

Case Reports on Oropharyngeal Cancer



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in Head and Neck Cancer
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V. Budach - 2nd Europ. Persp. H&N Cancer 1

Case 1: Right Tonsillar Cancer

Case History:

Male patient, 71 yrs., 83kg/174 cm
smoker, alcoholic, PS: 100 %

Clinical Symptoms: Pain right upper neck/throat

Co-Morbidities: Hypertension,
Creatinine clearance <70 ml

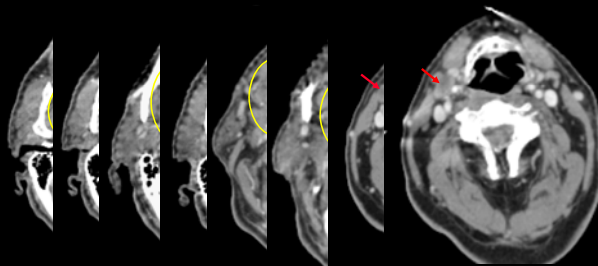
First Diagnosis: 09/2008

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Case 1: Right Tonsillar Cancer - Pretherapeutic Staging -

09/08 CT: 4cm lesion at right tonsillar bed



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Case 1: Right Tonsillar Cancer - Pretherapeutic Staging -

Panendoscopy (10/08):

- Right tonsillar tumour lesion extending to nasopharynx crossing midline with parapharyngeal infiltration
- Palpable right cervical LN

Biopsy and Histology:

- Moderately differentiated SCC, G2

Stage IV: cT4, cN2b, M0

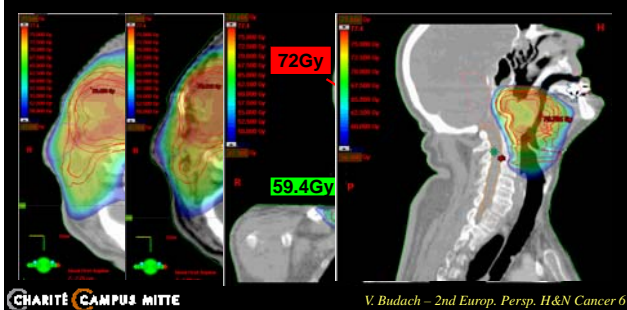
Case 1: Right Tonsillar Cancer

Treatment: 12.11. - 24.12.2008

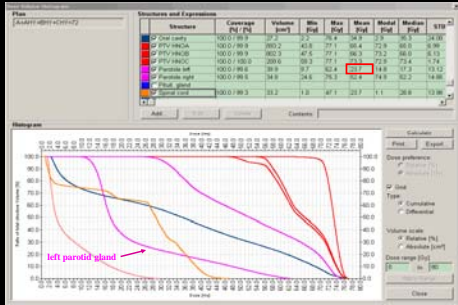
Definitive Concurrent „Bio-Radiation“ according to the „HART“-Protocol (IMRT) for non-tolerance of CDDP-CTX!

- CTV1: Tumour and LN+ TD 72 Gy
- CTV2: right IB-V + RPLN TD 59.4 Gy
left IB, II, III, RPLN
- CTV3: right RPLN, IB-V, TD 49.6 Gy
left RPLN, IB-IV
- TD: 72 Gy (30 Gy with 2 Gy/fx., 42 Gy with 1.4 Gy b.i.d.) plus
- Loading dose of Cetuximab 400mg/m² + weekly 250mg/m² for 6 weeks

Case 1: Right Tonsillar Cancer - IMRT according to „HART“ Protocol -



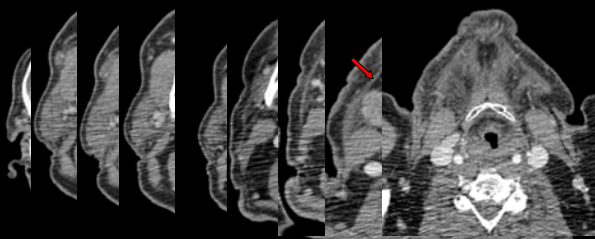
Case 1: Right Tonsillar Cancer - DVH -



Case 1: Right Tonsillar Cancer - Early Side Effects (CTC 3.0) -

- Mucositis, G2/3
- Dysphagia, G2
- Radiodermatitis, G2/3
- Taste alteration, G3
- Xerostomia, G2

Case 1: Right Tonsillar Cancer - Treatment Assessment @6 mos. after TT. -



Case 1: Right Tonsillar Cancer

- Treatment Assessment @ 6 mos. after TT. -

- PS: 100 %, 78 kg
- No xerostomia, dysphagia or taste alteration
- Flexible Endoscopy: CR
- No palpable cervical LN
- CT head and neck: CR!

Case 2: Left Tonsillar Cancer

Case history:

Male Patient, 55 yrs., 75kg/176 cm, smoker, PS: 90%

Clinical Symptoms: Pain left upper neck/throat,
dysphagia

Co-morbidities: NIDDM, hypertensive cardiac
disease, COPD

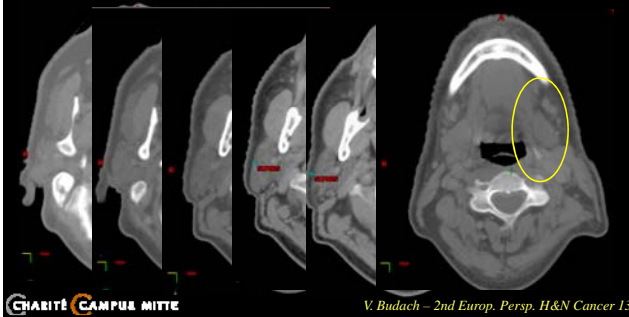
First Diagnosis: 12/06

Case 2: Left Tonsillar Cancer - Diagnostic Imaging -

CT (12/06):

- Contrast enhanced left tonsillar mass infiltrating soft palate and reaching the midline
- Additionally, infiltration of alveolar ridge of lower mandible.

Case 2: Left Tonsillar Cancer Pretherapeutic CT 12/2006



Case 2: Left Tonsillar Cancer

Panendoscopy:

- Left tonsillar mass infiltrating the soft palate, lateral pharyngeal wall, and base of tongue

Histology:

- Moderately differentiated SCC, G2

Stage IV: cT4, cN0, M0

Case 2: Left Tonsillar Cancer

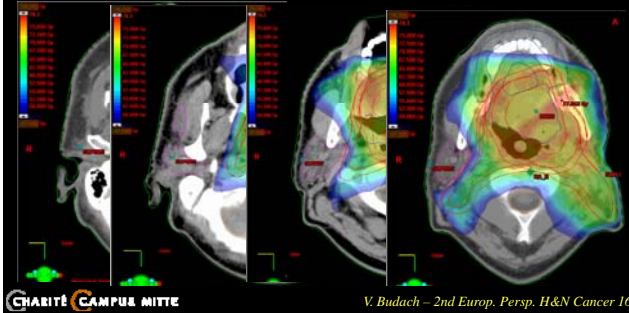
Treatment: 25.01. – 06.03.2007

Definitive concurrent CRTX according to the „C-HART“-Protocol (IMRT)

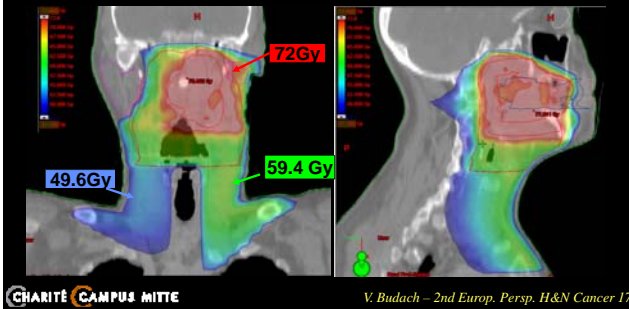
- CTV1: Tumour and LN+ TD 72 Gy
- CTV2: left IB-V + RPLN, TD 59.4 Gy
right IIA-III + RPLN
- CTV3: bilateral RPLN, IB-V TD 49.6 Gy

TD: 72 Gy (30 Gy with 2 Gy/fx., 42 Gy with 1.4 Gy b.i.d) plus
6 weekly cycles CDDP 30 mg/m² + c.i. 5-FU 600 mg/m² d. 1-5 of week 1

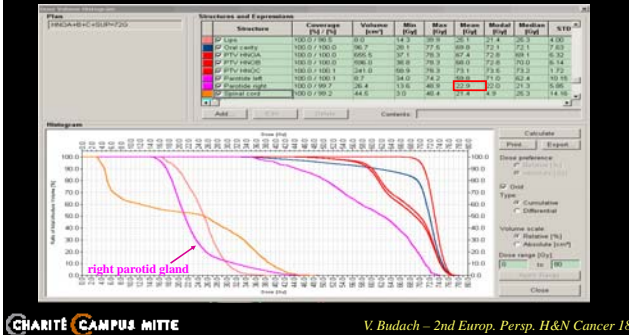
Case 2: Left Tonsillar Cancer
 - IMRT according to „C-HART“ Protocol -



Case 2: Left Tonsillar Cancer
 - IMRT + anterior portal according to „C-HART“ Protocol -



Case 2: Left Tonsillar Cancer
 - DVH -



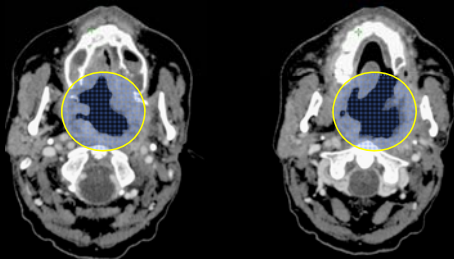
Case 2: Left Tonsillar Cancer - Early Side Effects -

- Mucositis, G3
- Dysphagia, G2
- Radiodermatitis, G2-3
- Taste alteration, G2
- Xerostomia, G2-3

Case 2: Left Tonsillar Cancer - Follow-up -

- @7 mos.: Some tumour residual in the left tonsillar region extending into the Nasopharynx
- @8 mos.: 2 cycles of CTX with TPF (Taxotere 75 mg/m², Cisplatin 75 mg/m², 5-FU 750 mg/m²) → CR!
- @1.5 yrs.: CT showed semicircular tumour growth → Recurrent Disease!

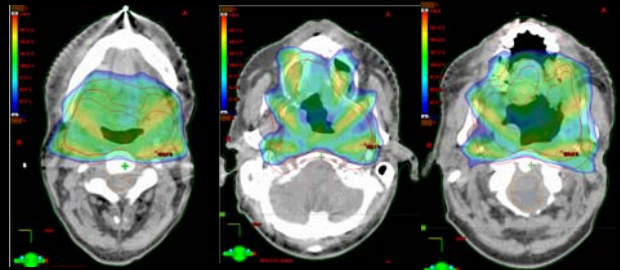
Case 2: Left Tonsillar Cancer - Follow-up @ 1.5 yrs. -



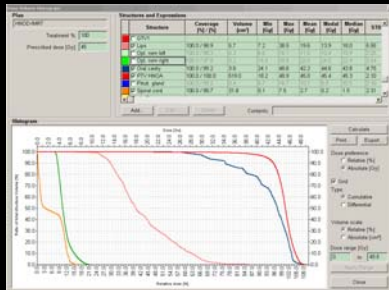
Case 2: Left Tonsillar Cancer - Re-Irradiation + MMC -

Palliative RTX @1.5 yrs. with 5 x 1.8 Gy up to a TD of 45 Gy due to large volume (>70 ml), loading dose of 400 mg/m² Cetuximab led to allergic reaction → switch to concomitant MMC 10 mg/m² BS x 2 cycles

Case 2: Left Tonsillar Cancer Re-Irradiation + MMC @ 1.5 yrs.



Case 2: Left Tonsillar Cancer - Re-Irradiation DVH -



Case 2: Left Tonsillar Cancer - Follow-up 3 mos. later

- PS: 70%, 64 kg/ 176cm
- Foetor ex ore
- Dysphagia, G4 (feeding tube)
- Trismus, G3
- Clinical examination: necrotic tumour at the right soft palate extending to left side
- ➔ Best Supportive Care and DOD after 2 mos.

Case 3: Oropharyngeal Carcinoma

Case history:

68 year old female
BW: 60 kg, Height: 164 cm, non-smoker!
WHO performance status: 1

Concomitant disease:

Cystic renal disease, kidney transplant., IDDM, arterial hypertension, hypothyreosis

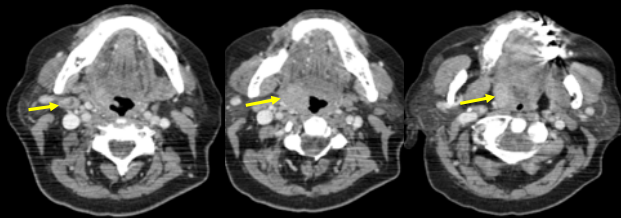
Symptoms:

Progressive dysphagia since 2 months
ENT work-up, CT-scan 17.01.2007

Case 3: Oropharyngeal Carcinoma - Pretherapeutic CAT -

Lymph node (+ECE)

Right tonsillar carcinoma



Case 3: Oropharyngeal Carcinoma
- Clinical Diagnosis -

1/07: Panendoscopy and biopsy



Right tonsillar carcinoma, HPV-16 positiv
2.4 x 1.9 x 2.1 cm

Stage IV: cT2, cN2b, M0, SCC, G3

Case 3: Oropharyngeal Carcinoma
- Treatment: Surgery and CRTX -

01/07: Tonsillar resection, uvula reconstruction,
selective right Neck Dissection Level II-V

TNM: pT2, pN2b, (2/27, ECE), M0

SCC G3, deep margin: <1 mm, L1, High-Risk!

02-04/07: Adjuvant 3D-conformal RTX with 5 x 2 Gy to
54/64 Gy, concurrent 5-FU (600 mg/m²) c.i. d. 1-5
and d. 35-40 (no DDP due to co-morbidities!)

Case 3: Oropharyngeal Carcinoma
- Post-treatment Course of the Disease -

@12 mos.: No pathologic findings or symptoms in
regular Follow-up

since then: Progressive dysphagia, BW: 54kg

Clinical findings:

Ulceration at the left uvula (0.4 x 0.2 cm)
encircled by 3.5 cm suspect solide tissue,
Regular tongue mobility, no palpable LN

Case 3: Oropharyngeal Carcinoma - Post-treatment Course of the Disease -

MRI finding @12 mos.:

2.4 x 1.3 cm lesion left oropharynx and soft palate

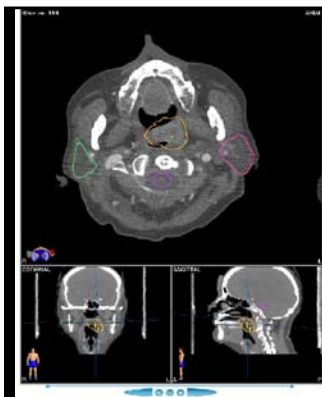
Biopsy and histology:

SCC, G3

Staging: CAT thorax and abdomen: No mets.



Further treatment options?



Case 3:

„Bio-Reirradiation“ with
Cetuximab for left-sided
Oropharyngeal Recurr.

Delineation of the PTV
(Planning Target Volume)

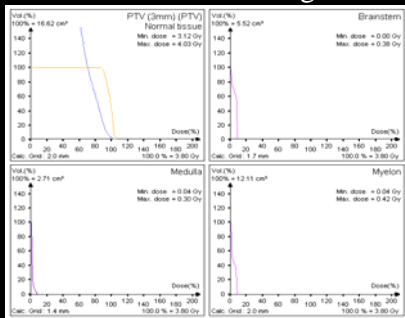


Case 3:

Stereotactic Re-RTX plus
Cetuximab @ 14 after first
definitive Radiotherapy

- PTV = GTV + 3mm
- PTV = 16.26 cc
- Novalis, 6 MV
- Pencil beam algorithm
- 7 conformal beams
- 13 x 3.8 Gy, TD 49.9 Gy
- 80 % isodose coverage

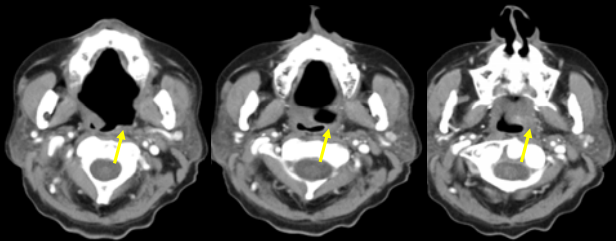
Case 3: Oropharyngeal Recurrence - Dose Volume Histogram -



Case 3: Oropharyngeal Recurrence - Acute Side Effects -

- Mucositis 1°
- Dysphagia 1°
- pain killers (morphine) needed

Case 3: Oropharyngeal Recurrence - Further Surveillance -



CT-scan @3 mos. post TT.: Partial Remission

Case 4: Carcinoma of the Oral Cavity

Case history:

64 year old male, smoker, alcoholic

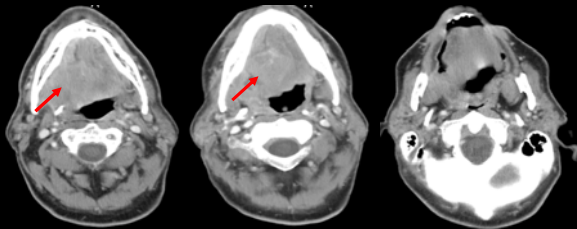
WHO-PS: 2

Symptoms: Oral pain and mild bleeding

Clinical findings 11/2002:

Right anterior floor of mouth ~ 5 cm
vulnerable, exophytic growing tumour
no palpable cervical lymph nodes

Case 4: Carcinoma of the Oral Cavity - Pretherapeutic CAT -



Case 4: Carcinoma of the Oral Cavity - Clinical Diagnosis and Surgery -

CT images of the abdomen & thorax: NED

11/02: Biopsy of the Floor of the Mouth



Tumour at the right floor of the mouth

Stage IV: pT4, pN0, cM0

Pathological findings: SSC, G2

Case 4: Carcinoma of the Oral Cavity - Treatment -

12/02-01/2003:

Definitive CRTX according to the „C-HART“ protocol
(TD: 72 Gy) plus concurrent DDP 30mg/m² once
weekly for 6 cycles plus c.i. 5-FU 600mg/m² d 1-5 wk.1

Case 4: Oropharyngeal Recurrence - Follow-up -

@5 yrs.: no clinical or pathologic findings at
different follow-up intervals

Clinical finding @5.5 yrs.: 2 x 1.5 cm ulceration at
the right soft palate, no palpable LN

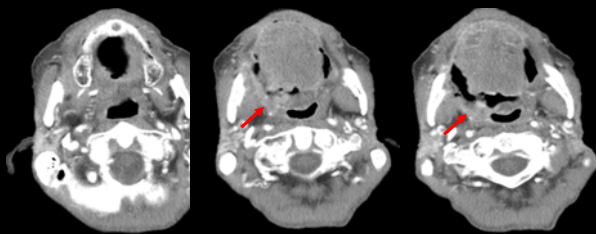
CT @5.5 yrs.: lesion at right soft palate and tissue
defect at right oropharnx, no enlarged cervical LN

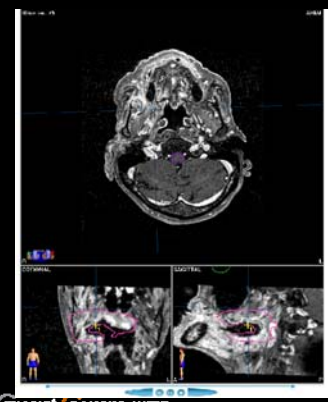
Biopsy: SSC, G3

Staging: CT abdomen & thorax: M0

➔ Further treatment options?

Case 4: Oropharyngeal Recurrence - Diagnostic CAT -



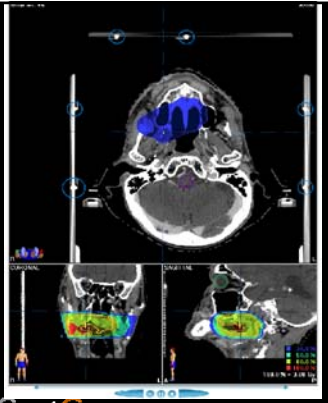


Case 4:
Delineation of tumour for

„Bio-Reirradiation of the OP-recurrence as shown by MR-Imaging @5.6 yrs. after definitive RTX

Cetuximab loading dose + once weekly 250mg/m² wk. 1-3 plus additional 4 weeks

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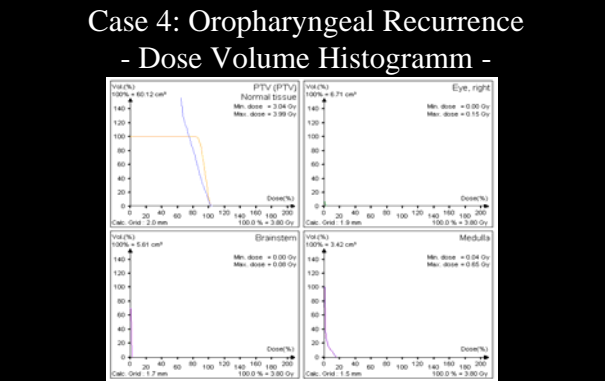


Case 4:
STX Re-irradiation + Cetuximab

1. PTV = GTV + 3mm
2. PTV = 60.12 cc
3. Novalis, 6 MV
4. Pencil beam algorithm
5. 4 conformal beams
6. 13 x 3.8 Gy, TD 49.9 Gy
7. 80 % isodose coverage
8. Spinal cord < 25 %

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Case 4: Oropharyngeal Recurrence - Dose Volume Histogramm -

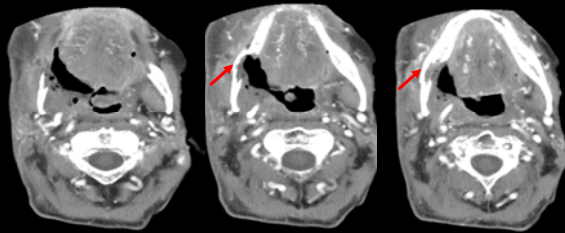


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Case 4: Oropharyngeal Recurrence
- Acute Side Effects -

Skin erythema 1°
No subjective response at the end of STX

Case 4: Oropharyngeal Recurrence
- Follow-up 3mos. later -



CAT 23.09.08: Late Morbidity: Fracture of right mandible (DD: osteoradionecrosis), swelling of right cheek, less CM-enhancement at right oropharynx

Case 4: Oropharyngeal Recurrence
- Acute Side Effects -

- Mucositis 1°
- Dysphagia 1°
- pain killers (morphine) needed

Case Reports - What are the Options for Re-irradiation?

- Re-Irradiation for small tumor volumes of up to 70 ml is feasible.
- Fractionation of 11 x 3.8 Gy is tolerable.
- The addition of concurrent Cetuximab or CDDP after one year of CDDP-containing CTX is possible, MMC also an option.
- For larger tumour volumes >70 ml HFX with b.i.d. 1.2 Gy to a total dose of 60 Gy/ 5 wks. is feasible.
- The above dose regimens allow some curative potential in the range of 20% @2 years for recurrent H&N-cancer patients!
