What’s New in Medical Dermatologic Therapy

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And Chairman
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Disclosure

Mark Lebwohl is an employee of Mount Sinai which receives research funds from: Abbvie, Amgen, Boehringer Ingelheim, Celgene, Eli Lilly, Janssen / Johnson & Johnson, Kadmon, Medimmune/Astra Zeneca, Novartis, Pfizer, Valeant and ViDac.

Dr. Lebwohl is also a consultant for Allergan, Aqua Leo-pharma, and Promius.
• Warts
• Vaccines
• JAK inhibitors
• New psoriasis therapies
• New eczema therapies


Intralesional immunotherapy compared to cryotherapy in the treatment of warts
Khozeimeh F, et al.
*Int J Dermatol.* 2017; 56:474-8

- 60 pts
- Candida antigen 0.1 cc IL q3w x ≤3 treatments
- Cryo x ≤10 treatments

*Cryo cures: 56.7%
Candida cures: 76.7%*
Early sexual experiences of teenage heterosexual males in Australia: a cross-sectional survey.
Chow EPF, et al. 

• 191 men in the study
• Median age at first oral sex was 16.4 years (IQR:15.5-17.7) and 16.9 years (IQR:16.0-18.0) for first vaginal sex.
• In previous 12 mos: oral sex (89.5%) and vaginal sex (91.6%)
• 32.6% report condom use at last vaginal sex
• Total lifetime female partners: n=1187
HPV viral load determination during pregnancy as a possible cervical cancer risk.


• 68% of pregnant women have evidence of HPV infection
The near disappearance of genital warts in young women 4 years after commencing a national human papillomavirus (HPV) vaccination programme.

Read TRH, et al.

*Sex Transm Infect.* 2011;87:544-7.
Quadrivalent vaccine proves highly effective in preventing HPV-associated anogenital warts and intra-epithelial neoplasms of the cervix, vagina, and vulva.


- 3 yr follow-up
- Vaccine 100% effective against genital warts, VIN, CIN, cancer
Reduced prevalence of oral human papillomavirus (HPV) 4 years after bivalent HPV vaccination in a randomized clinical trial in Costa Rica.

Herrero R et al.

Human papillomavirus and rising oropharyngeal cancer incidence in the United States.

Chaturvedi AK, et al.

The role of the human papillomavirus in oropharyngeal cancer.
Naidu A, et al.
Differences in history of sexual behavior between patients with oropharyngeal squamous cell carcinoma and patients with squamous cell carcinoma at other head and neck sites.


Oropharyngeal SCC assoc. w/ ↑ oral sex partners

- >9 lifetime sex partners (OR 39.2 [CI 8.2-187.3])
- >4 oral-genital sex partners (OR 8.6 [CI, 2.2-33.4])

Coffee consumption and the risk of oral, pharyngeal, and esophageal cancers in Japan: the Miyagi Cohort Study.
Naganuma T, et al.

Coffee consumption was associated with a lower risk of oral, pharyngeal, and esophageal cancers.
A vaccine to prevent herpes zoster and postherpetic neuralgia in older adults. Oxman MN et al. 


- 38,546 adults $\geq 60$ 1:1
- Zoster: vaccine – 315, placebo – 642
- PHN: vaccine – 27, placebo – 80
• Vaccine reduced zoster incidence by 51.3%.

• Reduced post-herpetic neuralgia by 66.5%.

- efficacy: 97.2% (95% CI, 93.7 to 99.0; P<0.001)
- severe ISR & systemic reactions within 7d: 17% vaccine, 3.2% placebo
Efficacy of the Herpes Zoster Subunit Vaccine in Adults 70 Years of Age or Older.

Cunningham AL, et al

- efficacy against herpes zoster: 91.3%
  (95% CI, 86.8 to 94.5; P<0.001)
- efficacy against postherpetic neuralgia: 88.8%
  (95% CI, 68.7 to 97.1; P<0.001)
- ISR & systemic rxn within 7d: (79.0% vs. 29.5%).
Immunogenicity and Safety of the HZ/su Adjuvanted Herpes Zoster Subunit Vaccine in Adults Previously Vaccinated with a Live-Attenuated Herpes Zoster Vaccine.

Grupping K, et al
Long-term immunogenicity and safety of an investigational herpes zoster subunit vaccine in older adults.


- 6 yrs post-vaccine → IgE-specific CMI & anti-gE antibody ↓ 20-25% from month 36, but > prevaccination values.
- 6 yrs → IgE-specific CMI → 3.8 times prevaccination value & anti-gE antibody concentration → ↑ 7.3 times

Median % change SALT score:
Peribulbar inflammation: 32.9%
No inflammation: 1.2%


- 5/10 patients repigmented at sites of sun or NB UVB exposure
Tofacitinib or adalimumab versus placebo for psoriatic arthritis.

Mease P, et al.

TILDRAKIZUMAB
PASI 75 Response Over Time

*P<0.001 vs PBO; †P<0.05 vs ETN; §P<0.001 vs ETN; P-values unadjusted for multiplicity.

P-values were calculated using the Cochran-Mantel-Haenszel (CMH) test stratified by body weight (≤90kg, >90kg) and prior exposure to biologic therapy for psoriasis.

Modified intention-to-treat population (ie, all randomized patients who received ≥1 dose of study medication).

The figure represents observed data only; data shown for Week 12 are based on missing data being imputed as non-responders.

PBO=placebo; TIL=tildrakizumab; ETN=etanercept.
Modified ITT population (all randomized patients who received ≥1 dose of study medication). Figure represents observed data only; data shown for Week 12 are based on missing data being imputed as non-responders.

Reich K, et al. EADV 2016, D3T01.1I Late Breaker Sponsored by Sun Pharmaceutical

**reSURFACE 1 and reSURFACE 2: TIL in chronic plaque psoriasis PASI 90 and PASI 100**

**Graphs showing responders (%) over weeks for PASI 90 and PASI 100.**

- **PASI 90:**
  - TIL 100 mg: 35%
  - TIL 200 mg: 52%
  - PBO→TIL 100 mg: 3%
  - PBO→TIL 200 mg: 1%
  - ETN: 32%

- **PASI 100:**
  - TIL 100 mg: 31%
  - TIL 200 mg: 26%
  - PBO→TIL 100 mg: 24%
  - PBO→TIL 200 mg: 23%
  - ETN: 35%
Voyage 1: **Guselkumab PASI 75**

Responders:

- Week 16: Placebo→Guselkumab (n=174) vs. Adalimumab (n=334) P<0.001 vs. ADA
- Week 24: Placebo→Guselkumab (n=174) vs. Adalimumab (n=334) P<0.001 vs. ADA
- Week 48: Placebo→Guselkumab (n=174) vs. Adalimumab (n=334) P<0.001 vs. ADA

### VOYAGE1: PASI 90 & PASI 100 response with guselkumab through 2 years

#### PASI 90

<table>
<thead>
<tr>
<th>Week</th>
<th>GUS (n=329)</th>
<th>Placebo (n=174)</th>
<th>ADA (n=334)</th>
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<td>44</td>
<td>80.1</td>
<td>32.3</td>
<td>31.1</td>
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#### PASI 100

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<th>Week</th>
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<th>Placebo (n=174)</th>
<th>ADA (n=334)</th>
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<tr>
<td>44</td>
<td>78.9</td>
<td>78.9</td>
<td>78.9</td>
</tr>
</tbody>
</table>

NRI = 72.3

GUS → Placebo → GUS
GUS → ADA → GUS

Griffiths CEM, et al. EADV 2017, D3T01.I Sponsored by Janssen Research and Development LLC
PASI 90 Response Rate (NRI) by Week in the Induction Phase

Visit Week

Percent of Responders

0% 20% 40% 60% 80%

1 2 4 6 8 10 12

Placebo  Ustekinumab  140 mg Q2W  210 mg Q2W  Weight-Based

AMAGINE-2

0% 20% 40% 60% 80%

3.24% 47.0% 49.3% 58.7% 70.3%

BRODALUMAB
PASI 100 Response Rate (NRI) by Week in the Induction Phase

AMAGINE-2

Visit Week

Percent of Responders

0% 10% 20% 30% 40% 50%

Placebo Ustekinumab 140 mg Q2W 210 mg Q2W Weight-Based

0.65%

BRODALUMAB
PASI 100: Brodalumab 210 mg Q2W vs. Ustekinumab (NRI*) AMAGINE-2 and AMAGINE-3

*Non-responder imputation (NRI) was used to impute missing data. Subjects who had return of disease are also imputed as non-responders for subsequent visits through week 52.
SCULPTURE: Long-term skin improvement responses with secukinumab 300 mg fixed interval (q4w) through 5 years

As observed (AO)
Multiple imputation (MI, n=168 at each time point)
LOCF (n=168 at each time point)

<table>
<thead>
<tr>
<th>Year</th>
<th>AO PASI 75 (%)</th>
<th>MI PASI 75 (%)</th>
<th>LOCF PASI 75 (%)</th>
<th>AO PASI 90 (%)</th>
<th>MI PASI 90 (%)</th>
<th>LOCF PASI 90 (%)</th>
<th>AO PASI 100 (%)</th>
<th>MI PASI 100 (%)</th>
<th>LOCF PASI 100 (%)</th>
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<tbody>
<tr>
<td>Year 1</td>
<td>88.9</td>
<td>-</td>
<td>-</td>
<td>68.5</td>
<td>-</td>
<td>-</td>
<td>43.8</td>
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<td>-</td>
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<td>Year 5</td>
<td>88.5</td>
<td>80.1</td>
<td>79.2</td>
<td>66.4</td>
<td>58.6</td>
<td>59.5</td>
<td>41.0</td>
<td>35.6</td>
<td>37.5</td>
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</table>

Year 1
(n=162)

Year 2
(n=152)

Year 3
(n=139)

Year 4
(n=132)

Year 5
(n=122)

PASI 75 (%)
PASI 90 (%)
PASI 100 (%)

Δ=~8%
Δ=~7%
Δ=~5%
IXORA-P: Efficacy and safety of continuous 2-weekly dosing of ixekizumab over 52 weeks in patients with moderate to severe psoriasis

Dose adjustment based on achievement of sPGA ≥2 at 2 consecutive visits during Week 12 through Week 40; investigators were blinded to the predefined criteria and timing

Langley RG, et al. EADV 2017, OP04.03 Sponsored by Eli Lilly and Company

IXORA- P: study design

• IXE q2w is better at Week 52

*P<0.05; †P<0.01; ‡P<0.001 vs IXE q4w  
‡Dose adjustment based on achievement of sPGA ≥2 at 2 consecutive visits during Week 12 through Week 40; investigators were blinded to the predefined criteria and timing
Bimekizumab demonstrates impressive joint and skin responses for psoriatic arthritis patients

Positive top line results from the UCB Phase 2b BE ACTIVE study underscore the potential of bimekizumab to significantly improve joint and skin symptoms in PsA patients

- The study achieved a stringent primary endpoint, with up to 46% of psoriatic arthritis (PsA) patients who received bimekizumab experiencing at least 50% improvement in PsA joint symptoms (ACR50), versus 7% with placebo, at week 12. These results were achieved in a mixed patient population, both biologic naïve and previously biologic exposed patients.
- Among patients with active skin lesions (BSA ≥3), up to 65% of patients who received bimekizumab also experienced at least 90% skin clearance (PASI90), a secondary endpoint, versus 7% of patients who received placebo, at week 12.
- These data build on the highly positive clinical results recently reported with bimekizumab in psoriasis and ankylosing spondylitis.
## Efficacy Results at Week 16

<table>
<thead>
<tr>
<th></th>
<th>ultiMMa-1**</th>
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<th>ultiMMa-2**</th>
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<tr>
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<td>Risankizumab</td>
<td>Ustekinumab</td>
<td>Placebo (PBO)</td>
<td>Risankizumab</td>
<td>Ustekinumab</td>
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<tr>
<td></td>
<td>150 mg</td>
<td>45/90 mg</td>
<td>(n=102)</td>
<td>150 mg</td>
<td>45/90 mg</td>
</tr>
<tr>
<td><strong>n=304</strong></td>
<td>(n=100)</td>
<td></td>
<td></td>
<td>(n=294)</td>
<td>(n=99)</td>
</tr>
<tr>
<td><strong>PASI 90</strong></td>
<td>75%</td>
<td>42%</td>
<td>5%</td>
<td>75%</td>
<td>48%</td>
</tr>
<tr>
<td><strong>sPGA 0/1</strong></td>
<td>88%</td>
<td>63%</td>
<td>8%</td>
<td>84%</td>
<td>62%</td>
</tr>
<tr>
<td><strong>PASI 100</strong></td>
<td>36%</td>
<td>12%</td>
<td>0%</td>
<td>51%</td>
<td>24%</td>
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<tr>
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<td>(n=304)</td>
<td>(n=100)</td>
<td>(n=294)</td>
<td>(n=99)</td>
<td></td>
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<tr>
<td>PASI 90</td>
<td>82%</td>
<td>44%</td>
<td>81%</td>
<td>51%</td>
<td></td>
</tr>
<tr>
<td>PASI 100</td>
<td>56%</td>
<td>21%</td>
<td>60%</td>
<td>30%</td>
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</table>
Percent Change in EASI From Baseline Through Week 16

**SOLO 1 & 2**
- Placebo qw (n=460)
- Dup 300 mg q2w (n=457)
- Dup 300 mg qw (n=462)

**CHRONOS**
- Placebo qw + TCS (n=264)
- Dup 300 mg q2w + TCS (n=89)
- Dup 300 mg qw + TCS (n=270)

**CAFÉ**
- Placebo qw + TCS (n=108)
- Dupilumab 300 mg q2w + TCS (n=107)
- Dupilumab 300 mg qw + TCS (n=110)

*P<0.0001 vs placebo or placebo + TCS. †Nominal P<0.0001 vs placebo + TCS. ‡Presented data are from the FAS-52 of patients who completed the study before the data cutoff. Week 16 statistics use the FAS. Patients who used rescue therapy or withdrew from the trial were classified as nonresponders in the statistical analysis. 1. Ferrándiz C et al. Presented at: EADV 2017; September 13–17, 2017; Geneva, Switzerland. Abstract FC07.09. 2. Blauvelt A et al. Lancet 2017;389:2287–2303. 3. De Bruin-Weller M et al. Presented at: EADV 2017; September 13–17, 2017; Geneva, Switzerland. Abstract D3T01.1B.
Topical tofacitinib for atopic dermatitis: a phase IIa randomized trial

Phase 2 study of baricitinib in adults with moderate to severe AD: EASI 50 through Week 16

EASI 50 at Week 16

<table>
<thead>
<tr>
<th>Week</th>
<th>Placebo + TCS</th>
<th>BAR 2 mg + TCS</th>
<th>BAR 4 mg + TCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>11</td>
<td>21</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>62</td>
<td>68</td>
</tr>
<tr>
<td>8</td>
<td>24</td>
<td>59</td>
<td>61</td>
</tr>
<tr>
<td>12</td>
<td>31</td>
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</tr>
<tr>
<td>16</td>
<td>37</td>
<td>57</td>
<td>61</td>
</tr>
</tbody>
</table>

Change from baseline in EASI score over time

<table>
<thead>
<tr>
<th>Placebo + TCS</th>
<th>BAR 2 mg + TCS</th>
<th>BAR 4 mg + TCS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>−46</td>
<td>−64</td>
</tr>
<tr>
<td></td>
<td>−65</td>
<td>−65</td>
</tr>
</tbody>
</table>

*P<0.05; †P≤0.01; ‡P≤0.001; aMixed-effects model of repeated measures; bLast observation is Week 16 LOCF

Guttman-Yassky E, et al. EADV 2017, FC04.01 Sponsored by Eli Lilly and Company
Phase 2b trial of upadacitinib in adults with moderate to severe AD: Primary and key secondary endpoints at Week 16

**Primary endpoint:**
% change in EASI score

- Placebo (n=39)
- UPD 7.5 mg (n=42)
- UPD 15 mg (n=42)
- UPD 30 mg (n=42)

**Key secondary endpoints:**
Responder rates

- Placebo (n=41)
- UPD 7.5 mg (n=42)
- UPD 15 mg (n=42)
- UPD 30 mg (n=42)

**Key secondary endpoint:**
% change in pruritus/itch NRS

- Placebo (n=37)
- UPD 7.5 mg (n=40)
- UPD 15 mg (n=37)
- UPD 30 mg (n=42)

*P<0.05, 1P<0.01, 2P<0.001 vs placebo *itch rated from 0 (no itch) to 10 (worst imaginable itch)

- Serious AEs occurred in 2/1/0 patients in the 7.5/15/30 mg groups and 1 patient in the placebo group
- No herpes zoster, malignancies, deaths or cases of pulmonary embolism or deep vein thrombosis were reported

- Dose response effect seen with all endpoints including IGA 0/1 and NRS response
- This study has exciting results and we are looking forward to seeing baseline and safety data

Phase 2b study of PF-04965842 in AD: IGA response and EASI score over 16 weeks

**IGA response of 0/1 and ≥2-point improvement**

- Placebo (n=55)
- PF-04965842 10 mg qd (n=49)
- PF-04965842 30 mg qd (n=51)
- PF-04965842 100 mg qd (n=56)
- PF-04965842 200 mg qd (n=55)

**Mean change from baseline in EASI score**

- Week 4: 27.8% (PF-04965842 10 mg qd), 44.5% (PF-04965842 30 mg qd)
- Week 12: 6.3% (PF-04965842 200 mg qd)

Gooderman M, et al. EADV 2017, late breaking news D3T01.1A Sponsored by Pfizer