

**SUPPLEMENTAL APPLEDIX FOR THE STUDY:**

**Plasma interleukin-6 level predicts the risk of arteriovenous fistula dysfunction in patients  
undergoing maintenance hemodialysis**

**Supplementary Table 1. Baseline demographic and laboratory data of the study population according to the tertiles of plasma IL-6 level**

|   | Tertiles of plasma IL-6 level |                     |                     | <i>p</i> value         |
|---|-------------------------------|---------------------|---------------------|------------------------|
|   | Tertile 1<br>(n=98)           | Tertile 2<br>(n=91) | Tertile 3<br>(n=93) |                        |
| Age (year)                                  | 59.3 ± 12.9                   | 59.8 ± 12.5         | 65.2 ± 12.0         | 0.002 <sup>e, f</sup>  |
| Male (n, %)                                 | 64 (65.3)                     | 67 (73.6)           | 59 (63.4)           | 0.292                  |
| Body mass index (kg/m <sup>2</sup> )        | 24.2 ± 6.2                    | 23.6 ± 5.1          | 23.0 ± 5.3          | 0.327                  |
| Dialysis vintage (year) <sup>a</sup>        | 2.4 (1.1, 6.0)                | 3.5 (1.7, 6.6)      | 3.8 (1.6, 9.6)      | 0.054                  |
| Charlson Comorbidity Index                  | 3.9 ± 1.5                     | 4.0 ± 1.6           | 4.3 ± 1.5           | 0.150                  |
| Diabetes mellitus (n, %)                    | 57 (58.2)                     | 51 (56.0)           | 53 (57.0)           | 0.957                  |
| Previous history of CVD (n, %) <sup>b</sup> | 89 (90.8)                     | 79 (86.8)           | 86 (92.5)           | 0.419                  |
| Pre-dialysis systolic BP (mmHg)             | 145 ± 18                      | 143 ± 20            | 145 ± 22            | 0.895                  |
| Location of AVF (n, %) <sup>c</sup>         |                               |                     |                     |                        |
| Forearm                                     | 20 (20.6)                     | 21 (23.1)           | 28 (30.1)           | 0.291                  |
| Upper arm                                   | 77 (79.4)                     | 70 (76.9)           | 65 (69.9)           |                        |
| AVF vintage (year) <sup>a</sup>             | 2.2 (1.0, 5.0)                | 2.9 (1.2, 5.3)      | 2.9 (0.9, 5.8)      | 0.222                  |
| Ultrafiltration (L/session)                 | 2.17 ± 1.06                   | 2.42 ± 0.99         | 2.32 ± 1.07         | 0.250                  |
| Single pool Kt/V                            | 1.61 ± 0.29                   | 1.55 ± 0.27         | 1.60 ± 0.30         | 0.276                  |
| Blood flow rate (mL/min)                    | 272 ± 23                      | 265 ± 23            | 269 ± 22            | 0.059                  |
| Hemodialysis duration (hour)                | 3.90 ± 0.22                   | 3.93 ± 0.18         | 3.93 ± 0.22         | 0.499                  |
| Hemodiafiltration (n, %)                    | 18 (18.4)                     | 22 (24.2)           | 30 (32.3)           | 0.084                  |
| Statin use (n, %)                           | 43 (43.9)                     | 46 (50.5)           | 42 (45.2)           | 0.626                  |
| Anti-platelet agent use (n, %)              | 66 (67.3)                     | 67 (73.6)           | 68 (73.1)           | 0.566                  |
| Erythropoiesis-stimulating agent use (%)    | 93 (94.9)                     | 80 (87.9)           | 85 (91.4)           | 0.228                  |
| Hemoglobin (g/dL)                           | 10.6 ± 1.1                    | 10.5 ± 1.2          | 10.2 ± 1.4          | 0.062                  |
| Intact parathyroid hormone (pg/dL)          | 241 ± 221                     | 310 ± 256           | 286 ± 181           | 0.097                  |
| Calcium (mg/dL)                             | 8.6 ± 0.8                     | 8.5 ± 0.7           | 8.5 ± 0.9           | 0.506                  |
| Phosphorus (mg/dL)                          | 4.8 ± 1.5                     | 5.1 ± 1.3           | 4.6 ± 1.4           | 0.098                  |
| Albumin (mg/dL)                             | 3.9 ± 0.3                     | 3.9 ± 0.3           | 3.7 ± 0.3           | <0.001 <sup>e, f</sup> |
| Alkaline phosphatase (mg/dL)                | 96 ± 60                       | 108 ± 75            | 129 ± 88            | 0.010 <sup>e</sup>     |

|   |                    |                     |                     |                        |
|---|--------------------|---------------------|---------------------|------------------------|
| LDL-cholesterol (mg/dL)                   | 78 ± 25            | 77 ± 26             | 76 ± 26             | 0.897                  |
| Erythrocyte sedimentation rate<br>(mm/hr) | 23.7 ± 19.4        | 25.9 ± 15.0         | 40.5 ± 28.0         | 0.001 <sup>e, f</sup>  |
| hs-CRP (mg/dL) <sup>a</sup>               | 0.22 (0.06, 1.49)  | 0.69 (0.19, 2.82)   | 2.40 (0.60, 8.06)   | <0.001 <sup>e, f</sup> |
| MCP-1(pg/mL) <sup>a</sup>                 | 162 (134, 205)     | 175 (141, 224)      | 162 (123, 226)      | 0.515                  |
| TNF- $\alpha$ (pg/mL) <sup>a</sup>        | 8.12 (5.33, 11.79) | 10.92 (6.94, 13.61) | 10.93 (7.01, 14.00) | 0.002 <sup>d, e</sup>  |

**Abbreviation:** AVF, arteriovenous fistula; BP, blood pressure; LDL, low-density lipoprotein; hsCRP, high-sensitivity C-reactive protein; IL-6: interleukin-6 ; MCP-1, monocyte chemoattractant protein-1  
TNF- $\alpha$ : tumor necrosis factor- $\alpha$ .

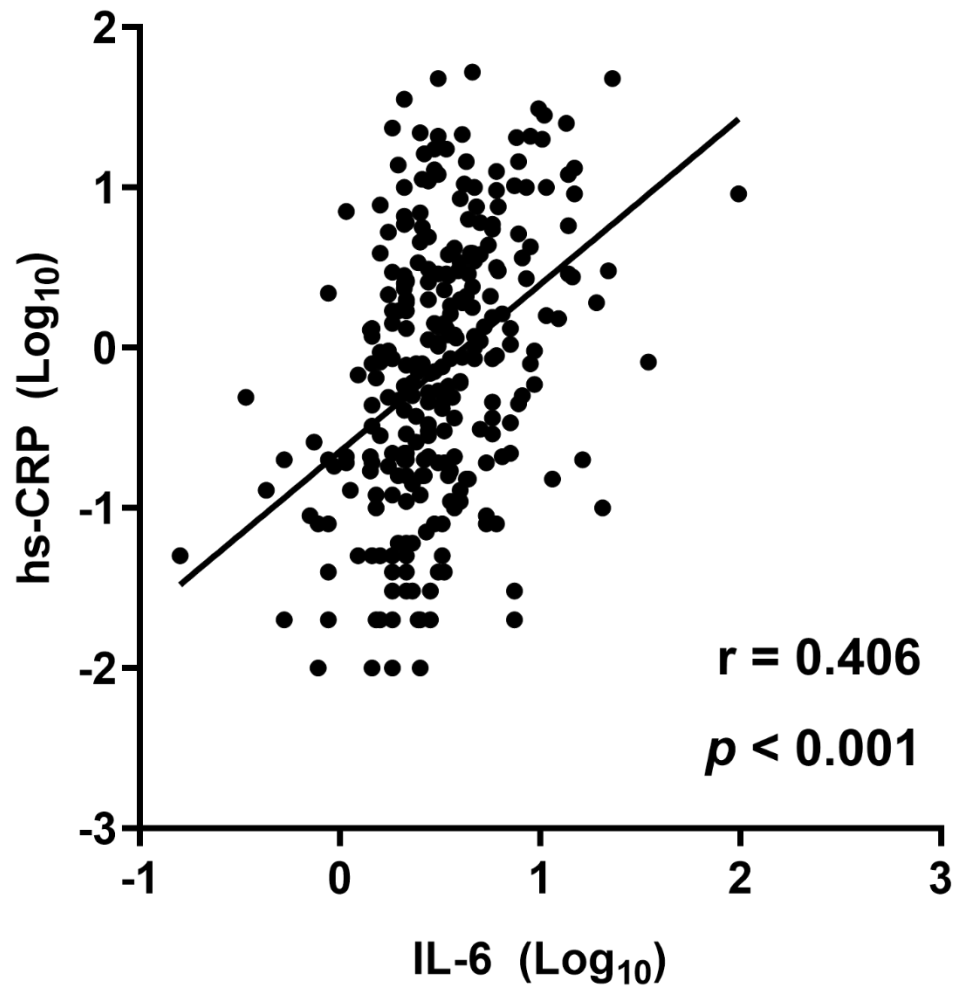
<sup>a</sup> Data are expressed as median (first, third interquartile ranges) and are compared by the Kruskal-Wallis test because of their non-normal distributions.

<sup>b</sup> Includes congestive heart failure, myocardial infarction, coronary artery disease requiring percutaneous transluminal coronary angioplasty or coronary artery bypass surgery, ventricular arrhythmia, cardiac arrest, and sudden death.

<sup>c</sup> No information in a patient without AVF dysfunction.

<sup>d</sup>  $p < 0.05$ , tertile 1 vs. tertile 2; <sup>e</sup>  $p < 0.05$ , tertile 1 vs. tertile 3; <sup>f</sup>  $p < 0.05$ , tertile 2 vs. tertile 3.

Supplementary Figure 1. Correlation between plasma IL-6 levels and high sensitivity C-reactive protein



**Abbreviation:** IL-6, interleukin-6; hs-CRP, high sensitivity C-reactive protein.