

A practical guide to assess the Nancy histological index for UC

Recently, we published the first validated index to assess histological disease activity in UC.¹ We believe that some clarifications have to be made regarding the assessment of this index in both clinical practice and clinical trials. Three histological criteria have to be assessed.

The first criterion is the presence of mucosal *ulceration* defined by the loss of colonic crypts replaced with 'immature' granulation tissue (defined as disorganised blood vessels with extravasated neutrophils) or the presence of fibrinopurulent exudate. The presence of only epithelial stripping should not be considered as ulceration. '*Ulceration*' (grade 4 of the Nancy index corresponding to severely active disease) is simply defined by the *presence or absence* of this criterion on biopsy specimen (figure 1A, B).

If ulceration is absent on biopsy specimen, the pathologist has to assess the second histological criteria, which is '*acute inflammatory cells infiltrate*'. Acute inflammatory cells infiltrate is defined by the *presence of neutrophils in lamina propria and/or epithelial cells*, with three grades:

- ▶ Moderate to severe: presence of multiple clusters of neutrophils in lamina propria and/or in epithelium that are easily apparent. In this case, it defines grade 3 of the Nancy index (figure 1C).
- ▶ Mild: few or rare neutrophils in lamina propria or in the epithelium that are difficult to see. In this case, it defines grade 2 of the Nancy index (figure 1D).
- ▶ Absence: no neutrophils on biopsy specimen.

Then, in the absence of neutrophils on biopsy specimen, pathologist has to assess '*chronic inflammatory infiltrate*'. Chronic inflammatory infiltrate is defined by *the presence of lymphocytes and/or plasmocytes and/or eosinophils in lamina propria*. Chronic inflammatory infiltrate has to be assessed by two grades:

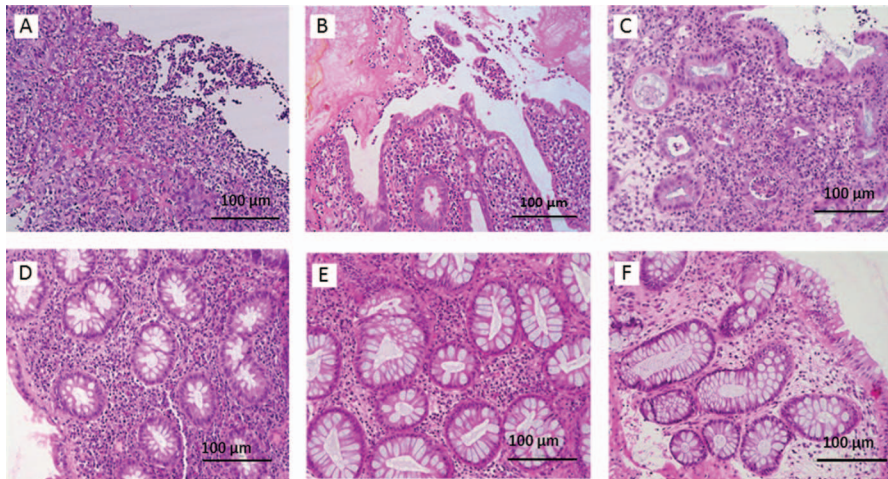


Figure 1 (A) Ulceration of colonic mucosa with inflamed granulation tissue corresponding to *grade 4* of the Nancy index (HES $\times 200$). (B) Ulceration of colonic mucosa with neutrophils in fibrin corresponding to *grade 4* of the Nancy index (HES $\times 200$). (C) Presence of multiple clusters of neutrophils in lamina propria and/or in epithelium that are easily apparent. Acute inflammatory cells infiltrate is moderate to severe, corresponding to *grade 3* of the Nancy index. (HES $\times 200$). (D) Presence of few or rare neutrophils in lamina propria or in the epithelium that are difficult to see. Acute inflammatory cells infiltrate is mild, corresponding to *grade 2* of the Nancy index (HES $\times 200$). (E) Biopsy specimen showing no acute inflammatory cells infiltrate and presence of a moderate-to-severe increase in chronic inflammatory cells number corresponding to *grade 1* of the Nancy index (HES $\times 200$). (F) Biopsy specimen showing a mild increase in chronic inflammatory cell number. In this case, it defines a *grade 0* of the Nancy index (HES $\times 200$). HES, hematoxylin-eosin-saffron.

- ▶ Moderate to severe: presence of an increase in chronic inflammatory cells number that are easily apparent. In this case, it defines a *grade 1* of the Nancy index (figure 1E).
- ▶ No or mild: no or mild increase in chronic inflammatory cells number. In this case, it defines a *grade 0* of the Nancy index (figure 1F).

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