Materials and methods: Between May 2019 and January 2020, 8 consecutive patients with endophytic renal masses underwent preoperative ICG tumor marking followed by off-clamp RAPN (OC-RAPN). 3 of these 8 patients had a solitary kidney and 2 of them had previous renal surgery. Preoperative superselective transarterial delivery of a lipiodol-ICG mixture (1:2 volume ratio) into tertiary-order arterial branches feeding the renal mass prior to transperitoneal OC-RAPN was performed. Clinical data were prospectively collected in our institutional RAPN dataset. Perioperative outcomes of RAPN were assessed.

Results: Median tumor size was 2.6 cm (interquartile range 1.9–3.2). The median RENAL score was 9 (7–10). Angiographic procedure was performed about 150 minutes before surgery and was successful in all patients. Median operative time was 70 min (60–80); median estimated blood loss was 200 ml (150–250). No conversion to on-clamp partial nephrectomy or radical nephrectomy was needed. Only one patient experienced postoperative bleeding, treated with super-selective arterial embolization (classified as 3a according to Clavien-Dindo Classification System). Median hospital stay was 4 days (3–5). Median hemoglobin and percent estimated glomerular filtration rate (eGFR) drop were 3.6 g/dl (3–5) and 7% (5%–15%), respectively.

Conclusions: NIRF/ICG technology is an emerging safe and useful tool, able to improve identification of endophytic renal masses during NSS. We demonstrated the feasibility of this technique with similar perioperative outcomes to previous series. Despite the increasing costs, the procedure improved significantly the ability to localize endophytic renal masses, allowing to perform NSS even in this complex cases.

SC177	The impact of sarcomatoid features on survival outcomes in metastatic renal cell carcinoma patients receiving upfront cytoreductive nephrectomy: a retrospective analysis of a contemporary series

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Introduction: Sarcomatoid features (SF) correlate with worst survival outcomes in patients with primary metastatic renal cell carcinoma (mRCC). Some reports suggested a cut-off above 25% sarcomatoid features as a predictor of poorer outcome. We aimed to report survival outcomes on a large dataset of patients with SF treated with cytoreductive nephrectomy (CN).

Materials and methods: A purpose built multi-institutional international database (REgistry of MetAstatic RCC- REMARCC project) was used for this retrospective analysis. Patients with diagnosis of mRCC treated with CN with or without metastasectomy were included. The cohort was stratified according to the presence of SF in the primary specimen. Kaplan Meier methods and Cox proportional Hazards Regression Analyses were used to estimate overall mortality rates. The reverse Kaplan Meier method was used to estimate the median (IQR) follow-up.

Results: Overall 617 patients who underwent CN were included. Of all, 78 (12.6%) patients received synchronous/metachronous metastasectomy. A total of 118 (19.1%) patients had SF in the final specimen. The median involvement of the sarcomatoid component was 35.0% (IQR 10.0–72.5%). Patients with SF were more frequently classified as poor prognosis according to Heng's criteria (44.9 vs. 33.3%, p = 0.022). Moreover, patients with sarcomatoid features harbored more frequently locally advanced disease [pT3-4 stage tumors (88.1 vs. 73.7%, p = 0.003) and pN1 tumors (28.8 vs. 18.22%, p = 0.025)]. The median follow-up was 55.1 (IQR 25.9–120.6) months. Overall, 395 (64.0%) deaths were recorded in the whole cohort. The median overall survival was shorter for patients with SF (13.1 vs. 27.9 months, p < 0.001). However, neither patients with a SF >35% nor those with a SF >50% showed higher overall mortality rates than those with <35% and <50% SF, respectively (p = 0.720 and 0.960, respectively). Patients with SF showed higher overall mortality rates even after accounting for Heng's risk group, type of surgery and pT and pN stage (HR: 1.35, 95% CI: 1.04–1.75, p = 0.024).

Conclusions: Patients with mRCC and SF experience higher mortality rates, even when accounting for pathologic status and risk group. Interestingly, the extent of sarcomatoid defined as >50% in the specimen was not predictive of higher mortality rates within patients with SF. These results suggest that all patients with a SF on primary tumor should be carefully followed independently of percentage of sarcomatoid dedifferentiation.

SC178	Who scores the game in nephron-sparing surgery? renal scoring system reproducibility among residents in urology and radiology

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Introduction: Different renal scoring systems have been tested to predict surgical complexity and post-procedural outcomes after nephron sparing surgery (NSS). To date, it has not been determined how the scoring systems vary between specialists with different backgrounds and levels of skills. The aim of this study is to evaluate the applicability of 4 different nephrometry scores (Ns) and to analyse their reproducibility comparing the scores assigned by radiology and urology residents.

Materials and methods: We enrolled 108 patients candidate to NSS with a laparoscopic or open approach between November 2017 and April 2020. All diagnostic Computed Tomography (CT) scans were retrospectively evaluated and images were consulted both in the axial and coronal planes. 6 residents in total, 3 urologists and 3 radiologist analyzed diagnostic CT scans and assigned independently the Ns for each patient. We included the R.E.N.A.L., the P.A.D.U.A., the C–Index and the ABC. In descriptive analysis all continuous variables were summarized with median and interquartile range, while categorical variables with absolute and relative frequencies. The scores given by the "Urologists group" (UG) and the "Radiologists group" (RG) were compared using the Mann-Whitney test and graphically with the Box Plot. Intra-class correlation coefficient (ICC) was used for continuous scores reliability while for categorical scores Cohen's kappa (k) was used. Inter-Observer reliability was calculated, first comparing the scores among all readers.

Results: Intra-class correlation coefficient among all readers was higher for the RENAL and PADUA scores while was low for the C-Index and ABC score. When considering the specific professional back-ground, in UG Ns where characterized by an intra-class correlation index higher than 0.8, while in RG only the RENAL and the PADUA presented similar results. On the contrary the C-Index and ABC scores had lower ICC. The differences in score assigned between the two groups of specialists resulted respectively in 1 point and 0.6 point mean for the RENAL score (p = 0.012) and the C-Index (p < 0.001) while no mean differences were observed in PADUA and ABC scores (p > 0.05).

Conclusions: Ns are reproducible in P.A.D.U.A and R.E.N.A.L. based on anatomical characteristics, however the disagreement reach the 20% of cases among all groups. On the other hand C-Index and ABC score