and radiological imaging, and 19 patients without progressive or persistent muscle invasive disease, were offered concurrent chemoradiation with weekly cisplatin 25 mg/m^2. RT dose 64−66 Gy in 1.8−2.0 Gy per fraction with CT planning. Patients unfit to have either neoadjuvant or concurrent chemotherapy, received radiotherapy alone with the same fractionation. Following completion of their treatment, patients had regular cystoscopies (every 3 months) and regular f-up appointments (3−6 months).
Results: 31 male and 7 female patients, median age 75 years, range 27−86 years old (only 6 patients <70 years old). 4 patients had pelvic nodal disease and 1 patient para-aortic lymphadenopathy; they proceeded to CRT after complete response of the nodal disease to neoadjuvant chemotherapy. On follow up there were 5 local relapses (13%) with 2 salvage cystectomies, 1 pelvic lymphadenopathy relapse (3%), 5 distant metastases (13%), whilst 7 patients died without disease progression (18%).
Mean progression free survival (PFS) from the date of starting treatment was in excess of 4.7 years: 1718 days (95% CI 1138 to 2297 days). Mean overall survival (OS) was in excess of 5.1 years: 1882 days (95% CI 1402 to 2362 days). 5 year Kaplan Meier(KM) PFS for the CRT group was 58% compared to 30% for the RT group, whilst 5 year KM OS for the CRT group was 48% with 34% for the RT group.
Conclusions: In an elderly, predominantly unfit for surgery group of patients, bladder preservation with radiotherapy or chemoradiotherapy resulted in very meaningful control of their disease and mean survival of about 5 years.

7122 POSTER

Secondary Cancer Risk for Stage I Seminoma Patients − a Comparison of Adjuvant Treatment Versus Surveillance

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Background: Post-surgical management of stage I seminoma includes: surveillance with repeated CT-scans and treatment reserved for those who relapse, or adjuvant treatment with either immediate radiation therapy (RT) or carboplatin. The cancer specific survival is close to 100%. Cure without long-term sequelae of treatment is the aim. Our goal is to estimate the risk of radiation-induced secondary cancers (SC) death from for patients undergoing S, adjuvant RT or adjuvant carboplatin (AC).
Materials and Methods: We measured organ doses from CT scans (3 phases each one) of a seminoma patient who was part of the active surveillance strategy and from a man undergoing adjuvant RT 20-Gy and a 30-Gy salvage RT treatment to the para-aortic area using helical Intensity Modulated RT (Tomotherapy®) with accurate delineation of organs at risk and a CTV to PTV expansion of 1 cm. Effective doses to organs in mSv were estimated according to the tissue-weighting factors recommendations of the International Commission on Radiological Protection 103 (Ann ICRP 2007). We estimated SC incidence and mortality for a 10,000 people population based on the excess absolute risk model from the Biological Effects of Ionizing Radiation (BEIR) VII (Health Risk of Exposure to Low Levels of Ionizing Radiation, NCR, The National Academies Press Washington, DC, 2006) assuming a seminoma diagnosis at age 30, a total life expectancy of 80 years.
Results: The nominal risk for a fatal secondary cancers was calculated 1.5% for 15 abdominal CT scans, 14.8% for adjuvant RT (20 Gy para-aortic field) and 22.2% for salvage RT (30 Gy). The calculation assumed that the risk of relapse on surveillance and adjuvant AC was 15% and 4% respectively and that all patients were salvaged at relapse with RT.

	n CT abdomen/Pelvis = secondary cancer %	RT Dose and % receiving treatment = secondary cancer %	Total secondary cancer risk in %
Active surveillance	15 = 1.5%	30 Gy in 15% of pts = 3.3%	4.8
Adjuvant carboplatin	7 = 0.7%	30 Gy in 4% of pts = 0.88%	1.58
Adjuvant radiotherapy	7 = 0.7%	20 Gy in 100% of pts = 14.8%	15.5

Conclusions: These data suggest that: 1) Adjuvant radiotherapy is harmful and should not anymore be regarded as a standard option for seminoma stage I. 2) AC seems to be an option to reduce radiation induced cancers. Limitations: the study does not consider secondary cancers due to chemotherapy with AC (unknown). The use of BEIR VII for risk modeling with higher doses of RT needs to be validated.

7123 POSTER

Patterns of Care for Stage 1 Testicular Cancer in Australia in 2010

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Background: There are now several acceptable management options for early stage testicular cancer with cure rates approaching 100%. There is an international trend to surveillance to minimise treatment-associated morbidity.
The Australian and New Zealand Urogenital and Prostate Cancer Trials Group (ANZUP) undertook a survey of clinicians involved in the treatment of testicular cancer to determine the patterns of care in Australia and to explore the number and type of imaging procedures used in surveillance strategies.
Methods: An internet-based survey was sent to all clinician members of ANZUP, as well as membership lists of relevant Australian craft groups. The multiple choice questions asked about the management of strategy for all patients treated over the previous 12 months, preferred management strategies, and surveillance imaging protocols. The survey was approved by the University of Sydney Human Research Ethics Committee.
Results: 53 medical oncologists, 10 radiation oncologists, and 7 urologists documented the patterns of care for 644 patients.
For stage 1 seminoma, surveillance was employed in 33%, radiotherapy in 23%, a single dose of adjuvant carboplatin in 34%, and 2 doses of adjuvant carboplatin in 9%. For stage 1 non-seminoma, surveillance was employed in 60%, adjuvant chemotherapy in 35%, and RPLND in 5%.
Surveillance was the preferred strategy for low-risk non-seminoma in 74%, high-risk non-seminoma in 43%, low-risk seminoma in 53%, and high-risk seminoma in 22%.
The mean [SD] numbers of CXR, CT abdomen, and CT chest used in 5 year surveillance strategies for seminoma and non-seminoma were (9.2 [5.6], 9.4 [3.5], 5.1 [4.0]) and (11.8 [7.3], 10.0 [3.6], 6.2 [4.7]) respectively. For seminoma, 7% of clinicians used >15 CT abdomen and 3% used >15 CT chest. For non-seminoma, 8% used >15 CT abdomen and 5% used >15 CT chest.
Conclusion: Our results demonstrate that there is considerable variation in the management of stage 1 testicular cancer within Australia. The high proportion of seminoma receiving adjuvant chemotherapy is contrary to international trends of increasing surveillance. Surveillance protocols were highly variable. The radiation exposure from CT during imaging for surveillance could increase risk of secondary malignancies, particularly for patients receiving >15 CTs. There is a need to reduce radiation exposure from CT imaging for surveillance through standardised follow-up protocols and alternate imaging modalities.

7124 POSTER

Adjuvant Radiotherapy With or Without Chemotherapy in Patients With Stage III/IV Transitional Cell Carcinoma of the Upper Urinary Tract And/or Positive Resection Margin

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Background: The role of adjuvant radiotherapy still remains undefined in patients with transitional cell carcinoma of the upper urinary tract (UTTCC). To evaluate the role of adjuvant radiotherapy, we reviewed the clinical outcomes of patients with advanced stage III or IV UTTCC.
Materials and Methods: Between January 2007 and December 2010, 17 patients with stage III (n = 13) or IV (n = 4) UTTCC (16 patients with ureter cancer and 1 patient with renal pelvis cancer) were treated with nephroureterectomy and adjuvant radiotherapy with or without chemotherapy. As historic control group, we retrospectively reviewed 46 patients who were treated with nephroureterectomy alone for UTTCC between January 2000 and December 2005. All cases were stage III/IV or positive resection margin. 8 of 17 patients (41%) in adjuvant radiotherapy group had positive resection margin including 1 with grossly positive margin, while 7 of 46 patients (15.2%) in surgery alone group had microscopically positive margin. Adjuvant radiotherapy was delivered to tumour bed and regional lymph nodes with median dose of 50.4 Gy (range