radiation induced brachial plexopathy; a non-reversible late toxicity experienced by a small number of patients. The BP was analysed at the superior and inferior divisions to establish if segmental interfractional BP movement should be considered when planning radiotherapy in this high-dose region.

**Material and Methods**
A retrospective single centre analysis of 15 patients with head & neck cancer treated with radical bilateral neck irradiation. The extent of BP movement relative to the planning scan was assessed using weekly cone beam CT (CBCT) scans. The BP was contoured on the planning scan and the subsequent 6, weekly CBCT’s; this was used to calculate the jaccard conformity index (JCI) for the left/right and superior/inferior divisions of the BP.

**Results**
The mean JCI for right and left superior BP was 44.4±15.5% whereas the mean JCI for right & left inferior BP was 38.3±15.5%. There was a statistically significant difference between superior and inferior JCI p=0.0002 95% CI (-9.26 to -2.88). Bilateral superior BP JCI was higher, with better conformity than the corresponding inferior divisions.

**Conclusion**
Interfractional BP movement occurs; the greatest movement is seen at the inferior division. Data suggests re-evaluating current BP margins and consideration of a larger inferior BP PRV margin.

**PO-056 Management of the N3 neck after radical chemoradiation for head and neck cancer**

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**Purpose or Objective**
Management of the N3 Neck following radical chemoradiation (CRT) for head and neck cancer (HNC) remains unclear. Published studies to date report on small chemoradiation (CRT) for head and neck cancer (HNC) and N3 neck nodal disease treated with CRT. All patients were assessed at 12-16 weeks post-CRT with CT or PET-CT scan. Patients with residual disease on imaging were treated with selective neck dissection (SNL).

**Results**
Between 01/2012 and 12/2017, 19 patients (17 (89.5%) males) with Tx-T4N3M0 HNC were treated. Eleven (57.9%) patients had p16+ve disease. Fifteen (78.9%) patients received CRT and 4 (21.1%) patients were treated with radiotherapy alone. Median (range) follow up was 25.5 (3-51) months. Three p16+ve patients (15.8%) had SND for residual disease post-CRT: 2 patients had confirmed structural residual disease on post-CRT imaging is reasonable, particularly for p16+ve disease. Analysis of pooled data from published studies will help to inform management of the neck in this setting.

**PO-057 Predicting risk of Acute Kidney Injury in head and neck cancer patients receiving chemoradiotherapy**

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**Purpose or Objective**
Head and neck (HN) cancer patients treated with concurrent radiotherapy with cisplatin (CTRT) are at risk of acute kidney injury (AKI). AKI often requires in-patient management with implications for healthcare resources and patients’ quality of life. We sought to identify pre-treatment risk factors for development of AKI to inform clinical management of this group.

**Material and Methods**
A retrospective analysis was conducted of HN patients receiving curative volumetric modulated arc radiotherapy (VMAT) with cisplatin (100mg/m2 week 1 and 4), between February 2016 and May 2017 at our institution. Patients were generally required to have an isotope Glomerular Filtration Rate (GFR) > 60ml/min pre-treatment. Demographic, clinical and dosimetric parameters were collected. All episodes of AKI (defined as a rise of ≥ 26 µmol/l in serum creatinine level or 1.5 x baseline) during treatment were identified. Logistic regression was employed to investigate the associations between risk of AKI and parameters listed in Table 1. Multivariate logistic regression model, using stepwise backward selection, was conducted for parameters having p < 0.05 in the univariate analysis or felt clinically likely to be related to AKI risk. 2-tailed p-values less than 0.05 were considered as significant.

**Results**
133 patients were identified. All were treated to 60-66 Gy. 39% (35) developed AKI during treatment and 11% (15) of these had a persistent rise in serum creatinine from baseline of > 20 at last review. Factors significant on univariate analysis for AKI are shown in Table 1. On multivariate analysis increasing age and use of ACE-Inhibitors (ACE-I) or Angiotensin Receptor Blockers (ARB) were associated with an increased risk of AKI.
Conclusion
AKI during HN CTRT is common and a proportion of patients may suffer consequent chronic renal impairment. Careful management is required to minimise its incidence. Consideration should be given to stopping ACE-I/ARB medications when safe to do so prior to treatment. Older patients are at increased risk of AKI and may benefit from more frequent monitoring of serum creatinine during therapy to ensure adequate hydration is maintained. It is not possible to predict risk based on disease characteristics or baseline renal function, consistent with previously published findings for patients receiving cisplatin chemotherapy.

PO-058 Cisplatin, Fluorouracil, Docetaxel in Head and Neck Carcinoma: real data of induction chemotherapy F. Ferreira Pereira1, L. Castro Oliveira1, I. Azevedo1, J. Dinis1, C. Vieira1
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Purpose or Objective
Objective: Head and Neck Carcinoma is potentially curable in early stages, but unfortunately the majority presented with a locally advanced disease, where the prognosis is worst. This study aimed to analyze the importance of Cisplatin, Fluorouracil and Docetaxel (TPF) in inoperable head and neck cancer.

Material and Methods
Methods: Retrospective study of patients treated with TPF in a tertiary cancer center between 07.2010 and 2012.17 (241 patients, median follow-up 28 months (0-96). We looked for main endpoints: response rates, toxicities, progression free survival (PFS) and overall survival (OS).

Results
Results: The majority of patients were men (91.7%; 221/241), median age 53 years (36-76), smokers (80.1%; 181/226) and with alcohol abuse (83.5%; 182/218). The most disease sites were oropharynx (40.2%; 97/241), oral cavity (31.1%; 75/241) and hypopharynx (17.8%; 43/241). At diagnosis, the stage was III in 10.2% (24/236), IVa in 58.5% (138/236) and IVb in 31.4% (74/236). TPF cycles median was 4 (1-4) and 13.7% (n:33) had to suspend the treatment, most of them because of toxicity. Toxicities grade 3/4 were presented in 36% (108/299), mainly mucositis, neutropenia and infections. Clinical response to TPF were partial response in 63.5% (153/241). 15.4% (N:37) had disease progression. The majority of patients were submitted to concurrent chemoradiotherapy with platinum (46.1%; 111/241). The final response to treatment was complete response in 63.5% (120/189). Relapse was detected in 96 patients, most of them locoregional (32.3%) and distant metastasis (29.2%). Currently, 103 (50.5%) patients maintaining with no disease. 75.4% (104/138) were submitted to subsequent treatments. On the last observation, 26.1% (63/241) were alive with no cancer and 58.9% (142/241) dead because of disease (global mortality 66.8%). Median PFS was 20 months (3-96). Estimated 1-year OS was 66.2%; 2-year was 45% and 5-year was 28.6%.

Conclusion
Conclusion: Induction chemotherapy with TPF provided a survival benefit to the locally advanced head and neck cancer. Even though the adverse effects appeared in a significant percentage of cases, these are easily handle with support therapeutics and doses adjustment, and the number of complete responses and the long survivals in this type of cancer is encouraging. Our study assume an importance because of this is a real-life population, which highlights the TPF benefit.

PO-059 Association of pretreatment nutritional status on outcome of radiotherapy in head and neck SCC
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Purpose or Objective
To determine whether some major nutritional parameters, namely Body mass index (BMI), serum