

SDC4

Index	0-0.5Y			0.5-2Y			2-6Y			6-18Y			18-62Y		
	Crouzon	control	p	Crouzon	control	p	Crouzon	control	p	Crouzon	control	p	Crouzon	control	p
Based on Sella-Nasion plane															
SN-FH	9.74±4.46	3.99±1.42	0.014*	6.78±6.28	4.61±3.13	0.455	9.03±5.20	6.10±3.39	0.170	12.19±3.67	8.27±3.40	0.053	14.32±5.21	9.70±3.44	0.070
SN-Mx	13.80±5.62	6.56±4.11	0.014*	14.12±6.03	3.89±4.61	0.006**	11.54±4.03	5.65±3.54	0.003**	12.38±6.09	6.11±3.44	0.039*	16.96±7.17	8.82±3.93	0.025*
SN-Occ	23.61±4.55	16.80±4.61	0.011*	19.06±3.66	13.61±6.08	0.042*	20.29±4.71	16.00±7.31	0.131	22.20±5.83	13.85±5.49	0.014*	21.63±6.60	15.49±5.87	0.076
SN-MP	32.77±2.77	25.13±8.18	0.036*	37.18±4.82	30.55±5.10	0.062	48.04±6.32	33.51±5.01	<0.001**	46.47±7.42	32.35±7.20	0.003**	47.12±9.41	35.12±7.24	0.017*
SN-MRP	71.76±4.91	67.20±4.56	0.081	74.52±8.72	73.01±4.62	0.729	89.45±7.82	80.24±6.15	0.011*	96.57±9.07	85.02±8.60	0.026*	94.99±5.13	89.61±8.13	0.130
Based on Frankfort horizontal plane															
FH-Mx	4.06±6.22	2.57±3.58	0.573	6.42±4.57	0.72±5.09#	0.007**	2.51±3.83	0.30±3.25#	0.106	0.19±4.77	2.16±3.09#	0.290	2.64±4.14	0.88±4.04#	0.113
FH-Occ	13.87±3.93	10.85±6.72	0.262	14.27±4.83	9.00±5.31	0.081	11.26±4.31	9.90±6.67	0.587	10.01±4.35	5.58±3.17	0.048*	7.31±4.92	5.79±3.92	0.518
FH-MP	23.79±2.66	18.53±3.34	0.007**	30.84±5.55	26.13±3.47	0.189	39.01±6.73	28.70±5.20	0.002**	34.28±4.91	24.08±4.32	0.001**	32.79±8.71	26.03±4.47	0.096
FH-MRP	62.05±5.42	63.00±4.28	0.709	69.72±8.66	68.34±3.92	0.746	80.42±6.93	74.05±4.64	0.034*	84.38±9.09	77.47±6.72	0.126	80.67±2.58	81.95±5.66	0.557

Angles of two adjacent planes

Mx-Occ	9.41±4.10	7.43±5.69	0.433	5.91±7.18	9.79±5.89	0.324	8.88±4.21	10.42±7.35	0.564	9.87±2.24	7.55±5.35	0.290	6.91±5.97	8.59±3.25	0.519
Occ-MP	10.69±1.11	5.89±3.74	0.008**	18.90±5.12	16.94±6.83	0.563	27.78±6.63	17.57±5.44	0.002**	24.40±2.28	18.54±3.92	0.004**	25.58±6.23	19.36±4.07	0.046*
MP-MRP	38.75±6.19	37.03±15.72	0.773	38.43±5.95	42.46±4.46	0.223	41.41±2.42	47.62±5.16	0.005**	50.10±6.99	52.67±6.64	0.481	47.88±7.63	54.49±4.39	0.071

Angular measurements

SNA	74.28±5.03	87.88±2.71	<0.001**	71.14±8.15	85.75±4.19	0.005**	77.22±5.50	83.43±4.23	0.014*	73.54±9.22	84.08±3.76	0.023*	72.83±5.35	86.72±6.10	<0.001**
SNB	69.21±4.97	80.08±3.68	0.002**	76.41±5.21	80.57±5.12	0.222	76.29±6.31	79.13±4.93	0.287	75.88±5.59	80.54±4.70	0.109	77.23±6.59	83.87±7.37	0.079
ANB	6.81±4.03	8.20±4.37	0.551	(3.93)±4.98	4.24±3.31	0.039*	0.20±2.50	4.57±1.66	<0.001**	(4.08)±5.69	3.83±1.72	0.009**	(4.78)±4.34	4.22±2.65	<0.001**
N-S-PP	78.29±6.35	76.40±3.68	0.489	71.01±5.26	74.52±4.57	0.237	80.85±5.22	76.30±3.38	0.042*	87.61±5.94	79.46±5.22	0.016*	81.83±5.96	78.99±3.52	0.290
N-S-AR	111.37±1.72	103.01±3.09	<0.001**	106.12±5.34	104.57±2.68	0.564	108.13±4.49	106.90±1.75	0.456	110.86±4.12	108.15±4.24	0.233	109.18±4.83	110.23±3.04	0.626
N-A-Pog	162.82±10.85	160.16±12.62	0.681	175.37±10.69	167.64±4.86	0.246	173.92±5.26	169.77±4.38	0.077	171.92±11.64	172.68±4.41	0.875	168.56±7.78	173.90±4.30	0.138
N-S-GN	63.98±2.83	53.69±1.82	<0.001**	65.21±3.11	59.30±4.11	0.020*	73.61±6.26	63.38±4.42	0.001**	75.03±6.44	63.09±6.09	0.003**	72.09±6.17	65.31±7.26	0.063
S-N-Pog	68.14±4.27	80.46±4.50	<0.001**	73.30±4.44	79.66±4.91	0.055	73.94±6.51	79.02±4.76	0.070	74.78±5.24	81.21±4.57	0.027*	77.65±6.65	83.85±7.54	0.104

Linear measurements

S-N	43.88±3.78	42.06±2.71	0.285	48.36±2.96	52.38±2.85	0.021*	51.76±4.75	58.66±4.24	0.004**	59.87±4.92	68.11±4.32	0.005**	60.22±1.53	68.35±5.56	0.002**
S-ANS	47.71±3.33	49.70±3.44	0.225	51.65±3.39	59.82±3.10	<0.001**	58.81±5.60	69.80±5.44	<0.001**	69.43±8.65	79.69±5.84	0.024*	68.92±4.54	85.50±6.68	<0.001**

S-A	45.88±2.68	48.94±3.40	0.040*	49.17±3.25	60.14±3.04	<0.001**	57.70±5.35	68.86±5.64	<0.001**	67.13±9.04	80.42±6.93	0.009**	66.22±5.51	85.24±6.95	<0.001**
S-B	49.35±5.06	53.13±4.61	0.180	63.67±3.13	70.45±5.34	0.013*	79.16±6.15	84.20±7.81	0.124	98.70±8.52	101.11±9.33	0.609	98.05±4.94	112.34±10.24	0.003**
S-Pog	50.53±4.52	56.48±5.05	0.040*	65.66±4.21	74.94±4.73	0.011*	85.24±5.78	91.20±9.65	0.106	107.59±9.19	109.55±11.44	0.718	109.28±7.62	122.66±10.49	0.010*
S-GN	54.41±5.51	57.54±5.60	0.319	66.18±4.72	76.79±5.15	0.010*	87.97±5.79	93.61±9.71	0.126	110.40±8.63	112.84±10.60	0.632	113.28±7.13	124.10±9.84	0.023*
S-PNS	21.07±1.52	24.16±2.72	0.004**	22.62±2.68	31.46±3.31	<0.001**	28.95±4.72	37.10±4.06	<0.001**	36.60±5.11	43.95±4.72	0.013*	33.91±5.26	47.38±5.62	<0.001**
S-GO	32.50±3.06	34.09±5.61	0.484	40.96±4.03	46.78±3.11	0.027*	51.50±4.15	57.31±5.65	0.016*	65.41±7.36	71.57±7.85	0.141	68.72±8.59	75.61±7.23	0.115
S-ARR/L	32.63±3.05	35.93±3.43	0.062	33.96±1.99	40.52±2.04	<0.001**	40.40±3.17	46.78±3.56	<0.001**	44.52±4.43	53.35±4.00	0.002**	50.46±4.49	52.16±3.71	0.433
S-GOR/L	41.31±2.84	43.39±5.37	0.337	50.17±3.60	56.06±2.87	0.016*	62.38±4.03	68.00±6.49	0.030*	78.91±5.89	84.78±9.22	0.163	82.79±6.76	90.39±9.35	0.080
BA-ANS	60.39±4.32	62.07±3.20	0.382	57.94±4.92	72.29±1.95	0.002*	66.54±7.19	82.05±5.05	<0.001**	78.32±9.52	93.15±6.54	0.006**	78.79±6.44	98.62±7.31	<0.001**
N-ANS	26.00±1.92	24.53±2.08	0.132	29.38±3.04	29.68±1.68	0.826	34.31±6.90	37.78±4.70	0.220	47.00±4.07	44.85±6.72	0.462	44.15±6.38	50.20±3.88	0.053
ANS-MEN	29.57±2.73	26.00±2.88	0.037*	36.39±4.82	41.28±3.35	0.132	57.37±6.24	51.74±4.67	0.041*	67.75±7.18	62.84±9.58	0.279	69.24±3.87	70.62±6.34	0.599
N-Men	53.78±4.41	48.95±4.70	0.074	64.30±5.45	69.54±4.55	0.151	90.30±8.55	87.93±8.39	0.542	113.38±9.22	107.28±13.37	0.319	114.23±8.71	118.69±7.68	0.306
N-ANS/S-PNS	1.24±0.13	1.02±0.05	0.004**	1.31±0.20	0.95±0.11	0.006**	1.20±0.21	1.02±0.09	0.038*	1.31±0.22	1.02±0.11	0.013*	1.33±0.31	1.07±0.15	0.075
ANS-Men/N- Men	0.55±0.03	0.53±0.02	0.185	0.56±0.03	0.59±0.02	0.178	0.64±0.06	0.59±0.03	0.050	0.60±0.02	0.58±0.03	0.353	0.61±0.04	0.59±0.03	0.463
S-GO/N-Men	0.62±0.04	0.72±0.06	0.002**	0.64±0.06	0.67±0.04	0.332	0.57±0.02	0.65±0.04	<0.001**	0.58±0.06	0.67±0.05	0.012*	0.60±0.09	0.64±0.06	0.401

Wit's	2.87±5.13	3.13±1.73	0.909	3.98±3.79※	1.92±2.13	0.046*	3.70±4.23※	1.39±3.74	0.012*	5.14±7.86※	2.52±2.22	0.042*	4.08±9.03※	4.30±2.46	0.050
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the angle was anticlockwise rotated from FH plane

() B point was in front of A point in the ANB angle measurements

※ B point was in front of A point in the Wit's measurements

* $p < 0.05$

** $p < 0.01$