and compared with log-rank tests. Since June 1993 until March 2013, 87 patients with the diagnosis of gallbladder cancer who underwent extended or simple cholecystectomy and were staged as T1b-2-3N0-1M0, received adjuvant radiochemotherapy at Instituto Oncológico, Viña del Mar. Overall survival and median survival were analyzed in relation to different prognostic factors, using Kaplan-Meier techniques and compared with log-rank tests.

**Results:** With a median follow-up of 43 months (range: 5-180 months) the 5 and 10-year overall survival (OS) rate for the entire cohort was 44.9% and 36.8%, respectively, and the median survival time was 45 months. In the group who underwent extended cholecystectomy, the 5-year OS was 57.2% versus 31.2% for those who underwent simple cholecystectomy (p=0.032). The median survival time was 57 and 27 months for patients with extended cholecystectomy and simple cholecystectomy, respectively (p=0.032).

**Conclusions:** After a complete resection, radiochemotherapy appears a good approach and can achieve a long term survival rate. This benefit is higher for those in which surgery is an extended cholecystectomy.

**EP-1219**

A bespoke, flexible clinical database system for multicentre rectal carcinoma registry

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**Purpose/Objective:** A clinical data registry was required to support the data requirements of the UK patients undergoing rectal brachytherapy. The data input and access requirements for this group culminated in the need for a bespoke development rather than an off-the-shelf product. These extended requirements included the need to allow patient-led data entry, multi-centre access, discussion forums, customised data extraction and visualisation.

**Materials and Methods:** A bespoke, extendable and customisable web-based clinical data repository system was developed. Case report forms were translated into web-enabled forms either by a specially implemented form designer or via consultation with the developer. Patient-led data entry is achieved by allowing data managers to assign each case a patient login. Patients are able to enter data on baseline and follow-up assessments via a simple web interface or tablet App before or during consultation. The registry has been designed to allow multi-centre data input while allowing doctors from disparate centres to be given permission to view other centres cases. Security of data is ensured by separation of the web server from the data server, secure certificates and user accounts with group assignments. All events that occur on the registry are logged in encrypted tables allowing audit trails to be tracked.

**Results:** An extendible web-enabled database has been developed which allows a bespoke and advanced data registry to be developed and deployed relatively rapidly. A unique feature of this registry system is patient-led data entry. Patients are reminded by email to enter data shortly before follow-up appointments and are able to utilise the web interface or tablet Apps. Additionally, a focus has been placed on the ability to extract customised data reports and visualisation reports without the need for statistical packages. This feature allows varying questions to be asked of the registry directly via the web interface.

**Conclusions:** Existing clinical trial and clinical registry systems have been evaluated for suitability for this trial. Some of the systems evaluated were more oriented to clinical trial management than needed for the current requirements and others were restricted in the patient-led data entry and data visualisation. These finding led to the development of a customisable data registry system, which is able to support multiple clinical registries and requirements. New registries can be set-up with relative simplicity by utilising built-in form and report designers tools. Patient-led entry enables a greater emphasis to be placed on survivorship which is very important in this patient-centred treatment approach.

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**EP-1220**

Highly conformal radiotherapy for T1-2 N0 (<3 cm, <50% of the anal circumference) anal cancers: outcome and toxicity

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**Purpose/Objective:** While for locally-advanced (T3-T4) tumors, the combination of elective lymph-node irradiation along with concomitant chemotherapy (CT) has been demonstrated to improve loco-regional control (LRC) compared to radiotherapy (RT) alone, the best treatment strategy remains controversial in early-stage anal tumors (T1-2) without nodal involvement. The role of prophylactic inguinal irradiation (PII) in this setting remains an open issue, especially in the era of modern EBRT techniques. The aim of this study was to assess outcomes and toxicity results of highly-conformal EBRT techniques in patients with early-stage T1-2 N0 anal cancers measuring <3 cm and involving <50% of the anal circumference treated conservatively with or without concomitant CT.

**Materials and Methods:** Data of 44 patients with cT1 (n=13) or cT2 <3 cm, involving <50% of the anal circumference (n=31, median size 2.5 cm) cN0, histologically proven anal carcinoma, treated in two institutions between 03/2006 and 04/2014 were retrospectively reviewed. Median age was 61 years (range: 36-87). For all patients, the pelvis and inguinal region were treated with highly conformal EBRT techniques, including helical Tomotherapy, intensity-modulated radiation therapy (IMRT) or volumetric modulated arc therapy (VMAT) in 22, 17 and 5 patients, respectively. Regarding the boost, 28 patients were treated with 3D-conformal RT, 6 with Tomotherapy, 4 with IMRT and 6 with VMAT. Image-guided RT modalities were used for daily repositioning. EBRT schedule consisted of elective lymph node irradiation including PII to 36 Gy (1.8 Gy/fraction), followed by a boost to the GTV up to 59.4 Gy after a median gap of 10 days (range: 1-26). Concomitant CT was delivered in 37 patients (Mitomycin/CFU and Mitomycin/Capcitabine for 25 and 9 patients, respectively). Toxicity was scored according to the CTCAE v3.0 scale.

**Results:** Treatments were delivered in all patients as planned, with no interruptions. After a median follow-up of
Purpose/Objective: In early stage node negative anal cancers (T1-2 measuring <3cm, with ≤ 50% anal circumference involvement), highly conformal RT techniques provide excellent LRC rates with an acceptable toxicity profile, at least comparable to those published in the literature, especially using a brachytherapy boost. PII to 36 Gy delivered with modern EBRT techniques may significantly reduce the risk of inguinal relapse without increasing radiation-induced side effects.

Electronic Poster: Clinical track: Genitourinary (prostate included)

EP-1221
Evaluation of 3-Tesla pelvic MRI in prostate cancer patients receiving post-prostatectomy IMRT
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Purpose/Objective: This retrospective study evaluates the utility of a 3-Tesla (3T) MRI in detecting a local recurrence or nodal involvement in post-prostatectomy prostate cancer patients receiving adjuvant or salvage intensity modulated radiation therapy (IMRT).

Materials and Methods: From 1/1/2006 to 5/1/2012, 90 patients status post prostatectomy had a 3T MRI prior to adjuvant or salvage IMRT. Patients were grouped into those with positive and negative findings on MRI. The following variables were analyzed for their usefulness in predicting positive findings on MRI: pre- and post-op PSA, PSA and testosterone at time of imaging, PSA velocity, surgical margins, Gleason grade, stage, physical exam findings, and type of surgical prostatectomy.

Results: Significant variables predictive of a positive MRI included positive margins and presence of a positive digital rectal exam. Furthermore, the anatomical site of tumor recurrence on 3T MRI was significantly associated with the anatomical locations of positive margins. In the vast majority of patients with a positive 3T MRI, imaging aided in IMRT treatment planning. Patients with a positive MRI finding, as compared without MRI findings, did not show differences in clinical outcome at follow-up.

Conclusions: A pre-RT 3T MRI is useful to assess recurrences in prostate cancer in post-prostatectomy men with rising PSA levels. In order to ensure cost-effectiveness of the 3T MRI, assessment of tumor margins and a careful physical examination must be performed in order to optimize the chance of a positive MRI finding and thus guide treatment planning.

EP-1222
Impact of 18F-Choline PET in the decision making strategy of treatment volumes in definitive prostate radiotherapy
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Purpose/Objective: The role of 18F-choline positron emission tomography/computed tomography (Cho-PET) in diagnosis and staging before definitive radiotherapy in localized prostate cancer patients is not standardized. Aim of the study is to evaluate the impact of Cho-PET decision making strategy in patients with localized prostate cancer eligible to definitive radiotherapy.

Materials and Methods: From January 2011 to August 2014, sixty patients with biopsy proven prostate adenocarcinoma, with no prior treatment on primary tumor and staged with Cho-PET before radiotherapy were prospectively enrolled. Median age was 73 years (60-81 years); Gleason score was 6 in 32 patients (pts), 7 in 14 pts and ≥8 in 14 pts; median PSA value at the diagnosis was 6.79 ng/ml (2.3-143ng/ml). All patients were treated with Volumetric Modulated Arc Therapy (Varian RapidArc®, Palo Alto - CA, USA) with simultaneous integrated boost in 28-30 fractions (moderate hypofractionation) as follow: for low risk prostate PTV only, for intermediate risk prostate and seminal vesicles PTVs and for high risk prostate, seminal vesicles and pelvic lymph nodes. Androgen deprivation was prescribed according to NCCN risk classification. Cho-PET findings were used to define the stage according to the detection of primary tumor (T), pelvic lymph nodes (N) and distant metastases (M). Therapeutic strategy based on the Cho-PET evaluation was compared to the strategy that would have been proposed in case of PET not available and/or not strictly indicated, following international and national prostate cancer guidelines.

Results: Cho-PET was positive in 57 cases (95%): T (prostate gland only) in 46 (81% of all positive cases); T in combination with N( pelvic nodes) in 7 (12.5%); and M(bone) in combination with T or N, or both, in 4 (6.5%). After the Cho-PET patients were stratified according to NCCN risk classification as follows: 26 (43%) low risk, 16 (10%) intermediate risk and 24 (41%) high risk. Cho-PET shifted treatment indication in 13 cases (21%). The changes regarding radiation treatment volumes were as follow: 6 intermediate risk pts (10%) shifted to high risk and consequently were irradiated on prostate, seminal vesicles and pelvic nodes PTVs; in 7 high risk pts (11%) the Cho-PET showed bone and/or pelvic lymph node uptake and consequently a simultaneous integrated boost on PET positive