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Recommendations for the reporting of surgically resected specimens of renal cell carcinoma: the Association of Directors of Anatomic and Surgical Pathology

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A checklist based approach to reporting the relevant pathologic details of renal cell carcinoma resection specimens improves the completeness of the report. Karyotypic evaluation of renal neoplasms has refined but also complicated their classification. The number of diagnostic possibilities has increased and the importance of distinguishing different tumor types has been underscored by dramatic variation in prognosis and the development of targeted therapies for specific subtypes. The increasing number of recognized renal neoplasms has implications for handling renal resection specimens. Furthermore, the prognostic significance of other features of renal neoplasms related to grade and stage has been demonstrated. This guideline for the handling of renal resection specimens will focus on problem areas in the evolving practice of diagnosis, grading, and staging of renal neoplasms. The accompanying checklist will serve to ensure that all necessary details of the renal resection specimen are included in the surgical pathology report.

Editorial Comment

The reporting of renal cell carcinoma is facilitated by the provision of a checklist to insure that pathologists provide all of the essential information to enable clinicians to optimize patient care.

The checklist includes the gross description and the diagnostic information:

1. Gross description. Includes how the specimen is received, how the specimen is identified, the type of nephrectomy (total or partial), the length of ureters and the description of other structures. The tumor description includes the site within the kidney, the size in 3 dimensions, the gross characteristics (color, consistency and degree of heterogeneity, the relationship to the perinephric soft tissue with emphasis to the renal sinus fat, renal vein invasion, adrenal invasion, lymph nodes, and other findings (hydronephrosis, pyelonephritis, etc.)

2. Diagnostic information. Includes the histologic type according to the World Health Organization 2004 classification (1): clear cell carcinoma, multilocular cystic carcinoma, papillary carcinoma, mucinous tubular and spindle carcinoma, collecting duct carcinoma, medullary carcinoma, translocation carcinomas (includes Xp11 and 6:11), tubulocystic carcinoma, acquired cystic disease-associated carcinoma, and renal cell carcinoma, unclassified. For the histological grade may be used the Fuhrman scheme (2). Sarcomatoid dedifferentiation is a growth pattern that may occur in any of the major types of renal cell carcinoma. Presence of necrosis has been found to be of prognostic significance (3). The number of nodes sampled and the number positive should be reported. The prognosis appears to be significantly adversely affected by

extranodal extension of the metastatic focus, and therefore, it is recommended that this be assessed and reported as well (4).

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UROGENITAL TRAUMA

Renal gunshot wounds: clinical management and outcome

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Background: To analyze our experience with renal gunshot wounds (GSW).

Methods: We analyzed our prospective trauma database for patients with renal GSW.

Results: Two hundred one patients (206 renal units) with renal GSW were collected from our database. Preoperative imaging (1-shot intravenous pyelogram, dedicated intravenous pyelogram, or computed tomography) was performed in 68.7% (n = 140). Gross or microscopic (>5 red blood cell/high power field) hematuria was present in 88.7%. Injury to other organs was present in 96.5% (194 of 201), with >1 organ involved in 74.6% (other than kidney). The liver was the most commonly injured organ. Using the American Association for the Surgery of Trauma grading system, there were 46 grade 1 (G1), 21 G2, 62 G3, 51 G4, and 26 G5 injuries. The trend to observe without renal exploration has not changed significantly during the past three decades (1978-1989 = 32.8%, 1990-1999 = 39%, 2000-2007 = 30.4%). Ninety-five renal units (excluding nephrectomy) underwent repair with associated small or large bowel injuries without any known complications, including 14 patients with mesh used during renal repair. The renal salvage rate was 85.4% (n = 176 of 206) with two delayed nephrectomy procedures for persistent bleeding after initial repair. The total number of nephrectomy procedures was 30 of 206 renal units. Postoperative imaging was obtained in 32.8% (55 of 201) patients, and there were no known cases of postinjury hypertension. Overall survival was 90.6% (182 of 201), with 2 intraoperative and 17 postoperative deaths. There were no postoperative infections related to renal reconstruction. Isolation of renal vessels was obtained in all patients before opening Gerota's fascia with no deaths secondary to urologic intervention.