

## Supplementary Data

### *Analysis of results based on fresh frozen plasma (FFP) transfusion*

Both groups were well matched for age, mean arterial pressure and heart rate at baseline. Among those who received FFP transfusions, significant differences were noted in terms of hemoglobin (median 6.8 g/dL *vs* 7.8 g/dL;  $P < 0.001$ ), INR (median 2.3 *vs* 1.9;  $P < 0.001$ ), albumin (3.0 mg/dL *vs* 3.2 mg/dL;  $P = 0.017$ ) and serum urea (median 43 mg/dL *vs* 36.0 mg/dL;  $P = 0.006$ ) as compared to those who did not. Patients receiving transfusions were more likely to have ascites (72.2% *vs* 47%;  $P < 0.001$ ), HE (25% *vs* 8.2%;  $P < 0.001$ ), higher CTP and MELD scores (10.0 and 21.8 *vs* 7.0 and 14.7;  $P < 0.001$ ) than those who did not receive transfusion. The etiology of cirrhosis in both groups were similar (predominantly alcohol related), as was the source of bleeding (high grade esophageal varices).

## Supplementary Tables

**Supplementary Table 1 Comparison of baseline characteristics of cirrhosis patients who received FFP and those who did not**

| Characteristics                      | FFP transfusion yes ( <i>n</i> = 108) | FFP transfusion no ( <i>n</i> = 805) | <i>P</i> value |
|--------------------------------------|---------------------------------------|--------------------------------------|----------------|
| Age (years)                          | 42 (35-52)                            | 45 (35-54)                           | 0.097          |
| Sex (Male: Female)                   | 98 (90.7): 10 (9.3)                   | 664 (82.5): 141 (17.5)               | 0.030          |
| Heart rate (per minute)              | 90 (84-100)                           | 96 (86-110)                          | 0.013          |
| MAP (mm of Hg)                       | 81 (73-87)                            | 82 (74-90)                           | 0.334          |
| Hemoglobin (g/dl)                    | 6.8 (5.3-8.4)                         | 7.8 (6.3-9.5)                        | <0.001         |
| TLC (x10 <sup>9</sup> /L)            | 8.3 (6.0-12.5)                        | 6.2 (3.7-8.8)                        | <0.001         |
| Platelet count (x10 <sup>9</sup> /L) | 84 (54-129)                           | 97 (55-137)                          | 0.116          |
| INR                                  | 2.3 (1.9-2.8)                         | 1.5 (1.3-1.8)                        | <0.001         |
| Serum urea (mg/dl)                   | 43 (28-84)                            | 36 (24-62)                           | 0.006          |
| Creatinine (mg/dl)                   | 0.9 (0.6-1.7)                         | 0.8 (0.6-1.2)                        | 0.088          |
| Sodium (meq/L)                       | 139.0 (135-143)                       | 139 (135-142)                        | 0.589          |
| Bilirubin (mg/dl)                    | 3.1 (1.4-8.0)                         | 1.6 (0.9-2.7)                        | <0.001         |
| AST (IU/L)                           | 64.0 (37-115)                         | 49.0 (33-82)                         | 0.001          |
| ALT (IU/L)                           | 41 (25-70)                            | 34 (22-51)                           | 0.007          |
| Albumin (g/dl)                       | 3.0 (2.5-3.6)                         | 3.2 (2.7-3.8)                        | 0.017          |

|                    |                  |                  |        |
|--------------------|------------------|------------------|--------|
| CTP                | 10.0 (8.0-12.0)  | 7.0 (6.0-8.0)    | <0.001 |
| MELD               | 21.8 (17.2-29.1) | 14.1 (10.7-18.9) | <0.001 |
| Ascites            | 78 (72.2)        | 378 (47.0)       | <0.001 |
| HCC                | 5 (4.6)          | 30 (3.7)         | 0.595  |
| HE                 | 27 (25.0)        | 66 (8.2)         | <0.001 |
| Endotherapy        |                  |                  | 0.217  |
| No therapy         | 30 (27.8)        | 172 (21.4)       |        |
| Glue               | 8 (7.4)          | 97 (12.0)        |        |
| Ethoxysclerol      | 7 (6.5)          | 36 (4.5)         |        |
| EVL                | 58 (53.7)        | 479 (59.5)       |        |
| APC                | 0                | 2 (0.2)          |        |
| Glue and EVL       | 5 (4.6)          | 19 (2.4)         |        |
| Rebleed at 5 days  | 18 (16.7)        | 30 (3.7)         | <0.001 |
| Rebleed at 42 days | 35 (32.4)        | 103 (12.8)       | <0.001 |
| Death at 42 days   | 38 (35.2)        | 128 (15.9)       | <0.001 |
| Child Class        |                  |                  | <0.001 |
| A                  | 16 (14.8)        | 358 (44.5)       |        |
| B                  | 29 (26.9)        | 332 (41.2)       |        |
| C                  | 63 (58.3)        | 115 (14.3)       |        |

|                       |       |     |           |            |    |           |             |            |        |
|-----------------------|-------|-----|-----------|------------|----|-----------|-------------|------------|--------|
| Etiology              |       |     |           |            |    |           |             |            | 0.002  |
| Alcohol               |       |     | 62 (57.4) |            |    |           |             | 331 (41.1) |        |
| Other                 |       |     | 46 (42.6) |            |    |           |             | 474 (58.9) |        |
| RBC                   |       |     |           |            |    |           |             |            | <0.001 |
| 0                     |       |     | 42 (38.9) |            |    |           |             | 500 (62.1) |        |
| 1                     |       |     | 21 (19.4) |            |    |           |             | 122 (15.2) |        |
| ≥2                    |       |     | 45 (41.7) |            |    |           |             | 183 (22.7) |        |
| Platelet              | (<20: | 20- | 3 (2.8):  | 23 (21.3): | 82 | 20 (2.5): | 145 (18.0): | 640        | 0.689  |
| 50: >50)              |       |     | (75.9)    |            |    | (79.5)    |             |            |        |
| Cause of bleed        |       |     |           |            |    |           |             |            | 0.485  |
| variceal              |       |     |           |            |    |           |             |            |        |
| Esophageal            |       |     | 97 (89.8) |            |    |           |             | 692 (86.0) |        |
| Fundal                |       |     | 4 (3.7)   |            |    |           |             | 51 (6.3)   |        |
| Esophageal and Fundal |       |     | 7 (6.5)   |            |    |           |             | 62 (7.7)   |        |

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Note: All values are represented as n (%) or median (IQR).

APC: Argon plasma Coagulation, AST: Aspartate Transaminase, ALT: Alanine Transaminase, CTP: Child-Turcotte-Pugh score, INR: Internationalized Normalized Ratio, EVL: Endoscopic Variceal Ligation, FFP: Fresh Frozen Plasma, HE: Hepatic Encephalopathy, HCC: Hepatocellular carcinoma, MAP: Mean Arterial Pressure, MELD: Model for End Stage Liver Disease, RBC: Red blood cells, TLC: Total Leucocyte Count

**Supplementary Table 2 Comparison of baseline characteristics of patients who received either FFP or platelet transfusion with those who did not**

| Characteristics                      | FFP/ platelet transfusion any ( <i>n</i> = 177) | FFP/platelet transfusion no ( <i>n</i> = 736) | <i>P</i> value |
|--------------------------------------|-------------------------------------------------|-----------------------------------------------|----------------|
| Age (years)                          | 42 (34-50)                                      | 45 (36-55)                                    | 0.007          |
| Sex (Male: Female)                   | 154 (87.0): 23 (13.0)                           | 608 (82.6): 128 (17.4)                        | 0.177          |
| Heart rate (per minute)              | 90 (85-100)                                     | 98 (86-110)                                   | 0.001          |
| MAP (mm of Hg)                       | 81 (74-87)                                      | 82 (74-90)                                    | 0.149          |
| Hemoglobin (g/dl)                    | 7.3 (5.8-8.8)                                   | 7.8 (6.2-9.5)                                 | 0.006          |
| TLC (x10 <sup>9</sup> /L)            | 6.9 (3.9-10.6)                                  | 6.3 (3.8-9.0)                                 | 0.051          |
| Platelet count (x10 <sup>9</sup> /L) | 63 (38-109)                                     | 100 (62-140)                                  | <0.001         |
| INR                                  | 1.9 (1.6-2.5)                                   | 1.5 (1.3-1.8)                                 | <0.001         |
| Serum urea (mg/dl)                   | 41 (28-70)                                      | 36 (24-63)                                    | 0.122          |
| Creatinine (mg/dl)                   | 0.8 (0.6-1.3)                                   | 0.8 (0.6-1.2)                                 | 0.282          |
| Sodium (meq/L)                       | 140 (135-143)                                   | 139 (135-142)                                 | 0.091          |
| Bilirubin (mg/dl)                    | 2.4 (1.1-6.0)                                   | 1.6 (0.9-2.7)                                 | <0.001         |
| AST (IU/L)                           | 61 (34-94)                                      | 49 (34-84)                                    | 0.093          |
| ALT (IU/L)                           | 38 (23-65)                                      | 34 (23-52)                                    | 0.139          |

|                    |                  |                  |        |
|--------------------|------------------|------------------|--------|
| Albumin (g/ dl)    | 3.1 (2.7-3.7)    | 3.2 (2.7-3.8)    | 0.260  |
| CTP                | 9.0 (6.5-11.0)   | 7.0 (6.0-8.0)    | <0.001 |
| MELD               | 18.7 (13.5-24.7) | 14.1 (10.9-19.0) | <0.001 |
| Ascites            | 119 (67.2)       | 337 (45.8)       | <0.001 |
| HCC                | 10 (5.6)         | 25 (3.4)         | 0.188  |
| HE                 | 37 (20.9)        | 56 (7.6)         | <0.001 |
| Endotherapy        |                  |                  | 0.261  |
| No therapy         | 45 (25.4)        | 157 (21.3)       |        |
| Glue               | 17 (9.6)         | 88 (12.0)        |        |
| Ethoxysclerol      | 12 (6.8)         | 31 (4.2)         |        |
| EVL                | 96 (54.2)        | 441 (59.9)       |        |
| APC                | 0                | 2 (0.3)          |        |
| Glue and EVL       | 7 (4.0)          | 17 (2.3)         |        |
| Rebleed at 5 days  | 25 (14.1)        | 23 (3.1)         | <0.001 |
| Rebleed at 42 days | 56 (31.6)        | 82 (11.1)        | <0.001 |
| Death at 42 days   | 54 (30.5)        | 112 (15.2)       | <0.001 |
| Child Class        |                  |                  | <0.001 |
| A                  | 44 (24.9)        | 330 (44.8)       |        |
| B                  | 60 (33.9)        | 301 (40.9)       |        |

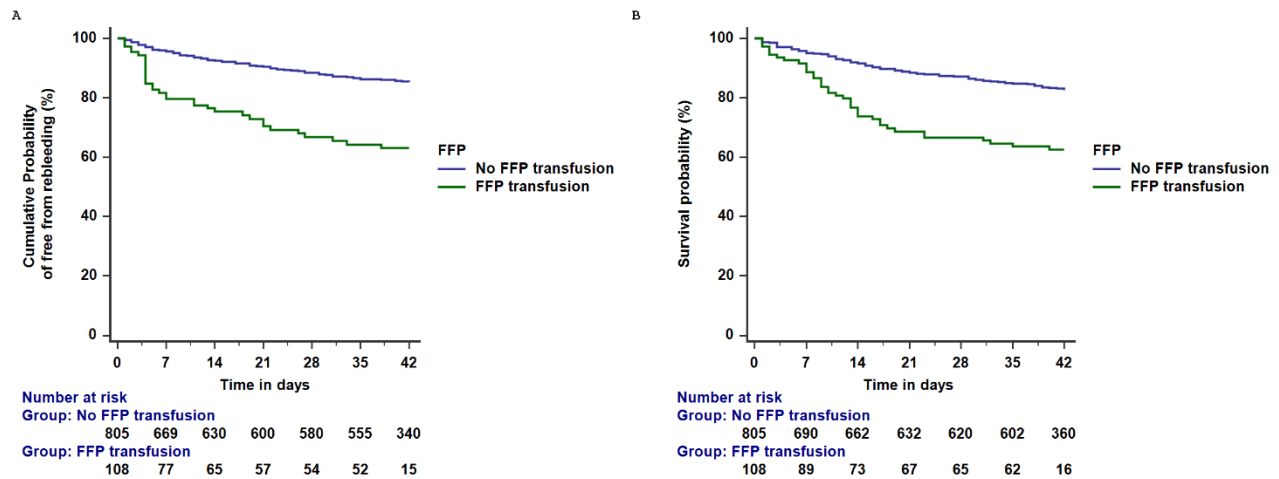
|                       |            |            |       |
|-----------------------|------------|------------|-------|
| C                     | 73 (41.2)  | 105 (14.3) |       |
| Etiology              |            |            |       |
| Alcohol               | 88 (49.7)  | 305 (41.4) | 0.052 |
| Other                 | 89 (50.3)  | 431 (58.6) | 0.001 |
| RBC                   |            |            |       |
| 0                     | 83 (46.9)  | 459 (62.4) |       |
| 1                     | 34 (19.2)  | 109 (14.8) |       |
| ≥2                    | 60 (33.9)  | 168 (22.8) |       |
| Cause of bleed        |            |            | 0.752 |
| variceal              |            |            |       |
| Esophageal            | 155 (87.6) | 634 (86.1) |       |
| Fundal                | 11 (6.2)   | 44 (6.0)   |       |
| Esophageal and Fundal | 11 (6.2)   | 58 (7.9)   |       |

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Note: All values are represented as n (%) or median (IQR).

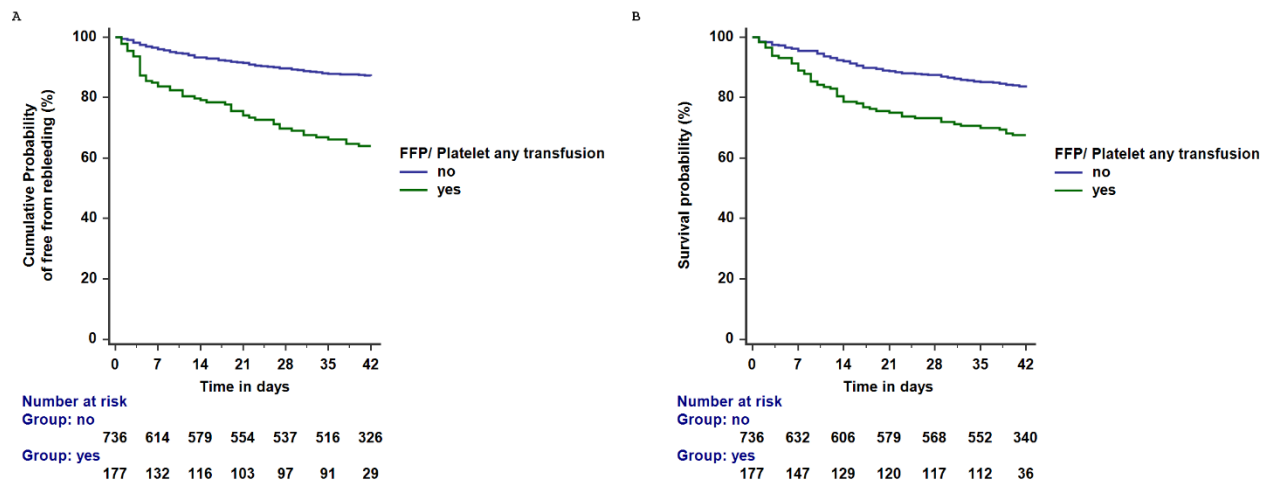
APC: Argon plasma Coagulation, AST: Aspartate Transaminase, ALT: Alanine Transaminase, CTP: Child-Turcotte-Pugh score, INR: Internationalized Normalized Ratio, EVL: Endoscopic Variceal Ligation, FFP: Fresh Frozen Plasma, HE: Hepatic Encephalopathy, HCC: Hepatocellular carcinoma, MAP: Mean Arterial Pressure, MELD: Model for End Stage Liver Disease, RBC: Red blood cells, TLC: Total Leucocyte Count

## Supplementary Figures



**Supplementary Figure 1** Kaplan Meier curves of patients who received FFP transfusion vs those who did not demonstrating cumulative probability of (A) free from rebleed (log-rank  $P < 0.001$ ) and (B) survival probability (log-rank  $P < 0.001$ ).





**Supplementary Figure 2** Kaplan Meier curves of among patients who received FFP/platelet transfusion vs those who did not demonstrating cumulative probability of (A) free from rebleed (log-rank  $P < 0.001$ ) and (B) survival probability (log-rank  $P < 0.001$ ).