oral cavity and oropharynx; 36 underwent S+RT and 36 received exclusive CH-RT. Late effects of treatment assessment included: Radiation Therapy Oncology Group (RTOG)-European Organisation for Research and Treatment of Cancer (EORTC) late radiation morbidity scoring system, DISCHE morbidity recording scheme.
Results: According to AJCC TNM 7th edition, in S+RT group 58% of pts was T1/T2, 42% T3/T4, 39% N0/N1, 61% N2/N3, 22% stage I/II, 78% stage III/IV, 64% G1-G2 and 36% G3. In CH-RT group 55% of pts was T1/T2, 45% T3/T4, 41% N0/N1, 59% N2/N3, 19% stage I/II, 81% stage III/IV, 62% G1-G2 and 38% G3. After median follow-up of 63 months, moderate-severe DISCHE score in S+RT vs CT+RT was: skin toxicity (86%vs81%), subcutaneous fibrosis (97%vs75%), taste impairment (64%vs89%), salivary function (59%vs79%). Long term dysphagia: some discomfort (22%vs39%), soft diet required (42%vs28%), fluids only and naso-gastric tube feeding (11%vs4%).
Conclusions: A different pattern of long term toxicity was observed in S+RTvsCT+RT. Anxiety rate is lower, depression is present in half of patients and is statistically related with dysphagia.

8542 POSTER

Innovative Combined Approaches in Locally Advanced Nasopharingeal Carcinoma Diagnosed in a Non-endemic Population

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Background: Aim of this study was the clinical evaluation of two different schemes of neoadjuvant chemotherapy (NACT) followed by concomitant chemoradiotherapy (CHRT) in locoregionally advanced nasopharyngeal carcinoma (A-NPC) in a non endemic population.
Material and Methods: Seventy patients (51M, 19F, median age: 53.5 yrs, median ECOG PS: 0 (63 pts) and 1 (7 pts); 63 pts type 3 and 7 pts type 2 WHO histology; 36pts stage III, 28pts stage IVa and 6 pts IVb AJCC TNM; 47 pts N2/N3 AJCC TNM) were enrolled. Fourthy pts (A) were treated with 3 cycles of NACT with cysplatin (100 mg/m^2) + epirubicin (90 mg/m^2), followed by cysplatin (100 mg/m^2) and concomitant 70 Gy RT; 30 (B) received 3 cycles of NACT with carboplatin (AUC6) + taxol (175 mg/m^2) followed by carboplatin (AUC1) + Taxol (60 mg/m^2) and concomitant 70 Gy RT.
Results: (%A vs %B) After IC: complete responses (CRs 30% vs 33%), partial responses (PRs 60% vs 60%), no change (NC 10% vs 6.6%); after CHRT: CRs (75% vs 87%), PRs (25% vs 13%). After a median follow-up of 54 months (A) and 49 months (B): 3 and 5 yrs progression free survival was 75% vs 80% and 65% vs 75% respectively and overall survival was 84% vs 85% and 77% vs 80% respectively; 5 yrs locoregional control was 70% vs 90% and 5 yrs distant metastases free survival was 75% vs 85%; toxicity of IC was: G3-G4 neutropenia was 40% vs 83%, G3 thrombocytopenia 12% vs 13%, G3 anaemia 0% vs 10% and G3 mucositis 2.5 vs 6.6%; toxicity of CHRT was: G3-G4 neutropenia 20% vs 63%, G3 thrombocytopenia 10% vs 7.5%, G3 anaemia 2.5% vs 17%, G3-G4 mucositis 32.5% vs 69%, skin toxicity 25% vs 23% and G3 neurotoxicity 5% vs 10%.
Conclusions: Neoadjuvant-chemotherapy with such protocol represents a feasible, efficient treatment for patients with A-NPC, ensuring excellent locoregional disease control and overall survival with low incidence of distant metastases.

8543 POSTER

Pattern of Recurrence After Chemoradiation in Head and Neck Cancer

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Background and Purpose: To identify pattern of locoregional recurrence in patients treated with chemoradiation (RADPLAT protocol) for locally advanced head and neck cancer.
Material and Methods: Between 2000 and 2004, 160 patients with locally advanced head and neck cancer were treated with chemoradiation according RADPLAT protocol (150 mg cisplatin/m^2 i.a, day 1, 7, 15 & 22 or 100 mg cisplatin/m^2 i.v, day 1, 22 & 43). TNM classification is shown in table 1. Among these patients, 40 had local or regional recurrence as the first side of failure. Median follow up time was 11 months (range 3–107 months). CT-MRI scan were used to identify the side of recurrence and correlate the side to radiotherapy fields in 40 patients.
Results: For primary tumour side there were 27 (79.4%) in-field and 7 (20.6%) marginal recurrences. Distribution of recurrences regards to T-stage is shown in table 2. For nodal site there were 15 (65.2%) in-field, 4 (17.4%) out-field, 1 (4.3%) marginal and 3 (16%) in both in-and-out of field recurrences. Table 3 shows the distribution of recurrences according to N-stage.
Conclusion: The most of failures after chemoradiation for locally advanced head and neck cancer occur within the radiation field. Because 79.4% of local and 65.2% of regional recurrences occur in field of radiation the consideration should be given to enhance therapeutic ratio by radiation dose escalation or sensitization of cancer cells by chemo/immuno/radio-therapy.

Table 1

	No	N1	N2a	N2b	N2c	N3	Total
T2	1	1	0	0	0	1	3
T3	16	6	1	8	20	1	52
T4	12	11	4	36	27	15	105
Total	29	18	5	44	47	17	160

Table 2

	T3	T4	Total
In	7	20	27
Margin	2	5	7
No recurrence	2	4	6
Total	11	29	40

Table 3

	No	N1	N3	N2b	N2c	N2a	Total
In	0	3	5	3	3	1	15
Out	2	0	1	1	0	0	4
Margin	0	0	0	1	0	0	1
In & Out	0	0	0	2	1	0	3
No recurrence	4	2	2	3	6	0	17
Total	6	5	8	10	10	1	40

8544 POSTER

The Role of Functional Imaging in Characterising Disease Response in Patients Undergoing Chemoradiation for Head and Neck Cancer (HNC)

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Background: To evaluate the role of FDG-PET, diffusion-weighted (DW) and dynamic contrast-enhanced (DCE) MRI scans in addition to contrast enhanced CT and T1/T2-weighted MRI scans before, during and after primary chemoradiation for HNC.
Material and Methods: Ten patients with histologically proven HNC planned for radical chemoradiotherapy were recruited into this feasibility study. Patients were immobilised in a 5-point thermoplastic mask prior to undergoing CT, PET and MRI (T1, T2, DW, DCE sequences) at the following time points; baseline, following 2 cycles of induction chemotherapy (cisplatin, 5-fluorouracil), after 40 Gy of chemoradiation (excluding PET), 3 and 6 months post-treatment. A region of interest was contoured on each functional imaging modality as follows; 50% maximum SUV threshold (PET), restricted diffusion on b1000 sequence (DW-MRI), maximally enhancing region (DCE-MRI). These volumes were then compared with the volume defined by anatomical imaging (CT/MRI) and changes in target volume which occurred during treatment recorded.
Results: All patients have completed radical chemoradiation for HNC. Eight patients have completed 6 months of follow-up and 1 patient withdrew following the first PET scan due to claustrophobia. The comparison of mean target volumes based on PET, CT and T1-MRI and summary DCE/DW statistics before and after induction chemotherapy is summarised in Table 1.