**Supplementary Table 2. Evaluation of the quality of the studies included in the cohort analysis: modified Newcastle-Ottawa scale.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Author** | **Year** | **Study population selection** | **Comparability between groups** | **Outcome measurement** | **Total score****(9piont)** |
| Representativeness of the sample（1point） | Determination of treatment（1point） | Make sure that the research started withoutOutcome indicators to be observed（1point） | Decompensation in research designNumber of patients with stage cirrhosis≥50（1point） | Subjects are comparable in design and statistical analysis（2point） | Result evaluation（2point） | Adequacy of follow-up time ≥12/24 weeks after the results occurred（1point） |
| Ridruejo, E | 2019 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 9 |
| Pellicelli.A | 2019 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 7 |
| Sanai. F | 2018 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 8 |
| Garg, G | 2018 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 8 |
| Young, J | 2017 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 7 |
| Hezode, C | 2017 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 7 |
| Goel, A | 2017 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 8 |
| Fox, D | 2017 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 7 |
| Dalgard, O | 2017 | 1 | 0 | 1 | 0 | 1 | 2 | 1 | 6 |
| Alonso, S | 2017 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 8 |
| Poordad, F | 2016 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 7 |
| Foster, G | 2016 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 8 |
| Cheng, P | 2019 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 7 |
| Backus, L | 2019 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 7 |
| Abaalkhail, F | 2016 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 8 |
| Leroy, V | 2016 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 8 |
| Petersen, J | 2016 | 1 | 1 | 1 | 1 | 0 | 2 | 1 | 7 |
| Flamm, S | 2019 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 8 |
| Zhang, M | 2019 | 1 | 1 | 0 | 1 | 0 | 2 | 1 | 6 |
| Atsukawa, M | 2020 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 7 |
| Gheorghe, L. S | 2020 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 8 |
| Tahata, Y | 2020 | 1 | 0 | 1 | 0 | 1 | 2 | 1 | 6 |
| Takaoka, Y | 2020 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 7 |
| Zhang, M | 2020 | 1 | 0 | 1 | 0 | 1 | 2 | 1 | 6 |

**Cochrane Risk Bias Assessment Tool evaluation of the quality of randomized controlled trials.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Author** | **Year** | **Selection bias** | **Implementation bias** | **Measurement bias** | **Follow-up bias** | **Reporting bias** | **Other biases** |
| **Random** | **Distribution** | **Blind** | **Blinding** | **Complete** | **Selective report** | **Other** |
| Takehara, T | 2019 | ＋ | ＋ | ? | ＋ | ＋ | ＋ | ? |
| El-Sherif, O | 2018 | ＋ | ＋ | ? | ＋ | ＋ | ＋ | ? |
| Abd Alla, M | 2018 | ? | ＋ | ? | ＋ | ＋ | ＋ | ? |
| Welzel, T | 2016 | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ? |
| Manns, M | 2016 | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ? |
| Curry, M | 2015 | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ? |
| Troland, D | 2017 | ? | ? | ? | ＋ | ＋ | ＋ | ? |
| Bansal, A | 2017 | ? | ? | ? | ＋ | ＋ | ＋ | ? |
| Liu, C | 2018 | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ? |

+, low; -, high; ?, uncertain.