severity of adverse events across the dose levels were noted. No dose-limiting toxicities were observed at any dose level.
Conclusion: The combination of cilengitide, cisplatin, 5 FU, and cetuximab was well tolerated. Cilengitide in combination with cetuximab and chemotherapy did not change the known safety profile of this standard treatment in SCCHN. Cilengitide 2000 mg was the recommended dose for the phase II study.

8518 POSTER

Prognostic value of the expression of SDF 1 and CXCR 4 in head and neck squamous cell carcinoma (HNSCC)

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Background: HNSCC have a hardly predictable evolution, and new prognostic factors are warranted to guide treatment options. Using cell lines or immunohistochemistry data, SDF 1 and its receptor CXCR 4 has been involved in the metastatic spread of various tumors, including HNSCC. We focused on the expression of SDF1 and CXCR4 in HNSCC to assess its prognostic value.
Methods: Fifty-seven patients treated for HNSCC were retrospectively analyzed for SDF1 and CXCR 4 expression by real-time PCR (RT-PCR). Tissue samples were collected at the time of initial diagnosis. At least 50% of the sample was tumoral. Total RNA was reverse-transcribed with TaqMan quantitative RT-PCR (Applied Biosystems). Results were recorded as average threshold cycle, and relative expression was determined using Normalized Expressions method. Expression of SDF1 and CXCR 4 was related to survival after at least 1 year of follow-up.
Results: In the 57 patients, expression of SDF1 (mean value 3.54, median 1.75, range 0.02−32.32) and CXCR 4 (mean value 0.58, median 0.23, range 0−9.89) demonstrated a great variability between patients. After a median follow-up of 30 months (range 12−56), 37 patients were alive (group A) and 20 were dead because of cancer evolution (group D). In group A, median level of SDF1 was 2.5 whereas it was 1.6 in group D ($p = 0.01$). Median level of CXCR 4 was 0.84 in group D and 0.25 in group A ($p = 0.4$). In addition, patients with low level of SDF1 had a worse survival ($p = 0.004$) whereas level of CXCR 4 was not related to evolution. Among usual prognostic factors, only node involvement tend to be related with a worse survival ($p = 0.06$).
Conclusions: In this series, SDF1 expression seems to have significant prognostic value to predict survival of HNSCC patients which is in agreement with in vitro data suggesting a role for SDF1/CXCR4 signaling in the metastatic process. If confirmed in further studies, SDF1 expression may help in management decision for HNSCC patients.

8519 POSTER

A phase 2, randomized trial (CONCERT-1) of chemoradiotherapy with or without panitumumab in patients (pts) with unresected, locally advanced squamous cell carcinoma of the head and neck (SCCHN): Interim pooled safety analysis

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Background: Panitumumab (pmab), a fully human monoclonal antibody against the epidermal growth factor receptor (EGFR), is indicated as monotherapy for the treatment of metastatic colorectal cancer. This ongoing study sponsored by Amgen is designed to estimate the difference in 2 year local regional control (LRC) rates in pts receiving chemoradiotherapy (CRT) alone or CRT plus panitumumab (PCRT) as first-line treatment of locally advanced SCCHN (ClinicalTrials.gov Identifier: NCT00500760).
Methods: This is a phase 2, open-label, randomized, international, multicenter study. Eligible pts were randomized 2:3 to CRT or PCRT. CRT included radiotherapy (RT) and cisplatin (100 mg/m^2 – days 1, 22, and 43 of RT). PCRT included RT and pmab (9.0 mg/kg Q3W) + cisplatin (75 mg/m^2 Q3W), both administered on days 1, 22, and 43 of RT. Standard fractionation RT (70 Gy delivered in 2 Gy fractions for 5 days/week $\times$7 weeks) was planned for all pts and was delivered by either the intensity-modulated (IMRT) modality or the three-dimensional conformal (3D-CRT) modality. The primary endpoint is LRC rate at 2 years. Key secondary endpoints include PFS, OS, and safety. An external, independent data monitoring committee (DMC) conducts planned safety and efficacy reviews during the course of the trial.
Results: Pooled data from this planned interim safety analysis includes the first 54 of 150 planned pts; 50 (93%) pts are male; median (range) age is 56 (37−74) years; ECOG PS 0: 69%, PS 1: 31%; 32 (59%) pts received IMRT, and 22 (41%) pts received 3D-CRT. Forty-eight (89%) pts completed all RT, and 48 pts received RT per protocol without a major deviation. The median (range) total RT dose administered was 70 (16, 70) Gy. The most common grade $\geqslant$ 3 adverse events (AEs) graded using the CTCAE version 3.0 are shown (Table).
Conclusions: After this interim safety analysis, the DMC recommended the CONCERT-1 study continue per protocol. Enrollment into the study completed (n = 153) on 26 March 2009. Updated pooled safety data for this group will be presented.

Table: Most common grade $\geqslant$ 3 adverse events[1] – safety analysis set (n = 53)

Adverse event	Any grade n (%)	Grade 3 n (%)	Grade 4 n (%)
Mucosal inflammation	35 (66)	21 (40)	0 (0)
Radiation-induced skin injury[2]	34 (64)	6 (11)	1 (2)
Dysphagia	31 (58)	14 (26)	0 (0)
Stomatitis	12 (23)	6 (11)	0 (0)
Hypokalemia	10 (19)	4 (8)	0 (0)
Dehydration	7 (13)	4 (8)	0 (0)
Infection	5 (9)	5 (9)	0 (0)

[1]There was one grade 5 treatment-related AE of syncope; [2]Any skin toxicities determined to be caused by radiation therapy.

8520 POSTER

Preliminary results of a pilot study with a modified induction docetaxel/cisplatin/5-FU (TPF) followed by concomitant chemoradiotherapy (CT/RT) in locally advanced head and neck cancer (LAHNC)

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Background: TPF induction CT followed by CT/RT has been evaluated in several trials showing high activity although associated with non-irrelevant toxicity. To aim the efficacy, toxicity profile and organ preservation of a modified neoadjuvant TPF to concurrent CT/RT in both resectable (R) and unresectable (UR) LAHNC.
Patient and Methods: One hundred seventy patients (p) with stage III-IV, PS ECOG 0−2, were included to receive 3 cycles of docetaxel 75 mg/m^2 iv day (d) 1, cisplatin (P) 75 mg/m^2 iv d2 and 5 FU 750 mg/m^2 iv continuous infusion d2−5, every 3 weeks with prophylactic ciprfloxacin 500 mg twice daily from d6−15 of each cycle and granulocyte colony-stimulating factor as secondary or primary setting, followed by P 100 mg/m^2 iv d1, 22, 43 concomitant with RT (66−70 Gy, conventional fractionation). Neck dissection was planned for p with stage N2−3 after induction CT or salvage surgery for resectable p with persistent disease at the end of treatment.
Results: Main p characteristics were: median age 58 years (39−77), male 89%, ECOG 0/1/2 47%/50.6%/2.4%, stage IV 62.7%, larynx/hipopharynx/oral cavity/oropharynx 45%/12%/17.3%/25.7% and R/UR 41.8%/58.2%. Median TPF/P cycles administered were 3/3. Neoadjuvant CT/total treatment overall response rate evaluation (R/UR): 70% (73%/68%)/86% (84%/88%). Neck dissection was performed in 16 p and salvage surgery in 6 p. Organ preservation was achieved in 90.8% of R p. Main G3−4 toxicity during TPF treatment was neutropenia 11.2%, febrile neutropenia 11.2%, mucositis 11.2%, and during CT/RT mucositis 16.5%, neutropenia 16.5%. Median time to progression was 19.5m (R:15.6,

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.

8521 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*)

Advetrse 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.

8522 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 recurred patients and good treatment to address this problem is awaited.

8523 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 maxium standardized uptake value (SUVmax) 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. SUVmax 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 SUVmax groups, respectively. Multivariate analysis also confirmed these observations. In multivariate analysis, included the SUV_{max}, Karnofesky performance status, AJCC stage and chemotherapy use, SUVmax 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.

8524 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