What’s New in Systemic Therapy

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LIFE CHANGING MEDICATIONS

• New psoriasis therapies
• Dupilumab
• Omalizumab
• Vismodegib/Sonidegib
• 9-valent HPV vaccine
Drugs for Psoriasis and Psoriatic Arthritis

- ETANERCEPT
- ADA LIMUMAB
- INFLIXIMAB
- C ERT OLIZUMAB
- GOLIMUMAB
- USTEKINUMAB
- SECUKINUMAB
- IXEKIZUMAB
- APREMILAST
- METHOTREXATE
- CYCLOSPORINE
- ACITRETIN

- BRODALUMAB
- GUSELKUMAB
- TILDRA KIZUMAB
- RISANKIZUMAB
- LY3074828
Drugs for Psoriasis and Psoriatic Arthritis - ORAL

- ETANERCEPT
- ADALIMUMAB
- INFLIXIMAB
- CERTOLIZUMAB
- GOLIMUMAB
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Drugs for Psoriasis and Psoriatic Arthritis - FEW INJECTIONS

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Drugs for Psoriasis and Psoriatic Arthritis - FEW INJECTIONS

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Drugs for Psoriasis and Psoriatic Arthritis –
LONG Hx & ↓ CARDIAC DISEASE

- ETANERCEPT
- ADAHILIMABUMAB
- INFLIXIMAB
- CERTOLIZUMAB
- GOLIMUMAB

- USTEKINUMAB
- SECUKINUMAB
- IREKIZUMAB
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Drugs for Psoriasis and Psoriatic Arthritis –
OBESITY: ADJUST FOR WEIGHT

- ETANERCEPT
- ADALIMUMAB
- INFLIXIMAB
  - CERTOLIZUMAB
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Drugs for Psoriasis and Psoriatic Arthritis – OBESITY

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Drugs for Psoriasis and Psoriatic Arthritis – OBESITY: High Efficacy

- ETANERCEPT
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Drugs for Psoriasis and Psoriatic Arthritis - PSA

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Drugs for Psoriasis and Psoriatic Arthritis - FAST

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Dupilumab Phase 2b Study: Mean Percent Change In EASI at Week 16 (LOCF†)

Mean Percent Change In EASI at Week 16 (LOCF†)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Least squares mean % change in EASI from baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>-18.1</td>
</tr>
<tr>
<td>Dupilumab 100 mg q4w</td>
<td>-44.8</td>
</tr>
<tr>
<td>Dupilumab 300 mg q4w</td>
<td>-63.5</td>
</tr>
<tr>
<td>Dupilumab 200 mg q2w</td>
<td>-65.4</td>
</tr>
<tr>
<td>Dupilumab 300 mg q2w</td>
<td>-68.2</td>
</tr>
<tr>
<td>Dupilumab 300 mg weekly</td>
<td>-73.7</td>
</tr>
</tbody>
</table>

†LOCF imputation method for missing data and patients who received rescue medications.

EASI: Eczema and Severity Index; LOCF: last observation carried forward; q2w: every 2 weeks; q4w: every 4 weeks.

Dupilumab SOLO 1 & 2: Proportion (%) of Patients with IGA 0 or 1 and ≥ 2-point Reduction From Baseline at week 16

SOLO 1

<table>
<thead>
<tr>
<th>Group</th>
<th>SOLO 1 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>10</td>
</tr>
<tr>
<td>Dupilumab 300 mg q2w</td>
<td>38*</td>
</tr>
<tr>
<td>Dupilumab 300 mg qw</td>
<td>37*</td>
</tr>
</tbody>
</table>

SOLO 2

<table>
<thead>
<tr>
<th>Group</th>
<th>SOLO 2 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>8.5</td>
</tr>
<tr>
<td>Dupilumab 300 mg q2w</td>
<td>36*</td>
</tr>
<tr>
<td>Dupilumab 300 mg qw</td>
<td>36*</td>
</tr>
</tbody>
</table>

* P<0.0001.
IGA: investigator’s global assessment; qw: weekly; q2w: every 2 weeks.
Dupilumab CHRONOS: Proportion (%) of Patients Achieving EASI-75 at Week 52

- **Placebo + TCS**: 22%
- **Dupilumab 300 mg q2w + TCS**: 65% (*p<0.0001*)
- **Dupilumab 300 mg qw + TCS**: 64%

EASI: eczema area and severity index; q2w: every 2 weeks; qw: weekly; TCS: topical corticosteroid.

Source: Data on file
Patients achieving IGA0/1 at Week 12
- 18.9% for placebo vs 33.3% for lebrikizumab 125 mg q4w

There appears to be a dose-response relationship: 125 mg q4w did not appear to have reached an efficacy plateau at Week 12, suggesting that a longer treatment duration may be beneficial

*P<0.05 vs placebo; SD, single dose

Simpson EL, et al. EADV 2016, D3T01.1F
Phase 2 study of nemolizumab in patients with moderate to severe AD: Change in pruritus and sleep disturbance VAS

Time course of percentage change in pruritus VAS

Time course of percentage change in sleep disturbance VAS

Mean ± SE; Per-protocol population, no imputation, excluded data after rescue therapy

Ruzicka T, et al. EADV 2016, FC04.02 Sponsored by Chugai Pharmaceutical Co. Ltd.
Omalizumab treatment reduced mean weekly Itch Severity Score by Week 1

- Rapid-onset, dose-response, sustained efficacy at Wk 24 compared with Wk 12

Maurer M, et al. EADV 2013: FC09.1. Sponsored by Genentech, Inc. and Novartis
All doses of omalizumab significantly reduced mean weekly ISS vs placebo (primary endpoint)

- Placebo: n=80, mean change from baseline = -3.63
- Omalizumab 75 mg: n=77, mean change from baseline = -6.46, p=0.0010
- Omalizumab 150 mg: n=80, mean change from baseline = -6.66, p=0.0012
- Omalizumab 300 mg: n=81, mean change from baseline = -9.40, p<0.0001

p values derived from t-test of least squares means of the differences between each of the omalizumab groups and placebo group using ANCOVA controlling for baseline weekly ISS (<13 vs ≥13) and baseline weight (<80 kg vs ≥80 kg). Baseline observation carried forward imputation was used for missing values.

Figure. Time to Urticaria Relapse After Omalizumab Treatment

Each patient is represented by a square, with colors indicating the type of urticaria disease. Two colors within a single square indicate comorbidity of 2 urticaria diseases.
Inhibition of the hedgehog pathway in advanced basal-cell carcinoma.
Von Hoff DD et al.

- 33 patients – metastatic or advanced BCC
- GDC – 044a → 16 partial and 2 complete responses
- fatigue, hyponatremia, muscle spasm, afib
Randomized, double-blind study of sonidegib (LDE225) in patients with locally advanced or metastatic basal-cell carcinoma

J Clin Oncol 32:5s, 2014 (suppl; abstr 9009a^)
MR Migden, etal

SONIDEGIB
Quadrivalent vaccine proves highly effective in preventing HPV-associated anogenital warts and intra-epithelial neoplasms of the cervix, vagina, and vulva.
Garland S et al.

- 3 yr follow-up
- Vaccine 100% effective against genital warts, VIN, CIN, cancer
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.
Overall efficacy of HPV-16/18 AS04-adjuvanted vaccine against grade 3 or greater cervical intraepithelial neoplasia: 4-year end-of-study analysis of the randomised, double-blind PATRICIA trial.

Vaccine efficacy:
45.7-100% against CIN3+
76.9-100% against adenoca-IS
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.


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])

Attribution of 12 high-risk human papillomavirus genotypes to infection and cervical disease.
Joura EA, et al.

>85% CIN3/AIS, >70% CIN2, ~50% CIN1 attributed to HPV6/11/16/18/31/33/45/52/58
Seroprevalence and Associated Factors of 9-Valent Human Papillomavirus (HPV) Types among Men in the Multinational HIM Study.

Rahman S, et al

“28.3% of men were seropositive for at least one of the 9vHPV vaccine type”
AAD Practice Management Center
Office of Access to Care and Treatment
Rachna Chaudhari

www.aad.org/piorauth