

# Diagnose und Behandlung der Klasse III Anomalien

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# Extrakt

Diagnose von Klasse III Anomalien

Behandlungs Timing von Klasse III

Behandlungsmöglichkeiten

Konservative Behandlung

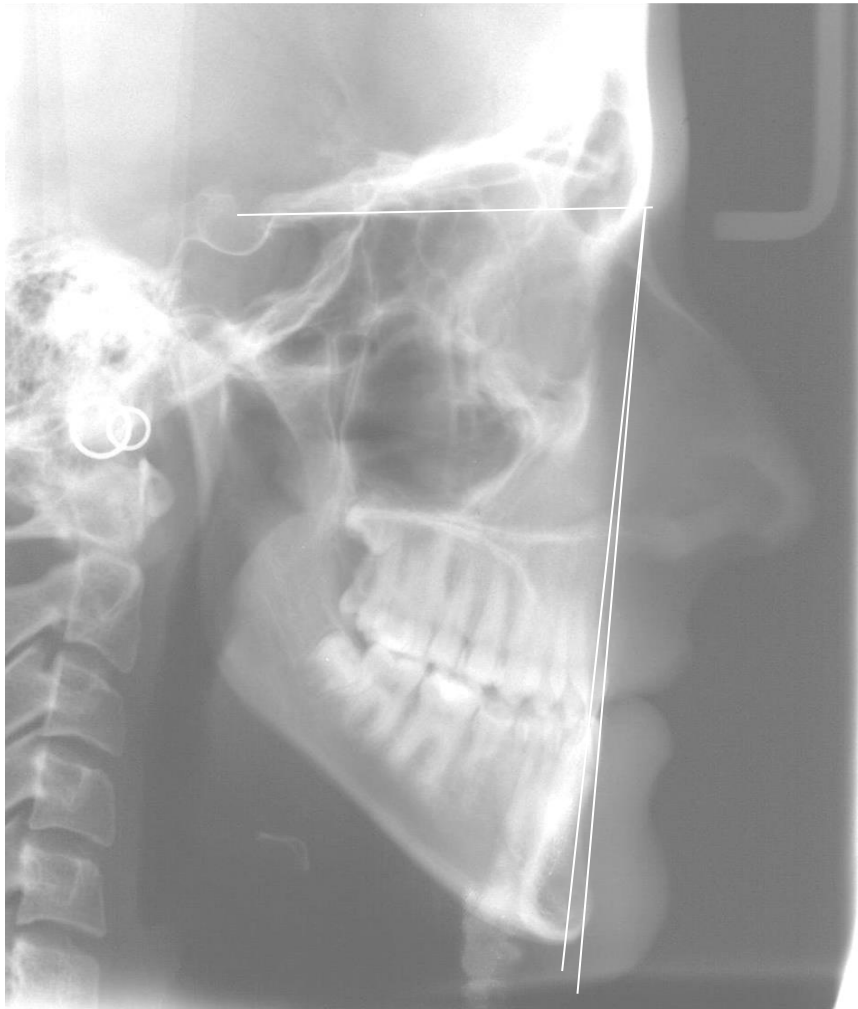
Semikonservative Behandlung

Semiinvasive Behandlung

Chirurgische Behandlung

Fall Presentationen

# Skeletale Diagnose



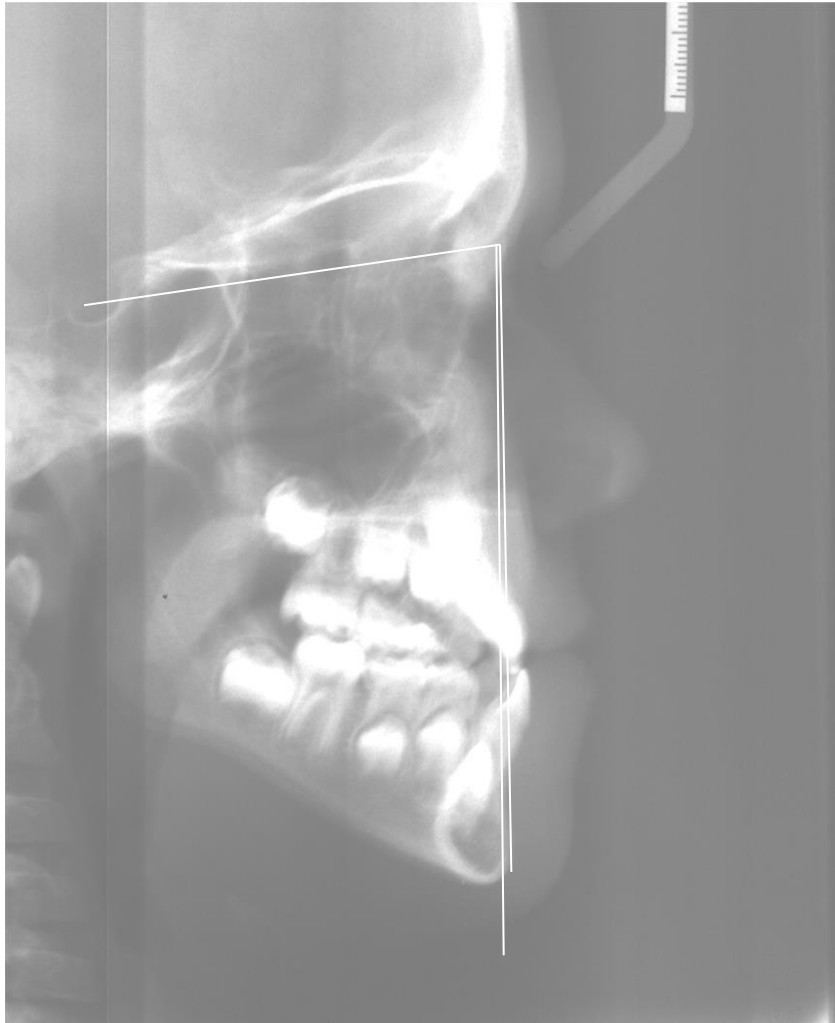
ANB angle :  $-2^{\circ}$

Norm. value :  $2^{\circ}$





# Skeletale Diagnose

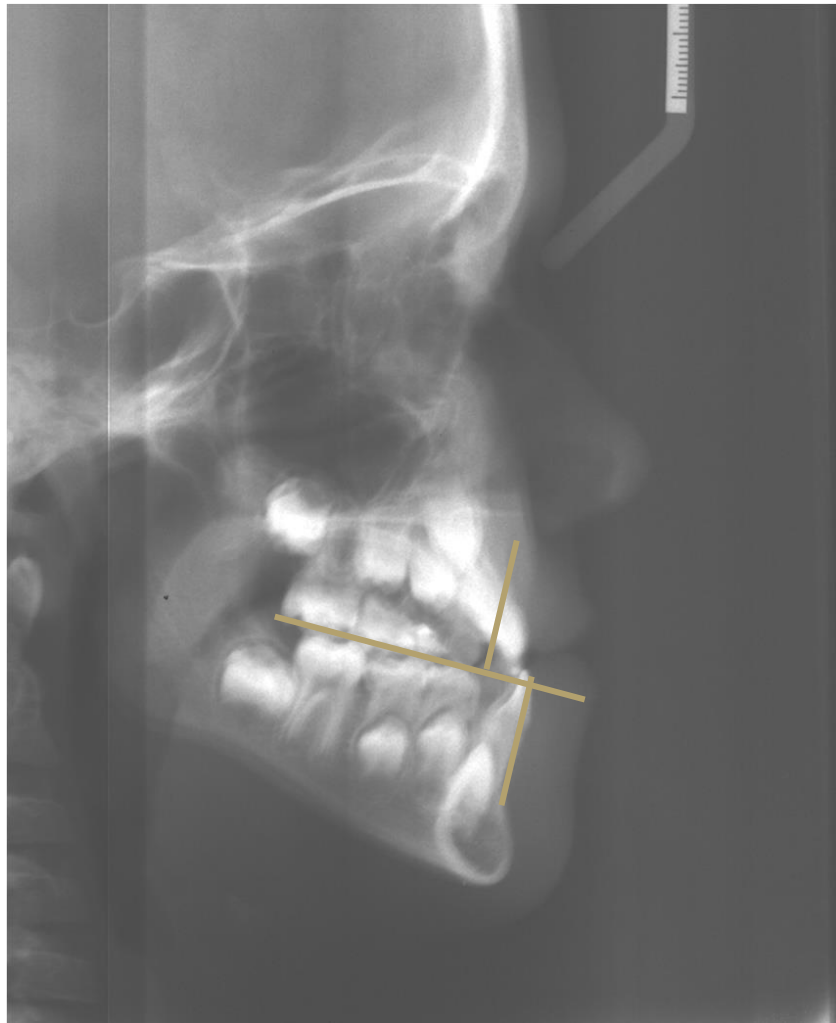


ANB Winkel=+0.5°

Norm. :2°

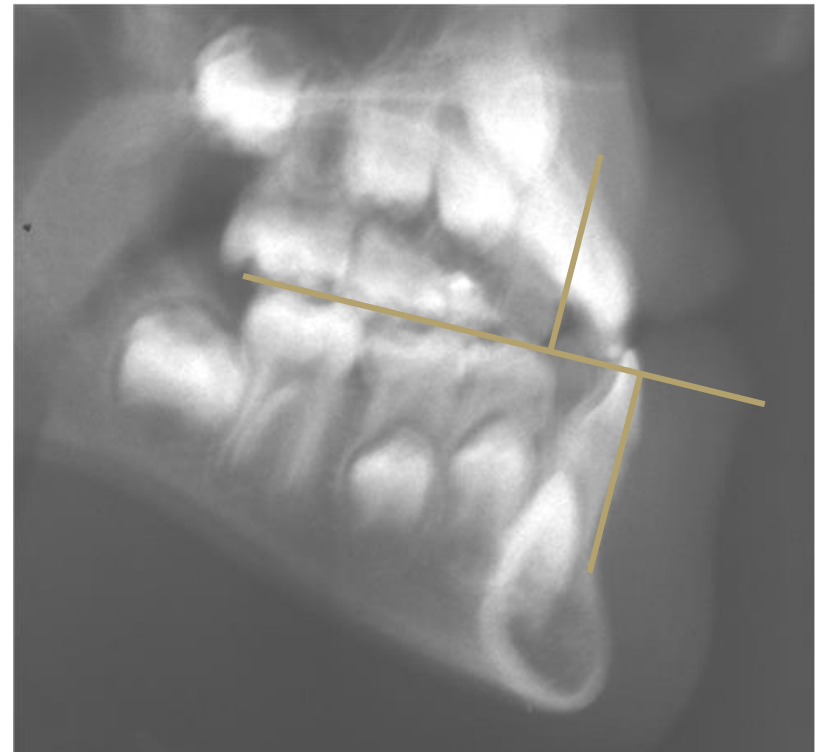


# Skeletale Diagnostik

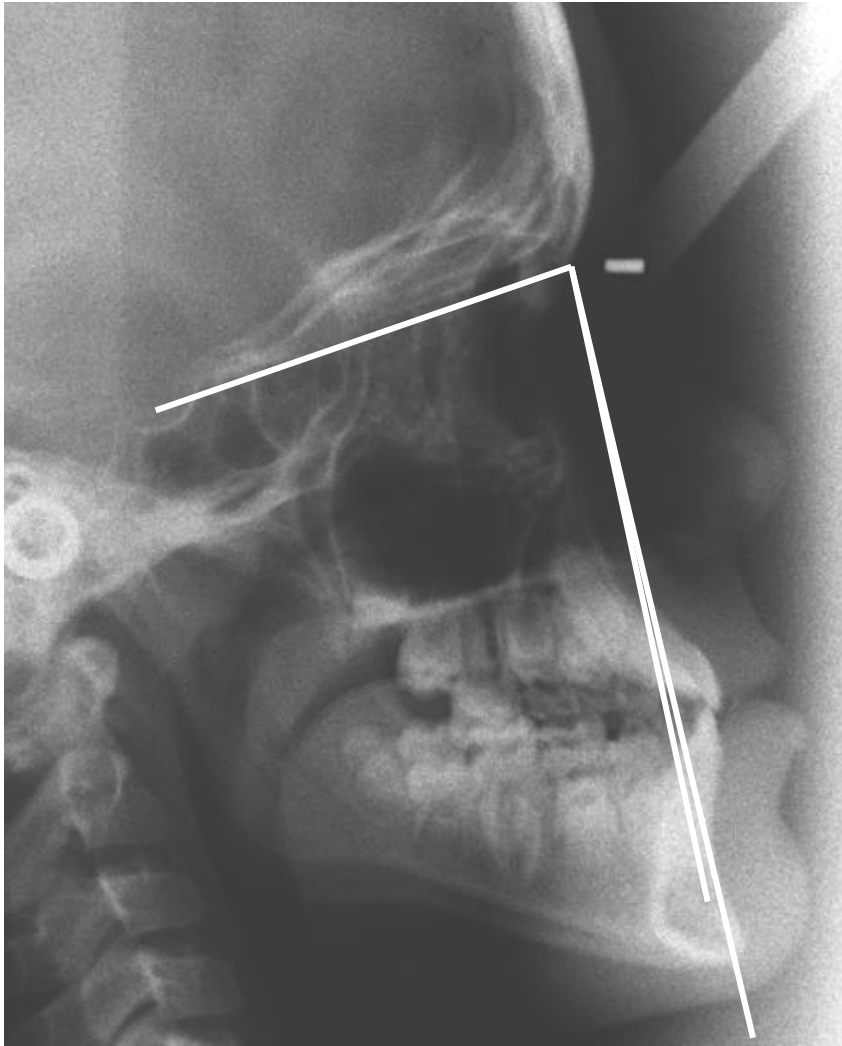


WITS érték: -9mm

norm: 0 -2 mm

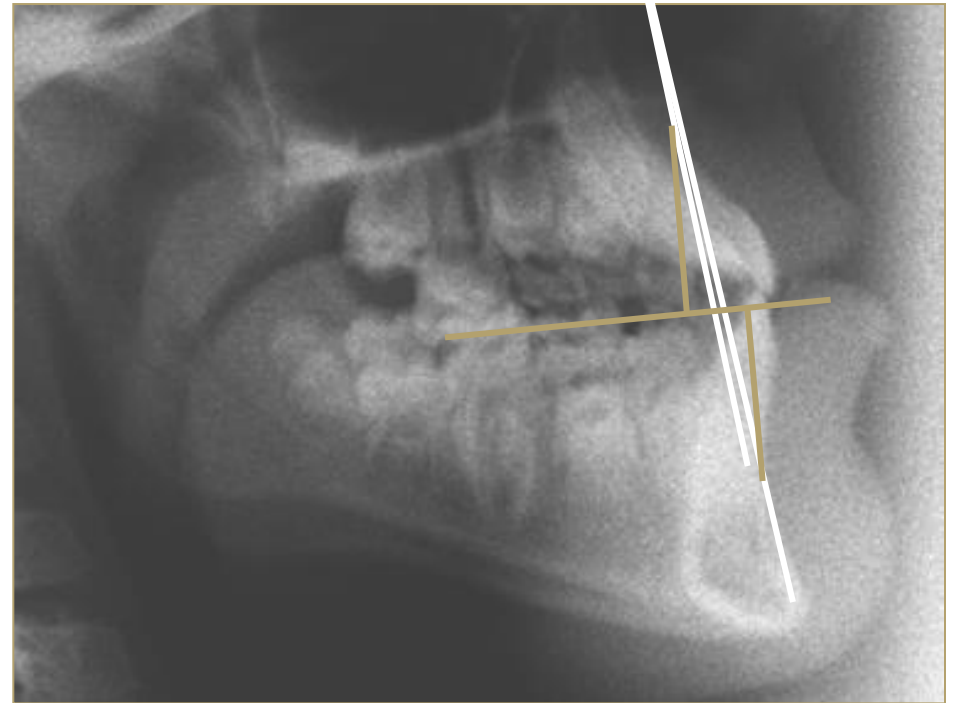


# Skeletale Diagnose

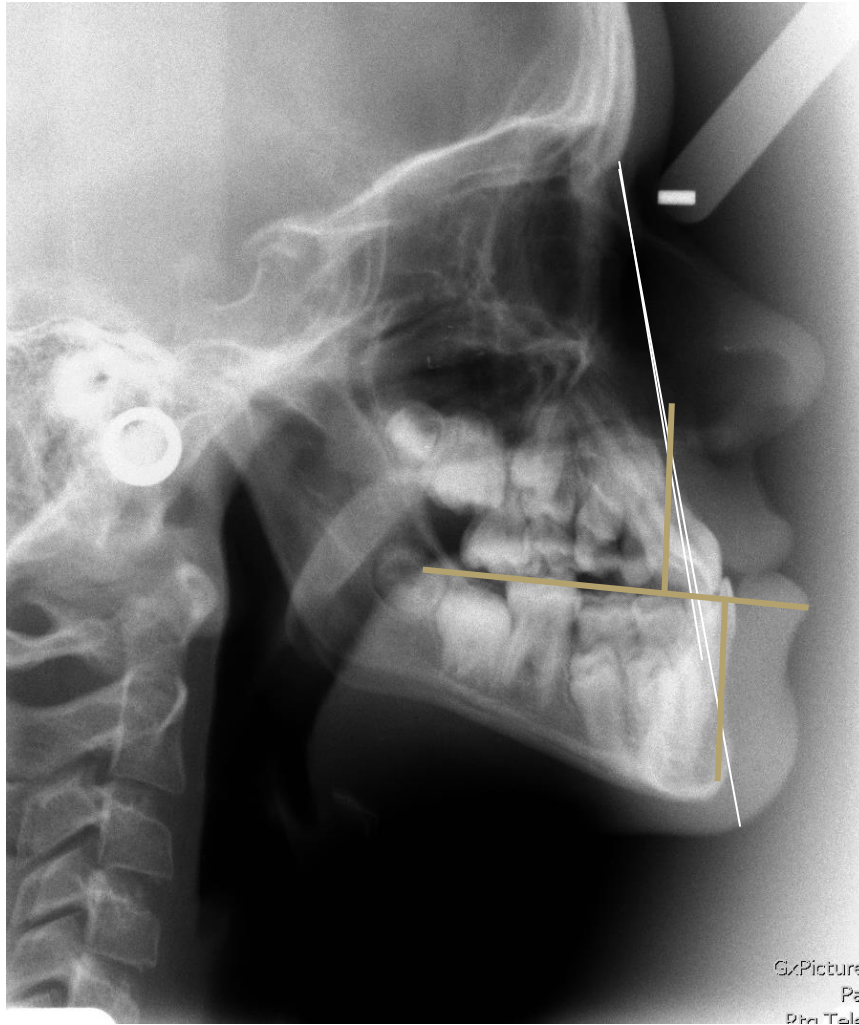


ANB Winkel =  $-1^{\circ}$

WITS: -8mm



# Skeletal diagnosis

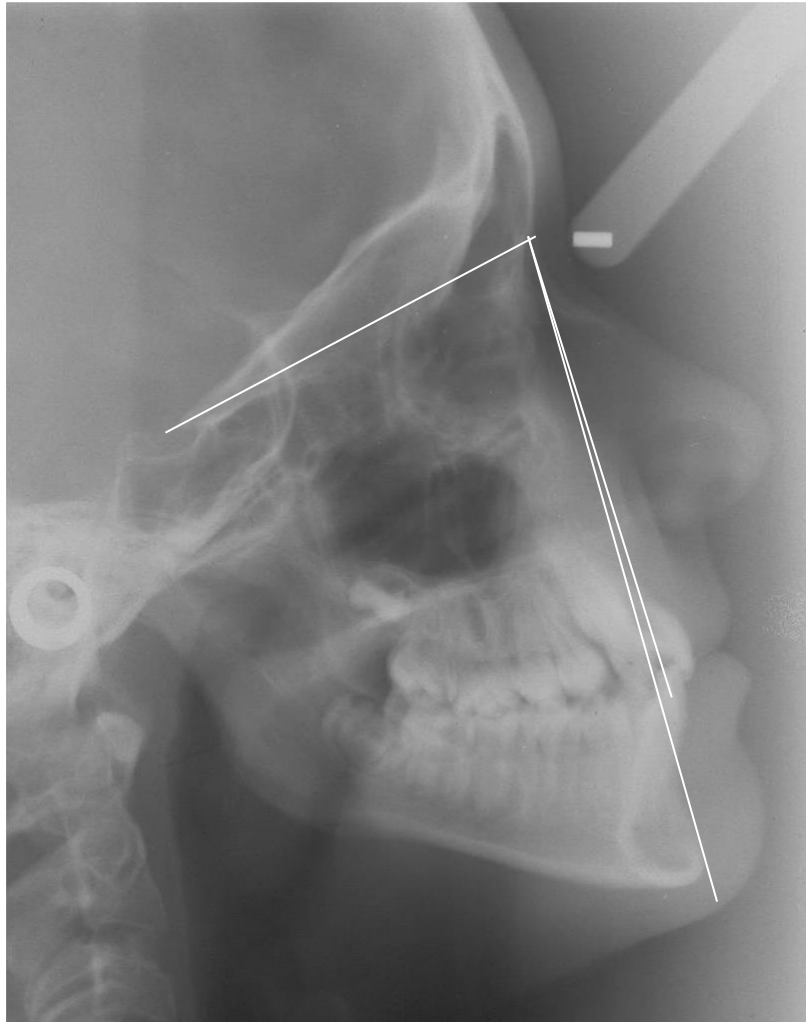


ANB angle=  $-1^{\circ}$

WITS: -10mm

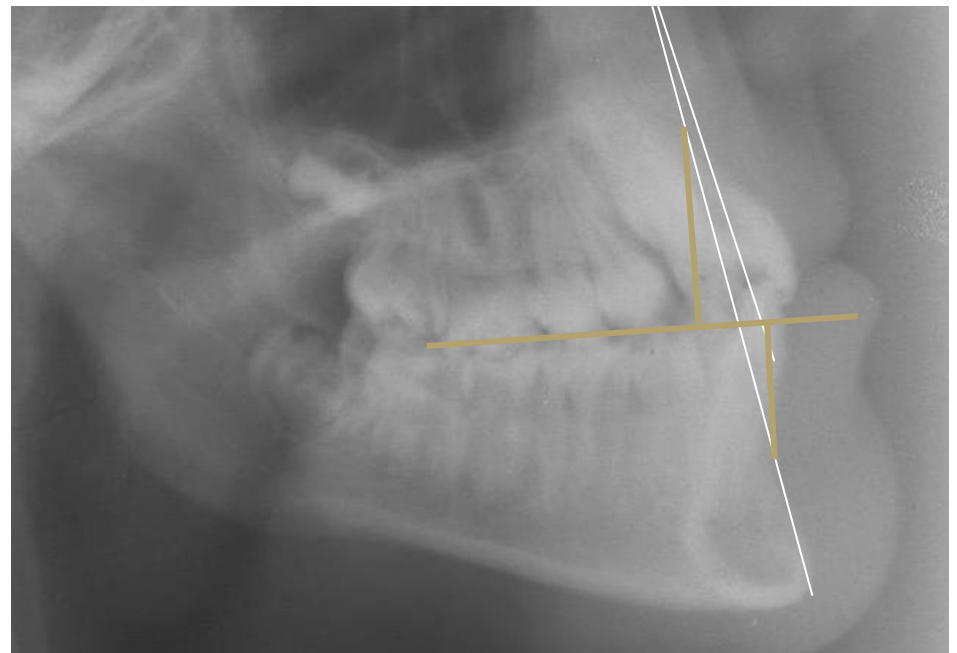


# Skeletale Diagnose



ANB angle=+1.5°

WITS: -6mm



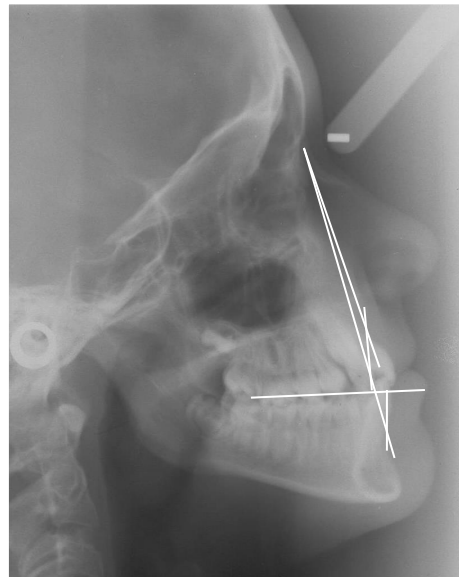
# Dental diagnosis



# Dentale Diagnose



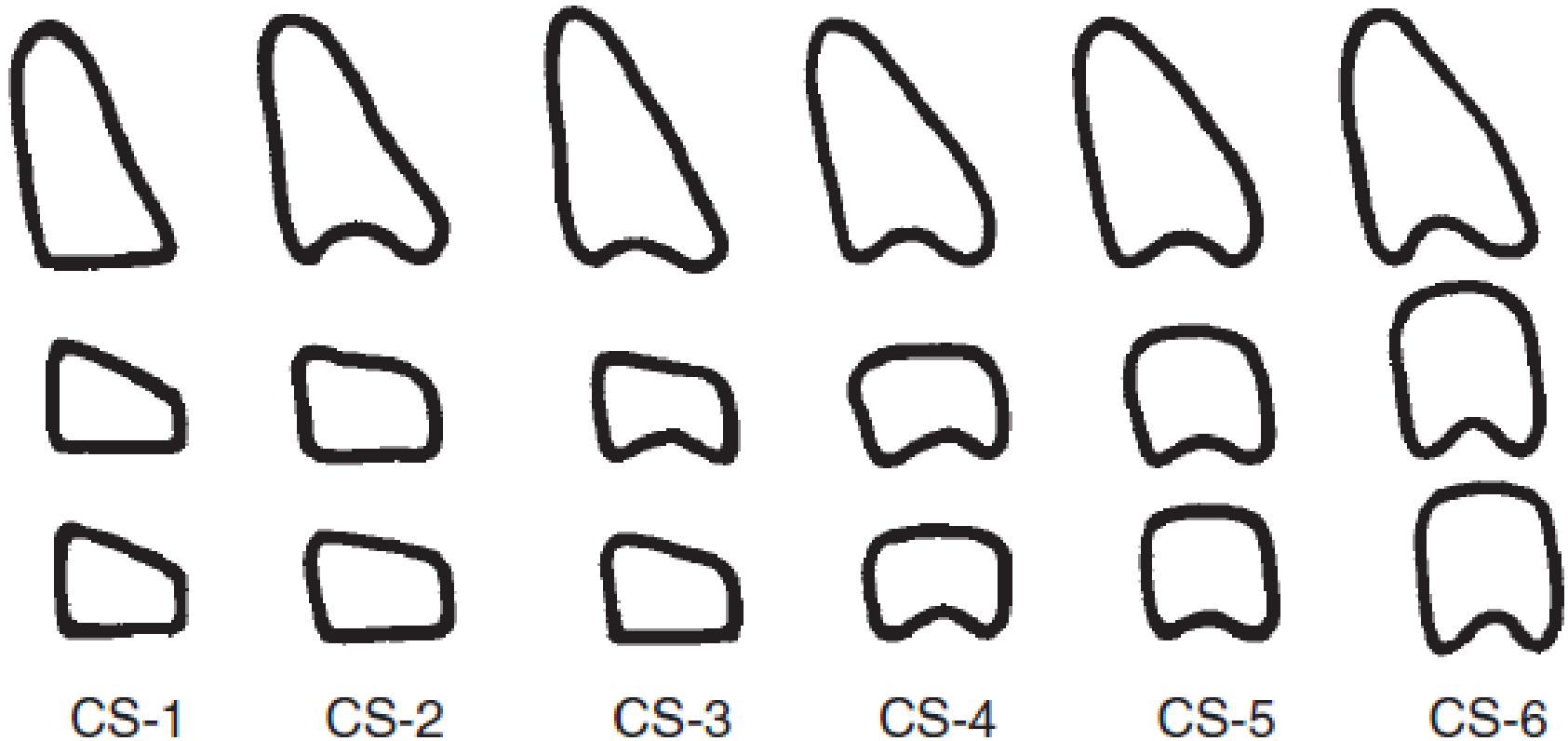
# Dentale Diagnose



ANB: 2°

WITS: -6mm

# Klasse III Behandlungs Timing



Graber, Contemporary Orthodontics 2012. Ch 14. Optimizing Orthodontic and Dentofacial Orthopedic Treatment Timing

# CVMS



CVMS 1

CVMS 2

CVMS 3

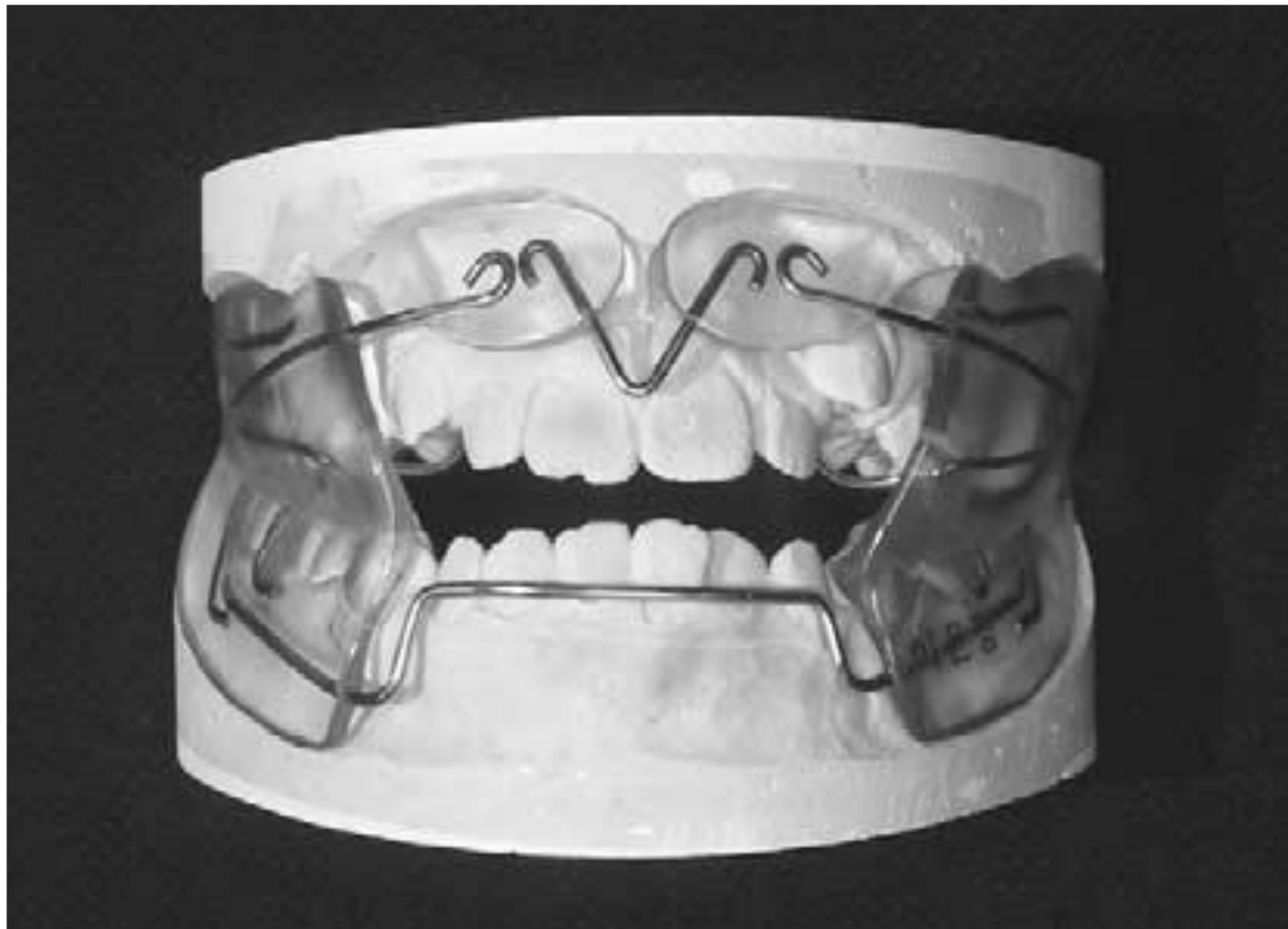
CVMS 4

CVMS 5

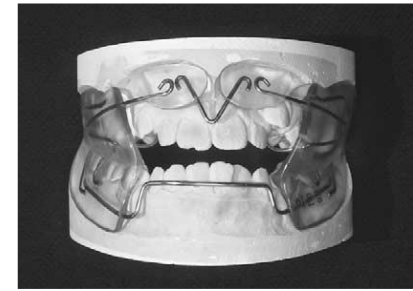
CVMS 6

Graber, Contemporary Orthodontics 2012. Ch 14. Optimizing Orthodontic and Dentofacial Orthopedic Treatment Timing

# Fränkel III



# Fränkel III



**Baik et al. 2004, AJODO:** 30 prepubertal noncleft patients mean age  $8.0 \pm 1.2$  years, at least *14 hours* per day, mean treatment duration,  $1.3 \pm 0.6$  years

**The treatment effects were mainly from backward and downward rotation of the mandible and linguoversion of the mandibular incisors**

**Levin AS, McNamara JA Jr, Franchi L, Baccetti T, Fränkel C .2008. AJODO:** 32 prepubertal noncleft patients, good compliance,  $2.5+3$  years active treatment and retention.

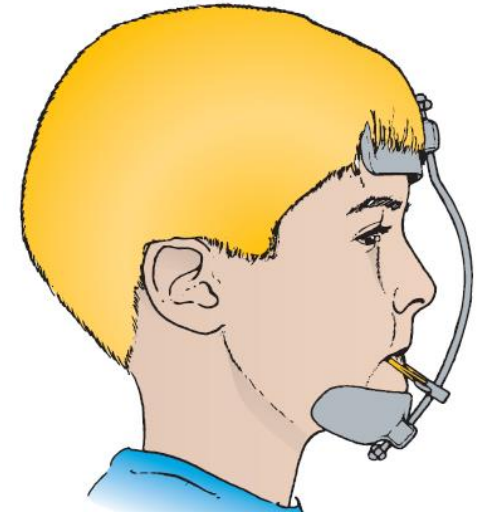
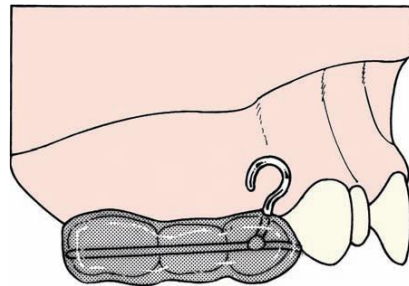
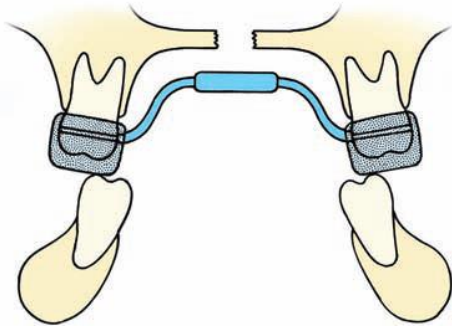
**Long-term results of FR-3 therapy in patients with good compliance consisted of significant maxillary modifications and induced changes in mandibular morphology. Long-term appliance wear (more than 5 years) should be emphasized when considering treatment outcomes.**

**Falck F, Zimmermann-Menzel K, J Orofac Orthop. 2008**

Patients treated with the FR-3 consisted of **56 subjects**. **Maxillary landmarks (point A, nasospinale), and the upper incisor (root included) did move significantly farther forward in the treated group than** in the control group ( $p < 0.01$ ). The **gonial angle decreased** by 7.17 degrees in the FR-3 group, as opposed to 2.07 degrees in the untreated group ( $p < 0.001$ ). No significant differences were noted in mandibular-length growth (Ar-Pog, Ar-Go, Go-Pog).



# Hyrax + Gesichtsmaske



Graber, Contemporary Orthodontics 2012. Ch 14. Optimizing Orthodontic and Dentofacial Orthopedic Treatment Timing

Significant improvements of SNA angle, ANB angle, overjet, and molar relationship remained stable during the posttreatment period. No significant effect was found in the mandibular skeletal measures

**Cozza et al.2010.AJODO**

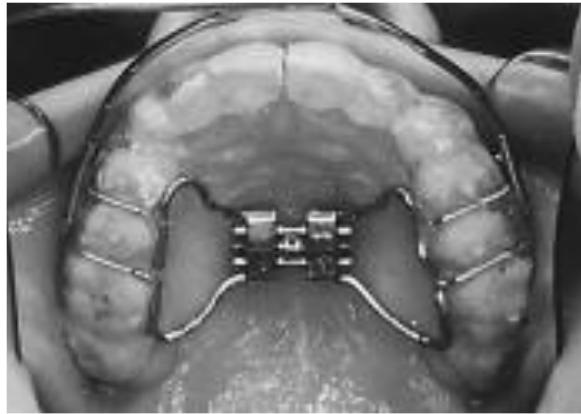
# Alt-RAMEC + Liou spring



Liou and Tsai, 2005. CPCJ

# Hyrax + modifizierte Gesichtsmaske

Alcan et al. 2000. AJODO



F=750g

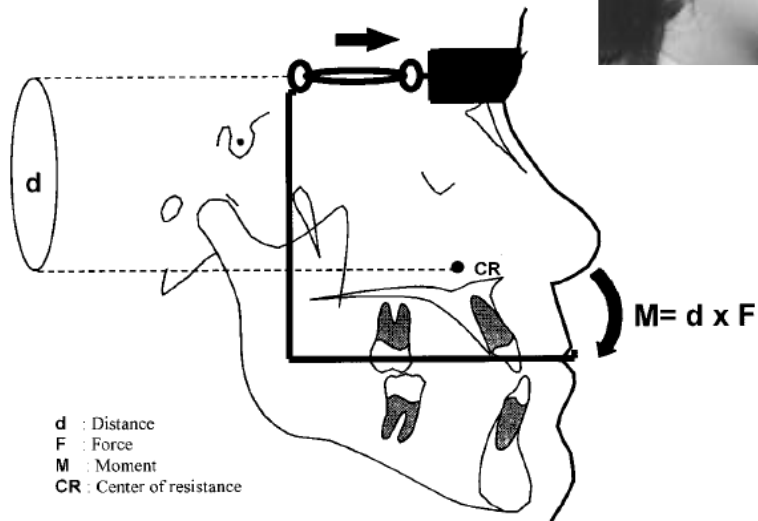
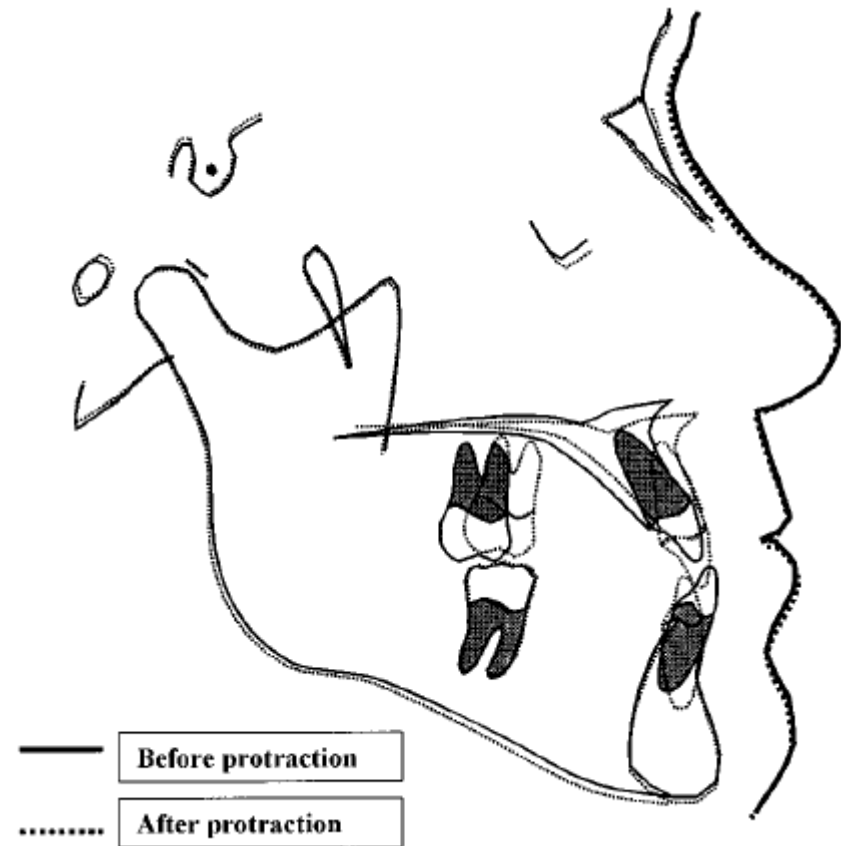


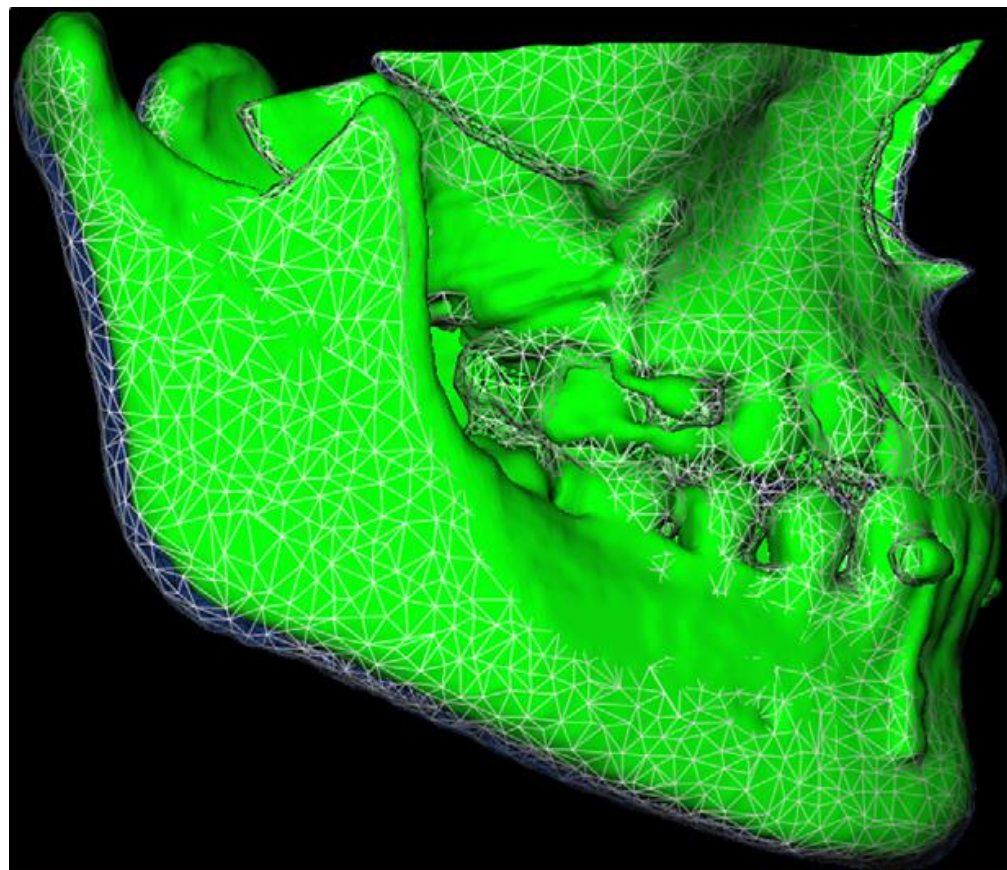
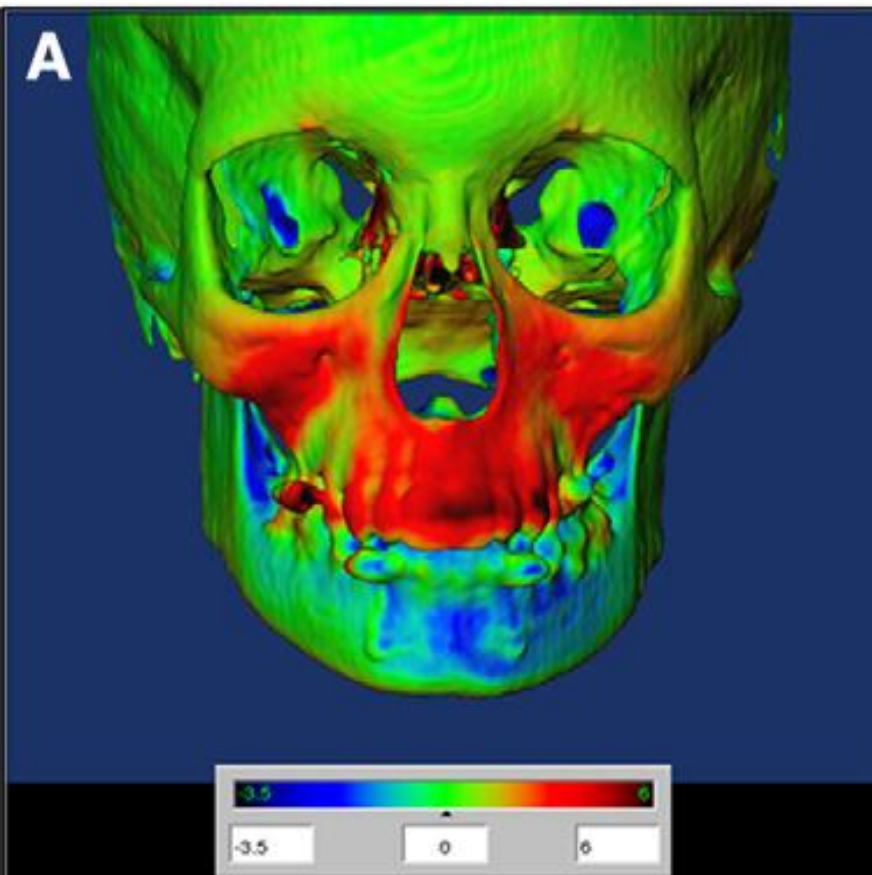
Fig 5. Force and moment system of MMPH.



# Bone Anchored Maxillary Protraction (BAMP)



De Clerck et al., 2010. J Oral Maxillofacial Surg



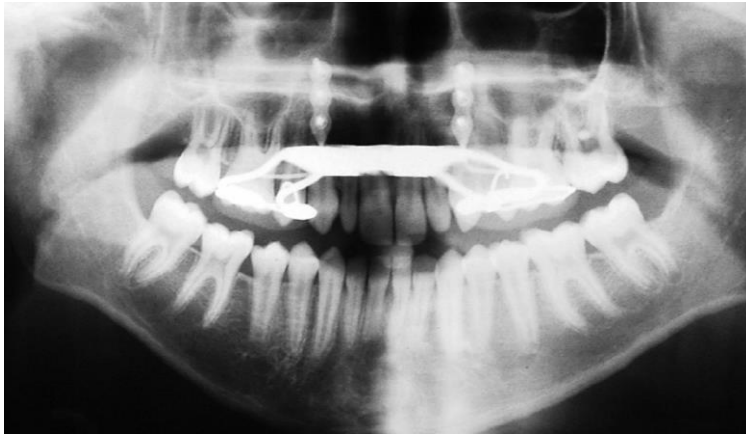
Remodeling of the glenoid fossa at the anterior eminence and bone resorption at the posterior wall  
De Clerck et al. 2012. AJODO

# Hybrid-hyrax + mentoplate



Wilmes et al., 2011. JCO

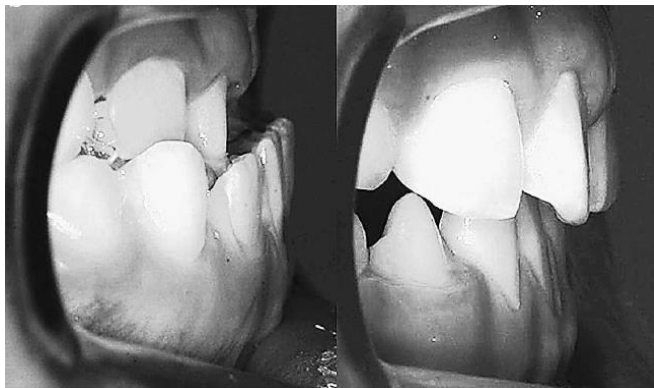
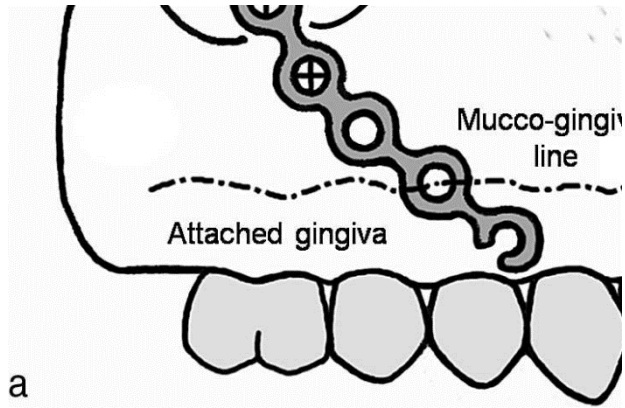
# Alt-RAMEC + arcmaszk + minilemez



15 patients with a mean skeletal age of  $11.6 \pm 1.59$  years undergoing 8 weeks of Alt-RAMEC followed by maxillary protraction, maxilla moved forward by 2 mm

Kaya et al., 2011. Angle Orthodontist

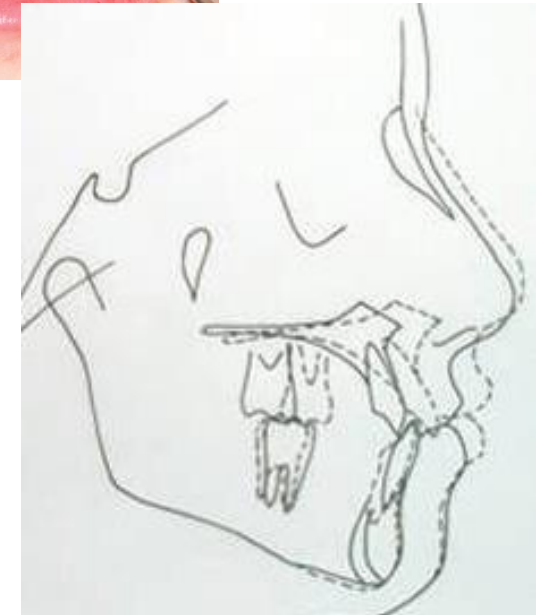
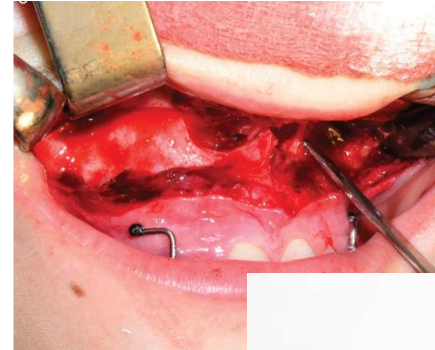
# Miniplatte + Gesichtsmaske



Baek et al., 2010. Angle Orthodontist



# SARME + Face mask



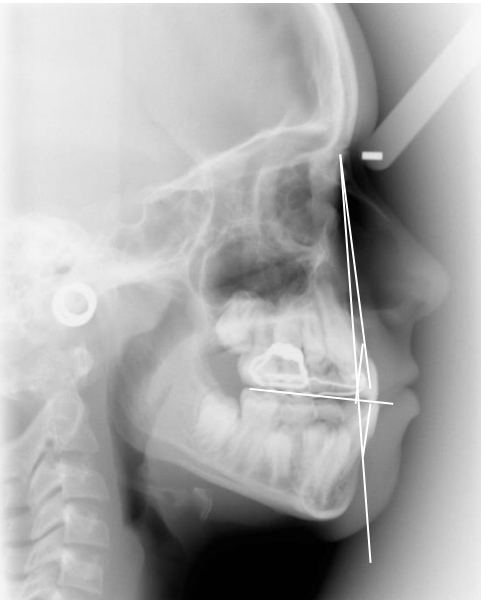
Kücükeles et al., Angle Orthodontist, Vol 81, No 1, 2011

In the short term, statistically significant maxillary advancement was achieved with surgically assisted maxillary protraction. However, in the long term, these sagittal changes were not stable, whereas RME and FM provided stability.

Nevzatoğlu S, Küçükkeleş N. Angle Orthod. 2014 Nov

**Long-term results of surgically assisted maxillary protraction vs regular facemask.**

# Hyrax + Gesichtsmaske

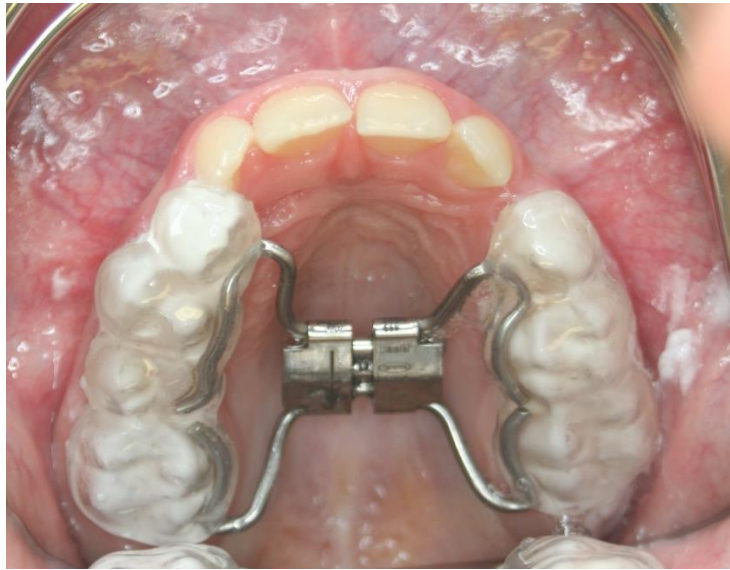


ANB: 2°

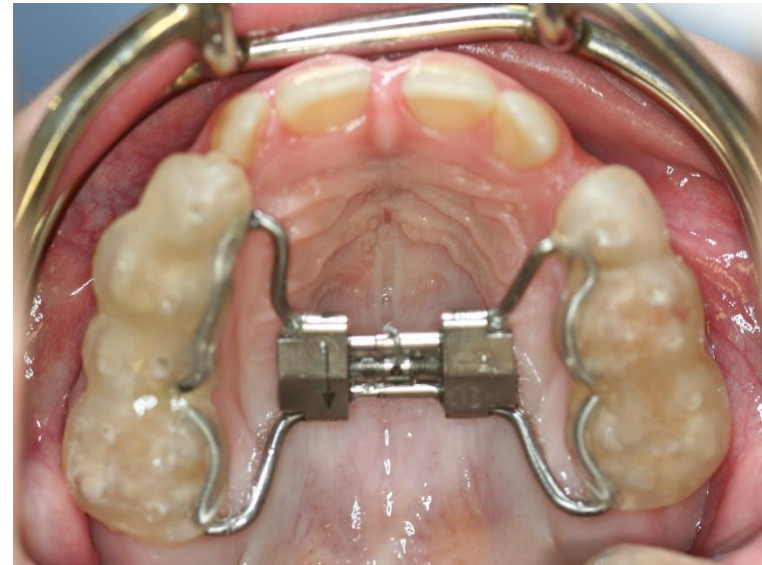
WITS: -3mm

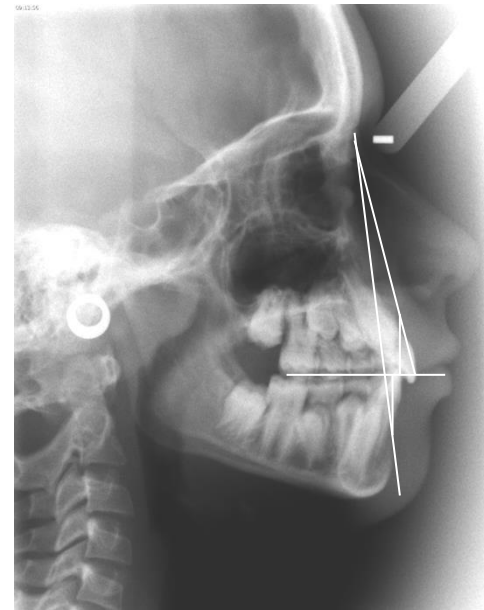
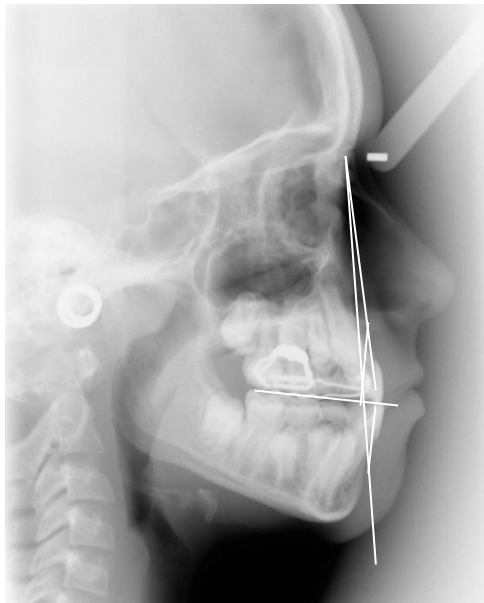
CVMI: 2-3

# Hyrax + Gesichtsmaske



Maxilla  
transzverzális  
tágítása







ANB: 0°

WITS: -11mm

CVMI: 3



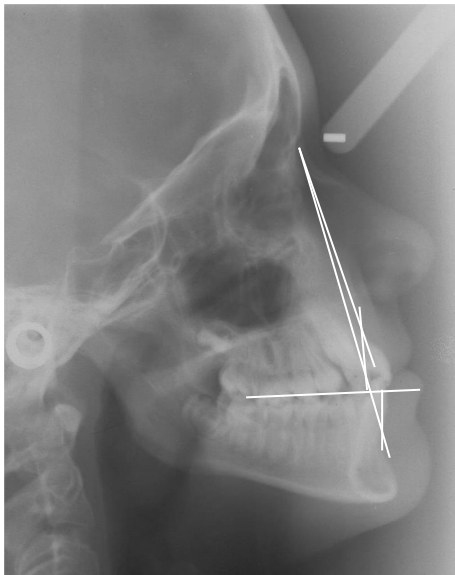
# Alt-RAMEC + Gesichtsmaske



09:47:31

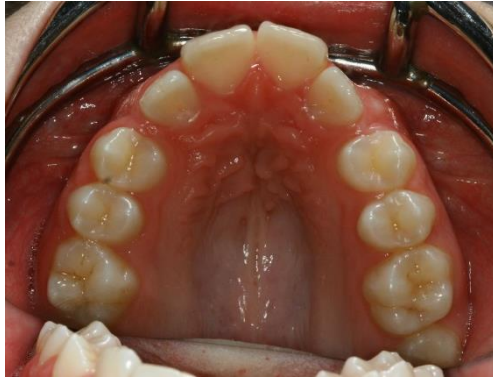






ANB: 2°

WITS: -6mm

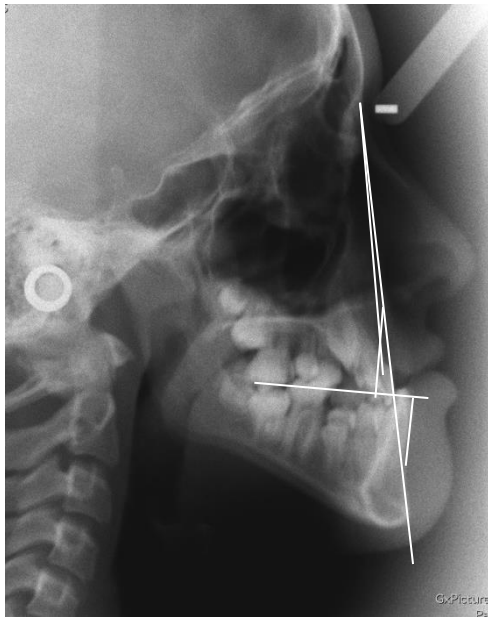


ANB: 2°

WITS: -6mm

CVMS: 3-4





ANB:  $-2^{\circ}$   
WITS: -11mm  
CVMI: 4

# Hybrid hyrax + Alt-Ramec + Gesichtsmaske



4x auf – 3x zu





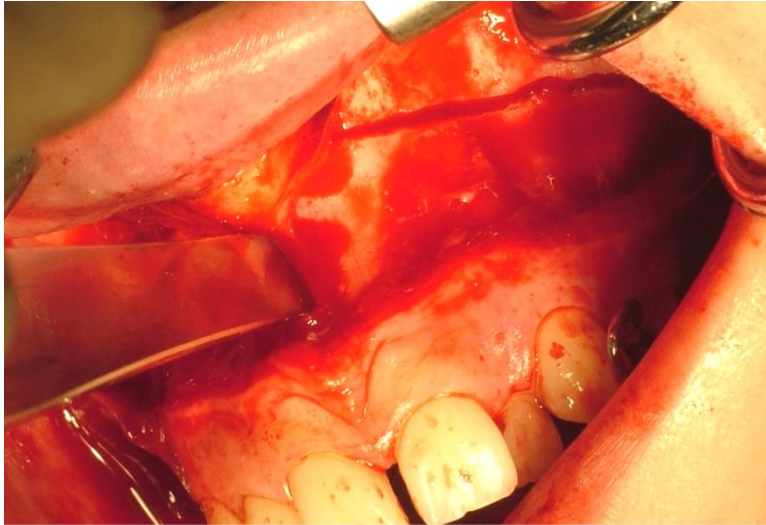
# SARME + Gesichtsmaske



ANB:  $-2^{\circ}$

WITS: -12mm

CVMI: 6



## Chirurgie: Dr. Bogdán Sándor





## Chirurgie : Dr. Bogdán Sándor

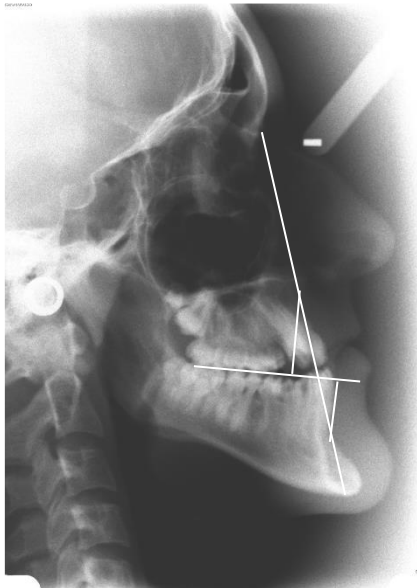
# Hybrid hyrax + Alt-Ramec + Gesichtsmaske



4x auf – 3x zu







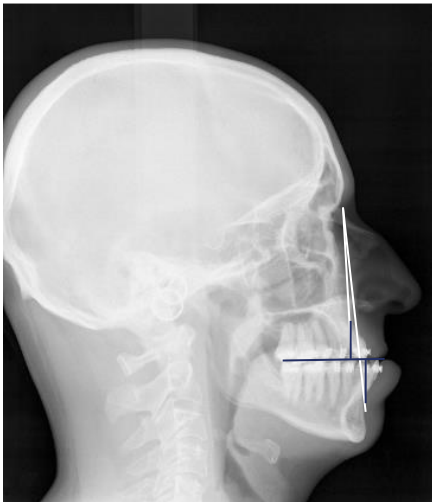
ANB: 0°

WITS: -15mm

CVMI: 6



# Le Fort I Osteotomie



ANB:  $-1^{\circ}$

WITS: -6mm

CVMI: 6

# Le Fort I Osteotomie



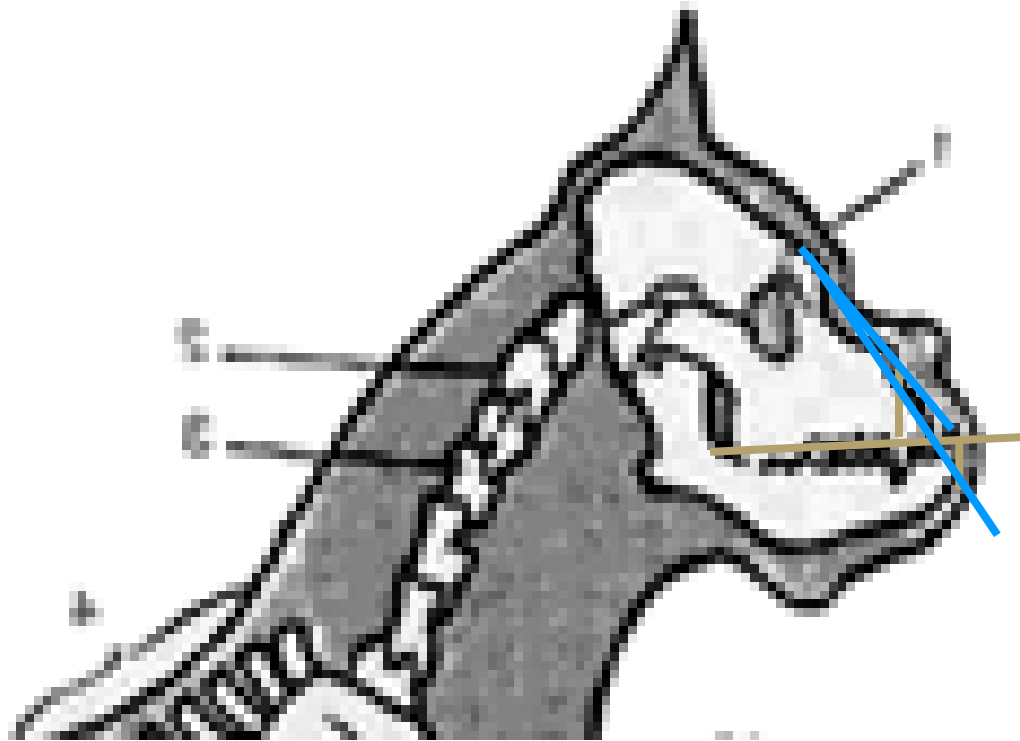
Chirurgie: Dr. Nagy Krisztián

# Le Fort I Osteotomie



Chirurgie: Dr. Nagy Krisztián





Danke für Ihre Aufmerksamkeit!