**Supplemental Table S3.** Encoding of HCC clinicopathological features into numbers for carrying out Spearman’s correlation test.

|  |  |  |
| --- | --- | --- |
| Characteristic | Common notation | Encoded digital notation |
| Age | years | years |
| Gender | malefemale | 12 |
| TNM staging | IIIIIIIV | 1234 |
| BCLC staging | ABCD | 1234 |
| Tumor size | cm | cm |
| Intrahepatic metastases | noyes | 01 |
| Lymph node metastases | noyes | 01 |
| Distant metastases | noyes | 01 |
| Tumor capsule presence | absentfeebleprominent | 012 |
| Invasion into blood vessels | noyes | 01 |
| Tumor vascularity | lowmoderatehigh | 123 |
| Histological differentiation,Edmondson-Steiner grade | G1 - highG2 - moderateG3 - poorG4 – undifferentiatedGx – not applicable | 1234N/A |
| Alpha-fetoprotein serum level | low (<50 ng/ml)high (>50 ng/ml) | 12 |
| Ascites | noyes | 01 |
| Cirrhosis | noyes | 01 |
| Tumor necrosis | noyes | 01 |