**Table S1. The sex-specific median of body composition parameters**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **2D** | | | |  | **3D** | | |
| The section above aortic arch | | Median | |  | Whole chest  (T1-T12) | Median | |
| Male | Female |  | Male | Female |
| Muscle | SMA, cm2 | 24.53 | | 16.57 |  | SMV, cm3 | 3595.08 | 2472.45 |
| SMI, cm2/m2 | 8.74 | | 6.57 |  | SMVI, cm3/cm2 | 1291.09 | 996.00 |
| SMD, Hu | 48.00 | | 37.50 |  | SMM, g | 183171.90 | 111045.84 |
| Subcutaneous fat | SFA, cm2 | 8.13 | | 12.02 |  | SFV, cm3 | 1452.88 | 1990.27 |
| SFI, cm2/m2 | 2.85 | | 4.78 |  | SFVI, cm3/cm2 | 509.29 | 778.96 |

Abbreviations: SFA, subcutaneous fat area; SFI, subcutaneous fat area index; SFV, subcutaneous fat volume; SFVI, subcutaneous fat volume index; SMA, skeletal muscle area; SMD, skeletal muscle density; SMI, skeletal muscle area index; SMM, skeletal muscle mass; SMV, skeletal muscle volume; SMVI, skeletal muscle volume index.

**Table S2. Internal validation for overall survival by 1000 bootstrap resampling**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variables** | | **Observed HR** | **Bootstrap** | | |
| **SE** | **95% CI** | ***P*** |
| Age | | 1.02 | 0.02 | -0.02–0.076 | 0.319 |
| Sex | |  |  |  | 0.583 |
|  | Female | Ref |  |  |  |
|  | Male | 0.81 | 0.43 | -1.06–0.67 |  |
| BMI | | 1.01 | 0.10 | -0.21–0.17 | 0.928 |
| Diagnosis | |  |  |  | 0.349 |
|  | SAA | Ref |  |  |  |
|  | VSAA | 1.55 | 0.50 | -0.59–1.39 |  |
| Donor type | |  |  |  |  |
|  | MSD | Ref |  |  |  |
|  | MUD | 0.88 | 5.54 | -8.86–8.44 | 0.726 |
|  | HID | 3.23 | 1.09 | 0.03–2.93 | **0.036** |
| Conditioning regimen | |  |  |  |  |
|  | CTX+BU+ATG | Ref |  |  |  |
|  | FLU+CTX+ATG | 1.02 | 1.71 | -2.04–1.58 | 0.981 |
|  | TBI+CTX+ATG +FLU | 0.42 | 0.61 | -2.23–0.20 | 0.096 |
|  | Others | 1.28 | 3.77 | -12.57–1.87 | 0.626 |
| Stem cell source | |  |  |  | 0.289 |
|  | PB | Ref |  |  |  |
|  | PB+BM | 0.72 | 5.54 | -9.09–8.34 |  |
| SMVI | |  |  |  | **0.044** |
|  | ≥ Median | Ref |  |  |  |
|  | < Median | 2.40 | 0.50 | 0.06–2.07 |  |

Abbreviations: Alb, albumin; ATG, antithymocyte immunoglobulin; BM, bone marrow; BMI, body mass index; BU, busulfan; CY, cyclophosphamide; FLU, fludarabine; HID, haploidentical donor; HU, Hounsfield unit; MSD, matched sibling donor; MUD, matched unrelated donor; PB, peripheral blood; SAA, severe aplastic anemia; SMVI, skeletal muscle volume index; TBI, total body irradiation; TP, total protein; VSAA, very severe aplastic anemia. The bold values were statistically significant.