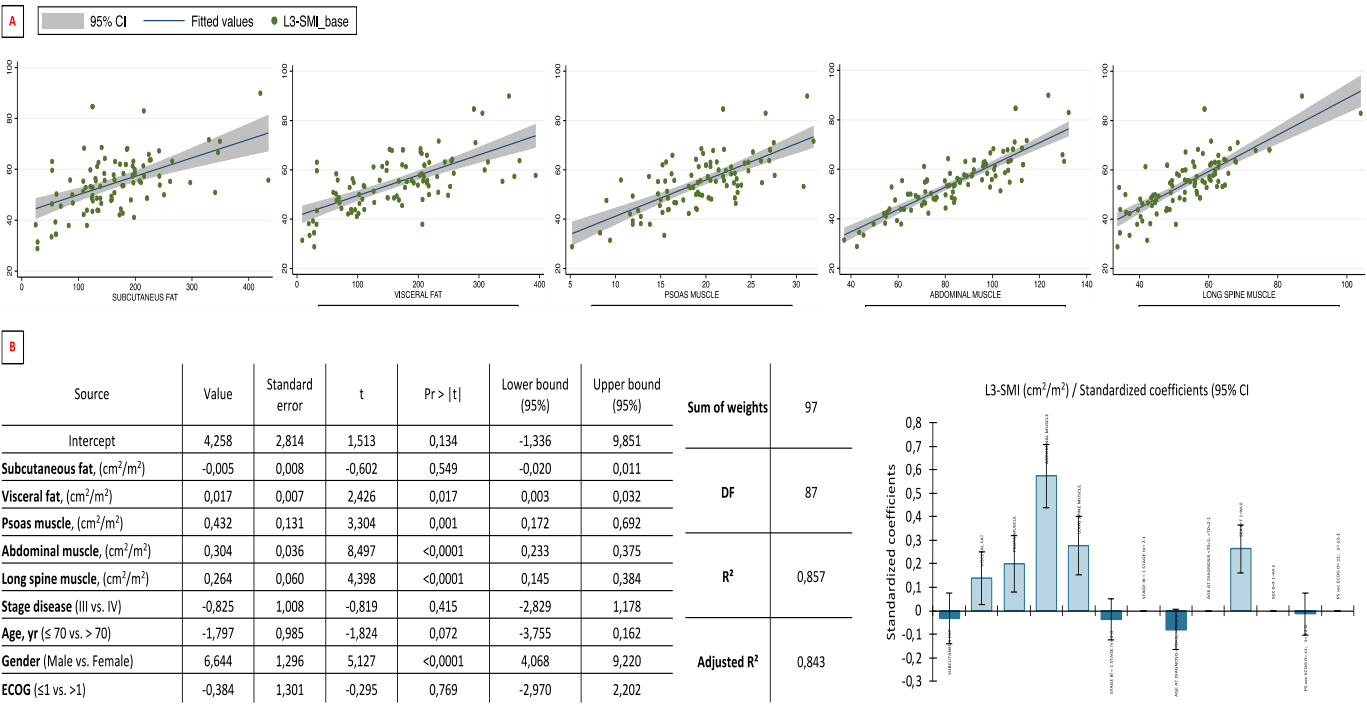


# Supplementary Figures

Figure S1 A – S1 B.

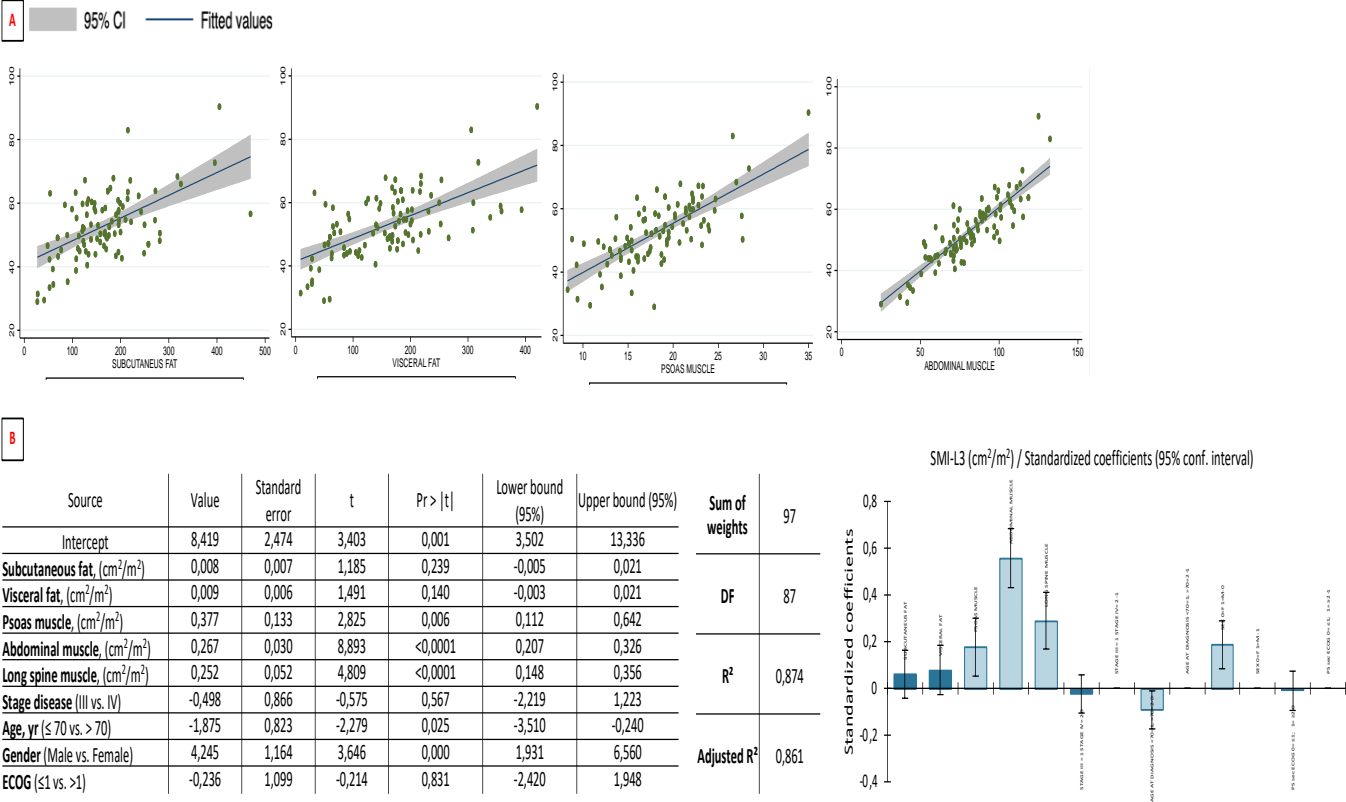
Univariable linear regression plots depicting AI-based Quantib Body Composition® Skeletal Muscle Index (SMI-L3) and anthropomorphic sarcopenia-related variables at baseline (A).

Multivariable linear regression model assessing SMI-L3, clinic-demographic and anthropomorphic sarcopenia-related variables at baseline (B).



**Figure S2 A - B.**

Univariable linear regression plots depicting AI-based Quantib Body Composition® Skeletal Muscle Index (SMI-L3) and anthropomorphic sarcopenia-related variables after fist therapy cycle (A). Multivariable linear regression model assessing SMI-L3, clinic-demographic and anthropomorphic sarcopenia-related variables after fist therapy cycle (B).



Bivariable and Multivariable adjusted Cox regression modeling for anthropometric measures assessing the Odds Ratio for overall survival at baseline (A) and post-systemic treatment (B).

A		Bivariable analysis*		Multivariable analysis**	
Continuous and categorical variables		aOR (95%CI)	P value	aOR (95%CI)	P value
<b>SMI-L3, (cm<sup>2</sup>/m<sup>2</sup>)</b>	Continuous	0.96 (0.92 – 1.1)	0.058	0.95 (0.91 – 0.99)	<b>0.047</b>
<b>Sarcopenic status, by SMI-L3</b>	No	Ref.		Ref.	
	Yes	2.33 (0.99 – 5.52)	0.054	2.63 (1.05 – 6.61)	<b>0.039</b>
<b>Subcutaneous fat, (cm<sup>2</sup>/m<sup>2</sup>)</b>	Continuous	0.99 (0.98 – 0.99)	<b>0.027</b>	0.99 (0.98 – 0.99)	<b>0.023</b>
<b>Subcutaneous fat, (cm<sup>2</sup>/m<sup>2</sup>)</b>	> Q1	Ref.		Ref.	
	≤ Q1	2.64 (1.07 – 6.92)	<b>0.048</b>	2.84 (1.02 – 7.86)	<b>0.044</b>
<b>Visceral fat, (cm<sup>2</sup>/m<sup>2</sup>)</b>	Continuous	0.99 (0.99 – 1.00)	0.110	0.99 (0.98 – 1.00)	0.079
<b>Visceral fat, (cm<sup>2</sup>/m<sup>2</sup>)</b>	> Q1	Ref.		Ref.	
	≤ Q1	2.71 (0.92 – 7.93)	0.068	2.91 (0.97 – 8.72)	0.056
<b>Psoas muscle, (cm<sup>2</sup>/m<sup>2</sup>)</b>	Continuous	0.90 (0.82 – 0.99)	<b>0.026</b>	0.90 (0.81 – 0.99)	<b>0.040</b>
<b>Psoas muscle, (cm<sup>2</sup>/m<sup>2</sup>)</b>	> Q1	Ref.		Ref.	
	≤ Q1	3.09 (0.91 – 10.51)	0.070	2.95 (0.97 – 8.95)	0.055
<b>Abdominal muscle, (cm<sup>2</sup>/m<sup>2</sup>)</b>	Continuous	0.97 (0.95 – 1.00)	<b>0.021</b>	0.96 (0.94 – 0.99)	<b>0.015</b>
<b>Abdominal muscle, (cm<sup>2</sup>/m<sup>2</sup>)</b>	> Q1	Ref.		Ref.	
	≤ Q1	3.90 (1.01 – 15.05)	<b>0.048</b>	3.44 (0.85 – 13.99)	0.084
<b>Long spine muscle, (cm<sup>2</sup>/m<sup>2</sup>)</b>	Continuous	0.97 (0.93 – 1.01)	0.094	0.97 (0.92 – 1.01)	0.117
<b>Long spine muscle, (cm<sup>2</sup>/m<sup>2</sup>)</b>	> Q1	Ref.		Ref.	
	≤ Q1	2.27 (0.77 – 6.70)	0.137	1.98 (0.68 - 5.74)	0.211

\* Adjusted by Gender  
\*\* Adjusted by Age, Gender, Stage, ECOG, n. of meds

B		Bivariable analysis*		Multivariable analysis**	
Continuous and categorical variables		aOR (95%CI)	P value	aOR (95%CI)	P value
SMI-L3, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.93 (0.89 – 0.98)	<b>0.011</b>	0.92 (0.87 – 0.97)	<b>0.006</b>
Sarcopenic status, by SMI-L3	No	Ref.		Ref.	
	Yes	2.00 (0.86 – 4.68)	0.106	2.31 (1.15 – 5.78)	<b>0.038</b>
Subcutaneous fat, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.99 (0.98 – 0.99)	<b>0.041</b>	0.99 (0.98 – 0.99)	<b>0.028</b>
Subcutaneous fat, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	0.214
	≤ Q1	1.87 (0.71 – 4.90)	0.199	1.87 (0.69 – 5.07)	
Visceral fat, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.99 (0.99 – 1.00)	0.080	0.99 (0.98 – 1.00)	0.066
Visceral fat, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	2.71 (0.92 – 7.93)	0.068	2.77 (0.89 – 8.54)	0.076
Psoas muscle, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.84 (0.74 – 0.94)	<b>0.005</b>	0.84 (0.74 – 0.96)	<b>0.009</b>
Psoas muscle, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	3.09 (0.91 – 10.51)	0.070	2.84 (0.80 – 10.1)	0.106
Abdominal muscle, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.96 (0.93 – 0.99)	<b>0.007</b>	0.95 (0.93 – 0.98)	<b>0.005</b>
Abdominal muscle, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	3.90 (1.01 – 15.05)	<b>0.048</b>	3.72 (0.92 – 15.01)	0.064
Long spine muscle, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.95 (0.91 – 0.99)	0.050	0.95 (0.91 – 1.00)	0.053
Long spine muscle, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	2.27 (0.77 – 6.70)	0.137	2.67 (0.85 – 8.34)	0.090

\* Adjusted by Gender  
\*\* Adjusted by Age, Gender, Stage, ECOG, n. of meds

**Tables S2 A-B** Bivariable and Multivariable adjusted Cox regression modeling for anthropometric measures assessing the hazard for overall survival at baseline (A) and post-systemic treatment (B).

aHR: adjusted hazard ratio; CI: confidence interval; SMI: skeletal muscle index; Q: quartile; ECOG: Eastern Cooperative Oncology Group

A		Bivariable analysis*		Multivariable analysis**	
Continuous and categorical variables		aHR (95%CI)	P value	aHR (95%CI)	P value
SMI-L3, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.96 (0.92 – 0.98)	<b>0.005</b>	0.95 (0.92 – 0.99)	<b>0.007</b>
Sarcopenic status, by SMI-L3	No	Ref.			
	Yes	3.31 (1.56 – 7.04)	<b>0.002</b>	3.79 (1.71 - 8.40)	<b>0.001</b>
Subcutaneous fat, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	1.02 (0.96 – 1.11)	0.169	0.99 (0.99 - 1.001)	0.164
Subcutaneous fat, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	1.29 (0.60 – 2.78)	0.506	1.26 (0.58 – 2.73)	0.551
Visceral fat, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0,99 (0,98 - 1,02)	0.053	0.99 (0.99 – 1.00)	0.072
Visceral fat, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	1.84 (0.89 – 3.79)	0.098	1.74 (0.82 – 3.69)	0.146
Psoas muscle, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.91 (0.85 – 0.97)	<b>0.007</b>	0.90 (0.84 – 0.97)	<b>0.010</b>
Psoas muscle, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	2.03 (1.01 – 4.08)	<b>0.047</b>	1.98 (1.16 – 4.08)	<b>0.049</b>
Abdominal muscle, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.98 (0.98 – 0.99)	<b>0.023</b>	0.98 (0.96 – 0.99)	<b>0.031</b>
Abdominal muscle, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	2.10 (0.95 – 4.62)	0.064	2.01 (0.88 – 4.58)	0.096
Long spine muscle, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.96 (0.93 – 1.00)	0.053	0.96 (0.93 – 1.00)	0.068
Long spine muscle, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	1.68 (0.81 – 3.49)	0.160	1.68 (0.79 – 3.57)	0.175

\*Adjusted by Gender

\*\*Adjusted by Age, Gender, Stage, ECOG, n. of meds

B		Bivariable analysis		Multivariable analysis*	
Continuous and categorical variables		aHR (95%CI)	P value	aHR (95%CI)	P value
SMI-L3, (cm2/m <sup>2</sup> )	Continuous	0.95 (0.91 – 0.98)	<b>0.008</b>	0.94 (0.91 – 0.98)	<b>0.009</b>
Sarcopenic status, by SMI-L3	no	Ref.		Ref.	
	yes	2.81 (1.35 – 5.83)	<b>0.005</b>	3.29 (1.51 – 7.16)	<b>0.003</b>
Subcutaneous fat, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.99 (0.41 – 1.001)	0.585	0.99 (0.99 – 1.001)	0.171
Subcutaneous fat, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	1.95 (0.98 – 3.88)		2.02 (1.00 – 4.06)	<b>0.048</b>
Visceral fat, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.99 (0.99 – 1.001)	0.080	0.99 (0.99 – 1.001)	0.221
Visceral fat, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	1.34 (0.62 – 2.91)	0.445	1.23 (0.55 – 2.74)	0.598
Psoas muscle, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.91 (0.84 – 0.99)	<b>0.043</b>	0.90 (0.83 – 0.98)	<b>0.046</b>
Psoas muscle, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	1.20 (0.50 – 2.83)	0.675	1.14 (0.47 – 2.75)	0.768
Abd. muscle, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.97 (0.96 – 0.99)	<b>0.028</b>	0.97 (0.96 – 0.99)	<b>0.032</b>
Abd. muscle, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	1.97 (0.87 – 4.45)	0.100	1.89 (0.82 – 4.39)	0.133
Long spine muscle, (cm <sup>2</sup> /m <sup>2</sup> )	Continuous	0.97 (0.93 – 1.00)	0.135	0.97 (0.93 – 1.001)	0.154
Long spine muscle, (cm <sup>2</sup> /m <sup>2</sup> )	> Q1	Ref.		Ref.	
	≤ Q1	1.10 (0.49 – 2.49)	0.803	1.13 (0.49 – 2.57)	0.768
*Adjusted by Gender					
**Adjusted by Age, Gender, Stage, ECOG, n. of meds					