

***Dental
Management
of
Oral Cancer
Patients***



Dr Agnieszka Frydrych

Why is this important?

- Dental care forms an integral part of the multidisciplinary management of oral and oropharyngeal cancer patients and it significantly contributes to the preservation of life quality



Oral Cavity (OC) and Oropharyngeal (OP) Cancer

- In Australia about 3,000 new cases of oral and oropharyngeal cancer are reported a year (~2.5% of all cancers)

Australian Dental Journal
The official journal of the Australian Dental Association



SCIENTIFIC ARTICLE

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Knowledge and perceptions regarding oral and pharyngeal carcinoma among adult dental patients

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CANCER DIAGNOSIS

ABC NEWS





"John has been through an eleven and a half hour surgery in Melbourne yesterday and is now in a stable condition in ICU. The cancerous tumour was located in his mouth and it has been successfully removed."

JILL FARNHAM

NEWS | BREAKING NEWS | BREAKING NEWS | BREAKING NEWS

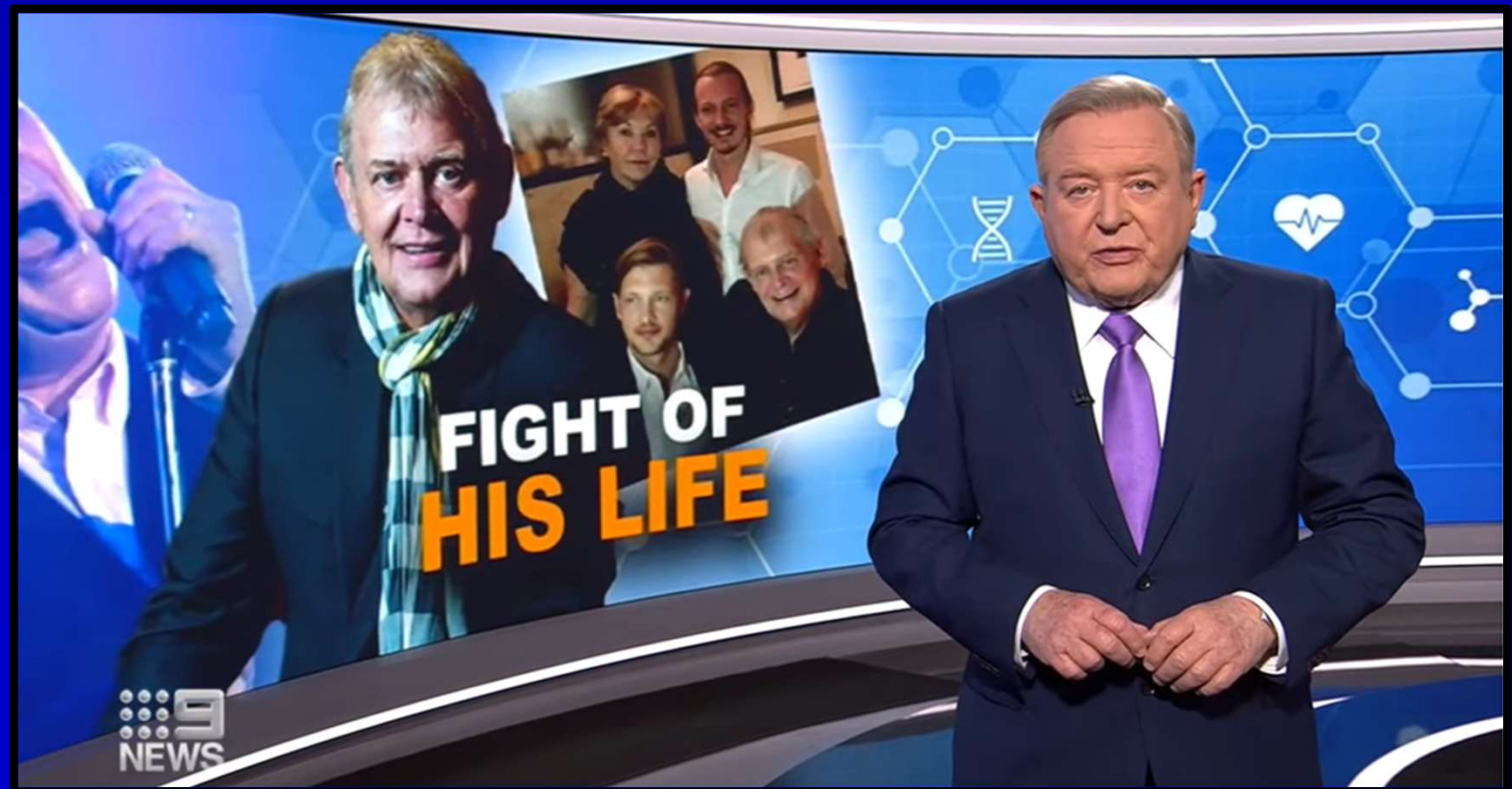
Today **FARNHAM'S FAMILY SPEAKS**

7:13 **SAYS THEY'RE OVERWHELMED BY OUTPOURING OF LOVE**


MELB 14°



"The Farnham Cancer"



FIGHT OF HIS LIFE



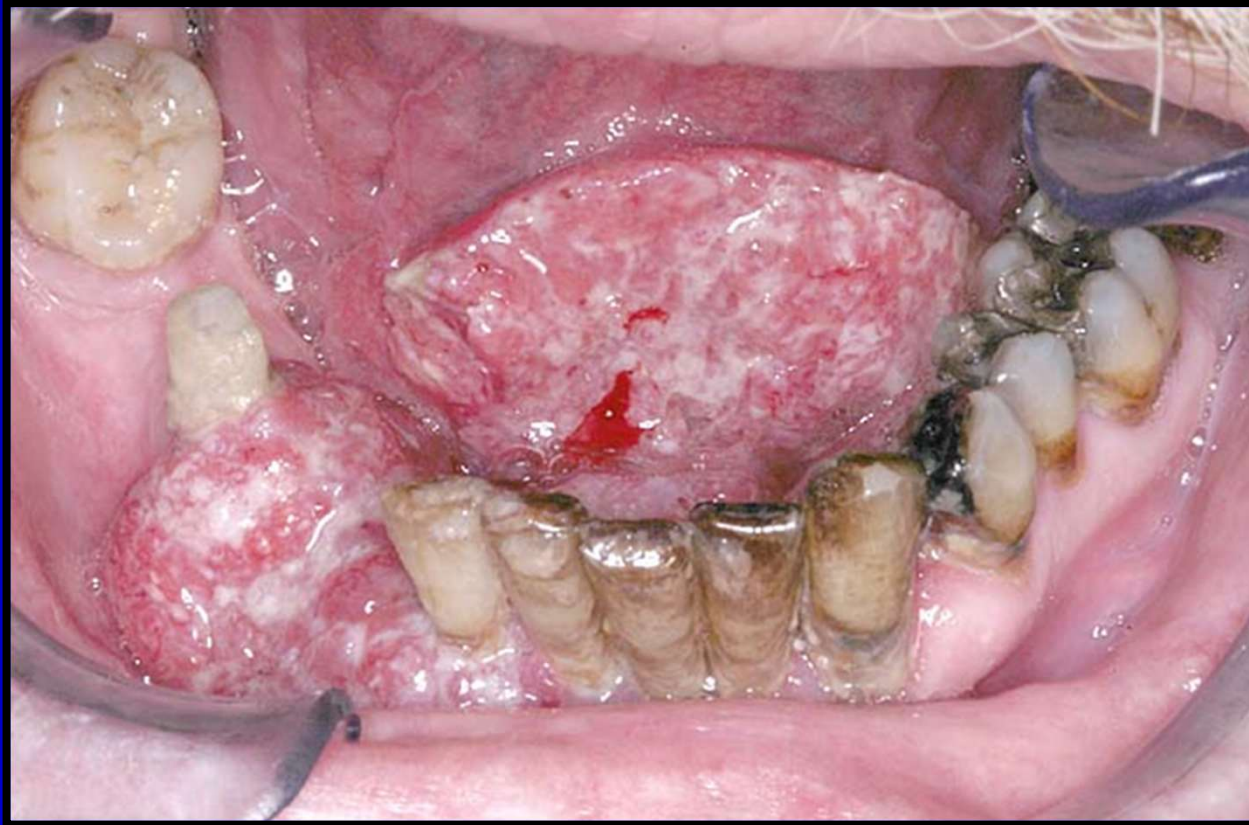
Oral Cavity (OC) and Oropharyngeal (OP) Cancer

- Adverse impacts on life quality
 - High suicide rates



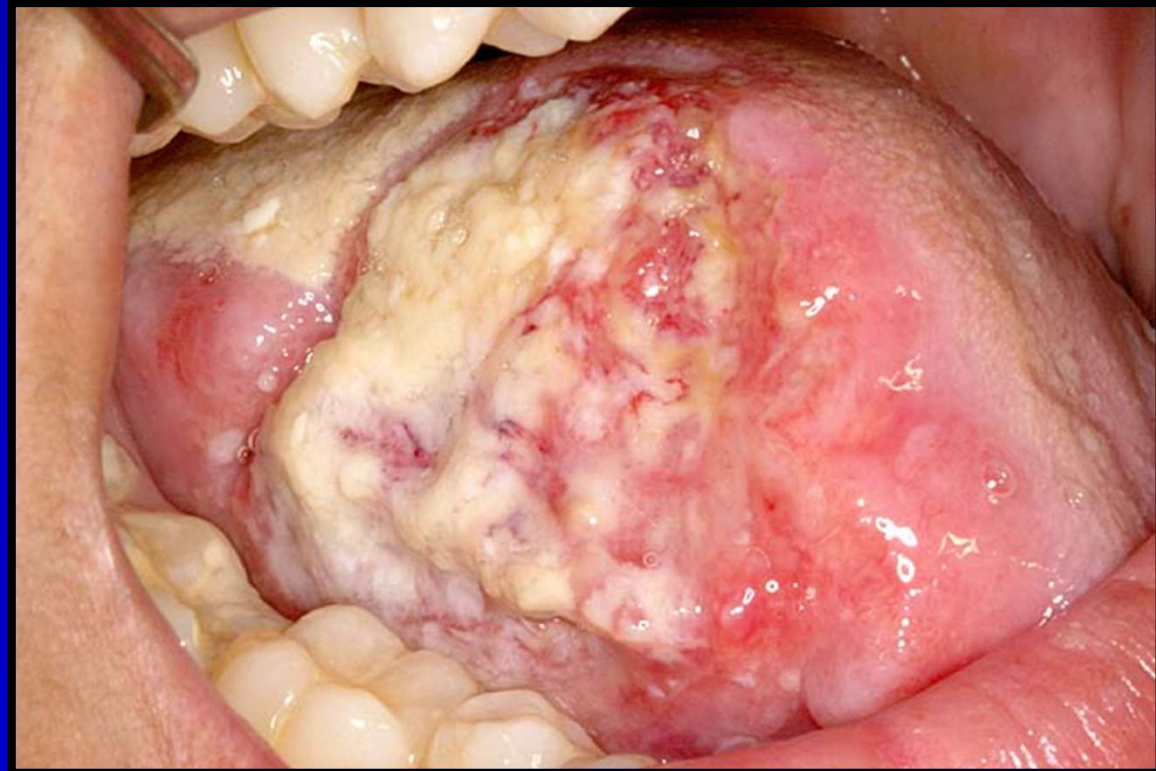
OC and OP Cancer

- Over 90% of cancers of the oral cavity and the oropharynx are SCC

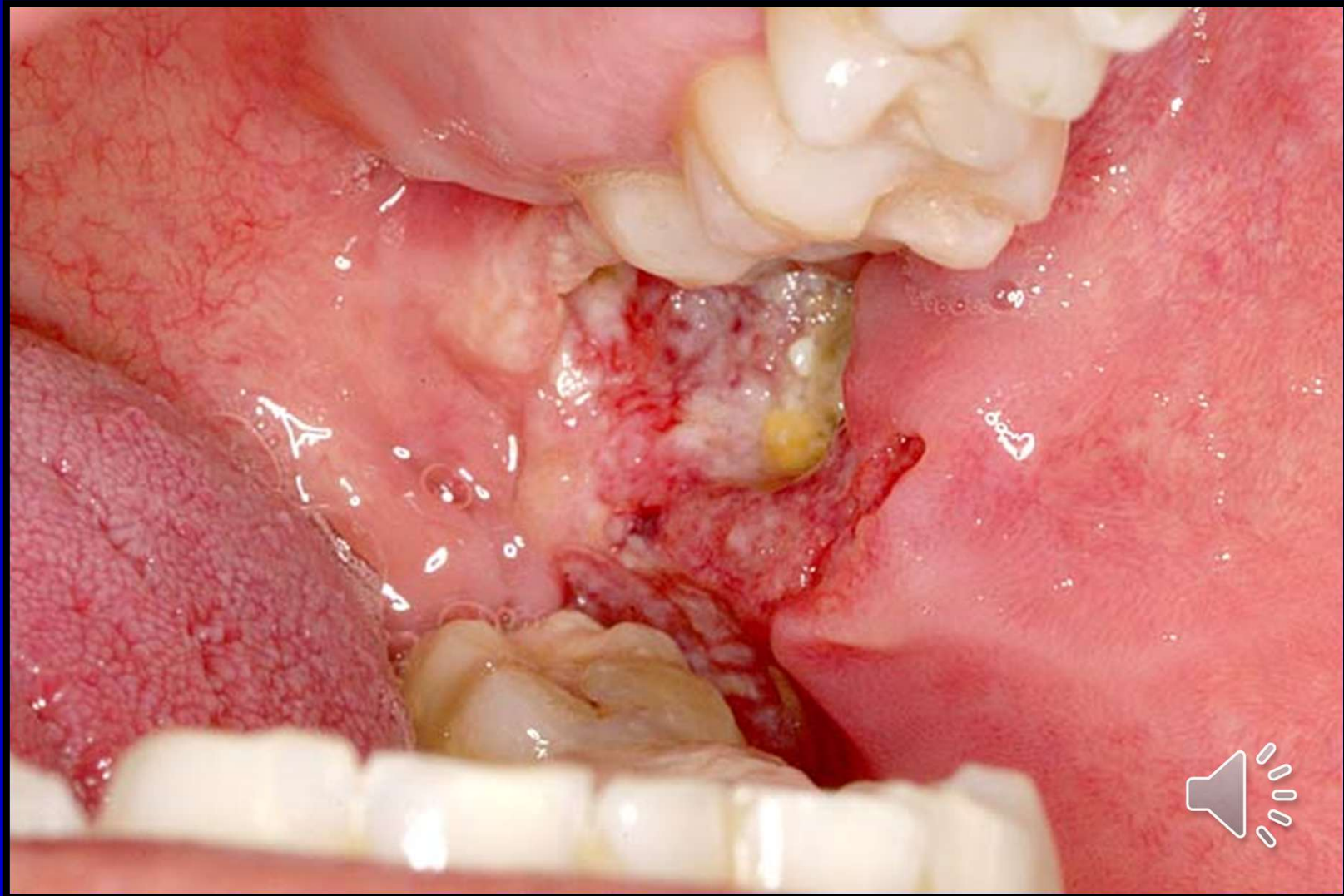


OC and OP Cancer

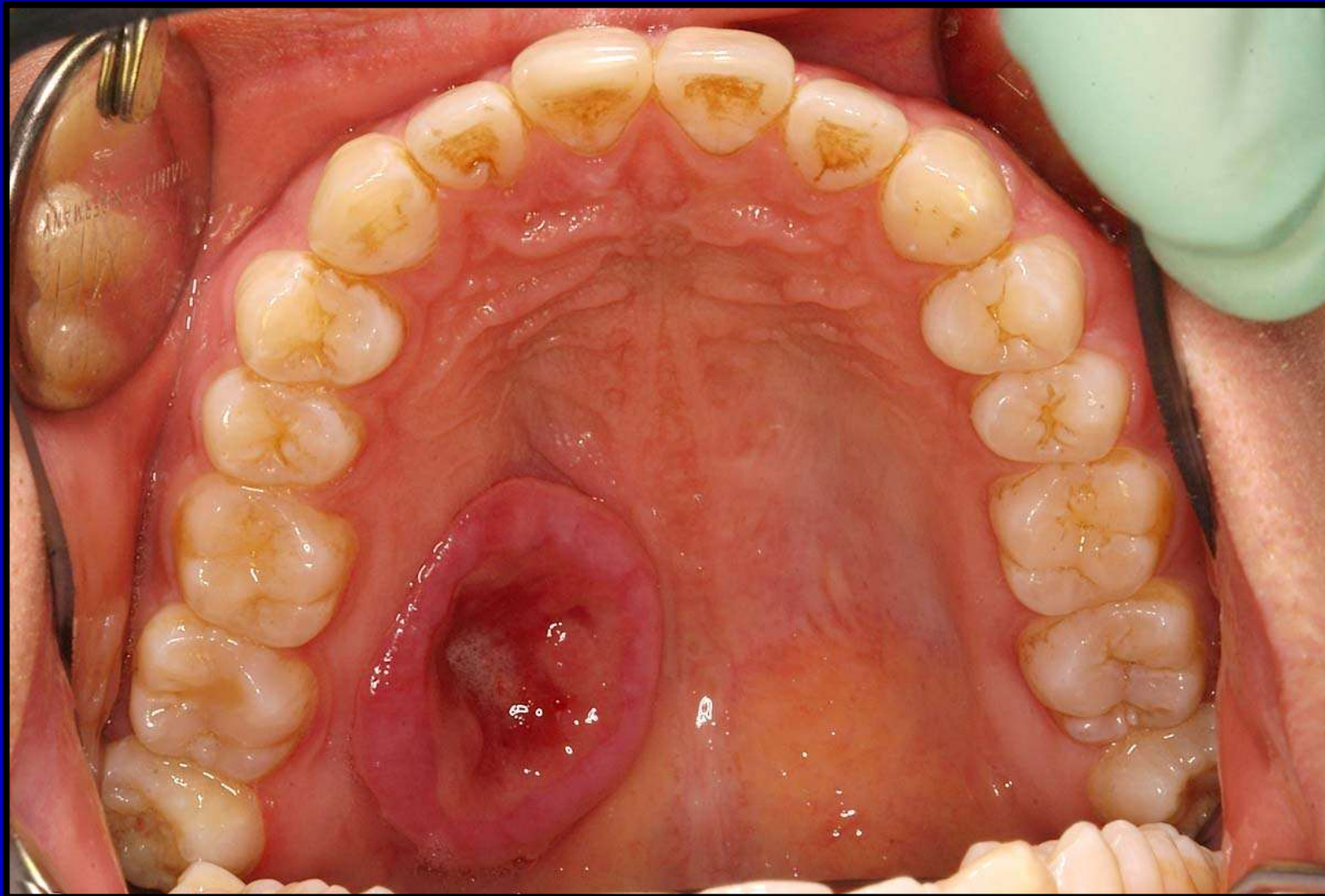
- The incidence of oral squamous cell carcinoma is increasing among young patients



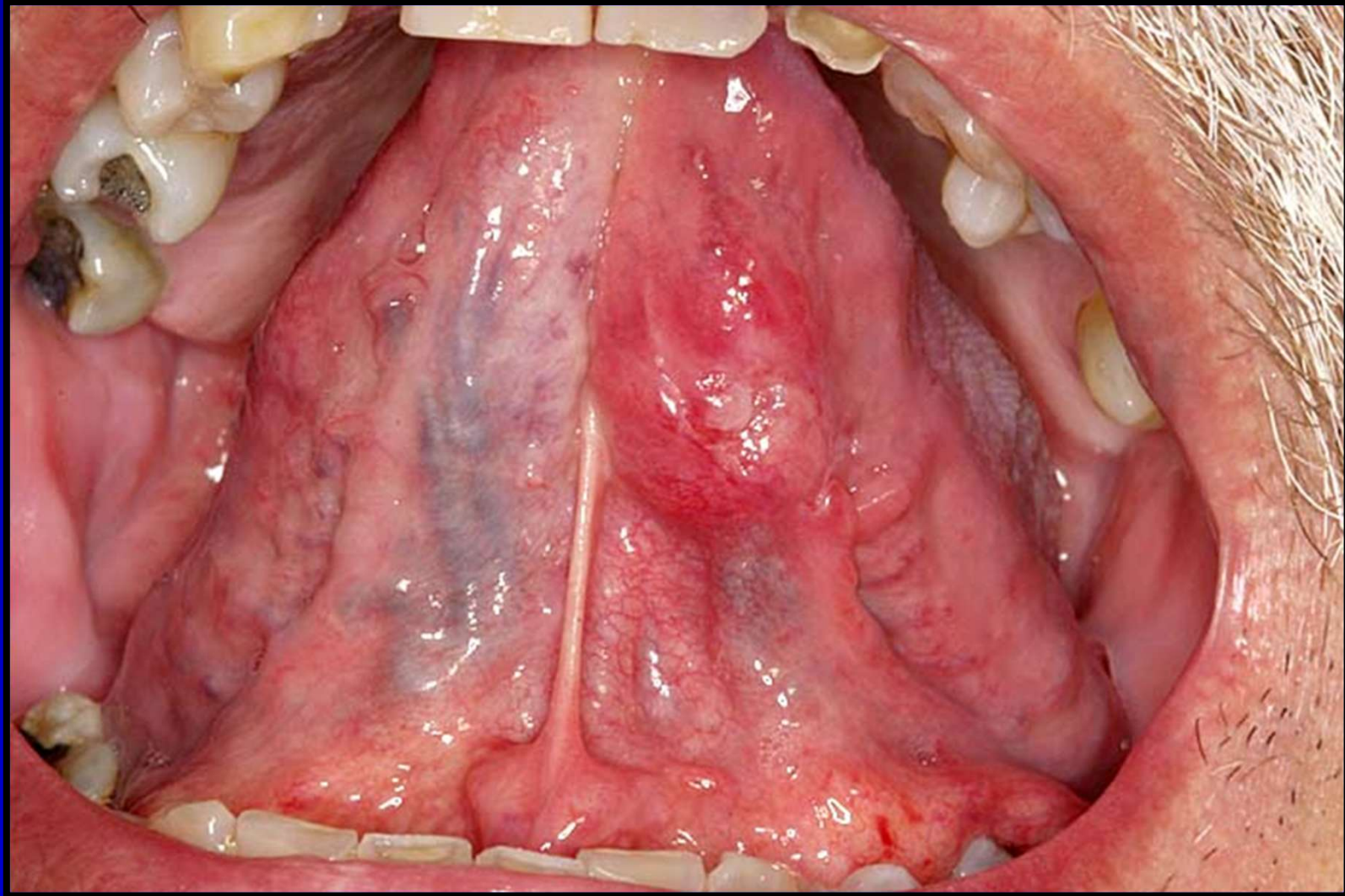
OC and OP Cancer



OC and OP Cancer



Treatment

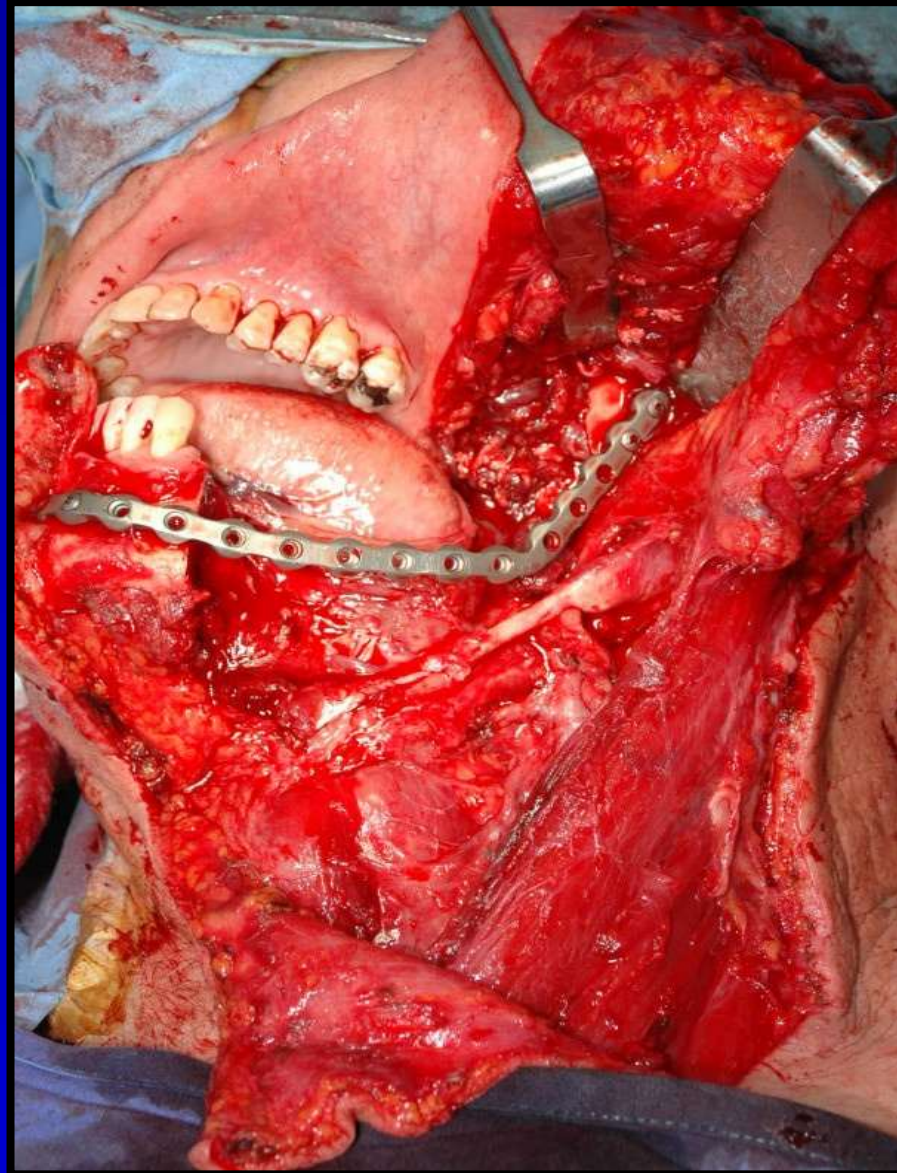


Treatment

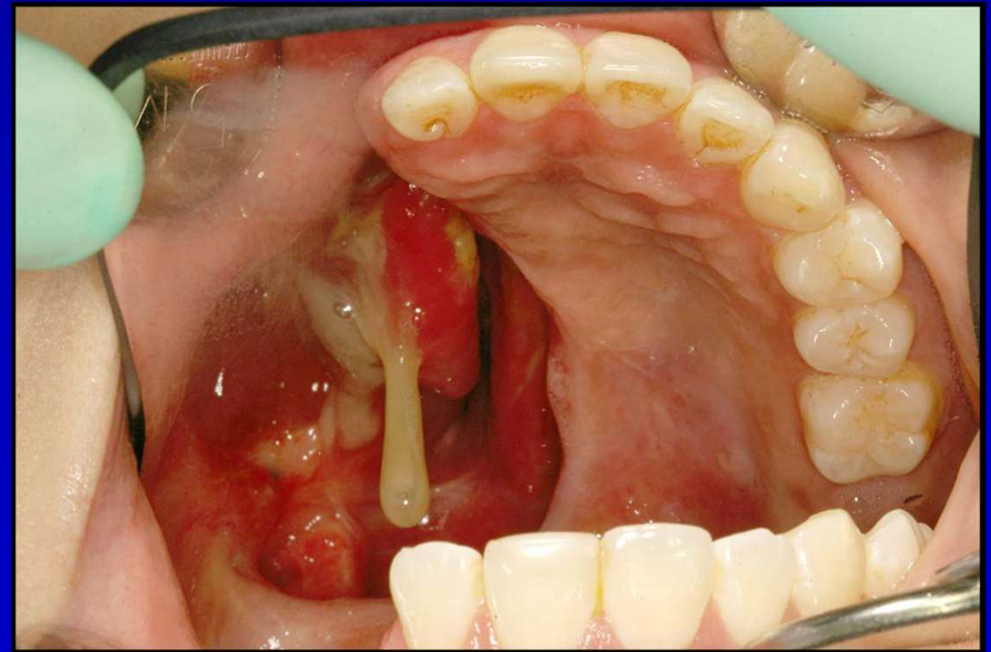
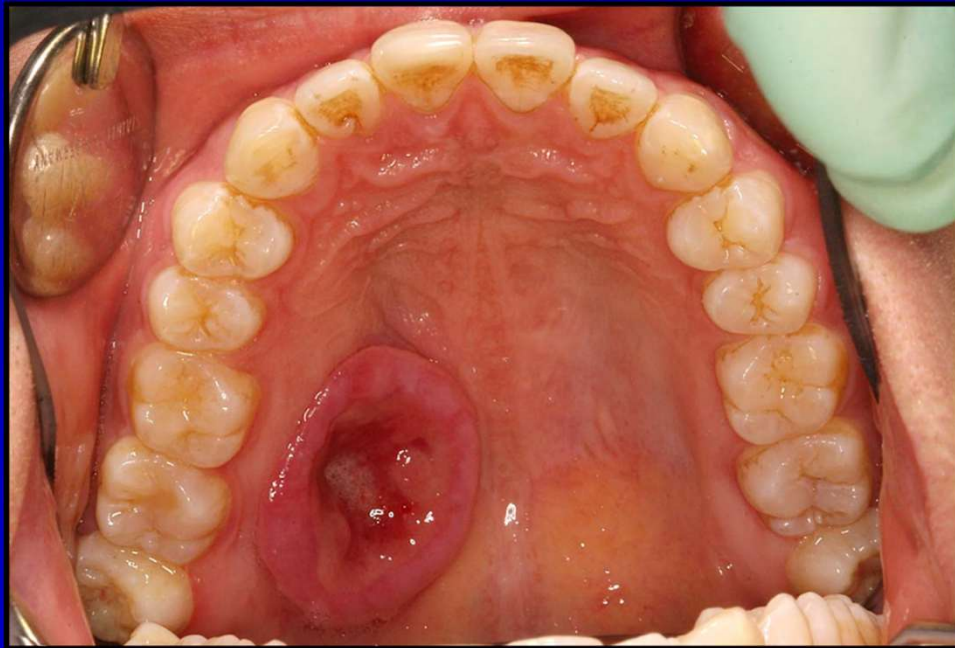
- **Surgery**
- Radiation therapy
- Surgery + radiation therapy
- Radiation + chemo therapy
- Surgery + radiation + chemo therapy
- No treatment (palliation)



Surgery



Surgery



Radiation therapy

- Doses required to kill malignant cells range from 50-70Gy → High dose!
- Radiation is fractionated into daily doses of ~ 2Gy
- Delivered Monday to Friday, usually over a 6-7 week period



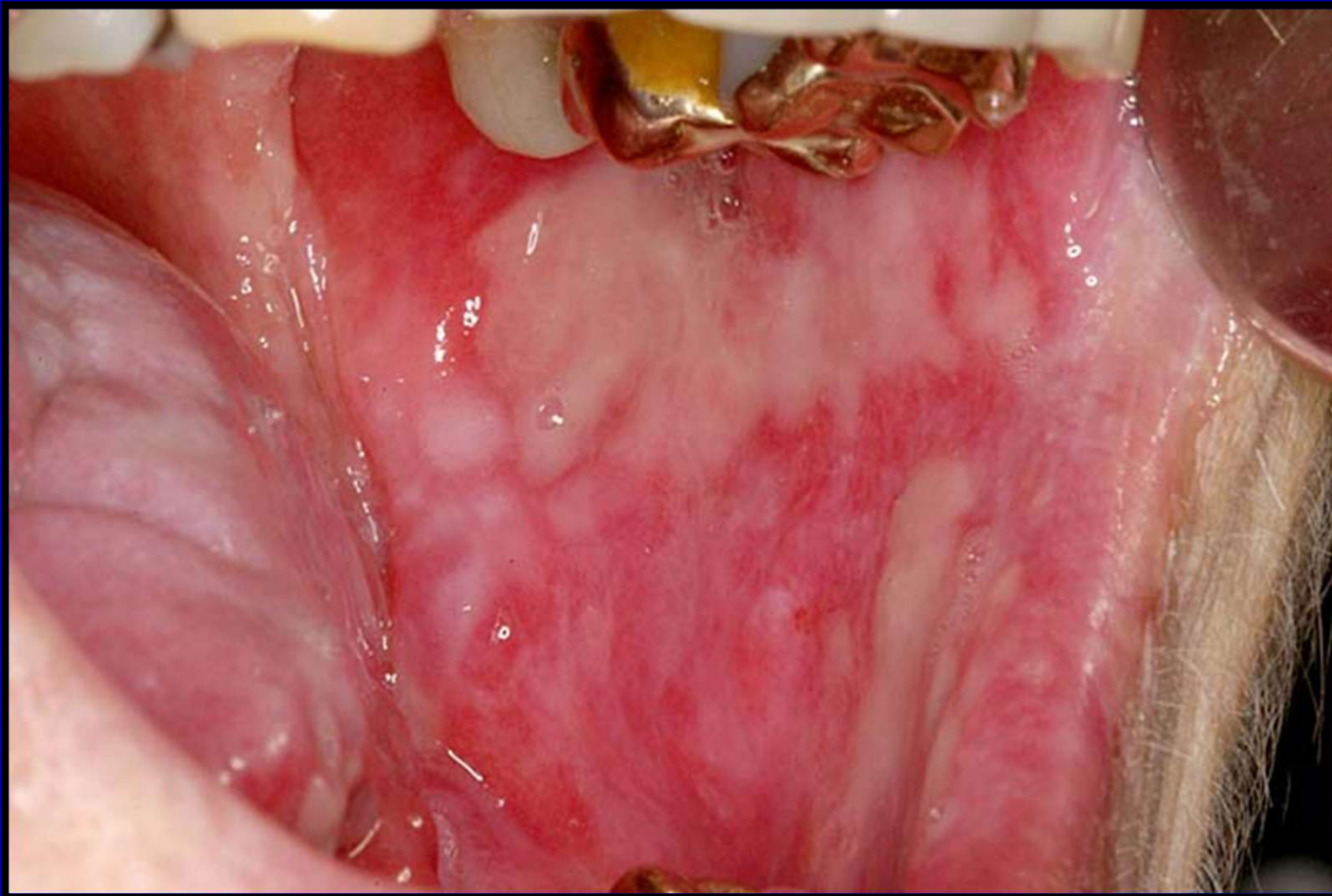
Radiation therapy

- Radiation dermatitis



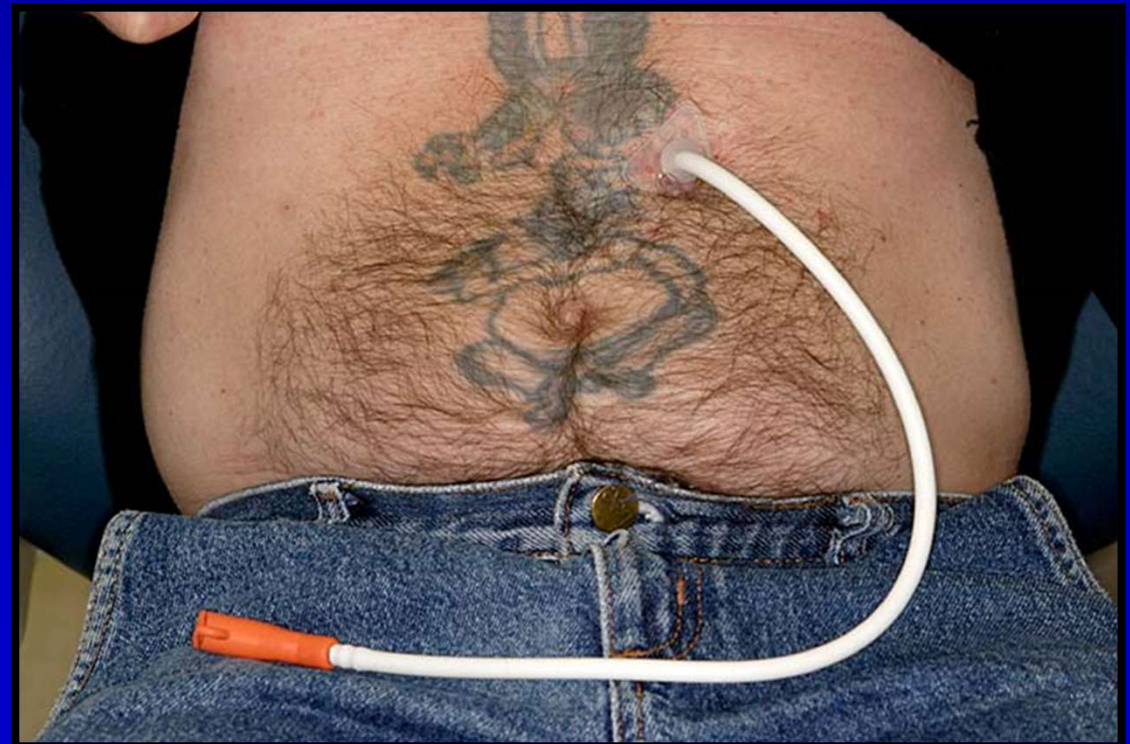
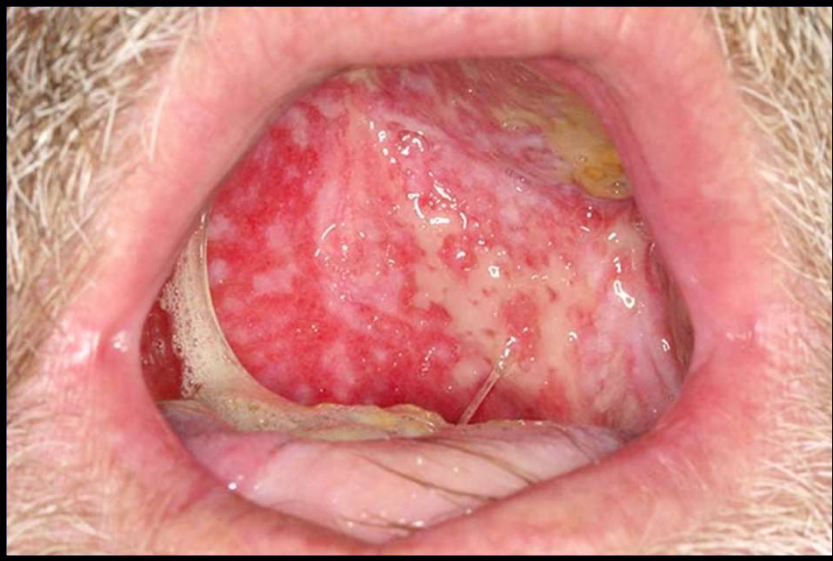
Radiation therapy

- Radiation mucositis



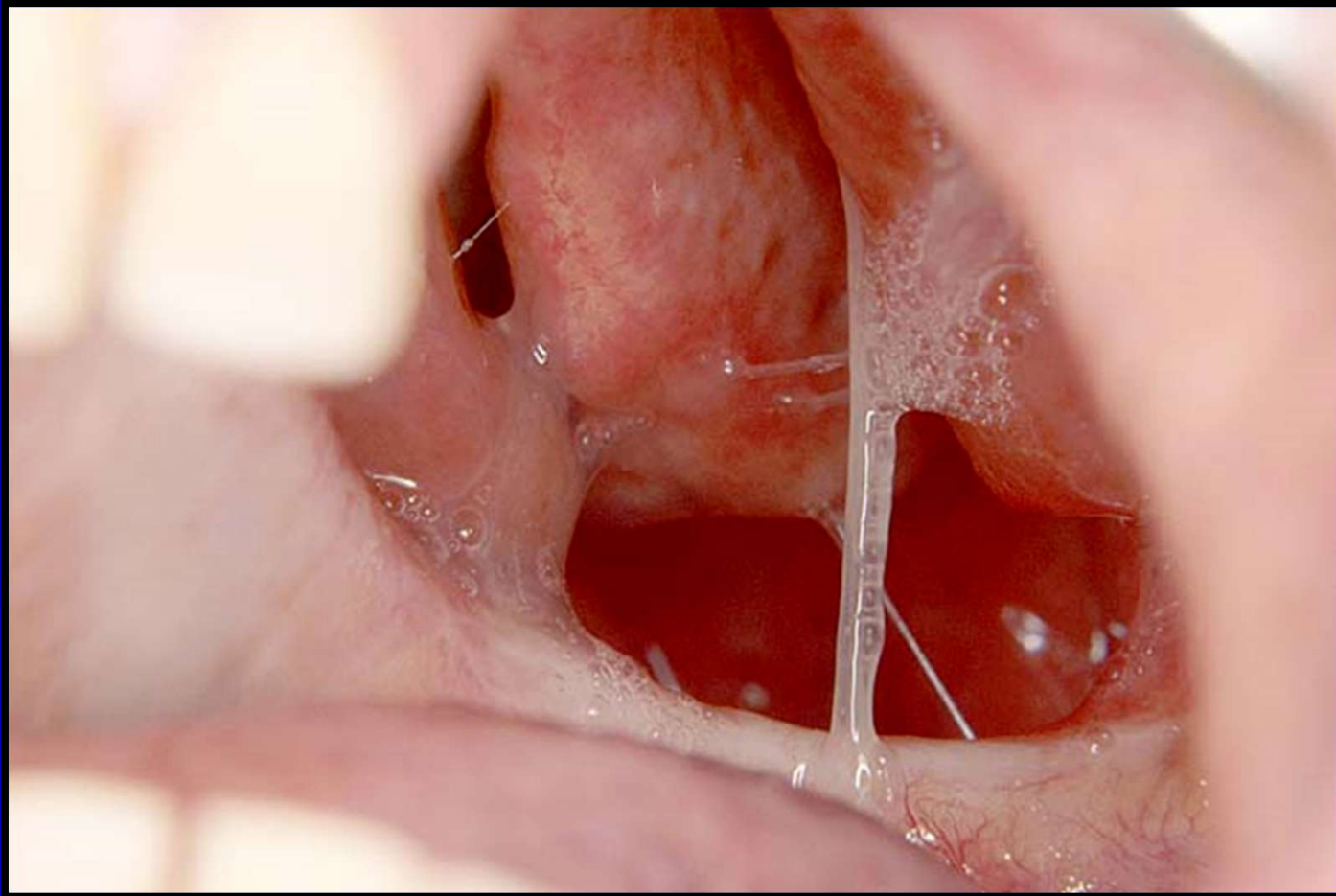
Radiation therapy

- Radiation mucositis



Radiation therapy

- Salivary gland dysfunction



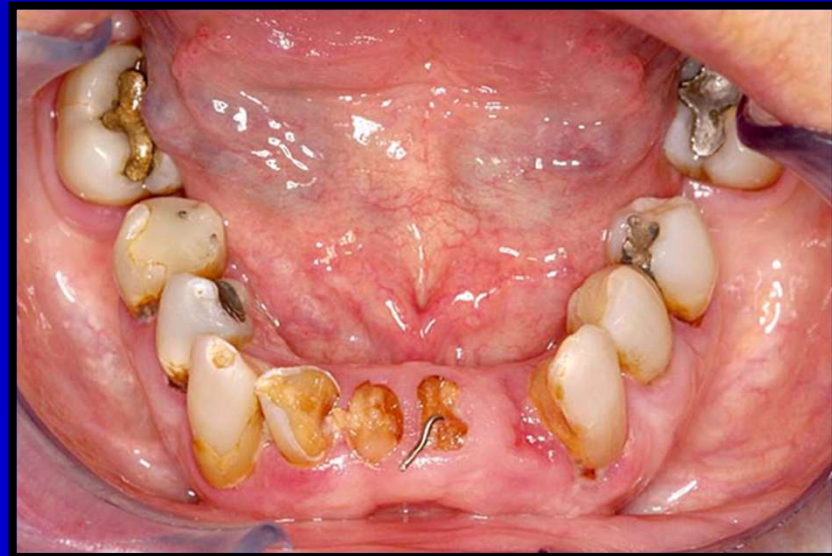
Radiation therapy

- Xerostomia and loss of taste



Radiation therapy

- Dental caries



Radiation therapy

- Candidiasis



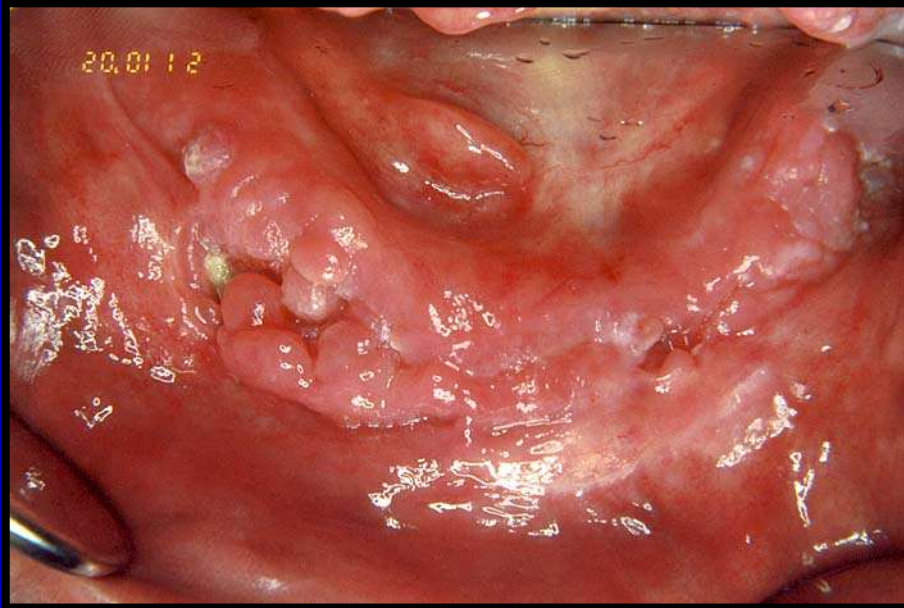
Radiation therapy

- Trismus (myofibrotic contracture)

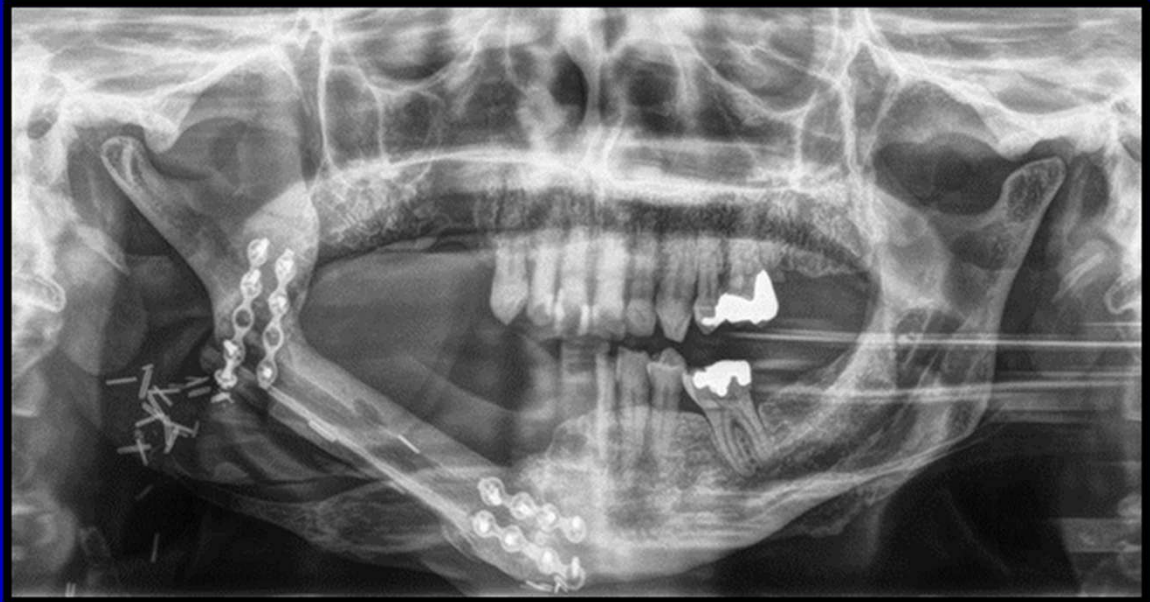


Radiation therapy

- Osteoradionecrosis



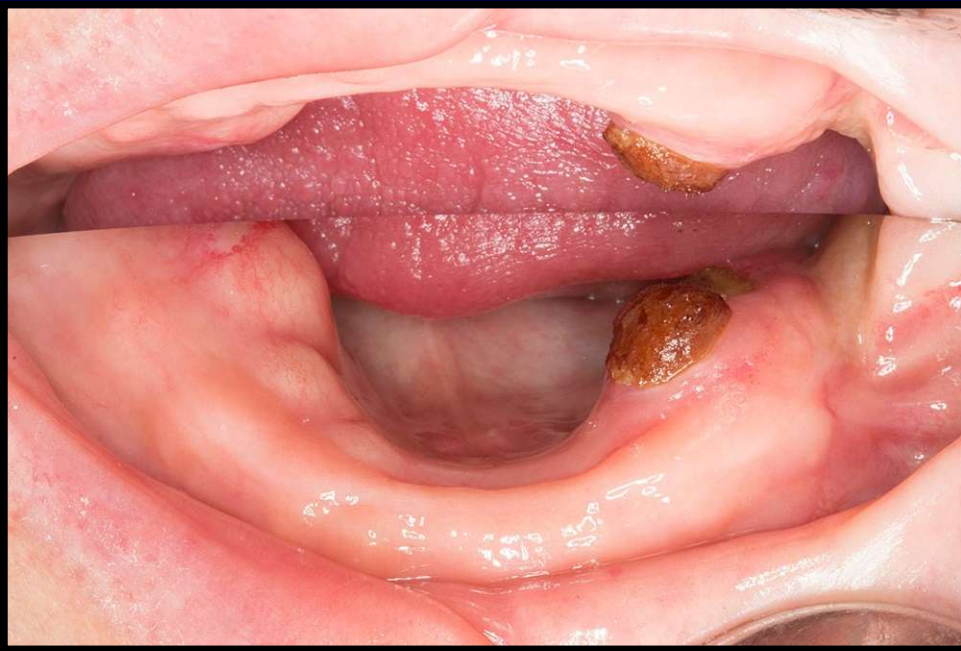
Radiation therapy



Radiation therapy



Radiation therapy



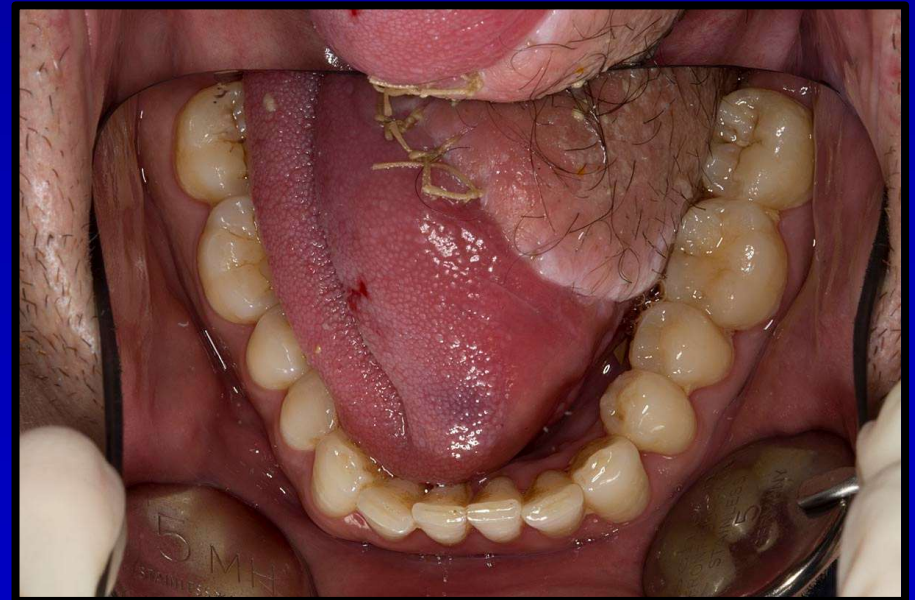
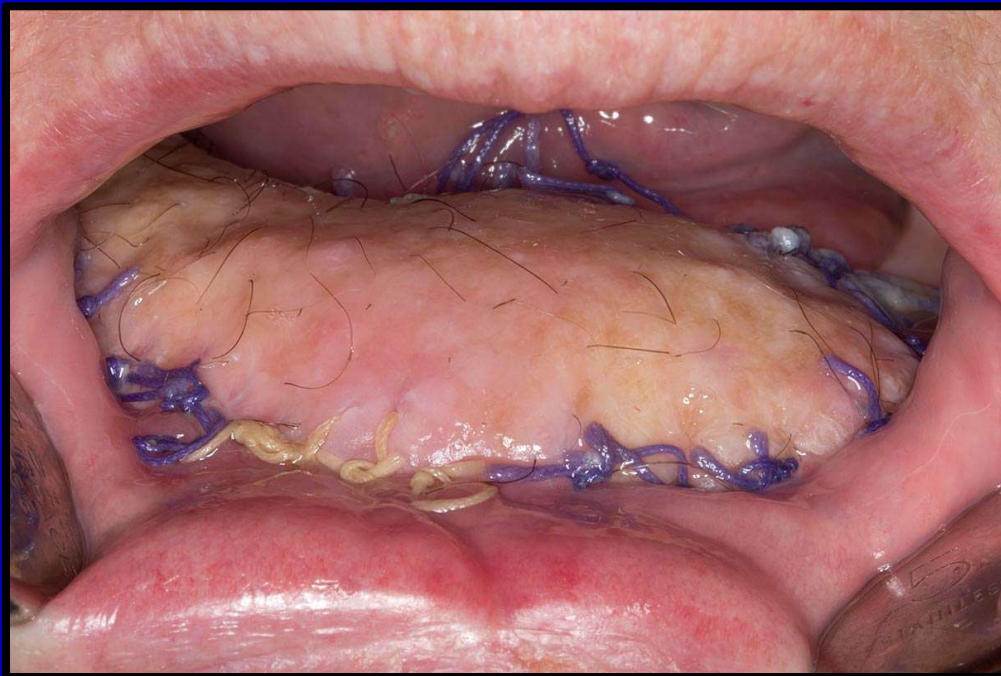
Other adverse effects of treatment

- Pain

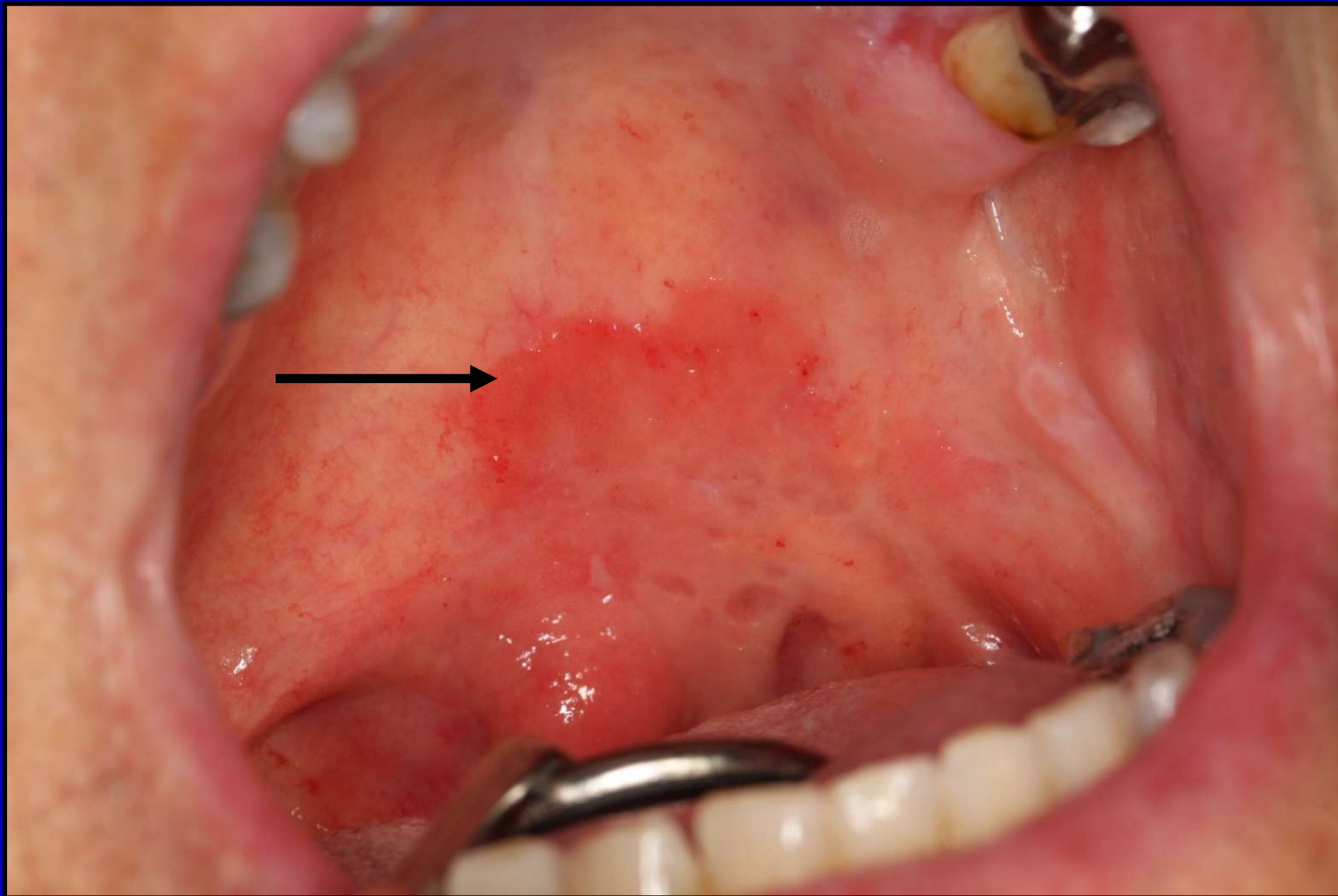


Other adverse effects of treatment

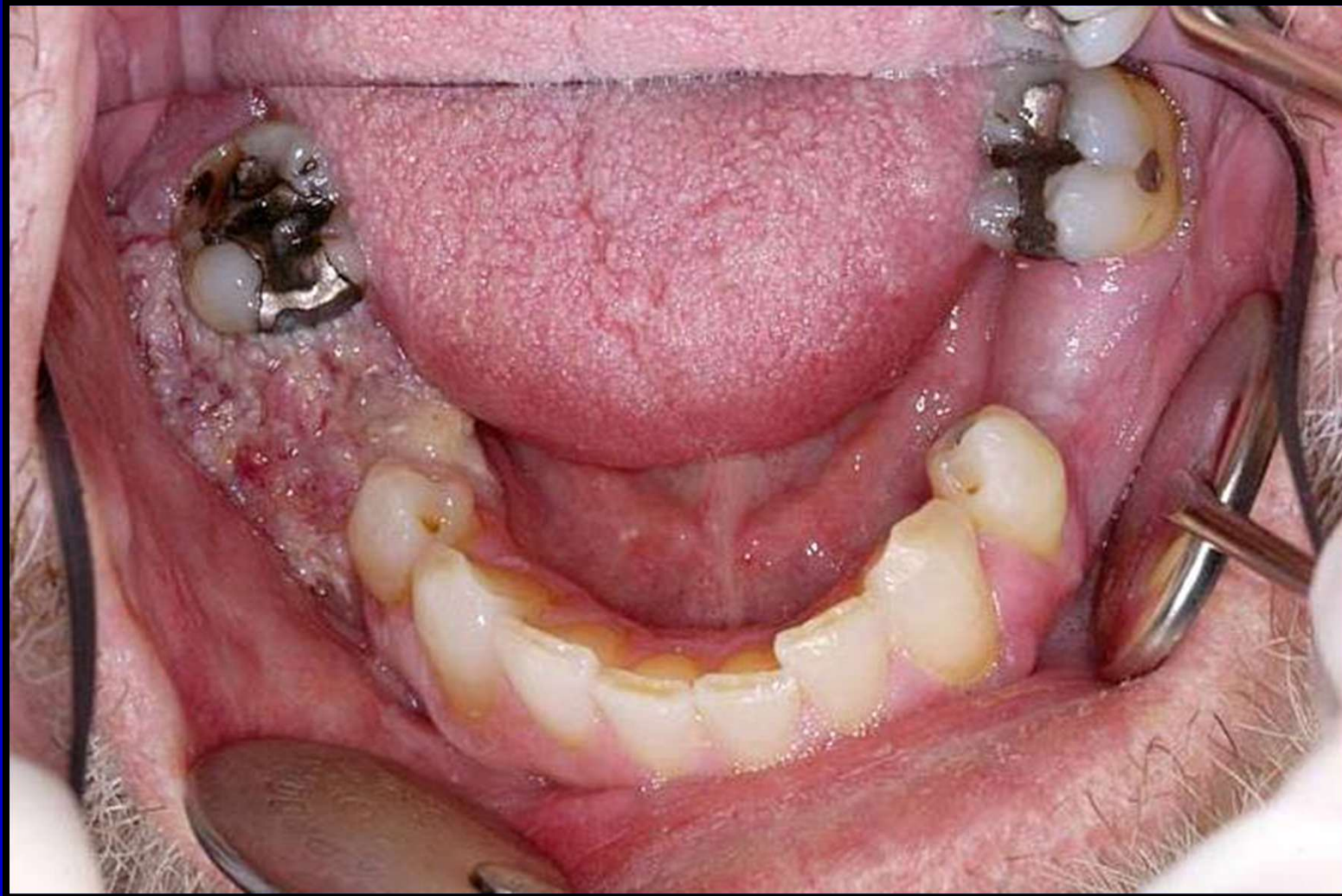
- Dysphagia
- Dysarthria
- Psychological problems



Other considerations



Dental management



Dental management

1. Pre-radiation therapy work-up
2. Follow-up during radiation therapy
3. Long term, post radiation therapy care



Dental management

1. Pre-radiation therapy work-up



Dental management



VS

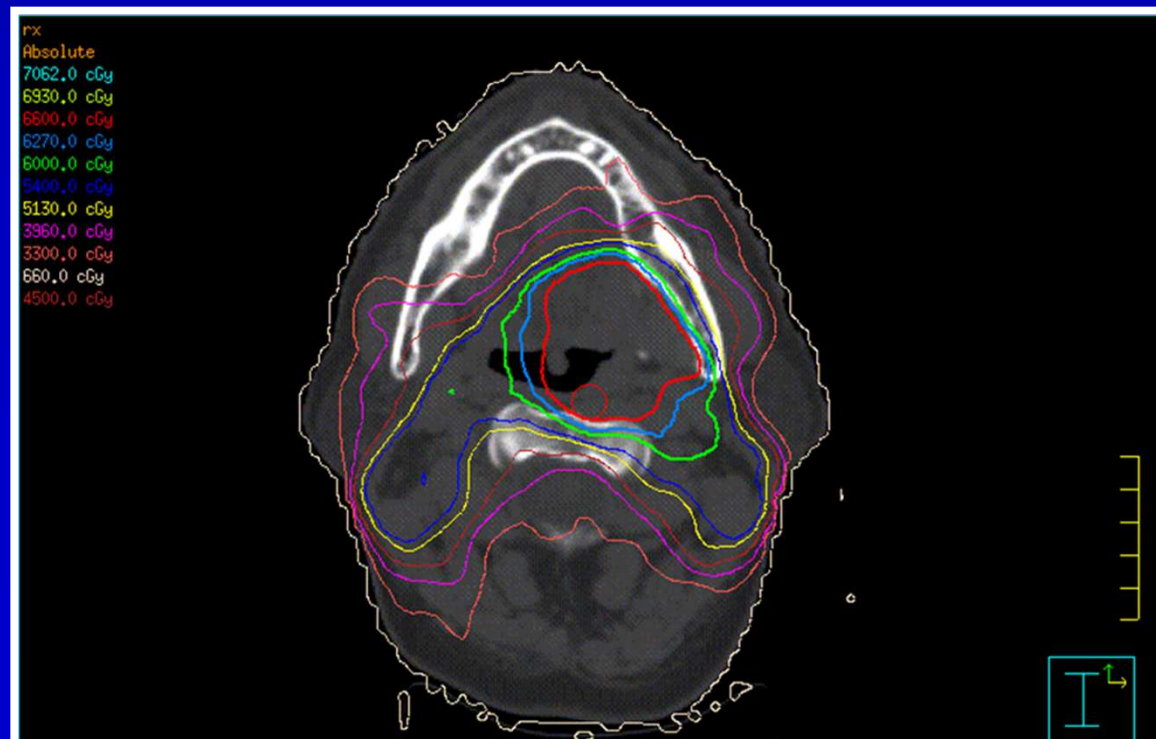


- Ensure that a patient is dentally fit
- Ensure that a patient understands the implication of radiation therapy from the dental point of view
- Ensure that a patient understands the required life style changes to maintain dentition post radiation therapy



Dental management: Pre-radiation therapy

- Medical / dental / social history
- Establishment of proposed radiation therapy fields



Dental management: Pre-radiation therapy

- Comprehensive dental examination, including radiographic examination
- Dietary counselling



Dental management: Pre-radiation therapy

- Special consideration of teeth in the irradiated field
 - Condition of dentition
 - Patient's dental awareness
 - Immediacy of treatment
 - Prognosis for tumour control



Dental management: Pre-radiation therapy

- Teeth generally recommended for extraction:
 - Non-restorable teeth
 - Root caries
 - Periodontal disease
 - Peri-apical disease
 - Third molars
 - Non-functional teeth
 - Impacted teeth

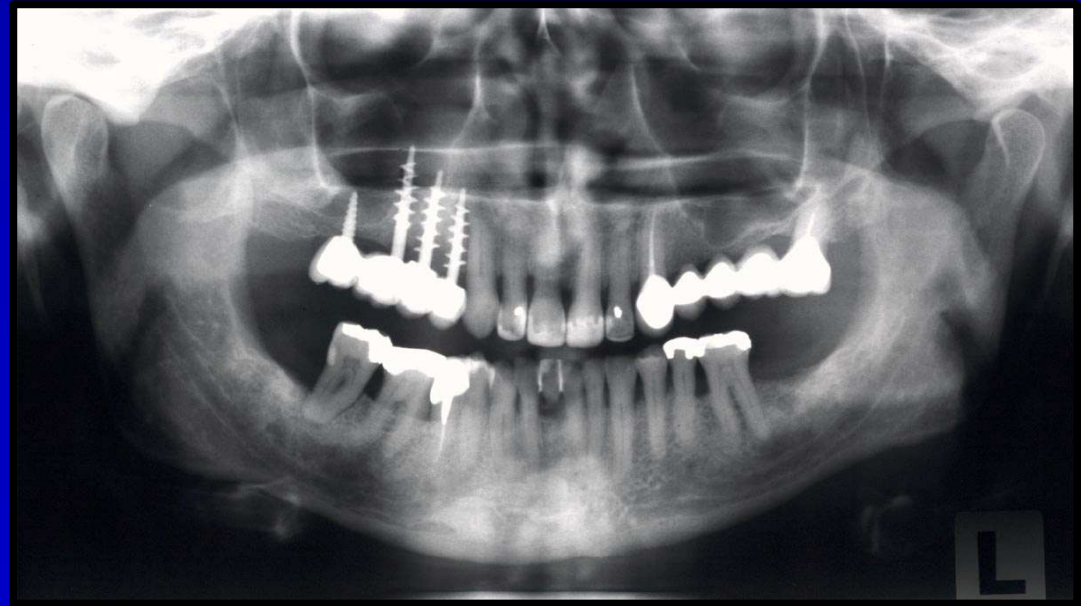


Dental management: Pre-radiation therapy

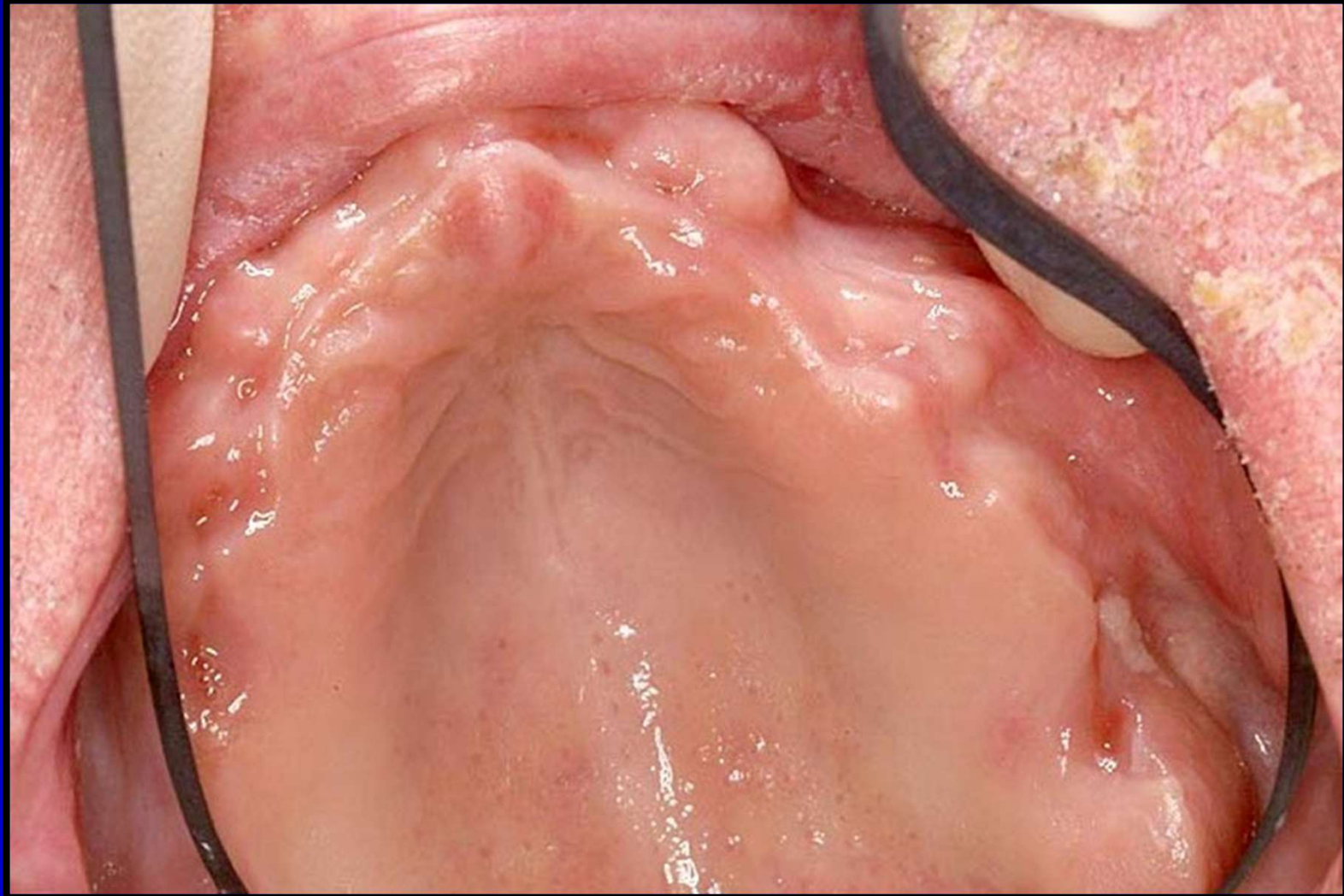
- Poor oral hygiene
- Lack of dental awareness
- Lack of cooperation



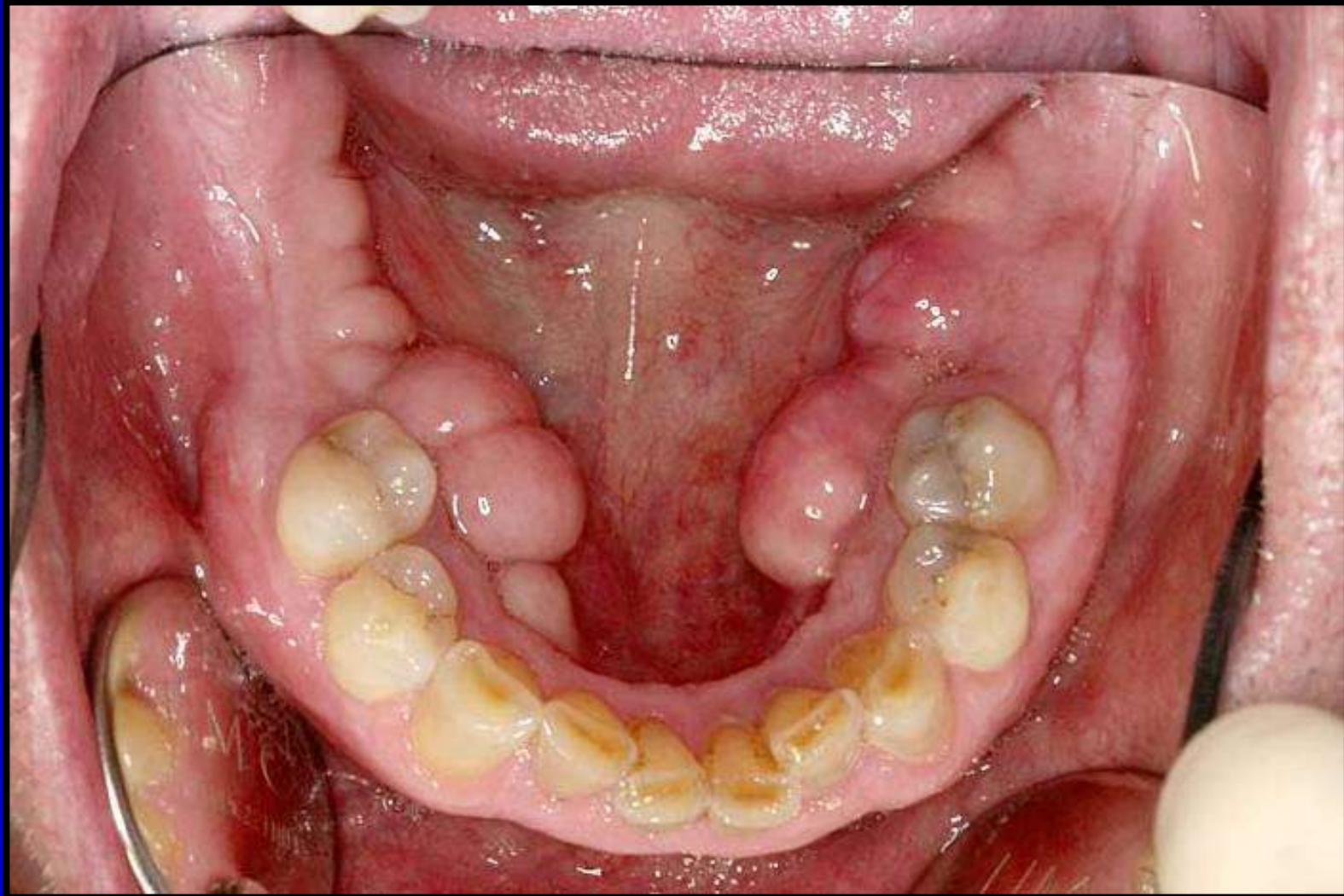
Dental management: Pre-radiation therapy



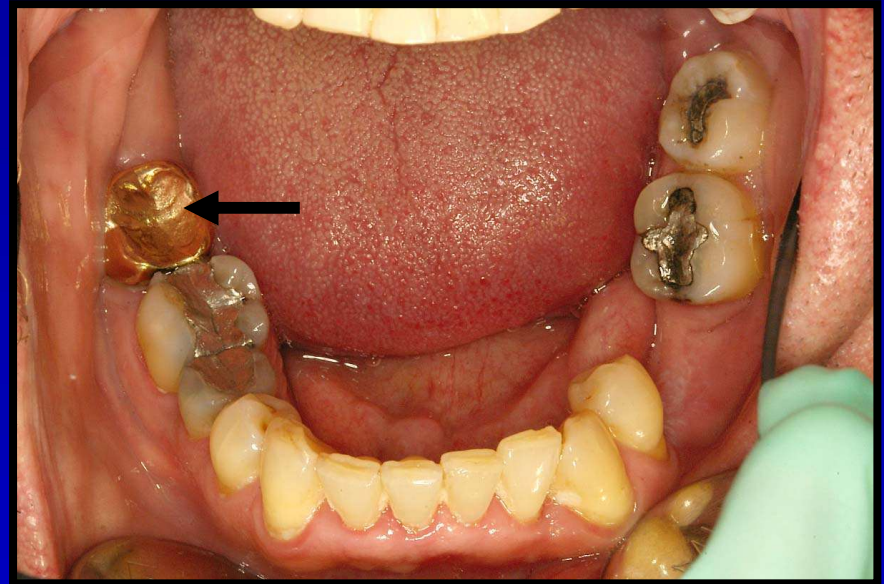
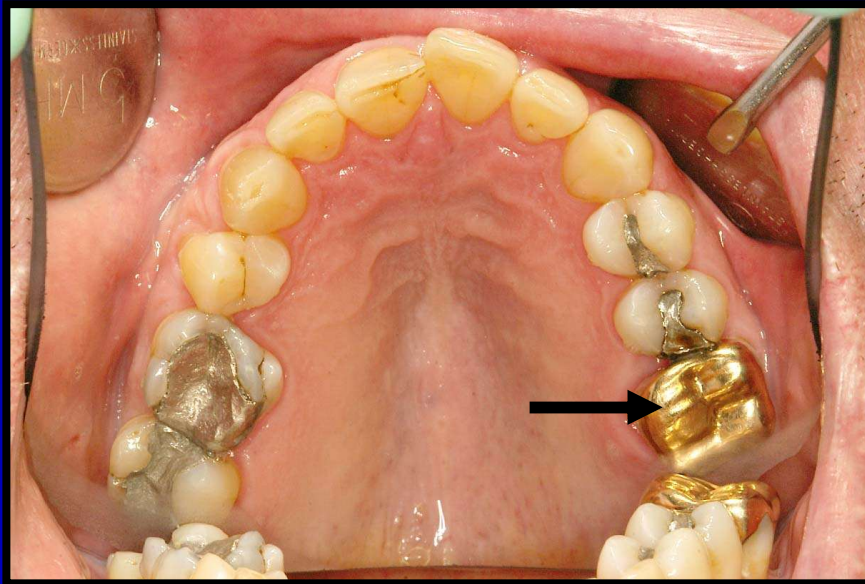
Dental management: Pre-radiation therapy



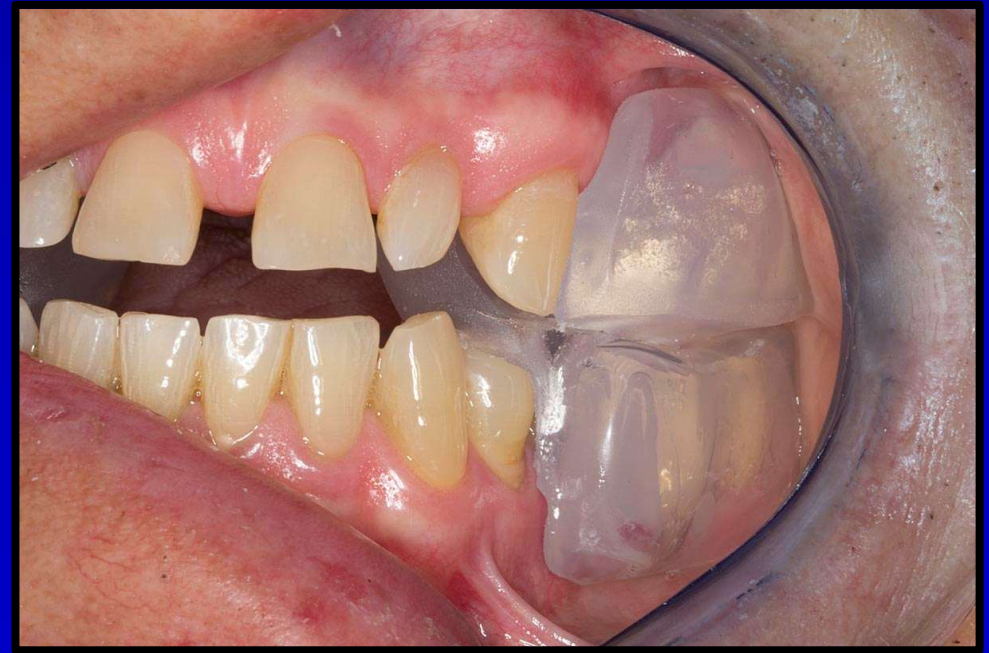
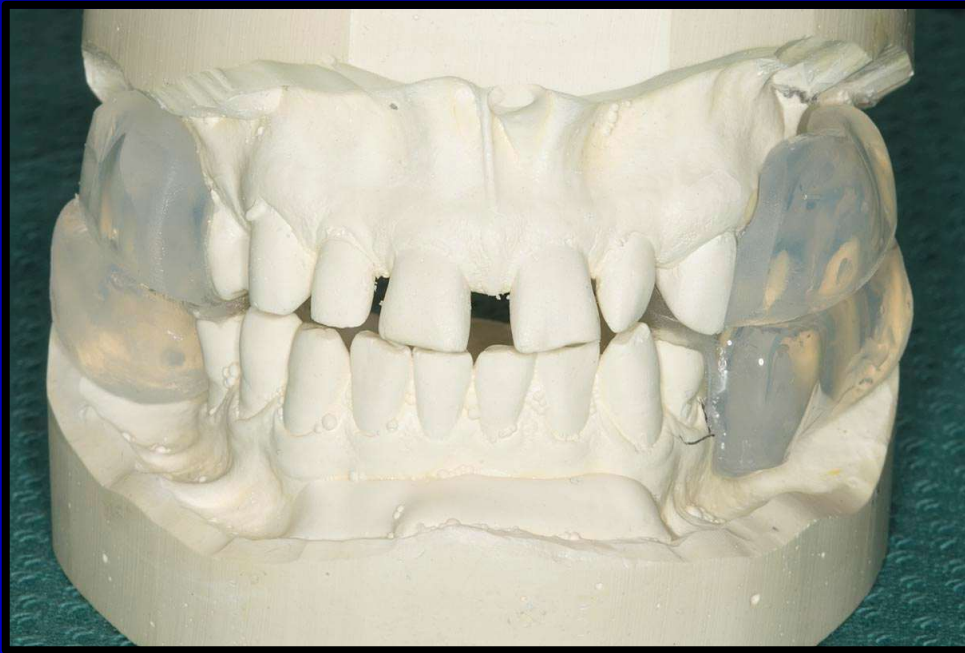
Dental management: Pre-radiation therapy



Dental management: Pre-radiation therapy



Dental management: Pre-radiation therapy



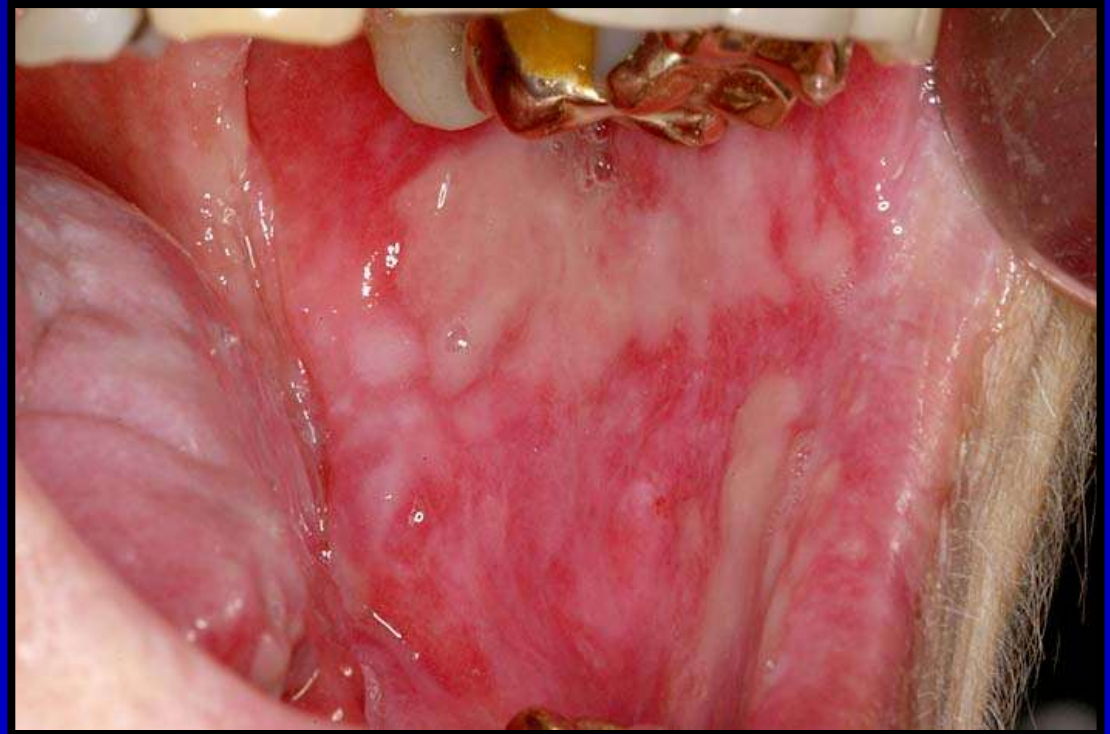
Dental management

2. Management during radiation therapy



Dental management: During radiation therapy

- Dealing with
 - Mucositis
 - Loss of taste
 - Dry mouth



→ Symptomatic management



Dental management: During radiation therapy

- Maintenance of good OH
- Benzydamine hydrochloride



Dental management

3. Long term, post radiation therapy follow-up



Dental management: Post radiation therapy

- Dealing with
 - Dry mouth
 - Caries
 - Increased periodontal attachment loss
 - Infections
 - Trismus
 - ORN
 - Chronic pain



Dental management: Dry mouth



Dental management:

Dry mouth



Dental management:

Dry mouth

- Stimulants

- Sugar free chewing gum, candies and mints



Dental management:

Dry mouth

- Secretagogues
 - Pilocarpine
 - Other



Dental management:

Dry mouth

- Stimulants

→ Electro-stimulating devices (GenNarino)

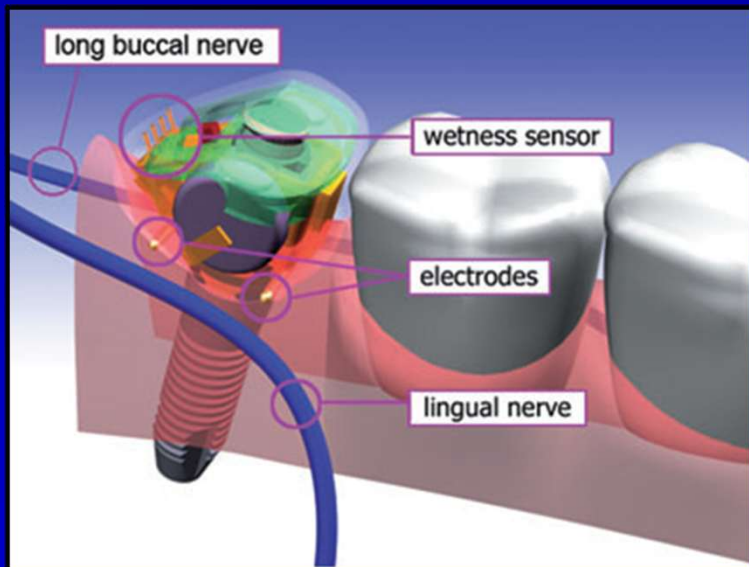


PHOTO: Ami S et al. Clin Implant Dent Relat Res 2010; Alajbeg I et al, Oral Surg Oral Med Oral Pathol Oral Radiol 2012.

Dental management: Dry mouth



PHOTO: Wolff A. et al. Med Oral Patol Oral Cir Bucal, 2018 Sept1:23(5)e552-9.

Dental management: Caries

- DIET
- OH,
- Daily F application
- Regular dental visits



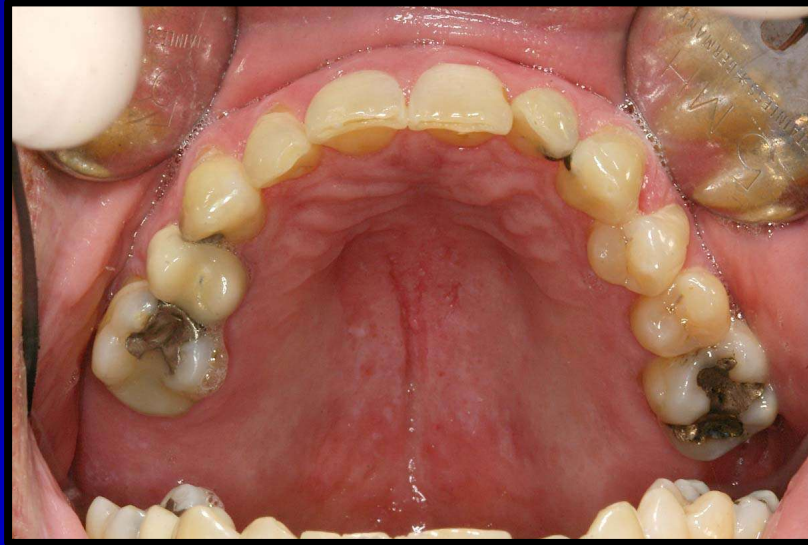
Dental management: Caries



Dental management: Caries



Dental management: Caries



Dental management: Infection



Dental management: Trismus (myofibrotic contracture)



Dental management:

Osteoradionecrosis

- Prevention
- Hyperbaric oxygen treatment
 - Breathing 100% O₂ at pressure greater than 1 atmosphere absolute (Usually 2-3 ATA)
- Surgery
- Medical treatment



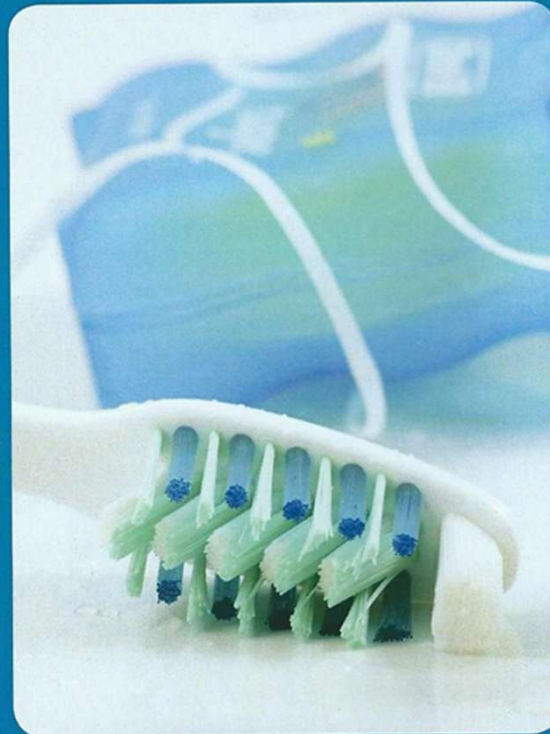
Dental management: Osteoradionecrosis



Patient information

Radiation Therapy
to the head and neck

Oral health care



It is important that your mouth is in good health before cancer treatment begins as this reduces the risk and severity of mouth problems



Patient information

4. Chewing and swallowing problems

These may be due to disease in or around the mouth and throat. Sometimes radiotherapy or chemotherapy to this region can also cause temporary problems. If teeth are extracted, chewing may be more difficult.

- ◇ Try changing the consistency or texture of foods to make them easier to manage. Semi- solid foods such as yoghurt and soups may be easier to swallow.
- ◇ Avoid extremes of temperature in food and drinks - very hot or very cold.
- ◇ Drink plenty of nourishing fluids.
- ◇ Eat food in small quantities frequently.
- ◇ Food moistened with gravy and sauces may be easier to swallow.

If you are having problems with your dentures, take them out at meal times and try softer foods which do not need to be chewed.

5. Dry or coated mouth

A dry or coated mouth can result from radiotherapy or chemotherapy as saliva may be reduced or become thick. Hints:

- ◇ Use mouthwashes and gargles regularly, (check with your doctor before using commercially produced mouthwashes).
- ◇ Moisten your foods with gravy and sauces.
- ◇ Suck ice blocks, sweets and soft drinks.
- ◇ Be sure to drink fluids with your meals or snacks.
- ◇ Ask your doctor about using artificial saliva.
- ◇ Tangy foods, such as lemons and pineapple may help to stimulate the flow of saliva in your mouth.

- ◇ Avoid chocolate and pastry; they stick to the roof of your mouth.
 - ◇ Sucking boiled sweets can stimulate your saliva; so can chewing gum.
-
- ◇ Use lip balm for dry lips.
 - ◇ Avoid alcohol and very hot drinks which can dry out your mouth further.

6. Sore mouth

Chemotherapy can reduce your immunity and you may have a problem with infections in your mouth and throat. Your doctor can recommend drugs to relieve the discomfort such as an anaesthetic mouthwash, as well as treat the infection. Other hints:

- ◇ Drink plenty of nourishing fluids. If fresh fruit juices sting your mouth, try drinking blackcurrant, rose hip syrup, apple juice, cranberry juice, peach or pear nectar, as these are less acidic.
- ◇ Cold foods and drinks can be soothing to a sore mouth. Try adding crushed ice to drinks and eating ice cream.
- ◇ Avoid salty, acidic, very hot or spicy food which may sting your mouth.
- ◇ Avoid rough textured food like toast, dry biscuits or raw vegetables as they can scrape at sore skin.
- ◇ Keep your food moist with sauces and gravies.
- ◇ Try drinking through a straw to avoid the sore spots.
- ◇ Soft or vitamised foods may be easiest to eat as they require little or no chewing.
- ◇ Cigarette smoke can irritate the mouth.
- ◇ Use a child's soft toothbrush to clean your teeth gently.



CASE 1

- 46 year old
- Metastatic neck SCC – unknown primary
- Treatment: surgery & radiation therapy

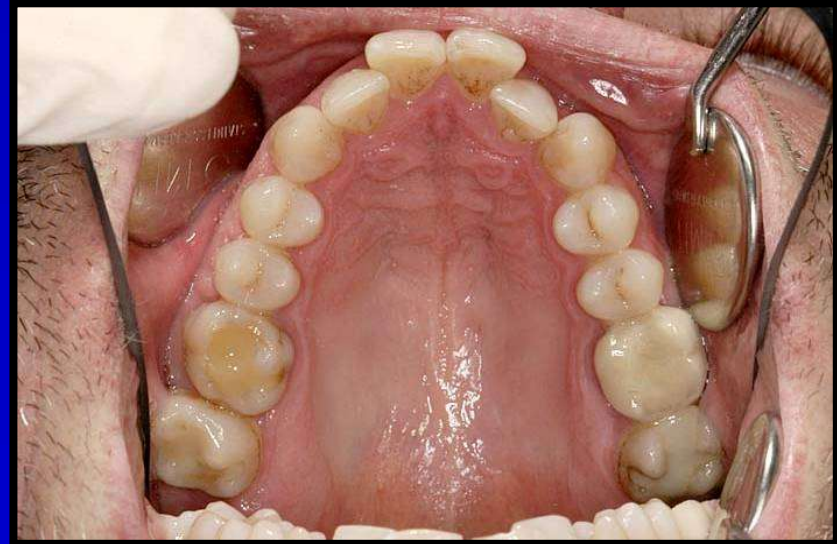


Case 1

- Proposed radiation therapy fields:
 - All molars in the irradiated field



Case 1



Case 1

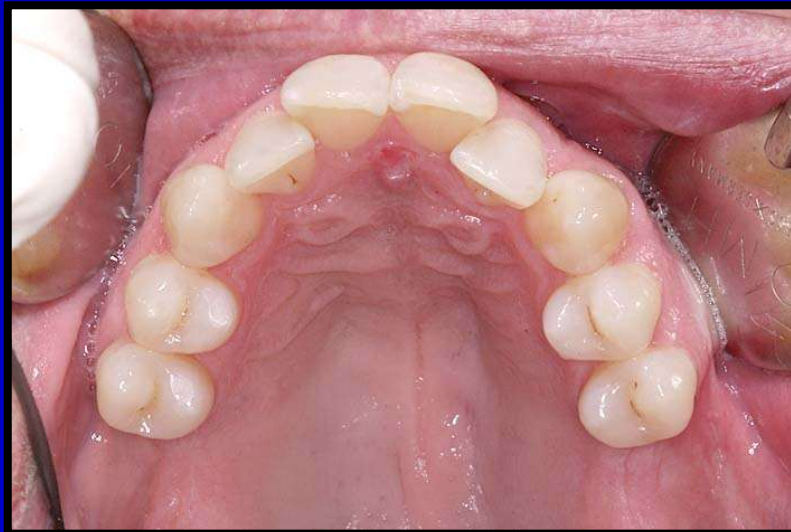


Case 1

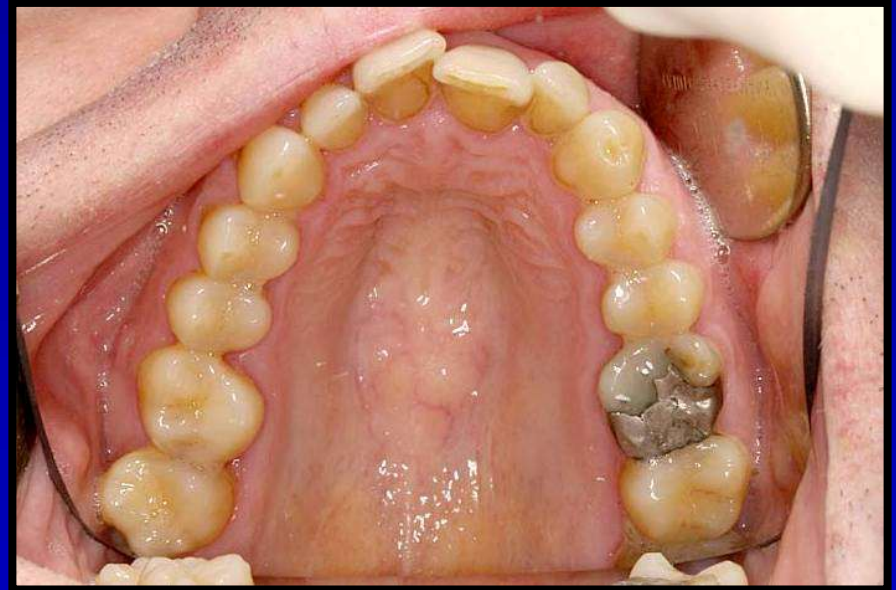
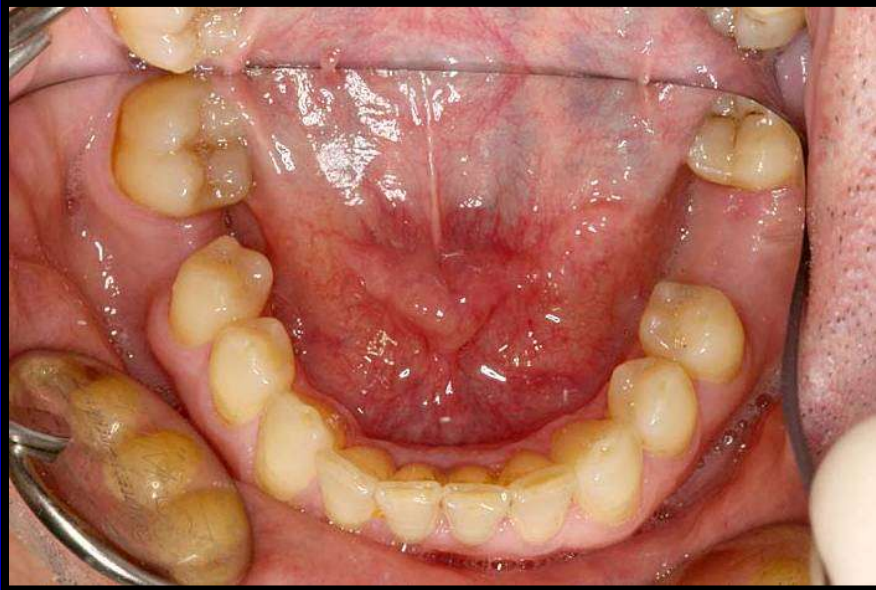
- Treatment plan:
 - Pre-radiation therapy
 - I. Extraction of all molar teeth
 - II. OH, Dietary, F and dental care advice
 - During radiation therapy
 - I. Management of acute side effects
 - Post radiation therapy
 - I. Regular dental examination, education and prophylaxis
 - II. Regular follow-up in Oral Medicine Clinic.



Case 1



Case 2



Case 2



Conclusion

- Dental care forms an integral part of the multidisciplinary management of oral cancer patients and it significantly contributes to the preservation of life quality



OR

