

Introduction

Finding a lesion on someone that's **Hypopigmented** isn't a big deal, but it's often the subject of board examinations. There isn't one algorithm to follow - just a loose group of associations to remember - which is perfect for building a summary table.

Tinea Versicolor

When there's a **patchy depigmentation** one of the things to consider is a fungal infection with **Malassezia globosa**. A normal fungus present in skin flora, it's unclear what causes it to overgrow, though **Cushing's** and **Immunosuppression** are risk factors. Hypopigmentation is a result of inhibited melanin production. Patients present with **small scaly patches of varying color** (typically in summer, as these spots don't tan). Diagnosis is made by **KOH prep** of the scale that reveals **hyphae + spores** that looks like "spaghetti and meatballs." Treat with topical **selenium sulfide**.

Vitiligo

An **autoimmune disease** that causes **small sharply demarcated depigmented macules or patches** with irregular borders that can coalesce. They're usually found on the **extremities, face, and genitalia**. Lesions can be picked up by the **Wood's Lamp Test** (no pigment at all), but definitive diagnosis is confirmed by the **absence of melanocytes** on histology. It's associated with autoimmune disorders such as hypothyroidism and lupus. Treatment is often ineffective. Steroids and UV light have been attempted.

Albinism

If a patient is **completely white** with **pale hair** and **pale eyes** they likely have albinism. It's a **genetic disorder** of **tyrosinase** (normal melanocytes, deficient enzyme) so there is no treatment; the diagnosis is clinical. Simply protect these people from UV exposure and educate on preventing skin cancer. Albinism is tested against Piebaldism and PKU, which can result in pale-skinned kids.

Ash Leaf

A **child** with a single hypopigmented (**NOT depigmentation**) spot that's positive on **Wood's Lamp** is an Ash Leaf Spot and pathognomonic for **Tuberous sclerosis**. Watch for early onset seizures. Get a CT scan to visualize the tubers in the brain. Look for **Shagreen patches** and adenoma sebaceum.

*Piebaldism is **inadequate melanocyte migration** with a **white forelock** on the scalp)*

*Albinism is **inadequate tyrosinase activity**, total depigmentation in all surfaces*

*PKU is a deficiency in phenylalanine hydroxylase, causing a **relative deficiency of tyrosine**. Screened for at birth. Intellectual disability, seizures follow if not for a special diet*

Shagreen patches (elevated fleshy collagen plaques)

Adenoma Sebaceum (hyperplastic blood vessels)

Dz	Patient	Diagnosis	Biopsy	Treatment	Path	Risk Factors
Tinea Versicolor	Small Patchy Scales of varying color Back and Chest	KOH Prep "spaghetti and meatballs"	Ø	Topical selenium Sulfide	Overgrowth of fungus (normal flora)	Cushing's Immuno↓
Vitiligo	Macule or Papule on Hands and Face	Wood's Lamp enhances lesion	Absent Melanocytes on histo prep	Ø tx Ppx vs Sun	Autoimmune	Other Autoimmune
Albinism	All body		Genetic Testing	Ø tx Ppx vs Sun		
Ash Leaf	Hypopigmented lesion from birth	Wood's Lamp then CT	Ø	See Peds		