**Supplementary Table S1. Demographic and clinical characteristics of 353 patients who were included in the main analysis and 267 patients who were excluded evaluated before DAA treatment.**

|  |  |  |  |
| --- | --- | --- | --- |
|   | Included patients(N=353) | Excluded patients(n=267) | p-value |
| Age (mean, SD, years)  | 64.3 ± 10.9 | 65.7 ± 10.1 | 0.104 |
| Male gender (%) | 190 (53.8) | 139 (52.1) | 0.675 |
| BMI (Kg/m2) | 26.0 ± 3.9 | 26.2 ± 3.4 | 0.507 |
| Diabetes (%) | 66 (18.9) | 57 (21.3) | 0.459 |
| Platelets (x 109/mL, mean,SD)  | 113.8 ± 59.6 | 117.5 ± 62.3 | 0.517 |
| Albumin (g/dL, mean,SD) | 4.0 ± 0.5 | 3.9 ± 0.5 | 0.065 |
| Bilirubin (mg/dL,mean,SD) | 1.1 ± 0.7 | 1.0 ± 0.7 | 0.572 |
| INR (mean,SD) | 1.1 ± 0.2 | 1.1 ± 0.3 | 0.224 |
| LSM by TE (kPa, mean,SD) | 22.1 ± 11.5 | 23.4 ± 12.8 | 0.194 |
| Esophageal varices before DAAAbsentSmall | 203 (57.5)150 (42.5) | 158 (59.2)109 (40.8) | 0.671 |

DAA, direct-acting antiviral agents. BMI, body mass index. INR, international normalized ratio. HRV, high-risk varices. TE, transient elastography

**Supplementary Table S2.** Comparison of the AUROCs for HRV prediction of non-invasive criteria evaluated before DAAs and after SVR by DAAs in 353 patients with HCV compensated cirrhosis.

|  |  |  |  |
| --- | --- | --- | --- |
|  | AUROC before DAAs(95%CI) | AUROC after DAAs (95%CI) | p-value |
| RESIST-HCV | 0.59 (0.54-0.64) | 0.70 (0.65-0.75) | 0.006 |
| Baveno VI | 0.57 (0.51-0.62) | 0.65 (0.59-0.69) | <0.001 |
| Expanded Baveno VI | 0.62 (0.57-0.67) | 0.64 (0.59-0.69) | 0.412 |

**Supplementary Table S3. Diagnostic performance for the prediction of HRV of non-invasive criteria evaluated after SVR in 203 patients with HCV compensated cirrhosis without esophageal varices before DAAs.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Number of endoscopies | HRV identified (true positive) | HRV missed (false negative) | Misclassified as HRV(false positive) | Correctly spared endoscopies(true negative) | False negative / number of patients avoiding endoscopies (95% CI)  | Sensitivity (95% CI) | Specificity (95%CI) | Positive Likelihood Ratio | Negative Likelihood Ratio | AUROC (95% CI) | *p*- value for AUROC comparison\* |
| EGDS in all patients  | 203 (100.0) | 2 (100.0) | 0 (0) | 201 (100.0) | 0 (0) | - | - | - | - | - | - | - |
| Baveno VII-HCV criteria | 131 (64.5) | 2 (100.0) | 0 (0.0) | 129 (64.2) | 72 (35.8) | 0 | 1.00 (0.16-1.00) | 0.36 (0.29-0.43) | 1.56 | 0.00 | 0.68 (0.61-0.74) | 0.666 |
| Baveno VI criteria  | 125 (61.6) | 2 (100.0) | 0 (0.0) | 123 (61.2) | 78 (38.8) | 0 | 1.00 (0.16-1.00) | 0.39 (0.32-0.46)  | 1.63 | 0.00 | 0.69 (0.63-0.78) | 0.623 |
| Expanded Baveno VIcriteria  | 79 (38.9) | 1 (50.0) | 1 (50.0) | 78 (38.8) | 123 (61.2) | 1/124 (0.8) (0.0-4.4) | 0.50 (0.01-0.99) | 0.61 (0.54-0.68) | 1.29 | 0.82 | 0.56 (0.48-0.63) | 0.976 |
| RESIST-HCV criteria  | 73 (36.0) | 1 (50.0) | 1 (50.0) | 72 (35.8) | 129 (64.2) | 1/130 (0.7)(0.0-4.1) | 0.50 (0.01-0.99)  | 0.64 (0.57-0.71) | 1.40 | 0.78 | 0.57 (0.50-0.64) | - |
| Ideal strategy | 2 (1.0) | 2 (100.0) | 0 (0) | 0 (0) | 201 (100.0) | 0 | - | - | - | - | - | - |

\*Reference is AUROC of RESIST-HCV criteria

Percentage of HRV identified and missed are calculated by using patients with HRV (n=2) as denominator.

HRV, high-risk varices. SVR, sustained virologic response. DAA, direct-acting antiviral agents. EGDS, esophagogastroduodenoscopy. AUROC, area under the receiver operating characteristic curve. 95% CI, 95% confidence interval.

**Supplementary Table S4. Diagnostic performance for the prediction of HRV of non-invasive criteria evaluated after SVR in 150 patients with HCV compensated cirrhosis with small esophageal varices before DAAs.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Number of endoscopies | HRV identified (true positive) | HRV missed (false negative) | Misclassified as HRV(false positive) | Correctly spared endoscopies(true negative) | False negative / number of patients avoiding endoscopies (95% CI)  | Sensitivity (95% CI) | Specificity (95%CI) | Positive Likelihood Ratio | Negative Likelihood Ratio | AUROC (95% CI) | *p*- value for AUROC comparison\* |
| EGDS in all patients  | 150 (100.0) | 32 (100.0) | 0 (0) | 118 (100) | 0 (0) | - | - | - | - | - | - | - |
| Baveno VII-HCV criteria | 138 (92.0) | 31 (96.9) | 1 (3.1) | 107 (90.7) | 11 (9.3) | 1/12 (8.3) (0.2-38.4)  | 0.97 (0.84-1.00) | 0.09 (0.05-0.16) | 1.07 | 0.34 | 0.53 (0.45-0.61) | 0.021 |
| Baveno VI criteria  | 125 (83.3) | 31 (96.9) | 1 (3.1) | 94 (79.7) | 24 (20.3) | 1/25 (4.0)(0.1-20.4) | 0.97 (0.84-1.00) | 20.3 (13.5-28.7) | 1.22 | 0.15 | 0.59 (0.50-0.67) | 0.332 |
| Expanded Baveno VIcriteria  | 110 (73.3) | 26 (81.3) | 6 (18.7) | 84 (71.2) | 34 (28.8) | 6/40 (15.0)(5.7-29.8) | 0.81 (0.63-0.93) | 0.29 (0.21-0.38) | 1.14 | 0.65 | 0.55 (0.47-0.63) | 0.037 |
| RESIST-HCV criteria  | 102 (68.0) | 28 (87.5) | 4 (12.5) | 74 (62.7) | 44 (37.3) | 4/48 (8.3)(2.3-19.9) | 0.88 (0.71-0.96) | 0.37 (0.29-0.47) | 1.40 | 0.34 | 0.62 (0.54-0.70) | - |
| Ideal strategy | 32 (21.3) | 32 (100.0) | 0 (0) | 0 (0) | 118 (100.0) | 0 | - | - | - | - | - | - |

\*Reference is AUROC of RESIST-HCV criteria

Percentage of HRV identified and missed are calculated by using patients with HRV (n=32) as denominator.

HRV, high-risk varices. SVR, sustained virologic response. DAA, direct-acting antiviral agents. EGDS, esophagogastroduodenoscopy. AUROC, area under the receiver operating characteristic curve. 95% CI, 95% confidence interval.

**Supplementary Table S5. Demographic and clinical characteristics of 5 patients classified as false negative by RESIST-HCV criteria compared to the whole cohort.**

|  |  |  |
| --- | --- | --- |
|   | Whole cohort(N=353) | False negative (n=5) |
| Age (mean, SD, years)  | 67.2 ± 11.1 | 54.0 ± 17.4 |
| Male gender (%) | 190 (53.8) | 5 (100) |
| BMI (Kg/m2) | 26.0 ± 3.9 | 30.0 ± 4.4 |
| Diabetes (%) | 66 (18.9) | 2 (40) |
| Platelets (x 109/mL, mean,SD)  | 132.9 ± 62.5 | 165.0 ± 36.1 |
| Albumin (g/dL, mean,SD) | 4.2 ± 0.5 | 4.3 ± 0.4 |
| Bilirubin (mg/dL,mean,SD) | 0.9 ± 0.6 | 1.2 ± 1.1 |
| INR (mean,SD) | 1.2 ± 0.3 | 1.1 ± 0.1 |
| LSM by TE (kPa, mean,SD) | 15.6 ± 9.6 | 23.2 ± 2.5 |

BMI, body mass index. INR, international normalized ratio. TE, transient elastography

**Supplementary Table S6. Net benefit for ruling in HRV at 5%, 7.5% and 10% threshold probabilities of missing HRV of RESIST-HCV and elastography-based criteria (Baveno VI, Expanded Baveno VI and Baveno VII-HCV criteria) after sustained virological response by direct-acting antiviral agents in 353 patients with HCV compensated cirrhosis by decision curve analysis.**

|  |  |
| --- | --- |
|  | Number of EGDS correctly performed per 100 patients |
| Criteria | Threshold probability of 5% of missing HRV | Threshold probability of 7.5% of missing HRV | Threshold probability of 10% of missing HRV |
| RESIST-HCV | 6 | 5 | 3 |
| Baveno VI | 6 | 4 | 2 |
| Expanded Baveno VI | 5 | 2 | 2 |
| Baveno VII-HCV | 6 | 3 | 2 |

Net benefit represents the number of EGDS correctly performed per 100 patients compared to the strategy to perform EGDS in none at different threshold probabilities of missing HRV.

HRV, high-risk varices. DAA, direct-acting antiviral agents. SVR, sustained virologic response