

**Re: Oncocytoma on renal mass biopsy: is it still the same histology when surgery is performed?
Results from UroCCR-104 study. N Branger et al <https://doi.org/10.1007/s00345-022-04261-3>**

Oncocytoma on renal mass biopsy: why is surgery even performed?

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Contemporary management of localized renal masses (LRM) is nuanced, balancing oncologic control against overtreatment. For patients harbouring benign and asymptomatic oncocytoma, upfront partial or radical nephrectomy represents a diagnostic rather than therapeutic procedure, with risk of serious adverse events(1). Yet, the role of preoperative renal tumour biopsy remains controversial.

We welcome Branger and colleagues' contribution from the multicentre French UroCCR project (NCT03293563) (2), but we are puzzled by the high proportion of patients with biopsy-diagnosed oncocytoma managed with surgery (63%), either upfront or after a period of surveillance.

Biopsy-diagnosed oncocytomas on active surveillance (AS) exhibit low growth (1-2 mm/yr) with few transitioning to active treatment (3-11%) after median follow up of 29-34 months (3-5), with no reported metastatic events or deaths (6). The oncological safety of AS for all LRMs (benign and malignant) has also been reported at a mid-/long- term follow-up(7).

In contrast, Branger et al report that 35% of patients managed with initial AS transitioned to surgery during a median follow up of 28 months, on the basis of '*growth during surveillance*' in 96% of cases. Median growth rate in this group would have been of interest but was not reported.

Surgical overtreatment of oncocytoma reflects the uncertainty regarding the positive predictive value of renal mass biopsy (RMB), particularly surrounding misclassification of histology/grade due to tumour heterogeneity(8,9). Of note, the vast majority of tumours "misclassified" at RMB in the study by Branger et al were chromophobe or other oncocytic/chromophobe renal cell carcinoma (RCC) on final pathology(2). While the latest WHO classification of urogenital tumours cautioned against a *definite* diagnosis of oncocytoma from a needle core biopsy(8), we join the authors in emphasizing that such misclassification might be of limited clinical significance, given the low metastatic potential and excellent prognosis of tumours on this spectrum(4). Reassuringly, clear cell and unclassified RCC were found in only 4% of operated cases.

Discordance between RMB and surgical pathology for samples obtained at centres inside and outside the French Research Network for Kidney Cancer was 21% vs 52%, respectively, calling into question the appropriateness of performing and reporting RMB outside high-volume institutions. A contemporary pragmatic objective for RMB would be to reliably differentiate "low grade oncocytic neoplasia" from other (more aggressive) RCC histotypes. Such discrimination may allow decision making with clinically meaningful impact.

Lastly, upfront surgery was performed most commonly due to ‘tumour size’ or ‘surgeon decision’, with only 3% of patients undergoing surgery based on patient preference alone; this suggests that patients accept AS when offered. A more detailed justification for the decision to operate and the rationale for biopsy in the first instance would have been desirable, since a benign result did not allow the patient to avoid surgery.

In conclusion, the study by Branger et al. highlights the ongoing challenge of reducing overtreatment of benign, often incidental renal tumours. No test is perfect, but judicious use of RMB and novel “virtual biopsy” imaging tools (10) will be key to risk-stratify LRMs, allowing objective and individualized counselling towards informed, evidence-based and shared decision-making.

Authors’ Contribution

Hannah Warren: Project development, manuscript writing
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Anna Calì: Project development, manuscript writing
Maxine GB Tran: Manuscript editing
Riccardo Campi: Project development, manuscript writing

Collaborators’ contribution

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Disclosure of potential conflicts of interest

The authors have relevant conflicts of interest to declare

Research involving Human Participants and/or Animals

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Informed consent

Not Applicable

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