

**Table S1.** Characteristics of Brazilian women living in England by tertile of 4% Total vBMD (n=51)<sup>1</sup>

Bone Parameter	4% Total vBMD (mg/cm <sup>3</sup> )			p value <sup>2</sup>
	Tertile 1 < 327.31	Tertile 2 327.31 – 365.51	Tertile 3 > 365.51	
Number (n)	17	17	17	
Wegiht (kg)	67.17 ±9.5	73.60 ±13.56	69.54 ±18.30	0.419
Height (m)	1.64 ±0.05	1.64 ±0.06	1.64 ±0.05	0.912
BMI (kg/m <sup>2</sup> )	24.92 ±4.11	27.08 ±4.91	25.84 ±6.65	0.500
Serum 25(OH)D (nmol/l)	37.44 ±14.74	38.01 ±17.22	30.20 ±11.80	0.238
Plasma PTH (pmol/l)	5.38 ±1.57	4.94 ±2.73	5.94 ±2.73	0.364
Serum calcium (mmol/l)	2.29 ±0.06	2.31 ±0.08	2.28 ±0.07	0.463

<sup>1</sup>Values: mean ± SD; <sup>2</sup> Statistical analysis: one-way ANOVA with post-hoc Tukey's test.

**Table S2.** Characteristics of Brazilian women living in England by tertile of 4% Trabecular vBMD (n=51)<sup>1</sup>

Bone Parameter	4% Trabecular vBMD (mg/cm <sup>3</sup> )			p value <sup>2</sup>
	Tertile 1 < 172.59	Tertile 2 172.59 – 202.81	Tertile 3 > 202.81	
Number (n)	17	16	17	
Wegiht (kg)	73.10 ±14.83	65.44 ±11.35	72.26 ±15.63	0.246
Height (m)	1.67 ±0.051 <sup>a</sup>	1.62 ±0.04 <sup>a</sup>	1.63 ±0.06	<b>0.008</b>
BMI (kg/m <sup>2</sup> )	26.09 ±5.61	24.92 ±4.31	26.96 ±6.01	0.555
Serum 25(OH)D (nmol/l)	37.14 ±17.09	34.02 ±11.71	34.84 ±16.25	0.829
Plasma PTH (pmol/l)	5.45 ±2.38	5.48 ±1.65	5.40 ±2.16	0.994
Serum calcium (mmol/l)	2.30 ±0.06	2.32 ±0.06	2.26 ±0.09	0.052

<sup>1</sup>Values: mean ± SD; <sup>2</sup> Statistical analysis: one-way ANOVA with post-hoc Tukey's test: values in same row with same superscript letters are significantly different (<sup>a</sup>p=0.007).

**Table S3.** Characteristics of Brazilian women living in England by tertile of 66% Cortical vBMD (n=51)<sup>1</sup>

Bone Parameter	66% Cortical vBMD (mg/cm <sup>3</sup> )			p value <sup>2</sup>
	Tertile 1 < 1113.00	Tertile 2 1113.00 – 1149.48	Tertile 3 > 1149.48	
Number (n)	17	17	17	
Wegiht (kg)	74.21 ±16.86	71.95 ±11.41	64.16 ±12.56	0.095
Height (m)	1.64 ±0.05	1.63 ±0.06	1.65 ±0.05	0.732
BMI (kg/m <sup>2</sup> )	27.36 ±6.02	26.86 ±3.98	23.61 ±5.19	0.079

<b>Serum 25(OH)D (nmol/l)</b>	34.40 ±18.02	37.85 ±15.03	33.41 ±11.47	0.667
<b>Plasma PTH (pmol/l)</b>	5.69 ±2.89	5.21 ±1.44	5.26 ±1.67	0.762
<b>Serum calcium (mmol/l)</b>	2.30 ±0.06	2.30 ±0.70	2.27 ±0.07	0.380

<sup>1</sup>Values: mean ± SD; <sup>2</sup> Statistical analysis: one-way ANOVA with post-hoc Tukey's test.

**Table S4.** Characteristics of Brazilian women living in England by tertile of 66% Total vBMD (n=51)<sup>1</sup>

<b>Bone Parameter</b>	<b>66% Total vBMD (mg/cm<sup>3</sup>)</b>			<b>p value<sup>2</sup></b>
	<b>Tertile 1</b> < 676.04	<b>Tertile 2</b> 676.04 – 749.19	<b>Tertile 3</b> > 749.19	
Number (n)	17	17	17	
<b>Wegiht (kg)</b>	75.14 ±17.33	69.40 ±10.41	66.78 ±13.46	0.194
<b>Height (m)</b>	1.65 ±0.06	1.63 ±0.04	1.64 ±0.06	0.687
<b>BMI (kg/m<sup>2</sup>)</b>	27.55 ±6.16	25.54 ±3.58	24.74 ±5.70	0.286
<b>Serum 25(OH)D (nmol/l)</b>	28.43 ±12.86	41.03 ±15.77	36.21 ±17.91	0.402
<b>Plasma PTH (pmol/l)</b>	6.10 ±2.71	4.98 ±1.63	5.08 ±1.61	0.225
<b>Serum calcium (mmol/l)</b>	2.28 ±0.06	2.33 ±0.73	2.28 ±0.08	0.094

<sup>1</sup>Values: mean ± SD; <sup>2</sup> Statistical analysis: one-way ANOVA with post-hoc Tukey's test.

**Table S5.** Characteristics of Brazilian women living in Brazil by tertile of lumbar spine BMD (n=79)<sup>1</sup>

<b>Bone Parameter</b>	<b>Lumbar spine BMD (g/cm<sup>2</sup>)</b>			<b>p value<sup>2</sup></b>
	<b>Tertile 1</b> < 1.077	<b>Tertile 2</b> 1.077 – 1.185	<b>Tertile 3</b> > 1.185	
Number (n)	26	27	26	
<b>Wegiht (kg)</b>	58.11 ±10.95 <sup>a</sup>	64.21 ±14.80	67.27 ±11.82 <sup>a</sup>	<b>0.034</b>
<b>Height (m)</b>	1.61 ±0.06	1.62 ±0.05	1.63 ±0.06	0.300
<b>BMI (kg/m<sup>2</sup>)</b>	22.40 ±4.52	24.41 ±5.23	25.22 ±4.57	0.099
<b>Serum 25(OH)D (nmol/l)</b>	73.52 ±21.26	76.71 ±24.02	74.71 ±21.78	0.872
<b>Plasma PTH (pmol/l)</b>	4.47 ±1.44	4.45 ±1.58	4.54 ±1.45	0.973
<b>Serum calcium (mmol/l)</b>	2.26 ±0.05	2.29 ±0.06	2.28 ±0.06	0.102

<sup>1</sup>Values: mean ± SD; <sup>2</sup> Statistical analysis: one-way ANOVA with post-hoc Tukey's test: values in same row with same superscript letters are significantly different (<sup>a</sup>p=0.029).

**Table S6.** Characteristics of Brazilian women living in Brazil by tertile of femur BMD (n=64)<sup>1</sup>

<b>Bone Parameter</b>	<b>Femur BMD (g/cm<sup>2</sup>)</b>			<b>p value<sup>2</sup></b>
	<b>Tertile 1</b> < 0.931	<b>Tertile 2</b> 0.931 – 1.026	<b>Tertile 3</b> > 1.026	

Number (n)	22	21	21	
<b>Wegiht (kg)</b>	56.85 ±8.03 <sup>a</sup>	64.49 ±10.89 <sup>b</sup>	73.79 ±15.40 <sup>a,b</sup>	<b>&gt;0.001</b>
<b>Height (m)</b>	1.62 ±0.07	1.61 ±0.06	1.61 ±0.05	0.810
<b>BMI (kg/m<sup>2</sup>)</b>	21.45 ±2.67 <sup>c,d</sup>	24.69 ±3.88 <sup>c,e</sup>	28.26 ±5.70 <sup>d,e</sup>	<b>&gt;0.001</b>
<b>Serum 25(OH)D (nmol/l)</b>	72.85 ±18.40	74.26 ±26.42	73.16 ±16.83	0.974
<b>Plasma PTH (pmol/l)</b>	4.43 ±1.23	4.21 ±1.23	5.15 ±1.92	0.115
<b>Serum calcium (mmol/l)</b>	2.27 ±0.05	2.32 ±0.06	2.27 ±0.05	0.800

<sup>1</sup> Values: mean ± SD; <sup>2</sup> Statistical analysis: one-way ANOVA with post-hoc Tukey's test: values in same row with same superscript letters are significantly different (<sup>a</sup>  $p > 0.001$ ; <sup>b</sup>  $p = 0.035$ ; <sup>c</sup>  $p = 0.040$ ; <sup>d</sup>  $p < 0.001$ ; <sup>e</sup>  $p = 0.023$ )