PSORIASIS

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Pharmaceutical Activities

• Speaker: Aqua, Celgene, Pfizer
• Principal Investigator:
• Allergan ♦ Amgen ♦ Dr Reddys ♦ Exeltis ♦ Ferndale ♦ Galderma ♦ Genentech ♦ Glaxo ♦ Helix BioMedix ♦ Intraderm ♦ Lilly ♦ Oculus ♦ Quinnova ♦ Taro ♦ Pfizer ♦ Valeant
Psoriasis is important because....... 

Impact on lives: affects 7.5 million Americans 

Impact on health care: Treatment cost alone exceeds $50 billion/year in the US
Added Cost of Psoriasis: Linked to:

- Obesity
- Dyslipidemia
- Hypertension
- Diabetes
Psoriasis

Affects Caucasians > Blacks and Asians
Equal frequency Males and Females
May occur at any age (mean age of onset = age 28)

Psoriasis onset before age 15:
associated with more severe disease
more likely to have a positive family history
Psoriasis Subtypes

- Plaque
- Guttate
- Pustular
- Inverse
- Erythrodermic
- Nail
- Psoriatic arthritis
Plaque Psoriasis (80%)

- Most common locations
Hallmark of Psoriasis: Plaques
Why Plaques?
(increased epidermal turnover)

3 days vs 28 days
Guttate Psoriasis
Guttate psoriasis

- Multiple small oval to round patches and plaques
- Affects large body surface (trunk and extremities)
- Most common form in children
- Streptococcal throat infection a common trigger
- May spontaneously remit
Pustular psoriasis
Pustular psoriasis

- Multiple (sterile) pustules surrounded by erythema
- Can be generalized or localized to the hands and feet (painful and disabling)
May be localized to hands and feet
Inverse (Flexeral) Psoriasis
Flexeral psoriasis

• Affects the axillae, groin and under breasts

• Well demarcated and smooth

• Aggravated by sweat

• and fiction
Erythrodermic psoriasis
Erythrodermic psoriasis

Acute onset

May be accompanied by
Fever

May be accompanied by
high-output cardiac failure
Nail psoriasis
Nail pitting
Nail bed hyperkeratosis
Onycholysis
Oil drop deformity
Psoriatic arthritis

10-20% of psoriasis patients

May resemble rheumatoid arthritis but negative RF

Can affect any joint but is most common in fingers and toes (especially distal interphalangeal joints)
Enthesitis
Dactylitis
What causes psoriasis?

ENVIROMENTAL TRIGGER + HEREDITY = PSORIASIS
TARGETING DUAL DISEASE PROCESSES

Two key disease processes underlie psoriasis\(^1\)

- **Cell proliferation**
- **Inflammation**

**AIM:**
- Reduced cell turnover time and reduce scale
- Prevent the infiltration of inflammatory cells into the epidermis

Approach to psoriasis management

1st-line therapies
- Topicals

2nd-line therapies
- Phototherapy
- Systemic drugs

3rd-line therapies
- Biologics

Oral PDE4 Inhibitor
First Line Therapy: Topicals
SECOND LINE THERAPY

Narrowband ultraviolet light
Second Line Therapy: oral systemic agents

Require lab monitoring

MTX and acitretin contraindicated in pregnancy!!
Apremilast (Otezla)

Oral agent
Does not require lab monitoring
No increased risk of infection

Drawbacks:
Cost
Not as effective as biologics
GI: diarrhea
Apremilast MOA
Biologics: a revolution in the treatment of psoriasis

Given by injection

High degree of efficacy

Relatively low risk of infection

Expensive
3 MAIN CLASSES

- TNF Inhibitors
- IL12/23 Inhibitor
- IL17 Inhibitors
Psoriatic plaque

Lymphocytes
Neutrophiles
IL-1A+F
IL-22
Secukinumab
Ixekizumab
IL-17A
IL-17RA
Brodalumab
IL-17A
IL-17F
Keratinocyte activation and proliferation
Guselkumab
Tildakizumab
IL-6
IL-23
Secukinumab
Ixekizumab
IL-1β
IL-6
TNF-α
Tildakizumab
Guselkumab
IL-17A+F
IL-22
IL-26

Dendritic cells
Th1
IFN-γ
TNF-α
IL-12
Th2

CFIOI
A3 adenosine receptor
Cytoplasm
Induction of apoptosis
NF-κB
TNF-α

G-coupled protein
Phosphodiesterase
Apremilast
Cytoplasm

Acta Dermatol Venereol
Time to Play: Guess the biologic 😊
Phil Mickelson
Pro Golfer
Patient
For adults with moderate to severe chronic plaque psoriasis who are ready for systemic therapy or phototherapy,...
For adults with moderate to severe chronic plaque psoriasis who are ready for systemic therapy or phototherapy, ...

Humira®
adalimumab
4 doses a year after 2 starter doses
STELARA® is a 45 mg or 90 mg injection given under the skin as directed by your doctor at weeks 0, 4, and every 12 weeks thereafter.

4 doses a year after 2 starter doses
Close to the people you love

By prescription only. For adults with moderate to severe plaque psoriasis who are candidates for systemic therapy or phototherapy.
taltz (ixekizumab) injection

Close to the people you love

By prescription only. For adults with moderate to severe plaque psoriasis who are candidates for systemic therapy or phototherapy.
On the horizon....... 

A cure?