

## ARTICLE INFO

### AUTHOR'S AFFILIATIONS

General Practitioner, Sakinah Islamic Hospital, Mojokerto<sup>1</sup>  
Internship General Practitioner, Sakinah Islamic Hospital, Mojokerto<sup>2</sup>  
Urology Department, Sakinah Islamic Hospital, Mojokerto<sup>3</sup>  
Pathology Anatomy Department, Sakinah Islamic Hospital, Mojokerto<sup>4</sup>

### CORRESPONDING AUTHOR

Hendro Kusdianto, Sakinah Islamic Hospital, Mojokerto  
E-mail: [hendrorestihhr@gmail.com](mailto:hendrorestihhr@gmail.com)

### Article history

Received	19-02-2025
Revised	29-03-2025
Accepted	19-09-2025
Available online	30-09-2025

### Please cite this article in APA 7<sup>th</sup> edition style as:

Kusdianto, H., Ramadhani, M., Tribowo, S. P., Guntarno, N. C. (2025). Muscle Invasive Bladder Cancer with Chronic Kidney Disease: A Case Report. *Jurnal Ilmiah Kedokteran Wijaya Kusuma*, 14 (12), 149-156

<http://dx.doi.org/10.30742/jikw.v14i2.4273>

## Muscle Invasive Bladder Cancer with Chronic Kidney Disease: A Case Report

Hendro Kusdianto<sup>1\*</sup>, Muflikhah Ramadhani<sup>2</sup>, Suryo Prasetyo Tribowo<sup>3</sup>, Novalia Chumaladewi Guntarno<sup>4</sup>

### Abstract

**Background:** Bladder cancer ranks as the second most prevalent urinary tract cancer globally, following prostate cancer, accompanied by a significant mortality rate, and cause several complications, for example weight loss, urinary tract infections, metastases to other organs, and can cause chronic kidney failure due to obstruction of urine flow **Objective:** This case presented the challenging progression of muscle invasive bladder cancer with chronic kidney disease complications and refuse therapies as a clinical lesson for case management. **Case Presentation:** This case reports the clinical course of a 78 year old man who presented to our hospital's urology clinic presenting with symptoms of hematuria, along with urinary dripping, burning, and weight loss. **Result:** The patient was diagnosed with muscle invasive bladder carcinoma, with a complication of chronic kidney disease, and refused therapies. **Conclusion:** Controlling bladder cancer that has invaded to the muscular layer and chronic kidney disease was difficult and give poor prognosis linked to their age, type of bladder cancer, and refusal to undergo therapies.

**Keywords:** Bladder cancer, Chronic kidney disease, Muscle invasive

## Case Report

### INTRODUCTION

Bladder cancer ranks as the second most prevalent urinary tract cancer globally, following prostate cancer. As reported by GLOBOCAN (Global Cancer Statistics), there were 573,278 new bladder cancer diagnoses in 2020, accompanied by a significant mortality rate of 212,536 cases (Sung et al., 2021). In Indonesia, the incidence of bladder cancer grows by 15% annually. At Hasan Sadikin Hospital in Bandung, there were 372 diagnosed cases of bladder cancer during the period from 2010 to 2014, primarily affecting men aged 50 to 59 years (Perix et al., 2017).

Apart from its high prevalence, bladder cancer can cause several complications, for example in terms of tumors, patients can experience weight loss, urinary tract infections, metastases to other organs, and can cause chronic kidney failure due to obstruction of urine flow (Leslie et al., 2024). The data indicates that both the prevalence and mortality rates of bladder cancer are continuing to rise, along with the likelihood of related complications, particularly chronic kidney disease. However, literature and case reports regarding bladder cancer accompanied by complications of chronic kidney disease are still very rare. Consequently, this case report has been prepared as a study and

documentation of the case's progression to serve as a clinical lesson for case management. This case report presents the medical journey of a 78-year-old man who faced advancing bladder cancer that ultimately led to chronic kidney failure and his demise.

### CASE PRESENTATION

A 78-year-old man attended our hospital's urology clinic in April 2024 with complaints of bloody urine or hematuria. The patient had been experiencing blood and mucus in the urine for the past 2 months, accompanied by burning and pain when urinating for 2 days. The patient also felt the urge to urinate, but only dripped. The patient was currently weak, and had pain in the lower back, especially the right side. The patient's appetite decreased, resulting in weight loss. He had no prior history of hypertension or diabetes mellitus, but he had history of inguinal hernia. The patient's family did not experience similar things, and he got tranexamic acid and dexketoprofen for his post op hernia repair. The patient had a history of smoking since the age of 20 years. On physical examination, suprapubic tenderness and flank pain were found. The patient was prescribed tranexamic acid, terazosin HCl, and diclofenac sodium. A follow-up appointment has been scheduled for him.

In May, the patient came with persistent complaints and difficulty urinating. We suspected bladder cancer with prostate infiltration. The patient had a urinary catheter inserted, and a complete blood count and urological ultrasound were performed. Complete blood results showed leukocytosis of 13,920/  $\mu$ L, anemia with hemoglobin 9.7 g/dl, hematocrit 30.5%, erythrocytes 3.57 million, and thrombocytosis 482,000/  $\mu$ L.



**Figure 1.** Urological ultrasound of the patient. (1. In the bladder, a solid mass/lesion is visible on the right lateral wall to the base wall of the bladder (postero-inferior) 2. Intestinal gas is visible 3. The bladder appears to have a catheter attached (round shape), a distended curve is found)



**Figure 2.** Urological ultrasound of the patient. (1. There is a blockage of the HN calix system, hydronephrosis gr II, accompanied by proximal ureteral distension 2. Increased renal cortex 3. Intestinal gas 4. Abdominal wall)

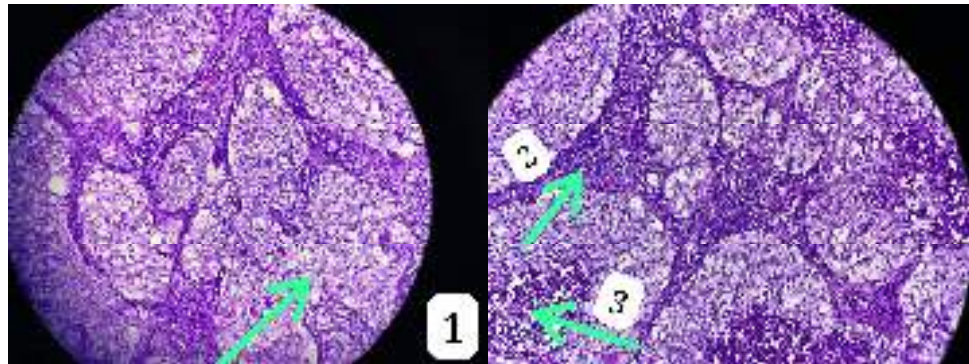
The results of the urological ultrasound showed that the bladder had a solid lesion on the posteroinferior wall, lobulated and measuring 6.9 x 5.5 x 6.8 cm (vol 137 cc). Meanwhile, grade II-III right and left hydronephrosis were found in the kidneys, post-renal blocking accompanied by bilateral chronic nephritis.

The patient was then planned for TURBT (Transurethral Resection of Bladder Tumor) and underwent preoperative procedures. When TURBT was performed, cystoscopy revealed a bladder mass filling the right and left lateral posterior walls, covering the right and left urinary bladder mucosa. Tumor resection was carried out, and tissue pieces were obtained with a total weight of around 47.8 grams, measuring 0.7 x 0.6 x 0.6 – 3.2 x 1 x 0.7 cm, white and gray in color, and then sent for histopathological examination.



**Figure 3.** The patient's tissue section specimen which sent to anatomical histopathology department

Anatomical histopathology results showed that the tissue was clear cell carcinoma with a differential diagnosis of invasive urothelial carcinoma, and the tumor had invaded to the muscular layer.



**Figure 4.** The patient's tissue section under microscope at anatomical histopathology department (1. pleomorphic tumor cells, with coarse chromatin nuclei and clear cytoplasm 2. Connective tissue between tumors 3. Necrotic area)

The patient reported pain and swelling in his scrotum following TURBT. The patient then had TWOC (Trial Voiding Without Catheter) and was given painkillers. In July 2024, the patient complained of being unable to urinate, urinary dripping, and still having pain when urinating, thus the catheter was reinserted. We encouraged the patient to get chemotherapy, but after we educated him on the treatment, the patient and family declined it.

In August, we discovered that the patient still had hematuria and was suffering from stage 3 chronic kidney disease, with a BUN of 31.2 mg/dl and a creatinine of 3.2 mg/dl. A complete urine examination revealed proteinuria +3, hematuria +3, and erythrocytes >30. This month, the patient reported no pain while urinating.

The patient did not visit the urology clinic in September appointment, but did visit our hospital's emergency room in October. In the emergency room, the patient felt that the symptoms were significantly worsening, the patient felt weak, his urination felt burning for two days, accompanied by increasingly more blood and mucus in his urine, and his urine was dripping. On physical examination, anemic conjunctiva, positive suprapubic pain and flank pain were found, and there was no palpable mass in the abdomen. Inpatient laboratory results showed leukocytosis 20,880/  $\mu$ L, anemia 8.7 g/dl, BUN 83.9 mg/dl, and creatinine 11.1 mg/dl. On the second day of hospitalization, the patient was anuric, unable to urinate. Then the urologist planned a nephrostomy and consulted a specialist in internal medicine for cito hemodialysis. Our internist advised the patient on regular HD and consulted anesthesia for CVC. However, unfortunately, after educate the patient and family, they did not agree to hemodialysis or nephrostomy. The patient forced to go home and leave the hospital. The patient's condition worsened and he passed away at home two days after leaving the hospital.

## DISCUSSION

Bladder cancer is a fairly common malignancy in the urinary tract, with urothelial carcinoma being the most common type. Bladder cancer is often found in elderly people aged 60 years and over, with symptoms experienced including gross hematuria, pain when urinating, increased urinary frequency, pelvic masses, and constitutional symptoms such as weakness and weight loss (Leslie et al., 2024). This is in accordance with this case, namely the patient was 78 years old (> 60 years), complaining of hematuria, dripping urine, pain when urinating, and weight loss. Risk factors for bladder cancer were also discovered in this patient, including smoking, male gender, and advanced age (Leslie et al., 2024). The patient was then given symptomatic therapy in the form of tranexamic acid, diclofenac sodium, and Terazosin HCl. The patient was initially treated with symptomatic therapy to assess the development and response to therapy, as there were various diagnoses possible at the time of presentation, including urinary tract stones and BPH (Benign Prostate Hyperplasia). The patient also had post op hernia repair therapy at this month. Supporting examinations were performed on the following appointment.

Symptoms persisted until May, accompanied by difficulty urinating, so bladder cancer could be suspected. The patient had a urinary catheter inserted and a complete blood count and urological ultrasound were performed. Complete blood results showed that the patient was in anemia (hemoglobin 9.7 g/dl) and leukocytosis (13,920/  $\mu$ L). Urological ultrasound in this case was performed because ultrasound has high sensitivity and specificity in diagnosing bladder causation with a non-invasive and cost-effective technique at an early stage (Gharibvand et al., 2017). The sensitivity of urological ultrasound precisely reaches 96% in detecting bladder cancer and 87% in cancer that is not invasive to the muscles (Ilgi Sr et al., 2020). The ultrasound results then supported bladder cancer, where a solid lesion was found on the postero-inferior wall, lobulated, measuring 6.9 x 5.5 x 6.8 cm (vol 137 cc), which then caused urinary tract obstruction characterized by right and left kidney hydronephrosis grade II-III and bilateral nephritis. Hydronephrosis is swelling or enlargement of one or both kidneys due to accumulation of urine, caused by urinary tract obstruction, kidney stones, tumors, or congenital abnormalities (Paul, 2023; Tayfur & Balci, 2022). According to radiological grading, grade II-III hydronephrosis shows widened calyces with an AP diameter range of 7 to 10 cm or more (Onen, 2020). Hydronephrosis in this case can be caused by obstruction which causes urine to flow back into the kidneys, accumulate, and cause distension of the renal calyces and pelvic.

The histopathology results following TURBT revealed that the cancer had penetrated the muscular layer and was a clear cell carcinoma with a differential diagnosis of invasive urothelial carcinoma. This makes the patient's illness more apparent. After the urological ultrasound came out, the patient underwent TURBT (Transurethral Resection of Bladder Tumor). TURBT is performed to identify and remove bladder tumors, as well as obtain histopathology specimens to accurately establish the patient's diagnosis (Kim & Patel, 2020). On cystoscopy, a bladder mass was found filling the right and left lateral posterior walls, as well as the urinary bladder mucosa. Tumor resection is

carried out then the related tissue is sent for histopathological examination according to the procedure.

After TURBT is performed the patient feels pain when urinating and the scrotum swells, which is common after surgery. Patients are given symptomatic painkillers. TURBT can indeed cause side effects of urinary tract infections and significant hematuria, and in poor conditions can cause bladder perforation (Erich & Zlotta, 2016). The patient underwent a TWOC trial, but the patient had difficulty urinating again, so the catheter was reinserted. TWOC is carried out with the indication that the patient has had a catheter installed for a long time and prevents the risk of urinary tract infections, however, if the patient during TWOC is unable to urinate as in the case, then TWOC is declared a failure (Colemeadow et al., 2018).

Treatment for muscle invasive bladder cancer, as in the case, includes neoadjuvant chemotherapy with cisplatin or adjuvant chemotherapy. Chemotherapy is performed because the majority cases of muscle invasive bladder cancer can be correlated with distant metastases and increase mortality. However, in this case the patient and family refused chemotherapy (Pinto, 2017).

The patient continued to have hematuria in August, as was previously recorded, and even in October, he came to the emergency room with symptoms that had gotten much worse, including weakness, burning in his urine, and dripping urine. The patient's symptoms should become better after TURBT, but they are not the same as what the patient is experiencing. According to research, post-TURBT, hematuria and patient's symptoms are often minor and transient; but, in cases of bigger bladder tumors, such as this case, symptoms may be severe and persistent (Strother et al., 2024).

The patient experienced worsening of symptoms after TURBT, and there were complications of chronic kidney disease stage 3 in August. Chronic kidney disease is a decrease in kidney function which is characterized by clinical manifestations of kidney damage such as proteinuria, presence of urine sediment, tissue damage, and structural abnormalities for more than three months (Chen et al., 2019; Yan et al., 2021). This is in accordance with what was found in the patient, proteinuria 3+, hematuria 3+, and erythrocytes > 30 were found. The patient's kidney function test results also increased (BUN 31.2 and creatinine 3.2). In this case, the patient's bladder cancer causes post-renal urine flow obstruction, initially causing acute kidney injuries (AKI), then progressing to chronic kidney disease (Fujita et al., 2020; Tanariyakul et al., 2024). During hospitalization in October, the patient's BUN and creatinine increased (BUN 83.9, creatinine 11.1). Elevated BUN and creatinine indicate progression of CKD, decreased kidney function, and a worse prognosis (Al Jameil, 2019; Seki et al., 2019; Sengsuk et al., 2018). The patient was already in CKD stage V and had anuria on the second day of hospitalization. Our internal medicine doctor recommends regular hemodialysis for patients, as hemodialysis is recommended for patients who have reached CKD stage IV and prevents metabolic disorders (Murdeswar & Anjum, 2020). Patients are also planned for nephrostomy at this stage, where percutaneous nephrostomy can be performed in bladder cancer patients with obstructive uropathy to improve kidney function and improve urine flow (Garg et al., 2019). Unfortunately, the patient and family refused hemodialysis or nephrostomy.

After the patient forced to go home from the hospital and refused nephrostomy and hemodialysis, two days later the patient's condition worsened and he passed away at home. There are several factors that play a role in the poor prognosis in these patients, including age, type of bladder cancer (muscle-invasive type of bladder cancer), and refusal of therapies. Patients aged 78 years have a worse prognosis and should carefully consider therapy than younger patients, this is in line with research that shows patients aged  $\geq 75$  years have shorter overall survival than those aged  $\leq 54$  years. This is believed to be related to the duration of exposure to carcinogens and the deficient ability to repair DNA in elderly patients (Lin et al., 2023).

The type of bladder cancer in the patient showed clear cell carcinoma with a differential diagnosis of invasive urothelial carcinoma, and had invaded the muscular layer. This type of bladder cancer carries a worse prognosis because it tends to grow rapidly and has a high risk of metastasis (Ogawa et al., 2020). Moreover, patients also refuse the therapy given, for example chemotherapy.



The majority of muscle invasive bladder cancer patients and do not receive therapy passed away within two years after diagnosis (Dobruch & Oszczudłowski, 2021). During the last hospitalization, the patient also refused nephrostomy and hemodialysis, then forced to go home. The patient's last renal function test increased (BUN 83.9, creatinine 11.1), which correlated with low eGFR. eGFR then correlates with high patient mortality (Ogawa et al., 2020). In contrast to the poor prognosis, in Muscle Invasive Bladder Cancer (MIBC) patients such as in this case, radical cystectomy can increase the 5-year survival rate in 50% of patients, and the chances can be increased with neoadjuvant cisplatin-based therapy. In a randomized controlled trial also conducted in MIBC patients, neoadjuvant cisplatin, methotrexate, and vinblastine therapy can reduce the risk of mortality by 16%, increase the 10-year survival rate, and provide benefits in types that have distant metastases. Thus, patients might have a better prognosis if they received radical cystectomy, did not refuse chemotherapy, nephrostomy, and hemodialysis ((van der Heijden et al., 2025).

## CONCLUSION

This case provides insight into the difficulties of controlling muscle invasive bladder cancer, as well as the problems of growing chronic kidney disease caused by post renal obstruction. Patients' poor prognosis is linked to his age, type of bladder cancer, and refusal to undergo therapies. However, there are several limitations that need to be considered. This case report only describes a bladder cancer patient who refused therapies, so it does not reflect the larger population and variations in the therapeutic response between individuals. Therefore, a comparative case report is needed to characterize the clinical course and prognosis of similar type bladder cancer patients.

## CONFLICT OF INTEREST

The authors have no conflicts of interest relevant to this research.

## ACKNOWLEDGEMENTS

The authors would like to thank Sakinah Islamic Hospital for providing us to write this case report, as well as the histopathology, laboratory, medical records, radiology department, and hospital staff who assisted in the data collection.

## REFERENCES

- Al Jameil, N. (2019). Assessment of Blood Urea Nitrogen (BUN) and Creatinine as Biochemical Markers in Chronic Kidney Disease and End Stage Renal Disease Patients Undergoing Hemodialysis. *Saudi Journal of Medicine*, 4(2): 97-102. [10.36348/sjm.2019.v04i02.004](https://doi.org/10.36348/sjm.2019.v04i02.004)
- Chen, T. K., Knicely, D. H., & Grams, M. E. (2019). Chronic kidney disease diagnosis and management: a review. *Jama*, 322(13), 1294–1304. <https://doi.org/10.1001/jama.2019.14745>
- Colemeadow, J., Hashemzehi, T., & Batura, D. (2018). Trial without catheter. *British Journal of Hospital Medicine*, 79(3), C42–C44. <https://doi.org/10.12968/hmed.2018.79.3.C42>
- Dobruch, J., & Oszczudłowski, M. (2021). Bladder cancer: current challenges and future directions. *Medicina*, 57(8), 749. <https://doi.org/10.3390/medicina57080749>
- Erlich, A., & Zlotta, A. R. (2016). Treatment of bladder cancer in the elderly. *Investigative and Clinical Urology*, 57(Suppl 1), S26–S35. <https://doi.org/10.4111/icu.2016.57.S1.S26>
- Fujita, N., Hatakeyama, S., Momota, M., Tobisawa, Y., Yoneyama, T., Yamamoto, H., Imai, A., Ito, H., Yoneyama, T., Hashimoto, Y., Yoshikawa, K., & Ohyama, C. (2020). Preoperative chronic kidney disease predicts poor prognosis in patients with primary non-muscle-invasive bladder cancer who underwent transurethral resection of bladder tumor. *Urologic Oncology: Seminars and Original Investigations*, 38(8), 684.e1-684.e8. <https://doi.org/https://doi.org/10.1016/j.urolonc.2020.02.001>

- Garg, G., Bansal, N., Singh, M., & Sankhwar, S. N. (2019). Role of percutaneous nephrostomy in bladder carcinoma with obstructive uropathy: a story revisited. *Indian Journal of Palliative Care*, 25(1), 53. [https://doi.org/10.4103/IJPC.IJPC\\_102\\_18](https://doi.org/10.4103/IJPC.IJPC_102_18)
- Gharibvand, M. M., Kazemi, M., Motamedfar, A., Sametzadeh, M., & Sahraeizadeh, A. (2017). The role of ultrasound in diagnosis and evaluation of bladder tumors. *Journal of Family Medicine and Primary Care*, 6(4), 840–843. [https://doi.org/10.4103/jfmpc.jfmpc\\_186\\_17](https://doi.org/10.4103/jfmpc.jfmpc_186_17)
- Ilgi Sr, M., Bayar, G., Abdullayev, E., Cakmak, S., Acinikli, H., Kirecci, S. L., & Horasanli, K. (2020). Rare causes of hydronephrosis in adults and diagnosis algorithm: Analysis of 100 cases during 15 years. *Cureus*, 12(5). <https://doi.org/10.7759/cureus.8226>
- Kim, L. H. C., & Patel, M. I. (2020). Transurethral resection of bladder tumour (TURBT). *Translational Andrology and Urology*, 9(6), 3056. <https://doi.org/10.21037/tau.2019.09.38>
- Leslie, S., Soon-Sutton, T., & Aeddula, N. (2024). Bladder cancer. *StatPearls*.
- Lin, W., Pan, X., Zhang, C., Ye, B., & Song, J. (2023). Impact of age at diagnosis of bladder cancer on survival: a surveillance, epidemiology, and end results-based study 2004-2015. *Cancer Control*, 30, <https://doi.org/10.1177/10732748231152322>.
- Murdeswar, H. N., & Anjum, F. (2020). *Hemodialysis*.
- Ogawa, K., Shimizu, Y., Uketa, S., Utsunomiya, N., & Kanamaru, S. (2020). Prognosis of patients with muscle invasive bladder cancer who are intolerable to receive any anti-cancer treatment. *Cancer Treatment and Research Communications*, 24, 100195. <https://doi.org/10.1016/j.ctarc.2020.100195>
- Onen, A. (2020). Grading of hydronephrosis: an ongoing challenge. *Frontiers in Pediatrics*, 8, 538943.
- Paul, J. (2023). Hydronephrosis and its impact on kidney function. *Pediatr Urol Case Rep*, 10(4), 309–310. <https://doi.org/10.14534/j-pucr.20222675603>
- Perix, V. K., Suryanti, S., & Sihombing, A. T. (2017). Five Years Facts of Bladder Cancer at West Java's Top Referral Hospital, in Indonesia. *Althea Medical Journal*, 4(1), 94–99. <https://doi.org/10.15850/amj.v4n1.1028>
- Pinto, I. G. (2017). Systemic therapy in bladder cancer. *Indian Journal of Urology*, 33(2), 118–126.
- Seki, M., Nakayama, M., Sakoh, T., Yoshitomi, R., Fukui, A., Katafuchi, E., Tsuda, S., Nakano, T., Tsuruya, K., & Kitazono, T. (2019). Blood urea nitrogen is independently associated with renal outcomes in Japanese patients with stage 3–5 chronic kidney disease: a prospective observational study. *BMC Nephrology*, 20(1), 115. <https://doi.org/10.1186/s12882-019-1306-1>
- Sengsuk, J., Tangvarasittichai, O., & Tangvarasittichai, S. (2018). Serum Uric Acid to Creatinine ratio as a marker of Estimated Glomerular Filtration Rate in type 2 diabetes patients. *Madridge J Diabetes*, 2(1), 36–41. <https://doi.org/10.33314/jnhrc.v2i02.4565>
- Strother, M., Barlotta, R., Uzzo, R., Bloom, E., Jazayeri, S. B., Bigalli, A. C., Schober, J., Lee, J., Bernstein, A., Ginsburg, K., Handorf, E., Chen, D. Y. T., Correa, A., Greenberg, R., Smaldone, M., Viterbo, R., & Kutikov, A. (2024). Symptomatic and functional recovery after transurethral resection of bladder tumor: Data from ecological momentary symptom assessment. *Urologic Oncology: Seminars and Original Investigations*, 42(4), 117.e1-117.e10. <https://doi.org/10.1016/j.urolonc.2023.12.007>
- Sung, H., Ferlay, J., Siegel, R. L., Laversanne, M., Soerjomataram, I., Jemal, A., & Bray, F. (2021). Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA: A Cancer Journal for Clinicians*, 71(3), 209–249. <https://doi.org/10.3322/caac.21660>
- Tanariyakul, M., Saowapa, S., Polpichai, N., Wannaphut, C., Yingchoncharoen, P., Thongpiya, J., Siladech, P., Olavarria Bernal, D. A., Chairsrimaneepan, N., & Dejthevaporn, T. S. (2024). *Kidney outcomes in patients with bladder cancer: Insights from real-world data—A National Inpatient Sample (NIS) study, 2020*. American Society of Clinical Oncology. [https://doi.org/10.1200/JCO.2024.42.16\\_suppl.e16622](https://doi.org/10.1200/JCO.2024.42.16_suppl.e16622)

- Tayfur, M., & Balci, M. (2022). Hydronephrosis due to bladder carcinoma. *Journal of Surgery and Medicine*, 6(1), 80–81. [10.28982/josam.885593](https://doi.org/10.28982/josam.885593)
- van der Heijden, A. G., Bruins, H. M., Carrion, A., Cathomas, R., Compérat, E., Dimitropoulos, K., Efsthathiou, J. A., Fietkau, R., Kailavasan, M., Lorch, A., Martini, A., Mertens, L. S., Meijer, R. P., Mariappan, P., Milowsky, M. I., Neuzillet, Y., Panebianco, V., Sæbjørnsen, S., Smith, E. J., ... Rink, M. (2025). European Association of Urology Guidelines on Muscle-invasive and Metastatic Bladder Cancer: Summary of the 2025 Guidelines. *European Urology*. <https://doi.org/10.1016/j.eururo.2025.02.019>
- Yan, M.-T., Chao, C.-T., & Lin, S.-H. (2021). Chronic kidney disease: strategies to retard progression. *International Journal of Molecular Sciences*, 22(18), 10084. <https://doi.org/10.3390/ijms221810084>