View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Elsevier - Publisher Connector



multivariate analysis adjusted for disease aggressiveness, age and BMI. A TT> 10.4 nmol/l was associated with a hazard ratio of 1.78 (95% CI 1.06-2.98, p = 0.03) for BCR. This difference in BCR appeared as a split on the Kaplan-Meier curve only five years after treatment. TT did not have an influence on overall survival (p = 0.28).
**Conclusions:** Low baseline TT level is an independent prognostic factor associated with a lower BCR rate. This effect appears only five years after radiotherapy treatment. The results are to the contrary to what has been shown from patients treated with radical prostatectomy.

139
WHAT ARE PROSTATE CANCER PATIENTS' PREFERENCES FOR INFORMATION AND DECISION SUPPORT? A SYSTEMATIC SURVEY OF PATIENTS DIAGNOSED IN EACH OF THREE PROVINCES
*Michael Brundage[1], Deb Feldman-Stewart[1], Christine Tong[1], John Robinson[2], Jackie Bender[3], Hannah Carolan[4], Joseph Chin[5], Joyce Davison[6], Arminee Kazanjian[4]*

[1]Cancer Centre of Southern Ontario, Kingston, ON
[2]Tom Baker Cancer Centre, Calgary, AB
[3]University Health Network, Toronto, ON
[4]University of British Columbia, Vancouver, BC
[5]London Health Sciences Centre, London, ON
[6]University of Saskatchewan, Saskatoon, SK

**Purpose:** Current clinical practice guidelines support the engagement of prostate cancer patients in their cancer care. However, the optimal timing of, and the most preferred sources of information provision and decision support desired by prostate cancer patients has not been systematically explored. In order to inform the design of strategies for information provision and decision support, we sought to determine prostate cancer patients' preferences by conducting a systematic survey of recently diagnosed patients.
**Methods and Materials:** Surveys were conducted in British Columbia, Alberta and Saskatchewan. Based on power calculations and estimated response rates, a random sample of prostate cancer patients in each provincial registry diagnosed in late 2012 was invited to participate.
**Results:** Provincial response rates were 46%-55%, total n = 1007. Across provinces, mean age was 69 years. During the interval between diagnosis and the treatment decision, preferred information sources (not mutually exclusive) were the urologist (90%), family physician (85%), and radiation oncologists (58%). The Radiation Oncologist being identified as information source was highly dependent on whether the patient was managed with prostatectomy only (39%) versus primary radiotherapy (92%, p < 0.01) whereas both groups identified the urologist as an important source (98% versus 94% respectively). Across all patients, 73% wanted printed information and 58% wanted information from the internet. Barriers to obtaining information from physicians included patients' perception of physicians not having enough time (27%), worrying about physician time (21%), and worrying about asking too many questions (15%). Barriers to obtaining information from books and from the internet, respectively, included uncertain quality (37% and 46%, respectively), unclear if personally applicable (39% and 41%), and poor search skills (31% and 20%). Recommended facilitators for providing information included a person to guide its acquisition (71%), providing printed information (69%), and someone to answer questions: in person (77%), over the phone (53%), or via email (43%). Even if access was easy, 27% would not want information from the internet, and 13% would not want any printed information. Regarding decision making, 18% would have liked more help with their decision, though half of that group (53%) indicated that they felt well informed. 77% of all respondents either used decision support or would have wanted to if they had known about it. Recommended timing for decision support included before meeting any specialists (11%), at the urologist visit (31%), and after all specialist visits before the decision is made with a doctor (35%).
**Conclusions:** Most prostate cancer patients want information and decision support but vary in where, when, and preferred medium. Optimal support needs to be multi-faceted and flexible.

140
INDENTIFICATION OF CURCULATING MIRNA ASSOCIATED WITH DEVELOPMENT OF CASTRATE RESISTANCE IN HIGH-RISK AND BIOCHEMICALLY RECURRENT PROSTATE CANCER PATIENTS
*Shawn Malone[1], Grant Howe[2], Huijun Zhao[2], Scott Grimes[1], Gregory Pond[3], Scott Morgan[1], Libni Eapen[1], Julia Craig[1], Brad Musclow[1], Christina Addison[2]*

[1]The Ottawa Hospital, Ottawa, ON
[2]Ottawa Hospital Research Institute, Ottawa, ON
[3]McMaster University, Hamilton, ON

**Purpose:** We previously identified circulating miRNA in metastatic prostate cancer patients that are associated with early castrate resistance (< 2 years). The current study determined whether the predictive miRNA were associated with time to castrate resistance (CRPC) in PSA recurrent and high-risk adjuvant patients.
**Methods and Materials:** Patients from a prospective biomarker trial were categorized into three groups: 1) CRPC within two years of ADT, 2) CRPC greater than two years, and 3) patients remaining ADT sensitive. Total RNA was isolated from pre-treatment plasma using the miRNeasy kit (Qiagen). For quality control, known concentrations of cel-miR-39 were added prior to RNA isolation. Isolated miRNA was subjected to reverse transcription (RT) using the miScript II RT Kit and primers specific to miRNA of interest. Quantification of individual miRNAs was performed by qPCR using the miScript SYBR Green PCR Kit and specific primers for miRNAs of interest following RT. Quantification of relative levels of miRNAs between samples was determined following comparison of the ΔΔCT method of relative quantification following normalization to cel-miR-39 and the endogenous control SNORD61.
**Results:** Previous work in metastatic patients identified 3 miRNA associated with development of early versus delayed CRPC. In the current study similar trends were observed for the third miRNA which was increased in early CRPC compared to other two groups. The second miRNA showed more variable expression amongst the three cohorts, and was generally lower in those patients who developed early CRPC. First miRNA was also lower in patients with early CRPC as compared other two groups, similar to our original findings in metastatic patients.
**Conclusions:** A previously identified miRNA signature of early castrate resistance in metastatic patients appears to be applicable to PSA recurrent and high-risk patients. Future work will validate these findings in additional patients from our trial and independent cohorts.

141
VALIDATION OF A FRENCH CANADIAN VERSION OF THE EXPANDED PROSTATE CANCER INDEX COMPOSITE INSTRUMENT (EPIC)
*Eric Vigneault, Josée Savard, Hans Ivers, Marie-Hélène Savard, Vincent Fradet, Philippe Després, William Foster, André-Guy Martin*
Centre de recherche CHU de Québec, Québec, QC

**Objectives:** To assess the psychometric properties of a French Canadian version of the Expanded Prostate Cancer Index Composite Instrument (EPIC-50), among a clinical sample of prostate cancer patients.
**Methods and Materials:** The validity of the French Canadian version of the EPIC-50 was assessed among patients from the radiation oncology and urology departments of CHU de Québec. A total of 251 patients were recruited. Participants taking part in the sensitivity to change study (n = 51) were asked to complete a battery of self-report scales at their consultation and at a follow up visit at the hospital, approximately six months after the initiation of their treatment. Another subsample of 68 patients completed the EPIC on two occasions separated by two weeks to estimate temporal stability. The battery comprised the

following questionnaires: the EPIC-50, the International Prostate Symptom Score (IPSS), the Sexual Health Inventory for men (SHIM), and the EORTC QLQ PR25. Analyses were conducted using the SAS 9.3 software (2012, SAS Institute, Cary, NC, USA) and the alpha level was set at 5%.
**Results:** The internal consistency of the EPIC was demonstrated by significant item-total correlations and elevated Cronbach's alpha for each subscale (urinary: r = .25-.80; α = .85; intestinal: r = .27 - .73; α = .84; sexual: r = .48 - .80; α = .92; hormonal: r = .21-.71; α = .80). Strong and significant correlations were found between EPIC-urinary subscale and IPSS total score (r =- .71, p < .01) and between EPIC-sexual subscale and SHIM total score (r = .79, p < .01), thus supporting the convergent validity of the EPIC. The test-retest reliability was excellent with strong and significant correlations obtained between the two administrations (urinary: r = .90; intestinal: r = .84; sexual: r = .88; hormonal: r = .79) and the absence of significant differences between T1 and T2 mean scores. Finally, a significant deterioration was found on all EPIC subscales from pre- to post-treatment thus indicating that the tool is sensitive to clinical change.
**Conclusions:** Our French Canadian version of the EPIC-50 appears to provide a reliable and valid assessment of quality of life in prostate cancer patients. Future analyses will investigate its factorial structure and the psychometric properties of the abbreviated version.

142
THE INFLUENCE OF DOSIMETRY ON ACUTE URINARY TOXICITY IN HDR PROSTATE BRACHYTHERAPY
*Nancy El-Bared, Talar Desrashodian, Georges Wakil, Marise Mondat, Djamal Berbiche, Marjorie Jolicoeur*
University of Sherbrooke, Greenfield Park, QC

**Purpose:** Although high-dose rate (HDR) brachytherapy boost is widely used in intermediate and high-risk prostate cancer treatment, the appropriate dose constraints are still evolving. The aim or our study is to analyze the influence of patient characteristics as well dosimetric parameter specifically the V150 (volume receiving 150% of the dose), on acute urinary toxicities.
**Methods and Materials:** We retrospectively analyzed 231 consecutive patients treated, between May 2012 and September 2014, with HDR brachytherapy boost in our institution. The CTCAE V3 criteria were used to grade the urinary symptoms. However, we wanted to separately analyze patients with urinary obstruction requiring urinary catheter for longer than 24 hours. For the purpose of our analysis, we used a value of 35% as a cut off for the V150. Other dosimetric parameters were also analyzed. Pearson's correlations as well as logistic regressions were performed.
**Results:** During a median follow up of 18.6 months, 29% of patients had no urinary toxicity, 28% had Grade 1 and 38% had Grade 2 or 3 urinary toxicities. Eleven patients (5%) needed a urinary catheter for longer than 24 hours because of urinary obstruction. Although not significant (p = 0.0951), we found an important difference between the mean prostate volume of patients needing urinary catheter (51 cc) versus those who did not (42 cc). Among different patient characteristics such as tobacco use, dyslipidemia, hypertension, coronary heart disease and hormone therapy treatments, only the use of hormone therapy at the time of HDR treatment significantly increased urinary toxicity (p = 0.0462). A V150 ≥ 35% did not significantly influence Grade 1 (p = 0.2204) or Grade 2-3 (p = 0.8162) urinary toxicity, nor did it significantly influence the need for urinary catheter placement (p = 0.1678). However, in the 11 patients for whom a urinary catheter was needed, the median V150 and Dmax to the urethra (maximal dose to the urethra) were 42% and 124.78% respectively.
**Conclusions:** In conclusion, the only significant prognostic factor for urinary retention requiring prolonged catheter placement was the use of hormone therapy. We did not find a significant influence of dosimetric parameters, specifically the V150, on acute urinary toxicity. However, due to the small sample size of patients requiring a urinary catheter we cannot conclude on the influence of the V150 for those patients. Nevertheless, we strongly believe that the V150 should be kept as low as possible since in our cohort the median V150 for the patients requiring a urinary catheter for obstructive symptoms was 42%.

143

Abstract withdrawn

144
EVALUATION OF MILK OF MAGNESIA TO REDUCE VARIATION IN RECTAL FILLING IN IMAGE GUIDED VOLUMETRIC MODULATED ARCH THERAPY OF PROSTATE CANCER
*Ali Hosni, Tara Rosewall, Timothy Craig, Vickie Kong, Andrew Bayley, Charles Catton, Peter Chung*
Princess Margaret Cancer Centre, University of Toronto, Toronto, ON

**Purpose:** To investigate the effect of milk of magnesia (MoM) on consistency of interfraction rectal filling and acute rectal toxicity.
**Methods and Materials:** Two groups were retrospectively identified, each consisting of 40 patients with localized prostate cancer treated with VMAT to prostate +/- seminal vesicles, to prescribed dose of 78 Gy in 39 fractions over eight weeks. The first group were instructed to follow a bowel regimen with antiflatulent diet and MoM started three days prior to planning CT scan (P-CT) and continued during RT, while the second group followed simple dietary advice to achieve an empty rectum. The rectum between the upper and lower borders of the clinical target volume (CTV) was delineated by a single observer on the P-CT and on eight, weekly cone beam CT (CBCT). Rectal filling was assessed by measurement of anterio-posterior diameter of the rectum at the superior and mid levels of CTV, and by calculation of rectal volume (RV) and the average cross-sectional rectal area (CSA; defined as the rectal volume divided by length). The differences in these measurements were compared between the two groups by repeated measures analysis. Data relating to acute toxicity was extracted from patients' medical charts.
**Results:** A total of 720 images, including 80 P-CT and 640 CBCT images from 80 patients were analyzed. All images showed satisfactory visualisation of the rectum at the level of CTV. Using linear mixed models, and after adjusting for baseline values at the time of P-CT to test the differences in rectal dimensions between both groups over the eight-week treatment period, there were no significant differences either in rectal volume (p = 0.58), average CSA (p = 0.63), anterio-posterior diameter of rectum at superior level of CTV (p = 0.95) or at mid level of CTV (p = 0.28). In the MoM group, the mean volume of MoM taken by patients was 31 $cm^3$ (range, 15–45 $cm^3$) in the first week and 13 $cm^3$ (range, 0–30 $cm^3$) in the last week. The proportion of patients who took MoM decreased from 100% in the first week to 60% in the last week. Acute RTOG rectal toxicity in MoM/non-MoM groups consisted of G2 diarrhea (n = 3/2), G1 diarrhea (n = 21/7), G1 proctitis (n = 5/5).
**Conclusions**: MoM did not appear to reduce the interfraction variation in rectal filling compared to simple dietary advice. MoM may cause diarrhea and a substantial proportion of patients discontinued its use by the end of radiation treatment.

145
LONG-TERM OUTCOMES OF STAGE II SEMINOMAS
*Rima Pathak[1], Scott Tyldesley[2], Gaurav Bahl[1]*
[1]University of British Columbia, Abbotsford, BC
[2]British Columbia Cancer Agency, Vancouver, BC

**Purpose:** To review the long-term outcomes for patients with Stage II Seminoma treated at our institute.
**Methods and Materials**: We included all patients referred and registered with Stage I or II Seminoma in our Cancer Registry, from 1984. Patients with unknown stage or histology were