**Supplementary Material**

**eTable 1. Univariate analysis of variables associated with 90-day mortality**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **HR** | **95% CI** | **p** |
| Age | 1.04 | 1.02-1.07 | **0.001** |
| Gender (ref. female) | 0.86 | 0.51-1.46 | 0.575 |
| BMI | 0.97 | 0.92-1.02 | **0.185** |
| Urgent surgery | 1.02 | 0.60-1.74 | 0.951 |
| Complicated elective surgery | 0.98 | 0.57-1.68 | 0.951 |
| Cancer | 0.95 | 0.56-1.61 | 0.858 |
| SAPS II score | 1.06 | 1.03-1.07 | **<0.001** |
| SOFA score | 1.11 | 1.04-1.18 | **0.001** |
| CCI>4 | 2.73 | 1.55-4.82 | **0.001** |
| Skeletal muscle index* Middle versus lowest tertile
* Highest versus lowest tertile
 | 0.570.42 | 0.31-1.050.22-0.82 | **0.070****0.010** |
| Myosteatosis* Middle versus lowest tertile
* Highest versus lowest tertile
 | 1.073.19 | 0.49-2.361.70-5.99 | 0.867**<0.001** |
| Sarcobesity* Middle versus lowest tertile
* Highest versus lowest tertile
 | 0.941.22 | 0.49-1.830.66-2.28 | 0.8640.525 |

**eFigure 1. Impact of skeletal muscle index (panel A) and myosteatosis (panel B) on 1-year survival.** Estimation of survival is described by a Kaplan-Meier survival curve after dividing the population into 3 groups defined by tertiles of the index distribution.

**A**

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**B**



**eTable 2. Multivariate analysis of variables associated with 90-day mortality, without myosteatosis**

Model 1. Only Skeletal muscle index > Harrell’s C=0.768

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **HR** | **95% CI** | **p** |
| SAPSII score | 1.05 | 1.04-1.07 | **<0.001** |
| CCI>4 | 2.44 | 1.38-4.31 | **0.002** |
| Skeletal muscle index* Middle versus lowest tertile
* Highest versus lowest tertile
 | 0.470.36 | 0.26-0.870.19-0.71 | **0.017****0.003** |

**eTable 3. Multivariate analysis of variables associated with 90-day mortality, without Skeletal muscle index**

Model 2. Only Myosteatosis > Harrell’s C=0.768

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **HR** | **95% CI** | **p** |
| SAPSII score | 1.05 | 1.03-1.07 | **<0.001** |
| CCI>4 | 2.42 | 1.36-4.29 | **0.003** |
| Myosteatosis* Middle versus lowest tertile
* Highest versus lowest tertile
 | 1.002.31 | 0.45-2.221.23-4.34 | 0.994**0.010** |

**eFigure 2.** Proportion of 90-day mortality reported by combination of low or high SMI (i.e. according to the 50% percentile of SMI) with low or high myosteatosis (i.e. according to the 50% percentile of myosteatosis). P-value for trend was reported. \* p<0.05, \*\* p<0.01 versus Low SMI/High Myosteatosis group.



**eFigure 3.** Impact of combination of low or high SMI (i.e. according to the 50% percentile of SMI) with low or high myosteatosis (i.e. according to the 50% percentile of myosteatosis) on 90-day survival. Estimation of survival is described by a Kaplan-Meier survival curve after dividing the population into 4 groups defined by high or low SMI associated with high or low myosteatosis.

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