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<u>Name</u>	<u>Name of Ineligible companies with which relevant financial relationships</u>	<u>Nature of Relationship</u>
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Dr. Richard Pierce	Sensus Healthcare	Employee, Medical Director, Stockholder

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7 Dermatology Cases Studies: Misunderstandings, Misdiagnosis and Alarming Trends

Richard Pierce, MD, FAAD

Conflict of Interest Disclosure

- Medical Director for Sensus Healthcare, a company that manufactures Superficial Radiation Therapy machines
- Presentation will avoid all related topics (skin cancer)

Objectives

1. **Simple:** non-comprehensive (best treatments, not every treatment)
2. **Conversational:** a better way to learn

Diagnosis 1

#1 most frequently misdiagnosed by primary care



Nummular Dermatitis:

Associations	Treatments	Editorial
<ul style="list-style-type: none">• Eczema (what is eczema?)• Genetics• Environment	<ul style="list-style-type: none">• Topical Steroids/non-steroidal• Moisturize• Bathing routine• Biologic medications (dupilumab)	<ul style="list-style-type: none">• Simplify your topical steroid plan• Highly effective non-steroidal medications exist (start with tacrolimus)

What is this?



Tinea

Dermatophytosis



Tinea vs Nummular Dermatitis: How to tell the difference



Simplicity: Just feel the skin, nummular dermatitis is rough textured, tinea is smooth (**most useful tip in this lecture**)
KOH prep.

*If it gets better with topical steroids, then worse, consider tinea

Tinea vs Nummular Dermatitis: How to tell the difference



Diagnosis 2



Diagnosis 2



Diagnosis 2

(scabies)

Associations	Treatments	Editorial
<ul style="list-style-type: none">• Transmission by close skin contact• Hands/wrists/waist/elbows/penis• Itchy• Crusted scabies is uncommon (immunosuppression)	<ul style="list-style-type: none">• Permethrin (head to toe), wash after 12 hours, treat again in 7-14 days• Oral Ivermectin• Permethrin and Oral Ivermectin for crusted• Spinosad• Treat close contacts (household members)• Wash bedding in hot water	<ul style="list-style-type: none">• This can be hard to diagnose• If the penis is not involved, consider alternative diagnosis• Permethrin and Oral Ivermectin for non-crusted• Expect post treatment dermatitis, tell your patient

Diagnosis 3

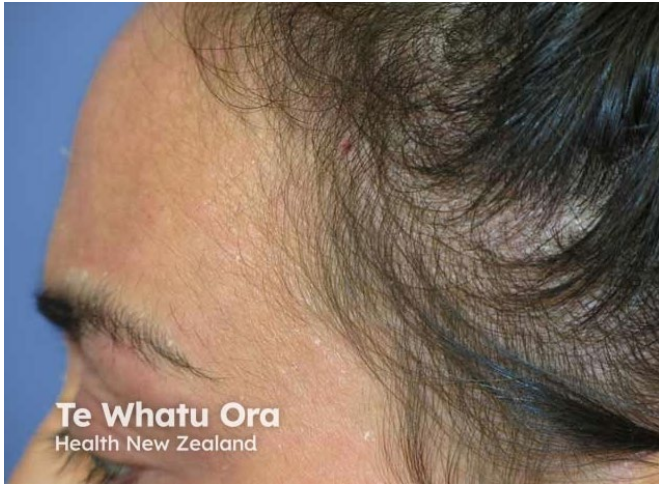


Diagnosis 3

(non-scarring hair loss)



Non-scarring Alopecia



Telogen Effluvium

- Sudden, diffuse shedding
(anagen shift to telogen)
- 3 months after stress/illness
- Self limited



Androgenetic Alopecia

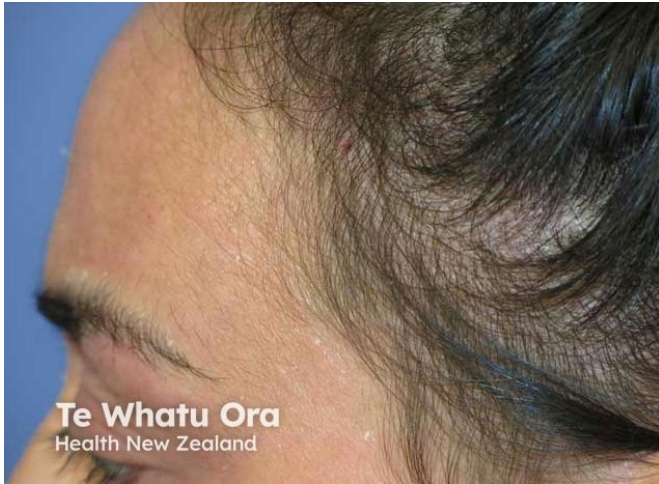
- Gradual, patterned
- Genetic
- DHT



Alopecia Areata

- Sudden, patchy
- Eyebrow, eyelashes, facial
and body hair
- Immune system attacks
hair follicles

Non-scarring Alopecia



Telogen Effluvium

- Sudden, diffuse shedding (anagen shift to telogen)
- 3 months after stress/illness
- Self limited



Androgenetic Alopecia

- Gradual, patterned
- Genetic
- DHT
- Alarming trends



Alopecia Areata

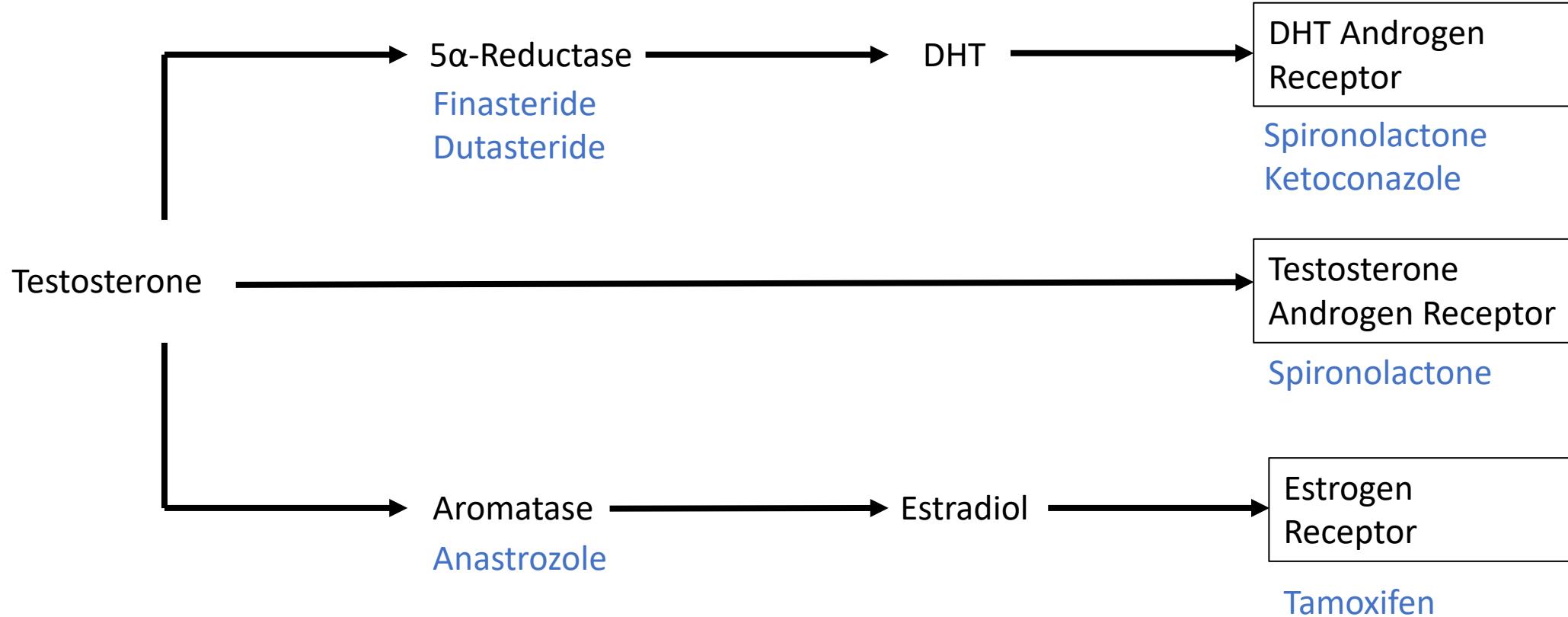
- Sudden, patchy
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The Rise of Hormone Replacement Therapy for Vitality, Wellness, and Longevity

Misunderstandings and Alarming Trends

- PCM and patient attitudes
- What is alarming?
 - Dosing protocols
 - Lab monitoring
 - General understanding
 - Dermatologic side effects (androgenetic alopecia, acne, gynecomastia)

Androgenic pathway



Finasteride

FDA Package Insert

Clinical Studies for PROPECIA (finasteride 1 mg) in the Treatment of Male Pattern Hair Loss

In three controlled clinical trials for PROPECIA of 12-month duration, 1.4% of patients taking PROPECIA (n=945) were discontinued due to adverse experiences that were considered to be possibly, probably or definitely drug-related (1.6% for placebo; n=934).

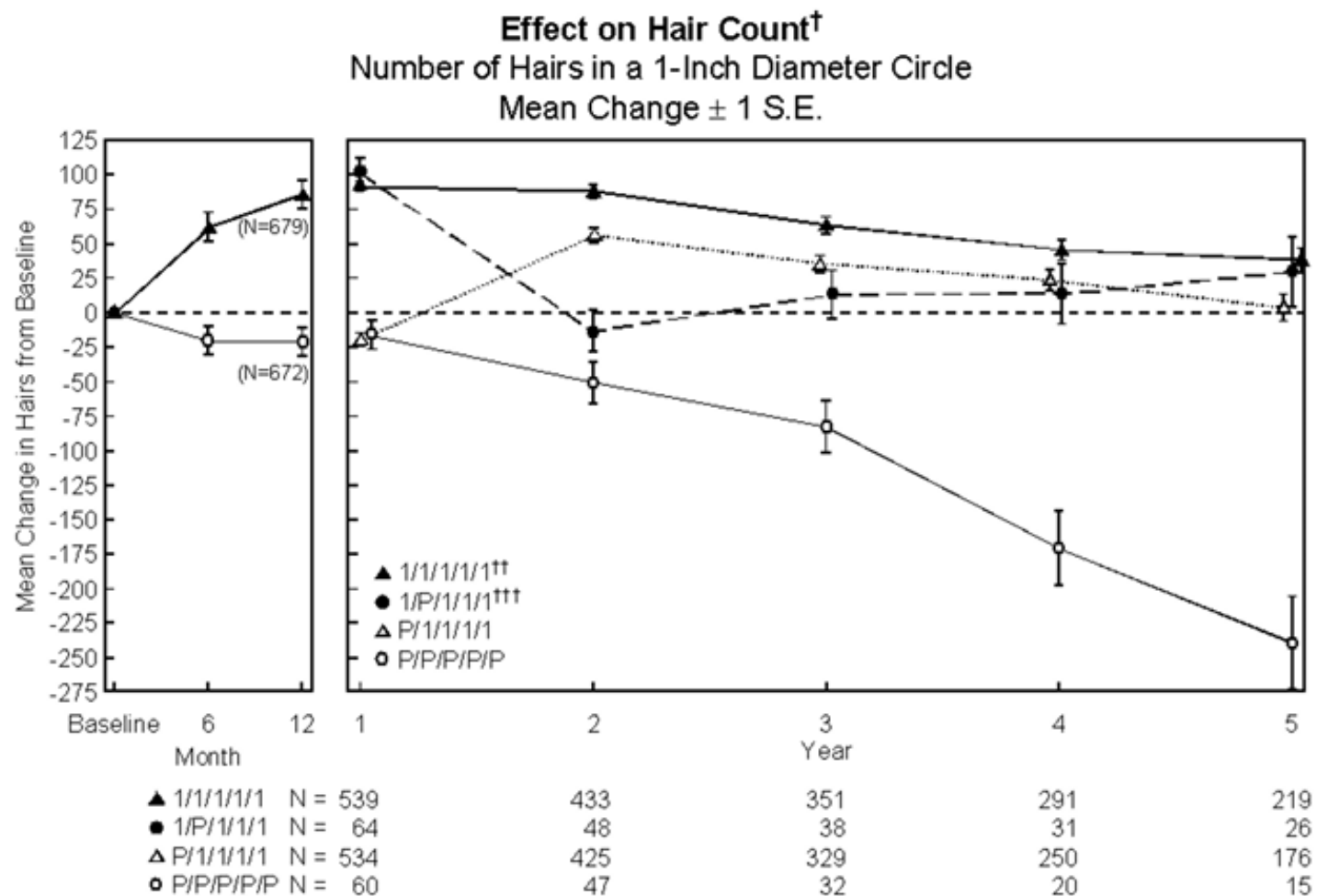
TABLE 1 Drug-Related Adverse Experiences for PROPECIA (finasteride 1 mg) in Year 1 (%) MALE PATTERN HAIR LOSS		
	PROPECIA N=945	Placebo N=934
Decreased Libido	1.8	1.3
Erectile Dysfunction	1.3	0.7
Ejaculation Disorder (Decreased Volume of Ejaculate)	1.2 (0.8)	0.7 (0.4)
Discontinuation due to drug- related sexual adverse experiences	1.2	0.9

5.3 Increased Risk of High-Grade Prostate Cancer with 5 α -Reductase Inhibitors

Men aged 55 and over with a normal digital rectal examination and PSA \leq 3.0 ng/mL at baseline taking finasteride 5 mg/day (5 times the dose of PROPECIA) in the 7-year Prostate Cancer Prevention Trial (PCPT) had an increased risk of Gleason score 8-10 prostate cancer (finasteride 1.8% vs placebo 1.1%). [See Adverse Reactions (6.1).] Similar results were observed in a 4-year placebo-controlled clinical trial with another 5 α -reductase inhibitor (dutasteride, AVODART) (1% dutasteride vs 0.5% placebo). 5 α -reductase inhibitors may increase the risk of development of high-grade prostate cancer. Whether the effect of 5 α -reductase inhibitors to reduce prostate volume, or study-related factors, impacted the results of these studies has not been established.

Finasteride

FDA Package Insert

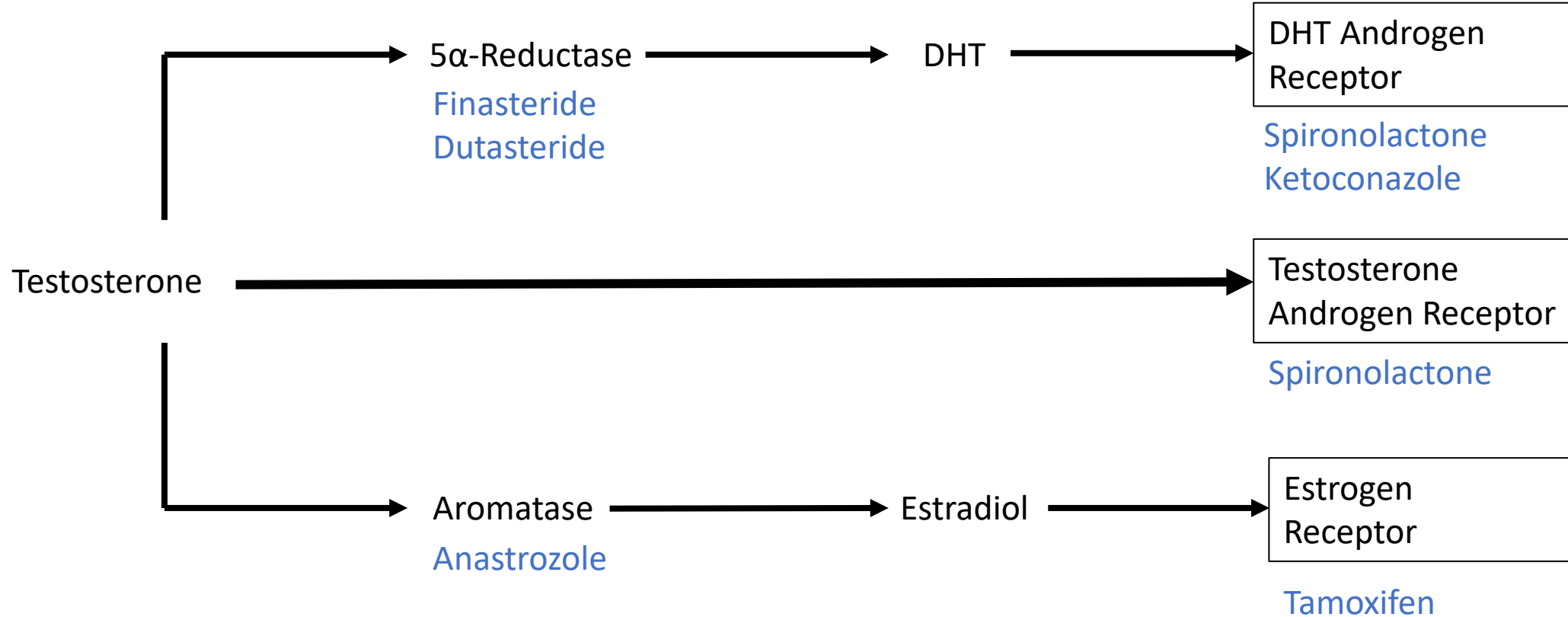


[†] Pooled data from vertex hair loss studies

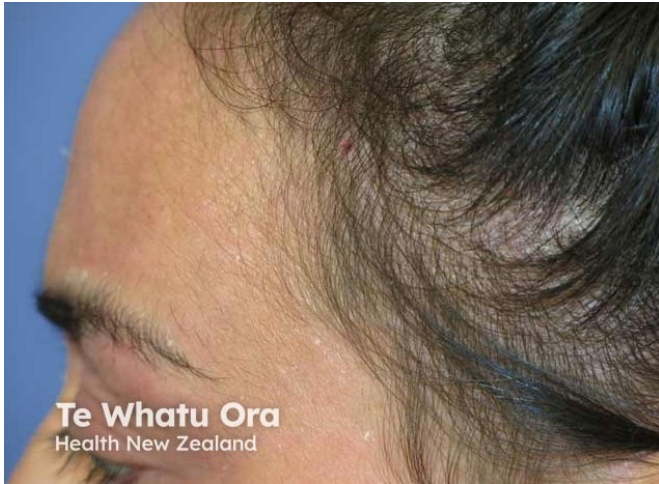
^{††} 1 = finasteride, 1 mg

^{†††} P = placebo

Androgenic pathway



Non-scarring Alopecia



Telogen Effluvium

- Sudden, diffuse shedding (anagen shift to telogen)
- 3 months after stress/illness
- Self limited



Androgenetic Alopecia

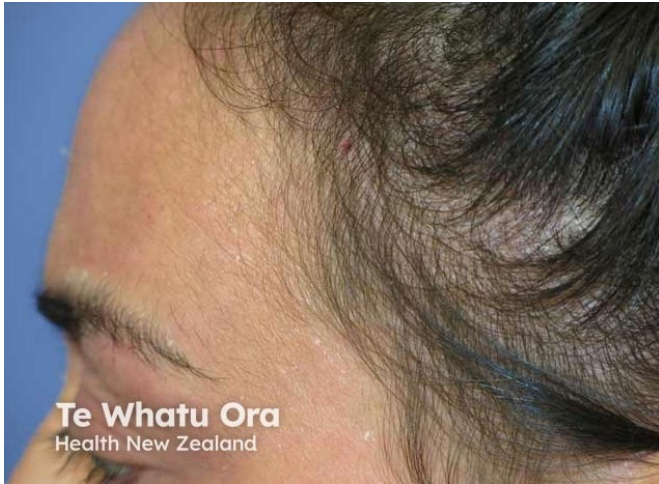
- Gradual, patterned
- Genetic
- DHT



Alopecia Areata

- Sudden, patchy
- Eyebrow, eyelashes, facial and body hair
- Immune system attacks hair follicles

Non-scarring Alopecia Treatments



Telogen Effluvium

- Sudden, diffuse shedding
(anagen shift to telogen)
- 3 months after stress/illness
- Self limited

Minoxidil



Androgenetic Alopecia

- Gradual, patterned
- Genetic
- DHT

Minoxidil
Finasteride
Dutasteride (women)



Alopecia Areata

- Sudden, patchy
- Eyebrow, eyelashes, facial and body hair
- Immune system attacks hair follicles

Minoxidil
Corticosteroids (ILK, topical, systemic)
JAK inhibitors

Lab Work for Alopecia

Screening (when diagnosis is unclear)	If clinically indicated	Editorial
<ul style="list-style-type: none">• CBC• TSH, T3, T4• Ferritin• Vitamin D / B12	<ul style="list-style-type: none">• ANA• DHEA /Testosterone (women)• Zinc• Prolactin	<ul style="list-style-type: none">• Hair loss is usually not the presenting symptom• Correcting the abnormality may not improve the hair loss

Diagnosis 4



Scarring Alopecia

Central Centrifugal Cicatricial Alopecia (CCCA)



- African decent
- Scarring , crown->outward
- Multifactorial-immune destruction of follicle, chemical treatments, traction


Clobetasol
Doxycycline
Hydroxychloroquine
Minoxidil

Diagnosis 5





Prurigo Nodularis

Associations	Treatments	Editorial
<ul style="list-style-type: none"> Atopic dermatitis Anxiety/ depression Other causes of pruritis: <ul style="list-style-type: none"> diabetes chronic renal failure cardiovascular disease hepatitis C HIV infection polycythemia 	<ul style="list-style-type: none"> High potency topical steroid Occlusion/Protection (Cordran vs band-aid+ clobetasol) Dupilumab (IL-4) 	<ul style="list-style-type: none"> <i>First encounter:</i> Build trust: do not blame, diagnose, treat a limited area, f/u 3 weeks <i>Second encounter:</i> Use the trust: refer to derm*, address anxiety/depression, expand treatment area, give encouragement, f/u 4 weeks <i>Third encounter:</i> Consider dupilumab

*Dermatology: inject Kenalog, cryotherapy, dupilumab

Diagnosis 5





Diagnosis 6





Neurotic Excoriation/Compulsive Skin Picking

Associations	Treatments	Editorial
<ul style="list-style-type: none">• Anxiety/ depression• Bipolar disorder• OCD• BDD• Substance abuse• Acne	<ul style="list-style-type: none">• Treat underlying disorder (antidepressant/antipsychotic)• Occlusion/protection• Treat acne if present	<ul style="list-style-type: none">• <i>Build trust:</i> do not blame, diagnose, address anxiety/depression, refer to dermatology*• <i>Simplicity:</i> excoriations are not primary• Key to success: physician communication

*Dermatology: patient will want an “expert” opinion to rule out primary skin disorder

BONUS: Diagnosis 7



Stasis Dermatitis





Sources

<https://www.aafp.org/pubs/afp/topics/by-topic.skin-conditions.html>

The Color Atlas of Family Medicine Second edition Richard Usatine

Imaging Licensing

- Dermnet- <https://dermnetnz.org/>