

## Peer Review File

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### Reviewer A

**Comment 1:** This is a histological review. The authors do not describe the various classifications that can be used, the histological consensus of autoimmune hepatitis.

**Reply 1:** The various classifications and the histological consensus have been included and discussed mainly on the basis of the recent guidelines of AASLD in August 2020 published in *Hepatology*: Mack, Adams, Assis et al.: *HEPATOLOGY* 2020, 72:671-722.

**Comment 2:** They need to describe better the overlap syndrome. It is very confusing.

**Reply 2:** Description of the overlap syndromes has been changed according to the recent recommendation of AASLD in *Hepatology* 2020, 72:671-722.

### Reviewer B

**Comment 1:** Beer and Dienes present a review article titled "Autoimmune Hepatitis - Is Histology conclusive?" The paper is clearly written and easy to read. I am not sure that the paper presents any new information to the field. I realize that it is a review article, however, it is leaving out quite a few recent papers that discuss histopathologic findings in autoimmune hepatitis (AIH) and many of the references are older publications.

**Reply 1:** We have now updated the literature and added several publications: EASL Guidelines *J Hepatol* 2015, Mack et al. *Hepatology* 2020, Gurung et al. *Hum Pathol* 2018, Balitzer et al. *Mod Pathol* 2017, Torbenson et al. *Hum Pathol* 2019, Nguyen Canh et al. *J Clin Pathol* 2017, Lopez Couceiro et al. *Rev Esp Enferm Dig* 2019, Simoes et al. *Hepatol Commun* 2019.

**Comment 2:** Here are some suggestions that would improve the manuscript:

1. First, the authors discuss certain histopathologic features (e.g., emperipolesis and rosettes) that are well known to be controversial features for hepatopathologists. In fact, this question was brought up at the liver evening session of the United States and Canadian Academy of Pathology (USCAP) meeting and the audience was polled. Very few pathologists use these criteria to make a diagnosis of AIH. In addition, rosettes are known to be non-specific and can be observed whenever there is liver regeneration. Hepatic bilirubinostasis is a prime example.

**Reply 2:** Regarding the histologic features of emperipolesis and rosettes; they have been discussed in a new aspect that they are not typical for AIH but can be observed also in other types of hepatitis.

**Comment 3:** 2. Several references that discuss discrepancies or controversies of the Simplified Criteria have been left out of the reference section; here are some examples:

a. Torbenson MS, Arnold CA, Graham RP, et al. Identification of key challenges in liver pathology: data from a multicenter study of extramural consults. *Hum Pathol*. 2019;87:75-82. PMID: 30857968.

b. Balitzer D, Shafizadeh N, Peters MG, Ferrell LD, Alshak N, Kakar S. Autoimmune hepatitis: review of histologic features included in the simplified criteria proposed by the international autoimmune hepatitis group and proposal for new histologic criteria. *Mod Pathol*. 2017;30(5):773-783. PMID: 28106105.

**Reply 3:** The publications by Torbenson et al. and Balitzer et al. are now included and discussed in the text.

**Comment 4:** 3. In addition, the authors mention that viruses can mimic AIH; there are several papers that discuss this topic and a couple examples are shown below:

a. Simoes CC, Saldarriaga OA, Utay NS, et al. Direct-Acting Antiviral Treatment of Patients with Hepatitis C Resolves Serologic and Histopathologic Features of Autoimmune Hepatitis. *Hepatology*. 2019;3(8):1113-1123.

b. López Couceiro L, Gómez Domínguez E, Muñoz Gómez R, Castellano Tortajada G, Ibarrola de Andrés C, Fernández Vázquez I. Healing of autoimmune hepatitis associated with hepatitis C virus infection treated with direct-acting antivirals. *Rev Esp Enferm Dig*. 2019;111(2):159-161.

**Reply 4:** The coincidence of hepatitis C and AIH are now discussed and the publications of Simoes et al. and Lopez-Couceiro et al. have been included and described.

**Comment 5:** 4. The more detailed criteria provided by the AASLD guidelines should also be discussed and included, since the features described in the paper can assist in diagnosing cases that lack some of the features used in the simplified criteria (e.g., rosettes and emperipolesis).

**Reply 5:** The recent and actual guidelines of the AASLD published in *Hepatology* in August 2020 have been included and discussed.