

CASE: 0000 0032 1
CAUCASIAN SAMPLE

Dr. TRAINING

M (CA) Caucasian

AGE: 8.2

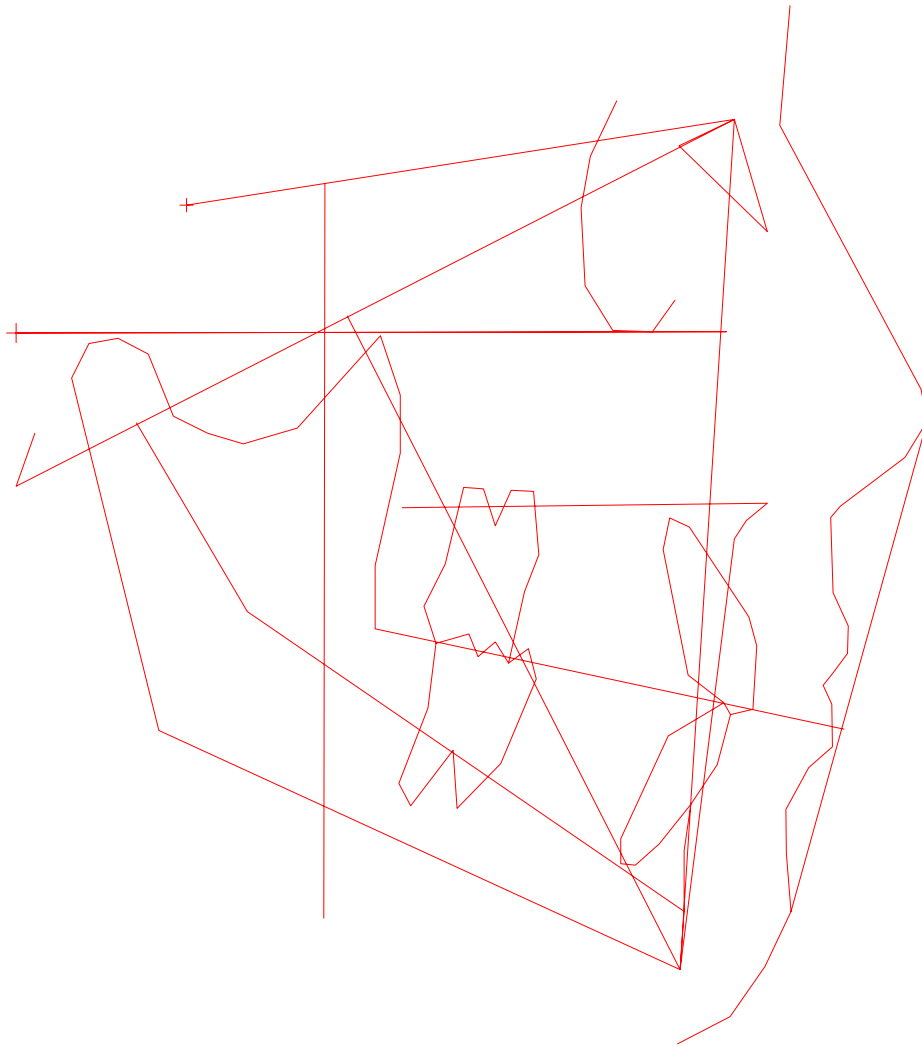
X: 09/10/2002 - R: 02/21/2003

MISSING PERMANENT TEETH

R ———— | ———— L

VISUAL NORMS

RMO®



CAUCASIAN SAMPLE
Dr. Training

RMO Case Number: 0000 0032 1
RMO Run date: 02/21/2003

X-Ray date: 09/10/2002 Age: 8.2
Birthdate: 06/23/1994 Sex: Male 1

Reference: C C D 1

C C D - O R T H O D O N T I C C O N D I T I O N S

LATERAL BEFORE TREATMENT

FACTOR	MEASURED VALUE	CLINICAL NORM	CLINICAL DEVIATIONS FROM NORM
# - Appears on tracing			

===== DENTAL RELATIONS =====

01 Molar Relation	3.3 mm	-3.0 mm	2.1 **
03 Canine Relation	4.7 mm	-2.0 mm	2.2 **
05 Incisor Overjet	8.5 mm	2.5 mm	2.4 **
07 Incisor Overbite	4.5 mm	2.5 mm	1.0 *
09 Mand Incisor Extrusion	3.2 mm	1.3 mm	1.0 *
#11 Interincisal Angle	118.2 dq	130.0 dq	-2.0 **

===== DENTAL TO SKELETON =====

#18 A6 Molar Position to PTV	18.3 mm	11.2 mm	2.4 **
#20 B1 to A-Po Plane	2.3 mm	1.0 mm	0.6
22 A1 to A-Po Plane	10.9 mm	3.5 mm	3.4 ***
#24 B1 Inclination to A-Po	23.3 dg	22.0 dg	0.3
26 A1 Inclination to A-Po	38.5 dg	28.0 dg	2.6 **
27 Occlusal Plane to Xi	3.8 mm	1.2 mm	0.8
28 Inclination of Occl Plane	14.4 dq	22.3 dq	-2.0 **
54 B1 Inclination to FH	59.5 dg	65.0 dg	-1.1 *

===== ESTHETICS =====

29 Lower Lip to Esthetic Plane	4.8 mm	-0.9 mm	2.9 **
30 Upper Lip Length	23.4 mm	25.0 mm	-0.8
31 Lip Embrasure to Occl Plane	-3.8 mm	-3.0 mm	-0.4
58 NasoLabial Angle	106.9 dq	115.0 dq	-1.6 *

===== NASOPHARYNGEAL AIRWAY =====

62 N-S-Ba	128.1 dq	129.6 dq	-0.3
63 Ba-S-PNS	61.5 dq	63.0 dq	-0.6
85 Airway Percent	68.6 %	53.6 %	1.0
86 Linder-Aronson AD1	28.1 mm	21.6 mm	1.2
87 Linder-Aronson AD2	21.7 mm	16.9 mm	1.2
88 Distance PTV to Adenoid	16.2 mm	8.8 mm	1.8

C C D - S K E L E T A L C O N D I T I O N S

LATERAL BEFORE TREATMENT

FACTOR	MEASURED VALUE	CLINICAL NORM	CLINICAL DEVIATIONS FROM NORM
# - Appears on tracing			

===== SKELETAL RELATIONS =====

#13 Convexity	4.7 mm	2.6 mm	1.0 *
#15 Lower Facial Height	36.4 dg	45.0 dg	-2.1 **
84 Present Patient Height	55.0 in	50.9 in	
91 Posterior face height	75.9 mm		
92 Anterior face height	105.8 mm		
93 Posterior/Anterior ratio	71.7 %		
94 Saddle Angle	118.6 dg	123.0 dg	-1.5 *
96 Condylion-A point	91.7 mm	83.8 mm	3.2 ***
97 Condylion-Gnathion	108.2 mm	102.8 mm	1.3 *
95 Max-Mand Differential	16.6 mm	19.3 mm	-1.1 *
98 Menton-ANS	59.4 mm	62.2 mm	-1.0 *

===== JAW TO CRANIUM =====

#32 Facial Depth	89.5 dg	86.4 dg	1.0 *
#34 Facial Axis	96.1 dq	90.0 dq	1.7 *
#36 Maxillary Depth	94.6 dg	90.0 dg	1.5 *
37 Maxillary Height	48.6 dg	52.8 dg	-1.4 *
38 Palatal Plane to FH	4.4 dg	1.0 dg	1.0 *
#39 Mandibular Plane to FH	14.1 dg	26.2 dg	-2.7 **
77 Ba-N-A	68.9 dg	63.0 dg	2.0 **
76 S-N-A	84.9 dg	82.0 dg	0.9
78 S-N-B	79.7 dg	80.0 dg	-0.1
69 A-N-B Difference	5.3 dg	2.0 dg	1.2 *
75 Total Facial Height	49.3 dg	60.0 dg	-3.6 ***

===== INTERNAL STRUCTURE =====

40 Cranial Deflection	28.7 dg	27.0 dg	0.6
42 Cranial Length Anterior	62.4 mm	58.1 mm	1.7 *
44 Ramus Height (CF-Go)	60.2 mm	57.9 mm	0.7
46 Ramus Xi Position	79.7 dg	76.0 dg	1.2 *
48 Porion Location (Por to PTV)	-39.4 mm	-40.9 mm	0.7
#50 Mandibular Arc	37.2 dg	25.8 dg	2.9 **
51 Corpus Length	67.7 mm	68.5 mm	-0.3

CAUCASIAN SAMPLE
Dr. TrainingRMO Case Number: 0000 0032 1
RMO Run date: 02/21/2003X-Ray date: 09/10/2002 Age: 8.2
Birthdate: 06/23/1994 Sex: Male 1

Reference: I N F O

P A T I E N T I N F O R M A T I O N

===== NAME =====

Patient name: CAUCASIAN SAMPLE
Doctor name: TRAINING
Age: 8.2
X-Ray date: 09/10/2002
RMO Case Number:
RMO Run date: 02/21/2003

===== MISSING PERMANENT TEETH =====

R -----+----- L
|
|

===== HEIGHT PREDICTION =====

Assumed skeletal age: 8.2
Current height: 55.0 inches
Amount of adult growth achieved: 73.0 %
Expected adult height: 75.4 inches

===== AIRWAY ANALYSIS =====

If the patient is clinically diagnosed
as a mouthbreather, observed mouthbreathing
is probably not caused by adenoid blockage
of the airway.

===== BOLTON ANALYSIS =====

Not Available - Upper and lower arch not analyzed

S I G N I F I C A N T C O N S I D E R A T I O N S

===== CONDITION =====

===== CCD FACTORS =====

===== HORIZONTAL =====
Severe Class II malocclusion 1
due to the upper molar 18
Severe Overjet 5
Skeletal Class II 13
due to a long ant cran base 42,46,50,51

===== VERTICAL =====

Skeletal Deep Bite 15
due to the mandible 37,38,39

===== TRANSVERSE =====

===== SYMMETRY =====

===== SPECIAL CONSIDERATIONS =====

Possible thumb sucking 5,22,36,37

===== COMMENTS =====

No analysis of frontal x-ray. Upper and lower arch
expansion decisions based on available data only.

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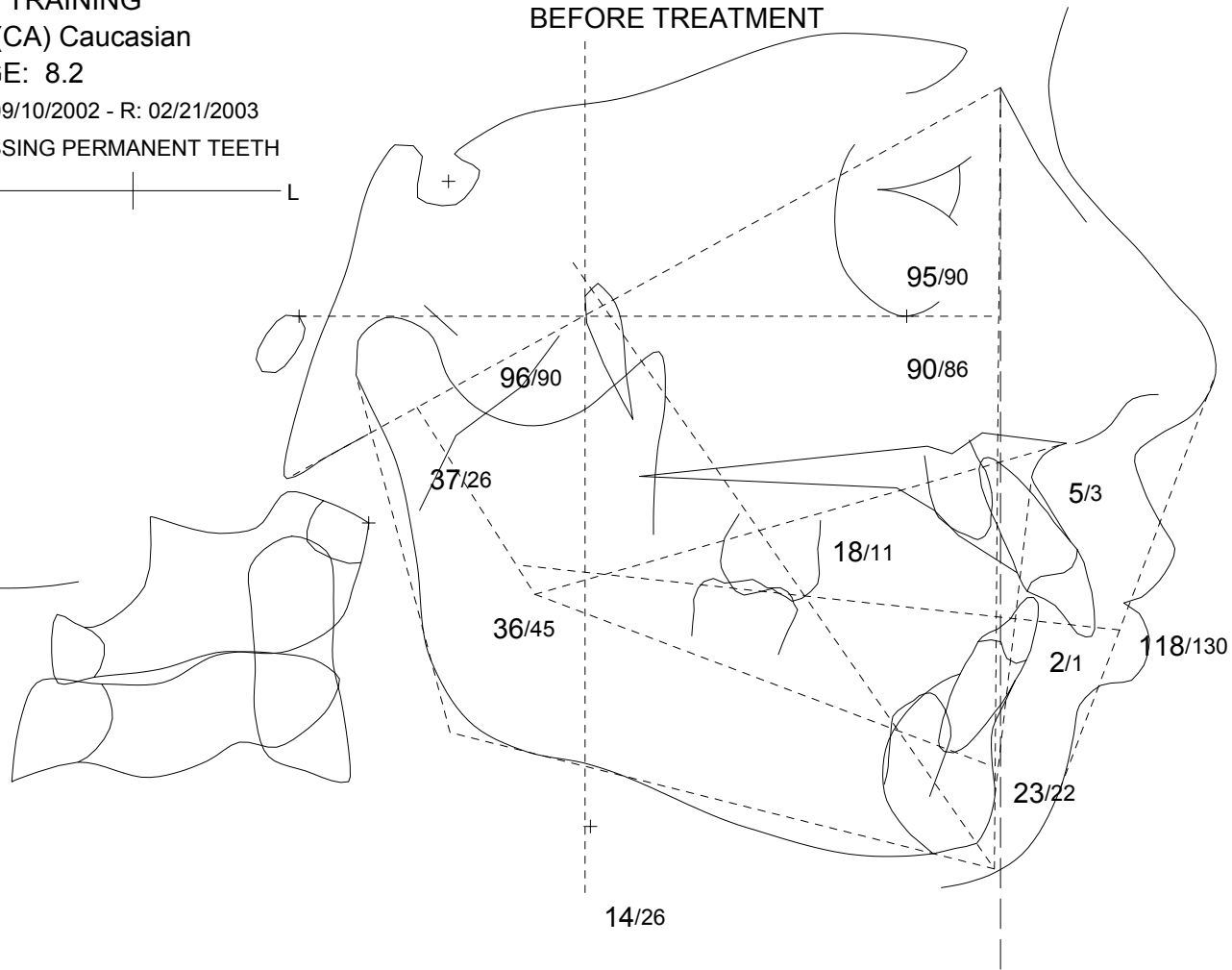
MISSING PERMANENT TEETH

R ————— | ————— L

TRACING

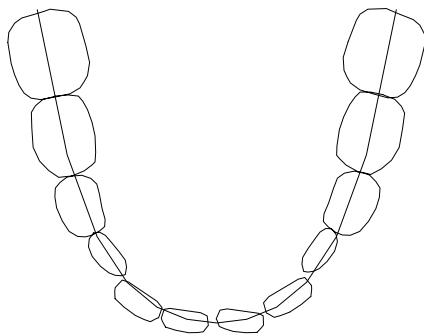
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BEFORE TREATMENT



MEASURED VALUE/NORM

R L



EXCESS 2.4 MM
 LEEWAY 3.7 MM

SIGNIFICANT CONSIDERATIONS

CONDITION	REASON
Severe Class II malocclusion	due to the upper molar
Severe Overjet	
Skeletal Class II	due to a long ant cran base
Skeletal Deep Bite	due to the mandible
Possible thumb sucking	
Adenoid blockage of the airway?	Probably not

FACIAL PATTERN: SEVERE BRACHYFACIAL

# FACTORS	MEASURED VALUE	NORM	CLINICAL DEVIATION
Interincisal Angle	118.2 dg	130.0 dg	-2.0 **
Convexity	4.7 mm	2.6 mm	1.0 *
Lower Facial Height	36.4 dg	45.0 dg	-2.1 **
A6 Molar Position to PTV	18.3 mm	11.2 mm	2.4 **
B1 to A-Po Plane	2.3 mm	1.0 mm	0.6
B1 Inclination to A-Po	23.3 dg	22.0 dg	0.3
Facial Depth	89.5 dg	86.4 dg	1.0 *
Facial Axis	96.1 dg	90.0 dg	1.7 *
Maxillary Depth	94.6 dg	90.0 dg	1.5 *
Mandibular Plane to FH	14.1 dg	26.2 dg	-2.7 **
Mandibular Arc	37.2 dg	25.8 dg	2.9 **

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Reference: G T N

===== G U I D E T O A L T E R N A T I V E T R E A T M E N T P L A N N I N G =====

Facial Pattern	2.0 C.D.	Probability of Lower Third Molar (based on space available)		
Vertical Description	SEVERE BRACHYFACIAL	Impaction	Eruption	Eruption
Auxiliary Appliances			Questionable	Functional
Headgear	CERVICAL			
	LIGHT FORCES	15.%	40.%	45.%
Activator	NEUTRAL			
Palate Separation	N/A - No Arch and Frontal data			
Convexity Objective	Reduce 2.0 mm			

Lower Arch Length Discrepancy (original arch) 6.1 mm Excess
Including useable leeway (E) space

* * * L O W E R A R C H * * *	Required Tooth Movement	Effect on Arch Length	Resulting Discrepancy

Lower Incisor to Ideal	Lt: 1.3 mm Bwd. Rt: 1.3 mm Bwd.	1.6 mm Decrease	4.5 mm Excess
Buccal Expansion to Ideal Arch Form		0.6 mm Increase	5.1 mm Excess
Incisors & Convexity to Cephalometric Limit	3.9 mm	7.8 mm Increase	Not Reqd
Lower Molar Distal Movement	2.0 mm	4.0 mm Increase	Not Reqd

* * * U P P E R A R C H * * *

Movement of First Molar (non-ext.) Required for Class I	2.1 mm Distal
Resulting Expected Space for 2nd & 3rd Molars at Maturity (non-ext.)	26.5 mm
Required Space for 2nd Molars	9.0 mm to 11.0 mm
Required Space for 2nd & 3rd Molars	18.0 mm to 22.0 mm

*** Indicated Treatment using Dr's Personalized Decision Program ***

Upper Arch	NON-EXTRACTION
Lower Arch	NON-EXTRACTION
Lower Incisor	Backward 1.3 mm
Buccal Expansion	Gain 0.6 mm
Lower Molar Movement	Forward 2.0 mm

Teeth Sizes:	L6	L5	L4	L3	L2	L1	R1	R2	R3	R4	R5	R6	TOTAL	SUM OF INCISOR	NORM
Lower Arch :	11.3	8.2	8.0	7.8	7.0	6.3	6.3	7.0	7.8	8.0	8.2	11.5	97.4	26.6 MM	22.7

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Reference: W R N

W O R K U P

===== ORIGINAL CONDITION =====

Facial pattern: 2.0 CD - Severe Brachyfacial
Lower arch form: NormalMissing permanent teeth: R -----+----- L
|Lower arch length discrepancy (ALD) 2.4 mm EXCESS
Leeway space 3.7 mm ---
Maximum use of leeway space 3.7 mm
Total arch length discrepancy 6.1 mm EXCESS===== COMPUTER DECISION =====
based on Dr. Training's individualized standards

UPPER ARCH: NON-EXTRACTION

Convexity change REDUCE 2.0 mm

LOWER ARCH: NON-EXTRACTION

Lower incisor BACKWARD 1.3 mm
Buccal Expansion GAIN 0.6 mm
Lower molar FORWARD 2.0 mm
Extracted teeth
R -----+----- L
|

===== AUXILIARY APPLIANCES =====

Activator: NEUTRAL
Palate separation: N/A - No Arch and Frontal data
Headgear: CERVICAL
LIGHT FORCES

===== POST TREATMENT =====

Pentamorphic arch form: Normal
Arch length relapse: 2.4 mmLower third molar probabilities
(based on space available)Impaction: 15 %
Marginal: 40 %
Functional: 45 %

R A T I O N A L E

===== REASONS FOR LOWER ARCH DECISION =====

Mandibular Arch Length Analysis

1. Initial Conditions
 - A. Original Arch Length 2.4 mm excess
 - B. Useable Leeway Space 3.7 mm
 - C. Total Initial Discrepancy (A+B) 6.1 mm excess
2. Maximum Permissible Arch Length Increase (Within Doctor Limits)
Due To:
 - D. Lower Incisor Repositioning 6.2 mm increase
 - E. Buccal Expansion 0.6 mm increase
 - F. Lower Molar Distal Movement 4.0 mm increase
 - G. Total Possible Increase (D+E+F) 10.8 mm increase

3. Resultant Arch Length Discrepancy 16.9 mm excess
Considering All Possible Arch Length Increases (C+G)
4. Resultant Computer Decision Non-Extraction
5. Work-Up Presented Is NON-EXTRACTION

===== REASONS FOR UPPER ARCH DECISION =====

1. Convexity change 2.0 mm reduce
2. Upper incisor tip movement for overbite/overjet ideal to lower 6.5 mm backward
3. First molar movement required 3.2 mm backward
4. First molar movement clinical limit 5.0 mm backward
5. Work-Up Presented Is NON-EXTRACTION

===== COMMENTS =====

CAUCASIAN SAMPLE
0000 0032 1

M 8.2

SEQUENCES WORKSHEET
PHASE I TREATMENT

02/21/2003
NON-EXTRACTION

RMO®

UPPER ARCH				LOWER ARCH			
ACTIVITY	DESCRIPTION	MONTHS	NOTES	ACTIVITY	DESCRIPTION	MONTHS	NOTES
	CORRECT CONVEXITY	0			INTRUDE 1	0	
	DISTALIZE 6	1				1	
	INTRUDE 1	0				0	
		2				2	
		0				0	
		3				3	
		0				0	
		4				4	
		0				0	
		5				5	
PROGRESS RECORDS		0		PROGRESS RECORDS		0	
		6				6	
	RETRACT INCISORS	0				0	
		7				7	
		0				0	
		8				8	
		0				0	
		9				9	
		1				1	
		0				0	
		1				1	
		1				1	
POST TX RECORDS		1		POST TX RECORDS		1	
		2				2	
		1				1	
		3				3	
		1				1	
		4				4	
		1				1	
		5				5	
		1				1	
		6				6	
		1				1	
		7				7	
		1				1	
		8				8	
		1				1	
		9				9	
		2				2	
		0				0	
		2				2	
		1				1	
		2				2	
		2				2	
		2				2	
		3				3	
		2				2	
		4				4	

CAUCASIAN SAMPLE
0000 0032 1

M 8.2

SEQUENCES WORKSHEET
PHASE II TREATMENT

02/21/2003
NON-EXTRACTION

RMO®

UPPER ARCH				LOWER ARCH			
ACTIVITY	DESCRIPTION	MONTHS	NOTES	ACTIVITY	DESCRIPTION	MONTHS	NOTES
PROGRESS RECORDS	RETRACT 4 AND/OR 5	0 1		PROGRESS RECORDS	ADVANCE 6	0 1	
		0 2			RETRACT INCISORS	0 2	
		0 3				0 3	
		0 4				0 4	
		0 5			ALIGN/LEVEL BUCCAL SEGS	0 5	
		0 6				0 6	
		0 7				0 7	
		0 8				0 8	
		0 9				0 9	
		1 0				1 0	
IDEAL ARCH	RETRACT 3 ALIGN/LEVEL BUCCAL SEGS	1 1		IDEAL ARCH	IDEAL ARCH	1 1	
		1 2				1 2	
		1 3				1 3	
		1 4				1 4	
		1 5				1 5	
		1 6				1 6	
		1 7				1 7	
		1 8				1 8	
		1 9				1 9	
		2 0				2 0	
FINAL ARCH	IDEAL ARCH	2 1		FINAL ARCH	FINAL ARCH	2 1	
		2 2				2 2	
		2 3				2 3	
		2 4				2 4	
		2 5				2 5	
		2 6				2 6	
		2 7				2 7	
		2 8				2 8	
		2 9				2 9	
		3 0				3 0	
POST TX RECORDS	FINAL ARCH	3 1		POST TX RECORDS	FINAL ARCH	3 1	
		3 2				3 2	
		3 3				3 3	
		3 4				3 4	
		3 5				3 5	
		3 6				3 6	
		3 7				3 7	
		3 8				3 8	
		3 9				3 9	
		4 0				4 0	

0000 0032 1
CAUCASIAN MALE
M 8.2

LONG RANGE GROWTH FORECAST COMPARISON RMO®

NON-EXTRACTION

02/17/2003

WITHOUT TREATMENT

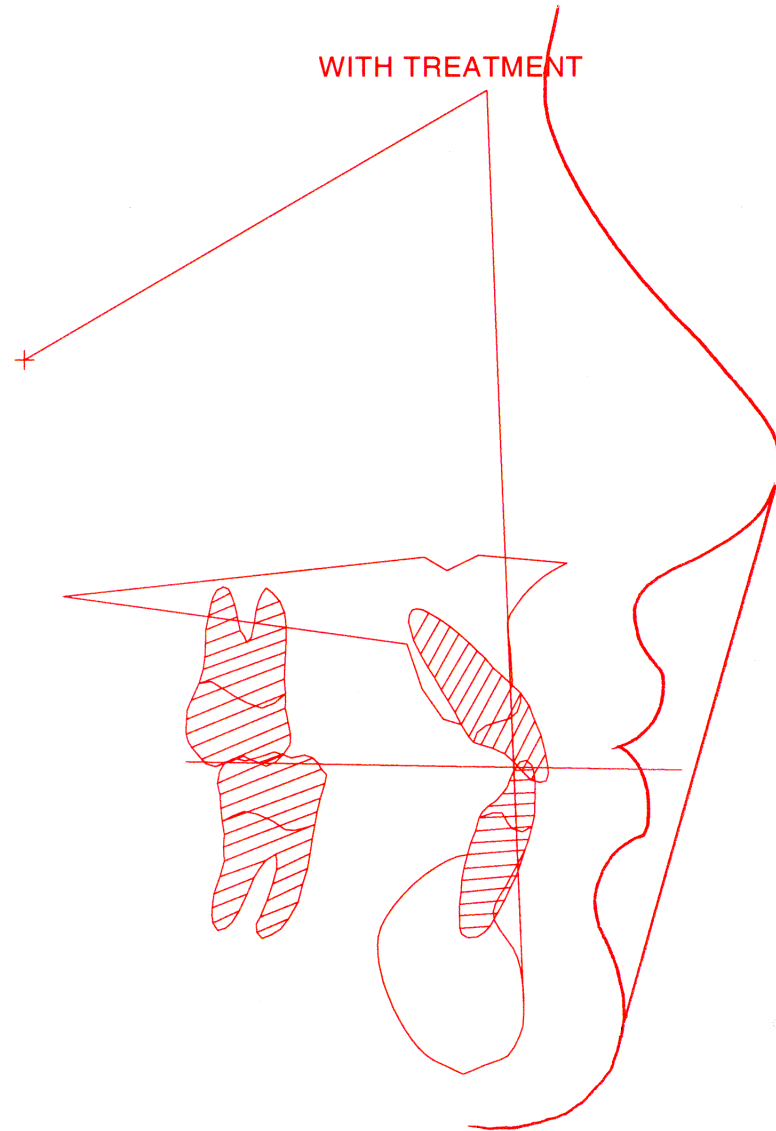


LOWER THIRD MOLAR PROBABILITIES (BASED ON SPACE AVAILABLE)

IMPACTION: 17 %
MARGINAL: 41 %
FUNCTIONAL: 42 %

CURRENT HEIGHT: 55.0 IN
EXPECTED MATURE HEIGHT: 76.1 IN

WITH TREATMENT



LOWER THIRD MOLAR PROBABILITIES (BASED ON SPACE AVAILABLE)

IMPACTION: 14 %
MARGINAL: 39 %
FUNCTIONAL: 47 %

ARCH LENGTH DECREASE POST TX
2.4 MM TOTAL

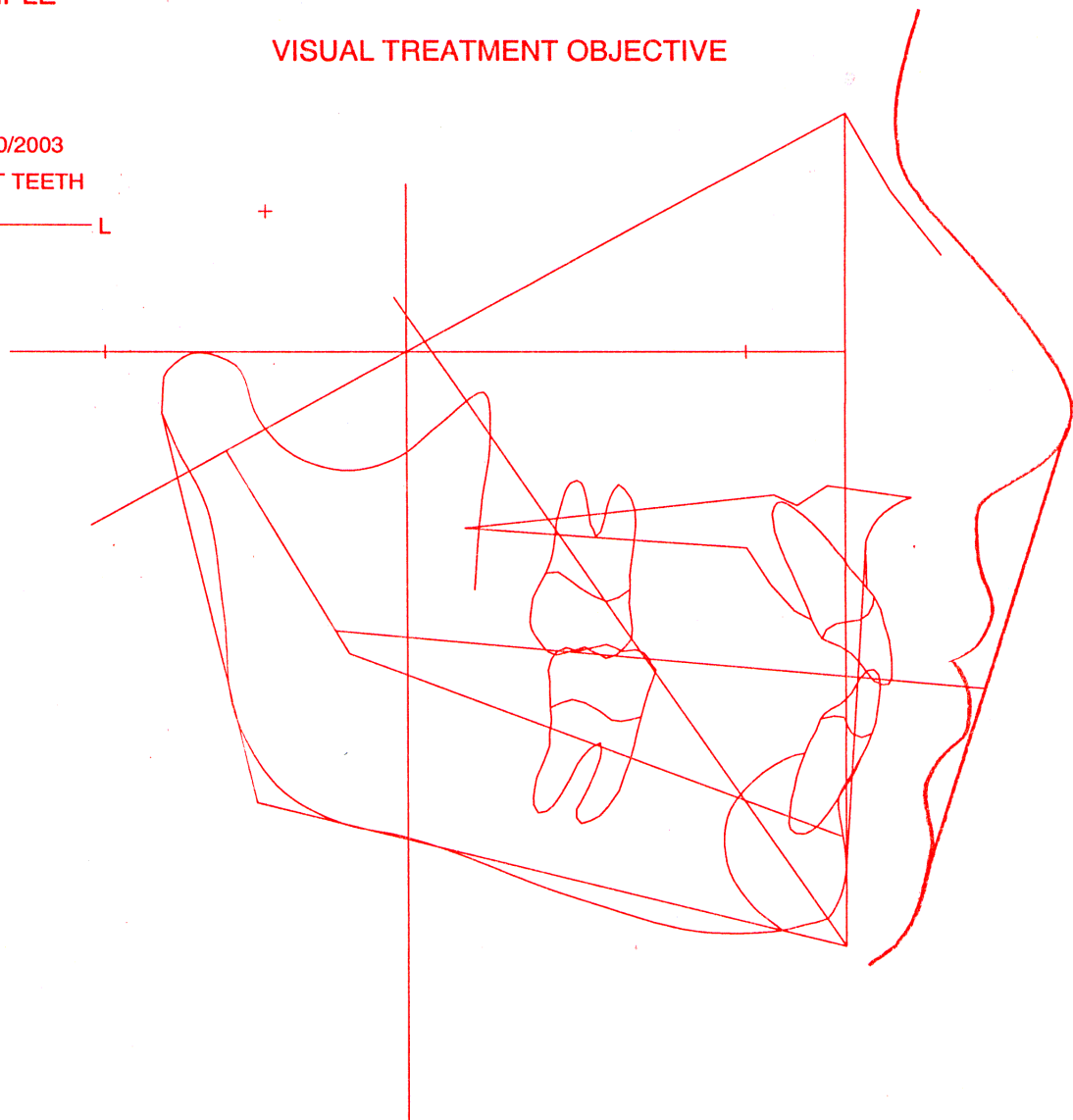
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 MISSING PERMANENT TEETH

NON-EXTRACTION VTO

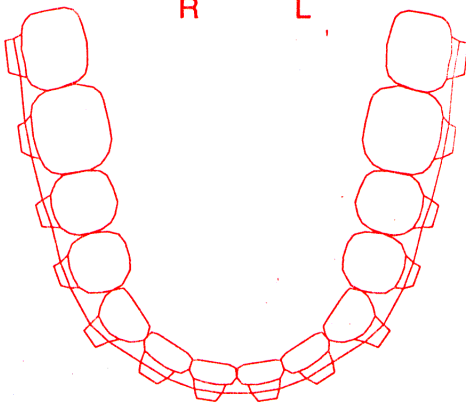
RMO®

VISUAL TREATMENT OBJECTIVE

R ————— | ————— L



SUGGEST
 NORMAL
 RMO PREFORMED
 PENTAMORPHIC ARCHWIRE
 R L



ESPECIALLY PREPARED FOR Dr. TRAINING

WORKUP PERFORMED
 Upper: NON-EXTRACTION
 Lower: NON-EXTRACTION

PREDICTION PERIOD
 24.0 months

GROWTH UNITS
 24.0 months: 1.8

HEIGHT PREDICTION
 Current height: 55.0 inches
 Mature height: 75.4 inches

3RD MOLAR PREDICTION
 Impaction: 15 %
 Marginal: 40 %
 Functional: 45 %

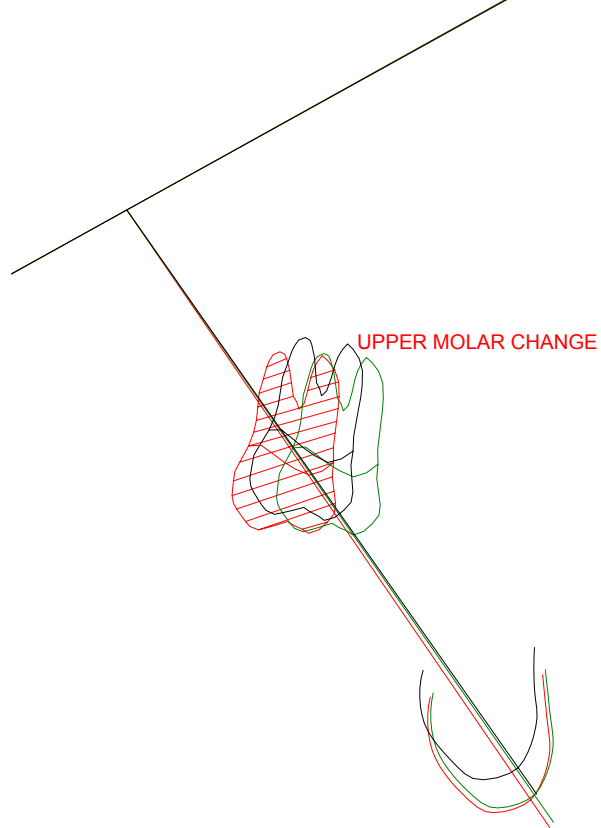
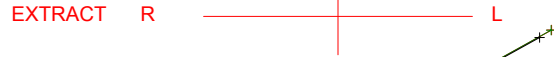
COMMENTS

0000 0032 1
 CAUCASIAN SAMPLE
 M 8.2

02/21/2003

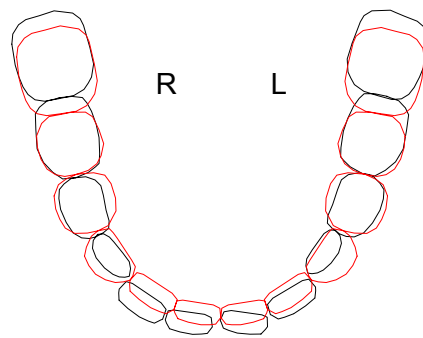
NON-EXTRACTION TREATMENT DESIGN

RMO®



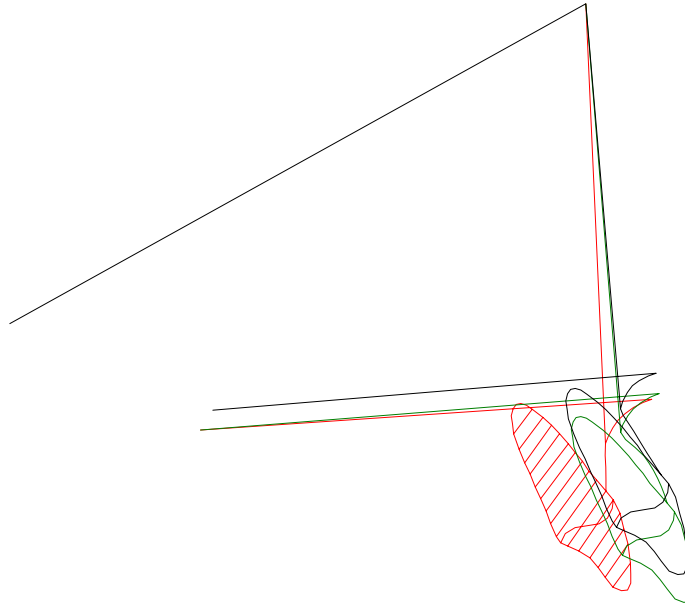
UPPER MOLAR CHANGE

MANDIBULAR GROWTH

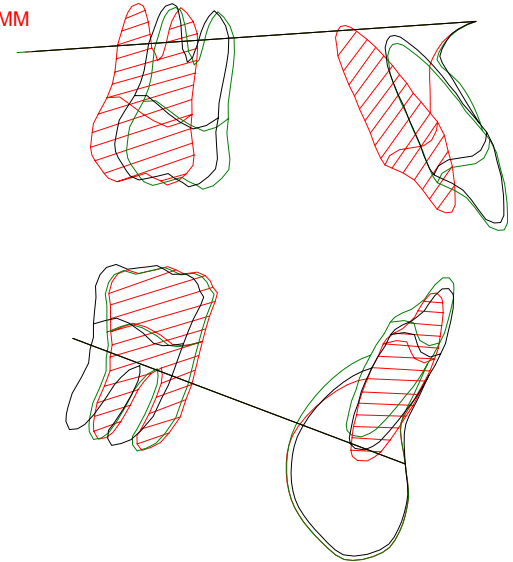


MAXILLARY CHANGE

PT. A MOVEMENT BACKWARD 2.0 MM



CHANGE IN MAXILLARY TEETH



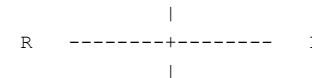
CHANGE IN MANDIBULAR TEETH

LOWER INCISOR	BWD(LT)	1.3	MM
LOWER MOLAR	FWD	2.0	MM

WORKUP PRESENTED

Upper arch: NON-EXTRACTION
 Lower arch: NON-EXTRACTION

MISSING PERMANENT TEETH



COMMENTS

— ORIGINAL
 — GROWTH W/O TREATMENT
 — TREATMENT OBJECTIVE

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Sex: Male 1

Reference: S A

S T E I N E R A N A L Y S I S

===== BEFORE TREATMENT =====

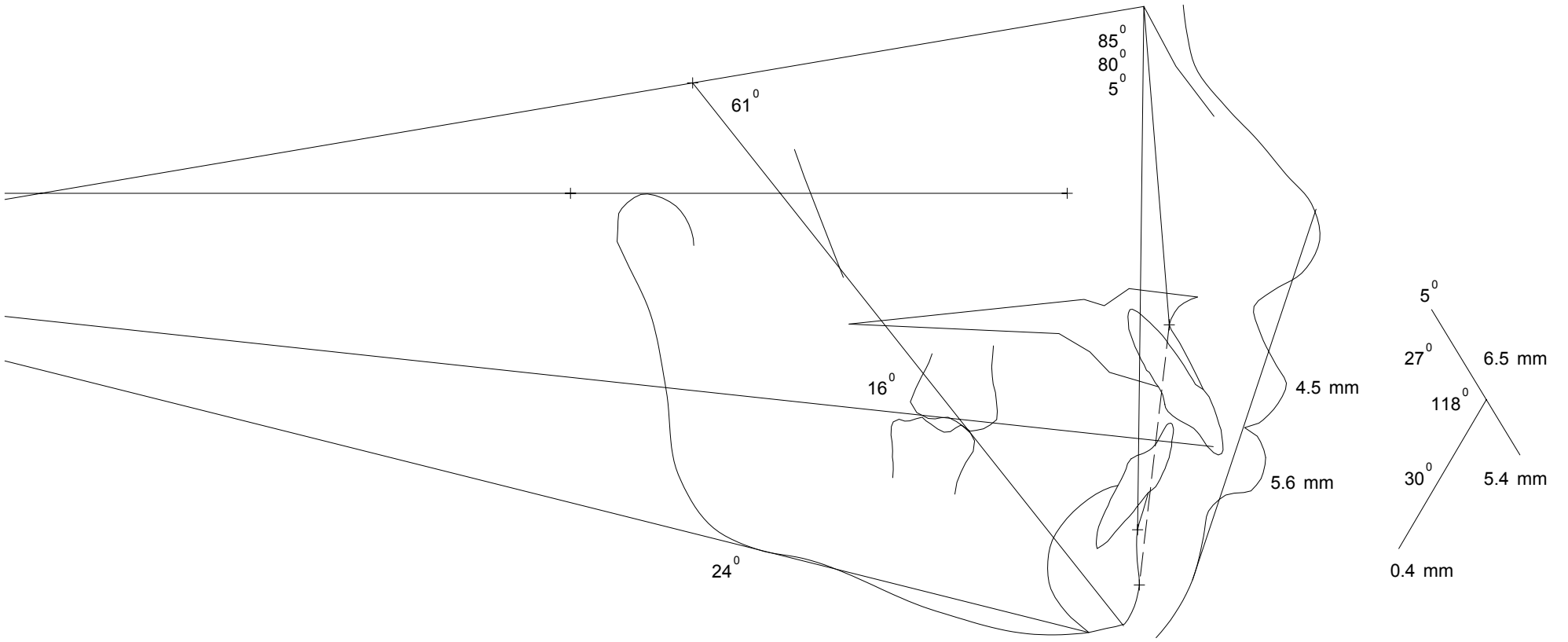
Factor	Measured Value	Clinical Norm	Clinical Deviations From Norm
SNA	84.9 dg	82.0 dg	0.9
SNB	79.7 dg	80.0 dg	-0.1
ANB	5.3 dg	2.0 dg	1.2 *
SND	75.6 dg	76.0 dg	-0.1
A1 to NA	6.5 mm	4.0 mm	0.8
A1 to NA	26.7 dg	22.0 dg	0.6
B1 to NB	5.4 mm	4.0 mm	0.6
B1 to NB	29.8 dg	25.0 dg	0.7
A1 to B1	118.2 dg	131.0 dg	-1.3 *
OCC.PL/SN	15.8 dg	14.0 dg	0.4

0000 0032 1
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M 8.2

02/21/2003

STEINER ANALYSIS

RMO®



AP TO 1 : 2.2 MM
WITS : 1.6 MM

