Joan T Richtsmeier

List of Publications by Year
in descending order

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145 papers	7,045 citations	57631 44 h-index	76769 74 g-index
158 all docs	158 docs citations	158 times ranked	5138 citing authors

#	Article	IF	Citations
1	Precision and error of three-dimensional phenotypic measures acquired from 3dMD photogrammetric images. American Journal of Medical Genetics, Part A, 2005, 138A, 247-253.	0.7	310
2	A Chromosome 21 Critical Region Does Not Cause Specific Down Syndrome Phenotypes. Science, 2004, 306, 687-690.	6.0	289
3	Euclidean distance matrix analysis: A coordinate-free approach for comparing biological shapes using landmark data. American Journal of Physical Anthropology, 1991, 86, 415-427.	2.1	284
4	The promise of geometric morphometrics. American Journal of Physical Anthropology, 2002, 119, 63-91.	2.1	256
5	Discovery and genetic localization of Down syndrome cerebellar phenotypes using the Ts65Dn mouse. Human Molecular Genetics, 2000, 9, 195-202.	1.4	246
6	Parallels of craniofacial maldevelopment in down syndrome and Ts65Dn mice. , 2000, 217, 137-145.		219
7	Angiogenesis and intramembranous osteogenesis. Developmental Dynamics, 2013, 242, 909-922.	0.8	189
8	Hand in glove: brain and skull in development and dysmorphogenesis. Acta Neuropathologica, 2013, 125, 469-489.	3.9	188
9	Abnormalities in cartilage and bone development in the Apert syndrome FGFR2+/S252W mouse. Development (Cambridge), 2005, 132, 3537-3548.	1.2	172
10	Phenotypic integration of neurocranium and brain. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2006, 306B, 360-378.	0.6	143
11	Too much of a good thing: mechanisms of gene action in Down syndrome. Trends in Genetics, 2001, 17, 83-88.	2.9	128
12	Craniofacial phenotypes in segmentally trisomic mouse models for Down syndrome. American Journal of Medical Genetics Part A, 2002, 107, 317-324.	2.4	121
13	A genome-wide association study identifies susceptibility loci for nonsyndromic sagittal craniosynostosis near BMP2 and within BBS9. Nature Genetics, 2012, 44, 1360-1364.	9.4	120
14	Phenotypic Variability: Its Components, Measurement and Underlying Developmental Processes. Evolutionary Biology, 2007, 34, 99-120.	0.5	112
15	An Analysis of Anatomy Education Before and During Covidâ€19: Mayâ€“August 2020. Anatomical Sciences Education, 2021, 14, 132-147.	2.5	108
16	Advances in Anthropological Morphometrics. Annual Review of Anthropology, 1992, 21, 283-305.	0.4	97
17	Central nervous system phenotypes in craniosynostosis. Journal of Anatomy, 2002, 201, 31-39.	0.9	96
18	Precision, Repeatability, and Validation of the Localization of Cranial Landmarks Using Computed Tomography Scans. Cleft Palate-Craniofacial Journal, 1995, 32, 217-227.	0.5	91

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19	Precision, Repeatability, and Validation of the Localization of Cranial Landmarks Using Computed Tomography Scans. Cleft Palate-Craniofacial Journal, 1995, 32, 217-227.	0.5	90
20	A COORDINATEâ€FREE APPROACH TO THE ANALYSIS OF GROWTH PATTERNS: MODELS AND THEORETICAL CONSIDERATIONS. Biological Reviews, 1993, 68, 381-411.	4.7	87
21	Finite-Element Scaling Applied to Sexual Dimorphism in Rhesus Macaque (Macaca mulatta) Facial Growth. Systematic Zoology, 1986, 35, 381.	1.6	86
22	Euclidean distance matrix analysis: Confidence intervals for form and growth differences. American Journal of Physical Anthropology, 1995, 98, 73-86.	2.1	82
23	Understanding craniosynostosis as a growth disorder. Wiley Interdisciplinary Reviews: Developmental Biology, 2016, 5, 429-459.	5.9	80
24	Oculoauriculovertebral anomaly: Segregation analysis. American Journal of Medical Genetics Part A, 1992, 43, 913-917.	2.4	79
25	The Effect of Rigid Fixation on Growth of the Neurocranium. Plastic and Reconstructive Surgery, 1991, 88, 395-403.	0.7	78
26	Relationship of brain and skull in pre- and postoperative sagittal synostosis. Journal of Anatomy, 2005, 206, 373-385.	0.9	73
27	Capturing data from three-dimensional surfaces using fuzzy landmarks. American Journal of Physical Anthropology, 1998, 107, 113-124.	2.1	72
28	Closing the Gap: Genetic and Genomic Continuum from Syndromic to Nonsyndromic Craniosynostoses. Current Genetic Medicine Reports, 2014, 2, 135-145.	1.9	72
29	Activation of p38 MAPK pathway in the skull abnormalities of Apert syndrome Fgfr2+P253R mice. BMC Developmental Biology, 2010, 10, 22.	2.1	70
30	A non-mosaic transchromosomic mouse model of Down syndrome carrying the long arm of human chromosome 21. ELife, 2020, 9, .	2.8	65
31	Comparative study of normal, Crouzon, and Apert craniofacial morphology using finite element scaling analysis. American Journal of Physical Anthropology, 1987, 74, 473-493.	2.1	64
32	Morphometric analysis of craniofacial growth inCebus apella. American Journal of Physical Anthropology, 1991, 84, 323-342.	2.1	64
33	On comparing biological shapes: Detection of influential landmarks. American Journal of Physical Anthropology, 1992, 87, 49-65.	2.1	64
34	The Role of Postnatal Growth Pattern in the Production of Facial Morphology. Systematic Biology, 1993, 42, 307-330.	2.7	64
35	Brain morphology in nonsyndromic unicoronal craniosynostosis. The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology, 2005, 285A, 690-698.	2.0	64
36	Differential effects of trisomy on brain shape and volume in related aneuploid mouse models. American Journal of Medical Genetics, Part A, 2007, 143A, 1060-1070.	0.7	64

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37	Sexual dimorphism of ontogeny in the crab-eating macaque (Macaca fascicularis). Journal of Human Evolution, 1993, 25, 1-30.	1.3	62
38	Beyond the closed suture in apert syndrome mouse models: Evidence of primary effects of FGFR2 signaling on facial shape at birth. Developmental Dynamics, 2010, 239, 3058-3071.	0.8	60
39	Microtia and associated anomalies: Statistical analysis. American Journal of Medical Genetics Part A, 1989, 34, 574-578.	2.4	58
40	Comparison of mandibular landmarks from computed tomography and 3D digitizer data. Clinical Anatomy, 2003, 16, 494-500.	1.5	57
41	New insights into the relationship between suture closure and craniofacial dysmorphology in sagittal nonsyndromic craniosynostosis. Journal of Anatomy, 2010, 217, 85-96.	0.9	52
42	FGF/FGFR Signaling Coordinates Skull Development by Modulating Magnitude of Morphological Integration: Evidence from Apert Syndrome Mouse Models. PLoS ONE, 2011, 6, e26425.	1.1	51
43	Tissueâ€specific responses to aberrant FGF signaling in complex head phenotypes. Developmental Dynamics, 2013, 242, 80-94.	0.8	51
44	Threeâ€dimensional morphometric analysis of craniofacial shape in the unaffected relatives of individuals with nonsyndromic orofacial clefts: A possible marker for genetic susceptibility. American Journal of Medical Genetics, Part A, 2008, 146A, 409-420.	0.7	48
45	p38 Inhibition ameliorates skin and skull abnormalities in Fgfr2 Beare-Stevenson mice. Journal of Clinical Investigation, 2012, 122, 2153-2164.	3.9	47
46	Growth of the Cranial Base in Craniosynostosis. Cleft Palate-Craniofacial Journal, 1991, 28, 55-67.	0.5	46
47	Cranial growth in the squirrel monkey(Saimiri sciureus): A quantitative analysis using three dimensional coordinate data. American Journal of Physical Anthropology, 1992, 87, 67-81.	2.1	45
48	Brain phenotypes in two FGFR2 mouse models for Apert syndrome. Developmental Dynamics, 2010, 239, 987-997.	0.8	42
49	Overlapping trisomies for human chromosome 21 orthologs produce similar effects on skull and brain morphology of Dp(16)1Yey and Ts65Dn mice. American Journal of Medical Genetics, Part A, 2014, 164, 1981-1990.	0.7	42
50	The Developmental Basis of Quantitative Craniofacial Variation in Humans and Mice. Evolutionary Biology, 2012, 39, 554-567.	0.5	41
51	Phosphotungstic acidâ€enhanced microCT: Optimized protocols for embryonic and early postnatal mice. Developmental Dynamics, 2020, 249, 573-585.	0.8	40
52	Comparison of Mandibular Phenotypic and Genetic Integration between Baboon and Mouse. Evolutionary Biology, 2009, 36, 19-36.	0.5	38
53	Unilateral and bilateral expression of a quantitative trait: asymmetry and symmetry in coronal craniosynostosis. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2012, 318, 109-122.	0.6	38
54	Growth of the Cranial Base in Craniosynostosis. Cleft Palate-Craniofacial Journal, 1991, 28, 55-67.	0.5	37

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55	What are genes â€œforâ€•or where are traits â€œfromâ€? What is the question?. BioEssays, 2009, 31, 198-208.	1.2	37
56	Craniofacial divergence by distinct prenatal growth patterns in Fgfr2 mutant mice. BMC Developmental Biology, 2014, 14, 8.	2.1	37
57	Three-dimensional morphological analysis of isolated metopic synostosis. , 1999, 256, 177-188.		35
58	Morphological comparison of the craniofacial phenotypes of mouse models expressing the Apert FGFR2 S252W mutation in neural crest- or mesoderm-derived tissues. Bone, 2014, 63, 101-109.	1.4	35
59	Statistical Models in Morphometrics: Are They Realistic?. Systematic Zoology, 1990, 39, 60.	1.6	34
60	Effects of aneuploidy on skull growth in a mouse model of Down syndrome. Journal of Anatomy, 2007, 210, 394-405.	0.9	34
61	Genetic and environmental contributions to variation in baboon cranial morphology. American Journal of Physical Anthropology, 2010, 143, 1-12.	2.1	33
62	Growth-related shape changes in the fetal craniofacial complex of humans (Homo sapiens) and pigtailed macaques (Macaca nemestrina): A 3D-CT comparative analysis. American Journal of Physical Anthropology, 2003, 120, 339-351.	2.1	32
63	The Skeletal siteâ€specific role of connective tissue growth factor in prenatal osteogenesis. Developmental Dynamics, 2012, 241, 1944-1959.	0.8	32
64	Trisomy 21 and facial developmental instability. American Journal of Physical Anthropology, 2013, 151, 49-57.	2.1	30
65	Integration of Brain and Skull in Prenatal Mouse Models of Apert and Crouzon Syndromes. Frontiers in Human Neuroscience, 2017, 11, 369.	1.0	30
66	Craniofacial Growth in Apert Syndrome as Measured by Finite-Element Scaling Analysis. Cells Tissues Organs, 1988, 133, 50-56.	1.3	29
67	Complex contributions of Ets2 to craniofacial and thymus phenotypes of trisomic â€œDown syndromeâ€•mice. American Journal of Medical Genetics, Part A, 2009, 149A, 2158-2165.	0.7	29
68	Intracranial Volume and Whole Brain Volume in Infants with Unicoronal Craniosynostosis. Cleft Palate-Craniofacial Journal, 2011, 48, 394-398.	0.5	29
69	Postnatal brain and skull growth in an Apert syndrome mouse model. American Journal of Medical Genetics, Part A, 2013, 161, 745-757.	0.7	29
70	From shape to cells: mouse models reveal mechanisms altering palate development in Apert syndrome. DMM Disease Models and Mechanisms, 2013, 6, 768-79.	1.2	29
71	Cranial growth and growth dimorphism inAteles geoffroyi. American Journal of Physical Anthropology, 1993, 92, 371-394.	2.1	28
72	Mutation Screening of Candidate Genes in Patients with Nonsyndromic Sagittal Craniosynostosis. Plastic and Reconstructive Surgery, 2016, 137, 952-961.	0.7	27

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73	Cleft Palate with Autosomal Recessive Transmission in Brittany Spaniels. Cleft Palate-Craniofacial Journal, 1994, 31, 364-371.	0.5	24
74	Cleft Palate with Autosomal Recessive Transmission in Brittany Spaniels. Cleft Palate-Craniofacial Journal, 1994, 31, 364-371.	0.5	24
75	Preoperative Osseous Dysmorphology in Unilateral Complete Cleft Lip and Palate: A Quantitative Analysis of Computed Tomography Data. Plastic and Reconstructive Surgery, 2007, 119, 1295-1301.	0.7	24
76	Morphological integration of soft-tissue facial morphology in down syndrome and siblings. American Journal of Physical Anthropology, 2011, 146, 560-568.	2.1	24
77	The relationship between cranial metric and nonmetric traits in the rhesus macaques from Cayo Santiago. American Journal of Physical Anthropology, 1984, 64, 213-222.	2.1	23
78	Interaction of Craniofacial Dysmorphology, Growth, and Prediction of Surgical Outcome. Journal of Craniofacial Surgery, 1995, 6, 270-281.	0.3	23
79	A Morphometric Study of Facial Growth. , 1993, , 391-410.		23
80	Landmark Morphometrics and the Analysis of Variation. , 2005, , 49-69.		22
81	Association of the Chondrocranium and Dermatocranium in Early Skull Formation. , 2017, , 52-78.		22
82	Midface and upper airway dysgenesis in FGFR2-craniosynostosis involves multiple tissue-specific and cell cycle effects. Development (Cambridge), 2018, 145, .	1.2	22
83	A simple method for visualization of influential landmarks when using euclidean distance matrix analysis. , 1998, 107, 273-283.		21
84	Quantification of facial skeletal shape variation in fibroblast growth factor receptorâ€related craniosynostosis syndromes. Birth Defects Research Part A: Clinical and Molecular Teratology, 2014, 100, 250-259.	1.6	21
85	The Influence of trisomy 21 on facial form and variability. American Journal of Medical Genetics, Part A, 2017, 173, 2861-2872.	0.7	21
86	Additive genetic variation in the craniofacial skeleton of baboons (genus Papio) and its relationship to body and cranial size. American Journal of Physical Anthropology, 2018, 165, 269-285.	2.1	21
87	Three-Dimensional Analysis of Craniofacial Form in a Familial Rabbit Model of Nonsyndromic Coronal Suture Synostosis Using Euclidean Distance Matrix Analysis. Cleft Palate-Craniofacial Journal, 1999, 36, 196-206.	0.5	20
88	Volume morphing and renderingâ€"An integrated approach. Computer Aided Geometric Design, 2000, 17, 59-81.	0.5	20
89	A quantitative method for the evaluation of three-dimensional structure of temporal bone pneumatization. Journal of Human Evolution, 2008, 55, 682-690.	1.3	20
90	Identifying the Misshapen Head: Craniosynostosis and Related Disorders. Pediatrics, 2020, 146, .	1.0	20

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91	Quantitative genetics of cranial nonmetric traits in randombred mice: Heritability and etiology. American Journal of Physical Anthropology, 1986, 69, 51-58.	2.1	19
92	Brief communication: A sample of pediatric skulls available for study. , 1997, 103, 415-416.		19
93	Facing up to the challenges of advancing Craniofacial Research. American Journal of Medical Genetics, Part A, 2015, 167, 1451-1454.	0.7	19
94	Structural and Mechanical Changes in Trabecular Bone during Early Development in the Human Femur and Humerus. , 2017, , 281-302.		19
95	Mandibular dysmorphology due to abnormal embryonic osteogenesis in FGFR2-related craniosynostosis mice. DMM Disease Models and Mechanisms, 2019, 12, .	1.2	19
96	Microstructure of trabecular bone in a mouse model for down syndrome. Anatomical Record, 2007, 290, 414-421.	0.8	18
97	Embryonic craniofacial bone volume and bone mineral density in Fgfr2^{+/P253R} and nonmutant mice. Developmental Dynamics, 2014, 243, 541-551.	0.8	18
98	Craniofacial skeletal response to encephalization: How do we know what we think we know?. American Journal of Physical Anthropology, 2019, 168, 27-46.	2.1	18
99	The Effect of Neurocranial Surgery on Basicranial Morphology in Isolated Sagittal Craniosynostosis. Cleft Palate-Craniofacial Journal, 2001, 38, 134-146.	0.5	17
100	GENETIC VARIATION IN BABOON CRANIOFACIAL SEXUAL DIMORPHISM. Evolution; International Journal of Organic Evolution, 2009, 63, 799-806.	1.1	17
101	Cartilage Segmentation in High-Resolution 3D Micro-CT Images via Uncertainty-Guided Self-training with Very Sparse Annotation. Lecture Notes in Computer Science, 2020, 12261, 802-812.	1.0	17
102	Perspectives on Craniofacial Growth. Clinics in Plastic Surgery, 1994, 21, 489-499.	0.7	17
103	A quantitative method for staging mouse embryos based on limb morphometry. Development (Cambridge), 2018, 145, .	1.2	16
104	Three-Dimensional Analysis of Craniofacial Form in a Familial Rabbit Model of Nonsyndromic Coronal Suture Synostosis Using Euclidean Distance Matrix Analysis. Cleft Palate-Craniofacial Journal, 1999, 36, 196-206.	0.5	16
105	A transchromosomic rat model with human chromosome 21 shows robust Down syndrome features. American Journal of Human Genetics, 2022, 109, 328-344.	2.6	16
106	Comparison of Craniofacial Phenotype in Craniosynostotic Rabbits Treated with Antiâ€“Tgf-Î²2 at Suturectomy Site. Cleft Palate-Craniofacial Journal, 2008, 45, 571-582.	0.5	15
107	Fluctuating Asymmetry and Developmental Instability in Sagittal Craniosynostosis. Cleft Palate-Craniofacial Journal, 2009, 46, 187-196.	0.5	15
108	Choanal Atresia and Craniosynostosis: Development and Disease. Plastic and Reconstructive Surgery, 2018, 141, 156-168.	0.7	14

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109	Nonsyndromic craniosynostosis: novel coding variants. Pediatric Research, 2019, 85, 463-468.	1.1	14
110	Single-cell analysis identifies a key role for Hhip in murine coronal suture development. Nature Communications, 2021, 12, 7132.	5.8	14
111	The effect of a <scp>B</scp>eareâ€<scp>S</scp>tevenson syndrome <scp>Fgfr2 Y</scp>394<scp>C</scp> mutation on early craniofacial bone volume and relative bone mineral density in mice. Journal of Anatomy, 2012, 221, 434-442.	0.9	13
112	A Critical Evaluation of the Down Syndrome Diagnosis for LB1, Type Specimen of Homo floresiensis. PLoS ONE, 2016, 11, e0155731.	1.1	13
113	Acute upregulation of hedgehog signaling in mice causes differential effects on cranial morphology. DMM Disease Models and Mechanisms, 2015, 8, 271-9.	1.2	12
114	A COMPUTATIONAL ANALYSIS OF BONE FORMATION IN THE CRANIAL VAULT USING A COUPLED REACTIONâ€“DIFFUSION-STRAIN MODEL. Journal of Mechanics in Medicine and Biology, 2017, 17, 1750073.	0.3	12
115	The Effect of Neurocranial Surgery on Basicranial Morphology in Isolated Sagittal Craniosynostosis. Cleft Palate-Craniofacial Journal, 2001, 38, 134-146.	0.5	11
116	<scp>D</scp>evelopmental and <scp>E</scp>volutionary <scp>S</scp>ignificance of the <scp>Z</scp>ygomatic <scp>B</scp>one. Anatomical Record, 2016, 299, 1616-1630.	0.8	11
117	A Computational Analysis of Bone Formation in the Cranial Vault in the Mouse. Frontiers in Bioengineering and Biotechnology, 2015, 3, 24.	2.0	10
118	A coupled reactionâ€“diffusionâ€“strain model predicts cranial vault formation in development and disease. Biomechanics and Modeling in Mechanobiology, 2019, 18, 1197-1211.	1.4	10
119	Phenotypes, Developmental Basis, and Genetics of Pierre Robin Complex. Journal of Developmental Biology, 2020, 8, 30.	0.9	10
120	An Invariant Approach to the Study of Fluctuating Asymmetry: Developmental Instability in a Mouse Model for Down Syndrome. , 2005, , 187-212.		10
121	Applications of Finite-Element Scaling Analysis in Primatology. Folia Primatologica, 1989, 53, 50-64.	0.3	9
122	Experiments of Nature: Premature Unicoronal Cranial Synostosis in Mantled Howler Monkeys (Alouatta palliata). Cleft Palate-Craniofacial Journal, 1992, 29, 143-151.	0.5	9
123	Chronic upâ€regulation of sonic hedgehog has little effect on postnatal craniofacial morphology of euploid and trisomic mice. Developmental Dynamics, 2016, 245, 114-122.	0.8	9
124	The Role of Postnatal Growth Pattern in the Production of Facial Morphology. Systematic Biology, 1993, 42, 307.	2.7	8
125	Cranial Vault Dysmorphology and Growth in Craniosynostosis. , 0, , 321-341.		8
126	Itâ€™s about Time: Ossification Center Formation in C57BL/6 Mice from E12â€“E16. Journal of Developmental Biology, 2018, 6, 31.	0.9	8

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127	It takes two: Building the vertebrate skull from chondrocranium and dermatocranium. Vertebrate Zoology, 2020, 70, 587-600.	2.0	7
128	Experiments of Nature: Premature Unicoronal Cranial Synostosis in Mantled Howler Monkeys (Alouatta palliata). Cleft Palate-Craniofacial Journal, 1992, 29, 143-151.	0.5	6
129	A dysmorphic mouse model reveals developmental interactions of chondrocranium and dermatocranium. ELife, 0, 11, .	2.8	6
130	A century of development. American Journal of Physical Anthropology, 2018, 165, 726-740.	2.1	5
131	Computational Morphogenesis of Embryonic Bone Development: Past, Present, and Future. , 2020, , 197-219.		3
132	Developmental Origins of and Covariation Between Metric and Nonmetric Cranial Traits. , 2012, , 61-84.		3
133	Meckelâ€™s Cartilage in Mandibular Development and Dysmorphogenesis. Frontiers in Genetics, 2022, 13, .	1.1	3
134	Tissueâ€specific responses to aberrant FGF signaling in complex head phenotypes. Developmental Dynamics, 2013, 242, C1.	0.8	2
135	A Multiscale Computational Model for the Growth of the Cranial Vault in Craniosynostosis. , 2014, 2014, .		2
136	Embryonic and early postnatal cranial bone volume and tissue mineral density values for C57BL / 6J laboratory mice. Developmental Dynamics, 2022, , .	0.8	2
137	Brief communication: A sample of pediatric skulls available for study. , 1997, 103, 415.		1
138	Capturing data from three-dimensional surfaces using fuzzy landmarks. , 1998, 107, 113.		1
139	The society of craniofacial genetics and developmental biology 35th annual meeting. American Journal of Medical Genetics, Part A, 2013, 161, 2938-2952.	0.7	0
140	Inside Cover Image, Volume 5, Issue 4. Wiley Interdisciplinary Reviews: Developmental Biology, 2016, 5, ii-ii.	5.9	0
141	The Contribution of Angiogenesis to Variation in Bone Development and Evolution. , 0, , 26-51.		0
142	Early craniofacial bone growth and maturation of Fgfr2 +/P253R mice and littermates. FASEB Journal, 2013, 27, 963.1.	0.2	0
143	Identification of a Novel Vomer Phenotype in the Fgfr2c C342Y/+ Mouse Model of Crouzon Syndrome. FASEB Journal, 2018, 32, 776.12.	0.2	0
144	Exploring Mechanisms of Cranial Vault Development using a Coupled Turingâ€Biomechanical Model. FASEB Journal, 2019, 33, 326.2.	0.2	0

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145	First Systematic Documentation of Sex Differences in Craniofacial Norms of Nigerian Children. FASEB Journal, 2019, 33, 452.10.	0.2	0