of cure. In contrast to that, if they noticed the symptoms in themselves, as much as 5% of medical students and 9% of students of other schools would seek medical advice only when they made everyday functioning impossible.

Conclusion: The level of HNC cancer knowledge among young population is alarmingly low. A large number of students of non-medical schools and universities are unaware of its risk factors and early symptoms. This group would benefit from increasing the number of educational campaigns, which would lead to earlier presentation, diagnosis and treatment of HNC.

EP-1102
Parotid toxicity in head and neck cancer patients treated with IMRT
G. Mantello1, G. Capezzali1, F. Cucciarrelli1, L. Vicenzi1, M. Giacometti2, M. Valenti2, S. Maggi2, M. Cardinali1
1Azienda Ospedaliero Universitaria Ospedali Riuniti, Radiotherapy Department, Ancona, Italy
2Azienda Ospedaliero Universitaria Ospedali Riuniti, Physics Department, Ancona, Italy

Purpose or Objective: The aim of this study was to evaluate the parotid glands toxicity and its relationship with the dose in a cohort of head and neck cancer patients treated with IMRT.

Material and Methods: 78 patients out of 110 treated in our department between January 2011 and October 2015 were included in the analysis. Criteria to select patients were: at least 6 months follow up, the omo-lateral parotid (OP) close to the high (HR) and / or intermediate (IR) risk CTV. Characteristics of the studied patients population are shown in Table1. The GTV, whenever present, CTV HR (regions at high risk of microscopic disease), CTV IR (regions at intermediate risk) and CTV LR (regions at low risk) were contoured on each slice. The targets were expanded 3 mm to obtain the PTVs. The prescribed dose was 66-70 Gy (2 - 2.13 Gy /fr) to PTV HR, 56-66 Gy (1.8 - 2 Gy/fr) to PTV IR; 56.1Gy (1.7 Gy/fr) to PTV LR. IMRT with Simultaneous Integrated Boost (SIB) technique was used (41 patients were treated with Tomotherapy and 36 with VARIAN 21EX). The OP and the CP were contoured; PTV SV1 OP and SV2 CP were defined as overlapping volumes of PTVs and glands. Priority was given to OP when OP was partially included. The dose limit (Dmean) was < 25 Gy to the whole contralateral gland (if not close to GTV N) and < 24 Gy to the volume of CP not included in the PTV (external CP). Salivary gland toxicity was assessed weekly, during RT, and at 3,6,9,12,18,24 months after RT and was graduated using the RTOG toxicity scale.

Results: The dose delivered to the PTVs was 67.9 Gy (range 66-70) 2.02 Gy/fr (1.9 -2.2) to PTV HR, 62.3 Gy (range 58-66) 1.86 Gy/fr (1.7-2) to PTV IR, 55.9 Gy (range 51-60) 1.68 Gy/fr (1.65-2) to PTV LR. The mean dose was 41.56 Gy (range 17.8 - 66.8) to OP and 24.9 Gy (range 4.7-39.7) to CP; the external CP received 21.7 Gy mean dose. 36 (46.1%) patients experienced mouth dryness, thickened saliva and altered taste (31 G1 and 5 G2) during RT. At a median follow up of 24 months (range 6-15) after RT. Only 13/36 patients with acute salivary problems experienced late xerostomia.

Conclusion: In our experience 25 Gy mean dose to the whole contra-lateral parotid, with < 24 Gy mean dose to the external CP, even with sacrifice of the OP, allowed our patients to maintain an adequate salivation. 24% of cases experienced G1 and G2 xerostomia. No G3 toxicity was observed.

EP-1103
Review of thyroid ablation rates with RAI based on I131 uptake in differentiated thyroid carcinoma
M. Keys1, C. Faul1, O. Boychek1
1St. Lukes Radiation Oncology Network, Radiation Oncology, Dublin 6, Ireland Republic

Purpose or Objective: Recent studies show that low activity (1.1GBq) of RAI is as effective as high activity (3.7GBq) in treating those with low-intermediate-risk differentiated thyroid cancer (DTC). The purpose of our study was to retrospectively review post-operative I131 uptake and ablation rates in those with DTC.

Material and Methods: Data was obtained from St. Luke’s Radiation Oncology Network (SLRON) patient registry. Selection criteria included histologically proven DTC; post-thyroidectomy; pre and post RAI ablation scan and RAI ablation in SLRON. There were 68 cases of DTC treated with RAI identified between 2005-2007 that were suitable for analysis and met criteria and follow up of ≥5 years.

Results: Of the cases analysed 73% were female and 27% male with a mean age of 44 years. The predominant histological subtype was papillary (73%), followed by follicular (22%). Most had early stage disease; Stage I (65%), Stage II (22%), Stage III (13%), 39 cases were pN0 and 29 had pN1 disease. Regarding RAI surgery performed 39 patients had a complete excision CE, 22 had residual disease and there was no information for 7 cases. Thirty seven (37) cases had microscopically positive margins, 26 were negative and it was unknown in 5. Pre RAI ablation, Post op. RAI (I131) uptake in these patients was an average of 3.6 % in pN1 disease and 5.1% in those with pN0 disease. The max uptake was 28%. The extent of the surgery tended to influence the trend of uptake. There was a trend to a higher mean uptake in those who didn’t have a CE with an uptake of 0.1-17%, and mean of 6.3%. Patients that had a CE had an uptake of 0-28%, and mean of 3.9%. In the SLRON there was no standard protocol for RAI dosage at the time the patients were treated The mean and range of doses of RAI administered was looked at based on pre-ablation uptake scans. Group 1 had a pre-ablation uptake of <4% and group 2 ≥4%. For group 1 the mean dose was 3.9GBq with a range 2.2-7.4GBq, and group 2 had a mean of 3.7GBq with a range of 2.8-7.4GBq. Post-ablative RAI131 scans showed an average of 0.07% uptake with the majority of patients (33) having <0.1% uptake. At the time of analysis 23 patients remained disease free, 10 had metastases (M1) and 2 had died from metastatic disease.

Conclusion: In those that received RAI ablation, high ablation rates ≥90% were shown despite variability in post-op. I131 uptake and dose of RAI administered. There didn’t appear to be an association between those with recurrent or metastatic disease and their pre-ablation uptake rates, it was more associated with original stage.

EP-1104
Role of perfusion CT in evaluation of tumour response after radiochemotherapy in HN cancer
P. Ferrazza1, P. Cocuzza1, F. Pancrazzi1, D. Delishaj1, L. Fatigante1, A. Cristaldo1, L. Faggion1, F. Orlandi1, F. Matteucci1, S. Ursino1
1Azienda Ospedaliero Universitaria Pisana, Department of Radiation Oncology, Pisa, Italy
2Azienda Ospedaliero Universitaria Pisana, Department of Diagnostic and Interventional Radiology, Pisa, Italy

Purpose or Objective: It is still debated to perform perfusion imaging in head and neck (HN) cancer. In a recent trial patients with head and neck cancer treated with radiochemotherapy had significantly improved disease free survival (DFS) when perfusion imaging was performed. Therefore we aimed to assess if perfusion CT is able to predict the tumour response after radiochemotherapy.

Material and Methods: Data were obtained from 30 patients with HN cancer treated in our institution. All were treated with radiochemotherapy. Capillary (cap) and tumour (tu) permeability surface area product (PS) were calculated comparing the Post-op perfusion CT (psc) to Pre-op perfusion CT (pcp).

Results: The analysis was focused on 23 patients. The mean age of patients was 62 years. 15 (65%) patients were male, 13 (56.5%) male patients were treated with radical surgery, 7 (30%) male patients with RT. Perfusion changes were observed in 12 patients (52%). The mean of cap PS was significantly increased after treatment (3.65 - 3.78 vs 3.42 - 3.54). The mean of tu PS was increased too after treatment (2.75 - 2.84 vs 2.48 - 2.58) and the differences were significant (p <0.05).

Conclusion: In our experience perfusion CT was able to predict the tumour response after radiochemotherapy. Further studies are needed to assess if perfusion CT could be used to select patients with HN cancer treated with radiochemotherapy.
Purpose or Objective: The aim of this prospective study is the comparison of perfusion parameters between CT and FDG-PET/CT to evaluate the prognostic value of perfusion parameters (CTPp) in predicting response to RT.

Material and Methods: We enrolled patients with intermediate and advanced stage of HNT (stage III-IV), candidate to RCT with curative intent. All patients underwent to pretreatment diagnostic and staging workup including perfusion CT (CTP) and FDG-PET/CT total body. Also, we performed a CTP 3 weeks after the end of RCT (CTP3w) and 3 months after the end of RCT (CTP3m) and PET/CT (respectively). We analyzed variations of the following CTPp: Blood Flow (BF), Blood Volume (BV), Mean Transit Time (MTT) and Permeability-surface product (PS). All RCT treatments were performed using intensity modulated radiotherapy technique with curative intent. All patients underwent a pretreatment diagnostic and staging workup including perfusion CT (CTP) and FDG-PET/CT total body. All patients were treated with curative intent. All patients underwent a pretreatment diagnostic and staging workup including perfusion CT (CTP) and FDG-PET/CT total body. All patients were treated with curative intent.

Results: From July 2012 to July 2015, 25 patients affected by stage III/IV HNT candidate to RCT were enrolled in our study. FDG-PET/CT 3 months after the end of RCT showed a complete metabolic response in 16 patients (64%), a partial metabolic response in 7 patients (28%), a stable metabolic disease in 1 patient (4%), and progression metabolic disease in 1 patient (4%). The significant reduction of all CTPp was observed from baseline CTP to CTP3w, except for MTT that did not show a significant variation (p=0.722). The analysis of differences between baseline CTP and CTP3m showed a significant reduction of all CTPp (p<0.001), including MTT (p=0.001). The reduction of all CTPp both at 3 weeks and at 3 months after the end of RCT, except for MTT (p=0.998 and 0.692). At the multivariate analysis the PS was the only parameter that maintained a statistical significance at CTP3m (p=0.037) with a significant trend also at CTP3w (p=0.099).

Conclusion: The induced damage on the intratumor microvascularization and low resistance flow of neoplastic vessels, explain the decrease of BV and BF whereas the reduction of neovascularization phenomenon could explain the observed decrease of PS. Despite poor sample size, our preliminary results seem to be promising for a potential role of CTP to predict tumor response. PS seems the most valuable parameter to predict the FDG-PET/CT tumor response. Due to the small sample size and short follow up, our results need to be confirmed in other series. Both functional and morphological data of the CTP can be useful in order to reduce as much as possible the rate of false positive.

Purpose or Objective: The goal of this study is to evaluate the results of treatment of T1N0M0 glottic cancer with irradiation, with emphasis on the influence of time from diagnosis to the beginning of radiation therapy.

Material and Methods: The inclusion criteria for this prospective study are (1)Age≥20 years old (2) Histologically proven squamous cell carcinoma of the oral cavity, oropharynx, hypopharynx, or larynx (3) Stage III or stage IV A or IVB without distant metastasis, (4) No prior chemotherapy given for HNSCC (5) Physician’s intention to treat with docetaxel-based induction therapy (6) Patients’ informed consent will be obtained. Tumor response for induction chemotherapy will be evaluated in patient with measurable disease according to institutional guidance. The induction chemotherapy regimen is a novel outpatient regimen. This regimen consists of cisplatin 60mg/m2 on day 1, docetaxel 50mg/m2 on day 8, 5-Fu 2500mg/m2 and leucovorin 250mg/m2 on day 15, and mexitreuxate 30mg/m2 and epirubicin 30mg/m2 on day 21, cycles will be repeated for a total of 3 to 4 cycles followed by surgery or radiotherapy. Responses rates will be reported using Response Evaluation Criteria In Solid Tumors (RECIST) criteria in patients with at least one measurable lesion. Toxicity will be recorded using the NCI-CTC v.4.03.

Purpose or Objective: To evaluate the overall response rate and access the toxicity for patients with locally advanced squamous cell carcinoma of head and neck (HNSCC) receiving a novel docetaxel-based outpatient neoadjuvant chemotherapy regimen.

Material and Methods: The inclusion criteria for this prospective study are (1)Age≥20 years old (2) Histologically proven squamous cell carcinoma of the oral cavity, oropharynx, hypopharynx, or larynx (3)Stage III or stage IV A or IVB without distant metastasis, (4) No prior chemotherapy given for HNSCC (5) Physician’s intention to treat with docetaxel-based induction therapy (6) Patients’ informed consent will be obtained. Tumor response for induction chemotherapy will be evaluated in patient with measurable disease according to institutional guidance. The induction chemotherapy regimen is a novel outpatient regimen. This regimen consists of cisplatin 60mg/m2 on day 1, docetaxel 50mg/m2 on day 8, 5-Fu 2500mg/m2 and leucovorin 250mg/m2 on day 15, and mexitreuxate 30mg/m2 and epirubicin 30mg/m2 on day 21, cycles will be repeated for a total of 3 to 4 cycles followed by surgery or radiotherapy. Responses rates will be reported using Response Evaluation Criteria In Solid Tumors (RECIST) criteria in patients with at least one measurable lesion. Toxicity will be recorded using the NCI-CTC v.4.03.