ครั้งที่ 4 (2.1)
Examination Guide

ORAL EXAMINATION GUIDELINES

For

Orthodontic Patients





DISEASE VS ABNORMAL CONDITION

Medical problems → DISEASE

Orthodontic problems → Malocclusion / Facial disharmony

Non Orthodontic problems → Facial disharmony

Not DISEASE
(Abnormal Condition)

Normal occlusion Vs Mal occlusion?

Implied by

Esthetic + **Function**

-Social acceptance
-Job success

-mastication
-speech
-protection of stomatognathic system

What is normal occlusion ?

Objective findings

Known or Unknown Etiology

Function
6 keys

Variable
Morphologic feature

Subjective findings

patients seek

Esthetic

Individuals
Nature variation
Races
Culture

What is normal occlusion ?

Nature variation

Malocclusion — Normal occlusion — Malocclusion

Patients

Orthodontist

How could we REACH the patients desire ?

Orthodontic Treatment

overcome malocclusion

Psychosocial difficulties

(Facial and dental appearance)

Patient desire (Esthetic)

How could we ATTACK the patients desire ?

Good occlusion :
Aesthetic excellence
(Patients expectation)

Good occlusal interdigitation is good function & esthetic

Cephalometric norm :
Skeletal / Dental Problems
Surgery / Compromised

Related to good facial esthetic

Clinical examination :
Good collection
(Knowledge & Experience)

CC, med &dent Hx, extra & intra oral, functional

Other patient records :

Models, photograph, OPG, hand wrist, Cervical spine

Steps in Dx and Tx planning

The process of transformation from subjective to objectives (Black box)

Other patient records :

Data Base

Questions /Interview | Photograph | Clinical examination | X-Ray | Model (Plaster)

Pathology controlled before orthodontic Tx

Data (Problems) Based

- Etiology of Malocclusion
- Growth Pattern
- MWC Development Pattern

+

Problems List

- Interference in occlusion (10 Keys)
- Disproportion of the soft tissue (Mac Mini Micro)
- Disproportion of the hard tissue
- (Cephalometric)

Synthesis and Diagnosis → **Treatment objectives (SCA)** → **Mechanic plan (BKT,SCA<Anch, Ext,)** → **Treatment sequence** → **Treatment (Implement)** → **Treatment re-evaluation**

Orthodontic priority option order → **Possible solution** → **Compromise cost/ benefit time consuming the result** → **Consultation** → **Informed consent**

Dynamic Micro Treatment Plan

Leveling Phase

Levelling Status

1, 2, 3 order levelling

Working Phase

Anchorage

Requirement > Preparation

Finishing Phase

10 keys to esthetic excellences

Settlement

Continuous monitoring and appropriate reassessment and adjustment to the original plan

Treatment (Implement)

Treatment Objectives

Esthetic-Occlusion-Balance

DATA COLLECTION

Questions / Interview

Clinical examination

Evaluation of diagnostic records

- -Dental cast
- -X-ray
- -Photographs

The Problem-based Approach

Questions / Interview

Orthodontics Evaluation form

Patient' s Name_____ Date : _____

Residence' s Name :_____ Nick Name :_____

Parent' s Country Origin : _____

I. General Information

A. Summary of medical history questionnaire :_____

B. Past orthodontics treatment ? ☐ Yes ☐ No

If yes, explain_____

C. Physical Development : Compared to Chronological age

☐ Matches ☐ Ahead ☐ Behind

D. Dental Development : Compared to Chronological age (Tooth Eruption)

☐ Matches ☐ Ahead ☐ Behind

E. Patients attitude towards problem and orthodontics

☐ Positive ☐ Indifferent ☐ Negative

F. School performance

☐ Excellent ☐ Good ☐ Fair

G. Other in the family with malocclusions or any orthodontic problems ?

☐ Grandparents ☐ Parents ☐ Siblings

H. Past face injury ? _____

I. Psycho-social evaluation (Internal VS External Motivation)

1. Nature of the Orthodontic problems (CC)

Congenital Specific nature _____

Developmental When recognised _____

Acquired When acquired _____

2. Duration of concern about the Orthodontic problems

1	2	3	4	5	6	7	8	9	10
Week				Months					Years

All right reserved.

Questions / Interview

- Chief complaint (Expectation, Fake / Truth)
- Medical and dental history (Orthodontic Tx influenced)
- Physical growth evaluation (Time of Treatment, Genetic)
- Social and behavioral evaluation (Motivation, Compliances)

How to Questions / Interview

Good communication

Patient's expectation

Simple question

Patient's concern

Parent's concern

Dentofacial esthetics

Alignment & occlusion

Chief complaint

The chief complaint would be problematic if each factor is not in the same line

Psychosocial problem

Chief complaint

The most important information what is a major reason for seeking consultation and treatment and if possible.

เป็นอะไรถึงอยากจัดฟัน ? / จะให้หมอแก้ไขอะไรให้ ?

ริมฝีปากบนอูม	อูม / ยุบ	ฟันบน /ล่าง	เก / ห่าง
ริมฝีปากล่างอูม	อูม / ยุบ		บนคอมล่าง (เหยิน)
ขากรรไกรบน	ยื่น / ถอย		ล่างคร่อมบน(ฟันล่างยื่น
ขากรรไกรล่าง	ยื่น / ถอย		ปิดช่องฟันปลอม
คาง	แหลม / สั้น		
โหนกแก้ม	ใหญ่		
รูปหน้า	บาน		

Chief complaint

Simple Question

- เป็นอะไรถึงอยากจัดฟัน
- สวยแล้วจะมาจัดทำไม
- ต้องการแค่นี้นะ
- มีอะไรที่อยากได้ หรือ ให้แก้ไขอีกหรือเปล่า
- รู้สึกอย่างไรกับรอยยิ้ม

Communication

Motivation

Patient's Concern

- ฟันไม่สวย
- ฟันห่าง เก
- อยากให้หน้าเรียว
- หน้าเหมือนม้า
- เศษอาหารชอบติด
- ถูกส่งตัวมาจากหมอ
- แม่/แฟนให้มาจัด
- เพื่อนล้อ
- เห็นเพื่อนจัดแล้วสวย
- อยากให้สวยกว่านี้
- อยากใส่เครื่องมือ

Patient's Expectation exploration

Questions / Interview

1. Are you in good health?

- Some medical condition can affect the result of orthodontic tx

2. Are you taking any medicine? (If yes Please Specify) __

-Bisphosphonates (treatment of osteoporosis)

- Prostaglandin inhibitors

-Phenytoin (Anticonvulsant)

3. Have you ever been seriously sick or hospitalized?

(If yes please explain)

-Trauma, Ashma, etc.

4. Have you ever had any of the following diseases ?

-some medical condition can affect to orthodontic Tx

Medical conditions & Orthodontic Tx

Medical Condition	Implications	Action
-Asthma	-Root resorption	-Monitor every 6 months for evidence of EARR
-Allergies	-Allergic reaction	-Determine material causing allergy and substitute for a nonallergic material
-Coagulation disorders	-Bleeding risk	-Avoid if possible treatment plans involving extractions
-Diabetes	-Periodontal disease	-Monitor adequate control of diabetes. Manage with a periodontist
-Epilepsy	-Gingival hypertrophy (medications)	-Monitor excellent plaque control. Manage with a periodontist for possible surgical intervention during treatment
-Heart valve conditions	-Endocarditis	-Premedication when fitting bands
-High blood pressure	-Gingival hyperplasia	-Monitor oral hygiene. Complement brushing with chlorhexidine
-HIV	-Periodontal disease, opportunistic infections	-Consult with physician about patient's general condition. Monitor oral hygiene and periodontal status
-Leukemia	-Mucositis, oral infections	-Remove appliances until remission (consult physician)
-Physical or mental handicap	-Gingivitis, relapse (muscle hyper-/hypo-activity)	-Electric toothbrushes may aid in oral hygiene. Consider mechanics plan where manual dexterity is not needed
-Rheumatoid arthritis	-TMJ degeneration	-Monitor TMJ. Manage with an oral surgeon if severe arthritic degeneration
-Transplant patient	-Gingival hyperplasia related to immunosuppressant drug	-Monitor oral hygiene. Consider chemical complement to brushing such as chlorhexidine.
-Xerostomia (primary or secondary)	-Caries	-Monitor for loose appliances. Consider fluoride rinses as an oral hygiene supplement

5. Have you ever experienced an unusual reaction (Allergy or sensitization) to any medicine or Antibiotics? (If yes, please specify)_____

6. Did you ever suck your thumb? (Till what age?)

7. Do you generally breathe through the mouth?

8. Do you generally have problems breathing through your nose?

9. Did you ever consult an E.N.T. specialist?

10. Did you ever suffer any injury in the dentition, face or head

11. Have you ever had pain in the T.M.J. area?

12. Have you ever noticed clicks or other noises concerning the T.M.J.?

13. Have you ever had and primary or permanent teeth extracted?

14. Do you play any wind instrument?

15. What is the main complaint which brought you for evaluation?

-Protruding teeth -Crooked front teeth

-Health related -Referred by dentist

-อยากหน้าเล็ก, กรามเล็ก, เศษอาหารติดฟัน, ฟันหลอ

-ทำไมถึงอยากจัดฟัน -รู้สึกยังไงกับรอยยิ้ม

Can the  go with braces ?

- mother's nutrition may be compromised as pain is elicited by tooth movement.

- radiographs are not usually recommended

- possibility of gingival hyperplasia due to hormonal influence

- taking care of oral hygiene is limited

General Information

A. Summary of medical history questionnaire :_____

B. Past orthodontics treatment? _____

C. Physical Development: Dental Development compared to Chronological age

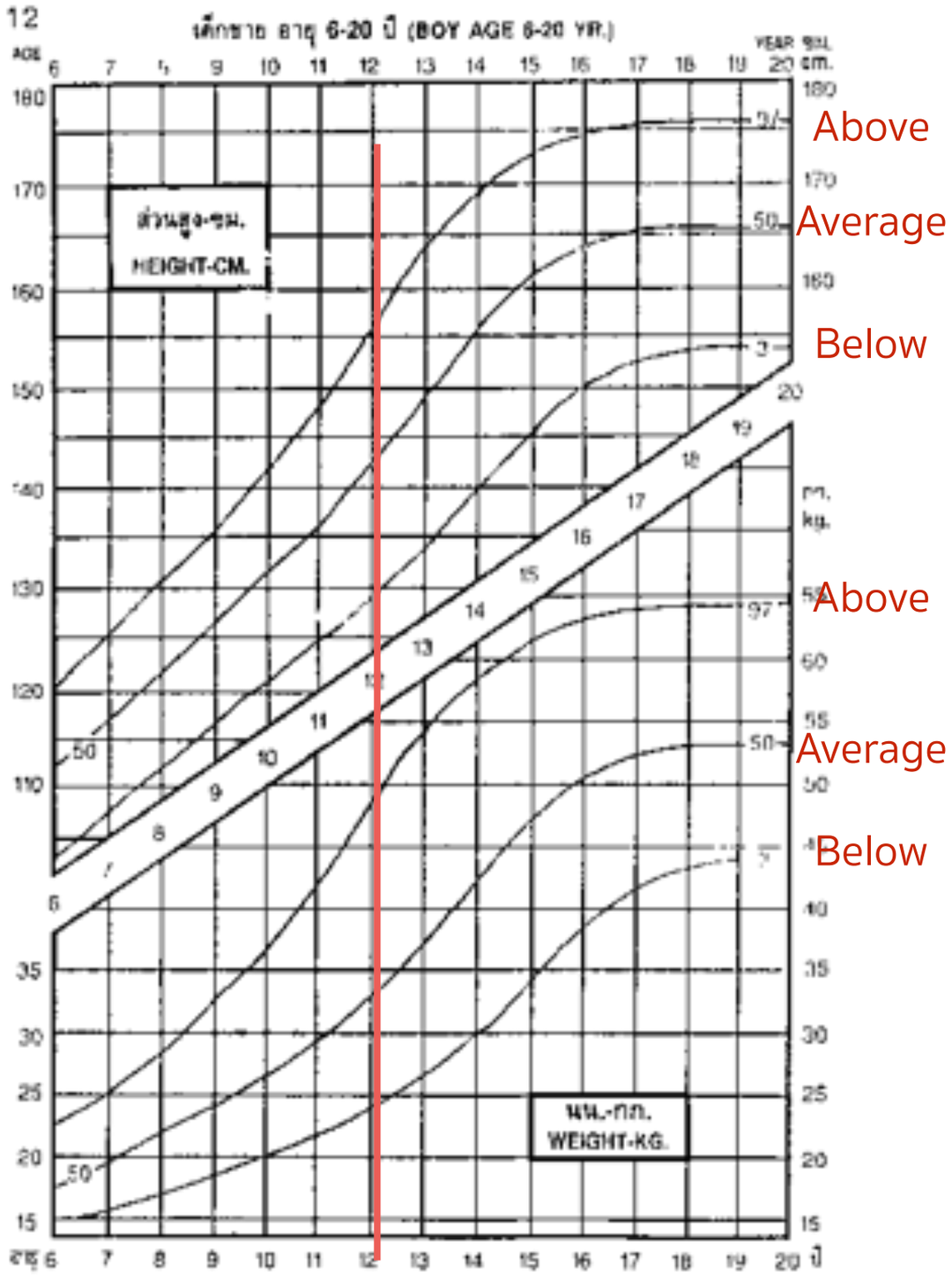
Growth Chart, สูงขึ้นเยอะหรือเปล่า, 2nd sexual characteristics

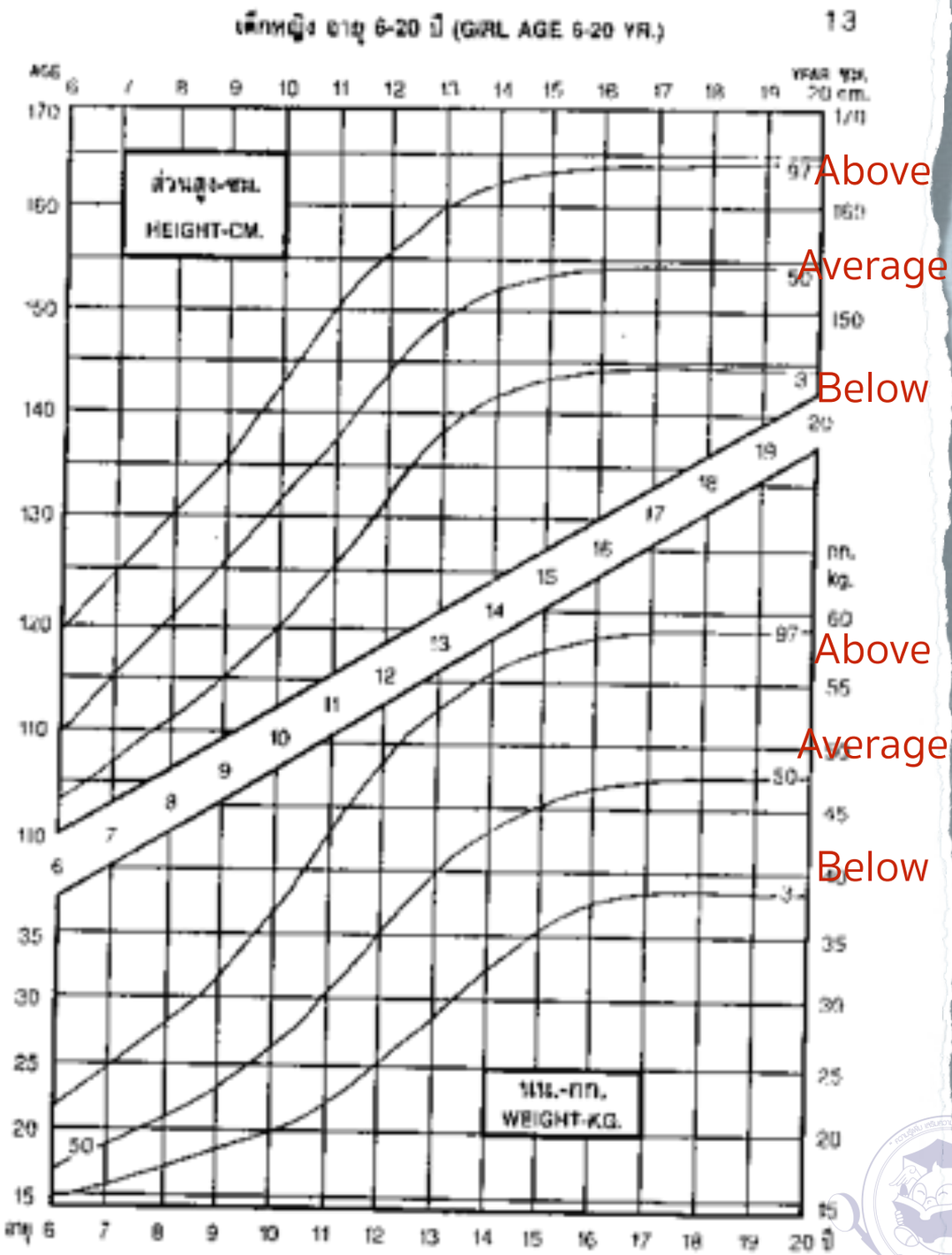
hand wrist, vertebral age

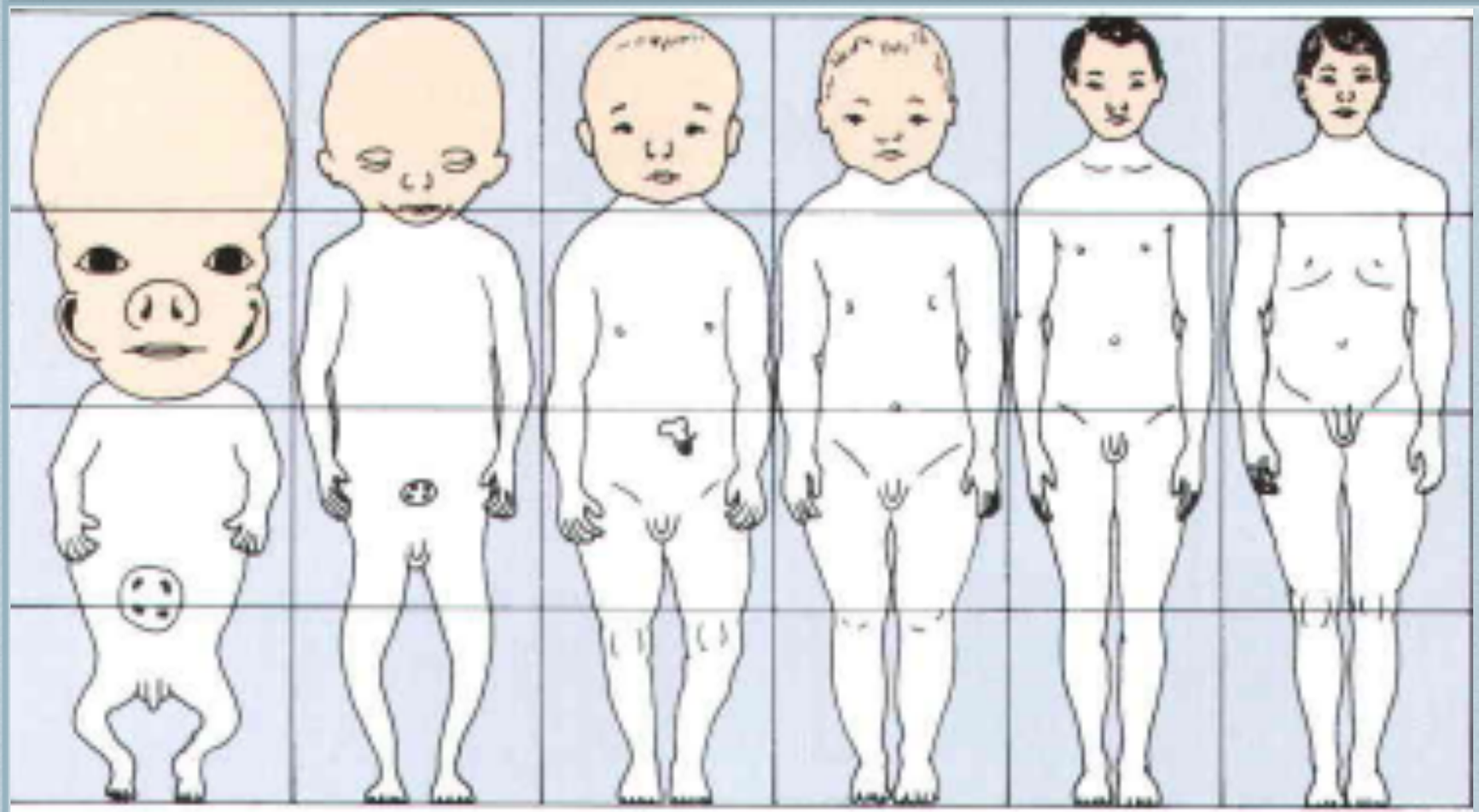
Tip: The child who is advanced in one characteristics is advanced in other as well

: The development of the child mostly follows his/her sibling development

Growth Curve for Thai Children

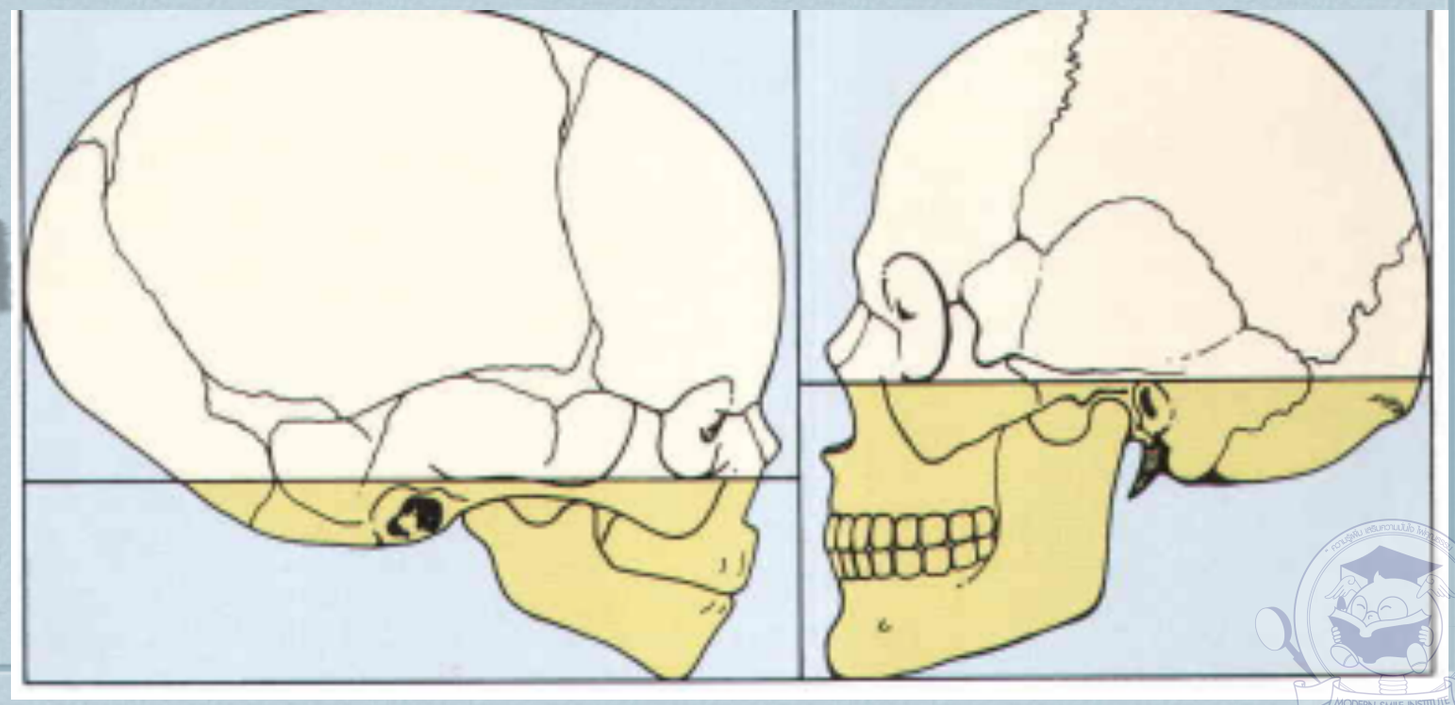


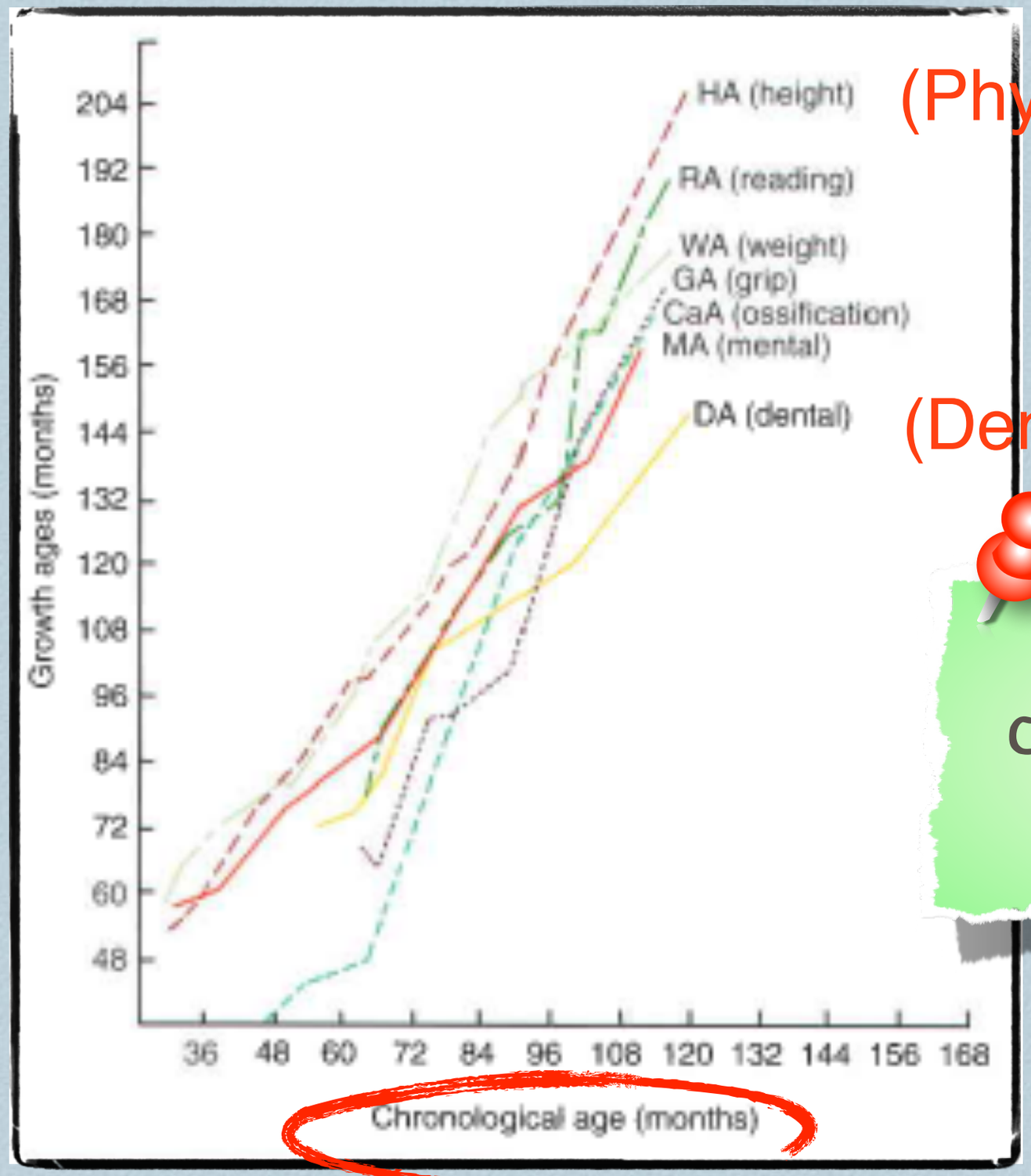




2 Month fetus | 4 Month fetus | Birth | 2 Years | 12 Years | 25 Years

Growth of the face much more develop postnatally

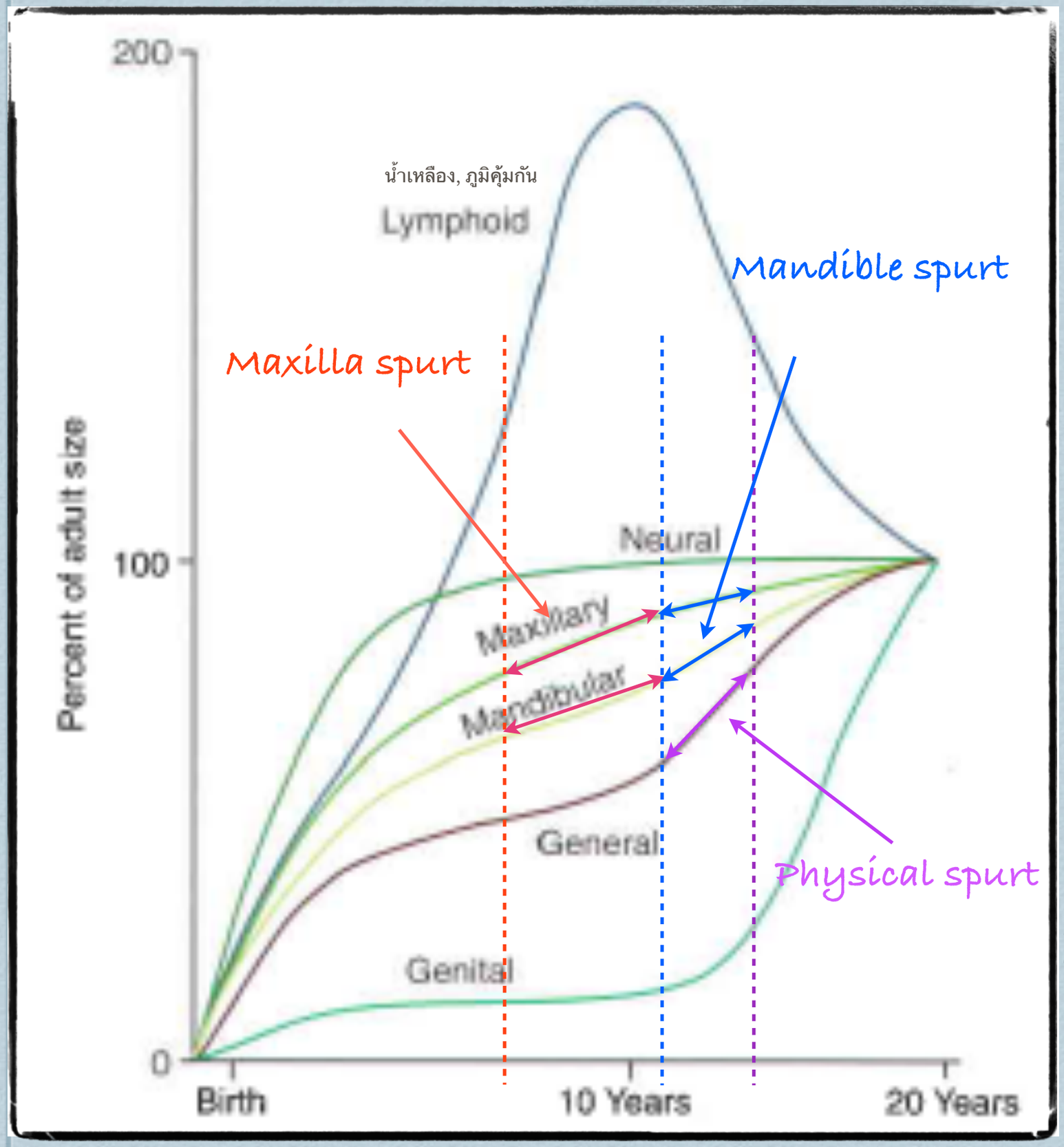




(Physical Development)

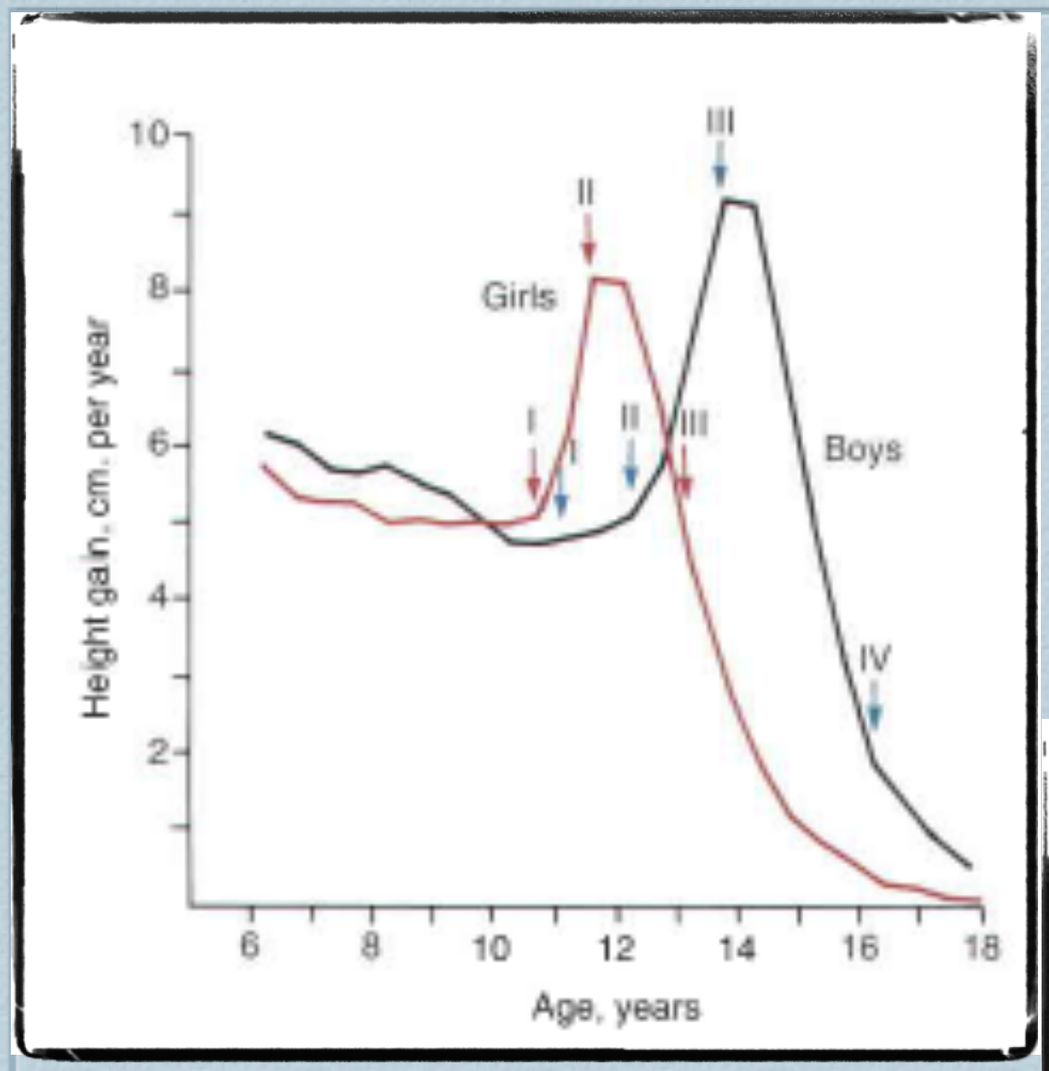
(Dental Development)

DENTAL AGE LESS CORRELATE THAN ANY OF THE OTHERS

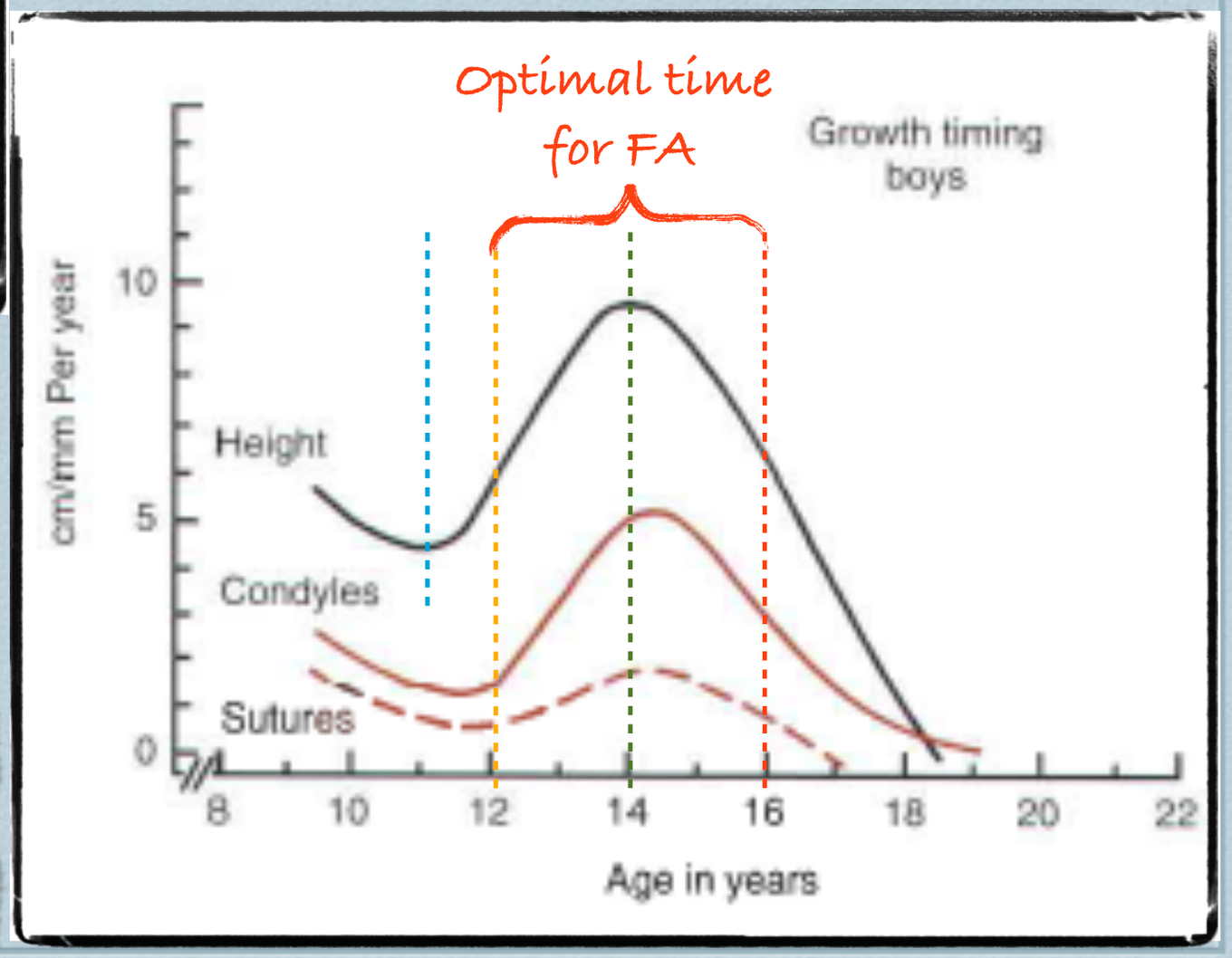


Maxilla spurt: about 7-12 yrs of age

Mandible spurt: about 12-14 yrs of age (The same period of physical spurt)



Velocity curves for girls occur 1-2 years earlier than for boys



the spurt in growth of the jaws occurs at about the same time as the spurt in height

(Physical spurt will start 1 yr earlier than mandible spurt)

Factors Influencing Craniofacial Growth (Malocclusion)

Genetic factors

- Extensive craniofacial deviations (syndromes)
- Abnormalities of tooth development and morphology (canine impaction, congenitally missing teeth, abnormalities in tooth shape)

Combination factors

Environmental factors

- Habit (Tongue Trusting, Thumb Sucking)
- Unbalance rest position long-term force (Tongue position, Breathing Pattern
- Muscular dysfunction (hyperactivity or hypoactivity)
- Premature loss of tooth / teeth

Motivation

External

pressure from another individual (mother, Friends)

many of their peers are having early treatment

Internal

comes from within the individual and is based on his or her own assessment of the situation and desire for treatment (Expectation)

adolescence

Cooperation is likely to be much better

it is important for a patient to have a component of internal motivation.

Patient Expectation

Appearance

- experience greater social or job success.
- If the social problems continue after treatment, as is quite likely, the orthodontic treatment may become resentment.

Dental / Function

Easy to deal with

Cooperation

child need

The extent to which the child sees the treatment as a benefit compared to the other.

parental control

- The degree of parental control or parenting style
- Resentful and rebellious adolescents,

adolescence

Expectation

D. Patient’s attitude towards problem and orthodontics :

Positive Indifferent Negative

E. School performance Excellent Good

F. Others in the family with malocclusions or any orthodontic problems?

Grandparent Parents Siblings

K. Psycho-social evaluation (Internal VS External Motivation)

1. Nature of the Orthodontic problems (CC)

Congenital Specific nature_____

Developmental When recognized_____

Acquired When acquired_____

2. Duration of concern about the Orthodontic problems

1 2 3 4 5 6 7 8 9 10

Week Months Years

3. Esthetic severity of Orthodontic problems

1 2 3 4 5 6 7 8 9 10

Slight Moderate Marked

4. Functional severity of Orthodontic problems

1 2 3 4 5 6 7 8 9 10

Slight Moderate Marked

5. Patient ability to define Orthodontic problems

1 2 3 4 5 6 7 8 9 10

Difficulty assistance ease

6. Patient perspective of the effect of Orthodontic problems on social adjustment

1 2 3 4 5 6 7 8 9 10

Severe Some No

7. Patient perspective of the effect of Orthodontic problems on vocational aspiration

1 2 3 4 5 6 7 8 9 10

Marked Moderate Minimal

8. Patient expectations from Orthodontic treatment

1 2 3 4 5 6 7 8 9 10

Unrealistic Not clear Realistic

9. Patient purpose of Orthodontic treatment

1 2 3 4 5 6 7 8 9 10

Fashion(Want) Combination Treatment (Need)

SUM (Points)……..

35(Poor) <50(Moderate) <80

Motivation of
the individual orthodontic patient

Internal Motivation: 80++
Excellent compliance patient

Moderate Motivation: 40-79
Moderate compliance

External Motivation:39—
Poor compliance Pt.

G. Past face injury? _____(esp. TMJ)

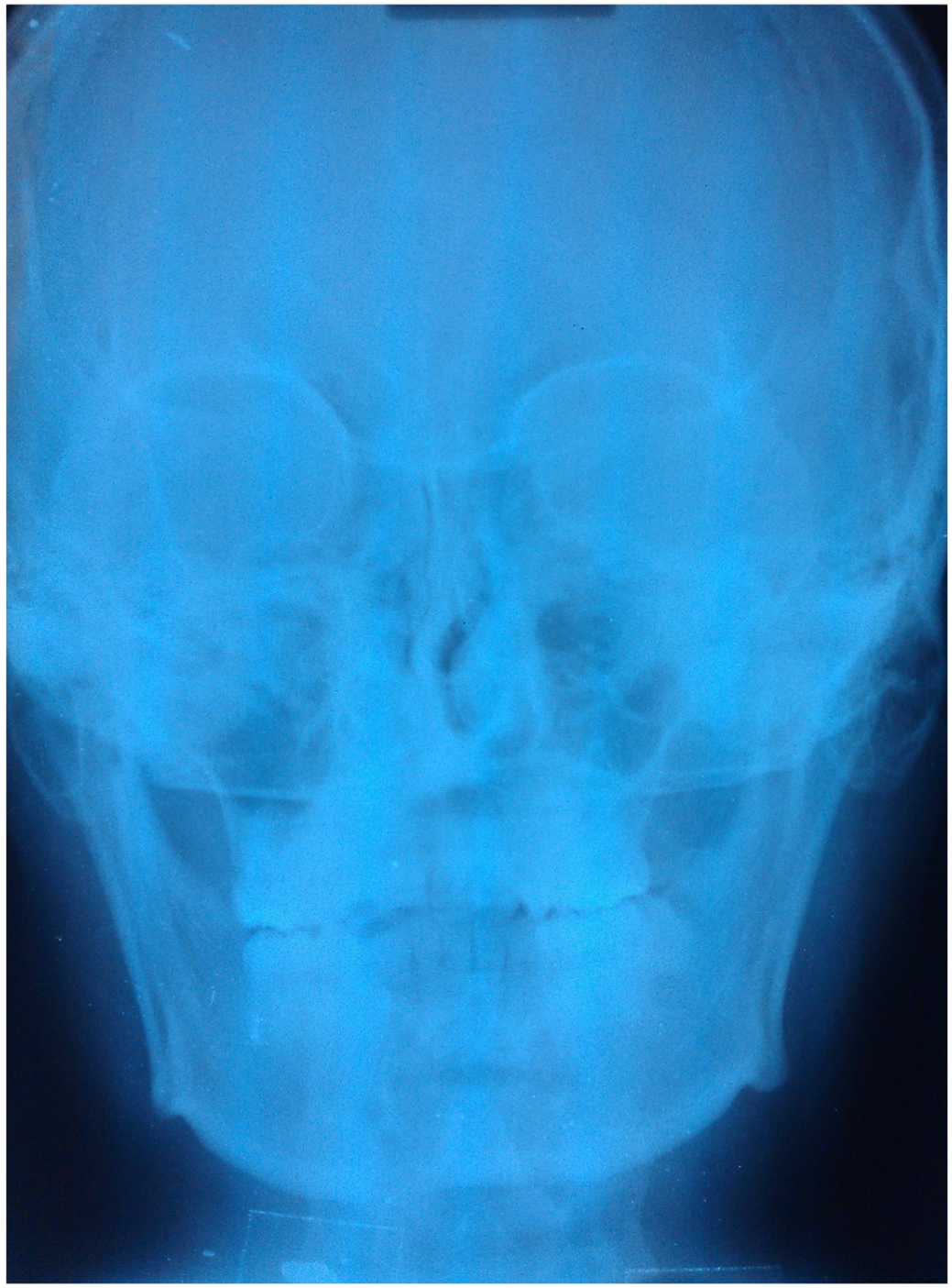
H. Speech : Normal Abnormal

Breathing Pattern : Nasal Mouth

Acute

Chronic due to:

-Adenoids -Allergies -Tonsils
-Deviated Septum -Nostrils



Esthetic Plan in Orthodontic

CR & CO Occlusion with Natural Head Position

	Macro	Mini	Micro	Ceph
Sagittal (A-P)	Convex, Concave, Mand plane angle Retrognathic, prognathic, Full Profile, Lip fullness Zygoma, Chin Nose Projection Nb angle Head Form	U/L lip (Thickness,) Everted lower lip Upper Lip Strain E- line	Angle classification Increase OJ - 7 mm. FACC	Skeletal max / mand relationship Increase OB=100% OJ - 7 mm cranial base, Max, mand, 1/1 Inclination of 1/1 teet 1/1 to Apog/NA/NB/SN/FH/Mand/Max Max mand length, Growth direction
Vertical	Mildly short lower third of face High, low angle Vertical proportion of facial height	U/L lip (Length,) Lip proportion posture at rest (Competent / open)	Increase OB=100% incisors at rest / smile Gingiva shown at rest / Smile	Rotation of mandible Mand plane angle (Divergent) UAFH, LAFH, PFH/AFH, FOP /OP, Dental Height, Growth direction
Coronal (Frontal)	Symmetry of face chin nose eye facial type Vertical proportion of facial height	Cant lip line, Smile symmetry Smile / lips Framework, Buccal Corridor, X bite , S-bite Incisors shows at rest, Midline, Diastema, Frenum Functional shift	Gingival Level, black triangle Tooth Shape color contact Crowding Gingival status angulation and Inclination	
Horizontal Transverse (Intra-arch)	Upper	Arch shape, size Mesial Migration COS	Irregularities, TSD, arch depth	
	Lower	Arch shape, size COS	Irregularities, TSD,	
OMD	Mouth Breathing Adrenoid Enlargement Habit	tongue posture at rest / swallow Tongue Thrusting	Tonicity of muscle, Lips	
General / Medical / Dental History	CC : ฟันเหยิน กรามใหญ่ Patient Expectation Psychosocial Problem	Genetic Problems (Syndrome,Dental) Functional analysis, TMJ	Motivation (Excellence,Poor) Dental History Medical History	Growth & Development Dental age

CLINICAL SOFT TISSUE BASE DIAGNOSIS TREATMENT PLANNING

Classification of Appearance and Esthetic Analysis

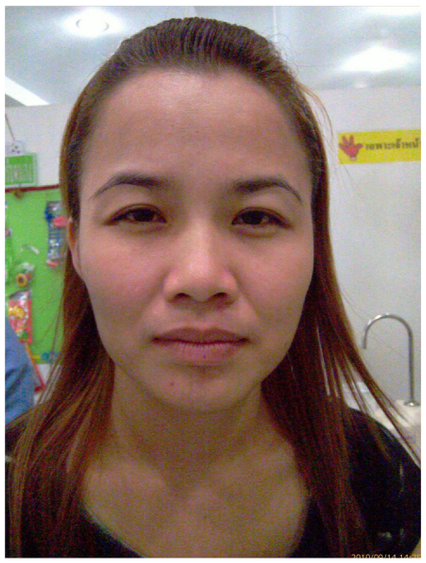
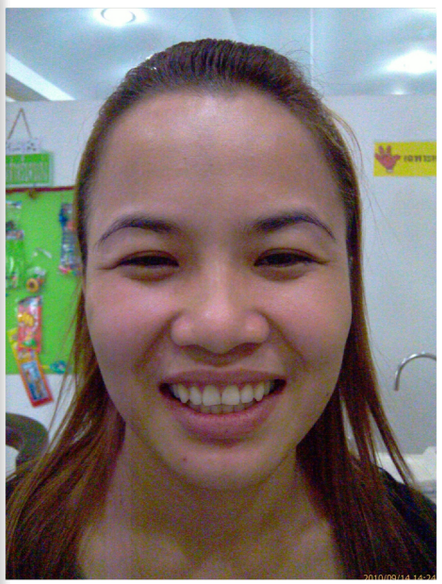
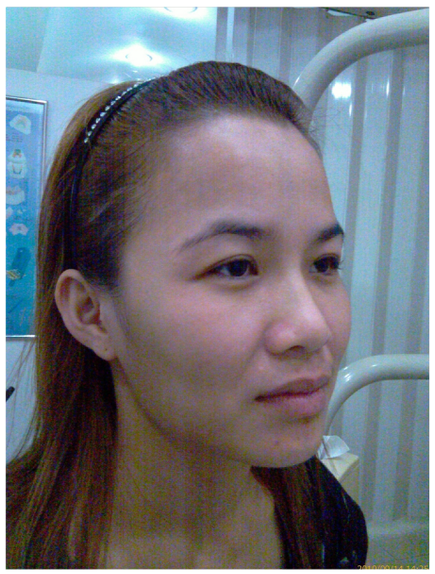
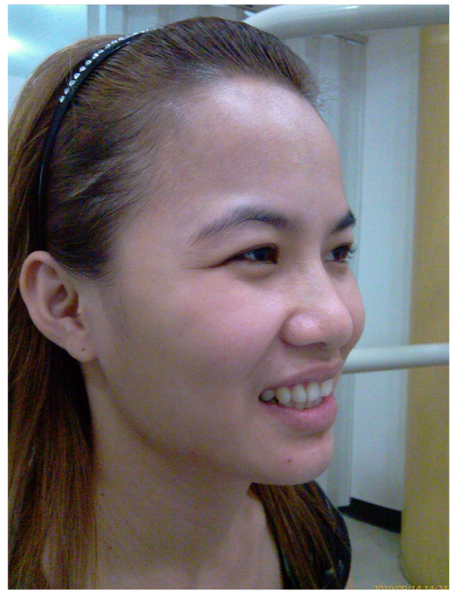
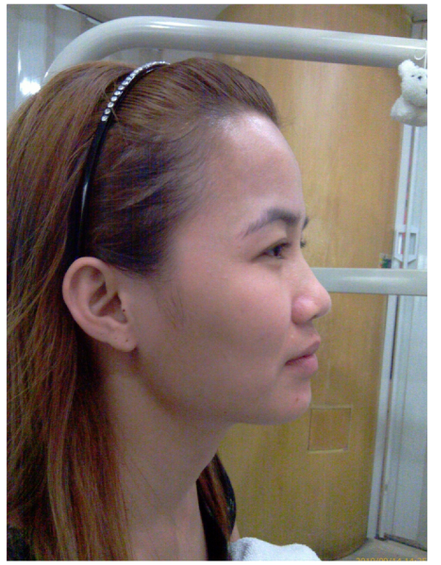
- Macro esthetic
- Mini esthetic
- Micro esthetic

Macro-esthetic

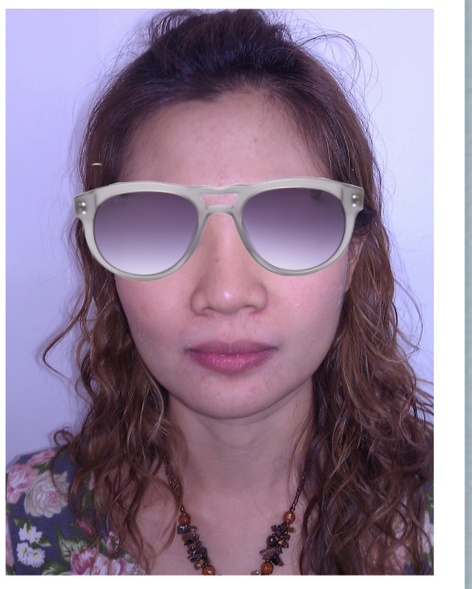


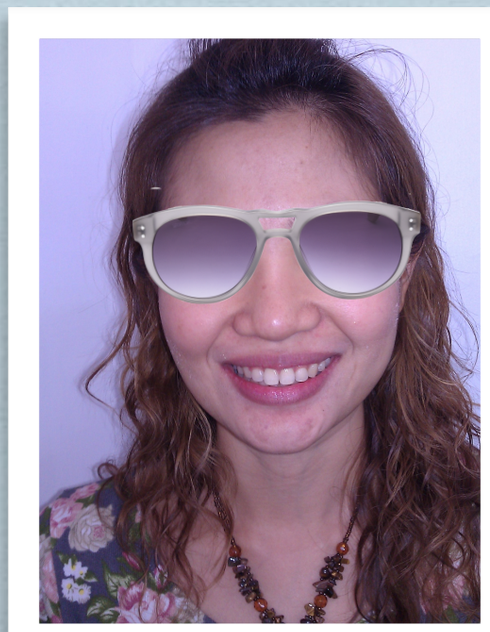


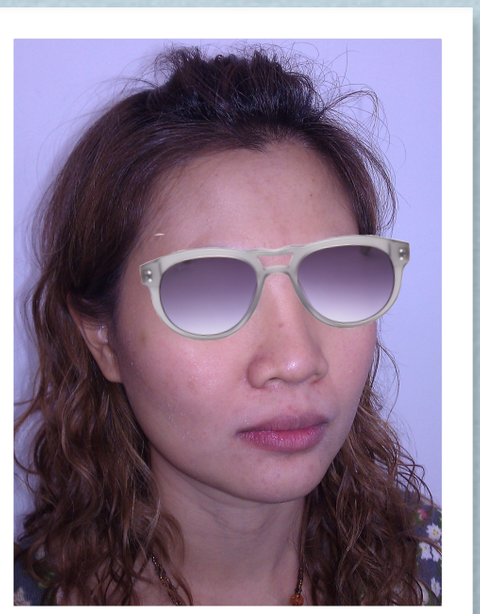


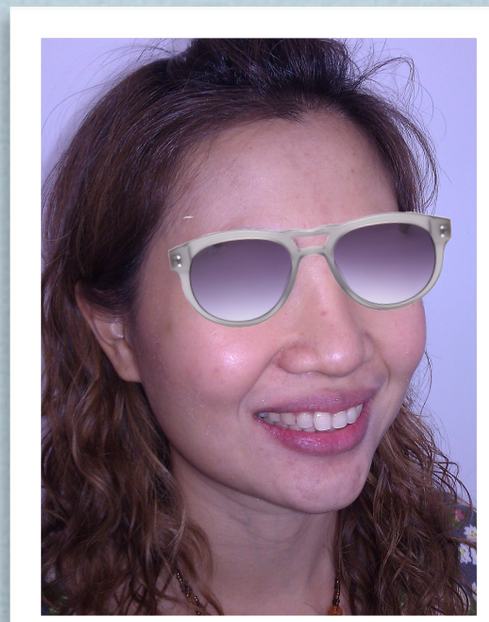






Macro-esthetic











Lateral Profile (Soft tissue Ceph)

- Lip fullness
- Chin / Nasal projections
- Vertical **proportions**

Frontal Profile (**Symmetry**, Width Proportion)

- Big ears
- Zygoma / Mand angle Width
- Chin / Nose Deviation
- Lip Cant

- Facial proportions (Not Esthetic) in all three planes of space
- Severely disproportionate face becomes a psychosocial problem
- Distorted and asymmetric facial features are a major contributor to facial esthetic problems.

Macro esthetic

CLINICAL SOFT TISSUE BASE
DIAGNOSIS TREATMENT PLANNING

Frontal Examination

- asymmetry
- excessive or deficient face height
- mandibular or maxillary deficiency or excess.

II. Facial Features

Macro Esthetic : Frontal Profile

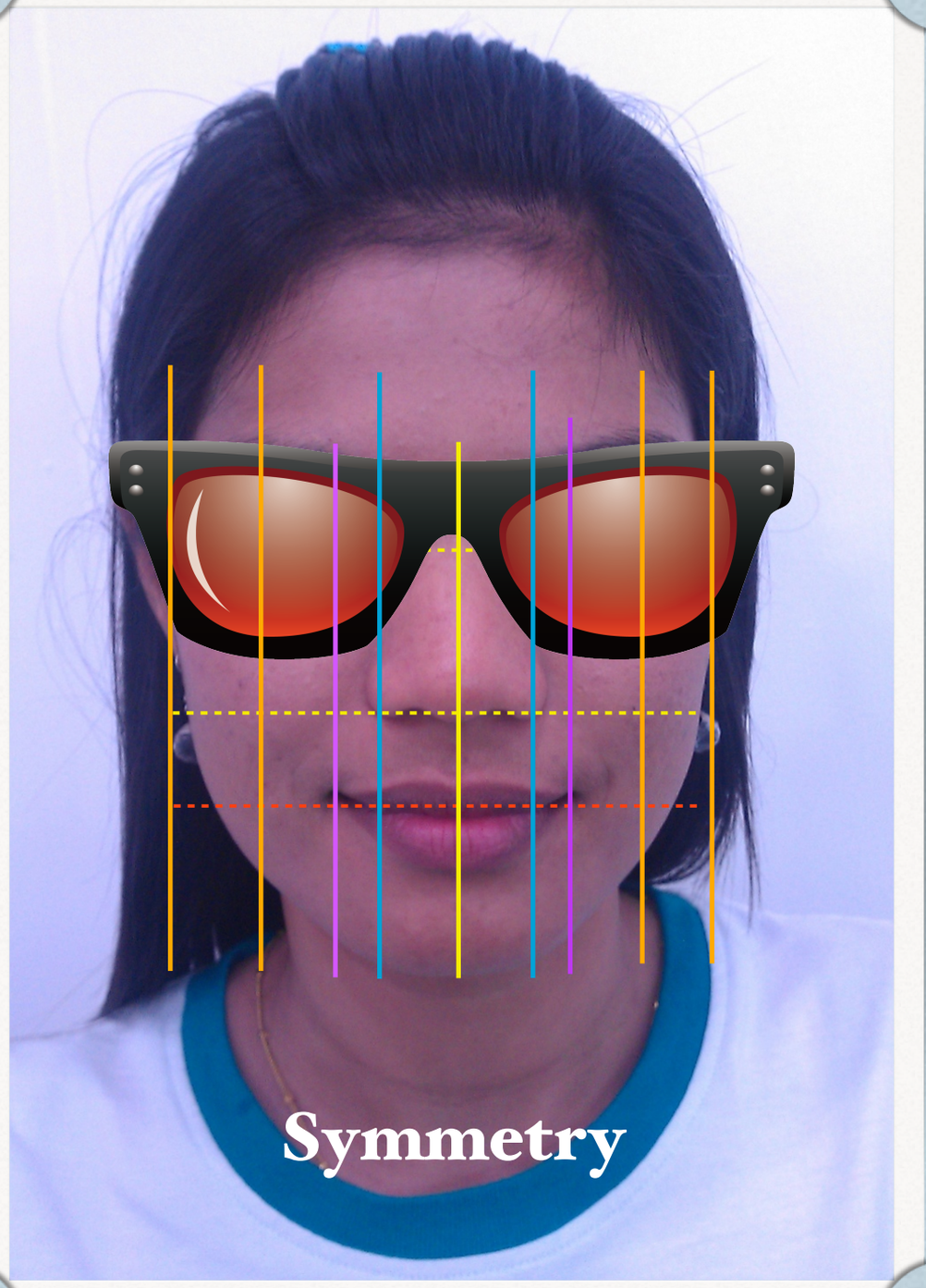
A. Facial Symmetry

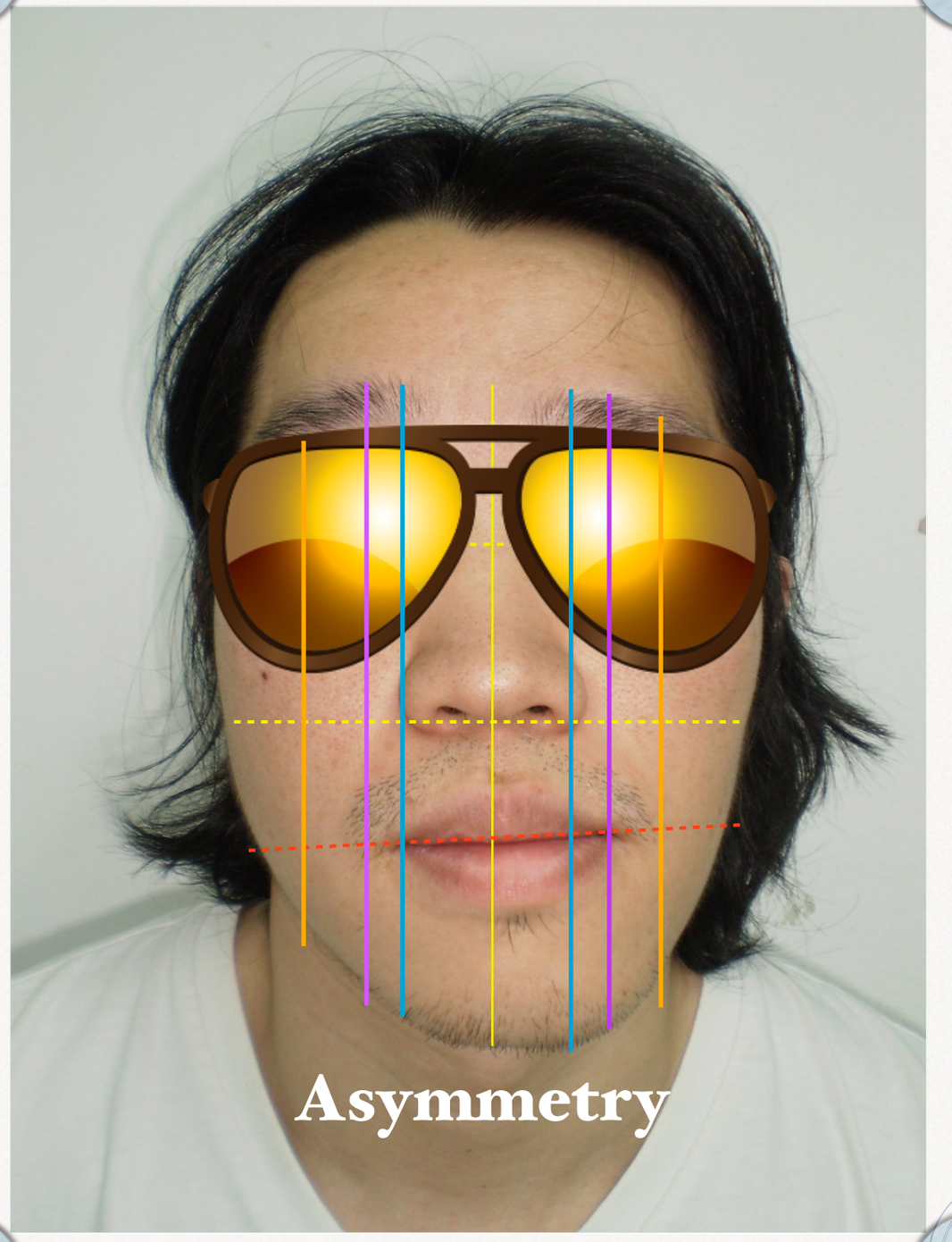
- SYMMETRICAL FACE
- ASYMMETRICAL FACE:
  - MAXILLARY DEVIATION RT. LT.
  - MANDIBULAR DEVIATION RT. LT.
- CANT OF EYE, NOSE, LIPS, CHIN

B. Head Form

Frontal Examination.

Facial Symmetry : normal asymmetry





Macro esthetic

CLINICAL SOFT TISSUE BASE
DIAGNOSIS TREATMENT PLANNING

Profile Analysis

poor man's cephalometric analysis.

- The jaws are proportionately positioned in the anteroposterior (AP).
- Evaluation of lip posture and incisor prominence.
- Reevaluation of vertical facial proportions and evaluation of mandibular plane angle.

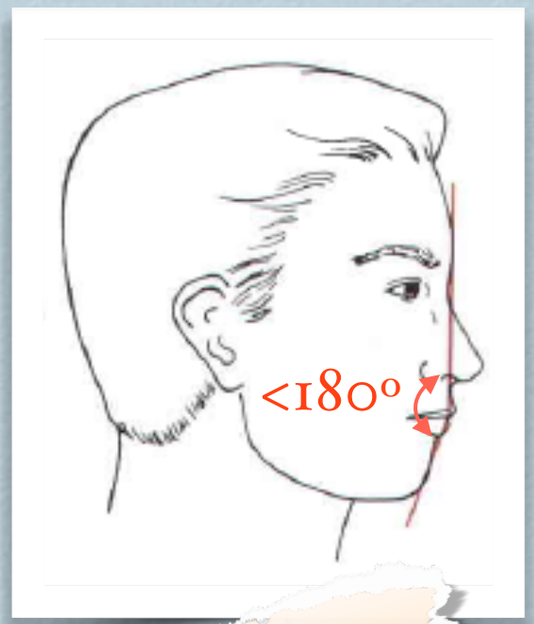
Natural head position

The mandible centered in CO / CR, the lips at rest, and the mouth closed to the first tooth contact

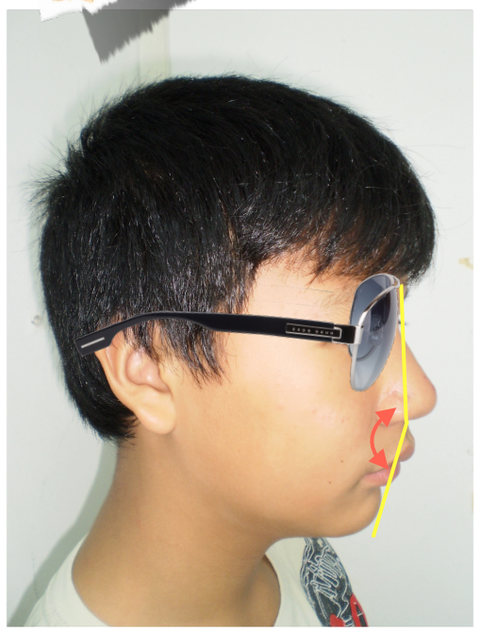
The jaws are proportionately positioned in the anteroposterior (AP).

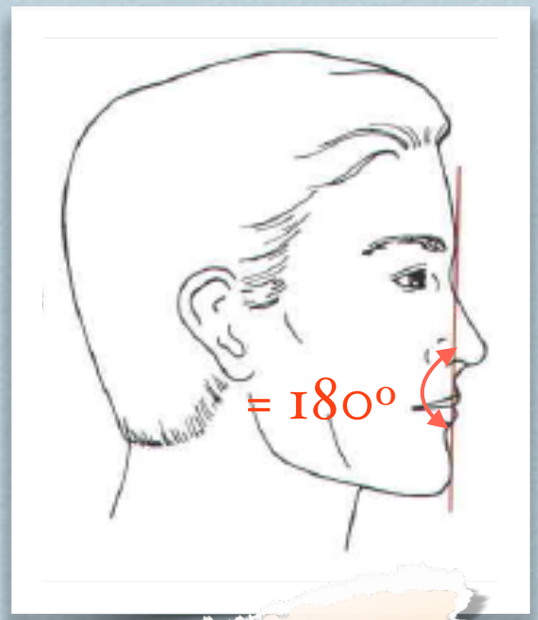
Macro Esthetic : Lateral Profile

A. Soft Tissue Lateral Profile : (3 points)

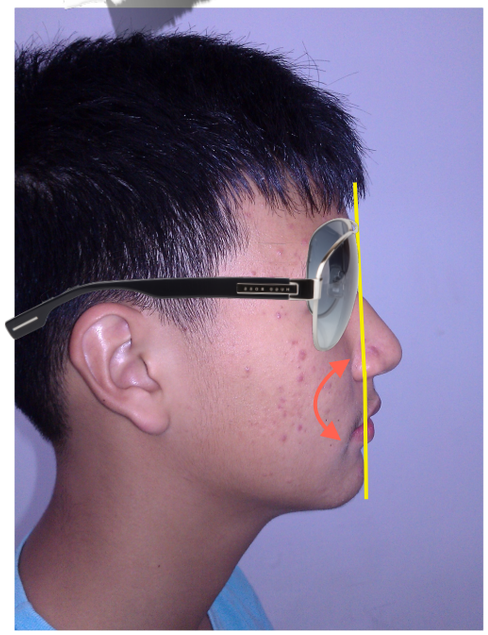


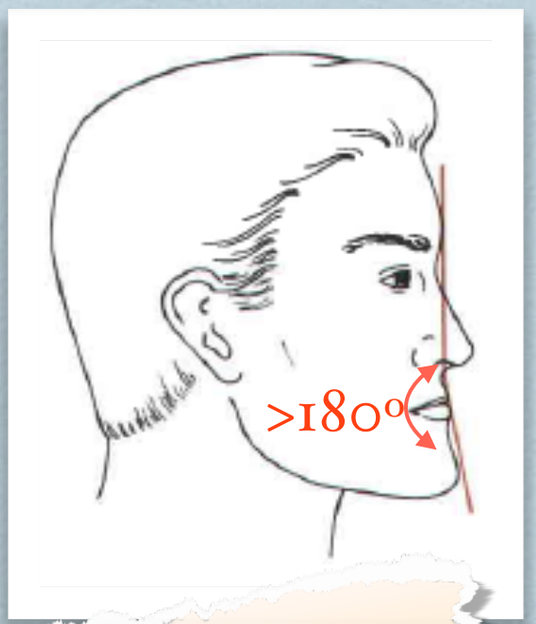
convex



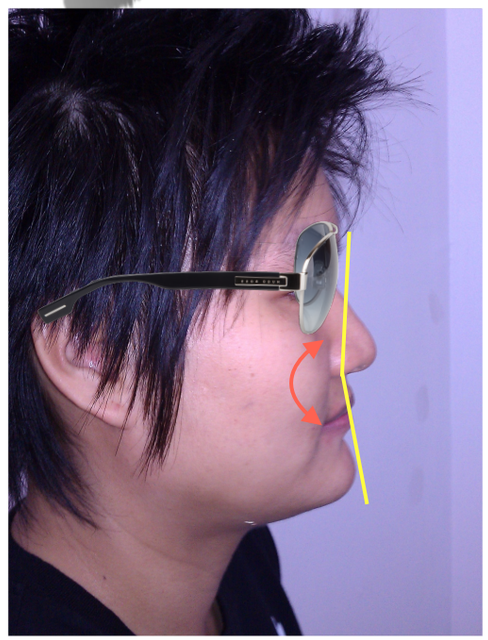


Straight





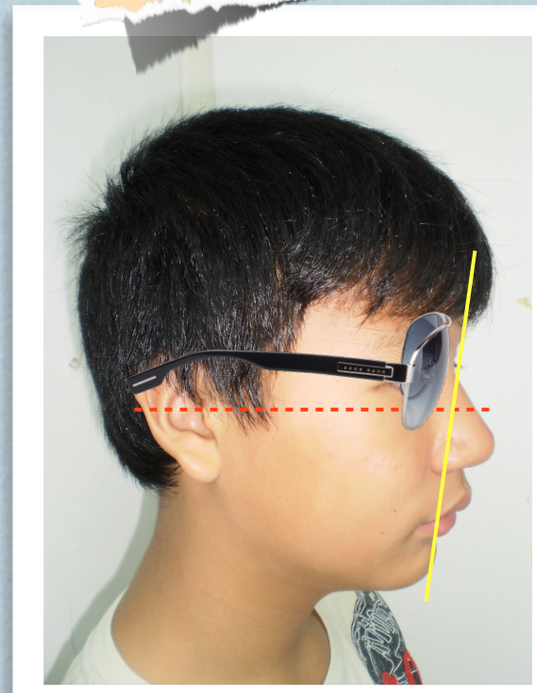
concave

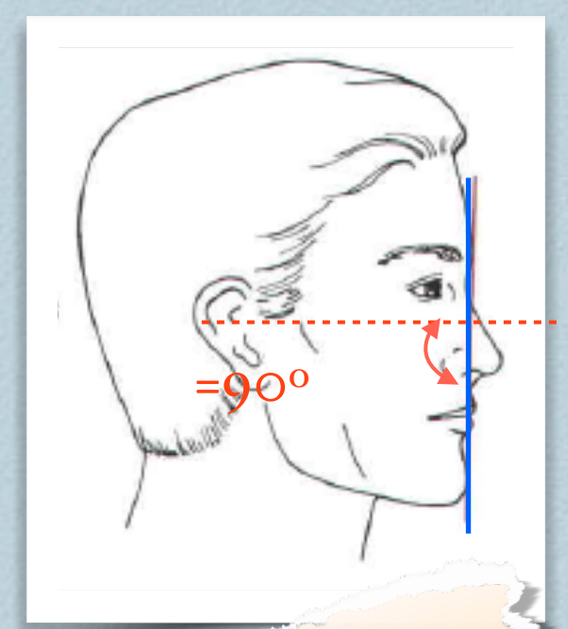


B. Soft Tissue Lateral Profile : (2 points)

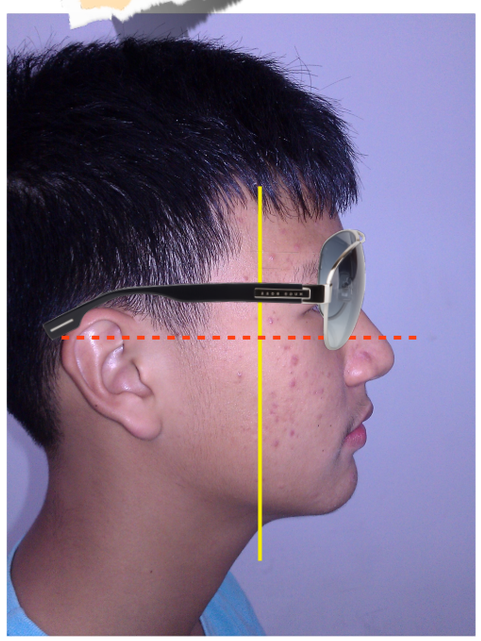


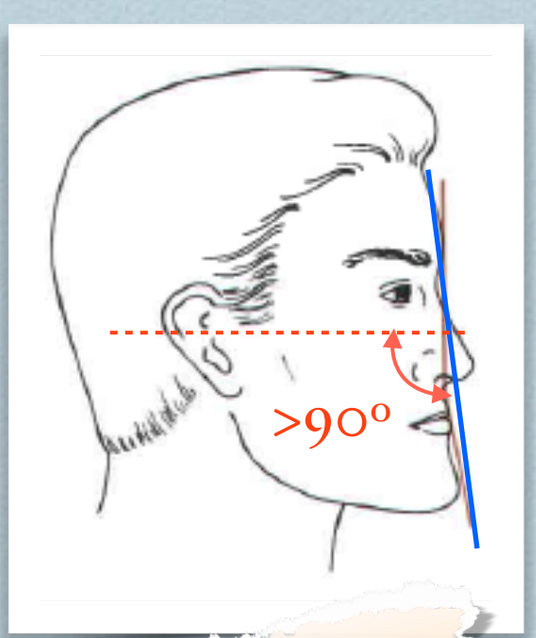
Retrognathic



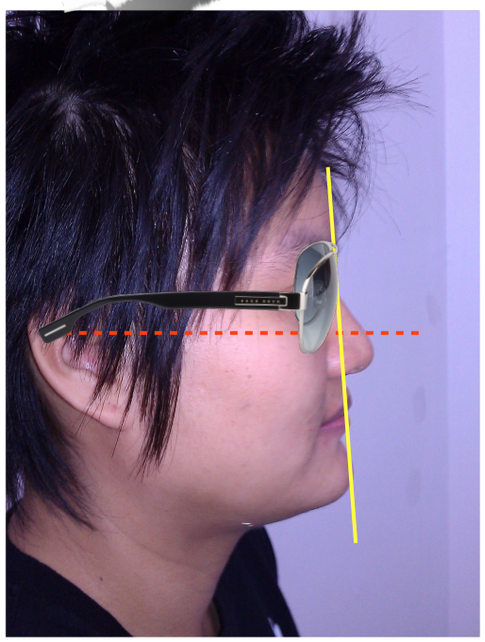


Orthognathic





Prognathic



Evaluation of lip posture and incisor prominence.

Macro Esthetic : Lateral Profile


soi sojeong 53-0297


กุหลาบ ฤทธิ์ด้วง 57-0967 CMP


สลิลธร เพ็งขาเม 62-0188

Evaluation of lip posture and incisor prominence.

Macro Esthetic : Lateral Profile













Evaluation of lip posture and incisor prominence.

Macro Esthetic : Lateral Profile





Thick Lower Sulcus Depth

Evaluation of lip posture and incisor prominence.

Macro Esthetic : Lateral Profile





Everted Lower lip

Evaluation of lip posture and incisor prominence.

Macro Esthetic : Lateral Profile



Open Competent



Close Competent

soft and bony structures are well balanced

Evaluation of lip posture and incisor prominence.

Macro Esthetic : Lateral Profile



Open Competent



Close Competent

soft and bony structures are well balanced

Evaluation of lip posture and incisor prominence.

Macro Esthetic : Lateral Profile



Open Competent



Close Competent

soft and bony structures are well balanced

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Evaluation of lip posture and incisor prominence.

Macro Esthetic : Lateral Profile



Open Competent



Close Competent

soft and bony structures are well balanced

กาญจนา กลางพระเนตร 54-0538 bite fixer cl.1 bimax CMP full profile ext FS

Evaluation of lip posture and incisor prominence.

Macro Esthetic : Lateral Profile



Open Competent

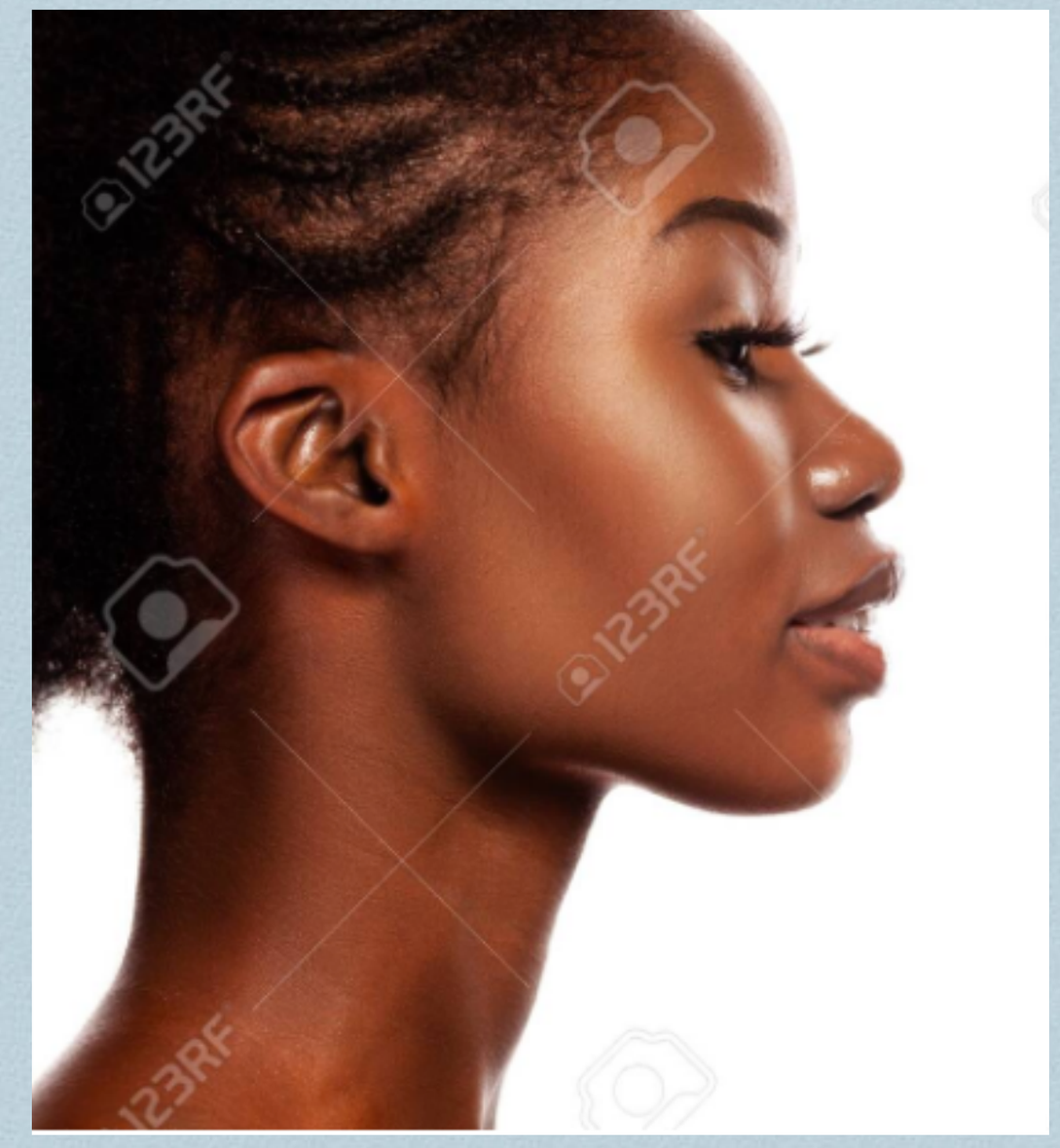


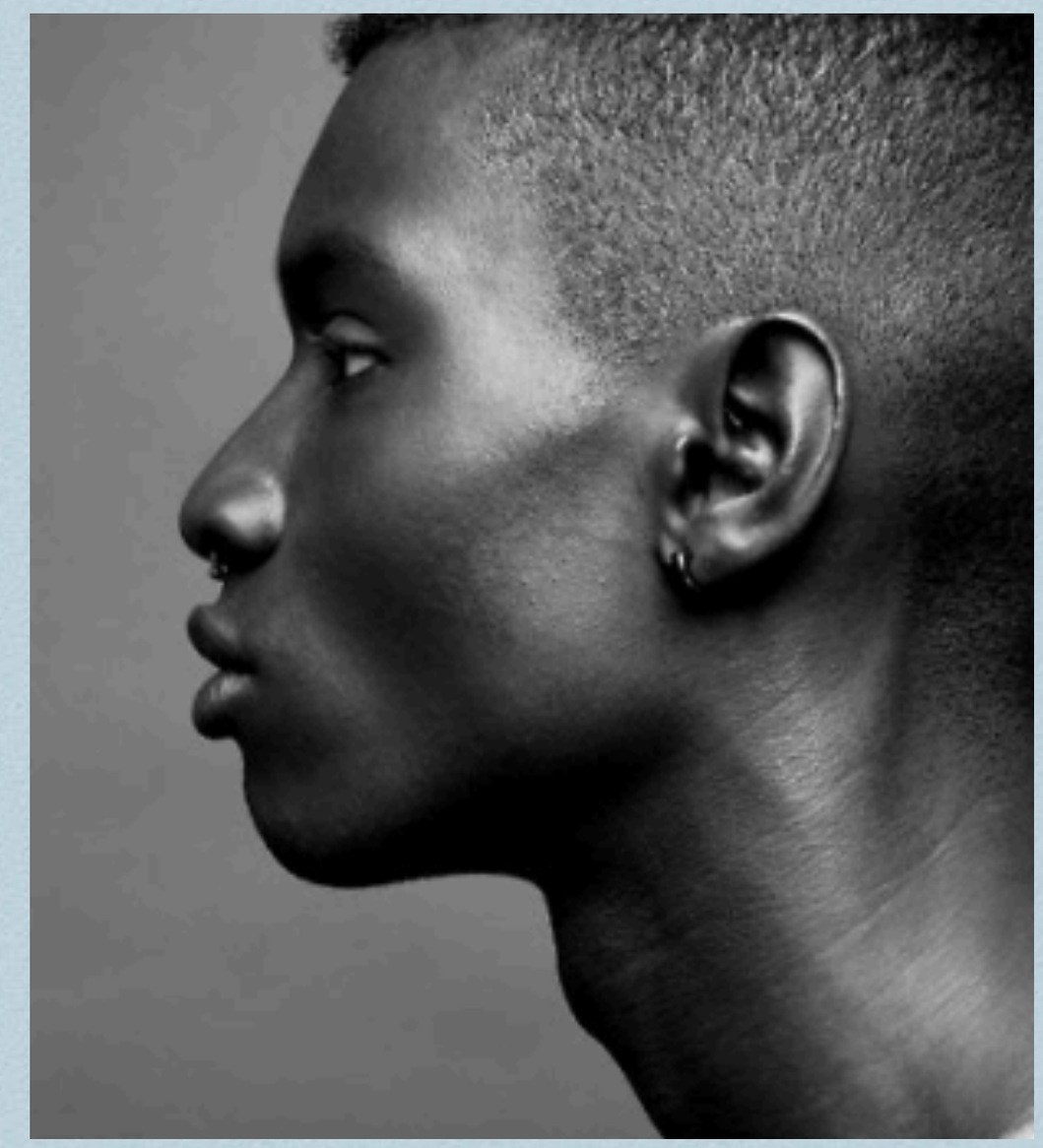
Close Competent

soft and bony structures are well balanced

Evaluation of lip posture and incisor prominence.

Macro Esthetic : Lateral Profile





CO VS CR



CO

Prognathic



CR

orthognathic





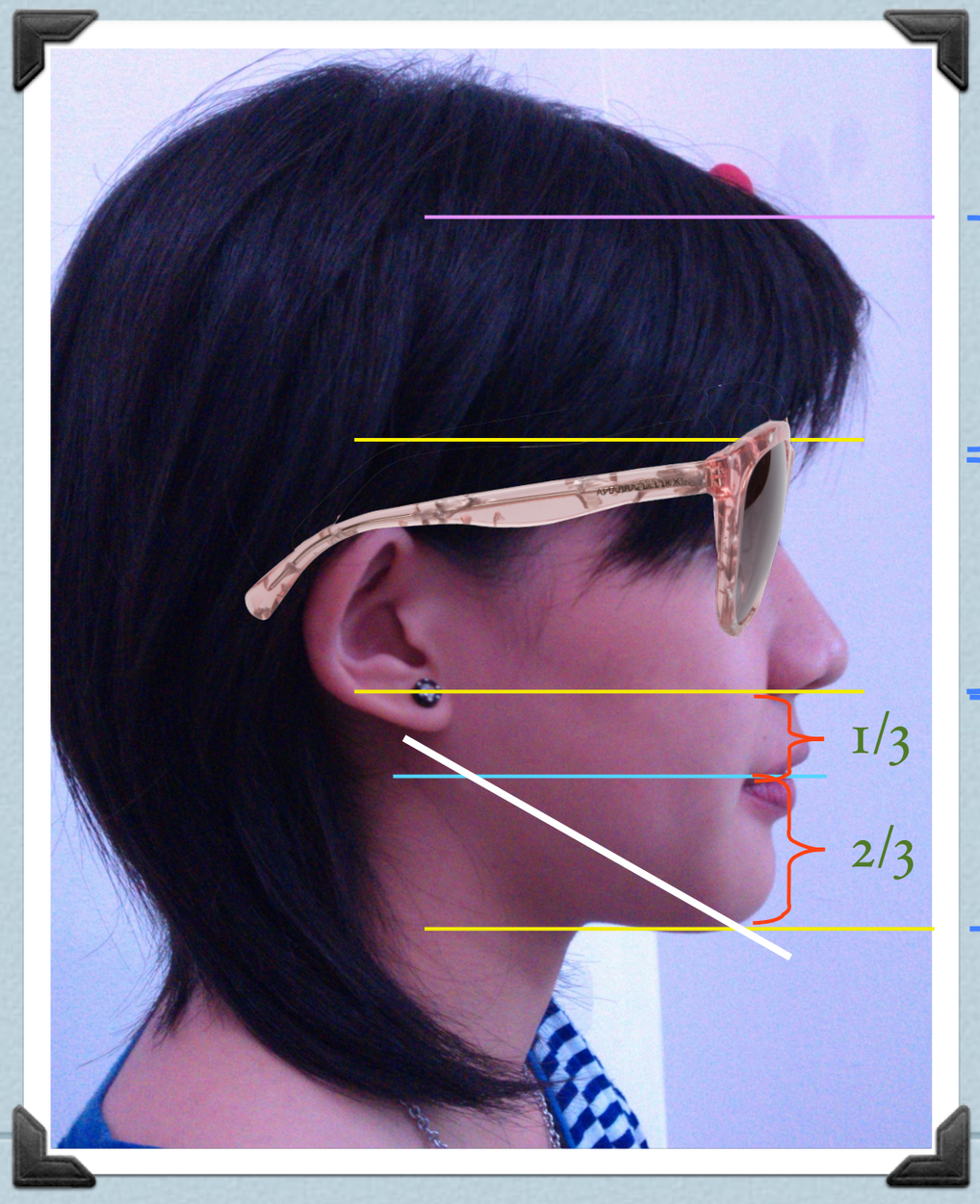




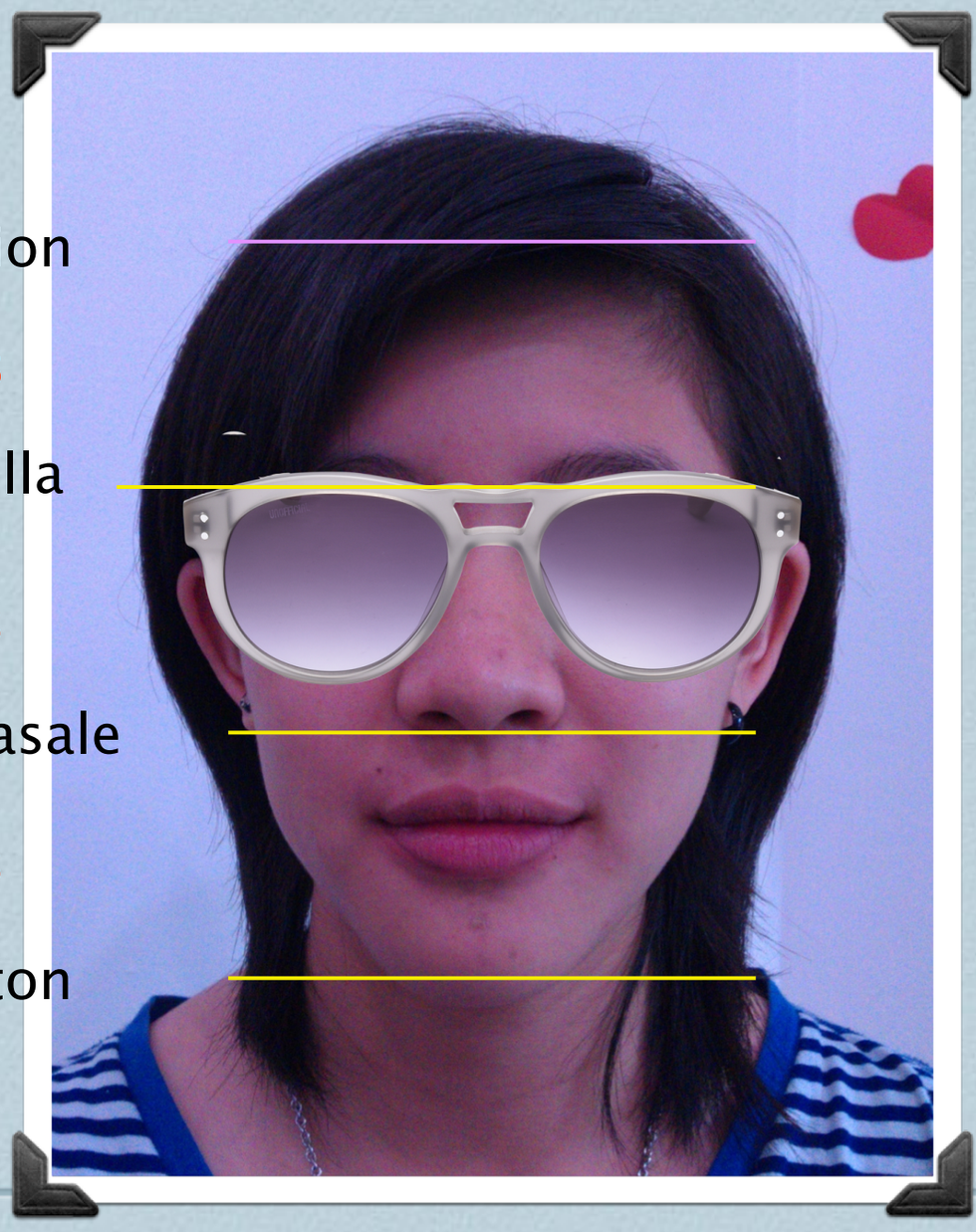
Reevaluation of vertical facial proportions and evaluation of mandibular plane angle.

C. Face Height : Proportion

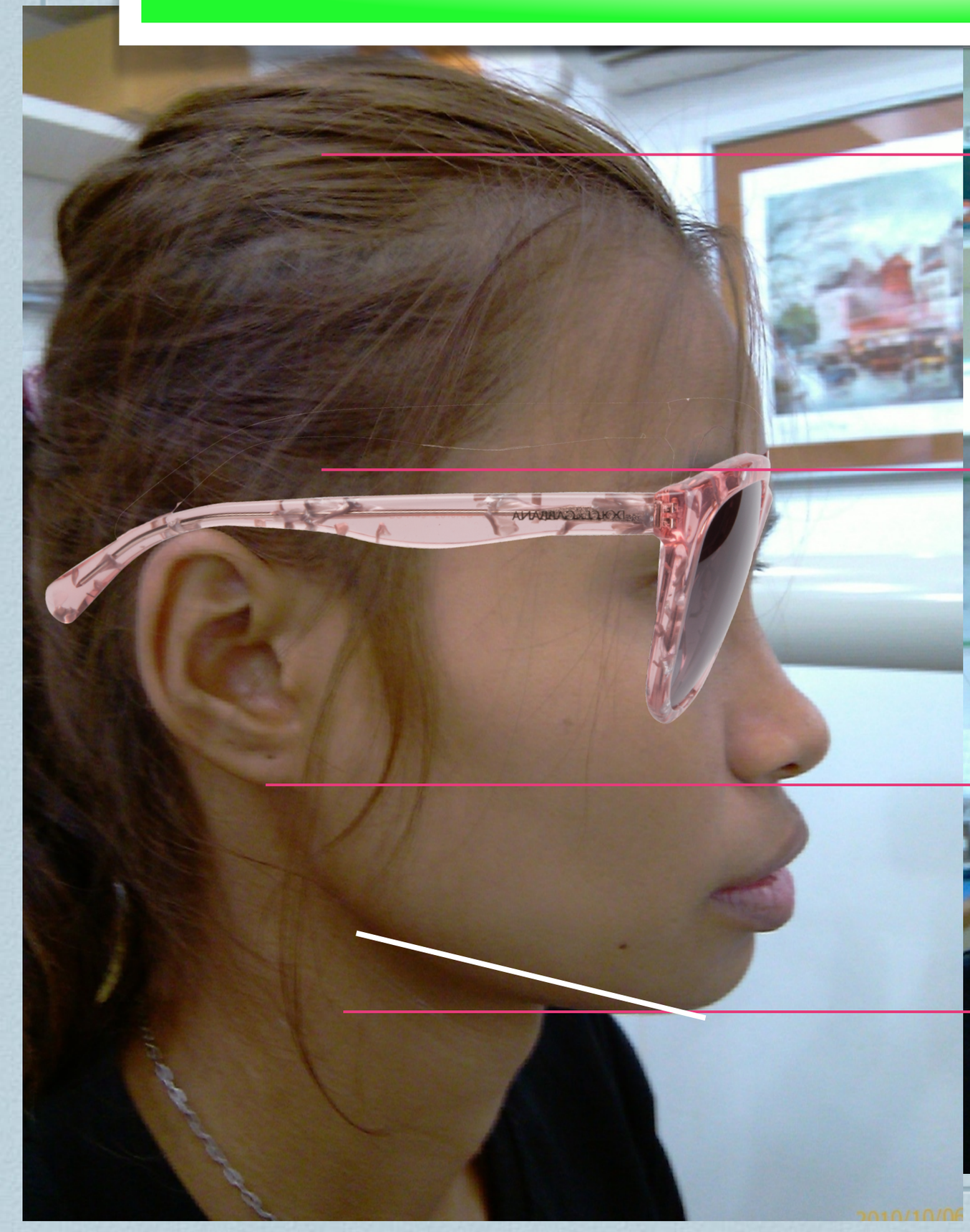
Upper:	Normal	Short	Long
Mid:	Normal	Short	Long
Lower:	Normal	Short	Long

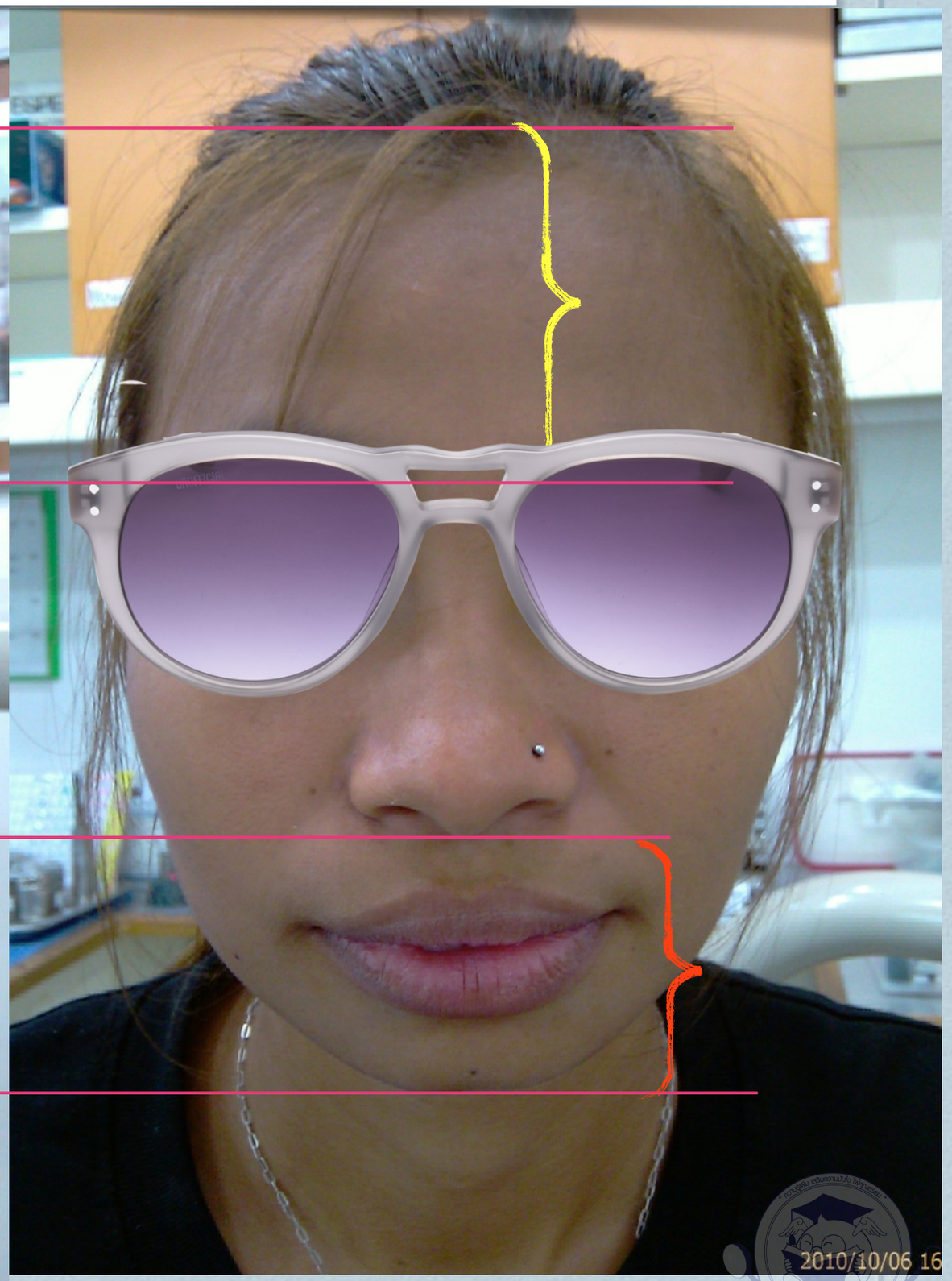


trichion
1/3
glabella
1/3
subnasale
1/3
menton

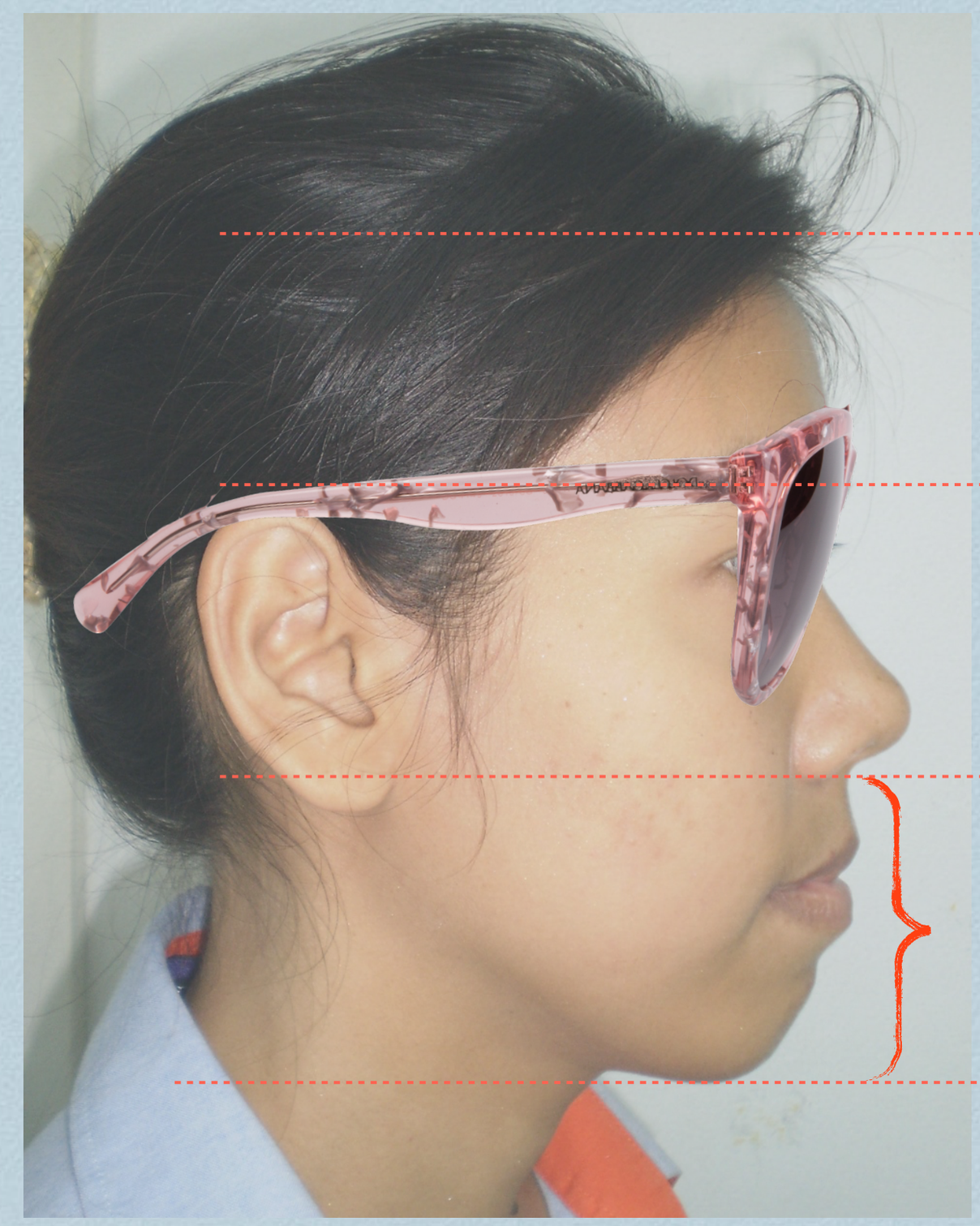


Short Lower Anterior Facial Height (Short LAFH)





Long Lower Anterior Facial Height (Long LAFH)





Macro Esthetic Lip Examination

How does beautiful lip look like at rest and smile

How to predict upper lip changed in respond to upper anterior tooth movement.

What are the references for lip measurement

Lip Rest posture :

- Lip vertical posture level : compared to upper incisors the exact location (incisal, middle, or apical third) > Inter labial gap 1-3 mm.
- Exposed tooth surface under lip line (Inter labial gap) could be influenced by upper incisors protrusion, growth of maxilla, upper incisors eruption, lip length)
- lip AP posture level : contact between the crown of the upper incisors and the upper lip (Lip strain) > influenced by lip thickness
- Lip thickness : thicker lips respond less and more variably to tooth movement than thinner lips
- Lip Rest tonicity : Lip pressure from the perioral muscle (Div2 Syndrome)
- Nasolabial angle (in flunked by Incisors Protrusion, upward nose, upper lip length. Lip Tonicity)
- E line : Upper lip sits behind 0-1 mm. to the E-line (Influenced by nose and chin

D. Lips (Macro Esthetic) :

1. Posture at rest : Open Closed

Competent Incompetent

2. Posture at swallowing :

Lip to Lip Tongue to Lower Lip Lip-Tongue-Lip

3. Upper Lip :

a. Length : Normal Short

b. Thickness (Strain) : Normal Thin Thick

c. Tonicity (Div2) : Normal Hypotonic Hypertonic

d. Exposed tooth surface under lip line (in mm) : _____

D. Lips :

1. Posture at rest : Open Closed

Competent Incompetent



mentalis strain



D. Lips :

1. Posture at rest : Open (normal interlabial gap ranges from 1- to 3-mm)

Closed (No interglacial gap) Competent Incompetent





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D. Lips (Macro Esthetic) :

1. Posture at rest : Open Closed
   Competent Incompetent
2. Posture at swallowing :
   Lip to Lip Tongue to Lower Lip Lip-Tongue-Lip
3. Upper Lip :
   a. Length : Normal Short
   b. Thickness (Strain) : Normal Thin Thick
   c. Tonicity (Div2) : Normal Hypotonic Hypertonic
   d. Exposed tooth surface under lip line (in mm) : __4 mm.___





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3. Upper Lip :

a. Length : Normal Short

b. Thickness : Normal Thin Thick

c. Tonicity : Normal Hypotonic Hypertonic

d. Exposed tooth surface under lip line (in mm) : _____









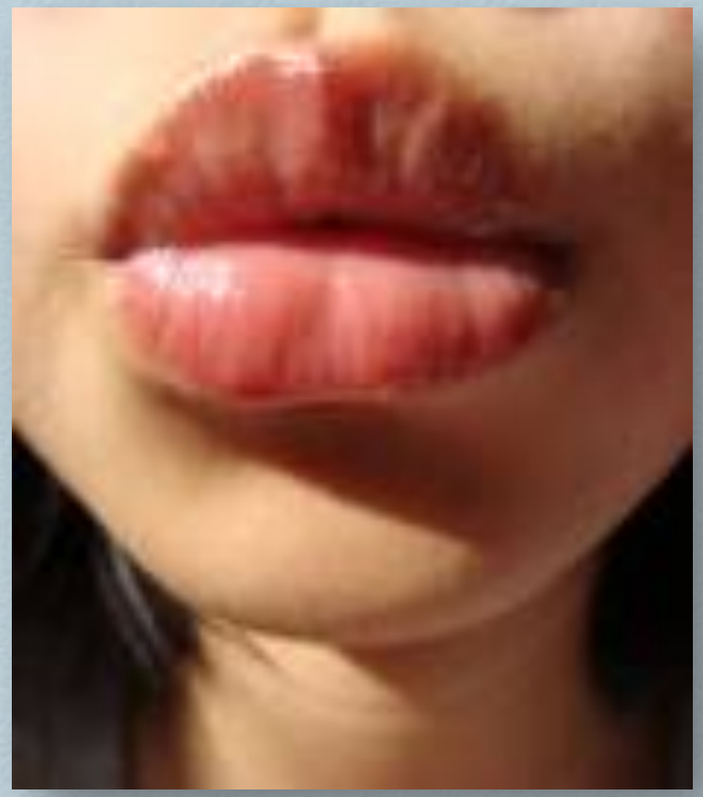





Incompetent Lip








ห้วงความสุข




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4. Lower Lip :

a. Length : Normal Everted

b. Thickness : Normal Thin Thick

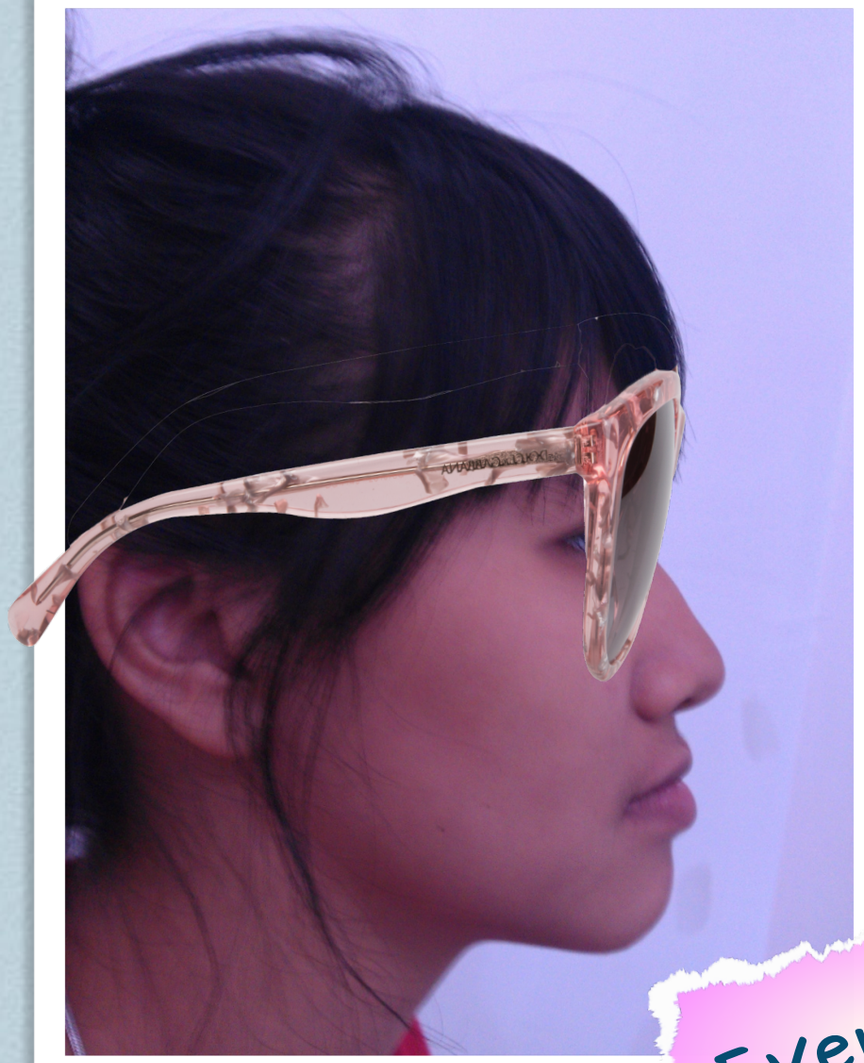
c. Tonicity : Normal Hypotonic Hypertonic

E. Nasolabial Angle : Normal

Obtuse: _____

Acute: _____

Lower Lip



Everted

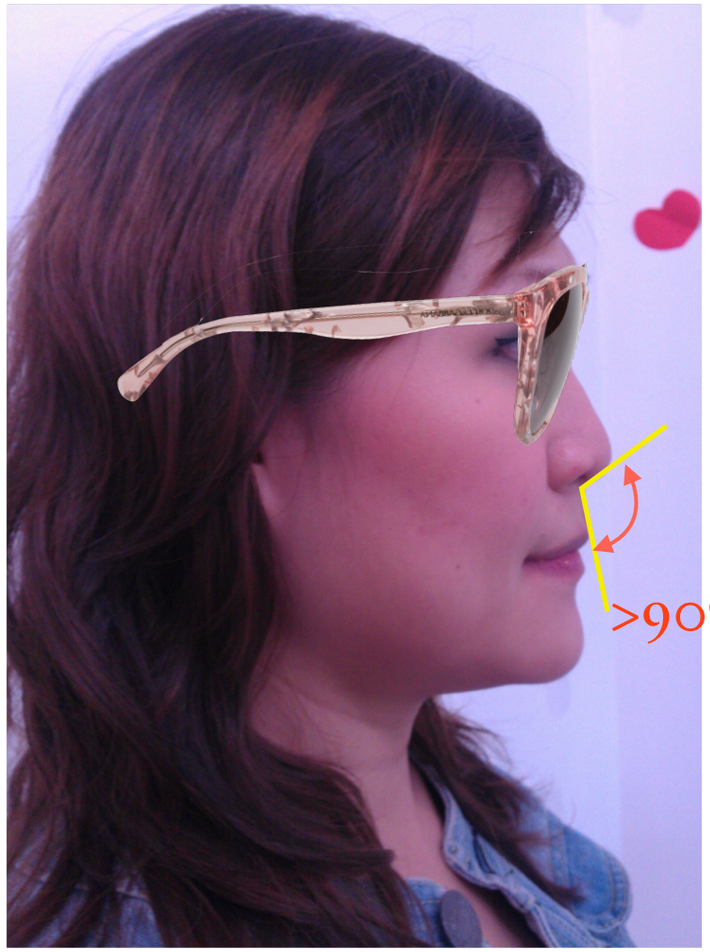


Normal

Nasolabial Angle



Normal =90

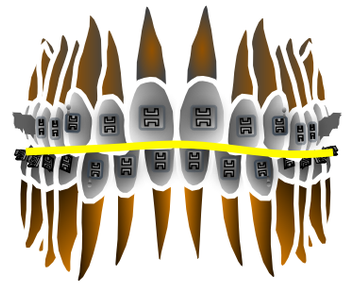
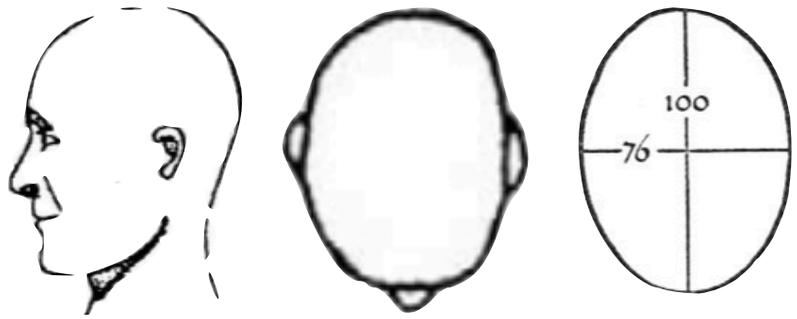
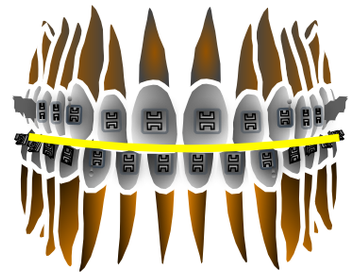
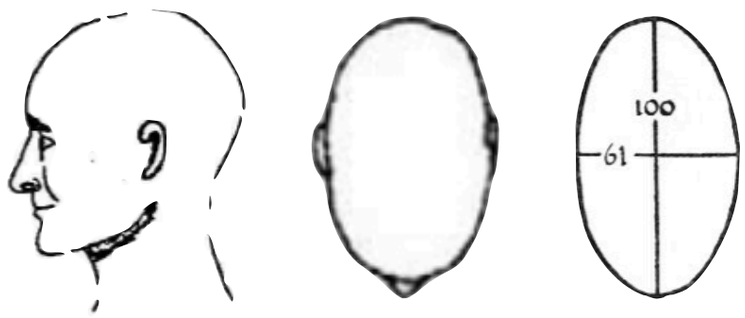
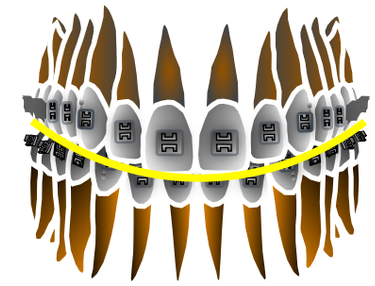


Obtuse>90



Acute <90

Facial Pattern and Head Form

Growth Pattern	Ceph	Face type	Headform	Arch Shape	Smile Line
Anterior Rotation	•SN-FOP < 14 •Flat Mand plane •Short face •Lip redundancy •Low LAFH •Deep mental sulcus	 Euryprosopic	 Brachycephalic	 Board / U Shape	 Concave / Reverse
Average Rotation	SN-FOP =14	 Mesoprosopic	 Mesocephalic	 Bioform / Damon	 Convex / Arch
Posterior Rotation	•SN-FOP >14 •Steep Mand plane •Long Face •Lip incompetent •High LAFH •Large Interlabial gap •Shallow mental sulcus	 Leptoprosopic	 Dolichocephalic	 Ovoid / Taper	 Convex / Arch

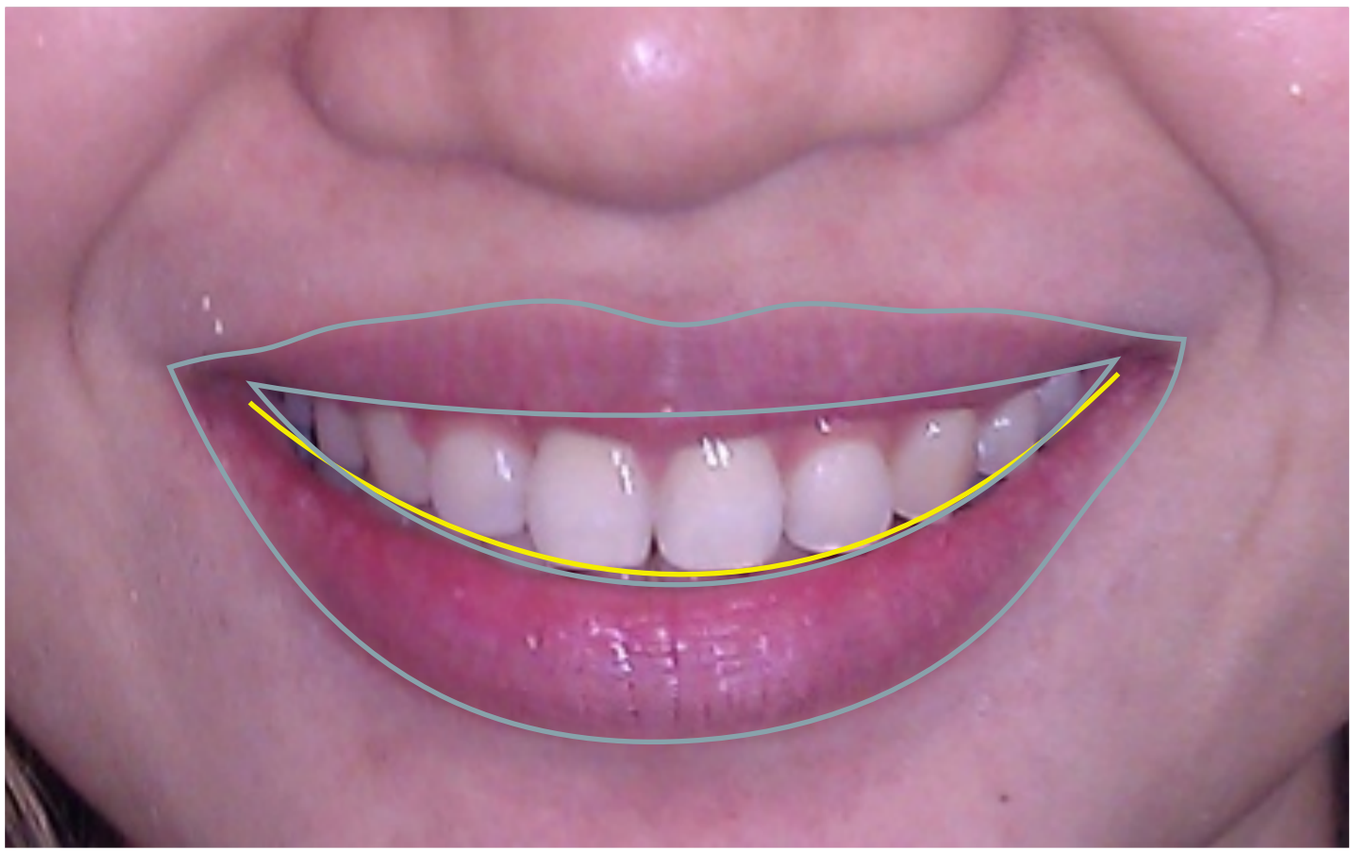
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https://pumpkinperson.com/2020/04/23/billy-takes-the-wais-iv/

https://www.researchgate.net/figure/Head-shape-variations-persist-into-adulthood-Reprinted-with-permission-from-Mooney-MP_fig2_7370628

Mini-esthetic

Tooth–Lip Relationships and Smile Analysis.



-The smile framework
-Incisor display
-Midline
-Gingival display on smile (Social-Enjoyment)
-Transverse smile
-Smile symmetry (Cant)
-Crowding
-Smile arc
-Vermillion display
-Buccal corridors

F. Mini Esthetic

1. At Rest

Incisor display Symmetry .....mm. Asymmetry

Lip Framework Symmetry Asymmetry

2. At Smile

Gingival display Symmetry .....mm. Asymmetry

Transverse Smile Symmetry Asymmetry

Smile Line Arc Flat Reverse

Buccal Corridor No Yes

Symmetry .....mm. Asymmetry

Vermillion Border Normal Thick Thin

Crowding None Present

1. At Rest

- Incisor display : Exposed tooth surface under lip line (Inter labial gap) could be influenced by upper incisors protrusion, growth of maxilla, upper incisors eruption, lip length
- Lip Framework : Cant of interglacial gap > Less respond to orthodontic treatment

2. At Smile

F. Mini Esthetic

- Gingival display : influenced by upper incisors protrusion,
  - •growth of maxilla (Gummy Smile)
  - •upper incisors eruption (Could be corrected orthodontically)
  - •lip length (Lengthening by age)
- Transverse Smile : Cant of occlusal plane
  - •Dental : influenced by asymmetrical settle of buccal segment
  - •Skeletal : Surgical approach is a solution
- Midline : Deviate to the face,
  - •Angulation of 1/- is more perceived
- Smile Line : Influenced by FOP and growth rotation of mandible
- Buccal Corridor : Physiological expansion is mandated
  - •2-3 mm. is an average
  - •Buccal plate could be fenestrated
- Vermillion Border : Influenced by 1/- retraction in thin lip or strain lip
- Crowding : The most patient concern

F. Mini Esthetic

1. At Rest

Lip Framework Symmetry Asymmetry



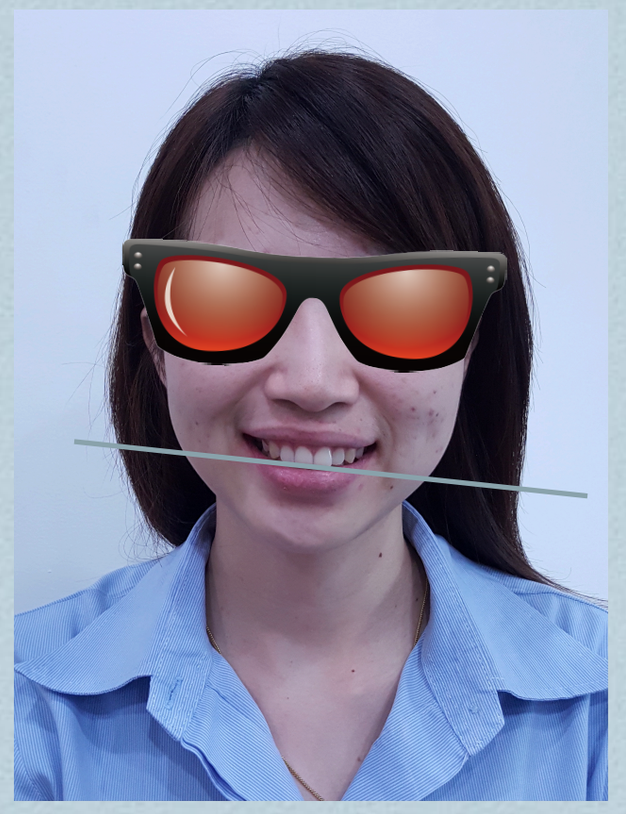




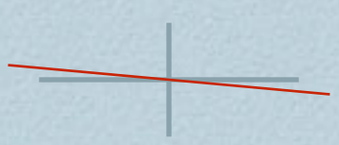


F. Mini Esthetic

1. At Rest : Lip Framework Asymmetry







F. Mini Esthetic

1. At Rest

Incisor display Symmetry …….mm. Asymmetry



Incisor display
Symmetry 2 mm.



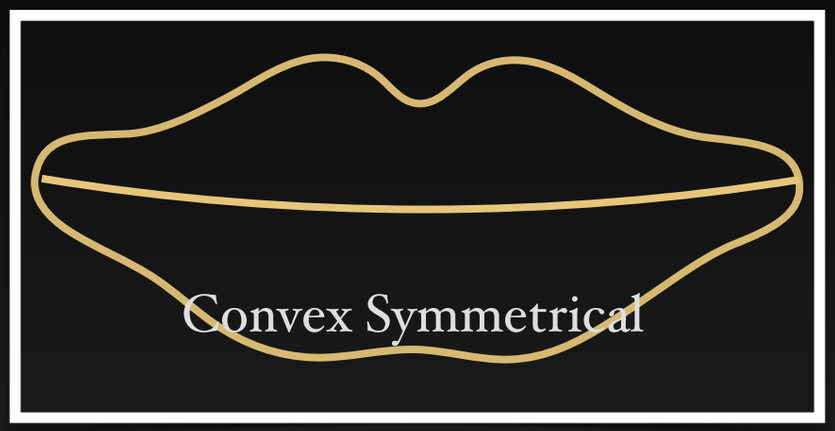
Incisor display
Symmetry 4 mm.

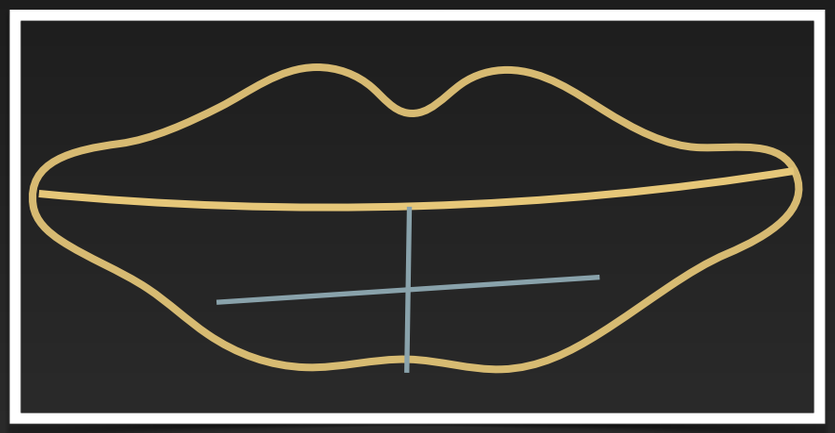


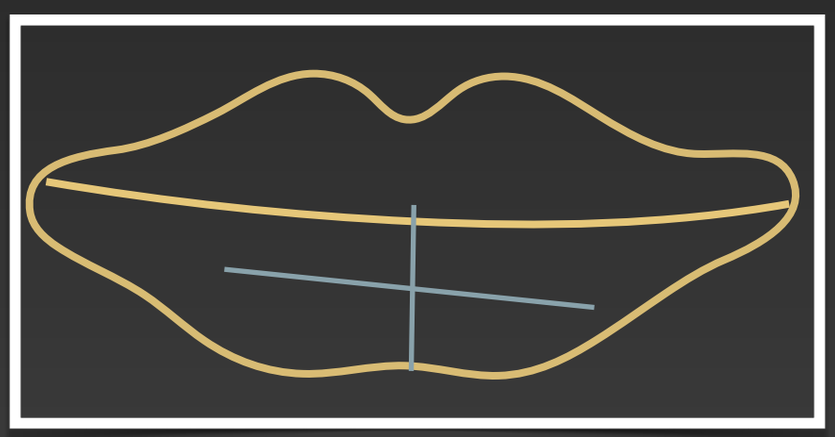
Incisor display
None

Lip Framework

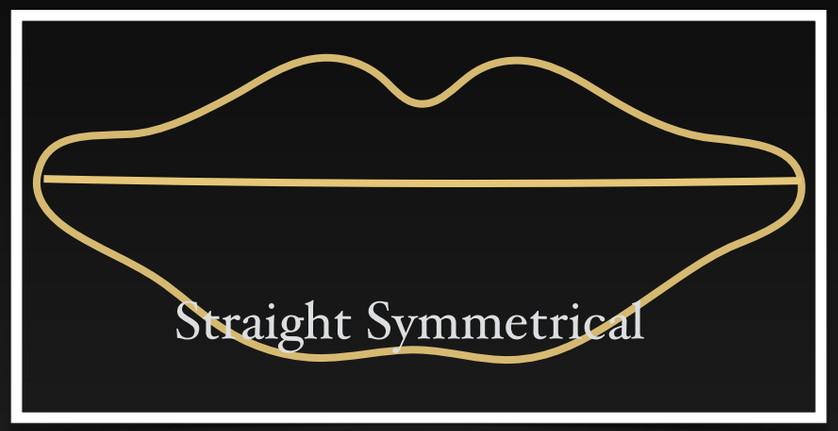
Convex (Curve) lip line at rest







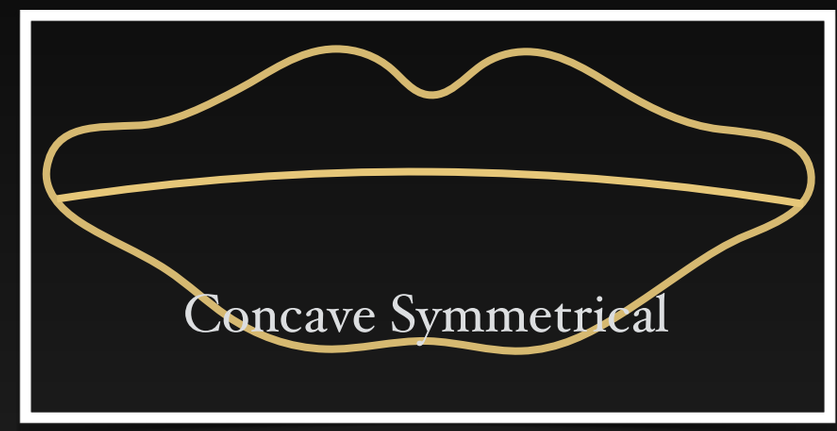
Flat (Straight) lip line at rest







Concave (Reverse) lip line at rest

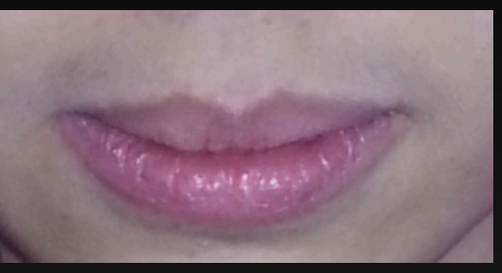






Lip Framework

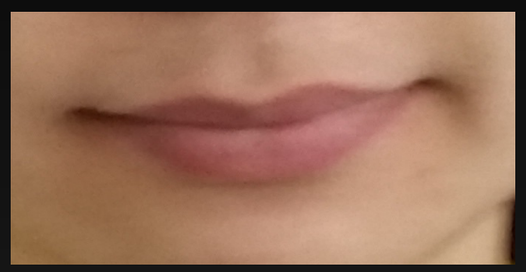
Convex (Curve) lip line at rest



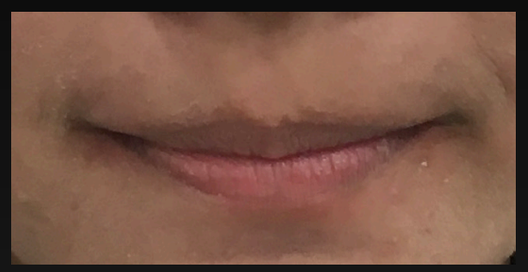
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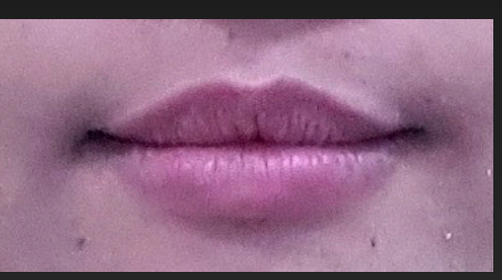


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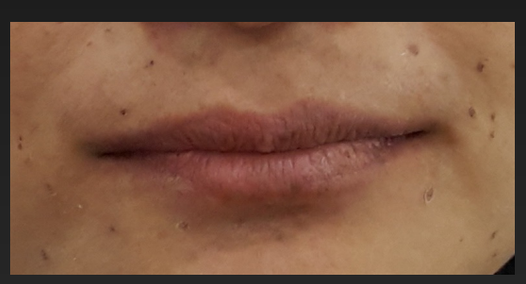


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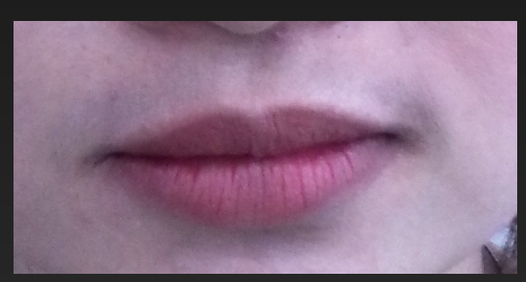
Flat (Straight) lip line at rest



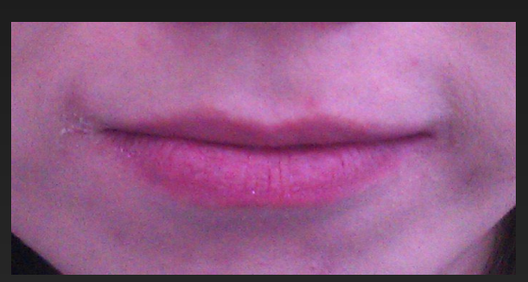
รุจิรา ช่วยนา 95-0448



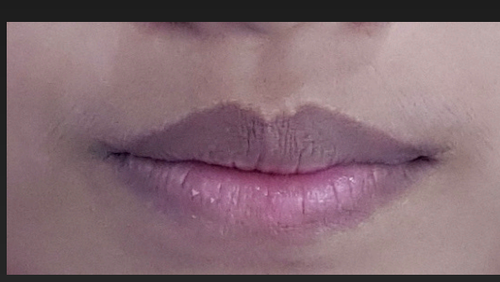
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พิมพ์แข สุอังวาทิน 55-0478

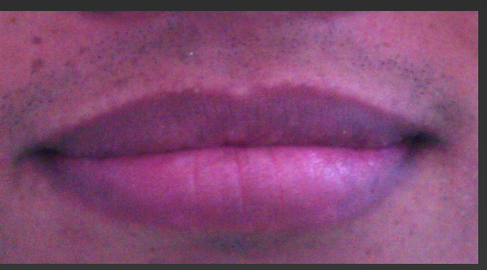


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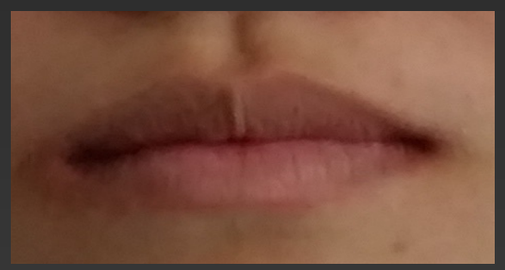


ธนัชชา สุมนาพันธ์โชติ 60-0928

Concave (Reverse) lip line at rest



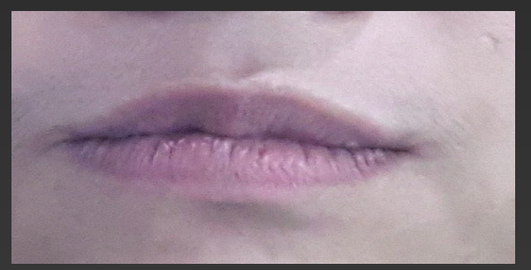
นพเก้า 52-1991



ปัทมา อ่อนหวาน 57-1575



วิภาวี จันทรมหา 53-0503



ลักษิกา ปราณีชาติ 59-1155



ศลิษา 52-1675

2. At Smile

Midline to face On

Gingival display None Symmetry …….mm. Asymmetry

Transverse Smile Symmetry Asymmetry

Smile Line Arc Flat Reverse

Buccal Corridor No Yes Symmetry ….1…mm. Asymmetry

Vermillion Border Normal Thick Thin

Crowding None Present #22





2. At Smile

Midline to face on

Gingival display Symmetry .1 mm. Asymmetry

Transverse Smile Symmetry Asymmetry

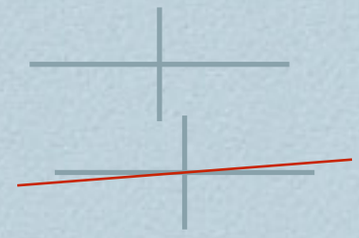
Smile Line Arc Flat Reverse

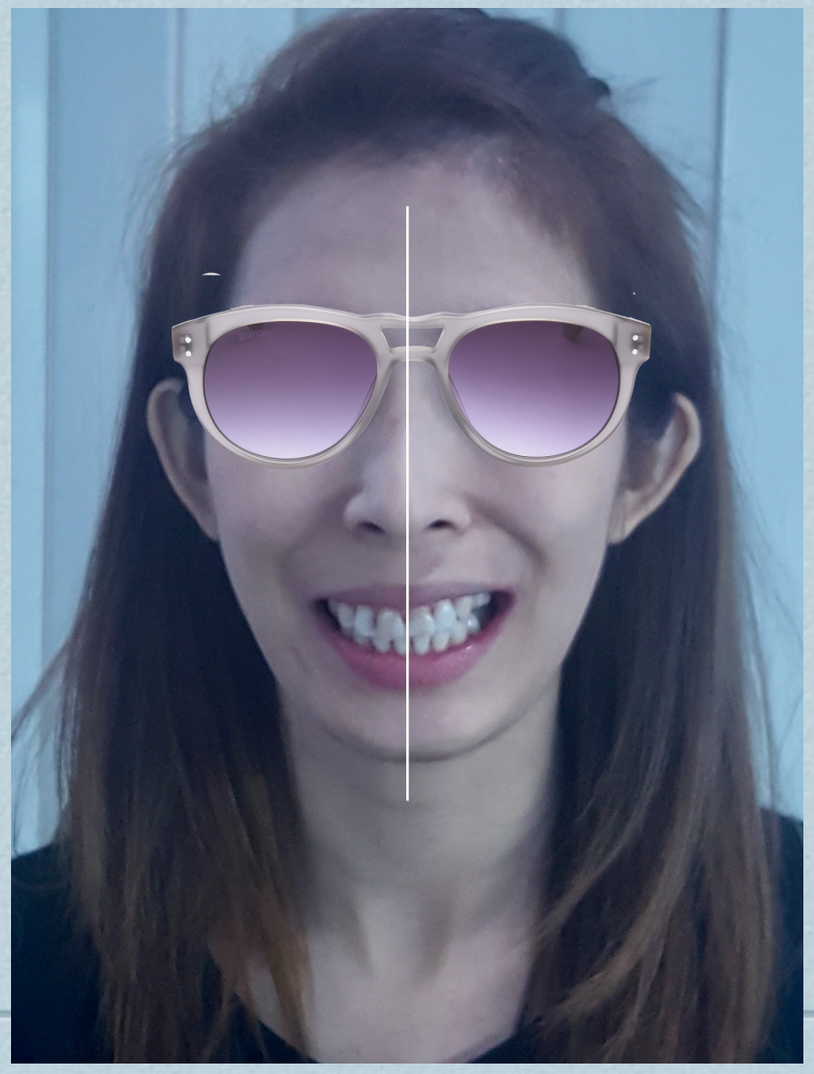
Buccal Corridor No Yes Symmetry …….mm. Asymmetry

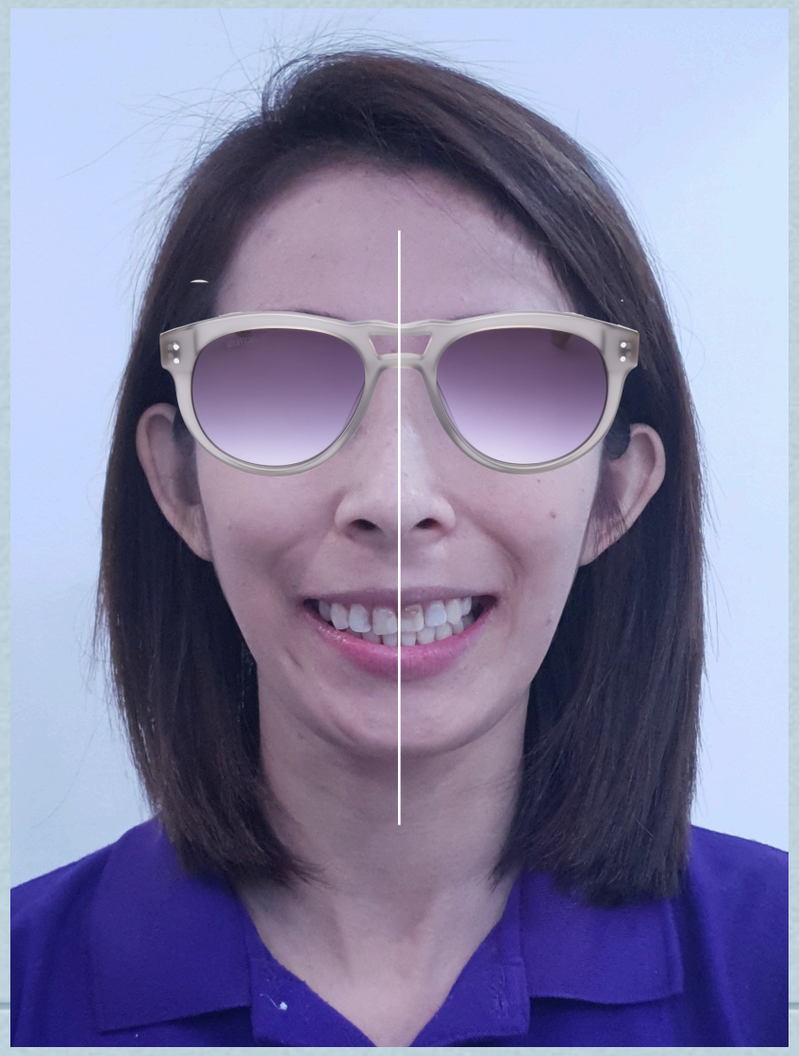
Lt 3 mm. Rt 1 mm.

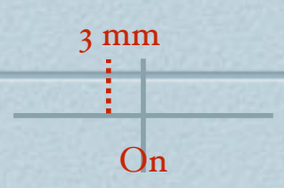
Vermillion Border Normal Thick Thin

Crowding None Present









2. At Smile

Midline to face

Gingival display Symmetry 1 mm. Asymmetry

Transverse Smile Symmetry Asymmetry

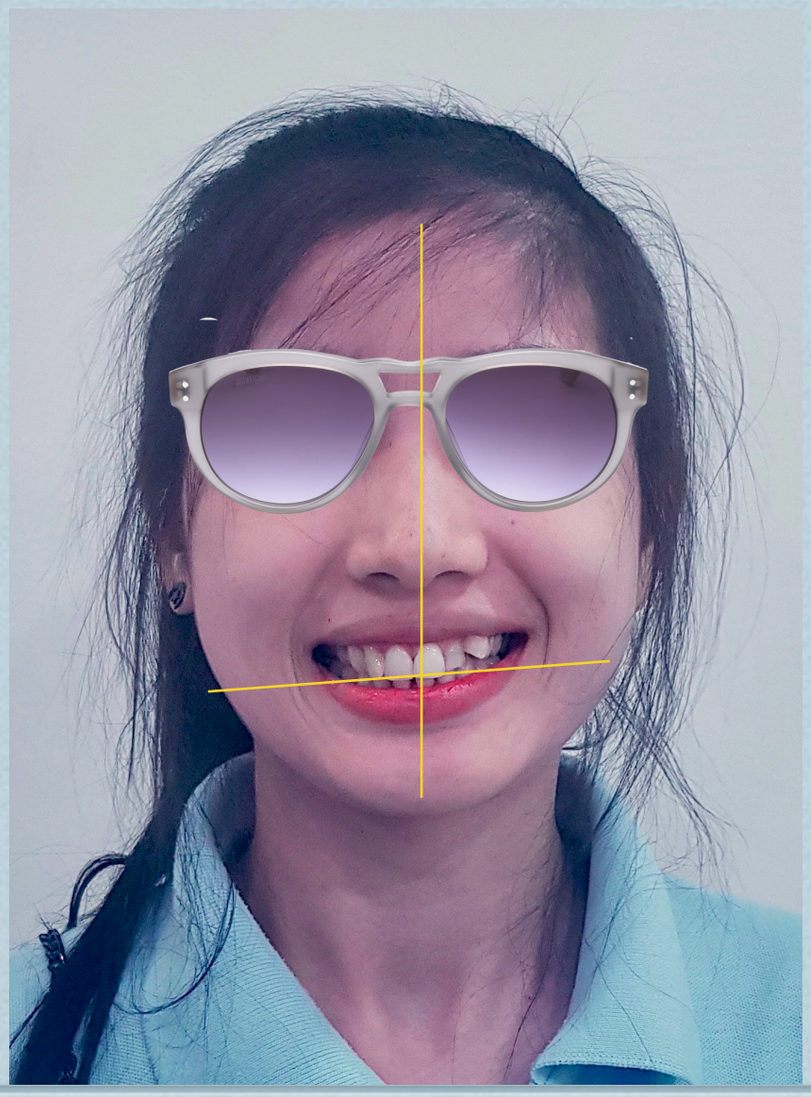


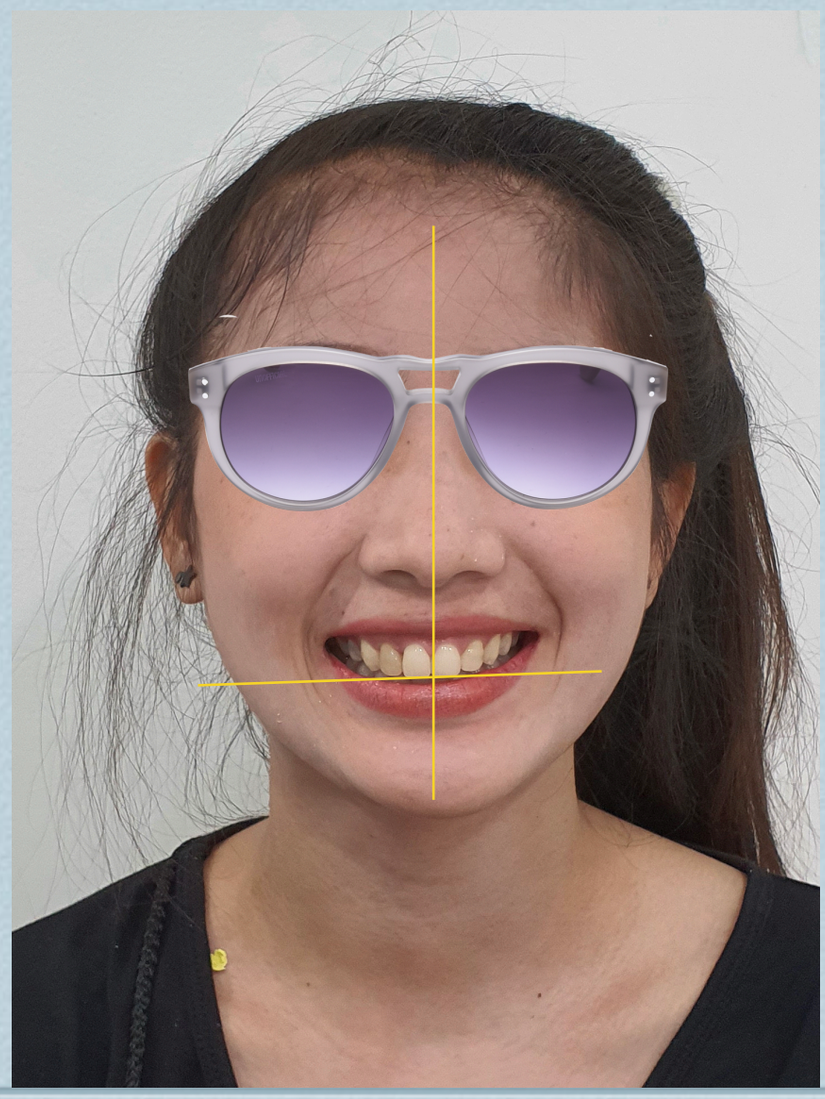
Smile Line Arc Flat Reverse

Buccal Corridor No Yes Symmetry 3 mm. Asymmetry

Vermillion Border Normal Thick Thin

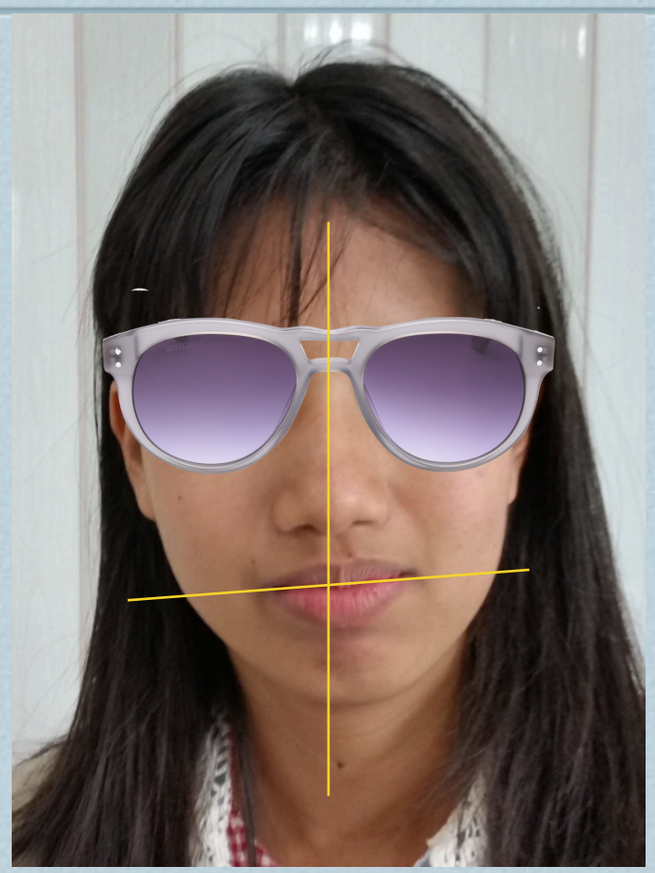
Crowding None Present

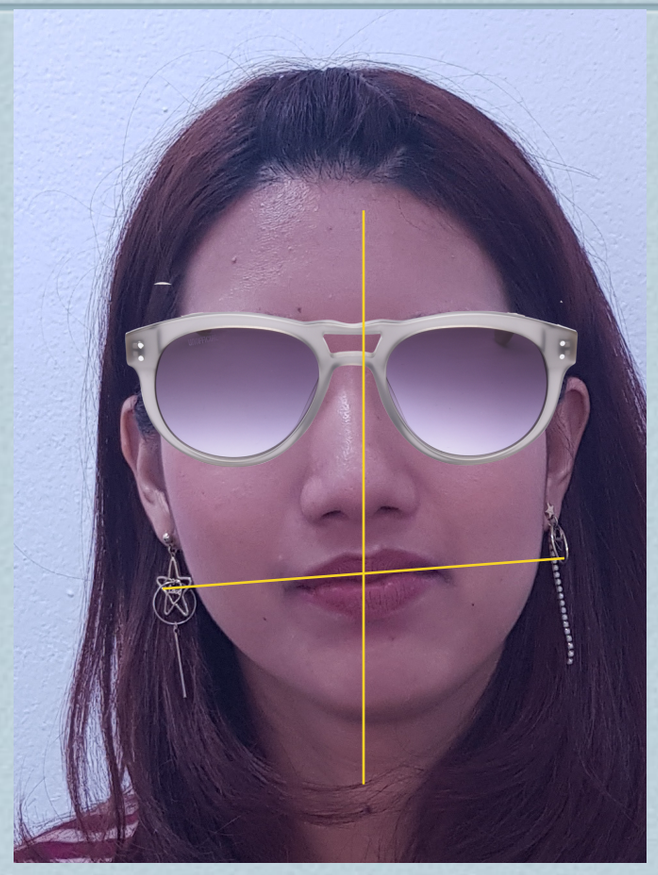


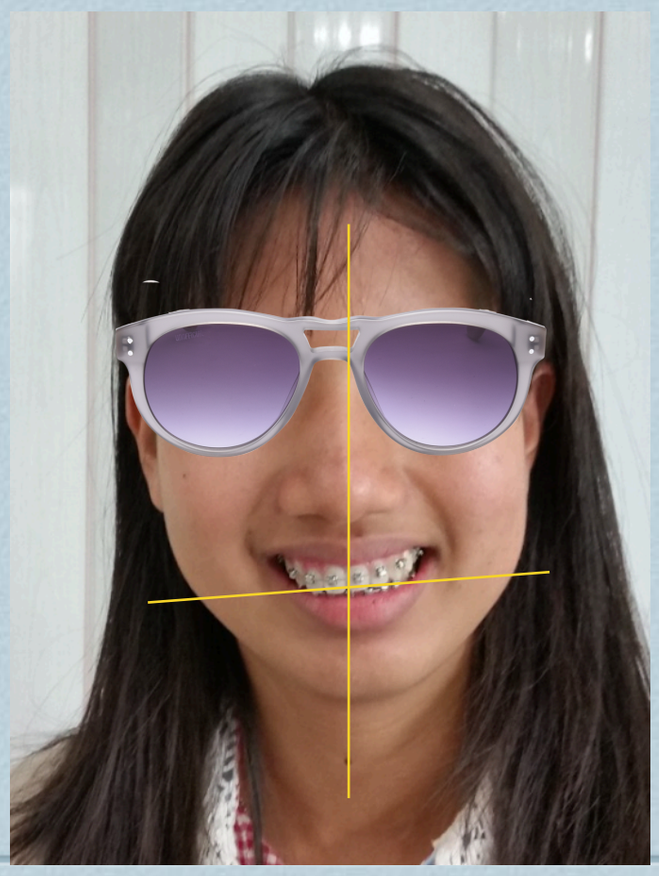


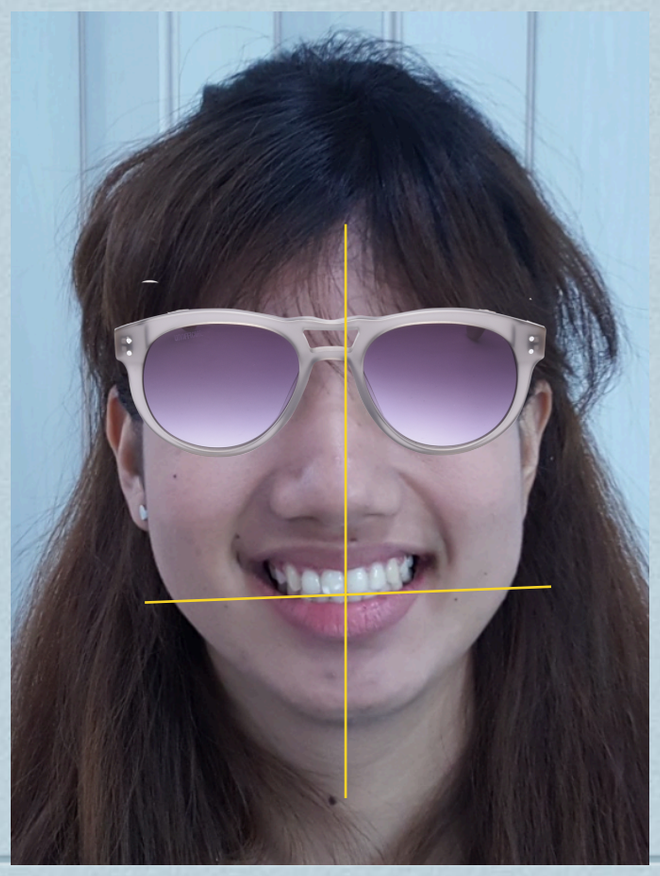
กัลยา นาคูณ 61-0577 CMP block out canine ext midline shift FS BF molar space closure

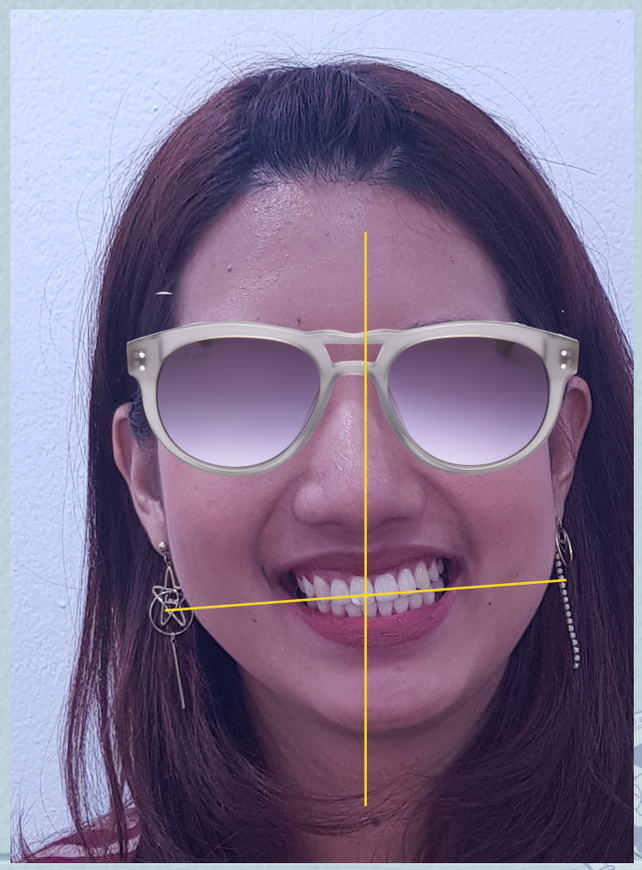
Transverse Smile
Lip Framework At Rest



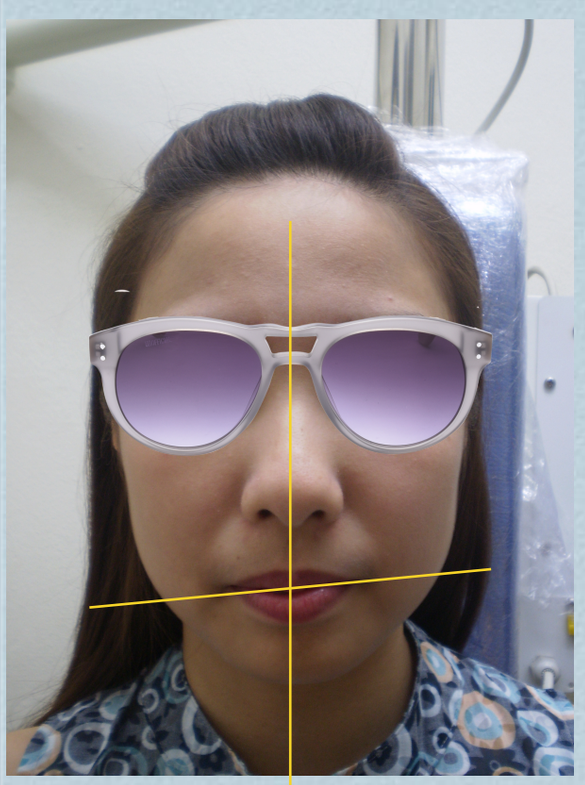


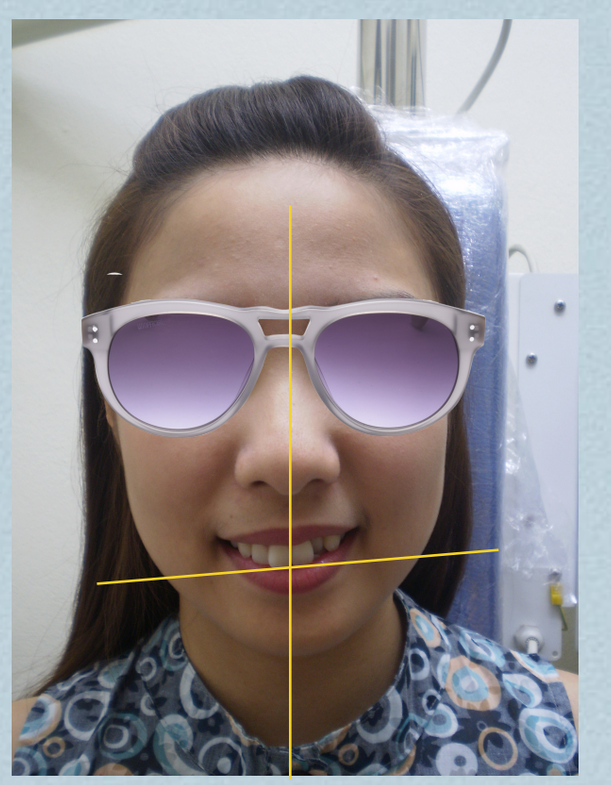




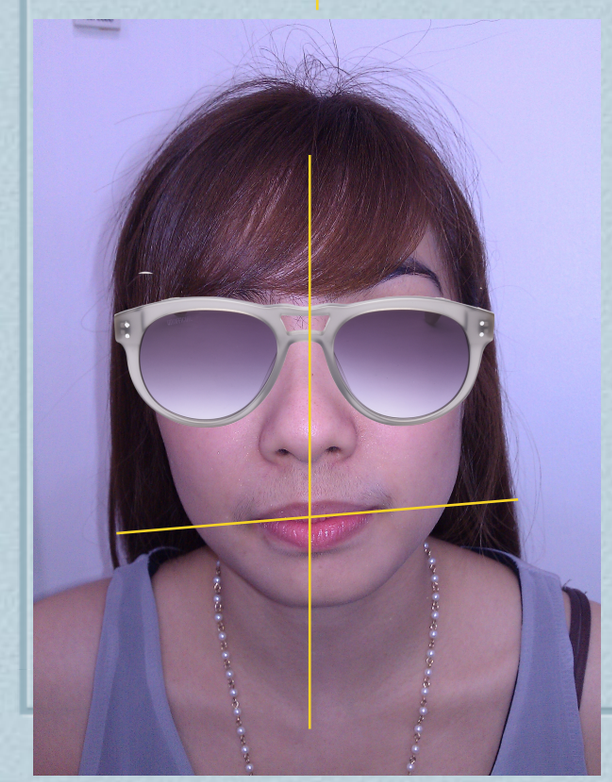


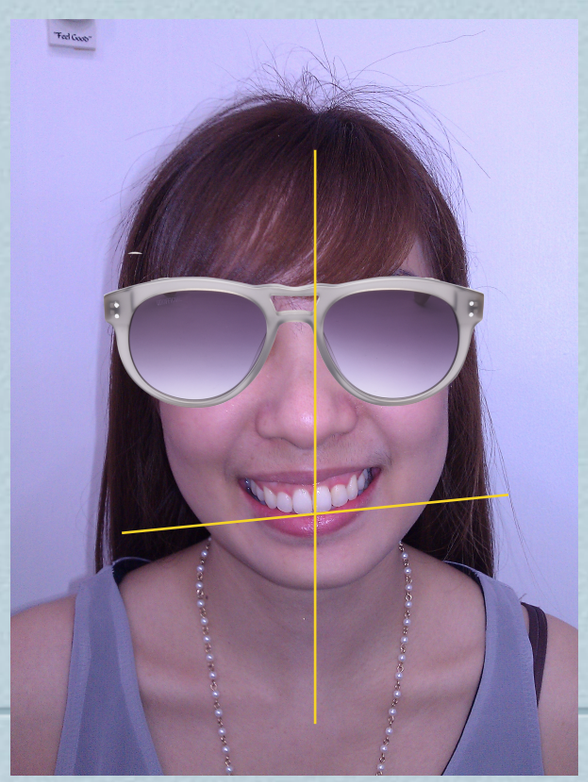
Transverse Smile
Lip Framework At Rest & Smile Line







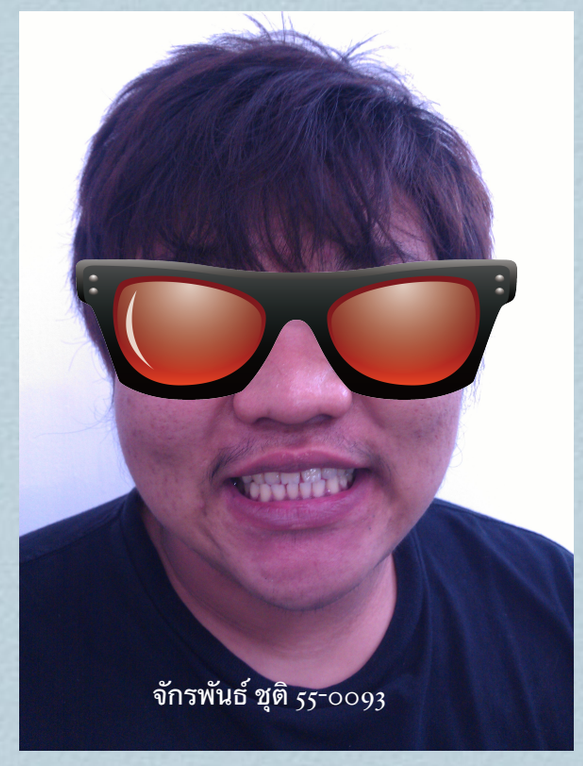






2. At Smile

Smile Line Arc Flat Reverse













Smile Variables

Variable	Ideal	Maximum	Minimum
Variables Best Viewed in Full Face			
Smile arc	Tracks the lower lip	0.6 mm higher at canines	Greater than flat
Buccal corridor (as % black space of intercommissure width) (45-50mm.)	16% (3.5-4 mm.)	88%	8% (2-3 mm.)
Gingival display	2.3 mm tooth coverage	0.8 mm tooth coverage	4.5 mm tooth coverage
Occlusal cant	0	2.8 degrees	
Upper to lower dental midlines	0	3.6 mm	
Variables Viewed Either in Full Face or as Close-up of Lower Face			
Upper dental midline to face	0 mm	2.9 to 3.2 mm	
Upper central to central incisor gingival height discrepancy	0 mm	2.0 to 2.1 mm	
Upper lateral to central incisor gingival height discrepancy	–0.4 mm	0.4 to 1.2 mm	–1.9 to –2.9 mm
Overbite	2 to 2.3 mm	5.4 to 5.7 mm	0.4 to 0.9 mm
Upper central to lateral incisal edge step	1.2 to 1.4 mm	2.0 to 2.9 mm	

Data from Ker AJ, Chan R, Fields HW, et al. *J Am Dent Assoc*. 2008;139:1318–1327, 2008; and Springer NC, Chang C, Fields HW, et al. *Am J Orthod Dentofac Orthop*. 2011;140:e171–e180.

Smile Variable	Gender	Maximum	Minimum
Buccal corridor (percentage dark space of intercommissure distance)	M	24	15
	F	17	10
Gingival display (mm of tooth coverage)	M	0.5	1
	F	0.5	0.5
Smile arc (mm canine above incisal edge + or below –)	M	3.8	1.8
	F	3.8	1.8
Upper midline to face	M	2.3	0
	F	2	0

From Chang C, Springer NC, Fields HW, et al. *Am J Orthod Dentofac Orthop*. 2011;140:e171–e180.

Mini-esthetic

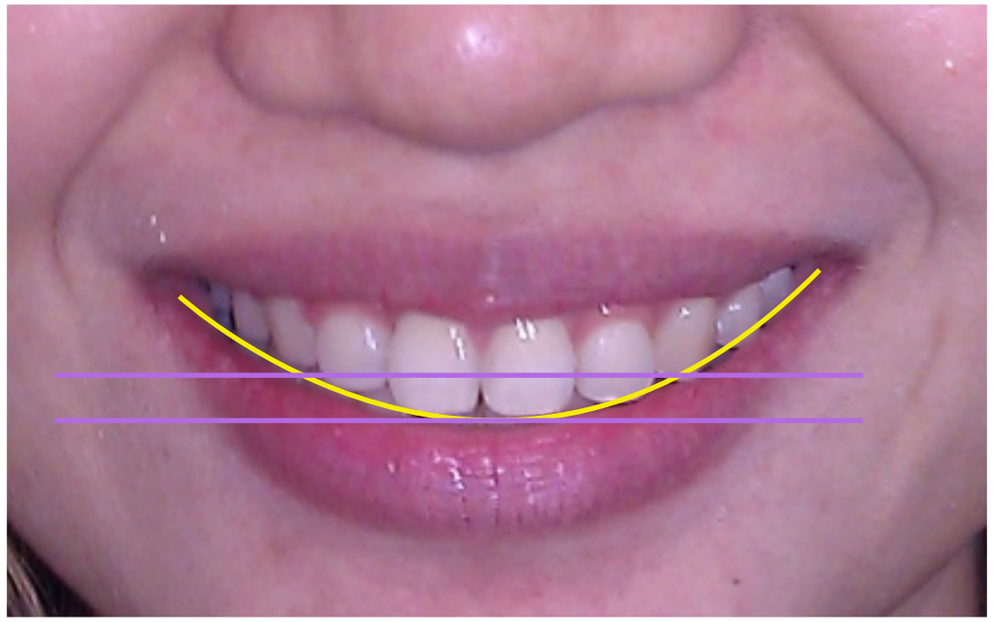


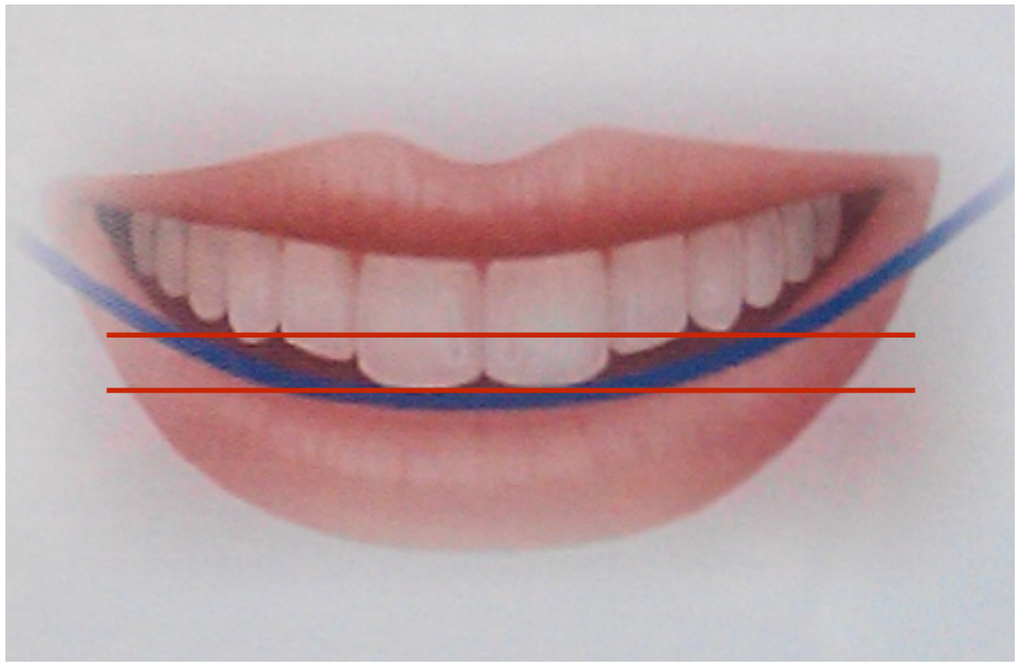


Mini-esthetic



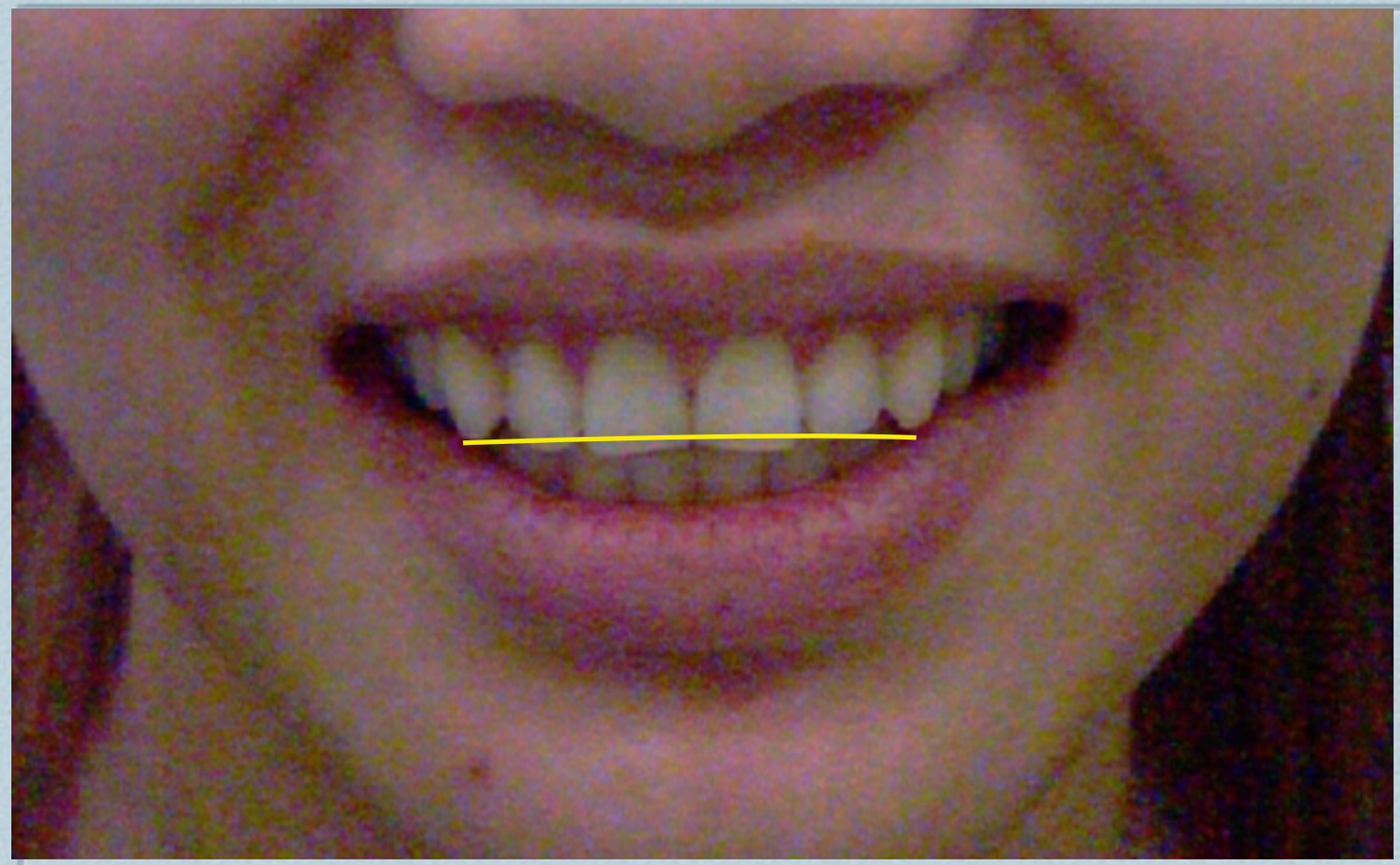
Mini-esthetic











Smile Line

- The parallelism of the curve of the upper anterior teeth to the lower lip curvature on smiling
- There are different types of smiles and the lower lip posture varies accordingly.
- The smile arc is a result of the occlusal plane inclination and second-order crown angulations in the upper anterior teeth (Extrusion)









อัญญาดา 53-1492















เสาวนิตย์ กอวงศ์ **49-0535**

4:50



III. Intra-Oral Examination

A. Periodontal Evaluation :

1. Oral hygiene : Good Fair Poor

2. Gingivitis : Generalized _____ Local – specify area _____

3. Periodontitis : Generalized Local – specify area _____

4. Tooth mobility :Tooth # _____ Degree : 1 2 3

Due to :

Trauma Advanced periodontal disease Other _____

5. Previous periodontal treatment :

No Yes

Initial preparation Curettage Surgery

B. Tongue : (Etiology of malocclusion)

1. Size : Normal / Abnormal

2. Mobility : Normal / Abnormal

3. Position at rest :

Normal / High / Low / Between teeth

4. Position during swallowing :

Normal Abnormal

Tongue to lower lip / Lip – tongue – Lip

5. Position during speech :

Normal /Abnormal

Anatomy

(relative to the mouth size)

Function

Tongue :

1. Size : Normal / Abnormal
2. Mobility : Normal / Abnormal → TONGUE TIE

   Move tongue up/down

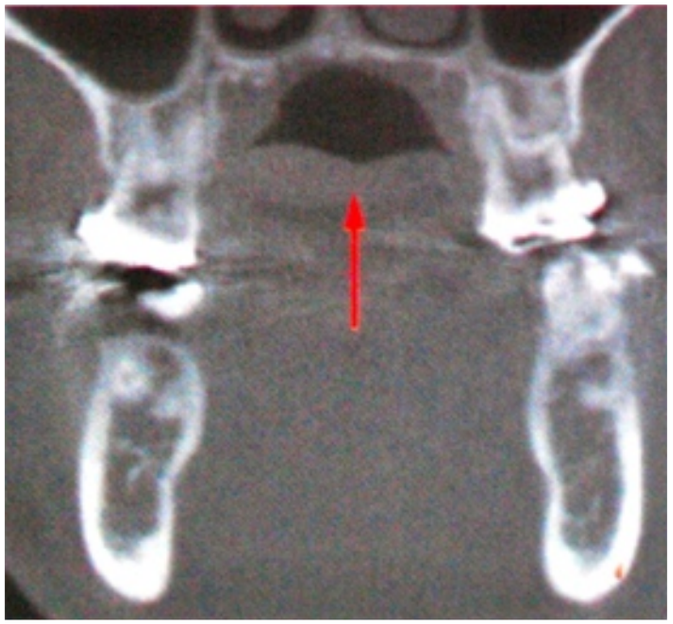
3. Position at rest :

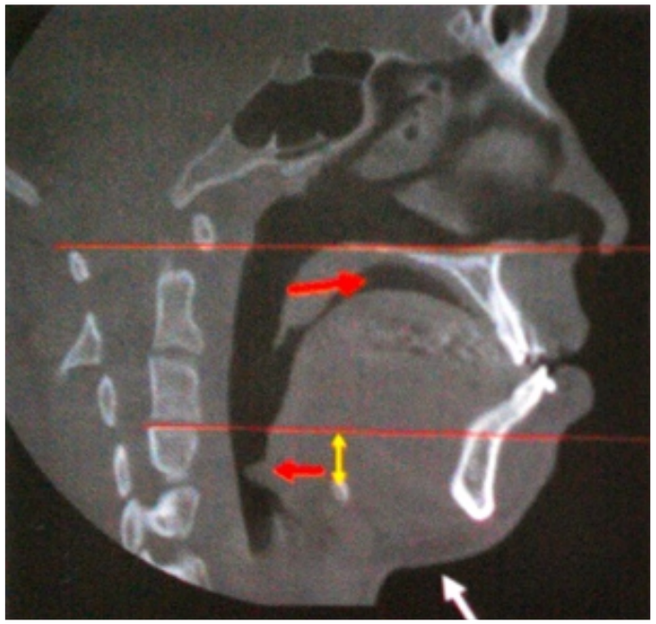
   Normal
   High
   } → AGAINST PALATE

   Low floor of mouth → −/1 SPACING, CL.III TENDENCY

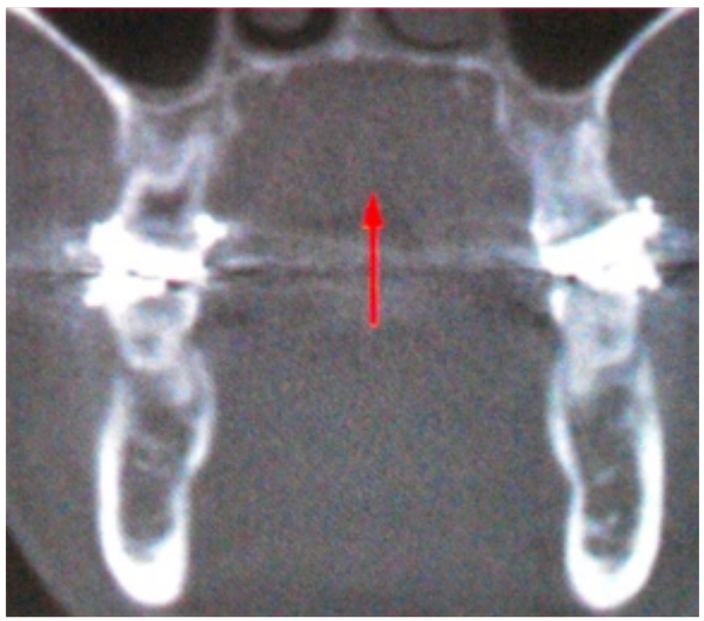
   Between teeth → OPENBITE

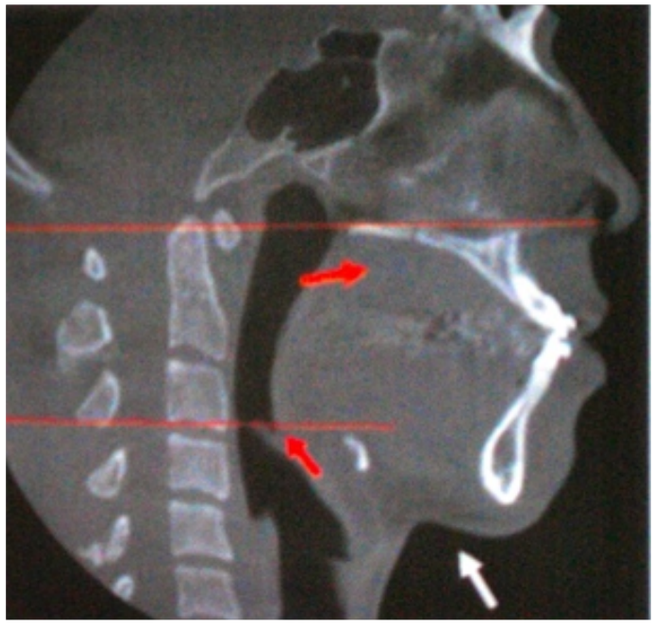
Tongue position at rest





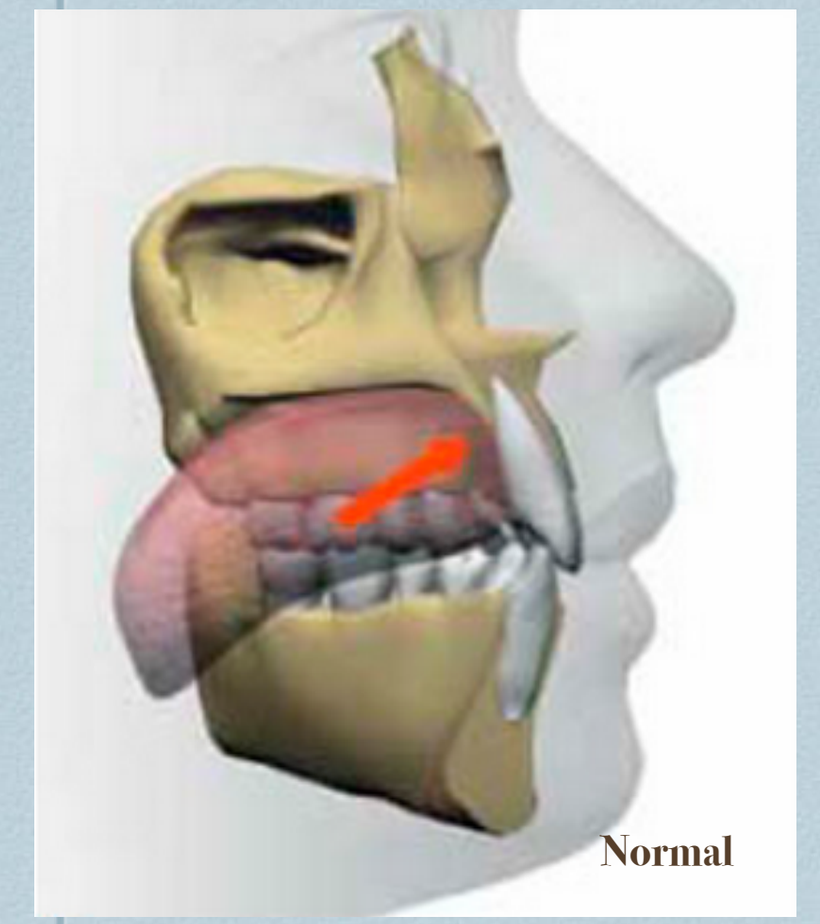
Low tongue position

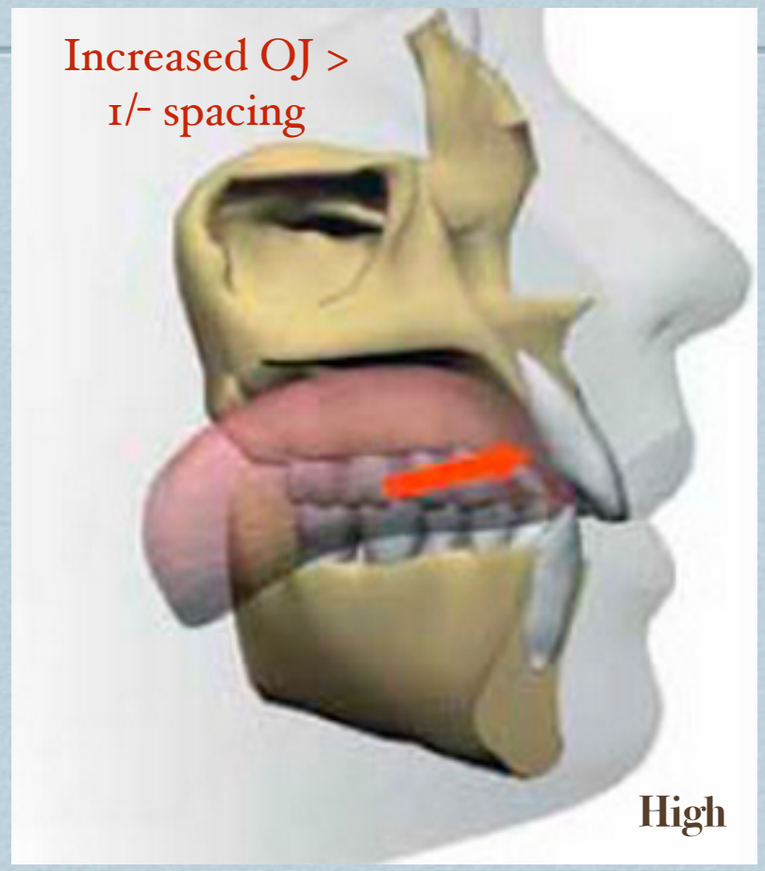


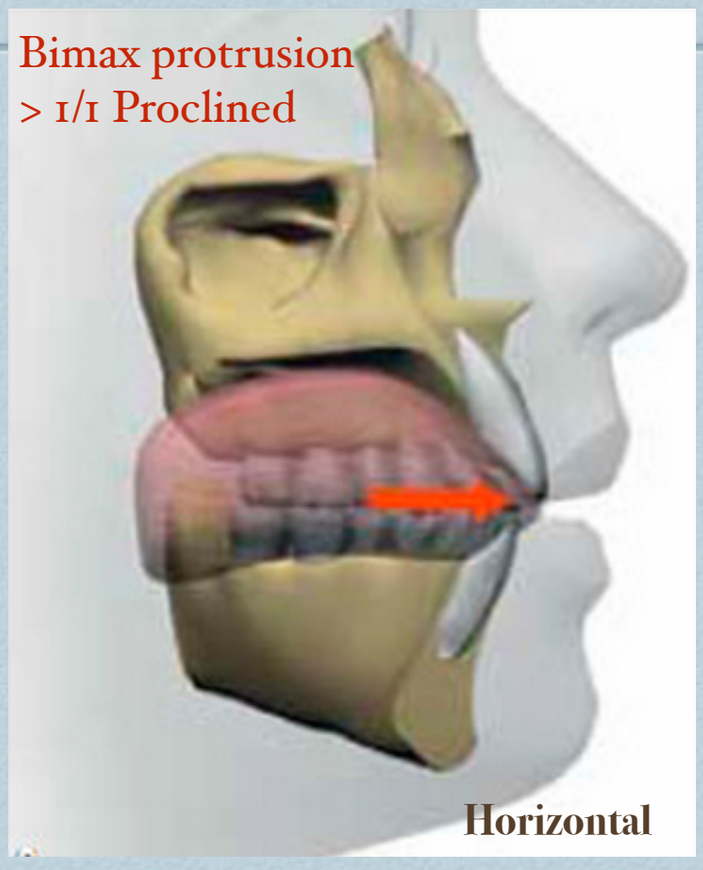


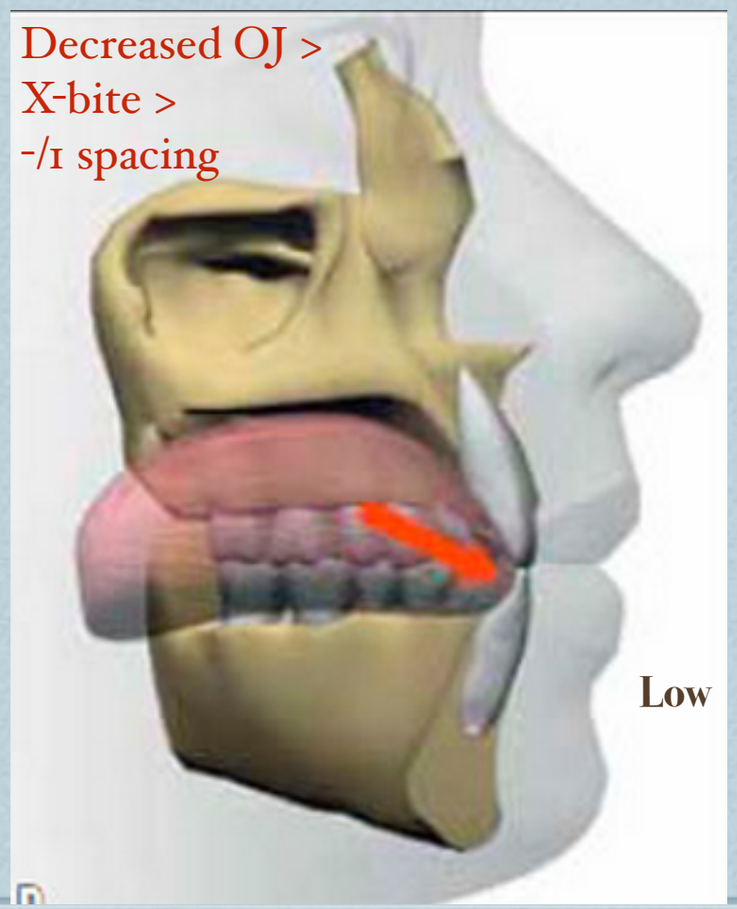
Normal tongue position
(against palate)

Classification of tongue posture at rest











Tongue position at rest and swallow



Low tongue position at rest and swallow





Horizontal tongue position at swallow

Low tongue position at rest and swallow



เบญจวรรณ สีละขันธ์ 62-0189 OMD low tongue spacing balance IPR CMP



Active tongue thrusting



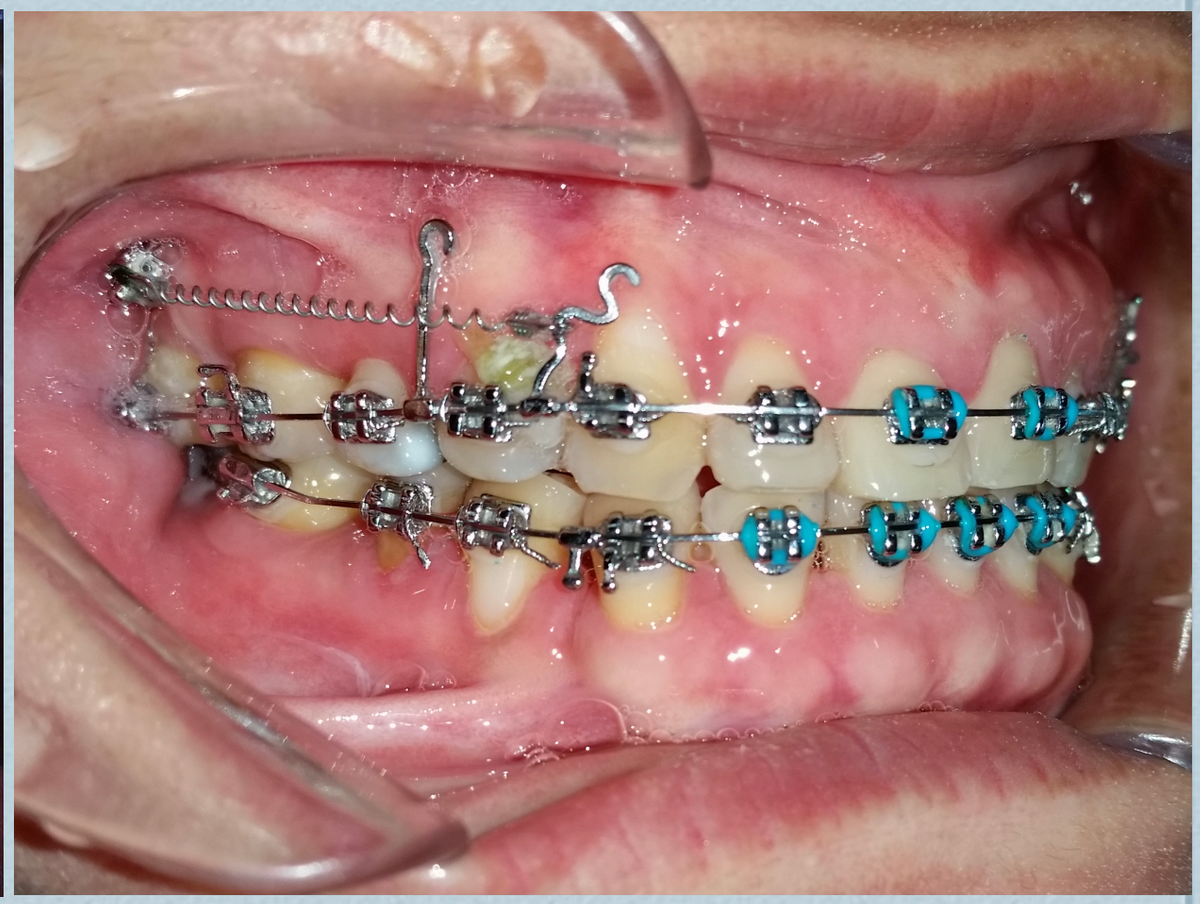




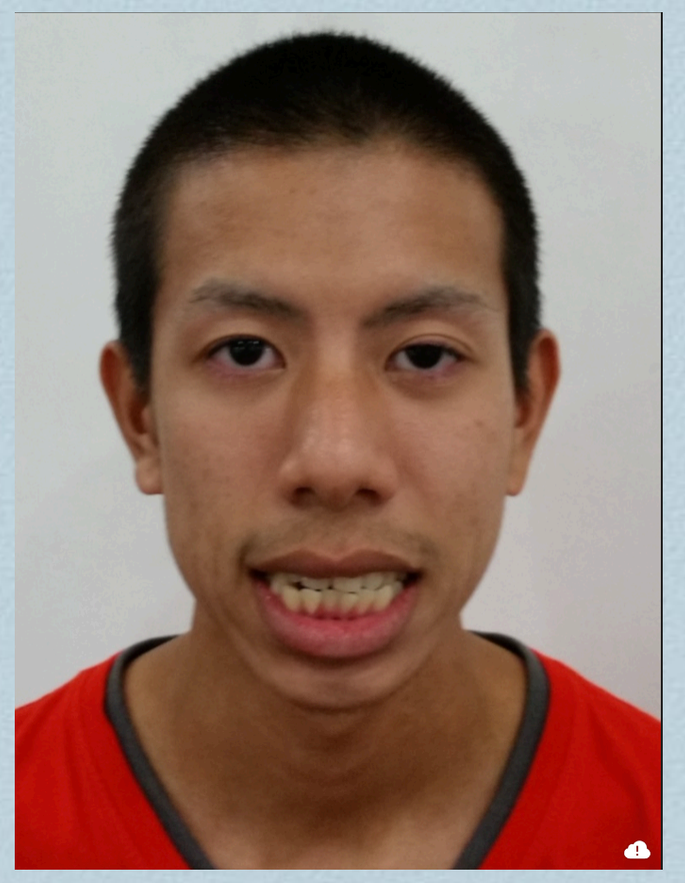


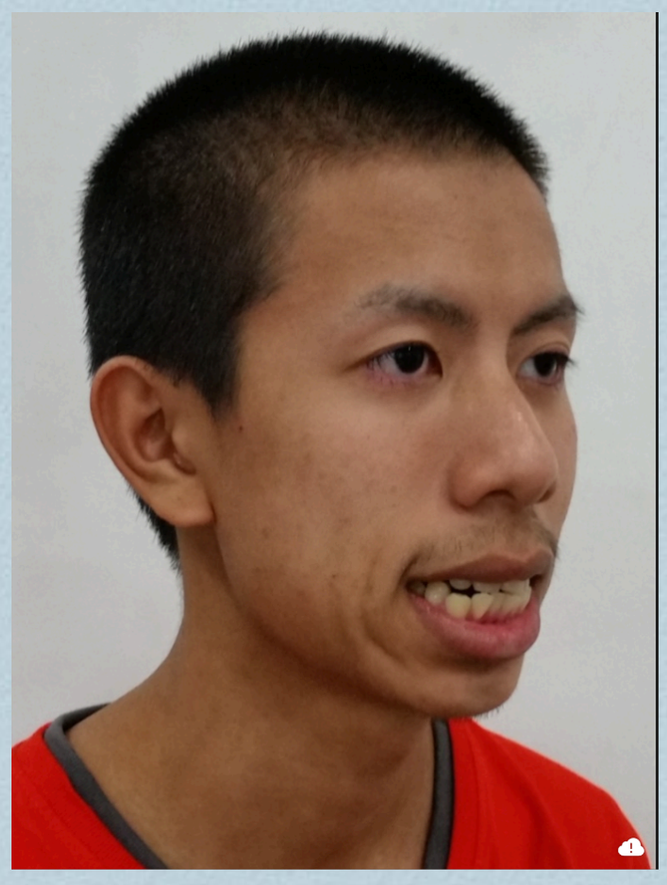
Low tongue position at Rest

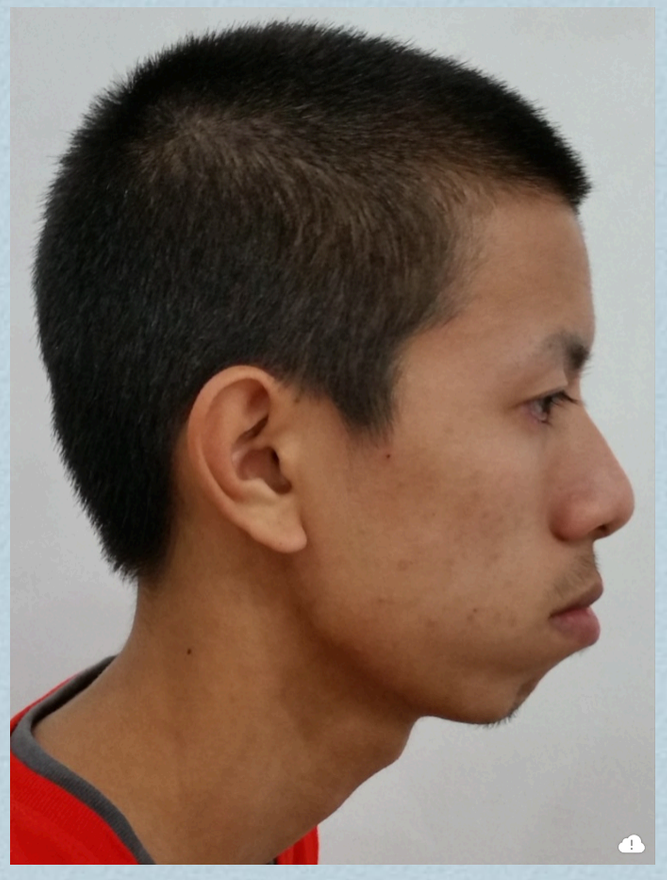




Very low tongue position at Rest















Tongue Tied

(High lingual frenum attachment)





4. Position during swallowing :

Tongue to -/1 teeth

Tongue to 1/- teeth

Between anterior teeth

5. Position during speech :

between teeth

floor of mouth

Normal

Speech Difficulties & Malocclusion

Speech sound	Problem	Related malocclusion
/s/, /z/ (sibilants) ส, ซ	Lips	Anterior open bite,large gap between Incisors
/t, /d/ (linguo-alveolar stops) ท,ธ,ถ	Difficulty in production	Irregular incisors, especially lingual position of maxillary incisors
/f /, /v/ (labiodental fricatives)ฝ,ฟ	Distortion	Skeletal Class lll
th, sh, ch (linguodental fricatives[voiced or voiceless) ฌ,ด	Distortion	Anterior open bite


daradaily
"หยาด" ยังเหลือ ถอยรถมินิย้อมใจ

C. Habits : Sucking - Thumb or finger

Tongue trusting

Pencil / pen biting

Nail biting

Bruxism

Other

1. Occurrence :

Active Duration : _____

Inactive Till what age : _____

2. Previous attempts at correction :

Yes

No

Nail biting











Thumb or finger Sucking













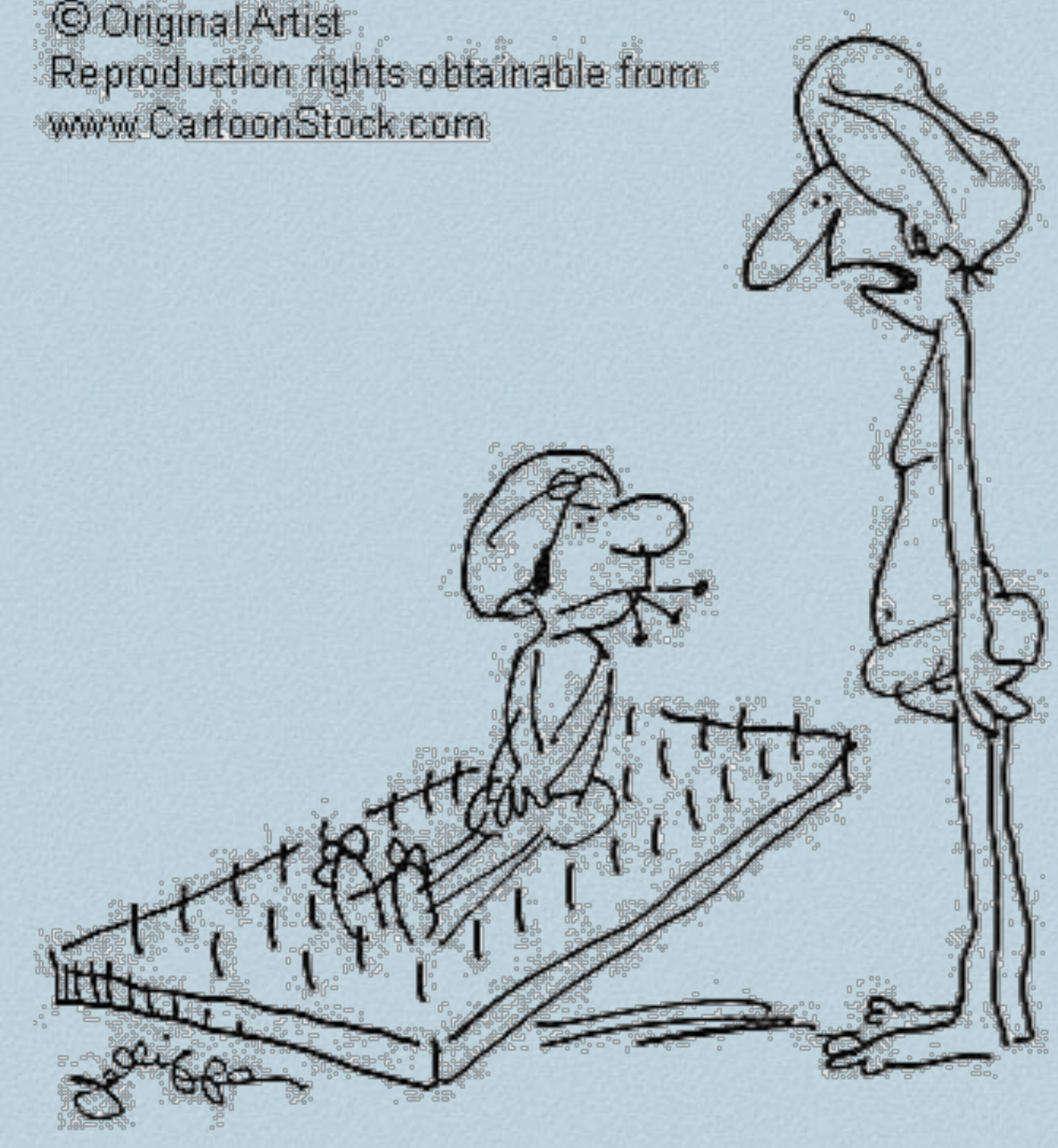


Tongue Thrusting





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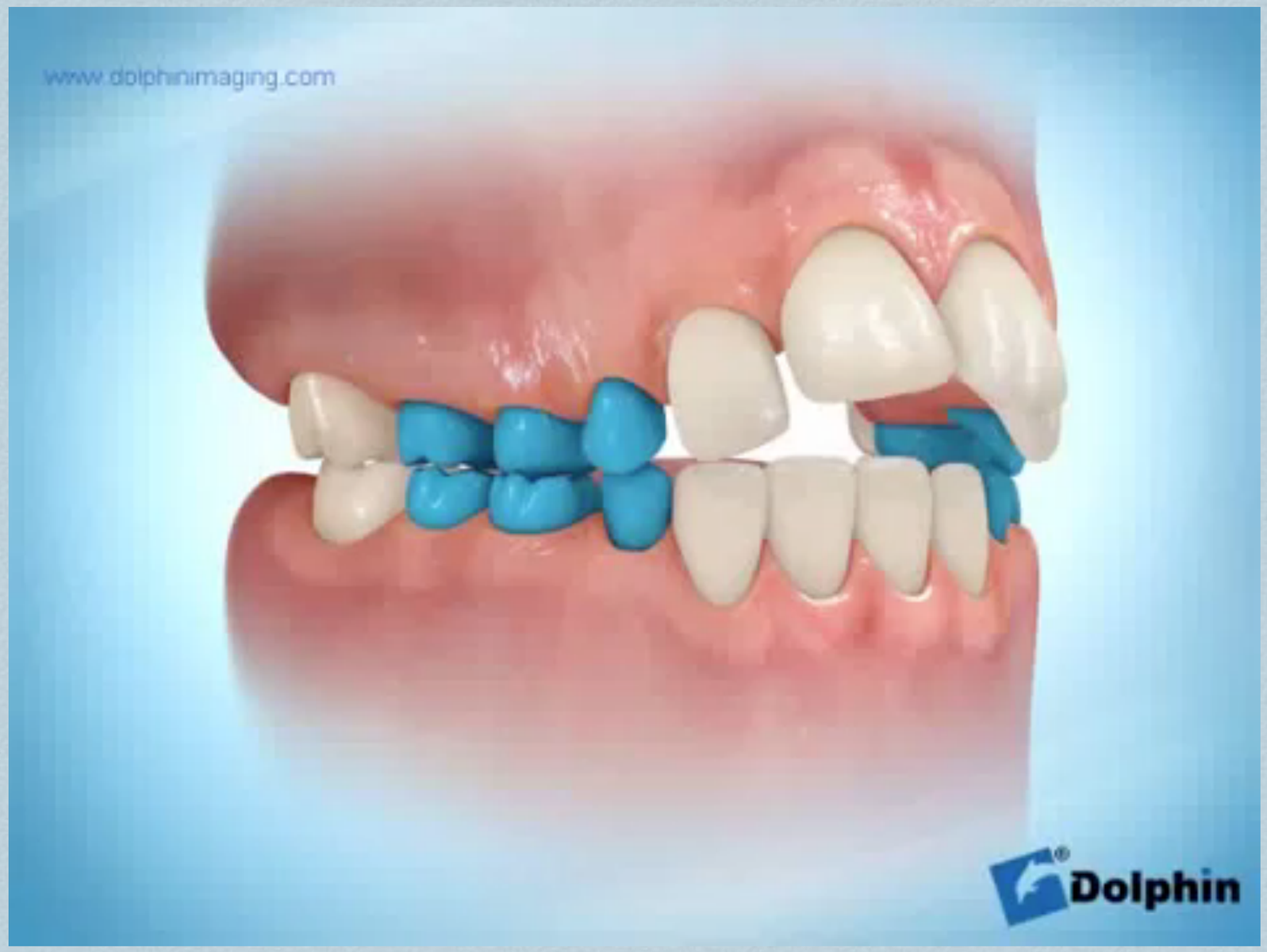


"Stop biting your nails son!"

Thumb sucking



Tongue thrusting



Tongue thrusting



D. Micro Esthetic :

1. Gingiva

Gingival Shape Scallop Sharp Blunt

Black Triangle None Present

2. Dentition

Tooth Shape Square Tapper Barrel

Tooth Proportion Height ……mm. Width……mm.

Proportion = ……

Contact Board Point (Incisal Middle Gingival)

Coloration Non Present

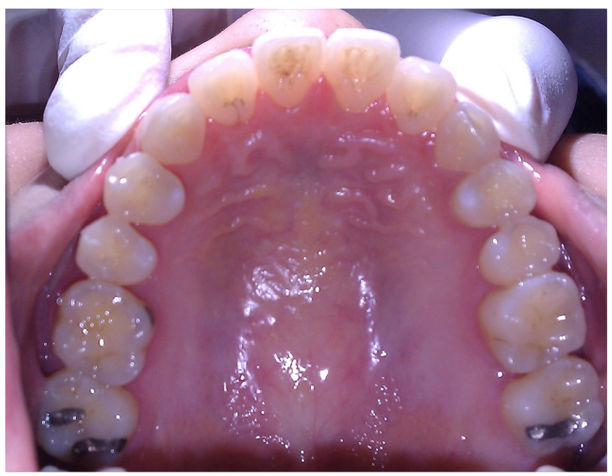


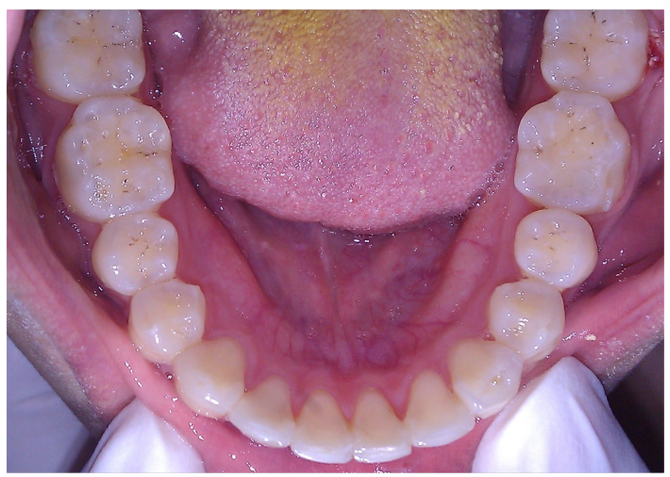
Micro-esthetic





-Gingival shape and contour
-Black Triangular holes
-Spacing
-Tooth shade
-Tooth proportion in height and width





Micro-esthetic









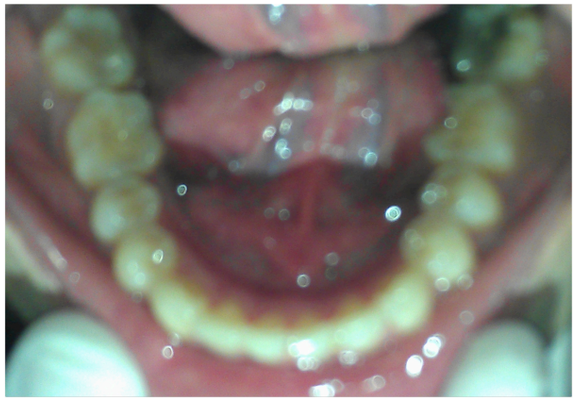










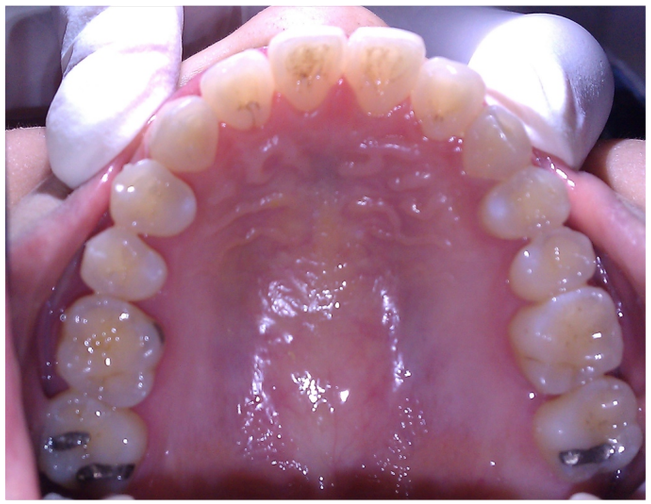


Micro-esthetic





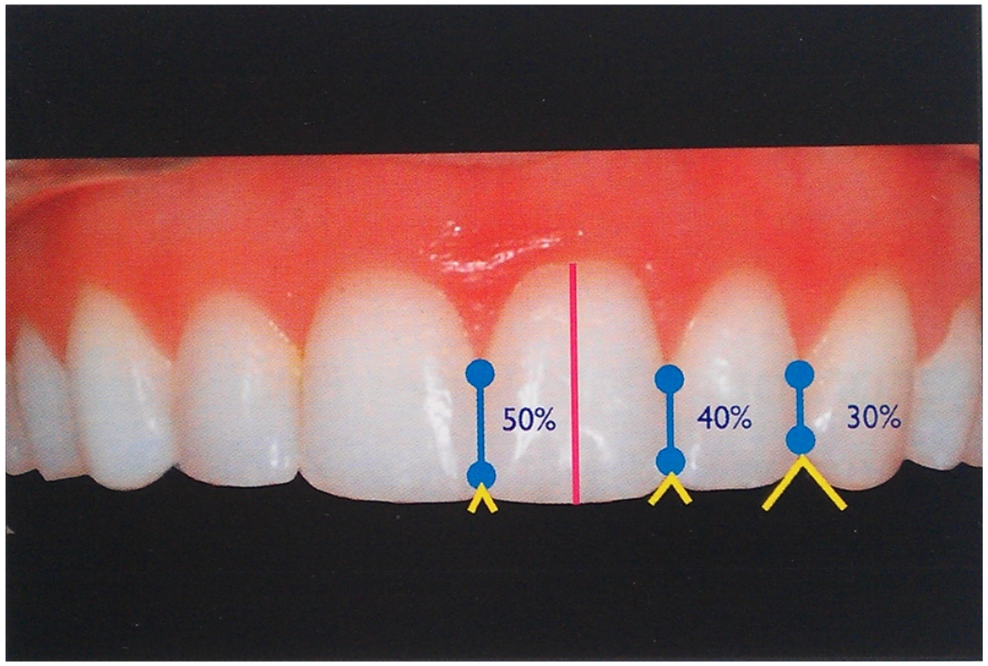


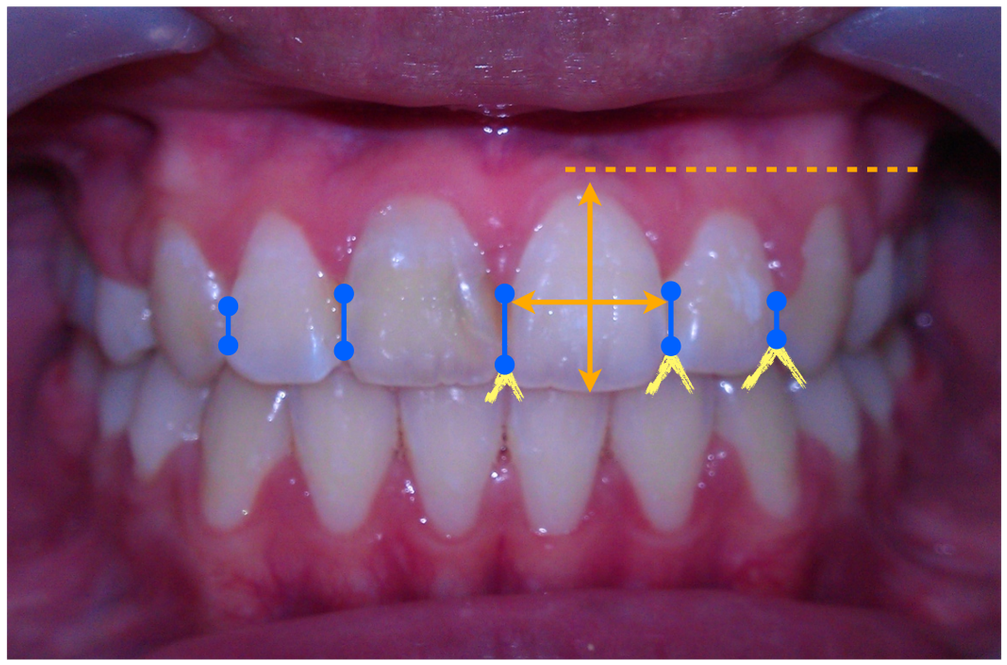


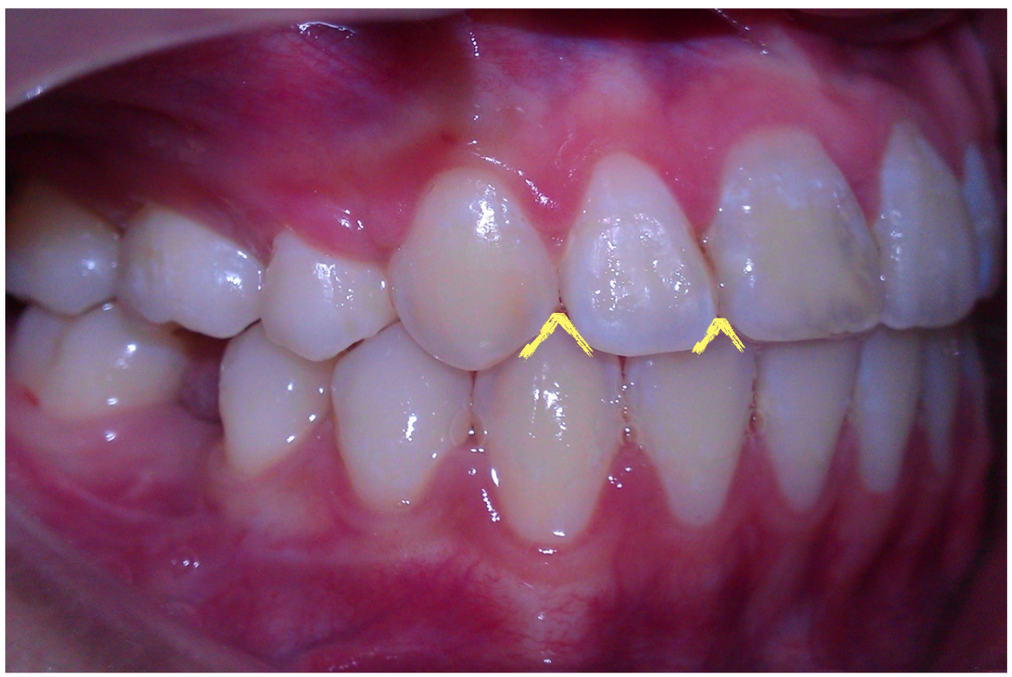


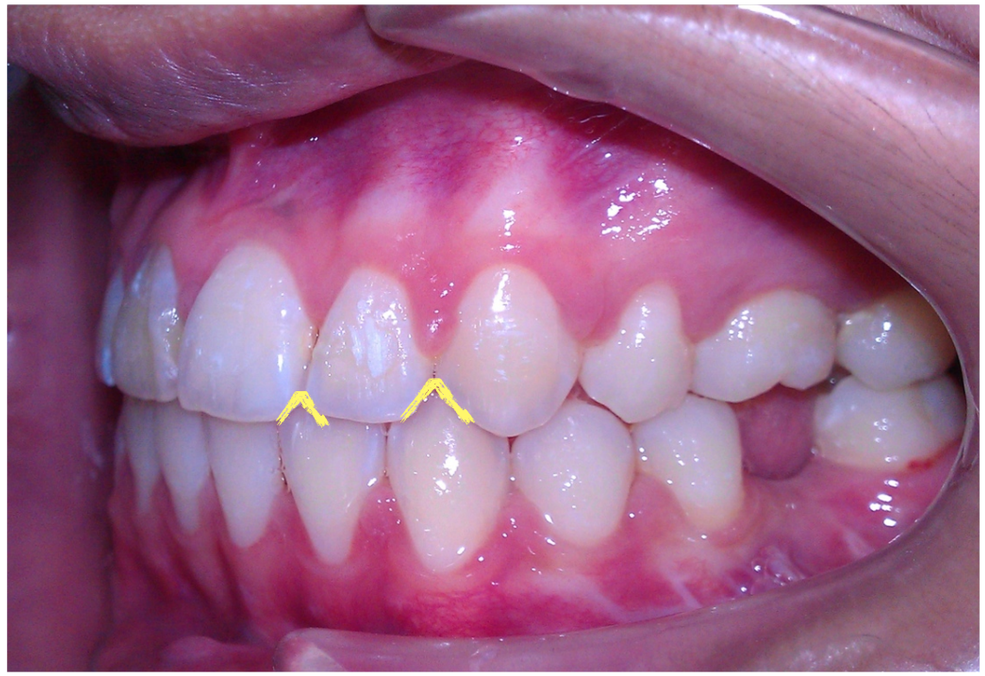


The proportion of crown length/ width

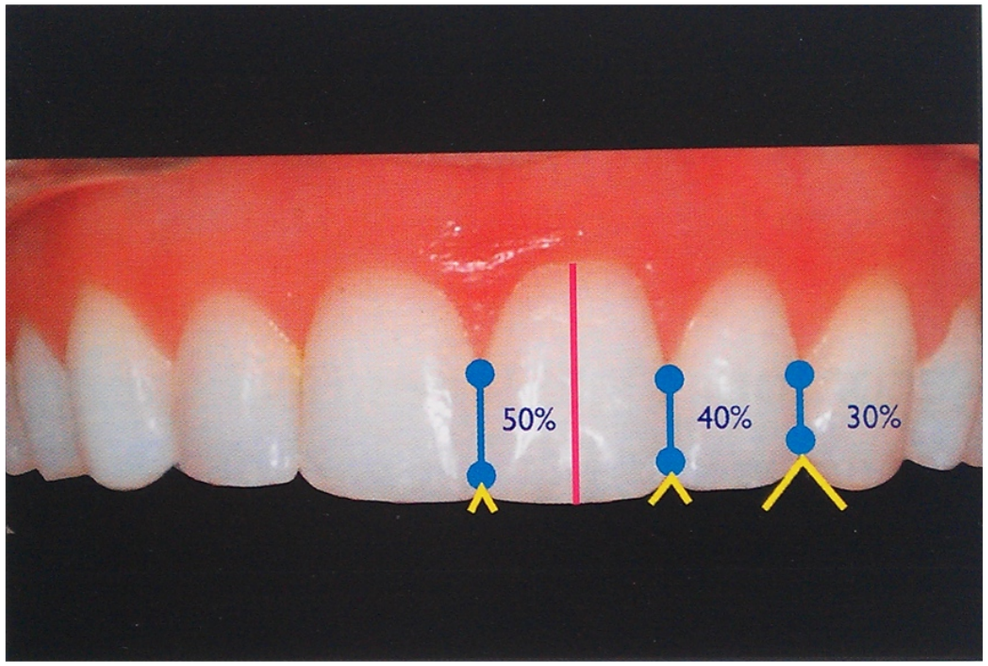


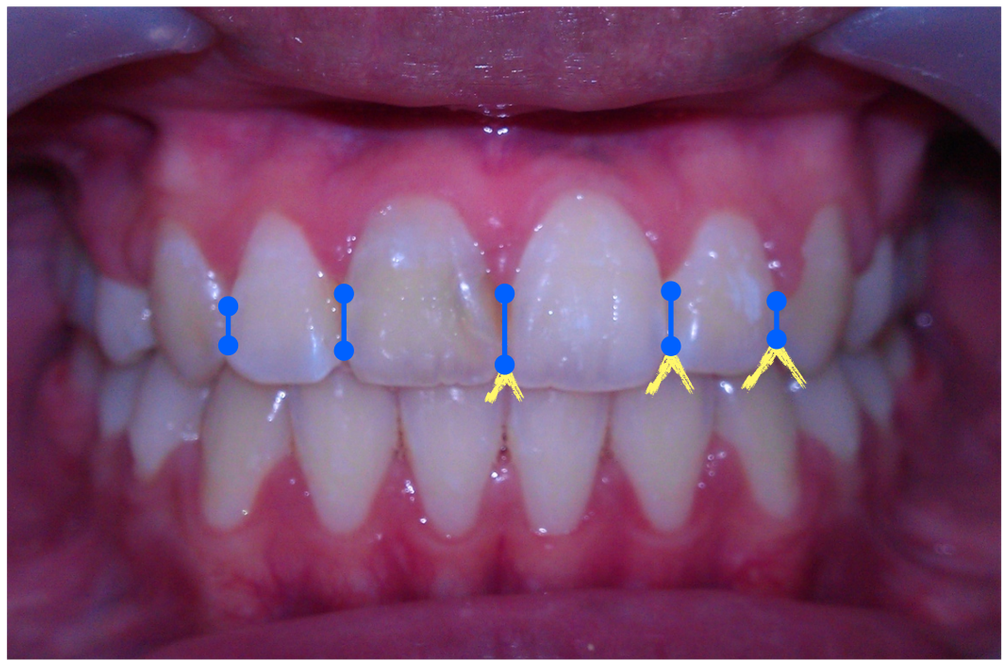


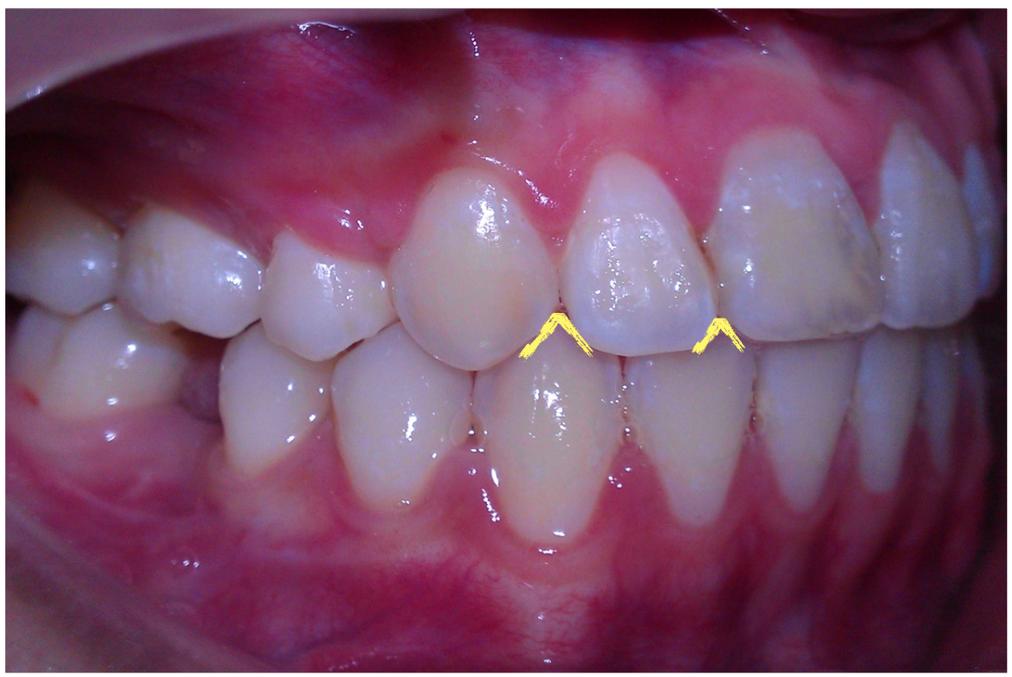


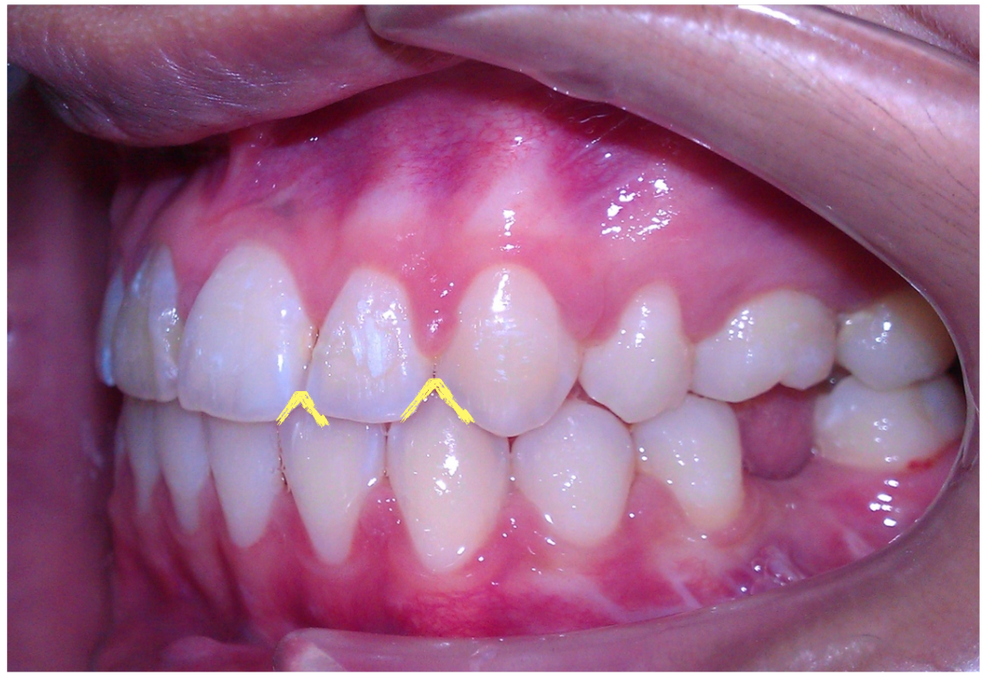


Connectors and Embrasures

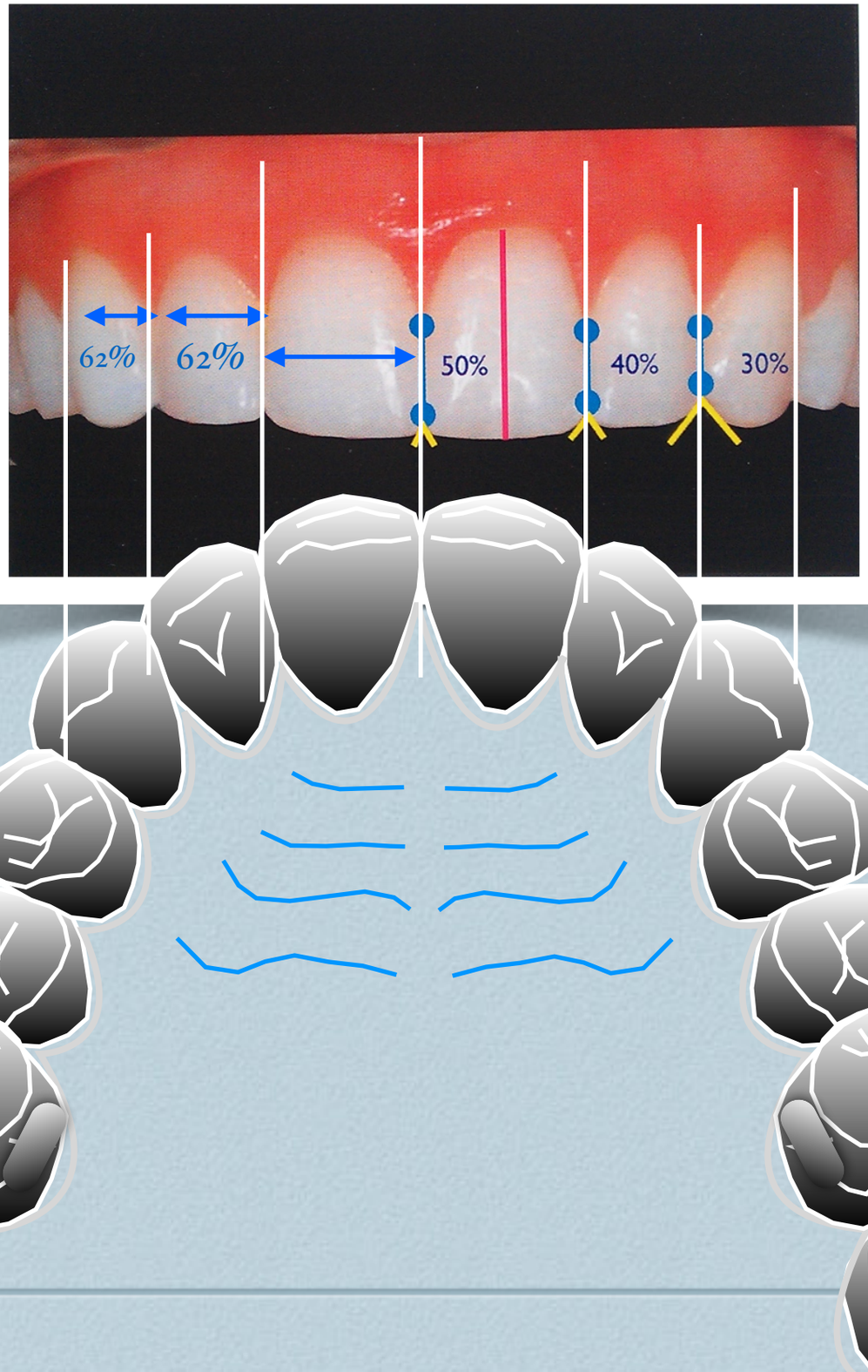


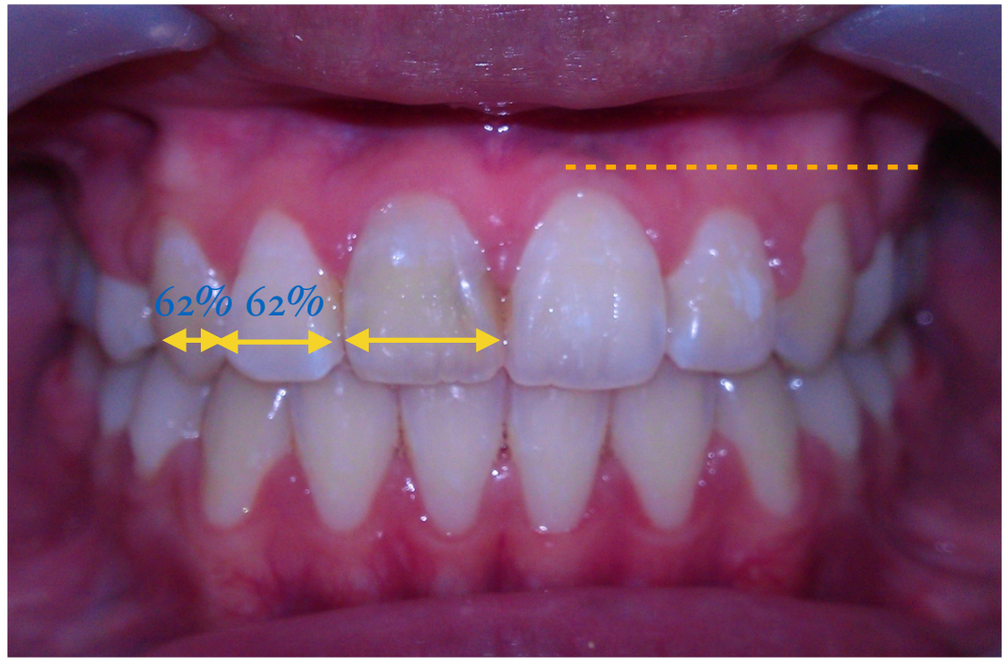






Width Relationships and the “Golden Proportion





Ideal tooth width proportions when viewed from the front are one of many illustrations of the “golden proportion”—1.0 : 0.62 : 0.38 : 0.24, and so on.

Embrasures: Black Triangles & Tooth Shape
Gingival Height Shape Contour







ธัญญลักษณ์ 55-1283



ธมนชนก บุญสุวรรณ 57-1017

Embrasures: Black Triangles & Tooth Shape
Gingival Height Shape Contour







เนตรนภา เดชอุดม 60-0975



กิตติภัทร์ สมถวิล 60-1083

Re contour teeth prior to bonding



Variation of tooth anatomy

-Lingual ridge of U/- ant
-Uneven of labial surface of 2/-
-Incisal edge of 1,2/-
-Plunging cusp of 3/-
-Incisal edge wearing of anterior teeth
- Peg shape of 2/-

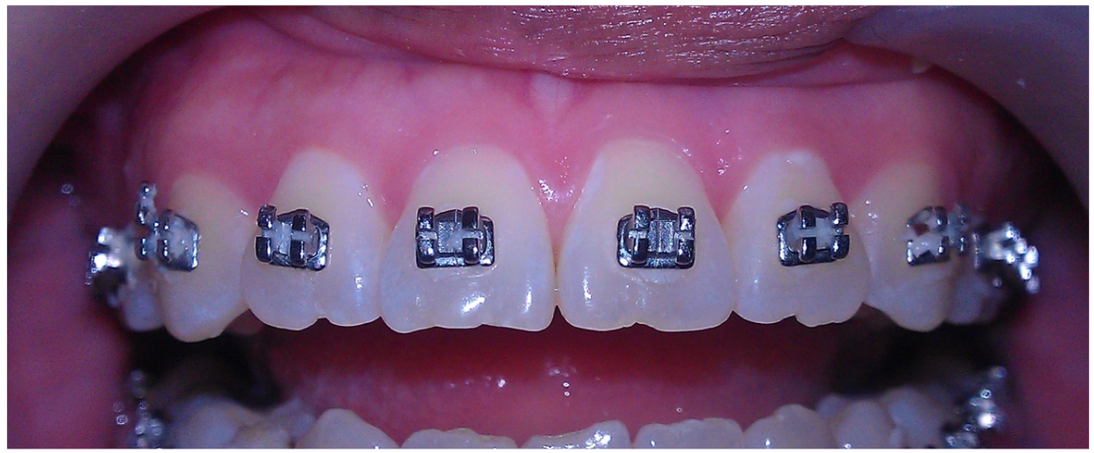




The more we know how to do enamel recontouring, the more esthetic our finishing can be

Re contour anterior teeth





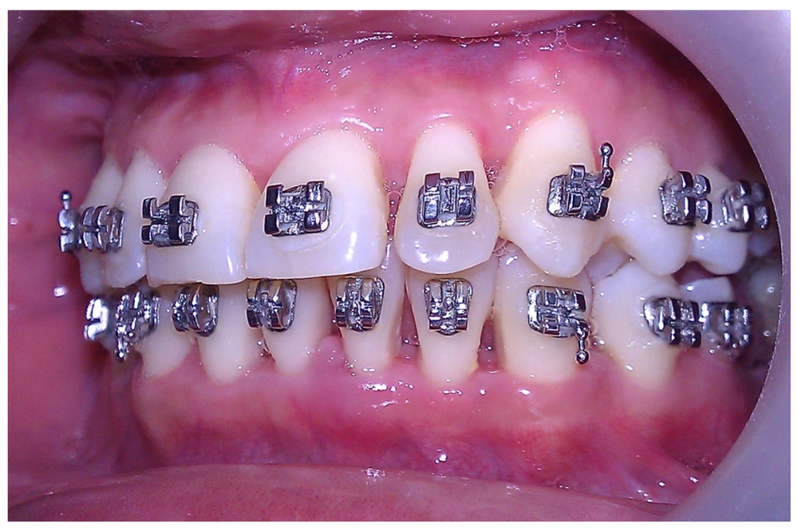




Re contour anterior teeth













IV. Dentition and Occlusion

A. Chart of present dentition :
B. Enamel : Fractures _____Decalcification _____ Discoloration _____
Defects _____
C. Caries : _____
D. Extractions : Deciduous _____ Permanent _____
E. Submerged Teeth : _____



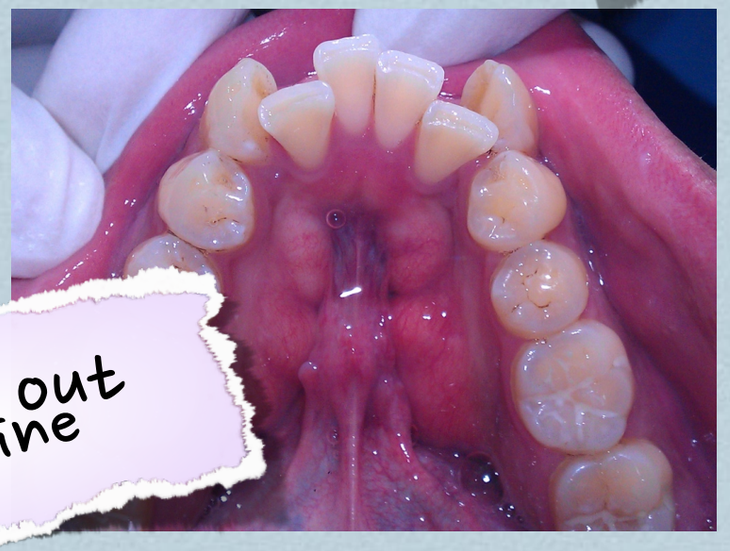
Decalcification



Discoloration



Block out canine





Deepbite



crossbites



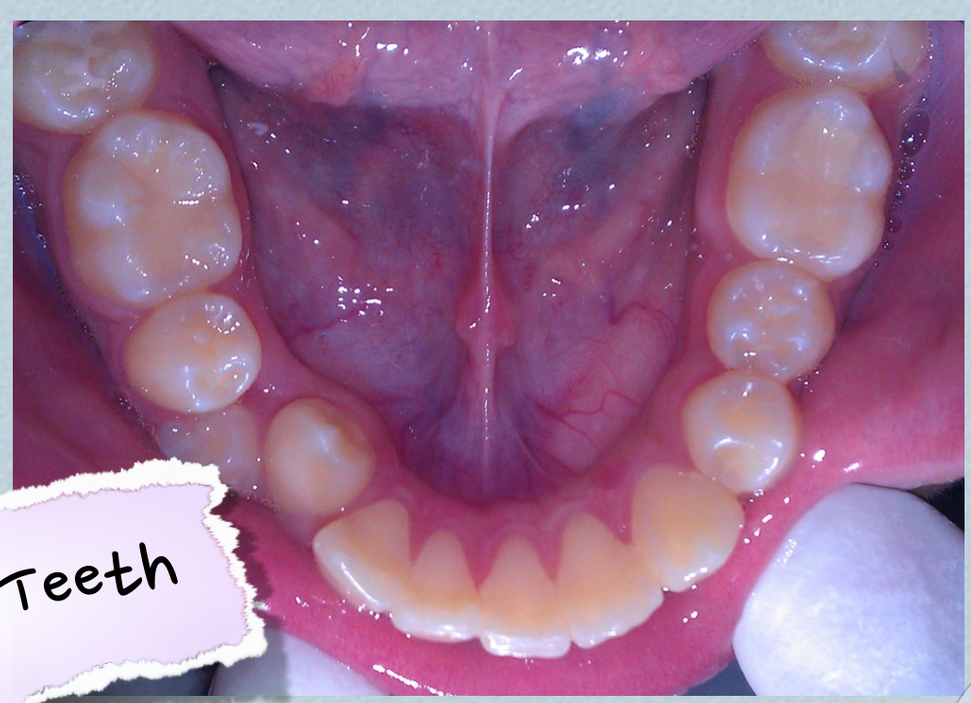
#12 extruded





congenital
Missisng Teeth





Submerged Teeth

F. Angle Classification :

1. Molar Relationship :

RT: I II (mm) III (mm) E/E

LT: I II (mm) III (mm) E/E

2. Cuspid Relationship :

RT: I II III E/E

LT: I II III E/E

G. Overbite :_____ %

H. Overjet : _____ mm.

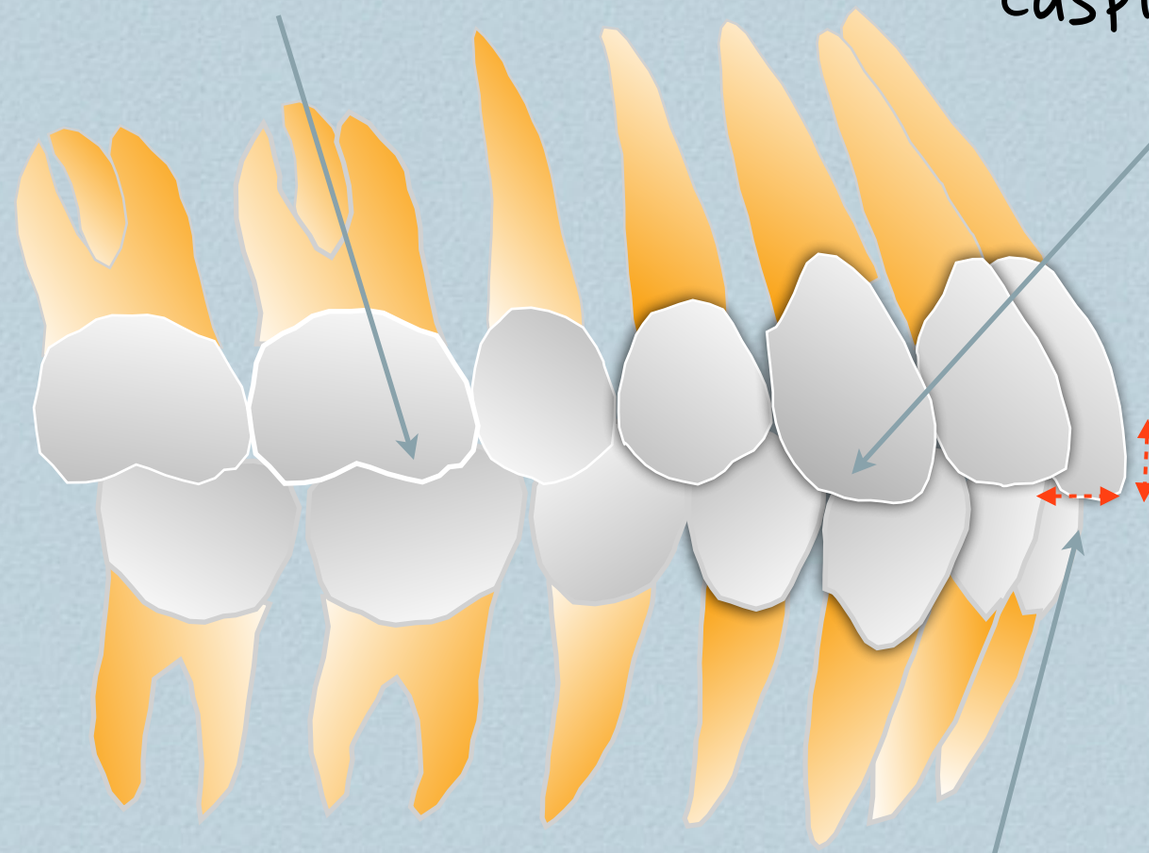
I. Midline to Face – Upper and Lower (in mm) : Right Left

Molar Relationship

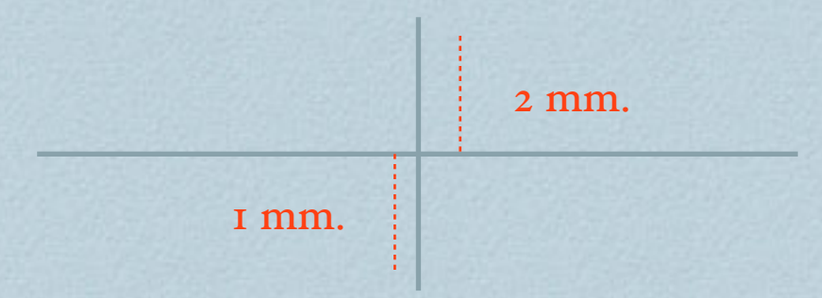
cuspid Relationship

Overbite(%)

Overjet(mm.)



Nose

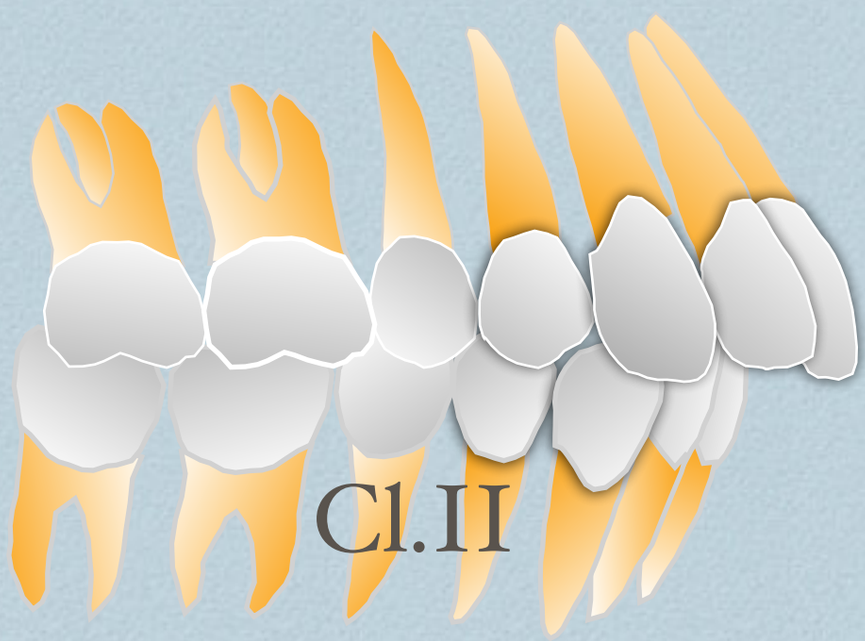


Midline to Face

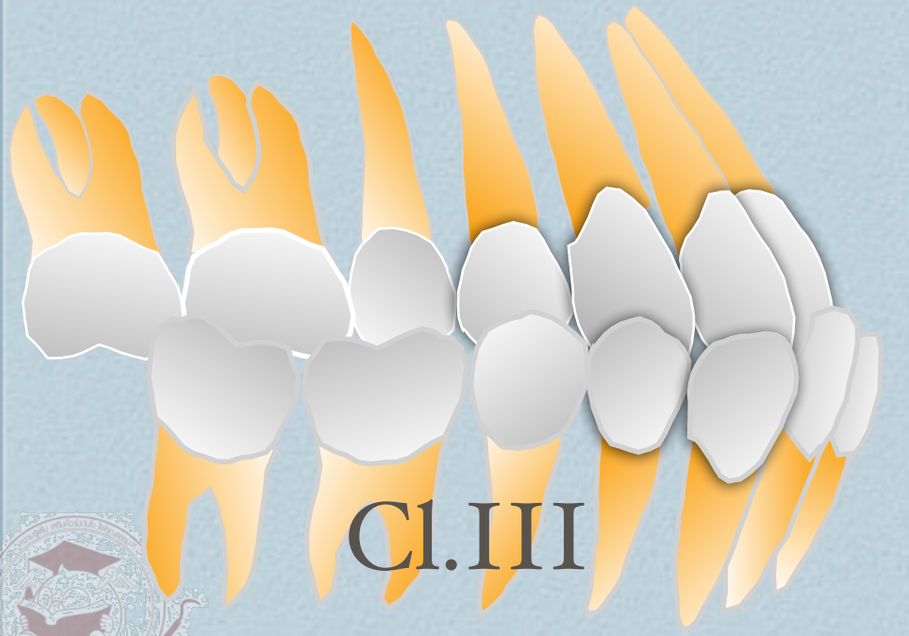
Angle Classification



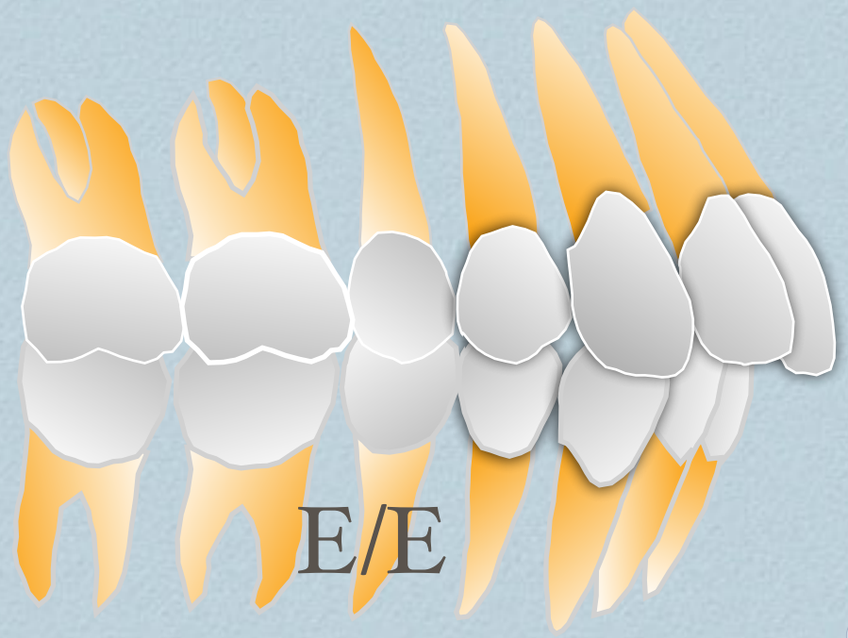
Cl.I



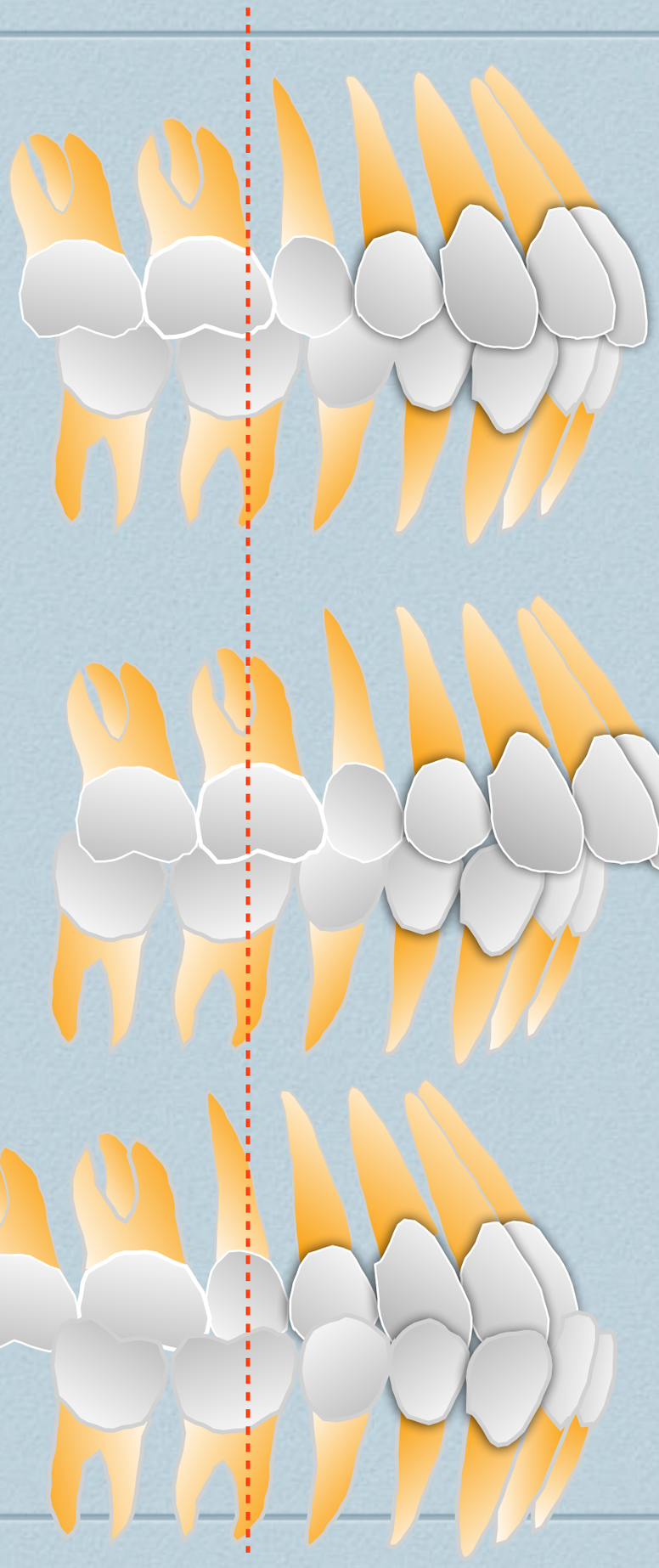
Cl.II



Cl.III



E/E





Cl.I

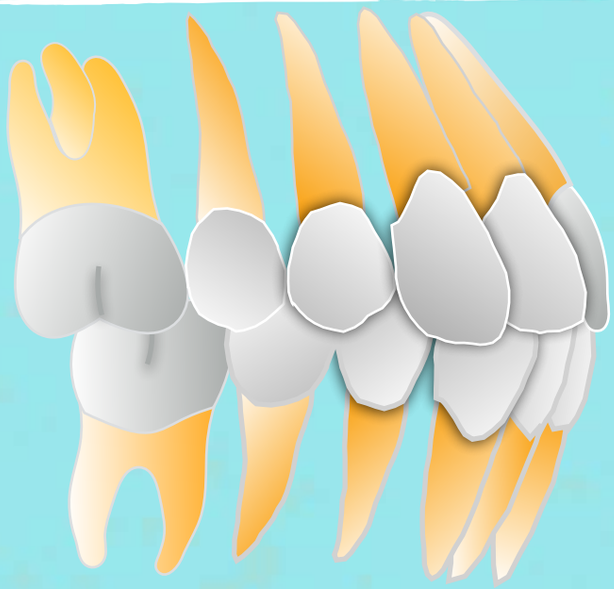


Cl.II

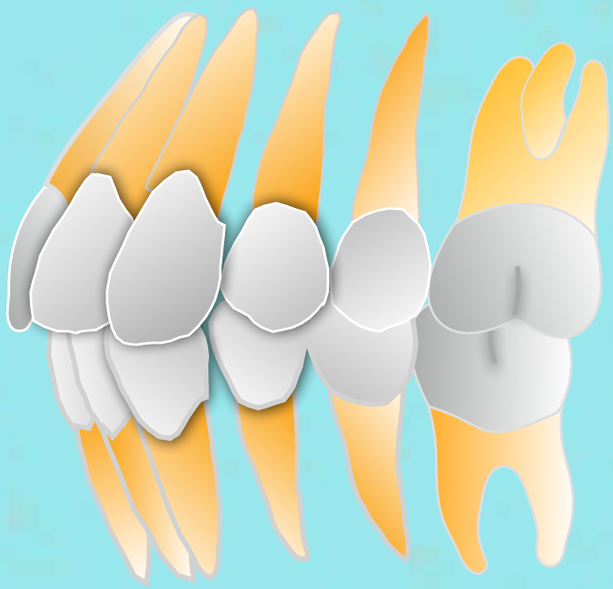


Cl.III

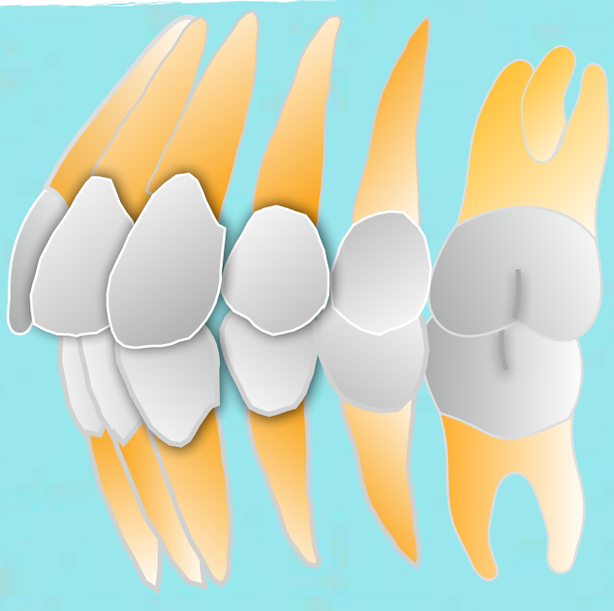
Asymmetrical Molar Relationship due to Mesial Migration of Upper first molar



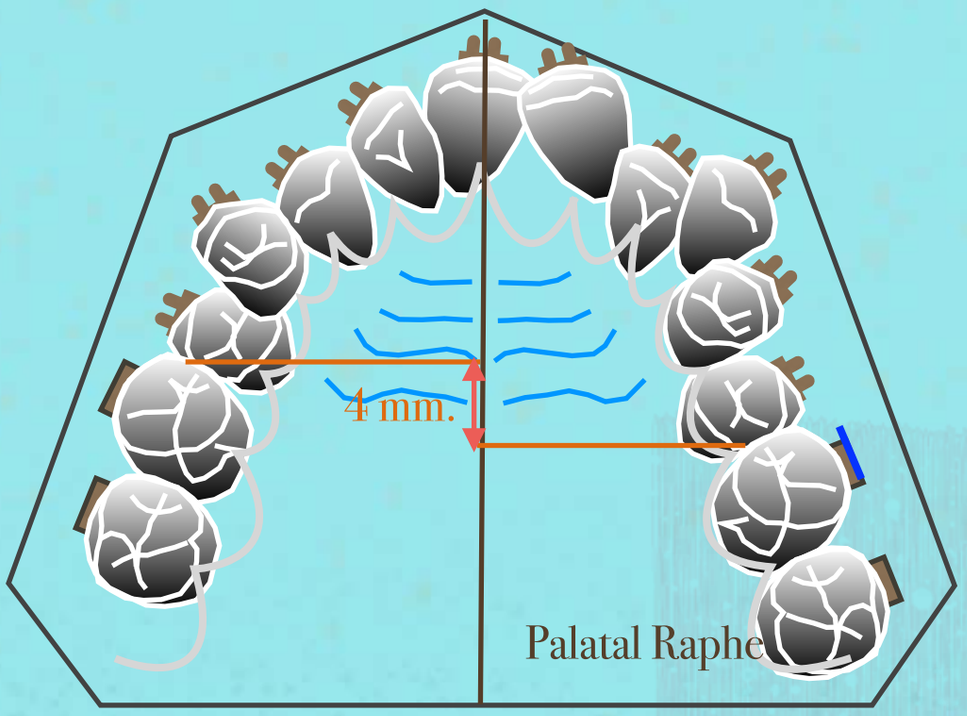
Class I



1/4 unit or Weak Class II
(Cl.2 1 mm.)



1/2 unit Class II or E/E
(Cl.2, 2 mm.)



- Mesial Migration of #16 = 4 mm
- Conventional Orthodontic Diagnosis used for Cl.1 so-called “Cl.1 Subdivision”
- MM could occur in any situation Cl.1, Cl.2 or Cl.3
- The most important part for the treatment technique
- The IPR could be used for solve the MM if the amount of migration is less than 2 mm.
- If mesial rotation of #6 is the cause of MM, Distal rotation of #6 could be the solution

Lip posture Mx



Lip posture Mx soft tissue



Lip posture Mx Mn



Lip posture Mn



Lip posture Mn



Lip posture Mn soft tissue



Lip posture Openbite



J. Crossbites :

1. ANTERIOR OR POSTERIOR TEETH

True Functional

Single tooth: _____

Multiple teeth: _____

2. POSTERIOR SEGMENT True Functional

Unilateral with shift

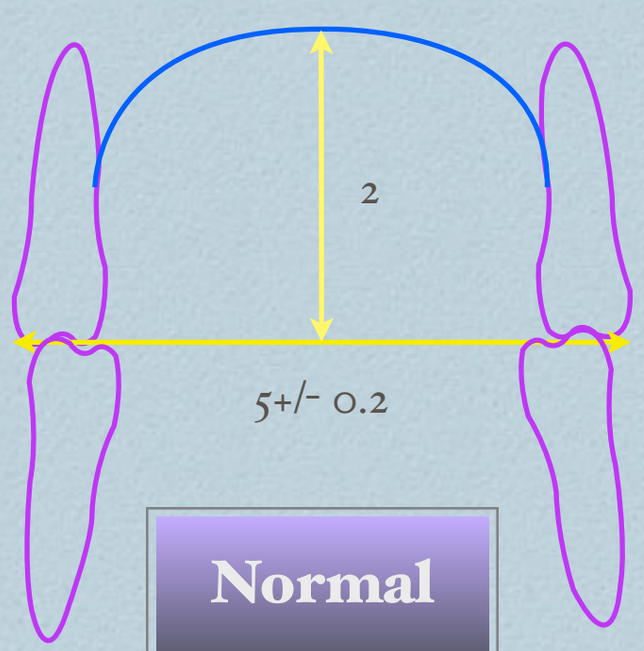
Bilateral

Scissors Bite:

Single tooth: _____

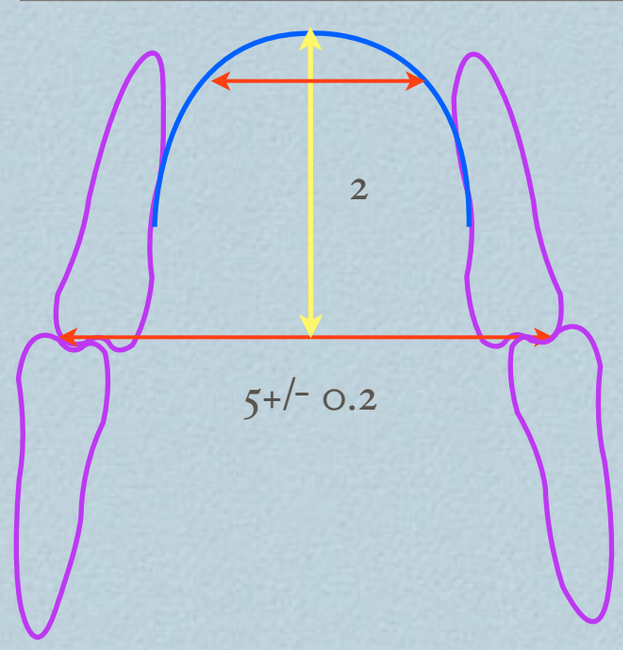
Multiple teeth: _____

Posterior Cross bite evaluation

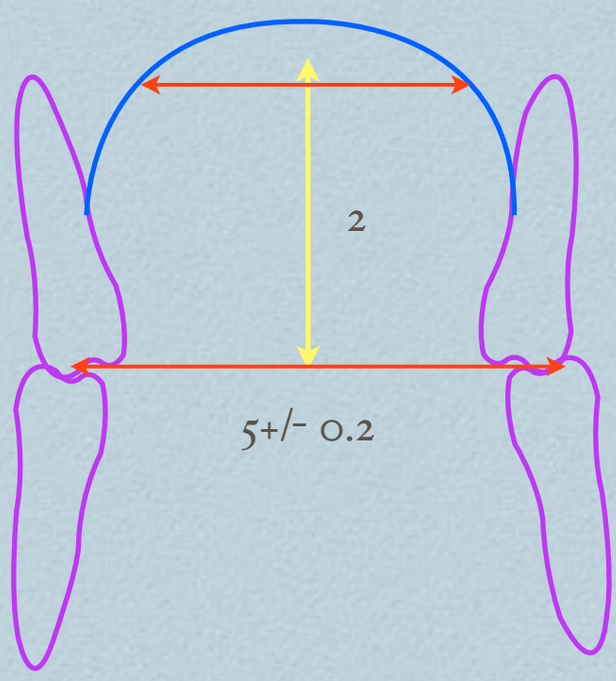


Normal

Skeletal Cross bite



Dental Cross bite



ANTERIOR OR POSTERIOR
Crossbites













Functional ANTERIOR OR POSTERIOR crossbites





SCISSORS BITE



K. Diastema : Upper Lower

Upper arch _____ mm.

Frenum: Normal

Thick

Frenum Insertion: Normal

Problematic

Lower arch _____ mm.



Diastema due to
high Frenum Insertion



