



Among all people, the most striking differences are in the face

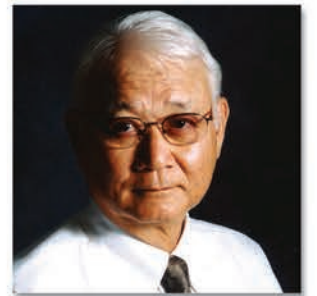
Orthodontists today use pre-adjusted appliances that are derived from Caucasian norms. When treating Asian patients with straight wire appliances, the clinician must increase the torque values for both the upper and lower incisors and decrease the angulation values in order to achieve an optimal interincisal angle and functional occlusion for Asians. The SEBA system offers a more natural position of the anterior teeth to bone and to each other, which affects the facial profile and most importantly, the stability of the finished orthodontic case.

DENTAL AND FACIAL AESTHETICS
Improve
 FUNCTION
 STABILITY

The relationship between the nose, lips, and chin is one of the most important considerations in diagnosis and treatment planning. Moving the anterior teeth in any direction will affect the position of the lips and overall facial balance.

Evidence-Based Orthodontics

Dr. Raymond Sugiyama has researched the differences between various ethnic groups for the past ten years. His findings, based on scientific evidence, show statistically significant differences in the dental anatomy and cephalometric measurements between Caucasians and Asians. Asian teeth are wider mesio-distally¹ and have less angulation^{2,3} than Caucasian teeth. The upper and lower incisors of Asian teeth are more proclined, in relation to basal bone, than Caucasian teeth, which results in an interincisal angle that is significantly less. These evidence-based findings have led to the development of the SEBA prescription. Higher torque and lower angulation of the SEBA prescription keep the teeth in the middle of the basal bone during orthodontic movement, thereby lessening the chance for root resorption.

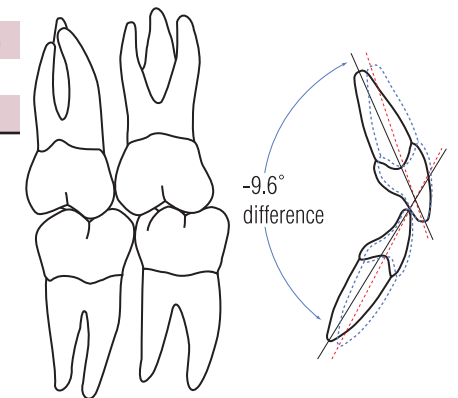


Dr. Raymond Sugiyama, D.D.S., M.S. is a Diplomate of the American Board of Orthodontics and has been on the teaching faculty of Loma Linda University for twenty-eight years. He is a visiting lecturer at thirty universities throughout Asia. Dr. Sugiyama is a Fellow of both the American College of Dentists and the International College of Dentists.

CEPHALOMETRIC COMPARISONS

	Asian Averages Chinese, Japanese, Korean and Thai	Caucasian Averages ⁴	Difference
U1-SN =	107.5°	104.2°	+3.3°
U1-FH =	114.0°	109.6°	+4.4°
L1-MP =	95.2°	91.2°	+4.0°
L1-APo =	4.5mm	1.0mm	+3.5mm
L1-APo =	26.2°	22.0°	+4.2°
U1-L1 =	124.4°	134.0°	-9.6°

Moving the anterior teeth in any direction will affect the position of the lips and overall facial balance.



CONCLUSIONS

Comparative differences: Asians and Caucasians based on scientific studies:

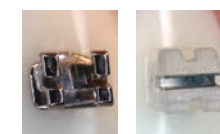
1. Upper and lower anterior teeth (related to basal bone) are significantly more labial inclined
2. The Interincisal Angle is significantly less
3. All teeth are wider except canines¹
4. Asian teeth have less angulation²

REFERENCES

- ¹ Yonezu et al: World Journal of Orthodontics: Volume 2, November 2001
- ² Etsuko Sebata-Motegi: Shikwa Gaku (1981)
- ³ Songlim Choi et al: Shikwa Gaku (1984)
- ⁴ Riolo, Moyers, McNamara and Stuart: University of Michigan Growth Study

People of various ethnicity show differences in hair, skin and eye color as well as other physical and structural anatomy. The orthodontist must recognize and respect these differences by placing the teeth in their natural position related to basal bone and to each other. The SEBA prescription offers patients the advantages of an appliance that will maximize their dental and facial aesthetics and enhance their chances for long term stability by placing teeth in a more natural and functional position than Caucasian based straight wire systems.

SEBA is available in Mini Master Series and Virage metal inserted ceramic brackets.



SEBA

SUGIYAMA EVIDENCE-BASED ASIAN PRESCRIPTION

MINI MASTER SERIES

The SEBA System - Sugiyama Evidence-Based Asian Prescription

.018 .022

Maxillary	Torq	Ang	Rot		M-D	R/L	No hook	With hook	No hook	With hook
Central	+24	+3	0		.140	R L	310-1001 310-1002	310-1021 310-1022		
Lateral	+18	+6	0		.115	R L	310-1003 310-1004	310-1023	310-1024	
Cuspid	+8	+9	5	Hook D-G	.122	R L	310-1005 310-1006	310-1005B 310-1006B	310-1025 310-1026	310-1025B 310-1026B
1st Bicuspid	-6	0	0	HGW, hook D-G	.120	R L	310-0007 310-0007	310-0104B 310-0105B	310-0027 310-0027	310-0114B 310-0115B
	-6	0	0	OFFSET HGW	.120	R/L	310-8007		310-8027	
2nd Bicuspid	-6	0	0	On raised pad, hook D-G	.120	R L	310-8107 310-8107	310-8108B 310-8109B	310-8127 310-8127	310-8128B 310-8129B
Mandibular										
Anteriors	+3	0	0	Bevel occlusal	.100	R/L	310-1010		310-1030	
Cuspid	-5	+5	5	Hook D-G	.122	R L	310-1008 310-1009	310-1008B 310-1009B	310-1028 310-1029	310-1028B 310-1029B
1st Bicuspid	-12	+2	0	HGW, hook D-G	.120	R L	310-0011 310-0012	310-0011B 310-0012B	310-0031 310-0032	310-0031B 310-0032B
	-12	+2	0	OFFSET HGW	.120	R L	310-8011 310-8012		310-8031 310-8032	
2nd Bicuspid	-17	+2	0	HGW, hook D-G	.120	R L	310-0013 310-0014	310-0013B 310-0014B	310-0033 310-0034	310-0033B 310-0034B
	-17	+2	0	OFFSET - on raised pad HGW	.120	R L	310-8113 310-8114		310-8133 310-8134	



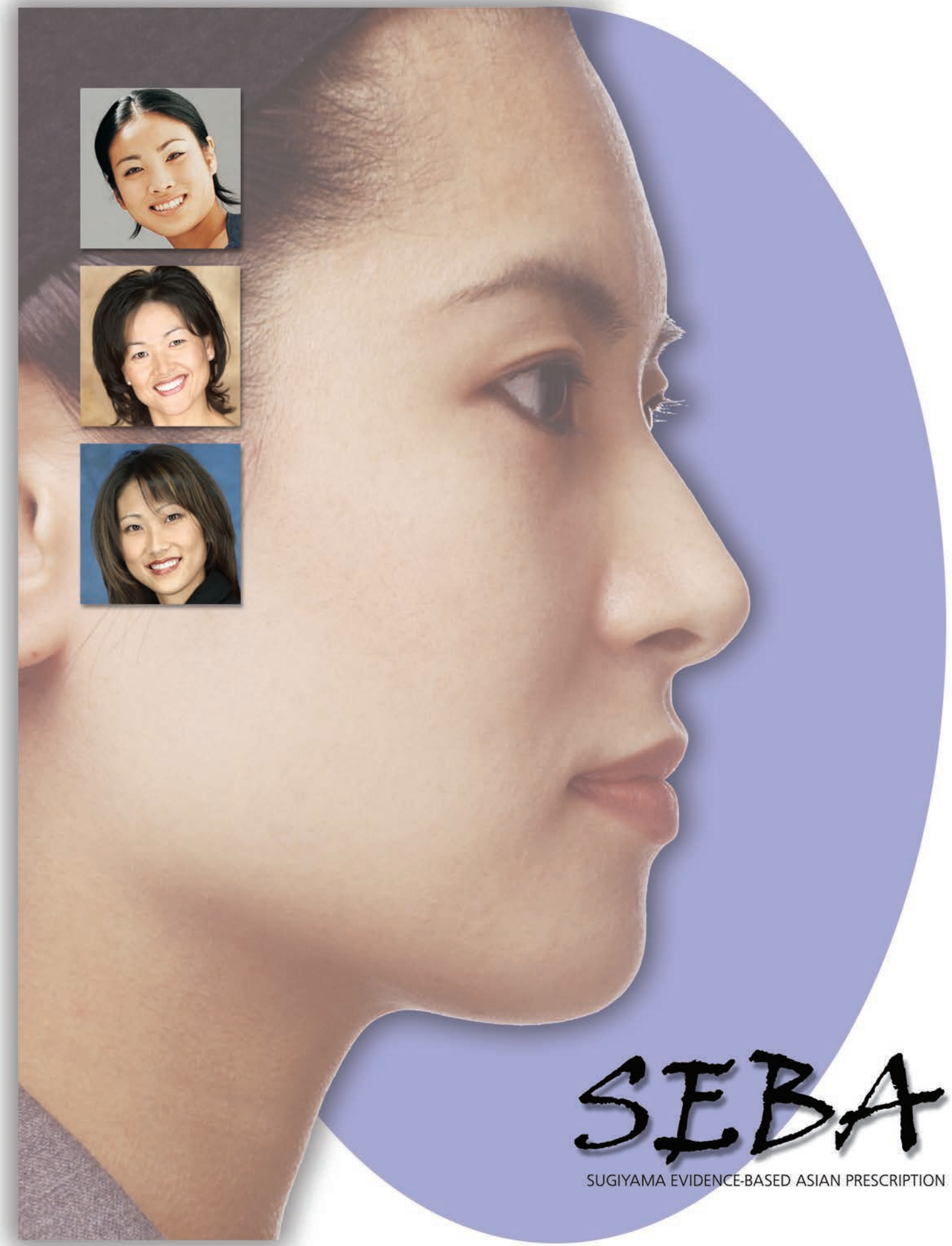
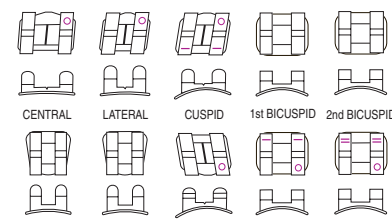
HGW: high gingival wing
D-G: distal/gingival
M-G: mesial/gingival
VS: vertical slot

OFFSET BICUSPID OPTIONS: Gingivally offset bicuspid brackets offer a larger bonding base covering more area on the occlusal one third of the buccal surface and increasing bond strength.

PERMANENT MARKS

Maxillary Central, lateral - dimple D-G
Cuspid - ID line occlusal and dimple D-G

Mandibular Cuspid - dimple D-G
1st bicuspid - ID line occlusal and dimple D-G
1st bicuspid with hook - "-"
2nd bicuspid - 2 ID lines occlusal and dimple D-G
2nd bicuspid with hook - "="



SEBA
SUGIYAMA EVIDENCE-BASED ASIAN PRESCRIPTION



1714 Cambridge Avenue Sheboygan, WI USA 53081
USA and Canada: 1-800-558-7687 www.americanortho.com

Among all people, the most striking differences are in the face

Orthodontists today use pre-adjusted appliances that are derived from Caucasian norms. When treating Latin-Hispanic patients with straight wire appliances, the clinician must increase the torque values for both the upper and lower incisors and decrease the angulation values in order to achieve an optimal interincisal angle and functional occlusion. The ProTorque system offers a more natural position of the anterior teeth to bone and to each other, which affects the facial profile and most importantly, the stability of the finished orthodontic case.

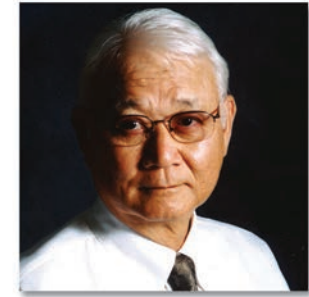
DENTAL AND FACIAL AESTHETICS

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Evidence-Based Orthodontics

Dr. Raymond Sugiyama and Dr. Mauricio Gonzalez Balut have conducted extensive research into the rationale for a bracket prescription different from standard prescriptions which are derived from measurements of Caucasians. Evidence-based data shows statistically significant differences in the dental anatomy and cephalometric measurements when comparing Caucasians to other ethnic patients. For example, studies show that the interincisal angle of Asian, Black, and Latin-Hispanic patients ranges from 10 - 16.6 degrees less when compared to Caucasians^{1,5}. This is the result of the increased proclination of the upper and lower incisors relative to basal bones in these groups. This fact suggests the need for more torque in the anterior teeth for this group of patients.



Dr. Raymond Sugiyama, D.D.S., M.S. is a Diplomate of the American Board of Orthodontics and has been on the teaching faculty of Loma Linda University for twenty nine years. He is a visiting lecturer at thirty nine universities in Asia and seven in Latin America. Dr. Sugiyama is a Fellow of both the American College of Dentists and the International College of Dentists. He practices in Los Alamitos, California.



Dr. Mauricio Gonzalez Balut, D.D.S., M.S. received his Dental Degree from the Intercontinental University in Mexico City and his Master's Degree in orthodontics from Loma Linda University. He is on the teaching staff at Intercontinental University and Universidad Autotoma in Mexico City and also at universities in Juarez, Merida, Monterrey and Puebla. He maintains a busy practice in Mexico City.

All teeth of Asians and Latin-Hispanics are wider mesio-distally than Caucasians' teeth³. Wider teeth need less angulation. This fact is shown in studies by Motegi in Japan⁴. The ProTorque prescription is ideally suited for Asian, Black, and Latin-Hispanic patients and also patients with Division 2 type malocclusions. The added torque keeps the roots in the middle of the basal bone and helps to maintain the natural fullness of the lips in this group of patients.

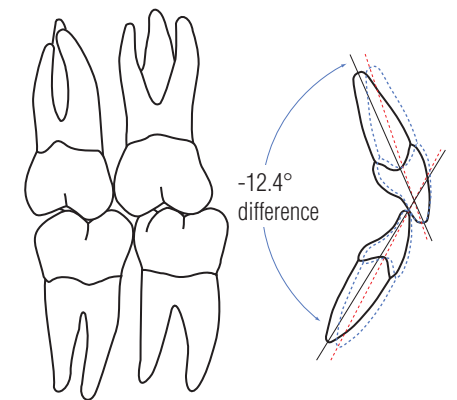
CEPHALOMETRIC COMPARISONS

	Hispanic Averages <small>Doddoli, Gonzalez, UIC, UAT, UPAEP</small>	Caucasian Averages <small>Broadbent, Fastlicht, Graber, Riolo, Swartz</small>	Difference
¹ U1-PP =	115.0°	110.0°	+5.0°
L1-MP =	95.0°	91.0°	+4.0°
U1-L1 =	121.6°	134.0°	-12.4°
² L1-FH =	115.1°	111.0°	+4.1°
U1-APo =	8.4	3.5	+4.9 mm
L1-APo =	4.7	1.0	+3.7 mm

REFERENCES

- ¹ Fastlicht, J: "Tetragon, A Visual Cephalometric Analysis", JCO, June 2000
- ² Gonzalez-Balut, M: "A Comparison Between the Native Mexican and Caucasians: Master's Thesis", Loma Linda University, 1997
- ³ a. Yonezu et al: World Journal of Orthodontics: Vol. 2, November 2001
b. Personal study by Dr. Raymond Sugiyama
- ⁴ Etsuko Sebata-Motegi: Shikwa Gaku, 1981
- ⁵ Marian Almyra Sevilla Naranjilla, DMD, MA, DipOrth: "Cephalometric Features of Filipinos with Angle Class I Occlusion According to the Munich Analysis", Angle Orthodontics, Vol. 75, No. 1, 2005

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LATIN / HISPANIC PRESCRIPTION
ProTorqueTM

MINI MASTER SERIES

The ProTorque System - Latin/Hispanic Prescription

Maxillary	Torq	Ang	Rot	M-D	R/L	.018		.022	
						No hook	With hook	No hook	With hook
Central	+24	+3	0	.140	R L	310-2001 310-2002		310-2021 310-2022	
Lateral	+18	+6	0	.115	R L	310-2003 310-2004		310-2023 310-2024	
Cuspid	+8	+9	5	Hook D-G	R L	310-2005 310-2006	310-2005B 310-2006B	310-2025 310-2026	310-2025B 310-2026B
1st Bicuspid	-6	0	0	HGW, hook D-G	R L	310-2007 310-2007	310-2104B 310-2105B	310-2027 310-2027	310-2114B 310-2115B
				OFFSET, HGW	R/L	310-8207		310-8227	
2nd Bicuspid	-6	0	0	On raised pad, hook D-G	R L	310-8207 310-8207	310-8208B 310-8209B	310-8227 310-8227	310-8228B 310-8229B
				OFFSET, HGW	R/L	310-8213 310-8214		310-8233 310-8234	
Mandibular									
Anteriors	+3	0	0	Bevel occlusal	R/L	310-2010		310-2030	
Cuspid	-5	+5	5	Hook D-G	R L	310-2008 310-2009	310-2008B 310-2009B	310-2028 310-2029	310-2028B 310-2029B
1st Bicuspid	-12	+2	0	HGW, hook D-G	R L	310-2011 310-2012	310-2011B 310-2012B	310-2031 310-2032	310-2031B 310-2032B
				OFFSET, HGW	R L	310-8211 310-8212		310-8231 310-8232	
2nd Bicuspid	-17	+2	0	HGW, hook D-G	R L	310-2013 310-2014	310-2013B 310-2014B	310-2033 310-2034	310-2033B 310-2034B
				OFFSET - on raised pad HGW	R L	310-8213 310-8214		310-8233 310-8234	

BRACKET ID
Color coded by quadrant

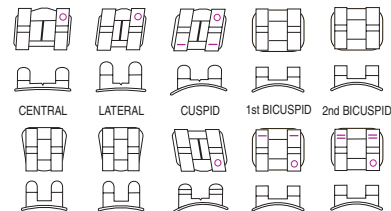
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1st bicuspid with hook - "-"
2nd bicuspid - 2 ID lines occlusal and dimple D-G
2nd bicuspid with hook - "="



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