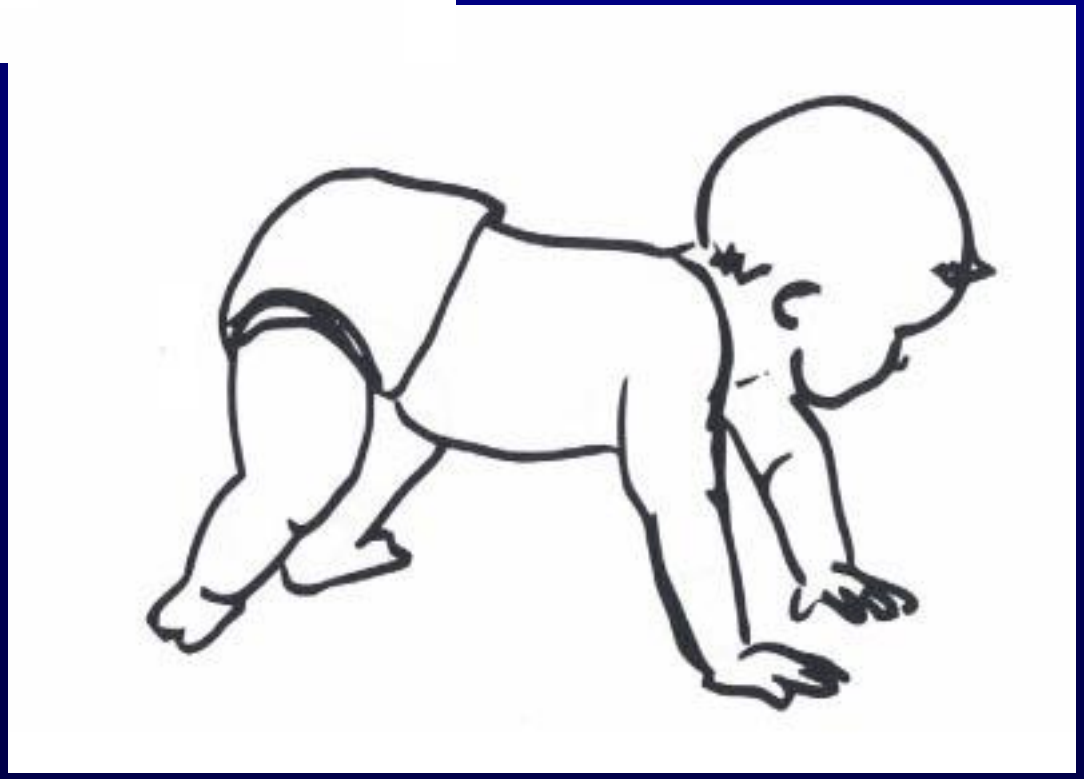
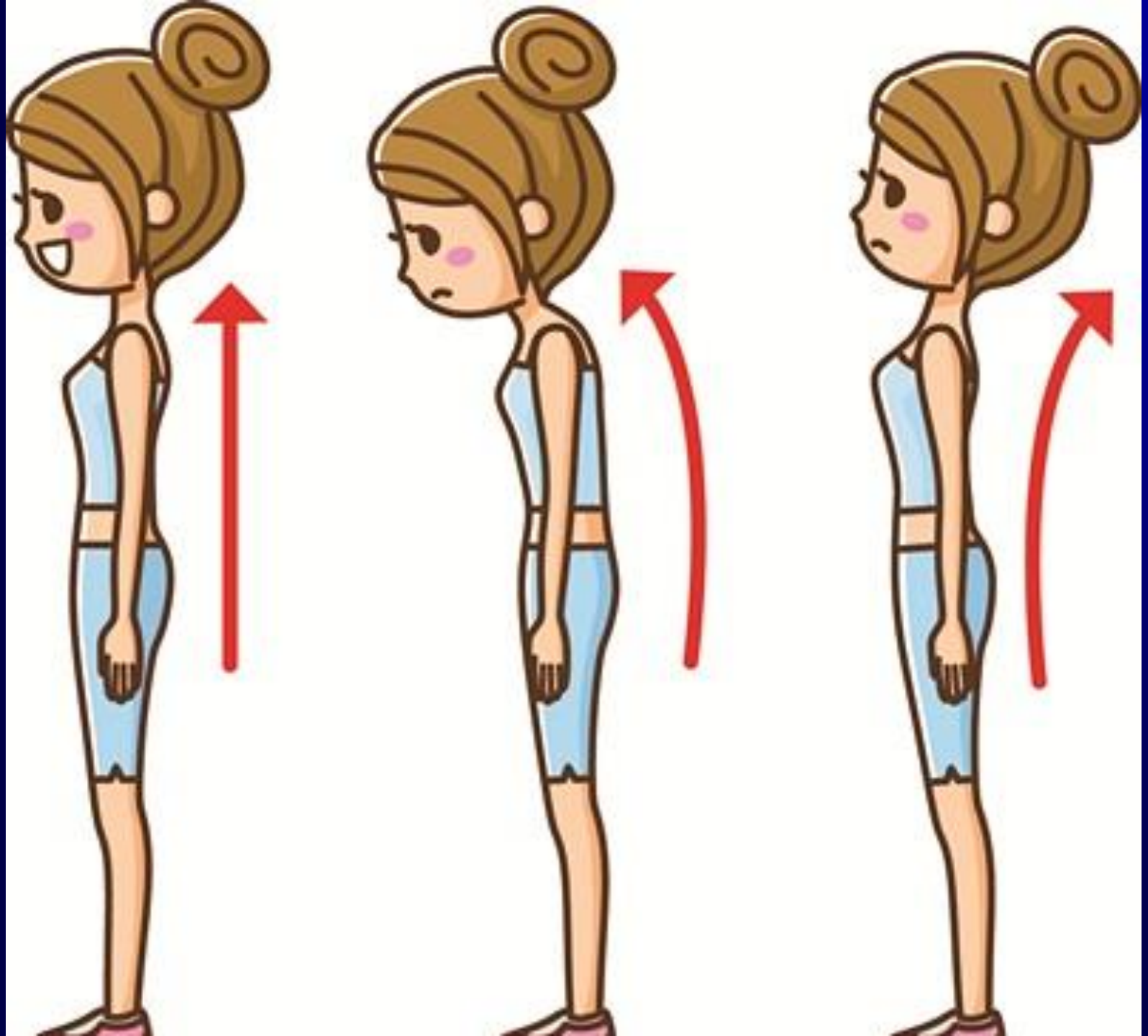
VIZKELETY TAMÁS DR.

Semmelweis Egyetem
Budapest

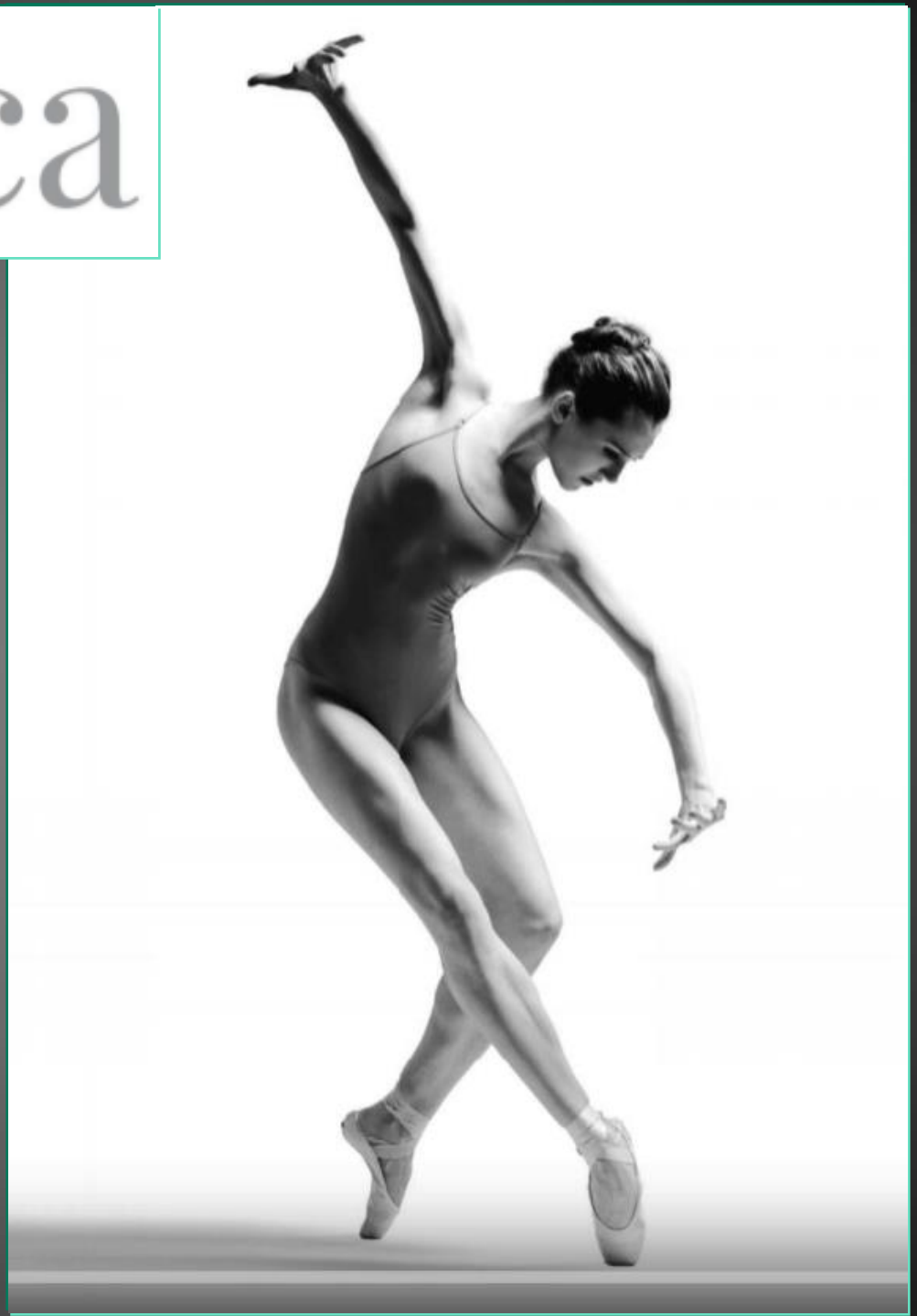
- **Cephalometric analysis, face esthetic**
- **Diagnostics (occlusion)**
- **Treatment planning**

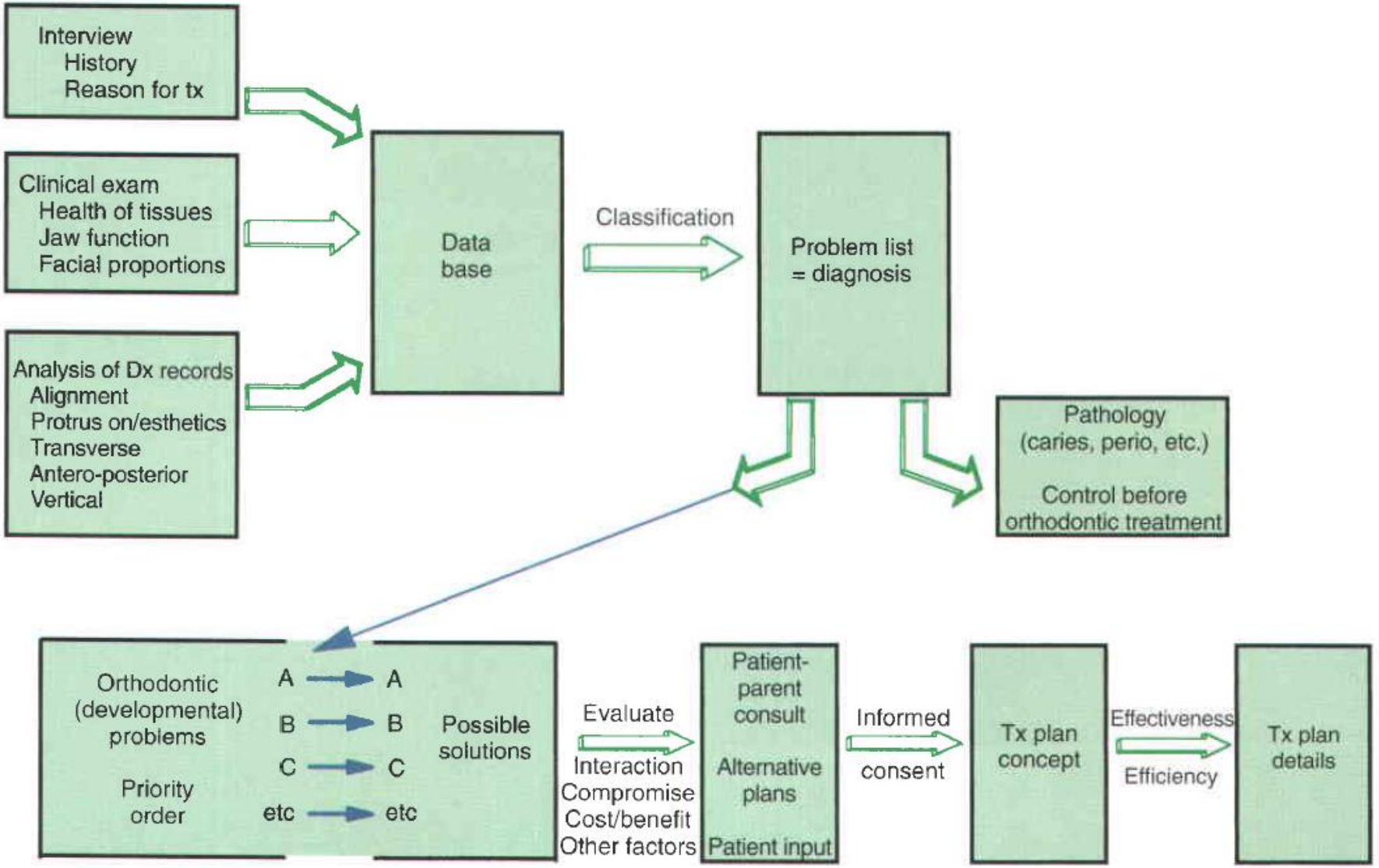




Estética

Rev Dental Press Estét. 2014 jan-mar;11(1):1-120





Proffit, W.R., Fields, H.W. and Sarver D.M.: Contemporary Orthodontics 5.ed. Mosby Elsevier 20012

The Problem-Oriented Approach

Questionnaire/Interview

- Chief Complaint
- Medical and Dental History
- Physical Growth Evaluation
- Social and Behavioral Evaluation

Clinical Evaluation

- Evaluation of Oral Health
- Evaluation of Jaw and Occlusal Function
- Evaluation of Facial and Dental Appearance
- Which Diagnostic Records are Needed?

Analysis of Diagnostic Records

- Cast Analysis: Symmetry and Space
- Cephalometric Analysis

Orthodontic Classification

- Development of Classification Systems
- Additions to the Five-Characteristics Classification System
- Classification by the Characteristics of Malocclusion

Development of a Problem List

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Patient Name: Date:

Are you interested in: (Please indicate all that apply)
[ ] Information
[ ] Treatment at this time
[ ] Clarification of previously received or conflicting information

If your child's teeth were to be changed, how would you like them changed?
[ ] Upper teeth Forward/Backward
[ ] Lower teeth Forward/Backward
[ ] Upper teeth up because gums show too much
[ ] Close spaces Upper/Lower
[ ] Straighten crowded teeth Upper/Lower
[ ] Improve the appearance of chipped/cracked/stained/dark/pointed teeth

Do you realize that growth has a strong influence on the success of orthodontic treatment?
Yes _____ No _____

Is it likely that your son or daughter will be an early maturer or late maturer?
Early _____ Late _____

How tall do you think this child will be when growth is completed? ___ ft ___ inches

Are you aware that orthodontic treatment can to some extent alter facial appearance?
Yes _____ No _____

If any features of the face could be changed, what would you like to see:
[ ] Upper lip Forward/Backward
[ ] Lower lip Forward/Backward
[ ] Upper jaw Forward/Backward
[ ] Lower jaw Forward/Backward
[ ] Chin Larger/Smaller
[ ] Nose Larger/Smaller/Different Shape

Would you prefer that facial appearance NOT be discussed in front of your child?
Yes _____ No _____

Is there any significant family history of jaw or teeth problems?

Are you interested in improving the appearance of the teeth at this time even if more treatment will be needed later? Yes _____ No _____

Signature Relationship to Patient

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MEDICAL HISTORY
(Child/Adolescent)

PATIENT NAME: _____ DATE: _____
BIRTH DATE: _____
Name of your child's physician: _____ Office Phone: _____
Address of your child's physician: _____ Date of last exam: _____

1. Is your child in good health? ..... Yes No Don't know
2. Does your child have a health problem? ..... Yes No Don't know
   If yes, explain: _____
3. Has your child ever been hospitalized, had general anesthesia, or emergency room visits? ..... Yes No Don't know
   If yes, explain: _____
4. Are your child's immunizations up to date? ..... Yes No Don't know
5. Does your child have allergies to medications (drugs), medical products (latex), or the environment (dust, mites, pollen, mold)? ..... Yes No Don't know
   If yes, please list: _____
6. List past medications taken by child: _____
7. List daily medications child is now taking: _____
8. Has your child ever had or been treated by a physician for:

Check one for each condition

Yes	No	?			Yes	No	?	
			a. Problems at birth					p. Cancer
			b. Heart murmur					q. Cerebral palsy
			c. Heart disease					r. Seizures
			d. Rheumatic fever					s. Asthma
			e. Anemia					t. Cleft lip/palate
			f. Sickle cell anemia					u. Speech or hearing problems
			g. Bleeding/hemophilia					v. Eye problems/contact lenses
			h. Blood transfusion					w. Skin problems
			i. Hepatitis					x. Tonsil/adenoid/sinus problems
			j. AIDS or HIV+					y. Sleep problems
			k. Tuberculosis					z. Emotional/behavior problems
			l. Liver disease					aa. Radiation therapy
			m. Kidney disease					bb. Growth problems
			n. Diabetes					cc. Attention deficit disorders
			o. Arthritis					

9. Has your child had any recent rapid growth? _____ If so, how much? _____
10. Parents: (Father) Ht: _____ Wt: _____ (Mother) Ht: _____ Wt: _____
11. Older brothers and sisters: (1) Ht: ____ Wt: ____ (2) Ht: ____ Wt: ____ (3) Ht: ____ Wt: ____
12. Females: Has menstruation begun? _____ If yes, when? _____ Pregnant? _____
    Using birth control pills? _____
13. If yes to any above, please explain this or any other problem: _____
    _____
14. Child's grade in school: _____ Child's school: _____
15. Do you consider your child to be (check one): Advanced in learning ___ Progressing normally ___
    Slow learner ___

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DENTAL HISTORY

16. What is your main concern about your child's dental condition? _____
17. Has your child been to a dentist before? No Yes If yes, date of last visit: _____
18. Regular dentist's name: _____
19. Check one for each condition:

Yes	No	?	
			a. Has your child ever had dental x-rays? Date of last x-rays? _____
			b. Will your child be uncooperative? If yes, explain: _____
			c. Has your child experienced any complications following dental treatment? If yes, explain: _____
			d. Has your child had cavities and / or toothaches?
			e. Are your child's teeth sensitive to temperature or food?
			f. Did you or your child ever get instructions in brushing?
			g. Do your child's gums bleed when brushed?
			h. Does your child use fluoride products: rinses, drops, tabs?
			i. Does or has your child had any clicking or pain in the jaw joint?
			j. Does or has your child had any problems opening or closing their mouth?
			k. Has your child inherited any family facial or dental characteristics? If yes, explain: _____
			l. Has your child ever injured his/her teeth?
			m. Has your child ever injured his/her jaws or face?
			n. Does or did your child use a pacifier?
			o. Does or did your child suck his/her fingers or thumb?

20. Does your child have any other dental problems we should know about? _____ Please explain: _____
21. Whom may we thank for referring you to our office? _____
22. PERSON COMPLETING THIS FORM: Signature _____
Relationship to patient: _____

ANNOTATIONS ON SELECTED QUESTIONS

2. This helps establish the patient's social-emotional status.
3. This helps establish a history of trauma.
4. In the instance of oral-facial trauma the DPT status is critical. Soft tissue injury is increased with appliances in place.
5. This helps identify allergies to all types of allergens. One must also consider latex used in dental treatment gloves and elastics. This sensitivity is increasing rapidly in the population.
8b,c,d,f: These patients need antibiotic coverage during banding and debanding procedures.
8g,h,i,j,k. With modern infection control procedures, these patients can be treated, but the treatment may need to be modified.
8o. This may relate to mandibular growth and development.
8p. This will help determine treatments using radiation or chemotherapy that can alter dental development, jaw growth, or somatic growth, depending on the site of the lesion and the treatment.
8x. This can help with evaluation of respiratory problems and tooth sensitivity.
8aa. Radiation therapy to the jaws can greatly alter local dental and skeletal development. The risks of osteoradioecrosis is also a risk in these patients depending on the radiation dosage and the type of treatment under consideration.
8bb. Some children with growth problems may be treated with growth hormones, which can have implications for growth modification treatment timing. In some cancer patients, growth hormones can be part of the post-radiation treatment regime. This, too, can affect treatment timing.
8cc. Attention Deficit Disorders can be treated with numerous drugs. The affect on growth of some of these medications is unclear.
9-12. These questions help establish growth status and timing. Birth control pills can be rendered ineffective by antibiotics used for SBE prevention and oral infections. Patients should be alerted to this problem.
16. The chief complaint is critical to determine why the patient is seeking care. This must be considered carefully in the planning of the treatment.
19a. Reduction in unnecessary radiation is critical to the highest quality care. Many practitioners will request films as part of the examination procedures. Patients seeking second opinions often have already had some records obtained.
19g. Orthodontic treatment in the face of periodontal disease, either acute or chronic, is contraindicated until the disease stage is either controlled or reversed.
19i. A previous history of TMJ problems or treatment merits pretreatment investigation.
19j. Limitations or problems with opening or closing can indicate TMJ problems.
19k. Familial tendency is indicated in some skeletal patterns, and missing teeth have a documented genetic component.
19l. Dental trauma may have implications during tooth movement due to the increased possibility of root resorption.
19n,o. Habits may explain some aspects of the malocclusion.
22. This helps establish the authenticity of the historian.

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FIRST CLINICAL OBSERVATION

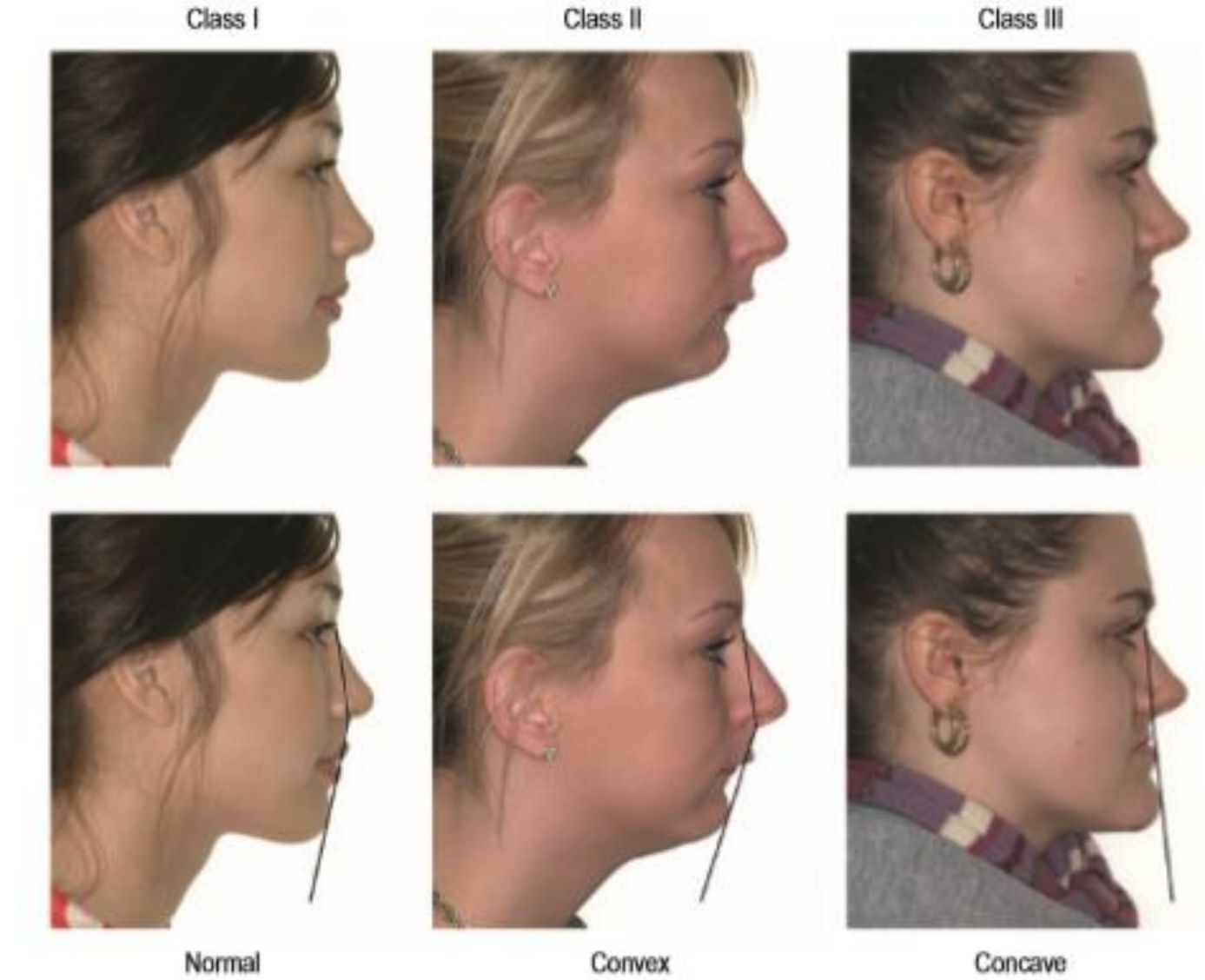

Figure 6.7 Skeletal class I (left), class II (middle) and class III (right) profiles. Facial convexity can also be described in relation to the angle between the upper and lower face.

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Figure 6.2 The face can be divided into thirds. The upper face extends from the hairline or top of forehead (trichion) to the base of the forehead between the eyebrows (glabellar). The midface extends from the base of the forehead to the base of the nose (subnasale). The lower face extends from the base of the nose to the bottom of the chin (menton). The lower third of the face can be further subdivided into thirds, with the upper lip in the upper one-third and the lower lip in the lower two-thirds.

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Figure 6.8 Normal nasolabial angle.

Figure 6.9 Facial profile divided into thirds.

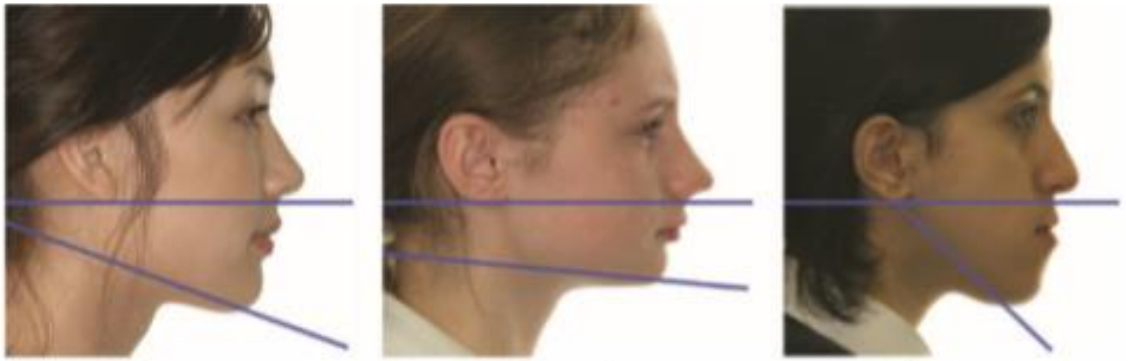

Figure 6.10 Clinical assessment of the vertical facial relationship.

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Figure 6.5 Transverse facial proportions should divide approximately into fifths (each one the width of the eye).

Figure 6.6 Facial asymmetry viewed from above and behind.

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Figure 6.3 Competent (left), potentially competent (middle) and incompetent (right) lips.

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Figure 6.4 Normal upper incisor shown at rest (upper) and on smiling (middle). Increased upper incisor shown on smiling (lower panel).

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Figure 4.16 The complete primary dentition is usually present by around 3 years of age. Note the variation in overbite.

(Courtesy of Miles Cobourne (upper), Rupert Cobourne (middle) and Isabelle George (lower).)

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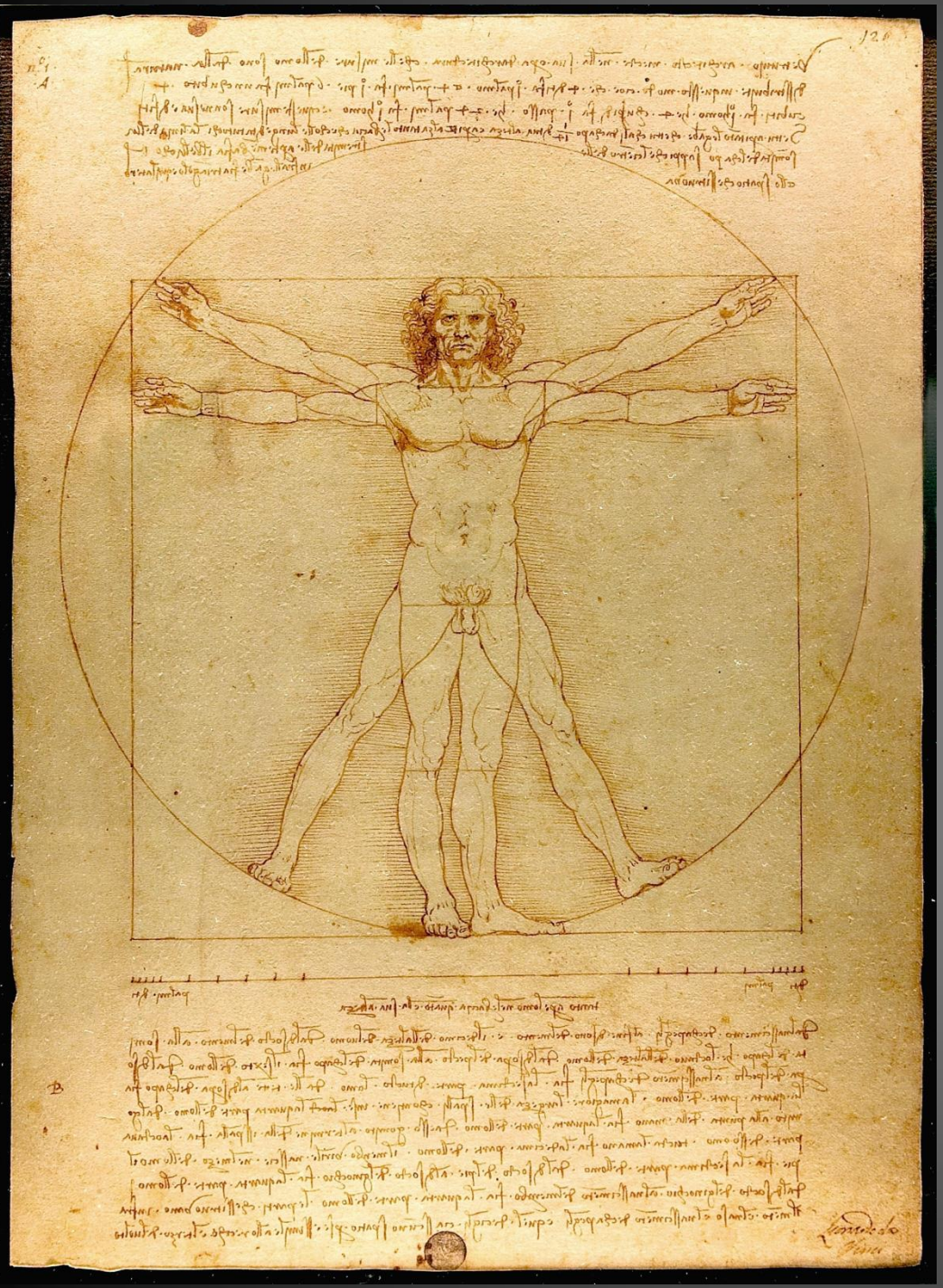
THE HISTORY OF THE OBSERVATION OF THE FACE AND BODY RATIOS



A Leonardo's work (1452-1519) cited

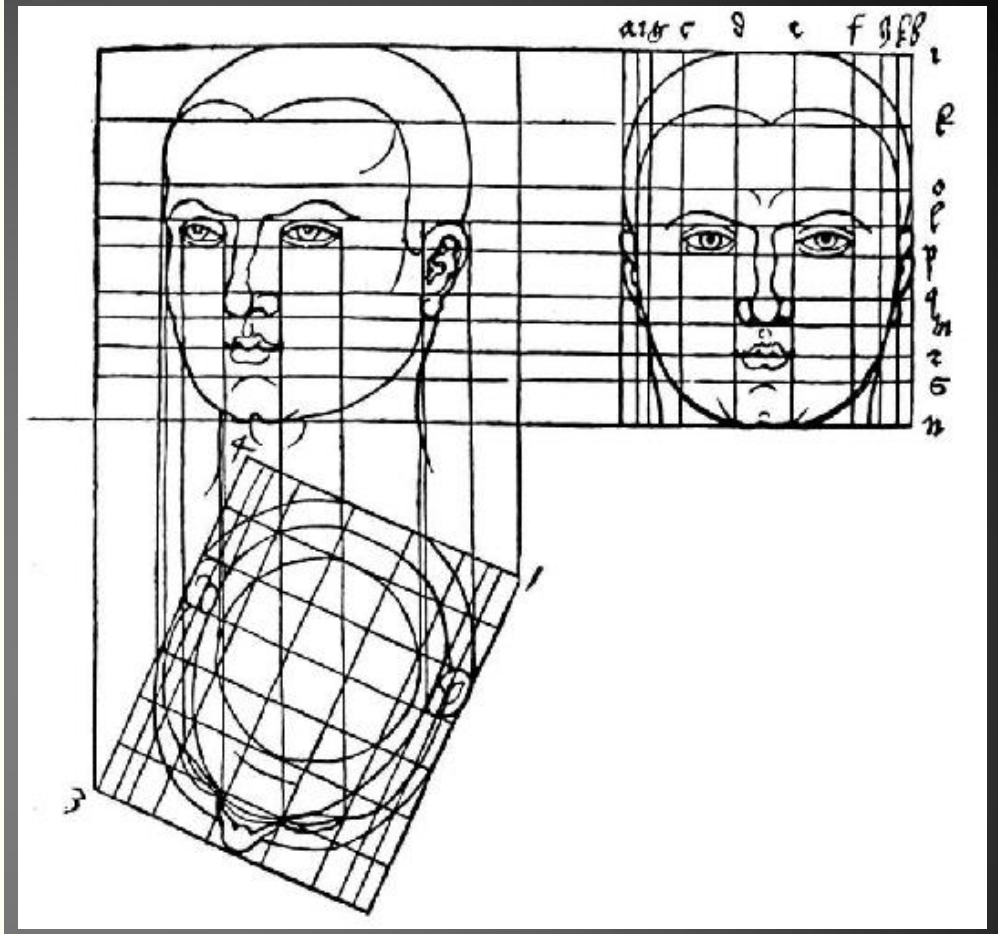
Marcus Vitruvius Pollio architect's work from the I. century before Christ

Vitruvius's most important work was the study volume with title *De architectura*

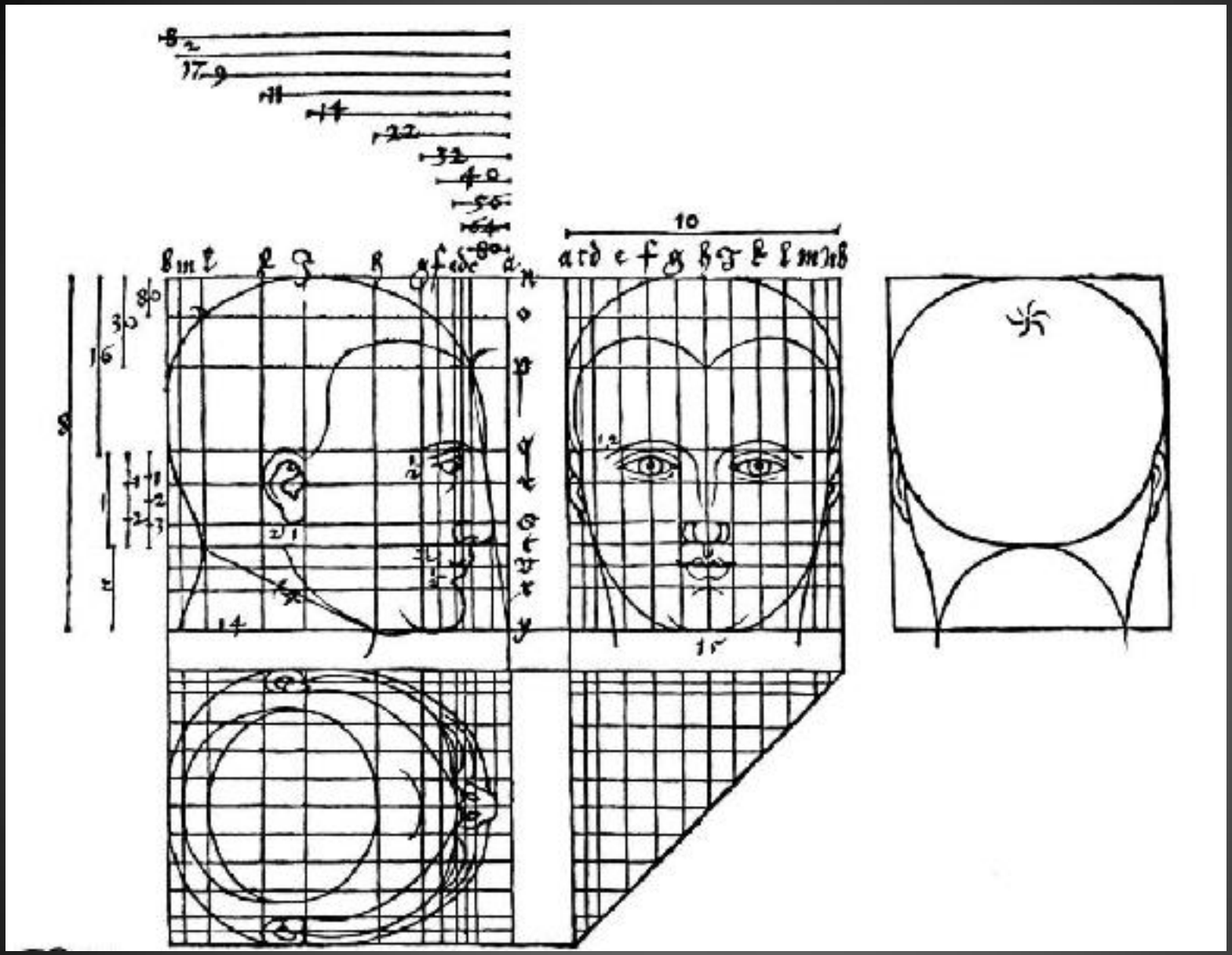
It is one of the most important source in the history of the art. In this work Vitruvius states that the rules in the arts and in the architect follow the ratios of the human body.

Hierin sind begriffen vier bücher
von menschlicher Proportion/durch Albrechten
Dürer von Nürenberg erfunden vnd be/
schriben/ zů nutz allen denen/so zů di-
ser kunst lieb tragen.

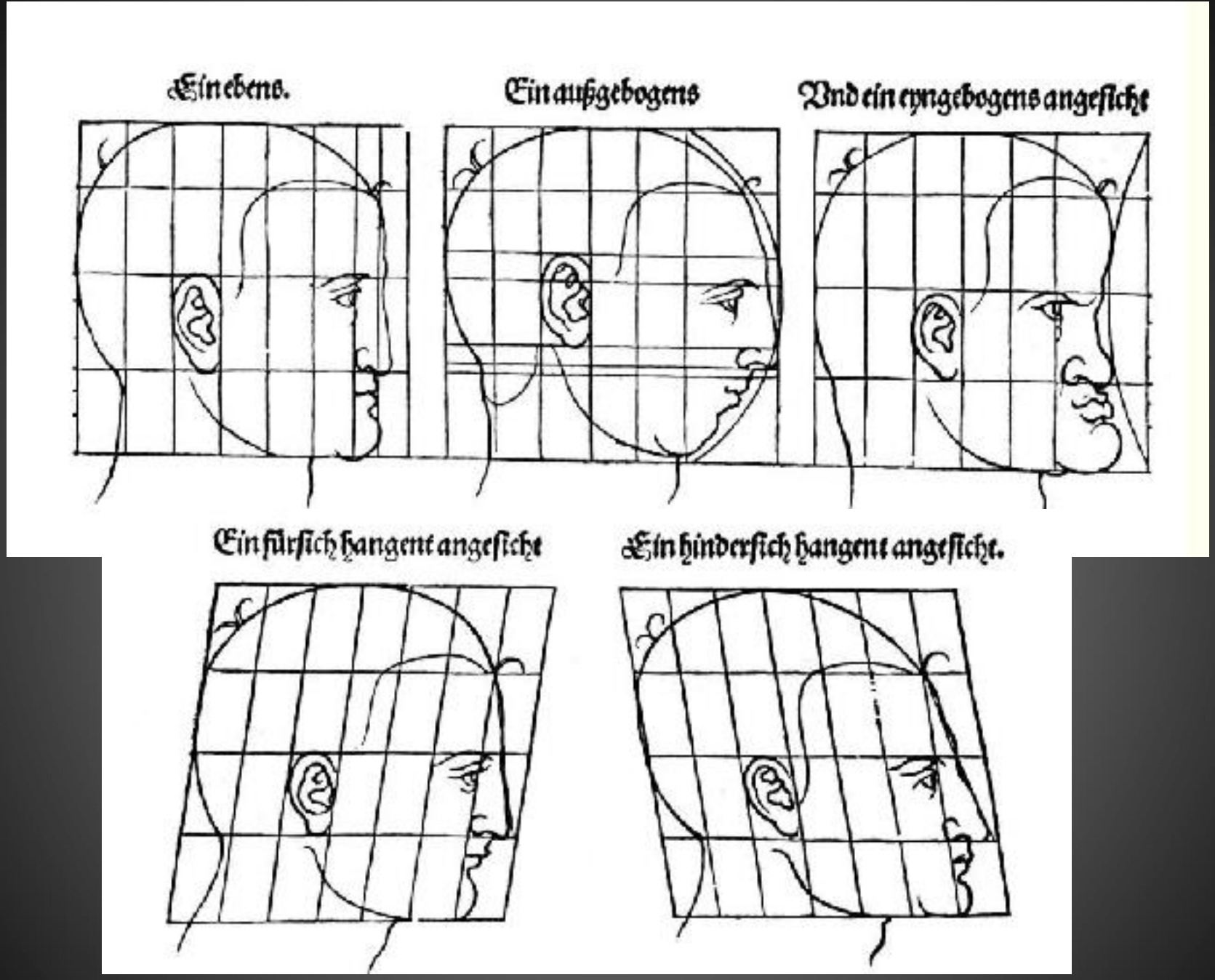
M.D.XXVIij.



Albrecht Dürer 1528 Nürnberg:Vier Bücher von menschlicher Proportion



Albrecht Dürer 1528 Nürnberg:Vier Bücher von menschlicher Proportion



Albrecht Dürer 1528 Nürnberg:Vier Bücher von menschlicher Proportion

THE HISTORY OF THE HEADPLATE and CONE BEAM COMPUTER TOMOGRAMM (CBCT) applied in the orthodontics

TECHNICAL BACKGROUND

Röntgen,Wilhelm Konrad

1895 (X-RAY)

1901 Nobel prise

Hounsfield, Godfrey N.

1972 (CT)

1979 Nobel prise

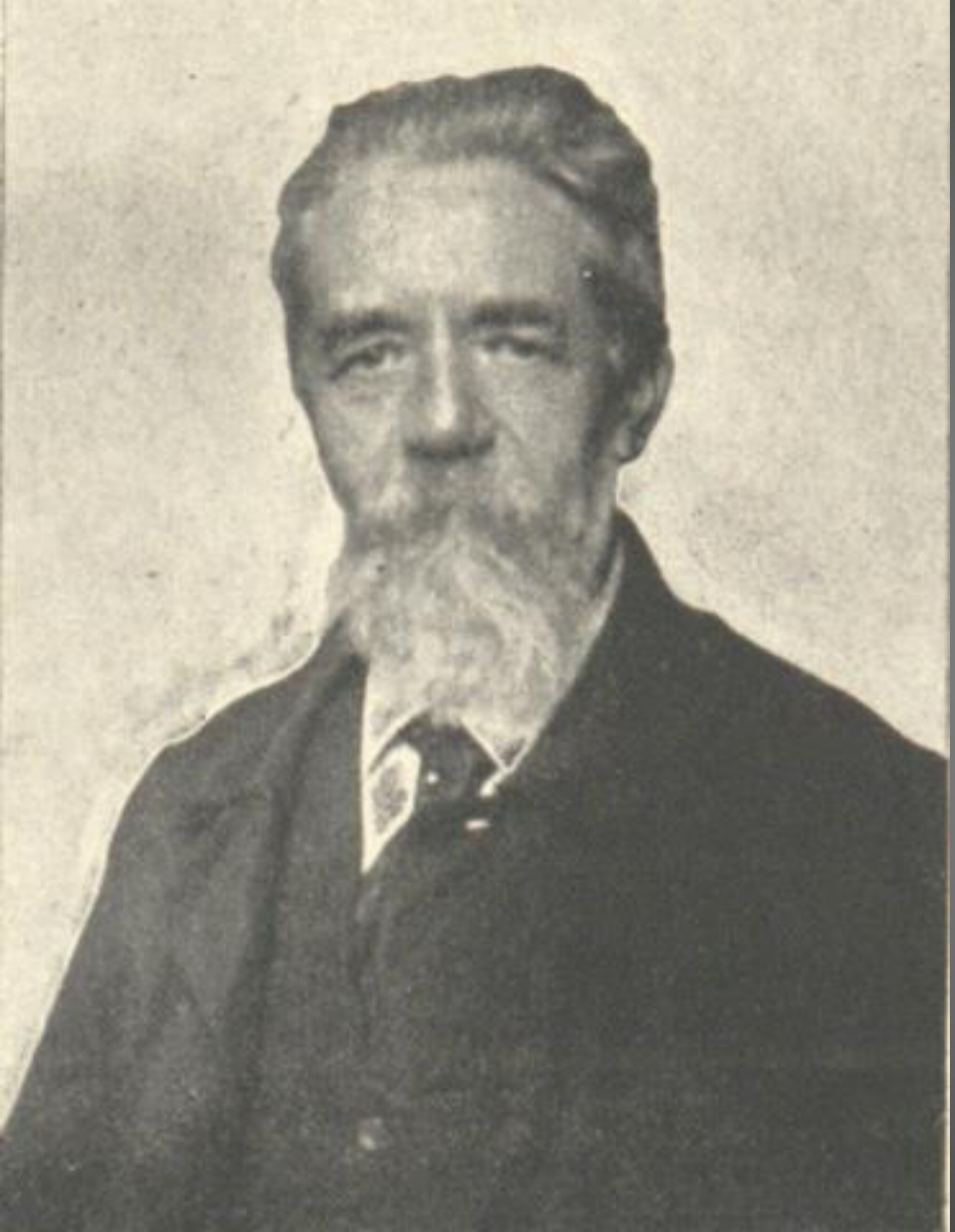
Athanasiou, A.E. ed.: Orthodontic Cephalometry Mosby-Wolfe 1996

CEPHALOMETRIA

- Hofrath H.: Die Bedeutung von Röntgenfern- und Abstandsaufnahme für die Diagnostik von Kieferanomalien.Fortschr Orthodont. 1931; 1:232-238

- Broadbent, B.H.:A new x-ray technique and its application to orthodontia. Angle Orthodontist Vol.I.No.2.pp.45-66

Athanasiou, A.E. ed.: Orthodontic Cephalometry Mosby-Wolfe 1996



Hofrath H.

Broadbent B.H.

The Angle Orthodontist

VOL. I — No. 2

APRIL, 1931

A magazine established by the co-workers of Edward H. Angle, in his memory. . . . . .

A NEW X-RAY TECHNIQUE
and
ITS APPLICATION TO ORTHODONTIA

By B. HOLLY BROADBENT D.D.S., *Director of the Bolton Study, Anatomical Laboratory, Western Reserve University, Cleveland, Ohio.*

Read before the Orthodontia Section of the Mid-Winter Meeting of the Chicago Dental Society, February 4, 1931.

Broadbent, B.H.:A new x-ray technique and its application to orthodontia. Angle Orthodontist Vol.I.No.2.pp.45-66

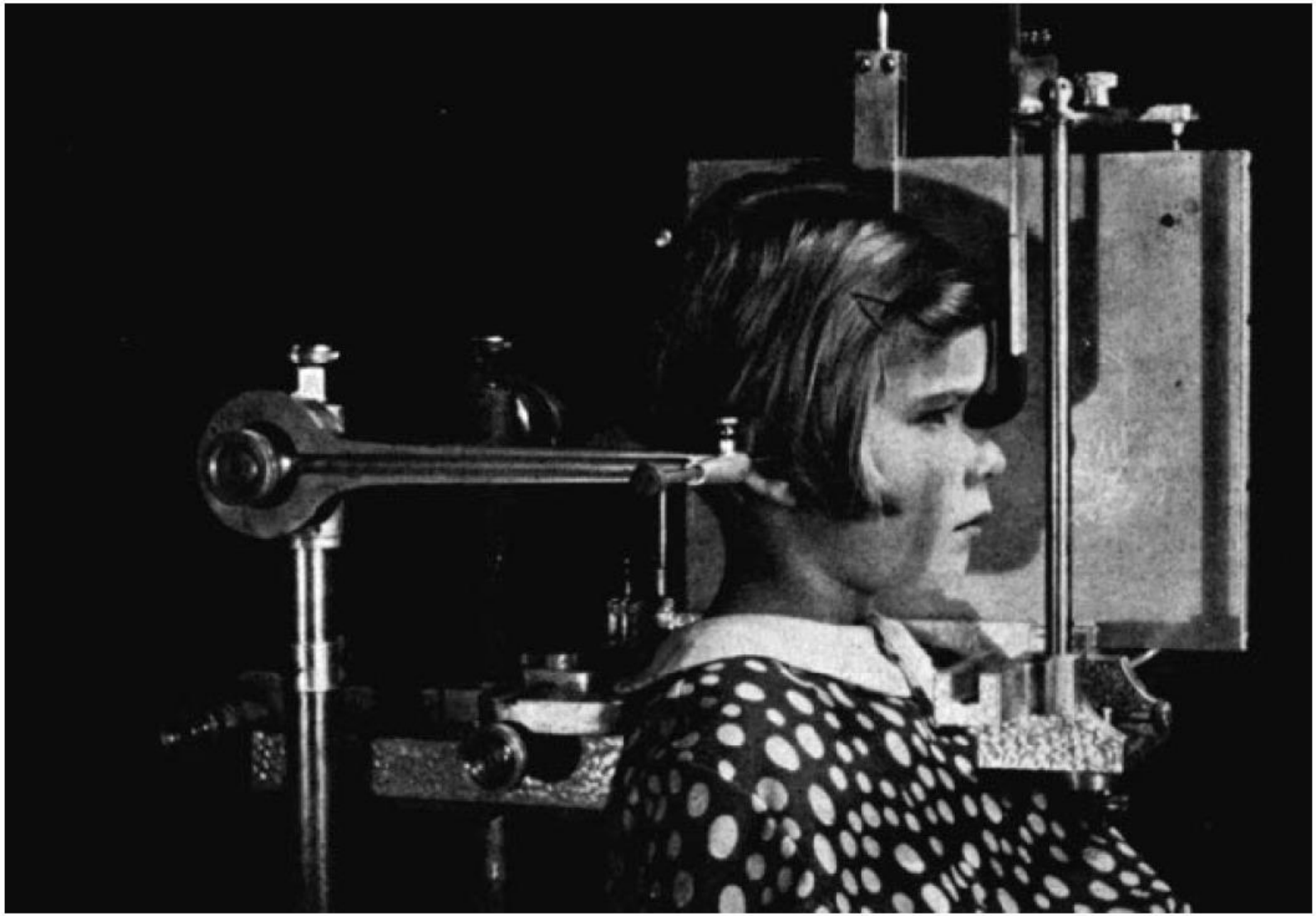


Fig. 13 The child's head adjusted to the head holder. Note the cassette in place for the lateral roentgenogram.

Broadbent, B.H.:A new x-ray technique and its application to orthodontia. Angle Orthodontist Vol.I.No.2.pp.45-66

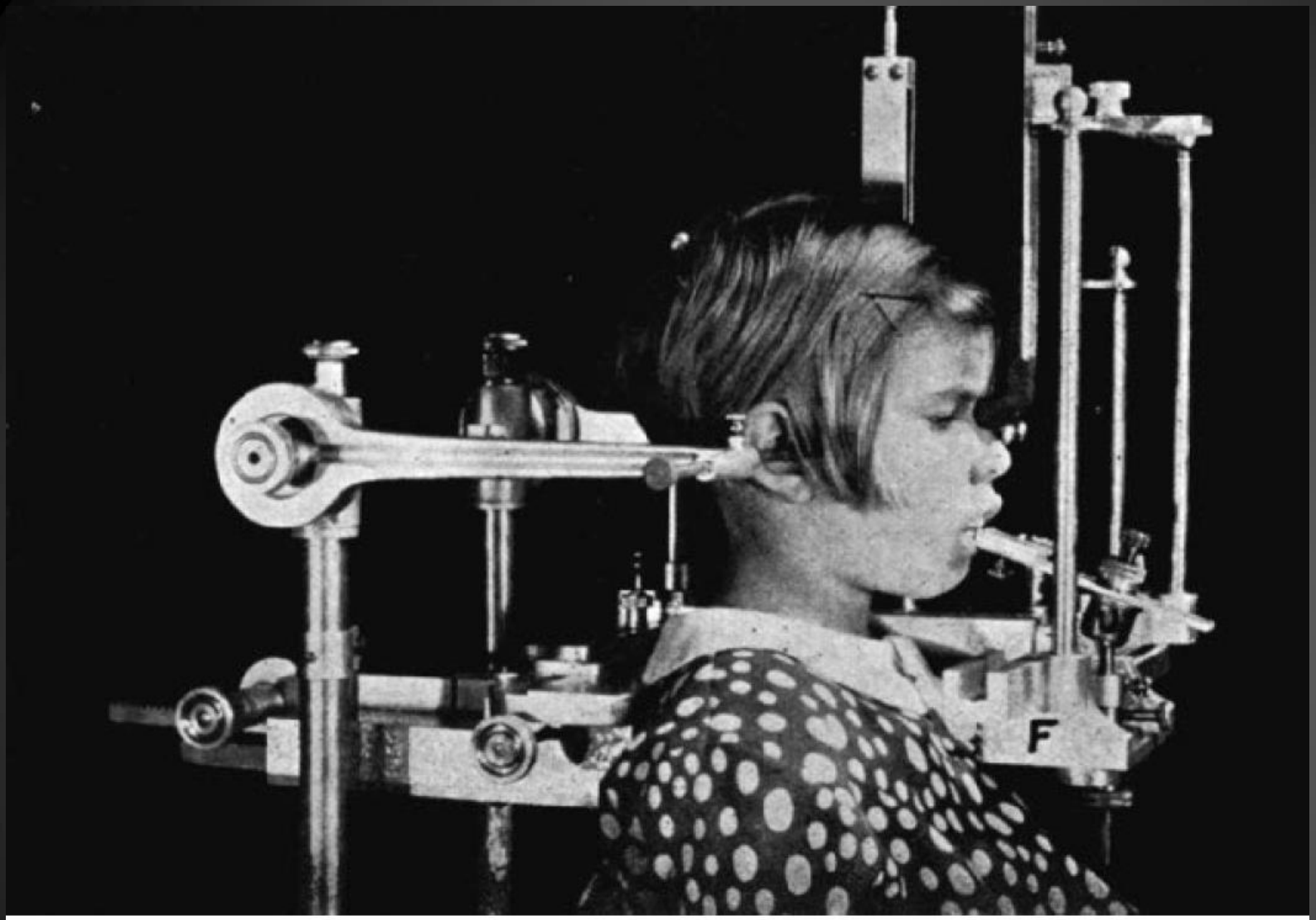
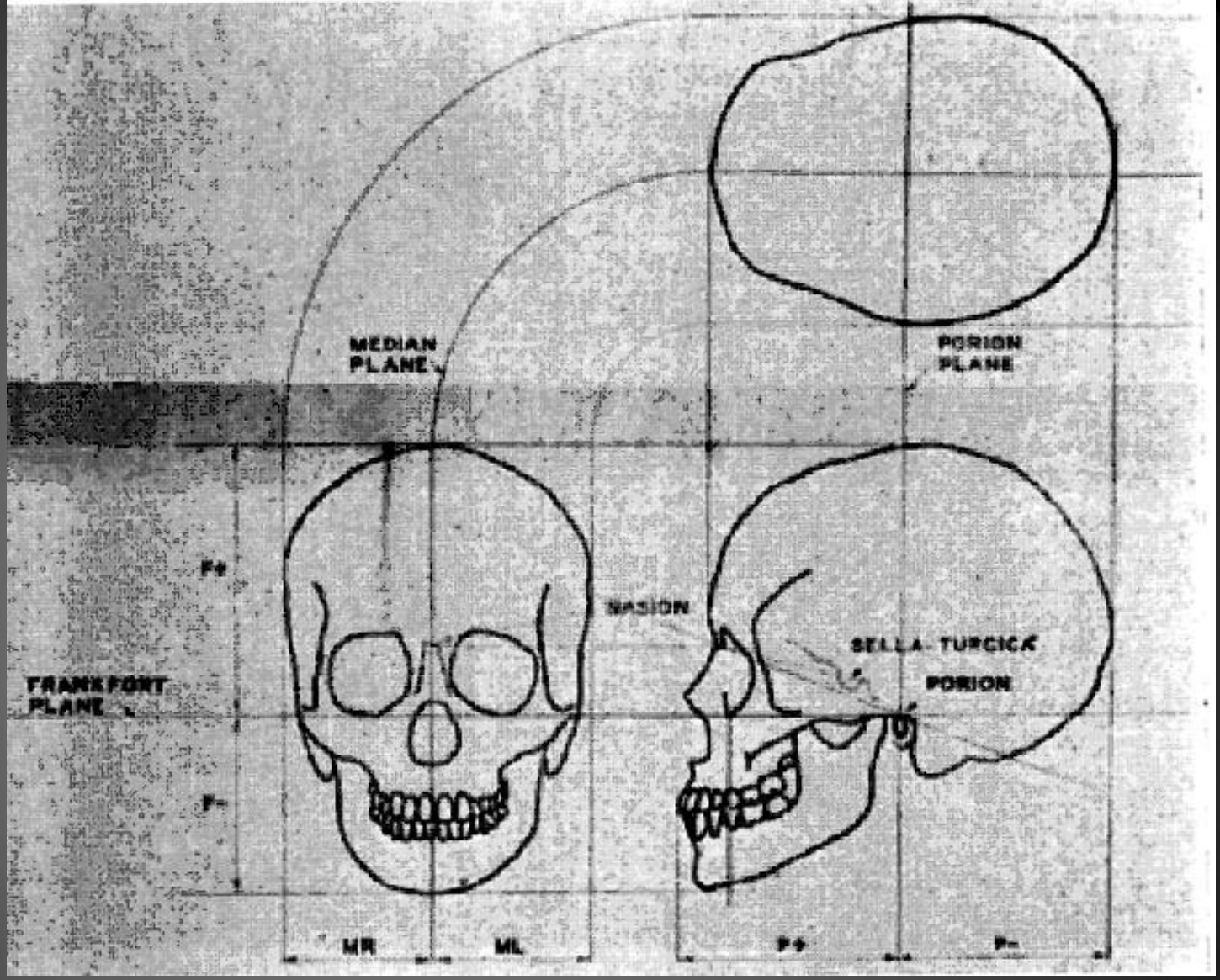


Fig. 16 The Head Holder with impression tray and clamp U in place on the front attachment for securing a model of the mouth oriented to the roentgenograms.

Broadbent, B.H.:A new x-ray technique and its application to orthodontia. Angle Orthodontist Vol.I.No.2.pp.45-66

- H.Hofrat 1931
- B.Holly Broadbent 1931



•Hofrath H.: Die Bedeutung von Röntgenfern- und Abstandsaufnahme für die Diagnostik von Kieferanomalien.Fortschr Orthodont. 1931; 1:232-238

•Broadbent, B.H.:A new x-ray technique and its application to orthodontia. Angle Orthodontist Vol.I.No.2.pp.45-66

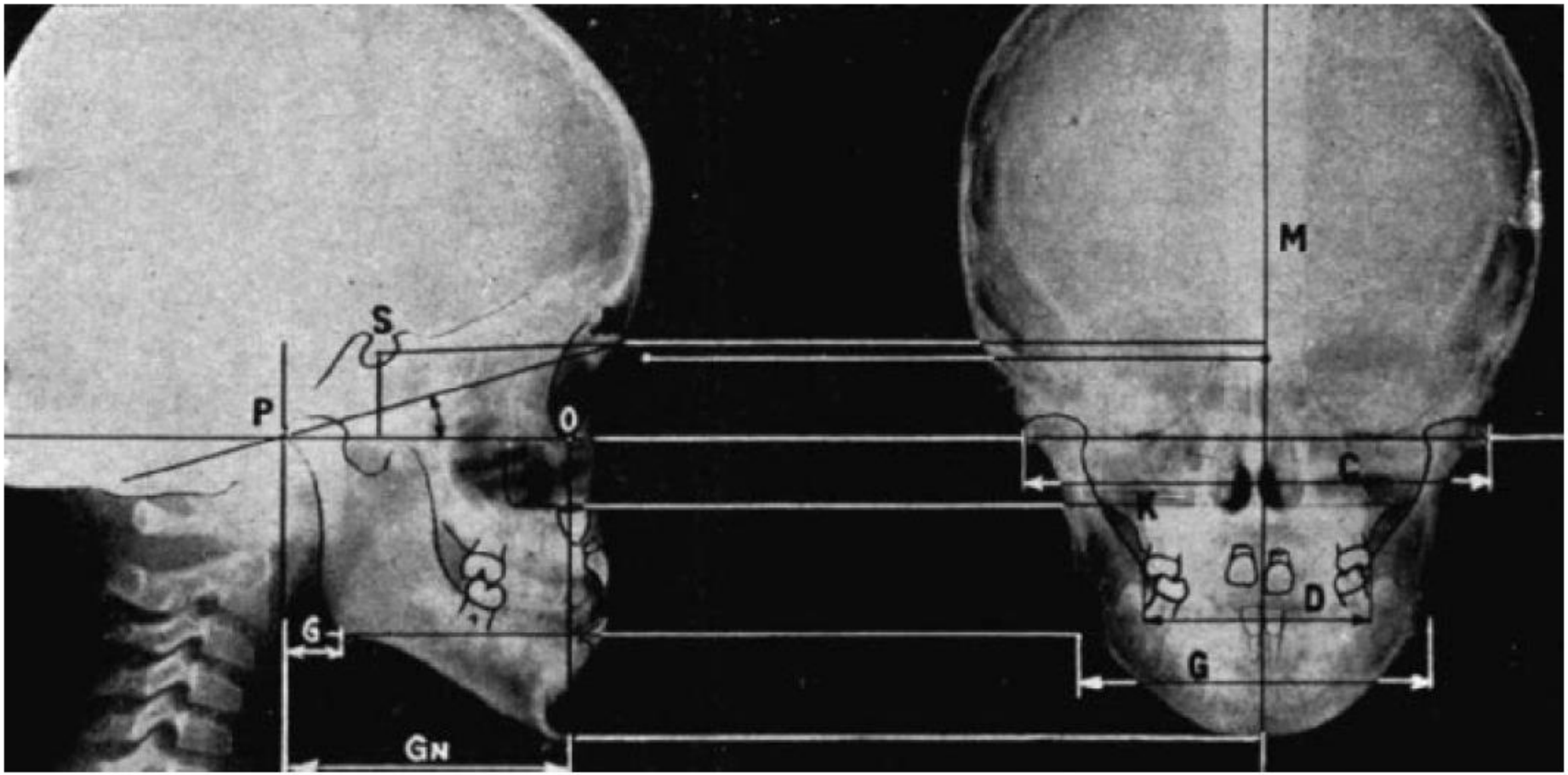


Fig. 18 Lateral and Frontal Roentgenograms of a child with a developing Class III mal-occlusion. Note that this craniometric technique applied to the living eliminates the uncertainty of measuring through soft tissue as it is done in cephalometric methods.

Broadbent, B.H.:A new x-ray technique and its application to orthodontia. Angle Orthodontist Vol.I.No.2.pp.45-66

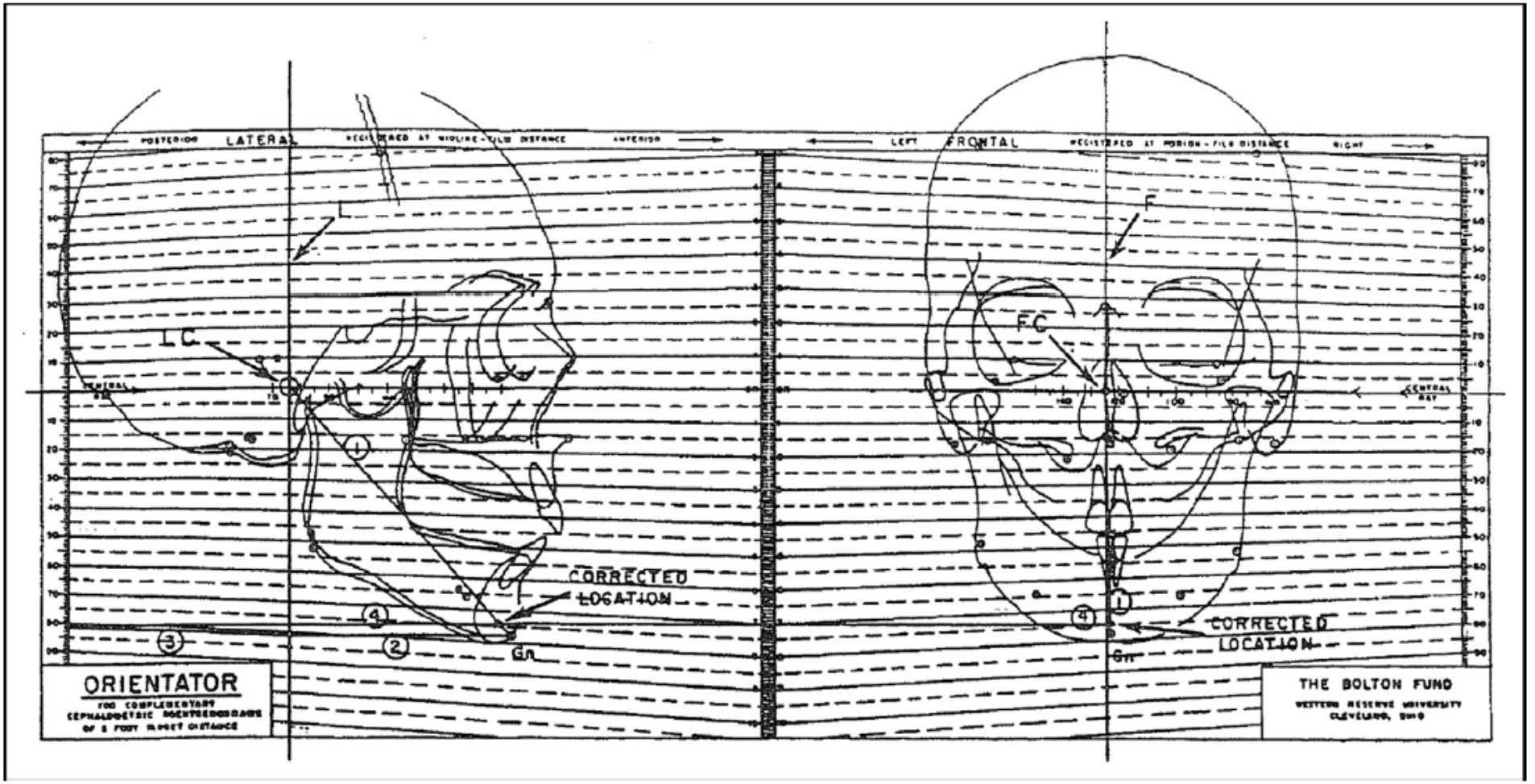


Fig 3. Bolton-Brush orientator, developed to correct for projection errors by using both lateral and posterior anterior views simultaneously.

AIMS OF THE CEPHALOMETRY

- Metrical and angular observation of the scull (sceleto-dental diagnosis)
- The changes in the growing during the growth and/or the treatment (the growing pattern)
- Alternative treatment plan possibilities based on the sceleto-dental survey

THE TECHNIC OF THE LATERAL HEADPLATE

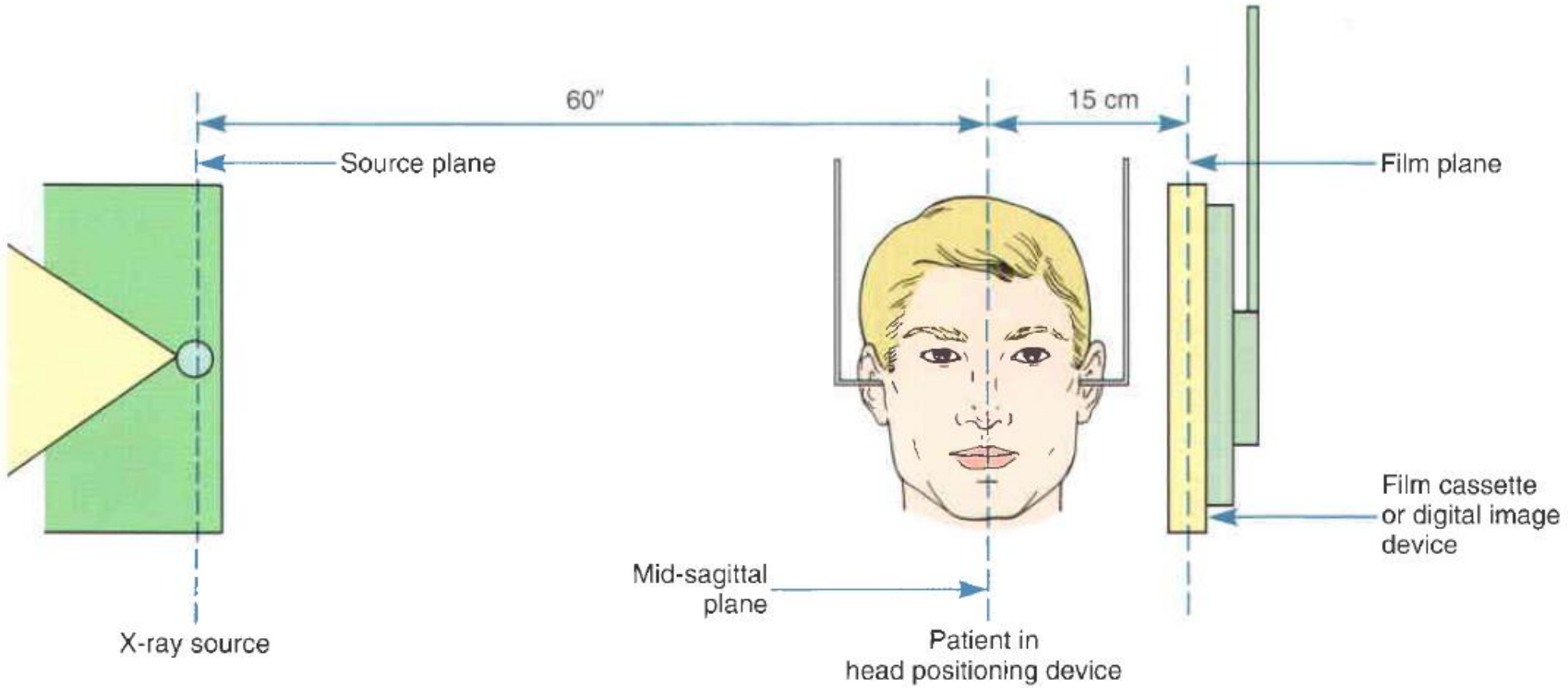


FIGURE 6-40 Diagrammatic representation of the American standard cephalometric arrangement. By convention, the distance from the x-ray source to the subject's midsagittal plane is 5 feet. The distance from the midsagittal plane to the cassette can vary in many machines but must be the same for each patient every time.

60” = 152,4 cm a sugárforrás – arcközépsík távolság

7” = 18 cm az arcközépsík film távolság

A jobb arcfél néz a sugárforrás felé

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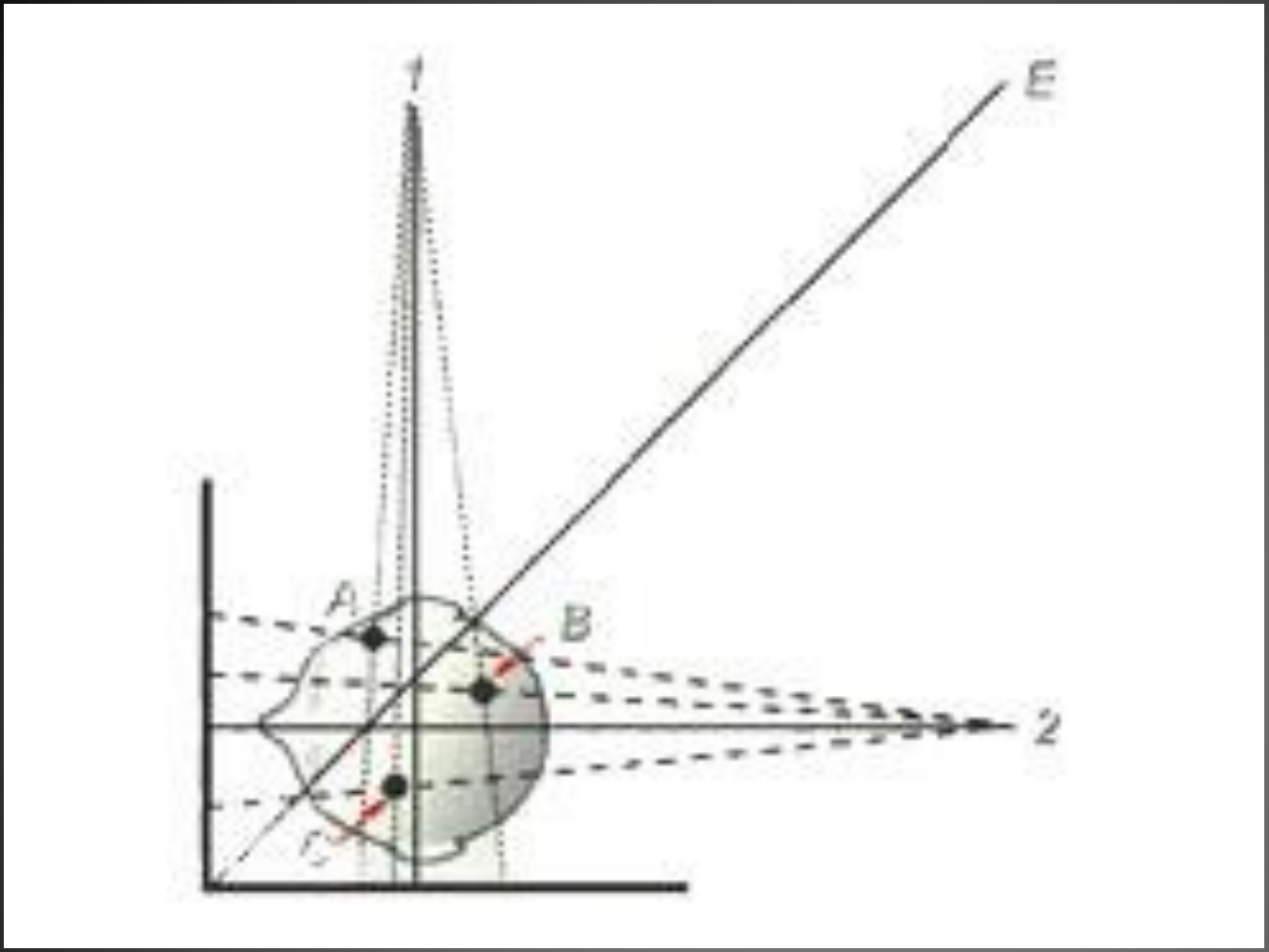
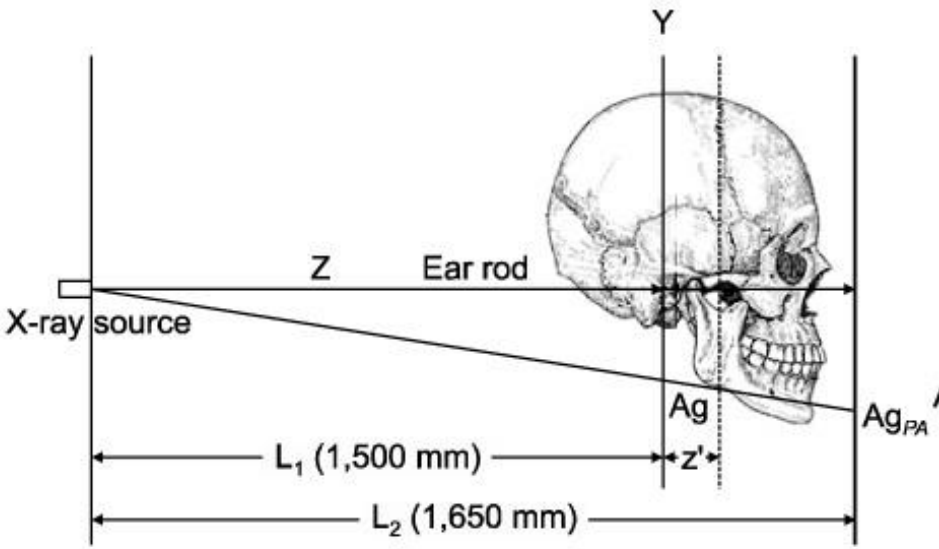
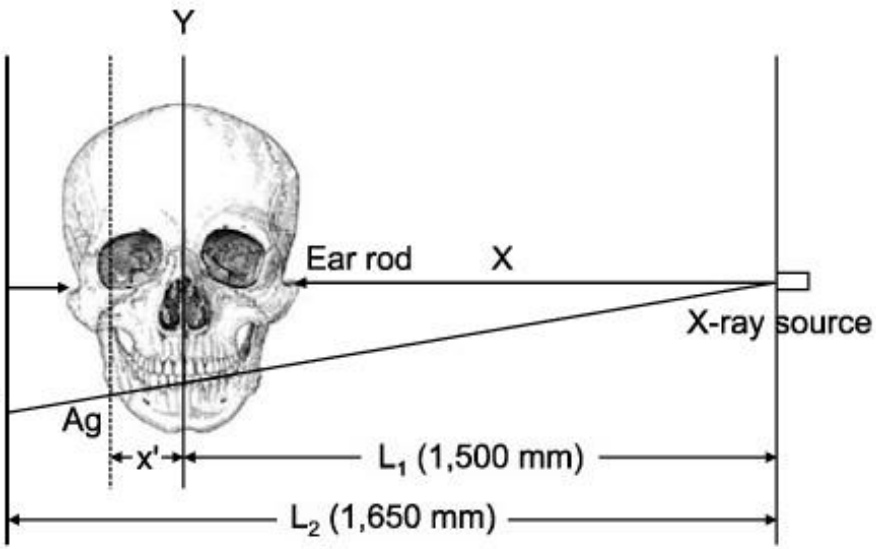
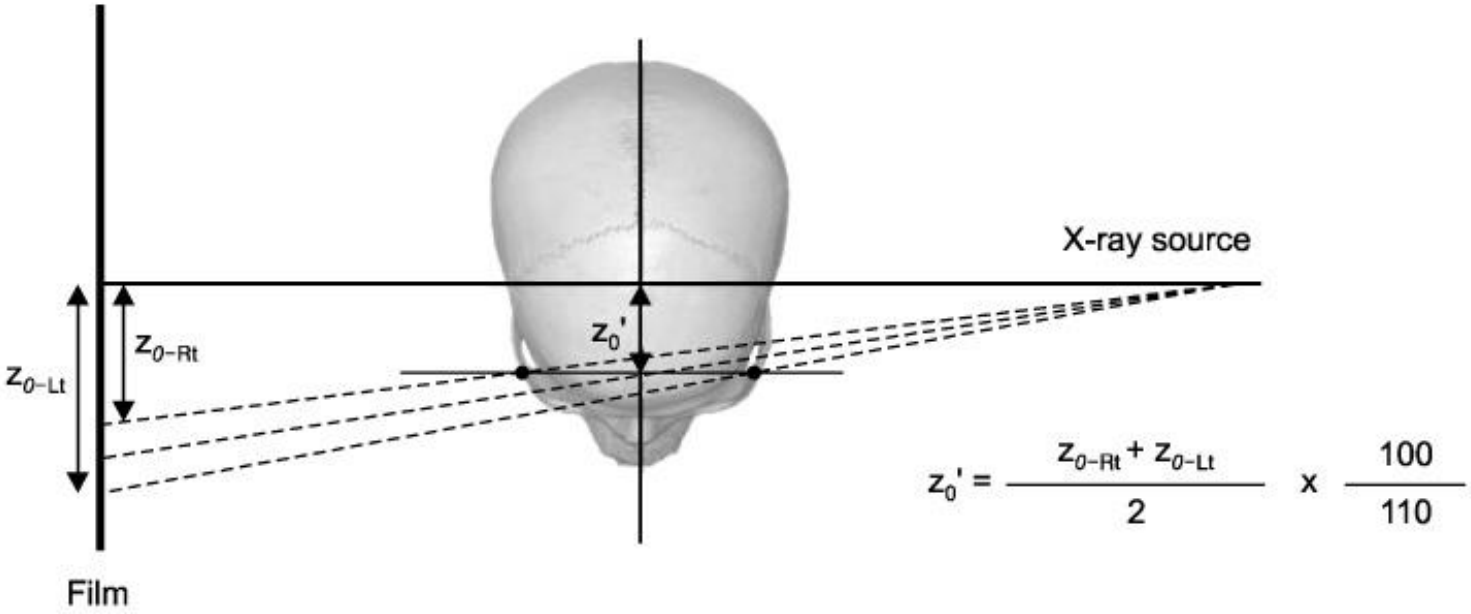


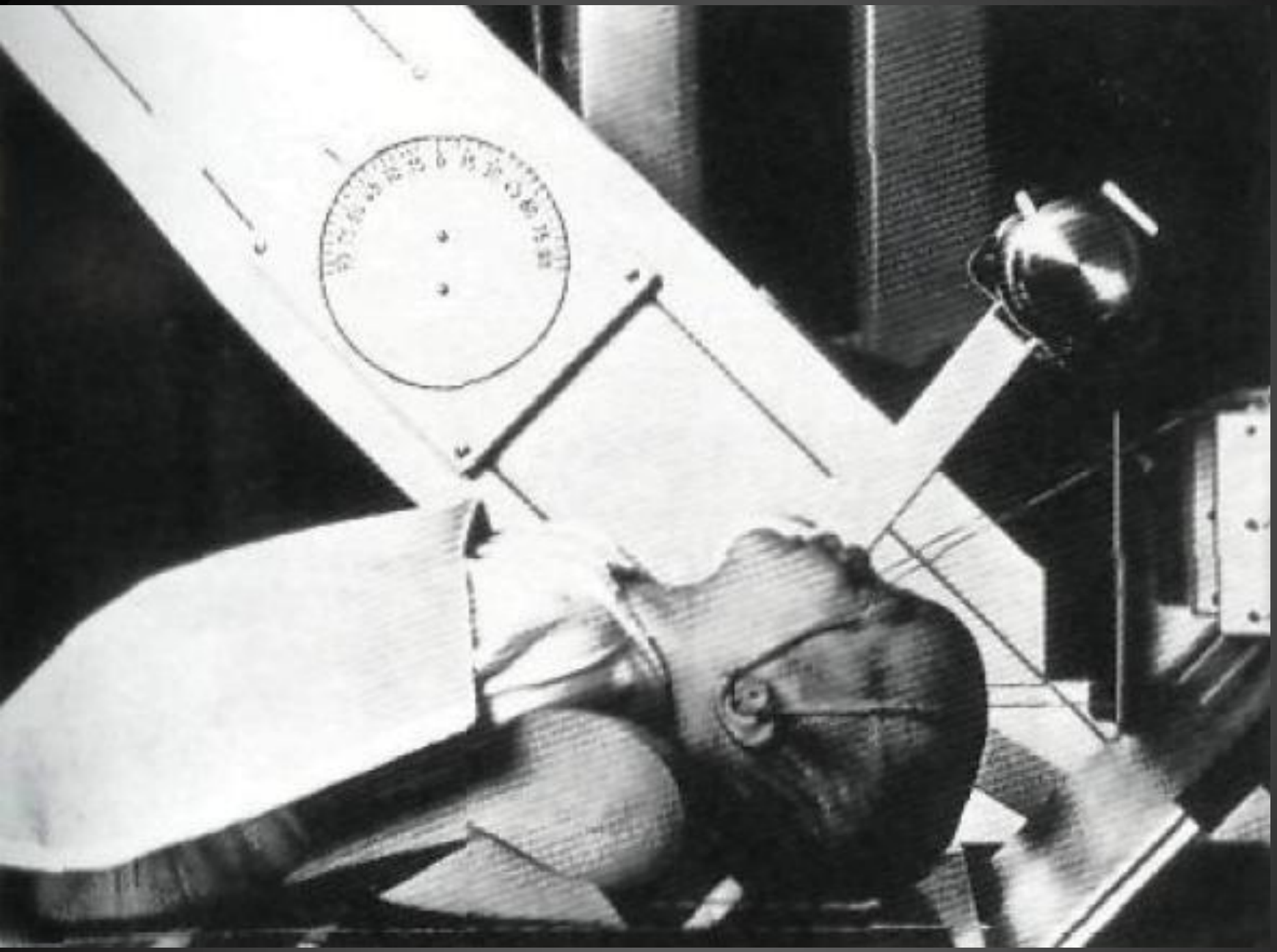
The geometry of a bi-planar stereopair. Note that each of the three points in the patient's head (A, B, and C) is located a different distance from the frontal and lateral film planes. For this reason, the points will be enlarged differently on the two films and therefore will have different y coordinates. http://www.cril.org/3Dmeasure_index.asp







THE ENLARGEMENT IS ABOUT 10%



Kreiborg S, Dahl E, Prydso U: A unit for infant roentgencephalometry. *Dentomaxillofac Radiol* 6:107-11. (1977)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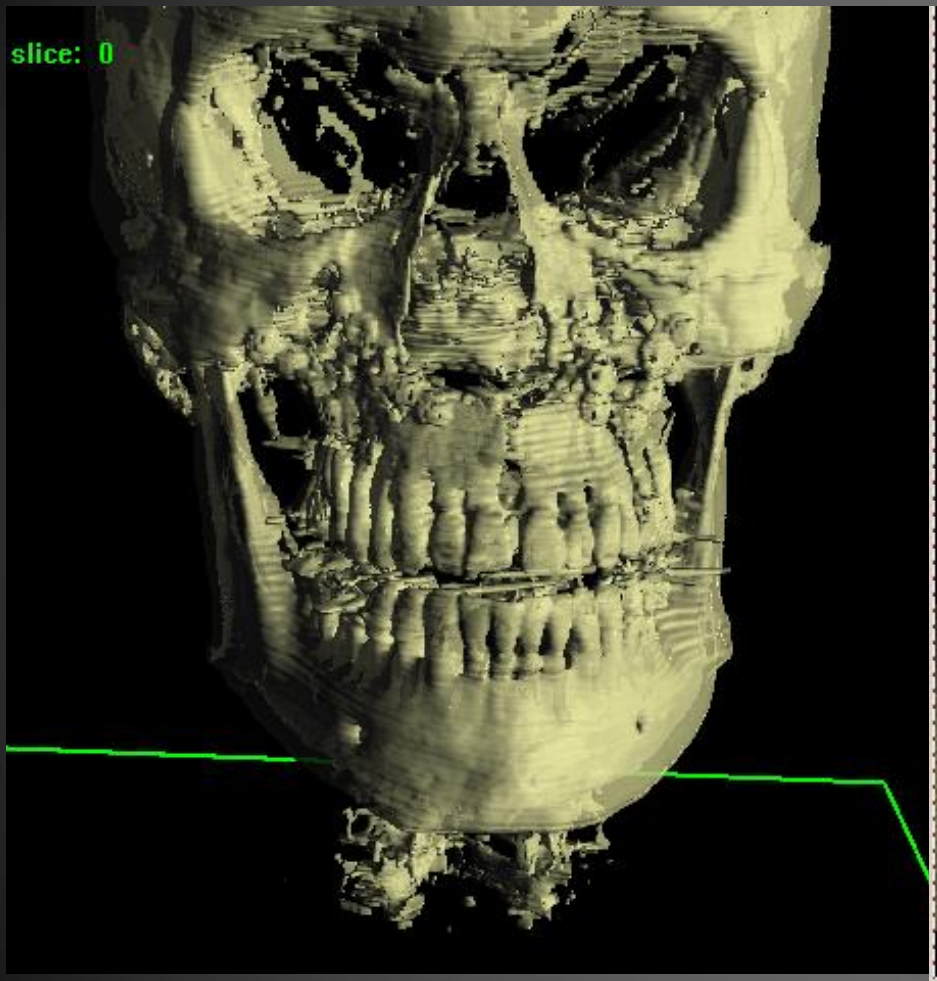
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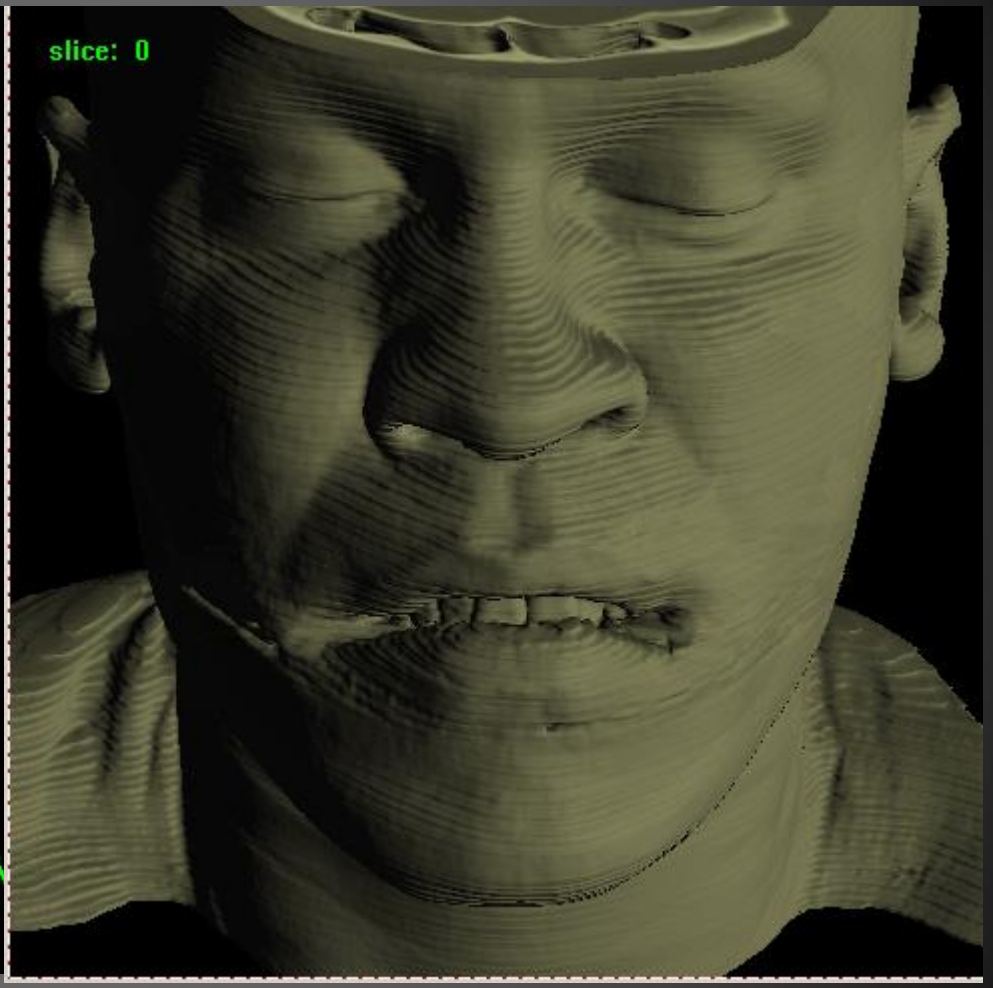
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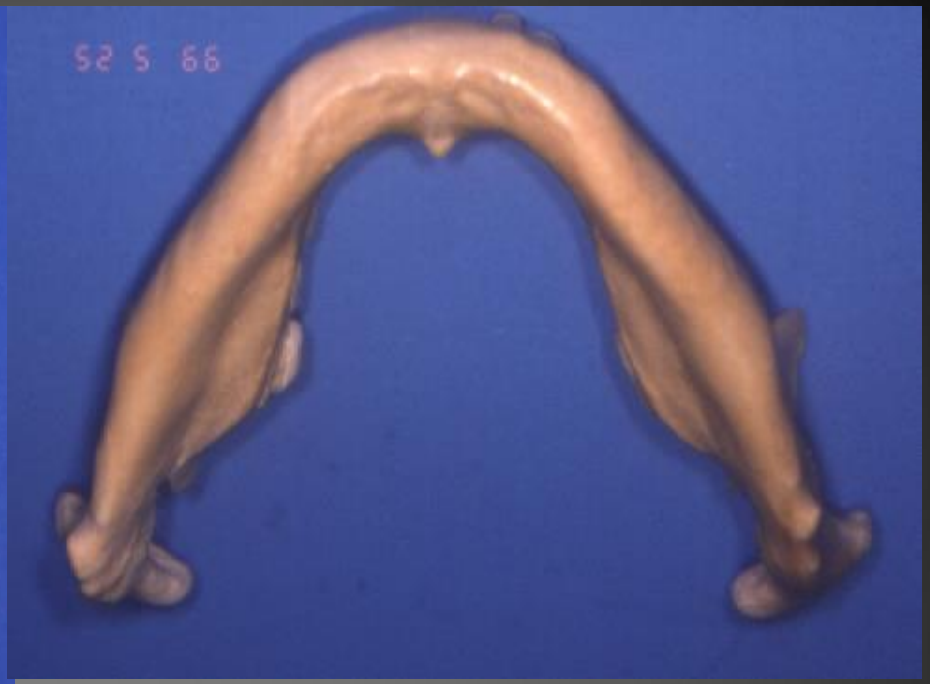
IT IS CEPHALOMETRY ALSO !!!

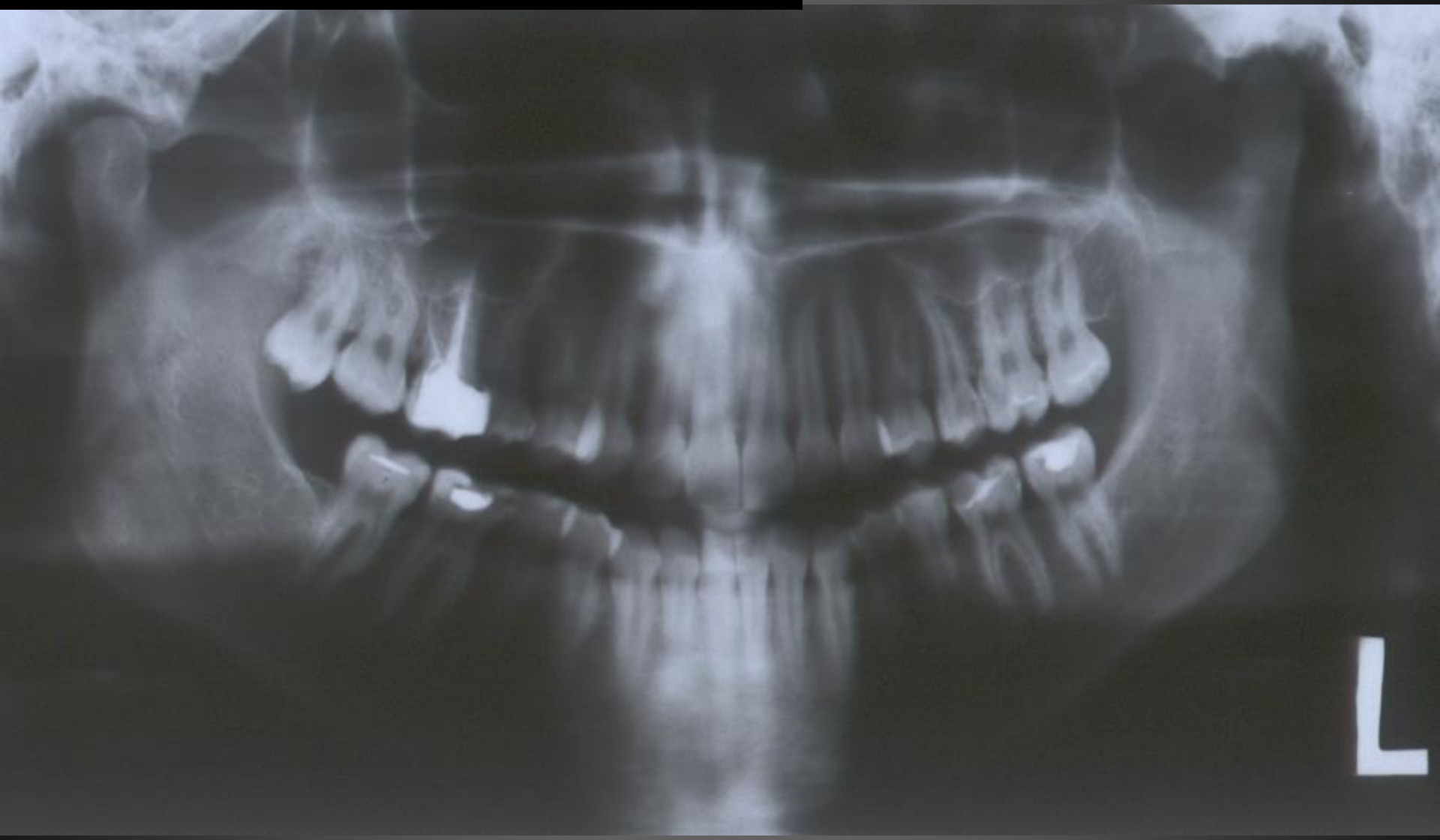
The rarely applied diagnostical imaging element in the orthodontics

a./ analysis of the frontal headplate
b./ analysis of the panoramic x-ray by Obwegeser
c./ analysis of the open and closed panoramic x-ray
d./ analysis of the occlusal radiographs
e./ computer-tomogramm and the 3D-reconstruction of it
f./ analysis of the magnetic resonance imaging



- **MANDIBULA**

STANDARD PANORAMIC X-RAX



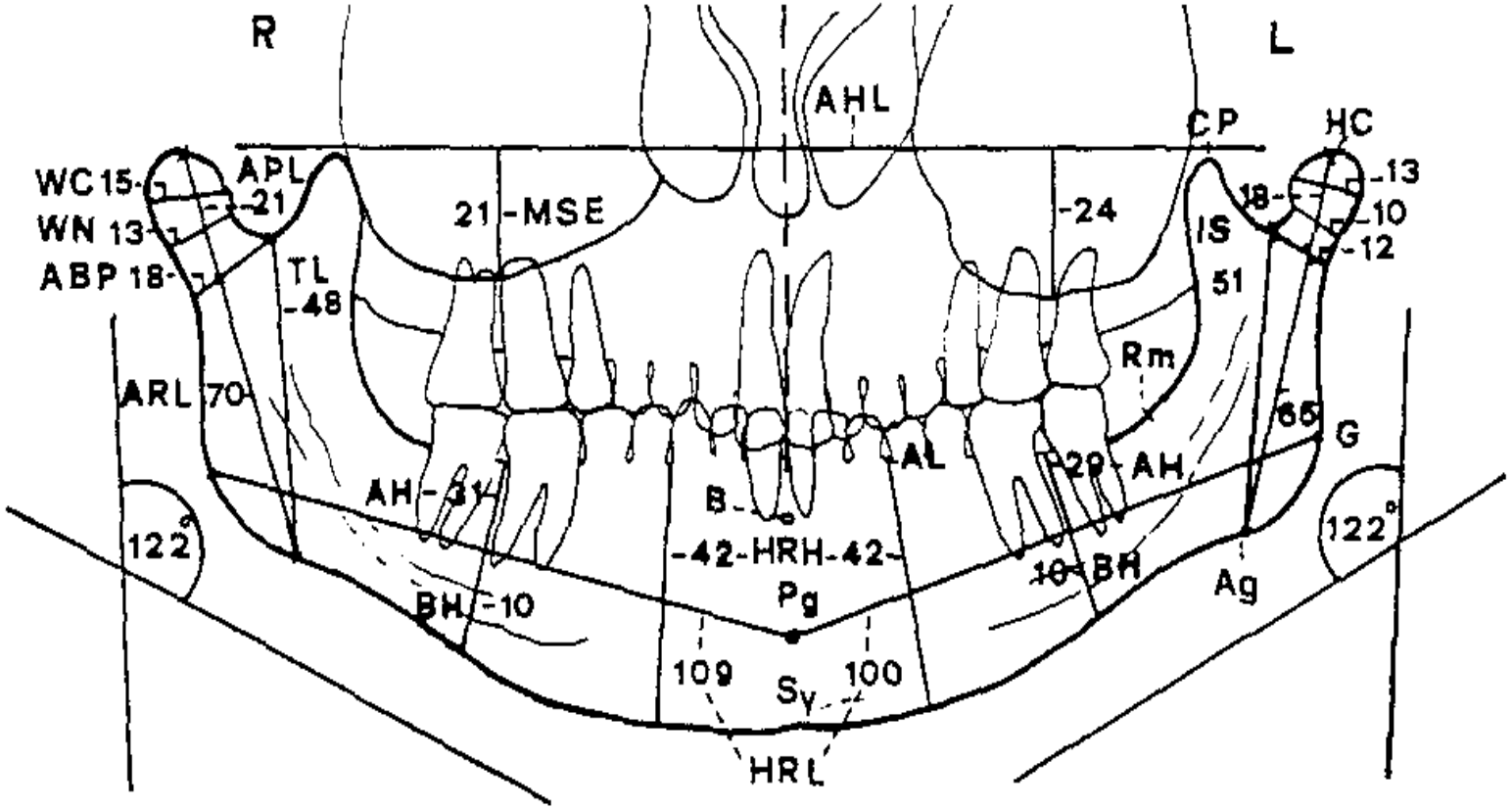


Fig. 4. On the tracing of a panoramic radiograph all wanted measurement points and measurable lengths are shown

•**Hugo L. Obwegeser: Mandibular Growth Anomalies Springer 2001**

The rarely applied diagnostical imaging element in the orthodontics

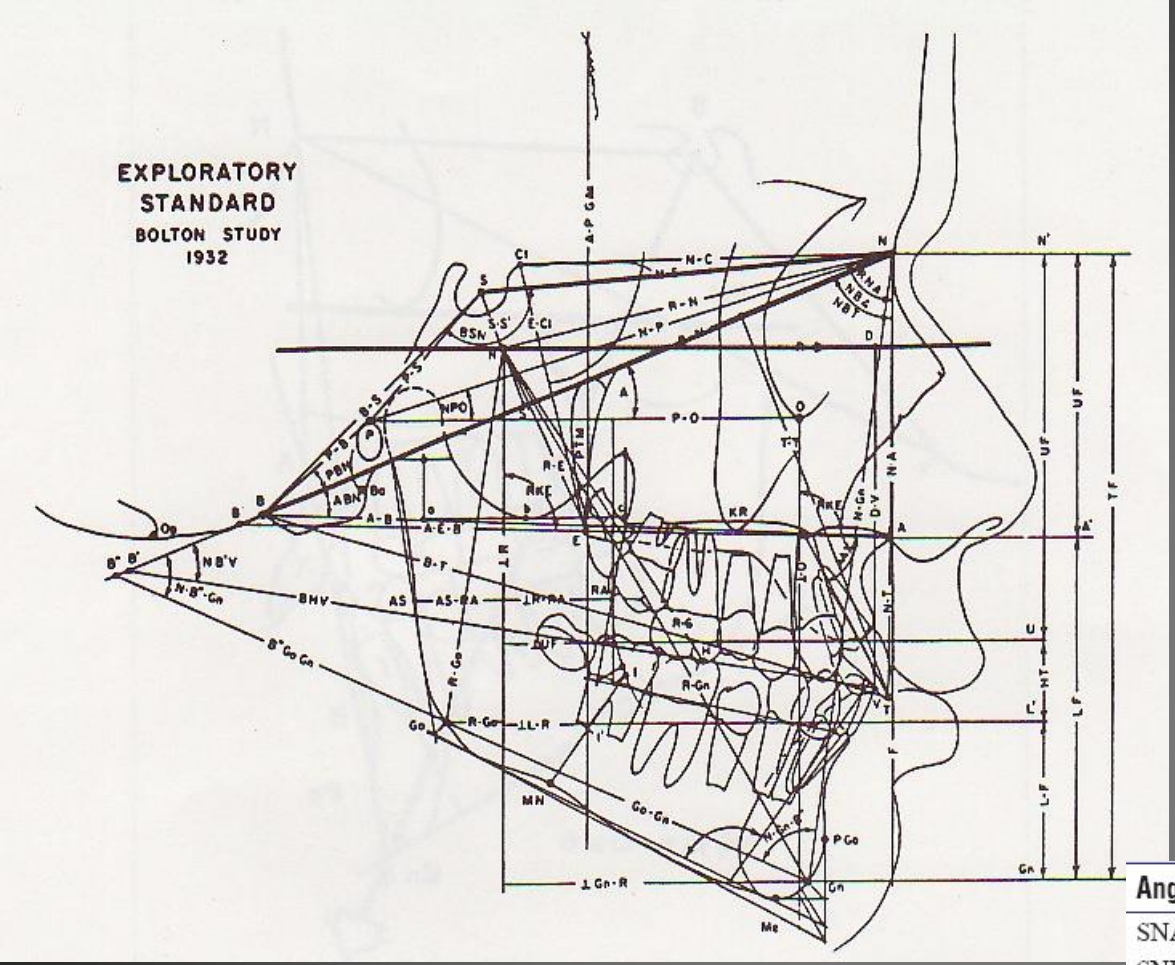
a./ analysis of the frontal headplate
b./ analysis of the panoramic x-ray by Obwegeser
c./ analysis of the open and closed panoramic x-ray
d./ analysis of the occlusal radiographs
e./ computer-tomogramm and the 3D-reconstruction of it
f./ analysis of the magnetic resonance imaging

PANORAMIC X-RAY
IN MAXIMAL INTERCUSPATION

PANORAMIC X-RAY
IN MAXIMAL MOUTH OPENING

LATERAL CEPHALOMETRIC ANALYSIS

RICKETTS'S average based, mean value „norms"



Angle	Normal values (°)
SNA	82±3
SNB	79±3
ANB	3±2
FH-NA	90±4
FH-NPg	87±4
SN-MP	32±5
FH-MP	24±3
Y-axis - SN	66±3
Y-axis - FH	59±3
U1-SN	103±6
U1-NA	22±6
L1-MP	90±5
L1-NB	25±7
U1-L1	135±11

ASBJORN HASUND

floating norm analysis

ETHNICAL DIFFERENCES

European population Hasund Segner

		2001.10.04.
SNA	82	
SNB	80	
ANB	2	
SNPg	81	
NSBa	130	
Gn-tgo-Ar	126	
N szög	58	
H szög	8	
ML-NSL	32	
NL-NSL	8,5	
ML-NL	23,5	
N-Sp' (mm)		
Sp'-Gn (mm)		
N-Sp'/Sp'-Gn (79%)		
T-†	131	
†-NA (szög)	22	
T-NB (szög)	25	
†-NA (mm)	4	
T-NB (mm)	4	
Pg-NB		
T-NPg		
NasoLab	110	

	SNA	NL-NSL	NSBa	ML-NSL	SNB	ML-NL
Retrog-náth	61		141	43	64	28
	62	14	140	42	65	27
	63		139	41	66	
	64	13		40	67	26
	65		138	39	68	
	66	12	137	38	69	25
	67		136	37	70	
	68	11		36	71	24
	69		135	35	72	
	70	10	134	34	73	23
	71			33	74	
	72	9	133	32	75	22
	73		132	31	76	
	74	8		30	77	21
	75		131	29	78	
	76	7	130	28	79	20
	77			27	80	
	78	6	129	26	81	19
	79		128	25	82	
	80	5		24	83	18
	81		127	23	84	
	82	4		22	85	17
	83		126	21	86	
	84	3	125	20	87	16
	85			19	88	
	86	2	124	18	89	15
	87		123	17	90	
	88	1		16	91	14
	89		122	15	92	
	90	0	121	14	93	13
	91			13	94	
	92				95	12
	93				96	
	94				97	
	95				98	
	96					
	97					
	98					
	99					
	100					
	101					
	102					
	103					
Orthog-náth						
Prog-náth						

	SNA	NL-SNL	NSBa	ML-NSL	SNB	ML-NL
Retrognath	62,0	15,8	143,1	40,7	62,2	25,0
	63,0	15,4	142,5	40,1	63,1	24,9
	64,0	15,0	141,9	39,6	64,0	24,7
	65,0	14,6	141,2	39,0	64,9	24,6
	66,0	14,2	140,6	38,5	65,7	24,4
	67,0	13,8	140,0	37,9	66,6	24,3
	68,0	13,3	139,4	37,4	67,5	24,2
	69,0	12,9	138,7	36,8	68,4	24,0
	70,0	12,5	138,1	36,3	69,2	23,9
	71,0	12,1	137,5	35,7	70,1	23,7
	72,0	11,7	136,9	35,2	71,0	23,6
	73,0	11,3	136,2	34,6	71,9	23,4
	74,0	10,9	135,6	34,1	72,8	23,3
	75,0	10,5	135,0	33,5	73,6	23,1
	76,0	10,0	134,4	33,0	74,5	23,0
Orthognath	77,0	9,6	133,7	32,5	75,4	22,8
	78,0	9,2	133,1	31,9	76,3	22,7
	79,0	8,8	132,5	31,4	77,1	22,6
	80,0	8,4	131,9	30,8	78,0	22,4
	81,0	8,0	131,2	30,3	78,9	22,3
	82,0	7,6	130,6	29,7	79,8	22,1
	83,0	7,2	130,0	29,2	80,6	22,0
	84,0	6,8	129,4	28,6	81,5	21,8
	85,0	6,3	128,7	28,1	82,4	21,7
	86,0	5,9	128,1	27,5	83,3	21,5
	87,0	5,5	127,5	27,0	84,1	21,4
	88,0	5,1	126,9	26,4	85,0	21,2
	89,0	4,7	126,2	25,9	85,9	21,1
	90,0	4,3	125,6	25,3	86,8	20,9
	91,0	3,9	125,0	24,8	87,6	20,8
	92,0	3,5	124,4	24,3	88,5	20,7
	93,0	3,1	123,8	23,7	89,4	20,5
	94,0	2,6	123,1	23,2	90,3	20,4
	95,0	2,2	122,5	22,6	91,1	20,2
	96,0	1,8	121,9	22,1	92,0	20,1
	97,0	1,4	121,3	21,5	92,9	19,9
	98,0	1,0	120,6	21,0	93,8	19,8
	99,0	0,6	120,0	20,4	94,6	19,6
	100,0	0,2	119,4	19,9	95,5	19,5
	101,0	-0,2	118,8	19,3	96,4	19,3
	102,0	-0,6	118,1	18,8	97,3	19,2
Prognath	103,0	-1,1	117,5	18,2	98,1	19,0

Figure 3 – Harmony box for Czech adults.

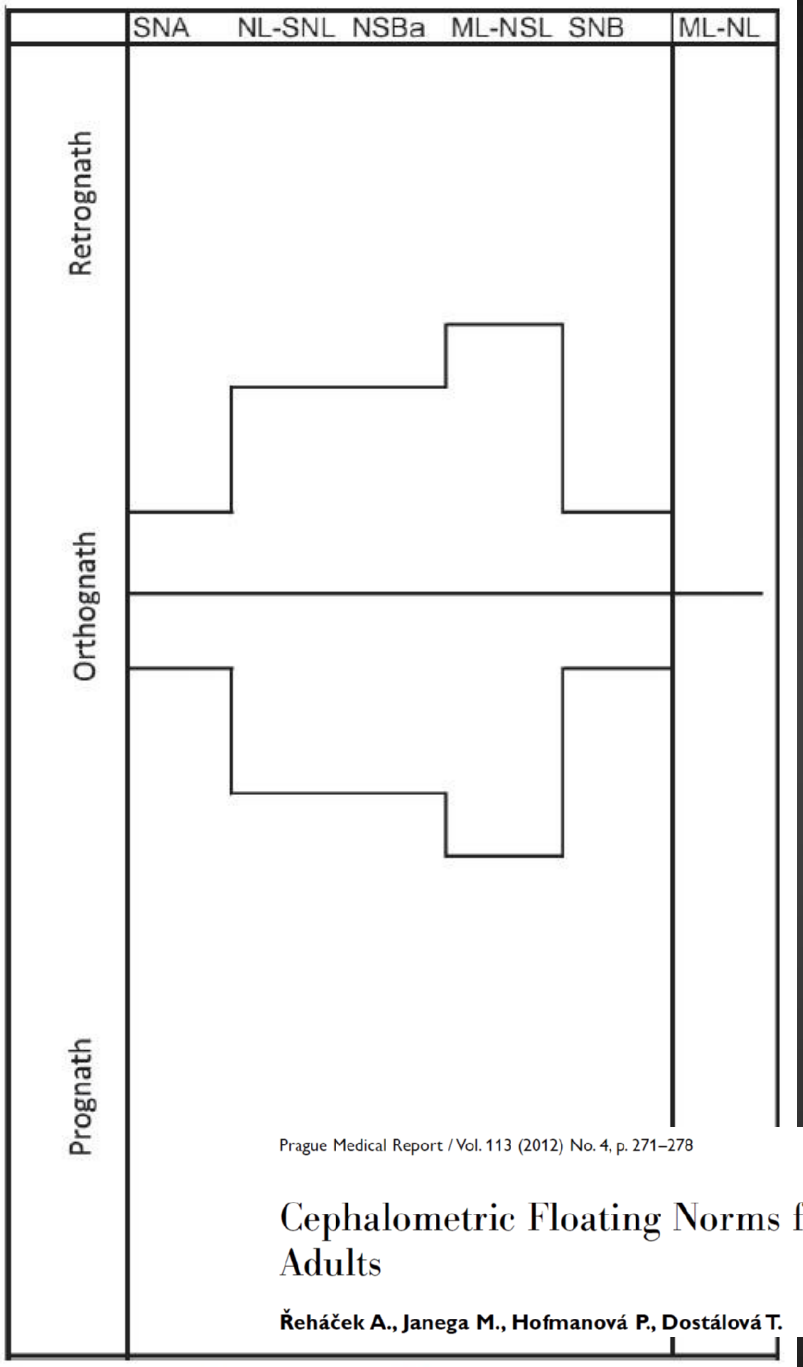


Figure 4 – Harmony schema for Czech adults.

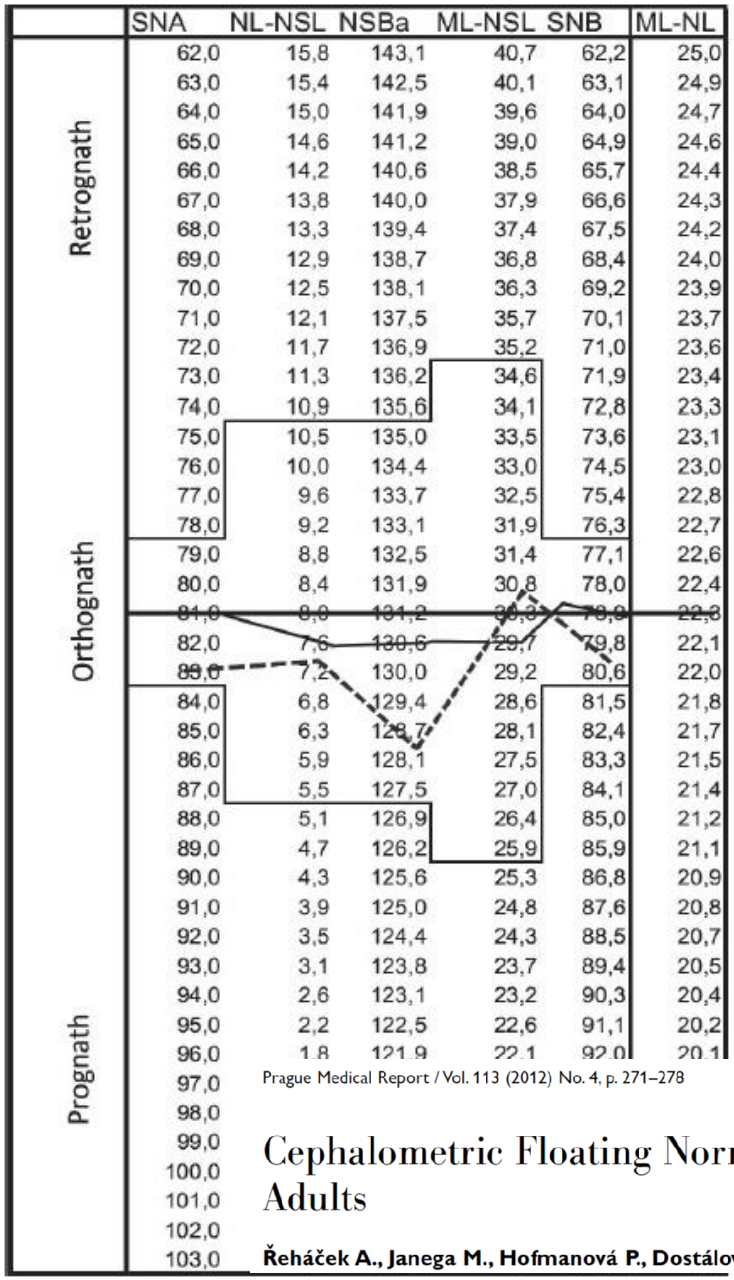
Prague Medical Report / Vol. 113 (2012) No. 4, p. 271–278

Cephalometric Floating Norms for Czech Adults

Řeháček A., Janega M., Hofmanová P., Dostálová T.

	SNA	NL-SNL	NSBa	ML-NSL	SNB	ML-NL
Retrognath	62,0	15,8	143,1	40,7	62,2	25,0
	63,0	15,4	142,5	40,1	63,1	24,9
	64,0	15,0	141,9	39,6	64,0	24,7
	65,0	14,6	141,2	39,0	64,9	24,6
	66,0	14,2	140,6	38,5	65,7	24,4
	67,0	13,8	140,0	37,9	66,6	24,3
	68,0	13,3	139,4	37,4	67,5	24,2
	69,0	12,9	138,7	36,8	68,4	24,0
	70,0	12,5	138,1	36,3	69,2	23,9
	71,0	12,1	137,5	35,7	70,1	23,7
	72,0	11,7	136,9	35,2	71,0	23,6
	73,0	11,3	136,2	34,6	71,9	23,4
	74,0	10,9	135,6	34,1	72,8	23,3
	75,0	10,5	135,0	33,5	73,6	23,1
	76,0	10,0	134,4	33,0	74,5	23,0
	77,0	9,6	133,7	32,5	75,4	22,8
	78,0	9,2	133,1	31,9	76,3	22,7
Orthognath	79,0	8,8	132,5	31,4	77,1	22,6
	80,0	8,4	131,9	30,8	78,0	22,4
	81,0	8,0	131,2	30,3	78,9	22,3
	82,0	7,6	130,6	29,7	79,8	22,1
	83,0	7,2	130,0	29,2	80,6	22,0
	84,0	6,8	129,4	28,6	81,5	21,8
	85,0	6,3	128,7	28,1	82,4	21,7
	86,0	5,9	128,1	27,5	83,3	21,5
	87,0	5,5	127,5	27,0	84,1	21,4
	88,0	5,1	126,9	26,4	85,0	21,2
	89,0	4,7	126,2	25,9	85,9	21,1
	90,0	4,3	125,6	25,3	86,8	20,9
	91,0	3,9	125,0	24,8	87,6	20,8
	92,0	3,5	124,4	24,3	88,5	20,7
	93,0	3,1	123,8	23,7	89,4	20,5
	94,0	2,6	123,1	23,2	90,3	20,4
	95,0	2,2	122,5	22,6	91,1	20,2
	96,0	1,8	121,9	22,1	92,0	20,1
Prognath	97,0	1,4	121,3	21,5	92,9	19,9
	98,0	1,0	120,6	21,0	93,8	19,8
	99,0	0,6	120,0	20,4	94,6	19,6
	100,0	0,2	119,4	19,9	95,5	19,5
	101,0	-0,2	118,8	19,3	96,4	19,3
	102,0	-0,6	118,1	18,8	97,3	19,2
	103,0	-1,1	117,5	18,2	98,1	19,0

Figure 5 – Harmonious combinations.



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Cephalometric Floating Norms for Czech Adults

Řeháček A., Janega M., Hofmanová P., Dostálová T.

Figure 6 – Comparison Czech adults (connected line) with North American adults (dashed line).


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	SNA	NL-NSL	NSBa	ML-NSL	SNB	ML-NL
Retrognathic	64	15.3	142.6	40.6	66.6	
	65	14.9	142.0	40.2	67.3	25.1
	66	14.6	141.4	39.8	68.0	25.1
	67	14.3	140.8	39.4	68.6	25.0
	68	14.0	140.2	39.1	69.3	24.9
	69	13.7	139.5	38.7	70.0	24.9
	70	13.4	138.9	38.3	70.6	24.8
	71	13.1	138.3	38.0	71.3	24.8
	72	12.8	137.7	37.6	72.0	24.7
	73	12.5	137.1	37.2	72.7	24.6
	74	12.2	136.5	36.9	73.3	24.6
	75	11.8	135.9	36.5	74.0	24.5
	76	11.5	135.3	36.1	74.7	24.5
	77	11.2	134.7	35.7	75.3	24.4
	78	10.9	134.1	35.4	76.0	24.3
	79	10.6	133.4	35.0	76.7	24.3
Orthognathic	80	10.3	132.8	34.6	77.3	24.2
	81	10.0	132.2	34.3	78.0	24.2
	82	9.7	131.6	33.9	78.7	24.1
	83	9.4	131.0	33.5	79.4	24.0
	84	9.1	130.4	33.2	80.0	24.0
	85	8.7	129.8	32.8	80.7	23.9
	86	8.4	129.2	32.4	81.4	23.9
	87	8.1	128.6	32.0	82.0	23.8
	88	7.8	128.0	31.7	82.7	23.7
	89	7.5	127.3	31.3	83.4	23.7
	90	7.2	126.7	30.9	84.0	23.6
	91	6.9	126.1	30.6	84.7	23.6
	92	6.6	125.5	30.2	85.4	23.5
	93	6.3	124.9	29.8	86.1	23.4
	94	6.0	124.3	29.5	86.7	23.4
	95	5.6	123.7	29.1	87.4	23.3
	96	5.3	123.1	28.7	88.1	23.3
	97	5.0	122.5	28.3	88.7	23.2
	98	4.7	121.9	28.0	89.4	23.1
	99	4.4	121.2	27.6	90.1	23.1
	100	4.1	120.6	27.2	90.7	23.0
	101	3.8	120.0	26.9	91.4	23.0
Prognathic	102	3.5	119.4	26.5	92.1	22.9
	103		118.8	26.1	92.8	22.8

Figure 4. Filipino harmony box.

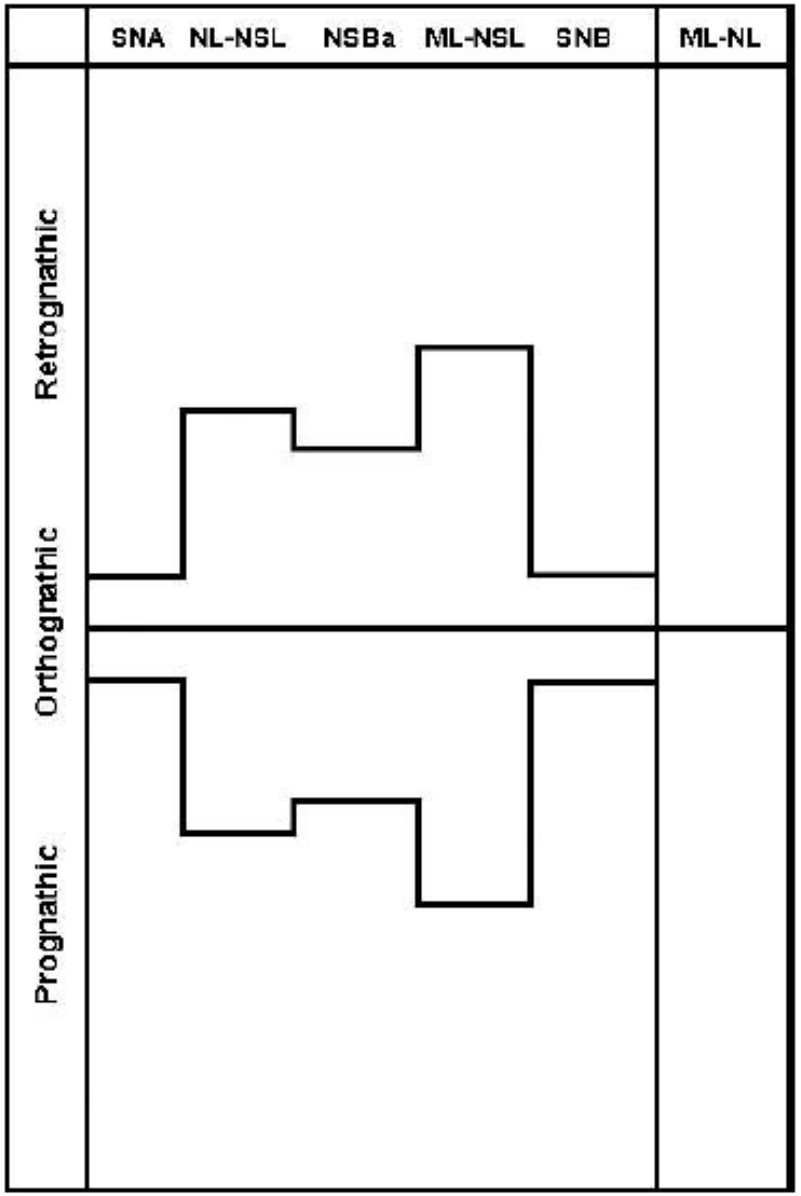


Figure 5. Filipino harmony schema.

Marian Almyra, Sevilla-Naranjilla, Ingrid Rudzki-Janson: Cephalometric Floating Norms as a Guide toward a Harmonious Individual Craniofacial Pattern among **Filipinos,** Angle Orthod. 2009,79.1162-1168

	SNA	NL-NSL	NSBa	ML-NSL	SNB	ML-NL
Prognath	62		141	43	64	28
	63	14		42	65	●
	64	●	140	41	66	27
	65				67	●
Orthognath	66	13	139	40	68	26
	67	●	138	39	69	●
	68	12		38	70	25
	69	●	137	37	71	●
	70	11		36	72	24
	71	●	136	35	73	●
	72	10	135	34	74	23
	73	●		33	75	●
	74	9	134	32	76	22
	75	●	133	31	77	●
	76	8		30	78	21
	77	●	132	29	79	●
	78	7	131	28	80	20
	79	●		27	81	●
	80	6	130	26	82	19
	81	●	129	25	83	●
	82	5		24	84	18
	83	●	128	23	85	●
	84	4	127	22	86	17
	85	●		21	87	●
	86	3	126	20	88	16
	87	●	125	19	89	●
	88	2	124	18	90	15
	89	●	123	17	91	●
Retrognath	90	1	122	16	92	14
	91				93	●
	92				94	13
	93				95	●
	94		121	14	96	
	95				97	

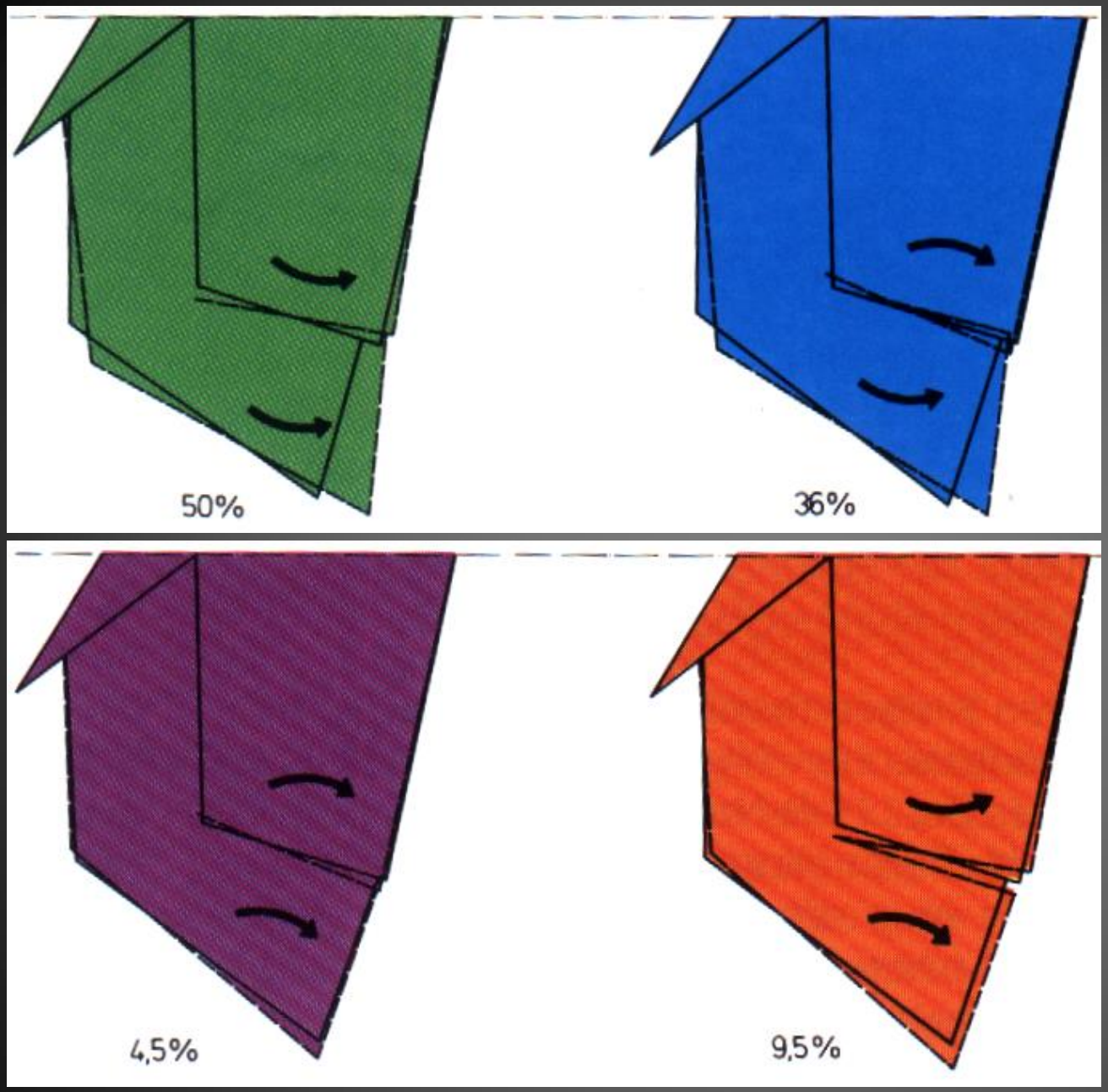
Figure 2. Segner-Hasund harmony box.

	SNA	NL-NSL	NSBa	ML-NSL	SNB	ML-NL
Prognathic	64		142.6	40.6	66.6	
	65	15.3	142.0	40.2	67.3	25.1
	66	14.6	141.4	39.8	68.0	25.1
	67	14.3	140.8	39.4	68.6	25.0
	68	14.0	140.2	39.1	69.3	24.9
	69	13.7	139.5	38.7	70.0	24.9
	70	13.4	138.9	38.3	70.6	24.8
	71	13.1	138.3	38.0	71.3	24.8
	72	12.8	137.7	37.6	72.0	24.7
	73	12.5	137.1	37.2	72.7	24.6
	74	12.2	136.5	36.9	73.3	24.6
	75	11.8	135.9	36.5	74.0	24.5
	76	11.5	135.3	36.1	74.7	24.5
	77	11.2	134.7	35.7	75.3	24.4
	78	10.9	134.1	35.4	76.0	24.3
	79	10.6	133.4	35.0	76.7	24.3
	80	10.3	132.8	34.6	77.3	24.2
	81	10.0	132.2	34.3	78.0	24.2
	82	9.7	131.6	33.9	78.7	24.1
	83	9.4	131.0	33.5	79.4	24.0
	84	9.1	130.4	33.2	80.0	24.0
	85	8.7	129.8	32.8	80.7	23.9
	86	8.4	129.2	32.4	81.4	23.9
	87	8.1	128.6	32.0	82.0	23.8
	88	7.8	128.0	31.7	82.7	23.7
	89	7.5	127.3	31.3	83.4	23.7
	90	7.2	126.7	30.9	84.0	23.6
	91	6.9	126.1	30.6	84.7	23.6
	92	6.6	125.5	30.2	85.4	23.5
	93	6.3	124.9	29.8	86.1	23.4
	94	6.0	124.3	29.5	86.7	23.4
	95	5.6	123.7	29.1	87.4	23.3
	96	5.3	123.1	28.7	88.1	23.3
	97	5.0	122.5	28.3	88.7	23.2
	98	4.7	121.9	28.0	89.4	23.1
	99	4.4	121.2	27.6	90.1	23.1
	100	4.1	120.6	27.2	90.7	23.0
	101	3.8	120.0	26.9	91.4	23.0
	102	3.5	119.4	26.5	92.1	22.9
	103		118.8	26.1	92.8	22.8

Figure 4. Filipino harmony box.

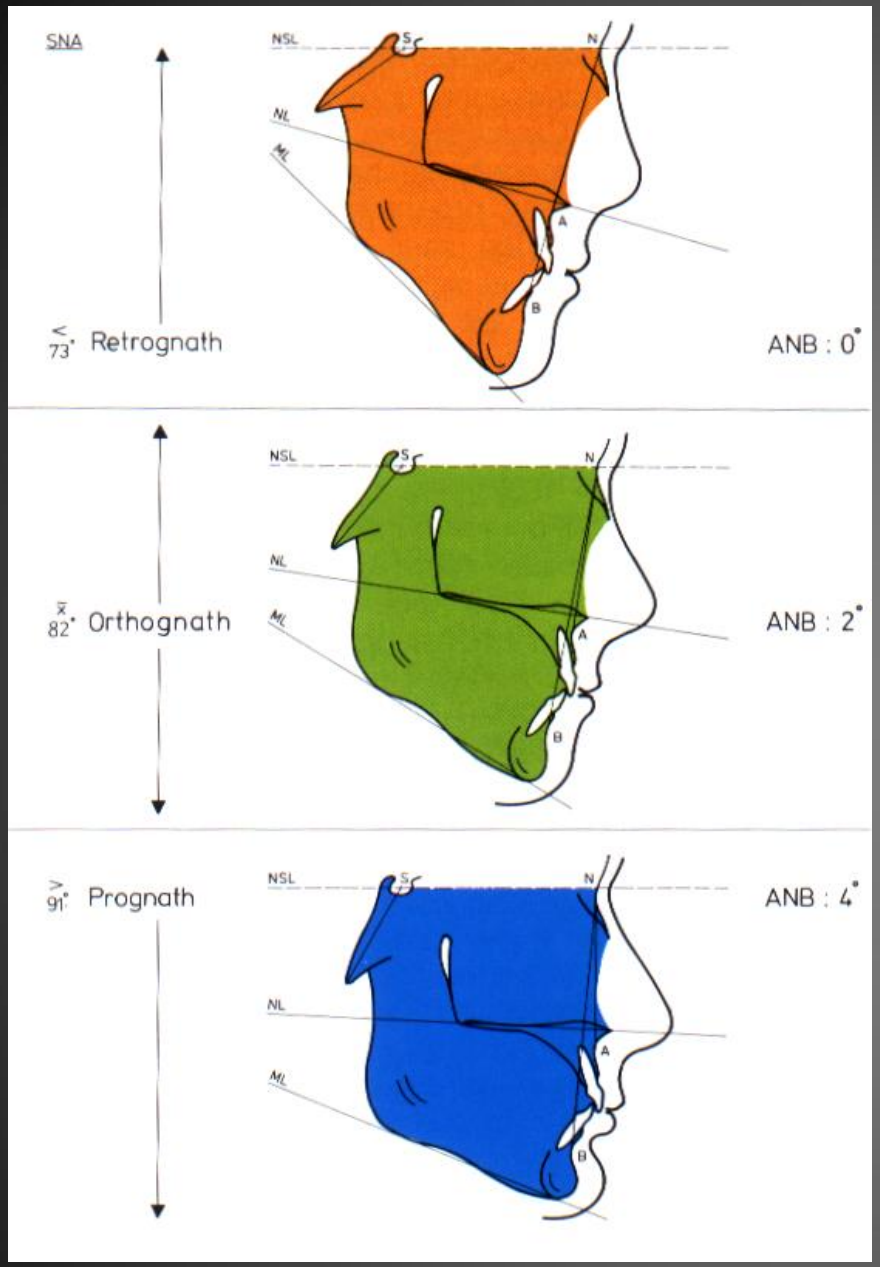
Marian Almyra, Sevilla-Naranjilla, Ingrid Rudzki-Janson: Cephalometric Floating Norms as a Guide toward a Harmonious Individual Craniofacial Pattern among Filipinos, Angle Orthod. 2009,79.1162-1168

BJÖRK, A. 1947



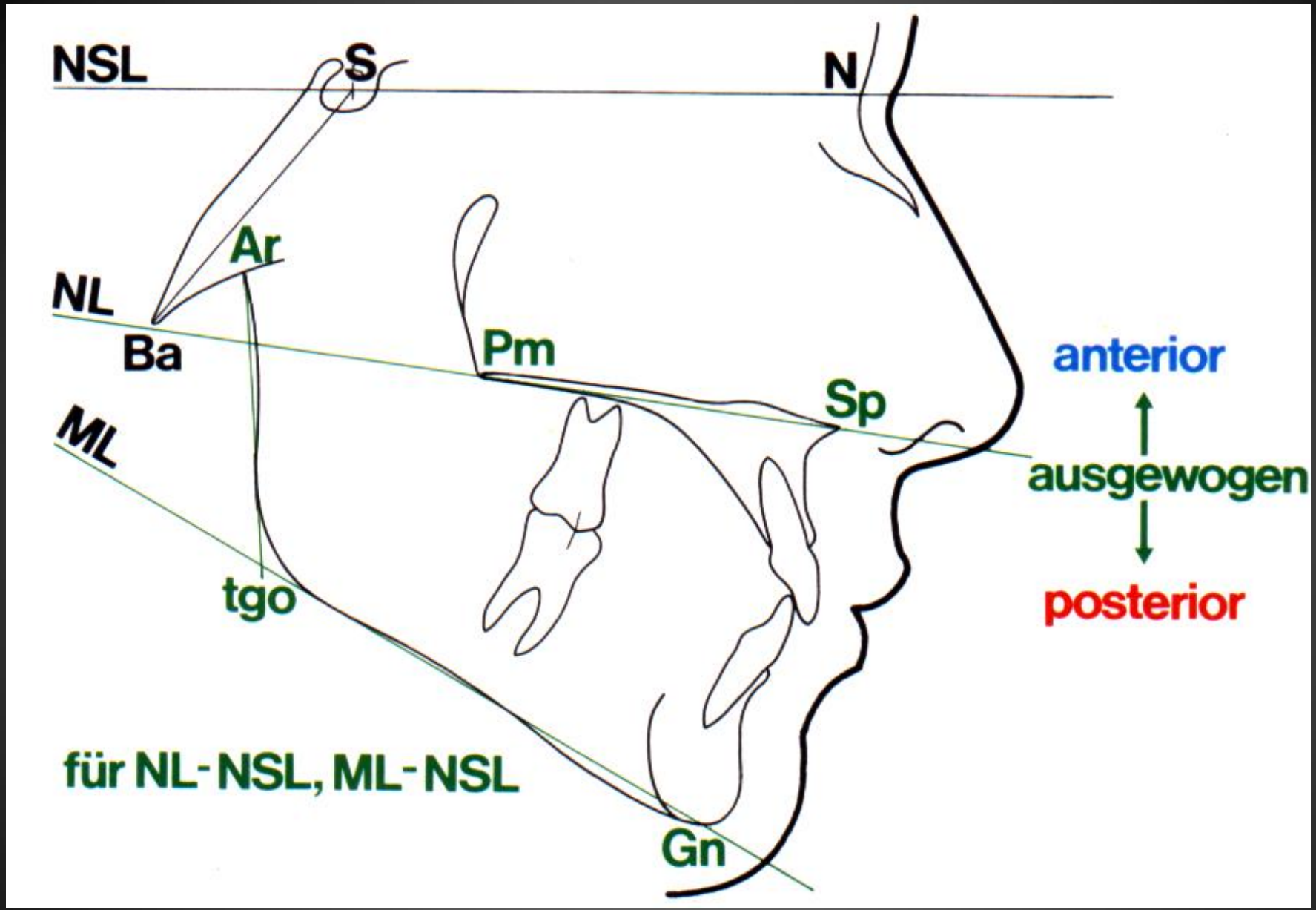
Lavergne, J.,N. Gasson:A metal implant study of mandibular rotation. Angle Orthodont.46. 14. (1976)

In:Steinhäuser,E. & Janson,I.:Kieferorthopädische Chirurgie Quintessenz 1988 p.45



	SNA	NL-NSL	NSBa	ML-NSL	SNB	ML-NL
Retrog-náth	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103	14	141	43	64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98	28
			140	42 41		27
		13	139	40		26
			138	39		
		12	137	38 37		25
		11	136	36		24
			135	35 34		23
		10	134	33		
		9	133	32 31		22
Orthog-náth		8	132	30		21
			131	29 28		20
		7	130	27		19
		6	129	26 25		18
			128	24		
Prog-náth		5	127	23		17
		4	126	22 21		16
			125	20		
		3	124	19 18		15
		2	123	17		14
			122	16		13
		1	121	15 14		12
		0		13		

•In:Steinhäuser,E.&Janson,I.:Kieferorthopädische Chirurgie Quintessenz 1988 p.104



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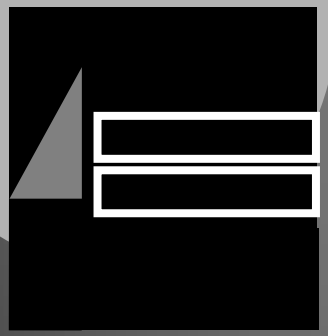
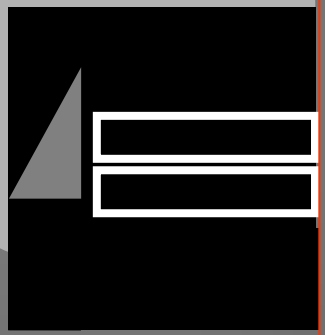
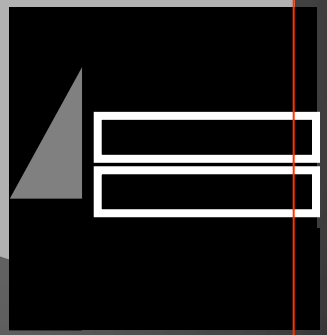
RETRO-

ORTHO-

PRO-





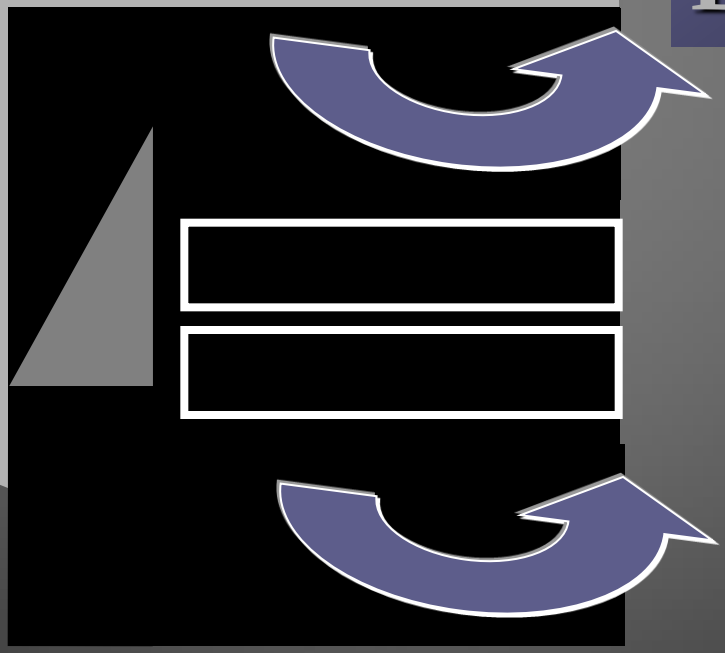


-GNATH

FACE TYPE

THE CONSEQUENSES OF THE ROTATIONS DURING OF THE GROWTH

ANTE-CLOCKWISE, ANTERIOR ROTATION BOTH JAWS

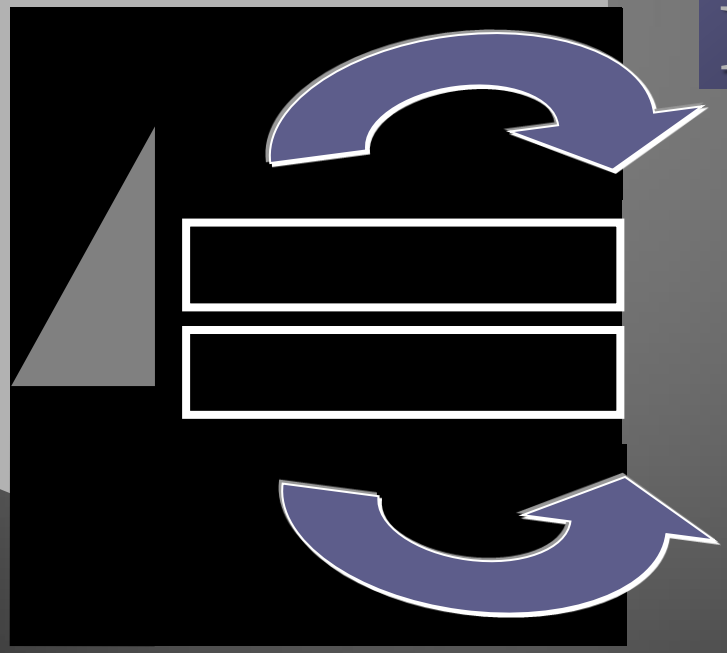


50 %

ANTE-CLOCKWISE, ANTERIOR ROTATION BOTH JAWS

50 %

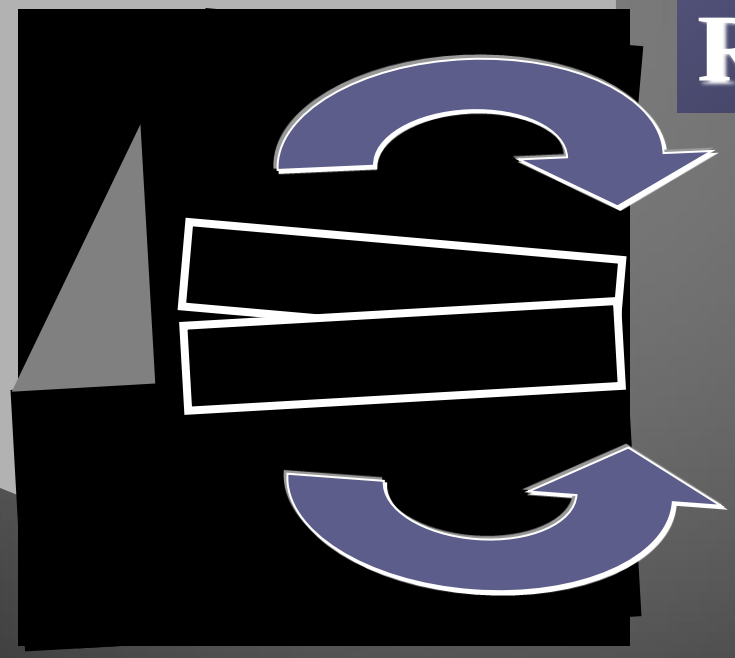
MAXILLA CLOCKWISE, MANDIBULA ANTE-CLOCKWISE, ROTATION



36

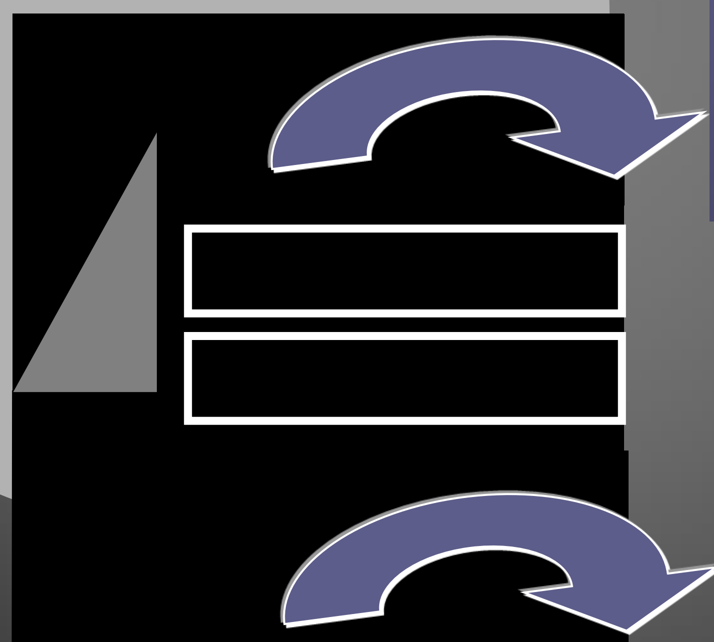
%

MAXILLA CLOCKWISE, MANDIBULA ANTE-CLOCKWISE, ROTATION



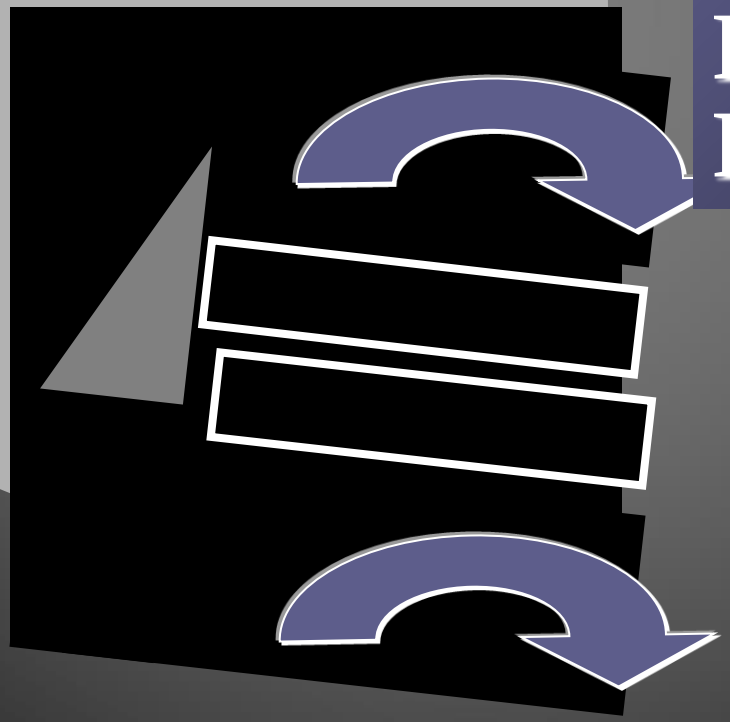
36 %

MAXILLA AND MANDIBULA CLOCKWISE ROTATION, POSTERIOR ROTATION

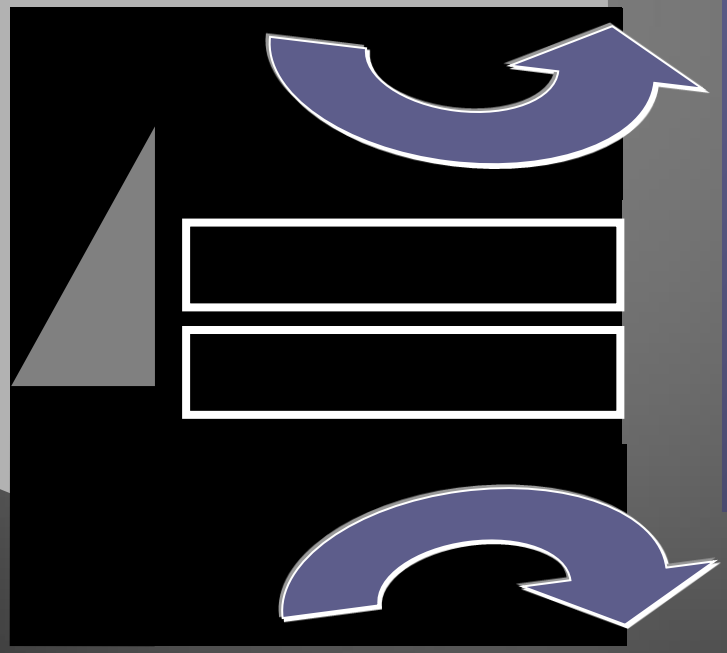


4,5 %

MAXILLA AND MANDIBULA CLOCKWISE ROTATION POSTERIOR ROTATION

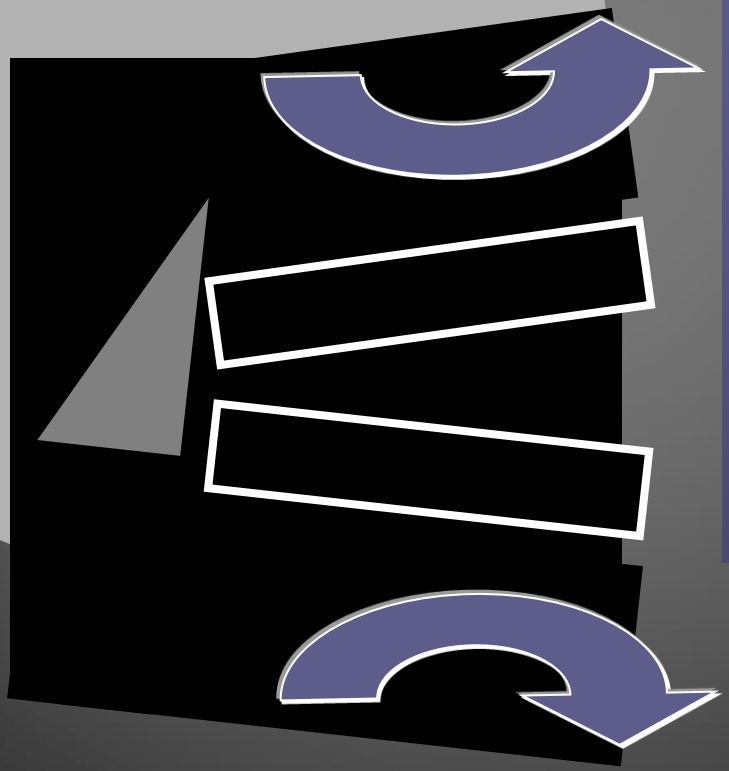


4,5 %



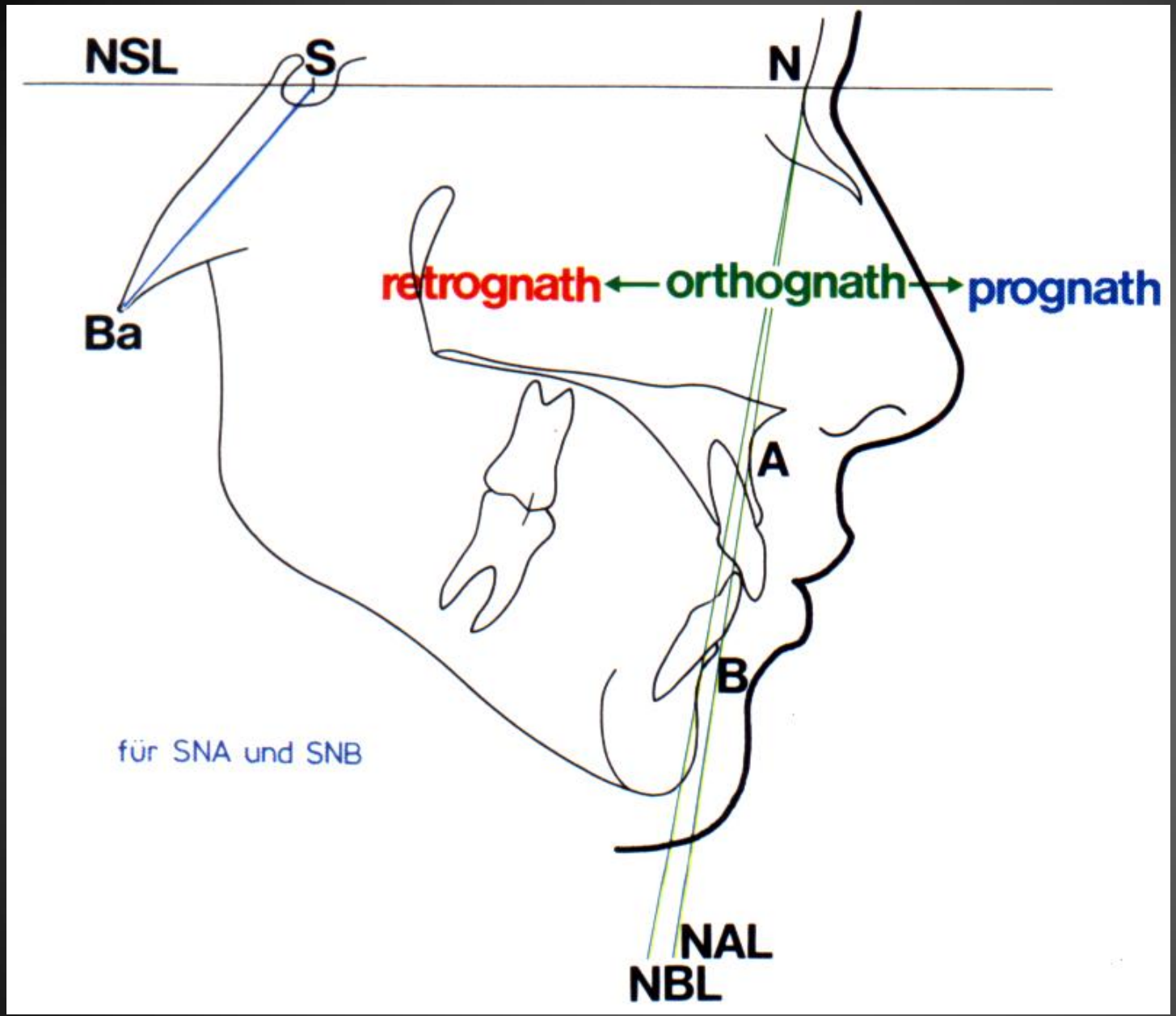
MAXILLA ANTE-CLOCKWISE, MANDIBULA CLOCKWISE ROTATION ANTERIOR AND POSTERIOR ROTATION

9,5 %

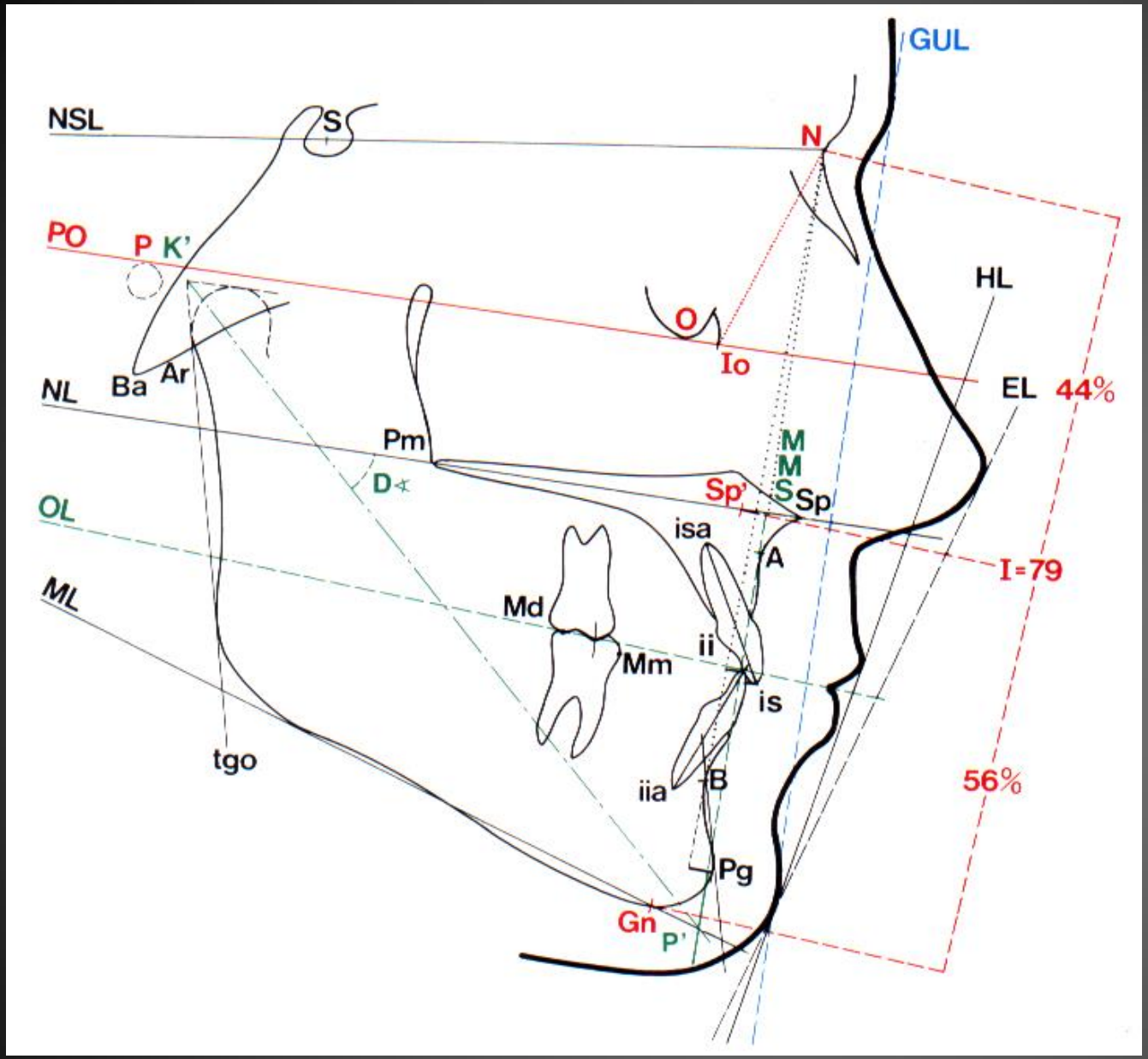


MAXILLA ANTE-CLOCKWISE, MANDIBULA CLOCKWISE ROTATION ANTERIOR AND POSTERIOR ROTATION

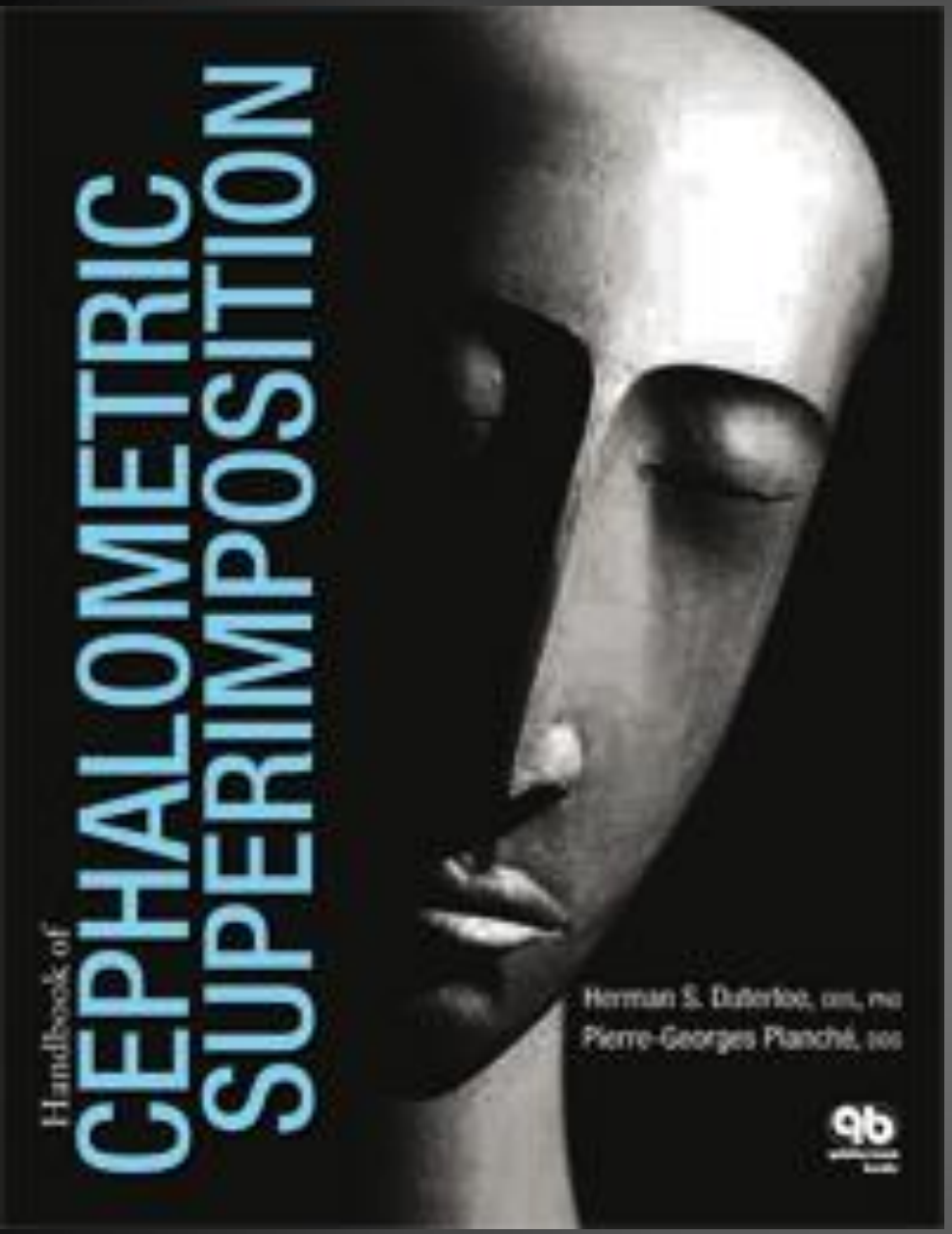
9,5 %



•In:Steinhäuser,E. &Janson,I.:Kieferorthopädische Chirurgie Quintessenz 1988 p.100



•In:Steinhäuser,E. & Janson,I.:Kieferorthopädische Chirurgie Quintessenz 1988 p.80



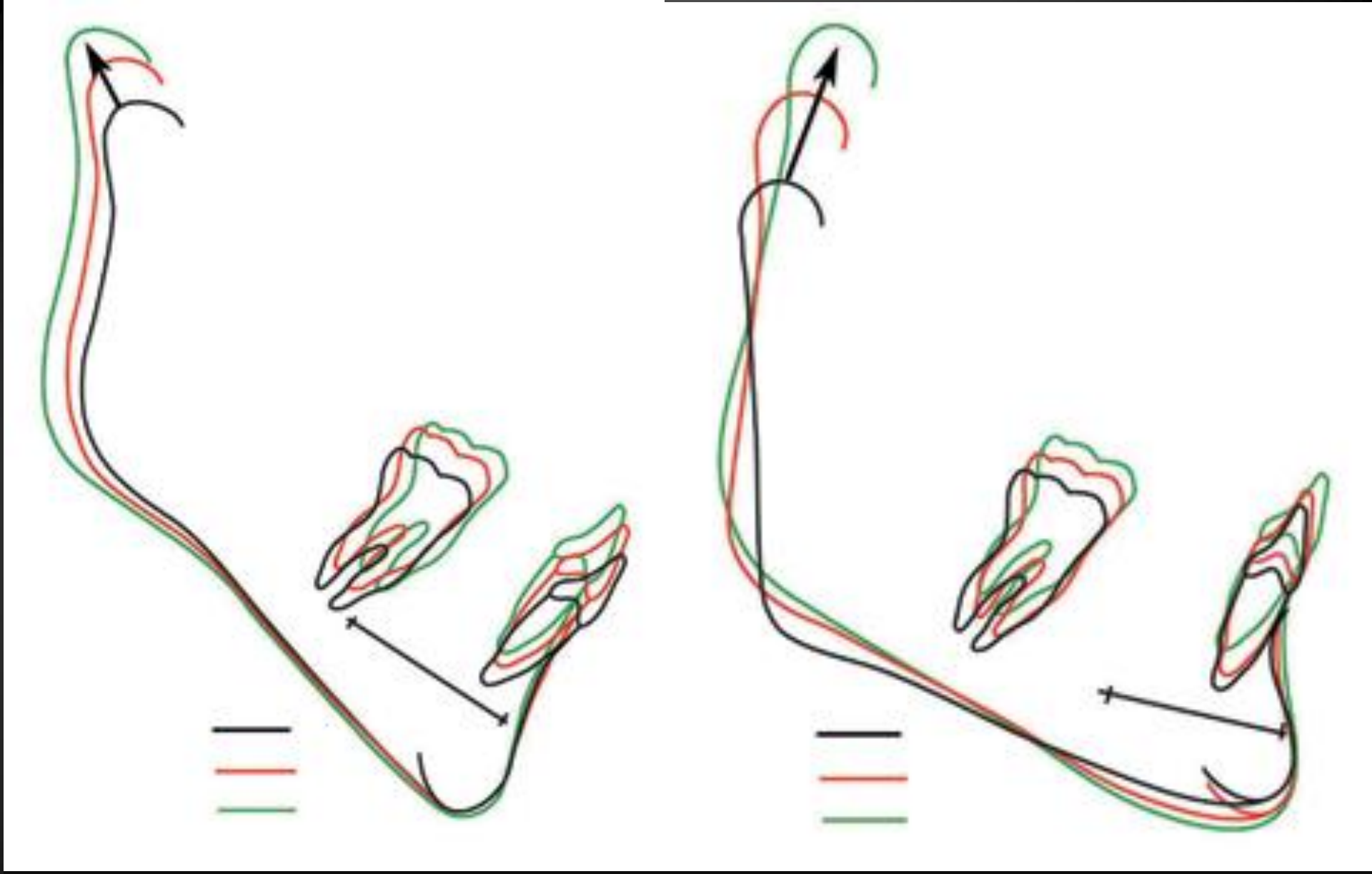
Duterloo, Herman S.
Planché, Pierre-Georges

Handbook of Cephalometric Superimposition

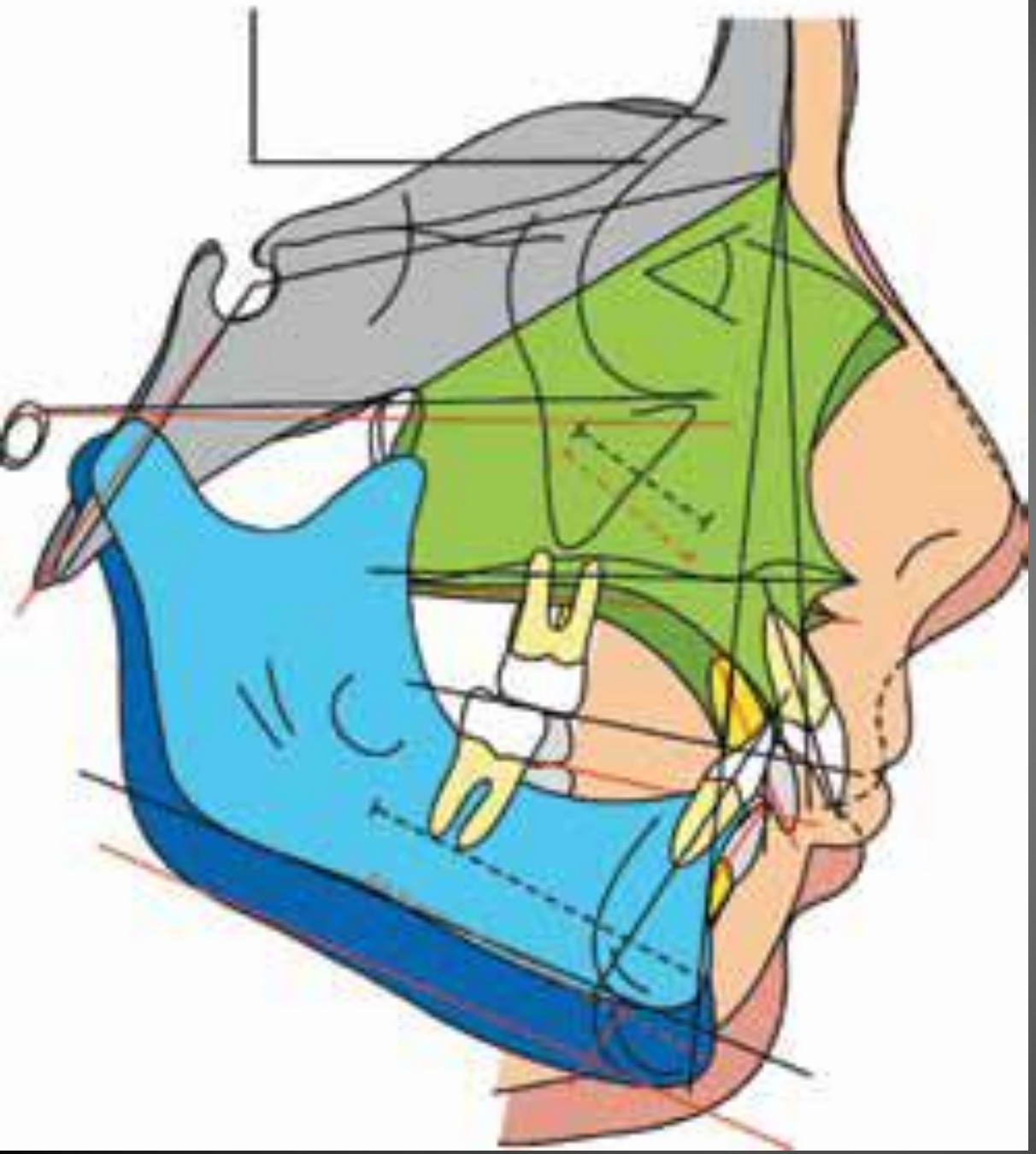
1st edition **2011**

Björk **1947**

Book
Hardcover, 220 pages, 550 images (colored)
Language: English
Subject: Orthodontics



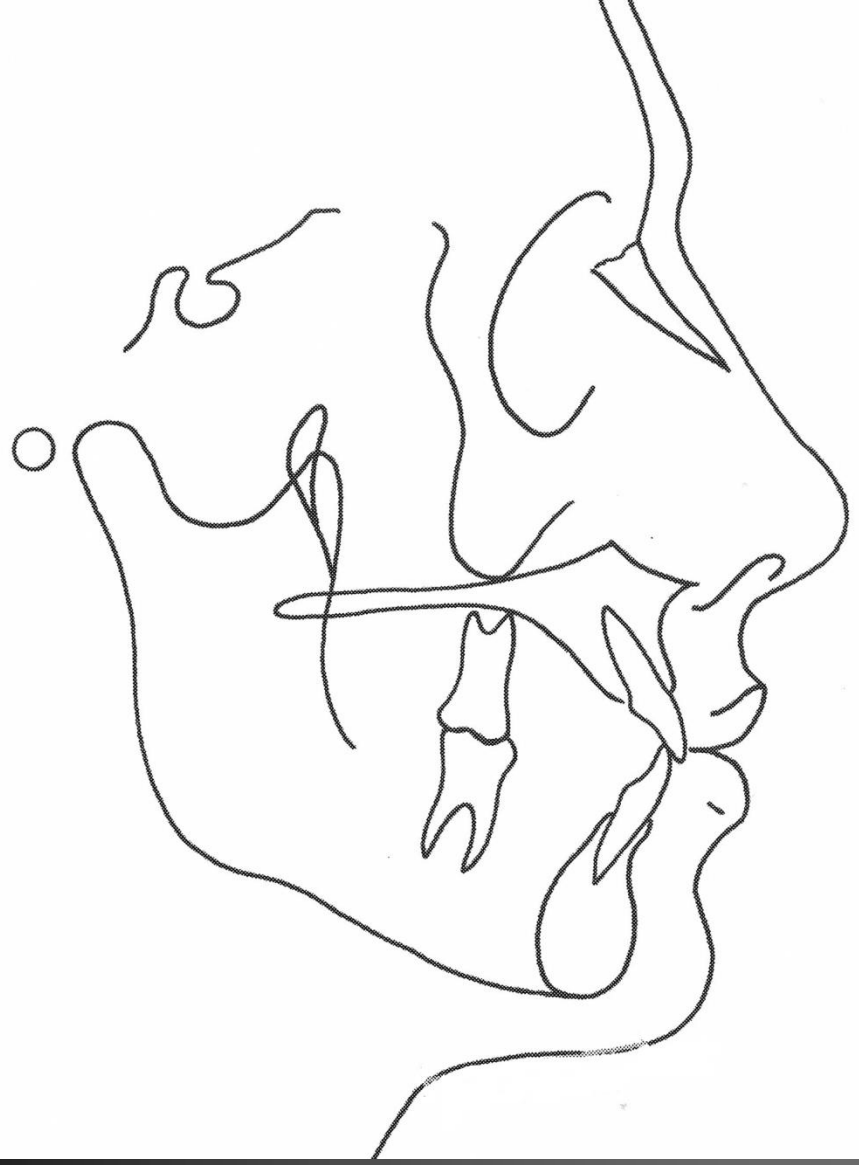
Estimates of annual condylar growth. The use of the incremental growth charts is demonstrated in the contrasting implant patients. (a and c) A female patient recorded at 10 years 6 months, 12 years 6 months, and 15 years 6 months, exhibited backward growth rotation. Condylar growth over the total period was 9.8 mm. Growth during the first 3 years was 1.7 mm/y. During the second period, growth was 1.6 mm/y, which is between the 25th and 50th percentile. (b and d) A male patient recorded at 11 years 7 months, 14 years 7 months, and 17 years 7 months, exhibited extreme forward growth rotation. Growth over the total period was 20.4 mm. Growth during the first 3 years was 3.77 mm/y. During the second period, it was 3.3 mm/y, which is above the 75th percentile. (Data from Björk and Skieller5; adapted from Buschang et al154 with permission.)

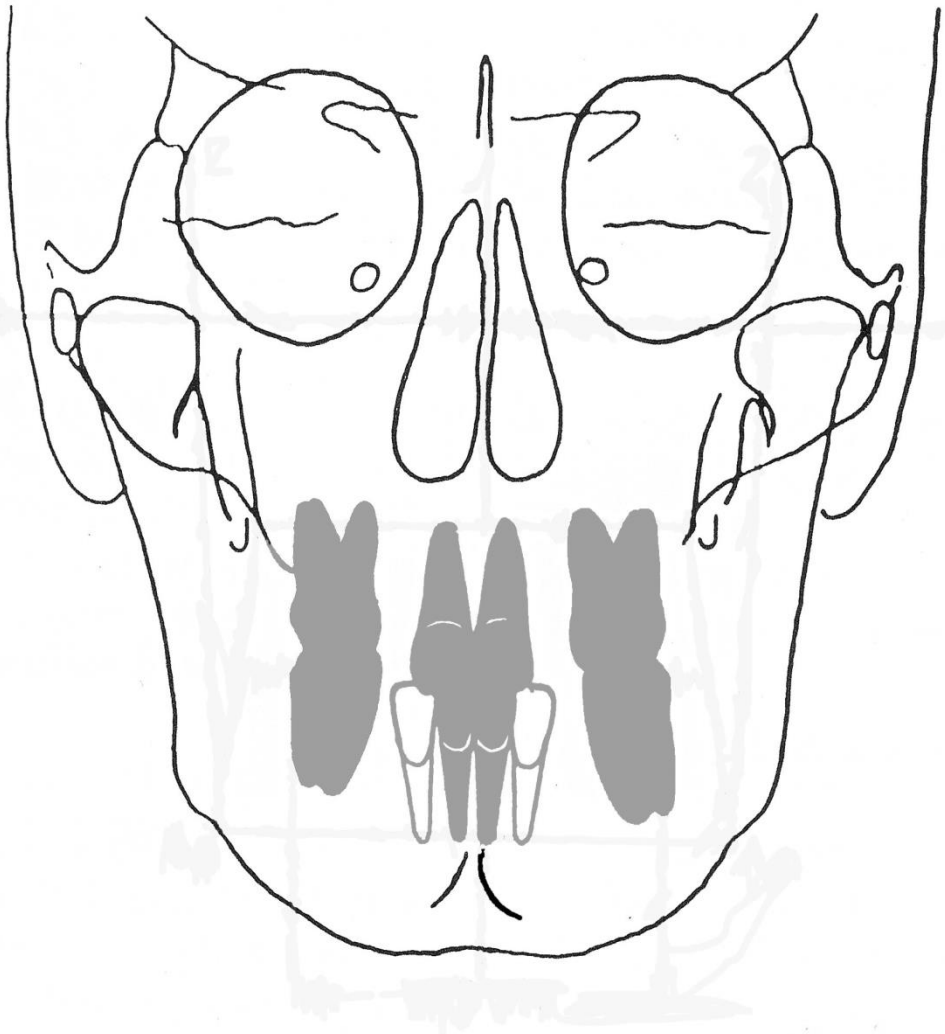


CEPHALOMETRIC SUPERIMPOSITION BASED ON NASION-SELLA

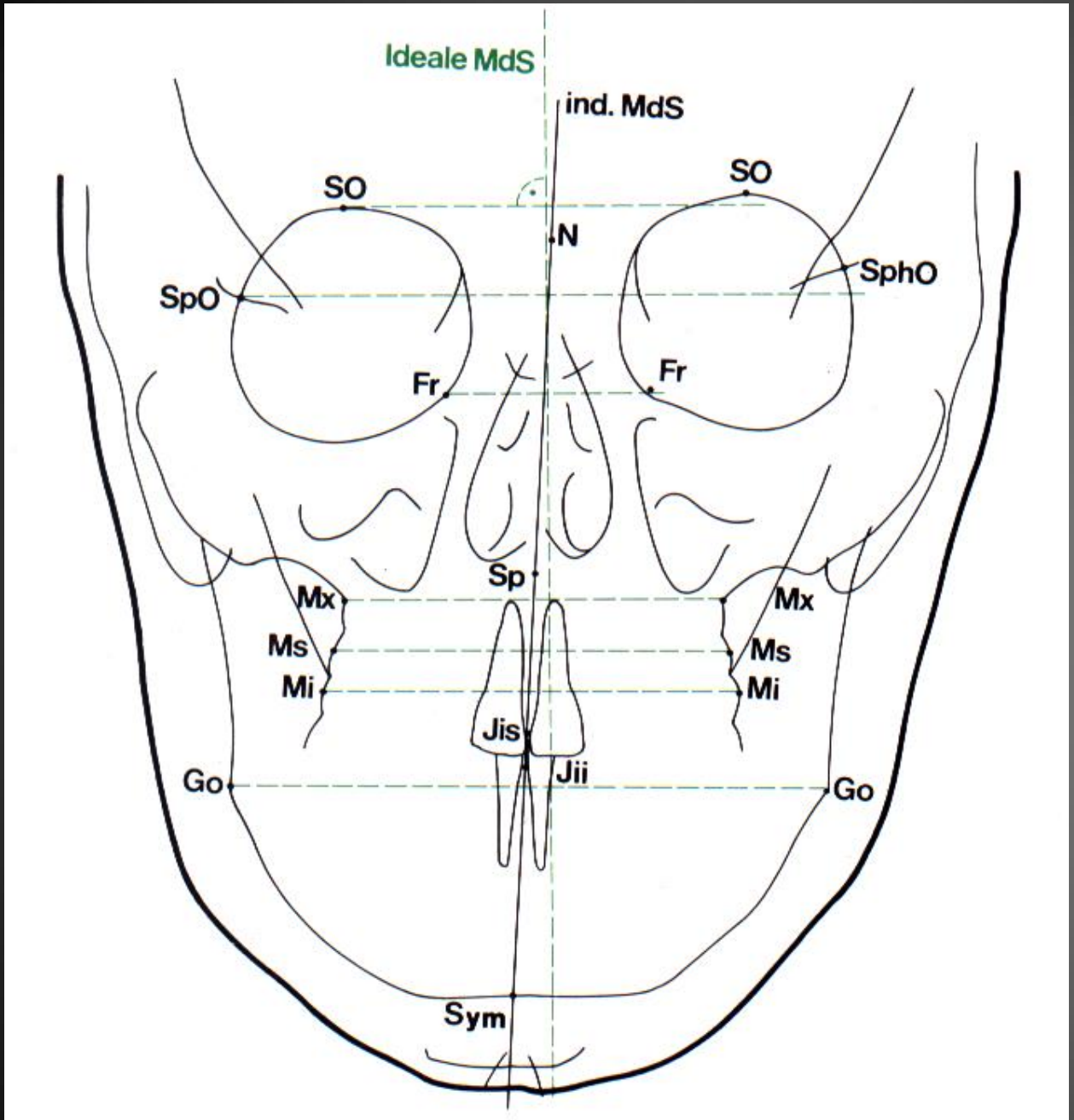
The rarely applied diagnostical imaging element in the orthodontics

a./ analysis of the frontal headplate
b./ analysis of the panoramic x-ray by Obwegeser
c./ analysis of the open and closed panoramic x-ray
d./ analysis of the occlusal radiographs
e./ computer-tomogramm and the 3D-reconstruction of it
f./ analysis of the magnetic resonance imaging



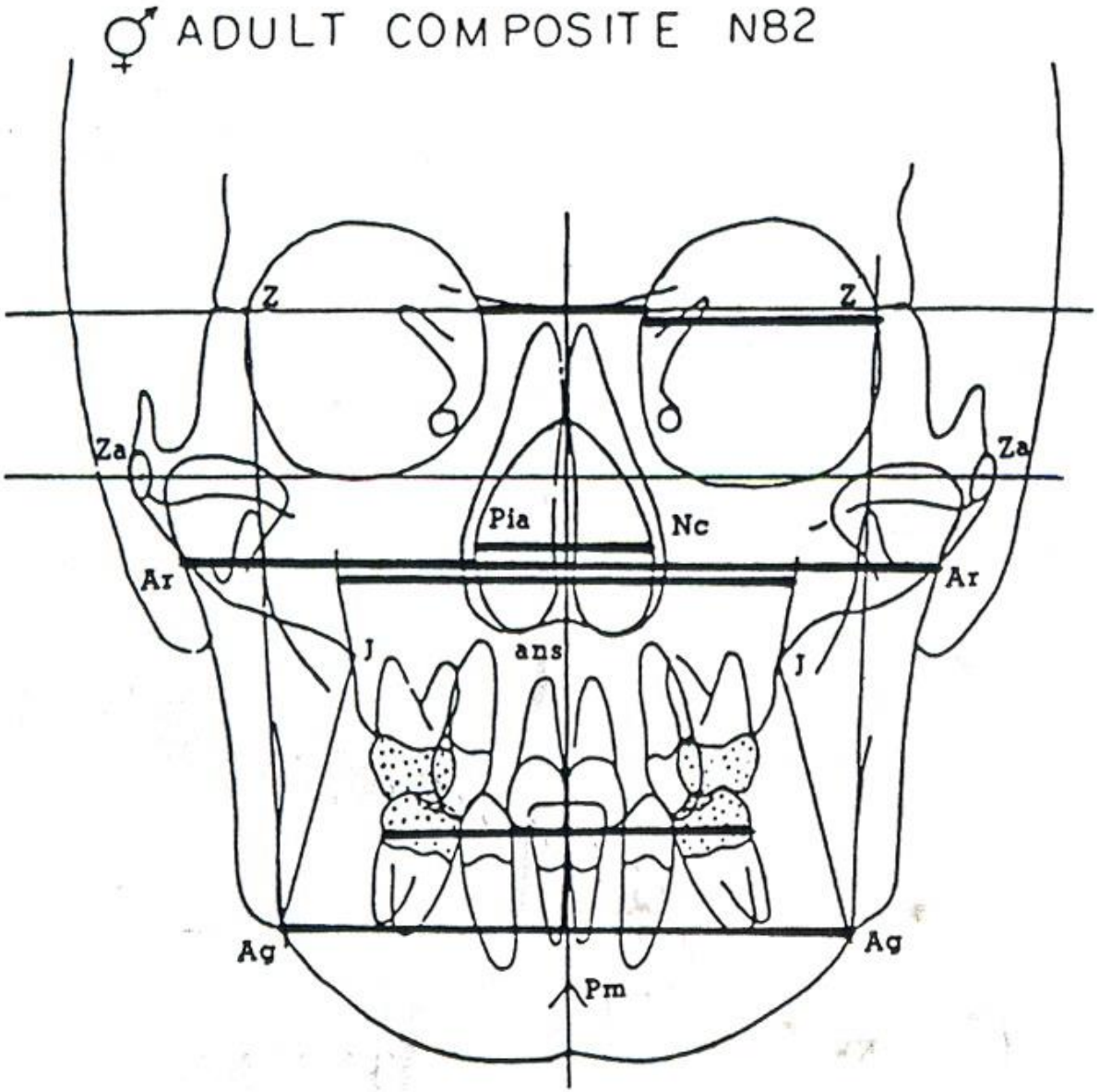


LATERAL AND FRONTAL CEPHALOMETRIC DRAWING



Rickett's Frontal Cephalometric Landmarks

In:Steinhäuser,E. & Janson,I.:Kieferorthopädische Chirurgie Quintessenz 1988 p.81



Rickett's Frontal Cephalometric Landmarks and Measurements

Ricketts, M. R.: Provocations And Perceptions In Cranio-Facial Orthopedics 1989 Rocky Mountin Orthodontics

Soft tissue analysis

Schwarz, A.M

DIE RÖNTGENOSTATIK

Die kieferorthopädische Diagnose am Fern-Röntgenbild

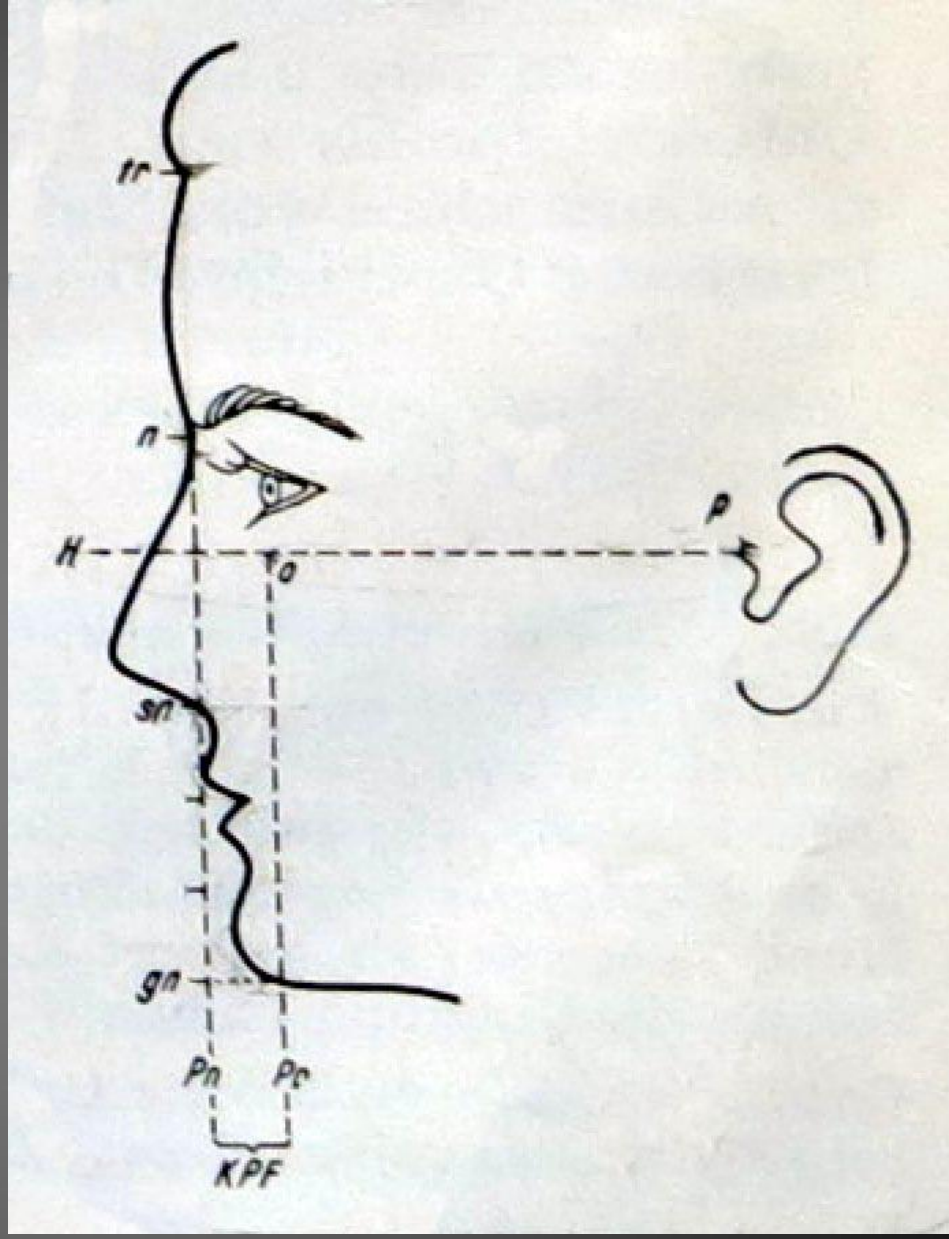
Von

Professor Dr. A. Martin Schwarz, Wien

Mit 91 Abbildungen (171 Einzelbilder)

1958

VERLAG VON URBAN & SCHWARZENBERG · WIEN · INNSBRUCK



Schwarz, A.M.:Die Röntgenostatik
Urban&Schwarzenberg Verlag, Wien 1958

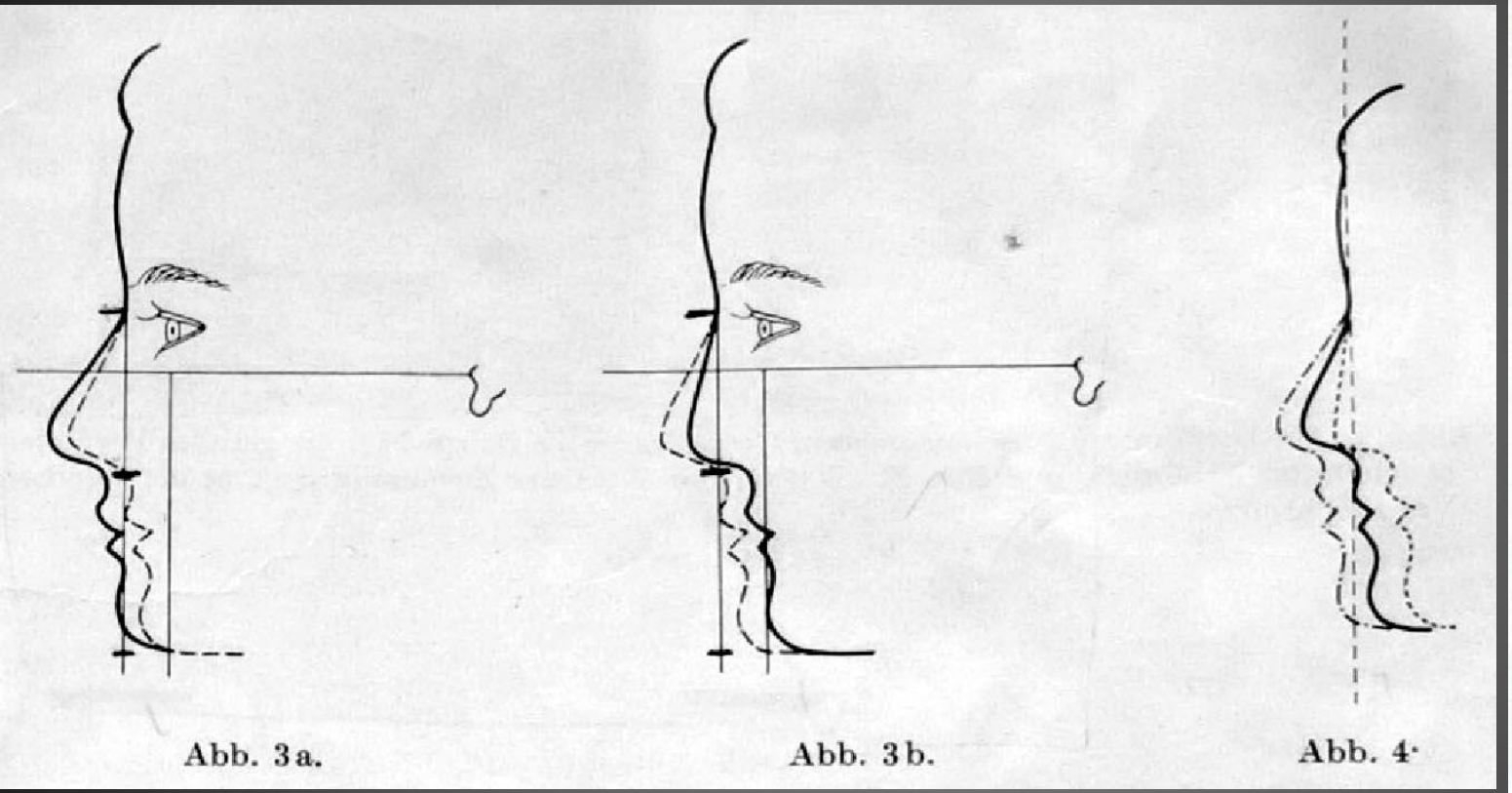
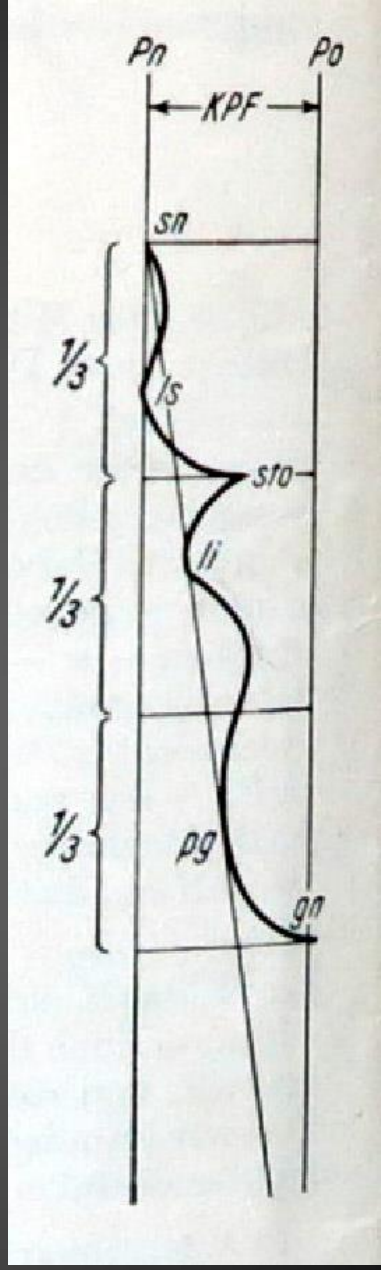


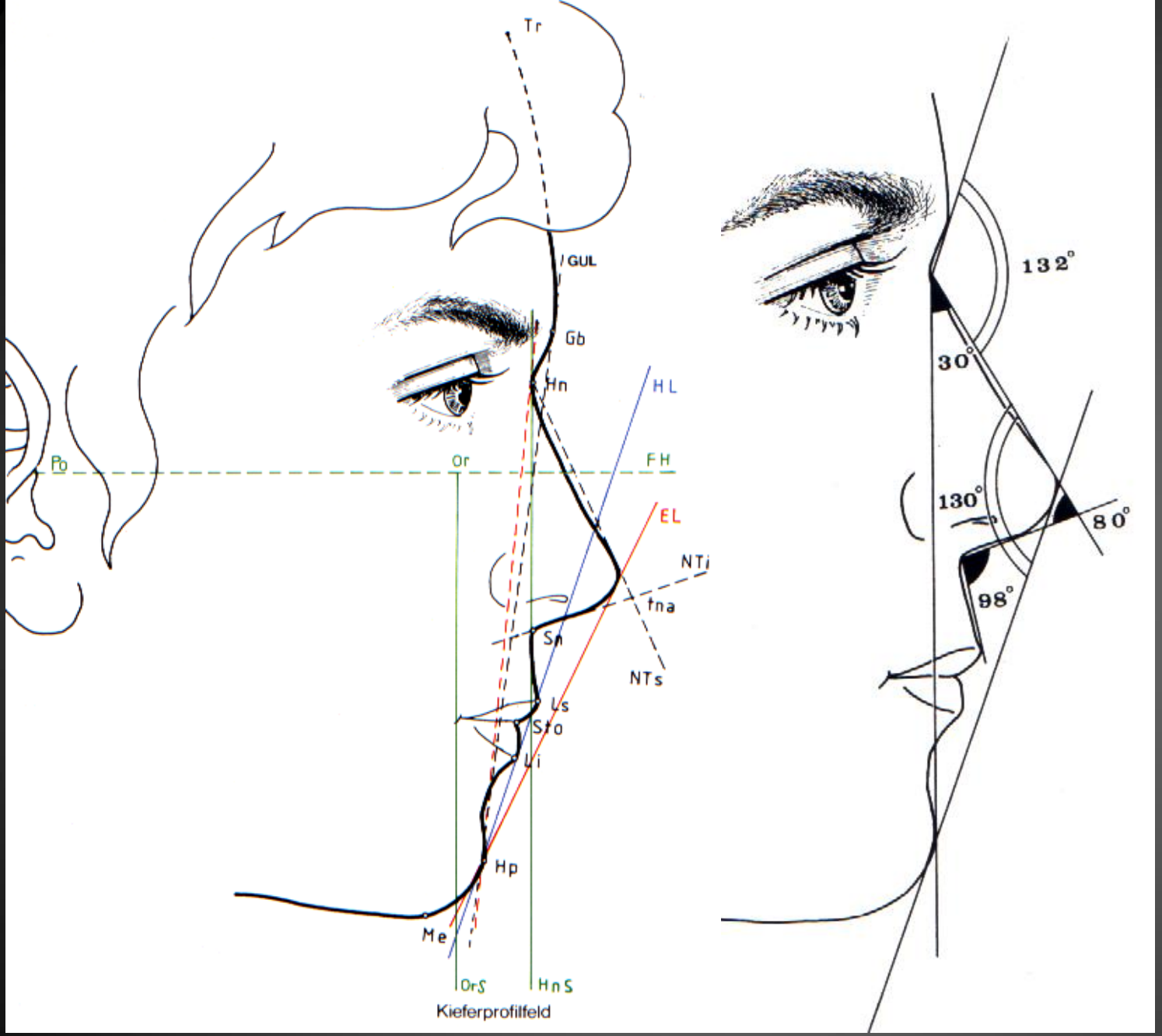
Abb. 3a.

Abb. 3b.

Abb. 4.



Schwarz, A.M.:Die Röntgenostatik
Urban&Schwarzenberg Verlag, Wien 1958



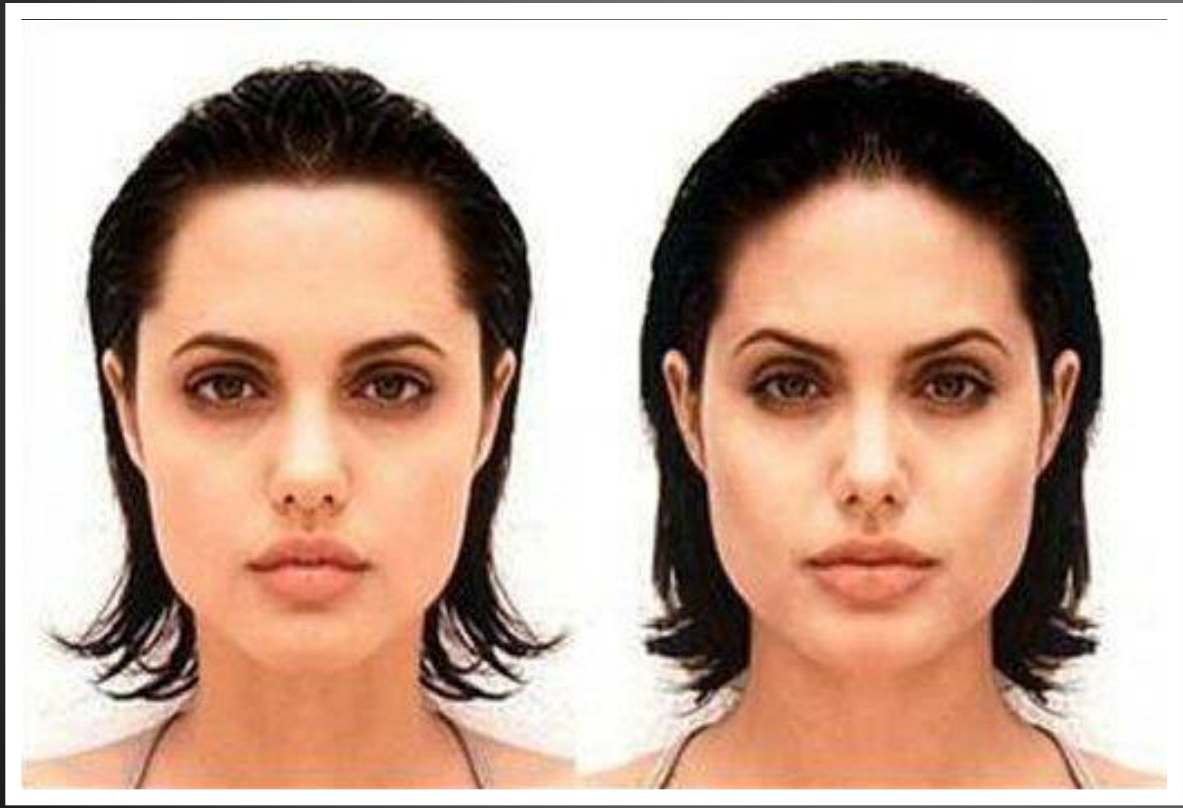
Schwarz, A.M.:
Die
Röntgenostatik
Urban&
Schwarzenberg
Verlag,
Wien 1958

In: Steinhäuser,E. & Janson,I.:Kieferorthopädische Chirurgie Quintessenz 1988 p.62

Evaluation of the soft tissue symmetry - asymmetry

ANGELINA JOLIE

- 2 x right 2 x left original



BRAD PITT

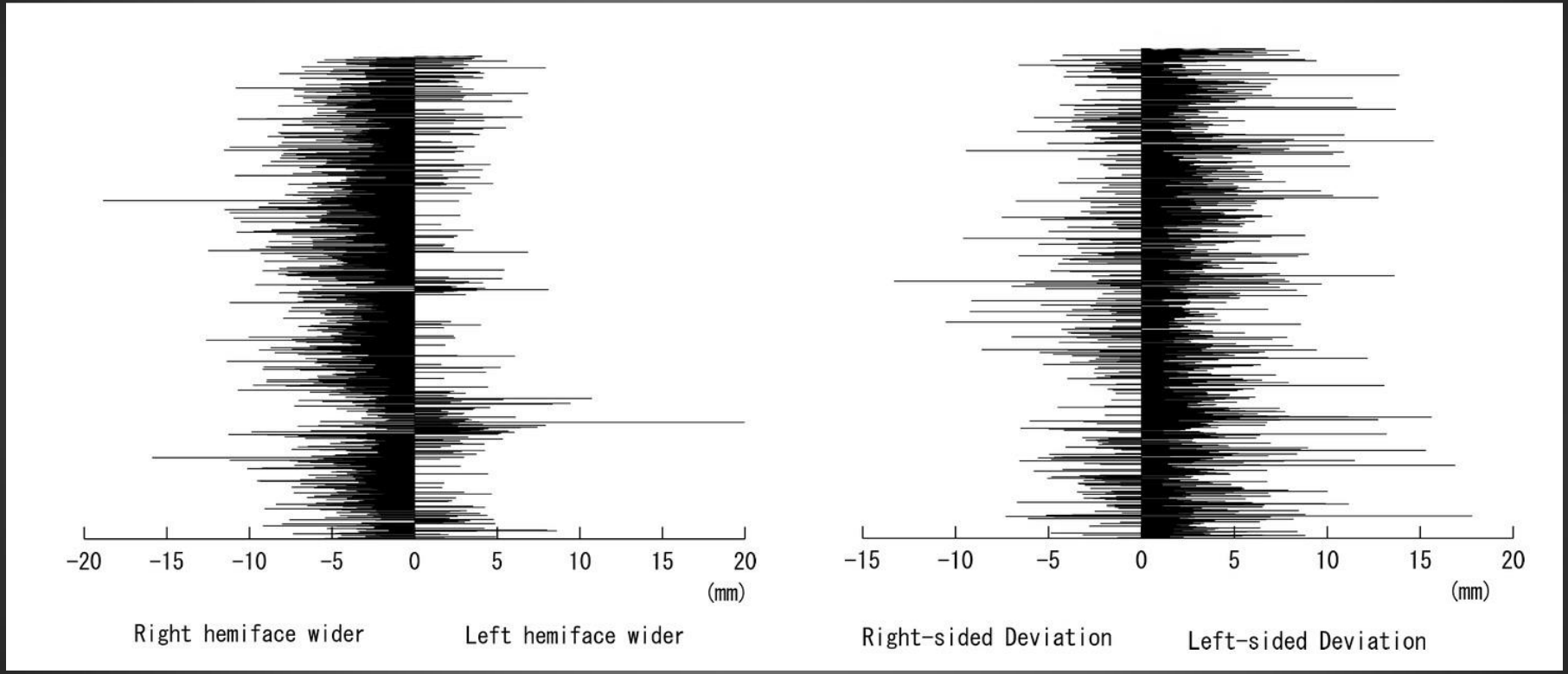
- 2 x right 2 x left original

The Angle Orthodontist: Vol. 78, No. 3, pp. 421–426. **2008**

Asymmetry of the Face in Orthodontic Patients

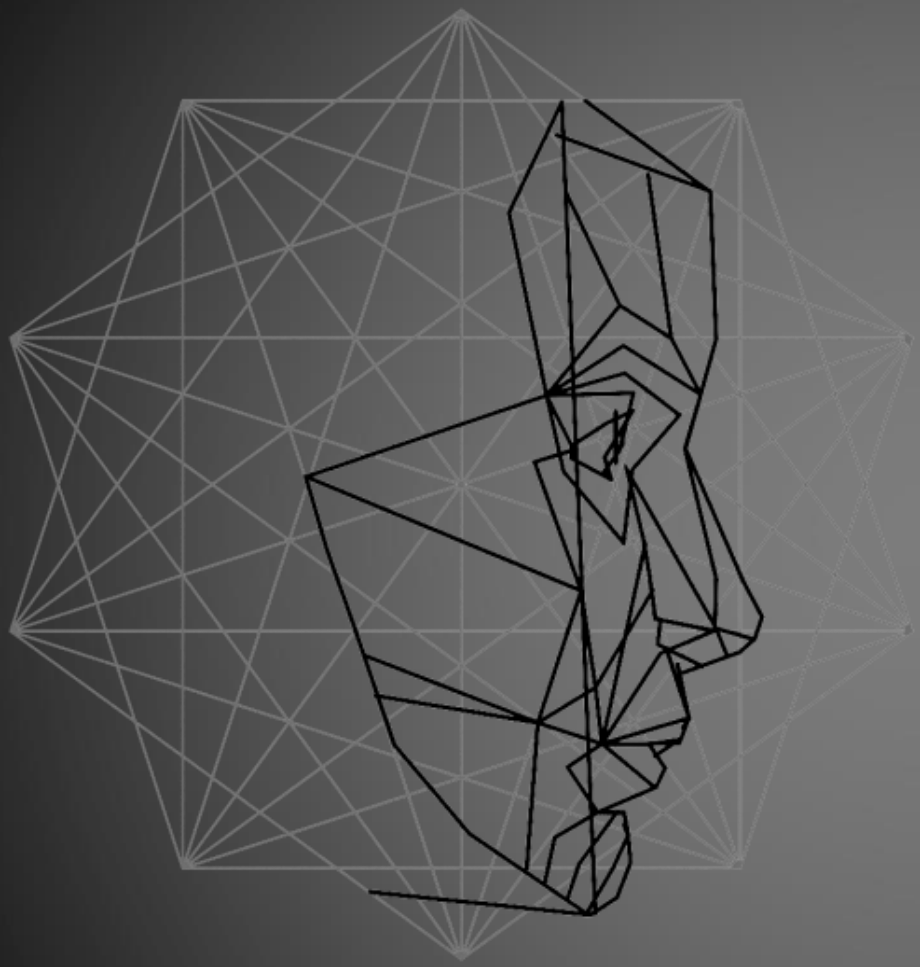
Seiji Haraguchi, Yoshitaka Iguchi, Kenji Takada

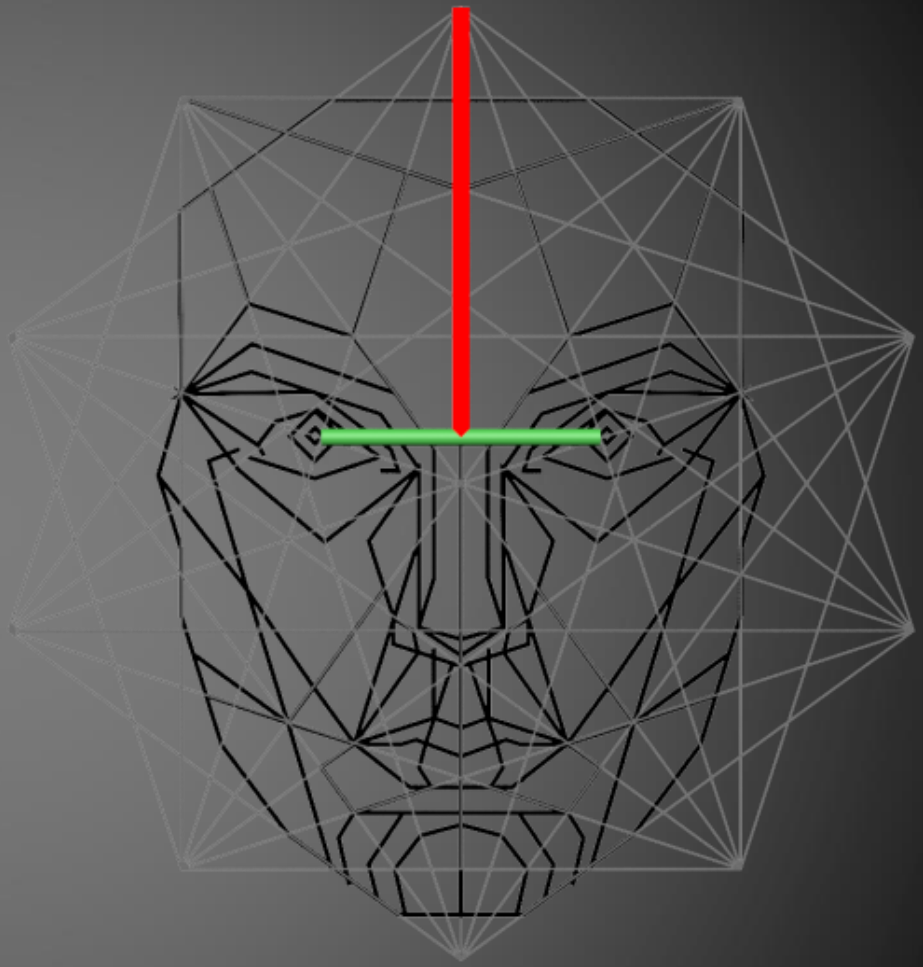
FACE **CHIN**



Number of the observed cases:	1800	Number of the observed cases:	1800
No facial laterality:	370	No chin laterality:	665
Right side facial laterality	1139	Right side chin laterality:	234
Left side facial laterality	291	Left side chin laterality	901

GOLDEN RATIO IN ARTS





GOLDEN RATIO IN THE HUMAN FACE

NHP=

NATURAL HEAD POSITION

•Downs W.B. 1956**: Analysis of the dentofacial profile. Angle Orthodontist 26; 191-212**

NATURAL HEAD POSITION IN CEPHALOMETRY

7790 HIT ON THE INTERNET

A **NHP** IS IMPORTANT IN THE CASES OF GROWING INDIVIDUALS, WHEN WE WANT TO EVALUATE TWO X-RAY FROM TWO DIFFERENT DATE

The rarely applied diagnostical imaging element in the orthodontics

a./ hand wrist x-ray for maturation evaluation

b./ bone scintigraphy (to clarify the stop of the growing in the condyle)

Fishman maturation prediction process

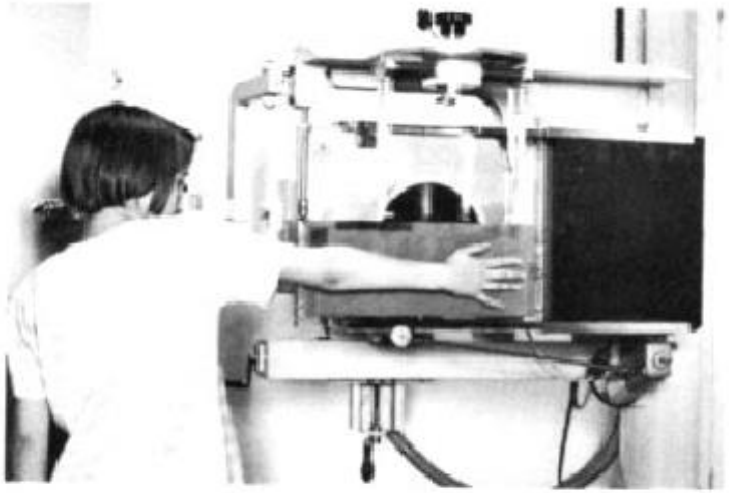
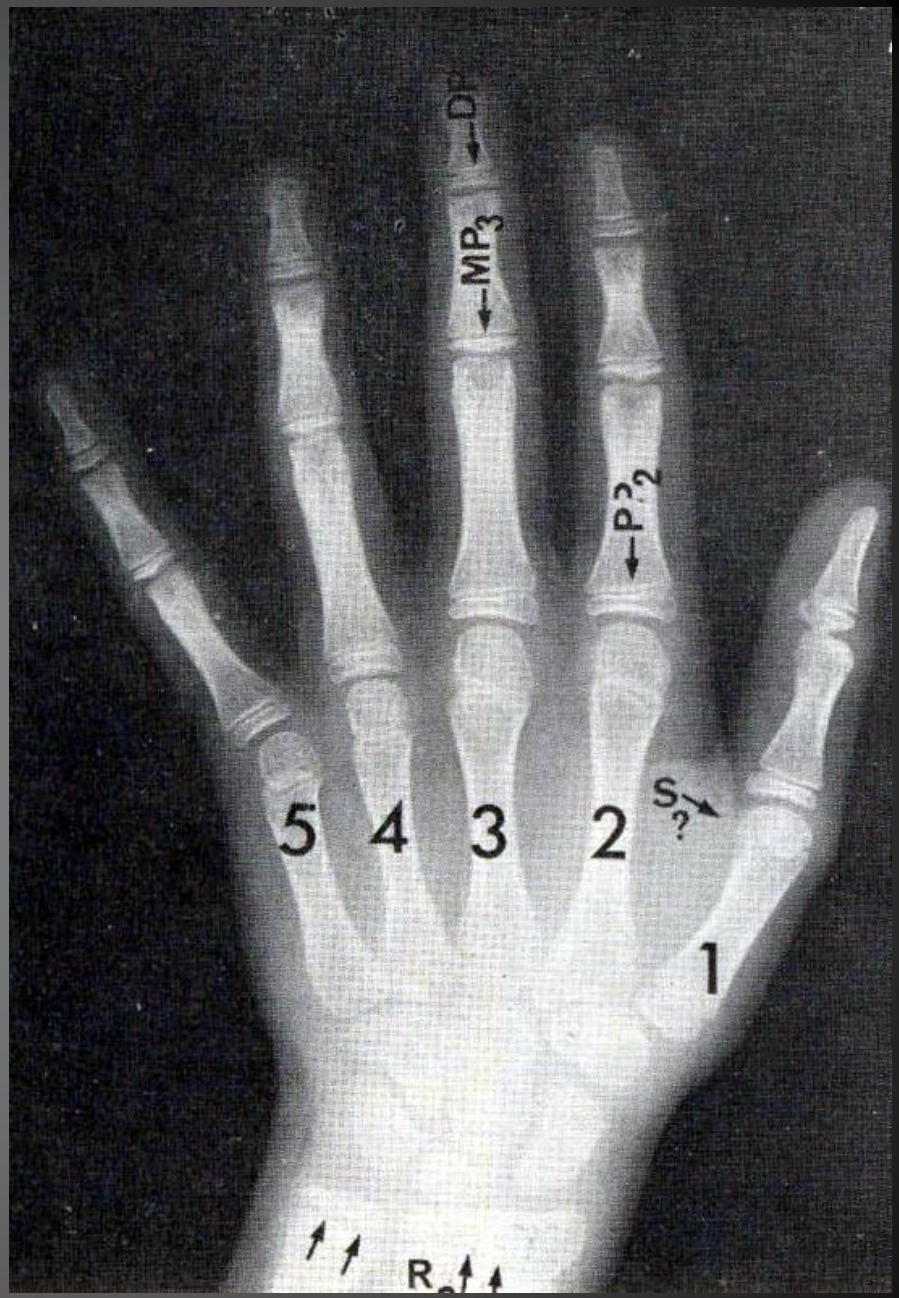


Fig. 1 Radiographing the right hand in the cephalostat.

distance of 190 cm on non-screen film; no grid; 60 kV (Fig. 1). The ulnar sesamoid (Fig. 2) is related to the adductor pollicis muscle. The radial sesamoid is related to the flexor pollicis brevis muscle and on the radiographs is usually overshadowed by the first metacarpal, so that it is not always visualized; it was therefore not included in this study.

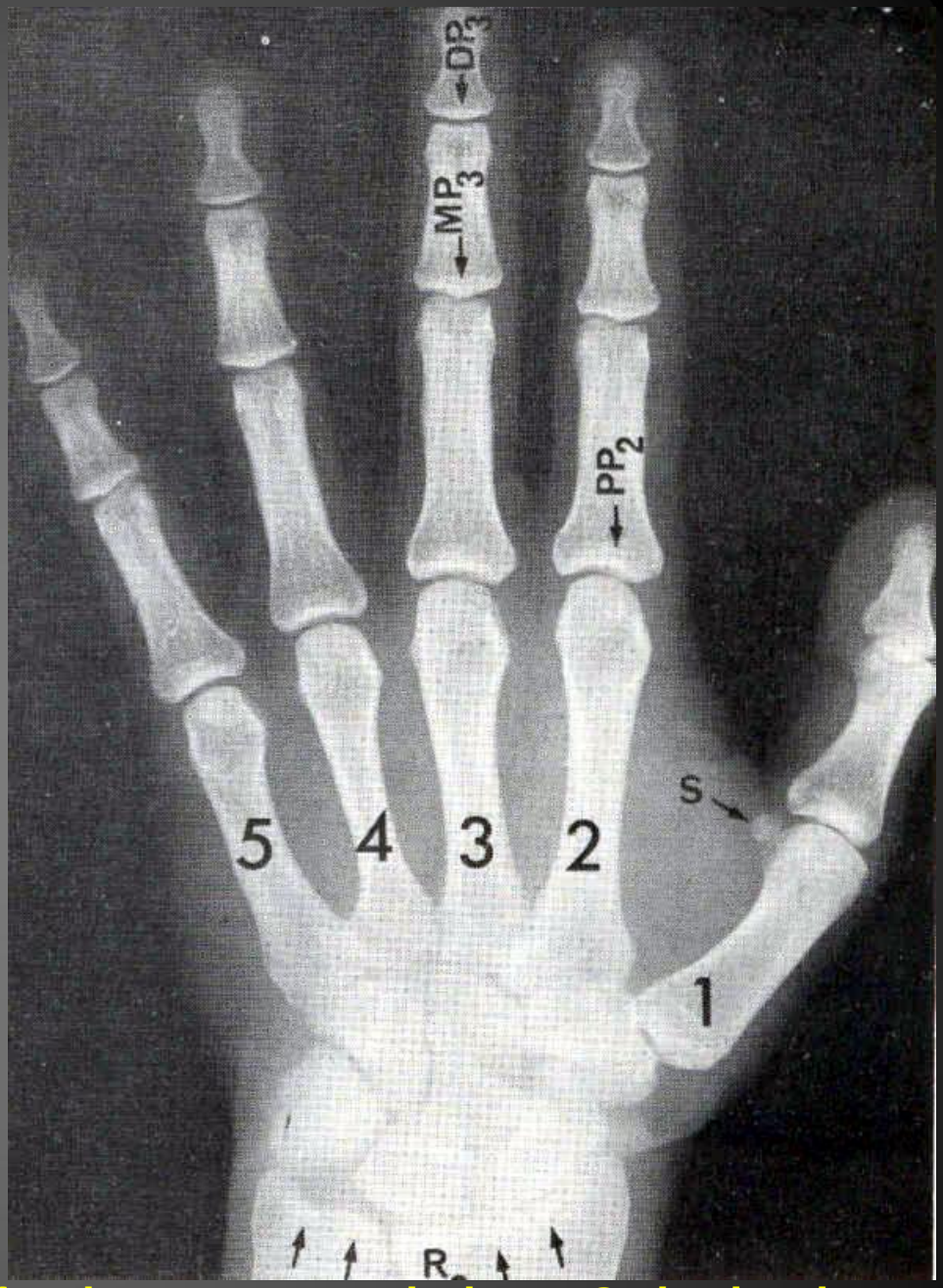
A.Björk and S.Helm: Prediction of the Age of Maximum Puberal Growth in Body Height Angle Orthodontics Vol 37. No. 2. 1967 április

Before the puberal growth spurt hand wrist x-ray without sesam bone



Hasund, Asbjorn: Clinical Cephalometry for the Bergen-Technique. Orthodontic Dept., Dental Inst. University of Bergen. Bergen, Norway 1977

After the puberal growth spurt hand wrist x-ray with sesam bone



Hasund, Asbjorn: Clinical Cephalometry for the Bergen-Technique. Orthodontic Dept., Dental Inst. University of Bergen. Bergen, Norway 1977

O'Reilly MT, Yanniello GJ.
Angle Orthod. Apr;58(2):179-84.1988

Mandibular growth changes and maturation of cervical vertebrae - a longitudinal cephalometric study.

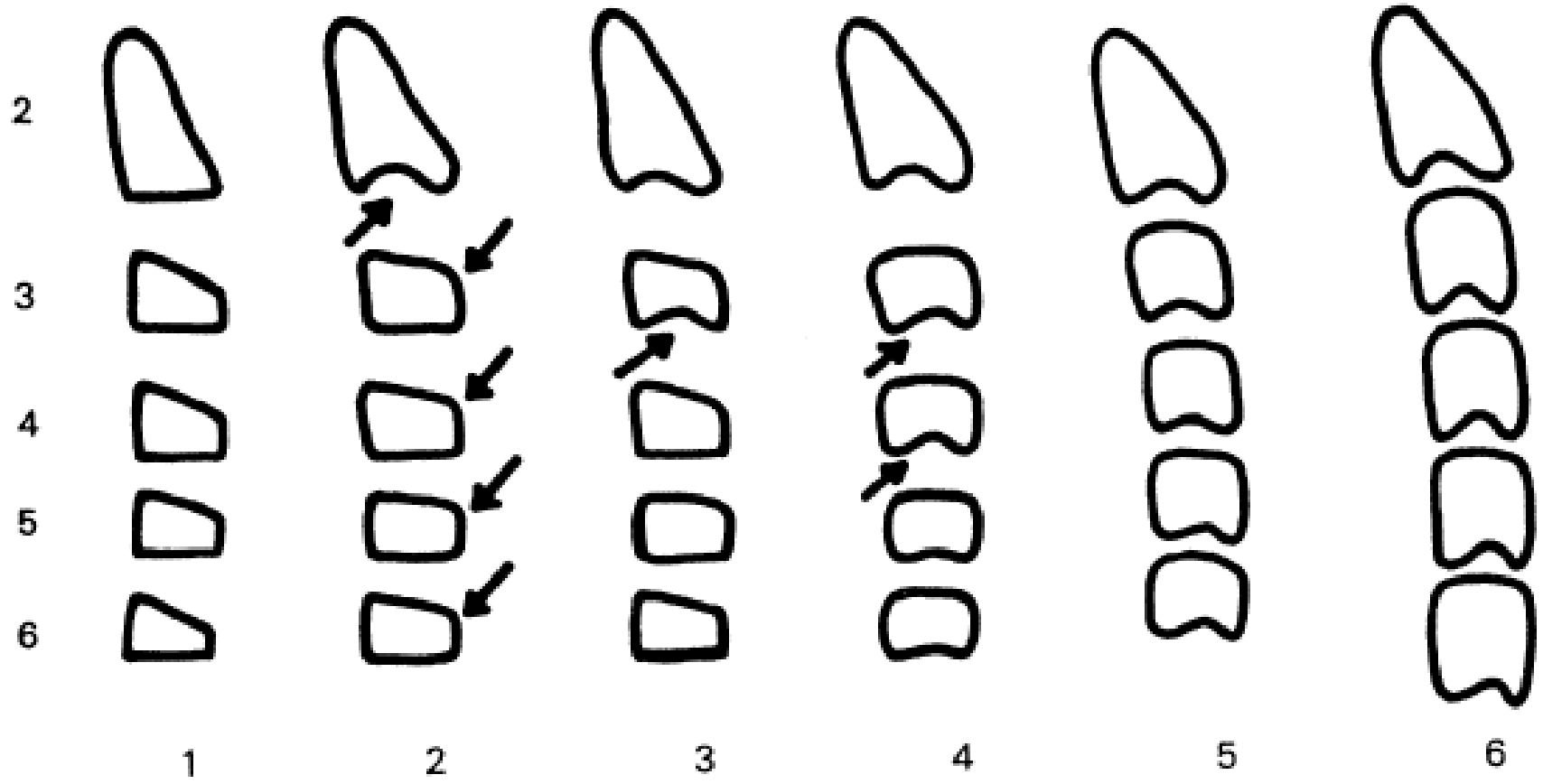


Abb. 7: Entwicklungsstadien nach O´Reilly (1988)

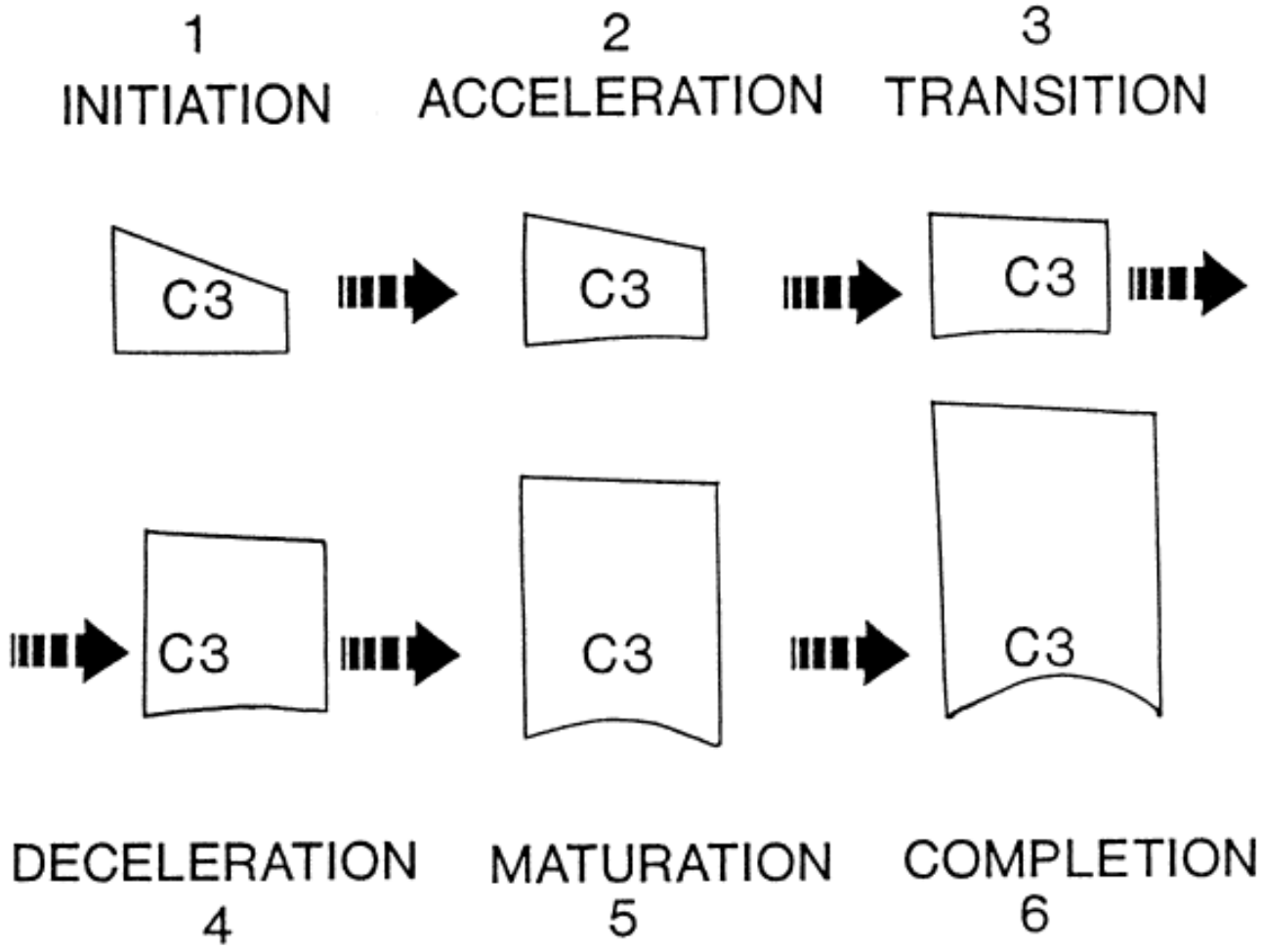
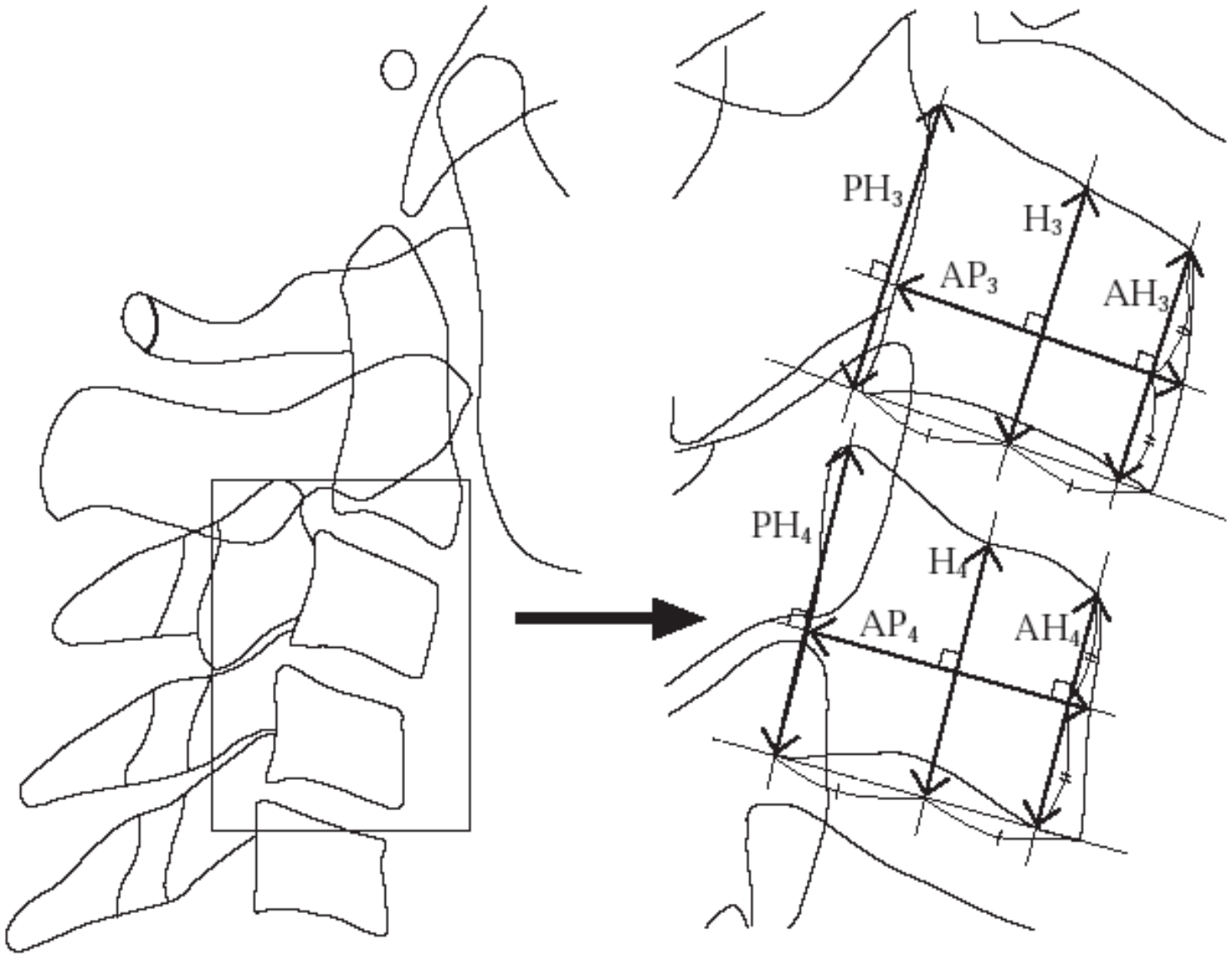


Abb. 8: Die sechs zervikalen Reifestadien nach Hassel und Farman (1995)

7,5 éves nő 9,5 éves nő 32 éves nő

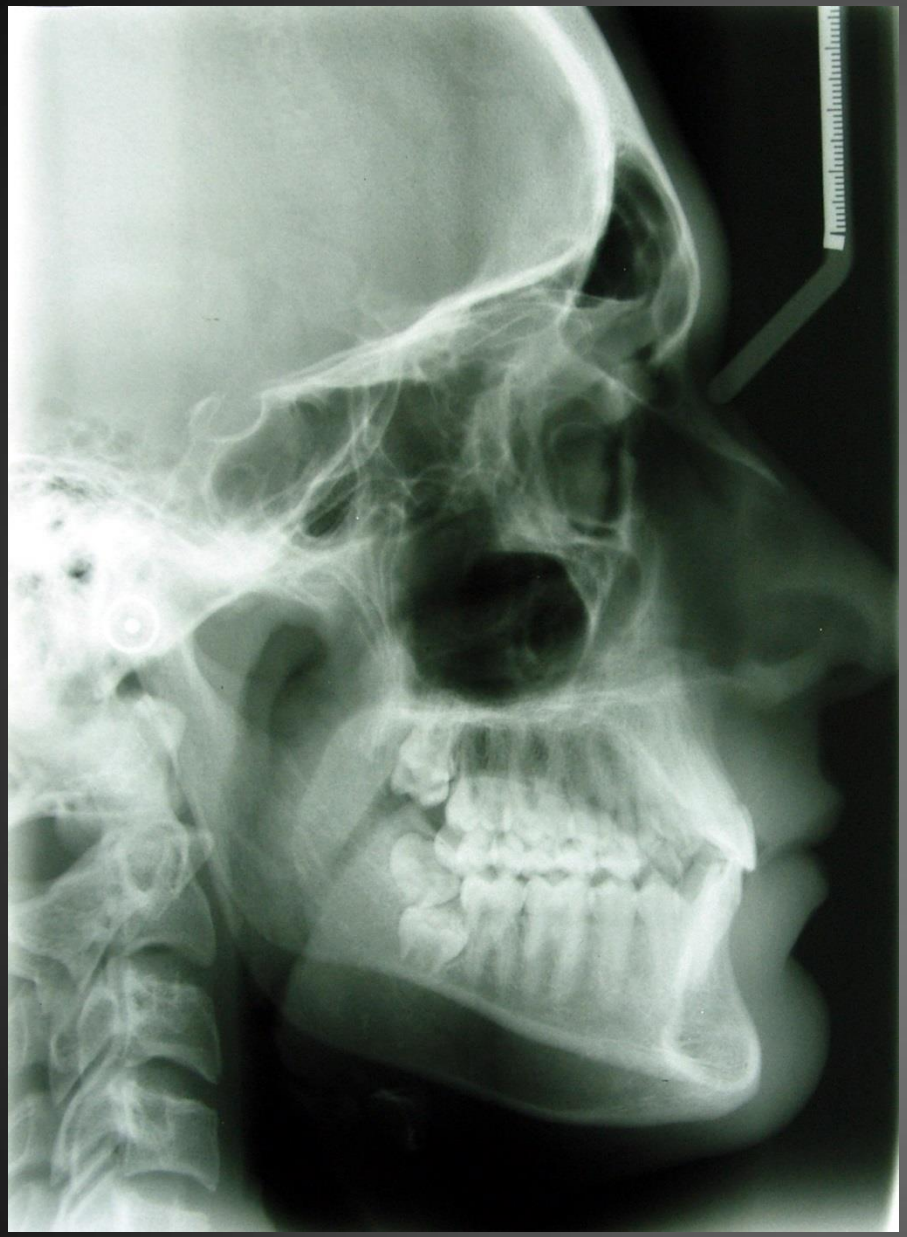


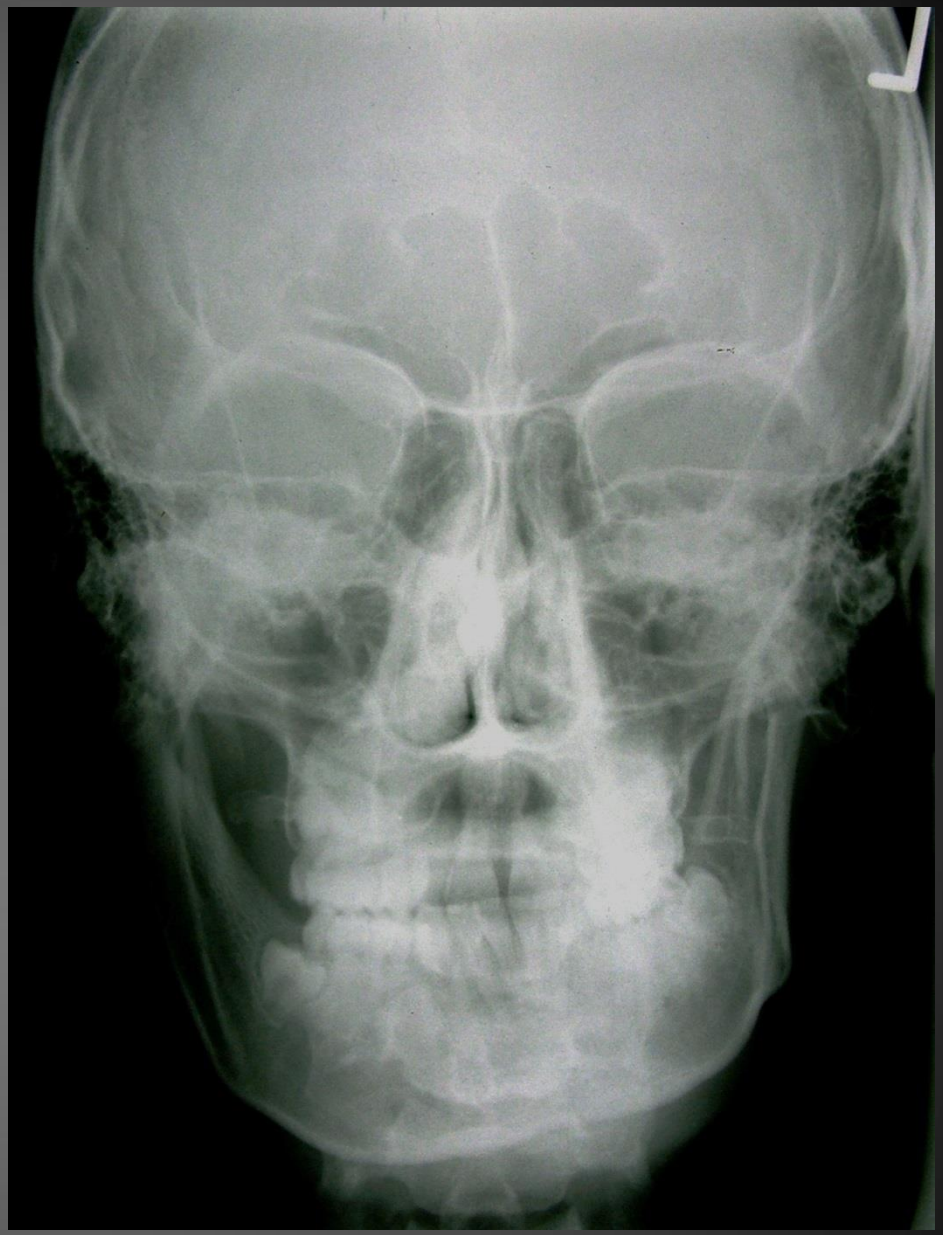
MLI=36,20-0,71xAH3-0.97xPH3-0,90xAH4

The rarely applied diagnostical imaging element in the orthodontics

a./ hand wrist x-ray maturation evaluation

b./ bone scintigraphy (to clarify the stop of the growing in the condyle)



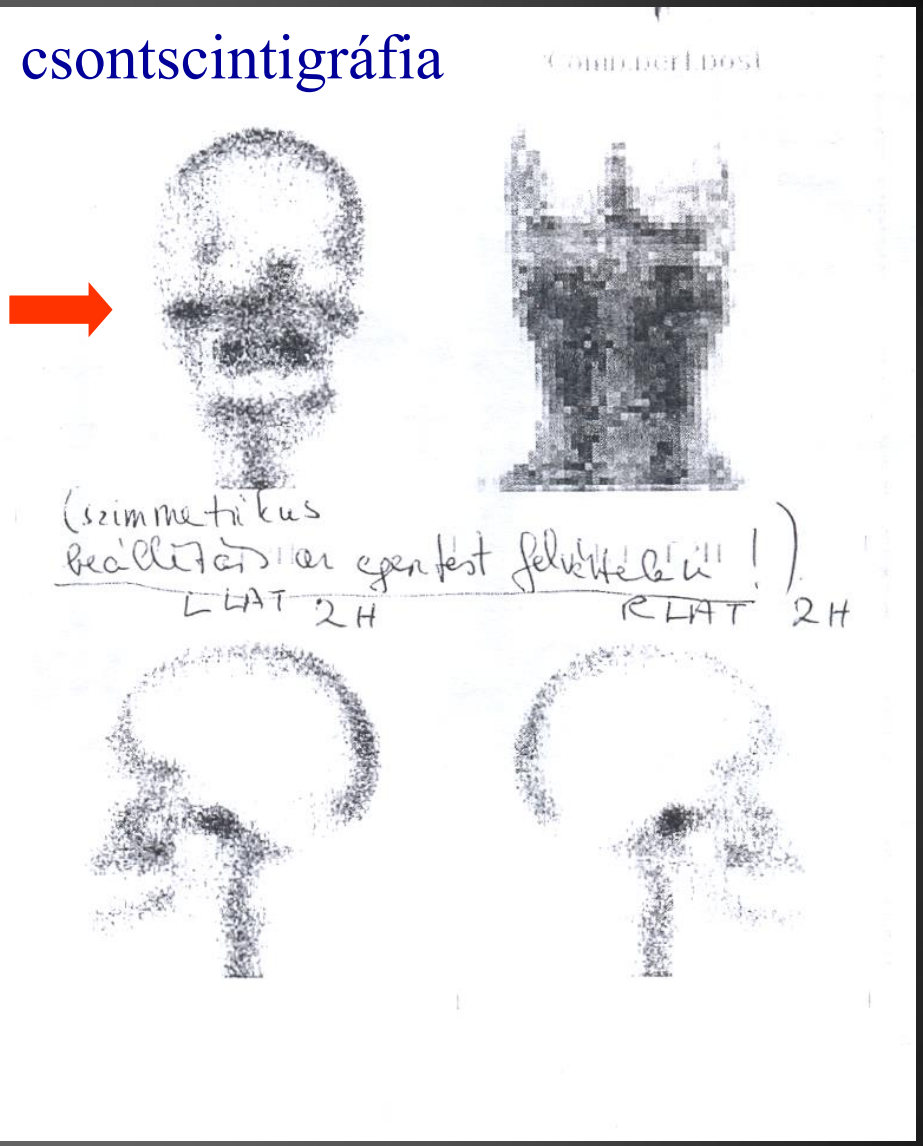


NY. ISTVÁN b. 87.09.07.

17 years old boy (obs. 2004.11.19)

NY. ISTVÁN b. 87.09.07. **17 years old boy (obs. 2004.11.19)**

csontscintigráfia



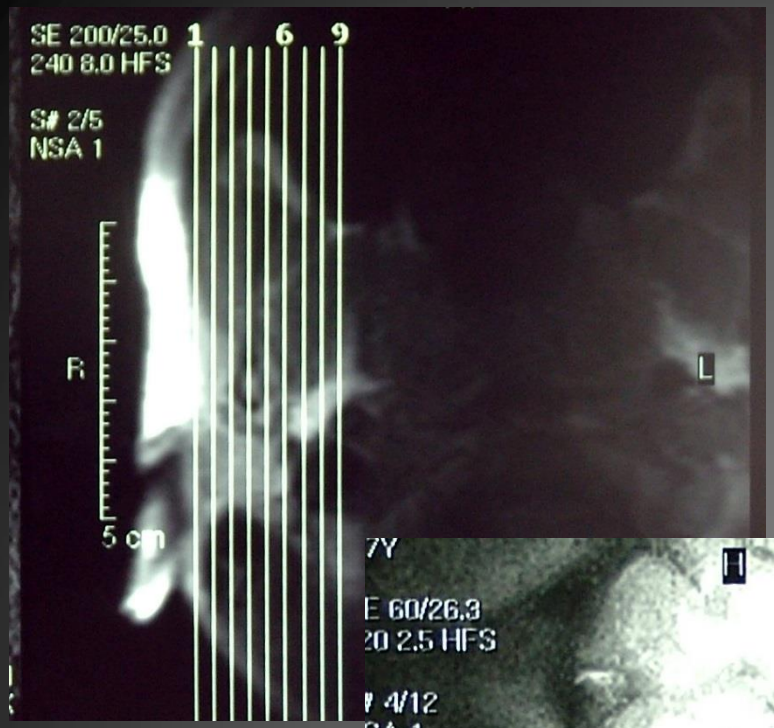
NY. ISTVÁN sz. 87.09.07.

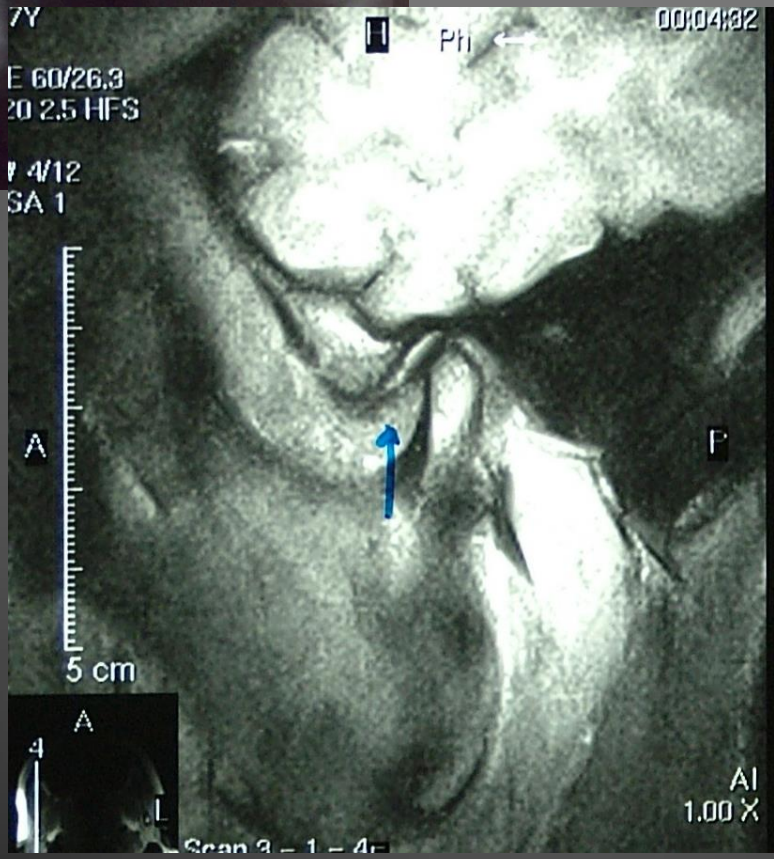
17 years old boy (obs. 2004.11.19)

The rarely applied diagnostical imaging element in the orthodontics

a./ analysis of the frontal headplate
b./ analysis of the panoramic x-ray by Obwegeser
c./ analysis of the open and closed panoramic x-ray
d./ analysis of the occlusal radiographs
e./ computer-tomogramm and the 3D-reconstruction of it
f./ analysis of the magnetic resonance imaging

e./


SE 200/25.0
240 8.0 HFS
S# 2/5
NSA 1
1
6
9
R
L
5 cm


7Y
E 60/26.3
20 2.5 HFS
4/12
SA 1
H
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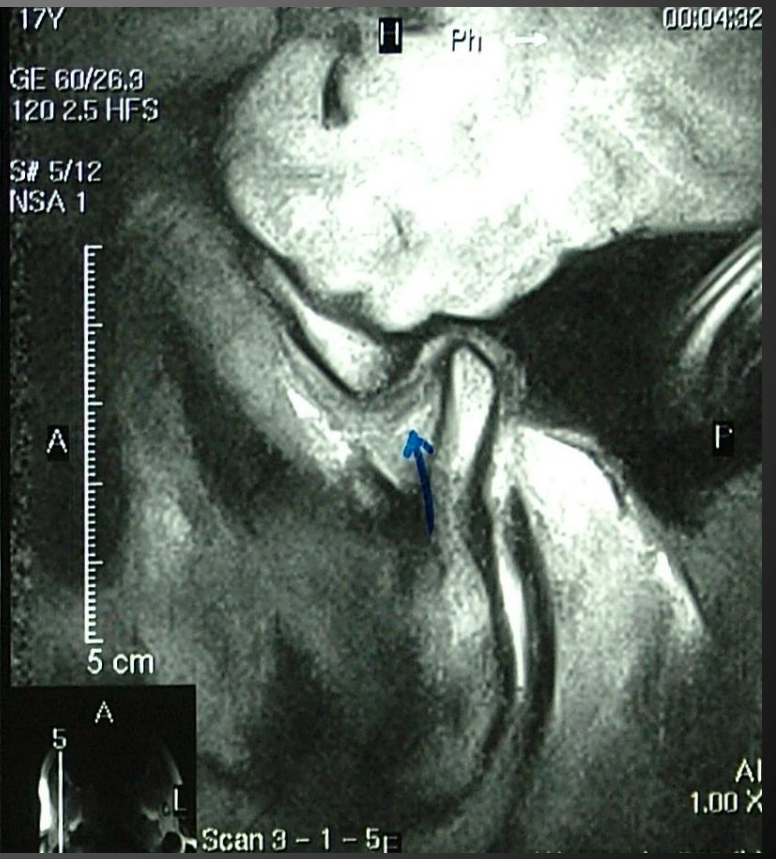
00:04:32
A
P
5 cm
A
4
L
AI
1.00 X
Scan 3 – 1 – 4


17Y
GE 60/26.3
120 2.5 HFS
S# 5/12
NSA 1
H
Ph
00:04:32
A
P
5 cm
A
5
L
AI
1.00 X
Scan 3 – 1 – 5

The rarely applied diagnostical instrumental equipments in the orthodontics

a./ occlusal analysis of casts in articulator fxd with face bow help

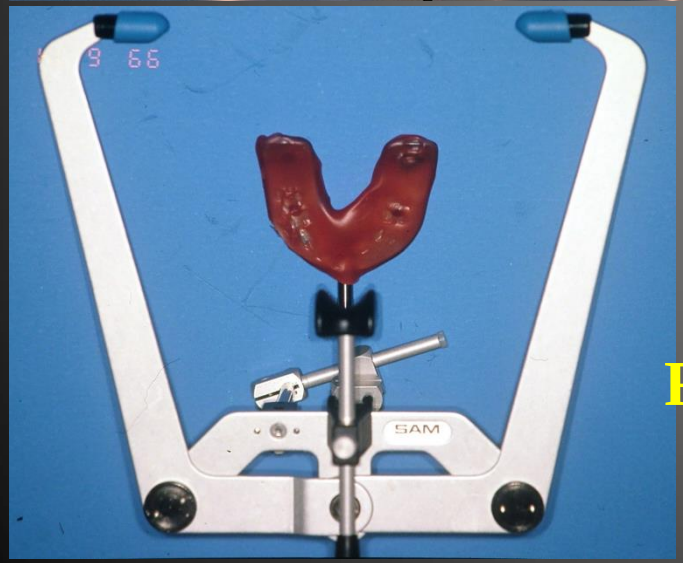
b./ articulation analysis of casts in articulator fxd with face bow help

c./ TMJ observation in articulator

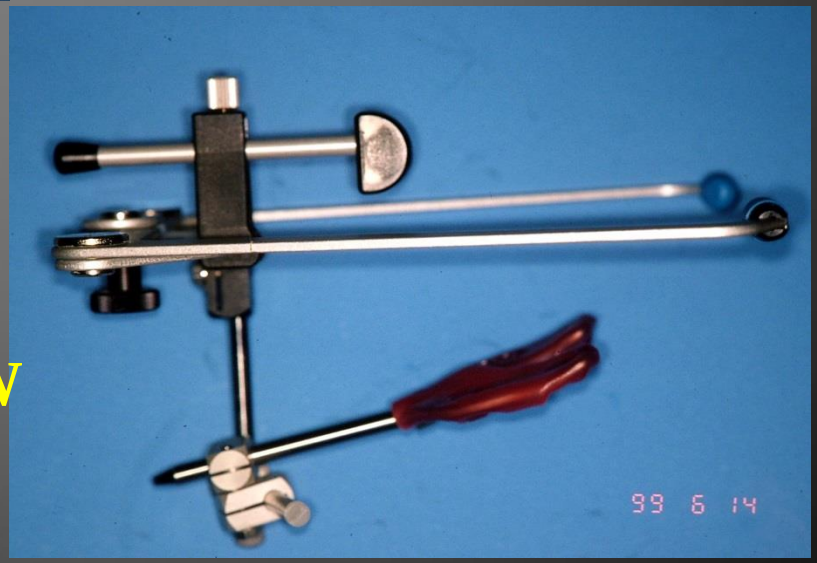
d./ TMJ observation with axiograph

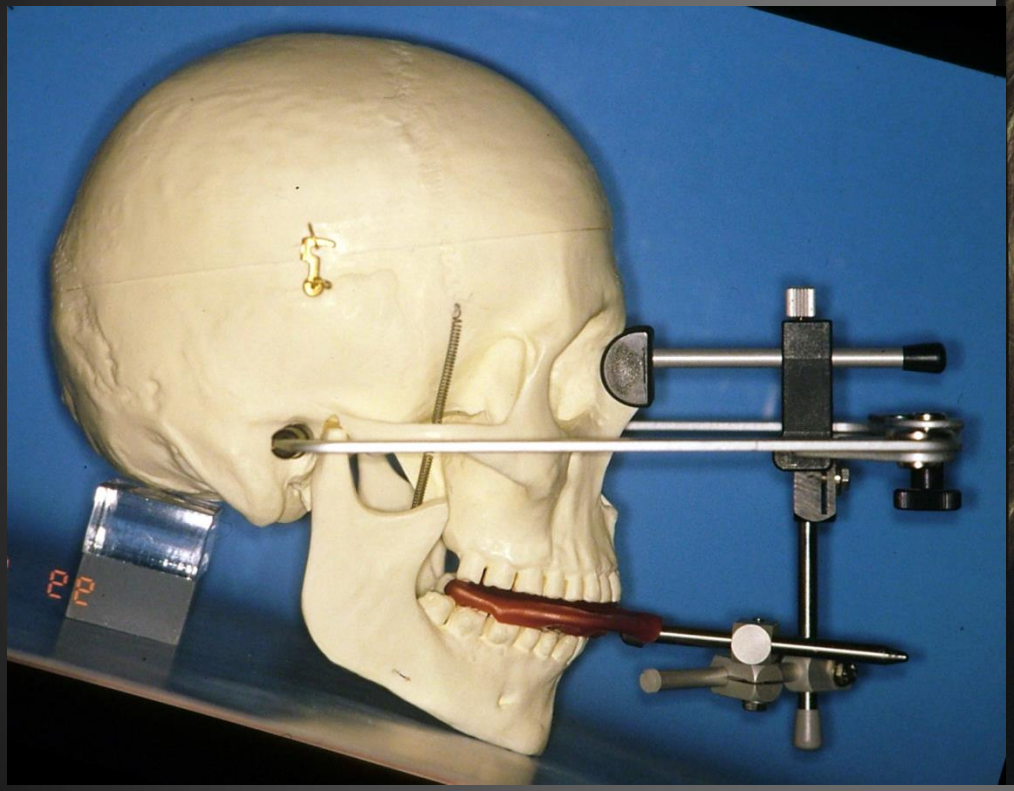
COMMUNICATION AMONG THE DIAGNOSTICAL SYSTEMS

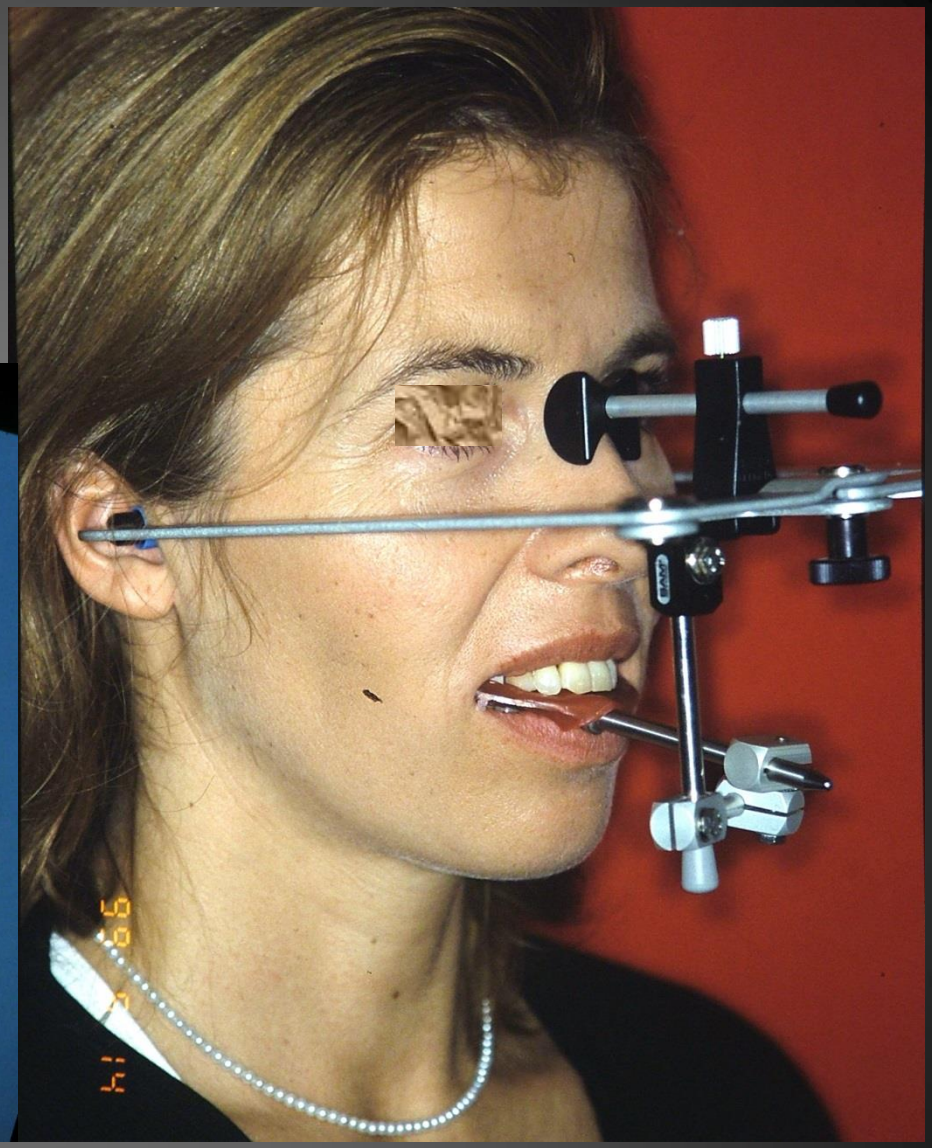
ARTICULATOR



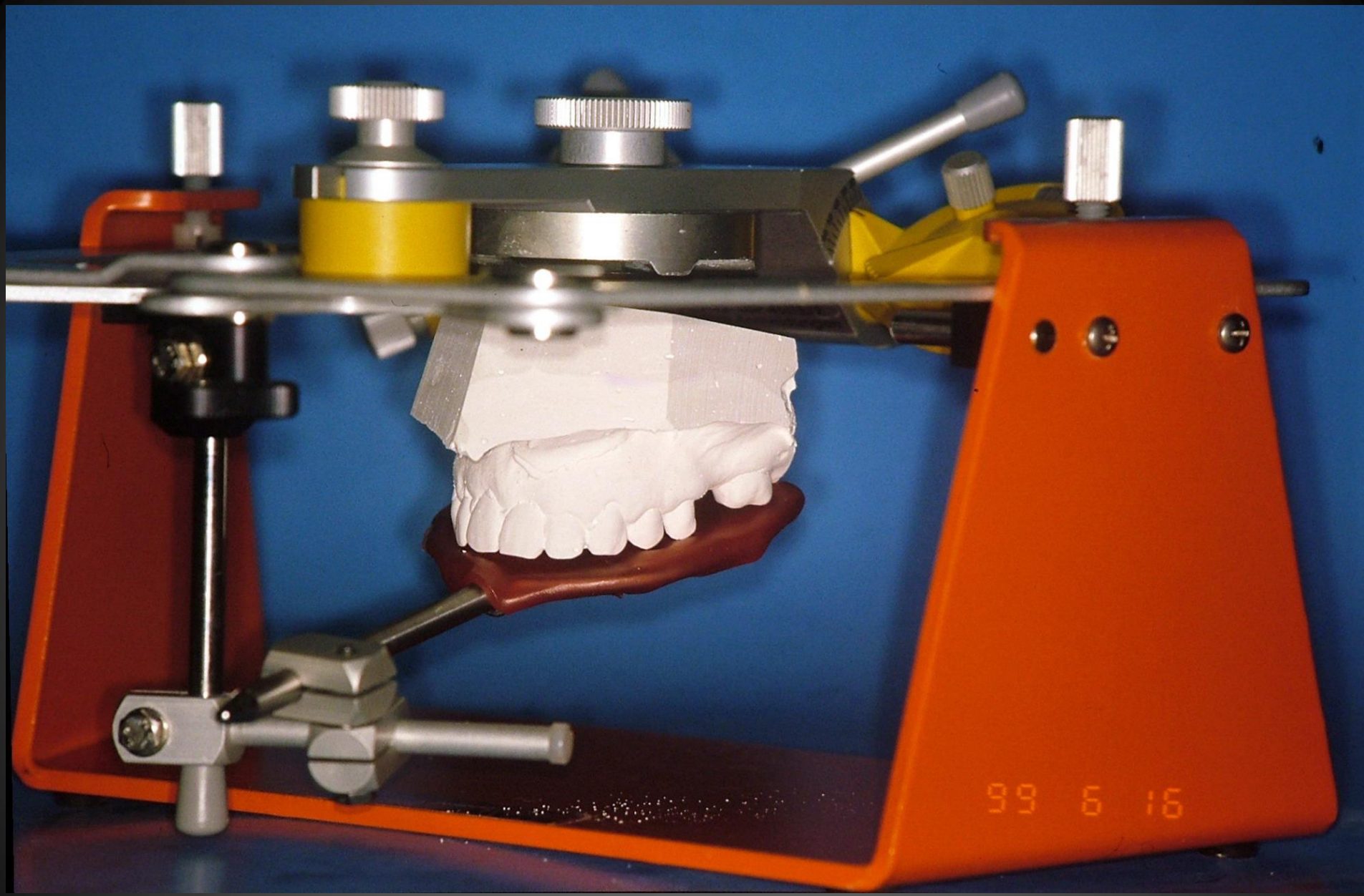
FACE BOW





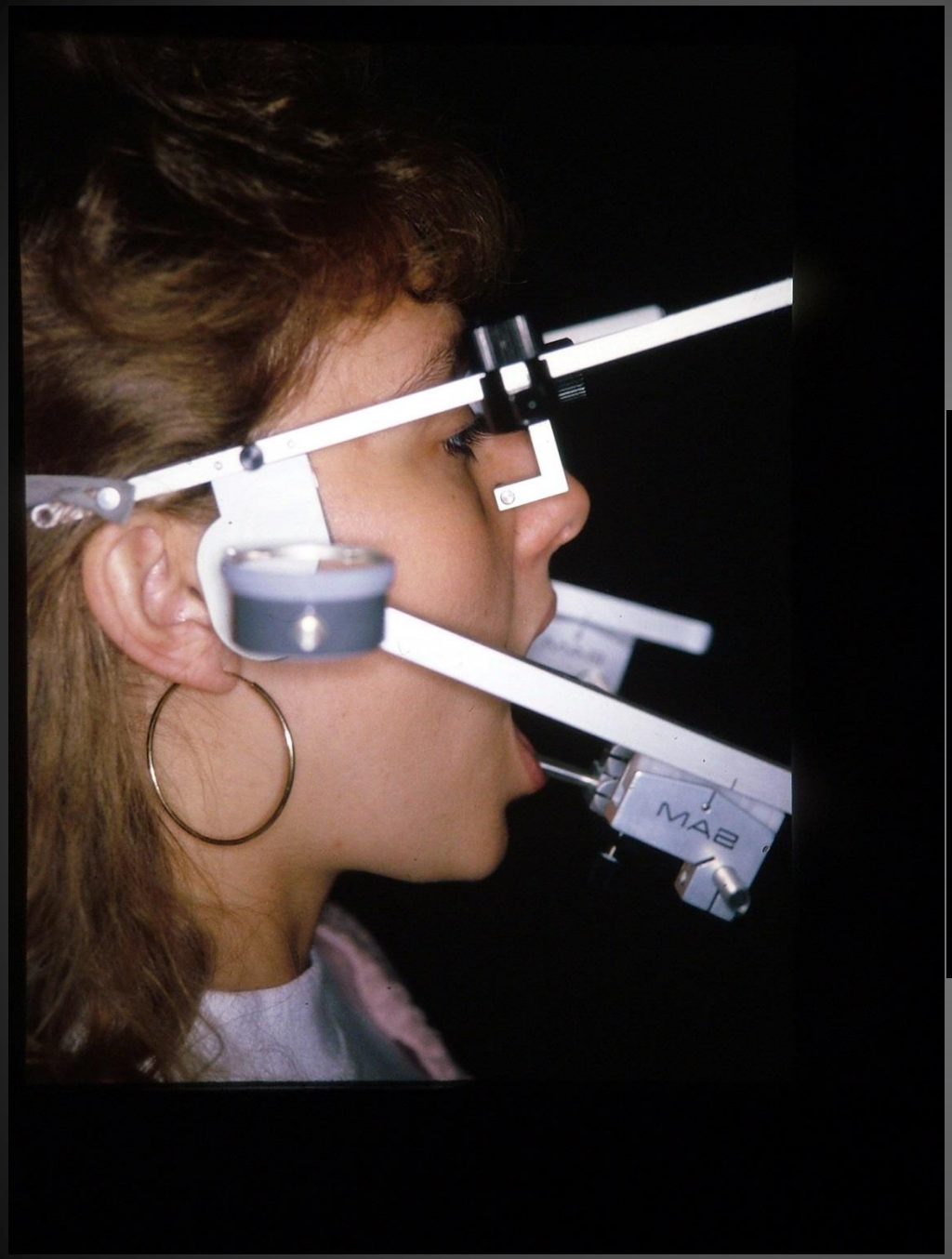


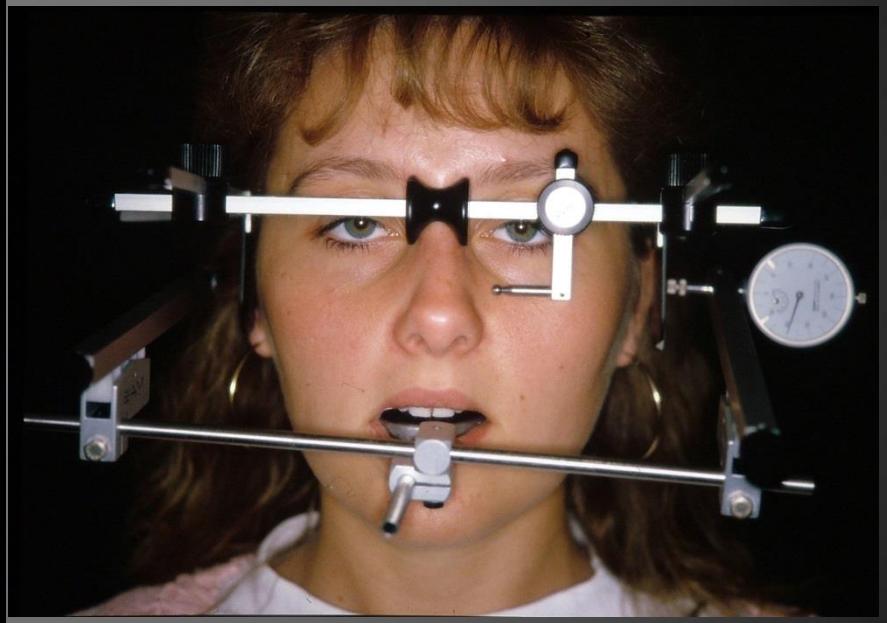
THE CLINICAL APPLICATION OF FACE BOW



CASTING INTO THE ARTICULATOR WITH THE HELP OF FACE BOW


SAM





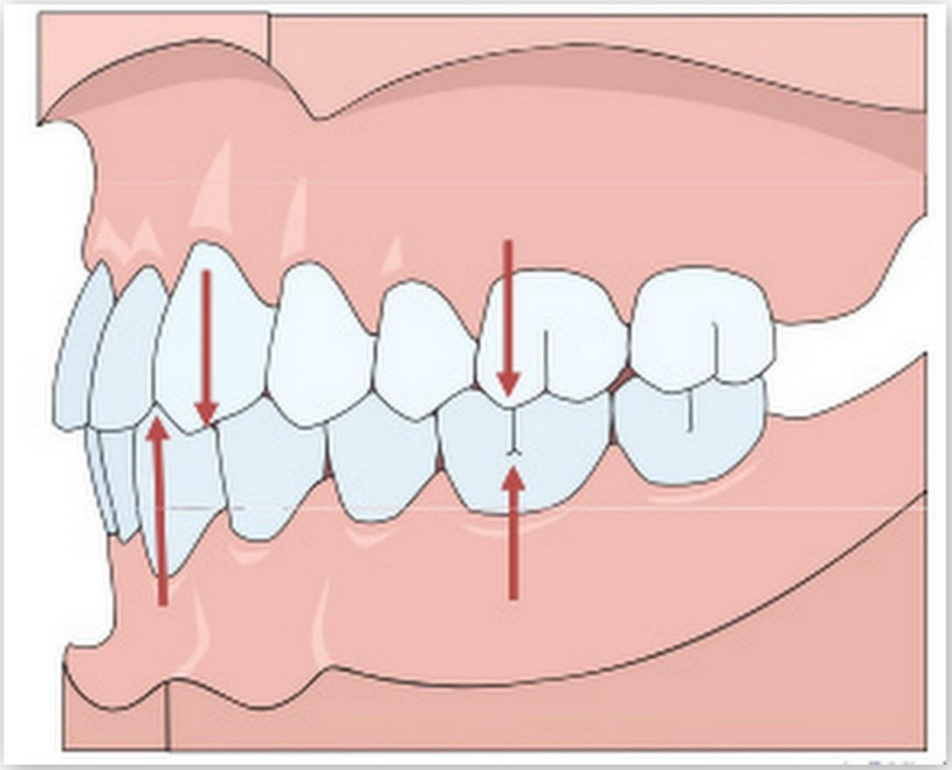
SLAVICEK AXIOGRAPH

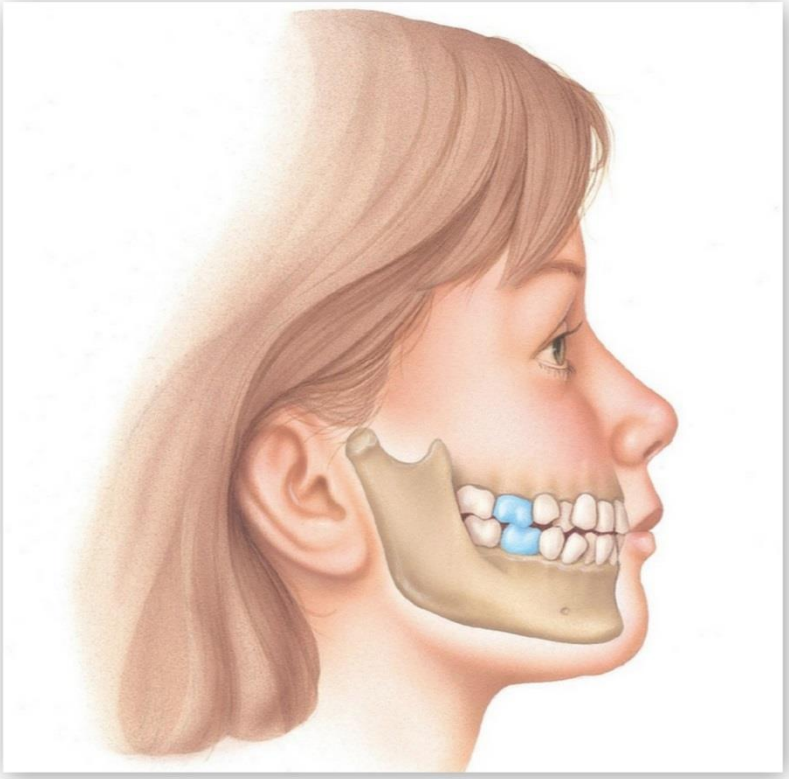
ANGLE'S CLASSIFICATION

WHERE THE BASE CONCEPT IS THAT

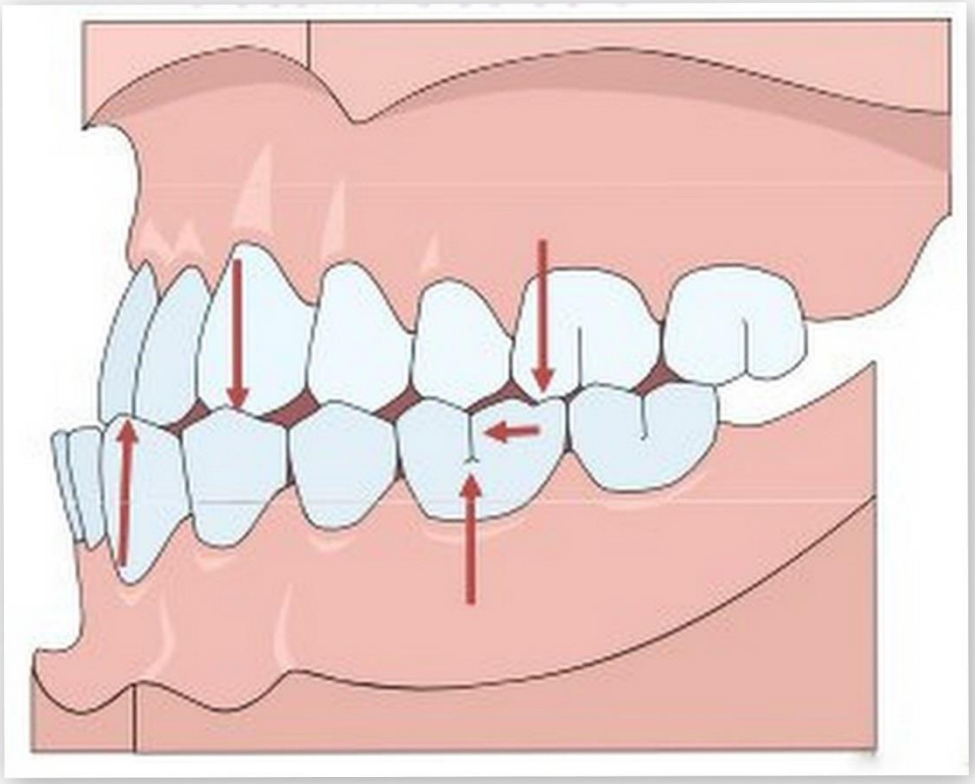
THE POSITION OF THE UPPER FIRST MOLARS IS EVERYTIME IS CORRECT

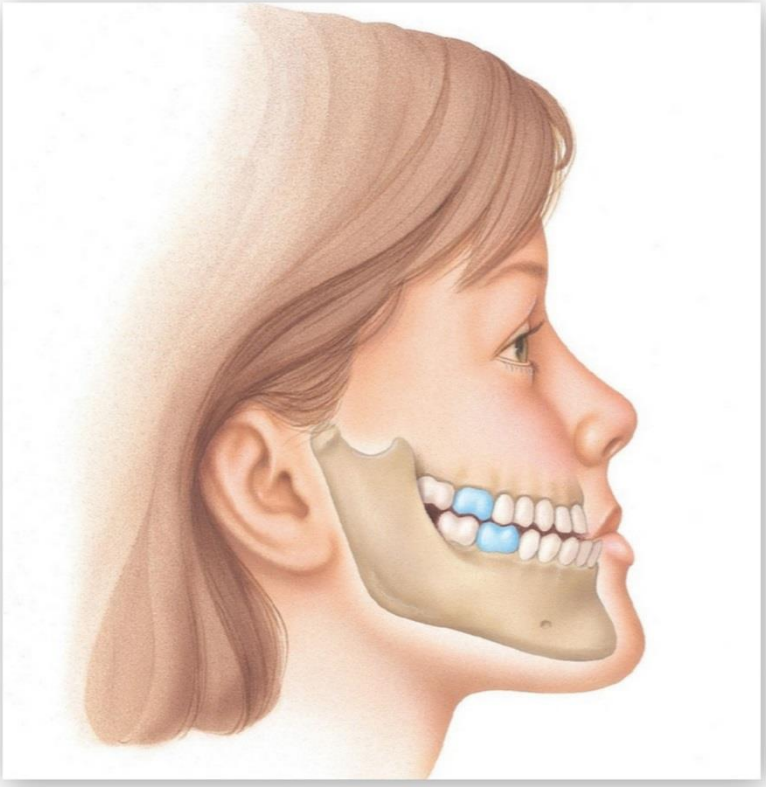
Angle E.H.



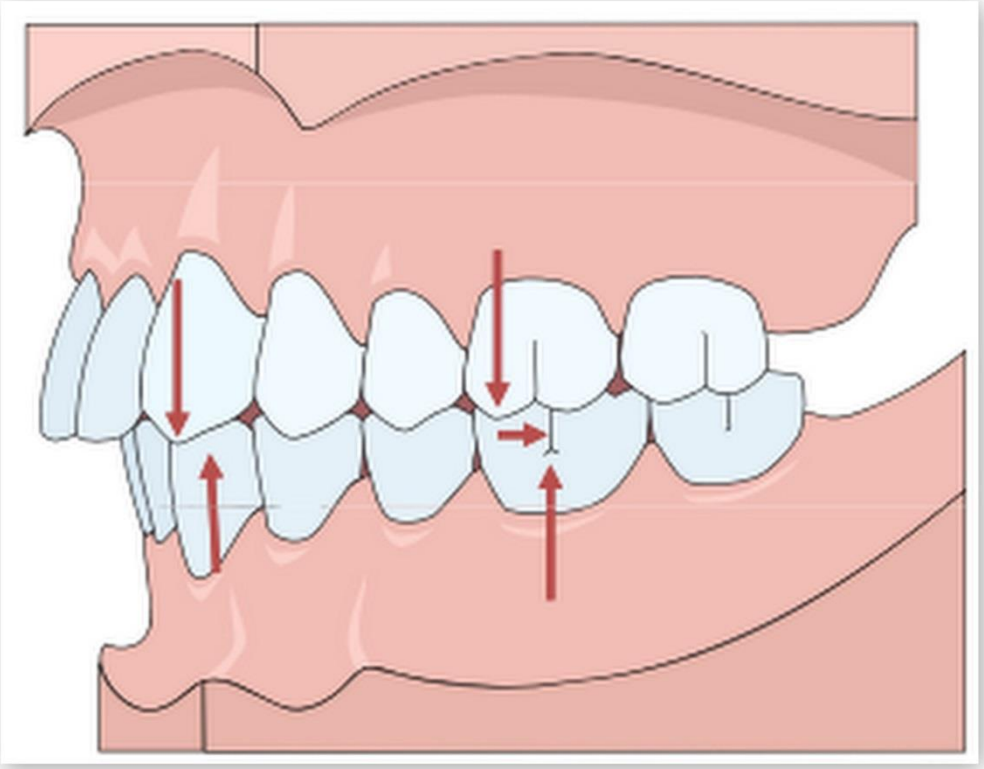


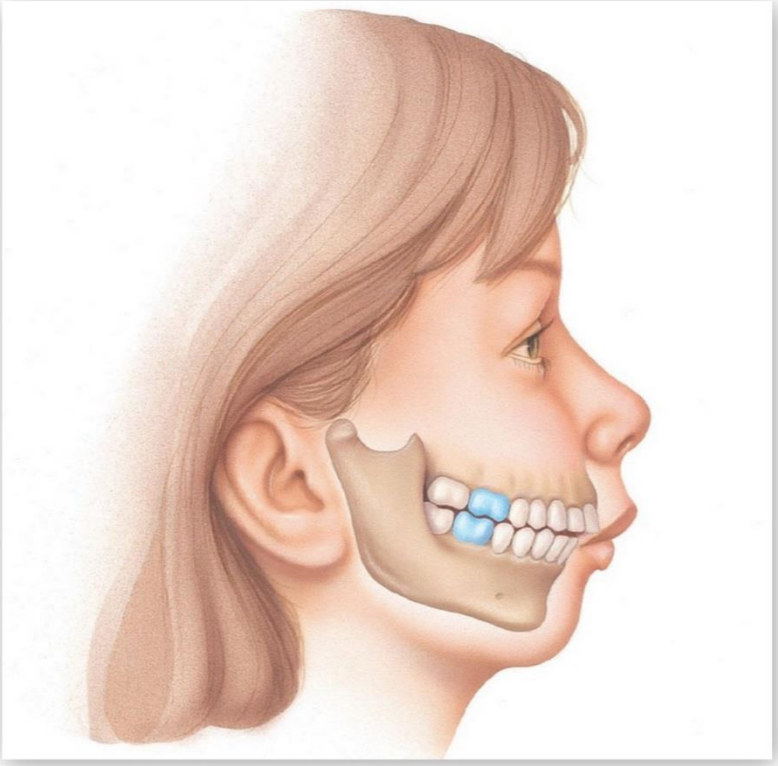
Class I Malocclusion





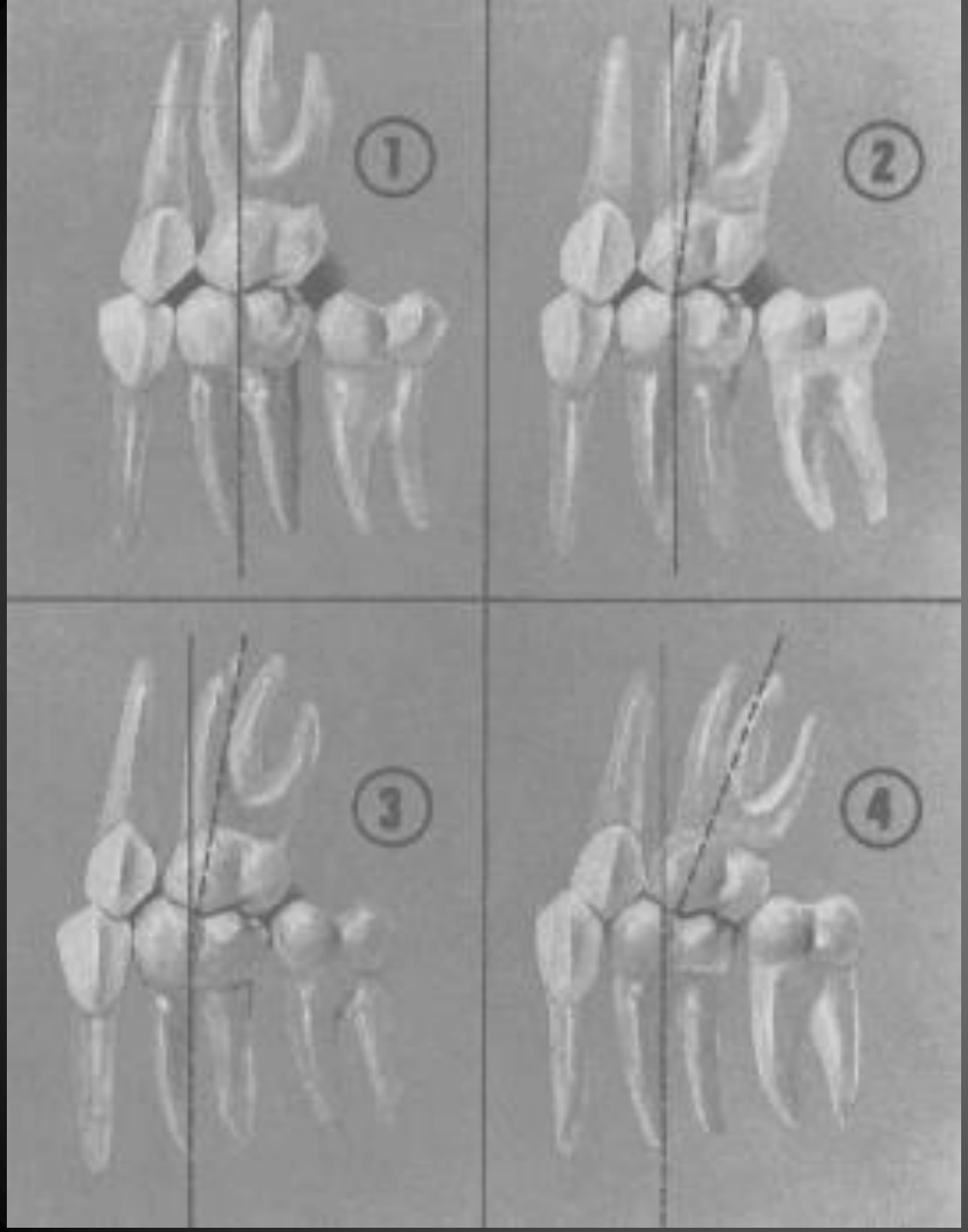
Class III Malocclusion





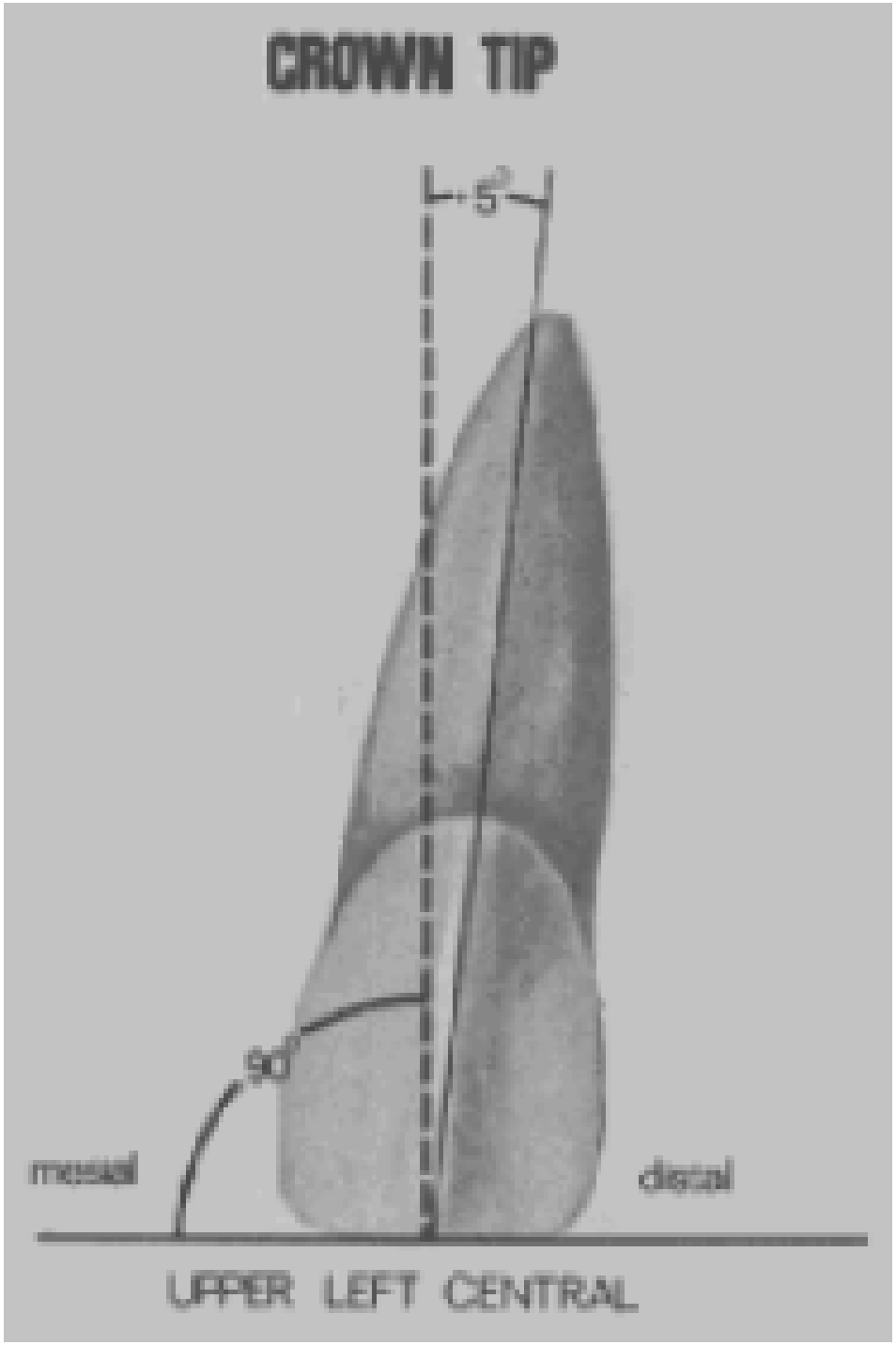
Class II Malocclusion

THE SIX KEYS OF THE OCCLUSION BY ANDREWS



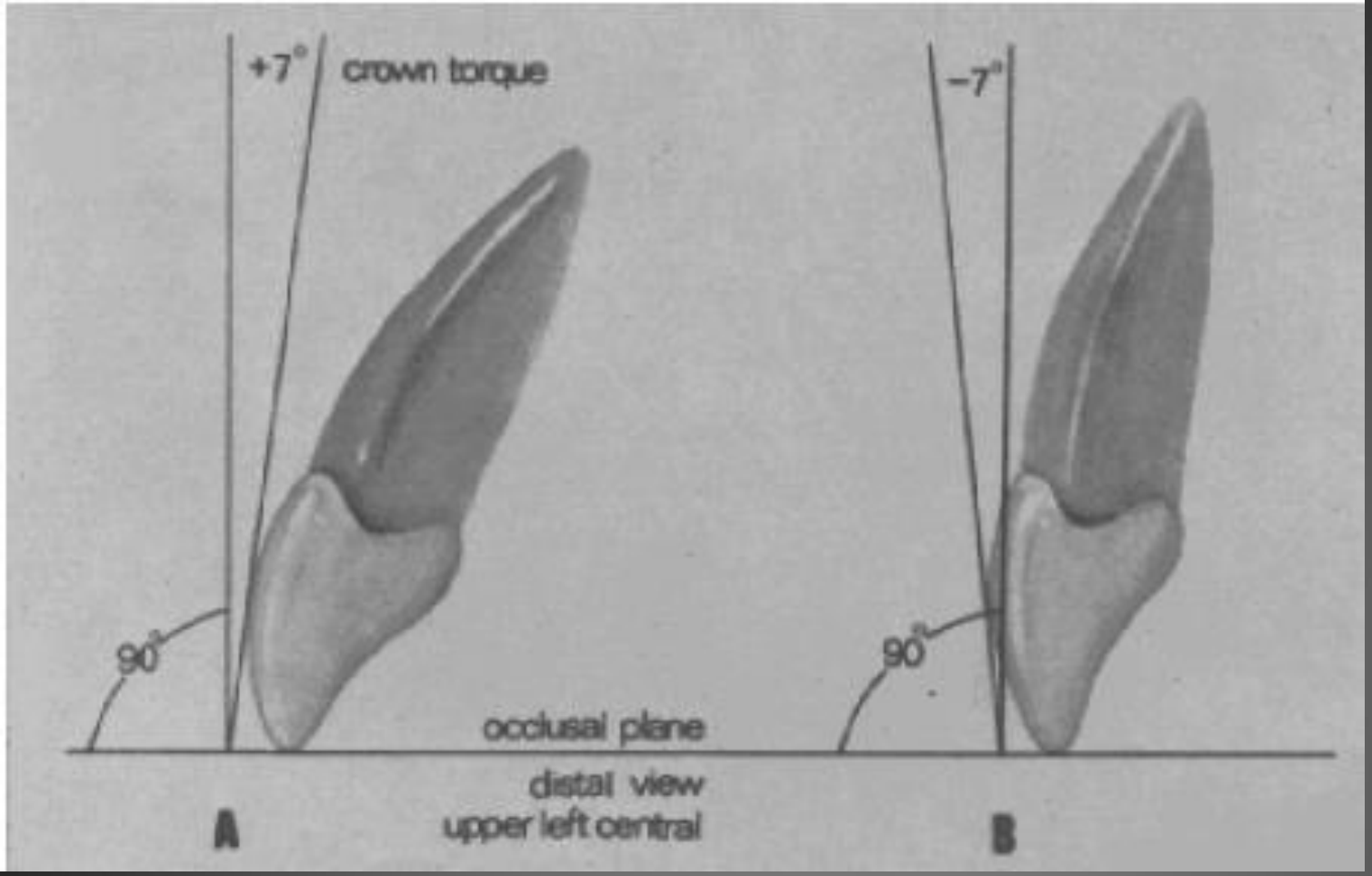
AJO-DO 1972 Sep (296-309): The six keys to normal occlusion - Andrews

Key I. Molar relationship



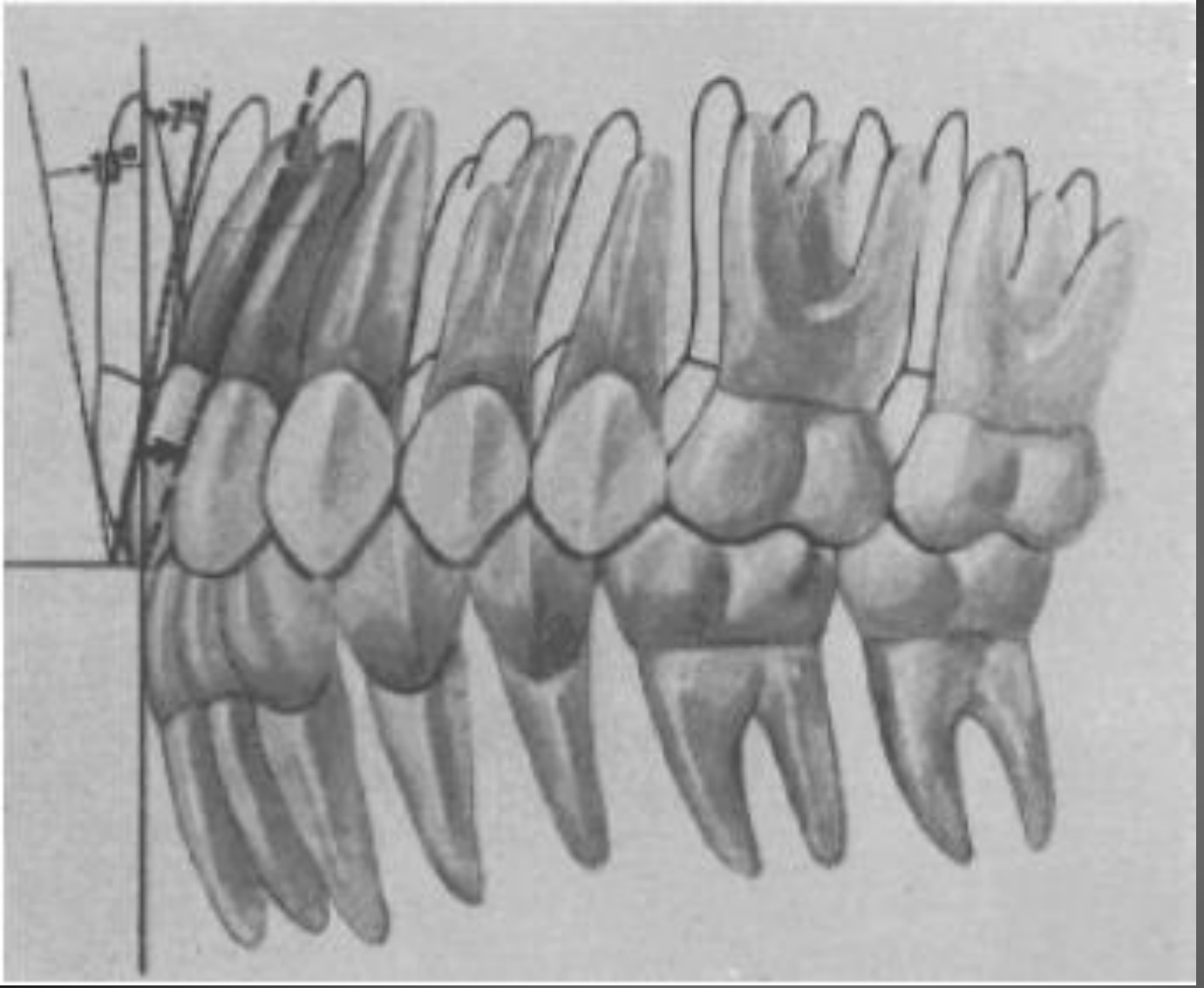
AJO-DO 1972 Sep (296-309): The six keys to normal occlusion - Andrews

Key II. Crown angulation (tip)



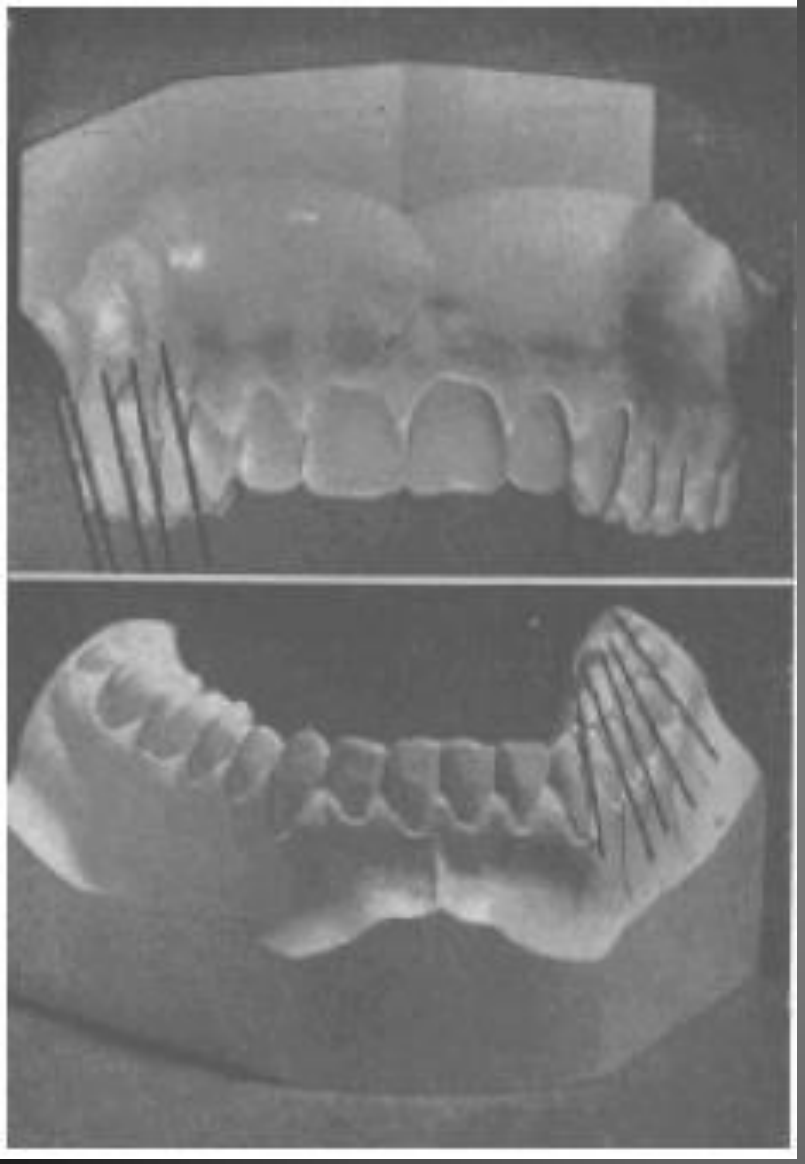
AJO-DO 1972 Sep (296-309): The six keys to normal occlusion - Andrews

Key III. Crown inclination (labiolingual of buccolingual inclination).



AJO-DO 1972 Sep (296-309): The six keys to normal occlusion - Andrews

Key III. Crown inclination (labiolingual of buccolingual inclination).



AJO-DO 1972 Sep (296-309): The six keys to normal occlusion - Andrews

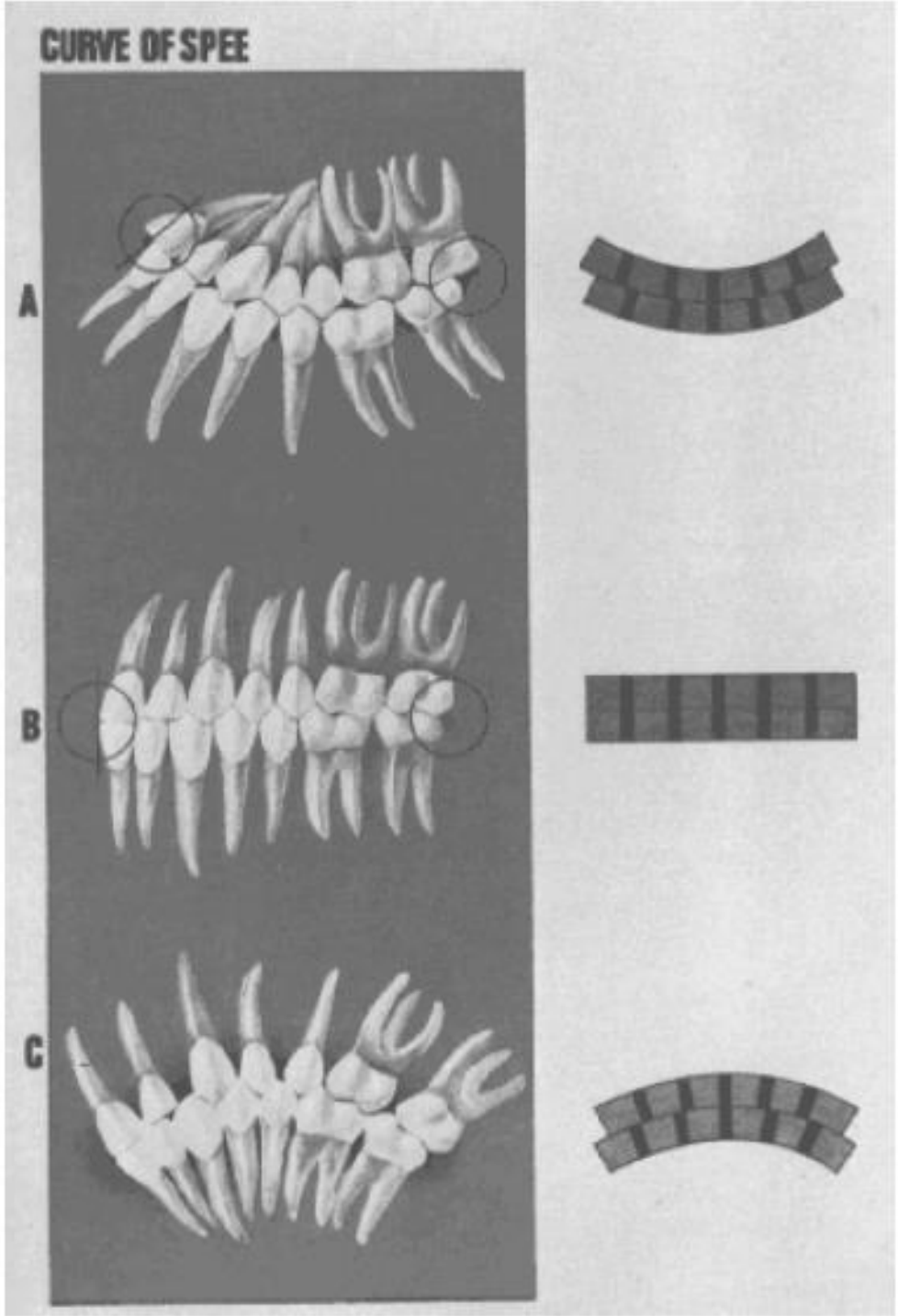
Key III. Crown inclination (labiolingual of buccolingual inclination).

AJO-DO 1972 Sep (296-309): The six keys to normal occlusion - Andrews

Key IV. Rotations

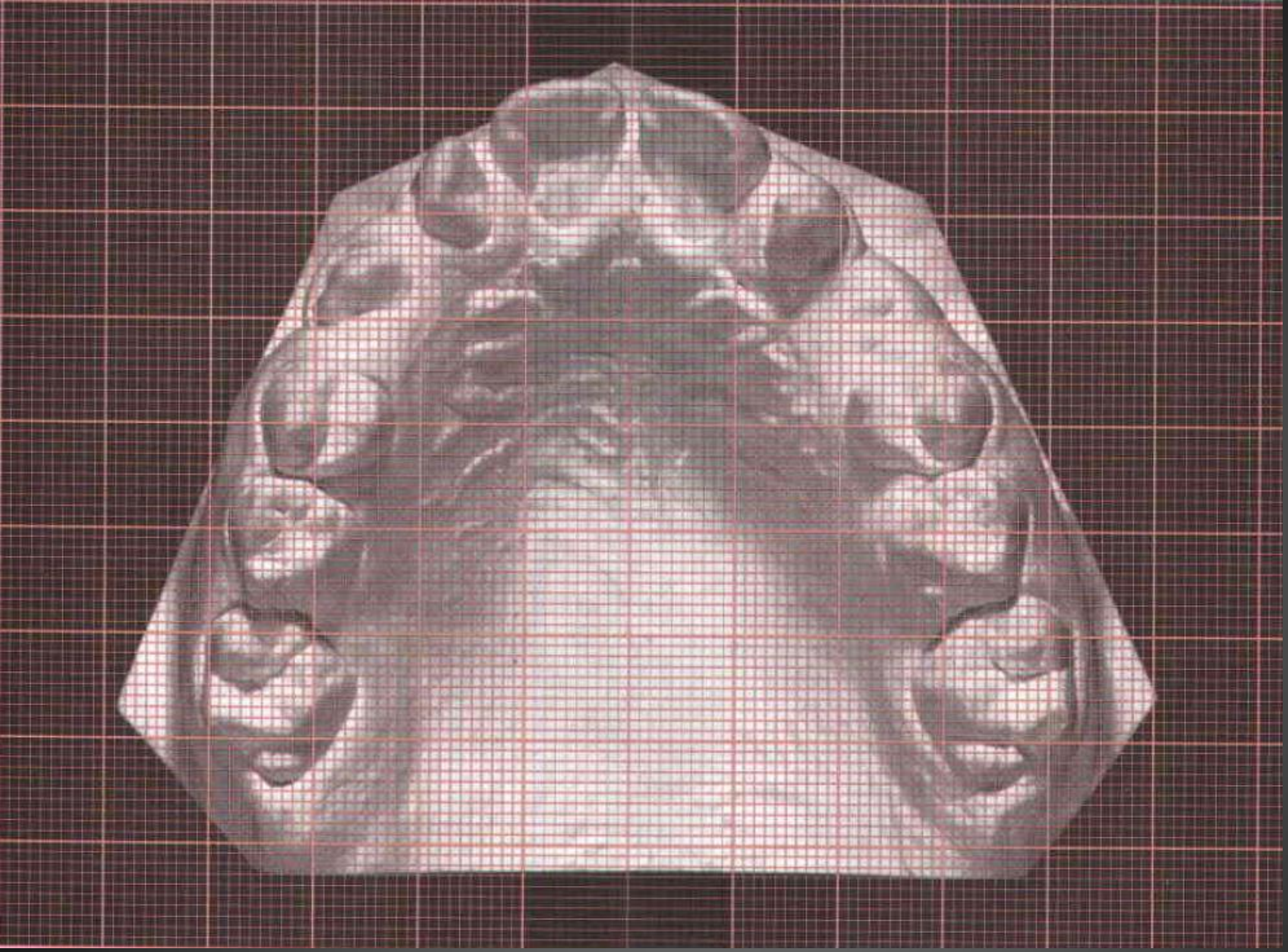
AJO-DO 1972 Sep (296-309): The six keys to normal occlusion - Andrews

Key V. Tight contacts.

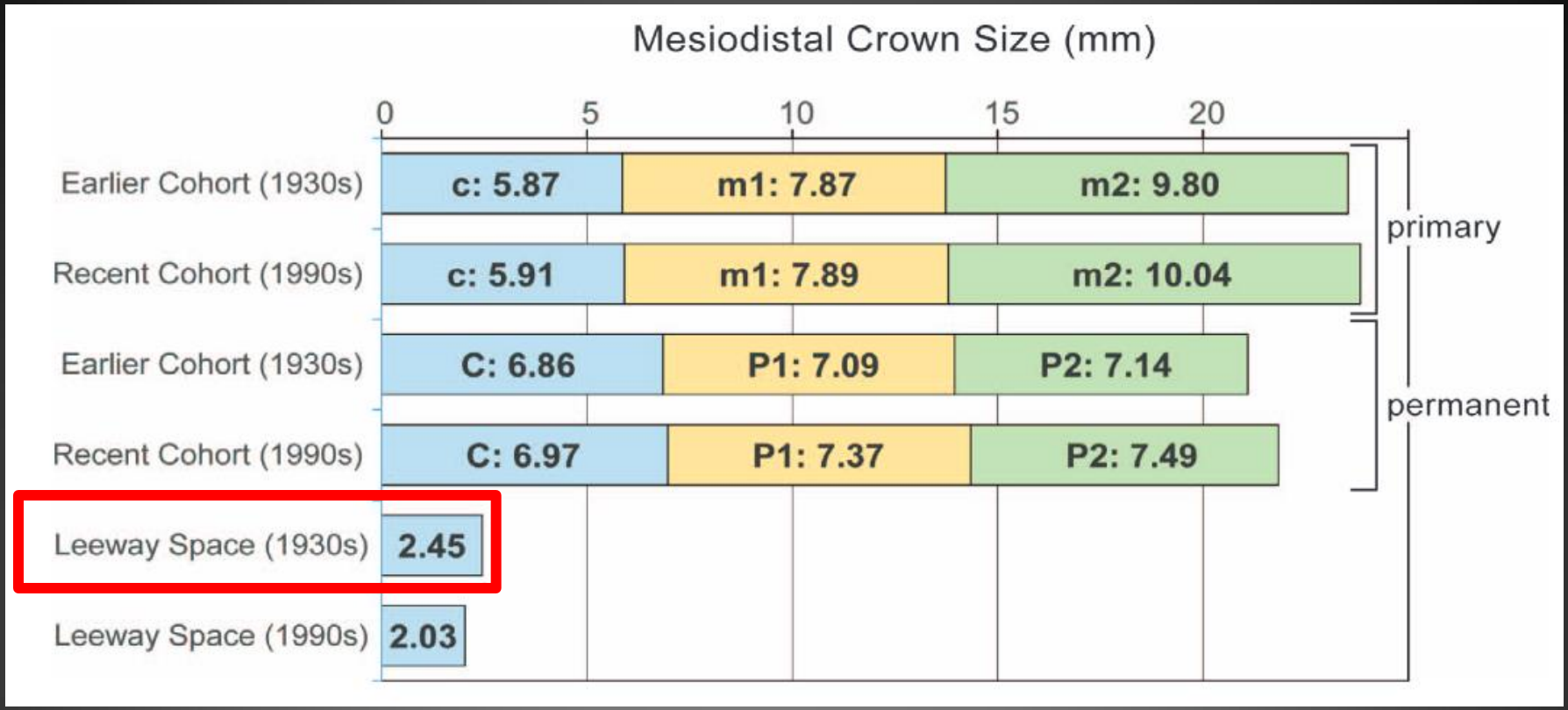


AJO-DO 1972 Sep (296-309): The six keys to normal occlusion - Andrews

Key VI. Occlusal plane.



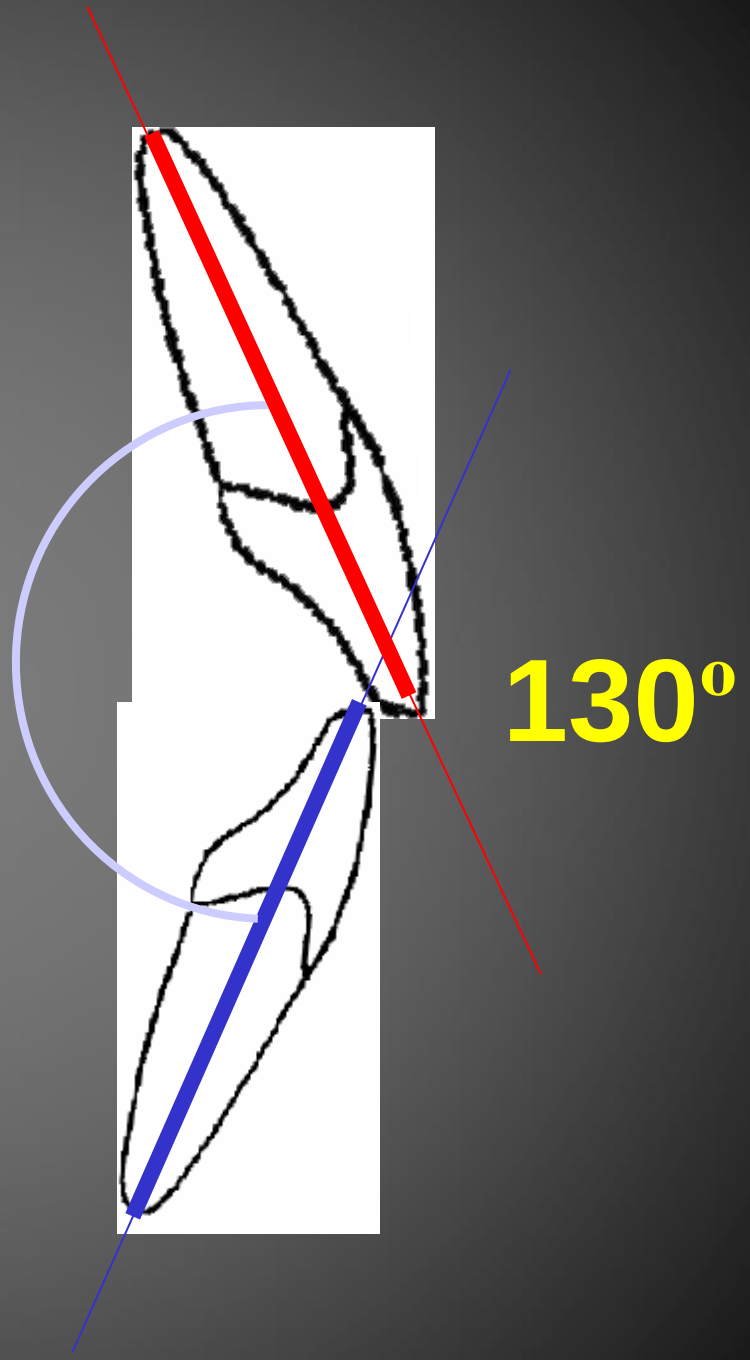
Proffit, W.R., Fields, H.W. and Sarver D.M.:Contemporary Orthodontics 4.ed. MOSBY Elsevier 2008



Evidence favoring a secular reduction in mandibular leeway space
Tyler R. Allena; Terry M. Trojanb; Edward F. Harris
Angle Orthod.2017;87:576–582

THE NORMAL INCISOR INCLINATION

130°



SPACE ESTIMATION IN CHANGING DENTITION

GROSS EQUATION

$$Y_{33\text{-}34\text{-}35} = 0{,}63 \times MD_{22} + 0{,}84 \times MD_{32} + 0{,}67 \times BL_{36} + 4{,}47$$

							3 4 5	(75%-os valószínűség)								
SI_i	19,5	20	20,5	21	21,5	22	22,5	23	23,5	24	24,5	25	25,5	26	26,5	27
Moyers	20,6	20,9	21,2	21,5	21,8	22	22,3	22,6	22,9	23,1	23,4	23,7	24	24,2	24,5	24,8
							3 4 5	(75%-os valószínűség)								
SI_i	19,5	20	20,5	21	21,5	22	22,5	23	23,5	24	24,5	25	25,5	26	26,5	27
Moyers	20,1	20,4	20,7	21	21,3	21,6	21,9	22,2	22,5	22,8	23,1	23,4	23,7	24	24,3	24,6

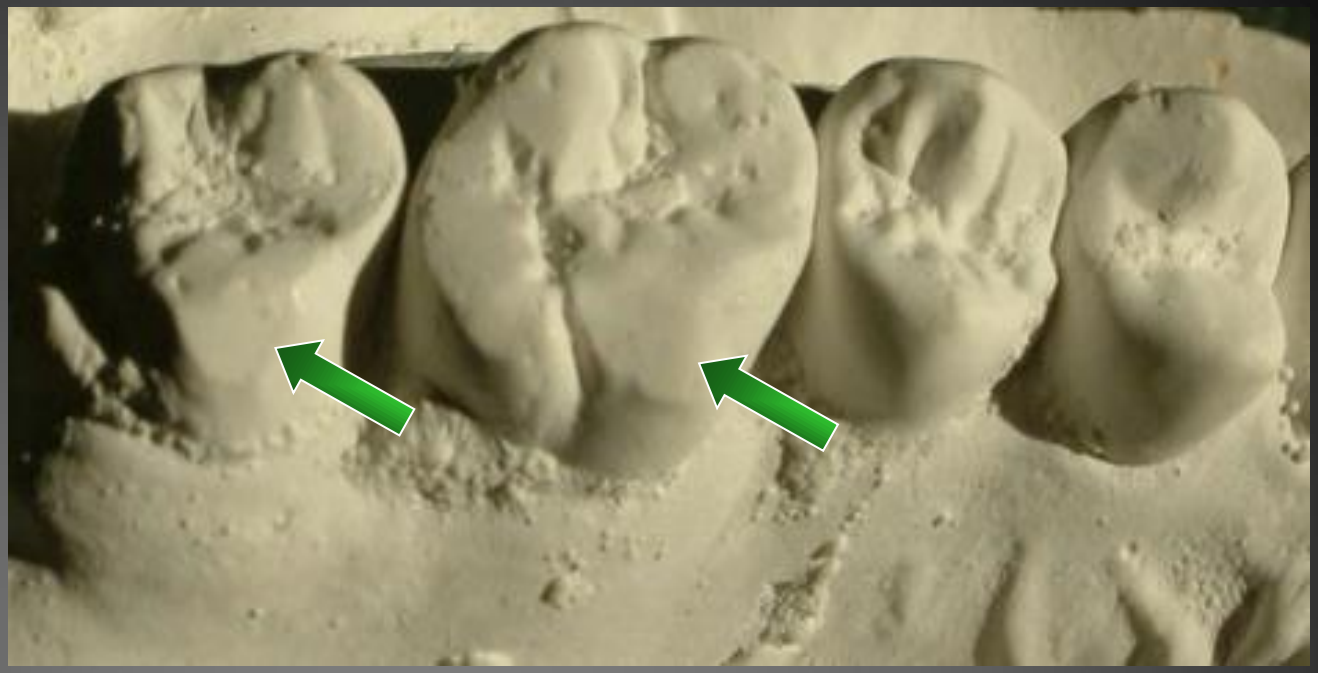
Moyers index: FROM THE SUM OF THE MESIODISTAL WIDTH OF THE LOWER INCISORS WE CAN ESTIMATE THE NEED OF THE SPACE THE UPPER AND LOWER 3-4-5 WITH 75% PROBABILITY

THE OCCLUSAL PATTERN AND THE ARTICULATION EVALUATION IN THE MOUTH AND ON THE CASTS

H.E.

H.E.

LEFT UPPER

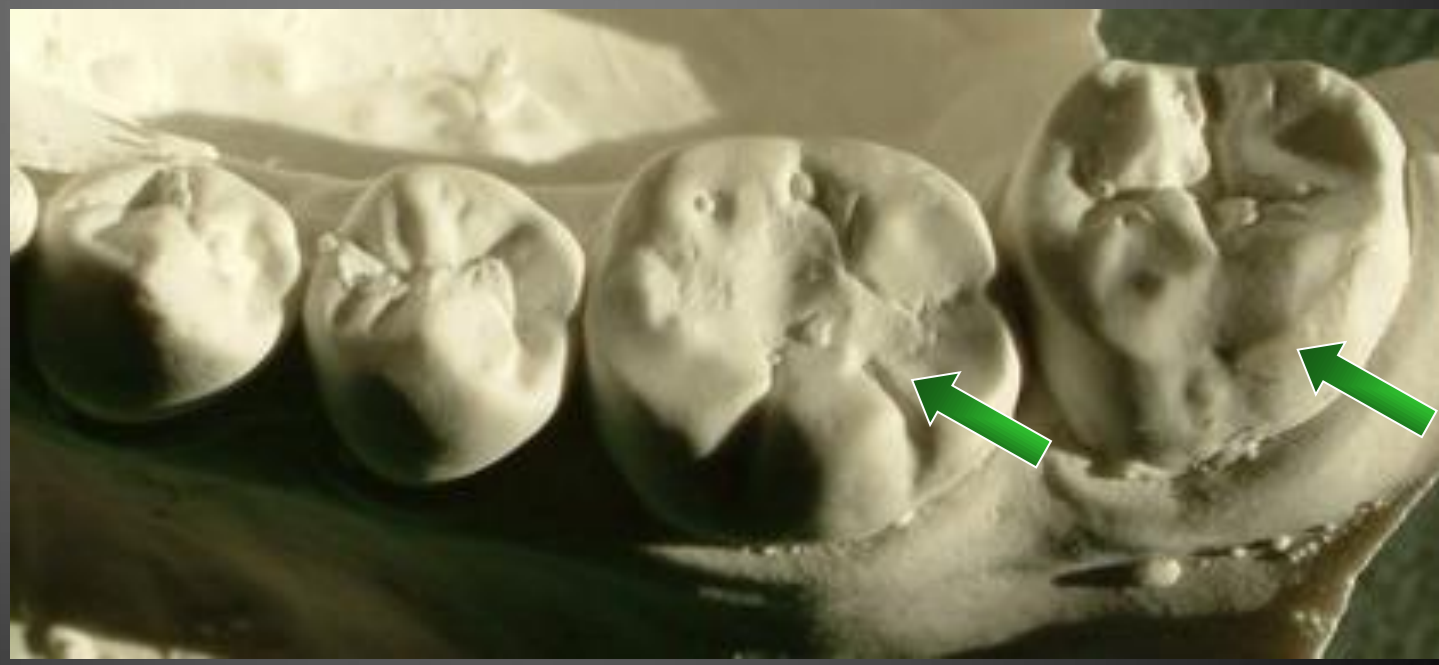


RIGHT UPPER

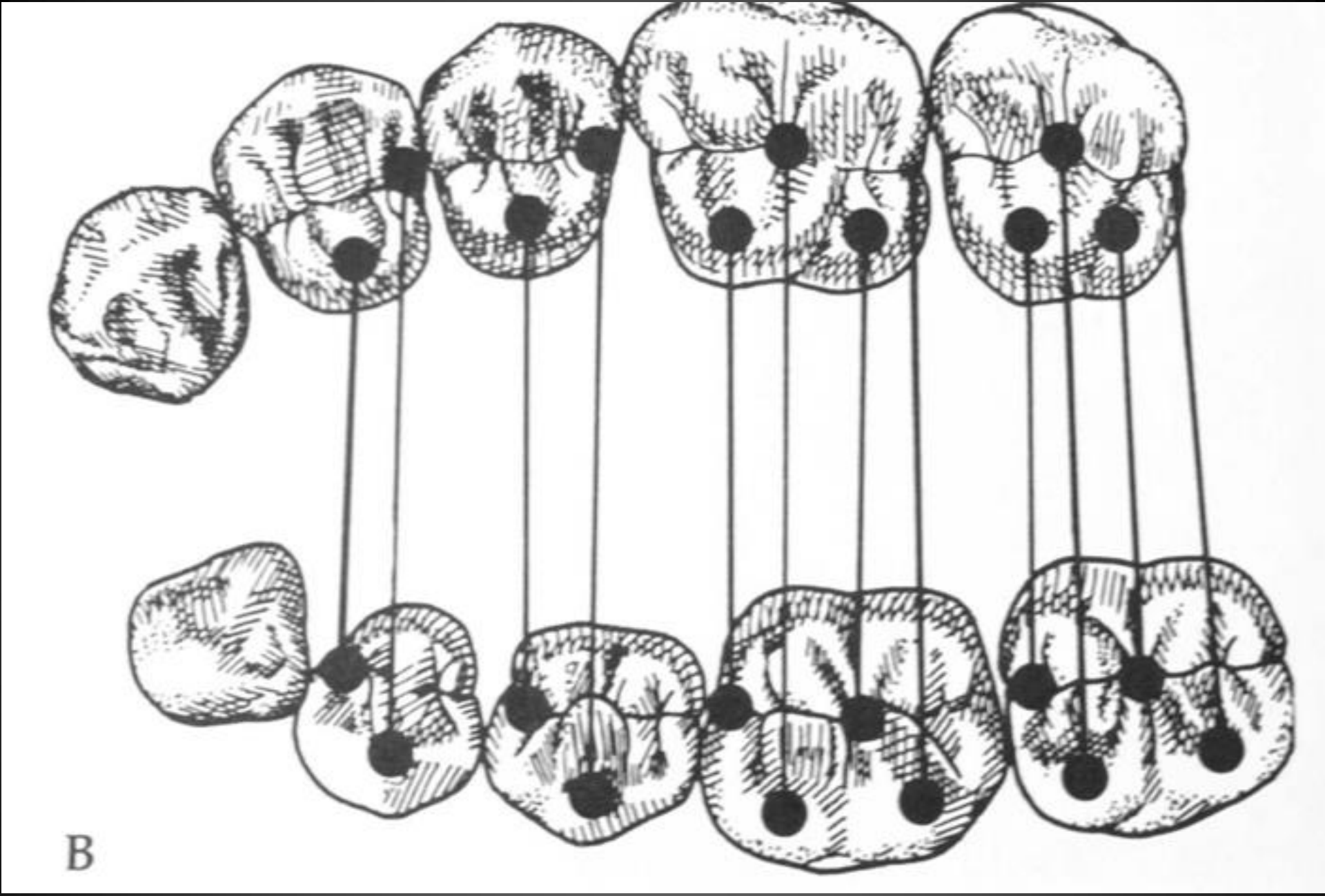
H.E.

RIGHT
LOWER

LEFT
LOWER



H.E.



Interarch relationships of Class II molar occlusion.

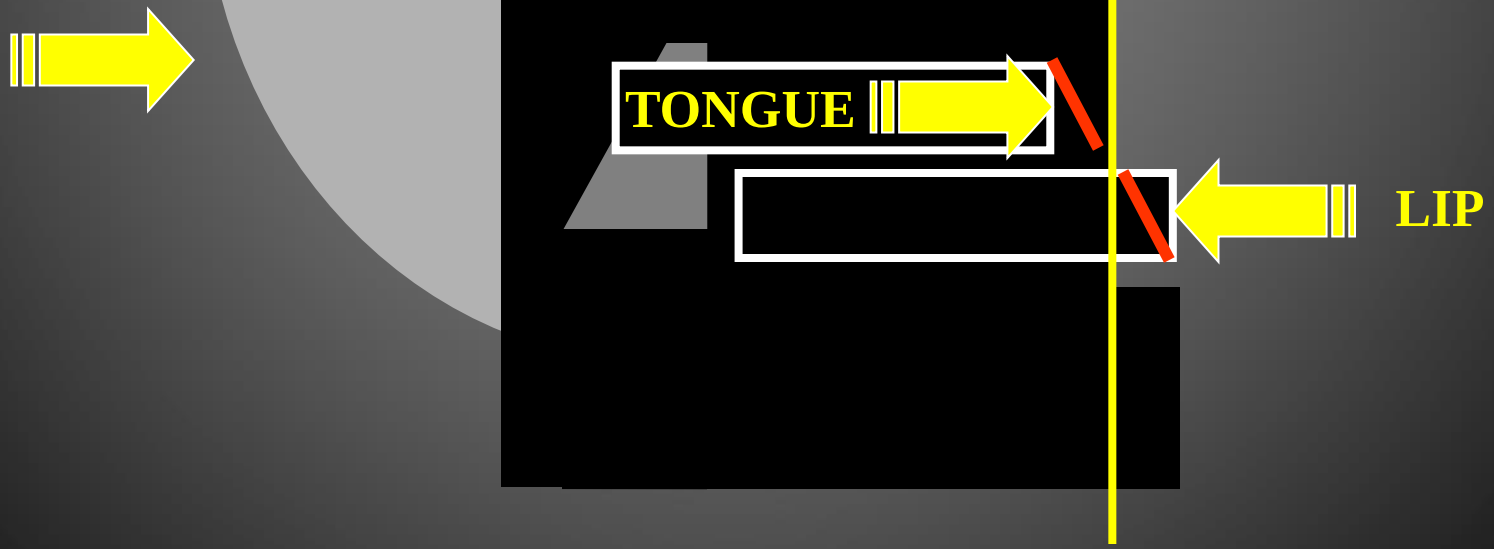
THE SOFT TISSUE PATTERN EVALUATION AND ANALYSIS FUNCTIONAL MATRIX

PROGENY

THE SOFT TISSUE FORCES WITH ACTION TO THE TEETH

THE MAXILLA BACKWARD POSITIONED

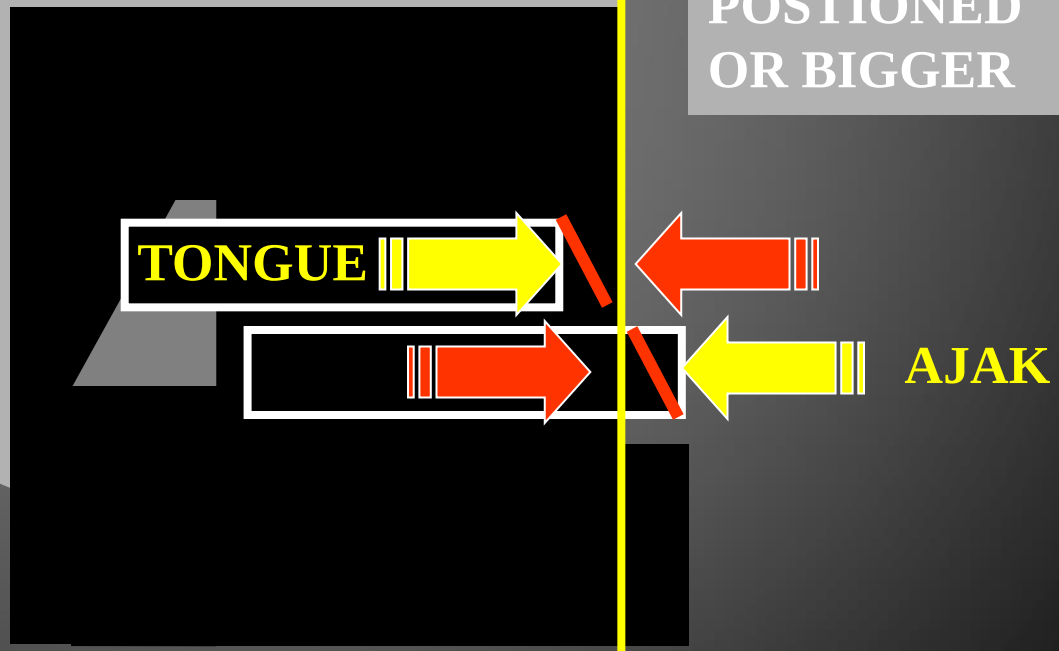
OR SMALLER, THE MANDIBLE FORWARD POSTIONED OR BIGGER



PROGENY

THE DESIRED FORCES TO MOVE THE TEETH

THE MAXILLA BACKWARD POSITIONED OR SMALLER, THE MANDIBLE FORWARD POSTIONED OR BIGGER



3D IMAGING METHODS APPLIYNG IN THE ORTHODONTICS

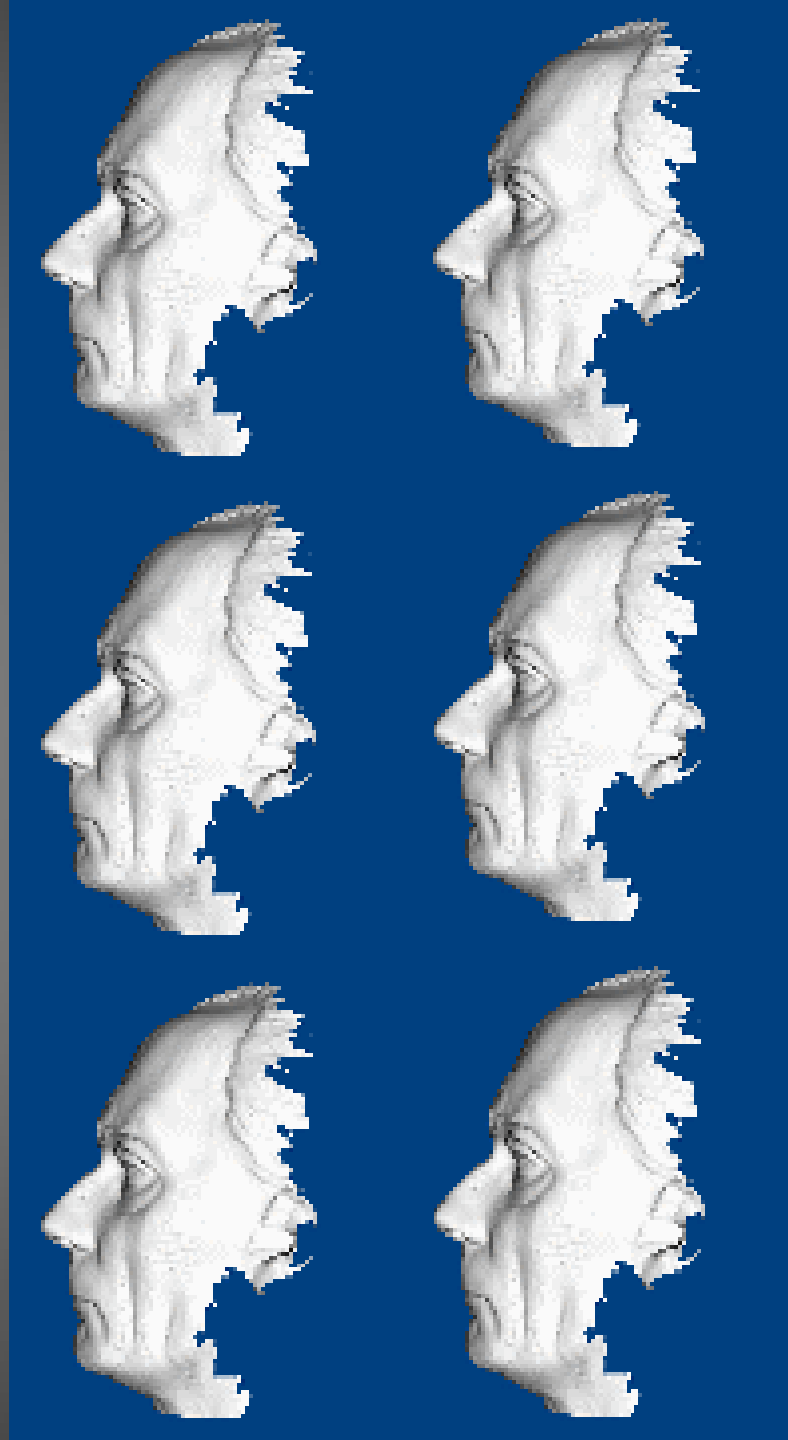


FOTO GRAMMETRIA

Gwen R.J. Swennen, Filip Schutyser, Jarg-Erich Hausamen: Three-Dimensional Cephalometry A Color Atlas and Manual Springer 2006

Quantitative 3D soft tissue analysis of symmetry prior to and after unilateral cleft lip repair compared with non-cleft persons (performed in Cambodia)

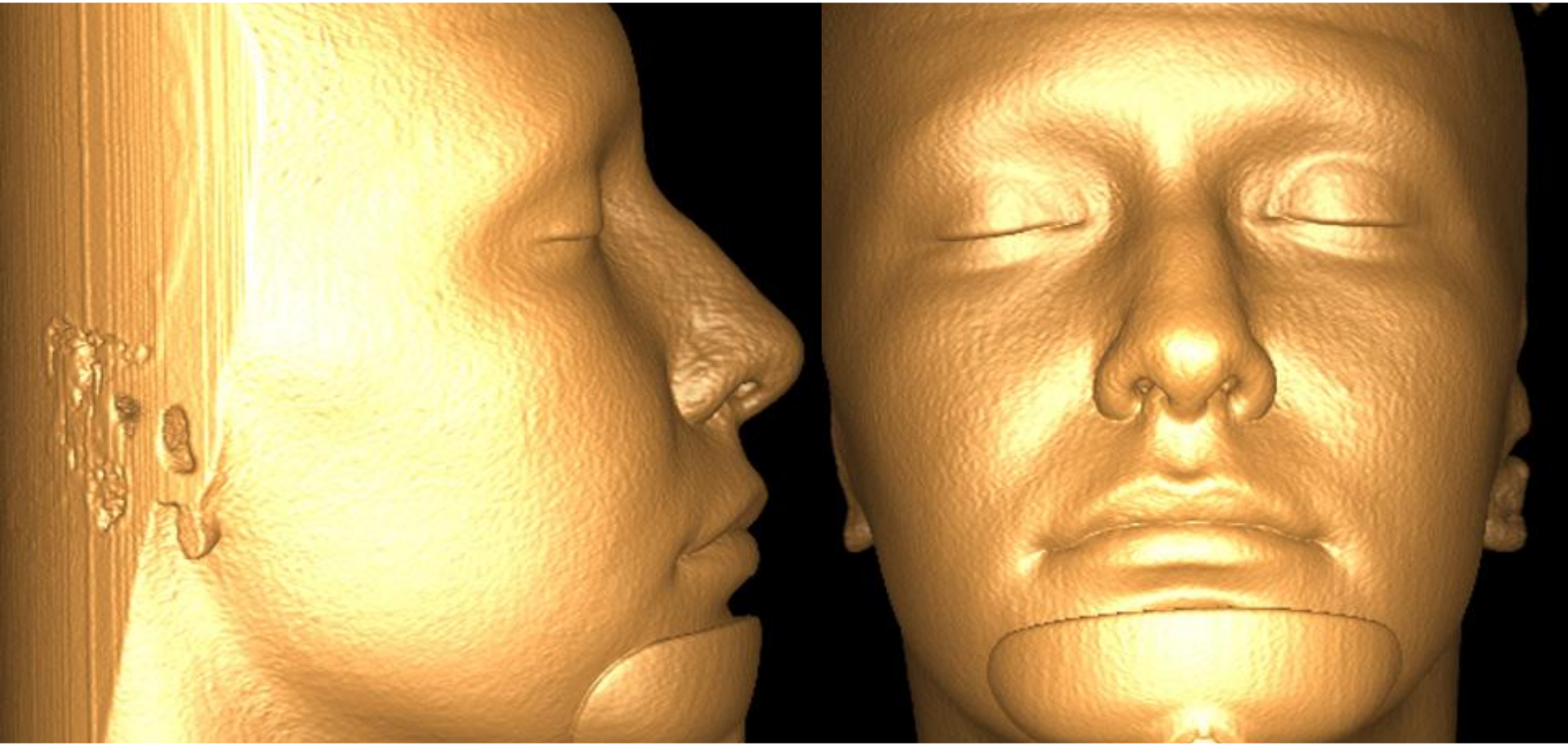
Katja SCHWENZER-ZIMMERER[1,2], Despina CHAITIDIS[1,3], Isabelle BERG-BOERNER[1,2], Zdzislav KROL[1], Laszlo KOVACS[4], Nina F. SCHWENZER[5], Stephan ZIMMERER[1,6], Christof HOLBERG[7], Hans-Florian ZEILHOFER[1,2]

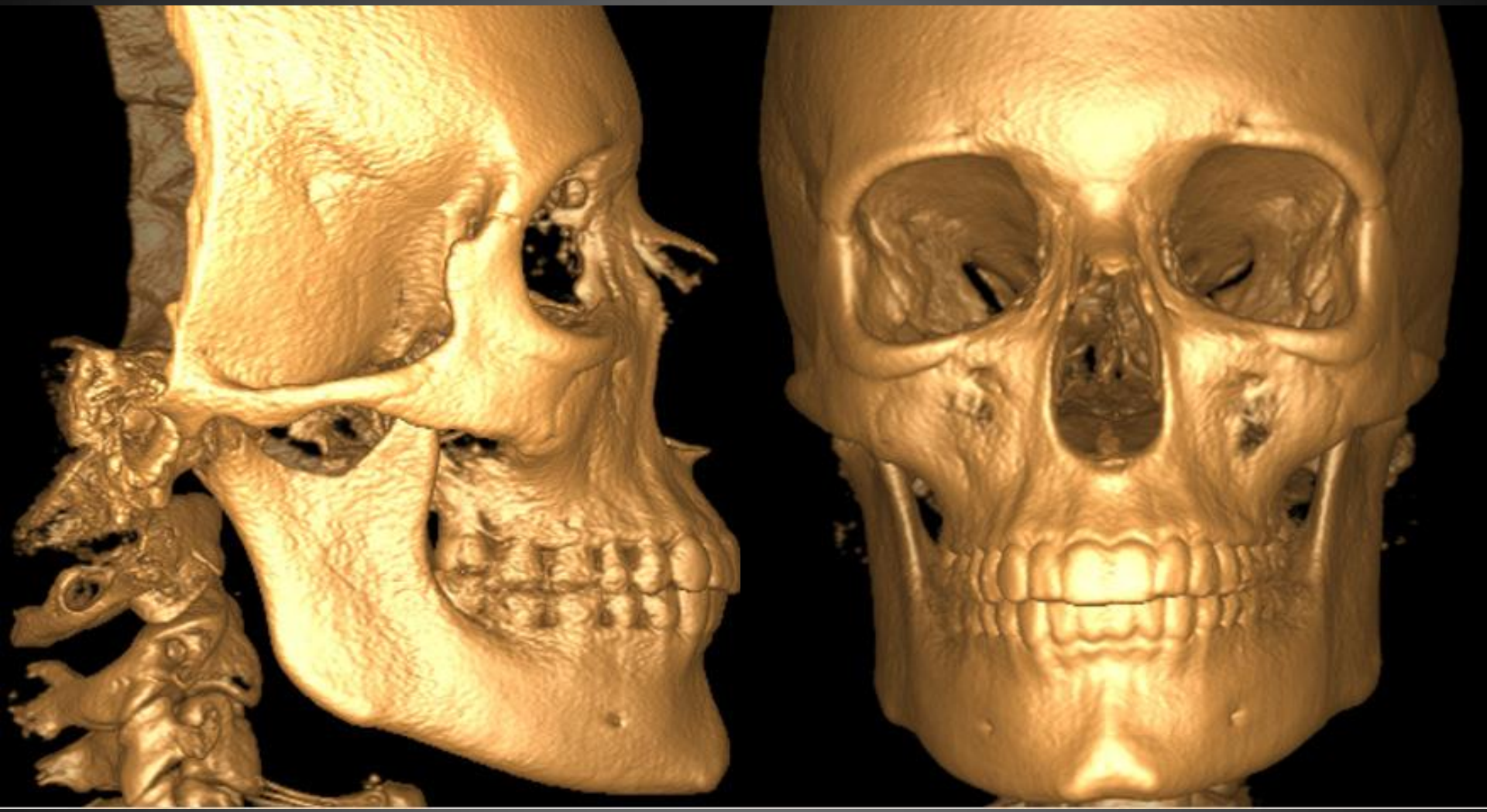
Journal of Cranio-Maxillofacial Surgery (2008) 36, 431–438

doi:10.1016/j.jcms.2008.05.003, available online at http://www.sciencedirect.com

Cone Beam 3-D Imaging System

- 3 D Imaging Procedure
- Proportional to size, without enlargement
- 12 BIT grey scale (4096)
- Short scanning time
- High resolution rendering
- Amorf silicium plane panel detektor



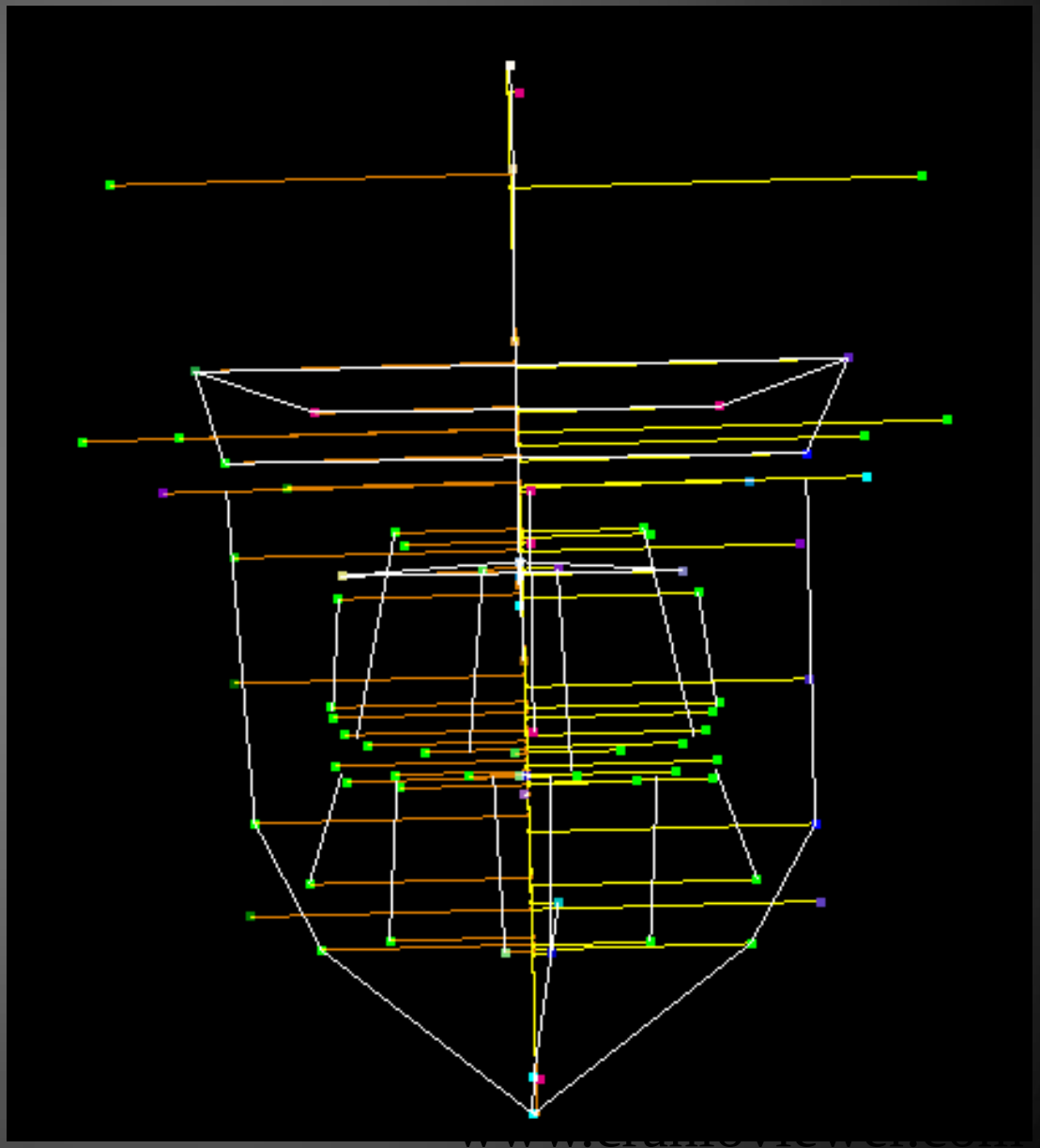


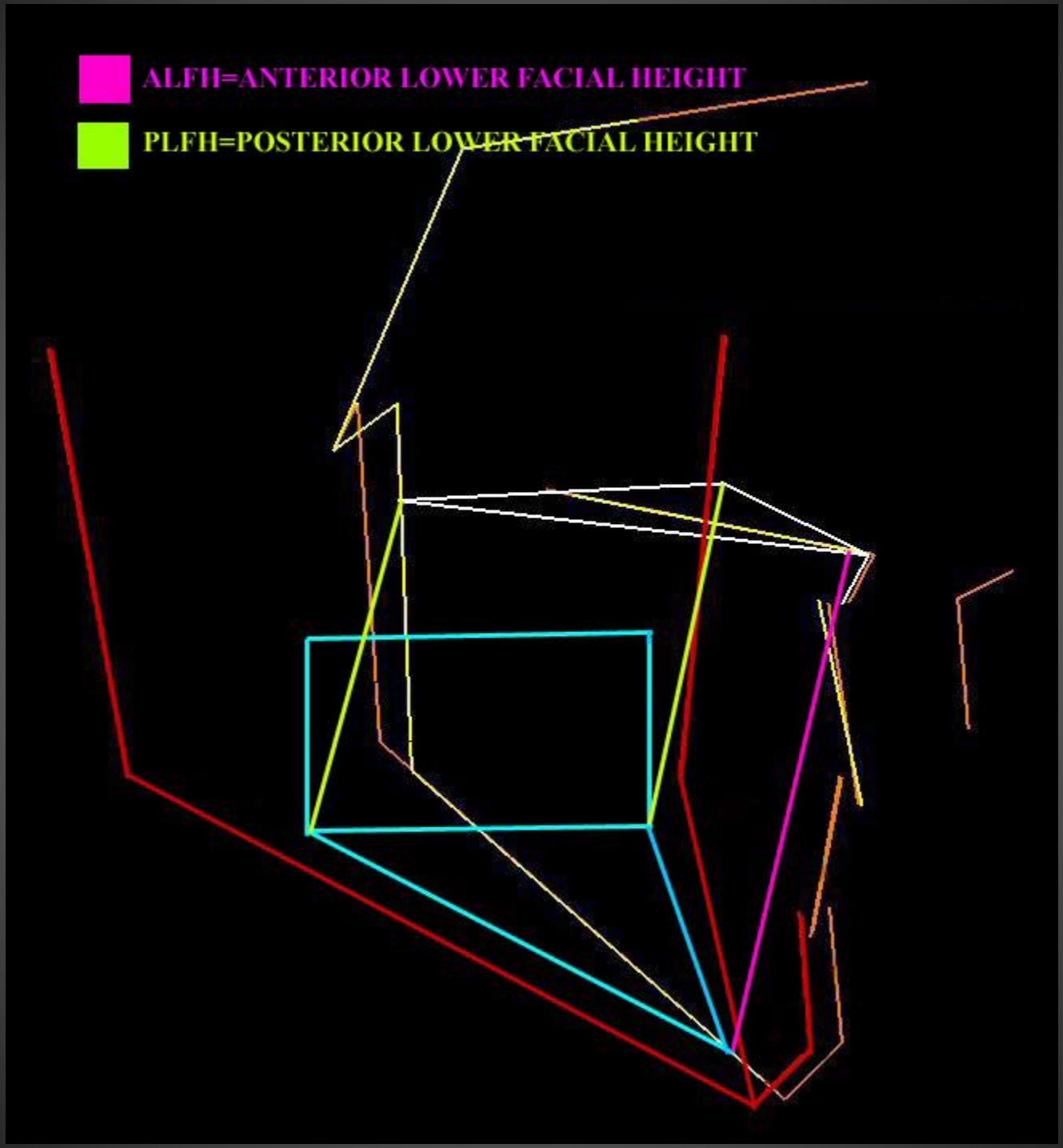
DISTANCES FROM THE MIDFACE PLANE ON A NORMAL SKULL

Távolságok az arcközépsíktól mérve

Az arcközép síkot meghatározó pontok:
Nasion,Galli,Sella,Basion,Dens

	Jobb		Bal
Orbitale	-35.0		36.6
Zygomaticofrontalis	-46.1		47.5
Arcus Zygomaticus	-62.8		62.7
Porion	-52.2		50.6
Semicircularis ant.	-36.5		36.7
Spina nasalis ant.		-0.2	
A pont		-0.3	
Apertura pyriformis	-13.8		15.4
Pterygoid verticalis	82.3		82.3
Gnathion (Gn)		-0.4	
Interforamen pont		0.6	
Foramen mentale	-21.6		22.8
Gonion	-42.9		44.3
Articulare	-48.2		47.0
Condylion	-48.4		47.7
Proc. Coronoideus	-47.2		48.4
1.1. és 2.1. apex	-4.0		3.6
1.1. és 2.1. korona	-5.4		4.2
1.3. és 2.3. apex	-13.6		13.2
1.3. és 2.3. korona	-17.3		16.9
1.6. és 2.6. centrum	-22.3		21.3
1.6. és 2.6. korona	-23.2		22.8
3.1. és 4.1. apex	-2.7		1.7
3.1. és 4.1. korona	-5.4		4.2
3.3. és 4.3. apex	-14.3		11.7
3.3. és 4.3. korona	-17.3		16.9
3.6. és 4.3. centrum	-26.2		26.6
3.6. és 4.6. korona	-23.2		22.8




ALFH=ANTERIOR LOWER FACIAL HEIGHT
PLFH=POSTERIOR LOWER FACIAL HEIGHT

3D CRANIO-WIEVER

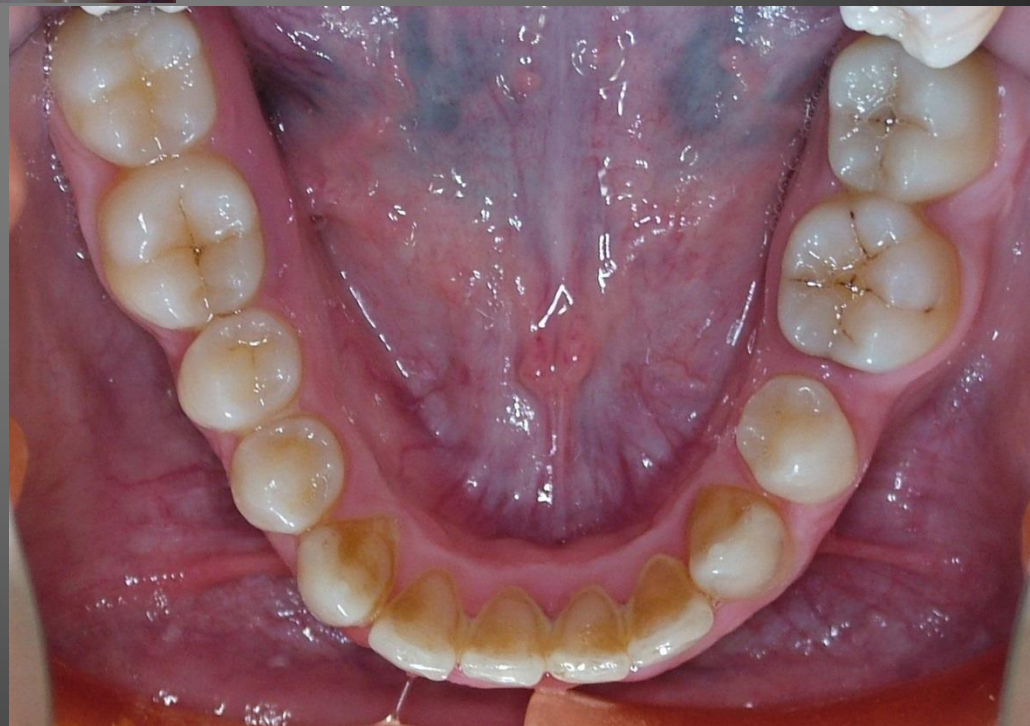



S. Andrea


S. Andrea

S. Andrea

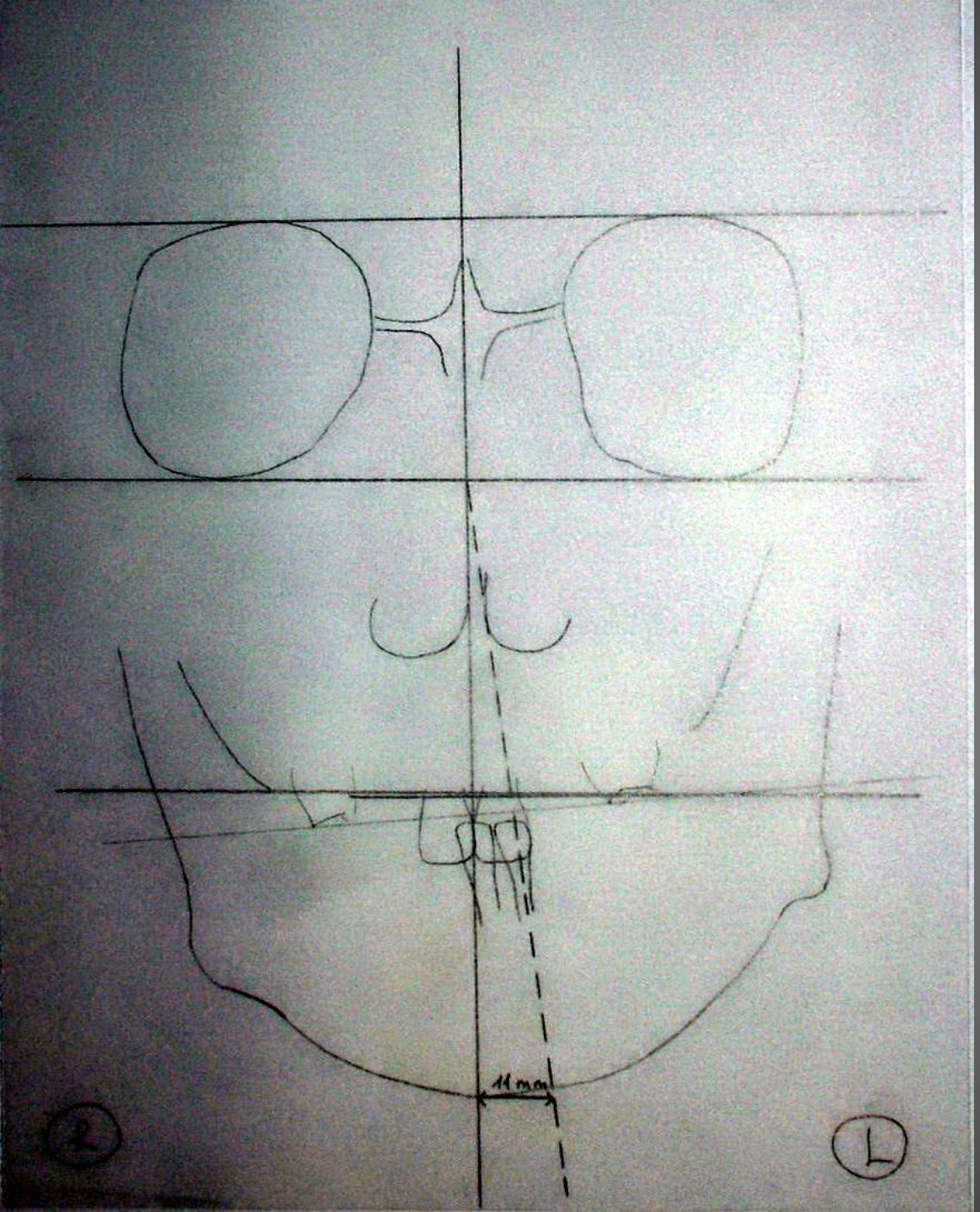
S. Andrea



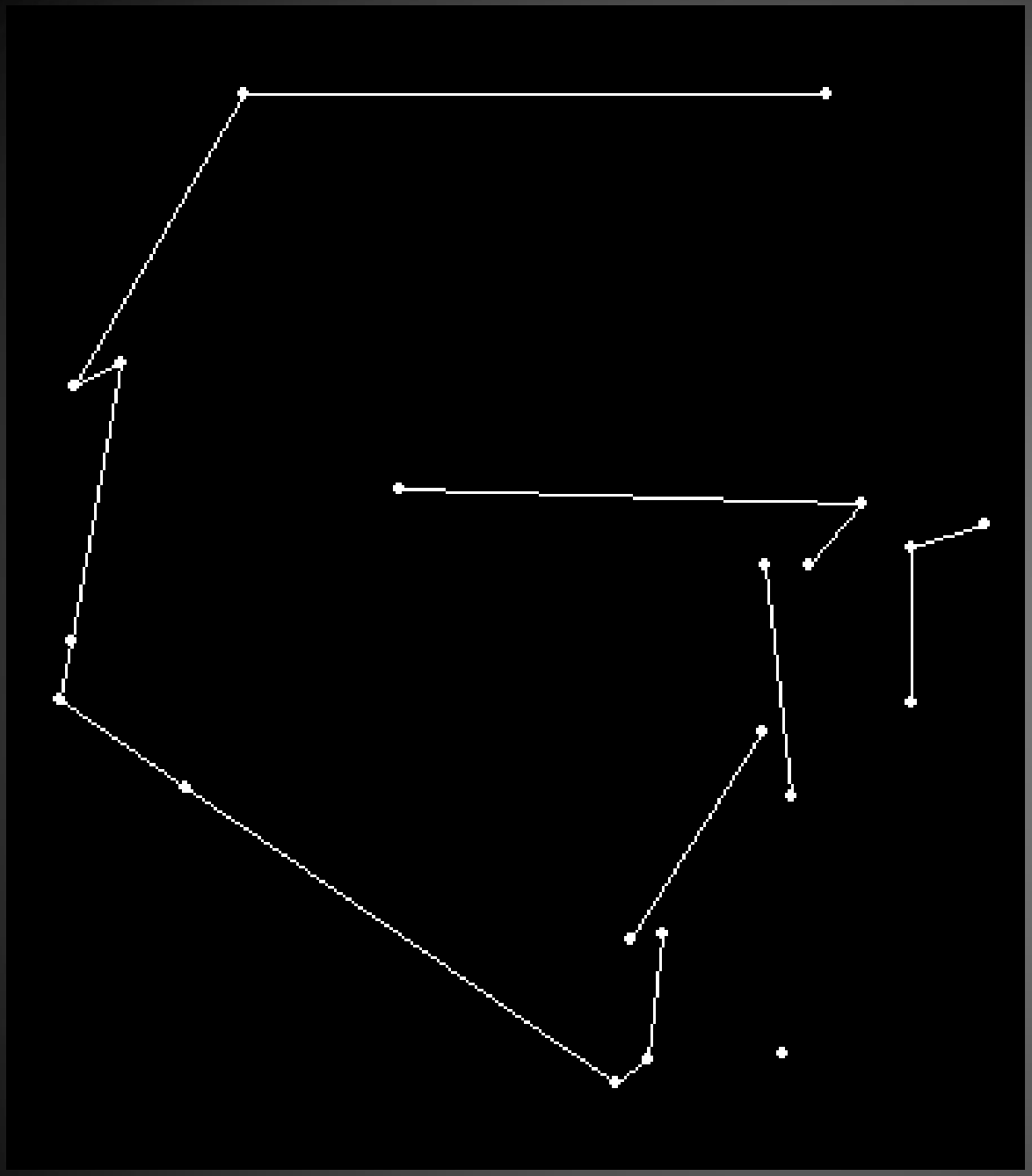
S. Andrea 2006.10.20.

The evaluation of the analog database for the treatment plan

S. Andrea

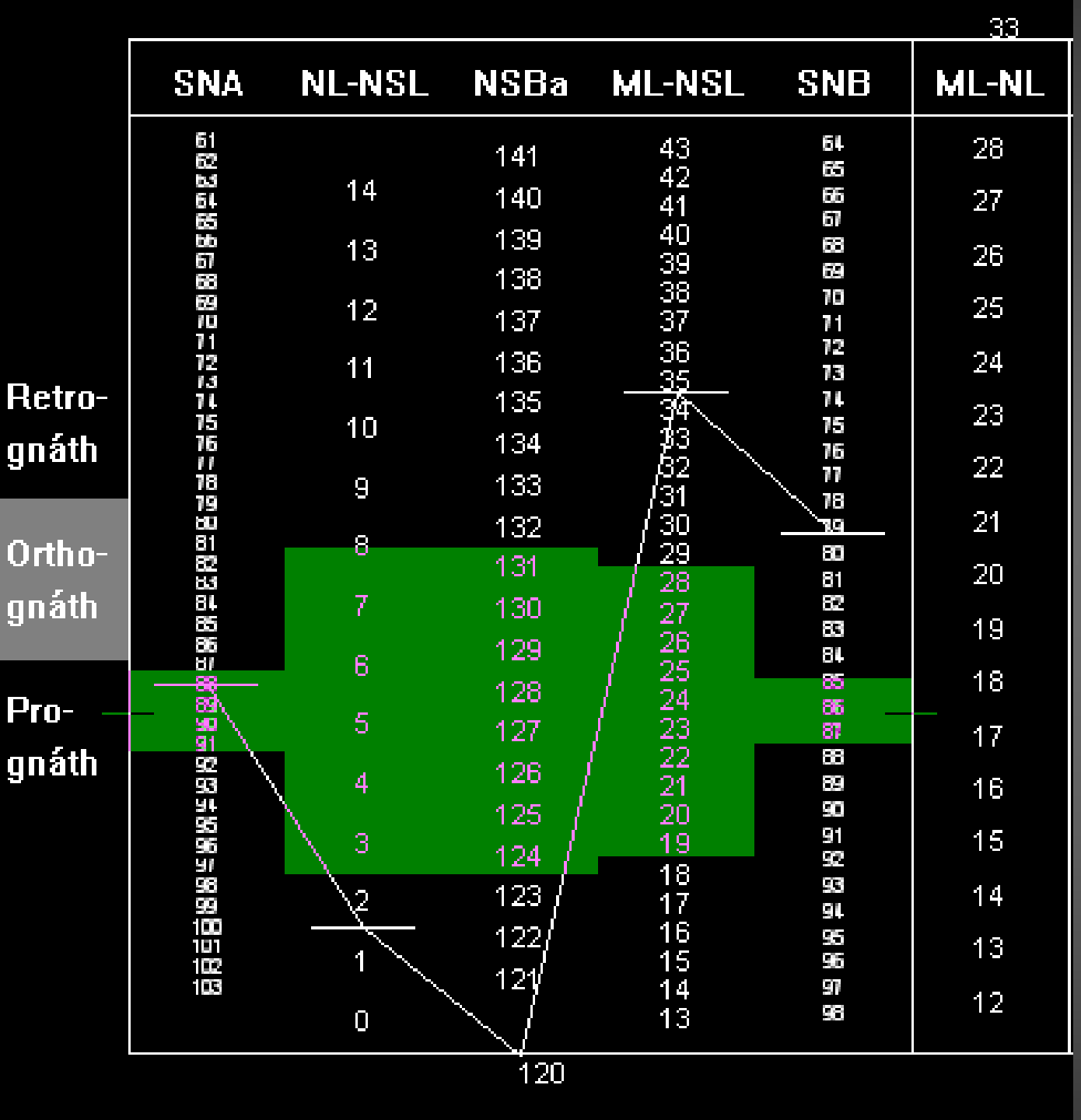


S. Andrea



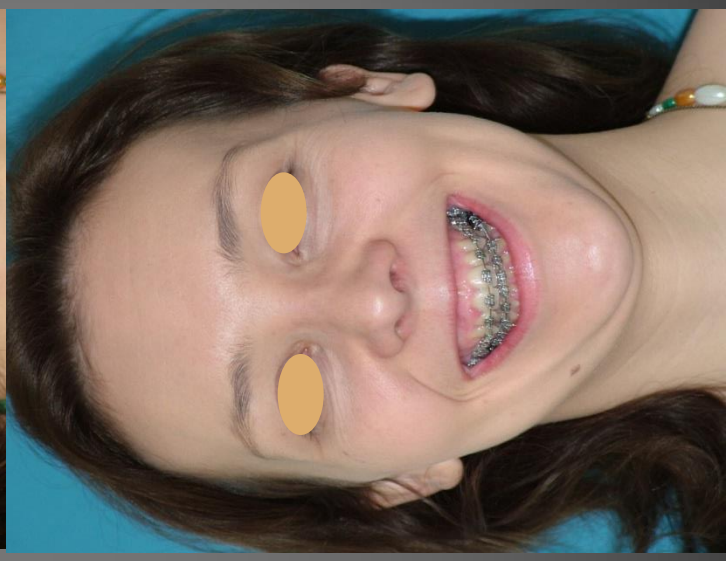
		2005.12.16.
SNA	82	87,7
SNB	80	79,0
ANB	2	8,7
SNPg	81	79,6
NSBa	130	119,7
Gn-tgo-Ar	126	114,2
N szög	58	62,0
H szög	8	9,1
ML-NSL	32	34,6
NL-NSL	8,5	1,6
ML-NL	23,5	33,0
N-Sp' (mm)		50,7
Sp'-Gn (mm)		72,7
N-Sp'/Sp'-Gn (79%)		69,7
T-?	131	141,3
?-NA (szög)	22	8,5
T-NB (szög)	25	21,4
?-NA (mm)	4	-0,9
T-NB (mm)	4	7,4
Pg-NB		1,2
T-NPg		6,6
NasoLab	110	108,6
Tweed		87,9

S. Andrea

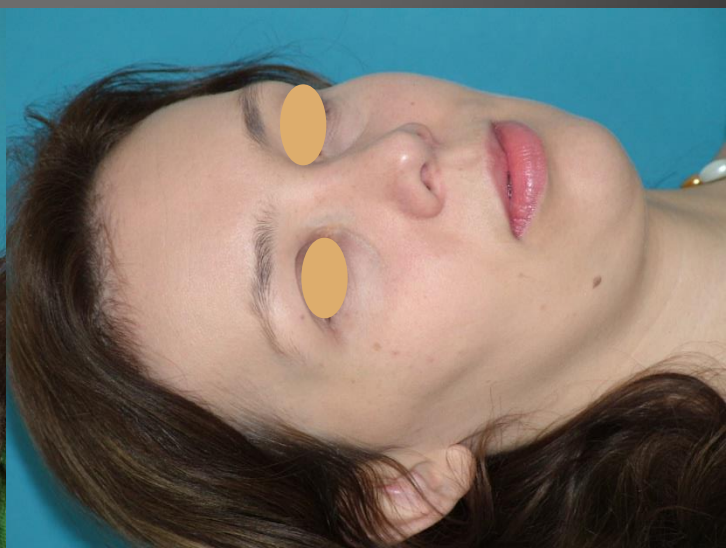

SNA
NL-NSL
NSBa
ML-NSL
SNB
ML-NL
33
120
Retro-
gnáth
Ortho-
gnáth
Pro-
gnáth

S. Andrea

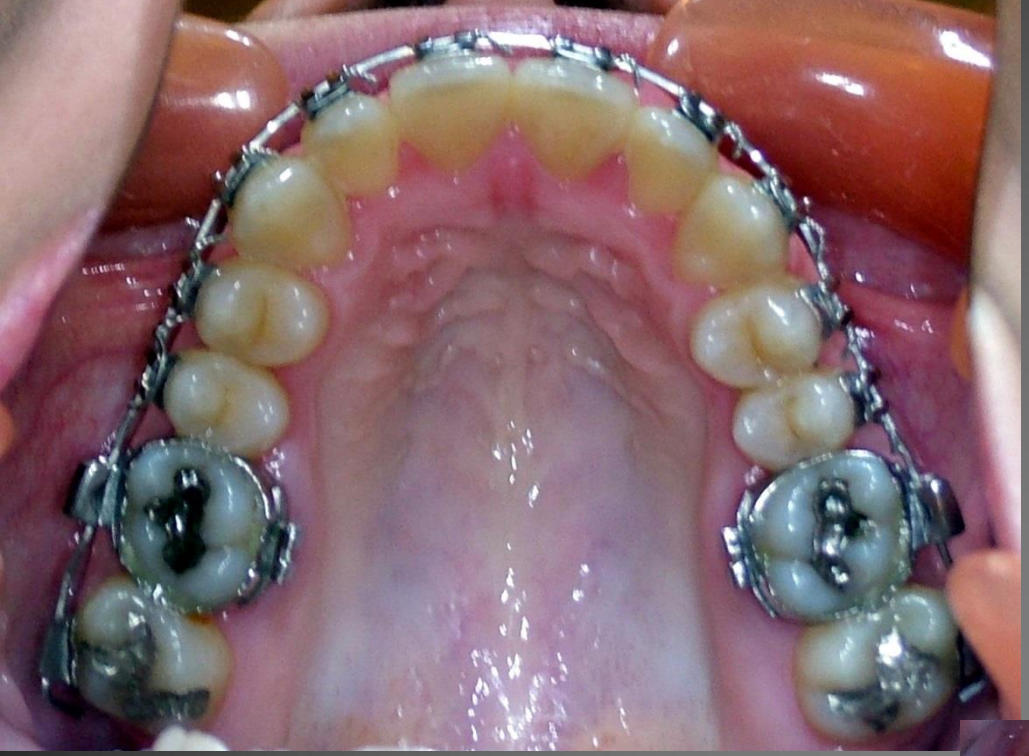


S. Andrea

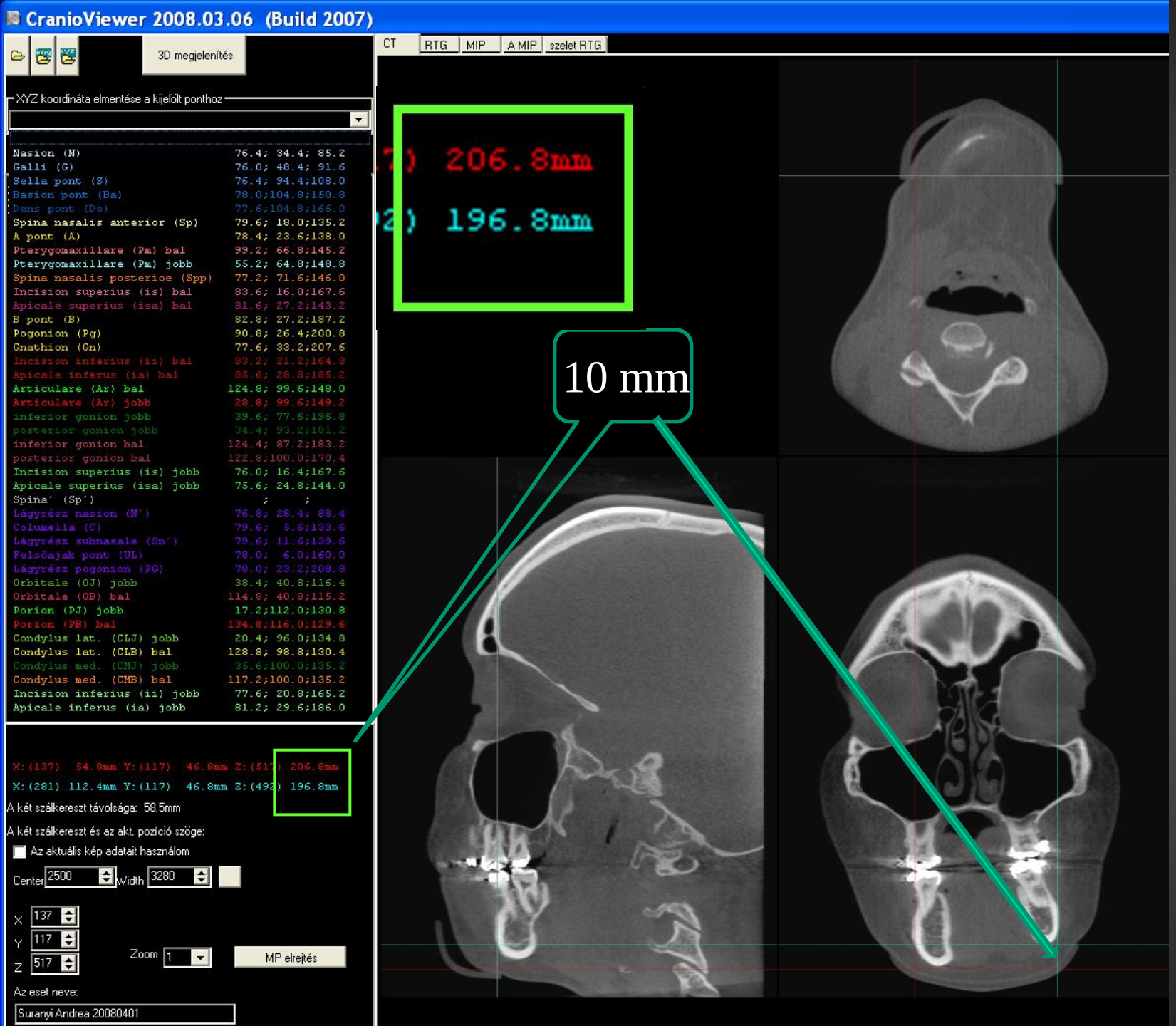
S. Andrea



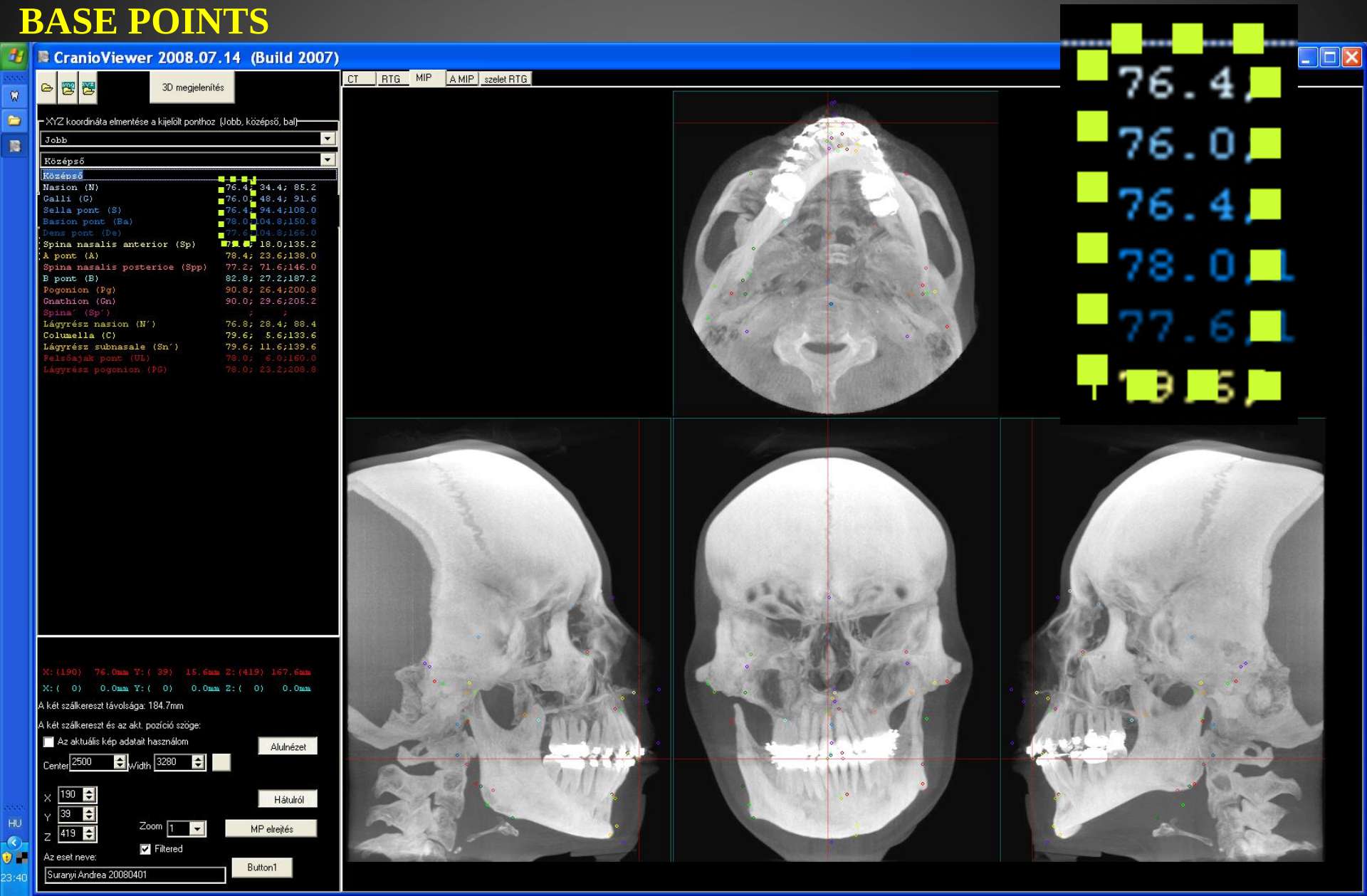
S. Andrea

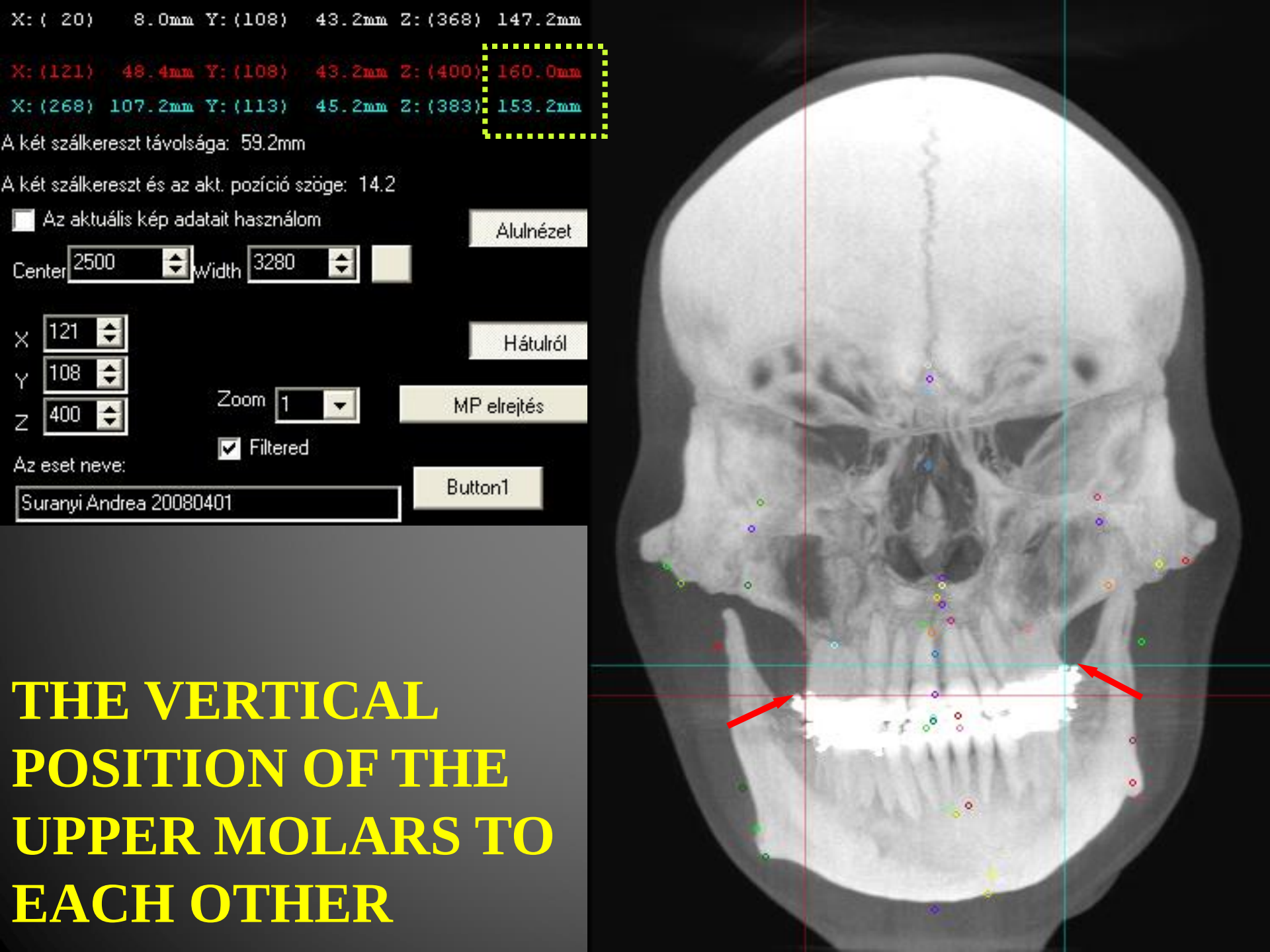
SYMMETRY EVALUATION WITH THE HELP OF THE CRANIO-VIEWER SOFTWARE

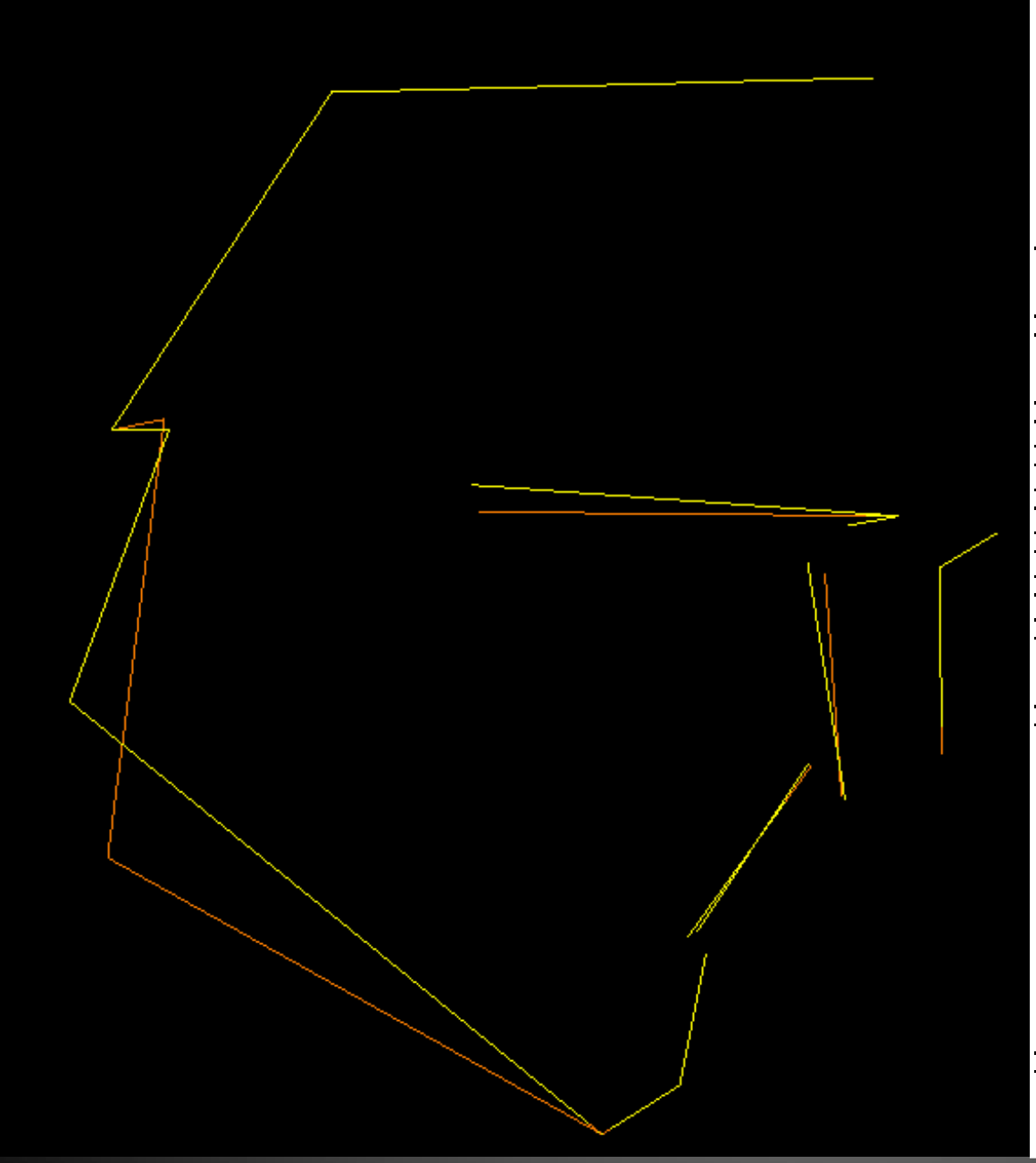
THE HEIGHT OF THE CORPUS MANDIBULAE ON CBCT DATABASE



THE POINTS OF THE SKULL BASE ON „X” AXIS DEVIATES 2 MM FROM THE FACIAL MIDPLANE WHICH IS GENERATED FROM THE 5 SKULL BASE POINTS




X:(20) 8.0mm Y:(108) 43.2mm Z:(368) 147.2mm
X:(121) 48.4mm Y:(108) 43.2mm Z:(400) 160.0mm
X:(268) 107.2mm Y:(113) 45.2mm Z:(383) 153.2mm
A két szálkereszt távolsága: 59.2mm
A két szálkereszt és az akt. pozíció szöge: 14.2
Az aktuális kép adatait használom
Alulnézet
Center 2500
Width 3280
X 121
Y 108
Z 400
Hátulról
Zoom 1
MP elrejtés
Filtered
Az eset neve:
Suranyi Andrea 20080401
Button1
THE VERTICAL POSITION OF THE UPPER MOLARS TO EACH OTHER



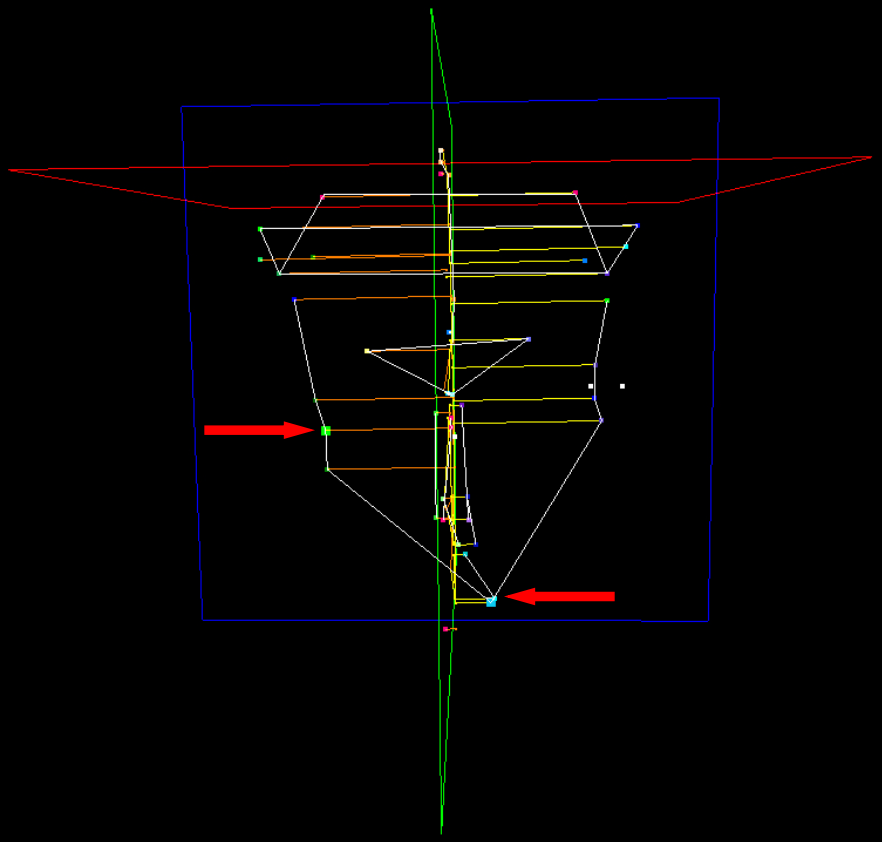
S: Andrea 20080401

	Jobb		Bal
SNA:		80.8	
SNB:		73.3	
ANB:		7.5	
SNPg:		73.2	
NSBa:		124.4	
Gn-tgo-Ar:	115.9		112.5
N szög:	71.8		62.9
H szög:		23.5	
ML-NSL:	35.4		44.3
NL-NSL:	5.3		8.7
ML-NL:	30.1		35.7
N-Sp' (mm):		54.0	
Sp'-Gn (mm):		68.4	
N-Sp'/Sp'-Gn		78.9	
T_1:	137.6		135.0
1-NA (szög):	8.0		13.1
T-NB (szög):	26.8		24.4
1-NA (mm):	1.1		1.5
T-NB (mm):	7.9		7.6
Pg-NB:		0.1	
T-NPg:	8.0		7.7
NasoLab:		60.3	
Tweed:	88.4		81.8

THE APPERENCE OF THE 3D DATABASE IN 2D

Suranyi Andrea 20080401 koponyájának megjelenítése

File View



Rajzelemek | Síkok

Arcközép sík meghatározás

Használt pontok:

- Nasion
- Galli
- Sella
- Basion
- Dens

2D Hasund kefalometria

Exportálás a SMILE-ba

Rotate X 117 Rotate Y 360 Rotate Z 182

Első pont: 15 Gnathion (Gn) X: 70.0mm Y: 29.6mm Z: 205.2mm

Második pont: 44 Gonion jobb X: 122.4mm Y: 90.0mm Z: 190.4mm

Szög csúcsa: 0 X: Y: Z:

Első pont: 15 Gnathion (Gn) X: 70.0mm Y: 29.6mm Z: 205.2mm

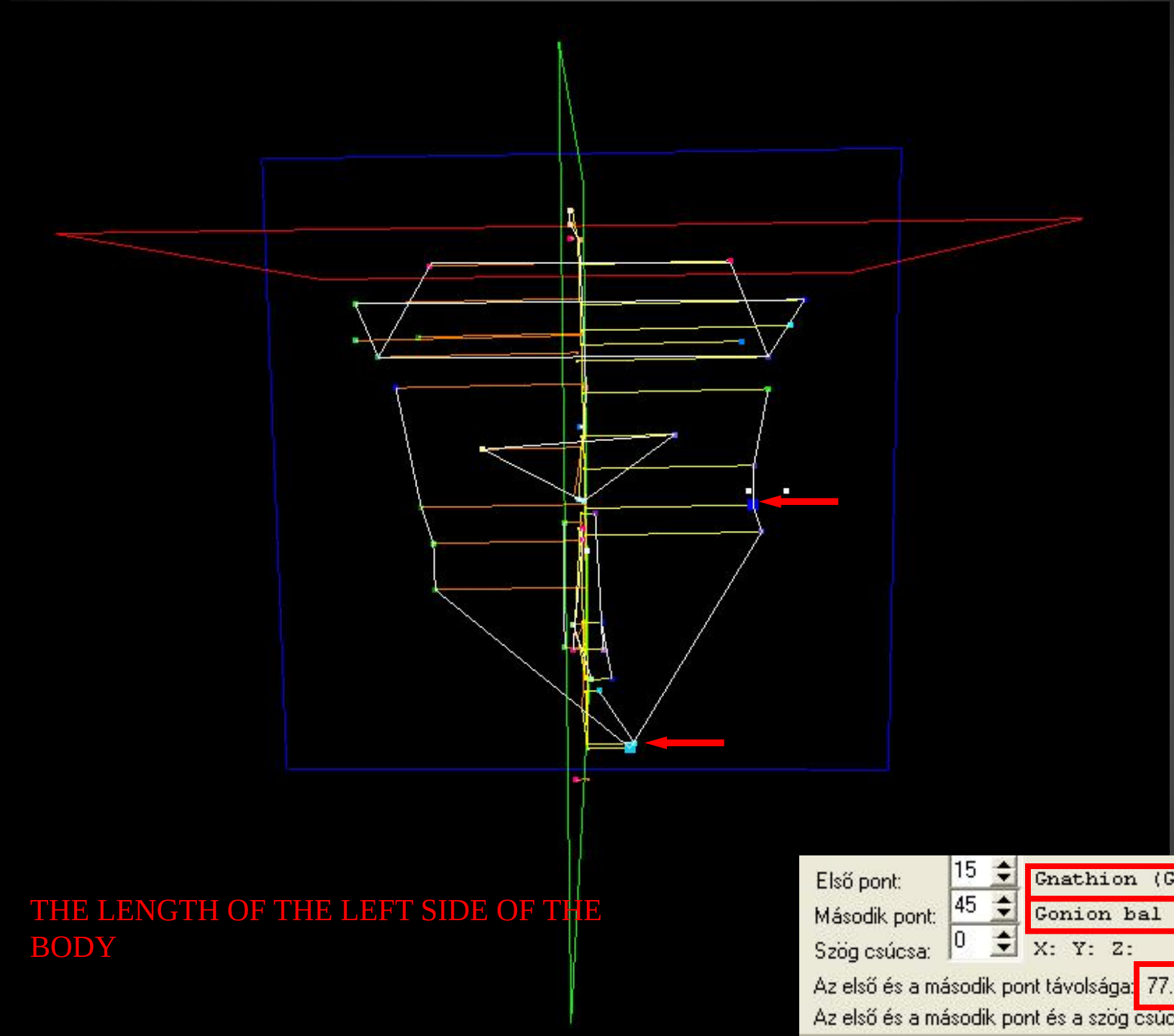
Második pont: 44 Gonion jobb X: 122.4mm Y: 90.0mm Z: 190.4mm

Szög csúcsa: 0 X: Y: Z:

Az első és a második pont távolsága 81.3mm

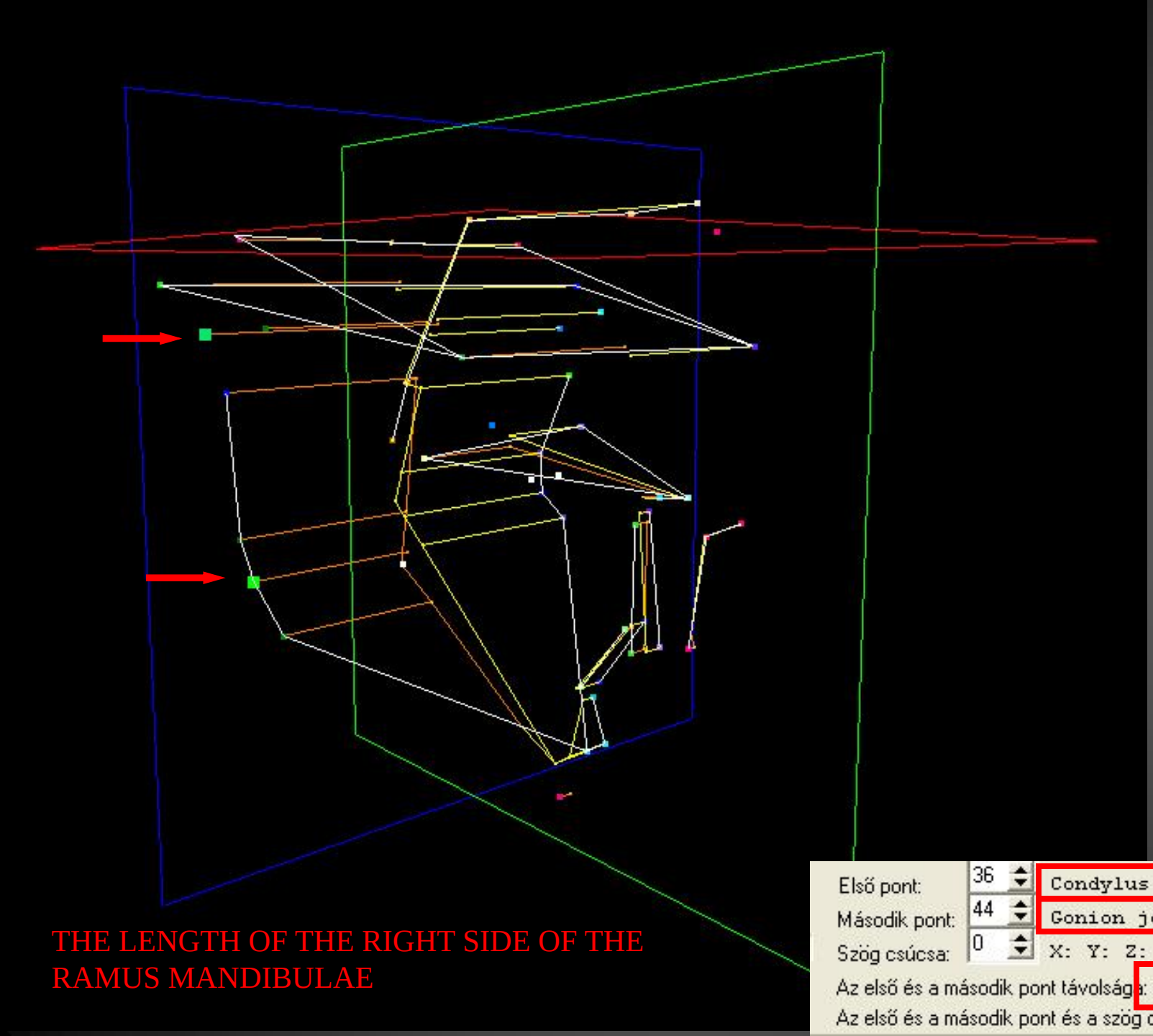
Az első és a második pont és a szög csúcsa közti szög: 19.3

THE LENGTH OF THE RIGHT SIDE OF THE BODY



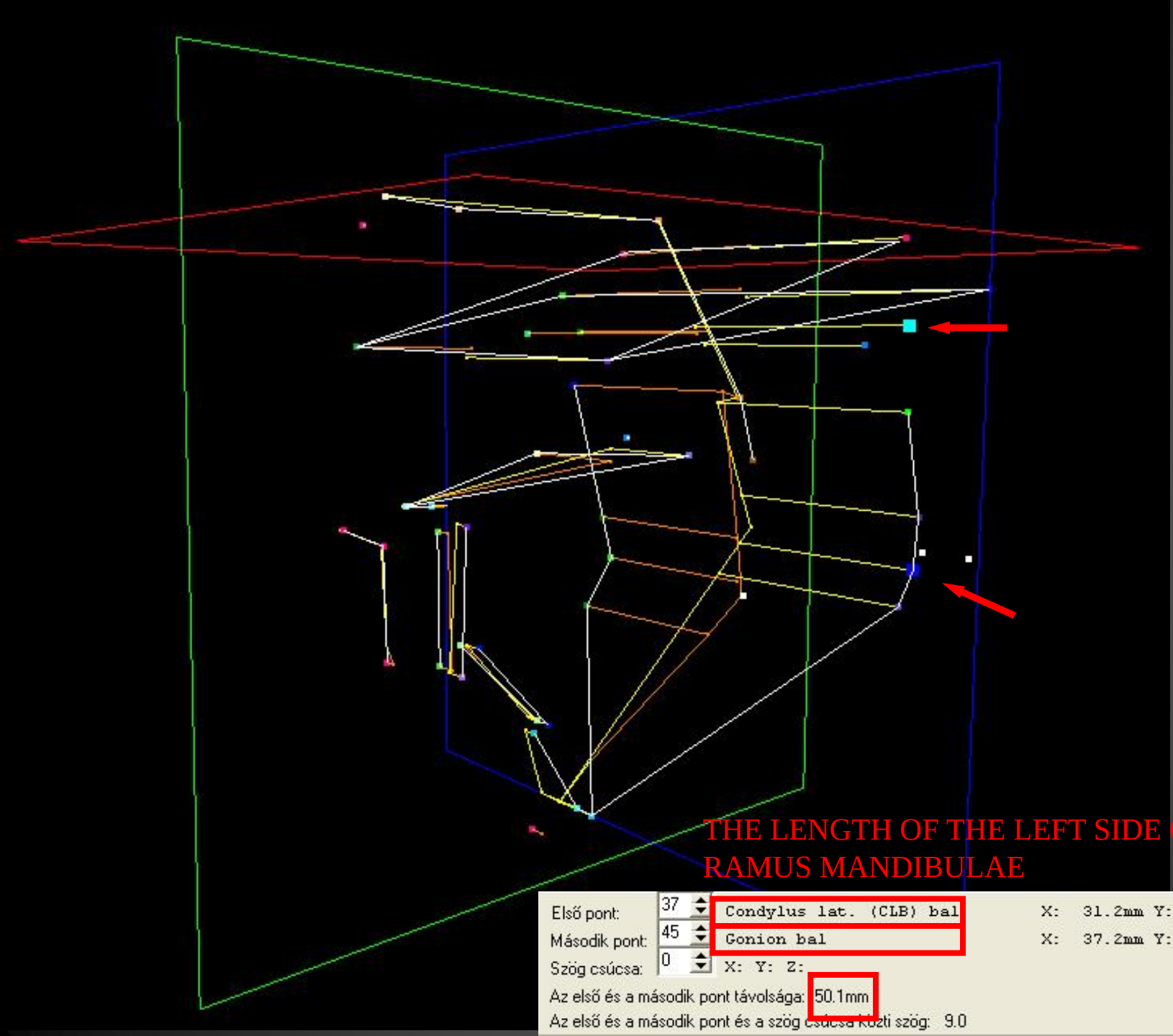
THE LENGTH OF THE LEFT SIDE OF THE BODY

Első pont: 15 Gnathion (Gn)
Második pont: 45 Gonion bal
Szög csúcsa: 0 X: Y: Z:
Az első és a második pont távolsága: 77.9mm
Az első és a második pont és a szög csúcsa közti szög: 20.8



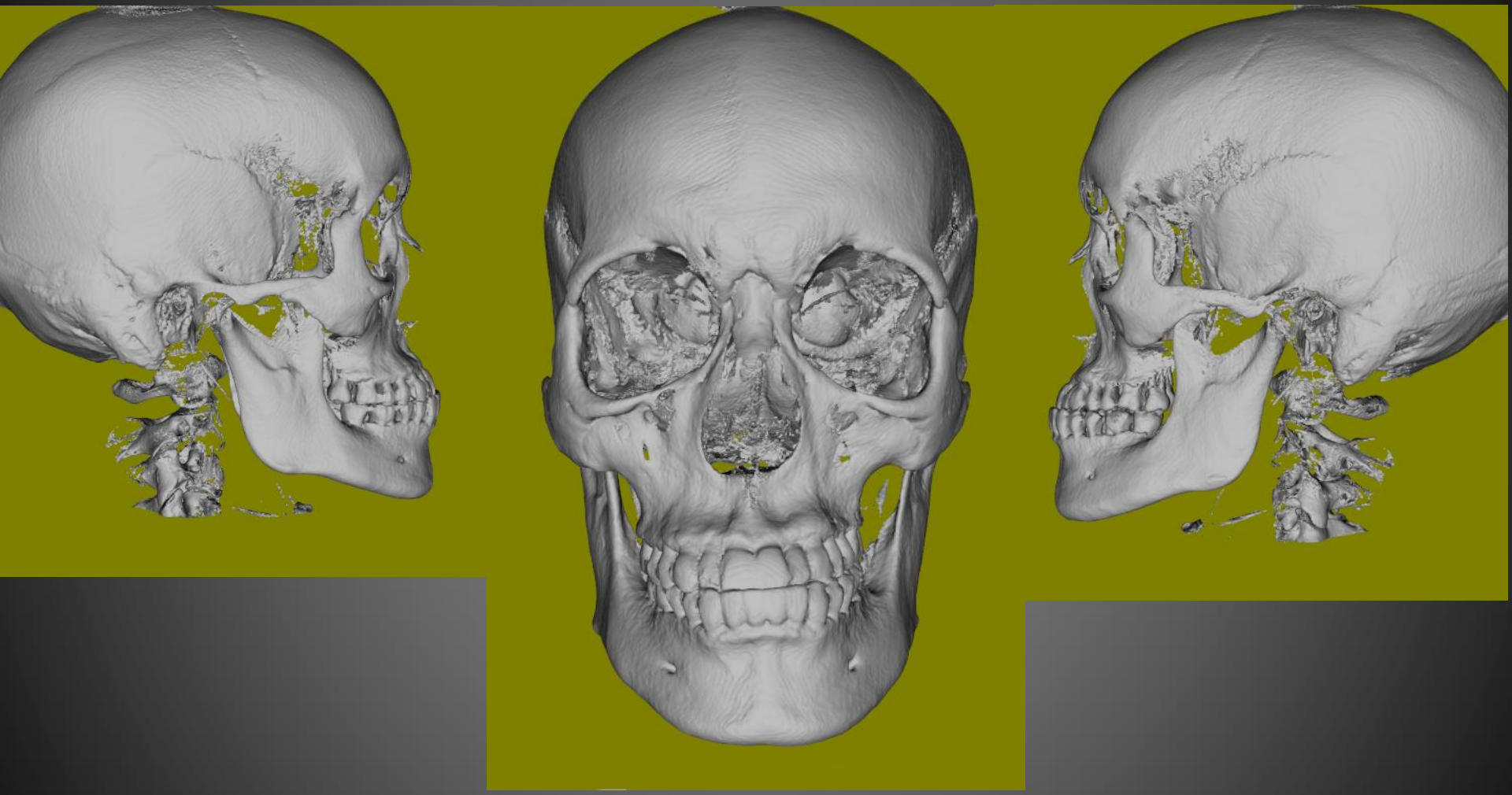
THE LENGTH OF THE RIGHT SIDE OF THE RAMUS MANDIBULAE

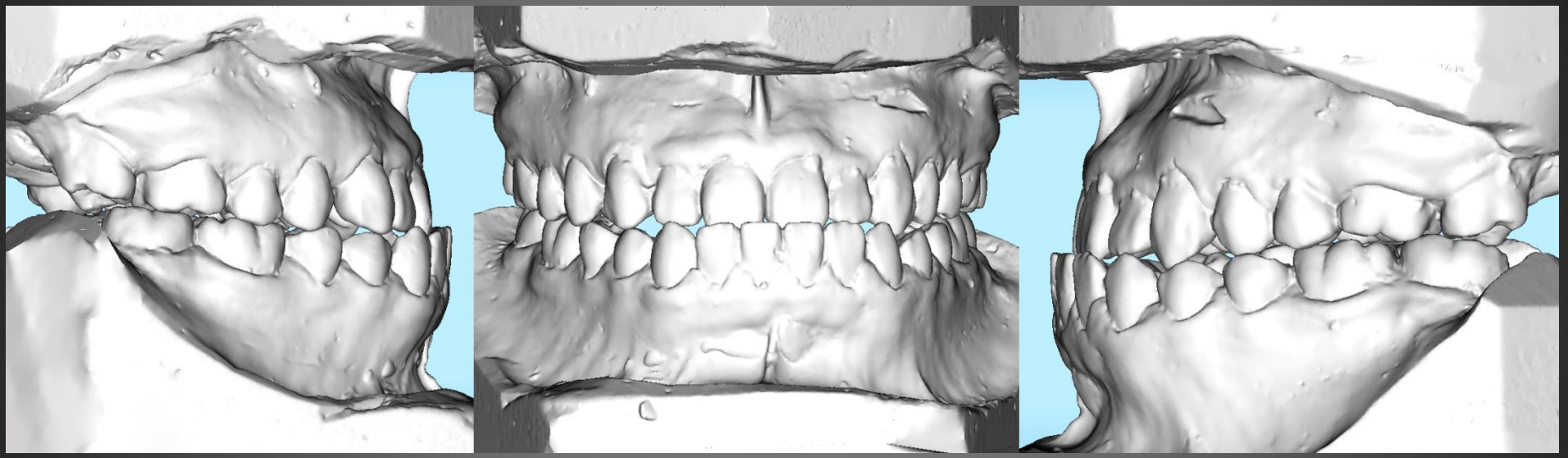
Első pont: 36 Condylus lat. (CLJ) jobb
Második pont: 44 Gonion jobb
Szög csúcsa: 0 X: Y: Z:
Az első és a második pont távolsága: 58.5mm
Az első és a második pont és a szög csúcsa közti szög: 13.0

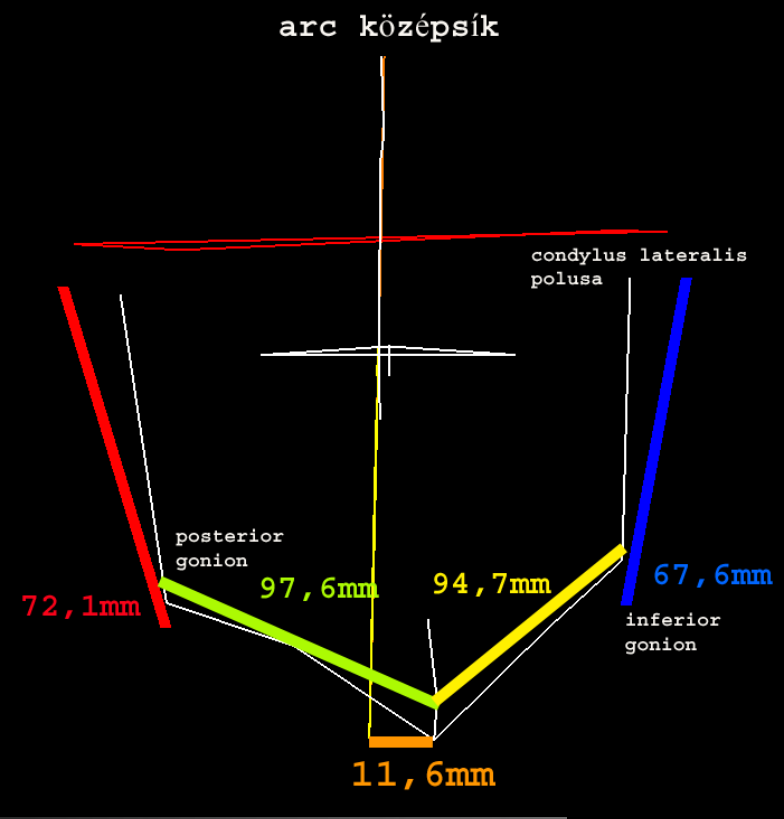


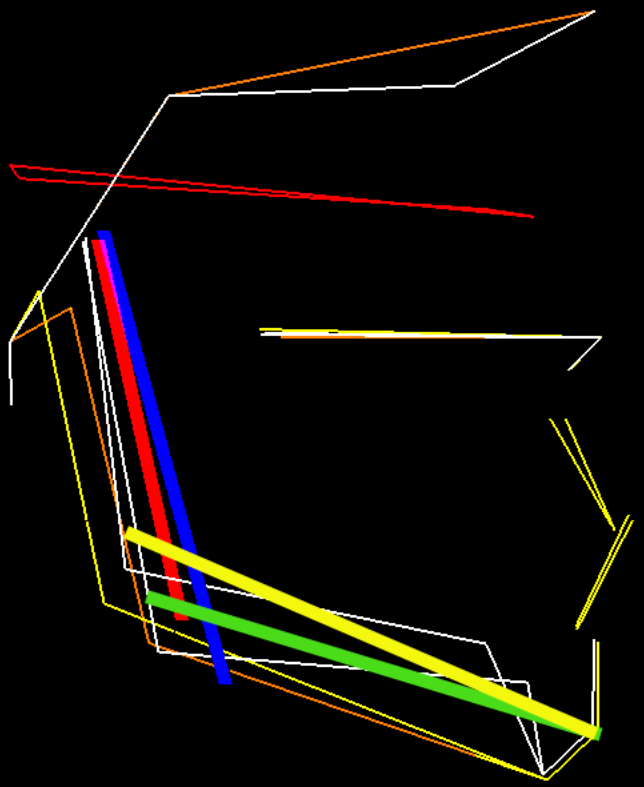
THE LENGTH OF THE LEFT SIDE OF THE RAMUS MANDIBULAE

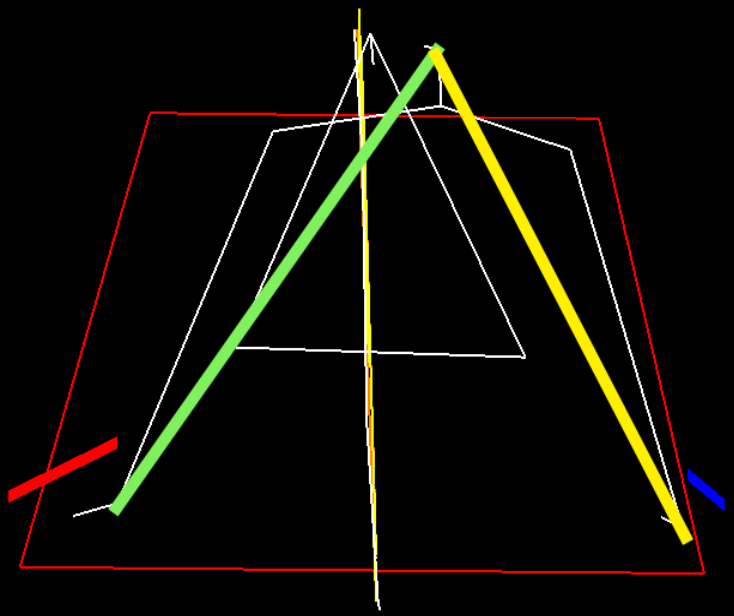
Első pont: 37 Condylus lat. (CLB) bal X: 31.2mm Y: 98.8mm Z: 130.4mm
Második pont: 45 Gonion bal X: 37.2mm Y: 95.6mm Z: 180.0mm
Szög csúcsa: 0 X: Y: Z:
Az első és a második pont távolsága: 50.1mm
Az első és a második pont és a szög csúcsa közti szög: 9.0

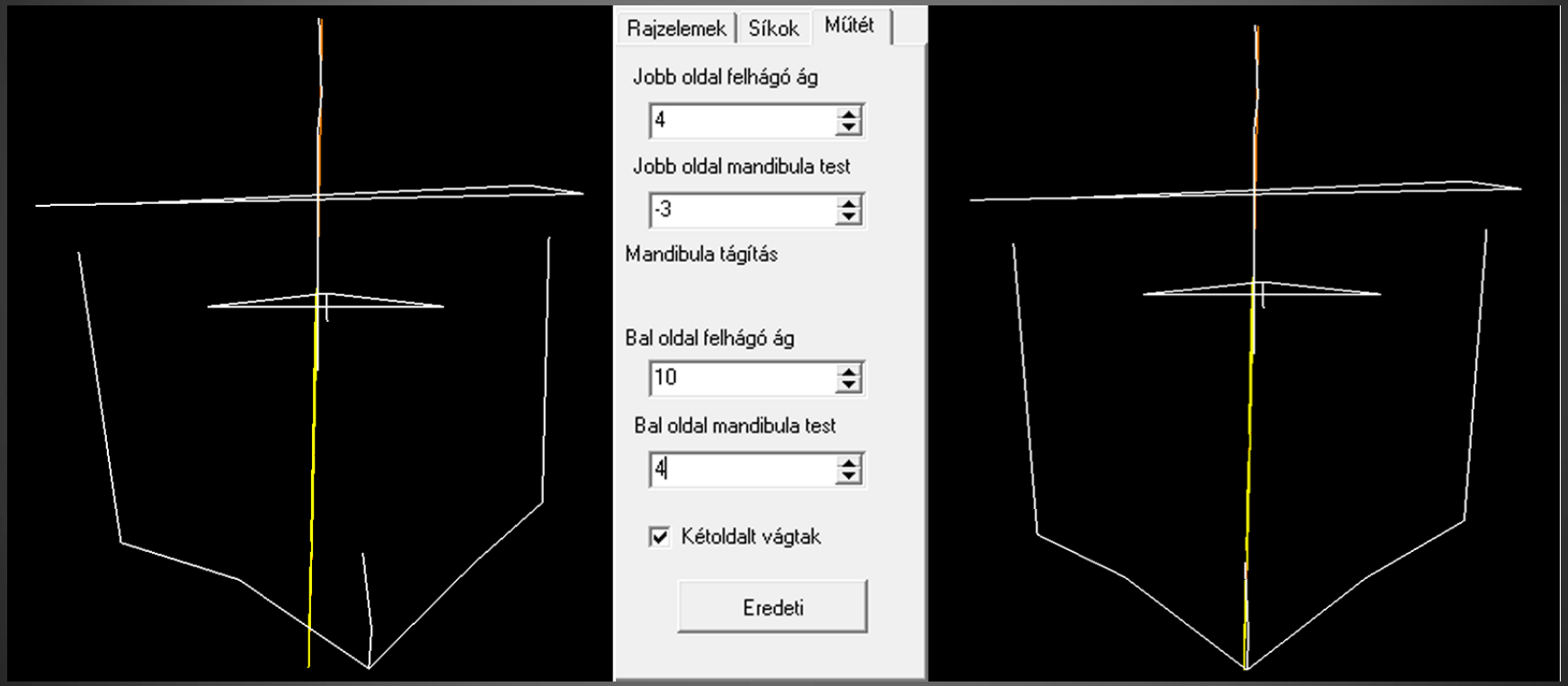


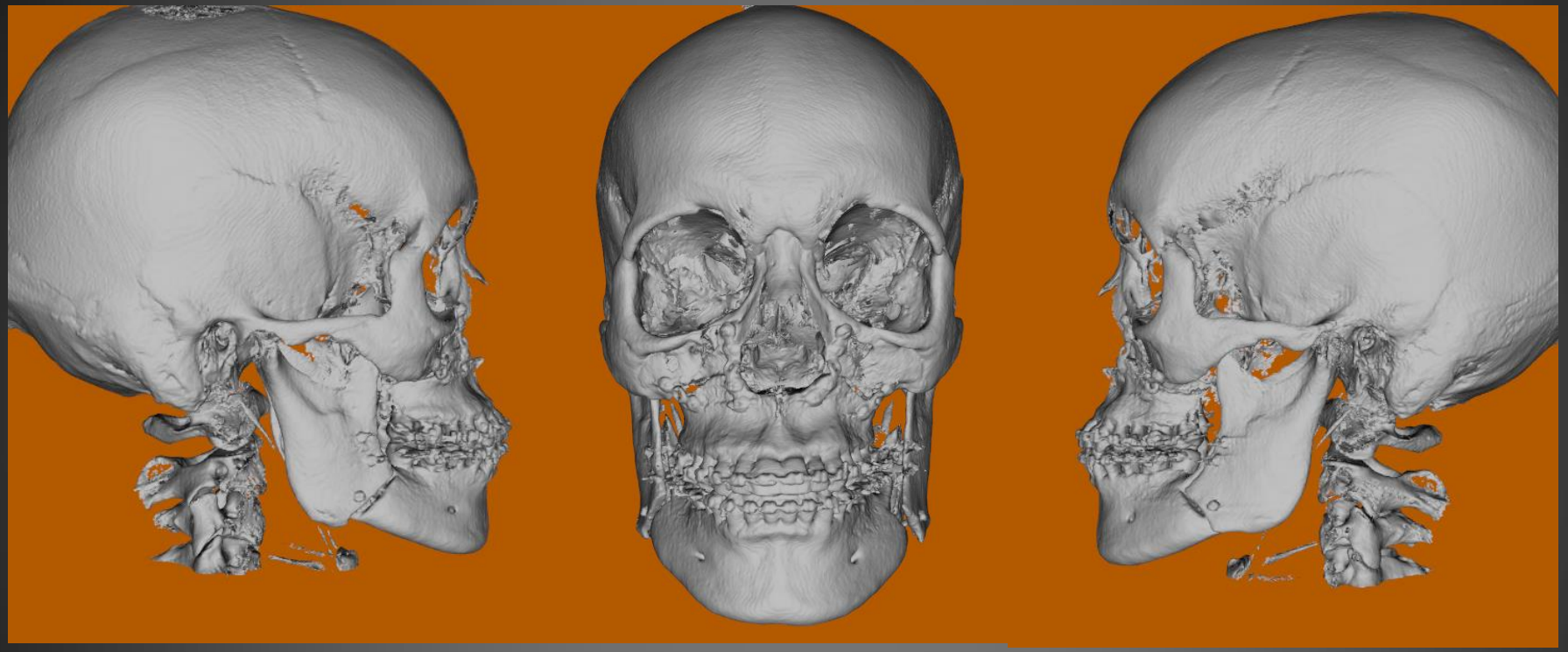


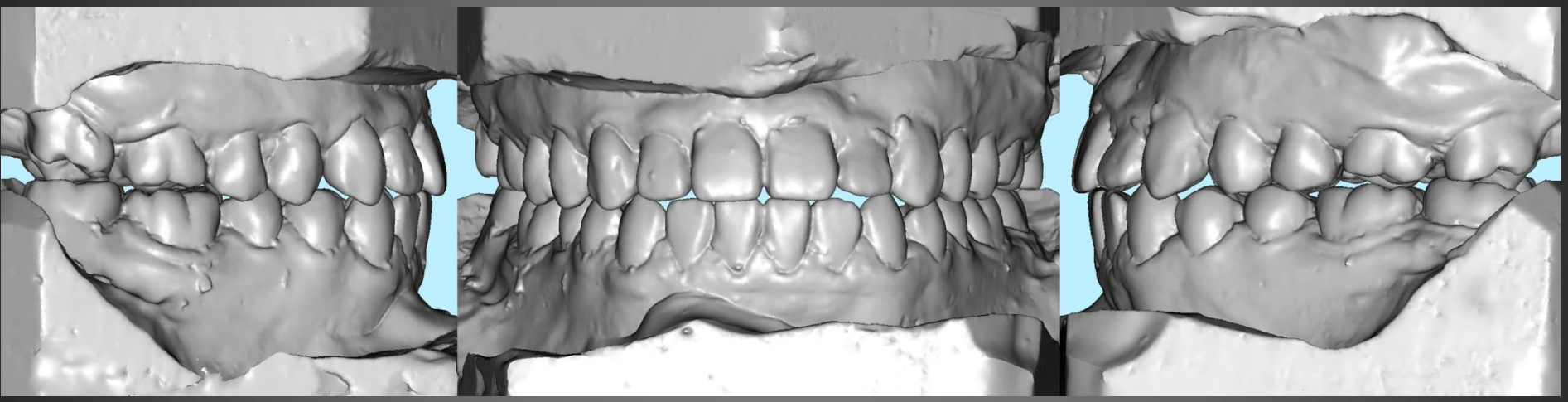

arc középsík
condylus lateralis
polusa
posterior
gonion
72,1mm
97,6mm
94,7mm
67,6mm
inferior
gonion
11,6mm

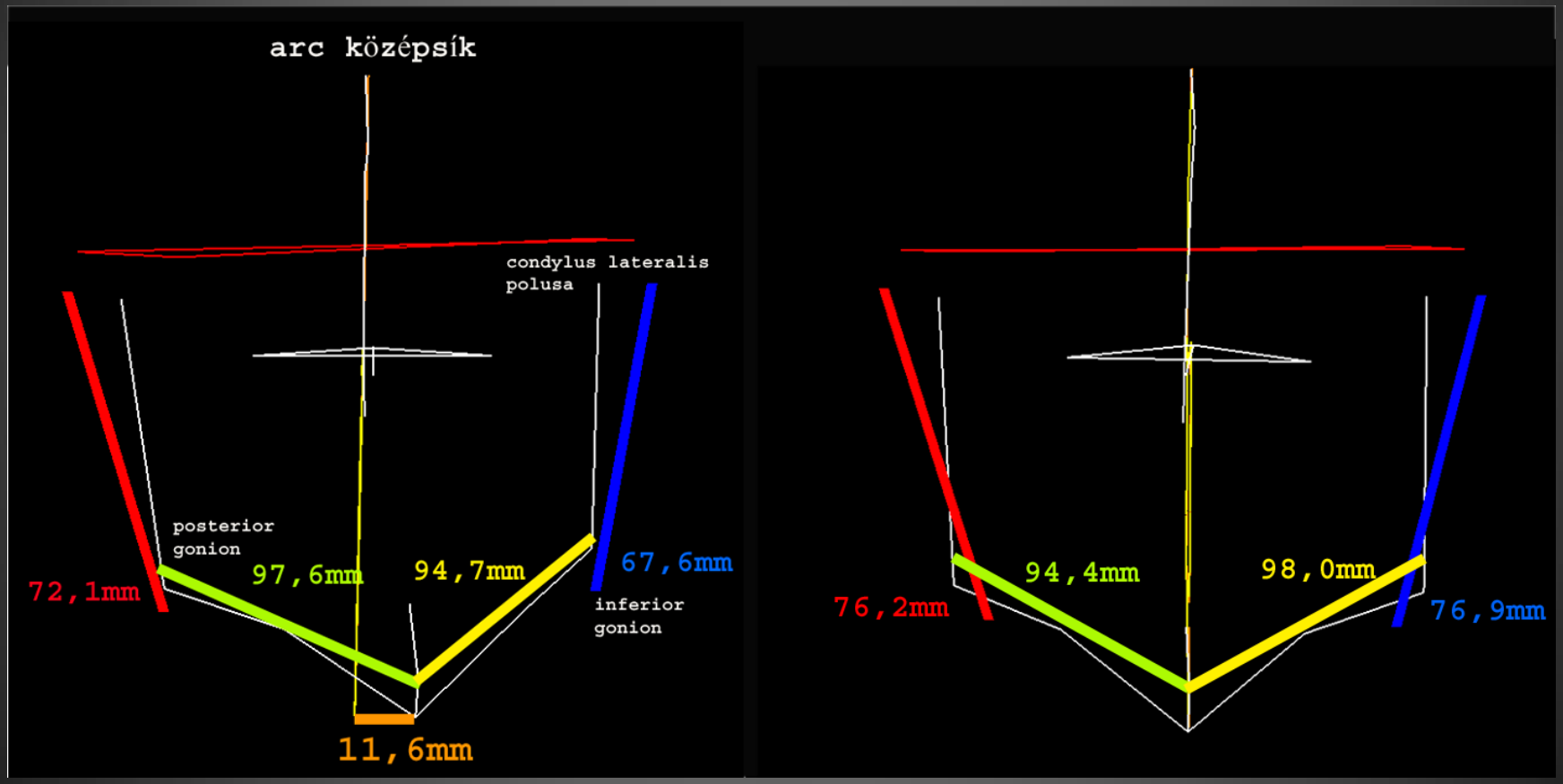





Rajzelemek
Síkok
Műtét
Jobb oldal felhágó ág
4
Jobb oldal mandibula test
-3
Mandibula tágítás
Bal oldal felhágó ág
10
Bal oldal mandibula test
4
Kétoldalt vágtak
Eredeti



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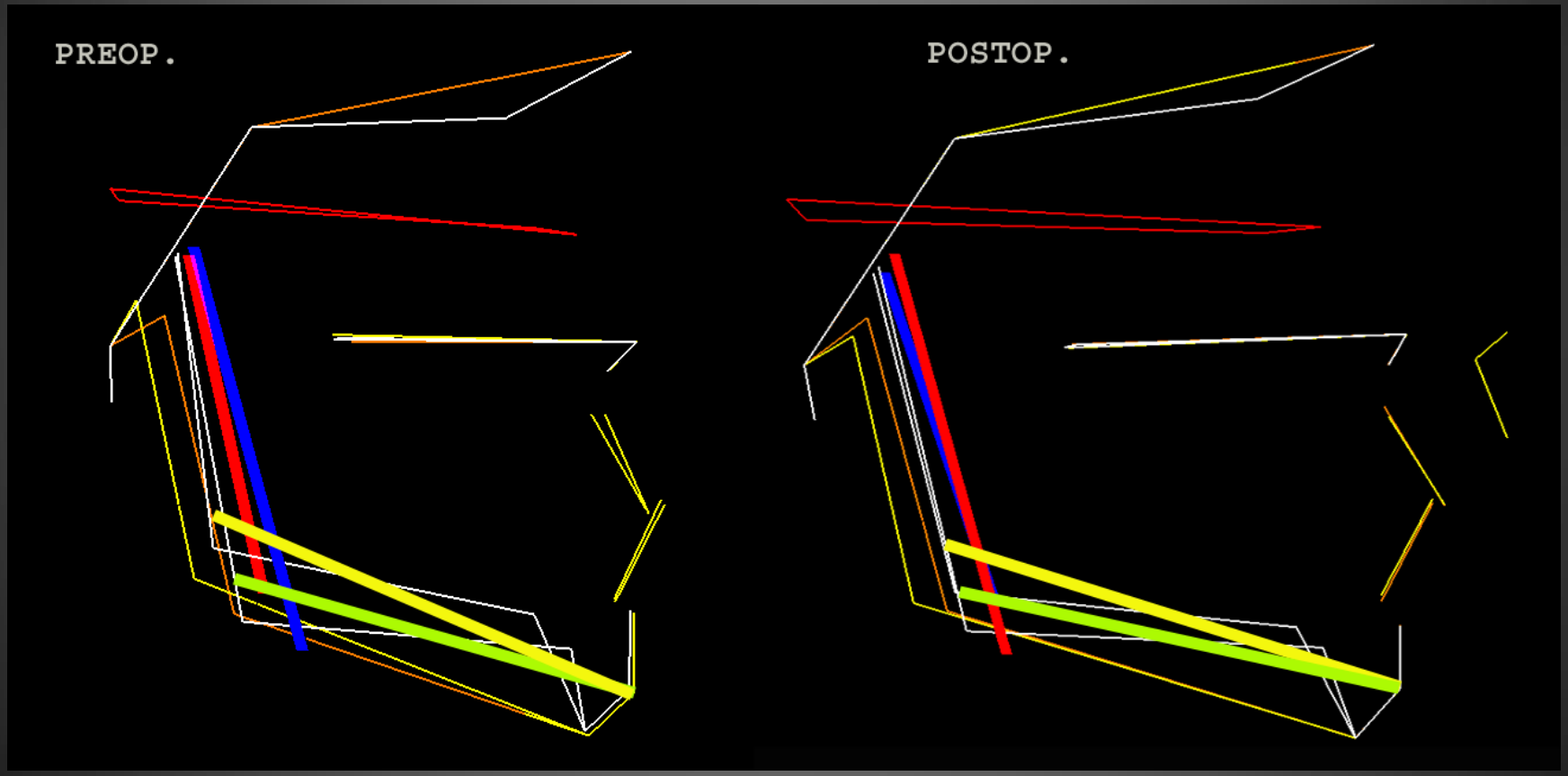
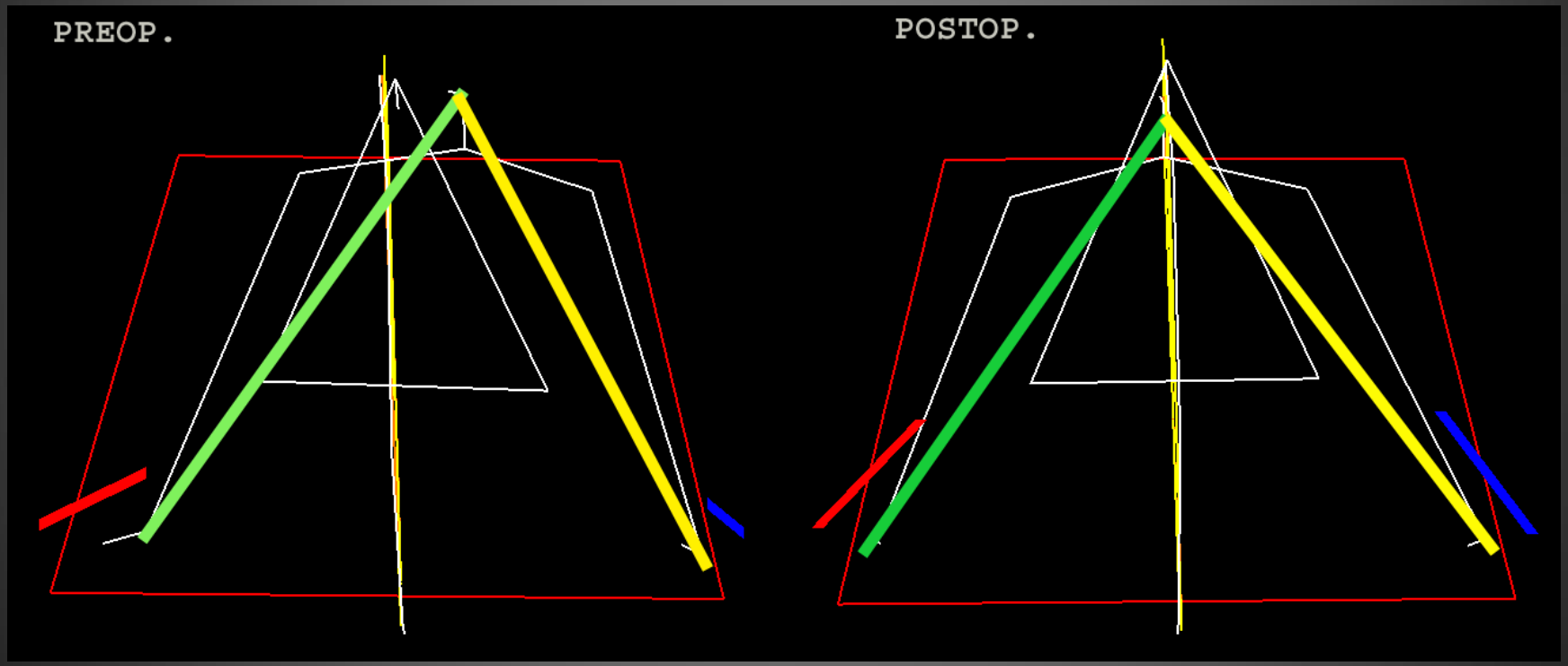
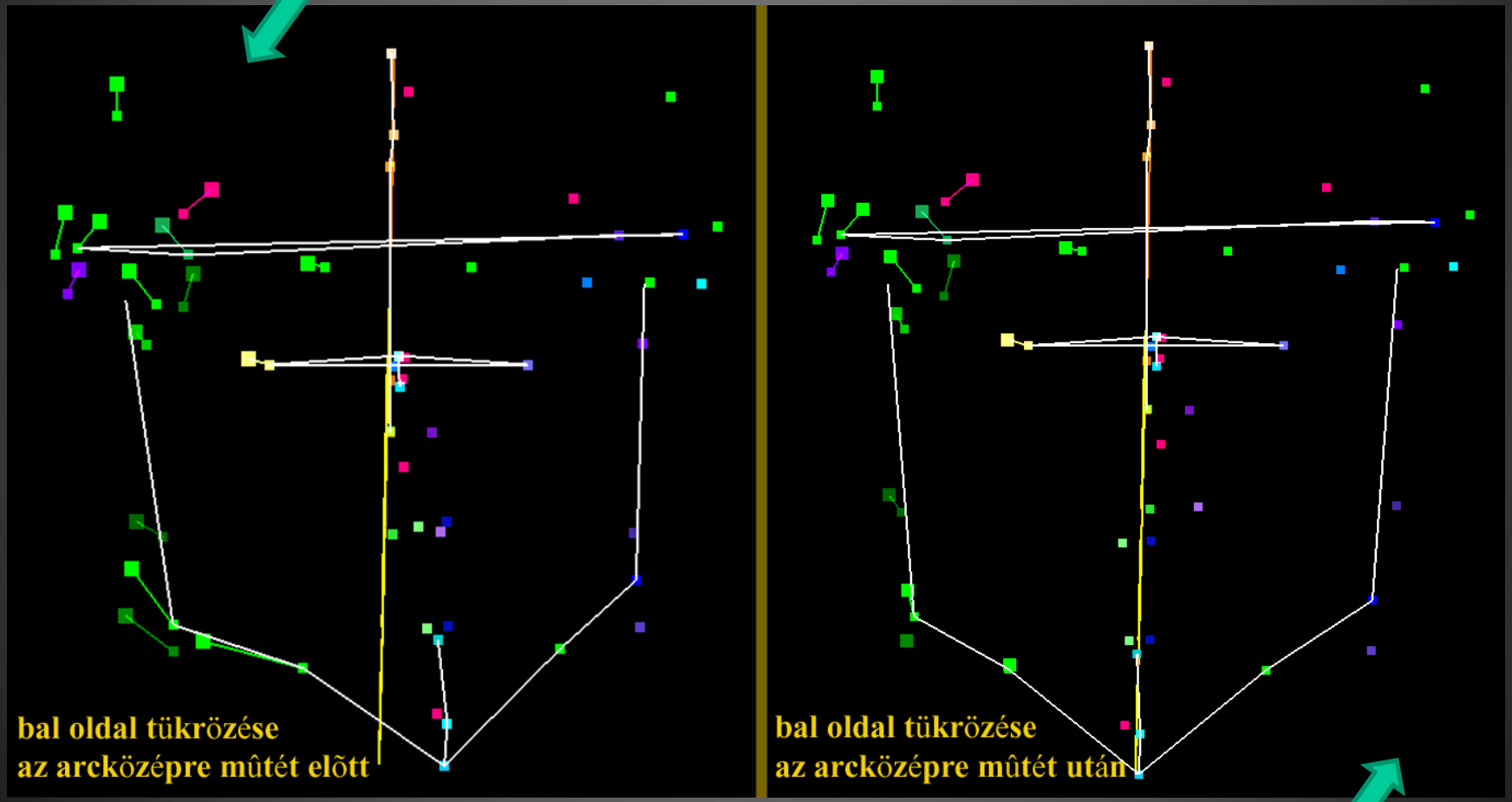
76,9mm


PREOP.
POSTOP.


PREOP.
POSTOP.

The projected left side to the midface before the operation



The projected left side to the midface after the operation