**Supplementary Table 1. Scoring of histological lesions of VBDS in the liver biopsy specimens**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Histological lesions score** | **0** | **1** | **2** | **3** | **4** |
| Cholangitis and regeneration |  |  |  |  |  |
| Vanishing bile duct | / | ≥ 1/2,＜ 3/4 | ≥ 3/4 | / | / |
| CK7+ hepatocyte  | / | ＜ 1/3 portal tract | 1/3-2/3 portal tract | ＞ 2/3 portal tract | / |
| Ductular reaction, type Ⅱ | Absent | Periportal,small | Periportal, branched | / | / |
| Cholestasis |  |  |  |  |  |
| Canalicular cholestasis | Absent | Obvious in high power microscopic view in zone 3 | Obvious in low power microscopic view in zone 3 | Obvious in low power microscopic view in zone 2, 3 | Obvious in low power microscopic view in all zone  |
| Hepatocellular cholestasis | Absent | Some in zone 3 | most in zone 3 | most in zone 2, 3 | most in zone 1, 2, 3 |
| Cholestasis in Kupffer cells | Absent | Scattered | Numerous | / | / |
| Cholate stasis | Absent | few | many | / | / |
| Foam cells | Absent | Minimal | Clusters | / | / |
| Inflammation |  |  |  |  |  |
| Portal inflammation | Absent | Mild, some or all portal areas | Moderate, some or all portal areas | Moderate/marked, all portal areas | Marked, all portal areas |
| Interface hepatitis | Absent | Mild | Mild-Moderate | Moderate | Severe |
| Lobular inflammation(assessment at ×200) | Absent | <2 lesions | 2-4 lesions | ≥4 lesions | / |
| Fibrosis |  |  |  |  |  |
| Fibrosis (according to Metavir) | Absent | portal fibrosis without septa  | portal fibrosis with few septa | portal fibrosis with many septa butno cirrhosis | Cirrhosis |