### Oral cancer

### Chemotherapy, Radiotherapy

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Treatment of cancers with drugs

Cytostatic agents Hormones Biological response modifiers Combination

## **Developement of CTX**

1942 - 1959Palliative results Major toxic side effects 1960 - 1979Healing was possible in some cases Efficacy  $\uparrow$  Toxicity  $\downarrow$ 1980 -2006 Molecular pathology Immunotherapy Gene therapy

Systemic CTX

#### Neoadjuvant (Reduction of the tumor, possibility for curative operation)

#### Adjuvant (Decrease the prevalence of a relapse)

# Palliative (advanced cancer stage)

# Combined therapy

1/3 of the patients are treated this way

The number of tumors can be healed only with CTX is low, only about 5%



### Systemic - Regional

Cycles

The efficacy depends on the given dose, on the Nr. and length of the cycles, and on the length of the interval between cycles

The dose should be high as possible

Combination of CTX drugs, synergism, Radio-Chemotherapy

## Intra-arterial chemotherapy

### In tumors with god blood supply

Best results if it is performed within combined therapy (S+CTX+RT)

# Advantages of IA - CTX

High drug concentration at the target area

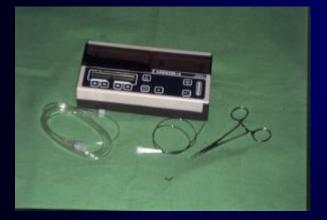
Low systemic toxicity

Better QOL during CTX

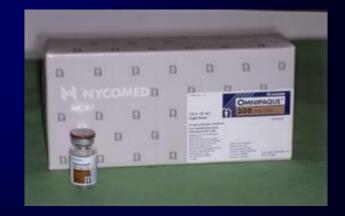


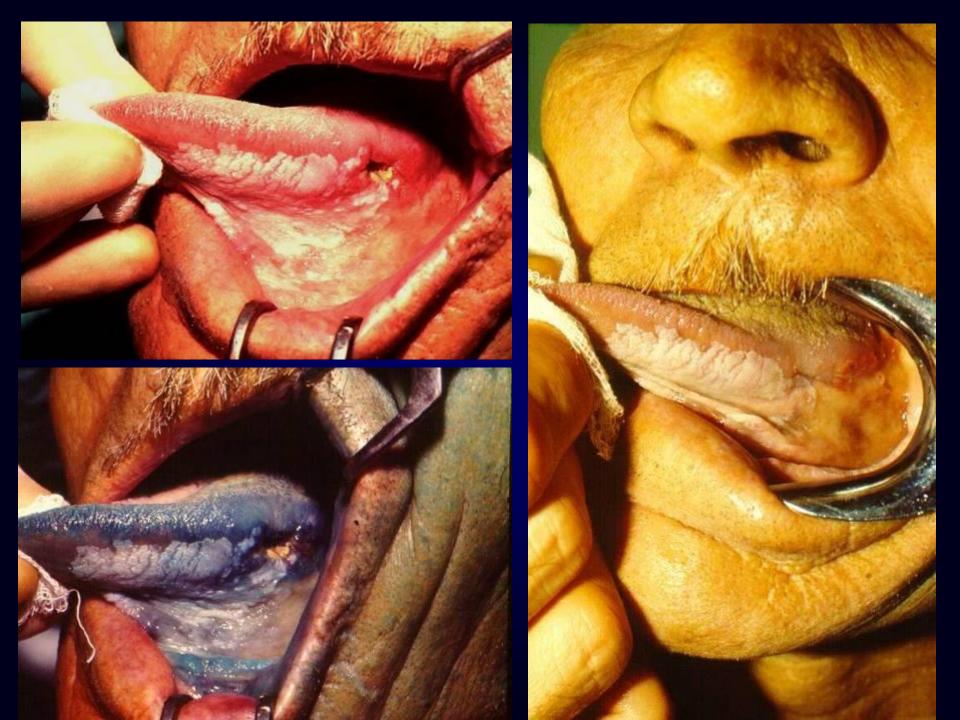














## Side effects

**Myelosuppression** Mucositis Alopecia Skin ulcers Facial paresis





#### Healing - Damage

Oral cancers are radiosensitive

Teletherapy – Interstitial therapy

Maximal dose 60 - 70 Gy

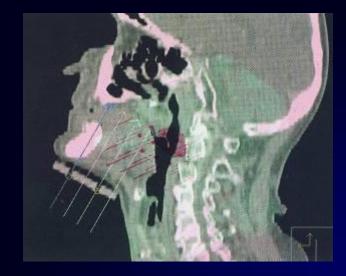
Goal: To destroy the tumor, better circumstances for an operation, decrease pain, local tu. controll, QOL

Goal: maximal tumor destruction at the target area with minimal damage in the surrounding tissues

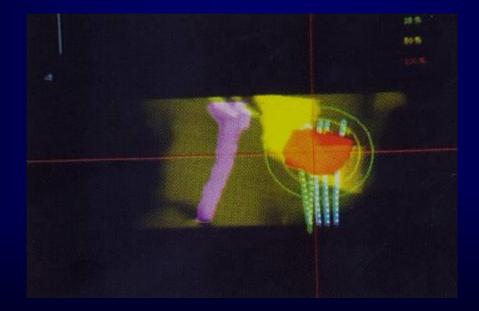
Critical organs CNS, eyes, teeth, jawbones

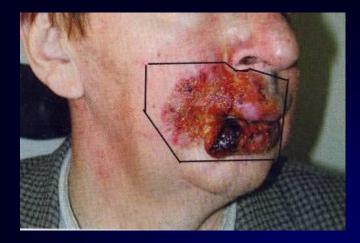
#### **Result-influencing factors**

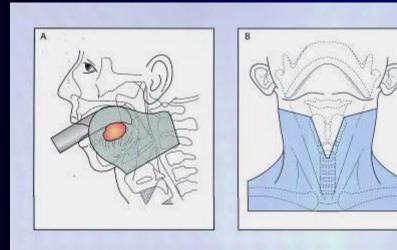
Radiosensitivity of the tumor, Grade, Tu-volume, given dose, way of fractionation



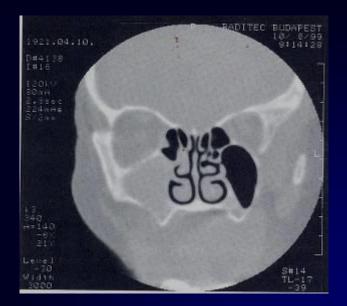
































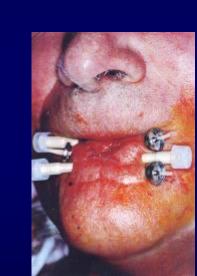






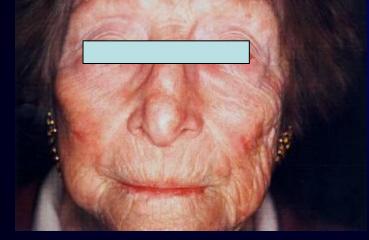










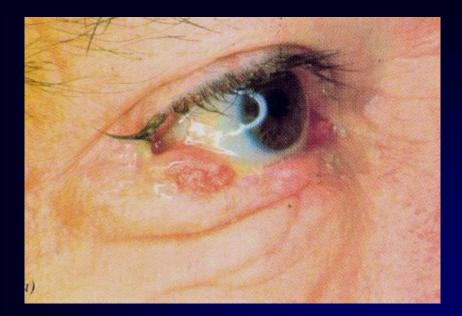


















#### Possibilities

Radio-Chemotherapy Thermotherapy – Radiosensitizer Teletherapy – AL therapy Dose escalation 3D therapy planning