tinea nigra
(phaeoannelomyces werneckei)
Tinea nigra

**Background:** Tinea nigra is an uncommon superficial dermatomycosis caused by *Phaeoannellomyces werneckii* (formerly classified as *Exophiala werneckii* and *Cladosporium werneckii*). The infection appears as a hyperpigmented macule, which usually occurs on the palms. The soles and, more rarely, other areas of the body can also be affected.
Pathogenic agent

• **The Organism:**
  *Phaeoannellomyces werneckii* (Exophiala werneckii)

• **Morphology:**
  Pigmented (brown or olive) branched, septate hyphae with budding cells are seen in KOH prep. In culture, a pigmented colony will form.
Ecology

- *P. werneckii* is found in the tropics and subtropics of several continents.
- The organism has been found in soil, sand, and some fish.
Incubation period

• Typically, the incubation period is 2-7 weeks, although in experimental inoculation, the incubation period was 20 years. The fungus exhibits lipophilic adhesion to human skin; it is exclusively found in the stratum corneum and does not extend into the stratum lucidum.
Anatomy & Pathology

• **Anatomy**: A superficial infection of the top layers of the cornified layer. **Pathology**: Fungal elements can usually be seen in the cornified layer. Occasionally, hyperkeratosis may be seen, but there is usually little evidence of inflammation.
Tinea nigra palmaris
Pathogenesis

• *P. werneckii* receives nourishment from its utilization of decomposed lipids. Its tolerance to an environment with a high salt concentration and a low pH allows the fungus to thrive in human skin.

• A pigmentary change in the skin results in a dark-colored macule due to the accumulation of a melaninlike substance in the fungus.
Pathophysiology

Tinea nigra is a superficial mycosis of the stratum corneum. Infection is believed to occur as a result of inoculation from a contamination source such as soil, sewage, wood, or compost subsequent to trauma in the affected area.
Tinea Nigra Clinical Picture

• **What:** Light to dark brown macules are typical, and slight scale might be present. Lesions spread centrifugally. The disease is almost always asymptomatic.

• **Where:** It classically occurs on the palms of the hands, but can present on the feet or other parts of the body.

• **Who:** More common among those living in the tropics or subtropics. No other identified risk factor.
Diagnosis

• **The Diagnosis**: KOH prep must be performed.

• **The Differential**: Malignant melanoma, lentigo, junctional nevi, pigmentation from Addison's disease, stains from dyes or chemicals.
Pathology

- The pigmented elements of P. Werneckii are seen in the superficial layers of the stratum corneum in this H&E stain.
Tinea nigra

- *Tinea nigra of the palm.*
- A light brown macule extends over the thenar eminence.
- The palm is the most common site of tinea nigra.
Tinea Nigra Treatment

Popular Recommendations:

- Topical azole cream
  
or
  Whitefield's ointment
  
or
  Topical thiabendazole

- Any topical antifungal is likely to be effective if used bid for 2-3 weeks.
- Griseofulvin is *not* effective