Management of post-surgical peripheral neuropathic pain in adults: A French survey

HSD121

P. MERTL[1], A. ASTIER[2], N. ATTAL[3], R. NAMANE[4], R. ALKATEB[5], L. MAHI[6], A. BELBACHIR[7] and G. PICKERING[8].

[1]Centre Hospitalier Universitaire Amiens-Picardie, Amiens, France, [2]French National Academy of Pharmacy, Paris, France, [3]Inserm U987, APHP, CHU Ambroise Paré, UVSQ Paris-Saclay, Boulogne-Billancourt, France, [4]Laboratoires Grünenthal SAS, Puteaux, France, [5]Grünenthal GmbH, Stolberg, Germany, [6]Axelys Santé, Malakoff, France, [7]Department of Anesthesia and Critical Care Medicine, Cochin University Paris Descartes Hospital Paris, France, [8]CIC INSERM 1405/Plateforme d'Investigation Clinique CHU Gabriel Montpied, Clermont-Ferrand, France.

*Correspondence: raneem.alkateb@grunenthal.com. This survey was initiated and funded by Grünenthal GmbH.

Introduction

- **Post-surgical peripheral neuropathic pain (PS-PNP)** is a recognized complication after surgery.[1,2]
- Despite available recommendations for neuropathic pain management, the **diagnosis and management** of chronic PS-PNP are **challenging and multidisciplinary**.[3]
- **Real-world French data** on how physicians in France identify, monitor, and manage PS-PNP are **limited**.[4]

Objective

- To describe **real-world diagnostic and therapeutic practices** for post-surgical peripheral neuropathic pain (PS-PNP) among **French** physicians involved in post-surgical pain management.
- Better understanding of current practices may help identify **unmet needs**, support **care harmonization** and inform future clinical research and PS-PNP management strategies.

Methods

- **Study design**
  - National cross-sectional survey conducted in France between April and May 2025.
  - Online self-administered questionnaire developed with a multidisciplinary steering committee of pain and surgical experts.
- **Data collected**
  - Physician characteristics and practice setting.
  - Perceived risk factors for chronic PS-PNP.
  - Timing and methods of diagnosis.
  - Treatment strategies and sequencing.
  - Evaluation of treatment response and referral patterns.
- **Participants**
  - Physicians involved in post-surgical pain management:
    - Orthopedic surgeons
    - General practitioners (GPs)
    - Anesthesiologists
  - Survey dissemination through:
    - French Society of Anesthesiology and Intensive Care Medicine (SFAR)
    - French Society of Orthopedic Surgery and Traumatology (SOFCOT)
    - Private GP network.
- **Analysis population**
  - 250 responses collected.
  - 245 responses included after exclusion of 4 non-French respondents and 1 duplicate.
- **Limitation**
  - Results should be interpreted with caution given the predominance of orthopedic surgeons, likely reflecting higher SOFCOT recruitment rather than actual national management patterns.

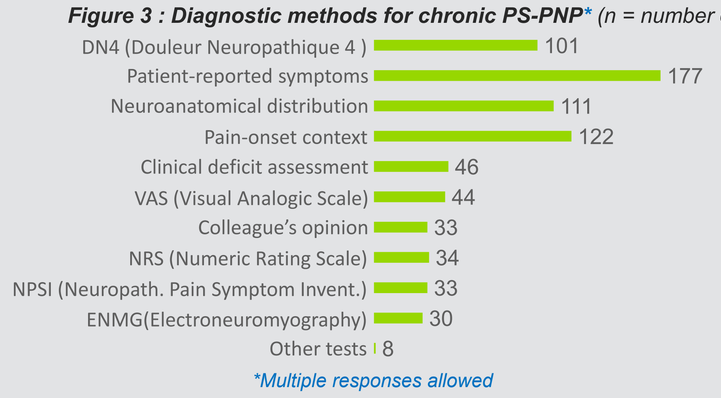
Respondent characteristics

- 89% **orthopedic surgeons**, 7% general practitioners & 4% anesthesiologists.
- 65% practiced in **private** settings.
- Self-perceived knowledge of peripheral neuropathic pain (PNP) was **moderate** (mean score: 2.87/5).
- Only **16%** reported using **a standardized protocol** for chronic PS-PNP management.

Diagnostic practices

- **Diagnosis** was mainly based on:
  - Patient-reported symptoms.
  - Clinical context of pain onset.
  - Neuroanatomical distribution.
  - DN4 questionnaire.

Figure 3 : Diagnostic methods for chronic PS-PNP* *(n = number of respondents)*



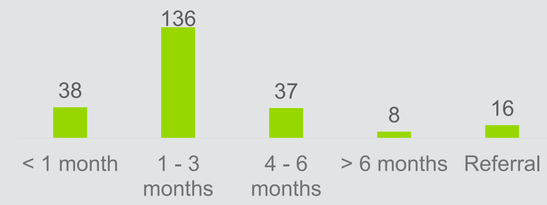
**Multiple responses allowed*

- Less frequently used tools included VAS, NRS, NPSI and ENMG investigations.
- When **diagnostic support** was required, the **preferred referral** options were: 71% pain specialist, 12% neurologist, 9% anesthesiologist, 9% rheumatologist or rehabilitation specialist.

Treatment monitoring and referral pathways

- 58% of respondents evaluated **treatment efficacy** or considered treatment **switching between 1 and 3 months** after treatment initiation.

Figure 8 : Time to assess treatment effectiveness and consider a change in treatment *(n = number of respondents)*



- **Efficacy was assessed** primarily through:
  - Patient satisfaction
  - Specialist input
  - Pain intensity scales (VAS/NRS)
  - Patient-reported symptoms
- In cases of **insufficient pain relief**, 96% reported **referring patients** to another specialist.
- **Pain specialists** were by far the most frequent referral destination.

Figure 10 : Preferred referral specialties following treatment failure or complex management* *(n = number of respondents)*

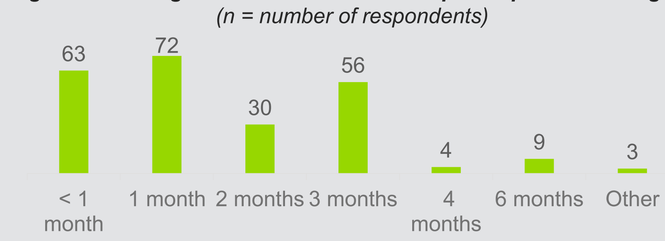


**Multiple responses allowed*

Perceived risk factors and timing of identification of neuropathic pain after surgery

- 93% of respondents reported being able to identify **risk factors** associated with **neuropathic pain** development after surgery.
- Psychosocial, pain vulnerability and cognitive factors were most frequently cited.

Figure 1 : Timing of identification of neuropathic pain after surgery *(n = number of respondents)*



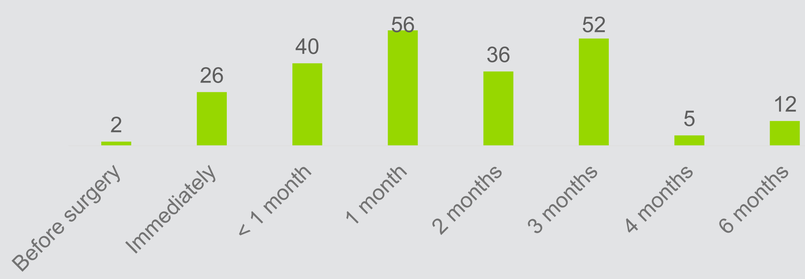
- **Neuropathic pain after surgery** was generally reported to occur **within 3 months.**
- More than half of respondents (57%) reported **onset within the first month** following surgery.

Treatment strategies

Timing of treatment initiation

- **Treatment** was most frequently initiated **within 3 months after surgery**.
- **Treatment initiation** occurred:
  - immediately after surgery (11%)
  - within 1 month (17%)
  - at 1 month (24%)
  - at 2 months (16%)
  - at 3 months (23%).

Figure 4 : Timing of treatment initiation for neuropathic pain after surgery *(n = number of respondents)*



First-line treatments

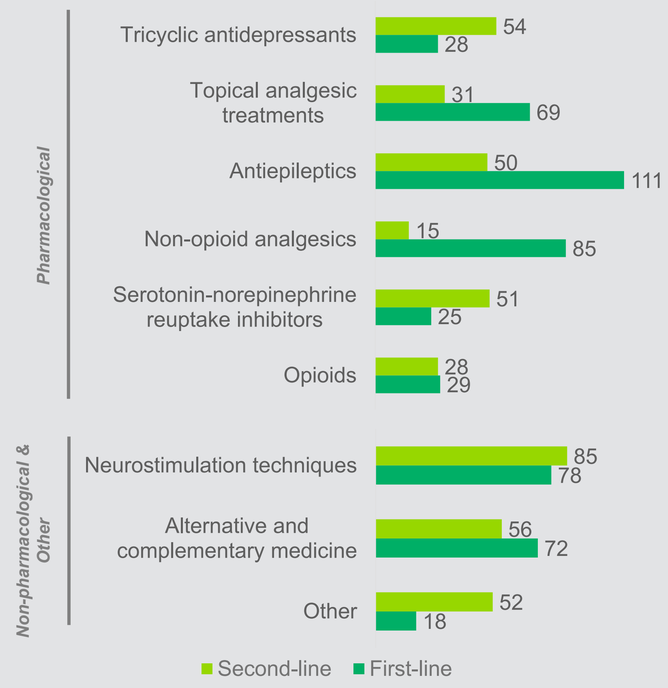
- Most commonly reported **first-line** approaches were:
  - Antiepileptics
  - Non-opioid analgesics
  - Neurostimulation techniques
  - Complementary/alternative medicine
  - Topical analgesics

Second-line treatments

- Most commonly reported **second-line** approaches were:
  - Neurostimulation techniques
  - Complementary/alternative medicine
  - Tricyclic antidepressants
  - Serotonin-norepinephrine reuptake inhibitors SNRIs, antiepileptics and others

- Among respondents selecting **topical analgesics:** patches were the predominant formulation, and daily use was the most frequently reported regimen.

Figure 5 : Preferred first-line and second-line treatments for chronic PS-PNP* *(n = number of respondents)*



**Multiple responses allowed*

Conclusion

- **Neuropathic pain after surgery** is generally **identified within the first 3 months,** with **more than half of the respondents** reporting identification **within the first month. Treatment** is also most frequently **initiated within the first 3 months** after surgery.
- **Diagnosis** mainly relies on **patient-reported symptoms,** the clinical context of **pain onset, neuroanatomical distribution,** and the **DN4 questionnaire.**
- **Only 16%** of respondents reported using a **standardized protocol for PS-PNP management**, highlighting considerable **variability** in clinical practice.
- The most frequently reported **first-line** treatment options were antiepileptics, non-opioid analgesics, neurostimulation techniques and topical analgesics, although considerable **heterogeneity** in treatment approaches was observed.
- The very **high referral rate** to **pain specialists** following treatment **failure** highlights the complexity of PS-PNP management and the need for **better-defined multidisciplinary care pathways**.
- These findings support the need for **greater harmonization of PS-PNP management** and better-defined multidisciplinary care pathways.

References

[1] *Moisset X, et al. Rev Neurol (Paris). 2021.*

[2] *Moisset X et al. Douleur Analgésie. 2020.*

[3] *Guideline on the clinical development of medicinal products intended for the treatment of pain, 2016. EMA/CHMP/970057/2011*

[4] *Dualé C et al. J Pain. 2014.*

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