

Peer Review File

Article information: <http://dx.doi.org/10.21037/aot-20-37>

Comment 1: Please put subheadings for each passage.

Reply 1: The subheadings for each passage were given for the clarity in accordance with the Reviewer's suggestions.

Comment 2: Completing the information on genetic background based on the indicated references.

Reply 2: In the manuscript, the paragraph related to the enrolment for AS based on genetic factor analysis was extended as suggested by the Reviewer. Thank you very much for these suggestions and the indication of the appropriate references which we finally included in the manuscript.

Comment 3: Line 6 PTCM should be PTMC

Reply 3: The wrong abbreviation of PTCM was changed to PTMC.

Comment 4: line 50: What exactly does the sentence: "Poor clinical significance of PTMC is confirmed" mean?

Reply 4: The sentence in line 50 was changed into: "Some PTMCs are not clinically significant, which is confirmed by post-mortem studies". We apologize for the lack of precision.

Comment 5: line 73 Ref. 12 is not from Japan. Instead, please add the following literature. Sugitani I, Toda K, Yamada K, et al. Three distinctly different kinds of papillary thyroid microcarcinoma should be recognized: our treatment strategies and outcomes World J Surg 2010; 34: 1222-31.

Reply 5: We apologize for this mistake. We corrected the number and we added the recommended references.

Comment 6: Line 170-172. As for patient-reported outcomes, please add the following literatures:

Kong SH, Ryu J, Kim MJ, et al. Longitudinal assessment of quality of life according to treatment options in low-risk papillary thyroid microcarcinoma patients: Active surveillance or immediate surgery (Interim analysis of MAeSTro) Thyroid 2019; 29: 1089-96

Yoshida Y, Horiuchi K, Okamoto T. Patients' view on the management of papillary thyroid microcarcinoma: active surveillance or surgery. Thyroid 2020; doi: 10.1089/thy.2019.0420

Reply 6: The recommended references were added.

Comment 7: Line 187. The latter "not" must be a typo.

Reply 7: A typo was corrected.

Comment 8: Line 212. Please add the following literature because it was published on AOT.

Sugitani I. Active surveillance for very low-risk papillary thyroid carcinoma: experience and perspectives from Japan. *Ann Thyroid* 2018; 3: 26. doi: 10.21037/aot.2018.10.04

Reply 8: We added the recommended paper, as suggested by the Reviewer.

Comment 9: Line 5. Is Ref. 5 in Polish? Please clarify the language and render it into English, if you can.

Reply 9: In accordance with the Reviewer's suggestion, the Polish title was translated into English: "The assessment of treatment of patients with low advanced papillary thyroid cancer staged cT1N0M0 treated as part of prospective clinical trial".

Comment 10: Line 358. It is not Ref. 30, but 31.

Reply 10: We apologize for this mistake. The number of the reference was corrected.

Comment 11: Line 361. MPTC must be PTMC.

Reply 11: The wrong abbreviation of MPTC was changed to PTMC.

Comment 12: I accept the proposition that active surveillance is best performed by experienced teams, in speciality centers with motivated patients and families. But the authors should provide more rationale as to why this has to be done in a research setting. Would it not be reasonable for one or more of these experienced centers to offer active surveillance to ideal patients (per the Brito system) in the older age group? I understand that doing active surveillance under an approved research protocol provide protections and contributes to data collection and generalizable knowledge, but my question is whether the important issue is whether the active surveillance is done by an experienced disease management team or more important that it is done as research outside of routine clinical care.

Reply 12: The initiation of AS in Europe on a larger scale seems currently necessary and warranted. We completely agree with the Reviewer's suggestion that for elderly patients assessed by the Brito system as ideal subjects, it is reasonable for one or more of these experienced European centers to offer active surveillance. Unfortunately, we must also bear in mind European legal conditions. In most European countries, the introduction of a new approach to clinical practice that is different from routinely recommended standards requires appropriate additional patient consent and is most often conducted as part of clinical trials by the most experienced centers before it becomes a routine clinical practice. We tried to explain this phenomenon better in our study. Thank you very much for this remark.