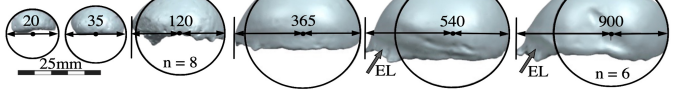
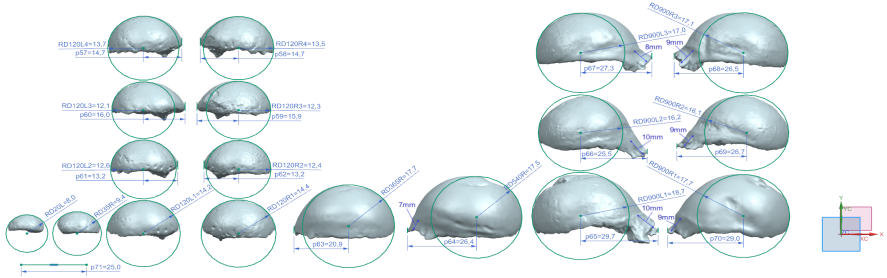
Epiphyseal Elongation [mm]

Age [Days]	Elongation
120 1R	0.00
120 2R	0.80
120 3R	3.60
120 4R	1.20
1201L	0.00
120 2L	0.60
120 3L	3.90
120 4L	1.20
Mean	1.61
SD	1.52

Age [Days]	Elongation
900 1R	11.30
900 2R	10.60
900 3R	9.40
9001L	11.00
900 2L	9.30
900 3L	10.30
Mean	10.32
SD	0.82





Epiphyseal Elongation 120 to 900 Days

Test For Normality 120 Day

Descriptive Statistics

	Elongation
Mean	1.4125
Standard Erro	0.5360029
Median	1
Mode	0
Standard Dev	1.51604514
Sample Varia	2.29839286
Kurtosis	-0.3745268
Skewness	1.06254712
Range	3.9
Maximum	3.9
Minimum	0
Sum	11.3
Count	8
Geometric M	#NUM!
Harmonic Me	#NUM!
AAD	1.16875
MAD	0.7
IQR	1.35

Box Plot

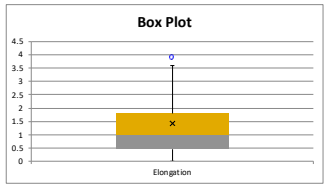
	Elongation
Min	0
Q1-Min	0.45
Med-Q1	0.55
Q3-Med	0.8
Max-Q3	1.8
Mean	1.4125
Min	0
Q1	0.45
Median	1
Q3	1.8
Max	3.6
Mean	1.4125
Grand Min	0
Outliers	3.9

Shapiro-Wilk Test

	Elongation
W-stat	0.81724853
p-value	0.04365322
alpha	0.05
normal	no

d'Agostino-Pearson

DA-stat	2.05988456
p-value	0.35702757
alpha	0.05
normal	yes



Test For Normality 900 Day

Descriptive Statistics

	Elongation
Mean	10.3166667
Standard Erro	0.33607208
Median	10.45
Mode	#N/A
Standard Dev	0.82320512
Sample Varia	0.67766667
Kurtosis	-1.7779317
Skewness	-0.2841819
Range	2
Maximum	11.3
Minimum	9.3
Sum	61.9
Count	6
Geometric M	10.2889448
Harmonic Me	10.2609439
AAD	0.65
MAD	0.7
IQR	1.275

Box Plot

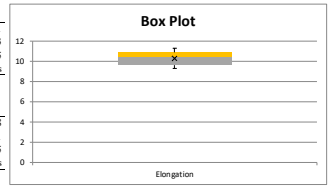
	Elongation
Min	9.3
Q1-Min	0.325
Med-Q1	0.825
Q3-Med	0.45
Max-Q3	0.4
Mean	10.3166667
Min	9.3
Q1	9.625
Median	10.45
Q3	10.9
Max	11.3
Mean	10.3166667
Grand Min	0
Outliers	

Shapiro-Wilk Test

	Elongation
W-stat	0.91581521
p-value	0.47574293
alpha	0.05
normal	yes

d'Agostino-Pearson

DA-stat	1.15620668
p-value	0.56096131
alpha	0.05
normal	yes



Epiphyseal Elongation 120 to 900 Days

Mann-Whitney Test for Two Independent Samples

	Elongation	Elongation	Difference
count	6	8	
median	10.45	1	9.45
rank sum	69	36	
U	0	48	

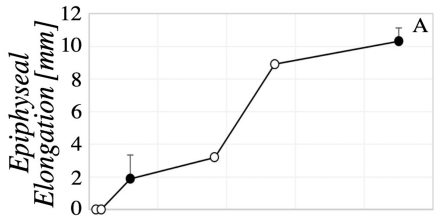
	one tail	two tail
alpha	0.05	
U	0	
mean	24	
std dev	7.73744996	ties
z-score	3.10179712	
effect r	0.82899015	
U-crit	11.2730274	8.83487675
p-value	0.00096175	0.0019235
sig (norm)	yes	yes
U-crit	10	7
sig (table)	yes	yes
p-value	0.000333	0.000666
sig (exact)	yes	yes

Calculate the 95% CI

Hodges-Lehmann estimation for the difference betweenpopulation medians

(m-n) table

	11.30	10.60	9.40	11.00	9.30	10.30
0.00	11.30	10.60	9.40	11.00	9.30	10.30
0.80	10.50	9.80	8.60	10.20	-0.80	9.50
3.60	7.70	7.00	5.80	7.40	-3.60	6.70
1.20	10.10	9.40	8.20	9.80	-1.20	9.10
0.00	11.30	10.60	9.40	11.00	0.00	10.30
0.60	10.70	10.00	8.80	10.40	-0.60	9.70
3.90	7.40	6.70	5.50	7.10	-3.90	6.40
1.20	10.10	9.40	8.20	9.80	-1.20	9.10



Calculate the 95% CI

alpha	0.05
U-crit	8.00
alpha	0.04
lower	5.50
upper	10.50
median	9.35
U-crit+	9.00
alpha	0.00
lower	5.80
upper	10.40

MWINV(alpha, n2, n1)
MWDIST(U-crit, n1, n2)
SMALL(F9:P20, U-crit)
LARGE(F9:P20, U-Crit)
MEDIAN(F9:F20)
U-crit+1
MWDIST(U-crit+, n1, n2)
SMALL(F9:P20, U-crit+)
LARGE(F9:P20, U-Crit+)

95% CI = [5.50, 10.50]

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

The average epiphyseal elongation increased from 120-days-old (*Mdn* = 1.0 mm) to 900-days-old (*Mdn* = 10.45 mm).
A Mann-Whitney test indicated this difference (9.45 mm) was statistically significant, 95% CI [5.50, 10.50], $U(N_{900} = 6, N_{120} = 8) = 0$, $z = 3.10$, $P < .001$, with a large effect size ($r = .83$).