

limited ability of patients with these disease states to self-report.<sup>2</sup> Healthcare providers may need specialized skills, tools, and training to assess the severity of pain in patients with moderate-to-severe dementia.<sup>2,3</sup> The authors did not mention how pain was assessed in this subset of patients. Self-reporting should be used whenever it is appropriate, but behavior assessment tools are recommended in patients with advanced dementia.<sup>4,5</sup>

In elderly patients with dementia, various measures (tools) have been developed for caregivers to assess the severity of pain. Among those, the Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC) and the Pain Assessment in Advanced Dementia Scale (PAINAD) are found to have the strongest psychometric evidence.<sup>5</sup> Furthermore, PACSLAC-J is a modified scale developed mainly for the Japanese population with communication impairments.<sup>6</sup>

Taking the above factors into consideration, we believe that an assessment with the appropriate tools may show that the severity of pain increases the risk of disability in elderly patients with dementia. Overall, this is an excellent study with compelling results. However, the incidental disability due to pain may be more than what the study suggests. This is particularly true in patients with dementia. Future studies may need to focus on assessment of pain with appropriate tools in elderly patients with dementia to better understand the association between pain and disability in these patients.

### Competing Interests

The authors declare no competing interests.

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### In Reply:

Drs. Venkata, Upadhyay, and Talari expressed concern about our assessment of pain in elderly patients, assuming their limited ability to self-report. We agree that lack of precise evaluation of cognitive function of participants at baseline is a limitation of the present study. However, we excluded persons who already had been certified as disabled, by the Long-term Care Insurance information, at the start of the follow-up; therefore, all analytic subjects were considered to be capable of fully understanding the questionnaire and making valid and reliable responses.<sup>1</sup>

We evaluated the severity of pain using a verbal rating scale (VRS). Studies comparing various pain intensity scales showed that VRS and simple numeric rating scale (NRS) have the highest validity and reliability in rating pain intensity in older adults, even in those with mild cognitive impairment.<sup>2,3</sup> In 2007, VRS and NRS also were recommended as the best scales for guidance on the assessment of pain in elderly people by the British Pain Society and British Geriatrics Society.<sup>4</sup>

Although we discussed that our finding of a negative association between the severity of pain and functional disability due to dementia may be influenced by the impact that treatment with nonsteroidal antiinflammatory drugs has on dementia risk, our study did not assess medication use. Whether pain predicts future cognitive function is still an important question that needs to be answered. We also believe that further studies should be performed using detailed information, such as data on medication, the chronological change in pain, and the appropriate assessment of pain.

### Competing Interests

The authors declare no competing interests.

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