**Supplementary Table 1. Population characteristics of the whole cohort**

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|  | **Overall****(n = 1063)** | **0 CMRF** **(n = 88)** | **1-3 CMRFs****(n = 877)** | **4-5 CMRFs****(n = 98)** | ***p*-value** |
| **Male, gender (%)** | 810 (76.1) | 68 (77.2) | 669 (76.2) | 73 (74.4) | 0.897 |
| **Age (years)** | 38.0 (32.0-47.0) | 34.0 (29.0-42.0) | 38.0 (31.0-46.0) | 45.0 (37.0-52.0) | < 0.001 |
| **BMI (kg/m2)** | 25.3 (23.2-27.6) | 21.3 (20.0-22.0) | 25.4 (23.5-27.5) | 27.7 (25.9-29.4) | < 0.001 |
| **Significant fibrosis (%)** | 503 (35.9) | 47 (53.4) | 406 (46.2) | 50 (51.0) | 0.330 |
| **Inflammation grade (G2, %)** | 646 (60.8) | 56 (63.6) | 531 (60.5) | 59 (60.2) | 0.846 |
| **Diabetes (%)** | 382 (10.3) | 0 (0.0) | 295 (33.6) | 87 (88.7) | < 0.001 |
| **Hypertension (%)** | 109 (10.2) | 0 (0.0) | 61 (6.9) | 48 (48.9) | < 0.001 |
| **Hb (g/L)** | 151.0 (140.0-160.0) | 146.5 (136.0-153.0) | 151.0 (139.0-160.0) | 152.0 (141.0-160.5) | 0.006 |
| **PLT (\*10^9/L)** | 192.0 (159.0-232.0) | 182.5 (145.3-222.8) | 192.0 (161.0-233.0) | 193.0 (154.8-230.5) | 0.476 |
| **Tbil (umol/L)** | 14.2 (11.0-18.3) | 14.6 (11.5-18.6) | 14.2 (11.0-18.3) | 13.3 (10.9-17.9) | 0.477 |
| **ALB (g/L)** | 44.4 (41.7-47.2) | 42.9 (39.3-45.1) | 44.7 (42.0-47.5) | 44.7 (41.9-47.1) | < 0.001 |
| **ALT (U/L)** | 45.0 (29.0-83.0) | 46.0 (26.3-92.0) | 45.7 (28.0-81.5) | 44.0 (30.0-80.0) | 0.868 |
| **AST (U/L)** | 33.0 (23.0-49.0) | 34.0 (24.0-52.0) | 31.0 (23.0-51.0) | 31.0 (23.0-47.3) | 0.386 |
| **ALP (U/L)** | 74.0 (59.0-93.0) | 73.0 (60.3-95.0) | 74.0 (59.0-93.0) | 75.5 (60.8-97.3) | 0.668 |
| **GGT (U/L)** | 33.0 (22.0-54.0) | 29.0 (18.0-51.5) | 32.0 (22.0-52.0) | 45.6 (31.8-66.3) | < 0.001 |
| **TC (mmol/L)** | 4.5 (4.0-5.1) | 4.5 (4.0-5.1) | 4.5 (3.9-5.1) | 4.5 (4.0-5.1) | 0.872 |
| **TG (mmol/L)** | 1.2 (0.9-1.8) | 0.9 (0.7-1.1) | 1.2 (0.9-1.7) | 2.1 (1.7-2.9) | < 0.001 |
| **HDL-c(mmol/L)** | 1.2 (1.0-1.4) | 1.5 (1.3-1.6) | 1.2 (1.0-1.4) | 0.9 (0.8-1.0) | < 0.001 |
| **LDL-c(mmol/L)** | 2.7 (2.2-3.2) | 2.5 (2.2-3.0) | 2.7 (2.2-3.2) | 2.7 (2.3-3.3) | 0.178 |
| **PT (%)** | 11.9 (11.1-14.4) | 12.6 (11.1-94.8) | 11.9 (11.1-14.2) | 11.5 (10.9-44.5) | 0.295 |
| **INR** | 1.0 (1.0-1.1) | 1.0 (1.0-1.1) | 1.0 (1.0-1.1) | 1.0 (1.0-1.1) | 0.401 |
| **HBsAg (IU/mL)** | 2791.4 (507.8-10290.2) | 3550.0 (585.8-11293.1) | 2835.2 (507.2-10926.0) | 2151.0(506.5-6559.788) | 0.335 |
| **HBV DNA (log10 IU/mL)** | 4.8 (3.0-7.3) | 5.1 (4.0-6.7) | 4.8 (3.0-7.5) | 3.5 (2.2-6.6) | 0.007 |
| **FIB-4** | 1.0 (0.7-1.5) | 0.97 (0.6-1.5) | 1.0 (0.7-1.5) | 1.2 (0.7-1.8) | 0.074 |
| **APRI** | 0.4 (0.3-0.8) | 0.5 (0.3-0.8) | 0.4 (0.3-0.8) | 0.4 (0.3-0.7) | 0.251 |
| **NFS** | -2.4 (-3.2--1.5) | -3 (-3.8--1.9) | -2.4 (-3.2--1.5) | -1.4 (-2.5--0.3) | < 0.001 |

The inflammation grade was evaluated according to Brunt’s criteria, with G2 representing moderate inflammation. CMRFs, cardiometabolic risk factors; BMI, body mass index; Hb, hemoglobin; PLT, platelet; Tbil, total bilirubin; ALB, albumin; ALT, alanine transaminase; AST, aspartate transaminase; ALP, alkaline phosphatase; GGT, gamma-glutamyl transferase; TC, total cholesterol; TG, triglyceride; HDL-c, high-density lipoprotein cholesterol; LDL-c, low-density lipoprotein cholesterol; PT, prothrombin time; INR, international normalized ratio; HBsAg, hepatitis B surface antigen; HBeAg, hepatitis B e antigen; HBV DNA, hepatitis B virus deoxyribonucleic acid; FIB-4, the fibrosis-4 index; APRI, the aspartate aminotransferase-to-platelet ratio index; NFS, the non-alcoholic fatty liver disease fibrosis score. *p*-values were compared among patients without CMRFs, patients with 1-3 CMRFs, and patients with 4-5 CMRFs.