## Peer Review File

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## Response to the Reviewer A' comments

**Comment 1**: Excessive Tables: Consider reducing the number of tables and perform a cutoff value analysis to refine and recommend an optimal active surveillance time for T1 PTC patients.

Reply 1: We have removed some tables from the supplementary materials, retaining only the essential ones. Due to the fact that our analysis did not yield statistically significant differences related to AS (Active Surveillance), the precise cutoff values are still subject to discussion. However, based on clinical practise, we selected threshold values of 6 months, 12 months, and 24 months for in-depth analysis and still did not find any statistical differences.(see Page 12, line 225-232)

**Comment 2**: Precision in Results: Ensure that the results are presented more precisely and concisely to improve clarity.

Reply 2: We have rechecked the data calculations to ensure the accuracy of the results and have also reorganized the language in the Results section to make it more concise. (see Page 9-10, line 158-189)

**Comment 3:** Discussion Clarity: The discussion section seems to contain extraneous information not directly related to the main topic and results. Streamline it for better readability and relevance.

Reply 3: We tried our best to improve the discussion section and made some changes to the manuscript. The changes will not influence the framework of the paper. And here we didn't list the changes but marked in red in the revised paper. (see Page 10-12, line 192-233)

**Comment 4**: Single-Center Analysis and Contradictory Results: Acknowledge that this study is a single-center analysis, and it's essential to address why the results are contradictory to other publications.

Reply 4: We have acknowledged in the discussion section that this is a single-center study(see Page 13, line 253). It is possible that our previous statements were not precise, but our actual conclusion is that active surveillance in the short term does not impact the risk of LLNM in T1 stage patients. Therefore, it may be considered as an alternative to surgery, which is in line with previous literature reports. (see Page 12, line 222-232)

**Comment 5:** Strength of Recommendations: Be cautious about using strong language like "prompt" in recommendations for surgical decision-making without sufficient supporting evidence.

Reply 5: As suggested by the reviewer, we have corrected the "prompt surgical intervention" into "careful consideration of the optimal timing for surgical intervention" (see

Page 10, line 194), corrected the "warrant prompt" into "should give serious thought to" (see Page 14, line 262), corrected the "prompt" into "trigger" (see Page 14, line 269).

**Comment 6:** Missing Information: Provide data on the number of cases and the duration of active surveillance in which lateral lymph node metastasis (LLNM) developed.

Reply 6: We have added some information about the number of cases and the duration of active surveillance in which lateral lymph node metastasis (LLNM) developed. (see Page 9, line 160, and Figure 1)

## Response to the Reviewer B' comments

Comment 1: Further discussion for the clinical value of the results for clinical impact in treatment of the disease would add article value particularly in the aspect of post operative adjuvant treatment as well as pre-operative assessment for potential cases of neck nodal dissection.

Reply 1: We have added a discussion of the clinical value of the results. (see Page 12-13, line 234-252)

## **Response to the Reviewer C' comments**

Comment 1: Need a little more detail on the role of ultrasounds in data collection or a statement on how that was used to define LNNM.

Reply 1: We have added a description of the role of ultrasound (see Page 7-8, line 125-135) and the ultrasound manifestations of LLNM (see Page 8, line 136-144).