly herpes zoster, but not inflammatory conditions. These findings highlight the need for targeted public health strategies, including vaccination and stress management, specifically during crises.

Phototherapy for Different Types of Cutaneous Porphyria: Case Series and Systematic Review

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Background: Porphyrias are a group of rare metabolic disorders characterized by defects in heme synthesis. Cutaneous photosensitivity is a common manifestation, posing significant challenges in its management. Photo-hardening accomplished by using narrow-band ultraviolet radiation (NB-UVB) was evaluated in the setting of Erythropoietic protoporphyria (EPP) in small case series, however, data is scarce regarding other types of porphyria.

Objective: We aimed to assess the effect of NB-UVB treatment on patients with different types of cutaneous porphyria.

Methods: A case series of 4 patients with Porphyria cutanea tarda (PCT) or variegate porphyria (VP) who were treated with NB-UVB is presented. In addition, a systematic review of studies evaluating porphyria patients treated with NB-UVB was conducted. As a low number of studies evaluating this treatment was expected, our primary outcome was to evaluate exacerbations following treatment, and patients' satisfaction.

Results: This case series includes 3 patients with VP and one patient with PCT. Three out of 4 patients were satisfied and didn't experience exacerbations following treatment, and the 4th patient showed lower compliance but experienced improvement as well. The systematic review included 22 patients (4 studies), 20 of them with EPP, 1 with VP, and 1 with congenital erythropoietic porphyria (CEP). Of the combined 26 patients, 17 (65%) reported an improvement following treatment. The number of phototherapy sessions varied among patients. There was no record of exacerbations following treatment.

Conclusions: The available data supports NB-UVB phototherapy to be a safe and effective measure for reducing exacerbations in patients with EPP, PCT, and VP.

CARMIL2 deficiency disrupts activation-induced metabolic reprogramming in T cells, and is partially rescued by glutamine supplementation

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Background: T-cell activation requires signaling through the T-cell receptor and costimulatory molecules, including CD28, triggering metabolic reprogramming to support growth and proliferation of the activating T -cell. CARMIL2, a scaffold protein, facilitates CD28-mediated signaling. Individuals with CARMIL2 mutations experience inborn errors of immunity, leading to T-cell dysfunction and severe infectious and inflammatory comorbidities. However, how CARMIL2 deficiency impacts T cell metabolic reprogramming remains unknown.

Objective: To investigate how CARMIL2 deficiency affects activation-induced metabolic reprogramming in T-cells.

Methods: CD4+ T-cells were isolated from patients with CARMIL2 deficiency and matched healthy controls (HC). Transcriptomic profile was analyzed by bulk RNA sequencing and whole-cell metabolomics by liquid chromatography-mass spectrometry (LC-MS/MS). Activation markers and signaling pathways were measured by flow cytometry. These approaches informed identification of specific amino acids for rescue experiments.

Results: Nine patients with CARMIL2 deficiency and sixteen age-and sex-matched healthy controls were recruited. RNA sequencing of CD4+ T-cells revealed decreased expression of genes associated with metabolic activity, including mTOR signaling, glycolysis, one-carbon metabolism, and glutamine metabolism. Whole cell metabolomics reinforced these results and highlighted glutamine deficiency as a potential driver of the observed metabolic phenotype. Glutamine supplementation restored NF-kB and mTOR activity, as measured by p-65 and RPS phosphorylation, respectively, and upregulated the expression of IL17A in CARMIL2-mutated CD4+ T cells.

Conclusions: CARMIL2 deficiency disrupts T-cell metabolic reprogramming and was partially rescued ex-vivo with glutamine supplementation. These findings highlight a potential therapeutic approach targeting metabolism to improve immune function in individuals with CARMIL2 deficiency.

Is Lentigo Malinga Associated with Fewer Coexisting Facial skin lesions? A Retrospective Study

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Background: Lentigo Maligna (LM) type melanoma predominantly arises on chronically sun-exposed skin, especially on the face in older individuals. Accurate differentiation between LM and other pigmented lesions on sun-damaged skin remains challenging due to overlapping clinical and dermoscopic features. A commonly held yet unvalidated notion suggests that a lesion that appears on relatively clear skin with fewer pigmented lesions should raise higher suspicion for LM. In this study, we aim to evaluate the validity of this hypothesis. The findings seek to provide evidence to guide clinical diagnostic heuristics in dermatology.

Methods: All patients that went through a biopsy of a pigmented lesion on their face and had corresponding images of their face at two medical centers between 2014-2024 were included. All pigmented and non-pigmented lesions ^{3} 2 mm in diameter on their face were counted and compared between patients with different diagnoses.

Results: The average number of total facial lesions was slightly lower in melanoma patients compared to non-melanoma patients (8.9 ± 7.2 vs. 10.1 ± 7.6), but the difference was not statistically significant ($P = 0.26$). Similarly, pigmented (8.4 ± 6.8 vs. 7.5 ± 6.2) and non-pigmented (1.4 ± 2.4 vs. 1.6 ± 2.4) lesions count showed no significant differences.

Conclusion: The commonly held heuristic that fewer background lesions indicate malignancy may not be reliable. Clinicians should avoid overreliance on this assumption, as several melanoma patients in our cohort had numerous additional facial lesions.

Cell-Free DNA Levels in Herpes Zoster: A Cross-Sectional Prospective Study

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Background: Our study investigates serum cell-free DNA fluctuations in patients with herpes zoster or post-herpetic neuralgia, offering insight into the tissue damage and inflammatory dynamics associated with these conditions.

Methods: We conducted a single-center combined cross-sectional and longitudinal study with 59 patients to assess cell-free DNA levels in herpes zoster and post-herpetic neuralgia. Cell-free DNA was extracted from blood samples of patients with herpes zoster or post-herpetic neuralgia and compared to healthy controls.

Results: Our findings demonstrated elevated cell-free DNA levels in patients with herpes zoster, which remained elevated for three months or longer following treatment. These results suggest the presence of a subacute inflammatory state after herpes zoster infection. Furthermore, patients who developed post-herpetic neuralgia did not show elevated cell-free DNA levels, while those who did not develop post-herpetic neuralgia exhibited increased levels.

Conclusion: This indicates that post-herpetic neuralgia is likely a localized response to prior nerve damage rather than a systemic inflammatory process with acute tissue damage.

A long-term follow-up study of Methotrexate and methylprednisolone in Israeli morphea patients

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Background: Morphea (localized scleroderma) is an inflammatory skin disorder characterized by fibrosis primarily affecting the dermis. Although various treatment modalities are used, evidence supporting many therapies remains limited.

Methods: In this retrospective study, we reviewed medical records of 421 morphea patients treated at Tel-Aviv Sourasky Medical Center between 2000-2022, focusing on 41 patients who received methotrexate treatment.

Results: Among these 41 methotrexate-treated patients (78.1% female), 25 (60.9%) received concurrent pulse therapy with methylprednisolone. Complete response was observed in 31 patients (75.6%), partial response in 3 (7.3%), and no response in 7 (17.1%). Lesions in the head and neck were significantly associated with treatment success (P = 0.008). Adverse effects occurred in 15 patients (36.6%), most commonly gastrointestinal symptoms. Treatment discontinuation occurred due to completion of regimen (39.0%), non-adherence (36.6%), and adverse effects (22.0%).

Conclusions: Methotrexate, especially in combination with methylprednisolone, appears effective and well-tolerated for morphea, with a high rate of clinical response. Lesion location may influence treatment outcomes. These findings provide insight for optimizing morphea management.

Elucidating the Relationship Between Mycosis Fungoides and Contact Sensitization: A Retrospective Study

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Background: Mycosis Fungoides (MF), a type of Cutaneous T-Cell Lymphoma (CTCL), presents diagnostic challenges due to its complex etiology. Previous studies suggest a link between MF and Type IV hypersensitivity, particularly allergic contact dermatitis (CD), but conclusive evidence is lacking.

Objective: To investigate the relationship between MF and contact sensitization, focusing on positive patch test (PPT) results in a controlled, extensive study.

Methods: A retrospective case-control study comparing 84 MF patients with 168 control patients carefully matched for demographics and clinical parameters. All participants underwent patch testing (PT) at Sourasky Medical Center Dermatology Clinic. Hypersensitivity reactions were analyzed to explore their association with MF.

Results: Our study, the largest of its kind, found a statistically significant difference in PPT reactions between the two groups (p < 0.001). MF patients had a markedly lower prevalence of positive reactions compared to the control group. Fragrance Mix emerged as a common allergen in MF patients, contrasting with Methylchloroisothiazolinone-Methylisothiazolinone (MCI/MI) in the control group.

Conclusion: This study shows a lower prevalence of hypersensitivity reactions in MF patients and identifies Fragrance Mix as a prevalent allergen. These findings suggest reevaluating the role of contact sensitization in MF pathophysiology and underscore the need for further research on diagnostic markers and therapeutic targets.

Procoagulant effects of extracellular vesicles in patients with livedo reticularis

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Background: Procoagulant activity is an important property of EVs (extracellular vesicles). This study investigates the role of EVs in livedo reticularis (LR).

Methods: We isolated EVs from plasma of 12 patients and 7 healthy controls (HC), measured tissue factor (TF) activity and analyzed their content and cellular origin.

Results: TF procoagulant activity was increased in plasma of LR patients. The number of vesicles was not increased, implying the procoagulant properties of EVs may not be explained by a higher abundance, but by their cargo. Hence, we sought to analyze their protein content. A total of 304 differentially expressed proteins (DEP) were identified. Five were upregulated and 269 downregulated. LR patients revealed a distinct expression pattern. Overrepresentation analysis revealed enrichment of proteins associated with homeostasis, coagulation, and vascular endothelial growth factor signaling pathways. Amongst the DEPs, Krueppel-Like Factor 8 (KLF8) exhibited the most prominent difference with a decrease by a fold change of 4.6 ($p<0.001$). KLF8 is expressed in vascular endothelium and regulates angiogenesis and vessel contractility. With regard to cellular origin, LR patients exhibited an increase in leukocyte-derived EVs and a decrease in platelet-derived EVs. This may be indicative of a shift from baseline homeostasis in health to an inflammatory EV profile in LR.

Conclusions: EVs exert a procoagulant effect in LR. Increased TF activity and a shift in EV release from primarily platelet-driven to leukocytes are possible mechanisms underlying this effect. Our findings suggest that a reduction in KLF8 within EVs may be a key regulatory factor in LR.

Evaluation of the Efficacy and Safety of the Vascupen 520 ± 10 nm Diode Laser Module in the Treatment of Facial Telangiectasia

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(Dr. Yehonatan Neumann, Rabin Medical Center; Prof. Daniel Maimoni, Rabin Medical Center; Prof. Assi Levy, Rabin Medical Center)Evaluation of the Efficacy and Safety of the Vascupen 520 ± 10 nm Diode Laser Module in the Treatment of Facial Telangiectasia

Background: Facial telangiectasias (FT) are common superficial vascular lesions that often cause significant aesthetic and psychological distress. While various treatment modalities exist, laser therapy has become a mainstay, particularly green light lasers due to their high hemoglobin absorption and minimal collateral damage.

Objective: To evaluate the efficacy and safety of a new laser device, the Vascupen 520 ± 10 nm fiber-coupled diode laser in the treatment of FT.

Methods: A single-center, prospective, open-label, proof-of-concept study involving 20 adult participants with mild-to-moderate facial telangiectasias. Each subject received up to three laser treatments at 4-week intervals, with follow-up visits at one- and three-months post-treatment. Efficacy was assessed using the Global Aesthetic Improvement Scale (GAIS), telangiectasia count, Clinical Erythema Assessment and Patient satisfaction. Safety and tolerability were measured via adverse event reporting and pain scores (Numeric Pain Rating Scale).

Results: A total of 20 patients (14 female and 6 male, mean age 51.5 years) underwent 1-3 laser treatments. The mean baseline telangiectasia count was 14.2, which decreased to 4.3 at the three-month follow-up visit (69.7% decrease).
Patient satisfaction averaged 4.6 out of 5.
No serious adverse events were reported throughout the study period.

Conclusion: The Vascupen 520 □ 10 nm diode laser is a safe and effective device for the treatment of facial telangiectasias

Guidelines for the Treatment of Infantile Hemangiomas -A Position paper from the Israeli Association of Dermatology and Venerology in Israel

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Background: Infantile hemangioma (IH) is the most common benign vascular tumor in infancy, affecting 4-10% of newborns. Recent advances, particularly in beta-blocker therapy, have significantly improved the management of IHs. Early identification and treatment of IH may help reduce morbidity and complications associated with this condition.

Aims: This study aimed to establish national guidelines for the diagnosis and treatment of IHs, providing evidence-based recommendations for selecting appropriate therapeutic approaches.

Methods: A comprehensive literature review was conducted, along with a series of consensus meetings with experts in pediatric dermatology in Israel who have experience in treating infantile hemangiomas. The guidelines were finalized after consensus approval.

Results: The guidelines categorize IHs by subtype and provide criteria for referral and treatment selection. Topical treatments, including propranolol gel and timolol drops, are recommended for small, superficial IHs. Systemic beta-blockers, primarily propranolol and atenolol, are first-line treatments for more extensive lesions, complicated IHs or IH associated syndromes. The document outlines detailed protocols for pre-treatment assessment, treatment initiation, monitoring, duration, and discontinuation. Alternative treatments are discussed for refractory cases or as additional treatment. The guidelines align with international recommendations while incorporating specific national considerations.

Conclusions: These Israeli national guidelines provide a structured approach to the diagnosis and treatment of IH, emphasizing early referral, appropriate treatment selection, and careful monitoring. While beta-blockers remain the primary pharmacological intervention, individualized clinical judgment is essential in guiding therapy. The guidelines serve as a critical resource for pediatricians and dermatologists, ensuring optimal patient outcomes while minimizing complications.

Vitiligo-like leukoderma following treatment with cyclin-dependent kinase 4/6 inhibitors – analysis of clinicopathologic and immunohistochemical findings

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Background: Vitiligo-like leukoderma is a rare cutaneous adverse event associated with cyclin-dependent kinase 4/6 (CDK4/6) inhibitors. However, its clinicopathological and immunohistochemical profiles remain unclear.

Objectives: To characterize the clinical, pathological, and immunohistochemical features of CDK4/6 inhibitor-induced vitiligo-like leukoderma.

Methods: This retrospective case series describes five female patients with advanced or metastatic breast cancer who developed vitiligo-like leukoderma during CDK4/6 inhibitor therapy. Clinical data and skin biopsies were evaluated, including immunohistochemical analysis of melanocyte markers, cell-cycle protein (p16), and T-cell subsets.

Results: The depigmented lesions appeared primarily in sun-exposed areas. Two patients exhibited an inflammatory phenotype with pruritus and a lichenoid rash. In all patients, the lesions progressed rapidly over several months and then stabilized. This course was maintained regardless of any vitiligo-targeted therapeutic interventions. Histopathological examination revealed complete absence of melanocytes in all biopsies. Three specimens (60%) had inflammatory changes, including lichenoid and perivascular lymphohistiocytic infiltrates, with immunohistochemistry showing a predominance of CD4+ T cells within the infiltrates. Features of chronic actinic damage (epidermal atrophy, orthokeratosis, reactive keratinocytes, dermal solar elastosis) were observed. In two biopsies (40%), there was a patchy distribution of p16 staining within basal and suprabasal keratinocytes. Four patients (80%) demonstrated prolonged (2–4 years) progression-free survival.

Conclusion: CDK4/6 inhibitor-induced vitiligo-like leukoderma appears to be a distinct clinicopathological entity, characterized by a predictable course and stabilization, consistent inflammatory features, and a CD4+-predominant immune profile. These findings suggest a unique pathogenic mechanism, either immune-mediated or associated with actinic damage, that distinguishes this condition from classic vitiligo.

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

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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,significantlyimprovingoutcomes.Guselkumab,targetingtheIL-23pathway,hasshownhighefficacy and a favorable safety profile in randomized controlled trials for moderate-to-severe plaque psoriasis.

Objective: To evaluate drug survival and cost-effectiveness of Guselkumab as first-line versus later-line biologic therapy in moderate-to-severe plaque psoriasis.

Methods: A retrospective cohort study of 200 patients treated at a tertiary center between 2002-2024. Patients were categorized as first-line (n=69) or later-line (n=131) Guselkumab. Drug survival was estimated using a log-normal distribution, and PASI response rates were compared. Markov model simulated clinical pathways, comparing costs and quality of life between groups. The model included two health states (responders, non-responders), with one-month cycles and a 10-year horizon. The model allowed up to three biologic lines for non-responders. Utility values were derived from literature, and drug costs from public sources. QALY and costs were estimated using Monte Carlo simulation (10,000 subjects, 100 trials). One-way and probabilistic sensitivity analyses were performed.

Results: First-line Guselkumab showed significantly longer drug survival ($p<0.001$) and higher PASI 100 response (72.5% vs. 14.5%, $p<0.0001$). Mean total cost per patient was lower (584,731 vs. 673,201 ILS), with greater QALY gain (8.19 vs. 5.83), yielding a dominant ICER of -37,610 ILS. Sensitivity analyses confirmed robustness.

Conclusions: First-line Guselkumab for moderate-to-severe psoriasis was associated with significantly longer drug survival and lower treatment costs compared to later-line use.

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

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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.

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

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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 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 ≥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. Limitations: Single-center study with potential regional variations in pandemic response and healthcare disruptions.

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.

Neglected, Misunderstood, and Underdiagnosed: A Retrospective Study of Nipple-Areolar Disease Referrals

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Background: The nipple areolar complex represents a unique functional unit with considerable emotional, sexual and cosmetic importance. A range of inflammatory and neoplastic diseases may affect this area, nevertheless many dermatologists and other health practitioners lack knowledge regarding these conditions, likely due to both limited exposure during training and cultural discomfort surrounding breast examination.

In this study we analyze patterns, diagnostic accuracy, and educational gaps in the evaluation of nipple-areolar skin disorders.

Methods: We conducted a retrospective chart review of 40 consecutive patients referred between 2024 and 2025 to a single dermatologist specializing in nipple-areolar diseases. Data collected included patient demographics, referral source, provisional diagnosis, final diagnosis, and treatment.

Results: Forty patients were referred for evaluation of nipple-areolar disease. Referral sources were diverse, including breast surgeons (n=9), lactation consultants (n=8), self-referrals (n=6), family physicians (n=2), dermatologists (n=2), and various other professionals such as pediatricians, radiologists, general surgeons, and even religious figures.

Diagnoses were diverse, and included- dermatologic inflammatory disorders, breast diseases, abnormalities related to nursing, pain syndromes and normal anatomy. Treatments included topical treatments, vasodilators for vasospasm, breastfeeding advice and urgent referrals to breast surgeons due to concern of malignancy. In several cases, the most impactful intervention was patient education and reassurance.

Conclusion: Nipple-areolar disease is neglected in medical education. Increased awareness and education are essential to reduce unnecessary referrals, avoid delays in treatment, and improve patient outcomes. Multidisciplinary collaboration and cultural sensitivity are critical to improve care and may save lives.

Staphylococcus epidermidis facilitates Cutibacterium acnes growth under aerobic conditions

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Background: Cutibacterium acnes is a dominant skin commensal implicated in acne vulgaris and medical device infections. Despite being an anaerobe, C. acnes thrives in the stratum corneum and upper hair follicles, where oxygen levels are relatively high. The mechanism behind its persistence in these oxygen-exposed environments remains unclear. We investigated whether Staphylococcus epidermidis, another abundant skin commensal, can facilitate C. acnes growth under aerobic conditions.

Methods: C. acnes and S. epidermidis were co-cultured in glass tubes under aerobic conditions. Biofilms were detached via sonication, and colony-forming units (CFUs) of each species were quantified separately. Confocal laser scanning microscopy (CLSM) was used to visualize the biofilm structure.

Results: When co-cultured with S. epidermidis, C. acnes grew robustly under aerobic conditions, comprising 99% of total biofilm CFUs by day 4. CLSM revealed that S. epidermidis formed structured biofilms that generated localized anaerobic niches at their base, allowing C. acnes to survive and proliferate. Preliminary in vivo experiments in mice suggest that this synergy also occurs on the skin, supporting the relevance of these findings in a physiological context.

Conclusion: S. epidermidis promotes C. acnes biofilm formation under aerobic conditions, likely by creating microenvironments conducive to anaerobic growth. These findings reveal a potential cooperative interaction that may help explain how C. acnes colonizes oxygen-exposed regions of the skin and highlight the importance of microbial interactions in shaping skin ecology.

Comparison of Disease Progression between Amelanotic Melanoma and Melanotic Melanoma

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Background: Amelanotic Melanoma lacks melanin, making it more challenging to detect than Melanotic Melanoma due to its absence of pigmentation, which often leads to delayed diagnosis and poorer outcomes. This study evaluated the differences in 1-year disease progression between patients with Amelanotic and Melanotic Melanomas to assess the impact of pigmentation on clinical outcomes.

Methods: We conducted a historical cohort study of 322 patients with melanoma (28 amelanotic and 294 melanotic) treated at Sheba Medical Center (2017-2023). Data on demographics, tumor depth, metastases, treatment type, and response were analyzed. Patients were categorized based on lesion pigmentation, and clinical outcomes were compared.

Results: The stage at diagnosis was the most significant predictor of remission, progression, and mortality in both groups. Pigmentation influenced treatment modifications (p=0.02) and showed a weak association with disease progression (p=0.08). Subgroup analysis by stage revealed no significant differences in outcomes, except for more frequent treatment modifications in patients with stage 2 Melanotic Melanoma (p=0.04). Notable findings included a higher prevalence of prior Melanoma in stage 2 amelanotic cases (40% vs. 12.19%, p=0.03) and a higher prevalence of metabolic syndrome in Melanotic Melanoma cases (60.29% vs. 18.18%, p=0.009).

Conclusion: Amelanotic Melanoma is rare. Although it is described in the literature as a more aggressive form of Melanoma, we found that for the same stage, Amelanotic Melanoma has the same biological behavior compared to Melanotic Melanoma. The main factor that affects all outcomes for both types of Melanoma is the stage at the diagnosis.

Pediatric Atypical Spitz Nevi: Insights from Immunohistochemistry and Molecular Diagnostics

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Background: Spitz nevi (SNs) range from benign lesions to malignant Spitz melanomas, with atypical SNs falling in between. Differentiating atypical SNs from melanoma can be especially difficult in pediatric populations. This case series emphasizes the diagnostic utility of immunohistochemistry and molecular profiling in clarifying these challenging lesions and guiding clinical decisions.

Methods: Three pediatric patients with atypical SNs were reviewed: a congenital lesion in a 1-month-old boy (axilla), and acquired lesions in a 7-year-old (face) and a 14-year-old (back). Histologic examination in all cases revealed a spindle and epithelioid melanocytic proliferation suggestive of atypical SN. Immunohistochemistry was performed in all cases; two underwent next-generation sequencing.

Results: Immunostaining showed low Ki-67 indices and positive P16, with negative staining for PRAME, BRAF, BAP1, and β-catenin across all cases. Molecular testing identified activating ZKSCAN1::MET kinase fusion in Case 1 and NTRK2 fusion in Case3, while Case 2 could not be fully assessed due to limited DNA. Both did not show copy number alterations. All lesions were excised with clear margins, without suspicious lymphadenopathy or need for sentinel lymph node biopsy. The kinase fusions (MET and NTRK2), which are more characteristic of spitzoid pathway than melanoma, alongside the histologic and immunohistochemical features, supported classification as atypical SNs.

Conclusion: This series underscores the importance of combining histopathology with molecular and immunohistochemical tools for accurate diagnosis of SNs in children. Recognition of distinct molecular signatures helps avoid overdiagnosis and overtreatment. Further studies are needed to improve diagnostic frameworks in pediatric melanocytic lesions.

Photosensitive Erythema Multiforme and Vandetanib in a pediatric patient

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Background: Vandetanib, a tyrosine kinase inhibitor approved for metastatic medullary thyroid cancer (MCT), is known to cause photosensitivity and various cutaneous adverse reactions. Photo-induced erythema multiforme (EM) is a rare manifestation, with only four cases previously reported in adults. To our knowledge, this is the first documented case in the pediatric population.

Methods: We report the case of a 14-year-old boy with MCT treated with oral Vandetanib who developed a pruritic rash three weeks after initiating therapy. Clinical evaluation revealed targetoid erythematous papules and plaques on sun-exposed areas. Laboratory workup excluded infectious or autoimmune causes. Phototesting and histopathology were performed to confirm the diagnosis.

Results: Phototesting demonstrated a markedly reduced minimal erythema dose (MED) to UVA, with papule formation on provocation. Histopathology from both spontaneous lesions and from the site of UVA photoprovocation revealed interface dermatitis with abundant dyskeratotic keratinocytes throughout the epidermis, consistent with EM. The patient was initially treated with topical corticosteroids, followed by a short course of systemic prednisone, leading to resolution within two months. Strict photoprotection allowed continuation of Vandetanib without recurrence over one year of follow-up.

Conclusions: This case illustrates a rare but clinically significant side effect of Vandetanib in a pediatric patient. Photo-induced EM should be recognized early to prevent misdiagnosis and unnecessary discontinuation of therapy. Phototesting and histopathology are valuable diagnostic tools. Education on rigorous photoprotection is critical, particularly in children who may face adherence challenges. Early identification and management can preserve treatment efficacy while minimizing morbidity.

Towards cell-based therapy of alopecia areata: Autologous human Vδ2 Foxp3 γδ-Treg cells restore hair-follicle immune privilege and enable hair regrowth in human alopecia areata models ex vivo and in vivo

Prof Amos Gilhar

Technion

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Background: While regulatory T cells (Tregs) control autoimmune diseases (AID), the role of evolutionarily older Foxp3+ γδTregs is much less understood. We noted that both lesional and non-lesional skin of patients with alopecia areata (AA), one of the most common AID, contains significantly more Vd1+/Foxp3+ γδTregs than healthy scalp skin. Therefore, we investigated how human γδTregs impact on experimentally induced AA in human scalp skin xenotransplants on SCID/beige mice in vivo.

Methods: Autologous Foxp3+γδTregs were generated by pre-stimulating PBMCs with IL-2, TGF-β1, IL-15, and zoledronate. Recognized γδTreg markers and secretory activities were confirmed by FACSAria analysis and ELISA (see below). These γδTregs were either co-cultured with stressed human scalp hair follicles (HFs) ex vivo or were injected intradermally into experimentally induced AA lesions in human skin xenotransplants on SCID/beige mice in vivo.

Results: These γδTregs reduced the perifollicular lymphocytic infiltrate, restored hair follicle immune privilege (HF-IP), prevented AA onset, and promoted hair regrowth in established AA lesions. We then co-cultured human Vd2+/Foxp3+ γδTregs with organ-cultured, MICA-overexpressing human scalp HFs in the presence/absence of pathogenic CD8+/NKG2D+ T cells, all under autologous conditions. γδTregs counteracted all AA hallmarks ex vivo: HF-IP collapse induced by CD8+ T cells via IL-10 and TGF-β1 secretion, HF dystrophy, and premature, IFNγ-induced catagen induction.

Conclusion: These findings in a model human AID introduce human γδTregs as clinically important regulatory lymphocytes and invite the use of autologous peripheral Vd2+/Foxp3+ γδTregs as cell-based therapy for AA and possibly other, CD8+ T cell-dependent AIDs characterized by IP collapse.

Sequential PDL Treatment in Infantile PWS: Clinical Implications of Protocol Transition

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Background: Port-wine stain (PWS) is a congenital capillary malformation that may darken, thicken, and develop nodules over time. Early pulsed dye laser (PDL) treatment yields better outcomes due to thinner skin and limited dermal involvement. While our previous meta-analysis found no advantage to weekly over less frequent treatments, a recent study reported meaningful improvement with weekly therapy. This case series presents infants with PWS treated initially with a weekly non-purpuric PDL protocol, followed by a purpuric regimen performed every two months.

Patients and methods: A retrospective single-center study of infants with PWS who were treated with PDL starting on a weekly regimen, between April 2024 and July 2025.

Results: Twenty-one patients (9 males) initiated PDL treatment as early as 3 weeks of age. Sessions were performed every week until maximal improvement, then continued every two months. Initial parameters were 7 J/cm², 10 mm spot size, 1.5 ms pulse duration; later sessions used 7–8 J/cm² and 0.45 ms duration. Significant improvement was achieved during the high-frequency, low-fluence phase without inducing purpura, with further gains observed after protocol transition.

Discussion and Conclusion: Weekly, non-purpuric PDL treatment yielded substantial improvement in early infantile PWS. While further research is warranted to directly compare the efficacy of varying treatment protocols, the management approach involving a transition from a non-purpuric weekly regimen to a purpuric protocol—and the resulting demonstration of additive improvement—has not been previously described in the literature and represents a novel contribution to current treatment strategies.

Q-switched ruby laser is safe and effective in removing permanent dark ink tattoo post radiotherapy skin marking in former breast cancer patients.

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Background: Permanent dark ink tattoos (PDIT) are essential for accurate positioning during breast cancer radiotherapy. Despite its importance, once treatment is completed, the permanent nature of PDIT has shown to cause psychological distress. Selective photothermolysis using Q-switched ruby laser (QSRL) is a potential tool for the removal of PDIT. We aim to evaluate the efficacy and safety of QSRL for the removal of PDIT post radiotherapy in breast cancer survivors.

Patients and Methods: This prospective, single-center interventional proof-of-concept study evaluated female breast cancer survivors in complete remission undergoing up to 6 treatments with Q-switched ruby laser (Sinon, Alma Lasers, Israel). A follow-up visit was conducted 6-8 weeks after the final session. Primary outcomes included blinded assessment of clinical improvement using the 0-4 Global Aesthetic Improvement Scale (GAIS) by two investigators, and patient-reported satisfaction on a 1-5 scale.

Results: Eleven patients were included, with an average age of 52 years (range: 45-67). Two patients discontinued after the first session due to personal preference.
Among the 9 women who completed the study, 31 hyperpigmented macules were treated.
The mean GAIS score was 3, indicating marked improvement. No adverse events were reported apart from mild discomfort during the procedure. Average patient satisfaction was high, with a mean score of 4.6/5.

Discussion and Conclusion: QSRL is a safe and effective treatment for the removal of iatrogenic PDIT, with particular benefit for patients recovering from breast cancer and other malignancies, for whom minimizing treatment-related marks can have a significant emotional value.

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

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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 CO2 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 CO2 laser resurfacing under local anesthesia for severe rhinophyma patients.

Patients and Methods: A Retrospective case series of patients with severe rhinophyma treated with an ablative CO2 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. In addition, patients were requested to complete a long-term follow-up questionnaire to assess sustained outcomes.

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 was high, with a mean score of 7.9/10 (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.

Discussion and Conclusion: Non-fractional, ablative CO2 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.

Advanced Mycosis Fungoides/ Sézary syndrome Masquerading Atopic Dermatitis in the Era of Advanced Therapeutics – Clues and Pitfalls

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Introduction: Mycosis fungoides (MF) and Sézary syndrome (SS) can mimic benign inflammatory dermatoses including atopic dermatitis (AD), especially when pruritus is prominent. This diagnostic challenge is especially important in the era of advanced AD therapies, which may aggravate MF/SS. Our aim was to identify clues and pitfalls in reaching the correct diagnosis of MF/SS, in patients presenting with severe pruritic-dermatoses simulating AD.

Methods: A retrospective case-series, of adults with pruritic-generalized eczematous MF/SS, initially misdiagnosed as AD, followed between 9/2009-6/2024.

Results: Thirteen patients, (3 diagnosed with childhood AD), presented with an extensive pruritic-eczematous rash. At initial presentation, findings characteristic to AD included hand with a dyshidrotic/vesicular/pseudo-vesicular eczema (54%), flexural (46%), and/or eyelid-involvement (31%), eosinophilia (23%), and elevated IgE (46%).
Findings atypical to AD included scalp seborrheic dermatitis-like rash (54%), psoriasiform/figurate/nummular plaques (31%), and follicular accentuation (23%). LDH was elevated in 62%.
Initial biopsies, performed in 10/13, were undiagnostic of MF/SS in all but 2. Treatments included phototherapy (8/13)/methotrexate (6/13), and advanced-therapeutics (dupilumab-3; upadacitinib -1), with aggravation.
After a median follow-up of 2 years (range 1-10), at a median age of 54 years, 12 patients were diagnosed with advanced-stage MF/SS, (IIB-2, III-2, IVA1-5, IVA2-3), and 1 with early-stage (IB). At last follow-up, (median-3.5 years), 7 were alive with-disease, 4 died of-disease, 1 had no evidence of disease, 1 was lost to follow-up.

Conclusions: In extensive pruritic dermatoses, certain AD features may mislead diagnosis, as they also appear in MF/SS, especially in advanced Th2-dominant stages. Caution is crucial before starting potentially harmful treatments.

Mohs Micrographic Surgery Usage for Skin Tumors on Special Body Sites: A Single-Center Experience

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Background: Mohs micrographic surgery (MMS) is widely accepted for treating skin cancers in cosmetically and functionally important areas, particularly the head and neck. However, its use on other anatomically sensitive sites – such as the genitalia and digits for example – is less frequently described. We present our institution's experience with MMS usage in these uncommon locations.

Methods: We conducted a retrospective review of patients treated with MMS for skin tumors located on special and sensitive body sites between July 1, 2022 and June 30, 2025. Collected data included patient demographics, tumor type and location, number of Mohs stages, reconstruction method, recurrence status and postoperative complications.

Results: A total of 20 cases were treated during the period. The main locations were male and female genitalia and digits. Tumor types included dermatofibrosarcoma protuberans (n=6), digital squamous cell carcinoma (n=7), penile intraepithelial neoplasia (n=4), vulvar basal cell carcinoma (n=1), genital extramammary Paget's disease (n=1) and malignant melanoma in situ (n=1). Margin clearance was achieved in up to four Mohs stages. Complex reconstruction using local flaps or grafts was performed in 20% of cases. Two recurrences were documented, no major complications were observed.

Conclusions: MMS is a safe and effective modality for the treatment of skin tumors on special body sites, offering precise margin control and tissue preservation. Our experience supports the use of MMS in these challenging anatomical areas, with excellent oncologic and functional outcomes. Further studies may help refine treatment algorithms and reconstructive approaches for these rare but clinically significant presentations.

Burning Towel Syndrome – A Detective Search for the Source of Enigmatic Torture After Showering

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Background: The challenge of our profession lies in identifying unexpected diagnoses that enable clear recommendations and alleviate patients' concerns. This case illustrates a severe symptom caused by an unexpected culprit.

Case: A married couple presented with recurrent, unexplained, unbearable burning sensations occurring unpredictably after showering. Symptoms affected one or multiple discrete skin areas, causing intense fiery pain lasting 10–15 minutes, during which normal activities were impossible. Physical examination revealed no visible signs even under magnification. Attempts to soothe the area by rubbing or pressing were ineffective. Investigations ruled out thorns, splinters, caustic residues, soaps, or towels as causes. Ultimately, USB digital microscopy identified a minute red ant, Wasmannia auropunctata, as the trigger linked to skin contact with the bath towel.

Discussion: Wasmannia auropunctata officially arrived in Israel in 2005 and has since caused increasing distress. Reactions to its sting vary; some develop visible redness or wheals, unlike this case. The primary prevention strategy focuses on eradicating ant nests using insecticides to reduce exposure and consequent symptoms.

Conclusions: Persistent investigation, supported by modern diagnostic technologies such as digital microscopy, can successfully uncover the source of novel and perplexing ailments, enabling effective management and patient relief.

Healthcare Service Utilization and Medication Use in 128,239 Children with Atopic Dermatitis in Israel – A Cross-Sectional Case-Control Study

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**Both authors contributed equally to the study*

Background: Atopic dermatitis (AD) is a chronic inflammatory disease requiring topical and systemic treatments. This study examines healthcare service utilization and medication use in children with AD in a large healthcare organization, during 2024.

Methods: A cross-sectional case-control study was conducted compared to 128,239 children with AD with 128,239 matched controls, regarding healthcare utilization and medication use. Multivariate analysis assessed differences between the groups.

Results: Children with AD had increased healthcare utilization compared to the control group, with higher rates of visits to pediatricians, general practitioners and dermatologists. 144 children (0.11%) with AD were treated by immune-suppressive drugs, as compared to 78 children (0.06%) of the control group (OR 1.8, 95% CI 1.4- 2.4, p-value <0.001). 410 children (0.32%) were treated with biologic drugs as compared to 12 children (0.01%) of the control group (OR 34.3, 95% CI 19.3- 60.9, p-value <0.001). 34 children (0.03%) were treated with JAK inhibitors as compared to 2 children (0.002%) of the control group (OR 17, 95% CI 4.1- 70.8, p-value <0.001).

Conclusions: Increased utilization of healthcare services was observed in pediatric patients with AD compared to the control group. As only a small proportion of the children with AD received immunosuppressants, biologic treatments and JAK inhibitors, we suggest that the use of systemic medications should be considered in pediatric patients with moderate to severe AD.

Biologics in psoriasis and psoriatic arthritis between 2013 and 2024 in Israel: a descriptive registry research

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Background: Psoriasis is an auto-inflammatory disease affecting the skin with a prevalence of 2-4% in the general population. Psoriatic arthritis (PsA) is an inflammatory arthritis, that may occur in patients with psoriasis. According to the data and research center of the Israeli government, As of 2019, in Clalit health services (CHS), 3.2% of the insured population were diagnosed with psoriasis with 2.83% of the latter received any biologic treatment, a rising psoriasis and PsA drug class in the past 20 years. Data regarding biologic subgroups and PsA in israel is lacking.

Methods: Data was collected from the CHS registry regarding patients with psoriasis and Psoriatic arthritis between 2013 and 2024. Psoriasis and PsA was defined as two diagnosis upon appointments by any physician, or a single diagnosis by a dermatologist or rheumatologist, respectively. The data was then categorised to basic demographics, comorbidities, treatment acquisitions and time of onset of biologic from diagnosis and duration.

Results: 77,049 patients with psoriasis were included in the study period with 15.17% (n= 11,691) and 10.14% (n= 7,813) were patients with PsA and patients who received biologic, respectively. The time of onset from diagnosis and duration of any biologic for a patient with psoriasis was 2,528 ± 2,132 and 1,689 ± 1,413 days respectively. Further sub-analysis was made between patients with inflammatory bowel disease, PsA and biologic subgroups of anti-TNF, anti-IL-17, anti-IL-23.

Conclusion: This descriptive registry research gives data regarding a large population of patients in israel with psoriasis and PsA, with emphasis on biologics.

Transcriptome analysis of Bullous Pemphigoid

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Background: Bullous pemphigoid (BP) is the most common autoimmune blistering disease. However, the underlying cellular signaling pathways driving its pathogenesis are not well characterized in the literature, and the available treatments remain limited.

The objective of this study is to examine which intracellular signaling processes and cytokine profiles are over- or under-expressed in the skin of patients with BP compared to healthy skin and thereby contribute to the pathogenesis of the disease.

Methods: This is a basic science study. Ten skin samples (frozen sections) from patients with BP and three healthy skin samples used as controls were collected. RNA was extracted from the samples, and transcriptomic profiling was performed using standard techniques to assess protein overexpression in affected skin, in comparison to expression in healthy skin.

Results: Transcriptomic analysis of skin from BP patients revealed 44 significantly differentially expressed genes (DEGs) compared to healthy skin ($p = 0.001$). Some of these genes may be related to the disease's pathogenesis and encode various inflammatory cytokines, such as IL-1β and the IL-17 receptor. Intracellular pathway analysis indicated involvement in the regulation of cell growth and epidermal differentiation, which may be part of the pathogenic mechanism in BP.

Conclusions: To our knowledge, this is the first study to examine the full transcriptomic profile from skin samples of BP patients in comparison to healthy skin. This study highlights the importance of transcriptomic analysis in advancing our understanding of autoimmune skin diseases to enable more accurate disease classification and the development of new therapeutic options.

Reading Between the Lines: ChatGPT-based Model Classifies Melanocytic Lesions Using Clinical Descriptions Alone

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Background: Artificial intelligence (AI), particularly large language models (LLMs) like ChatGPT, are increasingly being explored in clinical medicine. This study examines the potential of a LLM-based model to support melanocytic skin lesion classification into malignant and non-malignant categories using only clinical text.

Methods: This retrospective study analysed 223 melanocytic lesions extracted from medical records at Hadassah Medical Center, each categorized as malignant and non-malignant according to its definitive histopathological diagnosis. The unstructured clinical descriptions of each lesion – authored by the referring dermatologists – were processed using an advanced natural language processing (NLP) model (OpenAI text-embedding-large-3). The resulting embeddings were subjected to classification using the XGBoost machine learning algorithm within a 10-fold cross-validation framework. Model performance was evaluated in comparison to pathology reports as the gold standard.

Results: The model demonstrated a statistically significant performance over random in distinguishing between malignant and non-malignant lesions. Notably, the model achieved an area under the curve (AUC) of 0.730, with an accuracy of 0.693, sensitivity of 0.695, and specificity of 0.690.

Conclusions: This study offers a proof of concept: an NLP model with machine learning can classify melanocytic lesions as malignant or non-malignant using free-text clinical notes alone. While image-based AI tools are common in dermatology, this is the first study to explore the diagnostic potential of clinical language alone. These findings lay the groundwork for future research leveraging large language models in dermatology.

Bone-related outcomes in patients with bullous pemphigoid: A population-based study

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Background: Osteoporosis and femoral head fractures (FHF) are major public health concerns in aging populations, yet their potential link to bullous pemphigoid (BP) remains underexplored.

Objective: To evaluate the risk of osteoporosis and FHF in patients with BP and to assess the influence of different treatment regimens on these musculoskeletal outcomes.

Methods: In this retrospective cohort study using the Clalit Health Services database, we analyzed 3,924 patients with newly diagnosed BP and 19,280 matched controls. Incidence rates and hazard ratios (HRs) for osteoporosis and FHF were calculated using multivariate Cox regression, adjusting for demographic and clinical confounders. We further evaluated the impact of treatment strategies, including systemic corticosteroids (SCS), topical corticosteroids (TCS), and adjuvant immunosuppressants, on outcome risk.

Results: BP was associated with a significantly increased risk of osteoporosis (adjusted HR 1.66; 95% CI 1.40–1.96) and FHF (adjusted HR 1.23; 95% CI 1.03–1.47) compared to controls. Treatment with SCS significantly elevated osteoporosis risk relative to TCS (HR 1.59; 95% CI 1.00–2.56), while SCS monotherapy was associated with a lower risk of osteoporosis relative to SCS plus adjuvant immunosuppressants (HR 0.38; 95% CI 0.22–0.65). FHF was not significantly influenced by treatment modality but was a significant determinant of elevated mortality (HR 1.42; 95% CI 1.25–1.59).

Conclusions: BP is independently associated with higher risks of osteoporosis and FHF. Use of SCS, especially in combination with immunosuppressants, predisposes BP patients to osteoporosis. These findings highlight the need for proactive bone health surveillance and fracture prevention in patients with BP, particularly those undergoing SCS.

TRAV19 as a novel therapeutic target in pemphigus vulgaris

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Background: Pemphigus vulgaris(PV) results from autoantibody-mediated destabilization of epidermal cell to cell adhesion. The tendency to develop PV is largely influenced by genetic factors. Here, we aimed to identify novel immune-related elements contributing to PV pathogenesis.

Methods: Whole genome sequencing(WGS) on a series of PV patients was preformed, followed by a case-control association analysis. T cells were purified and sequenced for TCRA chains. Proliferation assay and cytokine measurements were characterized upon siRNA treatment in PBMCs. Single-cell RNA sequencing(scRNAseq) of PV-derived PBMCs was performed.

Results: WGS identified an indel variant (c.69_77delGGTAACTCAinsATTTC) within the TRAV19 gene in 23.5% of affected individuals that was absent from public databases. TRAV19 encodes the T cell receptor alpha variable 19 (TRAV19). A strong association in two cohorts of Jewish and Egyptian descent was shown between the TRAV19 risk variant and PV, which also predicted greater clinical severity in Jewish patients. Gene usage analysis showed reduction in TRAV19 gene in the risk group. Down regulation of TRAV19 resulted in a marked decrease in CD3/CD28 and IL-2-activated cell proliferation and a significant increase in TNFα secretion, known to play a critical role in PV. ScRNAseq showed dynamics in gene expression within various cell populations. An increase in Th17 cells in PV patients carrying the TRAV19 risk allele was observed. Of utmost interest, the IL-23/IL-17-axis has been shown to play an important role in PV-immunopathogenesis.

Conclusions: Our findings point at a strong association between PV and a LOF variant in TRAV19 which causes functional immunological abnormalities underlying PV pathogenesis.

ST18 Polymorphisms in Pemphigus Vulgaris: Ethnic Distribution and Functional Immune Impact

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Introduction: Pemphigus vulgaris (PV) is a rare autoimmune blistering disease caused by autoantibodies targeting desmosomal proteins desmoglein (DSG)3 and DSG1. Polymorphisms in the ST18 gene (rs2304365 and rs17315309), which encodes a transcription factor involved in immune regulation and apoptosis, have been associated with PV susceptibility and show ethnicity-specific patterns.

Methods: Serum from PV patients and healthy donors (HD) was analyzed by ELISA for anti-DSG1/DSG3 IgG and inflammatory cytokines (IL-6, IL-8, IL-17A, TNF-α). Genotyping of single-nucleotide polymorphisms (SNPs) rs2304365 and rs17315309 was performed by tetra-ARMS-PCR, PCR-RFLP, and confirmed by Sanger sequencing. Normal human epidermal keratinocytes (NHEK) were treated with PV or HD sera to assess cytokine expression and keratinocyte fragmentation.

Results: Six patients with PV and 8 ethnicity-matched HD were genotyped. The rs2304365 C allele frequency was significantly higher in PV patients (91.7%) compared to HD (50.0%, P=0.019). While the frequency of the rs17315309 A allele was higher among PV patients (83.3% vs. 62.5%), the difference was not statistically significant (P=0.227). Notably, all Jewish PV patients with the rs2304365 CC genotype also exhibited the rs17315309 AA genotype, whereas Arab PV patients with the same rs2304365 CC genotype carried the rs17315309 GA genotype, indicating ethnicity-specific linkage disequilibrium between these two ST18 variants. No significant associations were found between ST18 genotypes and anti-DSG1/3 levels, cytokine expression, or keratinocyte fragmentation.

Conclusions: These findings suggest a potential role for ST18 polymorphisms—particularly the rs2304365 C allele—in PV susceptibility in an ethnicity-dependent manner. Larger studies are needed to clarify their impact on disease phenotype.

The Efficacy of NB-UVB Phototherapy Treatment for Prurigo Nodularis Patients

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Background: Prurigo nodularis (PN) is a chronic inflammatory skin disease characterized by nodules and papules. The lesions are pruritic and can also develop secondary to itching. Common treatments include topical corticosteroids, narrowband ultraviolet B (NB-UVB) phototherapy, systemic antipruritic agents, immunosuppressants, and biologic agent dupilumab. The response rate to phototherapy in PN is currently unclear due to limited available literature. the study evaluate the efficacy of phototherapy in PN and to identify prognostic factors for treatment response, ultimately establishing treatment guidelines.

Methods: This study is a retrospective cohort analysis of patients diagnosed with PN who received NB-UVB phototherapy. Disease severity was determined according to Investigator's Global Assessment (IGA) score. Treatment response was considered if IGA0/1 - clear or almost clear from PN lesions - at the end of phototherapy treatment.

Results: 46 patients underwent at least 10 sessions of NB-UVB phototherapy. NB-UVB was administered as monotherapy or in combination with topical agents only. The average duration of NB-UVB treatment was 34 sessions. NB-UVB phototherapy was successful (IGA0/1-clear or almost clear) in more than half of the patients (56.5%). Neither IgE levels nor atopic background affected disease severity or treatment efficacy. Patients who responded favorably had a shorter disease duration, averaging one year($p = 0.028$). Most patients (85%) experienced no side effects.

Conclusion: NB-UVB phototherapy was effective in over half of the patients with PN. Given its effectiveness and low side effect profile relative to immunosuppressive therapies, the findings support revisiting treatment guidelines for this condition.

Skin, Stress and Gut: Investigating Psoriasis Comorbidities in IDF Cohort

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IDF (Israel Defense Forces)

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Background: Psoriasis is a chronic systemic skin condition, with emerging evidence linking it to mental disorders and with lesser extent to irritable bowel syndrome (IBS). Data on the association of psoriasis and these conditions in adolescence is limited. This study aimed to evaluate the prevalence and associations of mental disorders and IBS among adolescents with psoriasis within a large military cohort.

Methods: A retrospective cross-sectional study of 1,878,838 Israeli teenagers aged 16-19 that underwent medical evaluations conducted by the IDF as part of their pre-recruitment assessments between 2000 and 2024. Diagnosis of psoriasis, psychiatric disorders, and IBS were identified via coded medical fitness-codes. Logistic regression models were used to assess associations, adjusting for sociodemographic variables and mental co-morbidity.

Results: Psoriasis was diagnosed in 0.45% of the cohort, with its prevalence nearly doubling over the study period. Individuals with psoriasis had increased odds of mental comorbidities (adjusted OR 1.29, 95% CI 1.07-1.55). IBS prevalence was significantly higher in those with psoriasis (adjusted OR 1.46, 95% CI 1.17-1.83), independent of mental comorbidity. This association persisted across most psoriasis severity levels.

Conclusions: In this large cohort, psoriasis was significantly associated with both mental disorders and IBS. These findings highlight the importance of holistic assessment in young patients with psoriasis, including screening for gastrointestinal and mental health symptoms. Improved awareness may facilitate earlier intervention, reduce diagnostic delays, and enhance long-term outcomes.

Between the Frontlines and the Rear: Psoriasis Epidemiology and Clinical Course in Combat Versus Non-Combat IDF Soldiers

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Background: Psoriasis is an inflammatory skin disease characterized by immune dysregulation and a relapsing-remitting course. Although stress is often cited as a trigger, evidence remains inconsistent due to methodological limitations. Military service - especially in combat roles - exposes individuals to unique physical and psychological stressors that may affect psoriasis onset or severity. This study aims to valuate psoriasis progression trajectory during Israeli Defense Forces (IDF) service, comparing combat and non-combat conscripts.

Methods: A retrospective cross-sectional study was conducted among 3,757 IDF conscripts diagnosed with psoriasis during pre-recruitment evaluations (ages 16-25) between 2002-2024. Diagnoses were based on documentation by HMO physicians or dermatologists. Conscripts were categorized by initial role assignment: combat vs. non-combat. Psoriasis exacerbation was assessed using deterioration in medical fitness codes (primary outcome), and initiation of phototherapy or biologic treatment (secondary outcomes).

Results: The psoriasis combatant group included 1,157 (30.79%) conscripts, and the psoriasis non-combatant group included 2,600 (69.20%) conscripts. Disease deterioration occurred in 7.2% of combatants and 6.7% of non-combatants. Phototherapy referrals and biologic initiation rates were similar between groups. Most psoriasis combatants (86.34%) completed training successfully. Psoriatic conscripts in combat roles had fewer mental health interventions and were less frequently evaluated by mental health professionals during their service.

Conclusions: Psoriasis progression during military service was similar in combat and non-combat roles, with no significant differences in treatment patterns. However, psoriatic combatants had fewer mental health encounters, possibly reflecting reduced access to. Further research is needed to explore psychosocial impact of military roles in chronic disease populations.

Pediatric Lichen Planopilaris: A Case Series and Review Highlighting Diagnostic Challenges and Emerging Therapies

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Background: Lichen planopilaris (LPP) is a form of cicatricial alopecia that has rarely been reported in the pediatric population. Because of the limited number of reported cases, little information is available. Our objective is to describe the clinical and histological features of pediatric LPP, in addition to the available treatment options for these patients.

Methods: This was a retrospective single-center study. Included were all pediatric patients with clinical and histological features compatible with LPP. All patients were evaluated by a pediatric dermatologist.

Results: The cohort (6 males, 5 females; mean age 12.7 years) predominantly presented with localized, slowly progressive alopecia affecting ≤10% of the scalp. All patients underwent biopsy confirming perifollicular interface dermatitis and fibrosis. Misdiagnosis (e.g., as tinea capitis or alopecia areata) was frequent. Most patients responded to a combination of intralesional corticosteroids and systemic hydroxychloroquine. One exceptional case, a 9-year-old girl, experienced a severe disease flare affecting over 50% of the scalp following a febrile illness, requiring systemic corticosteroids and eventual treatment with JAK inhibitors, resulting in disease stabilization.

Conclusion: Pediatric LPP is likely underdiagnosed due to its clinical overlap with more common pediatric alopecias. Early recognition using trichoscopy and biopsy is critical to prevent irreversible scarring. While most cases respond to conventional therapies, severe or refractory cases may benefit from targeted immunomodulators such as JAK inhibitors. This study highlights the need for increased awareness, standardized diagnostic pathways, and prospective studies to guide optimal management in this vulnerable population.

Bidirectional Association between Vitiligo and Melasma: A Large-Scale Population-Based Study

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Background: The dual diagnosis of vitiligo and melasma has hardly been studied, and their association has not been investigated.

Objective: To test our hypothesis of an independent bidirectional association between vitiligo and melasma.

Methods: A population-based study was conducted including 24,436 patients with vitiligo and 119,205 matched controls. Both a retrospective cohort design and a nested case-control design were used, with calculation of adjusted hazard ratios (HRs) and odds ratios (ORs).

Results: The incidence of melasma per 1000 person-years was 1.38 (95% CI 1.22-1.54) in the vitiligo group and 0.88 (95% CI 0.84-0.96) in the control group. Patients with vitiligo had a 60% increased risk of developing melasma regardless of hormonal treatment, phototherapy, and thyroid disorders (adjusted HR, 1.58; 95% CI, 1.35-1.86). The prevalence of pre-existing melasma was higher in patients with vitiligo than controls (0.9% vs. 0.5%, P<0.001). Melasma was associated with a 30% increase in the odds of developing vitiligo (adjusted OR 1.32; 95% CI 1.12-1.55), regardless of hydroquinone treatment.

Conclusion: A bidirectional association between vitiligo and melasma was observed. Treatment strategies for dual diagnoses should be explored.

Beta-Blockers Are Safe and Effective in Infants younger than 5 Weeks with Infantile Hemangiomas: A Retrospective Multi-Center Study

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Background and Objectives: Infantile hemangiomas (IH) are common vascular tumors w rapid growth in early infancy. Beta-blockers are the standard treatment, with earlier initiation potentially improving outcomes. However, safety data for infants under 5 weeks of corrected age remain limited, and current FDA guidance restricts propranolol use to those ≥35 days. This study evaluates the safety and efficacy of initiating beta-blockers before versus after 5 weeks of corrected age.

Methods: A multicenter retrospective cohort study was conducted across three tertiary hospitals in Israel (2014-2024). Infants treated with propranolol or atenolol were grouped based on treatment initiation before or after 5 weeks of corrected age. Propensity score matching (1:1) adjusted for baseline differences. Primary outcomes were adverse events and treatment efficacy. Statistical analyses included chi-square, Fisher's exact, and Mann-Whitney U tests.

Results: A total of 71 infants in the early group and 109 controls were included. After matching, groups were comparable except for age and prenatal complications. No significant difference was found in adverse event incidence (11.3% early vs. 22.9% control, p=0.52). Most events were mild; symptomatic bradycardia or hypotension did not occur, and no treatment discontinuations were necessary. Complete regression occurred in 49.3% of the early group and 58.7% of controls (p=0.34).

Conclusion: Initiation of beta-blockers for IH before 5 weeks of age appears as safe and effective as later initiation. Early treatment was not associated with increased adverse events or reduced efficacy, supporting its use in selecting infants. Prospective studies are needed to confirm these findings.

Monotherapy treatment of leg telangiectasias (spider veins) using the Magma system's long-pulse Nd:YAG (1064 nm) laser

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Background: Leg telangiectasias (spider veins) are small, dilated superficial blood vessels located within the dermis, typically 0.1–3 mm in diameter. Although frequently considered a cosmetic concern, they may indicate underlying venous insufficiency and are associated with multiple etiological factors, including genetics, hormonal influences, aging, prolonged standing, and sun exposure. Prevalence increases with age, affecting up to 55% of women and 45% of men, particularly over the age of 50.

Methods: This prospective, single-center case study was conducted in 2024 at the Formatk Clinical Department (Tirat Carmel, Israel) by Dr. Nadav Pam and clinical instructor Veronika Yehoshua. Five female volunteers (mean age: 56; range: 46–64) with leg telangiectasias (0.1–3 mm in diameter) were enrolled after meeting inclusion/exclusion criteria and providing informed consent. Treatments were performed using the FDA-cleared, CE-marked, MDR-certified Magma System (Formatk Systems Ltd., Israel), equipped with a long-pulse Nd:YAG 1064 nm applicator. Energy parameters (180–280 J/cm□, 40–80 ms pulse durations) were customized per vessel diameter. Parker cooling gel was used; no anesthesia was administered.

Outcomes were evaluated through pre- and post-treatment photography, a 4-point clinical improvement scale, and VAS pain scoring.

Results: The average improvement score was 82/100 (range: 79–87), with a mean VAS score of 6/10 (range: 5–7). No significant adverse effects were reported in any patient.

Conclusions: The Magma long-pulse Nd:YAG 1064 nm laser demonstrates high efficacy, excellent tolerability, and a favorable safety profile for non-invasive treatment of leg telangiectasias.

Bullous pemphigoid and hematologic malignancies: Clarifying the debatable association by a large-scale population-based study

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Introduction: The current literature is inconsistent regarding the association of bullous pemphigoid (BP) with hematologic malignancies (HM). In the current study, we aimed to assess the bidirectional association between BP and HM.

Methods: A population-based retrospective cohort study was conducted to compare BP patients (n=3,924) with age-, sex- and ethnicity-matched control subjects (n=19,280) regarding the risk of 6 HMs: acute leukemia (AL), chronic leukemia (CL), Hodgkin lymphoma (HL), multiple myeloma (MM), non-Hodgkin lymphoma (NHL), and polycythemia vera (PV). A case-control design was additionally adopted to estimate the odds of BP in individuals with a preexisting diagnosis of each of the six HMs.

Results: In the retrospective cohort design, the overall incidence rates of AL, CL, HL, MM, NHL, and PV in patients with BP were estimated at 4.3(95% CI, 1.6-9.4), 27.3(95% CI, 18.9-38.1), 7.7(95% CI, 3.7-14.1), 35.1(95% CI, 25.5-47.1), 27.7(95% CI, 19.2-38.6), and 4.3(95% CI, 1.6-9.5) cases per 1,000 person-years, respectively. Patients with BP did not experience an elevation in the risk of any of the six aforementioned HMs. The development of subsequent BP was not significantly associated with a history of any of the investigated HM, as evidenced by the case-control study design.

Conclusion: Our study revealed that patients with BP do not experience an elevated risk of HM and that a history of HM is not associated with a significant increase in the odds of subsequent BP. Overall, the current data do not lend weight to the performance of routine screening for HM among patients with BP.

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

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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.

Treatment Patterns and Response Predictors in Granuloma Annulare: The Goeckerman Protocol as Evidence for Multimodal Anti-inflammatory Therapy

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Background: Granuloma annulare (GA) is a chronic inflammatory dermatosis with limited effective treatments. Most therapies show modest response rates (35–63%). The Goeckerman protocol, combining coal tar, phototherapy, and topical corticosteroids, is highly effective in other inflammatory dermatoses but has not been evaluated in GA.

Methods: We conducted a retrospective cohort study (2010–2024) at Sheba Medical Center, including 240 patients with biopsy-confirmed GA. Treatment modalities included topical corticosteroids, phototherapy, combination therapy, the Goeckerman protocol, and observation. Clinical response was categorized as complete, partial, or none. Multivariate logistic regression was used to identify predictors of treatment response.

Results: Of 240 patients (mean age 55.4 years; 77.5% female), 184 had follow-up data (median 3.0 months). Overall response rate was 58.2% (107/184), with significant differences between treatments: Goeckerman protocol 93.5% (29/31), corticosteroids plus phototherapy 69.6% (16/23), corticosteroids alone 56.3% (49/87), no treatment 32.4% (12/37), and phototherapy alone 16.7% (1/6). Multivariate analysis identified the Goeckerman protocol as the strongest predictor of response (OR 34.6; 95% CI 8.1–245.9; $p<0.001$), followed by combination therapy (OR 6.3; $p=0.003$) and corticosteroids alone (OR 2.8; $p=0.014$). Hyperlipidemia was associated with response in univariate analysis ($p=0.048$) but not in multivariate modeling.

Conclusions: Treatment outcomes in GA vary markedly by modality. The Goeckerman protocol achieves unprecedented efficacy, independent of patient demographics or disease extent. These findings support its use as a highly effective option and establish new therapeutic benchmarks in GA management.

The Skin Microbiome in Early-Stage Mycosis Fungoides: A Longitudinal Analysis in Response to Narrow Band Ultraviolet B Phototherapy

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Background: Mycosis Fungoides (MF) is the most common type of cutaneous T cell lymphoma. Bacterial microorganisms may play a key role in MF development. This study aimed to analyze the bacterial skin microbiome of MF patients before and after narrow band ultraviolet B (NB-UVB) treatment and compare it to healthy controls, correlating these findings with clinical response to NB-UVB treatment.

Methods: MF patients with supporting skin biopsies were included. Skin swabs were taken from lesional and non-lesional skin before and after NB-UVB treatment as well as healthy controls. Patients on recent treatments or antibiotics were excluded. Genomic DNA was extracted from skin swabs. Subsequently, the V1-V3 region of bacterial 16S ribosomal DNA gene and the tuf2 gene for the sequencing of the genus Staphyloccocus were amplified and sequenced.

Results: Sixteen MF patients and 18 healthy controls were enrolled. Nine stage 1B MF patients completed phototherapy. Beta-diversity did not show significant clustering between healthy individuals and MF patients, nor between lesional and non-lesional samples before and after phototherapy. Mean observed species (α-diversity) did not differ significantly, but lesional skin was more uniform. The most prevalent amplicon sequencing variants (ASVs) were Corynebacterium, Cutibacterium, and Staphylococcus. S. epidermidis was most prevalent post-phototherapy, while S. aureus was found only in patients post-phototherapy, especially in non-lesional swabs of poor responders.

Conclusion: This study compared the skin microbiome of healthy participants and early-stage MF patients before and after phototherapy. The findings provide insights into microbiome diversity in MF patients and suggest the need for further research.

Utilization of Mohs Micrographic Surgery for Genital Skin Cancers: A Review of Current Practices and Need for Improved Guidelines

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Background: Mohs micrographic surgery (MMS) is an organ-sparing technique that enables complete microscopic margin assessment prior to reconstruction, making it particularly valuable for anatomically sensitive sites. Although its advantages are well recognized, MMS remains underutilized for genital and perianal skin malignancies, in part due to inconsistent staging criteria and the absence of dedicated treatment guidelines.

Methods: We conducted a comprehensive literature review to evaluate the role of MMS in genital and perianal skin malignancies, focusing on treatment outcomes and existing practice patterns. Searches were performed in PubMed and the Wiley Online Library using relevant keywords related to MMS and genital skin cancers. Studies reporting recurrence rates, survival outcomes, and procedural considerations were included.

Results: The available literature suggests that MMS achieves high rates of complete tumor clearance with low local recurrence across a range of genital skin malignancies, including squamous cell carcinoma, extramammary Paget's disease, and dermatofibrosarcoma protuberans. Reported recurrence rates are generally lower than with conventional excision. MMS offers the additional benefit of maximal tissue preservation, which is critical in maintaining functional and cosmetic outcomes in these sensitive locations. However, substantial variation in patient selection, surgical technique, and follow-up protocols was noted among published studies.

Conclusions: MMS provides effective oncologic control and tissue preservation in the management of genital and perianal skin malignancies. The establishment of consensus guidelines, with standardized indications and procedural recommendations, is warranted to optimize patient outcomes and ensure consistent practice across institutions.

The Role of Morphometry in predicting response to phototherapy in early-stage Mycosis Fungoides

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Background: Narrowband UVB phototherapy is a well-established treatment modality for early-stage Mycosis Fungoides (MF). However, due to its chronicity, relapses can reach up to 50% according to some studies, and there are no established factors to predict treatment efficacy.

Objective: To evaluate the role of morphometric histologic parameters, immunophenotype and TCR clonality in predicting Narrow Band UVB phtotherapy (NB-UVB) efficacy in patients with early-stage MF.

Methods: Morphometric analysis was conducted on 3 different regions of MF biopsies from 58 stage I MF patients who were treated with NB-UVB phototherapy. Half of the biopsy samples were from patients who achieved partial or almost complete remission following 8 weeks, while the other half were from patients who did not respond at all at this point of time. Evaluated morphometric parameters included degree of spongiosis and the amount and size of lymphocytes in epidermis. In addition, TCR clonality and CD4 to CD8 ratio were statistically analyzed between these two groups.

Results: Patients who did not respond to an 8-week treatment with NB-UVB phototherapy exhibited a higher degree of spongiosis (odds ratio 0.9 (95% CI 0.82, 0.99), (p=0.02)), larger lymphocytes in the epidermis (odds ratio of 0.38 (95% CI 0.18, 0.8), (p=0.01)). There was a tendency toward monoclonal profile in non-responder group (odds ratio 0.02 (95% CI 0, 1.44), (p=0.07)). Patients with monoclonal profile had more lymphocytes with larger size in the epidermis (F=5.4; p=0.02, F=5.2; p=0.02 respectively). Spongiosis found to be independent of the clonality profile.

Conclusion: Histological morphometric parameters such as spongiosis and the size and amount of epidermotropic lymphocytes can be predictive of a response to NB-UVB phototherapy in early-stage MF. These parameters may serve as markers for selecting appropriate and individualized treatment plans as well as predicting prognosis.

Characteristics	n (%)	NBUVB phototherapy	
		R	NR
Total patients	58	29 (50)	29 (50)
Males	41 (70.6)	20 (68.9)	21 (72.4)
Females	17 (29.3)	9 (31)	8 (27.5)
Age (years)			
Mean	61.5 ± 15.9	61.1 ± 18.3	61.8 ± 13.3
Range	14-89	14-89	29-86
Stage			
IA	7 (12)	3 (10.3)	4 (13.7)
IB	51 (87.9)	26 (89.6)	25 (86.2)
TCR			
Polyclonal	37 (63.7)	23 (79.3)	14 (48.2)
Monoclonal	21 (36.2)	6 (20.6)	15 (51.7)
CD4:CD8 ratio			
Mean	4.5 ± 1.6	4.2 ± 1.2	4.8 ± 2
Range	1-12	1-7	2-12

Table 1. Patient characteristics.

R, Treatment responders; NR, Treatment non-responders

	Coefficient B	Standard error	z	p	Odds Ratio (95% CI)
Monoclonal TCR profile	-2.5	1.56	1.6	0.109	0.08 (0-1.74)
CD4:CD8 ratio	-0.68	0.38	1.8	0.074	0.51 (0.24-1.07)
Lymphocyte size	-0.96	0.38	2.5	0.011	0.38 (0.18-0.8)
Number of exocytosed lymphocytes	0.27	0.14	1.9	0.054	1.31 (1-1.71)
Spongiosis density	-0.11	0.05	2.2	0.029	0.9 (0.82-0.99)

Table 2. Results of logistic regression analysis.

Artificial Intelligence in Dermatology: Clinical Integration, Operational Utility, and Emerging Risks

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Background: Artificial intelligence (AI) is increasingly integrated into dermatology, with applications spanning clinical diagnostics, dermatopathology, surgical planning, practice operations, and medical education. This review summarizes the current and emerging uses of AI across these domains and examines associated risks, including diagnostic bias, overreliance, liability, and data privacy concerns.

Methods: A narrative review of peer-reviewed literature from 2020 to 2025 was conducted. Sources included clinical trials, observational studies, regulatory guidance, and implementation reports across dermatology subspecialties. Emphasis was placed on real-world clinical applicability, performance metrics, and ethical considerations.

Results: AI algorithms demonstrate dermatologist-level accuracy in melanoma detection, with sensitivity exceeding 85%, and reduce unnecessary biopsies and diagnostic errors in both retrospective studies and prospective pilot implementations.[1,2] In dermatologic surgery, AI supports intraoperative decision-making through margin analysis, frozen section interpretation, and operative planning.[3] Dermatopathology models enable tumor classification, mitotic index quantification, and immunofluorescence interpretation with strong inter-rater reliability. Practice-level adoption includes AI scribes for documentation, chatbot triage, and billing optimization. Generative models are increasingly used in education to create adaptive simulations and personalized learning paths for trainees. Key risks include diagnostic bias, particularly in underrepresented populations, overreliance by clinicians and patients, unclear legal frameworks for AI-related malpractice, and significant privacy threats. A 2025 breach involving 1.9 million patient records underscores the urgency of addressing cybersecurity vulnerabilities.

Conclusions: AI holds transformative potential across dermatologic care and education. However, responsible deployment requires rigorous validation, clinician oversight, equitable dataset design, and robust regulatory safeguards to ensure safe, ethical, and inclusive integration into clinical practice.

Beta blockers efficacy and safety in treatment of PHACE syndrome: a systematic review

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Background: PHACE syndrome is a rare neurocutaneous disorder associated with infantile hemangiomas and systemic anomalies, including posterior fossa malformations, arterial anomalies, cardiac defects, and eye abnormalities. Oral beta-blockers, particularly propranolol, are the first-line treatment for complicated infantile hemangiomas. However, concerns have been raised about the safety of beta-blockers in patients with PHACE syndrome due to their increased risk of arterial ischemic stroke.

Objective: To evaluate the safety and efficacy of oral beta-blockers for treating infantile hemangiomas in patients with PHACE syndrome.

Methods: A systematic review was conducted using databases PubMed, Scopus, and Web of Science for all studies published up to November 2023. Inclusion criteria focused on studies reporting beta-blocker use in PHACE syndrome according to established diagnostic criteria. Data extraction included patient demographics, hemangioma characteristics, treatment regimens, outcomes, and adverse events.

Results: The review included 57 studies encompassing 72 patients. Propranolol was the most frequently used beta-blocker (97.1%), with an average initial dose of 1.3 mg/kg daily (Range: 0.5-2 mg/kg, SD 0.6). The mean time to achieve the dose of 2 mg/kg daily was 8.4 days (Range: 0-150 days, SD 30.3) and the mean treatment duration was 16 months (Range: 3-94 months, SD 17.7). Complete or partial hemangioma resolution was achieved in 88.9% of cases. Adverse effects were minimal, with no reports of arterial ischemic stroke.

Conclusion: Oral beta-blockers, particularly propranolol, demonstrate high efficacy and an acceptable safety profile for treating infantile hemangiomas in patients with PHACE

MELANOMA PATIENTS NEEDS AND JOURNEY STUDY

Dr. Hedva Gonen

The Israeli Skin Cancer Association – Founder and Chair

The research was conducted in collaboration with MSD

Background: Melanoma patients often face a complex and fragmented healthcare journey. Delays in diagnosis and treatment, coupled with insufficient guidance and bureaucratic barriers, can adversely affect outcomes and patient well-being. This research aimed to identify key bottlenecks, patient satisfaction levels, and unmet needs throughout the melanoma care pathway in Israel.

Methods: A mixed-methods study was conducted, including a quantitative patient survey and qualitative interviews with melanoma patients. The research focused on timelines for diagnosis and treatment, satisfaction with medical and support services, and patient perceptions of information quality, communication, and bureaucratic assistance.

Results: The findings highlight significant delays: an average of 4.5 weeks from dermatologist referral to a plastic surgeon and 4.9 weeks from biopsy to results. Only 30% of patients started treatment within one month of diagnosis, while 79% began within three months. Patients valued clear explanations, reliable information, and a personal approach from healthcare professionals. Satisfaction was highest with treating physicians and the Israeli Skin Cancer Association (recognized by 85% of respondents), while the National Insurance system received the lowest satisfaction scores. Pain points included long wait times, limited access to oncologists, lack of procedural guidance, and difficulties navigating rights and bureaucracy. Demand was high for services such as personalized support, assistance in realizing rights, and improved informational resources.

Conclusions: The research identifies critical areas for intervention: reducing wait times, enhancing patient navigation, and providing integrated support services. Strengthening these aspects could significantly improve the care experience and outcomes for melanoma patients in Israel.

The Role of Phototherapy in Reducing the Risk of Psoriatic Arthritis among Psoriasis Patients in the Era of biologics – A Single Center Exploratory Retrospective Cohort Study

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Background and Objectives: Biologic therapies for psoriasis have shown promise in reducing the risk of Psoriatic Arthritis (PsA) by targeting inflammatory pathways. Emerging evidence suggests that phototherapy may also exert systemic anti-inflammatory effects. This study examines the impact of phototherapy on the progression to PsA.

Patients and Methods: This exploratory, hypothesis generating retrospective cohort study comprised 667 psoriatic patients, subclassified based on therapeutic interventions administered during longitudinal follow-up: phototherapy alone; phototherapy combined with systemic therapy [either conventional agents (e.g., methotrexate, acitretin, cyclosporine) or biologics (e.g., TNF inhibitors, anti-IL-12/23, anti-IL-17A, anti-IL-23A)]; topical therapy alone; and systemic monotherapy. PsA diagnoses were established in accordance with the Classification Criteria for Psoriatic Arthritis.

Results: Patients receiving standalone phototherapy exhibited a reduced PsA incidence compared to those on topical agents [4.09 vs. 5.30 events per 100 person-years; HR 0.73, 95% CI: 0.53-0.99, p=0.047]. Combining phototherapy with systemic therapy further reduced PsA risk compared to systemic monotherapy (2.26 vs. 3.74 events per 100 person-years; HR 0.56, 95% CI: 0.38-0.82, p=0.003). The lowest incidence was observed in patients treated with both phototherapy and biologics, outperforming biologics alone (HR 0.43, 95% CI: 0.19-0.93, p=0.03).

Conclusions: Phototherapy, especially in combination with systemic treatments, demonstrates synergistic potential in mitigating PsA risk.

Overlap Between Dermatologist and DEXI heat Maps During Dermoscopic Image Analysis Using Eye Tracking

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Introduction: Assessing the overlap between heat maps generated by AI and dermatologist heat maps, created through visual inspection of dermoscopic images using an eye tracker, may help determine whether AI allocation aligns with clinically relevant features. This is a preliminary assessment of human visual attention and AI, which is a necessary step toward improving AI interpretability.

Methods: Dermatologists, blinded to the lesion diagnoses, viewed dermoscopic images of diverse skin lesions and were asked to provide their diagnosis. Eye-tracking heat maps were generated based on their visual inspection. For the same set of images, class activation maps—representing the estimated spatial importance—were generated using the DEXI algorithm (Canfield Scientific's Vectra software system). We then compared the overlap between the DEXI-generated heat maps and the eye-tracking heat maps using pixel-wise rank correlation for each individual dermatologist. Inter-dermatologist heat map overlap values were used as the highest expected reference for dermatologist-DEXI similarity. The lowest expected reference was defined by the mean (null) correlation value between the DEXI and any dermatologist for non-homologous image pairs.

Results: Four dermoscopists visually inspected 120 dermoscopic images using an eye tracker including melanomas, BCCs, SCCs, nevi, benign keratoses, and benign vascular lesions. The highest observed mean pairwise correlation between inter-dermatologist heat maps was 0.556. The lowest observed mean pairwise correlation between DEXI and any dermatologist for non-homologous image pairs was 0.434. The overall mean pixel-wise pairwise correlation between all dermatologist heat maps and the DEXI heat maps was 0.529.

Conclusion: There is high overlap between dermatologists' heat maps and the DEXI heat maps. The dermatologists and DEXI shared diagnostic anchors.

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