Reviewer's report

Title: Proteomic approach could help us in diagnosis of Riedel's thyroiditis: a case report

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Reviewer: James Hennessey

Comments to authors:

I read with great interest the report entitled; Proteomic approach could help us in diagnosis of Riedel’s thyroiditis: a case report. The authors present the case of a woman diagnosed with Riedel’s thyroiditis at surgery and explore in vitro characteristics of the Riedel’s lesion compared to otherwise uninvolved goiter tissue form the same patient as well as samples from 3 patients diagnosed with anaplastic thyroid cancer, a primary differential diagnostic consideration in patients presenting with Riedel’s.

I found this report to intriguing as I have a great interest in discovering ways of diagnosing Riedel's before surgical intervention. As not all surgeries for this condition are as successful or safe as the one described here, it is indeed an important consideration in the evaluation of patients presenting with this rare disease.

Specific comments: The authors may want to consider having a native English speaker review and revise the grammatical details of the manuscript for ease of reading.

Abstract on Page 1: Consider defining the abbreviations FLC and FHC when they are first spelled out in the text. If there is sufficient room, might consider NOT using abbreviations for ease of the reader continuing to absorb what the authors are conveying rather than being involved in a continuous process of translating non-standard and to the endocrinologist reader, unfamiliar terms back into the specific entities that are so important to the report. Riedel’s is so rare that the average endocrinologist need to think what RT may be referring to each time it appears.

Page 5: It would be helpful if the authors summed up a proposed use of this technique in the evaluation of the patient with a thyroid mass in vivo. For example would one consider using a larger bore (23 gauge) needle to obtain sufficient material for the studies they have reported here? Would this need to be an ultrasound directed study in order to obtain material from apparently uninvolved (is it really normal?) tissue for example for the contralateral lobe? Is there enough experience with these techniques to establish threshold values for example in the optical density or Western blotting that would separate the suspicious lesion from anaplastic thyroid cancer? Are these techniques able to distinguish anaplastic thyroid cancer from papillary, Hurthle cell, follicular or medullary thyroid cancers on FNA (obtained in vivo of course) obtained
samples?

Thanks so much for sharing your fascinating work. I wish you all the best in further researching this technique for pre-op diagnosis.