radiotherapy, with the aim to verify possible correlations between the planned dose distributions to the main dose limiting structures and the observed levels of toxicity like mucositis, xerostomia and dysphagia.

**Material and Methods:** Data of histologically confirmed advanced HNC patients, in stage III and IV (AJCC), were reviewed in a retrospective dosimetric and clinical evaluation. Patients were treated with VMAT (RapidArc) and SIB in 33 fractions for a total dose of 69.96 Gy to the tumor and positive-nodes, and 54.49 Gy to the elective volume, respectively. Toxicity was graded according to CTCAE3.0. Correlation was explored between OAR dose parameters and related acute and late toxicities.

**Results:** From December 2008 to August 2014, 102 patients were treated. Acute mucosal and swallowing toxicities higher than grade 3 were reported in only 11% and 6% of patients, respectively; late morbidities (G1-G2) were present in only 3% of cases. No G3 Toxicity was reported. A statistically significant correlation was found between the dosimetric parameters of oral cavity V30Gy, V40Gy, and V70Gy, and mucosal toxicity (Pr = 0.01, 0.03, and 0.05, respectively). Concerning salivary glands, late toxicity profile was worse compared to acute side effects, with 19% of persisting late grade equal or higher than 2. Regarding the constrictors and the swallowing toxicity, most of the dosimetric parameters of the inferior constrictor muscle (mean dose, D1/2V, D1/3V, D2/3V) were significant at the univariate analysis, while no correlations were found for middle and superior constrictors. With a median follow-up of 19 months (range 1-61 months), Overall Survival (OS) at 3 and 5 years was 83±4% and 73±10%. Mean OS was 51±3 months. Disease Free Survival (DFS) at 3 and 5 years was 71±7%, and 34±16%. Mean DFS was 43±3 months.

**Conclusion:** Volumetric modulated arc therapy (VMAT) with Simultaneous Integrated Boost (SIB), that allow a shorter overall treatment time, a dose escalation, associated with a better sparing of OARs, showed a good toxicity profile. From our analysis toxicity to dose-limiting structures was significantly correlated to the dosimetric parameters explored.

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**EP-1054**

**Temporal patterns of patient-reported trismus and associated mouth-opening distances in RT of HNC**

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**Purpose or Objective:** To investigate the association between temporally robust domains of patient-reported trismus symptoms with mouth-opening ability as assessed by maximal interincisal opening distance (MIO) in head and neck cancer (HNC) patients treated with radiotherapy (RT).

**Material and Methods:** The study included 196 patients treated with primary state-of-the-art RT for HNC in 2007-2013. A five answering-category-based (no/mild/moderate/severe/very severe symptom) patient-reported trismus questionnaire (Gothenburg Trismus Questionnaire, GTQ) was completed pre-RT, and at 3, 6, and 12 months post-RT. This study focuses on the 14/21 potentially RT-induced physical trismus symptoms from 2 GTQ. At each follow-up, symptom domains were generated by means of factor analysis and these symptoms were correlated with MIO (categorized into five intervals (mm): 1: >50; 2: >40–<50; 3: >35–<40; 4: >25–<35; 5: <25) for each follow-up using Pearson’s correlation coefficient (Pr).

**Results:** The three symptom domains Jaw aches/pains, Jaw-related problems, and Eating limitations were identified at each follow-up, and included one, two and three temporally robust symptoms, respectively. Correlations between MIO and these symptoms were weak to modest (Pr= 0.22-0.58; Table) with the overall stronger correlations for ‘Opening mouth difficulty’ and ‘Current mouth-opening ability’ in the Jaw-related problems domain at 6 and at 12 months post-RT (Pr=0.49-0.58; Figure).

**Conclusion:** Mouth-opening distances can be explained in terms of associated patient-reported symptom severities on jaw-related problems. Translating the patient’s experience into objective measurements and vice versa widens possibilities to monitor and possibly prevent progression of trismus symptoms after RT.

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**EP-1055**

**Determination of EGFR in lesions of the oral cavity and evaluating the role of Gefitinib**

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**Purpose or Objective:** Determination of expression of EGFR in premalignant and malignant lesions of the oral cavity and evaluating the role of Gefitinib in the same

**Material and Methods:** 130 Patients with premalignant and malignant lesions of oral cavity from JK cancer institute, Kanpur were selected. EGFR status evaluation was done in all the patients. Premalignant lesions over expressing EGFR were randomly divided into 2 groups first group consisted of patients who were given CCRT(cisplatin). The other group had the same regimen but with the addition of Tab Gefitinib 250 mg OD daily. Malignant lesions with over expression of EGFR were randomly divided into 2 groups. Out of 130 patients registered 53 were premalignant out of which EGFR(++) positive in 73% (39) patients. EGFR(+++) over expression were in 8%(4)patients, EGFR negative in 18%(10) patients. 77 were malignant lesions EGFR positive in 89%(51) patients. EGFR(+)(+)in 38%(27) of patients, EGFR(+++)in 40%(28) patients. EGFR(+++) were expressed by 11%(11) patients. EGFR negative in 11%(11 patients)

**Results:** Out of 130 patients registered 53 were premalignant out of which EGFR(++) positive in 73% (39) patients. EGFR(+++) over expression were in 8%(4)patients, EGFR negative in 18%(10) patients. 77 were malignant lesions EGFR positive in 89%(51) patients. EGFR(+)(+)in 38%(27) of patients, EGFR(+++)in 40%(28) patients. EGFR(+++) were expressed by 11%(11) patients. EGFR negative in 11%(11 patients)
Conclusion: EGFR status evaluation in premalignant can be used as a screening tool for detection of transformation into malignant lesions. We can prevent this transformation by EGFR inhibitors. In malignant lesions it can be really important for the role of EGFR inhibitors. Gefitinib has shown good results when combined with the conventional CCRT.

Purpose or Objective: Increasingly limited health care resources coupled with a rising incidence of oropharyngeal squamous cell carcinoma (OPSCC) is resulting in longer wait times for definitive treatment. Our objectives were to determine the impact of treatment delays on disease upstaging and outcomes in OPSCC.

Material and Methods: Demographic features, number of days from diagnosis until surgery, and clinical and pathological staging information were determined for 139 patients diagnosed with OPSCC between January 2006 and November 2011. Patients were stratified on the basis of whether or not their disease was upstaged between clinical and pathological T, N or M stage. Statistics were performed using MedCalc Statistical Software.

Results: A total of 62 (45%) of patients were upstaged. Upstaged patients had a longer median time to surgery compared to non-upstaged patients (81 vs 68 days, p=0.017) and 21% (n=13) were upstaged to T ≥ T3 or N ≥ N1. There was a trend to higher incidence of margin positivity in upstaged patients (19%, n=12) compared to non-upstaged patients (9%, n=7) (p=0.141). Groups did not differ in the rate of nodal extracapsular extension (50% and 41%, p=0.363). Median overall survival (OS) for upstaged patients was 5.82 years and was not reached for non-upstaged patients. There was a trend to lower OS in upstaged patients (p=0.0746).

Conclusion: Longer duration between diagnosis and surgery is associated with significant pathological upstaging. Allocating resources to reduce treatment delays may result in overall health care savings due to a reduced rate of requirement for adjuvant treatment, reduced patient morbidity, and improvement in disease outcomes.

Purpose or Objective: The aim of this study was to investigate the impact of Sankol drug on the excretion of radioiodine-131 from patients DTC.

Material and Methods: Fifty-four patients with DTC who had normal renal function in two groups of control and intervention were included in this study. The herbal diuretic Sankol drug was given orally to the intervention group from 3 hours after the 131I administration, and then every 8 hours for 24 hours. The control patients received placebo with the same timing. The radioactivity of the urine samples from each maturation was measured and expressed as the percentage of the administered dose. Exposure from patients were measured after the drug administration and then at the time of 3, 9, 15, 21 and 24 hours after the patient isolation.

Results: The obtained mean percentage of activity excreted during 24 hours after intake of radioactive iodine in the urine in the intervention and control group were 68.85±4.3, 59.11±5.3 with p=0.001 respectively. The obtained percentage of residual activity in the body after 24 hours was 25.17±4.6, 19.56±3.6 with p < 0.001, respectively. Radiation dose rate at 300cm after 24 hours for the intervention and control group were 9.52±3.4 µSv/h, 11.92±6.0µSv/h with p > 0.05, respectively.

Conclusion: Our results demonstrated that Sankol given as an adjuvant medication in the patients with DTC was caused a significant increase in urinary excretion of radioiodine and shorten the hospital stay.

Purpose or Objective: To present protocol larynx preservation results in patients treated for carcinoma of the larynx or hypopharynx in stage III and IV.

Material and Methods: Data from a series of 50 patients treated under the guidance of larynx preservation protocol implemented at our institution in 2007 were analyzed. Treatment protocol is divided into two phases. Patients meeting the inclusion criteria receive CDDP and 5FU cycle. At 3 weeks CT evaluation is performed. If the answer is > 50% are included in the arm radiochemotherapy: CDDP every 3 weeks and RT 70Gy 2 Gy per session 5 days a week. Those who do not respond or <50% are scheduled to total laryngectomy + neck dissection. If indicated received postoperative RT. The cases analyzed belong the period 2007-2012 (minimum three years follow-up). All patients were considered evaluable.

Results: The serie includes 50 patients with a median age of 56 years. 42 men and 8 women with tumors in the larynx (28) and hypopharynx (22); 27 stage III and 23 stage IV. 22 not reached a sufficient response (<50%) and yes they got 27; in one case we missed the information. Laryngectomy was performed in 19 patients out of 22 unanswerd (3 refused). Among the 27 respondents, received RT / CT, 6 LT for recurrences were performed. Larynx preservation was achieved in 50% of patients. The survival of the entire group was 51% at 5 years and 62.6% cause-specific survival. The specific survival at 5 years with RT / CT was 60% compared to 65% of total laryngectomy gupo (p = 0.568).