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First external peer review

Reviewer A

1. An important limitation is the number of responses obtained. Only 27 endocrinologists seems very few in a country of more than 50 million inhabitants.

Reply 1: I agree with the reviewer's suggestion. A nationwide survey was conducted on head and neck surgeons, but there is a limitation in that it was conducted locally only for endocrinologists. The total population of the local branch is about 8 million, with 160 endocrinologists working. Among them, only 27 endocrinologists answered, but most of them are treating thyroid disease. The response rate of endocrinologists was low, but the trend of treatment recommendations for 1-4cm PTC could be identified through this survey. We have modified our text as advised (see Page11, line13).

Changes in the text: (Discussion) Second, a nationwide survey was conducted on head and neck surgeons, but there is a limitation in that it was conducted locally only for endocrinologists. The total population of the local branch is about 8 million, with 160 endocrinologists working. Among them, only 27 endocrinologists answered, but most of them are treating thyroid disease. The response rate of endocrinologists was low, but the trend of treatment recommendations for 1-4cm PTC could be identified through this survey.

2. When you talk about minimum ETE, what do you mean specifically? If it refers to microscopic ETE, this can only be known after surgery and histological examination. It is difficult to know the minimal TEE before surgery.

Reply 2: I agree with the reviewer's opinion that it is difficult to clearly distinguish between minimal ETE and gross ETE by US before surgery. Also, preoperative US findings suspecting minimal or gross ETE may differ from doctor to doctor. So, in this study, the minimum ETE or gross ETE was set as the case where ETE was suspected when the respondent evaluated it on US. We have modified our text as advised (see Page3, line1).

Changes in the text: (Methods) It is difficult to accurately identify minimal or gross ETE on preoperative ultrasonography (US). Also, preoperative US findings suspecting minimal or gross ETE may differ from doctor to doctor. So, in this study, the minimum ETE or gross ETE was set as the case where ETE was suspected when the respondent evaluated it on US.

3. The authors have not explored multifocality, which is easy to obtain feature in a preoperative ultrasound examination.

Reply 3: I agree with the reviewer's suggestion. Multifocality is important in papillary thyroid carcinoma. However, in this study, multifocality was not included in the questionnaire.

Changes in the text:

4. It is not adequately explained why endocrinologists are more favorable to more aggressive surgical procedures in some of the examples used in this survey

Reply 4: According to the results of this survey, endocrinologists prefer TT to head and neck surgeons when ETE is suspected. In Turkey's study comparing endocrinologists and surgeons' preference for microPTC, endocrinologists also showed that the ratio of TT and pCND was higher than that of surgeons. However, in a survey conducted on low-risk PTC in the United States, surgeons preferred more aggressive treatment. Therefore, it is thought that there are differences in the recommendations of endocrinologists and surgeons for thyroid surgery in each country. We have modified our text as advised (see Page10, line17).

Changes in the text: (Discussion) The preferences of endocrinologists and surgeons for surgical extents vary slightly depending on the survey. In Turkey's study comparing endocrinologists and surgeons' preference for microPTC, endocrinologists also showed that the ratio of TT and pCND was higher than that of surgeons. However, in a survey conducted on low-risk PTC in the United States, in many scenarios, surgeons and endocrinologists recommended similar surgical extent, but in some scenarios, surgeons preferred more aggressive treatment than endocrinologists. In this survey, in the case of anterior minimal ETE, anterior gross ETE, and tumor in isthmus, endocrinologists preferred more aggressive treatment than surgeons ($P<0.05$). Therefore, it is thought that the preferences of endocrinologists and surgeons for thyroid surgery varies from country to country.

5. The authors have not taken into account factors related to the patient, some as important as age or comorbidity. On some occasions, clinical data are more important than those of the tumor itself when making a decision about surgical treatment and the extent of surgery.

Reply 5: I agree with the reviewer's comments. We also believe that factors related to the patient are important in making treatment decisions. In this study, the patient was assumed to be a 55-year-old female diagnosed with a solitary, node-negative PTC with no history of radiation to head and neck, no family history and medication. We have modified our text as advised (see Page2, line17).

Changes in the text: (Methods) To evaluate surgeons and endocrinologists preference for surgical extent of thyroidectomy in patients with PTC, each scenario was of 55-year-old female diagnosed with a solitary, node-negative PTC with no history of radiation to head and neck, no family history and medication.

6. The Methods section is excessively brief and not very descriptive. It is not adequately expressed why factors determining the surgical extent that wanted to be measured were selected.

Reply 6: Thank you for your good opinion. As explained in the introduction, the decision of the surgical extent of thyroidectomy is related to tumor, patient, and doctor's factors. Tumor factors (size and location of tumor, degree of extrathyroidal extension, multifocality, lymph node metastasis, and status of opposite lobe, et al), patient's factors (systemic morbidity, radiation history, and family history, et al), and surgeon's factors (experience and preference). So, under the same conditions, different surgeons can suggest different surgical treatments. Therefore, this survey was conducted to confirm the difference between endocrinologist and surgeon's surgical extent of thyroid surgery according to the degree of ETE in the same tumor size. We have modified our text as advised (see Page2, line23).

Changes in the text: (Methods) We selected tumor sizes of 1.5 cm and 2.5 cm, which are controversial for endocrinologists and surgeons in determining the surgical extent of thyroidectomy. It is difficult to accurately identify minimal or gross ETE on preoperative ultrasonography (US). Also, preoperative US findings suspecting minimal or gross ETE may differ from doctor to doctor. So, in this study, the minimum ETE or gross ETE was set as the case where ETE was suspected when the respondent evaluated it on US. In addition, various nodules conditions were set in the contralateral lobe to determine the surgical extent according to the condition of the contralateral lobe.

7. Methodology of the survey is not adequately explained. The total number of head and neck surgeons in Korean society is not known, nor is the number of endocrinologists in the national society.

Reply 7: Thank you for your good opinion. There are a total of 342 head and neck surgeons and 160 one branch of Korean Endocrine Society members in Korea. We have added the data as advised (see Page2, line13 and Page3, line23).

Changes in the text: (Methods) The questionnaire was sent to 342 Korean Society of Head and Neck Surgery and 160 one branch of Korean Endocrine Society members from June to July 2021 by e-mail. (Results) Fifty-seven of 342 surgeons (16.7%) and twenty-seven of 160 (16.9%) endocrinologists responded to the questionnaire.

8. It is not known how the potential interviewees became aware of the existence of the survey.

Reply 8: Thanks for pointing it out. E-mails were sent to the members of Korean Society of Head and Neck Surgery and one branch of Korean Endocrine Society to notify them of the survey study. We have modified our text as advised (see Page2, line12).

Changes in the text: (Methods) The questionnaire was sent to 342 Korean Society of Head and Neck Surgery and 160 one branch of Korean Endocrine Society members from June to July 2021 by e-mail.

9. The reader would need to know the response rate, that is, the number of doctors who respond based on the total number of people invited to take the survey.

Reply 9: I agree with the reviewer's suggestion. We have modified our text as advised (see Page3, line23).

Changes in the text: (Results) Fifty-seven of 342 surgeons (16.7%) and twenty-seven of 160 (16.9%) endocrinologists responded to the questionnaire.

10. How was the anonymization of the survey carried out?

Reply 10: Thanks for pointing it out. After data collection, the real name is changed to a unique ID for anonymization. We have modified our text as advised (see Page2, line15).

Changes in the text: (Methods) After data collection was completed, the name was changed to unique ID and anonymized.

11. How were duplications avoided?

Reply 11: To avoid duplication of responses, real names of the survey subjects were written on the questionnaire. We have modified our text as advised (see Page2, line14).

Changes in the text: (Methods) To avoid duplication of responses, each name was registered in the questionnaire.

12. Of the surveys that were finally answered, how many were eliminated from the statistical evaluation and for what reasons?

Reply 12: There was no excluded data in this study, and all results were summarized in Table 1-4.

Changes in the text:

13. What online platform did you use to host your survey, if any?

Reply 13: We used a web-based survey management software called Google Forms. We have modified our text as advised (see Page2, line12).

Changes in the text: (Method) The author developed a questionnaire using 'Google Forms', a web-based survey management software.

14. Figures and tables repeat the same results. This repetition should be avoided.

Reply 14: Thanks for pointing it out. To avoid repetition, I have deleted figures accordingly.

Changes in the text:

15. In the discussion you should comment on other similar studies in which endocrinologists and surgeons have been surveyed on the surgical treatment of thyroid cancer. Only a single bibliographical reference on surveys appears. Isn't there any other study similar to this one in Korea or other countries?

Reply 15: I agree with the reviewer's suggestion. We added some references related this survey (see Page7-10).

Changes in the text: (Discussion) (first paragraph) Several survey studies support this by showing slightly different trends from guidelines for thyroid surgery. (6th paragraph) Although pCND in low-risk PTC is not recommended by the ATA guidelines, in this study, pCND was preferred in more than 50% of isolated PTC group without ETE. These results are similar to the previous survey on the treatment method of the Korean head neck surgeons for microPTC. (7th paragraph) In a survey of surgeons conducted in the United States, high-volume surgeons recommended lobectomy more frequently than low-volume surgeons for 1-3 cm PTC. However, in the survey on the preference of the surgical treatment of microPTC, there was no significant difference in most scenarios between the high- and low-volume surgeons. (8th paragraph) In Turkey's study comparing endocrinologists and surgeons' preference for microPTC, endocrinologists also showed that the ratio of TT and

pCND was higher than that of surgeons. However, in a survey conducted on low-risk PTC in the United States, in many scenarios, surgeons and endocrinologists recommended similar surgical extent, but in some scenarios, surgeons preferred more aggressive treatment than endocrinologists.

16. The large percentage of preference for pCND in both endocrinologists and surgeons for low-risk tumors is striking. Please clarify this and check it against the data published in the recent bibliography

Reply 16: The current ATA guidelines do not recommend pCND for low risk PTC. However, 20-69% of occult metastasis after pCND is also reported in PTC with N0 stage disease. And Korean head and neck surgeons and endocrinologists prefer pCND because they tend to think that removing the central lymph node with a high occult metastasis rate reduces the recurrence, and that unilateral CND has less effect on postoperative hypoparathyroidism or nerve injury. We have modified our text as advised (see Page9, line20).

Changes in the text: (Discussion) Although pCND in low-risk PTC is not recommended by the ATA guidelines, in this study, pCND was preferred in more than 50% of isolated PTC group without ETE. These results are similar to the previous survey on the treatment method of the Korean head neck surgeons for microPTC. Korean head and neck surgeons prefer pCND because they tend to think that removing the central lymph node with a high occult metastasis rate reduces the recurrence, and that unilateral CND has less effect on postoperative hypoparathyroidism or nerve injury.

17. The authors have not taken into account the experience of surgeons and endocrinologists, which is an important limitation, as they acknowledge at the end of the study. However, it seems to be understood that this data is recorded in the researchers' database, since Table 1 clearly shows both the age of the respondents and the years of experience. Therefore, an analysis could be made of treatment preferences in surgeons with high or low experience (according to the number of thyroidectomies) and between endocrinologists with high and low experience (according to the years of professional activity and the percentage of thyroid patients).

Reply 17: I agree with the reviewer's suggestion. We added some data about the treatment preferences between high- and low- experience surgeons (according to the number of thyroidectomies) and between endocrinologists with high and low experience (according to the years of professional activity). We have modified our text as advised (see Page6, line21).

Changes in the text: (Results)
Proportion of Hemi between low- and high- volume surgeons

To evaluate the differences by surgeon volume, respondents were categorized as low-volume if they performed 500 or fewer thyroidectomies, and high-volume if they performed greater than 500 thyroidectomies. The preference between high-volume and low-volume surgeons showed no difference in all scenarios. In PTC with anterior gross ETE, the proportion of hemi in the high volume surgeon was 48.5%, which was higher than that of the low volume surgeon (20.8%), but there was no statistical significance (p-value > 0.05) (Figure 1).

Proportion of Hemi between low- and high- experience endocrinologists
To evaluate the differences by endocrinologists' experience, respondents were categorized as low-experience if they worked for 10 years or less, and high-experience if they worked for more than 10 years. The preference for Hemi did not differ between high-experience and low-experience endocrinologists in all scenarios. (Figure 2).

Reviewer B

The authors present the results of Korean surgeon practice patterns for patients undergoing thyroidectomy for 1.5cm-2.5cm PTC. They include 57 surgeons and 27 endocrinologists.

Why was PTC size set at 1.5–2.5cm? It seems like the authors own anecdotal cut-off with no evidence to support this size as it is currently presented.

Reply 1: For microPTC or PTC larger than 4 cm, it was thought that there would be no significant difference in treatment among endocrinologists or surgeons. We selected tumor sizes of 1.5 cm and 2.5 cm, which are controversial for endocrinologists and surgeons in determining the surgical extent of thyroidectomy. We have modified our text as advised (see Page2, line23).

Changes in the text: (Methods) We selected tumor sizes of 1.5 cm and 2.5 cm, which are controversial for endocrinologists and surgeons in determining the surgical extent of thyroidectomy.

The study is skewed to overrepresent the opinion of surgeons

Reply 2: This study analyzed the preference of Korean endocrinologists and surgeons for surgical extent of thyroidectomy in 1.5cm and 2.5cm PTC. A nationwide survey was conducted on head and neck surgeons, but there is a limitation in that it was conducted locally only for endocrinologists. However, this study is thought to have been sufficient to analyze the treatment trends of endocrinologists or surgeons. In Turkey's study comparing endocrinologists and surgeons' preference for microPTC, endocrinologists also showed that the ratio of TT and pCND was higher than that of surgeons. However, in a survey conducted

on low-risk PTC in the United States, in many scenarios, surgeons and endocrinologists recommended similar surgical extent, but in some scenarios, surgeons preferred more aggressive treatment than endocrinologists. In this survey, in the case of anterior minimal ETE, anterior gross ETE, and tumor in isthmus, endocrinologists preferred more aggressive treatment than surgeons. Therefore, it is thought that the preferences of endocrinologists and surgeons for thyroid surgery varies from country to country. Therefore, I do not think that this study is skewed to overrepresent the opinion of surgeons. We have modified our text as advised (see Page10, line12).

Changes in the text: (Discussion) The preferences of endocrinologists and surgeons for surgical extents vary slightly depending on the survey. In Turkey's study comparing endocrinologists and surgeons' preference for microPTC, endocrinologists also showed that the ratio of TT and pCND was higher than that of surgeons. However, in a survey conducted on low-risk PTC in the United States, in many scenarios, surgeons and endocrinologists recommended similar surgical extent, but in some scenarios, surgeons preferred more aggressive treatment than endocrinologists. In this survey, in the case of anterior minimal ETE, anterior gross ETE, and tumor in isthmus, endocrinologists preferred more aggressive treatment than surgeons ($P<0.05$). Therefore, it is thought that the preferences of endocrinologists and surgeons for thyroid surgery varies from country to country.

Can the authors clarify in the methods what they are defining as “minimal ETE” and how that definition was conveyed to the survey respondents.

Reply 3: Thanks for pointing it out. It is difficult to clearly distinguish between minimal ETE and gross ETE by US before surgery. Also, preoperative US findings suspecting minimal or gross ETE may differ from doctor to doctor. So, in this study, the minimum ETE or gross ETE was set as the case where ETE was suspected when the respondent evaluated it on US. We have modified our text as advised (see Page3, line1).

Changes in the text: (Methods) It is difficult to accurately identify minimal or gross ETE on preoperative ultrasonography (US). Also, preoperative US findings suspecting minimal or gross ETE may differ from doctor to doctor. So, in this study, the minimum ETE or gross ETE was set as the case where ETE was suspected when the respondent evaluated it on US.

Can you discuss why you think endocrinologists prefer more aggressive surgery?

Reply 4: According to the results of this survey, endocrinologists prefer TT to head and neck surgeons when ETE is suspected. In Turkey's study comparing endocrinologists and surgeons' preference for microPTC, endocrinologists also showed that the ratio of TT and pCND was higher than that of surgeons. However, in a survey conducted on low-risk PTC in the United States, in many scenarios, surgeons and endocrinologists recommended similar surgical extent, but in some scenarios, surgeons preferred more aggressive treatment than

endocrinologists. Therefore, it is thought that the preferences of endocrinologists and surgeons for thyroid surgery varies from country to country. We have modified our text as advised (see Page10, line12).

Changes in the text: (Discussion) The preferences of endocrinologists and surgeons for surgical extents vary slightly depending on the survey. In Turkey's study comparing endocrinologists and surgeons' preference for microPTC, endocrinologists also showed that the ratio of TT and pCND was higher than that of surgeons. However, in a survey conducted on low-risk PTC in the United States, in many scenarios, surgeons and endocrinologists recommended similar surgical extent, but in some scenarios, surgeons preferred more aggressive treatment than endocrinologists. In this survey, in the case of anterior minimal ETE, anterior gross ETE, and tumor in isthmus, endocrinologists preferred more aggressive treatment than surgeons ($P<0.05$). Therefore, it is thought that the preferences of endocrinologists and surgeons for thyroid surgery varies from country to country.

Reviewer C

Thank you for your study surveying the extent of thyroidectomy and pCND in 1.5 cm and 2.5 cm PTC according to location and degree of extrathyroidal extension, as preferred by a subset of Korean head and neck surgeons and endocrinologists. It is interesting to see the differences in surgical preference between surgeons and endocrinologists as it has important implications in patient education and counselling, but I feel that this has not been adequately emphasised by the authors.

1. Title: the authors acknowledged that whilst the questionnaires were sent out to active Korean Society of Head and Neck Surgery members nationwide, the survey of endocrinologists was conducted only in the one branch of Korean Endocrine Society, of which there were only 27 respondents. How confident are the authors in suggesting that the responses of the 84 participants in the survey represent the "current trend" of Korean Head and Neck surgeons and endocrinologists, as stated in the title of the manuscript? Further to this, in the surveyed endocrinologists, the proportion of thyroid patients among outpatients were at most, 50% of cases. Again, are these endocrinologists representative of the majority of endocrinologists in Korea?

Reply 1: I agree with the reviewer's suggestion. Head and neck surgeons performed a nationwide survey. However, the survey of endocrinologists was conducted only in the one branch of Korean Endocrine Society. And the low response rates of surgeons and endocrinologists to the survey may have affected the results. We have modified our text as advised (see Page11, line6).

Changes in the text: (Title) ‘Survey of Korean Head and Neck Surgeons and Endocrinologists

for the Surgical Extent of 1.5 cm and 2.5 cm Papillary Thyroid Carcinoma'. (Discussion) This study has limitations. First, the low response rates of surgeons and endocrinologists to the survey may have affected the results. (57/342, 27/160, respectively) However, in Korea, 342 head and neck surgeons include retired professors or private clinic members who do not perform thyroid surgery. Currently, there are about 150 active head and neck surgeons in Korea, and it is estimated that about 50% of them are surgeons performing thyroid surgery. Therefore, it is thought that most Korean head and neck surgeons who perform thyroid surgery responded in this survey. Second, a nationwide survey was conducted on head and neck surgeons, but there is a limitation in that it was conducted locally only for endocrinologists. The total population of the local branch is about 8 million, with 160 endocrinologists working. Among them, only 27 endocrinologists answered, but most of them are treating thyroid disease. The response rate of endocrinologists was low, but the trend of treatment recommendations for 1-4cm PTC could be identified through this survey. Although it cannot represent all current trends in Korea, the results of this study are thought to be helpful in comparing the preference between endocrinologists and surgeons.

2. Seeing that it is a survey, and endocrinologists do not perform surgery, the use of the word "performed" throughout the abstract and main body of the manuscript is inappropriate.

Reply 2: I agree with the reviewer's suggestion. The use of the word "performed" throughout the abstract and main body of the manuscript has been corrected to the appropriate word.

Changes in the text: "performed" > "preferred" or "recommended"

3. Introduction: towards the end of the "Introduction" (page 5, line 21), the authors correctly stated that patients may be confused about the appropriate surgical method due to differing surgeon's versus endocrinologist's experience and recommendations, leading to impaired communication. However, this point was not mentioned again in neither the "Discussion" nor the "Conclusion" when it should really be emphasised as it is ultimately what should be interpreted from the findings of the survey.

Reply 3: I agree with the reviewer's suggestion. We have modified our text as advised (see Page10, line22 and Page11, line3).

Changes in the text: (Discussion) Various factors influence the surgical extent of thyroidectomy. In this study, it was confirmed that even with the same tumor and patient factor, different surgical methods were recommended according to surgeons and endocrinologists. If endocrinologists and surgeons recommend different surgical methods in the same patient, it may confuse the patient and lead to distrust of the doctor. Therefore, it is desirable to discuss in depth the risks and benefits of surgery through the multidisciplinary decision in which endocrinologists, surgeons, and patients participate before surgery.

(Conclusion) This study shows as the extent of thyroid surgery may differ between endocrinologists and surgeons and this could be confusing to patient and affect the patient outcomes. Therefore, individualized multidisciplinary approach considering the extent of surgery for thyroid cancer is recommended.

4. Results: I found the values on the pie charts in Figures 1 to 5 difficult to read. It is also unnecessary to include all five figures which represent the same information as depicted in Tables 2 and 3.
Table 4: seeing that p values were given for Tables 2 and 3, was there any difference in the type of surgery preferred by surgeons vs. endocrinologists in Table 4?

Reply 4: Thanks for pointing it out. To avoid repetition, I have deleted figures. In addition, to clarify the difference between surgeon and endocrinologists, p-value results are added in Table 4.

Changes in the text: There was no significant difference between the two groups (Table 4).

Table 4 Condition of the contralateral lobe changing Hemi to TT

Contralateral lobe	**Surgeon (N=39), No.(%)**	**Endocrinologist (N=23), No.(%)**	**Surgeon vs endocrinologist *(p-value)***
Taller than wide hypoechoic nodule (<5mm, no cytology performed)	21(55.3)	16(69.6)	NS
0.5-10mm hypoechoic nodule (non-diagnosis in cytology)	17(44.7)	13(56.5)	NS
Single benign nodule, <1cm	2(5.3)	0(0)	NS
Multiple benign nodules, largest<1cm	6(15.8)	1(4.3)	NS
Single benign nodule, 1-2cm	7(18.4)	2(8.7)	NS
Multiple benign nodules, largest<2cm	17(44.8)	8(34.8)	NS
Single benign nodule, 2-3cm	13(34.2)	6(26.1)	NS
Multiple benign nodules, largest<3cm	20(62.6)	12(52.2)	NS
Single benign nodule, >3cm	26(68.4)	17(73.9)	NS

† NS; no specific.

5. Discussion: the second and third paragraphs appear to be repeats of the results without any comparison to the literature that is available.
A discussion of the relevant literature pertaining to the findings of the survey also needs to be expanded in the fourth paragraph.
In the fifth paragraph, the authors stated that "surgeons preferred Hemi and endocrinologists preferred TT for a 1.5 cm PTC located in the isthmus", despite studies showing that "PTC occurring in the isthmus has a higher chance of multiple foci, invasion of the thyroid capsule, central metastasis, and recurrence compared with PTC occurring in other sites". Can they elaborate on this further? Why do the surgeons surveyed prefer hemi over TT? Is there literature supporting hemi over TT?
In the sixth paragraph, page 13 line 3, "clinically uninvolved central neck lymph nodes (cN0)" is a superfluous comment as this is implied with pCND.
The seventh paragraph has again already been discussed in the results, with no mention of any supporting literature.

Reply 5: I agree with the reviewer's suggestion. The second paragraph summarizes the results that the surgical extent changes when the tumor size changes from 1.5 cm to 2.5 cm in the case of PTC without ETE. Third paragraph describes differences of preference between surgeons and endocrinologists about the surgical extent of PTC with ETE. I have supplemented with relevant literature in 2-4 paragraphs. In 5th paragraph, our results show that Korean head and neck surgeons prefer hemi, but the appropriate surgical extent in isthmus PTC remains controversial. In 6th paragraph, "clinically uninvolved central neck lymph nodes (cN0)" has been deleted. 7th paragraph has already been mentioned in the results, so it has been deleted. We have modified our text as advised (see Page7-9).

Changes in the text: (Discussion)
- Second paragraph : Several studies have shown that aggressive therapy is needed because the prognosis is poor when the tumor is greater than 2 cm. For this reason, it is considered that the ratio of TT at 2.5 cm is higher than 1.5 cm.
- Third paragraph : In Turkey's study comparing endocrinologists and surgeons' preference for microPTC, endocrinologists also showed that the ratio of TT and pCND was higher than that of surgeons. However, in a survey conducted on low-risk PTC in the United States, in many scenarios, surgeons and endocrinologists recommended similar surgical extent, but in some scenarios, surgeons preferred more aggressive treatment than endocrinologists. In this survey, in the case of anterior minimal ETE, anterior gross ETE, and tumor in isthmus, endocrinologists preferred more aggressive treatment than surgeons ($P<0.05$). Therefore, it is thought that the preferences of endocrinologists and surgeons for thyroid surgery varies from country to country.
- Fourth paragraph : It is thought that TT is preferred in case of posterior gross ETE because the tumor could be easily invaded the nerve, esophagus, and trachea.
- Fifth paragraph : Korean endocrinologists prefer more aggressive surgery than surgeons for PTC located in the isthmus.

6. Conclusion: as we move more and more towards patient-centred care, the take home message of this study should be that, as the extent of surgery may differ between endocrinologists and surgeons, this could lead to patient confusion, impaired communication, and ultimately affect patient outcomes.

Reply 6: I agree with the reviewer's suggestion. We have modified our text as advised (see Page11, line2).

Changes in the text: (Conclusion) TT was frequently preferred in tumors with a large size or gross ETE, and pCND was frequently preferred in cases of suspected gross ETE. This study shows as the extent of thyroid surgery may differ between endocrinologists and surgeons and this could be confusing to patient and affect the patient outcomes. Therefore, individualized multidisciplinary approach considering the extent of surgery for thyroid cancer is recommended.

Second external peer review

Reviewer B

Comment: The decision for the cut-off of 1.5 cm to 2.5 cm still seems anecdotal or based on physician bias. Do you have a reference to support that this specific size range is controversial for endocrinologists and surgeons over a different size range (e.g-1cm to 3cm; 2cm to 4cm; etc)

Reply: 1-4 cm PTC is a gray zone, and both Hemi and TT are possible. There are the reports of significant differences in ETE, recurrence, and survival according to tumor size in patients with >2 cm compared to <2 cm among 1-4 cm PTC. Therefore, in this study, the size of the tumor was classified into 1.5 cm and 2.5 cm based on 2 cm.

In the text: We selected tumor sizes of 1.5 cm and 2.5 cm, which are controversial for endocrinologists and surgeons in determining the surgical extent of thyroidectomy.

Changes in the text: (Introduction) Therefore, this survey was intended to help determine the preference in the extent of thyroidectomy and pCND by analyzing the surgical methods according to the condition of tumor. (Methods) The surgical extent of 1-4 cm PTC is controversial. There are the reports of significant differences in ETE, recurrence, and survival according to tumor size in patients with >2 cm compared to <2 cm among 1-4 cm PTC (6,7). Therefore, in order to evaluate the preference according to the tumor size, 1.5cm was set for less than 2cm and 2.5cm was set for greater than 2cm.