

# Frontal View



- CC: “I want my teeth straighten”
- Age: 16.2 yo
- Ethnicity: Hispanic
- PMH: WNL
- Meds: None Allergies: None
- PDH: Posterior sealants,  
6 month recall
- Habits: Lateral tongue thrust
- Oral Hygiene: Good
- Facial Form: Mesocephalic

# Smiling



- Facial Symmetry: Symmetrical
- Facial Midline= Coincident
- Max. Midline= Coincident
- Mand. Midline= Coincident
- Buccal Corridors= Wide
- Gingiva visible at smile= None,  
80% incisal show

# Lateral Facial View



Profile Type: Concave

Soft Tissue:

Nasolabial Angle: Acute

Lips: Competent

Throat Length: Long

UFH:LFH: 39:61

# Intraoral Views



## Molar Relationship

Right= III

Left= Class III

## Canine Relationship

Right= Class III

Left= Class III

## Midline

Max = Coincident

Mand= Coincident

Overbite= 0mm

Crossbite=UL2 (#10),UR2(#7)

Overjet = 0mm

# Occlusal Views



**Maxilla**

Arch form: Ovoid

Arch Symmetry: Symmetrical

Space Analysis: 2.0 mm crowding



**Mandible**

Arch form: Ovoid

Arch Symmetry: Symmetrical

Space Analysis: 1.0 mm crowding

Bolton (6-6): n/a

Bolton (3-3): n/a

# Cephalometric Radiograph

## MAXILLA

SNA (°)	90.7	82.0
Midface Length (Co-A) (mm)	91.8	92.5
Convexity (A-NPo) (mm)	-0.2	3.4

## MANDIBLE

SNB (°)	90.5	80.9
Mand length (Co-Gn) (mm)	133.3	122.7
Facial Angle (FH-NPo) (°)	97.5	90.6

## MAXILLA - MANDIBLE RELATIONSHIP

ANB (°)	0.2	1.6
Wits (FOP) (mm)	-9.4	-1.0
Interincisal Angle (U1-L1) (°)	129.5	124.0

## MAXILLARY DENTAL

U1 - Palatal Plane (°)	116.5	110.0
U1 - SN (°)	116.6	103.8
U1 - NA (°)	25.9	22.8
U1 - NA (mm)	6.2	4.3

## MANDIBULAR DENTAL

L1 - GoGn (°)	88.0	90.0
L1 - NB (°)	24.5	25.3
L1 - NB (mm)	5.4	4.0
L1 to A-Po (°)	28.7	27.7
U1 - L1 (°)	129.5	131.0

## VERTICAL

Y-Axis -- Downs (SGn-FH) (°)	53.3	61.8
SN - GoGn (°)	26.0	32.9
Palatal-Mand Angle (PP-GoGn) (°)	26.0	25.0
SN-FOP (°)	12.9	16.0

## SOFT TISSUE

UFH:LFH, Upper (N-ANS/N-Gn) (%)	39.3	45.0
UFH:LFH, Lower (ANS-Gn/N-Gn) (%)	60.7	55.0
Lower Lip to E-Plane (mm)	-0.9	-2.0
Lower Face-Throat Ang (Sn-Gn'-C) (°)	91.1	100.0
NLA (Nasal Angle) (mm)	128.9	110.0



# Panoramic Radiograph



Dental Age: 16

Missing Teeth: None

Pathology: None

Overretained 1° Teeth: UL primary lateral(#G)

Impacted Teeth: Possible third molars

# Diagnosis

- Skeletal

Sagittal: Skeletal Cl III, Bimaxillary protrusive

Vertical: Hypodivergent

Transverse: Normal

- Dental

Sagittal: Molars Cl III

Canines Cl III

Overjet = 0mm

Vertical: Overbite = 0mm (Edge-to-edge)

Midlines: Coincident

Transverse: Crossbite=UL2 & UR2(#10 & #7)

- Soft tissue: Concave profile, lips competent

# Problem list

- Skeletal

- Skeletal Cl III, Bimaxillary protrusive
- Hypodivergent

- Dental

- Cl III molars & canines
- Overjet: Edge-to-edge
- Overbite: Edge-to-edge
- Crossbites
- Overretained MX left primary lateral (#G)
- Ectopic eruption of MX left permanent lateral (#10)
- Moderate maxillary diastema
- Lateral open bite

- Soft tissue

- Concave profile
- Lateral tongue thrust
- High maxillary median frenum attachment

# Treatment Objectives

1. Level, align, upright, correct crossbites
2. Resolve upper & lower crowding. Close diastema
3. Establish Cl I molar & canine relationship
4. Align midlines
5. Establish ideal overbite and overjet
6. Eliminate lateral tongue thrust
7. Establish functional occlusion
8. Retention

# Treatment Plan

Non-surgical, non-extraction attempt and reevaluate

RPE with Protraction facemask

Extract overretained primary maxillary left lateral (#G)

Align permanent maxillary left lateral

Angle's Cl I correction by protracting maxillary teeth and  
retracting mandibular teeth & Cl III elastics

Establish ideal overbite and overjet

Level,align,upright and correct crossbites

Close space (upper midline diastema)

Finish and detail

Retention

Oral Surgery consultation for extraction of L/U third molars

Reevaluate high maxillary median frenum

# Mechanotherapy

- RPE & Protraction facemask
- Band and bond fixed upper and lower appliances
- Archwire sequence
  - .018 HANT
  - .018 SS
  - .019x.025 HANT
  - .019X.025 SS
  - .016 SS
- Class III elastics
- Space closure by elastic chains
- Posterior settling elastics

# Retention

Maxillary = Hawley

Mandibular = Hawley

Estimated treatment time = 30 -36 months

Actual treatment time = 30 months

Prognosis = Good

# Initial

- Name: YP
- DOB: 8/9/1992
- Age: 16.2 y.o.
- Initial Records: 4/4/06



# Progress

Progress date: 6/18/08

Treatment duration: 26 months



# Final

Debond date: 10/30/08

Total treatment duration: 30 months



# Treatment timeline



# Panoramic Final



# Cephalometric Radiograph

## Final

### MAXILLA

SNA (°)	86.0	82.0
Midface Length (Co-A) (mm)	93.3.6	92.5
Convexity (A-NPo) (mm)	-2.3	3.4

### MANDIBLE

SNB (°)	88.2	80.9
Mandibular length (Co-Gn) (mm)	138.9	122.7
Facial Angle (FH-NPo) (°)	96.0	90.6

### MAXILLA - MANDIBLE RELATIONSHIP

ANB (°)	-1.5	1.6
Wits (FOP) (mm)	-4.3	-1.0
Interincisal Angle (U1-L1) (°)	124.0	124.0

### MAXILLARY DENTAL

U1 - Palatal Plane (°)	123.2	110.0
U1 - SN (°)	121.0	103.8
U1 - NA (°)	34.2	22.8
U1 - NA (mm)	8.8	4.3

### MANDIBULAR DENTAL

L1 - GoGn (°)	88.3	90.0
L1 - NB (°)	23.2	25.3
L1 - NB (mm)	4.0	4.0
L1 to A-Po (°)	26.1	27.7
U1 - L1 (°)	124.1	131.0

### VERTICAL

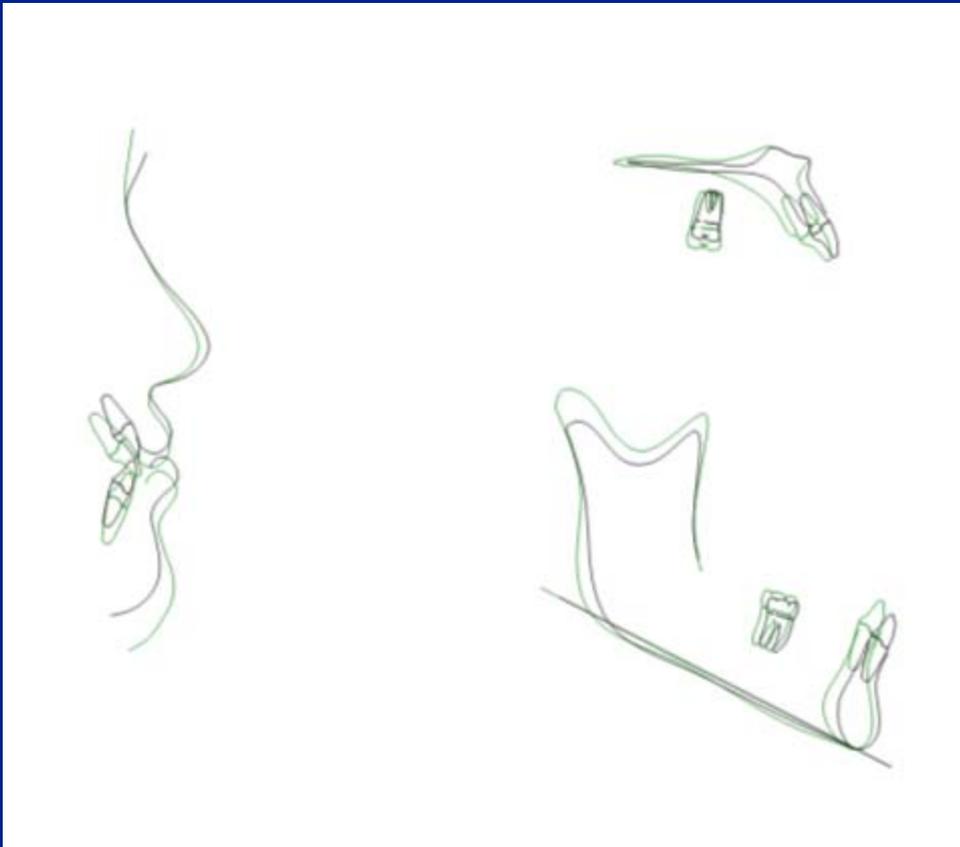
Y-Axis -- Downs (SGn-FH) (°)	54.1	61.8
SN - GoGn (°)	26.7	32.9
Palatal-Mand Angle (PP-GoGn) (°)	24.3	25.0
SN-FOP (°)	5.6	16.0

### SOFT TISSUE

UFH:LFH, Upper (N-ANS/N-Gn) (%)	41.0	45.0
UFH:LFH, Lower (ANS-Gn/N-Gn) (%)	59.0	55.0
Holdaway Angle (NB to H-line) (°)	2.7	8.0
Lower Lip to E-Plane (mm)	-1.9	-2.0
Lower Face-Throat Ang (Sn-Gn'-C) (°)	95.8	100.0
NLA (Nasal Angle) (mm)	148.9	110.0



# Tracing superimpositions



## Dental changes:

U1 - SN (°) 116 to 121

L1 - GoGn (°) 88.0 to 88.3

U1 - L1 (°) 129.5 to 124.1

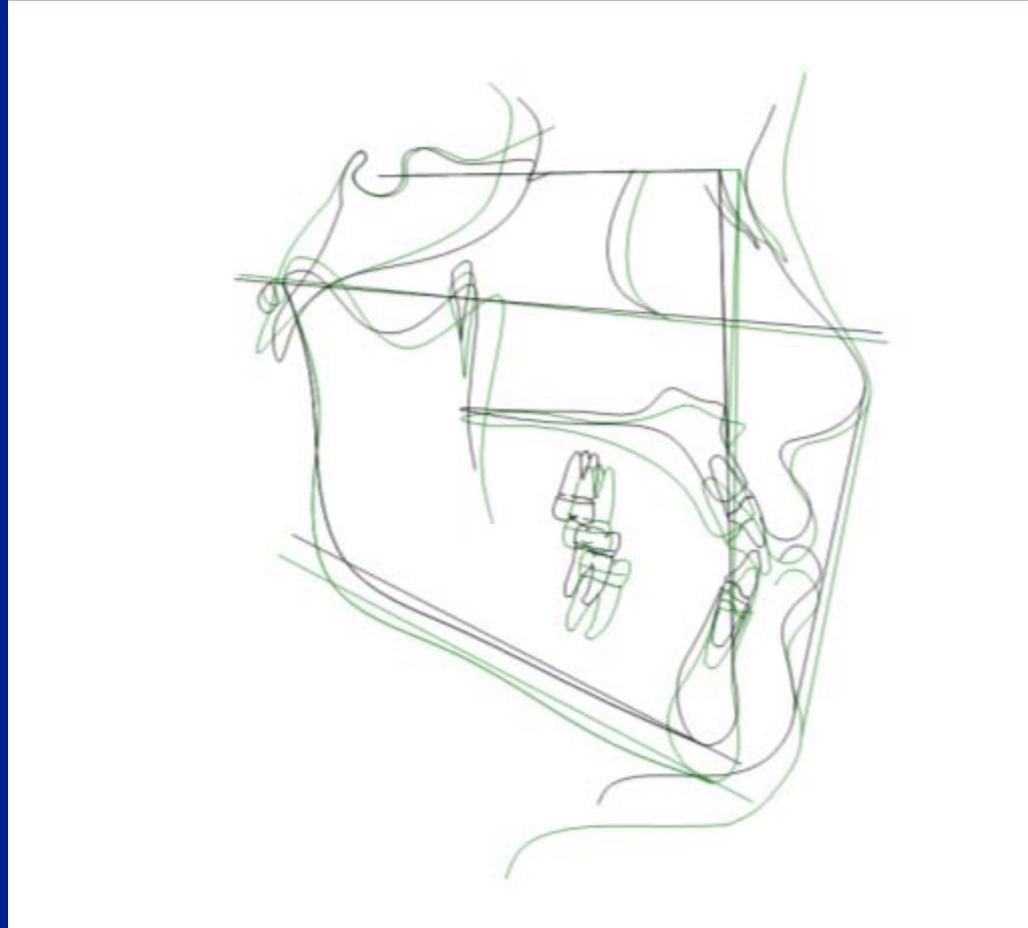
Overbite 0mm → +1.5mm

Overjet 0mm → +1mm

Black = initial

Green = final

# Tracing superimpositions



Black = initial

Green = final