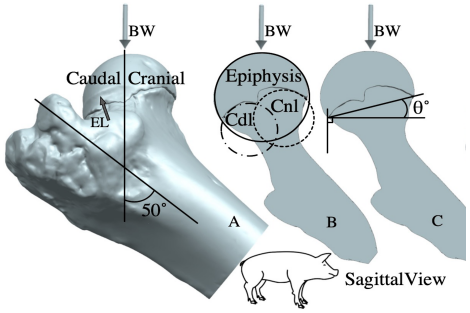
Sagittal Plane Growth Plate Slope Angles [Segrees]

Age [Days]	Slope Angle
120 1R	26.40
120 2R	28.60
120 3R	29.40
120 4R	23.90
1201L	29.20
120 2L	28.30
120 3L	28.50
120 4L	24.70
Mean	27.38
SD	2.11

Age [Days]	Slope Angle
900 1R	15.30
900 2R	21.10
900 3R	25.20
9001L	18.00
900 2L	19.90
900 3L	30.80
Mean	21.72
SD	5.54



Sagittal Plane Growth Plate Slope Angle 120 to 900 Days

Test For Normality 120 Days

Descriptive Statistics

	Slope Angle
Mean	27.38
Standard Erro	0.74683858
Median	28.40
Mode	#N/A
Standard Dev	2.11237848
Sample Varia	4.46214286
Kurtosis	-0.9322074
Skewness	-0.8809772
Range	5.5
Maximum	29.40
Minimum	23.90
Sum	219.00
Count	8
Geometric M	27.3009831
Harmonic M	27.2243812
AAD	1.78125
MAD	0.9
IQR	2.775

Box Plot

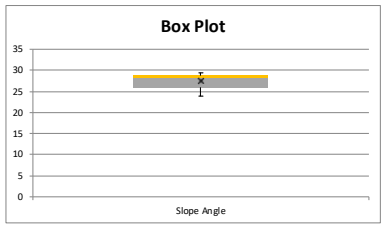
	Slope Angle
Min	23.9
Q1-Min	2.075
Med-Q1	2.425
Q3-Med	0.35
Max-Q3	0.65
Mean	27.38
Min	23.9
Q1	25.975
Median	28.40
Q3	28.75
Max	29.4
Mean	27.38
Grand Min	0
Outliers	

Shapiro-Wilk Test

	Slope Angle
W-stat	0.848381
p-value	0.09173445
alpha	0.05
normal	yes

d'Agostino-Pearson

DA-stat	1.76833515
p-value	0.41305787
alpha	0.05
normal	yes



Test For Normality 990 Days

Descriptive Statistics

	Slope Angle
Mean	21.72
Standard Erro	2.26059235
Median	20.50
Mode	#N/A
Standard Dev	5.53729778
Sample Varia	30.6616667
Kurtosis	0.3407543
Skewness	0.83035905
Range	15.5
Maximum	30.80
Minimum	15.30
Sum	130.30
Count	6
Geometric M	21.1596488
Harmonic M	20.6391444
AAD	4.18888889
MAD	3.6
IQR	5.7

Box Plot

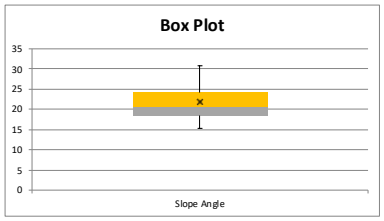
	Slope Angle
Min	15.3
Q1-Min	3.175
Med-Q1	2.025
Q3-Med	3.675
Max-Q3	6.625
Mean	21.72
Min	15.3
Q1	18.475
Median	20.50
Q3	24.175
Max	30.8
Mean	21.72
Grand Min	0
Outliers	

Shapiro-Wilk Test

	Slope Angle
W-stat	0.9539126
p-value	0.77181169
alpha	0.05
normal	yes

d'Agostino-Pearson

DA-stat	1.00361206
p-value	0.60543623
alpha	0.05
normal	yes



Sagittal Plane Growth Plate Slope Angle 120 to 900 Days

T Test: Two Independent Samples

SUMMARY — Hyp Mean D: 0

Groups	*Count*	*Mean*	*Variance*	*Cohen d*
Slope Angle	8	27.38	4.46214286	
Slope Angle	6	21.72	30.6616667	
Pooled		5.66	15.3786111	1.442879193

Effect size		Effect size	
Choen's *d* score		Choen's *r* score	
0.2	Small	0.1	Small
0.5	Medium	0.3	Medium
0.8	Large	0.5	Large

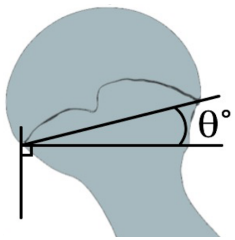
T TEST: Equal Variances — Alpha: 0.05

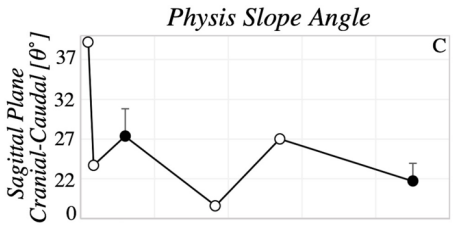
	std err	*t-stat*	*df*	*p-value*	*t-crit*	*lower*	*upper*	*sig*	*effect r*
One Tail	2.11788296	2.67169312	12	0.010173492	1.78228756			yes	0.61071548
Two Tail	2.11788296	2.67169312	12	0.020346984	2.17881283	1.04386276	10.2728039	yes	0.61071548

T TEST: Unequal Variances — Alpha: 0.05

	std err	*t-stat*	*df*	*p-value*	*t-crit*	*lower*	*upper*	*sig*	*effect r*
One Tail	2.38076577	2.37668628	6.09912861	0.027170178	1.93753882			yes	0.69341656
Two Tail	2.38076577	2.37668628	6.09912861	0.054340356	2.43730389	-0.1443163	11.460983	no	0.69341656

No difference could be detected for the average slope of the growth plate in the sagittal plane from 120-days-old (27.38 ± 2.11 mm) to 900-days-old (21.72 ± 5.54 mm). The 5.66 mm difference, 95% CI [-0.144, 11.46] was not statistically significant ($t(6.10) = 2.38$, $P = .05$, with a large effect size ($d = 1.44$).

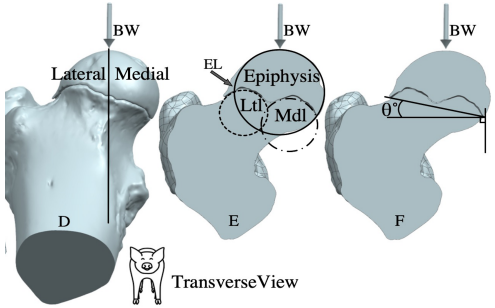




Transverse Plane Growth Plate Slope Angles [Degrees]

Age [Days]	Slope Angle
120 1R	13.90
120 2R	22.40
120 3R	18.50
120 4R	22.50
1201L	21.40
120 2L	19.30
120 3L	18.30
120 4L	25.00
Mean	20.16
SD	3.41

Age [Days]	Slope Angle
900 1R	12.30
900 2R	5.20
900 3R	8.20
9001L	8.30
900 2L	8.60
900 3L	8.20
Mean	8.47
SD	2.26



Transverse Plane Growth Plate Slope Angle 120 to 900 Days

Test For Normality 120 Days

Descriptive Statistics

	Slope Angle
Mean	20.16
Standard Erro	1.20711248
Median	20.35
Mode	#N/A
Standard Dev	3.41422968
Sample Varia	11.6569643
Kurtosis	0.55816362
Skewness	-0.5658485
Range	11.1
Maximum	25.00
Minimum	13.90
Sum	161.30
Count	8
Geometric M	19.8894331
Harmonic Me	19.5948254
AAD	2.6625
MAD	2.05
IQR	3.975

Box Plot

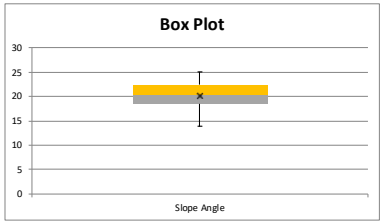
	Slope Angle
Min	13.9
Q1-Min	4.55
Med-Q1	1.9
Q3-Med	2.075
Max-Q3	2.575
Mean	20.16
Min	13.9
Q1	18.45
Median	20.35
Q3	22.425
Max	25
Mean	20.16
Grand Min	0
Outliers	

Shapiro-Wilk Test

	Slope Angle
W-stat	0.95902353
p-value	0.80074808
alpha	0.05
normal	yes

d'Agostino-Pearson

DA-stat	0.70810419
p-value	0.70183841
alpha	0.05
normal	yes



Test For Normality 900 Days

Descriptive Statistics

	Slope Angle
Mean	8.47
Standard Erro	0.92291808
Median	8.25
Mode	8.2
Standard Dev	2.26067836
Sample Varia	5.11066667
Kurtosis	2.58908725
Skewness	0.55643967
Range	7.1
Maximum	12.30
Minimum	5.20
Sum	50.80
Count	6
Geometric M	8.21332076
Harmonic Me	7.9546907
AAD	1.32222222
MAD	0.2
IQR	0.325

Box Plot

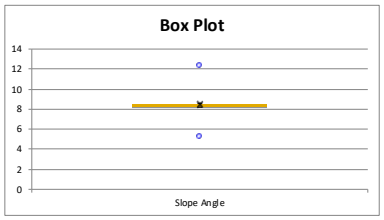
	Slope Angle
Min	8.2
Q1-Min	0
Med-Q1	0.05
Q3-Med	0.275
Max-Q3	0.075
Mean	8.47
Min	8.2
Q1	8.2
Median	8.25
Q3	8.525
Max	8.6
Mean	8.47
Grand Min	0
Outliers	12.30
	5.20

Shapiro-Wilk Test

	Slope Angle
W-stat	0.85939968
p-value	0.18711605
alpha	0.05
normal	yes

d'Agostino-Pearson

DA-stat	2.64558817
p-value	0.26638994
alpha	0.05
normal	yes



Transverse Plane Growth Plate Slope Angle 120 to 900 Days

T Test: Two Independent Samples

2

SUMMARY — Hyp Mean D: 0

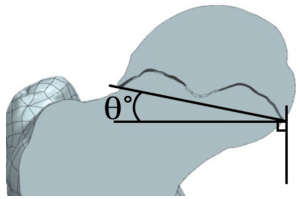
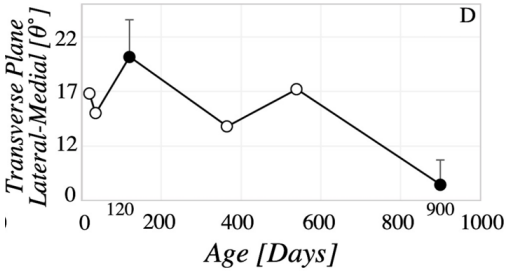
Groups	*Count*	*Mean*	*Variance*	*Cohen d*
Slope Angle	8	20.16	11.6569643	
Slope Angle	6	8.47	5.11066667	
Pooled		11.70	8.92934028	3.914005975

Effect size		Effect size	
Choen's *d* score		Choen's *r* score	
0.2	Small	0.1	Small
0.5	Medium	0.3	Medium
0.8	Large	0.5	Large

T TEST: Equal Variances — Alpha: 0.05

	std err	*t-stat*	*df*	*p-value*	*t-crit*	*lower*	*upper*	*sig*	*effect r*
One Tail	1.61381254	7.2473308	12	5.09186E-06	1.78228756			yes	0.90223175
Two Tail	1.61381254	7.2473308	12	1.01837E-05	2.17881283	8.17963787	15.2120288	yes	0.90223175

T TEST: Unequal Variances — Alpha: 0.05

	std err	*t-stat*	*df*	*p-value*	*t-crit*	*lower*	*upper*	*sig*	*effect r*
One Tail	1.51950594	7.69712904	11.8884496	2.94753E-06	1.78368198			yes	0.91261879
Two Tail	1.51950594	7.69712904	11.8884496	5.89505E-06	2.18108242	8.38166563	15.010001	yes	0.91261879

The average growth plate slope angle in the transverse plane decreased from 120-days-old (20.16 ± 3.41 mm) to 900-days-old (8.47 ± 2.26 mm)
This difference (11.70 mm), 95% CI [8.38, 15.01] was statistically significant $t(11.89) = 7.70$, $P < .001$, with a large effect size ($d = 3.91$).