



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-distally<sup>1</sup> and have less angulation<sup>2,3</sup> 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.

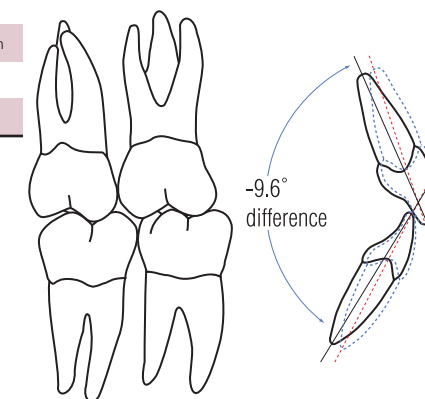


*Dr. Raymond Sugiyama, D.D.S., M.S. is a Diplomate of the American Board of Orthodontics and has been on the teaching faculty of Loma Linda University for twenty-eight years. He is a visiting lecturer at thirty universities throughout Asia. Dr. Sugiyama is a Fellow of both the American College of Dentists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

### CEPHALOMETRIC COMPARISONS

	Asian Averages Chinese, Japanese, Korean and Thai	Caucasian Averages <sup>4</sup>	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 canines<sup>1</sup>
4. Asian teeth have less angulation<sup>2</sup>

### REFERENCES

- <sup>1</sup> Yonezu et al: World Journal of Orthodontics: Volume 2, November 2001
- <sup>2</sup> Etsuko Sebata-Motegi: Shikwa Gaku (1981)
- <sup>3</sup> Songlim Choi et al: Shikwa Gaku (1984)
- <sup>4</sup> 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