

Supplementary

Table S1 Comparison of body-composition parameters between stage I and stage II-IV NSCLC

Body composition	Group	Mean (SD)	Adj. Mean (SE)	β (95% CI)	F	P	FDR-adjusted P value	η^2p
Intracellular water	Stage I	19.10 (3.71)	20.00 (0.29)	-0.18 (-0.91, 0.55)	0.233	0.629	0.858	0.001
	Stage II–IV	20.28 (3.86)	19.82 (0.21)					
Extracellular water	Stage I	11.52 (2.32)	11.95 (0.21)	0.31 (-0.20, 0.83)	1.441	0.231	0.465	0.004
	Stage II–IV	12.49 (2.55)	12.26 (0.14)					
Total body water	Stage I	30.62 (5.68)	31.95 (0.44)	0.13 (-0.97, 1.23)	0.058	0.811	0.885	0.000
	Stage II–IV	32.77 (5.81)	32.08 (0.31)					
Protein content	Stage I	8.15 (1.70)	8.50 (0.12)	0.08 (-0.23, 0.39)	0.243	0.622	0.858	0.001
	Stage II–IV	8.75 (1.59)	8.57 (0.09)					
Soft lean mass	Stage I	39.09 (7.62)	40.78 (0.58)	0.30 (-1.14, 1.74)	0.172	0.679	0.858	0.000
	Stage II–IV	41.97 (7.50)	41.09 (0.40)					
Mineral content	Stage I	2.92 (0.55)	3.03 (0.06)	0.03 (-0.12, 0.17)	0.130	0.718	0.874	0.000
	Stage II–IV	3.12 (0.72)	3.06 (0.04)					
Bone mineral salts	Stage I	2.51 (0.42)	2.59 (0.05)	0.02 (-0.10, 0.13)	0.088	0.767	0.874	0.000
	Stage II–IV	2.65 (0.57)	2.61 (0.03)					
Fat-free mass	Stage I	41.60 (7.98)	43.38 (0.61)	0.32 (-1.19, 1.83)	0.173	0.677	0.858	0.000

	Stage II–IV	44.62 (7.88)	43.70 (0.42)					
Body fat mass	Stage I	18.58 (6.26)	17.65 (0.61)	-1.81 (-3.34, -0.28)	5.428	0.020*	0.143	0.015
	Stage II–IV	15.36 (6.83)	15.84 (0.43)					
Skeletal muscle mass	Stage I	23.57 (4.88)	24.74 (0.47)	0.65 (-0.52, 1.82)	1.193	0.275	0.499	0.003
	Stage II–IV	26.00 (6.03)	25.39 (0.33)					
Body mass index	Stage I	23.19 (2.91)	23.02 (0.29)	-0.64 (-1.35, 0.07)	3.112	0.079	0.352	0.008
	Stage II–IV	22.29 (3.06)	22.38 (0.20)					
Percent body fat	Stage I	30.68 (8.42)	28.71 (0.81)	-2.57 (-4.58, -0.55)	6.289	0.013*	0.143	0.017
	Stage II–IV	25.12 (9.80)	26.15 (0.56)					
Waist-to-hip ratio	Stage I	0.85 (0.05)	0.85 (0.01)	0.00 (-0.02, 0.01)	0.287	0.593	0.858	0.001
	Stage II–IV	0.85 (0.06)	0.85 (0.00)					
Visceral fat area	Stage I	135.40 (36.01)	140.50 (3.98)	-12.25 (-22.21, -2.30)	5.858	0.016*	0.143	0.016
	Stage II–IV	130.90 (45.93)	128.20 (2.79)					
Bone mineral content	Stage I	2.51 (0.42)	2.59 (0.05)	0.02 (-0.10, 0.13)	0.088	0.767	0.874	0.000
	Stage II–IV	2.65 (0.57)	2.61 (0.03)					
Basal metabolic rate	Stage I	1302.10 (166.00)	1345.90 (22.81)	27.30 (-29.69, 84.28)	0.887	0.347	0.607	0.002
	Stage II–IV	1396.10 (291.60)	1373.20 (15.99)					

Arm circumference	Stage I	29.21 (3.10)	29.31 (0.36)	-0.19 (-1.08, 0.71)	0.167	0.683	0.858	0.000
	Stage II–IV	29.18 (4.11)	29.13 (0.25)					
Fat-free arm circumference	Stage I	23.63 (2.42)	24.14 (0.23)	-0.06 (-0.65, 0.52)	0.047	0.828	0.885	0.000
	Stage II–IV	24.34 (2.94)	24.08 (0.16)					
Upper-limb muscle mass	Stage I	4.39 (1.17)	4.70 (0.13)	0.23 (-0.09, 0.55)	2.026	0.156	0.361	0.006
	Stage II–IV	5.09 (1.65)	4.93 (0.09)					
Trunk muscle mass	Stage I	19.43 (3.55)	20.40 (0.67)	1.25 (-0.41, 2.92)	2.184	0.140	0.361	0.006
	Stage II–IV	22.17 (8.56)	21.66 (0.47)					
Lower-limb muscle mass	Stage I	13.93 (5.83)	14.68 (0.43)	0.08 (-0.99, 1.16)	0.024	0.878	0.915	0.000
	Stage II–IV	15.15 (4.10)	14.76 (0.30)					
Upper-limb fat mass	Stage I	2.58 (1.54)	2.59 (0.17)	0.14 (-0.29, 0.57)	0.407	0.524	0.858	0.001
	Stage II–IV	2.73 (1.94)	2.73 (0.12)					
Trunk fat mass	Stage I	8.70 (3.51)	8.27 (0.37)	-1.24 (-2.16, -0.33)	7.087	0.008**	0.143	0.019
	Stage II–IV	6.80 (4.14)	7.03 (0.26)					
Lower-limb fat mass	Stage I	5.48 (1.84)	5.13 (0.22)	-0.36 (-0.92, 0.19)	1.676	0.196	0.418	0.005
	Stage II–IV	4.59 (2.67)	4.77 (0.16)					
	Stage I	0.11 (0.02)	0.11 (0.00)	0.00 (0.00, 0.01)	2.231	0.136	0.361	0.006

Upper-limb muscle mass/total muscle mass	Stage II–IV	0.12 (0.03)	0.12 (0.00)					
Trunk muscle mass/total muscle mass	Stage I	0.50 (0.05)	0.50 (0.01)	0.03 (-0.01, 0.06)	1.964	0.162	0.361	0.005
	Stage II–IV	0.53 (0.18)	0.53 (0.01)					
Lower-limb muscle mass/total muscle mass	Stage I	0.36 (0.10)	0.36 (0.01)	0.00 (-0.02, 0.03)	0.045	0.831	0.885	0.000
	Stage II–IV	0.36 (0.09)	0.36 (0.01)					
Upper-limb fat mass/total fat mass	Stage I	0.20 (0.57)	0.22 (0.04)	0.00 (-0.11, 0.10)	0.008	0.931	0.950	0.000
	Stage II–IV	0.23 (0.32)	0.22 (0.03)					
Trunk fat mass/total fat mass	Stage I	0.55 (0.86)	0.55 (0.06)	-0.13 (-0.26, 0.01)	3.221	0.074	0.352	0.009
	Stage II–IV	0.43 (0.36)	0.43 (0.04)					
Lower-limb fat mass/total fat mass	Stage I	0.35 (0.49)	0.35 (0.03)	-0.04 (-0.12, 0.03)	1.347	0.247	0.465	0.004
	Stage II–IV	0.31 (0.18)	0.31 (0.02)					
Protein index	Stage I	3.12 (0.47)	3.19 (0.04)	0.02 (-0.07, 0.12)	0.241	0.624	0.858	0.001
	Stage II–IV	3.24 (0.43)	3.21 (0.03)					
Soft lean mass index	Stage I	15.00 (2.03)	15.31 (0.17)	0.07 (-0.37, 0.50)	0.096	0.757	0.874	0.000
	Stage II–IV	15.54 (2.01)	15.38 (0.12)					
Skeletal muscle index	Stage I	9.03 (1.25)	9.27 (0.16)	0.24 (-0.17, 0.65)	1.350	0.246	0.465	0.004

	Stage II–IV	9.64 (2.03)	9.51 (0.12)					
Fat mass index	Stage I	7.23 (2.57)	6.74 (0.24)	-0.71 (-1.30, -0.12)	5.590	0.019*	0.143	0.015
	Stage II–IV	5.77 (2.70)	6.03 (0.17)					
Visceral fat index	Stage I	52.51 (14.49)	53.38 (1.59)	-4.70 (-8.66, -0.74)	5.434	0.020*	0.143	0.015
	Stage II–IV	49.14 (18.29)	48.68 (1.11)					
Upper-limb muscle mass index	Stage I	1.68 (0.34)	1.75 (0.05)	0.09 (-0.03, 0.21)	2.301	0.130	0.361	0.006
	Stage II–IV	1.88 (0.59)	1.84 (0.03)					
Trunk muscle mass index	Stage I	7.46 (0.89)	7.66 (0.26)	0.49 (-0.16, 1.13)	2.164	0.142	0.361	0.006
	Stage II–IV	8.24 (3.33)	8.14 (0.18)					
Lower-limb muscle mass index	Stage I	5.36 (2.37)	5.53 (0.17)	-0.01 (-0.43, 0.42)	0.001	0.975	0.975	0.000
	Stage II–IV	5.61 (1.40)	5.52 (0.12)					
Upper-limb fat mass index	Stage I	0.99 (0.64)	0.97 (0.07)	0.05 (-0.12, 0.22)	0.343	0.559	0.858	0.001
	Stage II–IV	1.02 (0.75)	1.03 (0.05)					
Trunk fat mass index	Stage I	3.39 (1.43)	3.16 (0.14)	-0.49 (-0.85, -0.14)	7.508	0.006**	0.143	0.020
	Stage II–IV	2.56 (1.61)	2.67 (0.10)					
Lower-limb fat mass index	Stage I	2.15 (0.82)	1.98 (0.09)	-0.16 (-0.38, 0.06)	2.000	0.158	0.361	0.005
	Stage II–IV	1.73 (1.06)	1.82 (0.06)					

Upper-limb extracellular fluid ratio	Stage I	0.66 (0.01)	0.66 (0.00)	0.00 (-0.01, 0.00)	0.192	0.662	0.858	0.001
	Stage II–IV	0.66 (0.02)	0.66 (0.00)					
Trunk extracellular fluid ratio	Stage I	0.33 (0.01)	0.33 (0.00)	0.00 (0.00, 0.01)	2.138	0.145	0.361	0.006
	Stage II–IV	0.34 (0.02)	0.34 (0.00)					
Lower-limb extracellular fluid ratio	Stage I	0.66 (0.05)	0.66 (0.00)	0.01 (0.00, 0.02)	2.555	0.111	0.361	0.007
	Stage II–IV	0.66 (0.04)	0.66 (0.00)					
Upper-limb extracellular water ratio	Stage I	0.75 (0.02)	0.75 (0.00)	0.00 (-0.01, 0.00)	0.188	0.665	0.858	0.001
	Stage II–IV	0.75 (0.03)	0.75 (0.00)					
Trunk extracellular water ratio	Stage I	0.38 (0.02)	0.38 (0.00)	0.00 (0.00, 0.01)	2.120	0.146	0.361	0.006
	Stage II–IV	0.38 (0.02)	0.38 (0.00)					
Lower-limb extracellular water ratio	Stage I	0.75 (0.05)	0.75 (0.01)	0.01 (0.00, 0.02)	2.525	0.113	0.361	0.007
	Stage II–IV	0.76 (0.05)	0.76 (0.00)					
Whole-body extracellular fluid/ total extracellular fluid	Stage I	0.33 (0.04)	0.33 (0.00)	0.01 (0.00, 0.02)	3.103	0.079	0.352	0.008
	Stage II–IV	0.33 (0.04)	0.34 (0.00)					
Whole-body extracellular water/ total body water	Stage I	0.38 (0.04)	0.37 (0.00)	0.01 (0.00, 0.02)	3.104	0.079	0.352	0.008
	Stage II–IV	0.38 (0.05)	0.38 (0.00)					

Data are presented as mean (SD). Adjusted mean (SE) indicates the least-squares mean (standard error) estimated using ANCOVA adjusted for age and sex. β represents the adjusted mean difference for stage II-IV minus stage I disease. CI, confidence interval; FDR, false discovery rate; η^2p , partial eta-squared. Nominal significance is indicated

as *P < 0.05 and **P < 0.01. For all group F tests, df1 = 1; df2 varies according to the number of available observations.

Table S2 Comparison of body-composition parameters between *EGFR*-mutant and *EGFR*-wild-type tumors in stage I NSCLC

Body composition	Group	Mean (SD)	Adj. Mean (SE)	β (95% CI)	F	P	FDR-adjusted P value	η^2p
Intracellular water	Wild-type	18.91 (3.57)	18.93 (0.40)	0.28 (-0.85, 1.41)	0.247	0.620	0.844	0.002
	<i>EGFR</i> -mutant	19.24 (3.84)	19.22 (0.40)					
Extracellular water	Wild-type	11.41 (2.49)	11.40 (0.27)	0.22 (-0.54, 0.98)	0.318	0.574	0.844	0.003
	<i>EGFR</i> -mutant	11.62 (2.24)	11.62 (0.27)					
Total body water	Wild-type	30.31 (5.23)	30.34 (0.59)	0.50 (-1.18, 2.17)	0.348	0.557	0.844	0.003
	<i>EGFR</i> -mutant	30.86 (6.06)	30.83 (0.60)					
Protein content	Wild-type	8.02 (1.75)	8.01 (0.18)	0.23 (-0.30, 0.75)	0.739	0.392	0.806	0.007
	<i>EGFR</i> -mutant	8.23 (1.68)	8.24 (0.19)					
Soft lean mass	Wild-type	38.53 (7.42)	38.53 (0.81)	0.97 (-1.33, 3.26)	0.699	0.405	0.806	0.007
	<i>EGFR</i> -mutant	39.49 (7.85)	39.49 (0.82)					
Mineral content	Wild-type	2.91 (0.59)	2.92 (0.06)	0.01 (-0.17, 0.19)	0.008	0.928	0.947	0.000
	<i>EGFR</i> -mutant	2.93 (0.52)	2.93 (0.07)					
Bone mineral salts	Wild-type	2.50 (0.43)	2.50 (0.05)	0.03 (-0.11, 0.16)	0.135	0.714	0.909	0.001
	<i>EGFR</i> -mutant	2.53 (0.40)	2.53 (0.05)					

Fat-free mass	Wild-type	41.03 (7.75)	41.03 (0.85)	1.00 (-1.40, 3.39)	0.682	0.411	0.806	0.007
	<i>EGFR</i> -mutant	42.03 (8.23)	42.03 (0.85)					
Body fat mass	Wild-type	18.38 (6.33)	18.43 (0.91)	0.65 (-1.92, 3.23)	0.253	0.616	0.844	0.002
	<i>EGFR</i> -mutant	19.15 (7.02)	19.09 (0.92)					
Skeletal muscle mass	Wild-type	23.40 (5.00)	23.37 (0.52)	0.11 (-1.35, 1.58)	0.024	0.878	0.915	0.000
	<i>EGFR</i> -mutant	23.44 (4.75)	23.48 (0.52)					
Body mass index	Wild-type	22.74 (2.91)	22.78 (0.42)	0.97 (-0.20, 2.15)	2.707	0.103	0.806	0.026
	<i>EGFR</i> -mutant	23.79 (3.10)	23.76 (0.42)					
Percent body fat	Wild-type	30.62 (8.18)	30.68 (1.13)	0.32 (-2.87, 3.51)	0.040	0.843	0.909	0.000
	<i>EGFR</i> -mutant	31.06 (9.71)	31.00 (1.14)					
Waist-to-hip ratio	Wild-type	0.84 (0.06)	0.84 (0.01)	0.02 (-0.01, 0.04)	1.954	0.165	0.806	0.019
	<i>EGFR</i> -mutant	0.86 (0.05)	0.86 (0.01)					
Visceral fat area	Wild-type	132.83 (36.15)	134.07 (4.94)	-0.43 (-14.40, 13.54)	0.004	0.951	0.951	0.000
	<i>EGFR</i> -mutant	134.90 (40.15)	133.64 (4.99)					
Bone mineral content	Wild-type	2.50 (0.43)	2.50 (0.05)	0.03 (-0.11, 0.16)	0.135	0.714	0.909	0.001
	<i>EGFR</i> -mutant	2.53 (0.40)	2.53 (0.05)					
Basal metabolic rate	Wild-type	1292.06 (176.41)	1291.90 (17.15)	12.45 (-36.04, 60.94)	0.259	0.612	0.844	0.003

	<i>EGFR</i> -mutant	1304.19 (153.31)	1304.35 (17.32)					
Arm circumference	Wild-type	28.56 (3.12)	28.60 (0.42)	1.16 (-0.03, 2.36)	3.750	0.056	0.806	0.036
	<i>EGFR</i> -mutant	29.81 (3.23)	29.77 (0.43)					
Fat-free arm circumference	Wild-type	23.30 (2.59)	23.34 (0.28)	0.47 (-0.33, 1.27)	1.338	0.250	0.806	0.013
	<i>EGFR</i> -mutant	23.84 (2.25)	23.80 (0.29)					
Upper-limb muscle mass	Wild-type	4.27 (1.23)	4.27 (0.12)	0.16 (-0.19, 0.51)	0.854	0.358	0.806	0.008
	<i>EGFR</i> -mutant	4.45 (1.11)	4.44 (0.13)					
Trunk muscle mass	Wild-type	19.18 (3.51)	19.19 (0.37)	0.29 (-0.74, 1.33)	0.313	0.577	0.844	0.003
	<i>EGFR</i> -mutant	19.49 (3.55)	19.48 (0.37)					
Lower-limb muscle mass	Wild-type	13.52 (2.57)	13.58 (0.85)	0.87 (-1.53, 3.28)	0.520	0.473	0.826	0.005
	<i>EGFR</i> -mutant	14.52 (8.53)	14.45 (0.86)					
Upper-limb fat mass	Wild-type	2.46 (0.82)	2.48 (0.23)	0.31 (-0.34, 0.95)	0.891	0.347	0.806	0.009
	<i>EGFR</i> -mutant	2.81 (2.20)	2.79 (0.23)					
Trunk fat mass	Wild-type	8.34 (3.38)	8.41 (0.50)	0.91 (-0.51, 2.33)	1.603	0.208	0.806	0.016
	<i>EGFR</i> -mutant	9.39 (3.99)	9.32 (0.51)					
Lower-limb fat mass	Wild-type	5.45 (1.81)	5.49 (0.26)	0.24 (-0.49, 0.96)	0.419	0.519	0.844	0.004
	<i>EGFR</i> -mutant	5.76 (2.07)	5.72 (0.26)					

Upper-limb muscle mass/total muscle mass	Wild-type	0.11 (0.02)	0.11 (0.00)	0.00 (0.00, 0.01)	1.312	0.255	0.806	0.013
	<i>EGFR</i> -mutant	0.11 (0.01)	0.11 (0.00)					
Trunk muscle mass/total muscle mass	Wild-type	0.50 (0.04)	0.50 (0.01)	0.00 (-0.02, 0.02)	0.054	0.816	0.909	0.001
	<i>EGFR</i> -mutant	0.50 (0.06)	0.50 (0.01)					
Lower-limb muscle mass/total muscle mass	Wild-type	0.35 (0.04)	0.36 (0.02)	0.01 (-0.04, 0.05)	0.111	0.740	0.909	0.001
	<i>EGFR</i> -mutant	0.36 (0.15)	0.36 (0.02)					
Upper-limb fat mass/total fat mass	Wild-type	0.14 (0.06)	0.15 (0.09)	0.12 (-0.12, 0.36)	0.947	0.333	0.806	0.009
	<i>EGFR</i> -mutant	0.28 (0.89)	0.27 (0.09)					
Trunk fat mass/total fat mass	Wild-type	0.45 (0.11)	0.46 (0.13)	0.23 (-0.13, 0.59)	1.586	0.211	0.806	0.015
	<i>EGFR</i> -mutant	0.70 (1.32)	0.69 (0.13)					
Lower-limb fat mass/total fat mass	Wild-type	0.31 (0.15)	0.32 (0.07)	0.09 (-0.12, 0.30)	0.766	0.383	0.806	0.008
	<i>EGFR</i> -mutant	0.42 (0.74)	0.41 (0.07)					
Protein index	Wild-type	3.05 (0.49)	3.05 (0.06)	0.14 (-0.04, 0.31)	2.483	0.118	0.806	0.024
	<i>EGFR</i> -mutant	3.19 (0.50)	3.19 (0.06)					
Soft lean mass index	Wild-type	14.69 (1.82)	14.70 (0.26)	0.59 (-0.14, 1.32)	2.544	0.114	0.806	0.025
	<i>EGFR</i> -mutant	15.30 (2.33)	15.29 (0.26)					
Skeletal muscle index	Wild-type	8.91 (1.30)	8.90 (0.15)	0.17 (-0.27, 0.61)	0.605	0.438	0.825	0.006

	<i>EGFR</i> -mutant	9.06 (1.26)	9.07 (0.16)					
Fat mass index	Wild-type	7.09 (2.51)	7.12 (0.36)	0.37 (-0.64, 1.38)	0.526	0.470	0.826	0.005
	<i>EGFR</i> -mutant	7.52 (2.94)	7.49 (0.36)					
Visceral fat index	Wild-type	51.17 (14.11)	51.71 (2.02)	0.54 (-5.18, 6.25)	0.034	0.853	0.909	0.000
	<i>EGFR</i> -mutant	52.78 (16.46)	52.24 (2.04)					
Upper-limb muscle mass index	Wild-type	1.62 (0.37)	1.62 (0.04)	0.09 (-0.02, 0.21)	2.506	0.117	0.806	0.024
	<i>EGFR</i> -mutant	1.71 (0.31)	1.71 (0.04)					
Trunk muscle mass index	Wild-type	7.32 (0.85)	7.33 (0.11)	0.21 (-0.10, 0.51)	1.853	0.176	0.806	0.018
	<i>EGFR</i> -mutant	7.55 (0.93)	7.54 (0.11)					
Lower-limb muscle mass index	Wild-type	5.16 (0.59)	5.19 (0.36)	0.45 (-0.56, 1.45)	0.766	0.384	0.806	0.008
	<i>EGFR</i> -mutant	5.66 (3.62)	5.63 (0.36)					
Upper-limb fat mass index	Wild-type	0.94 (0.29)	0.95 (0.10)	0.15 (-0.12, 0.41)	1.148	0.287	0.806	0.011
	<i>EGFR</i> -mutant	1.10 (0.93)	1.09 (0.10)					
Trunk fat mass index	Wild-type	3.22 (1.33)	3.25 (0.20)	0.41 (-0.15, 0.98)	2.124	0.148	0.806	0.021
	<i>EGFR</i> -mutant	3.69 (1.66)	3.67 (0.20)					
Lower-limb fat mass index	Wild-type	2.13 (0.83)	2.15 (0.11)	0.11 (-0.20, 0.42)	0.483	0.489	0.826	0.005
	<i>EGFR</i> -mutant	2.27 (0.90)	2.26 (0.11)					

Upper-limb extracellular fluid ratio	Wild-type	0.66 (0.01)	0.66 (0.00)	0.00 (-0.01, 0.00)	0.693	0.407	0.806	0.007
	<i>EGFR</i> -mutant	0.66 (0.02)	0.66 (0.00)					
Trunk extracellular fluid ratio	Wild-type	0.33 (0.01)	0.34 (0.00)	0.00 (-0.01, 0.01)	0.045	0.832	0.909	0.000
	<i>EGFR</i> -mutant	0.33 (0.02)	0.33 (0.00)					
Lower-limb extracellular fluid ratio	Wild-type	0.67 (0.06)	0.67 (0.01)	-0.02 (-0.04, 0.00)	3.410	0.068	0.806	0.033
	<i>EGFR</i> -mutant	0.65 (0.03)	0.65 (0.01)					
Upper-limb extracellular water ratio	Wild-type	0.76 (0.01)	0.76 (0.00)	0.00 (-0.01, 0.00)	0.693	0.407	0.806	0.007
	<i>EGFR</i> -mutant	0.75 (0.02)	0.75 (0.00)					
Trunk extracellular water ratio	Wild-type	0.38 (0.02)	0.38 (0.00)	0.00 (-0.01, 0.01)	0.047	0.830	0.909	0.000
	<i>EGFR</i> -mutant	0.38 (0.02)	0.38 (0.00)					
Lower-limb extracellular water ratio	Wild-type	0.76 (0.07)	0.76 (0.01)	-0.02 (-0.04, 0.00)	3.504	0.064	0.806	0.034
	<i>EGFR</i> -mutant	0.74 (0.04)	0.74 (0.01)					
Whole-body extracellular fluid/total extracellular fluid	Wild-type	0.33 (0.05)	0.33 (0.01)	0.00 (-0.01, 0.02)	0.038	0.846	0.909	0.000
	<i>EGFR</i> -mutant	0.33 (0.01)	0.33 (0.01)					
Whole-body extracellular water/total body water	Wild-type	0.38 (0.06)	0.38 (0.01)	0.00 (-0.02, 0.02)	0.035	0.853	0.909	0.000
	<i>EGFR</i> -mutant	0.38 (0.01)	0.38 (0.01)					

Data are presented as mean (SD). Adjusted mean (SE) indicates the least-squares mean (standard error) estimated using ANCOVA adjusted for age and sex. β represents the adjusted mean difference for *EGFR*-mutant minus *EGFR*-wild-type disease. CI, confidence interval; FDR, false discovery rate; η^2p , partial eta-squared. For all group F tests,

df1 = 1; df2 varies according to the number of available observations.

Table S3 Comparison of body-composition parameters between *EGFR*-mutant and *EGFR*-wild-type tumors in stage II-IV NSCLC

Body composition	Group	Mean (SD)	Adj. Mean (SE)	β (95% CI)	F	P	FDR-adjusted P value	η^2p
Intracellular water	Wild-type	18.93 (3.94)	20.18 (0.45)	0.34 (-0.76, 1.45)	0.379	0.539	0.953	0.002
	<i>EGFR</i> -mutant	21.11 (3.74)	20.53 (0.29)					
Extracellular water	Wild-type	12.06 (2.40)	12.67 (0.33)	-0.20 (-1.01, 0.61)	0.247	0.620	0.953	0.001
	<i>EGFR</i> -mutant	12.75 (2.68)	12.47 (0.22)					
Total body water	Wild-type	30.99 (5.81)	32.86 (0.67)	0.14 (-1.51, 1.79)	0.028	0.867	0.953	0.000
	<i>EGFR</i> -mutant	33.87 (5.65)	33.00 (0.44)					
Protein content	Wild-type	8.29 (1.59)	8.79 (0.18)	0.01 (-0.44, 0.46)	0.002	0.968	0.998	0.000
	<i>EGFR</i> -mutant	9.03 (1.55)	8.80 (0.12)					
Soft lean mass	Wild-type	39.70 (7.50)	42.09 (0.86)	0.16 (-1.96, 2.29)	0.023	0.880	0.953	0.000
	<i>EGFR</i> -mutant	43.36 (7.27)	42.25 (0.57)					
Mineral content	Wild-type	2.97 (0.55)	3.12 (0.10)	0.04 (-0.20, 0.28)	0.090	0.764	0.953	0.000
	<i>EGFR</i> -mutant	3.22 (0.83)	3.15 (0.06)					
Bone mineral salts	Wild-type	2.55 (0.47)	2.66 (0.08)	0.00 (-0.19, 0.19)	0.000	0.998	0.998	0.000
	<i>EGFR</i> -mutant	2.71 (0.64)	2.66 (0.05)					
Fat-free mass	Wild-type	42.26 (7.89)	44.76 (0.91)	0.15 (-2.09, 2.39)	0.017	0.895	0.953	0.000
	<i>EGFR</i> -mutant	46.08 (7.63)	44.91 (0.60)					
Body fat mass	Wild-type	17.04 (6.59)	16.10 (0.92)	-0.94 (-3.20, 1.32)	0.668	0.415	0.953	0.003
	<i>EGFR</i> -mutant	14.72 (7.12)	15.16 (0.60)					
Skeletal muscle mass	Wild-type	24.42 (6.15)	25.91 (0.79)	0.44 (-1.50, 2.38)	0.204	0.652	0.953	0.001
	<i>EGFR</i> -mutant	27.05 (6.16)	26.35 (0.52)					
Body mass index	Wild-type	22.70 (2.71)	22.54 (0.41)	-0.09 (-1.10, 0.92)	0.032	0.859	0.953	0.000

	<i>EGFR</i> -mutant	22.37 (3.26)	22.45 (0.27)					
Percent body fat	Wild-type	28.52 (9.58)	26.26 (1.25)	-1.70 (-4.78, 1.38)	1.182	0.278	0.953	0.006
	<i>EGFR</i> -mutant	23.51 (9.83)	24.56 (0.82)					
Waist-to-hip ratio	Wild-type	0.85 (0.05)	0.85 (0.01)	0.00 (-0.02, 0.02)	0.192	0.662	0.953	0.001
	<i>EGFR</i> -mutant	0.85 (0.06)	0.85 (0.01)					
Visceral fat area	Wild-type	133.87 (37.81)	136.48 (6.47)	-8.09 (-24.03, 7.86)	1.000	0.318	0.953	0.005
	<i>EGFR</i> -mutant	129.62 (51.72)	128.40 (4.26)					
Bone mineral content	Wild-type	2.55 (0.47)	2.66 (0.08)	0.00 (-0.19, 0.19)	0.000	0.998	0.998	0.000
	<i>EGFR</i> -mutant	2.71 (0.64)	2.66 (0.05)					
Basal metabolic rate	Wild-type	1331.18 (203.65)	1366.68 (41.24)	58.64 (-42.97, 160.25)	1.296	0.256	0.953	0.007
	<i>EGFR</i> -mutant	1441.90 (344.79)	1425.33 (27.12)					
Arm circumference	Wild-type	29.21 (4.68)	29.23 (0.58)	0.26 (-1.17, 1.69)	0.132	0.717	0.953	0.001
	<i>EGFR</i> -mutant	29.51 (4.16)	29.50 (0.38)					
Fat-free arm circumference	Wild-type	24.08 (2.34)	24.90 (0.37)	-0.71 (-1.62, 0.21)	2.316	0.130	0.953	0.012
	<i>EGFR</i> -mutant	24.58 (3.30)	24.19 (0.24)					
Upper-limb muscle mass	Wild-type	4.72 (1.22)	5.05 (0.22)	0.14 (-0.41, 0.69)	0.257	0.613	0.953	0.001
	<i>EGFR</i> -mutant	5.35 (1.89)	5.20 (0.15)					
Trunk muscle mass	Wild-type	20.48 (3.69)	21.08 (1.25)	2.02 (-1.07, 5.10)	1.665	0.198	0.953	0.009
	<i>EGFR</i> -mutant	23.38 (10.89)	23.10 (0.82)					
Lower-limb muscle mass	Wild-type	14.20 (4.56)	15.07 (0.56)	0.34 (-1.04, 1.72)	0.237	0.627	0.953	0.001
	<i>EGFR</i> -mutant	15.81 (4.17)	15.41 (0.37)					
Upper-limb fat mass	Wild-type	2.72 (1.84)	2.67 (0.29)	0.19 (-0.51, 0.89)	0.296	0.587	0.953	0.002
	<i>EGFR</i> -mutant	2.84 (2.21)	2.87 (0.19)					
Trunk fat mass	Wild-type	7.99 (4.51)	7.60 (0.57)	-1.01 (-2.40, 0.39)	2.015	0.157	0.953	0.010
	<i>EGFR</i> -mutant	6.41 (4.16)	6.59 (0.37)					

Lower-limb fat mass	Wild-type	5.04 (2.50)	4.60 (0.37)	0.07 (-0.83, 0.97)	0.024	0.877	0.953	0.000
	<i>EGFR</i> -mutant	4.46 (2.90)	4.67 (0.24)					
Upper-limb muscle mass/total muscle mass	Wild-type	0.12 (0.02)	0.12 (0.00)	0.00 (-0.01, 0.01)	0.075	0.785	0.953	0.000
	<i>EGFR</i> -mutant	0.12 (0.04)	0.12 (0.00)					
Trunk muscle mass/total muscle mass	Wild-type	0.52 (0.05)	0.51 (0.03)	0.04 (-0.03, 0.10)	1.455	0.229	0.953	0.007
	<i>EGFR</i> -mutant	0.54 (0.23)	0.55 (0.02)					
Lower-limb muscle mass/total muscle mass	Wild-type	0.36 (0.08)	0.36 (0.01)	0.01 (-0.02, 0.04)	0.460	0.498	0.953	0.002
	<i>EGFR</i> -mutant	0.37 (0.10)	0.37 (0.01)					
Upper-limb fat mass/total fat mass	Wild-type	0.21 (0.33)	0.22 (0.05)	0.04 (-0.08, 0.16)	0.453	0.502	0.953	0.002
	<i>EGFR</i> -mutant	0.26 (0.37)	0.26 (0.03)					
Trunk fat mass/total fat mass	Wild-type	0.46 (0.24)	0.44 (0.05)	-0.02 (-0.15, 0.11)	0.060	0.807	0.953	0.000
	<i>EGFR</i> -mutant	0.42 (0.44)	0.43 (0.04)					
Lower-limb fat mass/total fat mass	Wild-type	0.29 (0.10)	0.28 (0.03)	0.05 (-0.02, 0.11)	2.051	0.154	0.953	0.010
	<i>EGFR</i> -mutant	0.32 (0.22)	0.32 (0.02)					
Protein index	Wild-type	3.16 (0.40)	3.24 (0.06)	0.04 (-0.10, 0.18)	0.355	0.552	0.953	0.002
	<i>EGFR</i> -mutant	3.32 (0.45)	3.28 (0.04)					
Soft lean mass index	Wild-type	15.11 (1.85)	15.50 (0.26)	0.24 (-0.39, 0.88)	0.560	0.455	0.953	0.003
	<i>EGFR</i> -mutant	15.93 (2.08)	15.75 (0.17)					
Skeletal muscle index	Wild-type	9.29 (1.91)	9.53 (0.29)	0.32 (-0.39, 1.03)	0.773	0.380	0.953	0.004
	<i>EGFR</i> -mutant	9.96 (2.24)	9.85 (0.19)					
Fat mass index	Wild-type	6.62 (2.74)	6.05 (0.35)	-0.34 (-1.20, 0.53)	0.585	0.445	0.953	0.003
	<i>EGFR</i> -mutant	5.45 (2.71)	5.72 (0.23)					
Visceral fat index	Wild-type	51.91 (15.94)	51.30 (2.55)	-2.95 (-9.22, 3.33)	0.857	0.356	0.953	0.004
	<i>EGFR</i> -mutant	48.06 (20.02)	48.35 (1.68)					
Upper-limb muscle mass index	Wild-type	1.79 (0.37)	1.85 (0.08)	0.09 (-0.12, 0.29)	0.662	0.417	0.953	0.003

	<i>EGFR</i> -mutant	1.97 (0.70)	1.94 (0.06)					
Trunk muscle mass index	Wild-type	7.81 (0.98)	7.74 (0.49)	0.93 (-0.28, 2.15)	2.300	0.131	0.953	0.012
	<i>EGFR</i> -mutant	8.65 (4.35)	8.68 (0.32)					
Lower-limb muscle mass index	Wild-type	5.40 (1.55)	5.54 (0.20)	0.21 (-0.30, 0.71)	0.651	0.421	0.953	0.003
	<i>EGFR</i> -mutant	5.81 (1.49)	5.75 (0.13)					
Upper-limb fat mass index	Wild-type	1.04 (0.73)	0.99 (0.11)	0.09 (-0.19, 0.36)	0.388	0.534	0.953	0.002
	<i>EGFR</i> -mutant	1.05 (0.85)	1.07 (0.07)					
Trunk fat mass index	Wild-type	3.10 (1.81)	2.86 (0.22)	-0.37 (-0.91, 0.16)	1.887	0.171	0.953	0.010
	<i>EGFR</i> -mutant	2.37 (1.57)	2.48 (0.14)					
Lower-limb fat mass index	Wild-type	1.96 (1.04)	1.73 (0.14)	0.03 (-0.32, 0.38)	0.033	0.857	0.953	0.000
	<i>EGFR</i> -mutant	1.66 (1.12)	1.77 (0.09)					
Upper-limb extracellular fluid ratio	Wild-type	0.66 (0.03)	0.66 (0.00)	0.00 (-0.01, 0.01)	0.151	0.698	0.953	0.001
	<i>EGFR</i> -mutant	0.66 (0.02)	0.66 (0.00)					
Trunk extracellular fluid ratio	Wild-type	0.34 (0.03)	0.34 (0.00)	0.00 (-0.01, 0.01)	0.039	0.844	0.953	0.000
	<i>EGFR</i> -mutant	0.34 (0.02)	0.34 (0.00)					
Lower-limb extracellular fluid ratio	Wild-type	0.66 (0.05)	0.66 (0.01)	0.01 (-0.01, 0.03)	1.802	0.181	0.953	0.009
	<i>EGFR</i> -mutant	0.67 (0.04)	0.67 (0.00)					
Upper-limb extracellular water ratio	Wild-type	0.75 (0.03)	0.75 (0.00)	0.00 (-0.01, 0.01)	0.198	0.656	0.953	0.001
	<i>EGFR</i> -mutant	0.75 (0.02)	0.75 (0.00)					
Trunk extracellular water ratio	Wild-type	0.39 (0.03)	0.38 (0.00)	0.00 (-0.01, 0.01)	0.030	0.862	0.953	0.000
	<i>EGFR</i> -mutant	0.38 (0.02)	0.38 (0.00)					
Lower-limb extracellular water ratio	Wild-type	0.76 (0.06)	0.75 (0.01)	0.01 (-0.01, 0.03)	1.809	0.180	0.953	0.009
	<i>EGFR</i> -mutant	0.76 (0.05)	0.76 (0.00)					
Whole-body extracellular fluid/ total extracellular fluid	Wild-type	0.34 (0.04)	0.34 (0.01)	-0.01 (-0.02, 0.01)	1.247	0.265	0.953	0.006
	<i>EGFR</i> -mutant	0.33 (0.04)	0.33 (0.00)					

Whole-body extracellular water/ total body water	Wild-type	0.39 (0.05)	0.39 (0.01)	-0.01 (-0.03, 0.01)	1.251	0.265	0.953	0.006
	<i>EGFR</i> -mutant	0.38 (0.05)	0.38 (0.00)					

Data are presented as mean (SD). Adjusted mean (SE) indicates the least-squares mean (standard error) estimated using ANCOVA adjusted for age and sex. β represents the adjusted mean difference for *EGFR*-mutant minus *EGFR*-wild-type disease. CI, confidence interval; FDR, false discovery rate; η^2p , partial eta-squared. For all group F tests, df1 = 1; df2 varies according to the number of available observations.

Table S4 PFS-derived optimal cutoffs for body-composition parameters among male patients receiving ICI-based therapy (n=94)

Parameter	Optimal cutoff
Protein content	9.5
SMM	27.4
SLM	45.4
BFM	11.9
VFA	153
PBF	22.5
WHR	0.89
SLMI	15.23
SMI	9.38
FMI	4.22

VFI	57.03
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PFS, progression-free survival; SMM, skeletal muscle mass; SLM, soft lean mass; BFM, body fat mass; VFA, visceral fat area; PBF, percent body fat; WHR, waist-to-hip ratio; SLMI, soft lean mass index; SMI, skeletal muscle index; FMI, fat mass index; VFI, visceral fat index.

Table S5 Univariable and multivariable Cox regression analyses of body-composition parameters for PFS among male patients receiving ICI-based therapy (n=94)

Variable	Univariable analysis			Multivariable analysis ^a		
	HR	95% CI	P value	HR	95% CI	P value
BMI						
< 25 kg/m ²	Ref.					
≥ 25 kg/m ²	0.69	(0.29–1.65)	0.400			
BMI, continuous variable	0.98	(0.89–1.09)	0.717			
Protein content						
Low	Ref.					
High	0.58	(0.29–1.15)	0.120			
SMM						
Low	Ref.					
High	0.63	(0.33–1.22)	0.171			
SLM						

Low	Ref.					
High	0.53	(0.27–1.06)	0.073			
VFA						
Low	Ref.					
High	2.39	(1.26–4.52)	0.008			
PBF						
Low	Ref.					
High	1.85	(0.96–3.56)	0.067			
WHR						
Low	Ref.					
High	0.72	(0.28–1.84)	0.488			
SMI						
Low	Ref.			Ref.		
High	0.49	(0.26–0.94)	0.031	0.49	(0.25–0.97)	0.04
SLMI						
Low	Ref.					
High	0.48	(0.24–0.96)	0.037			

FMI						
Low	Ref.					
High	1.56	(0.76–3.2)	0.228			
VFI						
Low	Ref.			Ref.		
High	2.09	(1.11–3.93)	0.023	2.11	(1.09–4.07)	0.027
Age (years)						
<60 years	Ref.			Ref.		
≥60 years	0.93	(0.47–1.83)	0.825	0.71	(0.33–1.55)	0.39
Smoking history						
Never smoker	Ref.			Ref.		
Former/current smoker	0.75	(0.37–1.5)	0.409	0.71	(0.34–1.45)	0.344
Stage						
Stage II/III	Ref.			Ref.		
Stage IV	1.26	(0.65–2.42)	0.497	1.36	(0.66–2.81)	0.399
Histologic subtype						
Adenocarcinoma	Ref.			Ref.		

Squamous cell carcinoma	1.38	(0.7–2.73)	0.357	1.41	(0.67–2.96)	0.361
Other	1.41	(0.55–3.6)	0.475	1.39	(0.51–3.81)	0.524

^aThe multivariable model included variables with nominal P values below 0.05 in univariable analyses and was adjusted for age, smoking history, clinical stage, and histologic subtype. Ref., reference group. HR, hazard ratio; CI, confidence interval; PFS, progression-free survival; BMI, body mass index; SMM, skeletal muscle mass; SLM, soft lean mass; VFA, visceral fat area; PBF, percent body fat; WHR, waist-to-hip ratio; SMI, skeletal muscle index; SLMI, soft lean mass index; FMI, fat mass index; VFI, visceral fat index.

Table S6 Cox regression analysis of combined body-composition categories for PFS among male patients receiving ICI-based therapy (n=94)

Parameter	Univariable analysis			Multivariable analysis ^a		
	HR	95% CI	P	HR	95% CI	P
lowSMI highVFI	Ref.			Ref.		
lowSMI lowVFI	0.25	(0.10–0.65)	0.004	0.23	(0.08–0.62)	0.004
highSMI highVFI	0.24	(0.08–0.66)	0.006	0.29	(0.08–0.99)	0.048
highSMI lowVFI	0.18	(0.07–0.48)	0.001	0.13	(0.04–0.38)	<0.001

^aThe multivariable model was adjusted for age, smoking history, clinical stage, and histologic subtype. HR, hazard ratio; CI, confidence interval; PFS, progression-free survival; SMI, skeletal muscle index; VFI, visceral fat index.

Table S7 Univariable and multivariable logistic regression analyses of body-composition parameters for ORR among male patients receiving ICI-based therapy (n=94)

Variable	Univariable analysis	Multivariable analysis ^a
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	OR	95% CI	P value	OR	95% CI	P value
BMI						
<25 kg/m ²	Ref.					
≥25 kg/m ²	0.69	(0.29–1.65)	0.400			
BMI, continuous variable	0.98	(0.89–1.09)	0.717			
Protein content						
Low	Ref.					
High	2.2	(0.94–5.14)	0.068			
SMM						
Low	Ref.					
High	1.7	(0.74–3.91)	0.208			
SLM						
Low	Ref.					
High	2.02	(0.87–4.68)	0.102			
VFA						
Low	Ref.					
High	0.45	(0.19–1.05)	0.063			

PBF						
Low	Ref.					
High	0.57	(0.25–1.29)	0.177			
WHR						
Low	Ref.					
High	1.82	(0.64–5.11)	0.260			
SMI						
Low	Ref.			Ref.		
High	2.41	(1.03–5.65)	0.042	3.04	(1.2–7.72)	0.019
SLMI						
Low	Ref.					
High	2.24	(0.96–5.23)	0.063			
FMI						
Low	Ref.					
High	0.51	(0.21–1.21)	0.126			
VFI						
Low	Ref.					

High	0.46	(0.19–1.12)	0.085			
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^aThe multivariable model included variables with nominal P values below 0.05 in univariable analyses and was adjusted for age, smoking history, clinical stage, and histologic subtype. Ref., reference group. OR, odds ratio; CI, confidence interval; ORR, objective response rate; BMI, body mass index; SMM, skeletal muscle mass; SLM, soft lean mass; VFA, visceral fat area; PBF, percent body fat; WHR, waist-to-hip ratio; SMI, skeletal muscle index; SLMI, soft lean mass index; FMI, fat mass index; VFI, visceral fat index.

Table S8 Logistic regression analysis of combined body-composition categories for ORR among male patients receiving ICI-based therapy (n=94)

Combined category	Univariable analysis			Multivariable analysis ^a		
	OR	95% CI	P value	OR	95% CI	P value
Low SMI/high VFI	Ref.			Ref.		
Low SMI/low VFI	4.51	(1.04–19.66)	0.045	6.48	(1.33–31.54)	0.021
High SMI/high VFI	4.85	(1.08–21.76)	0.039	6.8	(1.31–35.23)	0.022
High SMI/low VFI	6.97	(1.67–29.12)	0.008	15.9	(2.95–85.63)	0.001

Ref., reference group.

^aThe multivariable model was adjusted for age, smoking history, clinical stage, and histologic subtype. OR, odds ratio; CI, confidence interval; ORR, objective response rate; SMI, skeletal muscle index; VFI, visceral fat index.

Table S9 Longitudinal changes in 49 BIA-derived body-composition parameters in the paired ICI cohort (n=39)

Variable, mean ± SD	Before treatment	After treatment	Difference (95% CI)	t	P value	FDR-adjusted P value
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Intracellular water	20.98 ± 3.93	20.09 ± 3.00	-0.89 (-1.88 to 0.09)	-1.837	0.074	0.285
Extracellular water	12.96 ± 2.13	12.54 ± 1.73	-0.42 (-0.94 to 0.10)	-1.636	0.11	0.36
Total body water	33.61 ± 5.50	32.65 ± 4.67	-0.96 (-2.25 to 0.32)	-1.515	0.138	0.398
Protein content	8.85 ± 1.65	8.69 ± 1.30	-0.16 (-0.59 to 0.26)	-0.767	0.448	0.605
Soft lean mass	42.79 ± 7.26	41.77 ± 6.06	-1.02 (-2.78 to 0.74)	-1.17	0.249	0.455
Mineral content	3.25 ± 1.03	3.06 ± 0.41	-0.19 (-0.50 to 0.13)	-1.206	0.235	0.455
Bone mineral salts	2.79 ± 0.95	2.64 ± 0.33	-0.15 (-0.45 to 0.15)	-1.023	0.313	0.467
Fat-free mass	45.60 ± 7.45	44.42 ± 6.36	-1.18 (-2.95 to 0.58)	-1.357	0.183	0.448
Body fat mass	15.38 ± 5.84	19.12 ± 7.84	3.74 (1.77 to 5.71)	3.846	<0.001	0.005
Skeletal muscle mass	25.54 ± 3.85	25.38 ± 3.94	-0.16 (-1.09 to 0.77)	-0.351	0.728	0.849
Body mass index	22.75 ± 3.50	23.72 ± 3.88	0.97 (0.47 to 1.47)	3.898	<0.001	0.005
Percent body fat	24.82 ± 7.48	29.28 ± 9.15	4.46 (1.79 to 7.13)	3.377	0.002	0.014
Waist-to-hip ratio	0.841 ± 0.063	0.864 ± 0.059	0.023 (0.008 to 0.037)	3.076	0.004	0.021
Visceral fat area	139.18 ± 36.29	155.44 ± 43.47	16.26 (2.53 to 29.98)	2.398	0.022	0.1
Bone mineral content	2.79 ± 0.95	2.64 ± 0.33	-0.15 (-0.45 to 0.15)	-1.023	0.313	0.467
Basal metabolic rate	1375.2 ± 139.1	1368.6 ± 131.9	-6.5 (-36.7 to 23.6)	-0.439	0.663	0.793
Arm circumference	29.33 ± 4.86	30.17 ± 3.69	0.84 (-0.40 to 2.07)	1.368	0.179	0.448
Fat-free arm circumference	24.32 ± 2.95	24.96 ± 2.53	0.65 (-0.07 to 1.36)	1.826	0.076	0.285
Upper-limb muscle mass	4.99 ± 1.11	5.01 ± 1.06	0.02 (-0.16 to 0.21)	0.27	0.789	0.858
Trunk muscle mass	20.83 ± 3.44	21.14 ± 3.10	0.31 (-0.33 to 0.96)	0.977	0.335	0.469
Lower-limb muscle mass	15.13 ± 3.69	14.49 ± 2.17	-0.64 (-1.67 to 0.38)	-1.273	0.211	0.452

Upper-limb fat mass	2.58 ± 1.00	2.77 ± 0.94	0.18 (-0.06 to 0.43)	1.529	0.135	0.398
Trunk fat mass	7.17 ± 3.59	8.77 ± 4.31	1.60 (0.76 to 2.44)	3.852	<0.001	0.005
Lower-limb fat mass	4.73 ± 2.45	5.20 ± 2.01	0.47 (-0.28 to 1.22)	1.276	0.21	0.452
Upper-limb muscle mass/total muscle mass	0.115 ± 0.012	0.119 ± 0.012	0.004 (0.001 to 0.007)	3.113	0.004	0.021
Trunk muscle mass/total muscle mass	0.488 ± 0.034	0.507 ± 0.033	0.019 (0.007 to 0.031)	3.19	0.003	0.02
Lower-limb muscle mass/total muscle mass	0.358 ± 0.102	0.347 ± 0.023	-0.010 (-0.044 to 0.023)	-0.611	0.545	0.671
Upper-limb fat mass/total fat mass	0.192 ± 0.128	0.174 ± 0.145	-0.018 (-0.079 to 0.043)	-0.606	0.548	0.671
Trunk fat mass/total fat mass	0.535 ± 0.744	0.447 ± 0.143	-0.088 (-0.329 to 0.154)	-0.734	0.467	0.605
Lower-limb fat mass/total fat mass	0.331 ± 0.209	0.290 ± 0.112	-0.041 (-0.119 to 0.038)	-1.049	0.301	0.467
Protein index	3.29 ± 0.55	3.24 ± 0.41	-0.06 (-0.22 to 0.10)	-0.731	0.469	0.605
Soft lean mass index	15.93 ± 2.34	15.56 ± 1.89	-0.37 (-1.03 to 0.30)	-1.107	0.275	0.467
Skeletal muscle index	9.50 ± 1.15	9.45 ± 1.24	-0.05 (-0.40 to 0.30)	-0.297	0.768	0.855
Fat mass index	5.78 ± 2.29	7.17 ± 3.04	1.39 (0.65 to 2.14)	3.786	<0.001	0.005
Visceral fat index	52.20 ± 14.26	58.21 ± 16.75	6.01 (0.89 to 11.12)	2.378	0.023	0.1
Upper-limb muscle mass index	1.86 ± 0.36	1.87 ± 0.35	0.01 (-0.06 to 0.08)	0.304	0.763	0.855
Trunk muscle mass index	7.76 ± 1.10	7.88 ± 0.96	0.12 (-0.12 to 0.37)	0.996	0.326	0.469
Lower-limb muscle mass index	5.62 ± 1.20	5.39 ± 0.64	-0.23 (-0.59 to 0.13)	-1.269	0.212	0.452

Upper-limb fat mass index	0.96 ± 0.36	1.03 ± 0.34	0.07 (-0.02 to 0.16)	1.649	0.107	0.36
Trunk fat mass index	2.69 ± 1.37	3.29 ± 1.63	0.59 (0.28 to 0.91)	3.808	<0.001	0.005
Lower-limb fat mass index	1.77 ± 0.91	1.95 ± 0.79	0.18 (-0.09 to 0.45)	1.36	0.182	0.448
Upper-limb extracellular fluid ratio	0.331 ± 0.010	0.333 ± 0.012	0.003 (-0.002 to 0.007)	1.166	0.251	0.455
Trunk extracellular fluid ratio	0.337 ± 0.013	0.338 ± 0.010	0.001 (-0.004 to 0.006)	0.248	0.805	0.858
Lower-limb extracellular fluid ratio	0.336 ± 0.010	0.334 ± 0.011	-0.002 (-0.006 to 0.002)	-1.032	0.308	0.467
Upper-limb extracellular water ratio	0.377 ± 0.011	0.380 ± 0.014	0.003 (-0.002 to 0.008)	1.171	0.249	0.455
Trunk extracellular water ratio	0.385 ± 0.014	0.385 ± 0.012	0.001 (-0.005 to 0.006)	0.217	0.829	0.865
Lower-limb extracellular water ratio	0.383 ± 0.012	0.381 ± 0.013	-0.002 (-0.006 to 0.002)	-1.02	0.314	0.467
Whole-body extracellular fluid/total extracellular fluid	0.338 ± 0.008	0.337 ± 0.008	-0.000 (-0.003 to 0.003)	-0.137	0.892	0.892
Whole-body extracellular water/total body water	0.385 ± 0.010	0.385 ± 0.010	-0.000 (-0.003 to 0.003)	-0.173	0.863	0.881

Data are presented as mean ± SD. Differences were calculated as after-treatment minus before-treatment values and assessed using paired-sample t tests. P values were adjusted using the Benjamini–Hochberg procedure. CI, confidence interval; FDR, false discovery rate.

Table S10 Cox proportional hazards model for dynamic changes in body composition

Variable	Univariable analysis			Multivariable analysis ^a		
	HR	95% CI	P value	HR	95% CI	P value
△SLM	0.89	(0.47–1.67)	0.715			
△BFM	1.36	(0.73–2.56)	0.335			
△SMM	0.79	(0.38–1.66)	0.537			
△BMI	2.68	(0.92–7.83)	0.072			
△PBF	1.59	(0.84–2.98)	0.152			
△VFA	1.52	(0.81–2.86)	0.191			
△Appendicular muscle mass	1.14	(0.61–2.15)	0.674			
△Trunk fat mass	2.06	(1.15–3.70)	0.016	4.56	(1.39–14.97)	0.012

△ denotes relative change from baseline. Each variable was categorized as a >10% decrease versus no >10% decrease (reference). ^aThe multivariable model was adjusted for age, sex, smoking history, clinical stage, and histologic subtype. HR, hazard ratio; CI, confidence interval; SLM, soft lean mass; BFM, body fat mass; SMM, skeletal muscle mass; BMI, body mass index; PBF, percent body fat; VFA, visceral fat area.

Table S11 Sex-adjusted Cox regression analyses of sex-standardized continuous body-composition parameters for PFS in the EGFR-TKI cohort

Variable	HR (95% CI)	<i>P</i> value
BMI	0.82 (0.46–1.46)	0.494
Protein content	0.96 (0.52–1.75)	0.888
SMM	1.05 (0.56–1.99)	0.877
SLM	1.06 (0.58–1.93)	0.844
VFA	1.09 (0.60–1.99)	0.770
PBF	0.93 (0.55–1.55)	0.770
WHR	1.54 (0.80–2.99)	0.199
SMI	0.96 (0.50–1.82)	0.894
SLMI	0.93 (0.53–1.64)	0.797
FMI	0.88 (0.53–1.45)	0.604
VFI	1.06 (0.59–1.87)	0.854

HR, hazard ratio; CI, confidence interval; PFS, progression-free survival; BMI, body mass index; SMM, skeletal muscle mass; SLM, soft lean mass; VFA, visceral fat area; PBF, percent body fat; WHR, waist-to-hip ratio; SMI, skeletal muscle index; SLMI, soft lean mass index; FMI, fat mass index; VFI, visceral fat index.



Figure S1 Correlations among body composition parameters in patients with NSCLC. (A) Stage I; (B) stage II-IV. Protein, protein mass; SMM, skeletal muscle mass; SLM, soft lean mass; BFM, body

fat mass; BFP, body fat percentage; BMI, body mass index; WHR, waist-to-hip ratio. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.