


# TT3, a More Practical Indicator for Evaluating the Relationship Between Sarcopenia and Thyroid Hormone in the Euthyroid Elderly Compared with FT3 [Letter]

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## Dear editor

Given that we are currently conducting relevant research work, we have been very interested in a latterly published original article titled “TT3, a More Practical Indicator for Evaluating the Relationship Between Sarcopenia and Thyroid Hormone in the Euthyroid Elderly Compared with FT3”<sup>1</sup> published in *Clinical Interventions in Aging* by authors Chen J et al. We congratulate the authors in honor of their work.

This study mainly discussed the relationship between sarcopenia and thyroid hormone in the euthyroid elderly. The authors concluded that TT3 was positively associated with muscle strength and negatively associated with sarcopenia risk. Additionally, compared to FT3 with concentration fluctuations, TT3 is a more stable and practical indicator to evaluate the relationship between sarcopenia and thyroid hormone in the elderly euthyroid population.

We agree in principle with this research conclusion. Additionally, we consider five points that need to be further made clear. Firstly, imbalanced baseline gender data will inescapably affect the final statistical results. Generally, there is a gender difference in muscle strength between elderly females and older men.<sup>2</sup> Secondly, lack of assessment of participants' nutritional status, especially their appetite. Food intake is closely related to muscle mass.<sup>3</sup> Thirdly, lack of crucial biochemical indicator vitamin D data. Vitamin D plays an essential role in maintaining skeletal muscle mass and strength. Elderly with vitamin D deficiency may be at risk of sarcopenia.<sup>4</sup> Fourthly, lack of bone mineral density (BMD) data, a vital bone metabolism indicator. Older women with postmenopausal osteoporosis often suffer from sarcopenia.<sup>5</sup> Finally, this study is a retrospective single-center study with a relatively small scale. The conclusion of this study still needs to be further confirmed by multicenter and prospective studies.

Although these drawbacks, the theme focused on in this study is essential for the gerontology department and helps physicians promptly identify patients with risk factors for sarcopenia and take adequate measures to reduce adverse events of falls causing fractures in routine clinical practices.

## Disclosure

The authors report no conflicts of interest in this communication.

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