Reviewer’s report

Title: Impact of double J stenting or nephrostomy placement during transurethral resection of bladder tumour on the incidence of metachronous upper urinary tract urothelial cancer

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Reviewer: Daniel Shapiro

Reviewer's report:

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This retrospective case series sought to evaluate the impact of double-J stent placement during TURBT for bladder cancer on the incidence of metachronous upper urinary tract urothelial carcinoma (UUTUC) compared to nephrostomy tube placement. Over an 8-year time frame, 637 bladder cancer patients were identified. Of these, only 8 had metachronous UUTUC and 4/8 patients underwent DJ stent placement previously. The authors found a correlation between DJ stent placement and metachronous UUTUC. Additionally, no patient with a nephrostomy tube developed UUTUC. Patients with nephrostomy had significantly lower OS compared to the rest of the study patients.

Methodology questions:
1. The authors excluded "histologies other than BCa". This statement is somewhat vague. Do the authors mean they only included urothelial carcinoma of the bladder? Did the authors include variant urothelial histologies or exclude these as well?
2. The authors included "patients who received their initial diagnosis of BCa prior to 2008". Did the authors account for any upper tract manipulation prior to 2008 in patients who were diagnosed prior to 2008?
3. The authors should include indications for upper tract intervention. They also do not mention in the methods when the DJ stent or nephrostomy was placed. The reader must infer from the introduction that DJ stents were placed at the time of surgery.
4. What was the typical imaging regimen for their patients? How were the UUTUC diagnosed?
5. The authors should provide a definition of "metachronous" in the methods.

Results questions/concerns:
1. The number of patients with metachronous UUTUC is very low (only 8 patients) which severely limits the power and conclusions of the manuscript.
2. The authors claim that all UUTUC in stented patients occurred on the same side as the stent; however, 2 patients received bilateral stents and only developed UUTUC on a single side. Assuming that both upper tracts are receiving equal exposures in the same patient, can the authors rationalize why UUTUC only developed on a single side in these patients?
3. It would be helpful to know how many patients went on to receive cystectomy considering about 27% were pT2 at initial diagnosis.
4. Why did the authors choose to perform Chi-square versus logistic regression when determining associations? Logistic regression seems like the more logical choice of statistical test when determining predictors of UUTUC.
5. Can the authors provide a median time from stent placement to UUTUC development? Also, were the stents only placed perioperatively? Did any of the patients receive additional upper tract manipulation during their follow-up? The authors should specify how stents were managed as this may impact outcomes. For example, perhaps chronic indwelling stents were more likely to develop UUTUC.

6. The authors claim that DJ increases the risk of metachronous UUTUC. This claim was derived from univariable Chi-square test which does not account for any confounders. Further models would need to be constructed to account for possible confounding variables (such as stage and grade) with multivariable regression. Unfortunately, due to the very few number of events, I think this would not be possible.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

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If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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