Chemotherapy had lower distant and abdominal relapse rates, and significantly better DFS versus those who received six cycles of chemotherapy and no adjuvant RT. Post-operative RT should be considered in the treatment regimen for this patient group.

### 230 OUTCOMES OF CERVICAL CANCER PATIENTS TREATED WITH EXTERNAL BEAM RADIOTHERAPY AND BRACHYTHERAPY AT THE NATIONAL CENTRE FOR RADIOTHERAPY IN ACCRA, GHANA

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**Purpose:** Most women with cervical cancer in Sub-Saharan Africa present with locally advanced disease. These women require external beam radiotherapy (EBRT) and brachytherapy for a curative treatment course. Data on the outcomes of these patients remain sparse. We report the experience of The National Centre for Radiotherapy and Nuclear Medicine in Accra, Ghana.

**Methods and Materials:** The charts of patients treated from 2006-2011 were reviewed. Patients treated without brachytherapy or with palliative intent were excluded. Staging CT scans were not routinely performed. Cobalt-60 EBRT was followed by one or two low-dose-rate brachytherapy insertions. Concurrent weekly cisplatin was recommended. Because many patients experienced delays from diagnosis to treatment, we calculated rates of locoregional recurrence (LRR), and distant recurrence (DR) from the date of the last radiation treatment to the event date, or last follow up, when no event recurred, using a competing risk approach. Overall survival was calculated from the date of diagnosis using the Kaplan-Meier method.

**Results:** Two hundred and fifty-four patients had a median age at diagnosis of 55 years. FIGO stage was IB in 7% of patients, IIA in 13%, IIB in 43%, IIIB in 25% (48% had sidewall involvement, 33% hydrourethrosis, and 18% both), and IVA in 4%. Median dose to point A was 83 Gy (range 56-98 Gy) with a median contributing EBRT and brachytherapy dose of 46 Gy (range 32-52 Gy) and 29 Gy (range 8-50 Gy), respectively. EBRT boosts to the sidewall or primary tumour were used in 12% of patients with a mean dose of 9 Gy (range 4-20 Gy). Median doses to the ICRU bladder and rectal points were 71 Gy and 65 Gy. Sixty-four percent of patients received concurrent cisplatin. The median number of cycles was four, with 89% and 39% of patients receiving at least three and five cycles, respectively. Median overall treatment time was 73 days (range 27-329 days). Median follow up was 2.5 years with many patients lost to follow up. Three-year OS, LRR, and DR were 87%, 20%, and 11%, respectively. The most commonly reported late side-effect was vaginal stenosis/shortening in 32% of patients. We also identified nearly 300 patients who were offered curative treatment but never returned to start; they will be the subjects of a subsequent study on barriers of care.

**Conclusions:** We report the largest single institution series of cervical cancer patients treated with definitive EBRT and brachytherapy in Sub-Saharan Africa. Despite advanced stage at presentation, preliminary data is promising. However, many patients eligible for curative radiotherapy do not undergo treatment.

### 231 CLINICAL OUTCOME AFTER MULTICENTER, OPEN-LABEL PHASE II TRIAL ON POST-SURGERY CHEMORADIATION IN COMBINATION WITH CETUXIMAB IN SQUAMOUS CELL CARCINOMA OF THE HEAD AND NECK WITH HIGH-RISK OF LOCOREGIONAL RECURRENTNESS

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**Background:** Close resection margins (CM) and lymph node involvement with extracapsular extension (ECE) are associated with poor clinical outcome of patients with squamous cell head and neck cancer (SCCHNC) after surgical resection and adjuvant chemoradiation. We performed in this subset of patients an open label Phase 2 trial and investigated the effect of additional cetuximab administered concomitantly and as maintenance therapy during and after adjuvant radiochemotherapy.

**Methods and Materials:** Surgically treated SCCHNC with CM or ECE were eligible for the study. 61.6 Gy (1.82 Gy/d) were administered using an integrated boost IMRT-technique. Cisplatin (20 mg/m², d1-5 and d29-33) and 5-FU (continuous infusion: 600 mg/m², d1-d5 + d29-33) were given concurrently. Cetuximab started seven days prior to radiochemotherapy at 400 mg/m² followed by weekly doses of 250 mg/m². Maintenance cetuximab began after radiochemotherapy at 500 mg/m² every two weeks for six months. The study was conducted at 10 investigational sites recruiting in Germany from May 2008 until December 2010.

**Results:** The number of patients enrolled was 83. Fifty patients did not meet inclusion criteria leaving 78 for analysis. Median follow up was 1.5 years. Eighteen patients had events (death of progression) of which 10 were locoregional relapses. Two-year overall survival, disease-free survival, and locoregional tumour control were 86% (95%CI 79-95%), 77% (95% CL 66-86%), and 82% (95%CI 93-78%), Acute toxicity was in the expected range (separate abstract). Two thirds of patients started maintenance cetuximab after completion of chemoradiation and on third completed all treatment as scheduled.

**Conclusions:** Adjuvant radiochemotherapy with concomitant and maintenance cetuximab is feasible and results in a favourable clinical outcome in high-risk SCCHNC after surgical resection.

### 232 INCIDENCE AND CLINICAL OUTCOME OF HEAD AND NECK CANCER PATIENTS IN DUSSELDORF WITH HPV INFECTION

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**Purpose:** The causal relationship between cancer of the cervix uteri and infection with human papillomavirus (HPV) has been adequately studied. There are also indications that there is a link between HPV infection and squamous cell carcinoma of the head and neck. The aim of this study was to find out the incidence and clinical outcome of HPV infection in head neck cancer patients in a German population.

**Methods and Materials:** In a retrospective study, the tumour tissue from 164 patients (110 men, 54 women, 62.8 years ± 12.7) with head neck cancer (oropharynx = 65 nasopharynx = 10, larynx = 13, hypopharynx = 15, oral cavity = 33 CUP = five, Other = 23) were tested for HPV infection and the clinical outcome was investigated. p16 as a surrogate marker for HPV infection was determined. Moreover, risk factors such as nicotine, alcohol abuse, resection margin of the tumour tissue, histology, lymph nodes involvement, extracapsular spread, tumour stage, and the treatment of the tumour were analyzed for local control and overall survival.

**Results:** The incidence of HPV infection in oropharynx-carcinoma patients was 33%. Patients with HPV-positive oropharyngeal carcinomas showed a tendency towards longer survival time, (p = 0.76, HR: 2.42, 95% CI 0.91 - 6.44) compared to HPV-negative tumours. All other parameters were except the tumour stage in the uni and multivariate analysis not significant for local control and overall survival. The reason for this might be the small number of cases in our individual subgroups