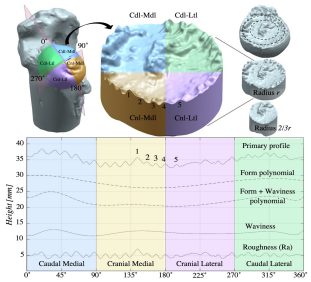
Surface Roughness (Ra) [mm]

Age [Days]	Radius 2/3	Radius r	Difference
120 1R	0.13	0.10	-0.03
120 2R	0.11	0.15	0.04
120 3R	0.13	0.20	0.07
120 4R	0.11	0.27	0.16
1201L	0.07	0.13	0.06
120 2L	0.12	0.11	-0.01
120 3L	0.08	0.13	0.05
120 4L	0.08	0.19	0.11
Mean	0.10	0.16	0.06
SD	0.02	0.06	0.06

Age [Days]	Radius 2/3	Radius r	Difference
900 1R	0.26	0.47	0.21
900 2R	0.10	0.44	0.34
900 3R	0.16	0.43	0.27
9001L	0.13	0.43	0.30
900 2L	0.17	0.46	0.29
900 3L	0.20	0.38	0.18
Mean	0.17	0.44	0.27
SD	0.06	0.03	0.06



Surface Roughness For Perimeter From Cylinder 2/3r vs r 120 to Days

Descriptive Statistics

	Difference
Mean	0.06
Standard Erro	0.02154211
Median	0.06
Mode	#N/A
Standard Dev	0.06093029
Sample Varia	0.0037125
Kurtosis	0.04839156
Skewness	0.28443075
Range	0.19
Maximum	0.16
Minimum	-0.03
Sum	0.45
Count	8
Geometric M	#NUM!
Harmonic M	#NUM!
AAD	0.04375
MAD	0.035
IQR	0.0525

Box Plot

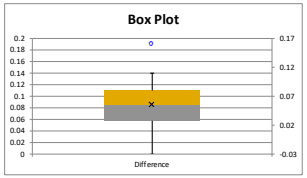
	Difference
Min	0
Q1-Min	0.0575
Med-Q1	0.0275
Q3-Med	0.025
Max-Q3	0.03
Mean	0.09
Min	-0.03
Q1	0.0275
Median	0.06
Q3	0.08
Max	0.11
Mean	0.06
Grand Min	-0.03
Outliers	0.19

Shapiro-Wilk Test

	Difference
W-stat	0.96958648
p-value	0.8947434
alpha	0.05
normal	yes

d'Agostino-Pearson

DA-stat	0.14408897
p-value	0.9304895
alpha	0.05
normal	yes



Surface Roughness For Perimeter From Cylinder 2/3r vs r 120 to Days

T Test: Two Paired Samples

1

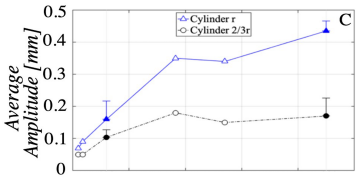
SUMMARY — Alpha 0.05 — Hyp Mean Di 0

Groups	*Count*	*Mean*	*Std Dev*	*Std Err*	*t*	*df*	*Cohen d*	*Effect r*
Radius r	8	0.16	0.05682052					
Radius 2/3	8	0.10	0.02386719					
Difference	8	0.06	0.06093029	0.02154211	2.61116484	7	0.92318618	0.70243936

T TEST

	p-value	*t-crit*	*lower*	*upper*	*sig*
One Tail	0.01742711	1.89457861			yes
Two Tail	0.03485422	2.36462425	0.005311	0.107188996	yes

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 120-day-old average amplitude of mammillary processes in the peripheral region (0.16 ± 0.06 mm) were higher than the central region (0.10 ± 0.02 mm).
This difference (0.06 mm), 95% CI [0.005, 0.11] was statistically significant $t(7) = 2.61$, $P = .03$, with a large effect size ($d = .92$).

Surface Roughness For Perimeter From Cylinder 2/3r vs r 900 Days

Descriptive Statistics

	Difference
Mean	0.27
Standard Erro	0.0243242
Median	0.28
Mode	#N/A
Standard Dev	0.05958188
Sample Varia	0.00355
Kurtosis	-0.9797262
Skewness	-0.4255004
Range	0.16
Maximum	0.34
Minimum	0.18
Sum	1.59
Count	6
Geometric M	0.25900548
Harmonic M	0.25269595
AAD	0.04666667
MAD	0.04
IQR	0.0725

Box Plot

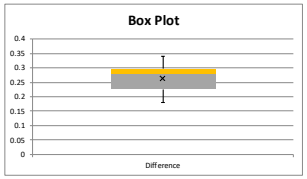
	Difference
Min	0.18
Q1-Min	0.045
Med-Q1	0.055
Q3-Med	0.0175
Max-Q3	0.0425
Mean	0.27
Min	0.18
Q1	0.225
Median	0.28
Q3	0.2975
Max	0.34
Mean	0.27
Grand Min	0
Outliers	

Shapiro-Wilk Test

	Difference
W-stat	0.95071534
p-value	0.74607156
alpha	0.05
normal	yes

d'Agostino-Pearson

DA-stat	0.57022579
p-value	0.75192936
alpha	0.05
normal	yes



Surface Roughness For Perimeter From Cylinder 2/3r vs r 900 Days

T Test: Two Paired Samples

2

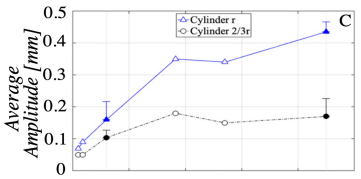
SUMMARY — Alpha 0.05 — Hyp Mean Di 0

Groups	*Count*	*Mean*	*Std Dev*	*Std Err*	*t*	*df*	*Cohen d*	*Effect r*
Radius r	6	0.44	0.03146427					
Radius 2/3	6	0.17	0.05585696					
Difference	6	0.27	0.05958188	0.024324199	10.8945005	5	4.4476612	0.97957971

T TEST

	p-value	*t-crit*	*lower*	*upper*	*sig*
One Tail	5.6599E-05	2.01504837			yes
Two Tail	0.0001132	2.57058184	0.20247266	0.327527345	yes

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 900-day-old average amplitude of mammillary processes in the peripheral region (0.44 ± 0.03 mm) were higher than the central region (0.17 ± 0.06 mm).
This difference (0.27 mm), 95% CI [0.20, 0.33] was statistically significant $t(5) = 10.89$, $P < .001$, with a large effect size ($d = 4.45$).

Surface Rooughness For Perimeter From Cylinder 2/3r 120 to 900 Days

Test For Normality 120 Days

Descriptive Statistics

	Radius 2/3
Mean	0.10
Standard Erro	0.00843833
Median	0.11
Mode	0.13
Standard Dev	0.02386719
Sample Varia	0.00056964
Kurtosis	-1.7765077
Skewness	-0.3401792
Range	0.06
Maximum	0.13
Minimum	0.07
Sum	0.83
Count	8
Geometric M	0.10119089
Harmonic M	0.09853979
AAD	0.0203125
MAD	0.02
IQR	0.0425

Box Plot

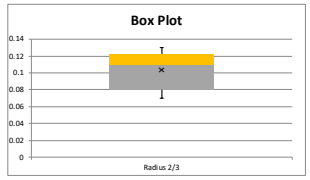
	Radius 2/3
Min	0.07
Q1-Min	0.01
Med-Q1	0.03
Q3-Med	0.0125
Max-Q3	0.0075
Mean	0.10
Min	0.07
Q1	0.08
Median	0.11
Q3	0.1225
Max	0.13
Mean	0.10
Grand Min	0
Outliers	

Shapiro-Wilk Test

	Radius 2/3
W-stat	0.87662701
p-value	0.17479959
alpha	0.05
normal	yes

d'Agostino-Pearson

DA-stat	1.64369036
p-value	0.43961973
alpha	0.05
normal	yes



Test For Normality 900 Days

Descriptive Statistics

	Radius 2/3
Mean	0.17
Standard Erro	0.02280351
Median	0.17
Mode	#N/A
Standard Dev	0.05585696
Sample Varia	0.00312
Kurtosis	0.43762327
Skewness	0.59905764
Range	0.16
Maximum	0.26
Minimum	0.10
Sum	1.02
Count	6
Geometric M	0.1624623
Harmonic M	0.15515577
AAD	0.04
MAD	0.035
IQR	0.055

Box Plot

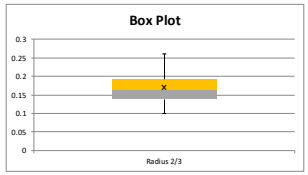
	Radius 2/3
Min	0.1
Q1-Min	0.0375
Med-Q1	0.0275
Q3-Med	0.0275
Max-Q3	0.0675
Mean	0.17
Min	0.1
Q1	0.1375
Median	0.17
Q3	0.1925
Max	0.26
Mean	0.17
Grand Min	0
Outliers	

Shapiro-Wilk Test

	Radius 2/3
W-stat	0.97624897
p-value	0.93146596
alpha	0.05
normal	yes

d'Agostino-Pearson

DA-stat	0.56561773
p-value	0.75366382
alpha	0.05
normal	yes



Surface Rooughness For Perimeter From Cylinder 2/3r 120 to 900 Days

T Test: Two Independent Samples

SUMMARY — Hyp Mean D: 0

Groups	*Count*	*Mean*	*Variance*	*Cohen d*
Radius 2/3	6	0.170	0.00312	
Radius 2/3	8	0.104	0.00056964	
Pooled		0.066	0.00163229	1.639785346

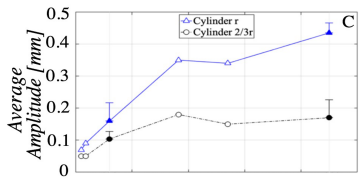
Effect size		Effect size	
Choen's *d* score		Choen's *r* score	
0.2	Small	0.1	Small
0.5	Medium	0.3	Medium
0.8	Large	0.5	Large

T TEST: Equal Variances — Alpha: 0.05

	std err	*t-stat*	*df*	*p-value*	*t-crit*	*lower*	*upper*	*sig*	*effect r*
One Tail	0.02181937	3.03629246		12	0.005172453	1.78228756		yes	0.65914416
Two Tail	0.02181937	3.03629246		12	0.010344907	2.17881283	0.01870967	0.11379033	yes	0.65914416

T TEST: Unequal Variances — Alpha: 0.05

	std err	*t-stat*	*df*	*p-value*	*t-crit*	*lower*	*upper*	*sig*	*effect r*
One Tail	0.02431471	2.72468752	6.37766892	0.016193798	1.92276547			yes	0.73341895
Two Tail	0.02431471	2.72468752	6.37766892	0.032387595	2.41221328	0.00759772	0.12490228	yes	0.73341895



The average amplitude of mammillary processes in the central region increased from 120-days-old (0.10 ± 0.02 mm) to 900-days-old (0.17 ± 0.06 mm)
This difference (0.07 mm), 95% CI [0.008, 0.12] was statistically significant($t(6.38) = 2.72$, $P < .001$, with a large effect size($d = 1.64$).

3

Surface Rooughness For Perimeter From Cylinder r 120 to 900 Days

Test For Normality 120 Day

Descriptive Statistics

	Radius r
Mean	0.16
Standard Erro	0.02008909
Median	0.14
Mode	0.13
Standard Dev	0.05682052
Sample Varia	0.00322857
Kurtosis	0.71206046
Skewness	1.0653013
Range	0.17
Maximum	0.27
Minimum	0.10
Sum	1.28
Count	8
Geometric M	0.15207743
Harmonic M	0.14516671
AAD	0.045
MAD	0.035
IQR	0.0675

Box Plot

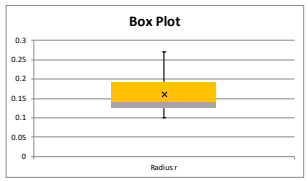
	Radius r
Min	0.1
Q1-Min	0.025
Med-Q1	0.015
Q3-Med	0.0525
Max-Q3	0.0775
Mean	0.16
Min	0.1
Q1	0.125
Median	0.14
Q3	0.1925
Max	0.27
Mean	0.16
Grand Min	0
Outliers	

Shapiro-Wilk Test

	Radius r
W-stat	0.90436583
p-value	0.31608689
alpha	0.05
normal	yes

d'Agostino-Pearson

DA-stat	2.23748564
p-value	0.32669025
alpha	0.05
normal	yes



Test For Normality 900 Day

Descriptive Statistics

	Radius r
Mean	0.44
Standard Erro	0.01284523
Median	0.44
Mode	0.43
Standard Dev	0.03146427
Sample Varia	0.00099
Kurtosis	1.637588
Skewness	-1.040141
Range	0.09
Maximum	0.47
Minimum	0.38
Sum	2.61
Count	6
Geometric M	0.43401507
Harmonic M	0.43299285
AAD	0.02166667
MAD	0.015
IQR	0.025

Box Plot

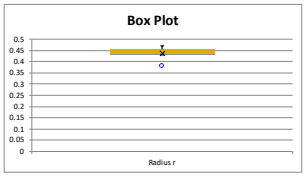
	Radius r
Min	0.43
Q1-Min	0
Med-Q1	0.005
Q3-Med	0.02
Max-Q3	0.015
Mean	0.44
Min	0.43
Q1	0.43
Median	0.44
Q3	0.455
Max	0.47
Mean	0.44
Grand Min	0
Outliers	0.38

Shapiro-Wilk Test

	Radius r
W-stat	0.91151211
p-value	0.44641871
alpha	0.05
normal	yes

d'Agostino-Pearson

DA-stat	2.39960981
p-value	0.30125298
alpha	0.05
normal	yes



Surface Rooughness For Perimeter From Cylinder r 120 to 900 Days

T Test: Two Independent Samples

SUMMARY — Hyp Mean D: 0

Groups	*Count*	*Mean*	*Variance*	*Cohen d*
Radius r	6	0.44	0.00099	
Radius r	8	0.16	0.00322857	
Pooled		0.28	0.00229583	5.739347427

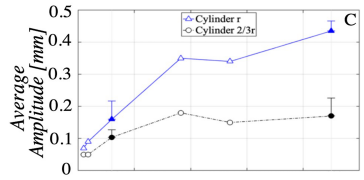
Effect size		Effect size	
Choen's *d* score		Choen's *r* score	
0.2	Small	0.1	Small
0.5	Medium	0.3	Medium
0.8	Large	0.5	Large

T TEST: Equal Variances — Alpha: 0.05

	std err	*t-stat*	*df*	*p-value*	*t-crit*	*lower*	*upper*	*sig*	*effect r*
One Tail	0.02587698	10.6272064		12	9.24475E-08	1.78228756		yes	0.9507639
Two Tail	0.02587698	10.6272064		12	1.84895E-07	2.17881283	0.21861891	0.33138109	yes	0.9507639

T TEST: Unequal Variances — Alpha: 0.05

	std err	*t-stat*	*df*	*p-value*	*t-crit*	*lower*	*upper*	*sig*	*effect r*
One Tail	0.02384474	11.5329439	11.259126	6.99464E-08	1.79211006			yes	0.96018583
Two Tail	0.02384474	11.5329439	11.259126	1.39893E-07	2.19482067	0.22266508	0.32733492	yes	0.96018583



The average amplitude of mammillary processes in the peripheral region increased from 120-days-old (0.16 ± 0.06 mm) to 900-days-old (0.44 ± 0.03 mm)
This difference (0.28 mm), 95% CI [0.22, 0.33] was statistically significant($t(11.26) = 11.53$, $P < .001$, with a large effect size($d = 5.74$).

4