Comment on "Predicting Responses to Interventional Pain Management Techniques for Chronic Low Back Pain: A Single-Center Observational Study (PReTi-Back Study)

To the Editor:

We read the study by Garcia-Hernandez and colleagues with great interest (1). This study aimed to identify the factors that may be associated with clinical responses to Interventional Pain Management Techniques (IPMTs) for adults with chronic low back pain (CLBP). The study utilised data from a large cohort of adult outpatients with CLBP, all receiving IPMTs within a tertiary hospital setting, to identify which baseline characteristics were associated with a positive outcome (composite improvement in pain and disability) at four weeks follow-up. Identified characteristics were then used to create a predictive model. A key conclusion drawn by the authors was that 'patients satisfied with previously performed interventional therapies or who exhibit findings of radicular compression or listhesis on imaging, show approximately twice the likelihood of experiencing a positive response to short-term IPMT than do patients without those characteristics'.

In our view, some language used throughout the manuscript is problematic and could mislead readers. Cohort studies reporting single-group data from patients receiving a specific treatment can help identify characteristics associated with better or worse prognosis. However, only 2-group studies, such as randomised controlled trials, can identify characteristics of patients who respond better or worse to a treatment (2,3). Given the study design constraints and lack of a control-arm comparator, it is inappropriate to use language suggesting that patients with a specific baseline characteristic have a better or worse treatment response to IPMTs. This important distinction between non-specific prognostic factors and true treatment-effect moderators is often overlooked and problematic. A recent study found that as many as 50% of single-group studies inappropriately report on treatment effect modifiers when the design does not enable this conclusion (4).

We hope this letter is informative to the readers of *Pain Physician* and leads to greater awareness among readers, researchers, and clinicians when interpreting the findings of this paper by Garcia-Hernandez and colleagues.

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