

**Please answer some of the questions below.**

**1. Is the medical procedure mentioned in the abstract's conclusion a mistake for a surgical procedure? And as for treatment of bone metastases, for example, surgical procedure may be indicated as a temporary measure in cases of spinal compression symptoms, so it is an exaggeration to say that it is contraindicated.**

Thank you for your careful and meticulous guidance. Since the source of the metastases was not clear at the time and there were bone-related symptoms, the surgical procedure was fine, and the lumbar surgery was intended to confirm the diagnosis and relieve the symptoms. We have modified it according to your opinions, and your opinions make our article more rigorous. Thank you for your efforts in this article, and I hope this article can be published in your journal.

**2. Please let me know if you know the change of Tg before and after bone metastasis treatment.**

Thanks for the valuable opinions of the reviewer. In this case, the patient's Tg level was not detected before surgery. After surgery, the patient's Tg level was not effectively detected due to his moving to other city, which is a pity of this case.

**3. Please describe in detail any information on bone metastasis of DTC, especially the characteristics of a single metastasis.**

We have added this part of information in Introduction: The bone is the second most common site of thyroid cancer metastasis after lung metastatic. But the prognosis is worse than lung metastases. The spine is the most common site of bone metastasis for differentiated thyroid cancer, with nearly half of patients occurring in it. Spinal metastasis of differentiated thyroid cancer is most often characterized by local intractable pain and neurological symptoms.

**4. The paper needs some revision mainly in medical terminology ("interspace claudication", "bilateral 4-word test", "L4 pyramidal anterior and posterior", "artificial pyramidal implantation", "armpits").**

interspace claudication→intermittent claudication;

bilateral 4-word test→bilateral Patrick's sign;

L4 pyramidal anterior and posterior→anterior and posterior combined lumbar spine surgery with artificial vertebral body replacement to L4;

artificial pyramidal implantation→artificial vertebral body replacement;

armpits→axilla;

**5. Most of the discussions were good. -To date, the prognosis of differentiated thyroid cancer (DTC) patients with bone metastasis is the generally poor and low survival rate.**

Please discuss why this patient seems to have a good prognosis. -Please provide the conclusion of this case report after the discussion.

For patients with differentiated thyroid cancer with bone metastases, the main symptoms are bone related events<sup>6</sup>; timely treatment can provide better outcomes for these patients. Timely treatment before serious bone-related events occur, the doctor patient and meticulous actively cooperate with the diagnosis and treatment and patients, complete lumbar surgery and thyroid surgery, Postoperative treatment with I-131 reduced the risk of recurrence. We believe that this is the reason for the better prognosis of this patient and the advantage of this case in diagnosis and treatment.

6. Please improve the journal titles / abbreviation of journals of the reference 2, 5, 6, 7, 10, 13, 14, and 17. -12 Quality of manuscript organization and presentation.

Thank you for your valuable comments. The citation format of all reference documents in this article is not automatically generated by Endnote X9, the document management software. We have reconfigured the reference format according to your comments. Thank you for giving us the opportunity to revise the manuscript. I really hope that this article can be published in your journal.

7.The CARE checklist mentions the "strengths and limitations in your approach to this case." Therefore, please state the strengths and limitations of this case in the manuscript in the discussion section.

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