between 0.84 and 0.90 without significant differences. Interestingly, the discriminative power of the single IPSS items was different and dramatically changed over time: only IPSS6 (straining) always showed a poor value at each time (AUC: 0.55-0.65). All the remaining IPSS items showed not significantly (p>0.07) different AUCs at baseline (0.71-0.76), while exhibiting very different patterns after RT. IPSS2 (frequency), IPSS4 (urgency) and IPSS5 (nocturia) showed the highest performances in the acute phase (AUC:0.77-0.87 at RT end and at 3 months). At 24 months, weak stream showed the highest AUC (0.87) while the remaining items ranged between 0.69 and 0.76. Very importantly, the AUC of ICIQ continuously increases from baseline/RT end (AUC=0.62-0.63) up to 24 months (AUC=0.82). In Figure 1a/1b the ROC curves at the different time intervals for overall IPSS and ICIQ are shown; a summary of AUC changes is shown in Figure 1c for all scores at baseline, end RT, 12 and 24 months.

**Conclusion:** The analysis of a large population of prospectively followed patients with PRUS evaluation showed that the discriminative power of different symptoms in assessing a severely impaired urinary QoL significantly changes over time. As expected, the overall IPSS always captures a very large fraction of these patients, while the predictive value of ICIQ is negligible at baseline and acutely, becoming highly discriminative in the long term.

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**Course of quality of life after radiotherapy for painful bone metastases**

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**Purpose or Objective:** In patients with painful bone metastases, radiotherapy is an effective treatment. Besides symptom control, quality of life (QoL) is an important endpoint. We focus on the course of QoL after radiotherapy.

**Material and Methods:** In the Dutch Bone Metastasis Study, 1,157 patients with painful bone metastases were randomized between one fraction of 8 Gray and six fractions of 4 Gray. The study proved equal effectiveness, with a pain response of 74%. Patients filled out weekly questionnaires for 13 weeks and then monthly for two years or until death. Three QoL domain scores (physical, psychosocial and functional) and a visual analogue scoring of general health were studied. Mixed modeling was used to model the course of QoL and to study the influence of several characteristics. An effect size of ≥ 0.10/0.20 (binary or continuous variable, respectively) is considered a small effect and therefore clinically relevant.

**Results:** In general, QoL stabilizes after a month. Psychosocial QoL improves temporarily after treatment. The level of QoL remains stable for a long time, steeply deteriorating at the end of life. For most QoL domains, a high pain score and intake of opioids are associated with worse QoL, with a small effect size (-0.11 to -0.27). A poor performance score is associated with worse functional QoL, with a medium effect size of 0.41.

**Conclusion:** The course of QoL is shown in Figure 1. The modeled course of QoL after radiotherapy for painful bone metastases, represented in survival groups (patients surviving less than 3, 3-<6, 6-<12, 12-<18 and 18-<24 months after randomization). The x-axis represents the months after treatment, where month 0 is the baseline measurement before treatment and month 1 the first months after treatment. The y-axis reflects the domain score of QoL, where the average is 0, with a standard deviation of 1. The higher the score, the better the QoL.

**Table:** Influence of baseline and follow-up variables on QoL domains, with effect sizes
p16 and high risk-HPV in node positive cutaneous squamous cell carcinoma of the head and neck were observed in clinicopathological factors based on p16 expression by immunohistochemistry. Detection of 1-8% p16 positivity is common but not prognostic in the unknown primary setting. HPV testing, in addition to p16-status in the unknown primary setting may provide additional information in determining a putative primary site.

**OC-0538**

Tumor-related leukocytosis associated with poor radiation response and outcome in cervical cancer

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**Purpose or Objective:** To investigate the prognostic significance of tumour-related leukocytosis (TRL) in cervical cancer patients treated with definitive radiotherapy

**Material and Methods:** Between 1986 and 2012, 2,456 patients with uterine cervical cancer (FIGO stage IA-II B 494, stage IIA-IIIB 1530, stage IIIA-IIIB 394 and stage IVA 38) who received definitive radiotherapy (62.6%) or platinum-based chemoradiotherapy (37.4%) consisting of EBRT and ICBT were retrospectively analyzed. TRL was defined as WBC count ≥ 9,000/μl on ≥ 2 occasions at the time of diagnosis and during the course of treatment. The neutrophil/lymphocyte ratio (NLR) was defined as the absolute neutrophil count divided by the absolute lymphocyte count. Locoregional failure free survival (LRFFS) and overall survival (OS) were compared between patients with or without TRL.

**Results:** Median age of all patients was 55 years (range, 21-87) and the median follow-up time was 65.1 months (range, 0.7-347.8). Among 2,456 patients included in this study, TRL was observed in 398 (16%) at the initial diagnosis. Patients in TRL(+) group were younger in age and had larger tumor, advanced FIGO stage and more common LN metastases (all p < 0.05). TRL (+) group showed relatively lower rate of complete remission (CR) (90% vs. 97%, p = 0.042). The 10-year LRFFS and OS for all patients were 84% and 78%, respectively. Compared to TRL(-) group, LRFFS and OS were significantly lower in TRL(+)-group (10-yr LRFFS: 69% vs. 87%, p < 0.001; 10-yr OS: 63% vs. 81% p < 0.001). After propensity score matching by age, FIGO stage, tumor size, LN metastasis, histologic subtype and pretreatment hemoglobin (Pre Tx Hb), both groups were well matched. The LR control and OS rate of TRL (+) group was still significantly lower than those of TRL (-) group. In multivariate analysis, advanced FIGO stage, non-SqCca, larger tumor size and TRL were identified as risk factors for LRFFS and OS (all p < 0.05). In addition, Pre Tx Hb, LN metastasis and high NLR (≥ 2.5) were also associated with poorer OS (all p < 0.05). Among patients with LRP (n=345), patients with TRL at the time of recurrence accounted for 26% and showed relatively poorer median OS (6 vs. 12 months, p = 0.001).

**Conclusion:** This study supports the aggressive nature and poor radiation response of cervical cancer with leukocytosis. Given the unfavorable features and higher probability of treatment failure, optimal therapeutic approach and careful monitoring for early detection of recurrence should be considered for these patients.

**OC-0539**

Stage II testicular seminoma: patterns of care and survival by treatment strategy

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**Purpose or Objective:** Stage II testicular seminoma is highly curable with radiotherapy (RT) or multiagent chemotherapy (MCT). These modalities have not been prospectively compared. Due to the rarity of stage II seminoma, prior studies are limited by small sample size. NCCN guidelines recommend RT as the preferred treatment for stage IIA, while EUA guidelines equally allow for RT or MCT. Both guidelines are equivocal for stage IIB, and recommend MCT for stage IIC.