

## ANTICANCER RESEARCH 36: 2535-2628 (2016)

Table I. PSM, compared to negative surgical margins (NSM), by mean age, lesion site, approach and pathologic T.

Pre-operative data		Univariate analysis				Multivariate analysis			
		NSM		PSM		P	OR	95%CI	P
Age Mean (SD)		61.8	12.7	65.5	9.9	0.02	-	-	-
Indication, n. (%)	Elective	748	80.3%	27	61.4%	0.002	-	-	-
	Rel/Abs	184	19.7%	17	38.6%				
Lesion site, n. %	Other site	676	72.5%	20	45.5%	0.01	2.89	1.56-5.35	0.001
	Polar superior	256	27.5%	24	54.5%				
Approach, n. (%)	Open	525	56.3%	33	86.8%	0.01	2.11	1.05-4.27	0.04
	Mini-invasive	407	43.7%	5	13.2%				
Pathologic T, n. %	Intracapsular	894	95.9%	39	88.6%	0.02	2.89	1.05-7.90	0.04
	Extracapsular	38	4.1%	5	11.4%				

lesion (OR=2.9, CI=1.56-5.35,  $p=0.01$ ) and pathologic extracapsular lesion (OR=2.9, CI=1.05-7.90,  $p=0.04$ ) were confirmed as significant predictive factors of positive surgical margins. *Conclusion:* Tumor renal site represents an important nephrometric pre-operative characteristic predictive of PSM. Extracapsular lesions are also correlated with a higher risk of PSM. Mini-invasive approach seems to present lower PSM rate for optical magnification; however, these data should be revised assessing similar pre-operative conditions in both approaches.

## 91

### IMPACT OF GENDER IN NEPHRON-SPARING SURGERY: COMPARISON OF PERIOPERATIVE AND PATHOLOGICAL OUTCOMES FROM THE DEFINITIVE RESULTS OF RECORD1 PROJECT

Andrea Mari<sup>1</sup>, Donata Villari<sup>1</sup>, Francesco Sessa<sup>1</sup>, Alessandro Antonelli<sup>2</sup>, Riccardo Bertolo<sup>3</sup>, Giampaolo Bianchi<sup>4</sup>, Barbara Bigazzi<sup>1</sup>, Nicola Longo<sup>5</sup>, Giuseppe Martorana<sup>6</sup>, Vincenzo Mirone<sup>7</sup>, Giuseppe Morgia<sup>8</sup>, Francesco Porpiglia<sup>3</sup>, Bernardo Rocco<sup>9</sup>, Bruno Rovereto<sup>10</sup>, Riccardo Schiavina<sup>6</sup>, Claudio Simeone<sup>2</sup>, Mario Sodano<sup>2</sup>, Alessandro Volpe<sup>11</sup>, Giacomo Novara<sup>12</sup>, Sergio Semi<sup>1</sup>, Marco Carini<sup>1</sup> and Andrea Minervini<sup>1</sup>

<sup>1</sup>Division of Urology, Department of Urology, Careggi Hospital, University of Florence, Florence, Italy;

<sup>2</sup>Department of Urology, Azienda AO Spedali Civili Di Brescia, Italy;

<sup>3</sup>Department of Urology, University of Turin, Ospedale San Luigi Gonzaga, Orbassano, Italy;

<sup>4</sup>Policlinico Di Modena, Department of Urology, University of Modena, Italy;

<sup>5</sup>Urology Department, University Federico II of Naples, Naples, Italy;

<sup>6</sup>Department of Urology, University of Bologna, S. Orsola-Malpighi Hospital, Bologna, Italy;

<sup>7</sup>Department of Urology, University Federico II, Naples, Italy;

<sup>8</sup>Luna Foundation, Roma, Italy;

<sup>9</sup>Department of Urology, University of Padua. IRCCS Foundation Ca' Granda - Ospedale Maggiore Policlinico, Milan, Italy;

<sup>10</sup>I.R.C.C.S. Policlinico San Matteo - Department of Urology, Pavia, Italy;

<sup>11</sup>Division of Urology, Maggiore Della Carità Hospital, University of Eastern Piedmont, Novara, Italy;

<sup>12</sup>Department of Urology, University of Padua, Italy

*Aim:* The aim of this study was to analyze gender differences in terms of perioperative and pathological features in a multicentre Italian dataset of patients (RECORD Project) undergoing nephron-sparing surgery (NSS). *Materials and Methods:* Overall, 1,055 patients treated with NSS, between January 2009 and December 2012, were evaluated. An evaluation of gender differences of pre-, intra- and postoperative, as well as pathological variables was performed. *Results:* Overall, 630 males and 346 females were analyzed. No significant difference was found between males and females in age at operation (analyzed as continuous and nominal (<75 years and ≥75 years) variable), ECOG score, clinical symptoms at diagnosis, tumor side, tumor growth pattern and localization and, also, number of lesions at radiological evaluation. A significant difference was found between males and females in body mass index (BMI) (26.3 (24.7-28.4) vs. 25.3 (22.5-27.5),  $p<0.001$ ), surgical indication (relative 14.9% vs. 11.9%; absolute 8.8% vs. 3.2%, respectively;  $p=0.001$ ), pre-operative hemoglobin (14.5±1.3 vs. 13.3±1.1,  $p<0.001$ ) and creatinine (1.0±0.5 vs. 0.8±0.2,  $p<0.001$ ). In intra-operative variables, no significant difference was found between the two groups regarding surgical approach (open vs. minimally invasive), technique (standard partial nephrectomy vs. simple enucleation), pedicle clamping and ischemia time. A significant difference was found between

males and females in operative time (200 (100-300) vs. 150 (100-250) min, respectively,  $p=0.03$ ) and estimated blood loss (EBL) (135 (105-180) vs. 125 (105-160) cc, respectively,  $p=0.01$ ). A slight difference between the two groups was found in intraoperative complication (5.8% vs. 3.2%, respectively,  $p=0.07$ ). No difference between the two groups was found regarding overall medical, overall surgical, surgical Clavien 2 and 3 complications. A significant difference was found between the two groups in preoperative-1st and preoperative-3rd day delta estimated glomerular filtration rate (eGFR) (10.1 (0.0-23.0) vs. 12.7 (0.0-30.2), respectively,  $p=0.01$  and 8.5 (0.0-23.0) vs. 18.9 (0.0-30.2), respectively,  $p=0.01$ ). Regarding pathological data, a significant difference was found between males and females relating to malignant/benign histotype (84.1%/15.9% vs. 71.4%/28.6%, respectively,  $p=0.001$ ). Males present a 58.3% of clear cells renal cell carcinoma (RCC) vs. 54.6% of females with a slightly higher 3rd-4th Fuhrman grade (19.6% vs. 15.0%, respectively,  $p=0.15$ ). **Conclusion:** NSS in males presented a higher intra-operative difficulty in terms of time, bleeding and complications. Females present a higher rate of benign tumors, as described in literature. Males present a slightly higher clear cell RCC rate with higher Fuhrman grade.

92

**ROLE OF SBRT WITH VMAT TECHNIQUE AND FFF BEAMS FOR LYMPH NODE METASTASES IN OLIGOMETASTATIC PATIENTS FROM GENITOURINARY MALIGNANCIES**

Giuseppe Roberto D'agostino, Ciro Franzese,  
Piera Navarria, Fiorenza De Rose, Angelo Tozzi,  
Tiziana Comito, Stefano Tomatis, Paolo Zucali,  
Rodolfo Hurle, Luca Cozzi and Marta Scorsetti

Radiotherapy and Radiosurgery, Humanitas Clinical and Research Hospital, Rozzano (MI), Italy

**Introduction/Aim:** Stereotactic body radiotherapy (SBRT) is considered a safe and effective approach for several sites of metastatic disease but few published data exist on local control rates in the context of isolated or limited lymph node metastases. We analyzed the outcome of oligometastatic patients suffering from genitourinary primary neoplasms and treated with SBRT on isolated lymph node metastases. **Materials and Methods:** Patients with a maximum of 5 lymph-nodal metastases (with a diameter of less than 5 cm) were included in this analysis. Radiotherapy was delivered with Volumetric Modulated Arc Therapy Rapid-Arc (VMAT-RA) and flattening filter-free (FFF) beams; median prescribed dose was 45 Gy in 6 fractions. We analyzed dosimetric data and correlated them with acute toxicity (CTCAE 3.0), local control of disease, progression-free survival and overall survival.

**Results:** From September 2007 to May 2015, 52 patients with 74 lymph node metastases were submitted to SBRT. Primary malignancies were prostate (56.7%), kidney (22.9%), bladder (19.2%), ureters (5.4%) and testicle (1.35%). At the post-treatment re-evaluation, a complete response was achieved in 39 lesions (52.7%) and a partial response in 25 lesions (33.7%). A stable disease was observed in 7 (9.4%) cases, while 3 (4%) lesions showed a disease progression. The overall clinical benefit rate was 95.8% (71/74 lesions). Acute toxicity was mild, 18 (34.6%) patients having experienced a G1 nausea and fatigue; no heavier toxicities were reported. At a median follow-up of 21.8 months (range=4.2-95.6), in-field progression of disease was observed in 12 sites (16.2%) after a median time of 6.8 months. Out-field lymph node progression was observed in 19 (36.5%) cases, while distant metastases occurred in 15 (28.8%) cases. Local control and overall survival at 1 year were 83% and 93%, respectively. **Conclusion:** Our results prove that SBRT with VMAT-RA and FFF beams can be considered a safe and effective approach for oligometastatic patients with isolated lymph node metastases from genitourinary tumors. Although this can be considered an initial experience, it suggests that SBRT may be an interesting strategy to preserve patients' quality of life and delay further systemic treatments.

93

**BLADDER PARAGANGLIOMA MISDIAGNOSED AS MUSCLE-INVASIVE UROTHELIAL CARCINOMA. AN ERROR THAT COULD BE AVOIDED**

Luca Ventura<sup>1</sup>, Claudio Festuccia<sup>2</sup>  
and Giovanni Luca Gravina<sup>2</sup>

<sup>1</sup>Division of Pathology, San Salvatore Hospital, L'Aquila (AQ), Italy;

<sup>2</sup>Department of Biotechnological and Applied Clinical Sciences, University of L'Aquila, L'Aquila (AQ), Italy

**Introduction:** Extra-adrenal paragangliomas are most commonly found in superior para-aortic area (45%), followed by inferior para-aortic (30%) and urinary bladder (10%), accounting for less than 0.5% of all bladder neoplasms (1). Previous reports show a female predominance with an age range of 32-79 years (mean=53) and a relatively good prognosis (1, 2). There is a documented tendency for paraganglioma of the urinary bladder to be misinterpreted as urothelial carcinoma (1-3). We report a case of bladder paraganglioma incidentally discovered in a female patient and diagnosed as muscle-invasive urothelial carcinoma. **Patients and Methods:** A 76-year-old woman was admitted to our hospital after recurrent episodes of vomiting for a hiatal hernia. A polypoid lesion of the bladder measuring 1 cm in diameter was incidentally found by computed tomography scanning. During surgery for hiatal hernia, she