

Review of: "Challenges in identifying biomarkers for Smooth muscle tumors of uncertain malignant potential (STUMP)"

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Potential competing interests: No potential competing interests to declare.

Thank you for inviting me to review this article on STUMP tumors.

The authors have done a commendable job of collecting and presenting the current literature on the detection and diagnosis of STUMPs.

A few typographical notes: In title, "Smooth" should be lower case for consistency. In the first sentence of the abstract, please clarify that mitotic activity is part of diagnostic criteria for LMS, but more is needed (i.e. Stanford criteria, Bell et al 1994). The authors do clarify this in paragraph 2 of the Short Review, but it should be corrected in the abstract. In Figure 1D, leiomyosarcoma is misspelled.

The last sentence in the second to last paragraph of the Short Review ("Therefore, the immunohistochemical findings related to...") does not follow from the evidence. It is true that cell cycle regulators are also mutated in other gyn cancers, but this does not mean that they might not be useful in differentiating benign from malignant mesenchymal tumors.

I would encourage the authors to go deeper into the literature on the work that has been done with biomarkers. In particular, the work of Zhang et al. PMID: 29258902 is very important in this space and should be cited. In addition, the work of Sabrina Croce is important with regards to the genetics of STUMP tumors (e.g. PMID: 29327710).

Thank you for the opportunity to review.

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