

**Materials and Methods:** HNC patient scheduled for radical radiotherapy were included. They were examined with videofluoroscopy (VF) and answered EORTC C30 and H&N35 quality of life questionnaires (QLQ) as well as questions regarding the exercises (diary). The patients were instructed in exercises for the pharyngeal constrictor, tongue, jaw, suprahyoid muscles and oesophageal sphincter and to perform the exercise program 3 times daily or as frequent as possible. VF was performed before RT and two, five and 11 months after RT. Compliance, the swallowing scale of the QLQ, and the usefulness of the diary were the primary endpoints.

**Results:** 10 males with cancer of the pharynx (5), larynx (3) and oral cavity (2) with a median age of 59 years were included. All patients had some dysphagia at inclusion. Patient-reported tube dependency peaked at 14 days after therapy (38%) and reached 0% at 8 months. Patients stated complete adherence to the exercise protocol at 11% of encounters. At least one exercise a day for all organs was carried out for 100%, 75% and 66% of patients after 1, 3 and 5 weeks of therapy, respectively and 83%, 85%, 50%, 60% and 50% at 14 days, 2, 5, 8 and 11 months after therapy, respectively. Adherence to the instructions and swallowing capability could not be predicted from pre-RT variables. During and shortly after radiotherapy there was a tendency that pain limited the conduction of exercises. Later the tendency was reversed.

**Conclusions:** The exercises were uncomfortable during radiotherapy and compliance only moderate. Support from the therapists is crucial for an opportunity to build a relation to the patient that promoted the adherence to the protocol. We will continue to a randomized phase II study with VF changes as the primary endpoint.

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POSTER

#### Neoadjuvant chemotherapy plus concomitant chemoradiotherapy in head and neck cancer: late toxicity and impact on quality of life

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**Background:** head and neck tumors and their treatment may negatively affect patient's quality of life (QoL). The aim of this study is the evaluation of the impact of neoadjuvant chemotherapy (NACT) followed by chemoradiation therapy (CRT) on QoL and psychological functioning of patients with oral and oropharyngeal tumors.

**Methods:** the population was composed by 36 patients affected by advanced oral cavity and oropharynx tumors, who underwent NACT, followed by concomitant CRT. In order to evaluate the late effects of RT we used the RTOG-EORTC late radiation morbidity score plus the DISCHE morbidity recording scheme; we also applied a visual analogue scale to evaluate dysphonia, dysphagia and dysmorphia. Psycho-oncological assessment included: HADS, MADRS, MINI MAC, EORTC QoL HN 35.

**Results:** the late toxicity evaluation demonstrates that salivary glands function, subcutaneous fibrosis, dysphagia and dysphonia are the most relevant and severe damages. Low levels of anxiety and depression were observed; the profile underscores the prevalence of active coping styles (fighting spirit, fatalism, respect to negation, anxiety and desperation). Patients with severe dysphagia (Dische 3-4) showed higher levels of depression: dysphagia influences the perceived global health (GH) and QoL, with effects on fatigue, physical and social functioning. It further determines problems in relationship (sexuality, social eating and contacts). Taste impairment was associated to lower perceived GH and QoL, with higher scores of depression. Dryness of mouth determines impairment in some aspects of QoL, such as social eating and contact, although without effects on emotional scores and perceived GH and QoL.

**Discussion:** NACT followed by CRT could result in a heavy addictive effect, strongly affecting nutrition. Depressive traits seems to be sub evaluated by auto-report instruments. However, late side effects of treatments, such as dysphagia, are clearly associated to impairment in perceived QoL and global health, and to a higher risk of psychological complains.

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POSTER

#### Body mass index (BMI) – simple tool for prediction and prognosis in patients with locoregionally advanced head and neck carcinomas (LA HNSCC)

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Changes in nutritional status are common in patients (pts) with HNSCC. Some data have pointed out that 5% of weight loss in 6 months before initial

treatment for LA HNSCC, was an independent predictor of poor disease specific survival in men. On the other hand obesity because of high energy intake (alcohol) might also negatively influence final outcomes. In our work we evaluate the correlation between initial BMI (weight kg / height m<sup>2</sup>), therapeutic response to neoadjuvant chemo and overall survival (OS) in pts with LA HNSCC treated with combined chemoradiotherapy.

During the period Jan. 2003–Oct. 2006, a total of 69 pts (N = 69, two pts being females) with T3-T4a, b; N1-N2b; M0 tumors (AJCC, 6-th ed. 2002) has been treated this way. Median age was 54 yrs (range 36–71 yrs) with ECOG status 1 (range 0–2). Two pts had primaries in epipharynx, 30 pts in oropharynx, 29 pts in hypopharynx, and 8 pts in larynx. All received PF regimen enhanced with Cytarabine (CAR) as a Platinum potentiator. Pts had been given 500 mg/m<sup>2</sup> of CAR (D1), 750 mg/m<sup>2</sup> of 5FU as a continuous infusion (D1-D5), and CDDP 120 mg/m<sup>2</sup> (D1) for 3 cycles, and then proceeded to radiotherapy with concomitantly applied CDDP 100 mg/m<sup>2</sup> (D2, D23, D44). Before radiotherapy, all of them were evaluated for response. Based on BMI, pts were categorized as overweight (BMI ≥ 25; 27% pts), normal weight (18.5 ≤ BMI < 25; 57% pts), and underweight (BMI < 18.5; 16% pts). Forty seven pts (68%) achieved response rate (CR+PR), 18 pts (26%) had stabilisation (SD) and four of them (6%) had progressed.

Responders had significantly higher values of initial BMI than non responders (Man-Whitney test; p < 0.01). In normally weighted, BMI positively correlates with response (OR = 15; p > 0.0018) and the same is true in overweighted pts (OR = 16.9; p < 0.00335). Underweighted pts had also significantly poorer OS compared to normally weighted (log rank test: p = 0.003) and overweighted (log rank test: p = 0.001). Between normally and overweighted pts such difference has not been observed (log rank test: p = 0.648).

In conclusion, we propose pretreatment nutritional assessment using BMI in this population pts which might in addition to TNM staging help in better and more sophisticated treatment planning.

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#### Correlation of p53 and PCNA expression with the invasion and prognosis of oral squamous cell carcinoma

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**Background:** Abnormalities in cell cycle-controlling genes are important in the malignant transformation and proliferation of tumors. Among these genes, the tumor suppressor gene p53 is most notable, and its mutations provide an indicator of tumor progression and prognosis. This study examined the expression of p53 and PCNA at the invasive front of oral squamous cell carcinomas by immunohistochemical staining, and investigated the relationship of these proteins to clinicopathological findings. Moreover, the relationships between the expression of these protein at the invasive front and survival rates were examined.

**Methods:** Fifty-nine biopsy specimens of oral squamous cell carcinoma were examined by immunohistochemical staining. p53 labeling index (p53-LI) and PCNA labeling index (PCNA-LI) were examined at the invasive front of tumors.

**Results:** None of the indices correlated significantly with the clinical findings. In highly invasive carcinoma, p53-LI and PCNA-LI were increased and co-expression. Patients with p53 and PCNA co-expression had a worse prognosis than other expression combination.

**Conclusions:** It is significant to detect p53-LI and PCNA-LI at the invasive front of oral squamous cell carcinoma in the examination of tumor cell characteristics.

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#### Therapeutic results of TPF chemotherapy prior to definitive radiochemotherapy for advanced nasopharyngeal cancer

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This is a clinical study conducted to evaluate the toxicity and efficacy of TPF chemotherapy of docetaxel, cisplatin, and fluorouracil prior to definitive radiochemotherapy in patients with advanced epithelial carcinoma of the nasopharynx.

**Patients and Methods:** Eligible patients with good performance status (ECOG 0–2) who had stage III/IV, or unresectable local recurrent diseases and no distant metastases were assigned to receive TPF chemotherapy. Intravenous infusion of 75 mg/m<sup>2</sup> of docetaxel and 75 mg/m<sup>2</sup> of cisplatin on day 1 followed by continuous intravenous instillation of 1000 mg/m<sup>2</sup>/day