Defining Prurigo Nodularis (PN)

Get to Know PN

- PN is a distinct, underrecognized, rare, chronic, and debilitating neuroinflammatory skin disease.1-3
- PN is characterized by symmetrical, disfiguring, often excoriated skin nodules that cover extensive areas of the body, including extensor surface of arms, legs, and occasionally parts of trunk.1-3
- Lesions may vary in quantity, size, and color (red, brown, black, and natural skin color).3-5
- Patients may also experience pain, burning, and stinging sensation in their skin lesions.3,6,7
- Prurigo nodules can become lichenified and crusted, with pigmentation changes to the surrounding skin.2,3,7
- Scratching behaviors further damage the skin, often resulting in bleeding.1,7
- Skin lesions in PN are accompanied by intense and intractable itch.1-3
- Itch disturbs the most basic activities, including sleep, to a great extent in more than 60% of patients with PN.8,9

PN Patient Demographics

- PN affects all ages; however, it is most common in patients aged between 51 and 65 years.1
- The prevalence of PN is 3 times higher in African American populations compared to Caucasians.12,13
- PN is more prevalent in women (53%) compared to men (47%).11
- Majority of patients with PN have other comorbidities, including dermatologic, systemic, neurologic, and psychological diseases.3,10,11,13
- Cardiovascular disease, chronic kidney disease, COPD, hypertension, and type 1 and 2 diabetes comprise the common comorbidities in patients with PN.13
- Patients with PN are more likely to suffer from depression and anxiety compared to healthy individuals.10,14-17
What is the Pathophysiology of PN?

- PN pathophysiology involves a dysregulated interaction between the nervous system, immune system, and skin.

- Itch, inflammation, epithelial dysregulation, and tissue remodeling are 4 aspects of PN.

- Overactivation of the immune system induces inflammation and sensitizes sensory neurons to pruritogens.

- Overactivated neurons in turn produce inflammatory cytokines resulting in inflammation in the dermal layers of the skin.

- Keratinocyte differentiation and activation of fibroblasts are involved in skin integrity and tissue remodeling.

- Misdiagnosis and lack of effective treatment options lead to substantial burden for patients.

- IL-31 is a neuroimmune cytokine emerging as a primary mediator of PN that links the immune and nervous systems.

References:


