

# Defining Prurigo Nodularis (PN)

Itch disturbs the most basic activities, including sleep, to a great extent in more than

**60%**  
of patients with PN<sup>8</sup>

Most common in patients aged between

**51 AND 65 YEARS<sup>1</sup>**

PN is

**3 TIMES HIGHER**

in African American populations compared to Caucasians<sup>12,13</sup>

PN is more prevalent in women

**53%**  
compared to men 47%<sup>11</sup>

## Get to Know PN

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

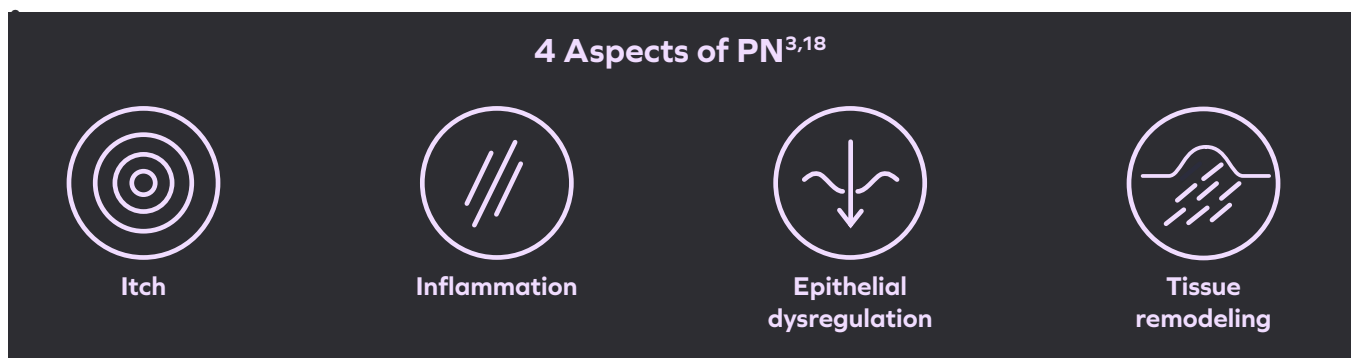
## PN Patient Demographics

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

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# What is the Pathophysiology of PN?

- PN pathophysiology involves a dysregulated interaction between the nervous system, immune system, and skin<sup>3,17,18</sup>
- Itch, inflammation, epithelial dysregulation, and tissue remodeling are 4 aspects of PN<sup>3,17</sup>
- Overactivation of the immune system induces inflammation and sensitizes sensory neurons to pruritogens<sup>18-20</sup>
- Overactivated neurons in turn produce inflammatory cytokines resulting in inflammation in the dermal layers of the skin<sup>20-22</sup>
- Keratinocyte differentiation and activation of fibroblasts are involved in skin integrity and tissue remodeling, respectively<sup>23,24</sup>
- Misdiagnosis and lack of effective treatment options lead to substantial burden for patients<sup>25,26</sup>
- IL-31 is a neuroimmune cytokine emerging as a primary mediator of PN that links the immune and nervous systems<sup>21,27-29</sup>



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GL-NPN-2200001 March 2022