

**Conclusions:** TIN therapy showed a significant anticancer activity for patients with CDDP refractory GCT and may be one of the options of salvage chemotherapy for CDDP refractory GCT.

#### UP-03.112

##### **Redo-Retroperitoneal Lymphadenectomy (RPLA) for Nonseminomatous Germ Cell Testicular Tumors (NSGCT): Clinical Presentation, Patterns of Recurrence and Outcome**

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**Introduction and Objectives:** To describe the clinical characteristics and outcome of patients (pts) with nonseminomatous germ cell testicular tumors (NSGCT) requiring reoperative (reop) redo-retroperitoneal lymphadenectomy (RPLA), because such pts are poorly characterized.

**Material and Methods:** Between 1982 and 2005, 29 pts underwent 32 redo operations: 10 after primary (P)-RPLA and 19 after post-chemotherapy (PC)-RPLA. The initial presentation, histological finding, morbidity and oncologic outcome after surgery were analyzed.

**Results:** All pts had NSGCT with metastasis in RPLN. Mean age at diagnosis of primary NSGCT was 38 years (y). Nineteen (66%) pts and 3 (10%) pts had CS IIC and III, respectively. Nine (31%) pts had elevated STMs before redo-RPLA. Fourteen (48%) pts were classified to be intermediate/poor IGCCCG risk group. The median diameter of the RP RM was 7.8cm. The MFI between initial and redo-RPLA was 27.3 months (m). Redo-RPLA pathology demonstrated the presence of fibrosis (F) in 3 (10%) pts, teratoma (T) in 13 (45%) pts, and vital carcinoma (VC) in 13 (45%) pts. Concordant histology occurred in 19 (65%) pts. All pts at P-RPLA had VC, with discordant histology at redo-RPLA in 4 (40%) pts (2 F, 2 T). In the PC-RPLA group, discordant histology on redo-RPLA occurred in 6 (32%) pts (1 F, 1 T, 4 VC). Of 14 (74%) pts with T elements in the RP at the initial PC-RPLA, 5 (36%) had worse histology at redo-RPLA. At MFU of 118.33+/-44.59 m, the 5-y DSS rate for the entire cohort of pts was 69%. At MFU of 31+/-32 m, 11 (38%) pts died (2 of C related toxicity). The 5-y DSS rate for pts with finding of F and T only in the RP approach 100% vs. 40% in those with VC (p<0.01). The 2-y overall survival rate in

pts with positive and negative STMs before redo-RPLA occurred in relation of 38% vs. 95% (p<0.0001).

**Conclusions:** Redo-RPLA for metastatic NSGCT can be performed with acceptable morbidity in selected referral centers. The liberal application of CDDP-based C is not sufficient to compensate for inadequate PC-RPLA. The proper integration of C and redo-RPLA can salvage a significant number of these pts.

#### UP-03.113

##### **Long-Term Follow-Up Using Testicular-sparing Surgery for Malignant and Benign Diseases**

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**Introduction and Objective:** Testicular sparing surgery is becoming more accepted for indications in benign diseases and selected malignant tumours due to reported oncological control, and minimal functional, physical and psychological morbidity. Nevertheless, data reported in Literature are small and lack in long-term follow up. We performed a long-term evaluation of testicular conservative surgical treatment of benign and malignant conditions.

**Material and Methods:** Between January 2001 and January 2005, a single center perspective clinical study was performed at our Academic Department of Urology. Case files of all patients diagnosed with small testicular mass (less than 1.5cm) and treated with conservative surgery were examined. Patients underwent physical examination, hormone and tumour marker assays, scrotal and abdominal ultrasound, chest x-ray and endocrinological examination. Should a benign disease or a selected malignant condition (Leydig cell tumour) be diagnosed during the frozen section analysis, testicular sparing surgery was performed. Each patient presenting a malignant condition underwent a strict oncological follow up according to the EAU Guidelines. We analyzed the outcomes in term of recurrence, evidence of metastasis, and disease free survival.

**Results:** From January 2001 to January 2005, 80 patients with small testicular mass underwent conservative surgery. Patient mean age was 40.9 years (range 20

to 72). Mean follow up was 95.78 months (range 77 to 120). Patients presented either with a palpable testicular nodule (62 patients, 77.5%) or a nodule diagnosed by ultrasound (18 patients, 22.5%). One patient was monorchid after contralateral orchiectomy for inguinal hernia repair and performed a testicular sparing surgery for immature teratoma and followed strict oncological follow up. Diagnosis after frozen section examination was Leydig cell tumor in 20 of 80 cases (25%). Mean histological size of the nodule was 0.93cm (range 0.06 to 1.5cm.). Preoperative FSH and LH levels were high in 17 patients. Tumor markers were normal before and after surgery. Follow up was conducted for all malignant patients following EAU Guidelines with physical examination, tumor markers, scrotal and abdominal ultrasound, chest x-ray. No local recurrence or metastasis was observed. Of patients, 100% are still alive with a 100% free disease survival.

**Conclusions:** Testicular sparing surgery is feasible in all benign cases. Leydig cell tumours present a favorable long-term follow up when diagnosed early. Conservative surgery proved to be the safer choice in these selected cases, preventing from the risk of iatrogenic hypogonadism. Our data suggest that Leydig cell tumour can be safely regarded as benign.

#### UP-03.114

##### **Testis-Preserving Surgery in the Management of Leydig Cell Tumours: The Importance of Pre- and Intra-Operative Ultrasound**

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**Introduction and Objectives:** Leydig cell tumours account for 1-3% of testicular neoplasms. Incidence occurs in two peaks, in the 5-10 (all benign) and 30-60 (90% benign) age range; 10% are bilateral. Presentation is usually as an incidental finding on a scrotal ultrasound, but hormone-secreting variants can present with symptoms of excessive androgenisation, feminisation or precocious puberty. Conventional management is radical inguinal orchidectomy, which can be seen as overtreatment in the vast majority.

**Materials and Methods:** We present, as an example, the case of a 31 year-old man with a contrast ultrasound diagnosed 3mm Leydig cell tumour and normal tumour markers. Management consisted of ultrasound-guided wide local excision through an inguinal approach. This approach allowed an estimated loss of only

5-10% testicular volume. Histology confirmed a benign Leydig cell tumour and all resection margins were clear. We currently have a series of eight partial orchidectomies for contrast ultrasound diagnosed Leydig cell tumours. There are characteristic ultrasound findings, enhanced by the use of contrast, that allow a higher confidence in the pre-operative diagnosis. This allows us to offer the option of partial orchidectomy without the need for intra-operative frozen section.

**Results:** From our eight patients, there are no incidences of local recurrences or distant metastatic disease. The follow-up period for these patients ranged from 8-48 months.

**Conclusions:** As a tumour that is predominantly benign and affects men for whom future fertility is a concern, the role of testis-conserving surgery is becoming an increasingly important consideration. Ultrasound is vital to make an accurate diagnosis and for intra-operative localisation of small, impalpable lesions. There is the option of utilising intra-operative frozen-section if the diagnosis is in doubt, although we do not find this to be necessary if contrast ultrasound imaging is used pre-operatively and an adequate cuff of tissue taken during resection. Careful selection of patients is key. We would recommend that this be considered for those with classic ultrasound images, small tumour mass and normal tumour markers.

#### UP-03.115

##### Update on Phase 1/2 Evaluation of Chemotherapy Plus Residual Tumour Excision for Testis Conservation

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**Introduction:** There is evidence that early andropause due to testicular atrophy may be playing a role in the increased metabolic syndrome and cardiac deaths seen with follow up of GCC patients even those on surveillance. In a randomized trial of 1477 stage 1 seminomas a single course of carboplatin produced a 78% reduction of contra lateral testicular GC. This has increased awareness of the effectiveness of chemotherapy on primary tumours. This abstract updates our experience assessing chemo-response of primary GCC in past 30 years.

**Methods:** Testicular GCC patients receiving chemotherapy with primary tumour in situ during 1978-2001 have been re-

viewed. 62 had advanced disease and 20 had stage I.

**Results:** In 30/82 (37%) the testis normalised and was retained. Median follow-up is 137 months. There have been no deaths in this series. 7 of these patients developed second GCC. Actuarial 5, 10 & 15 year relapse free survival was 81% & 70%. All relapses are new tumours without evidence of metastasis and are disease free after orchidectomy alone (12, 21, 23, 41, 51, 48, 77 and 161 months). 22 additional patients (28%) who underwent orchidectomy for apparent treatment failure had necrotic tissue/mature teratoma involving less than 50% of the testis and could have been candidates for tumour enucleation. Patients with stage I tumours and seminoma histology showed significantly higher preservation rate that approached 100% if one included those showing necrosis or mature teratoma involving less than 50% of the testis. There have been 6 pregnancies to date in wives of 3 patients. 5 of 6 patients studied in detail have recovered sperm, the highest count (100x10<sup>6</sup>) being the only patient who was successfully treated for bilateral testis tumours.

**Conclusions:** This update continues to confirm the safety of this approach and the potential benefits of combining surgery and chemotherapy. Given the increasing worry about the role of testicular atrophy in the genesis of the metabolic syndrome, this combination, despite its higher relapse but safe salvage rate, would seem to have become the preferred option given the longstanding data on the increased incidence of reduced leydig cell function after lumpectomy and radiotherapy.

#### UP-03.116

##### Creation of a Genitourinary Cancer Survivorship Clinic at a Comprehensive Cancer Center: Start-Up Design and Assessment of Met and Unmet Needs of the Target Population

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**Introduction and Objective:** The Genitourinary (GU) Cancer Center at MD Anderson Cancer Center was selected by the institution to pilot a novel specialty clinic dedicated to the needs of long-term cancer survivors. The objectives were to coordinate all cancer surveillance protocols, and to assess the levels of met and unmet needs of this population.

**Materials and Methods:** The clinic was designed with evidenced-based protocols for surveillance for all GU cancers, and to be actively coordinated by a single mid-level provider, who is supervised by a committee of urologists, radiation oncologist, and GU medical oncologists. Patients are eligible for referral who are >5 years into survivorship (3 years for testis), and exclusions include any potentially complex monitoring such as superficial bladder cancer, active surveillance, and novel ablative therapies. This population was assessed by an IRB approved survey protocol using the Cancer Survivors' Unmet Needs Measure (CaSUN) and its companion Partners survey. These validated instruments include 35 need items, 6 positive change item, and 1 open-ended question. The items are grouped into domains of need: existential survivorship, comprehensive cancer care, information, quality of life, and relationships.

**Results:** From March, 2009-Sept, 2010, 1,039 patients have been referred from internal faculty clinics, and 509 patients have had at least one clinic visit. The distribution of cancer sites is 49.4% prostate, 21.7% kidney, 20.3% testis, 8.3% bladder, and 0.3% penile. Using billing records, we identified a cohort of 5,000 patients who potentially met inclusion criteria for the clinic, and from a single survey mailing, we received 951 patient surveys and 484 matched patient/partner surveys. Of the 35 items, the percentage of patients reporting an unmet need was none=32%, 1=22%, 2=11%, 3=6%, 4=6%, and >4=23%. The top 5 unmet needs included contact with other cancer survivors, making positive life changes, sexual problem, concerns with cancer recurrence, and coordination of care among doctors. Among matched patient/partner surveys there was at least 74% agreement. **Conclusions:** Our pilot design of a long-term survivorship clinic for GU cancers appears to be acceptable to patients and referring faculty members. Monitoring this population using evidence-based protocols is the primary objective, while the CaSUN surveys are useful tools for identifying the needs of this population beyond testing for cancer recurrence.

#### UP-03.117

##### Adjuvant Chemotherapy for Upper Tract Urothelial Carcinoma Treated with Nephroureterectomy: Assessment of Adequate Renal Function and Impact on Outcome

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