KIDNEY CANCER

Rarity of hybrid tumours supports use of renal biopsy

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Benign renal masses rarely harbour coexisting malignant pathology, according to new research from the Fox Chase Cancer Center in Philadelphia, USA. This news will be welcomed by proponents of renal biopsy, the adoption of which has been limited by the suggested existence of such hybrid tumours.

“Renal biopsy has gained considerable clinical traction in recent years because it holds great promise for identifying patients with benign masses, affording the opportunity to avoid surgery,” says Alexander Kutikov, who led the study. Given that up to 20% of small renal masses are thought to be benign, concerns have been voiced that surgery represents overtreatment for some patients, leading to unnecessary loss of renal function.

However, renal biopsy has been plagued by reports of so-called hybrid tumours that contain both malignant and benign components. “When one drills down into the literature, one realizes that data on hybrid malignant pathology are relatively thin and, at least in part, hinge on cohorts with multifocal masses or those with known genetic syndromes,” explains Kutikov. To investigate the true incidence of hybrid tumours, Kutikov and his team focused on patients with solitary sporadic benign renal masses and assessed the rate of coexisting malignancy.

Using the large institutional surgical dataset available at the Fox Chase Cancer Center, researchers analysed the records of all patients who underwent renal surgery between 1994 and 2012. They identified 147 patients

who were found to have renal masses with any component of benign histology; 96 masses contained elements of renal oncocytoma, 44 lesions harboured angiomyolipoma and 7 masses were classified as containing other benign pathology.

Encouragingly, only 4 (2.7%) of these patients were found to harbour coexisting malignant tissue within or adjacent to the benign components, and none exhibited high-grade malignancy. Moreover, none of the patients with hybrid tumours experienced regional or metastatic progression during a median follow-up period of 44 months.

Kutikov hopes this finding will encourage the use of renal biopsy. “The role of biopsy to assess the presence of benign disease should not be undermined—especially in elderly patients and those with comorbidities—by the concern for missing possible unsampled areas with malignant features,” he told *Nature Reviews Urology*.

Finally, the researchers highlight the discrepancies they noted in the existing literature on the criteria for differentiating between benign renal oncocytoma and malignant chromophobe renal cell carcinoma. Future efforts should be made to standardize the pathological criteria used across institutions to differentiate between these two pathologies.

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Original article Ginzburg, S. *et al.* Coexisting hybrid malignancy in a solitary sporadic solid benign renal mass: implications for managing patients following renal biopsy. *J. Urol.* doi:10.1016/j.juro.2013.07.059