

UR:20.3), and median overall survival was not reached (R: not reached, UR:32.8).

Conclusions: Modified neoadjuvant TPF followed by CT/RT has demonstrated satisfactory activity and favourable tolerance in LAHNC, with encouraging organ preservation rate.

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POSTER

Treatment-related toxicities in patients with squamous cell carcinoma of the head and neck (SCCHN)

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Background: Little information is published from real-world clinical practice on treatment-related toxicities among patients with squamous cell carcinoma of the head and neck (SCCHN). Although randomized clinical trials report treatment-related toxicities, the treatment patterns and patient populations in clinical practice are more heterogeneous than those in clinical trials.

Materials and Methods: We used a population-based tumor registry at a large, US health system, to identify all cases of stage III or IV SCCHN diagnosed from 2000 to 2006. We identified the incidence/severity of acute and late toxicities associated with SCCHN treatment from detailed medical record review of health system encounters, including physician notes. Acute and late toxicities were evaluated using Common Terminology Criteria for Adverse Events (CTCAE3) criteria and Radiation Therapy Oncology Group/ European Organization for Research and Treatment of Cancer (RTOG/EORTC) late radiation morbidity scoring scheme, respectively. The incidence and severity of toxicities are presented by treatment. Detailed analyses according to tumor stage and location, grade, and acute versus late events were examined.

Results: We identified 195 patients with SCCHN: 104 patients (53%) received chemotherapy (chemo) + radiation therapy (RT); 87 (45%) received RT only; four patients (2%) received chemotherapy only or other/no treatment.

Table 1. Adverse Events of Interest (grade 2–4) by Treatment Received (N = 191*)

Adverse Events	Total (n = 191) n (%)	Chemo+RT (n = 104) n (%)	RT only (n = 87) n (%)
Gastrointestinal	160 (83.8)	89 (85.6)	71 (81.6)
Xerostomia	61 (31.9)	41 (39.4)	20 (23.0)
Dysphagia	70 (36.6)	44 (42.3)	26 (29.9)
Dermatology	91 (47.6)	54 (51.9)	37 (42.5)
Pulmonary	74 (38.79)	41 (39.4)	33 (37.9)
Aspiration pneumonia	62 (32.5)	37 (35.6)	25 (28.7)
Dehydration	43 (22.5)	29 (27.9)	14 (16.1)
Subcutaneous tissue	30 (15.7)	18 (17.3)	12 (13.8)
Infection	29 (15.2)	21 (20.2)	8 (9.2)
Renal/Genitourinary	19 (9.9)	14 (13.5)	5 (5.7)
Auditory	16 (8.4)	12 (11.5)	4 (4.6)
Bone	4 (2.1)	3 (2.9)	1 (1.1)

*Four patients received chemotherapy only or other/no treatment

Conclusions: Findings from this study reveal that treatment-related toxicity in patients with advanced SCCHN is common. The addition of chemotherapy to radiation is associated with increased risk treatment-related toxicities. These data provide real-world incidence rates of toxicity as observed in clinical practice.

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POSTER

Particle therapy for mucosal malignant melanoma of the head and neck: a retrospective study

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Background: Mucosal malignant melanoma (MMM) of the head and neck is resistant to conventional photon (X-ray or gamma-ray) radiotherapy. Particle therapy including proton therapy and carbon-ion therapy may be useful for the treatment of MMM because of its ability to deliver high dose to tumors while minimizing the dose to risk organs. Moreover, carbon-ion is supposed to be effective against MMM according to the results of biologic experiments. The purpose of this study was to assess the efficacy and toxicity of particle radiotherapy for MMM of the head and neck at Hyogo Ion Beam Medical Center retrospectively.

Materials and Methods: Between February 2002 and April 2008, 73 patients with MMM of the head and neck were treated with particle therapy. Forty seven of 73 patients had no treatment before the particle therapy, whereas 25 had undergone surgery and/or chemotherapy, and 1 surgery and photon radiotherapy. Fifty two patients received proton therapy and 21 patients received carbon-ion therapy. The total dose of proton therapy was ranging from 65 to 70.2 GyE (median, 65 GyE) in 26–28 fractions and the total dose of carbon ion therapy was ranging from 57.6–64 GyE (median, 57.6 GyE) in 16 fixed fractions. Primary tumor sites were nasal cavity in 43, maxillary sinus in 9, ethmoid sinus in 7, palate in 5, and others in 9. Overall and progression-free survivals, and local control were evaluated using the Kaplan-Meier method. Acute and late morbidities were assessed based on the Common Terminology Criteria for Adverse Events (CTCAE) v3.0. The median follow-up was 19 months (range, 5–62 months).

Results: The 2-year overall survival and progression-free survival rates were 62% and 28%, respectively. Six patients experienced local recurrence and the 2-year local control rate was 82%. Thirty three patients experienced distant metastases (lymph node, bone, lung, etc.). Within 1 year, 35 patients (48%) developed distant metastases. Grade 3 acute reactions were observed in 21 patients (mucositis in 17, dermatitis in 2, and otitis media in 2); however, no patients discontinued the treatment. Grade 4 late adverse effect was observed in 1 patient (visual loss).

Conclusions: Particle radiotherapy showed favorable outcome for local control of MMM of the head and neck. As for distant metastasis, however, even the patients with early stage MMM (T1–2) developed multiple metastases even though the primary tumors are controlled. The current multidrug chemotherapy has limited effects on distantly recurrent patients and good treatment to address this problem is awaited.

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POSTER

Pretreatment fluorodeoxyglucose positron emission tomography as predictive factor for the outcome of head and neck cancer patients

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Background: The aim of this study was to determine if fluorodeoxyglucose positron emission tomography (FDG-PET) uptake assessment before treatment can be used as an additional predictive factor for outcome in head and neck cancer patients receiving radiotherapy by helical tomotherapy (Hi-Art Tomotherapy®) ± chemotherapy.

Methods and Materials: Between June 2005 and March 2008, 58 patients with a biopsy proven head and neck cancer (HNC) were treated with radiotherapy at the UZ Brussel. All patients underwent a baseline FDG-PET before treatment. The maximum standardized uptake value (SUV_{max}) within the lesion was considered as a semi-quantitative measure representing the most metabolic active part of the tumor.

Results: The Median SUV_{max} = 7.92. SUV_{max} for patients who died was significantly higher than living patients (9.16 vs. 7.32, respectively, p=0.037). The median SUV_{max} was chosen as a cutoff value to categorize the patients into 2 separate groups with low and high SUV_{max}. 3-years Overall survival (OS) was 80% vs. 54% (p=0.009) and disease free survival (DFS) was 83% vs. 41% (p=0.018) for low and high SUV_{max} groups, respectively. Multivariate analysis also confirmed these observations. In multivariate analysis, included the SUV_{max}, Karnofsky performance status, AJCC stage and chemotherapy use, SUV_{max} was the only factor which showed significant difference in outcome. The 3-y OS (p=0.015), and DFS (p=0.027) were in favor of the low SUV_{max} group.

Conclusion: PET-FDG scan before treatment is a good predictor of outcome in HNC patients. Future work on a larger number of patients is warranted to determine SUV_{max} cut off value which could be used for early identification of patients with poor treatment outcome for perhaps other therapeutic approaches.

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POSTER

Expression of BRAK/CXCL14 is associated with antitumor efficacy of gefitinib in head and neck squamous cell carcinoma

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Background: The clinical efficacy of gefitinib (ZD1839, Iressa), which is an inhibitor specific for the epidermal growth factor (EGF) receptor