Reviewer's report

Title: STAT3 expression correlates with prognosis of thymic epithelial tumors

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Reviewer: Hiroaki Nomori

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This paper describes the STAT3 expression, which is the downstream key molecules of JAKs/STATs), in thymic epithelial tumor. They found out that STAT3 expression had significant correlation with tumor stage, tumor subtypes, and patient's prognosis. However, there are several major weakness in this study as follows:

1. Thymic epithelial tumors have been known to have significant histological heterogeneity. Different histological subtypes are often mixed each other in a tumor. In the way to count the STAT# positive tumor cells, the authors described that 100 cancer cells in each were randomly chosen. However, they described neither how many fields were chosen nor how many tumor cells were counted in total. In my opinion, grading the immunohistochemical positive tumors cells is very hard in thymic epithelial tumors because of its significant histological heterogeneity.

2. While the authors described that neoadjuvant chemo-radiotherapy was not conducted in their cases, there is no information about the postoperative radiation therapy.

3. The prognosis of thymic epithelial tumors is known to be usually very long. While the subjected cases were from 1999 to 2009, the cases less than recent 5 years would not be able to be evaluated with prognosis.

4. Besides, the authors did not show the cause of death. The authors should show the disease specific prognosis rather than overall prognosis. The thymic epithelial tumors are sometimes associated with myasthenia gravis, which is one of the important prognostic factor as well as the tumor itself. The authors should evaluate the results of STAT3 expression with disease specific prognosis.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

'I declare that I have no competing interests' below.