

Note: This is Online Appendix 1 of Minty R, Mahomed N, Van Wyk N, Mndebele G, Lockhat Z, Ranchod A. Comparison of bone age assessment using manual Greulich and Pyle method versus automated BoneXpert method in South African children. S Afr J Rad. 2025; 29(1), a3033. <https://doi.org/10.4102/sajr.v29i1.3033>

Manual BA – Composite BA (calculated at f=0.1)

	Intraclass Correlation	95% Confidence Interval		Sig
		Lower Bound	Upper Bound	
Single Measures	0.984	0.979	0.987	<0.001
Average Measures	0.992	0.989	0.994	<0.001

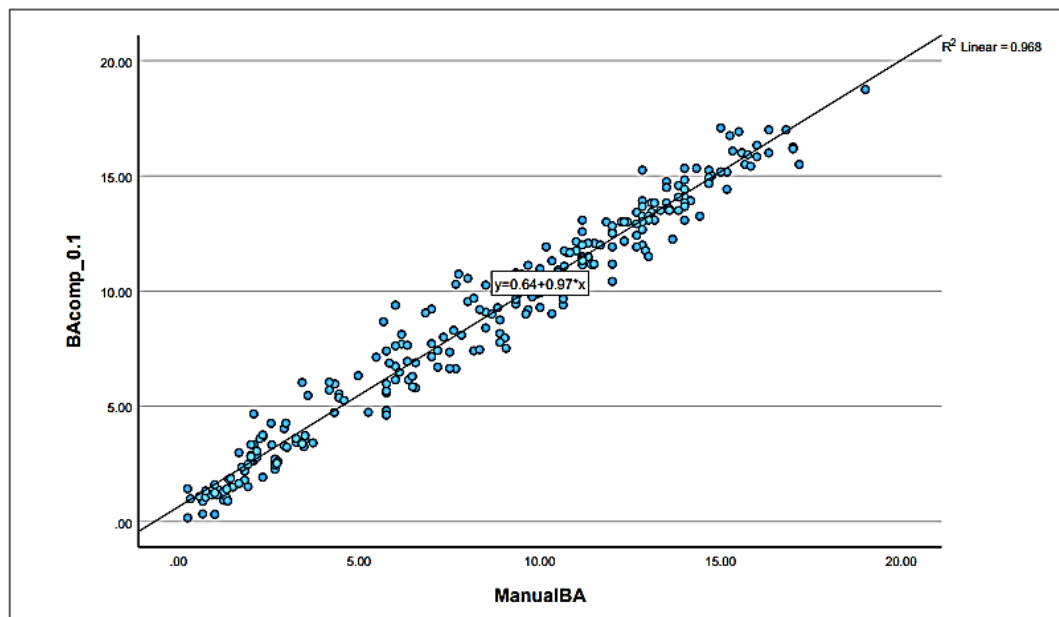


Figure 1-A1: Scatter plot showing the relationship between Manual and Composite BA (f=0.1)

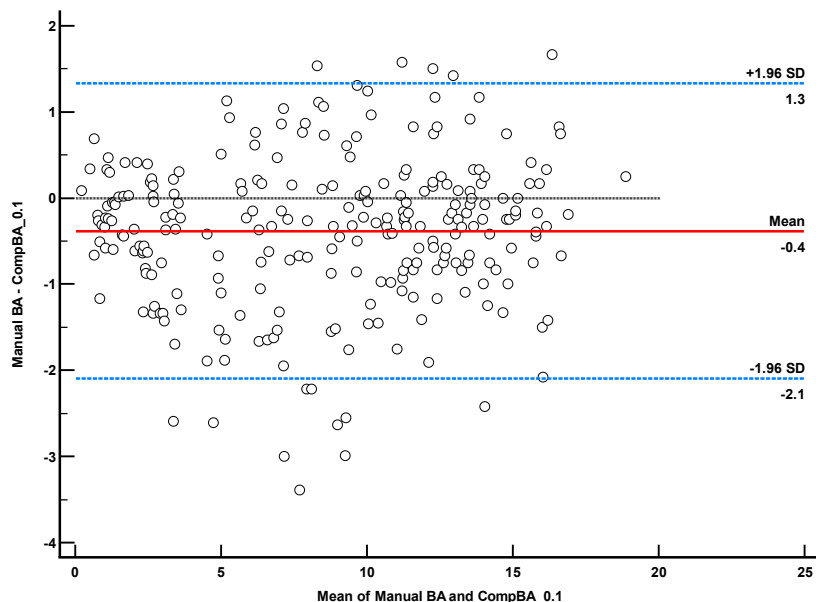


Figure 2-A1: Bland-Altman plot showing agreement between Manual and Composite BA (f=0.1) with 10% weighting on carpal bones and 90% weighting on tubular bones

RMSE = 0.95169

Manual BA – Composite BA (calculated at f=0.2)

	Intraclass Correlation	95% Confidence Interval		Sig
		Lower Bound	Upper Bound	
Single Measures	0.985	0.980	0.988	<0.001
Average Measures	0.992	0.990	0.994	<0.001

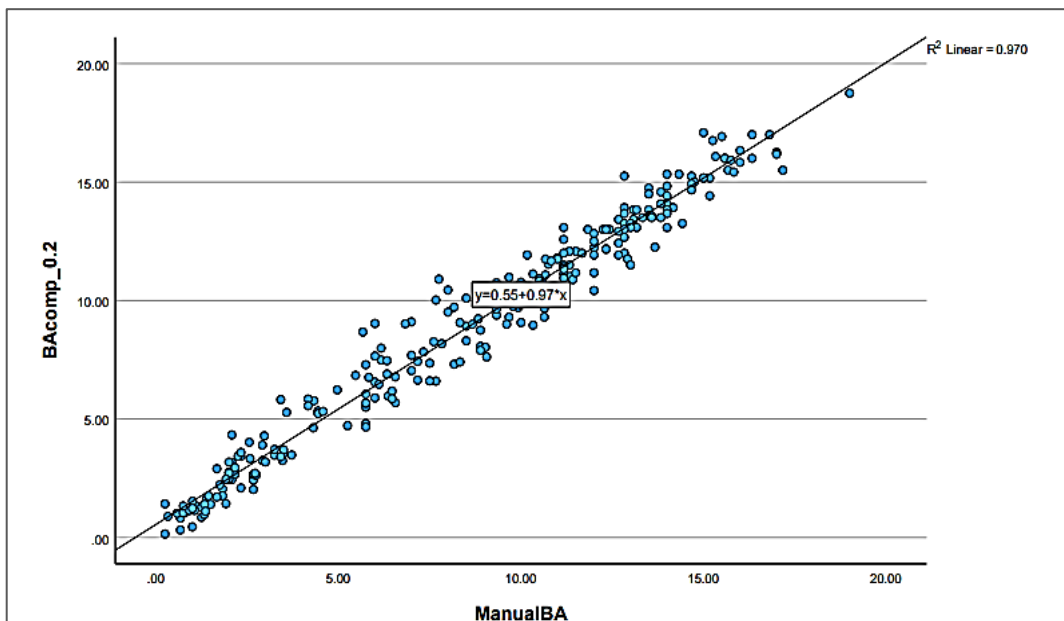


Figure 3-A1: Scatter plot showing the relationship between Manual and Composite BA (f=0.2)

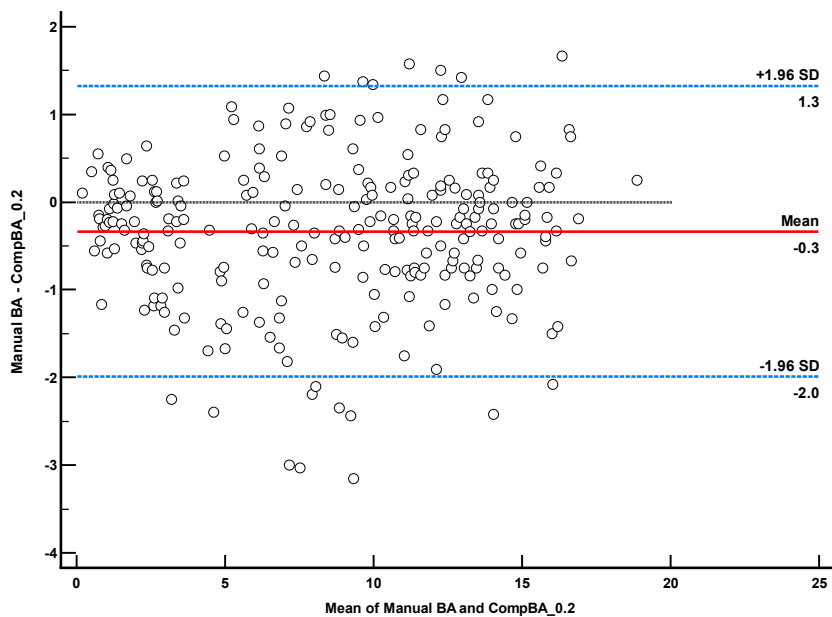


Figure 4-A1: Bland-Altman plot showing agreement between Manual and Composite BA (f=0.2) with 20% weighting on carpal bones and 80% weighting on tubular bones

RMSE = 0.90615

Manual BA – Composite BA (calculated at f=0.3)

	Intraclass Correlation	95% Confidence Interval		Sig
		Lower Bound	Upper Bound	
Single Measures	0.985	0.981	0.989	<0.001
Average Measures	0.993	0.991	0.994	<0.001

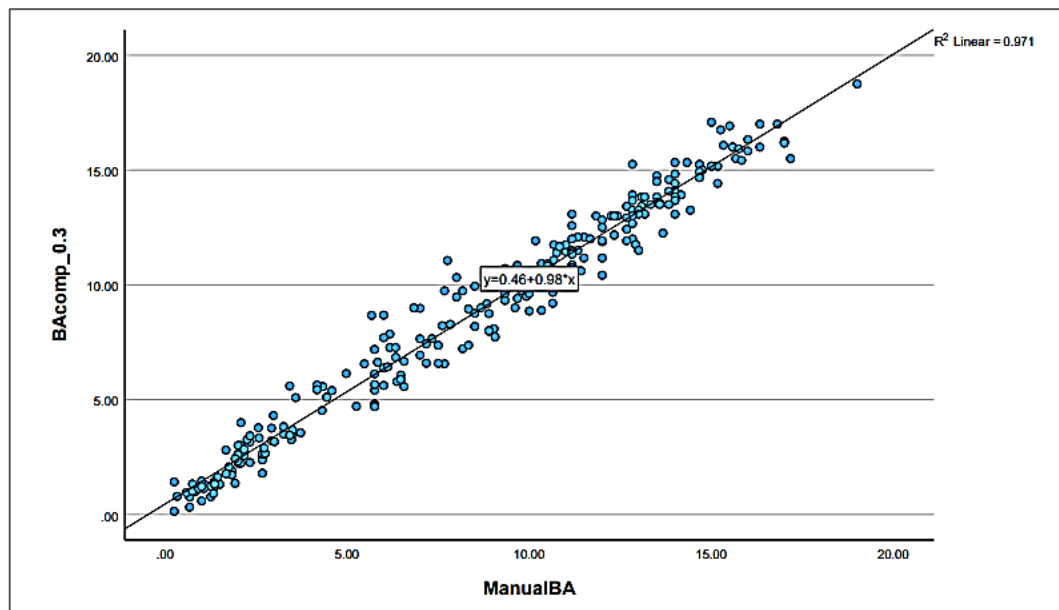


Figure 5-A1: Scatter plot showing the relationship between Manual and Composite BA (f=0.3)

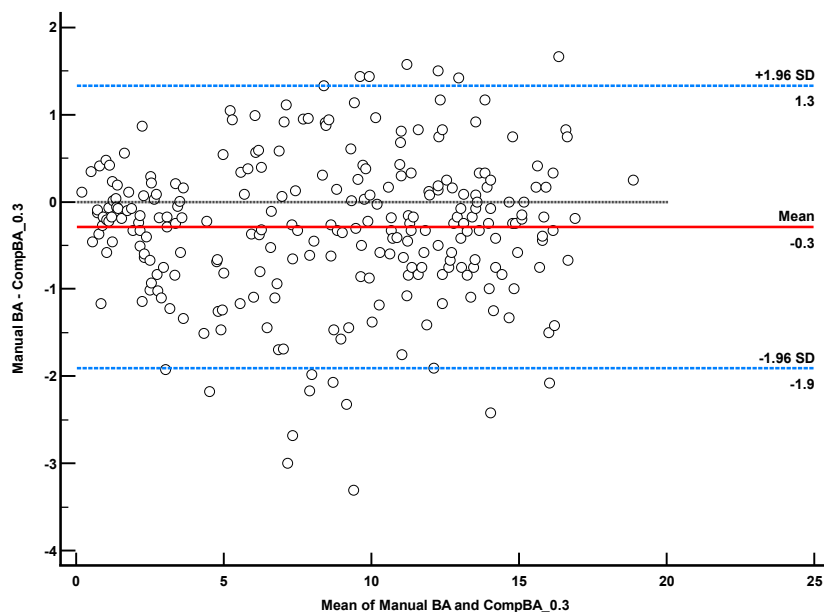


Figure 6-A1: Bland-Altman plot showing agreement between Manual and Composite BA (f=0.3) with 30% weighting on carpal bones and 70% weighting on tubular bones.

RMSE = 0.87138

Manual BA – Composite BA (calculated at f=0.4)

	Intraclass Correlation	95% Confidence Interval		Sig
		Lower Bound	Upper Bound	
Single Measures	0.986	0.982	0.989	<0.001
Average Measures	0.993	0.991	0.994	<0.001

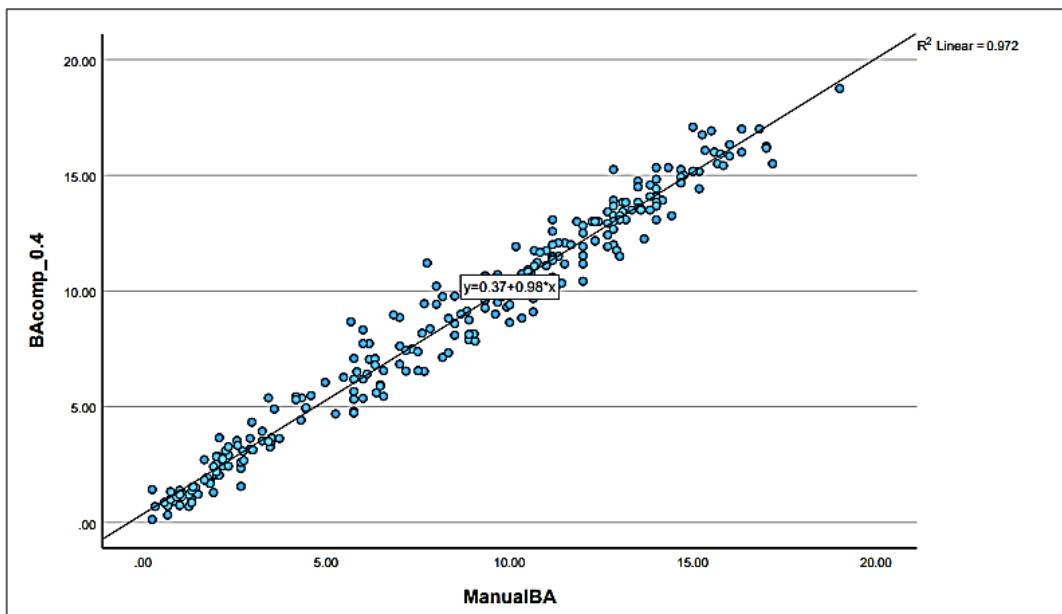


Figure 7-A1: Scatter plot showing the relationship between Manual and Composite BA (f=0.4)

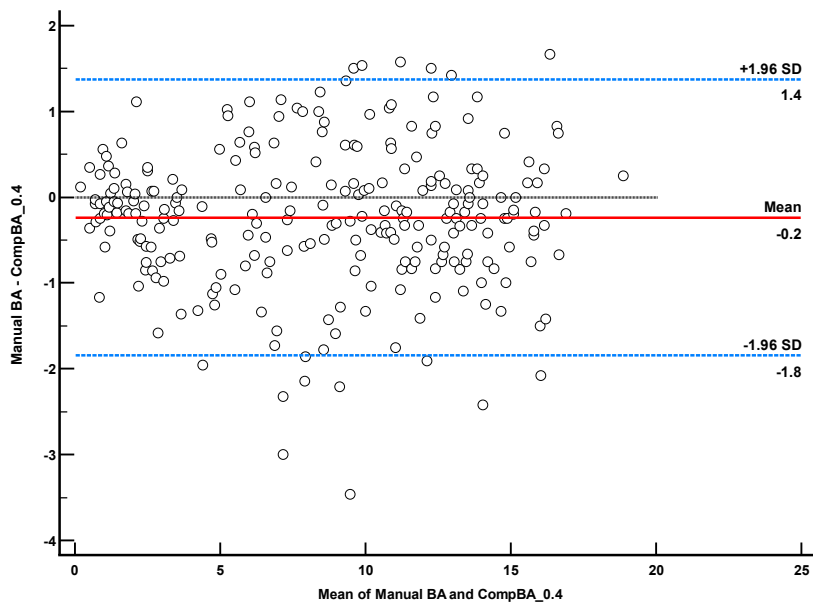


Figure 8-A1: Bland-Altman plot showing agreement between Manual and Composite BA (f=0.4) with 40% weighting on carpal bones and 60% weighting on tubular bones.

RMSE = 0.84870

Manual BA – Composite BA (calculated at f=0.5)

	Intraclass Correlation	95% Confidence Interval		Sig
		Lower Bound	Upper Bound	
Single Measures	0.986	0.982	0.989	<0.001
Average Measures	0.993	0.991	0.994	<0.001

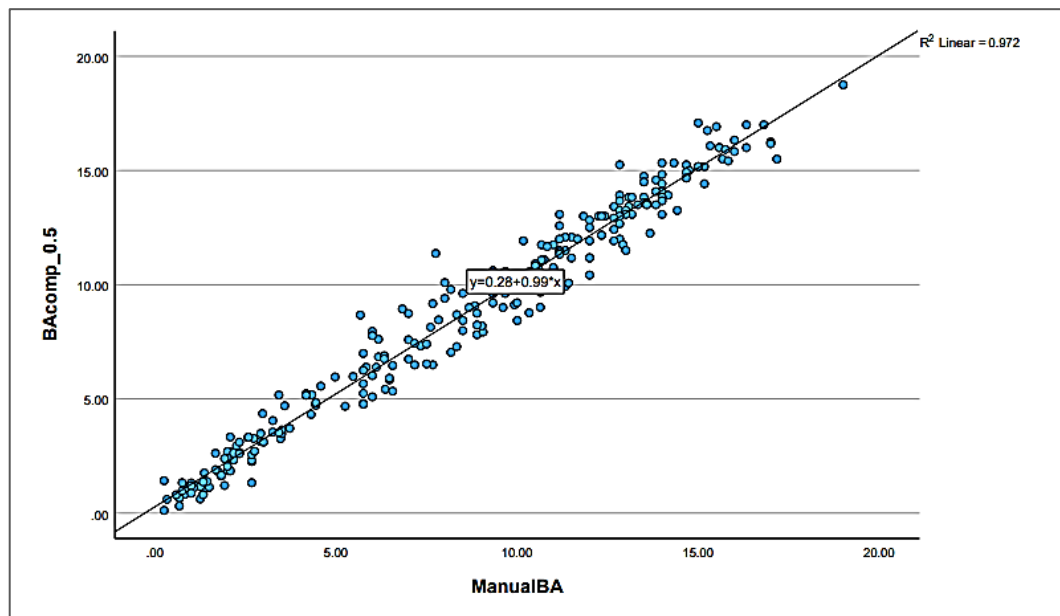


Figure 9-A1: Scatter plot showing the relationship between Manual and Composite BA (f=0.5)

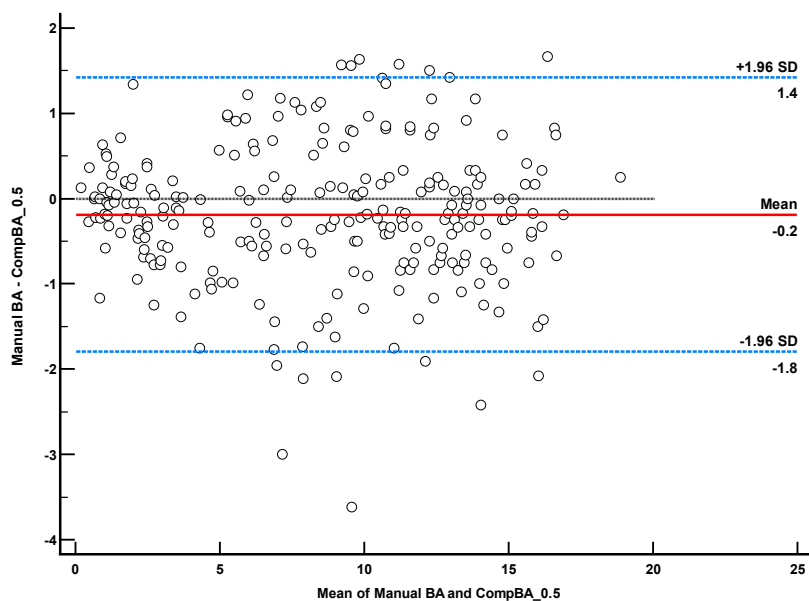


Figure 10-A1: Bland-Altman plot showing agreement between Manual and Composite BA (f=0.5) with 50% weighting on carpal bones and 50% weighting on tubular bones.

RMSE = 0.83909

Manual BA – Composite BA (calculated at f=0.6)

	Intraclass Correlation	95% Confidence Interval		Sig
		Lower Bound	Upper Bound	
Single Measures	0.985	0.981	0.989	<0.001
Average Measures	0.993	0.991	0.994	<0.001

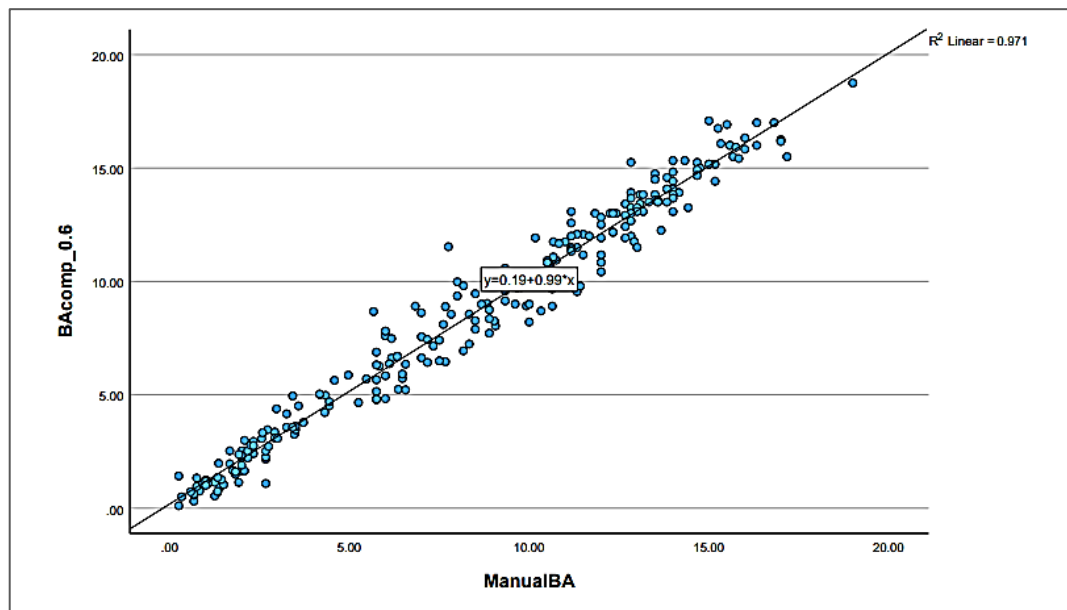


Figure 11-A1: Scatter plot showing the relationship between Manual and Composite BA (f=0.6)

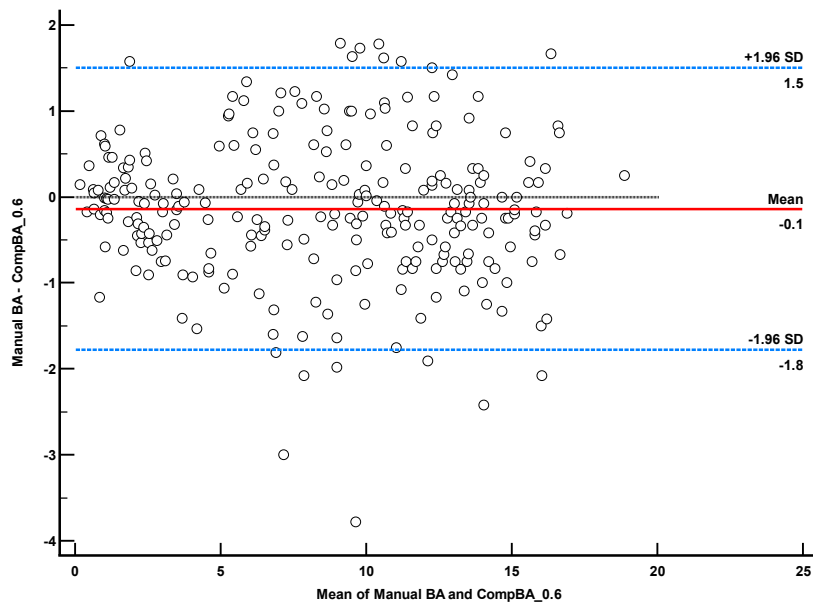


Figure 12-A1: Bland-Altman plot showing agreement between Manual and Composite BA (f=0.6) with 60% weighting on carpal bones and 40% weighting on tubular bones.

RMSE = 0.84300

Manual BA – Composite BA (calculated at f=0.7)

	Intraclass Correlation	95% Confidence Interval		Sig
		Lower Bound	Upper Bound	
Single Measures	0.985	0.980	0.988	<0.001
Average Measures	0.992	0.990	0.994	<0.001

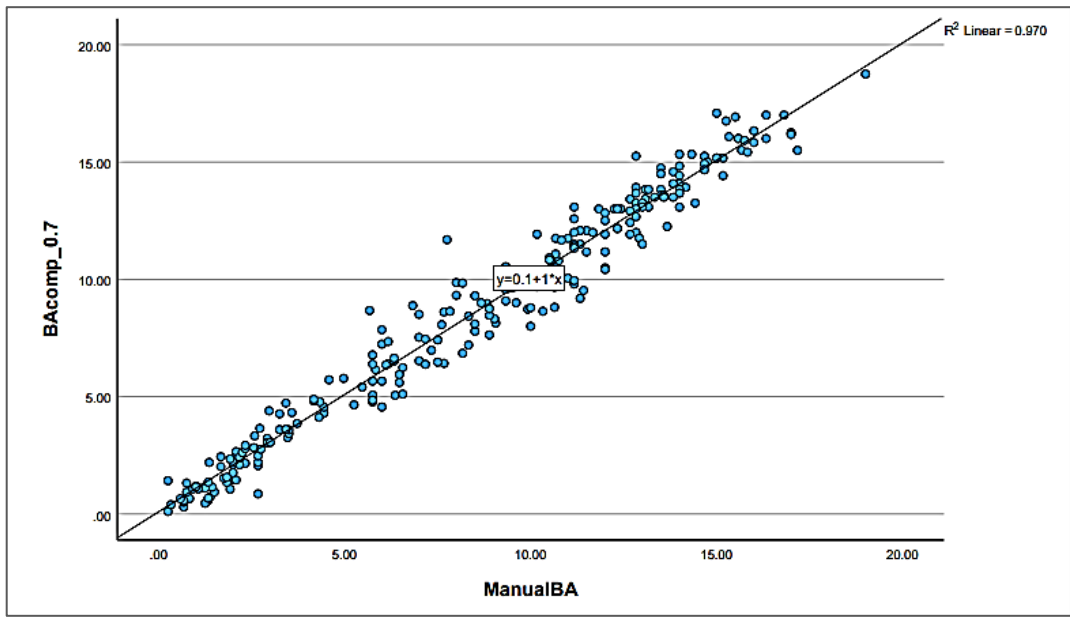


Figure 13-A1: Scatter plot showing the relationship between Manual and Composite BA (f=0.7)

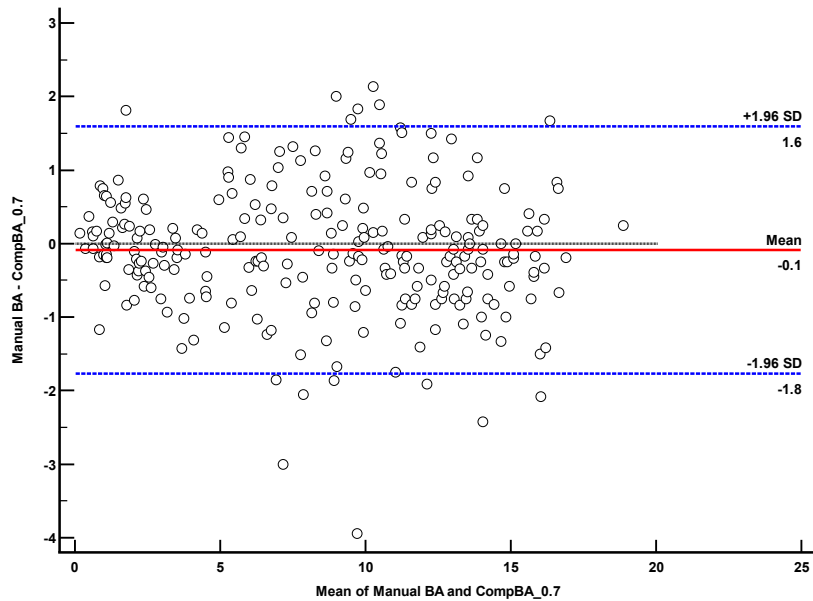


Figure 14-A1: Bland-Altman plot showing agreement between Manual and Composite BA (f=0.7) with 70% weighting on carpal bones and 30% weighting on tubular bones.

RMSE = 0.86024

Manual BA – Composite BA (calculated at f=0.8)

	Intraclass Correlation	95% Confidence Interval		Sig
		Lower Bound	Upper Bound	
Single Measures	0.983	0.979	0.987	<0.001
Average Measures	0.992	0.989	0.993	<0.001

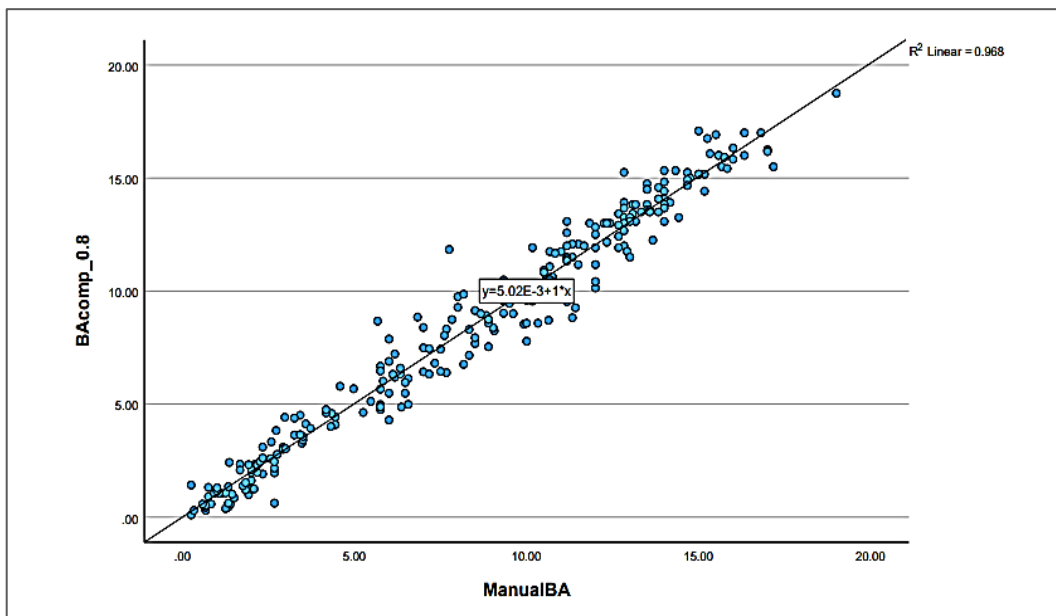


Figure 15-A1: Scatter plot showing the relationship between Manual and Composite BA (f=0.8)

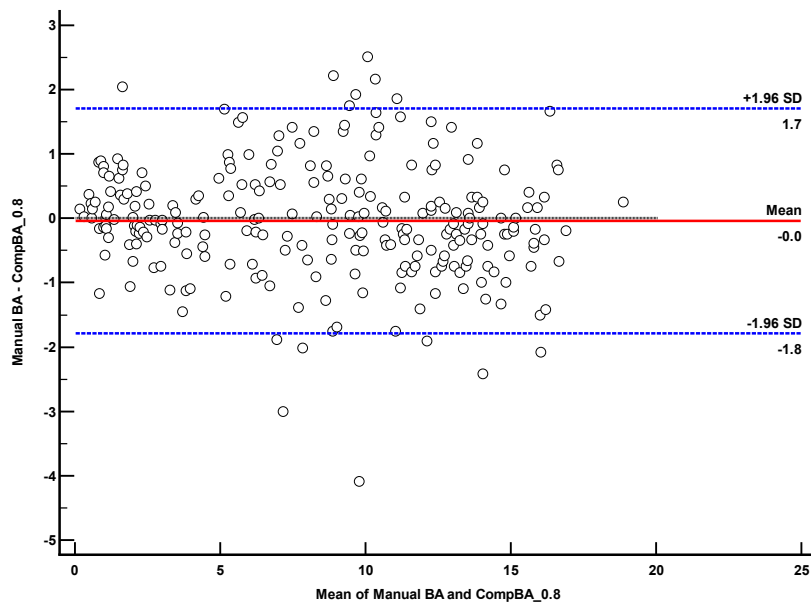


Figure 16-A1: Bland-Altman plot showing agreement between Manual and Composite BA (f=0.8) with 80% weighting on carpal bones and 20% weighting on tubular bones.

RMSE = 0.89003

Manual BA – Composite BA (calculated at f=0.9)

	Intraclass Correlation	95% Confidence Interval		Sig
		Lower Bound	Upper Bound	
Single Measures	0.982	0.977	0.986	<0.001
Average Measures	0.991	0.988	0.993	<0.001

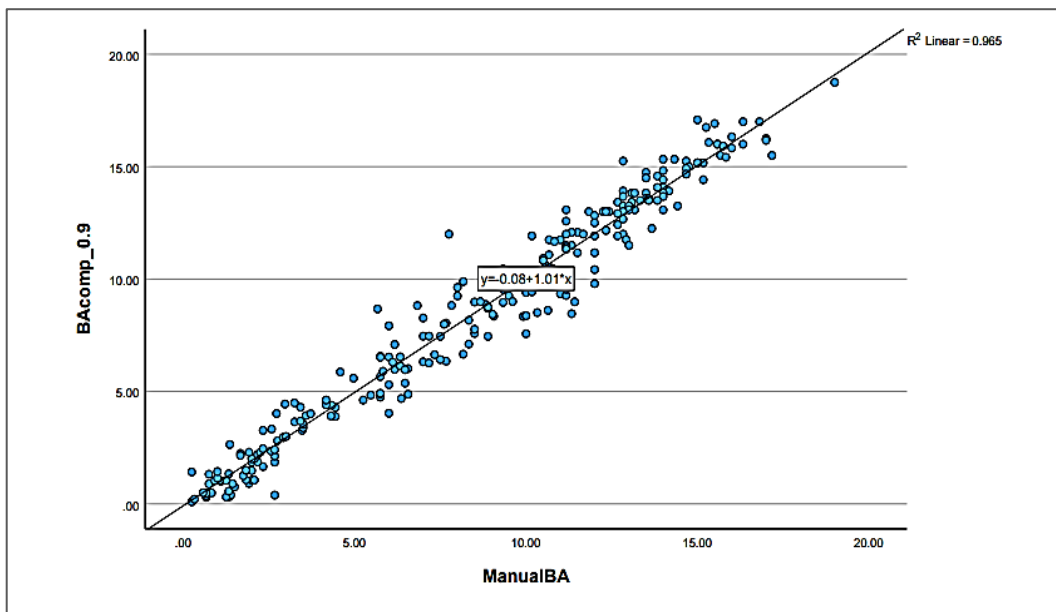


Figure 17-A1: Scatter plot showing the relationship between Manual and Composite BA (f=0.9)

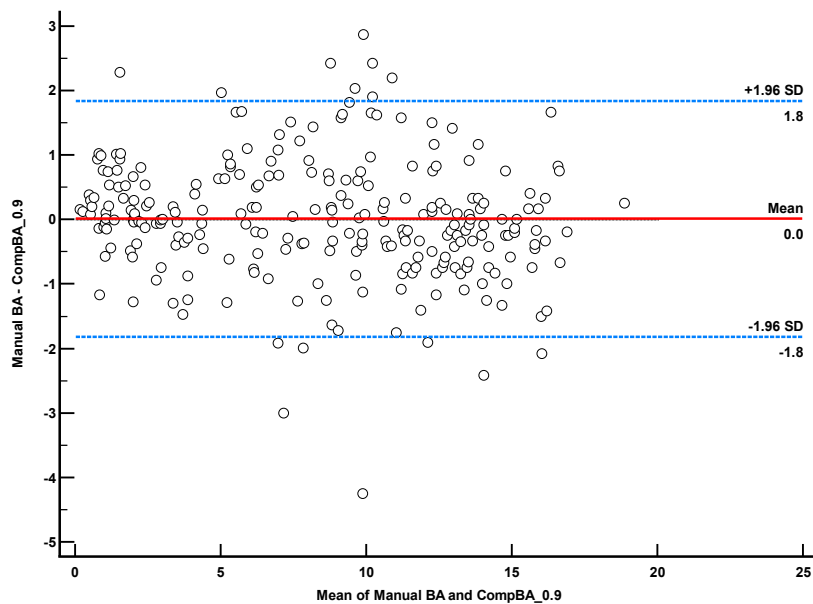


Figure 18-A1: Bland-Altman plot showing agreement between Manual and Composite BA (f=0.9) with 90% weighting on carpal bones and 10% weighting on tubular bones.

RMSE = 0.93119