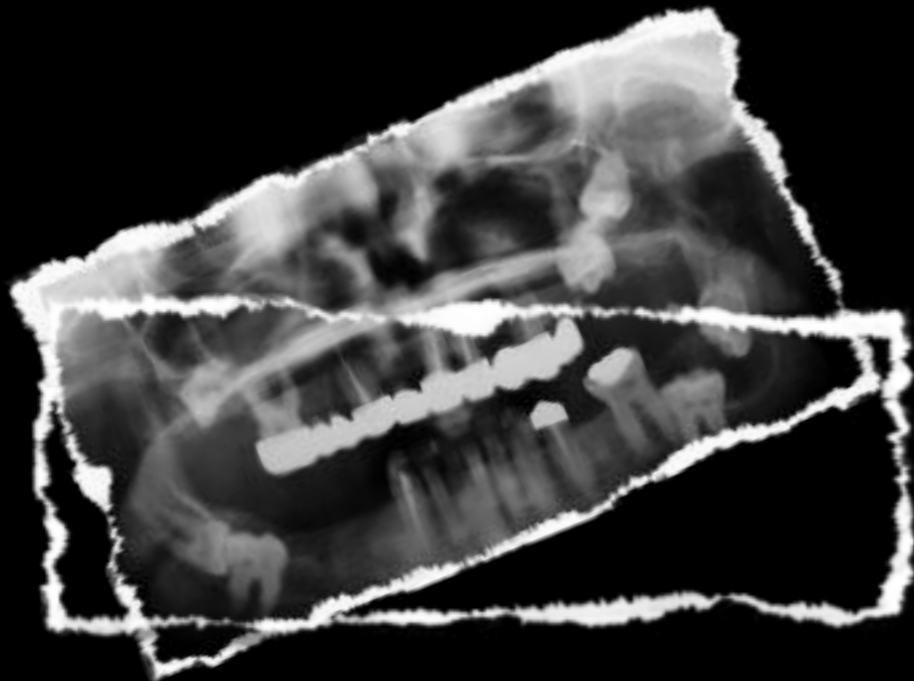


Relation between the complex diagnostics and the complications of the wisdom-tooth surgery



Changes of the "surgical profile" at the Dental Surgery Department of the Oral & Maxillofacial Surgery Clinic, Budapest

	1999	2008	2014
Surgical removal of teeth	4427	4728	5354
Impacted tooth removal	1197	1400	2042
Root apex resection	566	469	331
Retrograde root filling	104	93	33
Implantation	263	398	532
Bone replacement	75	103	133



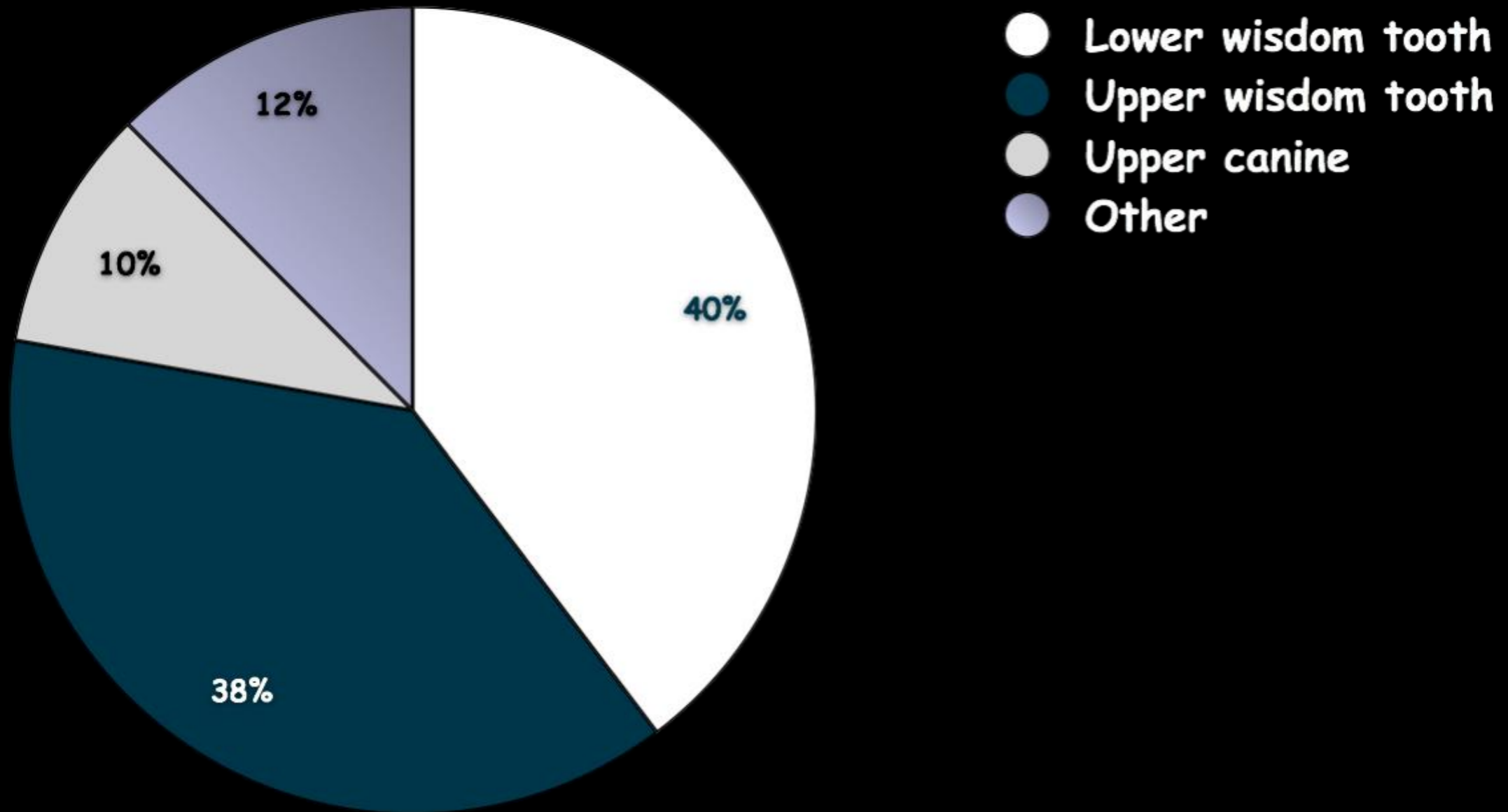
Reason ???

Wisdom teeth in irregular position may cause positional abnormalities

"eights"
are to be removed in "set time" defined by orthodontic
colleagues

Wisdom tooth inflammation is common when partly erupted or totally
impacted

Frequency Occurance of Trail in Break through of the Remaining Teeth



Indications and Contraindications of impacted Wisdom Tooth

Therapeutic reasons

Pericoronitis
Pulp exposure caries - pulpitis
Periapical inflammation
Massive destruction of the crown
Caries of neighbouring tooth, resorption
Facial pain
Cysta - tumor
Transplant donor
Elongation
Serious paradontal problemem
In the line of Jaw fracture

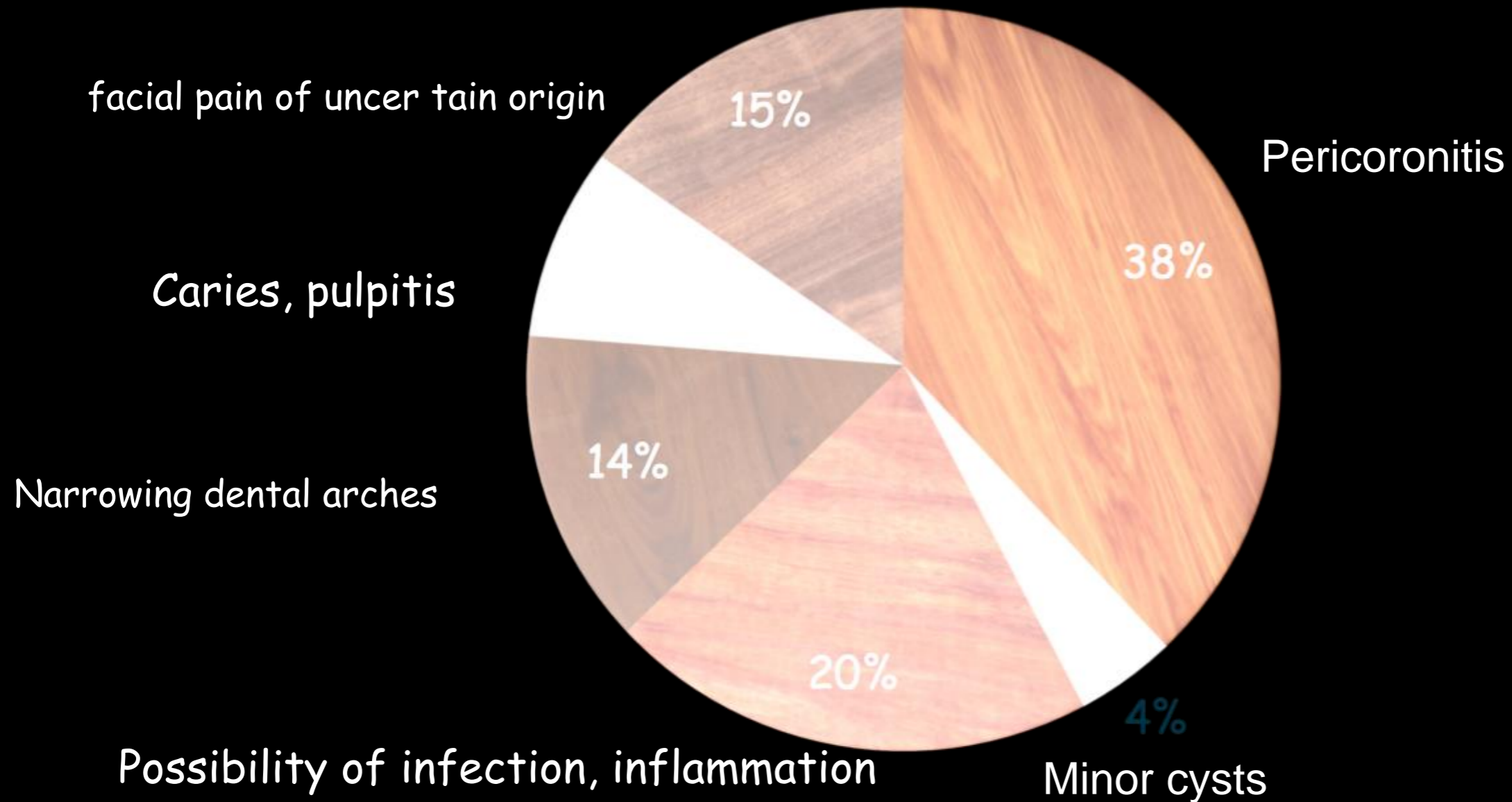
Prophylactic reasons

Due to medical aspects
(nodule, radiation therapy)

The patient has already been
anesthetized for other reasons

Orthodontic reasons

Reasons of Lower Impacted Wisdom Teeth



/Jaquiéry et al. 1994./

Indications & Contraindications of Wisdom Tooth Extraction

- Spontaneous arrangement of the teeth is expected in the dental arch
 - The wisdom tooth may insert into the dental arch due to orthodontic treatment or when another tooth is extracted
 - Surgical removal of deeply impacted wisdom teeth involves high risk
 - Lack of instrumental and / or professional skills.
 - Pericoronitis in acute inflammatory stage
- Patient's general condition does not allow operation (hemophilia, taking bisphosphonate)

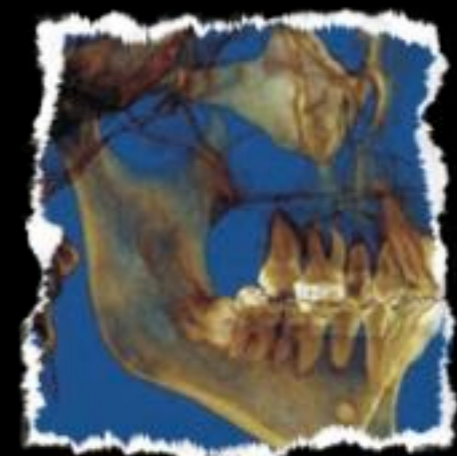
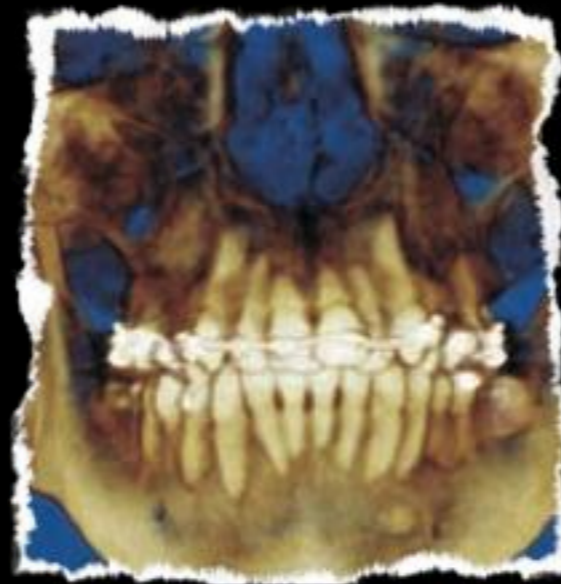
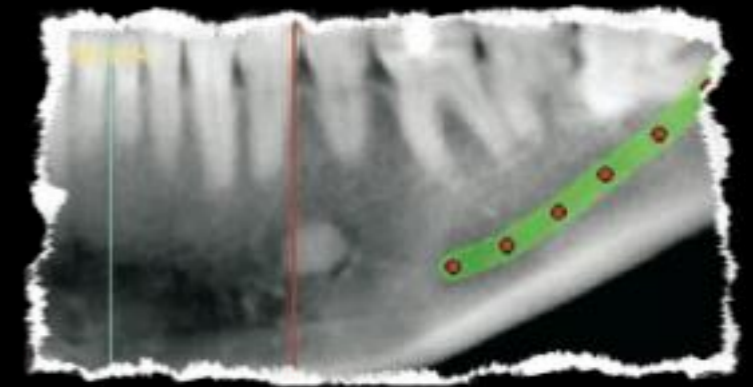
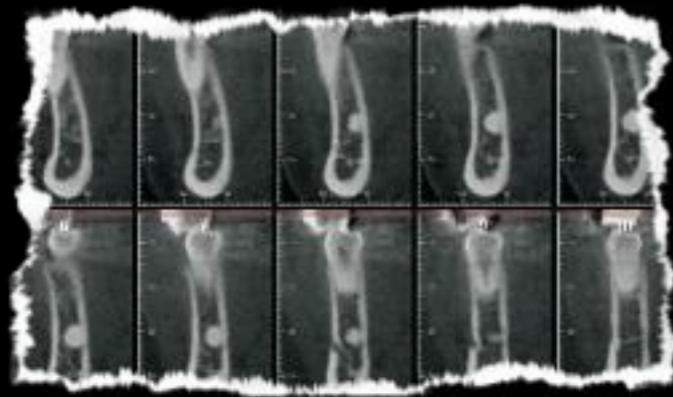
SAC-Classification (1996, Sailer & Pajarola)

S = simple. There are no anatomical or surgical risks - technical difficulties, devoid of complications: it can be carried out by qualified general dentist in accordance with outpatient treatment.

A = advanced. There are certain anatomical risks or significant surgery-technical difficulties, complications can be expected: the treatment will be performed by a dentist trained as a physician or surgical Dento-Alveolar surgeon as part of outpatient treatment.

C = complex. Serious difficulty instance, considerable technical difficulties and costs in operation, complications can be expected: performed by an experienced dentist qualified in oral surgery or Dento-Alveolar jaw or facial surgeon.

Wisdom Teeth **Diagnostics**



Aspects of **Clinical Trial** of Wisdom Teeth

- The position of the tooth crown
- The state of mucous membrane around the crown
- The relationship with the antagonistic teeth



Criteria for **Radiological Assessing** of Wisdom Teeth

- The shape of tooth crown, length and shape of the roots
- The relationship between the crown and the second molar, tooth axis deviation
- The dental crown in relation to the ramus mandibulae
- The relation of the tooth roots to the canalis mandibulae

Criteria for Radiological Assessing of Wisdom Teeth

- The shape of tooth crown, length and shape of the roots

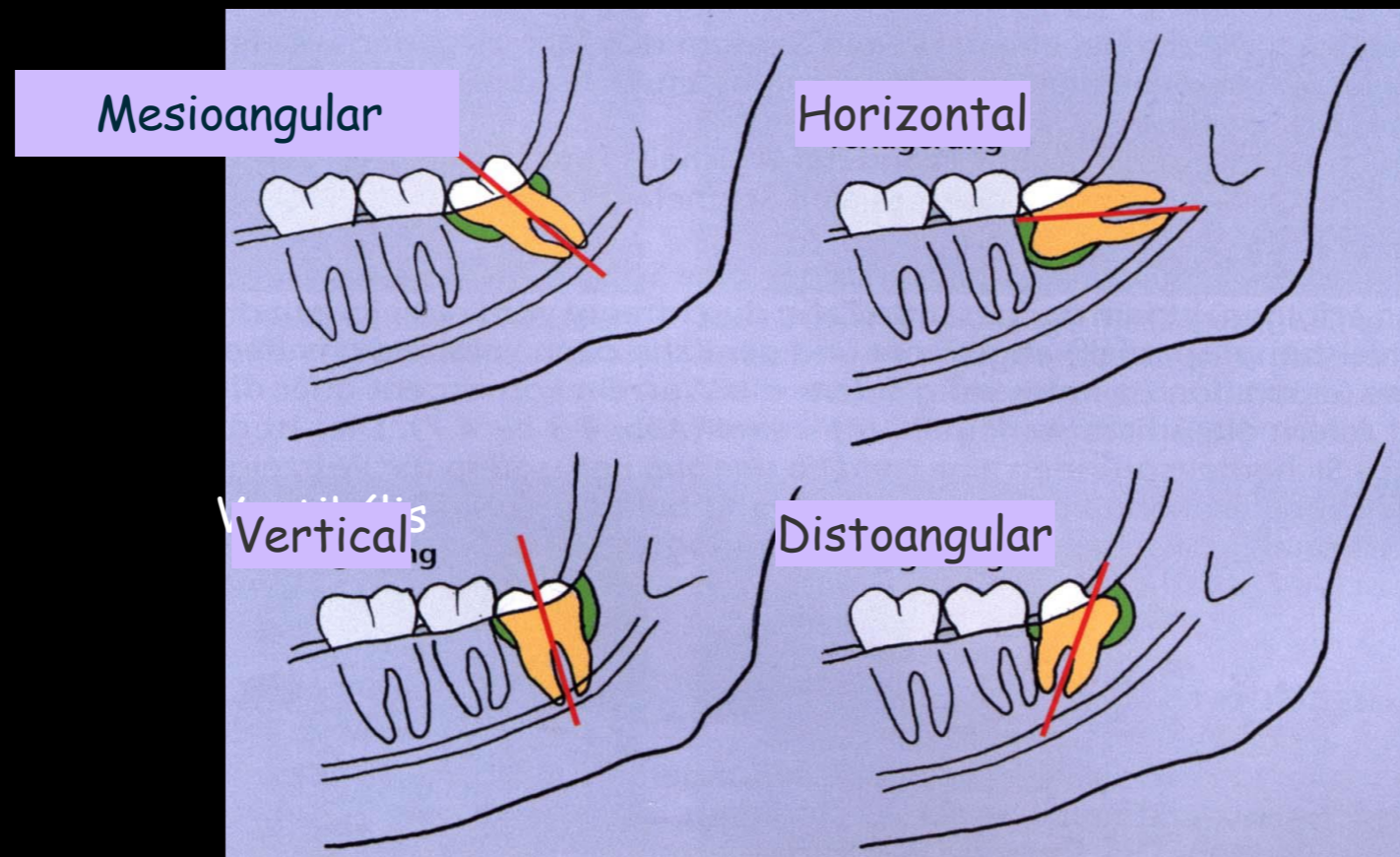


Periapical X-ray Photographs of Lower Wisdom Teeth

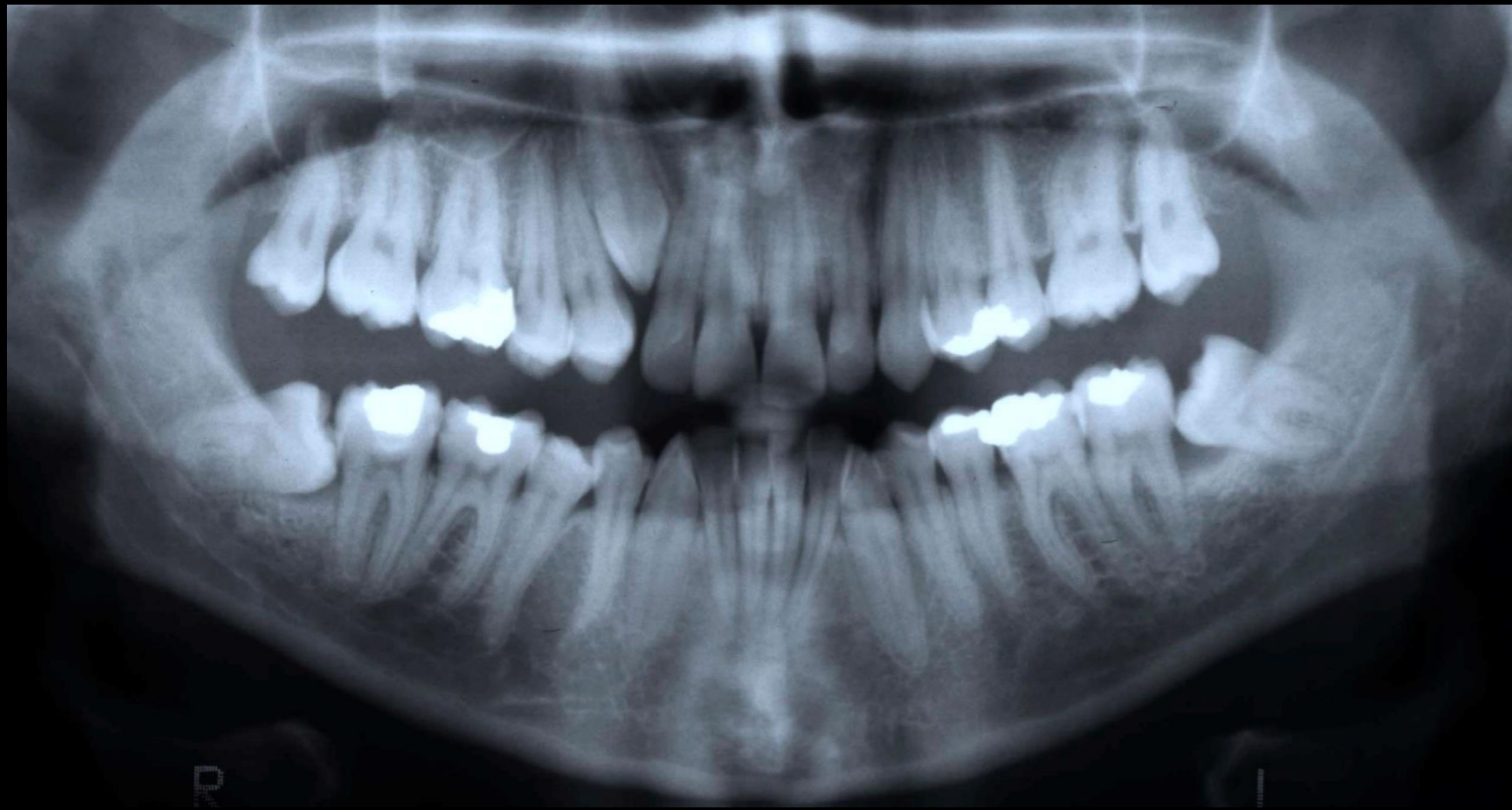


Aspects of Radiological Examination of Lower Wisdom Teeth

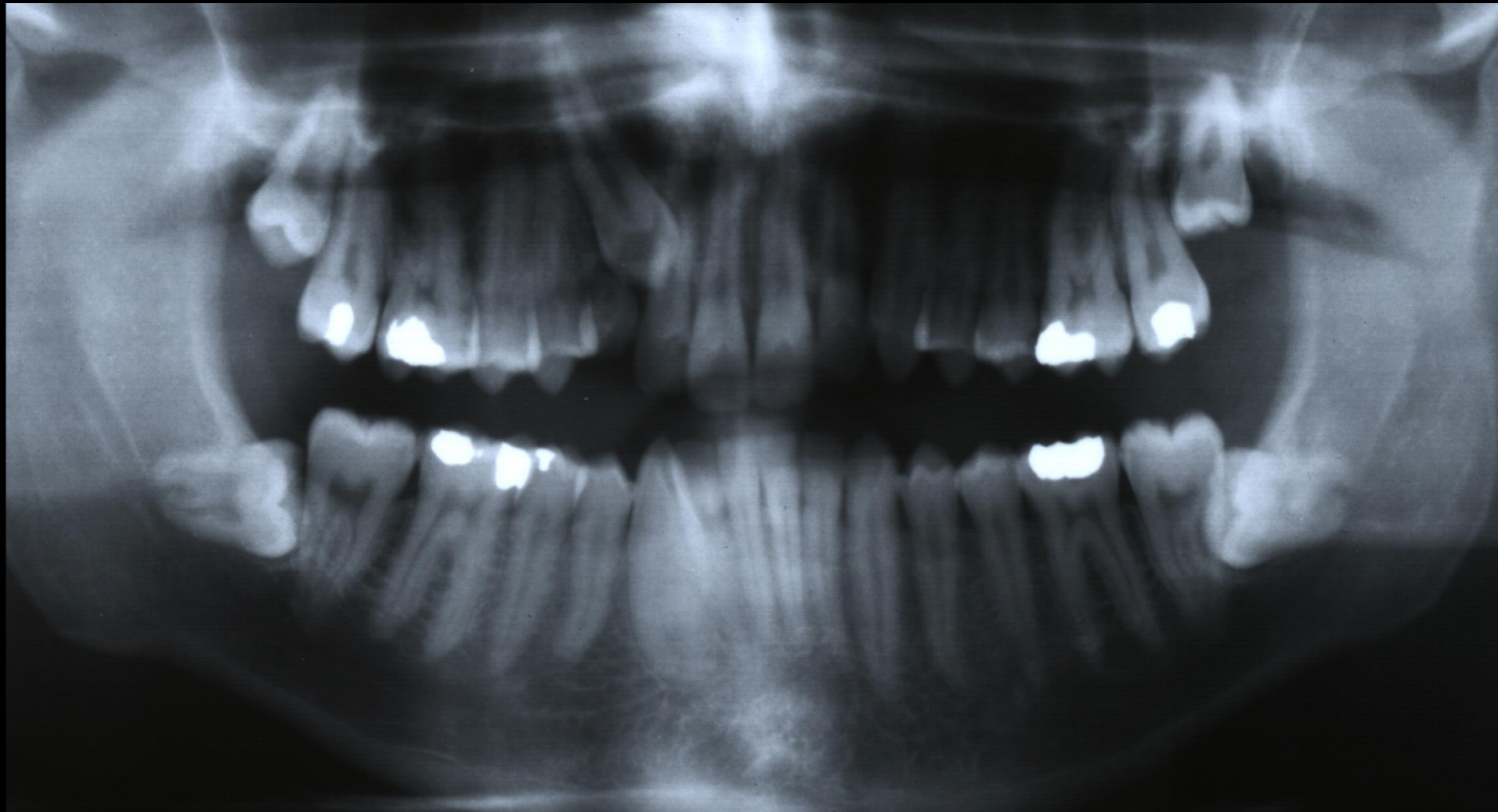
The relationship between the crown and the second molar tooth, tooth axis deviation (Winter, 1926 & Pell-Gregory, 1942 classification)



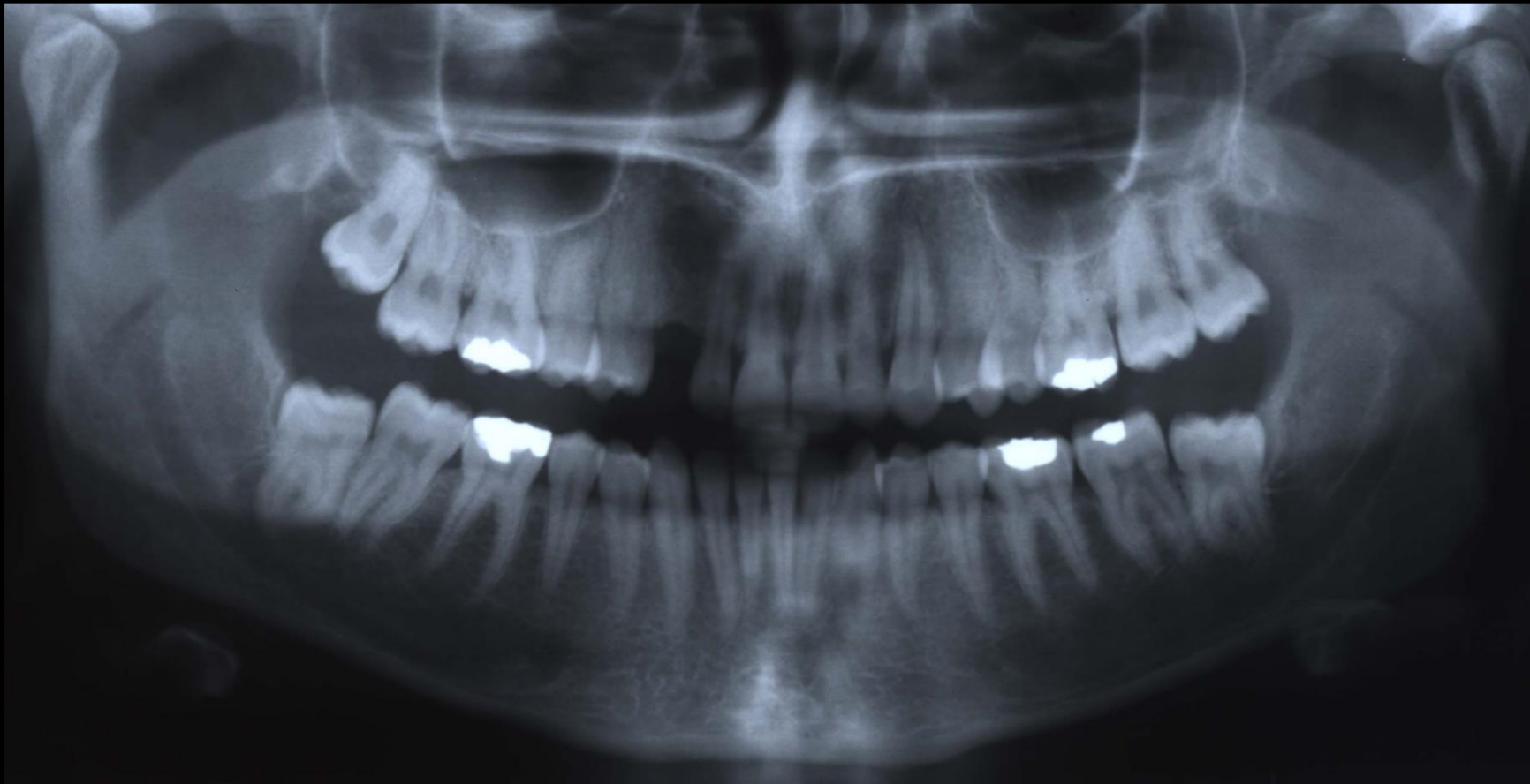
Mesioangular



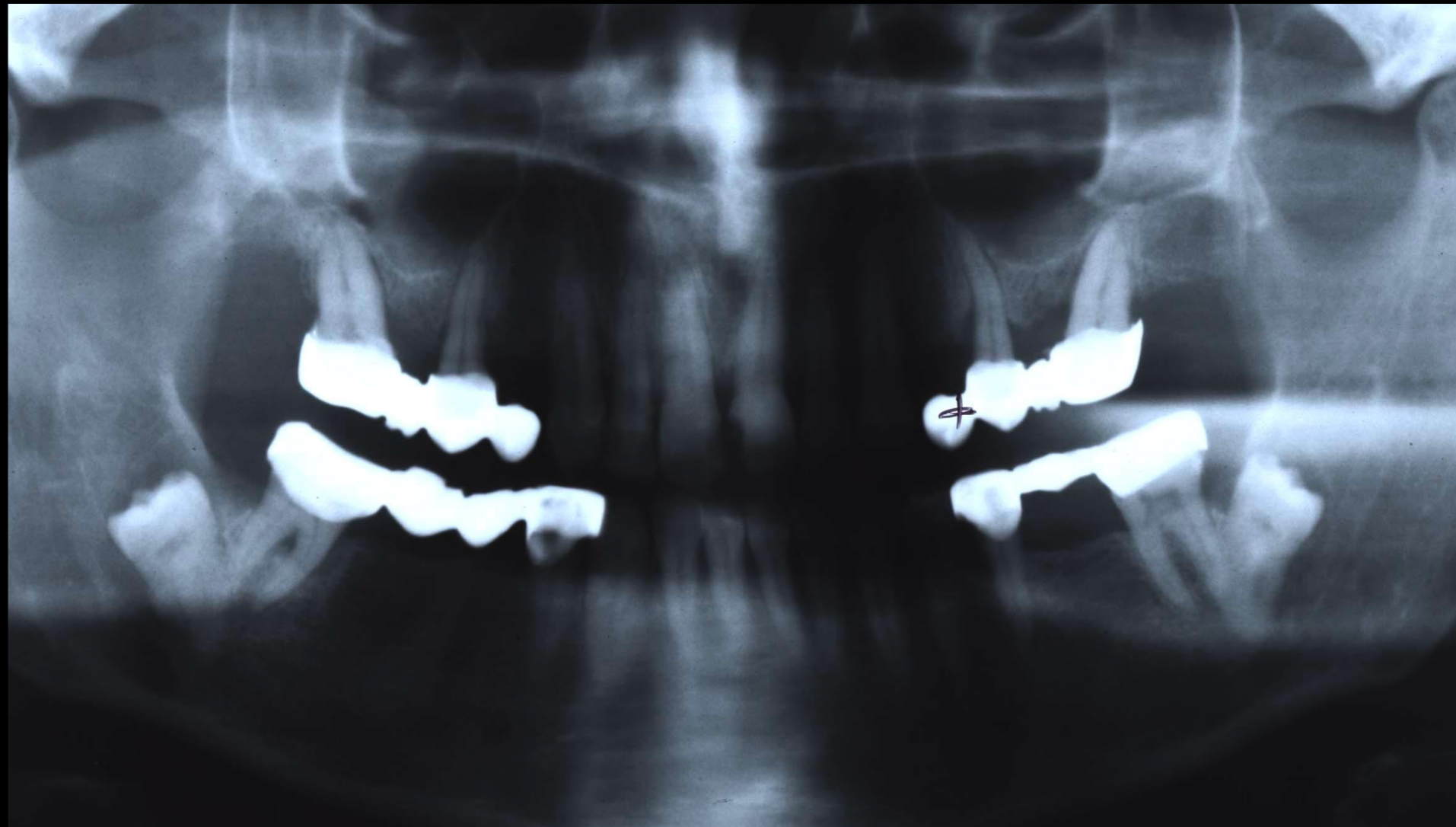
Horizontal



Vertical

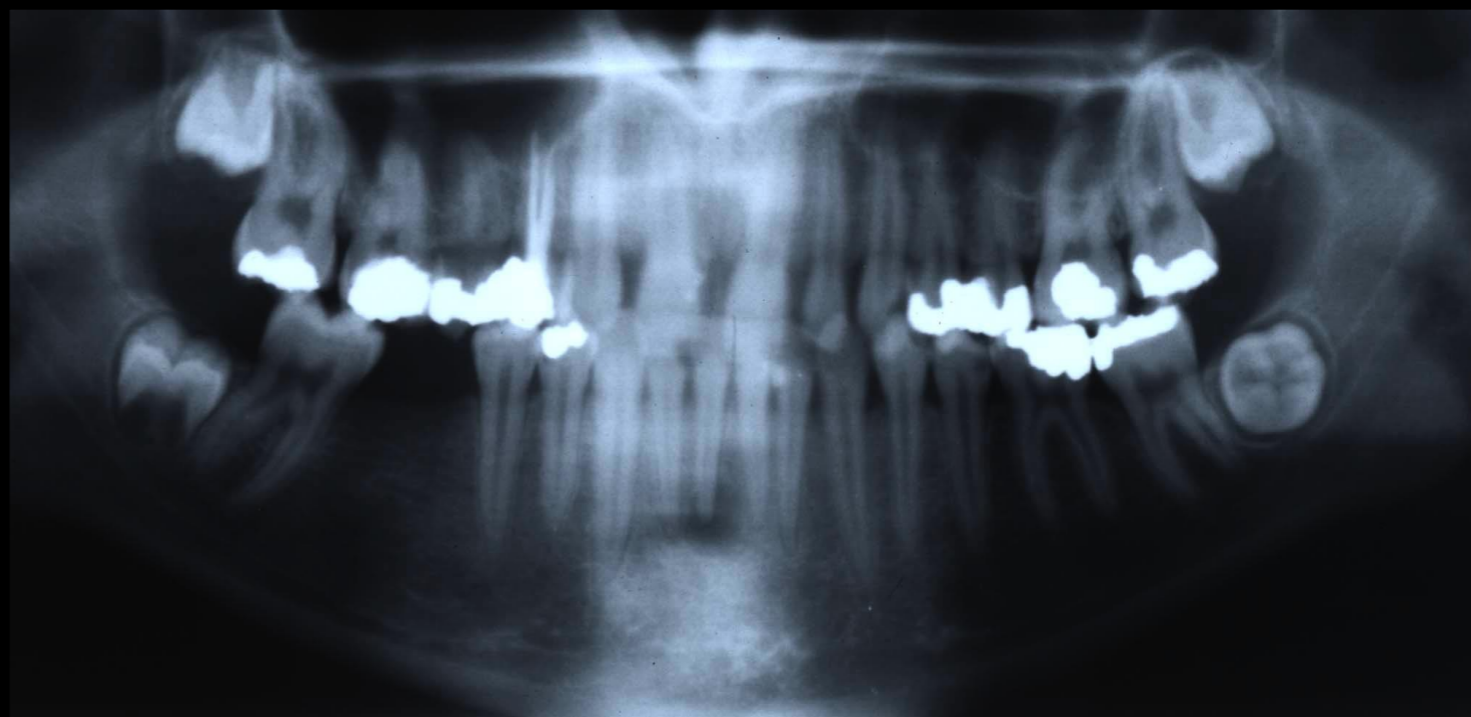
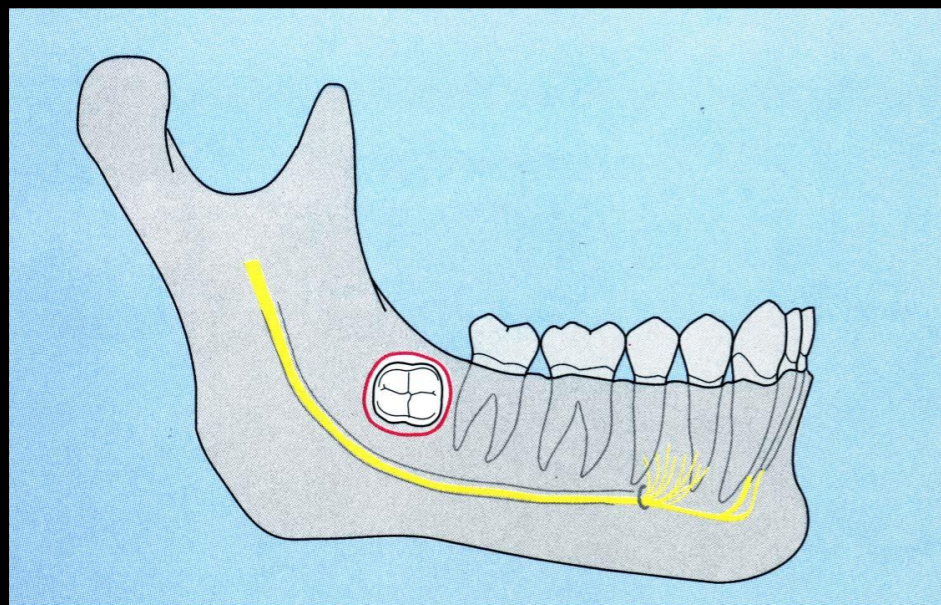


Distoangular



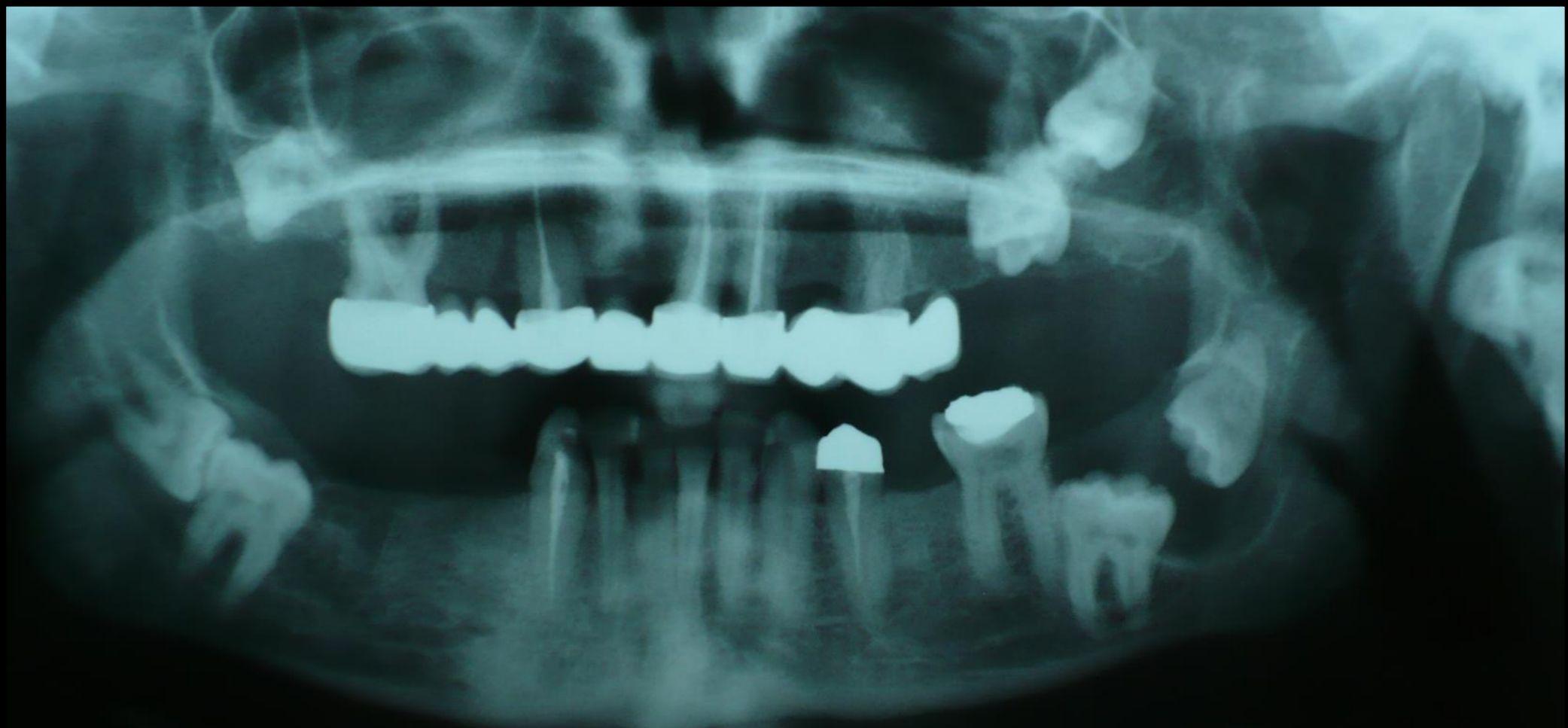
RARE BREKTHROUGH DISORDERS OF LOWER WISDOM TEETH

Transversal



RARE BREAKTHROUGH DISORDERS OF LOWER WISDOM TEETH

Situs inversus



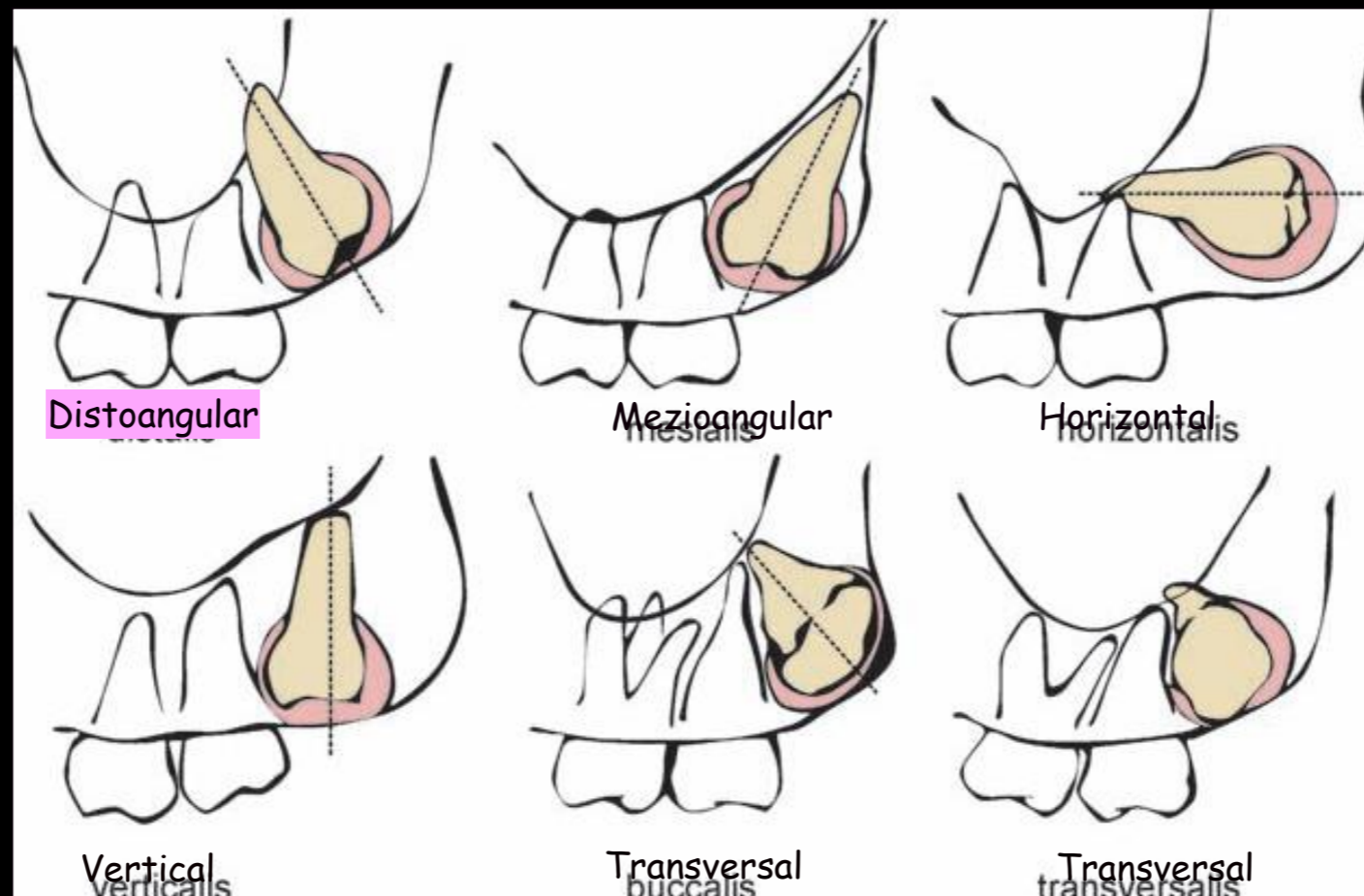
RARE BREAKTHROUGH DISORDERS OF LOWER WISDOM TEETH

Situs inversus



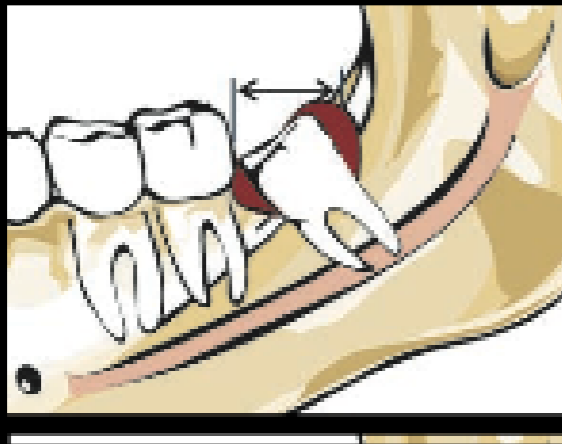
Aspects of Radiological Examination of Upper Wisdom Teeth

The relationship between the crown & the second molar, the tooth axis deviation



Aspects of Radiological Examination of Wisdom Teeth

Relation of the dental crown to the ramus mandibulae



Distance measured between the distal surface of the second molar and the level of the trigone retromolare crest line
(Winter, 1926 & Pell-Gregory, 1942 - classification)

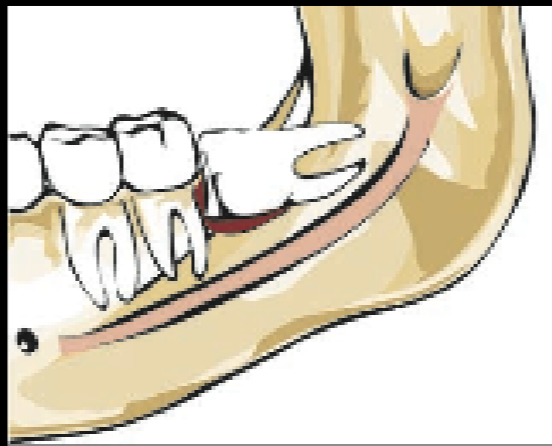
Aspects of Radiological Examination of Wisdom Teeth

- Relation of the tooth roots to the canal mandible

1



2



3



Relation of the tooth to the occlusal plane the depth of impaction

(Winter, 1926 & Pell-Gregory, 1942 - classification)

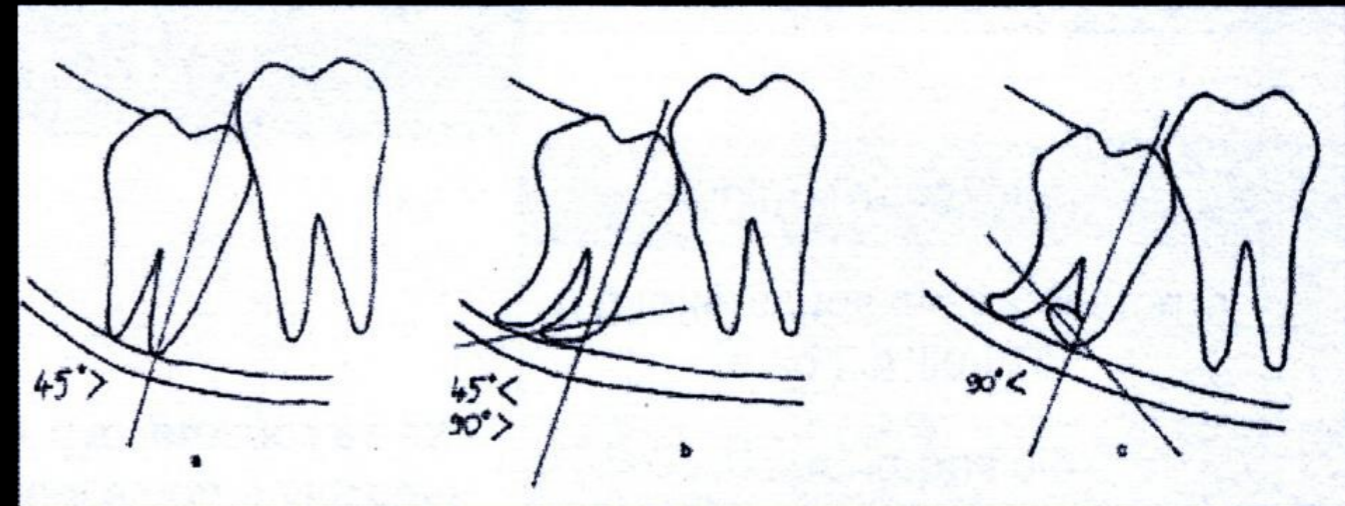
The role of the panoramic X-ray in the potential risk of probable injury of the inferior alveolar nerve before removing lower wisdom teeth. The effect of the overlapping root curvature and apex-mandible canal on risk estimation

Szalma J.et al

Fogorv.Szle (Dental Review) 103.2010: 43-47



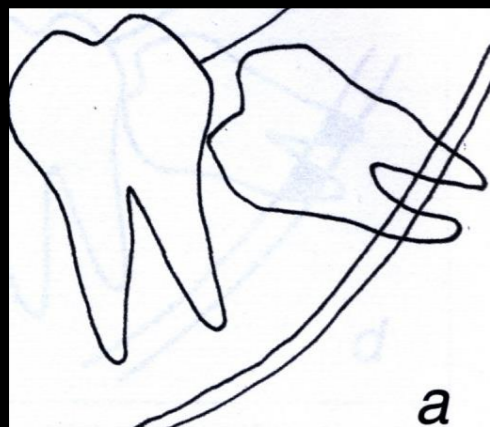
Root curvature greater than 90 degrees will increase significantly nerve damage and in case of deeper superposition the chance of numbness is clearly higher



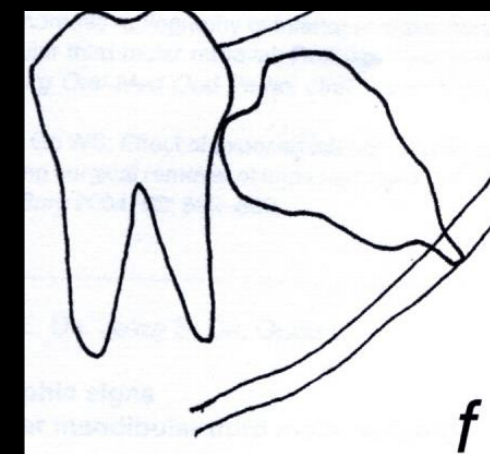
The role of the characteristic panoramic X-ray signals to judge expected inferior alveolar nerve injury before removing lower wisdom teeth

Szalma J. et al

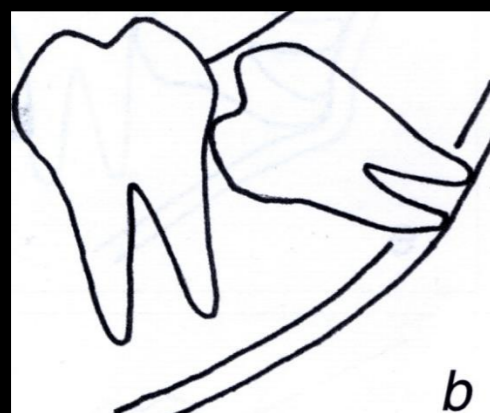
Fogorv.Szle (Dental Review) 104, 2011: 27-33



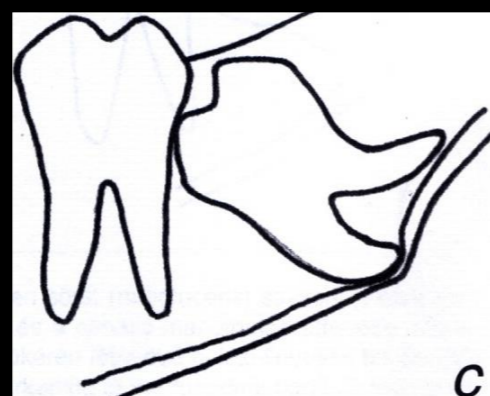
superimposed



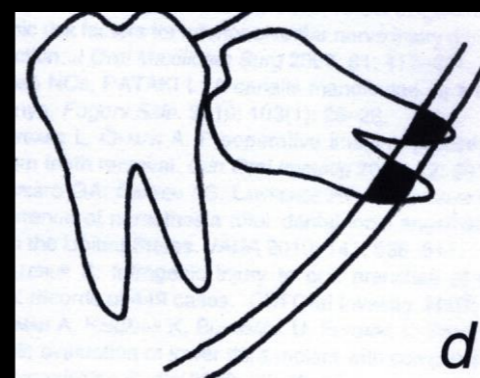
Root thinning



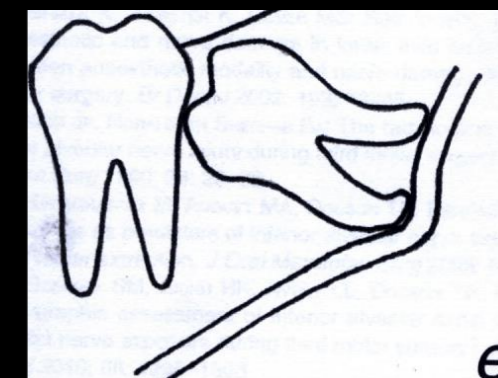
Continuity is broken



canal stenosis

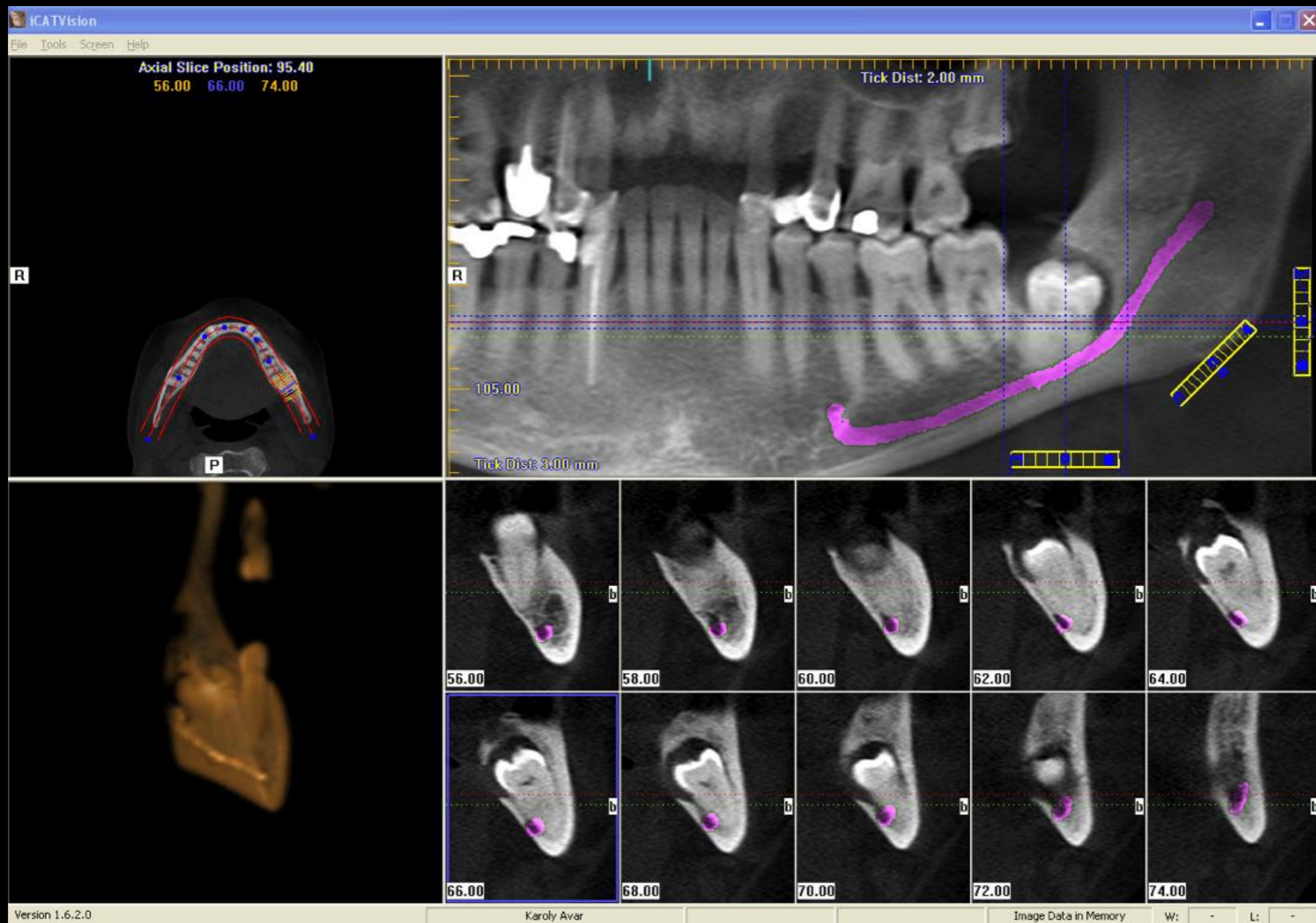


Dark bar

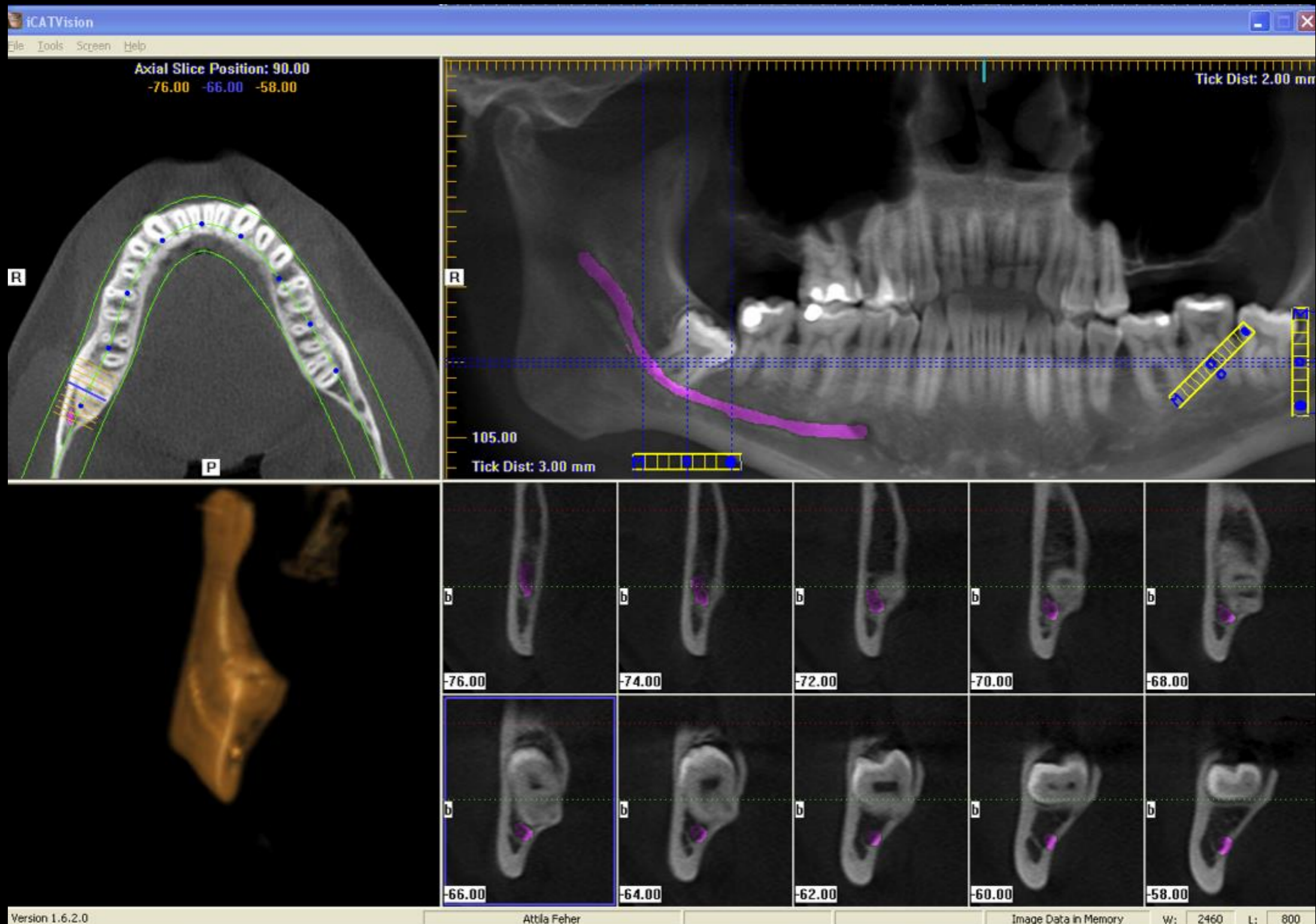


Bend in the canal

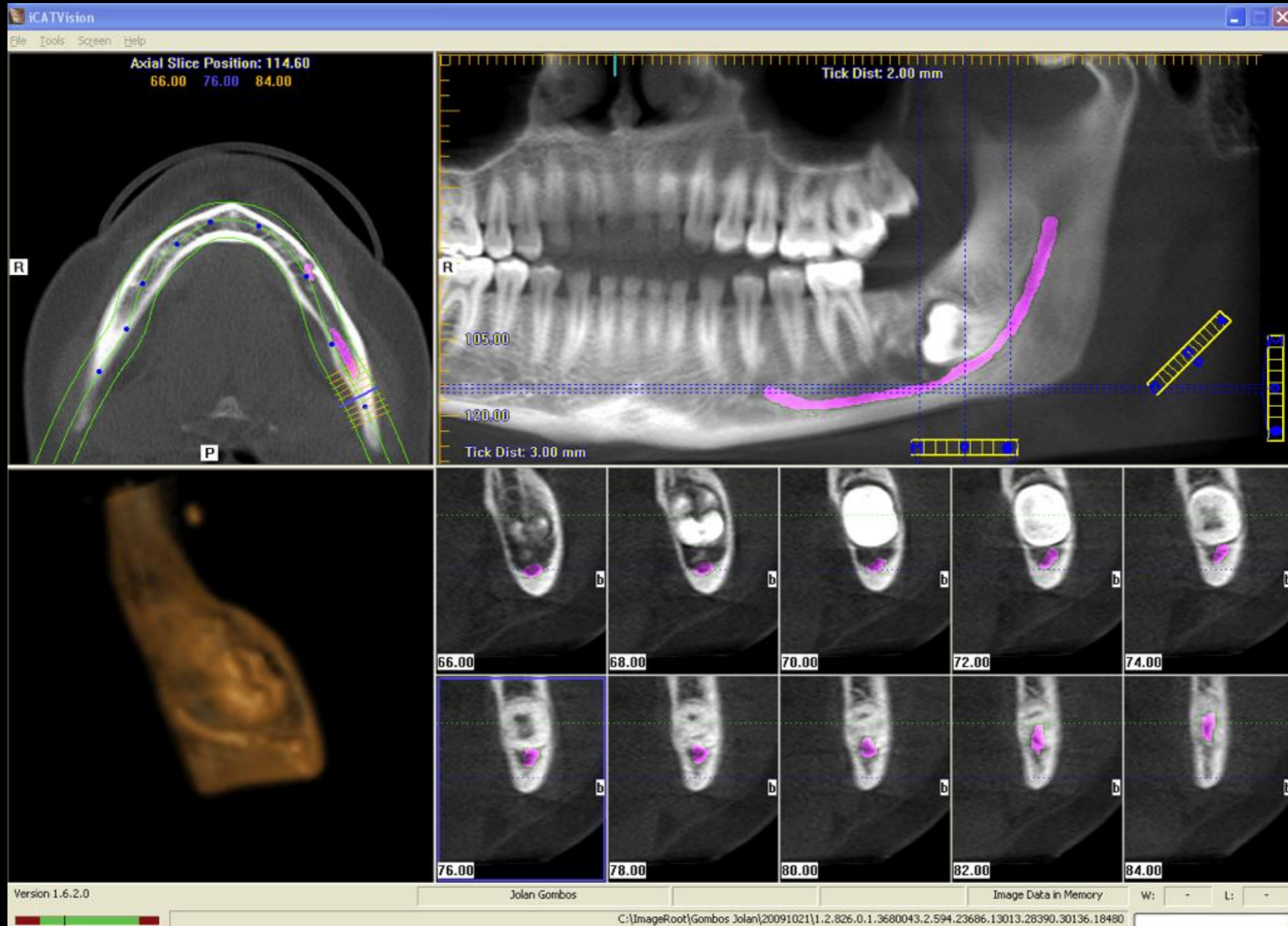
Examining the Relationship of Wisdom Teeth Root apex to Canal using **CBCT**



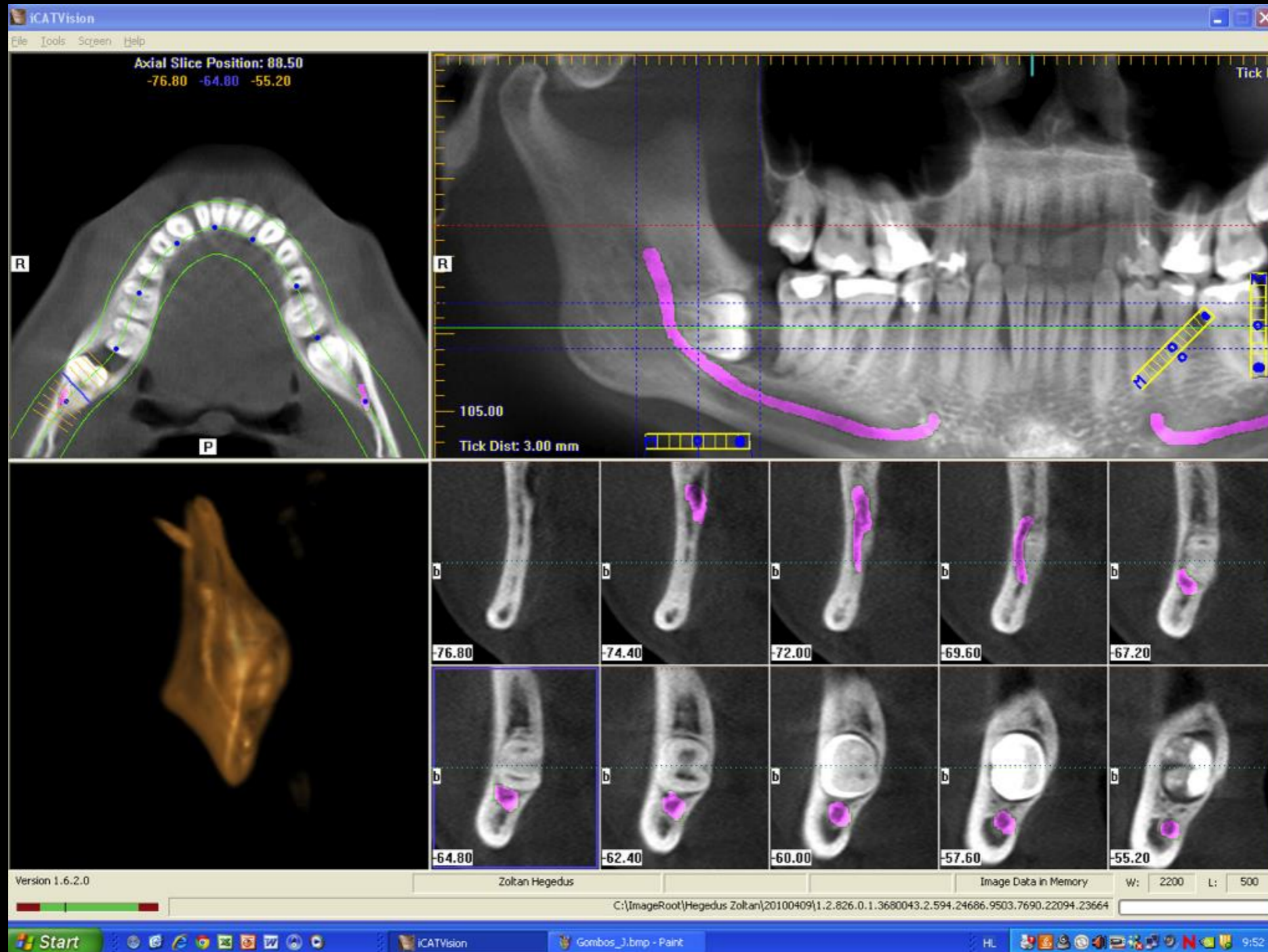
Examining the Relationship of Wisdom Teeth Root apex to Canal using **CBCT**



Examining the Relationship of Wisdom Teeth Root apex to Canal using **CBCT**



Examining the Relationship of Wisdom Teeth Root apex to Canal using **CBCT**



Complications of Wisdom Tooth surgery

Pre, intra and post-operative complications occurring during wisdom tooth surgery

0. Complications occurring during anesthesia
 1. Nerve injuries
 2. Post operative inflammations
 3. Jay fractures
 4. Second molar injury
5. Bleeding during surgery and post-operative bleeding
 6. Lesions induced by anesthesia
 7. Post operative swelling and pain

Complications of Wisdom Tooth surgery

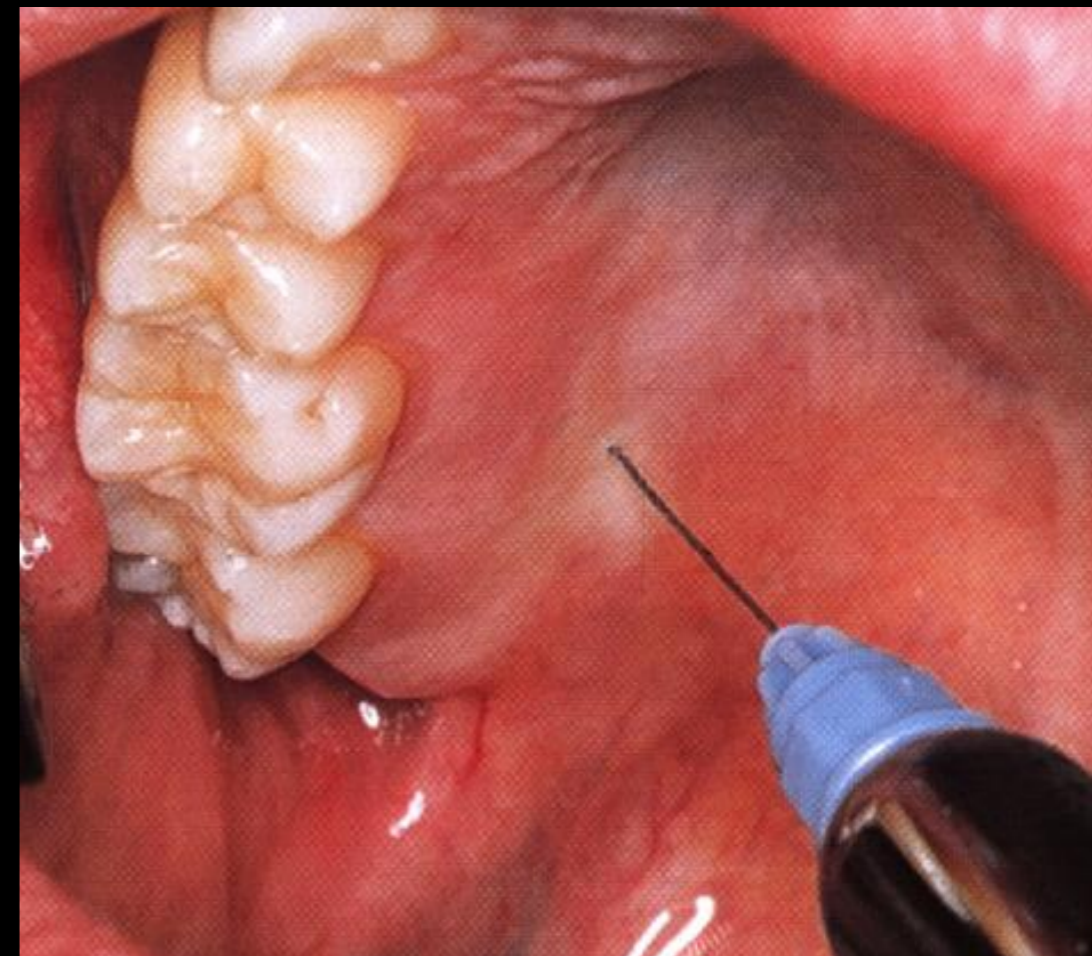
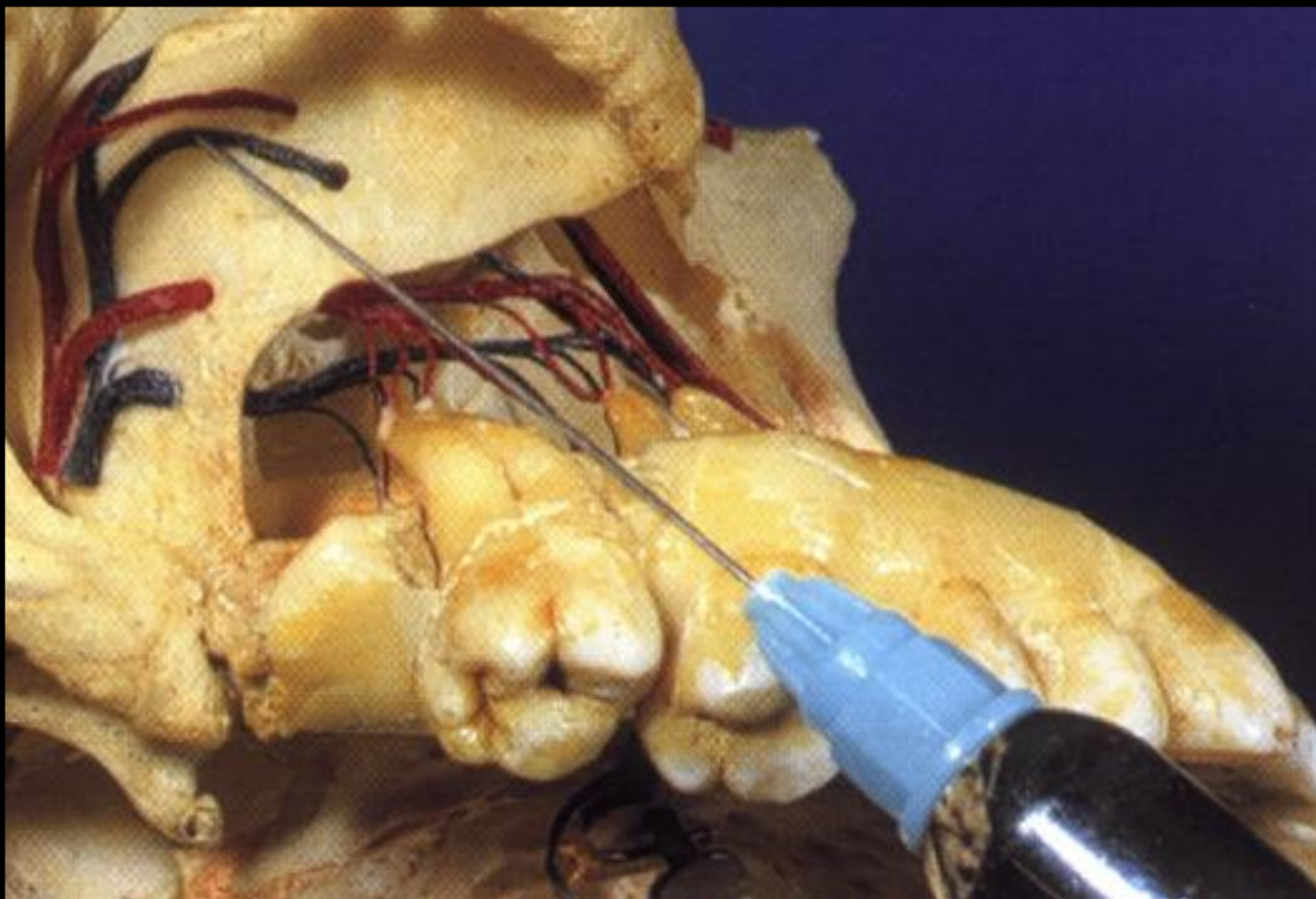
Pre, intra and post-operative complications occurring during Wisdom tooth surgery

0. Complications occurring during anesthesia

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Complications of Wisdom Tooth surgery

Anesthesia



Complications of Wisdom Tooth surgery

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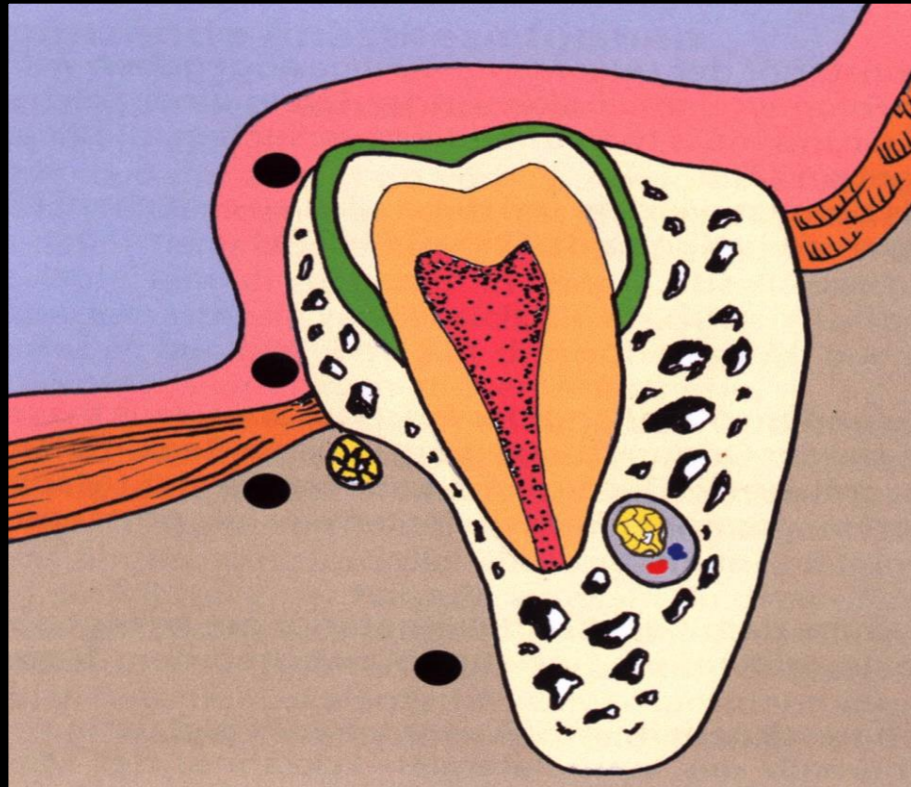
4. Second molar injury

5. Bleeding during surgery and post-operative bleeding

6. Lesions induced by anesthesia

7. Post operative swelling and pain

Complications of Wisdom Tooth surgery



Nerve injury

the injury of lingual nerve and inferior alveolar nerve



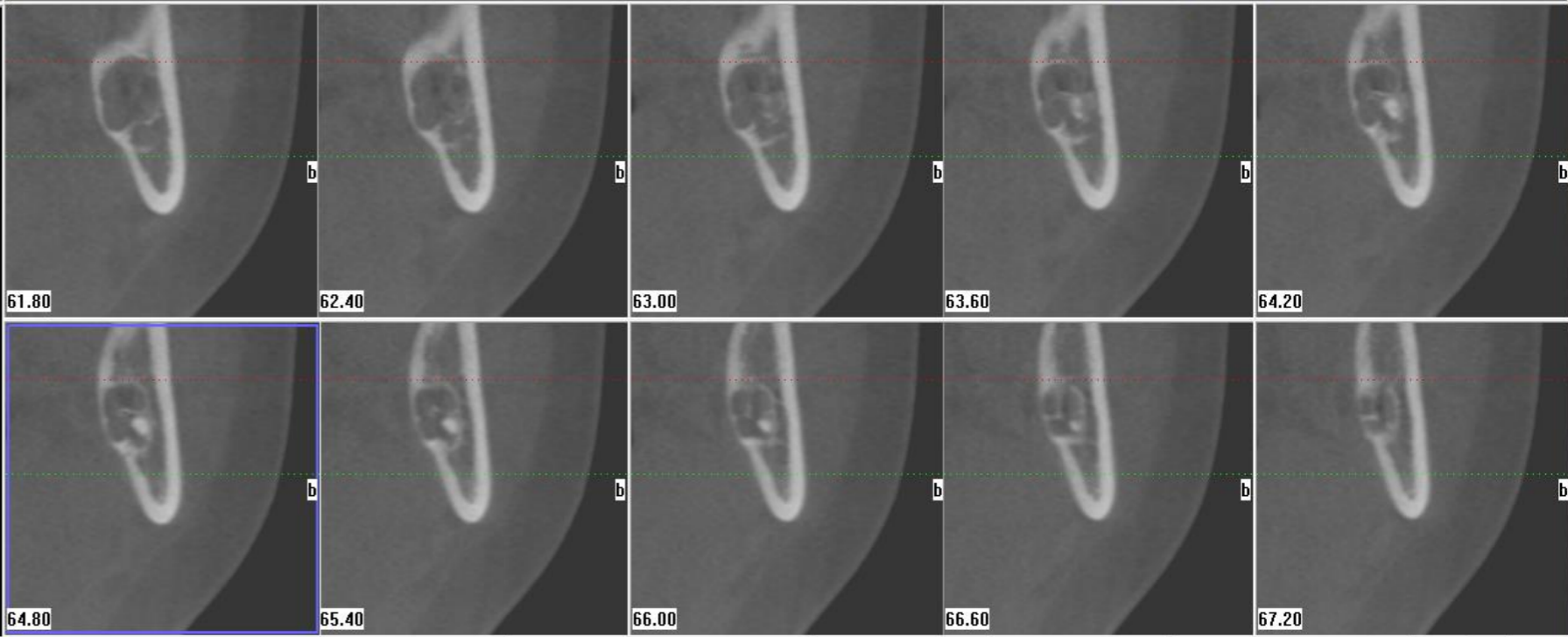
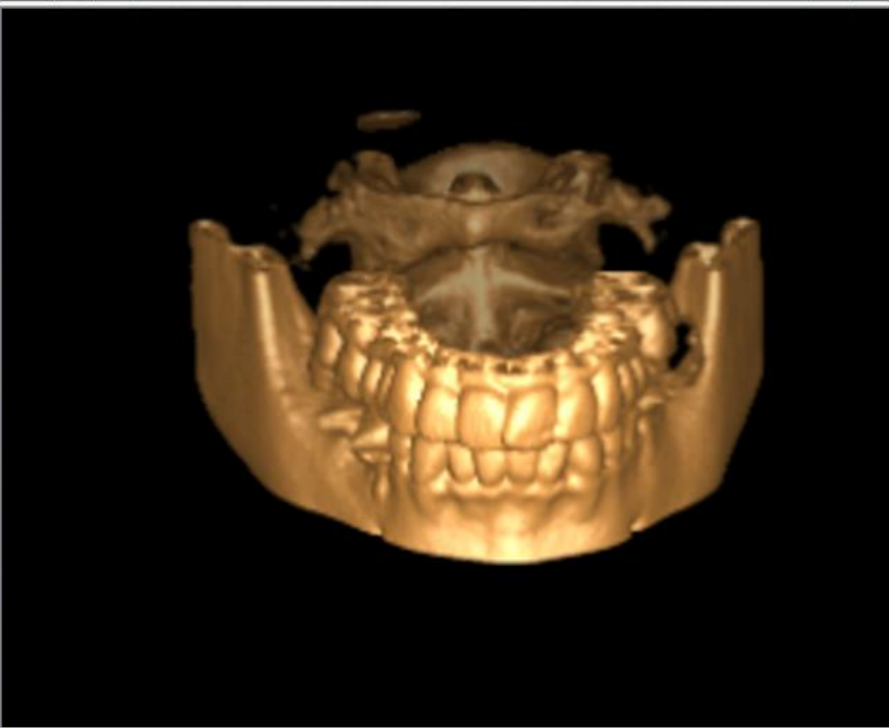
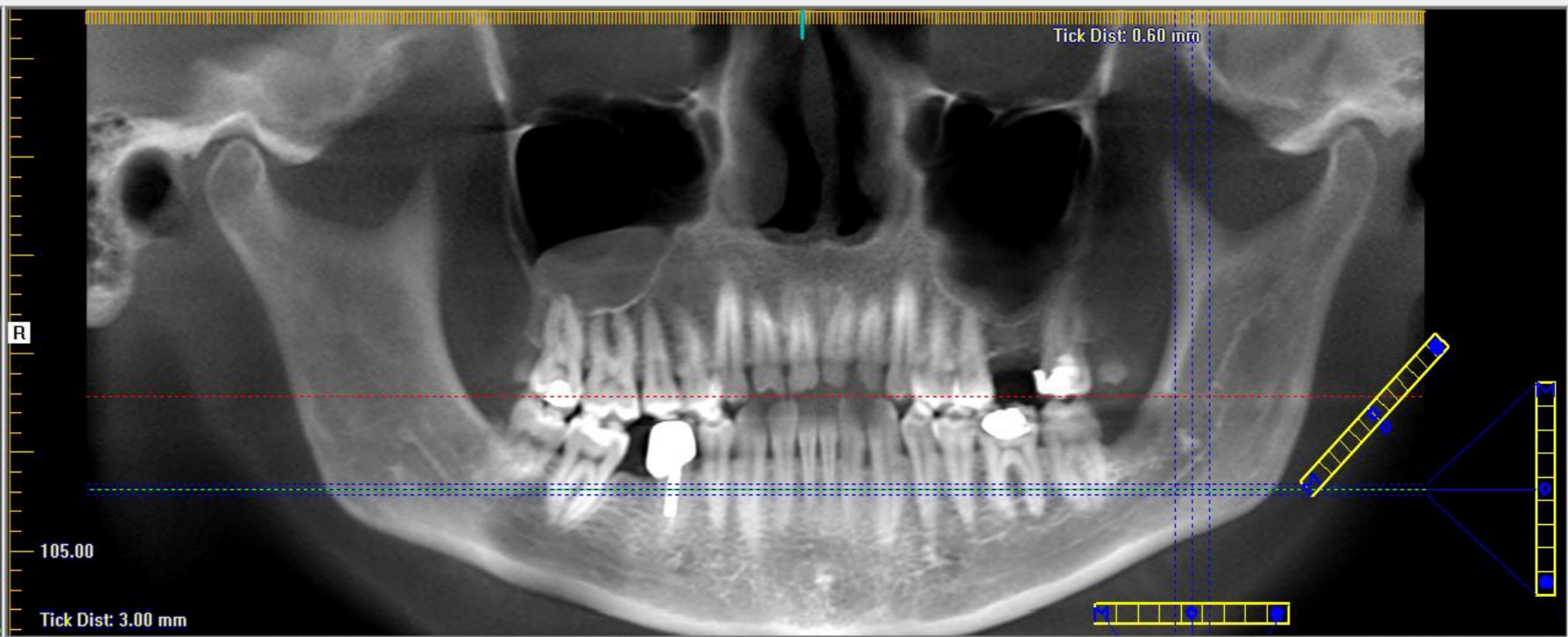
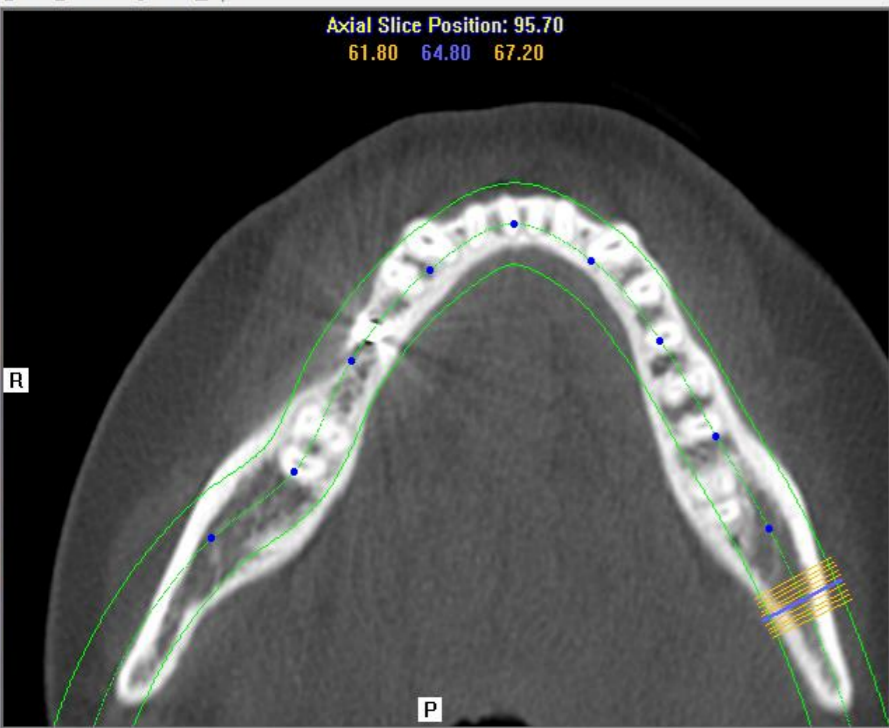
Nerve Injury

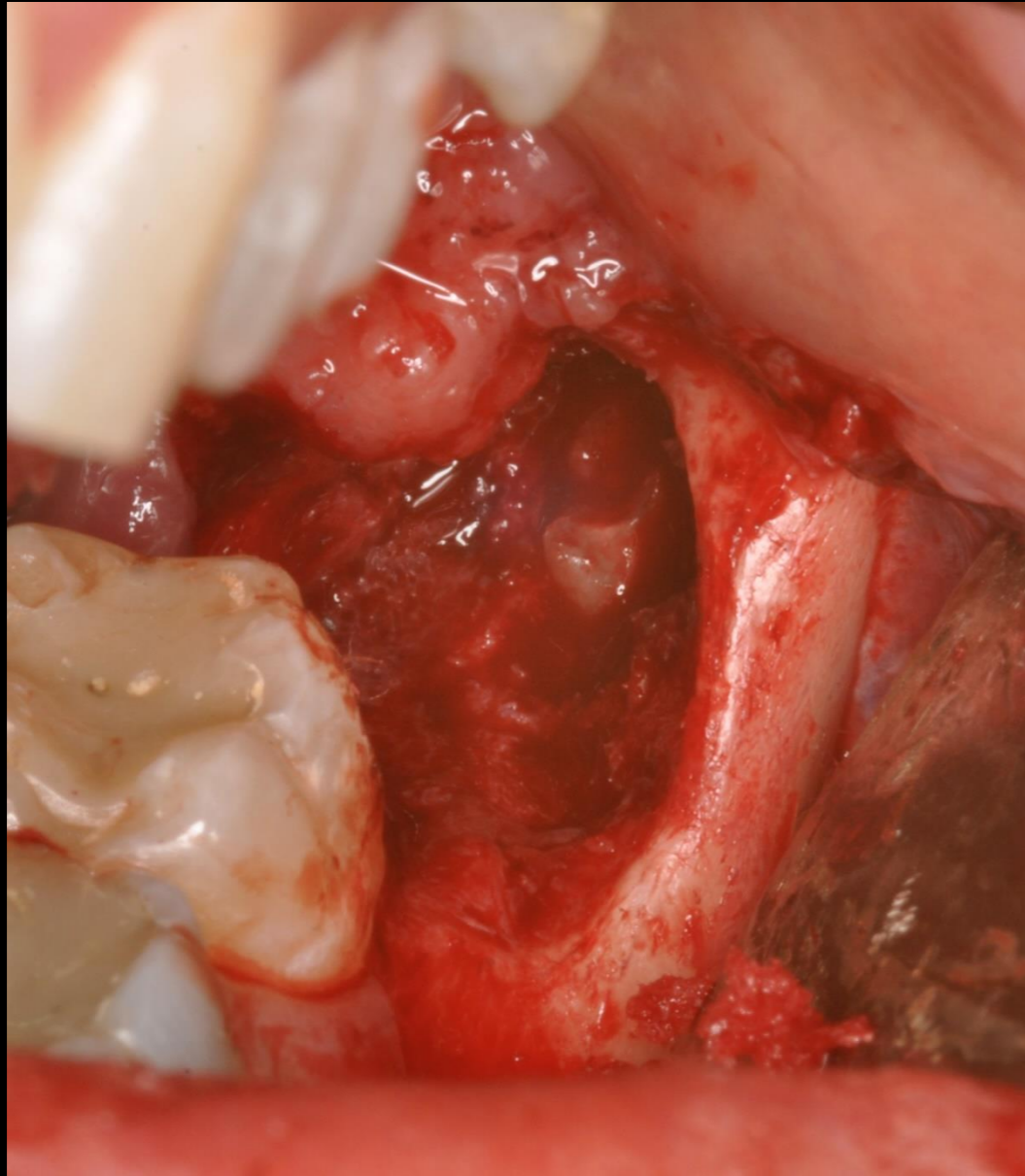


According to the literature we can state that considering all cases, in less than **1% of cases durable** and in **0.4 to 8.4% reversible** lingual nerve and n. alv. inf. damage may occur during wisdom tooth removal

Queral-Godoy E, Figueiredo R, Valmaseda-Castellon E, Berini-Aytes L, Gay-Escoda C: Frequency and evolution of lingual nerve lesions following lower third molar extraction. J Oral Maxillofac Surg 2006; 64: 402-407. 8.
Valmaseda-Castellon E, Berini-Aytes L, Gay-Escoda C: Inferior alveolar nerve damage after lower third molar surgical extraction: a prospective study of 1117 surgical extractions. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2001; 92: 377-383.

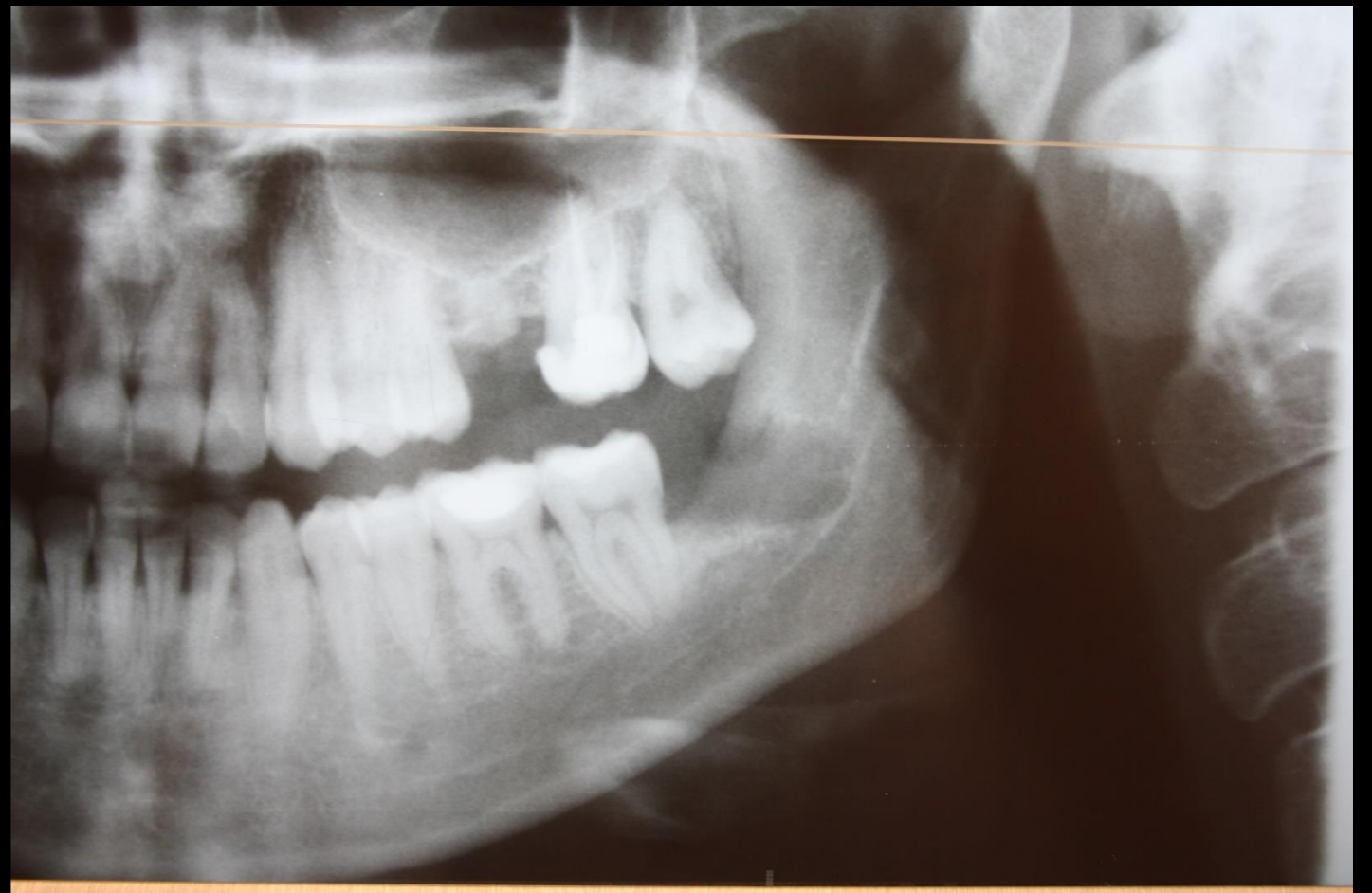






During Surgery





Complications of Wisdom Tooth surgery

Pre, intra and post-operative complications occurring during Wisdom tooth surgery

0. Complications occurring during anesthesia
 1. Nerve injuries
 2. Postoperative inflammation
 3. Jaw fractures
 4. Second molar injury
5. Bleeding during surgery and post-operative bleeding
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7. Post operative swelling and pain

Complications of Wisdom Tooth surgery

Postoperative Inflammation

After surgery removal of wisdom tooth there is relatively high chance of subsequent **inflammation (0.8 to 7.8%)**. The risk of infection is increased in case of elderly patients or heavy smokers



Yoshii T, Hamamoto Y, Muraoka S, Kohjitani A, Teranobu O, Furodoi S: Incidence of deep facial space infection after surgical removal of the mandibular third molars. *J Infect Chemother* 2001; 7: 55-57.

Arrigoni CC, Lambrecht JT: komplikationen bei und nach operativer Weisheitszahnentfernung. *Schweiz Monatschr Zahnmed* 2004; 114: 1271-1279.

The case of Dr. Sándor Bogdán

Complications of Wisdom Tooth surgery



The case of Dr. Sándor Bogdán



Complications of Wisdom Tooth surgery



Complications of Wisdom Tooth surgery

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Complications of Wisdom Tooth surgery

Jaw fractures



Complications of Wisdom Tooth surgery

Pre, intra and post-operative complications occurring during Wisdom tooth surgery

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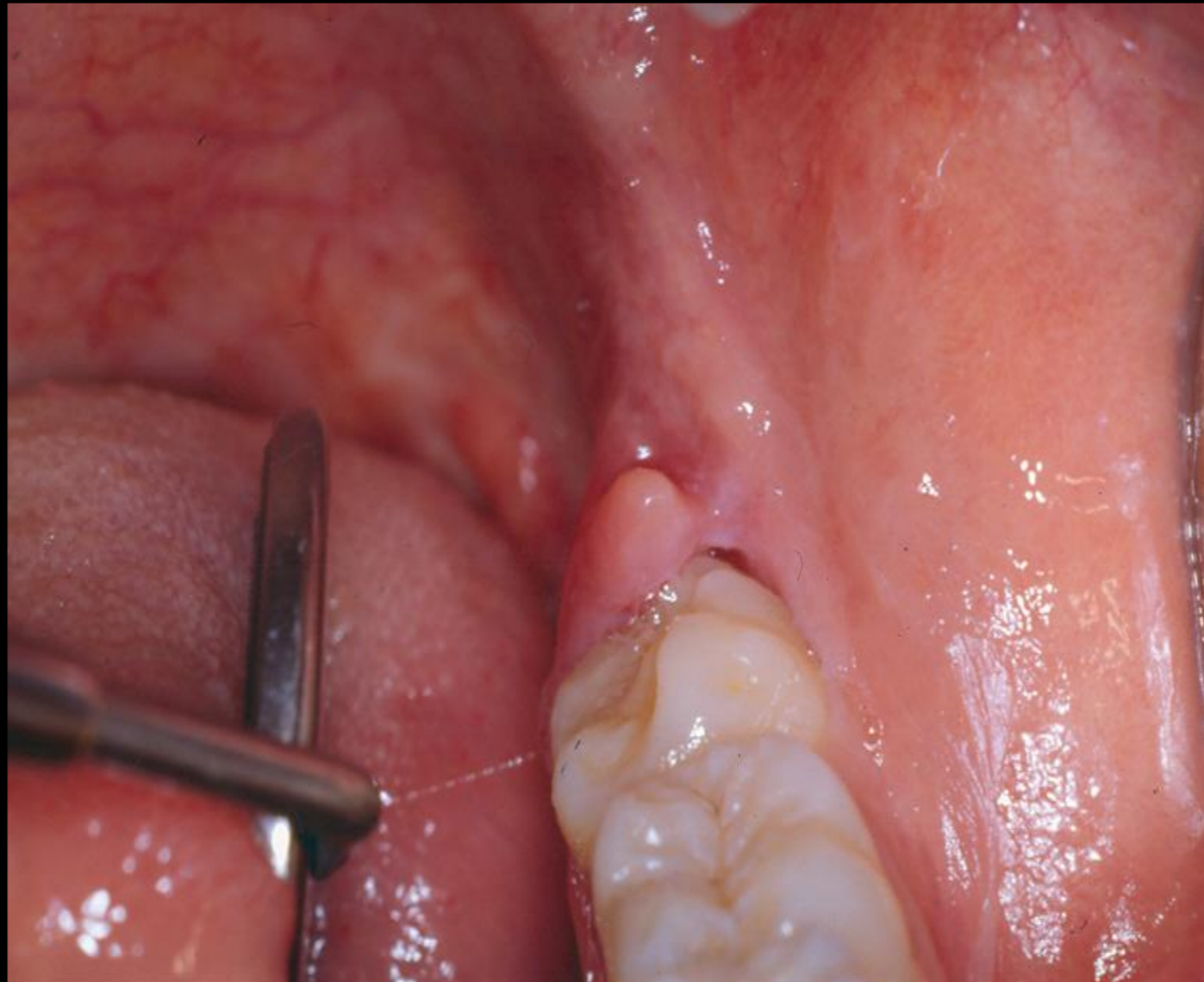
7. Post operative swelling and pain

Complications of Wisdom Tooth surgery

Bleeding during surgery and post-operative bleeding

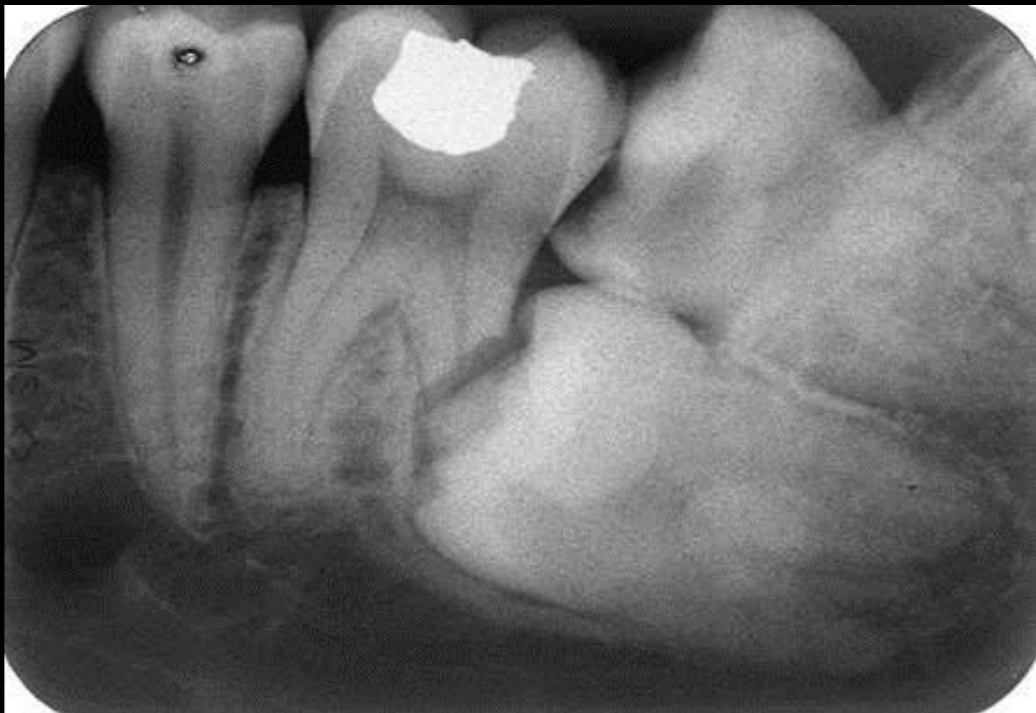


Complications of Wisdom Tooth surgery



Complications of Wisdom Tooth surgery

Resorbtion of the root of the first molar



Cyst formation of dental origin (follicular cyst)



October 2011

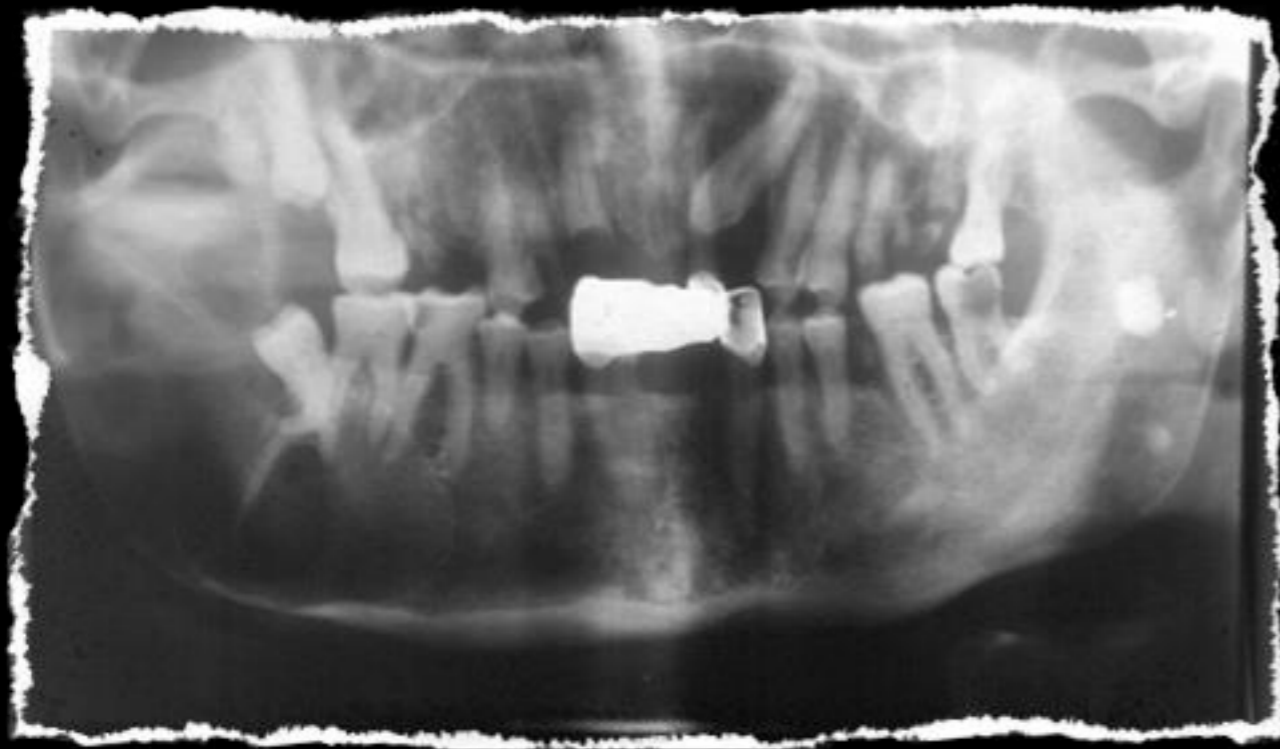
October 2012



SUPERDENT

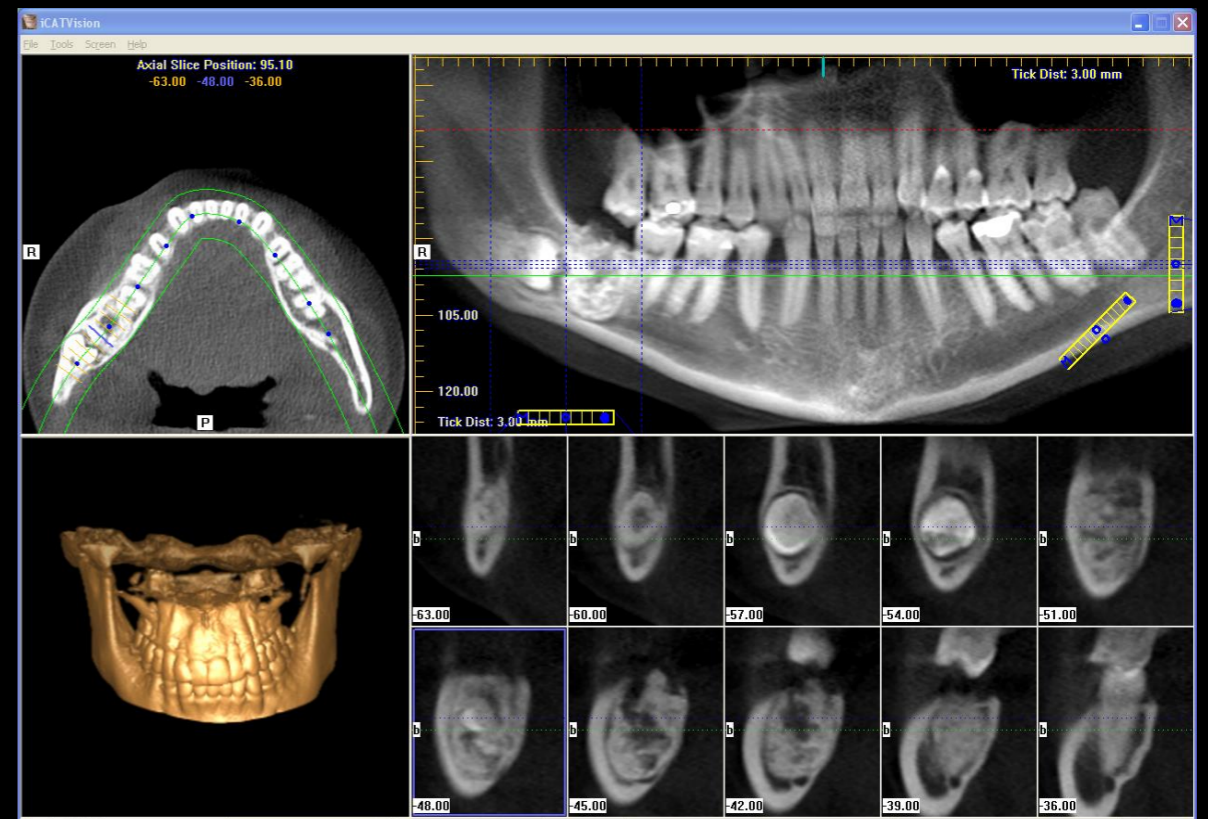
R

Odontogenic tumor formation

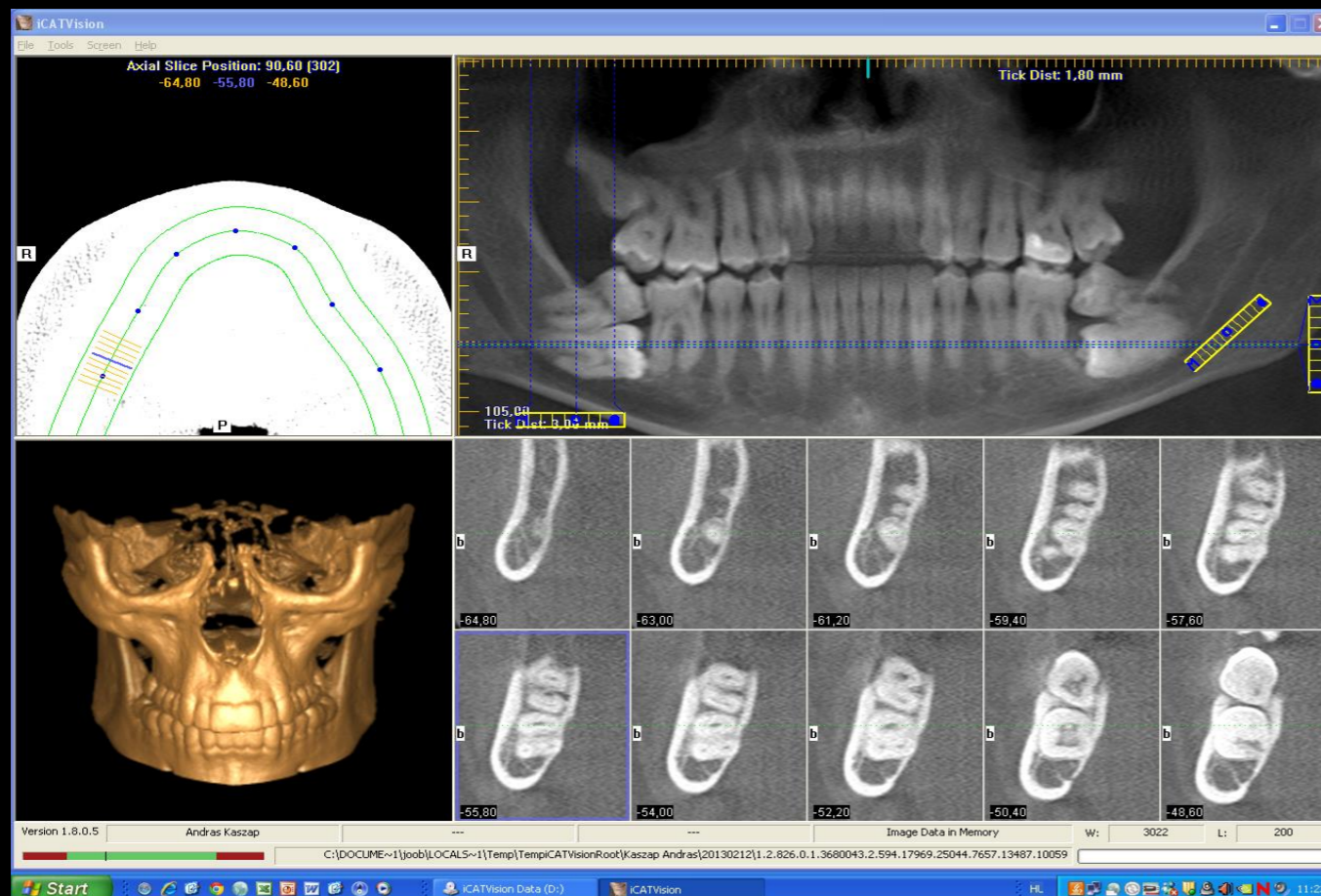


Odontoma located in front of tooth 48
CBCT- radiogram

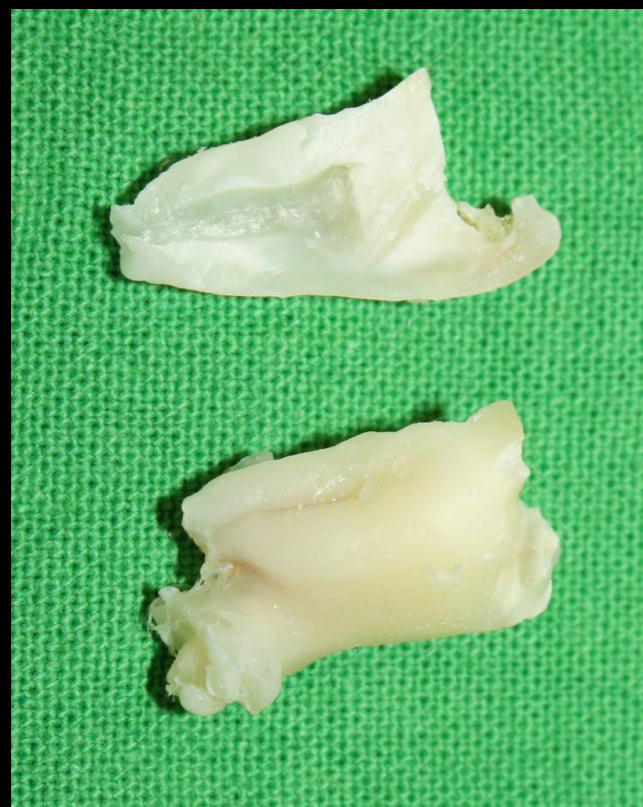
Huge ameloblastoma formed next to
tooth 48



Risk of Jaw Fracture



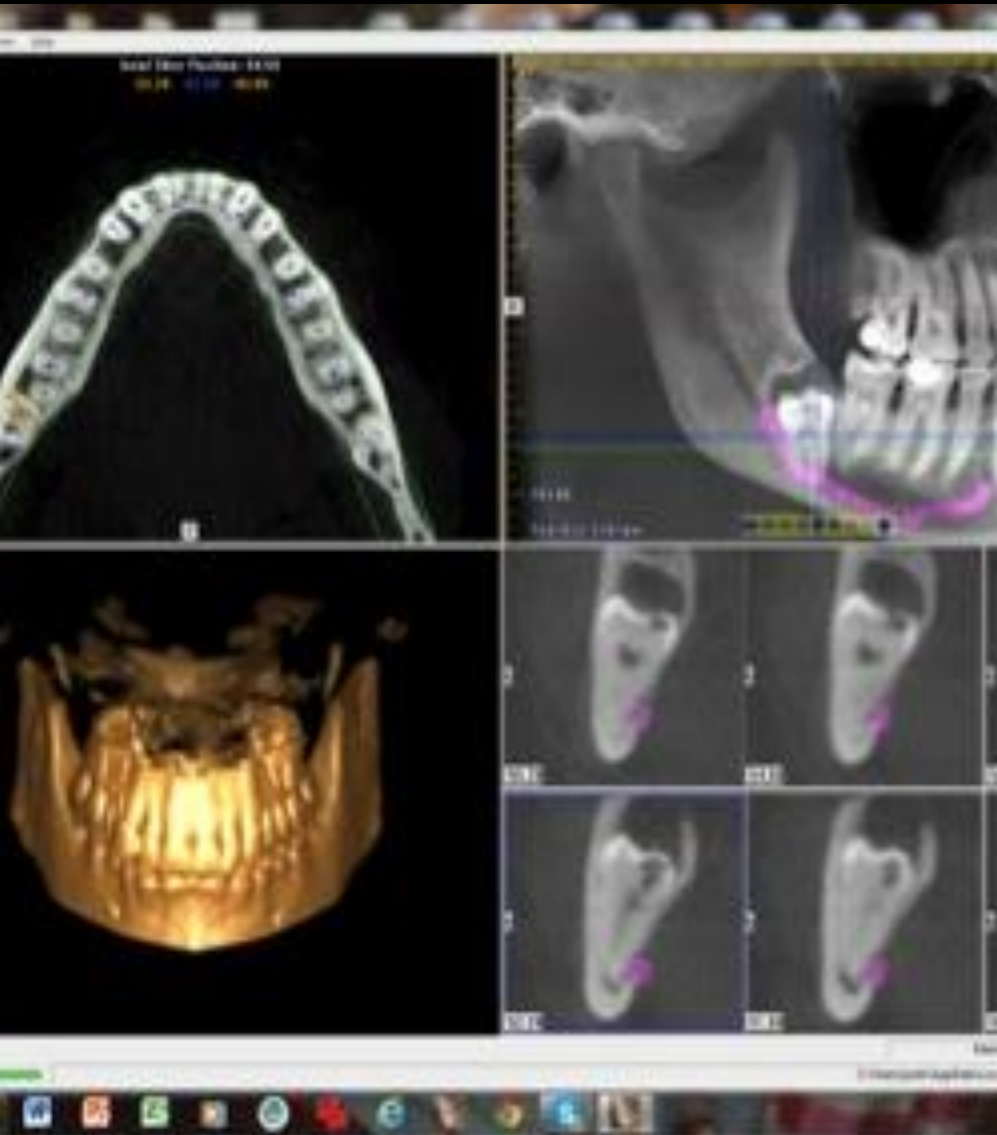
Correlating Wisdom Tooth Surgery diagnosis and Complications Occuring during Interventions













A bölcsességfogak szerepe a fogászat különböző szakterületein

szerkesztette:

Joób-Fancsaly Árpád



„Kindly listen to me, the one side maxilla resection is a difficult surgery, however, the removing of a lower wisdom tooth can be a difficult and complicated intervention”

Ferenc Skaloud (1902-1981)

Thank you for your kind attention!



joobarpad@gmail.com