Response to reviewer:

Thanks for the comments, we have revised the manuscript followed the reviewer's suggestions. All modifications are highlighted in red.

Areas for Improvement: Organization and Clarity: The manuscript's introduction lacks a clear statement of the study's objectives and relevance. It could benefit from a more concise introduction that outlines the purpose of the paper and its contribution to the field.

Response: Thanks for the suggestion. We have checked and revised the introduction part.

Introduction: Renal pelvis sarcomatoid carcinoma (RPSC) is a rare type of urinary tract malignancy[1]. This cancer has a low incidence, and it accounts for only about 0.3% of all urothelial carcinomas[2]. Since the initial description of this tumor by Fauci and colleagues in 1961, there have been fewer than 30 reported cases[3]. There are similar predisposing factors for RPSC and squamous cell carcinoma, including tobacco consumption, persistent irritation, chronic inflammation, and nephrolithiasis[4]. Surgery is the most efficacious and widely adopted treatment for patients with RPSC[5], and the major approaches are nephroureterectomy or nephrectomy. An accurate diagnosis of RPSC requires a comprehensive clinical assessment with histological and immunohistochemical analyses of the tumor[6].

Herein we present a patient with RPSC and describe the results from imaging, histochemistry, and genetics. We also provide a comprehensive review of the literature on this topic to consolidate all previous clinical findings on this cancer.

Case Presentation: The case presentation could be more structured. It should include a chronological account of the patient's medical history, diagnostic journey, and treatment plan.

Response: Thanks for the suggestion. We write it exactly in the format of a case report and conform to the format of *World Journal of Clinical Cases*. In our case presentation, we provided patient's medical history, diagnostic journey, and treatment plan. In our modified version, we further enriched this section.

Additionally, providing a timeline for key events would enhance readability.

Response: Thanks for the suggestion. In our case report, timeline is shown in Figure 1.

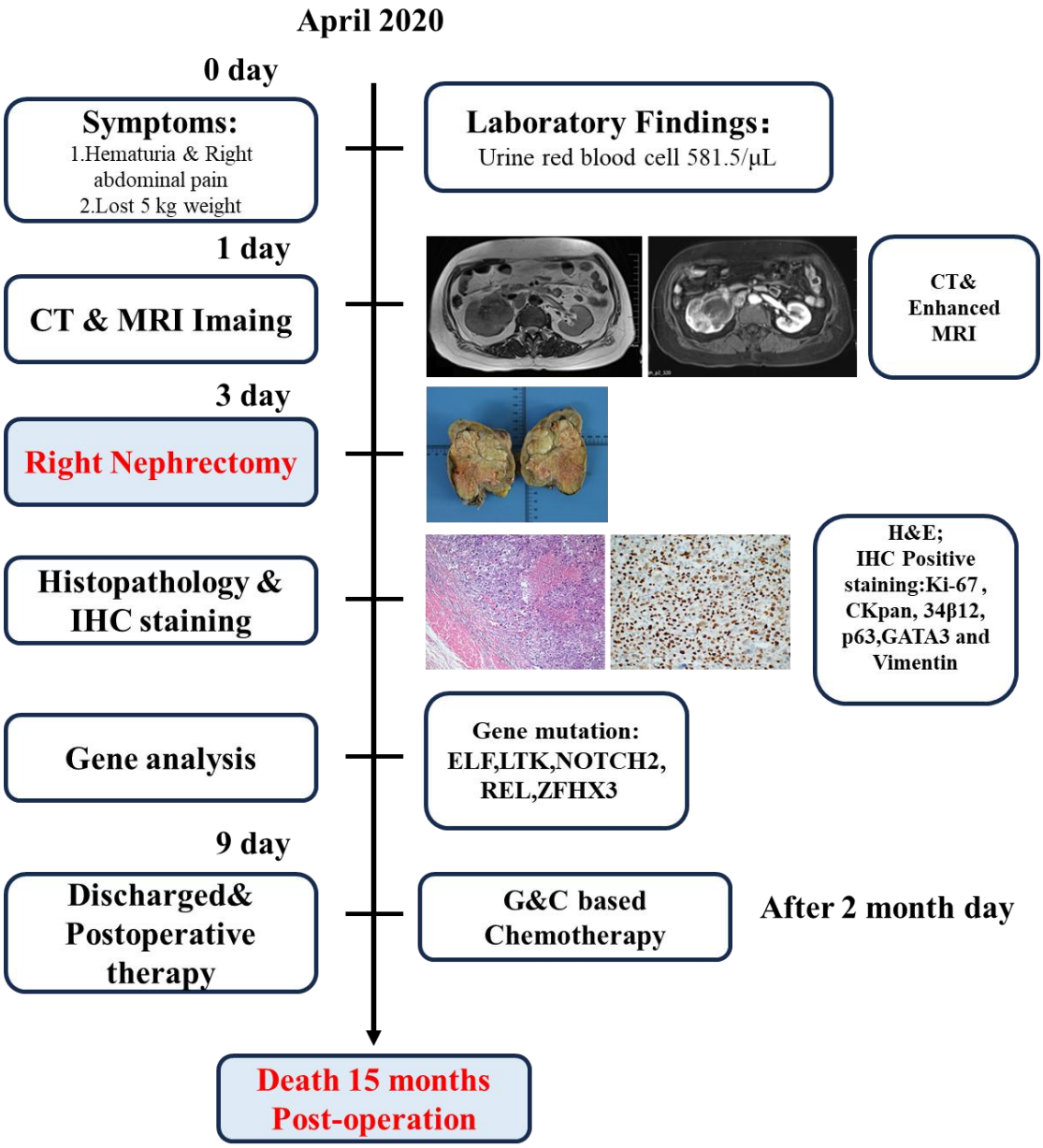

Figure 1. Timeline.

Discussion on Genetic Findings: While the manuscript mentions specific genes (e.g., ELF, LTK, NOTCH2, REL, ZFHX3) that showed noteworthy mutations, it does not elaborate on the significance of these genetic alterations or their potential implications for RPSC diagnosis and treatment. A more comprehensive discussion of the genetic findings would be beneficial.

Response: Thanks for the suggestion. We have mentioned in the article that the mutated genes identified in the patient's examination do not have specific targeted treatment options. The gene mutation data we have provided is primarily aimed at enhancing the completeness of the case report. Secondly, we hope that in the future, there can be targeted treatment strategies developed for the relevant mutated genes.

Treatment Section: The treatment section briefly mentions nephrectomy and

cisplatin-based chemotherapy but lacks details on the treatment regimen, patient response, and potential alternatives or considerations for future treatment approaches.
Response: Thanks for the suggestion. We discussed the potential alternatives of RPSC in the discussion part. At the same time, we have added more discussion about this part.
Treatment: Following thorough preoperative evaluation, the patient underwent right renal nephrectomy. Two months later, the patient opted for conventional systemic chemotherapy. This treatment commenced in July, 2020, and consisted of 6 cycles (21 days per cycle) of gemcitabine-cisplatin (GC).

Expanding on the treatment aspect would provide a more well-rounded perspective.
Response: Thanks for the suggestion. we have expanded the relevant treatment content in the article. Treatment: Following thorough preoperative evaluation, the patient underwent right renal nephrectomy. Two months later, the patient opted for conventional systemic chemotherapy. This treatment commenced in July, 2020, and consisted of 6 cycles (21 days per cycle) of gemcitabine-cisplatin (GC).

How could the authors consider nephroureterectomy as well since final histopathology was received after surgery.
Response: Thanks for the question. Preoperatively, through imaging examinations, we believed that the tumor might originate from the renal parenchyma, possibly being renal cell carcinoma invading the renal pelvis. At the same time, MRI results revealed that the patient may have multiple lymph node metastases. Therefore, after discussing with the patient's family, we did not choose to perform an extended nephroureterectomy.

Language and Formatting: The manuscript could benefit from more consistent formatting and proofreading for grammar and language. Additionally, the use of subsections within the discussion section could improve the flow and organization of ideas.
Response: Thanks for the comments. We polished this article with professional company edits(Figure 2).

Medjaden

5th Oct., 2023

Language Certificate

Dear Sir or Madam:

This document certifies that the manuscript **MJD2309181**:

Renal pelvis sarcomatoid carcinoma with renal vein tumor thrombus: case report and literature review

was edited for proper English language, grammar, punctuation, spelling, and overall style by a highly qualified, native English-speaking professional scientific editor at Medjaden Inc. on 5th Oct., 2023. Neither the research content nor the authors' intentions were altered in any way during the editing process. The final revised version can be found at http://pan.medjaden.com:2000/index.php?mod=shares&sid=ZWFtREVQYlZ2YXhxREtlR2xTZDJ6TWM1c0M3U2xNNldUZWh5aVcydw. (verification code: **2309181**)

Yours sincerely,

(Ms.) Hua (Selin) He for Medjaden Inc.

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Figure 2: Language certification.