54.8%, 20% and 13.7%. Xerostomia grade 2 appeared in 72.5% and 49.3% (RA/IMRT) of all cases. For all results, there was no statistically sigificant difference ($p \geqslant 0.05$, Mann-Whitney). Treatment could be delivered within 4 minutes, compared to more than 10 minutes for conventional IMRT.
Conclusion: Deliver rotational radiotherapy with SIB using RA is a quicker approach to irradiate complex volumes in patients with locally advanced HNSCC with acute toxicity comparable to conventional IMRT. RA has become our standard treatment approach for locally advanced HNSCC.

8506 ORAL

Cisplatin dose intensity correlates with outcome in patients with locally advanced head and neck squamous cell carcinoma receiving concurrent cisplatin based chemoradiation: a multi-institutional experience

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Background: A standard treatment option for patients with locally-advanced head and neck squamous cell cancer (LA-HNSCC) consists of concomitant cisplatin (CDDP) and radiation (RT). However the optimal dose and scheduling of CDDP is still controversial. To date, the significance of giving the full intended dose of CDDP (300 mg/m^2) on cancer-control has not been evaluated prospectively. To this end, we retrospectively evaluate 301 LA-HNSCC patients treated with chemoradiation (CRT).
Methods: the study population consists of 301 non-nasopharynx LA-HNSCC patients treated with primary CRT between January 2002 and September 2008 both in our Institution and at Princess Margaret Hospital in Toronto, Canada. Only patients that received CDDP and concomitant full dose of RT were included. The data collected consisted of patients and, tumor characteristics, CDDP and RT delivery details, toxicity, overall survival (OS) and disease-free survival (DFS).
Results: median age: 57; male: 77%; ECOG performance status 0: 67%; 0 comorbidities: 36%; oropharynx tumors: 60%; T3: 24%; T4: 30%; N2a: 6%; N2b: 32%. Of 301 patients, 278 (92%) received 70/72 Gy and 13 (4%) received 66 Gy, mainly due to the use of intensity-modulated radiation therapy with simultaneous integrated boost technique (IMRT-SIB). Of all, 94 (31%) patients received full-dose CDDP. The 2-year OS and DFS were respectively 83% and 70%. In multivariate analyses. Poorer ECOG-PS was significantly associated with decreased OS ($p < 0.001$). Conversely, oropharynx tumors were associated with better OS ($p = 0.004$). No prolongation of overall RT duration was significantly associated with improved OS ($p < 0.001$). Full-dose CDDP significantly increased overall DFS ($p = 0.009$). Interestingly, full-dose CDDP CT was associated with better local and regional DFS ($p = 0.005$), but not with distant DFS.
Conclusions: in patients with LA-HNSCC, full dose CDDP is associated with better DFS rates. Our data confirm that the dose of CDDP plays an important role in this patients' category. Whether CDDP based neoadjuvant can compensate for the suboptimal dose of CDDP in the concomitant phase is still to be demonstrated.

Poster presentations (Tue, 22 Sep, 09:00−12:00)
Head and neck cancer

8507 POSTER

The EGFRvIII variant in squamous cell carcinomas of the head and neck: Expression and correlation with clinico-pathological parameters in 675 patients from the randomised DAHANCA 6/7 study

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Background: The Epidermal Growth Factor Receptor (EGFR) is frequently overexpressed in squamous cell carcinomas of the head and neck (HNSCC). Genomic rearrangements can give rise to modified variants like EGFRvIII, which is a truncated receptor formed by a 267 amino-acid in-frame deletion. EGFRvIII has only sparsely been studied in HNSCC and the constitutively activation of this receptor may account for the relatively low response rates to EGFR-inhibitors. The aim of the present study was to describe the expression of EGFRvIII and correlate this with wtEGFR expression and clinical parameters.
Material and Methods: Formalin-fixed paraffin embedded tissue-blocks from 675 patients is at present available and evaluated for the expression of wtEGFR and EGFRvIII. All patients were randomised to primary radiotherapy 5 or 6 fx/week, 2 Gy/fx, in total 66−68 Gy. wtEGFR was visualised using a well known commercial antibody, whereas the antibody against EGFRvIII is relatively new but is specific for the variant receptor when tested by western blot. Expression of wtEGFR was evaluated on a 4-grade scale and the data was dichotomised into high or low expression by the cut-point 50% of positive tumour staining. EGFRvIII is at present only evaluated as a positive or negative staining. Expression was correlated to patient- and tumour characteristics and when the full cohort of up to 800 patients is evaluated, then outcome data will be analysed.
Results: EGFRvIII was present in 267 (40%) of the tumours, with a non-uniform staining pattern. Expression was evenly distributed in the larynx and pharynx (37 and 40%) and in 51% of the tumours of oral origin and expression of EGFRvIII was inversely correlated wtEGFR ($p = 0.001$). In contrast to wtEGFR, the expression of EGFRvIII was not more frequent in low differentiated tumours compared to well differentiated HNSCC. No other correlations with patient or tumour characteristics were observed.
Conclusions: This is by far the largest clinical study of EGFRvIII in head and neck cancer. The variant is expressed in 40% of the tumours in a heterogeneous pattern not related to the expression of wtEGFR. When the full cohort is evaluated, outcome data will be analysed and presented at the meeting.
Presented on behalf of the Danish Head and Neck Cancer group (DAHANCA)

8508 POSTER

Preliminary results of the randomized phase II TREMPLIN study: TPF Induction chemotherapy followed by radiotherapy plus cisplatin or cetuximab

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Background: induction chemotherapy (ICT) followed by radiotherapy (RT) or concurrent chemoradiotherapy (CRT) in case of objective response were a standard alternative to total laryngectomy and indicated for larynx preservation (LP) strategy. Data have suggested that cetuximab may add to improve the efficacy of radiotherapy in head and neck cancer. Docetaxel-based ICT was the most effective schedule. The objective of this phase II randomized trial was to compare the 3 months larynx preservation rate after TPF induction regimen followed by radiotherapy plus either cisplatin or cetuximab.
Material and Methods: the French GORTEC-GETTEC group initiated a randomized phase II study in previously untreated patients (pts) for whom surgical procedure required total laryngectomy. Eligible pts received 3 cycles of ICT (docetaxel and cisplatin both 75 mg/m^2 on day 1 and 5-FU 750 mg/m^2/day on days 1−5). In case of response $\geqslant$50% pts were randomized to receive either in arm A: RT (70 Gy) with cisplatin (100 mg/m^2 on days 1, 22 and 43 of RT) or in arm B: Cetuximab (400 mg/m^2 week 0 and 250 mg/m^2 on the first day of the 7 weeks of RT). Pts with response <50% had surgery. Primary endpoint was LP 3 months after treatment, secondary endpoints were larynx function preservation at 18 months, quality of function and tolerance to treatment.
Results: from March 2006 to April 2008 (end of accrual), 153 pts with stage III-IV larynx/hypopharynx cancer were enrolled in the study and could start ICT. Patients and T characteristics (age, sex, PS, primary site, TN) were well balanced. Of them 74 % could receive the planned ICT while the others had either reduced dosages or less than 3 cycles. Toxic deaths occurred in 2 pts (1.3%). Of the 149 evaluable pts after ICT, 22 were non-responders (15%), 4 pts were withdrawn from the study, 7 pts had ICT-related toxicity precluding any further cisplatin and 116 pts could be randomized (60 in arm A and 56 in arm B). 58 patients started RT + cisplatin ant 55 RTE + cetuximab. The 3 months LP rates were not statistically different (92% in arm A and 98% in arm B). In arm A, 43 % of pts could receive the full CRT protocol versus 71 % in arm B. In arm A 50% of pts had cisplatin-related toxicity (definitive in 52% the cases) while in arm B 26 % of patients had cetuximab-related toxicity (definitive in only 1 case). There was no CRT treatment-related death.
Conclusion: TPF-ICT followed by RT with concurrent cetuximab appeared more manageable than concurrent cisplatin with the same LP rate 3 months