Supplementary File III

Table S1 Characteristics of subjects

Characteristics	Males (N=30)			Females (N=30)			Total (N=60)		
	Mean	SD	Median	Mean	SD	Median	Mean	SD	Median
Age (years)	21.8	3.6	20.5	20.0	1.9	19.0	20.9	3.0	20.0
Body height (cm)	176.6	10.0	175.5	165.2	5.9	165.5	170.9	9.9	169.5
Body weight (kg)	69.8	9.1	68.7	55.2	5.8	55.5	62.5	10.6	61.0

Table S2 Intraclass correlation coefficient of metatarsal bones between two scans

Metatarsals	Length	Width	Height	Volume	Surface Area	SA: V
1st	1.00	0.98	0.99	0.99	0.99	0.97
2nd	1.00	0.98	0.97	0.98	0.98	0.98
3rd	1.00	0.91	0.93	0.81	0.91	0.93
4th	1.00	0.97	0.97	0.95	0.96	0.96
5th	1.00	0.91	0.99	0.97	0.99	0.97

(Data from Liu et al., 2018)

Reference:

Liu, Y., Li, R., Fan, Y., Antonijević, Đ., Milenković, P., Li, Z., et al. (2018). The influence of anisotropic voxel caused by field of view setting on the accuracy of three-dimensional reconstruction of bone geometric models. *AIP Adv*. 8, 085111. doi: 10.1063/1.50419

Table S3 Normality and homoscedasticity tests of normalized length, width and height of metatarsal bone *in vivo* based on its PAI between sexes

Metatarsals	Geometric parameters		Shapiro-Wilk test				Levene's Test	
			Statistics (male)	Sig (male)	Statistics (female)	Sig (female)	F	Sig
1st	Length	L	0.963	0.365	0.982	0.865	2.078	0.155
		R	0.973	0.626	0.977	0.732	0.816	0.370
	Width	L	0.946	0.130	0.922	0.030*	3.099	0.084
		R	0.894	0.006**	0.974	0.647	1.970	0.166
	Height	L	0.986	0.956	0.980	0.816	1.175	0.283
		R	0.983	0.905	0.953	0.199	0.116	0.735
2nd	Length	L	0.978	0.763	0.972	0.604	4.413	0.040*
		R	0.973	0.636	0.940	0.093	2.150	0.148
	Width	L	0.971	0.569	0.969	0.504	3.387	0.071
		R	0.985	0.939	0.953	0.207	0.933	0.338
	Height	L	0.974	0.650	0.902	0.009**	2.380	0.128
		R	0.989	0.985	0.977	0.746	0.633	0.430
3rd	Length	L	0.971	0.564	0.972	0.605	0.924	0.340
		R	0.965	0.406	0.946	0.135	1.505	0.225
	Width	L	0.976	0.699	0.947	0.139	0.722	0.399
		R	0.953	0.207	0.984	0.912	0.439	0.510
	Height	L	0.958	0.283	0.935	0.068	0.024	0.876
		R	0.970	0.547	0.982	0.866	0.078	0.781
4th	Length	L	0.986	0.956	0.979	0.789	0.692	0.409
		R	0.987	0.966	0.977	0.742	1.527	0.222
	Width	L	0.984	0.918	0.913	0.018*	0.068	0.795
		R	0.954	0.213	0.950	0.166	0.252	0.618
	Height	L	0.976	0.700	0.982	0.873	0.479	0.492
		R	0.965	0.404	0.975	0.693	2.254	0.139
5th	Length	L	0.905	0.011	0.970	0.552	0.421	0.519
		R	0.950	0.165	0.980	0.834	0.712	0.402
	Width	L	0.949	0.159	0.987	0.968	2.163	0.147
		R	0.916	0.022*	0.974	0.665	4.340	0.042*
	Height	L	0.964	0.384	0.983	0.905	0.006	0.939
		R	0.936	0.069	0.969	0.506	0.030	0.862

* Significance level: $p<0.05$; ** Significance level: $p<0.01$

Table S4 Normality and homoscedasticity tests of SA: V (mm^{-1}) and bone density (HU/1024) of metatarsal bone in vivo between sexes

Metatarsals	Geometric parameters		Shapiro-Wilk test				Levene's Test	
			Statistics (male)	Sig (male)	Statistics (female)	Sig (female)	F	Sig
1st	SA: V	L	0.962	0.351	0.979	0.796	0.510	0.478
		R	0.981	0.849	0.981	0.860	0.350	0.557
	Density	L	0.967	0.458	0.979	0.812	0.628	0.431
		R	0.983	0.903	0.968	0.480	1.631	0.207
2nd	SA: V	L	0.946	0.134	0.973	0.613	0.576	0.451
		R	0.941	0.096	0.975	0.673	2.372	0.129
	Density	L	0.985	0.932	0.991	0.993	0.094	0.761
		R	0.991	0.993	0.975	0.676	0.677	0.414
3rd	SA: V	L	0.975	0.687	0.976	0.721	0.143	0.707
		R	0.961	0.321	0.979	0.792	1.205	0.277
	Density	L	0.989	0.986	0.964	0.392	0.175	0.678
		R	0.986	0.959	0.976	0.714	0.369	0.546
4th	SA: V	L	0.971	0.572	0.972	0.600	2.747	0.103
		R	0.963	0.377	0.978	0.765	4.271	0.043*
	Density	L	0.952	0.197	0.971	0.576	1.156	0.287
		R	0.898	0.007**	0.977	0.730	0.698	0.407
5th	SA: V	L	0.982	0.878	0.975	0.691	1.614	0.209
		R	0.960	0.319	0.956	0.246	1.221	0.274
	Density	L	0.932	0.056	0.969	0.510	1.913	0.172
		R	0.920	0.026*	0.970	0.541	1.887	0.175

* Significance level: $p<0.05$; ** Significance level: $p<0.01$

Table S5 Normality and homoscedasticity tests of normalized PMIs of metatarsal bone in vivo based on its PAI between sexes

Metatarsals	Geometric parameters		Shapiro-Wilk test				Levene's Test	
			Statistics (male)	Sig (male)	Statistics (female)	Sig (female)	F	Sig
1st	PMI*x*	L	0.939	0.083	0.960	0.309	4.107	0.047*
		R	0.952	0.187	0.962	0.356	11.588	0.001**
	PMI*y*	L	0.937	0.077	0.946	0.129	3.604	0.063
		R	0.962	0.353	0.952	0.192	10.854	0.002**
	PMI*z*	L	0.947	0.144	0.985	0.937	4.485	0.038*
		R	0.971	0.567	0.967	0.464	8.550	0.005**
2nd	PMI*x*	L	0.957	0.267	0.971	0.559	2.585	0.113
		R	0.988	0.975	0.948	0.147	5.756	0.020*
	PMI*y*	L	0.980	0.836	0.953	0.207	3.654	0.061
		R	0.961	0.329	0.977	0.747	1.991	0.164
	PMI*z*	L	0.968	0.486	0.971	0.560	3.672	0.060
		R	0.994	1.000	0.954	0.222	4.863	0.031*
3rd	PMI*x*	L	0.953	0.206	0.971	0.572	1.165	0.285
		R	0.970	0.528	0.941	0.099	2.995	0.089
	PMI*y*	L	0.972	0.596	0.988	0.980	12.701	0.001**
		R	0.977	0.746	0.932	0.054	14.182	0.000**
	PMI*z*	L	0.972	0.593	0.957	0.259	3.515	0.066
		R	0.977	0.734	0.934	0.064	7.814	0.007**
4th	PMI*x*	L	0.976	0.710	0.963	0.372	4.994	0.029*
		R	0.981	0.864	0.970	0.545	3.802	0.056
	PMI*y*	L	0.984	0.926	0.891	0.005**	4.784	0.033*
		R	0.984	0.919	0.834	0.000**	0.083	0.774
	PMI*z*	L	0.958	0.282	0.938	0.083	6.714	0.012*
		R	0.968	0.483	0.937	0.078	4.364	0.041*
5th	PMI*x*	L	0.967	0.458	0.950	0.172	4.049	0.049*
		R	0.972	0.598	0.956	0.243	5.526	0.022*
	PMI*y*	L	0.946	0.134	0.963	0.365	1.853	0.179
		R	0.983	0.902	0.943	0.112	4.405	0.040*
	PMI*z*	L	0.946	0.136	0.923	0.033*	4.757	0.033*
		R	0.990	0.993	0.940	0.090	4.821	0.032*

* Significance level: $p<0.05$; ** Significance level: $p<0.01$

Table S6 Correlation results between variables of the 1st metatarsal of the left side

		Length	Width	Height	S: V	Density	PMI*x*	PMI*y*	PMIz	Height	Weight	Age
Length	**Pearson Coefficient**	1	-0.785**	-0.843**	0.219	-0.074	0.792**	0.623**	-0.817**	0.162	-0.136	-0.007
	Sig. (2-tailed)		0.000	0.000	0.0093	0.572	0.000	0.000	0.000	0.217	0.300	0.959
	N	60	60	60	60	60	60	60	60	60	60	60
Width	**Pearson Coefficient**	-0.785**	1	0.329*	-0.182	0.165	-0.608**	-0.740**	-0.786**	-0.032	0.231	-0.015
	Sig. (2-tailed)	0.000		0.01	0.164	0.207	0.000	0.000	0.000	0.807	0.076	0.908
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Pearson Coefficient**	-0.843**	0.329*	1	-0.176	-0.030	-0.679**	-0.307*	-0.563**	-0.176	0.067	0.047
	Sig. (2-tailed)	0.000	0.01		0.180	0.818	0.000	0.017	0.000	0.179	0.612	0.724
	N	60	60	60	60	60	60	60	60	60	60	60
S: V	**Pearson Coefficient**	0.219	-0.182	-0.176	1	0.155	0.304*	0.365**	-0.390**	-0.767**	-0.748**	-0.304*
	Sig. (2-tailed)	0.0093	0.164	0.180		0.236	0.018	0.004	0.002	0.000	0.000	0.018
	N	60	60	60	60	60	60	60	60	60	60	60
Density	**Pearson Coefficient**	-0.074	0.165	-0.030	0.155	1	-0.015	-0.129	0.087	-0.026	0.064	-0.082
	Sig. (2-tailed)	0.572	0.207	0.818	0.236		0.907	0.327	0.511	0.841	0.629	0.533
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*x*	**Pearson Coefficient**	0.792**	-0.608**	-0.679**	0.304*	-0.015	1	0.483**	-0.847**	0.095	-0.134	-0.069
	Sig. (2-tailed)	0.000	0.000	0.000	0.018	0.907		0.000	0.000	0.468	0.307	0.601
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*y*	**Pearson Coefficient**	0.623**	-0.740**	-0.307*	0.365**	-0.129	0.483**	1	-0.874**	-0.157	-0.385**	-0.012
	Sig. (2-tailed)	0.000	0.000	0.017	0.004	0.327	0.000		0.000	0.231	0.002	0.926
	N	60	60	60	60	60	60	60	60	60	60	60
PMIz	**Pearson Coefficient**	-0.817**	-0.786**	-0.563**	-0.390**	0.087	-0.847**	-0.874**	1	0.039	0.296*	0.129
	Sig. (2-tailed)	0.000	0.000	0.000	0.002	0.511	0.000	0.000		0.768	0.022	0.324
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Spearman Coefficient**	0.162	-0.032	-0.176	-0.767**	-0.026	0.095	-0.157	0.039	1	0.788**	0.259*
	Sig. (2-tailed)	0.217	0.807	0.179	0.000	0.841	0.468	0.231	0.768		0.000	0.045
	N	60	60	60	60	60	60	60	60	60	60	60
Weight	**Spearman Coefficient**	-0.136	0.231	0.067	-0.748**	0.064	-0.134	-0.385**	0.296*	0.788**	1	0.198
	Sig. (2-tailed)	0.300	0.076	0.612	0.000	0.629	0.307	0.002	0.022	0.000		0.130
	N	60	60	60	60	60	60	60	60	60	60	60
Age	**Spearman Coefficient**	-0.007	-0.015	0.047	-0.304*	-0.082	-0.069	-0.012	0.129	0.259*	0.198	1
	Sig. (2-tailed)	0.959	0.908	0.724	0.018	0.533	0.601	0.926	0.324	0.045	0.130	
	N	60	60	60	60	60	60	60	60	60	60	60

Table S7 Correlation results between variables of the 2nd metatarsal of the left side

		Length	Width	Height	S: V	Density	PMI*x*	PMI*y*	PMIz	Height	Weight	Age
Length	**Pearson Coefficient**	1	-0.714**	-0.857**	0.253	-0.055	0.806**	0.736**	-0.838**	0.058	-0.131	-0.054
	Sig. (2-tailed)		0.000	0.000	0.051	0.675	0.000	0.000	0.000	0.661	0.317	0.684
	N	60	60	60	60	60	60	60	60	60	60	60
Width	**Pearson Coefficient**	-0.714**	1	0.252	-0.238	0.018	-0.381**	-0.734**	0.554**	-0.057	0.045	0.095
	Sig. (2-tailed)	0.000		0.052	0.067	0.892	0.003	0.000	0.000	0.666	0.734	0.471
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Pearson Coefficient**	-0.857**	0.252	1	-0.175	0.063	-0.835**	-0.478**	0.751**	-0.051	0.134	-0.008
	Sig. (2-tailed)	0.000	0.052		0.181	0.632	0.000	0.000	0.000	0.698	0.308	0.952
	N	60	60	60	60	60	60	60	60	60	60	60
S: V	**Pearson Coefficient**	0.253	-0.238	-0.175	1	0.205	0.386**	0.382**	-0.413**	-0.791**	-0.775**	-0.188
	Sig. (2-tailed)	0.051	0.067	0.181		0.116	0.002	0.003	0.001	0.000	0.000	0.151
	N	60	60	60	60	60	60	60	60	60	60	60
Density	**Pearson Coefficient**	-0.055	0.018	0.063	0.205	1	0.067	0.159	-0.109	-0.232	-0.253	-0.201
	Sig. (2-tailed)	0.675	0.892	0.632	0.116		0.613	0.226	0.405	0.075	0.051	0.124
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*x*	**Pearson Coefficient**	0.806**	-0.381**	-0.835**	0.386**	0.067	1	0.715**	-0.958**	-0.162	-0.362**	-0.070
	Sig. (2-tailed)	0.000	0.003	0.000	0.002	0.613		0.000	0.000	0.215	0.005	0.598
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*y*	**Pearson Coefficient**	0.736**	-0.734**	-0.478**	0.382**	0.159	0.715**	1	-0.886**	-0.084	-0.246	-0.095
	Sig. (2-tailed)	0.000	0.000	0.000	0.003	0.226	0.000		0.000	0.521	0.058	0.471
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*z*	**Pearson Coefficient**	-0.838**	0.554**	0.751**	-0.413**	-0.109	-0.958**	-0.886**	1	0.137	0.340**	0.071
	Sig. (2-tailed)	0.000	0.000	0.000	0.001	0.405	0.000	0.000		0.296	0.008	0.591
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Spearman Coefficient**	0.058	-0.057	-0.051	-0.791**	-0.232	-0.162	-0.084	0.137	1	0.788**	0.259*
	Sig. (2-tailed)	0.661	0.666	0.698	0.000	0.075	0.215	0.521	0.296		0.000	0.045
	N	60	60	60	60	60	60	60	60	60	60	60
Weight	**Spearman Coefficient**	-0.131	0.045	0.134	-0.775**	-0.253	-0.362**	-0.246	0.340**	0.788**	1	0.198
	Sig. (2-tailed)	0.317	0.734	0.308	0.000	0.051	0.005	0.058	0.008	0		0.130
	N	60	60	60	60	60	60	60	60	60	60	60
Age	**Spearman Coefficient**	-0.054	0.095	-0.008	-0.188	-0.201	-0.070	-0.095	0.071	0.259*	0.198	1
	Sig. (2-tailed)	0.684	0.471	0.952	0.151	0.124	0.598	0.471	0.591	0.045	0.130	
	N	60	60	60	60	60	60	60	60	60	60	60

Table S8 Correlation results between variables of the 3rd metatarsal of the left side

		Length	Width	Height	S: V	Density	PMI*x*	PMI*y*	PMI*z*	Height	Weight	Age
Length	**Pearson Coefficient**	1	-0.744**	-0.839**	0.322*	-0.142	0.804**	0.714**	-0.820**	0.140	-0.125	0.029
	Sig. (2-tailed)		0.000	0.000	0.012	0.280	0.000	0.000	0.000	0.285	0.341	0.828
	N	60	60	60	60	60	60	60	60	60	60	60
Width	**Pearson Coefficient**	-0.744**	1	0.260*	-0.271*	0.076	-0.415**	-0.687**	0.550**	-0.051	0.059	0.095
	Sig. (2-tailed)	0.000		0.044	0.036	0.562	0.001	0.000	0.000	0.698	0.656	0.469
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Pearson Coefficient**	-0.839**	0.260*	1	-0.244	0.143	-0.824**	-0.472**	0.737**	-0.203	0.104	-0.098
	Sig. (2-tailed)	0.000	0.044		0.060	0.277	0.000	0.000	0.000	0.120	0.430	0.454
	N	60	60	60	60	60	60	60	60	60	60	60
S: V	**Pearson Coefficient**	0.322*	-0.271*	-0.244	1	0.105	0.358**	0.423**	-0.407**	-0.654**	-0.801**	-0.245
	Sig. (2-tailed)	0.012	0.036	0.060		0.423	0.005	0.001	0.001	0.000	0.000	0.059
	N	60	60	60	60	60	60	60	60	60	60	60
Density	**Pearson Coefficient**	-0.142	0.076	0.143	0.105	1	-0.020	0.014	0.008	-0.258*	-0.169	-0.027
	Sig. (2-tailed)	0.280	0.562	0.277	0.423		0.879	0.917	0.952	0.047	0.198	0.837
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*x*	**Pearson Coefficient**	0.804**	-0.415**	-0.824**	0.358**	-0.020	1	0.750**	-0.965**	0.037	-0.249	-0.001
	Sig. (2-tailed)	0.000	0.001	0.000	0.005	0.879		0.000	0.000	0.782	0.055	0.993
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*y*	**Pearson Coefficient**	0.714**	-0.687**	-0.472**	0.423**	0.014	0.750**	1	-0.897**	0.008	-0.213	-0.133
	Sig. (2-tailed)	0.000	0.000	0.000	0.001	0.917	0.000		0.000	0.949	0.102	0.309
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*z*	**Pearson Coefficient**	-0.820**	0.550**	0.737**	-0.407**	0.008	-0.965**	-0.897**	1	-0.013	0.274*	0.051
	Sig. (2-tailed)	0.000	0.000	0.000	0.001	0.952	0.000	0.000		0.921	0.034	0.699
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Spearman Coefficient**	0.140	-0.051	-0.203	-0.654**	-0.258*	0.037	0.008	-0.013	1	0.788**	0.259*
	Sig. (2-tailed)	0.285	0.698	0.120	0.000	0.047	0.782	0.949	0.921		0.000	0.045
	N	60	60	60	60	60	60	60	60	60	60	60
Weight	**Spearman Coefficient**	-0.125	0.059	0.104	-0.801**	-0.169	-0.249	-0.213	0.274*	0.788**	1	0.198
	Sig. (2-tailed)	0.341	0.656	0.430	0.000	0.198	0.055	0.102	0.034	0.000		0.130
	N	60	60	60	60	60	60	60	60	60	60	60
Age	**Spearman Coefficient**	0.029	0.095	-0.098	-0.245	-0.027	-0.001	-0.133	0.051	0.259*	0.198	1
	Sig. (2-tailed)	0.828	0.469	0.454	0.059	0.837	0.993	0.309	0.699	0.045	0.130	
	N	60	60	60	60	60	60	60	60	60	60	60

Table S9 Correlation results between variables of the 4th metatarsal of the left side

		Length	Width	Height	S: V	Density	PMI*x*	PMI*y*	PMIz	Height	Weight	Age
Length	**Pearson Coefficient**	1	-0.632**	-0.774**	0.424**	-0.009	0.819**	0.740**	-0.846**	0.024	-0.162	-0.104
	Sig. (2-tailed)		0.000	0.000	0.001	0.945	0.000	0.000	0.000	0.855	0.215	0.429
	N	60	60	60	60	60	60	60	60	60	60	60
Width	**Pearson Coefficient**	-0.632**	1	-0.002	-0.233	0.014	-0.280*	-0.613**	0.447**	0.052	0.090	0.276*
	Sig. (2-tailed)	0.000		0.989	0.073	0.916	0.030	0.000	0.000	0.693	0.492	0.033
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Pearson Coefficient**	-0.774**	-0.002	1	-0.356**	0.000	-0.828**	-0.453**	0.726**	-0.013	0.173	-0.043
	Sig. (2-tailed)	0.000	0.989		0.005	0.998	0.000	0.000	0.000	0.922	0.187	0.743
	N	60	60	60	60	60	60	60	60	60	60	60
S: V	**Pearson Coefficient**	0.424**	-0.233	-0.356**	1	0.056	0.443**	0.364**	-0.442**	-0.693**	-0.772**	-0.231
	Sig. (2-tailed)	0.001	0.073	0.005		0.671	0.000	0.004	0.000	0.000	0.000	0.076
	N	60	60	60	60	60	60	60	60	60	60	60
Density	**Pearson Coefficient**	-0.009	0.014	0.000	0.056	1	-0.029	0.158	-0.050	-0.104	0.035	0.017
	Sig. (2-tailed)	0.945	0.916	0.998	0.671		0.825	0.228	0.703	0.428	0.788	0.897
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*x*	**Pearson Coefficient**	0.819**	-0.280*	-0.828**	0.443**	-0.029	1	0.721**	-0.953**	-0.042	-0.260*	-0.027
	Sig. (2-tailed)	0.000	0.030	0.000	0.000	0.825		0.000	0.000	0.751	0.045	0.841
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*y*	**Pearson Coefficient**	0.740**	-0.613**	-0.453**	0.364**	0.158	0.721**	1	-0.897**	0.068	-0.105	-0.131
	Sig. (2-tailed)	0.000	0.000	0.000	0.004	0.228	0.000		0.000	0.605	0.426	0.317
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*z*	**Pearson Coefficient**	-0.846**	0.447**	0.726**	-0.442**	-0.050	-0.953**	-0.897**	1	-0.005	0.221	0.080
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.703	0.000	0.000		0.970	0.090	0.543
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Spearman Coefficient**	0.024	0.052	-0.013	-0.693**	-0.104	-0.042	0.068	-0.005	1	0.788**	0.259*
	Sig. (2-tailed)	0.855	0.693	0.922	0.000	0.428	0.751	0.605	0.970		0.000	0.045
	N	60	60	60	60	60	60	60	60	60	60	60
Weight	**Spearman Coefficient**	-0.162	0.090	0.173	-0.772**	0.035	-0.260*	-0.105	0.221	0.788**	1	0.198
	Sig. (2-tailed)	0.215	0.492	0.187	0.000	0.788	0.045	0.426	0.090	0.000		0.130
	N	60	60	60	60	60	60	60	60	60	60	60
Age	**Spearman Coefficient**	-0.104	0.276*	-0.043	-0.231	0.017	-0.027	-0.131	0.080	0.259*	0.198	1
	Sig. (2-tailed)	0.429	0.033	0.743	0.076	0.897	0.841	0.317	0.543	0.045	0.130	
	N	60	60	60	60	60	60	60	60	60	60	60

Table S10 Correlation results between variables of the 5th metatarsal of the left side

		Length	Width	Height	S: V	Density	PMI*x*	PMI*y*	PMIz	Height	Weight	Age
Length	**Pearson Coefficient**	1	-0.804**	-0.773**	0.483**	-0.238	0.766**	0.802**	-0.837**	-0.113	-0.296*	-0.331**
	Sig. (2-tailed)		0.000	0.000	0.000	0.067	0.000	0.000	0.000	0.390	0.022	0.010
	N	60	60	60	60	60	60	60	60	60	60	60
Width	**Pearson Coefficient**	-0.804**	1	0.245	-0.319*	0.118	-0.575**	-0.849**	0.791**	-0.067	0.105	0.272*
	Sig. (2-tailed)	0.000		0.059	0.013	0.371	0.000	0.000	0.000	0.609	0.426	0.036
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Pearson Coefficient**	-0.773**	0.245	1	-0.447**	0.263*	-0.636**	-0.404**	0.522**	0.243	0.353**	0.249
	Sig. (2-tailed)	0.000	0.059		0.000	0.043	0.000	0.001	0.000	0.062	0.006	0.055
	N	60	60	60	60	60	60	60	60	60	60	60
S: V	**Pearson Coefficient**	0.483**	-0.319*	-0.447**	1	0.042	0.351**	0.440**	-0.431**	-0.674**	-0.797**	-0.327*
	Sig. (2-tailed)	0.000	0.013	0.000		0.749	0.006	0.000	0.001	0.000	0.000	0.011
	N	60	60	60	60	60	60	60	60	60	60	60
Density	**Pearson Coefficient**	-0.238	0.118	0.263*	0.042	1	0.044	-0.038	0.008	-0.116	0.013	-0.032
	Sig. (2-tailed)	0.067	0.371	0.043	0.749		0.789	0.771	0.954	0.379	0.921	0.807
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*x*	**Pearson Coefficient**	0.766**	-0.575**	-0.636**	0.351**	0.044	1	0.760**	-0.904**	0.073	-0.136	-0.105
	Sig. (2-tailed)	0.000	0.000	0.000	0.006	0.789		0.000	0.000	0.577	0.299	0.426
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*y*	**Pearson Coefficient**	0.802**	-0.849**	-0.404**	0.440**	-0.038	0.760**	1	-0.965**	0.002	-0.179	-0.225
	Sig. (2-tailed)	0.000	0.000	0.001	0.000	0.771	0.000		0.000	0.991	0.172	0.084
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*z*	**Pearson Coefficient**	-0.837**	0.791**	0.522**	-0.431**	0.008	-0.904**	-0.965**	1	-0.076	0.158	0.174
	Sig. (2-tailed)	0.000	0.000	0.000	0.001	0.954	0.000	0.000		0.563	0.228	0.184
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Spearman Coefficient**	-0.113	-0.067	0.243	-0.674**	-0.116	0.073	0.002	-0.076	1	0.788**	0.259*
	Sig. (2-tailed)	0.390	0.609	0.062	0.000	0.379	0.577	0.991	0.563		0.000	0.045
	N	60	60	60	60	60	60	60	60	60	60	60
Weight	**Spearman Coefficient**	-0.296*	0.105	0.353**	-0.797**	0.013	-0.136	-0.179	0.158	0.788**	1	0.198
	Sig. (2-tailed)	0.022	0.426	0.006	0.000	0.921	0.299	0.172	0.228	0.000		0.130
	N	60	60	60	60	60	60	60	60	60	60	60
Age	**Spearman Coefficient**	-0.331**	0.272*	0.249	-0.327*	-0.032	-0.105	-0.225	0.174	0.259*	0.198	1
	Sig. (2-tailed)	0.010	0.036	0.055	0.011	0.807	0.426	0.084	0.184	0.045	0.130	
	N	60	60	60	60	60	60	60	60	60	60	60

Table S11 Correlation results between variables of the 1st metatarsal of the right side

		Length	Width	Height	S: V	Density	PMI*x*	PMI*y*	PMIz	Height	Weight	Age
Length	**Pearson Coefficient**	1	-0.823**	-0.875**	0.320*	-0.106	0.802**	0.646**	-0.866**	0.033	-0.294*	-0.011
	Sig. (2-tailed)		0.000	0.000	0.013	0.419	0.000	0.000	0.000	0.800	0.023	0.931
	N	60	60	60	60	60	60	60	60	60	60	60
Width	**Pearson Coefficient**	-0.823**	1	0.444**	-0.291*	0.130	-0.602**	-0.713**	0.782**	0.121	0.363**	0.041
	Sig. (2-tailed)	0.000		0.000	0.024	0.324	0.000	0.000	0.000	0.355	0.004	0.754
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Pearson Coefficient**	-0.875**	0.444**	1	-0.257*	0.057	-0.751**	-0.409**	0.698**	-0.114	0.206	-0.066
	Sig. (2-tailed)	0.000	0.000		0.048	0.665	0.000	0.001	0.000	0.385	0.114	0.614
	N	60	60	60	60	60	60	60	60	60	60	60
S: V	**Pearson Coefficient**	0.320*	-0.291*	-0.257*	1	0.130	0.302*	0.396**	-0.414**	-0.768**	-0.777**	-0.261*
	Sig. (2-tailed)	0.013	0.024	0.048		0.320	0.019	0.002	0.001	0.000	0.000	0.044
	N	60	60	60	60	60	60	60	60	60	60	60
Density	**Pearson Coefficient**	-0.106	0.130	0.057	0.130	1	-0.104	-0.020	0.076	-0.072	-0.007	-0.070
	Sig. (2-tailed)	0.419	0.324	0.665	0.320		0.429	0.878	0.565	0.583	0.960	0.596
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*x*	**Pearson Coefficient**	0.802**	-0.602**	-0.751**	0.302*	-0.104	1	0.406**	-0.849**	0.123	-0.129	-0.005
	Sig. (2-tailed)	0.000	0.000	0.000	0.019	0.429		0.001	0.000	0.351	0.327	0.970
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*y*	**Pearson Coefficient**	0.646**	-0.713**	-0.409**	0.396**	-0.020	0.406**	1	-0.827**	-0.154	-0.345**	-0.067
	Sig. (2-tailed)	0.000	0.000	0.001	0.002	0.878	0.001		0.000	0.239	0.007	0.610
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*z*	**Pearson Coefficient**	-0.866**	0.782**	0.698**	-0.414**	0.076	-0.849**	-0.827**	1	0.009	0.288*	0.067
	Sig. (2-tailed)	0.000	0.000	0.000	0.001	0.565	0.000	0.000		0.947	0.026	0.612
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Spearman Coefficient**	0.033	0.121	-0.114	-0.768**	-0.072	0.123	-0.154	0.009	1	0.788**	0.259*
	Sig. (2-tailed)	0.800	0.355	0.385	0.000	0.583	0.351	0.239	0.947		0.000	0.045
	N	60	60	60	60	60	60	60	60	60	60	60
Weight	**Spearman Coefficient**	-0.294*	0.363**	0.206	-0.777**	-0.007	-0.129	-0.345**	0.288*	0.788**	1	0.198
	Sig. (2-tailed)	0.023	0.004	0.114	0.000	0.960	0.327	0.007	0.026	0.000		0.130
	N	60	60	60	60	60	60	60	60	60	60	60
Age	**Spearman Coefficient**	-0.011	0.041	-0.066	-0.261*	-0.070	-0.005	-0.067	0.067	0.259*	0.198	1
	Sig. (2-tailed)	0.931	0.754	0.614	0.044	0.596	0.970	0.610	0.612	0.045	0.130	
	N	60	60	60	60	60	60	60	60	60	60	60

Table S12 Correlation results between variables of the 2nd metatarsal of the right side

		Length	Width	Height	S: V	Density	PMI*x*	PMI*y*	PMIz	Height	Weight	Age
Length	**Pearson Coefficient**	1	-0.766**	-0.835**	0.218	-0.140	0.844**	0.796**	-0.873**	0.144	-0.100	-0.113
	Sig. (2-tailed)		0.000	0.000	0.094	0.286	0.000	0.000	0.000	0.273	0.449	0.390
	N	60	60	60	60	60	60	60	60	60	60	60
Width	**Pearson Coefficient**	-0.766**	1	0.286*	-0.213	0.062	-0.502**	-0.735**	0.625**	-0.051	0.036	0.187
	Sig. (2-tailed)	0.000		0.026	0.102	0.638	0.000	0.000	0.000	0.696	0.787	0.153
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Pearson Coefficient**	-0.835**	0.286*	1	-0.143	0.156	-0.829**	-0.558**	0.766**	-0.146	0.088	0.011
	Sig. (2-tailed)	0.000	0.026		0.275	0.235	0.000	0.000	0.000	0.266	0.503	0.933
	N	60	60	60	60	60	60	60	60	60	60	60
S: V	**Pearson Coefficient**	0.218	-0.213	-0.143	1	0.109	0.423**	0.501**	-0.479**	-0.775**	-0.792**	-0.231
	Sig. (2-tailed)	0.094	0.102	0.275		0.409	0.001	0.000	0.000	0.000	0.000	0.076
	N	60	60	60	60	60	60	60	60	60	60	60
Density	**Pearson Coefficient**	-0.140	0.062	0.156	0.109	1	0.038	0.126	-0.076	-0.096	-0.124	-0.142
	Sig. (2-tailed)	0.286	0.638	0.235	0.409		0.776	0.339	0.566	0.467	0.344	0.278
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*x*	**Pearson Coefficient**	0.844**	-0.502**	-0.829**	0.423**	0.038	1	0.778**	-0.967**	-0.096	-0.361**	-0.081
	Sig. (2-tailed)	0.000	0.000	0.000	0.001	0.776		0.000	0.000	0.465	0.005	0.537
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*y*	**Pearson Coefficient**	0.796**	-0.735**	-0.558**	0.501**	0.126	0.778**	1	-0.913**	-0.128	-0.349**	-0.171
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.339	0.000		0.000	0.329	0.006	0.192
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*z*	**Pearson Coefficient**	-0.873**	0.625**	0.766**	-0.479**	-0.076	-0.967**	-0.913**	1	0.108	0.375**	0.112
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.566	0.000	0.000		0.411	0.003	0.394
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Spearman Coefficient**	0.144	-0.051	-0.146	-0.775**	-0.096	-0.096	-0.128	0.108	1	0.788**	0.259*
	Sig. (2-tailed)	0.273	0.696	0.266	0.000	0.467	0.465	0.329	0.411		0.000	0.045
	N	60	60	60	60	60	60	60	60	60	60	60
Weight	**Spearman Coefficient**	-0.100	0.036	0.088	-0.792**	-0.124	-0.361**	-0.349**	0.375**	0.788**	1	0.198
	Sig. (2-tailed)	0.449	0.787	0.503	0.000	0.344	0.005	0.006	0.003	0.000		0.130
	N	60	60	60	60	60	60	60	60	60	60	60
Age	**Spearman Coefficient**	-0.113	0.187	0.011	-0.231	-0.142	-0.081	-0.171	0.112	0.259*	0.198	1
	Sig. (2-tailed)	0.390	0.153	0.933	0.076	0.278	0.537	0.192	0.394	0.045	0.130	
	N	60	60	60	60	60	60	60	60	60	60	60

Table S13 Correlation results between variables of the 3rd metatarsal of the right side

		Length	Width	Height	S: V	Density	PMI*x*	PMI*y*	PMIz	Height	Weight	Age
Length	**Pearson Coefficient**	1	-0.727**	-0.839**	0.321*	-0.150	0.837**	0.792**	-0.865**	0.102	-0.171	-0.004
	Sig. (2-tailed)		0.000	0.000	0.012	0.252	0.000	0.000	0.000	0.438	0.191	0.975
	N	60	60	60	60	60	60	60	60	60	60	60
Width	**Pearson Coefficient**	-0.727**	1	0.236	-0.317*	0.130	-0.453**	-0.718**	0.581**	-0.043	0.021	0.149
	Sig. (2-tailed)	0.000		0.069	0.014	0.323	0.000	0.000	0.000	0.744	0.872	0.255
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Pearson Coefficient**	-0.839**	0.236	1	-0.203	0.109	-0.825**	-0.553**	0.764**	-0.135	0.175	-0.118
	Sig. (2-tailed)	0.000	0.069		0.119	0.405	0.000	0.000	0.000	0.305	0.182	0.371
	N	60	60	60	60	60	60	60	60	60	60	60
S: V	**Pearson Coefficient**	0.321*	-0.317*	-0.203	1	0.063	0.459**	0.486**	-0.495**	-0.681**	-0.808**	-0.271*
	Sig. (2-tailed)	0.012	0.014	0.119		0.633	0.000	0.000	0.000	0.000	0.000	0.036
	N	60	60	60	60	60	60	60	60	60	60	60
Density	**Pearson Coefficient**	-0.150	0.130	0.109	0.063	1	0.001	0.001	0.001	-0.120	-0.039	0.055
	Sig. (2-tailed)	0.252	0.323	0.405	0.633		0.996	0.991	0.994	0.361	0.769	0.676
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*x*	**Pearson Coefficient**	0.837**	-0.453**	-0.825**	0.459**	0.001	1	0.784**	-0.970**	-0.002	-0.352**	-0.023
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.996		0.000	0.000	0.989	0.006	0.862
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*y*	**Pearson Coefficient**	0.792**	-0.718**	-0.553**	0.486**	0.001	0.784**	1	-0.911**	-0.041	-0.249	-0.092
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.991	0.000		0.000	0.757	0.055	0.482
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*z*	**Pearson Coefficient**	-0.865**	0.581**	0.764**	-0.495**	0.001	-0.970**	-0.911**	1	0.015	0.343**	0.066
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.994	0.000	0.000		0.907	0.007	0.618
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Spearman Coefficient**	0.102	-0.043	-0.135	-0.681**	-0.120	-0.002	-0.041	0.015	1	0.788**	0.259*
	Sig. (2-tailed)	0.438	0.744	0.305	0.000	0.361	0.989	0.757	0.907		0.000	0.045
	N	60	60	60	60	60	60	60	60	60	60	60
Weight	**Spearman Coefficient**	-0.171	0.021	0.175	-0.808**	-0.039	-0.352**	-0.249	0.343**	0.788**	1	0.198
	Sig. (2-tailed)	0.191	0.872	0.182	0.000	0.769	0.006	0.055	0.007	0.000		0.130
	N	60	60	60	60	60	60	60	60	60	60	60
Age	**Spearman Coefficient**	-0.004	0.149	-0.118	-0.271*	0.055	-0.023	-0.092	0.066	0.259*	0.198	1
	Sig. (2-tailed)	0.975	0.255	0.371	0.036	0.676	0.862	0.482	0.618	0.045	0.130	
	N	60	60	60	60	60	60	60	60	60	60	60

Table S14 Correlation results between variables of the 4th metatarsal of the right side

		Length	Width	Height	S: V	Density	PMI*x*	PMI*y*	PMIz	Height	Weight	Age
Length	**Pearson Coefficient**	1	-0.718**	-0.857**	0.404**	-0.003	0.834**	0.682**	-0.888**	0.027	-0.151	-0.093
	Sig. (2-tailed)		0.000	0.000	0.001	0.984	0.000	0.000	0.000	0.839	0.248	0.478
	N	60	60	60	60	60	60	60	60	60	60	60
Width	**Pearson Coefficient**	-0.718**	1	0.256*	-0.370**	-0.073	-0.404**	-0.770**	0.631**	0.045	0.114	0.088
	Sig. (2-tailed)	0.000		0.048	0.004	0.580	0.001	0.000	0.000	0.732	0.387	0.505
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Pearson Coefficient**	-0.857**	0.256*	1	-0.287*	0.058	-0.859**	-0.377**	0.765**	-0.031	0.157	0.024
	Sig. (2-tailed)	0.000	0.048		0.026	0.662	0.000	0.003	0.000	0.813	0.231	0.855
	N	60	60	60	60	60	60	60	60	60	60	60
S: V	**Pearson Coefficient**	0.404**	-0.370**	-0.287*	1	0.138	0.438**	0.393**	-0.483**	-0.709**	-0.765**	-0.260*
	Sig. (2-tailed)	0.001	0.004	0.026		0.292	0.000	0.002	0.000	0.000	0.000	0.045
	N	60	60	60	60	60	60	60	60	60	60	60
Density	**Pearson Coefficient**	-0.003	-0.073	0.058	0.138	1	-0.001	0.303*	-0.124	-0.033	0.125	0.054
	Sig. (2-tailed)	0.984	0.580	0.662	0.292		0.992	0.020	0.349	0.802	0.341	0.679
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*x*	**Pearson Coefficient**	0.834**	-0.404**	-0.859**	0.438**	-0.001	1	0.498**	-0.918**	-0.054	-0.288*	-0.133
	Sig. (2-tailed)	0.000	0.001	0.000	0.000	0.992		0.000	0.000	0.683	0.026	0.312
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*y*	**Pearson Coefficient**	0.682**	-0.770**	-0.377**	0.393**	0.303*	0.498**	1	-0.801**	0.069	-0.086	-0.094
	Sig. (2-tailed)	0.000	0.000	0.003	0.002	0.020	0.000		0.000	0.599	0.513	0.477
	N	60	60	60	60	60	60	60	60	60	60	60
PMIz	**Pearson Coefficient**	-0.888**	0.631**	0.765**	-0.483**	-0.124	-0.918**	-0.801**	1	-0.001	0.227	0.098
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.349	0.000	0.000		0.997	0.081	0.457
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Spearman Coefficient**	0.027	0.045	-0.031	-0.709**	-0.033	-0.054	0.069	-0.001	1	0.788**	0.259*
	Sig. (2-tailed)	0.839	0.732	0.813	0.000	0.802	0.683	0.599	0.997		0.000	0.045
	N	60	60	60	60	60	60	60	60	60	60	60
Weight	**Spearman Coefficient**	-0.151	0.114	0.157	-0.765**	0.125	-0.288*	-0.086	0.227	0.788**	1	0.198
	Sig. (2-tailed)	0.248	0.387	0.231	0.000	0.341	0.026	0.513	0.081	0.000		0.130
	N	60	60	60	60	60	60	60	60	60	60	60
Age	**Spearman Coefficient**	-0.093	0.088	0.024	-0.260*	0.054	-0.133	-0.094	0.098	0.259*	0.198	1
	Sig. (2-tailed)	0.478	0.505	0.855	0.045	0.679	0.312	0.477	0.457	0.045	0.130	
	N	60	60	60	60	60	60	60	60	60	60	60

Table S15 Correlation results between variables of the 5th metatarsal of the right side

		Length	Width	Height	S: V	Density	PMI*x*	PMI*y*	PMI*z*	Height	Weight	Age
Length	**Pearson Coefficient**	1	-0.782**	-0.677**	0.377**	-0.070	0.814**	0.790**	-0.844**	-0.011	-0.294*	-0.198
	Sig. (2-tailed)		0.000	0.000	0.003	0.594	0.000	0.000	0.000	0.931	0.023	0.129
	N	60	60	60	60	60	60	60	60	60	60	60
Width	**Pearson Coefficient**	-0.782**	1	0.071	-0.275*	-0.094	-0.609**	-0.853**	0.804**	-0.003	0.152	0.129
	Sig. (2-tailed)	0.000		0.591	0.033	0.474	0.000	0.000	0.000	0.981	0.245	0.326
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Pearson Coefficient**	-0.677**	0.071	1	-0.279*	0.224	-0.583**	-0.257*	0.401**	0.011	0.240	0.182
	Sig. (2-tailed)	0.000	0.591		0.031	0.086	0.000	0.048	0.002	0.932	0.065	0.165
	N	60	60	60	60	60	60	60	60	60	60	60
S: V	**Pearson Coefficient**	0.377**	-0.275*	-0.279*	1	0.060	0.315*	0.381**	-0.376**	-0.710**	-0.809**	-0.278*
	Sig. (2-tailed)	0.003	0.033	0.031		0.649	0.014	0.003	0.003	0.000	0.000	0.031
	N	60	60	60	60	60	60	60	60	60	60	60
Density	**Pearson Coefficient**	-0.070	-0.094	0.224	0.060	1	0.096	0.204	-0.173	0.003	0.100	0.122
	Sig. (2-tailed)	0.594	0.474	0.086	0.649		0.464	0.117	0.186	0.981	0.448	0.353
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*x*	**Pearson Coefficient**	0.814**	-0.609**	-0.583**	0.315*	0.096	1	0.779**	-0.911**	0.153	-0.120	-0.059
	Sig. (2-tailed)	0.000	0.000	0.000	0.014	0.464		0.000	0.000	0.244	0.360	0.652
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*y*	**Pearson Coefficient**	0.790**	-0.853**	-0.257*	0.381**	0.204	0.779**	1	-0.968**	0.026	-0.173	-0.068
	Sig. (2-tailed)	0.000	0.000	0.048	0.003	0.117	0.000		0.000	0.845	0.185	0.606
	N	60	60	60	60	60	60	60	60	60	60	60
PMI*z*	**Pearson Coefficient**	-0.844**	0.804**	0.401**	-0.376**	-0.173	-0.911**	-0.968**	1	-0.095	0.163	0.066
	Sig. (2-tailed)	0.000	0.000	0.002	0.003	0.186	0.000	0.000		0.470	0.213	0.617
	N	60	60	60	60	60	60	60	60	60	60	60
Height	**Spearman Coefficient**	-0.011	-0.003	0.011	-0.710**	0.003	0.153	0.026	-0.095	1	0.788**	0.259*
	Sig. (2-tailed)	0.931	0.981	0.932	0.000	0.981	0.244	0.845	0.470		0.000	0.045
	N	60	60	60	60	60	60	60	60	60	60	60
Weight	**Spearman Coefficient**	-0.294*	0.152	0.240	-0.809**	0.100	-0.120	-0.173	0.163	0.788**	1	0.198
	Sig. (2-tailed)	0.023	0.245	0.065	0.000	0.448	0.360	0.185	0.213	0.000		0.130
	N	60	60	60	60	60	60	60	60	60	60	60
Age	**Spearman Coefficient**	-0.198	0.129	0.182	-0.278*	0.122	-0.059	-0.068	0.066	0.259*	0.198	1
	Sig. (2-tailed)	0.129	0.326	0.165	0.031	0.353	0.652	0.606	0.617	0.045	0.130	
	N	60	60	60	60	60	60	60	60	60	60	60

Table S16 Homogeneity of variance-covariance matrices results

Sides	Box's test	Metatarsals				
		1st	2nd	3rd	4th	5th
Left	Box's M	2.845	4.764	0.764	3.253	7.501
	F	0.447	1.529	0.245	3.198	2.407
	sig	0.848	0.205	0.865	0.074	0.065
Right	Box's M	10.088	14.540	2.663	12.795	7.860
	F	1.585	4.666	0.855	2.012	2.522
	sig	0.147	0.003	0.464	0.060	0.056

Table S17 Mardia's multivariate skewness and kurtosis results

Sides	Metatarsals	Skewness			skewness		
		b	**z**	***sig***	**b**	**z**	***sig***
Left	**1st**	3.637	35.759	0.433	34.460	-0.248	0.804
	2nd	6.181	61.811	0.003**	37.602	1.205	0.228
	3rd	5.287	52.869	0.027*	37.970	1.375	0.169
	4th	5.673	56.732	0.012*	35.863	0.340	0.689
	5th	5.684	56.838	0.011*	39.048	1.874	0.061
Right	**1st**	3.836	37.721	0.346	30.432	-2.097	0.036*
	2nd	4.644	46.441	0.094	36.712	0.792	0.428
	3rd	4.079	40.794	0.231	34.754	-0.114	0.909
	4th	4.139	41.395	0.212	34.330	-0.310	0.757
	5th	6.485	64.849	0.002**	40.315	2.460	0.014*

* Significance level: $p < 0.05$; ** Significance level: $p < 0.01$;

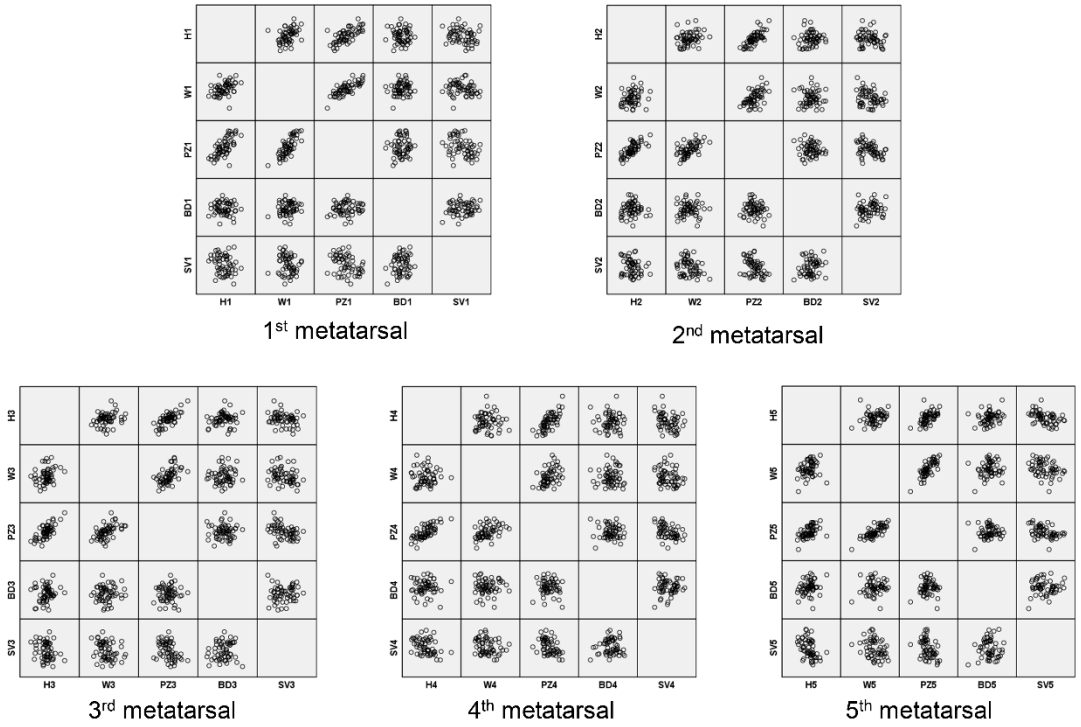

Figure S5-A Linearity of five variables of the 1st - 5th metatarsal bones of the left side

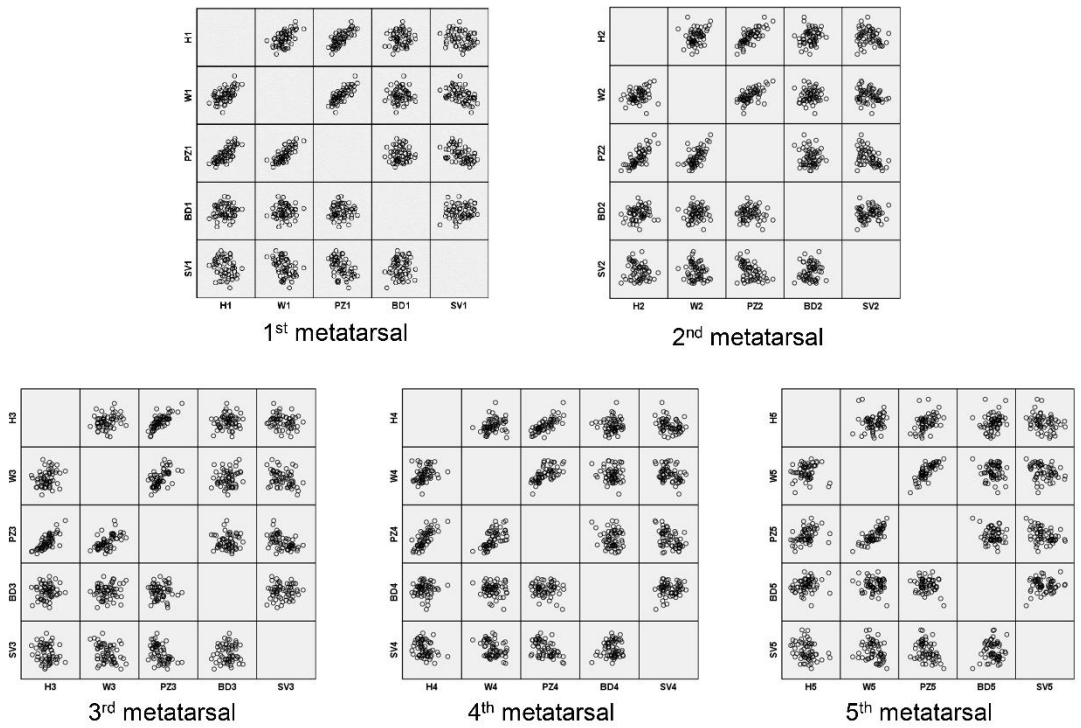

Figure S5-B Linearity of five variables of the 1st - 5th metatarsal bones of the right side